



RF TEST REPORT

Report No: FCS202107010W01

Issued for

Applicant:	Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address:	1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China
Product Name:	Wireless Charger
Brand Name:	Guany
Model Name:	GY-Z8A
Series Model:	GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
Test Standard:	EN 303417 V1.1.1(2017-09)
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

TEST REPORT CERTIFICATION

Applicant's name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd

Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang ' an town ,Dongguan City ,Guangdong China

Manufacture's Name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd

Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang ' an town ,Dongguan City ,Guangdong China

Product description

Product Name.....: Wireless Charger

Brand Name: Guany

Model Name.....: GY-Z8A

Series Model.....: GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S

Test Standards.....: EN 303417 V1.1.1(2017-09)

This device described above has been tested by FCS, and the test results show that the equipment under test (EUT) is in compliance with the 2014/53/EU RED Directive Art.3.2 requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of FCS, this document only be altered or revised by FCS, personal only, and shall be noted in the revision of the document.

Date of Test.....:

Date (s) of performance of tests.....: 02 Jul. 2021 ~ 13 Jul. 2021

Date of Issue.....: 13 Jul. 2021

Test Result.....: Pass

Tested by : Scott Shen

(Scott Shen)

Reviewed by : Duke Qian

(Duke Qian)

Approved by : Kait Chen

(Kait Chen)



TABLE OF CONTENTS

1.	Summary of test results.....	6
1.1.	Standard description.....	6
1.2.	Test result.....	6
2.	General test information.....	7
2.1.	Description of EUT.....	7
2.2.	Accessories of EUT.....	7
2.3.	Assistant equipment used for test.....	7
2.4.	Block diagram of EUT configuration for test.....	7
2.5.	Test environment conditions.....	7
2.6.	Deviations of test standard.....	8
2.7.	Test laboratory.....	8
2.8.	Measurement uncertainty.....	8
3.	Equipment used during test.....	9
4.	Permitted range of operating frequencies and Operating frequency ranges.....	10
4.1.	Limits.....	10
4.2.	Block diagram of test setup.....	10
4.3.	Test procedure.....	10
4.4.	Test result.....	11
5.	H-field requirements.....	12
5.1.	Limits.....	12
5.2.	Block diagram of test setup.....	13
5.3.	Test procedure.....	14
5.4.	Test result.....	14
6.	Transmitter spurious emissions.....	15
6.1.	Limits.....	15
6.2.	Block diagram of test setup.....	15
6.3.	Test procedure.....	15
6.4.	Test result.....	16
7.	Transmitter out of band (OOB) emissions.....	17
7.1.	Limits.....	17
7.2.	Block diagram of test setup.....	17
7.3.	Test procedure.....	17
7.4.	Test result.....	17
8.	WPT system unwanted conducted emissions.....	18
9.	Receiver blocking.....	18

Revision history

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	13 Jul. 2021	

1. Summary of test results

1.1. Standard description

EN 303417 V1.1.1(2017-09): Wireless power transmission systems, using technologies other than radio frequency beam in the 19-21 kHz, 59-61 kHz, 79-90 kHz, 100-300 kHz, 6765-6795 kHz ranges; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

1.2. Test result

EN 303417 V1.1.1(2017-09)				
No	Test Parameter	Clause No	Condition	Results
1	Permitted range of operating frequencies	4.3.2	U	PASS
2	Operating frequency ranges	4.3.3	U	PASS
3	H-field requirements	4.3.4	U	PASS
4	Transmitter spurious emissions	4.3.5	U	PASS
5	Transmitter out of band (OOB) emissions	4.3.6	U	PASS
6	WPT system unwanted conducted emissions	4.3.7	Only for equipment which has a cable between the off board power supply and the primary coil which is longer than 3 m	N/A
7	Receiver blocking	4.4.2	Only for Mode 1, Mode 2 and Mode 3 (see Table 2)	N/A
Note 1: N/A is an abbreviation for not applicable, means according technology of EUT, this test item is not applicable for this reported device. Note 2: U means unconditionally applicable.				

2. General test information

2.1. Description of EUT

EUT* Name	: Wireless Charger
Model Number	: GY-Z8A
EUT function description	: Please reference user manual of this device
Power supply	: Input: DC 9V/2A Phone Output: 5W,7.5W,10W,15W Headphone Output: 3W Watch Output: 2.5W
Wireless charging Operation frequency	: 115kHz-205kHz
Antenna Type	: Inductive loop coil antenna
WPT operational modes	: Mode 4: energy transmission
Sample Type	: Series production

Note: EUT is the ab. of equipment under test.

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Serial No.	Other
AC Adapter	Wentong	WT0903500G	N/A	N/A

2.3. Assistant equipment used for test

Description of Assistant equipment	Manufacturer	Model number or Type	Other
Simulation load	/	/	/

2.4. Block diagram of EUT configuration for test

TX mode:



2.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

/	Normal Conditions	Extreme Conditions
Temperature range	15°C-35°C	-20°C-55°C
Humidity range	20%-75%	20%-75%
Power supply	DC 12V	Low voltage: DC 10.8V, High voltage: DC 13.2V (±10% of nominal voltage)

2.6. Test laboratory

Company Name: Flux Compliance Service Laboratory

Address: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan

Telephone: +86-769-27280901

Fax: +86-769-27280901

FCC Test Firm Registration Number: 514908

Designation number: CN0127

A2LA accreditation number: 5545.01

2.7. Measurement uncertainty

Test Item	Uncertainty
RF frequency	3×10^{-8}
Radiated RF power	$\pm 3.57\text{dB}$
Peak Output Power (Conducted)(Spectrum analyzer)	0.86 dB ($10\text{ MHz} \leq f < 3.6\text{GHz}$);
	1.38 dB ($3.6\text{GHz} \leq f < 8\text{GHz}$)
Peak Output Power (Conducted)(Power Sensor)	0.74dB
Maximum frequency deviation -within 300Hz and 6kHz of audio frequency -within 6kHz and 25kHz of audio frequency	2.1%
	1.5dB
Adjacent channel power	1.2dB
Conducted spurious emission	0.86 dB ($10\text{ MHz} \leq f < 3.6\text{GHz}$);
	1.40 dB ($3.6\text{GHz} \leq f < 8\text{GHz}$)
	1.66 dB ($8\text{GHz} \leq f < 22\text{GHz}$)
Radiated Emissions	$\pm 3.57\text{dB}$ ($f < 26\text{GHz}$)
Temperature	$\pm 0.4^{\circ}\text{C}$
Humidity	$\pm 2\%$
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment used during test

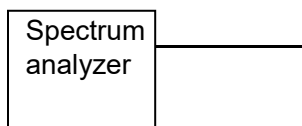
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
RF Connected Test (Tonscend RF Measurement System)					
Spectrum analyzer	R&S	FSU26	200071	Oct. 12, 2020	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jun. 29, 2021	1 Year
Vector Signal Generator	Agilent	E8267D	US49060192	Oct. 12, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Jun. 29, 2021	1 Year
Power Sensor	Agilent	U2021XA	MY55150010	Oct. 21, 2020	1 Year
Power Sensor	Agilent	U2021XA	MY55150011	Oct. 23, 2020	1 Year
DC Power Source	MATRIS	MPS-3005L-3	D813058W	Aug. 18, 2020	1 Year
Attenuator	Mini-Circuits	BW-S10W2	101109	Aug. 18, 2020	1 Year
RF Cable	Micable	C10-01-01-1	100309	Oct. 21, 2020	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	Oct. 21, 2020	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
Radiated Emission Test Chamber 1#					
EMI Test Receiver	R&S	ESU8	100316	Oct. 12, 2020	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jun. 29, 2021	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	Nov. 09, 2020	1 Year
Double Ridged Horn Antenna	R&S	HF907	100276	Nov. 16, 2020	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	Oct. 25, 2020	1 Year
Pre-amplifier	A.H.	PAM-0118	360	Oct. 21, 2020	1 Year
Pre-amplifier	TERA-MW	TRLA-0040G35	101303	Oct. 12, 2020	1 Year
RF Cable	HUBSER	CP-X2+ CP-X1	W11.03+ W12.02	Oct. 21, 2020	1 Year
RF Cable	N/A	SMAJ-SMAJ-1M + 11M	17070133+17070131	Nov. 08, 2020	1 Year
MI Cable	HUBSER	C10-01-01-1M	1091629	Oct. 21, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

4. Permitted range of operating frequencies and Operating frequency ranges

4.1. Limits

The limit specified in EN 300 417 V1.1.1, Sub clause 4.3.2.3 or 4.3.3.3 as applied, the permitted range of operating frequencies and operating frequency ranges shall be within 100-300 kHz.

4.2. Block diagram of test setup



4.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer through suitable attenuator.
- (2) Configure EUT work in carrier transmit mode.
- (3) Set the spectrum analyzer as follows:

Start frequency: lower than the lower edge of the permitted frequency range.

Stop frequency: higher than the upper edge of the permitted frequency range.

RBW= 300Hz; VBW=1kHz; Detector mode: Quasi Peak; Display mode: Maxhold

- (4) The 99% OBW function shall be used to determine the operating frequency range:

f_H is determined. f_H is the frequency of the upper marker resulting from the OFR.

f_L is determined. f_L is the frequency of the lower marker resulting from the OFR.

- (5) For multi-frequency systems the OFR is described in Figure 2.

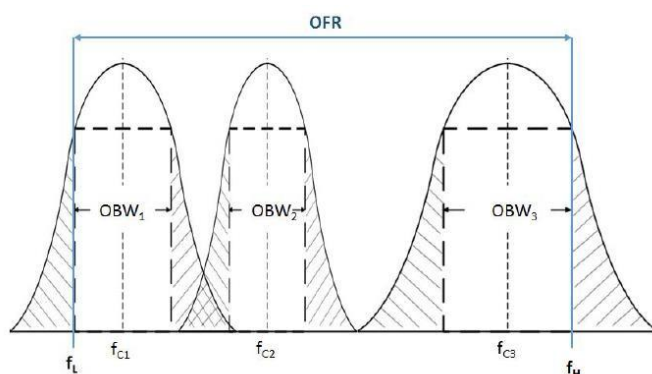


Figure 2: OFR of a multi - frequency WPT system within one frequency range of Table 2 and within one WPT system cycle time

4.4. Test result

Test Conditions		F _L [kHz]	F _H [kHz]	Assigned Frequency Band Limit (kHz)	Result
Volt	Temp				
Normal Volt DC 12V	25℃	115.820	205.820	100-300	PASS
Low Volt DC 10.8V	-20℃	115.671	205.780	100-300	PASS
Low Volt DC 10.8V	55℃	115.378	205.760	100-300	PASS
High Volt DC 13.2V	-20℃	115.692	205.442	100-300	PASS
High Volt DC 13.2V	55℃	115.648	205.446	100-300	PASS

5. H-field requirements

5.1. Limits

Table 3:

Frequency range [MHz]	H-field strength limit [dBμA/m at 10 m]	Comments
$0.100 < f \leq 0.119$	42	
$0.119 \leq f < 0.135$	66 descending 10 dB/dec above 0.119MHz	See note 1
$0.135 \leq f < 0.140$	42	
$0.140 \leq f < 0.1485$	37.7	
NOTE 1: Limit is 42 dBuA/m for the following spot frequencies: 60 kHz ± 250 Hz and 129,1 kHz ± 500 Hz.		

Note:

Refer to EN 300 417 V1.1.1, Subclause 6.1.1, An alternative measurement distance (e.g. 3 m) may be used as long as the measured values at the actual test distance are extrapolated to 10 m according to ETSI EN 300 330 [1], Annex H.

1) Refer to EN 300 330 V2.1.1, Annex H.2, the H-field limit in dBμA/m at 3 m, H_{3m}, is determined by the following equation:

$$H_{3m} = H_{10m} + C_3$$

where:

H_{10m} is the H-field limit in dBμA/m at 10m distance according to the present document; and C₃ is a conversion factor in dB determined from figure H.2.

Correction factor, C₃, for limits at 3 m distance, dB

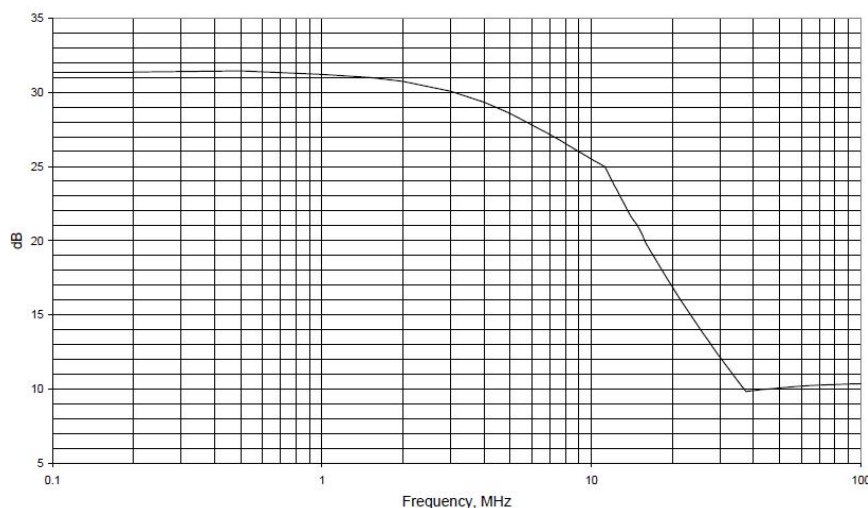


Figure H.2: Conversion factor C₃ versus frequency

2) For 115kHz, C₃=31.2

$$H_{3m} = H_{10m} + C_3 = 42 + 31.3 = 73.3 \text{ dB}\mu\text{A/m}$$

For 119kHz, C₃=31.2

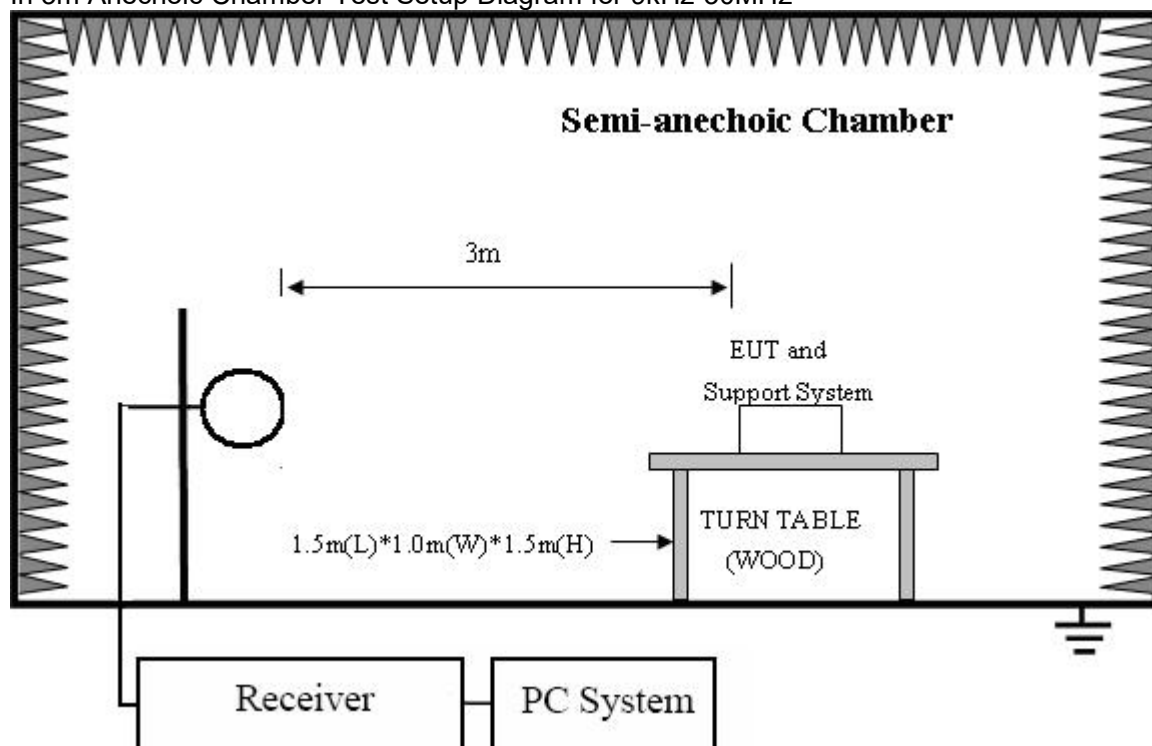
$$H_{3m} = H_{10m} + C_3 = 66 + 31.3 = 97.3 \text{ dB}\mu\text{A/m}$$

For 140kHz, C₃=31.2

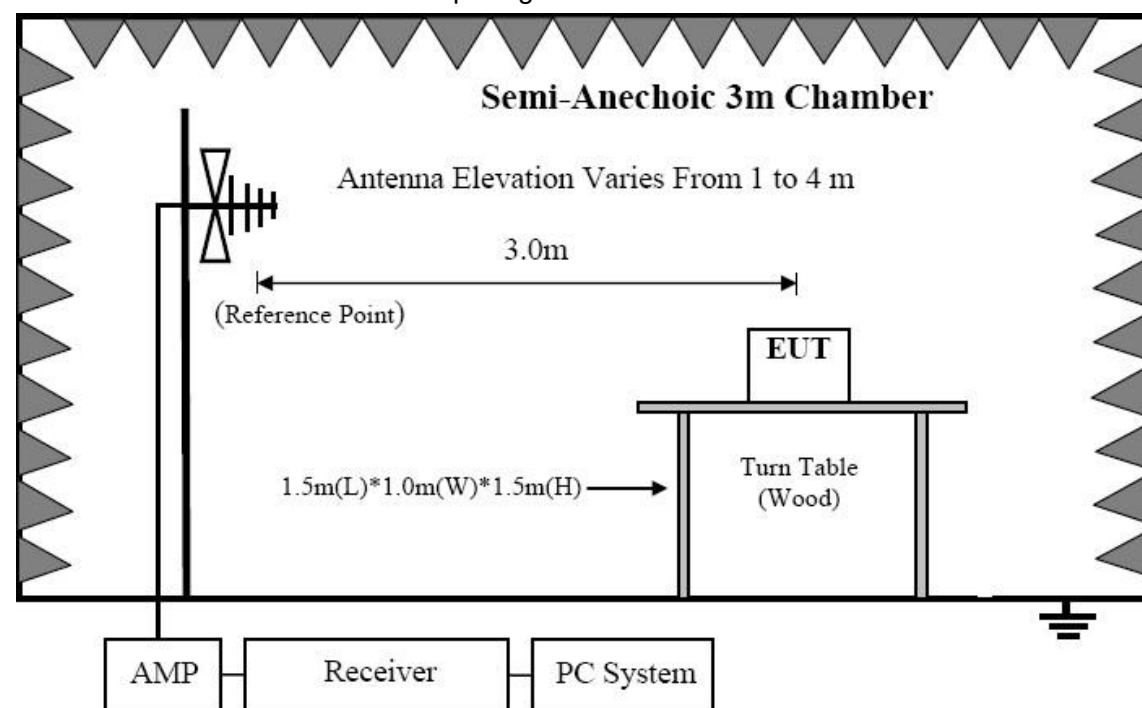
$$H_{3m} = H_{10m} + C_3 = 42 + 31.3 = 73.3 \text{ dB}\mu\text{A/m}$$

5.2. Block diagram of test setup

In 3m Anechoic Chamber Test Setup Diagram for 9kHz-30MHz



In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



5.3. Test procedure

- 1) Scan from 9kHz to 150kHz, find the maximum H-field frequency to measure.
- 2) The measuring bandwidth and detector type of the measurement receiver see below:

Frequency: (f)	Detector type	Measurement receiver bandwidth	Spectrum analyser bandwidth
$9 \text{ kHz} \leq f < 150 \text{ kHz}$	Quasi Peak	200 Hz	300 Hz
$150 \text{ kHz} \leq f < 30 \text{ MHz}$	Quasi Peak	9 kHz	10 KHz
$30 \text{ MHz} \leq f \leq 1\,000 \text{ MHz}$	Quasi Peak	120 kHz	100 kHz
NOTE: For the measurement of the ranges $6,765 \text{ MHz} \leq f \leq 6,795 \text{ MHz}$ and $11,810 \text{ MHz} \leq f \leq 15,310 \text{ MHz}$, the measurement bandwidth has to be 200 Hz respectively 300 Hz.			

- 3) Refer to ETSI EN 300 330 V2.1.1 Clause 6.2.4 and Annex C

5.4. Test result

Test Conditions Mode 4		Frequency [kHz]	Measured power (dB μ A/m) @3m	Corr. (dB)	Limit (dB μ A/m) @3m	Result
Volt	Temp					
Normal Volt	25°C	115	33.13	31.3	73.3	PASS
Normal Volt	25°C	130	27.70	31.3	97.3	PASS
Normal Volt	25°C	205	41.61	31.3	73.3	PASS

6. Transmitter spurious emissions

6.1. Limits

Below 30MHz (at 10m)

State (see note)	Frequency $9 \text{ kHz} \leq f < 10 \text{ MHz}$	Frequency $10 \text{ MHz} \leq f < 30 \text{ MHz}$
Operating	27 dB μ A/m at 9 kHz descending 10 dB/dec	-3.5 dB μ A/m
Standby	5.5 dB μ A/m at 9 kHz descending 10 dB/dec	-25 dB μ A/m
NOTE: "Operating" means mode 2, 3 and 4 according to Table 2; "standby" means mode 1 according to Table 2.		

Above 30MHz (at 3m)

State (see note)	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 790 MHz	Other frequencies between 30 MHz to 1 000 MHz
Operating	4 nW (-54dBm)	250 nW (-36dBm)
Standby	2 nW (-57dBm)	2 nW (-57dBm)
NOTE: "Operating" means mode 2, 3 and 4 according to Table 2; "standby" means mode 1 according to Table 2.		

6.2. Block diagram of test setup

The same as clause 5.2

6.3. Test procedure

- 1) Scan from 9kHz to 1GHz, find the maximum radiation frequency to measure.
- 2) The measuring bandwidth and detector type of the measurement receiver see below:

Frequency: (f)	Detector type	Measurement receiver bandwidth	Spectrum analyser bandwidth
$9 \text{ kHz} \leq f < 150 \text{ kHz}$	Quasi Peak	200 Hz	300 Hz
$150 \text{ kHz} \leq f < 30 \text{ MHz}$	Quasi Peak	9 kHz	10 KHz
$30 \text{ MHz} \leq f \leq 1\,000 \text{ MHz}$	Quasi Peak	120 kHz	100 kHz
NOTE: For the measurement of the ranges $6,765 \text{ MHz} \leq f \leq 6,795 \text{ MHz}$ and $11,810 \text{ MHz} \leq f \leq 15,310 \text{ MHz}$, the measurement bandwidth has to be 200 Hz respectively 300 Hz.			

- 3) Refer to ETSI EN 300 330 V2.1.1 Clause 6.2.8, 6.2.9 and Annex C

6.4. Test result

9 kHz-30MHz:

Mode 4:

Frequency (MHz)	Result @3m (dBuA/m)	Limit (dBuA/m) @10m	Corr. (dB)	Limit @3m (dBuA/m)	Antenna polarization	Conclusion
0.01	33.70	25.54	31.3	56.84	H	PASS
0.02	29.35	23.46	31.3	54.76	H	PASS
0.04	26.04	20.50	31.3	51.80	H	PASS
0.70	4.69	8.10	31.3	39.40	H	PASS
1.64	0.54	4.40	31.0	35.40	H	PASS
5.00	-1.98	-0.42	28.6	28.18	H	PASS
0.02	28.23	22.62	31.3	53.92	V	PASS
0.04	23.06	20.43	31.3	51.73	V	PASS
0.06	20.98	18.50	31.3	49.80	V	PASS
0.26	11.15	12.47	31.3	43.77	V	PASS
1.30	-1.93	5.43	31.1	36.53	V	PASS
3.15	-3.89	1.59	29.7	31.29	V	PASS

30MHz-1GHz:

Frequency (MHz)	Result (dBm)	Limit (dBm)	Antenna polarization	Conclusion
49.88	-73.58	-53.99	H	PASS
100.93	-62.54	-53.99	H	PASS
123.70	-62.18	-35.99	H	PASS
217.54	-62.38	-53.99	H	PASS
406.09	-69.35	-35.99	H	PASS
675.21	-64.06	-53.99	H	PASS
47.16	-59.97	-53.99	V	PASS
77.05	-58.46	-35.99	V	PASS
135.98	-68.72	-35.99	V	PASS
218.31	-66.79	-53.99	V	PASS
295.15	-65.66	-35.99	V	PASS
709.18	-62.95	-53.99	V	PASS

Note: All the emissions are measured with PK detector.

7. Transmitter out of band (OOB) emissions

7.1. Limits

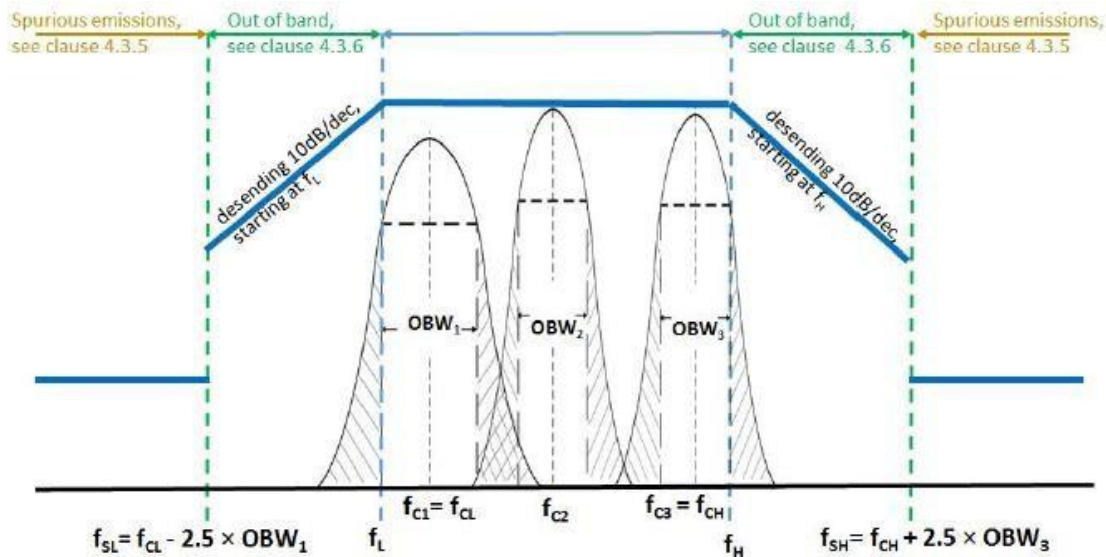


Figure 5: Out of band and spurious domain of a multi - frequency system
(during one WPT system cycle time)

7.2. Block diagram of test setup

The same as clause 5.2

7.3. Test procedure

- 1) Scan from 9kHz to 150kHz, find the maximum H-field frequency to measure.
- 2) The measuring bandwidth and detector type of the measurement receiver see below:

Frequency: (f)	Detector type	Measurement receiver bandwidth	Spectrum analyser bandwidth
$9 \text{ kHz} \leq f < 150 \text{ kHz}$	Quasi Peak	200 Hz	300 Hz
$150 \text{ kHz} \leq f < 30 \text{ MHz}$	Quasi Peak	9 kHz	10 KHz
$30 \text{ MHz} \leq f \leq 1\,000 \text{ MHz}$	Quasi Peak	120 kHz	100 kHz

NOTE: For the measurement of the ranges $6,765 \text{ MHz} \leq f \leq 6,795 \text{ MHz}$ and $11,810 \text{ MHz} \leq f \leq 15,310 \text{ MHz}$, the measurement bandwidth has to be 200 Hz respectively 300 Hz.

- 3) Refer to ETSI EN 300 330 V2.1.1 Annex C

7.4. Test result

The equipment met the requirement of this clause.

8. WPT system unwanted conducted emissions

Not applicable

Since this requirement applies to all WPT systems where the cable to the primary coil exceeds a length of 3m and where the cable is not installed in the ground or any metallic structures.

9. Receiver blocking

Not applicable

Since this requirement applies to all WPT systems operation in Mode 1, Mode 2 and Mode 3, but the EUT only operated in Mode

※※※※※END OF THE REPORT※※※※※

TEST REPORT

Report No: FCS202107010H01

Issued for

Applicant:	Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address:	1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China
Product Name:	Wireless Charger
Brand Name:	Guany
Model Name:	GY-Z8A
Series Model:	GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
Test Standard:	EN 62479: 2010
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

TEST RESULT CERTIFICATION

Applicant's Name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China
Manufacture's Name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China

Product Description

Product Name.....: Wireless Charger
Brand Name: Guany
Model Name.....: GY-Z8A
Series Model.....: GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
Test Standards.....: EN 62479: 2010

This device described above has been tested by FCS, and the test results show that the equipment under test (EUT) is in compliance with the 2014/53/EU RED Directive requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of FCS, this document may be altered or revised by FCS, personal only, and shall be noted in the revision of the document.

Date of Test.....:

Date (s) of performance of tests.: 02 Jul. 2021 ~ 13 Jul. 2021

Date of Issue.....: 13 Jul. 2021

Test Result.....: Pass

Tested by

:

Scott Shen

(Scott Shen)

Reviewed by

:

Duke Qian

(Duke Qian)

Approved by

:

Kait Chen

(Kait Chen)





TABLE OF CONTENT

Description	Page
1. GENERAL INFORMATION.....	4
1.1 Assess Standard.....	4
1.2 Assess Laboratory.....	4
2. CONFORMITY ASSESSMENT METHODS.....	4
3. ASSESS RESULT.....	6

1. GENERAL INFORMATION

1.1 Assess Standard

EN 62479:2010: Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (10 MHz – 300 GHz)

1.2 Assess Laboratory

Flux Compliance Service Laboratory
Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road
Hi-Tech Industrial, Song shan lake Dongguan, Guangdong, China

2. CONFORMITY ASSESSMENT METHODS

General considerations

Compliance of electromagnetic emissions from electronic and electrical equipment with the basic restrictions usually is determined by measurements and, in some cases, calculation of the exposure level. If the electrical power used by or radiated by the equipment is sufficiently low, the electromagnetic fields emitted will be incapable of producing exposures that exceed the basic restrictions.

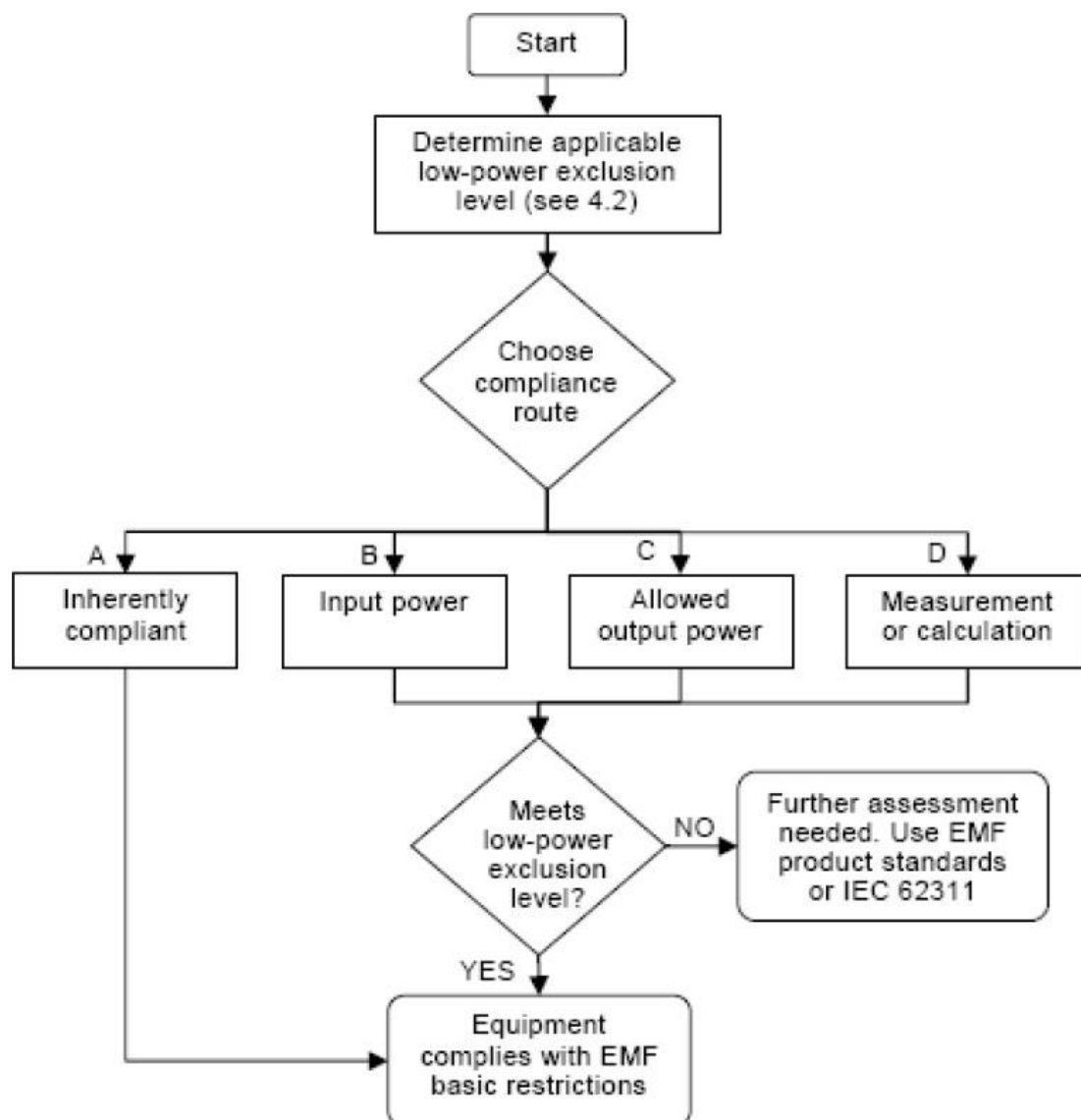
Four routes, as illustrated in Figure 1 and described as follows, can be used to demonstrate compliance with EN 62479

1. Typical usage, installation and the physical characteristics of equipment make it inherently compliant with the applicable EMF exposure levels such as those listed in the bibliography. This low-power equipment includes unintentional (or non-intentional) radiators, for example incandescent light bulbs and audio/visual (A/V) equipment, information technology equipment (ITE) and multimedia equipment (MME) that does not contain radio transmitters.

2. The input power level to electrical or electronic components that are capable of radiating electromagnetic energy in the relevant frequency range is so low that the available antenna power and/or the average total radiated power cannot exceed the low-power exclusion level defined in 4.2 of EN 62479

3. The available antenna power and/or the average total radiated power are limited by product standards for transmitters to levels below the low-power exclusion level defined in 4.2 of EN 62479
4. Measurements or calculations show that the available antenna power and/or the average total radiated power are below the low-power exclusion level defined in 4.2 of EN 62479

If none of these routes can be used, then the equipment is deemed to be out of the scope of this standard and EMF assessment for conformity assessment purposes shall be made according to other standards, such as IEC 62479 or other EMF product standards



Low-power exclusion level (P_{max})

Low-power electronic and electrical equipment is deemed to comply with the provisions of EN 62479 if it can be demonstrated using routes B, C or D that the available antenna power and/or the average total radiated power is less than or equal to the applicable low-power exclusion level P_{max}

For wireless devices operated close to a person's body with available antenna powers and/or average total radiated powers higher than the P_{max} values given in Annex A of EN 62479 the alternative P_{max} values (called P_{max}'), described in Annex B of EN 62479 can also be used.

3. ASSESS RESULT

It is found that the max result is -1.76dBm (0.67mW) less than 20 mW (please refer to the test report "FCS202107010W01". The SAR-based P_{max} follows Guideline / Standard: ICNIRP. Therefore, the EUT is deemed to comply with EMF basic restrictions

.....END OF REPORT.....



EMC TEST REPORT

Report No: FCS202107010E01

Issued for

Applicant:	Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address:	1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China
Product Name:	Wireless Charger
Brand Name:	Guany
Model Name:	GY-Z8A
Series Model:	GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
Test Standard:	EN55032:2015; EN61000-3-2:2014 EN61000-3-3:2013, EN55035:2017 ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

TEST RESULT CERTIFICATION

Applicant's Name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd

Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China

Manufacture's Name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd

Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China

Product Description

Product Name.....: Wireless Charger

Brand Name: Guany

Model Name.....: GY-Z8A

Series Model.....: GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S

Test Standards.....: EN55032:2015; EN61000-3-2:2014
EN61000-3-3:2013, EN55035:2017
ETSI EN 301 489-1 V2.2.3 (2019-11)
ETSI EN 301 489-3 V2.1.1 (2019-03)

This device described above has been tested by FCS, and the test results show that the equipment under test (EUT) is in compliance with the 2014/53/EU RED Directive requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of FCS, this document may be altered or revised by FCS, personal only, and shall be noted in the revision of the document.

Date of Test.....:

Date (s) of performance of tests.: 02 Jul. 2021 ~ 13 Jul. 2021

Date of Issue.....: 13 Jul. 2021

Test Result.....: Pass

Tested by : Scott Shen
(Scott Shen)

Reviewed by : Duke Qian
(Duke Qian)

Approved by : Kait Chen
(Kait Chen)



TABLE OF CONTENTS

1. TEST SUMMARY.....	5
1.1 TEST FACTORY.....	6
1.2 MEASUREMENT UNCERTAINTY.....	6
2. GENERAL INFORMATION.....	7
2.1 GENERAL DESCRIPTION OF EUT.....	7
2.2 DESCRIPTION OF TEST MODES.....	8
2.3 DESCRIPTION OF TEST SETUP.....	8
2.4 MEASUREMENT INSTRUMENTS LIST.....	9
3. EMC EMISSION TEST.....	12
3.1 RADIATED EMISSION MEASUREMENT.....	16
4. EMC IMMUNITY TEST.....	20
4.1 GENERAL PERFORMANCE CRITERIA.....	20
4.2 ESD TESTING.....	22
4.3 RS TESTING.....	25
APPENDIX I- TEST SETUP.....	28

**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	13 Jul. 2021	FCS202107010E01	ALL	Initial Issue
Note: Format version of the report -V01				

1. TEST SUMMARY

Test procedures according to the technical standards:

ETSI EN 301 489-1 V2.2.3 (2019-11)

ETSI EN 301 489-3 V2.1.1 (2019-03)

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
EN55032:2015	Conducted Emission On AC And Telecom Port 150kHz to 30MHz	Class B	N/A	
	Radiated Emission 30MHz to 1000MHz	Class B	PASS	
	Radiated Emission 1GHz to 6GHz	Class B	PASS	NOTE (1)
EN61000-3-2:2014	Harmonic Current Emission	Class A	N/A	NOTE (2)
EN61000-3-3:2013	Voltage Fluctuations & Flicker	-----	N/A	
EMC Immunity				
Section	Test Item	Performance Criteria	Judgment	Remark
EN61000-4-2:2009	Electrostatic Discharge	B	PASS	
EN61000-4-3:2006+A1:2008+A2:2010	RF electromagnetic field	A	PASS	
EN61000-4-4:2012	Fast transients	B	N/A	
EN61000-4-5:2006	Surges	B	N/A	
EN61000-4-6:2009	Injected Current	A	N/A	
EN61000-4-11:2004	Volt. Interruptions Volt. Dips	B / C / C / C	N/A	NOTE (3)

Note:

(1) If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.

If the highest frequency of the internal sources of the EUT is between 500 MHz and 1GHz, measurement shall only be made up to 5 GHz.

If the highest frequency of the internal sources of the EUT is above 1 GHz, the Measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.

(2) The power consumption of EUT is less than 75W and no Limits apply.

(3) Voltage dip: 100% reduction – Performance Criteria B

(4) cription, the test will not be executed.

1.1 TEST FACTORY

Company Name:	Flux Compliance Service Laboratory.
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan,

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
EACC01	ANSI	9KHz-150KHz	2.88	
		150 KHz ~ 30MHz	2.67	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
EACC02	ANSI	30MHz ~ 200MHz	3.73	
		200MHz ~ 1000MHz	3.92	
		1GHz ~ 6 GHz	3.31	

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Name	Wireless Charger
Brand Name	Guany
Model Name	GY-Z8A
Series Model	GY-Z8, GY-Z8B, GY-Z8C, GY-Z8D, GY-Z8S, GY-Z11, GY-Z11S
Model Difference	Only different in model name
Power Supply	Input: DC 9V/2A Phone Output: 5W, 7.5W, 10W, 15W Headphone Output: 3W Watch Output: 2.5W
Hardware version number	V1.0
Software version number	V1.0

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Phone 5W, Watch 2.5W, Headset 3W
Mode 2	Phone 7.5W, Watch 2.5W, Headset 3W
Mode 3	Phone 10W, Watch 2.5W, Headset 3W
Mode 4	Phone 15W, Watch 2.5W, Headset 3W

Note: The test modes were carried out for all operation modes(include link and idle).

The worst test mode for the final conducted data of EUT is Mode 2 and the worst test mode for radiation data is Mode 5, test data display.

2.3 DESCRIPTION OF TEST SETUP

System Diagram of Connections Between EUT and Simulators

2.4 MEASUREMENT INSTRUMENTS LIST

2.4.1 CONDUCTED TEST SITE

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2020.10.13	2021.10.12
LISN	R&S	ENV216	101242	2020.10.13	2021.10.12
LISN	ETS	3810/2NM	00023625	2020.10.13	2021.10.12
Absorbing Clamp	R&S	MDS-21	100668	2020.10.13	2021.10.12
CE Cable	N/A	C01	N/A	2020.10.13	2021.10.12
Temperature & Humidity	Mieo	HH660	N/A	2020.10.13	2021.10.12
Testing Software	EZ-EMC(Ver.STSLAB-03A1 CE)				

2.4.2 RADIATED TEST SITE

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2020.10.13	2021.10.12
Bi-log Antenna	TESEQ	CBL6111D	34678	2020.10.13	2021.10.12
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1343	2020.10.13	2021.10.12
Pre-amplifier(1G-18G)	SKET	LNPA-01018G-45	SK2018080901	2020.10.13	2021.10.12
Pre-amplifier(0.1M-3GHz)	EM	EM330	060665	2020.10.13	2021.10.12
Spectrum Analyzer	Agilent	N9020A	MY49100060	2020.10.13	2021.10.12
RE Cable (9K-1G)	N/A	R01	N/A	2020.10.13	2021.10.12
RE Cable (1G-18G)	N/A	R02	N/A	2020.10.13	2021.10.12
Temperature & Humidity	Mieo	HH660	N/A	2020.10.13	2021.10.12
Testing Software	EZ-EMC(Ver.STSLAB-03A1 RE)				

2.4.3 HARMONICS AND FLICKER

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Harmonic Voltage & Flicker	LAPLACE	AC 2000A	311217	2020.10.13	2021.10.12
AC Power Source	MTONI	PHF-5010	631169	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMW500	117239	2020.10.13	2021.10.12

2.4.4 ESD

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
ESD TEST GENERATOR	HAEFELY	ONYX 16	173835	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMW500	117239	2020.10.13	2021.10.12

2.4.5 SURGE, EFT/BURST, VOLTAGE INTERRUPTION/DIPS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Surger Generator	HTEC	HCWG 10	152101	2020.10.13	2021.10.12
Surger Generator	HTEC	TC0B4	143903	2020.10.13	2021.10.12
VOLTAGE DIPS & INTERRUPTIONS Generator	HAEFELY	ECOMPACT4	4770290/00	2020.10.13	2021.10.12
EFT/B Generator	HTEC	HEFT 51	143801	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMW500	117239	2020.10.13	2021.10.12

2.4.6 RS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
RF Relay matrix tsj	TSJ	RFM-S621	04261	2020.10.13	2021.10.12
Power meter	Agilent	E4419B	MY45102079	2020.10.13	2021.10.12
Power Sensor	Agilent	8481A	MY41097696	2020.10.13	2021.10.12
Power Sensor	Agilent	8481A	MY41097697	2020.10.13	2021.10.12
Signal Generator	Agilent	N5182A	MY46240556	2020.10.13	2021.10.12
Power Amplifier	MICOTOP	MPA-80-1000-250	1711488	2020.10.13	2021.10.12
Power Amplifier	MICOTOP	MPA-1000-3000-75	MPA1706275	2020.10.13	2021.10.12
Logarithmic-periodic Antenna	Schwarzbeck	VULP9118E	820	2020.10.13	2021.10.12
Microwave Horn Antenna	Schwarzbeck	BBHA 9120LF	F01008	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMU200	111764	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMW500	117239	2020.10.13	2021.10.12
Audio Analyzer	R&S	UPV	100419	2020.10.13	2021.10.12
Power Amplifier	MICOTOP	MPA-3000-6000-50	1711489	2020.10.13	2021.10.12

2.4.7 INJECTION CURRENT

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
CS	SCHLODER	CDG-6000-25	126A1280/2014	2020.10.13	2021.10.12
CDN	Frankonia	CDN-M2+3	A2210275/2014	2020.10.13	2021.10.12
EM Clamp	SCHLODER	EMCL-20	132A1283	2020.10.13	2021.10.12
Attenuator	Nemtest	ATT-6DB-100	A100W224	2020.10.13	2021.10.12
Audio Power Amplifier	B&K	2716-C-001	2610976	2020.10.13	2021.10.12

Mouth Simulator	B&K	4227	2630621	2020.10.13	2021.10.12
Sound Calibrator	B&K	4231	2637486	2020.10.13	2021.10.12
1/2" Pressure-field Microphone	B&K	4192	2641678	2020.10.13	2021.10.12
Ear Simulator for Telephonometry	B&K	4185	2553612	2020.10.13	2021.10.12
Telephone Test Head	B&K	4185	2631728	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMU200	111764	2020.10.13	2021.10.12
Audio Analyzer	R&S	UPV	100419	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMW500	117239	2020.10.13	2021.10.12

2.4.8 PFMF

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
MF Generator	HTEC	HMFG-COMB	143903	2020.10.13	2021.10.12
Magnetic field coil	HTEC	HCOIL 100	143808	2020.10.13	2021.10.12
Universal Radio Communication Tester	R&S	CMW500	117239	2020.10.13	2021.10.12

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 REQUIREMENTS FOR CONDUCTED EMISSIONS FROM THE AC MAINS POWER PORTS OF THE CLASS A EQUIPMENT

FREQUENCY (MHz)	Coupling device	Detector type / bandwidth	Class A limits dB(μ V)
0.15 - 0.5	AMN	Quasi Peak / 9 kHz	79
0.50 - 30			63
0.15 - 0.5	AMN	Average / 9 kHz	66
0.50 - 30			60

3.1.2 REQUIREMENTS FOR CONDUCTED EMISSIONS FROM THE AC MAINS POWER PORTS OF THE CLASS B EQUIPMENT

FREQUENCY (MHz)	Coupling device	Detector type / bandwidth	Class B limits dB(μ V)
0.15 - 0.5	AMN	Quasi Peak / 9 kHz	66 - 56*
0.50 - 5			56
5 - 30			60
0.15 - 0.5	AMN	Average / 9 kHz	56 - 46*
0.50 - 5			46
5 - 30			50

Note:

- C. The tighter limit applies at the band edges.
- D. The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

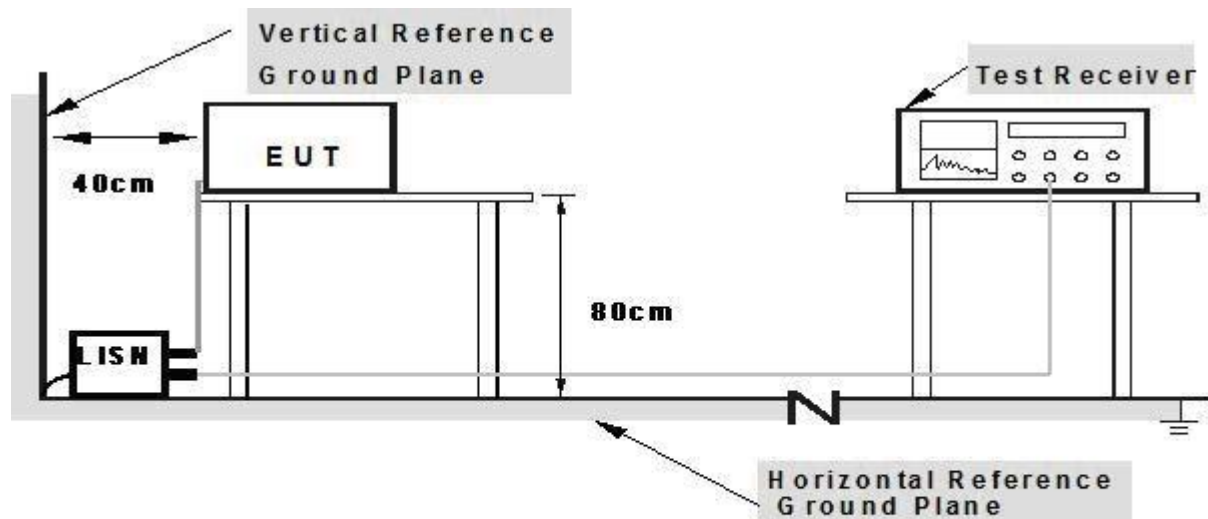
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.3 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

• TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the following during the testing.

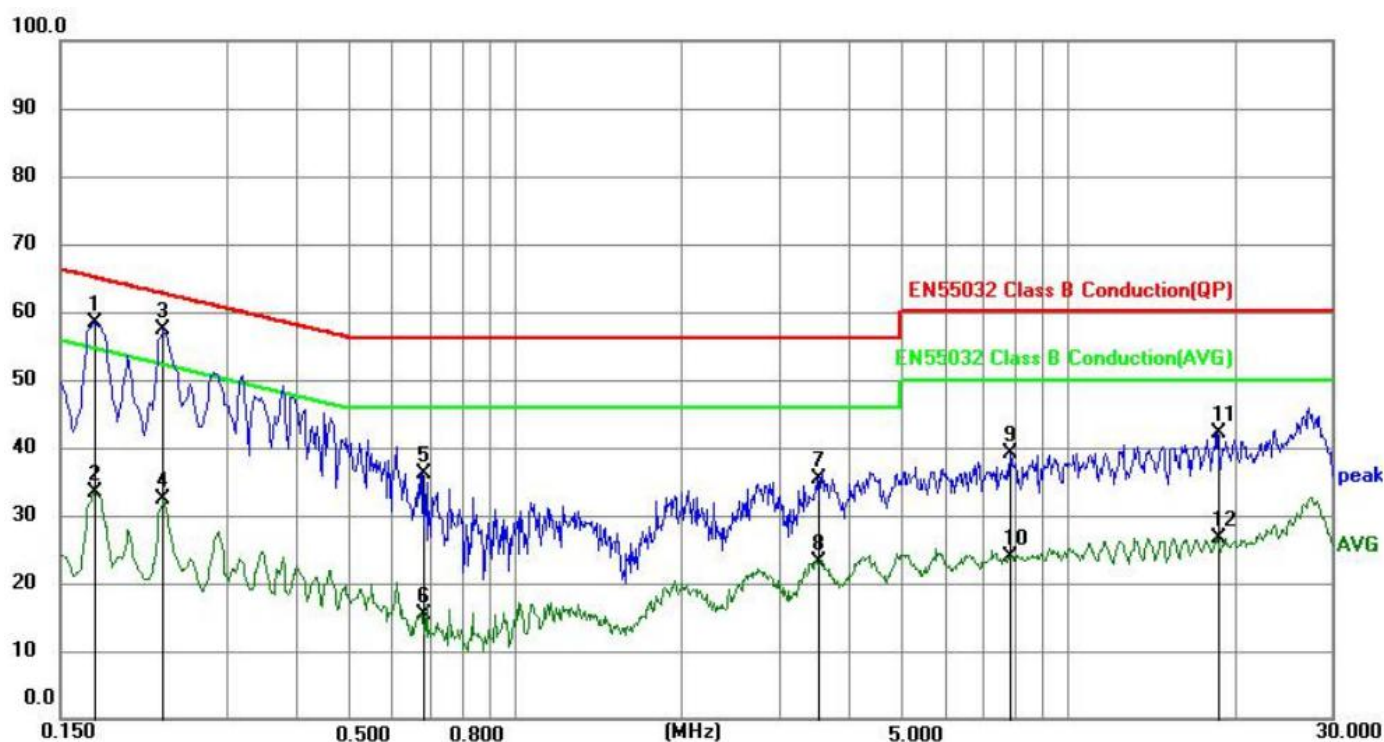
3.1.5 TEST RESULTS

Temperature:	25.3℃	Relative Humidity:	62%
Phase:	L	Test Mode:	Mode 4(Worst)
Test Voltage:	DC 5V		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1725	48.66	9.78	58.44	64.84	6.40	QP
2	0.1725	23.60	9.78	33.38	54.84	21.46	AVG
3	0.2310	47.62	9.80	57.42	62.41	4.99	QP
4	0.2310	22.64	9.80	32.44	52.41	19.97	AVG
5	0.6809	26.34	9.88	36.22	56.00	19.78	QP
6	0.6809	5.44	9.88	15.32	46.00	30.68	AVG
7	3.5250	17.84	17.49	35.33	56.00	20.67	QP
8	3.5250	5.63	17.49	23.12	46.00	22.88	AVG
9	7.8855	19.04	20.00	39.04	60.00	20.96	QP
10	7.8855	3.86	20.00	23.86	50.00	26.14	AVG
11	18.6494	22.08	20.16	42.24	60.00	17.76	QP
12	18.6494	6.41	20.16	26.57	50.00	23.43	AVG

Remark:

(A) All readings are Quasi-Peak and Average values.

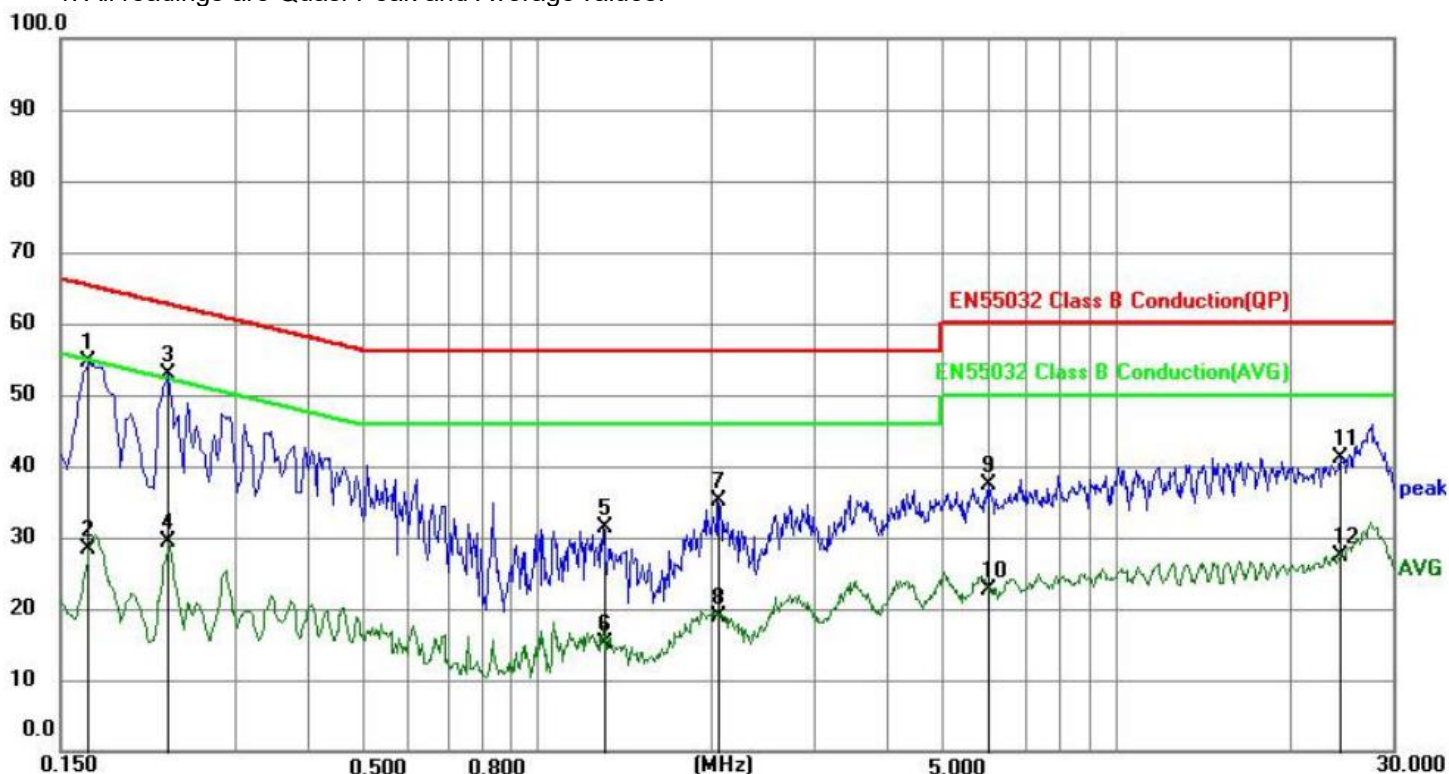


Temperature:	25.3°C	Relative Humidity:	62%
Phase:	N	Test Mode:	Mode 4(Worst)
Test Voltage:	DC 5V		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1680	44.79	9.78	54.57	65.06	10.49	QP
2	0.1680	18.63	9.78	28.41	55.06	26.65	AVG
3	0.2310	43.03	9.80	52.83	62.41	9.58	QP
4	0.2310	19.59	9.80	29.39	52.41	23.02	AVG
5	1.2975	19.85	11.41	31.26	56.00	24.74	QP
6	1.2975	3.66	11.41	15.07	46.00	30.93	AVG
7	2.0535	20.19	15.03	35.22	56.00	20.78	QP
8	2.0535	3.83	15.03	18.86	46.00	27.14	AVG
9	6.0270	17.31	20.07	37.38	60.00	22.62	QP
10	6.0270	2.64	20.07	22.71	50.00	27.29	AVG
11	24.3915	20.93	20.27	41.20	60.00	18.80	QP
12	24.3915	7.22	20.27	27.49	50.00	22.51	AVG

Remark:

1. All readings are Quasi-Peak and Average values.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

FREQUENCY (MHz)	Class A		Class B	
	At 10m	At 3m	At 10m	At 3m
	dBuV/m	dBuV/m	dBuV/m	dBuV/m
30 – 230	40	50	30	40
230 – 1000	47	57	37	47

3.2.2 LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (at 3m) dBuV/m		Class B (at 3m) dBuV/m	
	Peak	AVG	Peak	AVG
1000-3000	76	56	70	50
3000-6000	80	60	74	54

Notes:

- (1) The limit for radiated test was performed according to CISPR 32.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.3 TEST PROCEDURE

- e. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- f. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- g. The height of the equipment shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- h. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- i. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- j. For the actual test configuration, please refer to the related Item –EUT TestPhotos.

3.2.4 TEST SETUP

(B) Radiated Emission Test Setup Frequency Below 1 GHz

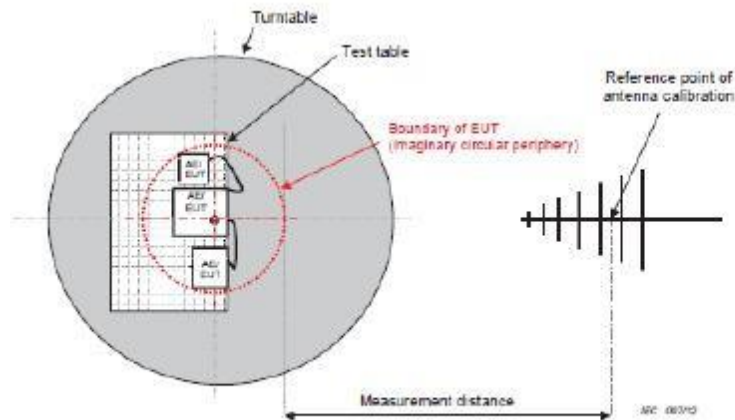


Figure C.1 – Measurement distance

(C) Radiated Emission Test Setup Frequency Above 1GHz

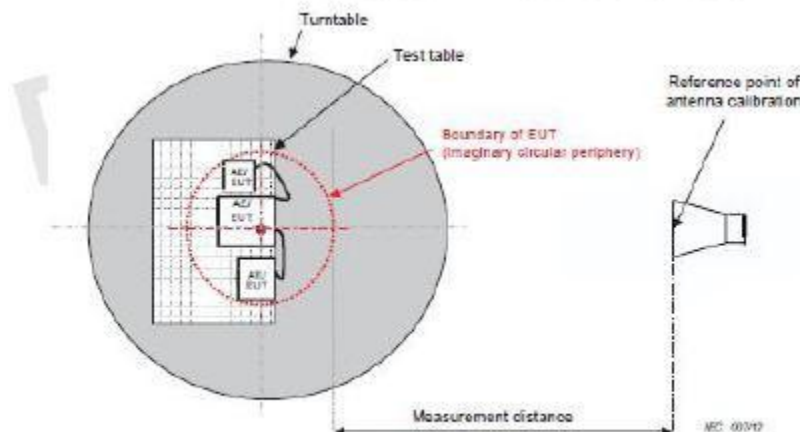


Figure C.1 – Measurement distance

3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS(30 - 1000 MHz)

Temperature:	22.1℃	Relative Humidity:	56%
Phase:	Horizontal	Test Mode:	Mode 4(Worst)

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	31.0703	50.24	-18.83	31.41	40.00	-8.59	QP
2	69.8450	51.95	-20.38	31.57	40.00	-8.43	QP
3	114.1136	48.91	-18.82	30.09	40.00	-9.91	QP
4	188.4122	59.41	-19.87	39.54	40.00	-0.46	QP
5	297.2241	57.10	-16.13	40.97	47.00	-6.03	QP
6	420.5803	47.98	-14.65	33.33	47.00	-13.67	QP

Remark:

2. All readings are Quasi-Peak.

3. Margin = Result (Result =Reading + Factor)-Limit

4. Factor= Cable Loss +Antenna Factor-Amplifier Gain

80.0 dBuV/m



Temperature:	22.1℃	Relative Humidity:	56%
Phase:	Vertical	Test Mode:	Mode 4(Worst)

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.6378	76.99	-40.24	36.75	40.00	-3.25	QP
2	44.2751	73.40	-40.24	33.16	40.00	-6.84	QP
3	70.0902	76.42	-40.24	36.18	40.00	-3.82	QP
4	158.6676	79.72	-40.24	39.48	40.00	-0.52	QP
5	196.5098	79.44	-40.24	39.20	40.00	-0.80	QP
6	263.8190	82.86	-40.24	42.62	47.00	-4.38	QP

Remark:

1. All readings are Quasi-Peak.
2. Margin = Result (Result =Reading + Factor)-Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain

80.0 dBuV/m



4. EMC IMMUNITY TEST

4.1 GENERAL PERFORMANCE CRITERIA

4.1.1 PERFORMANCE CRITERIA (Bluetooth)

According to **ETSI EN 301 489-17** standard, the general performance criteria as following:

Criteria	During the test	After the test
A	Shall operate as intended May show degradation of performance (see note 1) Shall be no loss of function Shall be no unintentional transmissions	Shall operate as intended Shall be no degradation of performance (see note 2) Shall be no loss of function Shall be no loss of stored data or user programmable functions
B	May show loss of function (one or more) May show degradation of performance (see note 1) No unintentional transmissions	Functions shall be self-recoverable Shall operate as intended after recovering Shall be no degradation of performance (see note 2) Shall be no loss of stored data or user programmable functions
C	May be loss of function (one or more)	Functions shall be recoverable by the operator Shall operate as intended after recovering Shall be no degradation of performance (see note 2)

NOTE 1: Degradation of performance during the test is understood as a degradation to a level not below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

NOTE 2: no degradation of performance after the test is understood as any degradation below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. After the test no change of actual operating data or user retrievable data is allowed. If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

PERFORMANCE FOR TT

The performance criteria B shall apply, except for voltage dips of 100 ms and voltage interruptions of 5 000 ms duration, for which performance criteria C shall apply. Tests shall be repeated with the EUT in standby mode (if applicable) to ensure that unintentional transmission does not occur. In systems using acknowledgement signals, it is recognized that an acknowledgement (ACK) or not-acknowledgement (NACK) transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

PERFORMANCE FOR TR

The performance criteria B shall apply, except for voltage dips of 100 ms and voltage interruptions of 5 000 ms duration for which performance criteria C shall apply. Where the EUT is a transceiver, under no circumstances, shall the transmitter operate unintentionally during the test. In systems using acknowledgement signals, it is recognized that an ACK or NACK transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

PERFORMANCE FOR CT

The performance criteria A shall apply. Tests shall be repeated with the EUT in standby mode (if applicable) to ensure that unintentional transmission does not occur. In systems using acknowledgement signals, it is recognized that an Acknowledgement (ACK) or Not Acknowledgement (NACK) transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

PERFORMANCE FOR CR

The performance criteria A shall apply. Where the EUT is a transceiver, under no circumstances, shall the transmitter operate unintentionally during the test. In systems using acknowledgement signals, it is recognized that an ACK or NACK transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

4.2 ESD TESTING

4.2.1 TEST SPECIFICATION

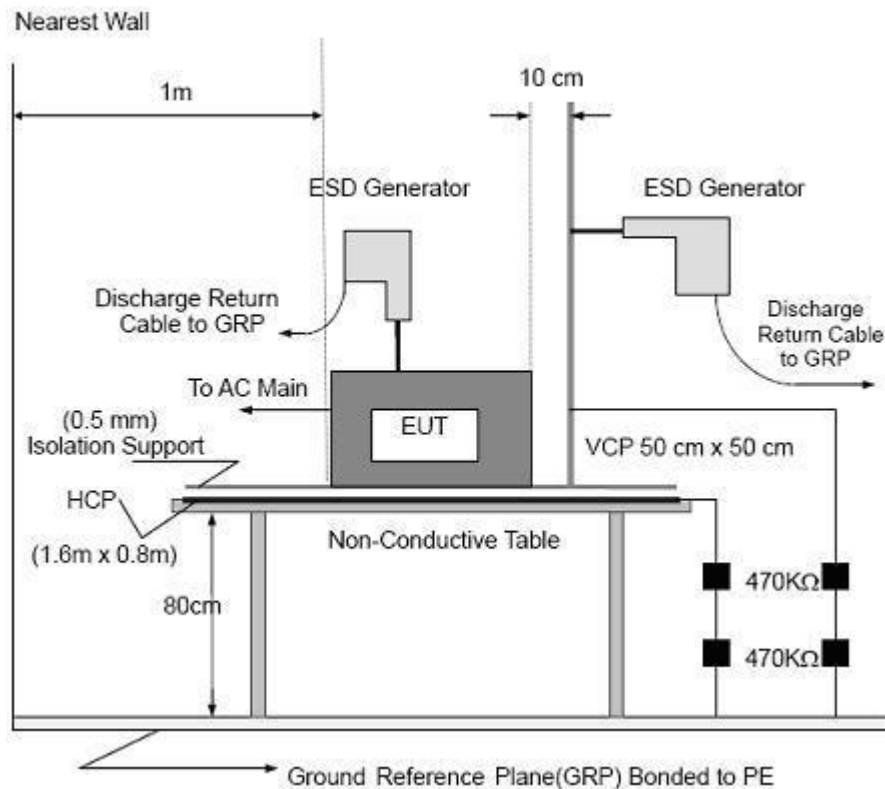
Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Required Performance:	B
Discharge Voltage:	Air Discharge: 2KV/4KV/8KV (Direct) Contact Discharge: 2KV/4KV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 200 times in total
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

4.2.2 TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

- a. Contact discharge was applied to conductive surfaces and coupling planes of the EUT.
During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second. The EUT shall be exposed to at least 200 discharges, 100 each at negative and positive polarity, at a minimum of four test points. One of the test points shall be subjected to at least 50 indirect discharges to the center of the front edge of the horizontal coupling plane. The remaining three test points shall each receive at least 50 direct contact discharges.
If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode. Test shall be performed at a maximum repetition rate of one discharge per second.
Vertical Coupling Plane (VCP):
The coupling plane of dimensions 0.5m x 0.5m, is placed parallel to and positioned at a distance 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
Horizontal Coupling Plane (HCP):
The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
- b. Air discharges at insulation surfaces of the EUT.
It was at least ten single discharges with positive and negative at the same selected point.

4.2.3 TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940k total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of 1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.

4.2.4 TEST RESULT

Temperature:	21.8℃	Relative Humidity:	45%
Pressure:	1010hPa	Test Mode:	Mode1

BT TEST RESULT

Discharge Level	Polarity	Test Points	Contact Discharge	Air Discharge	Criterion	Test Result
4	+/-	VCP/HCP	N/A	N/A	B	PASS
2,4,8	+/-	Gap, plastic shell, button	N/A	NOTE	B	PASS

Note: The EUT function was correct during the test.

Red Dot —Air Discharged

Blue Dot —Contact Discharged

4.3 RS TESTING

4.3.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance:	A
Frequency Range:	80 MHz - 6000 MHz
Field Strength:	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3 m
Antenna Height:	1.5 m
Dwell Time:	at least 3 seconds

4.3.2 TEST PROCEDURE

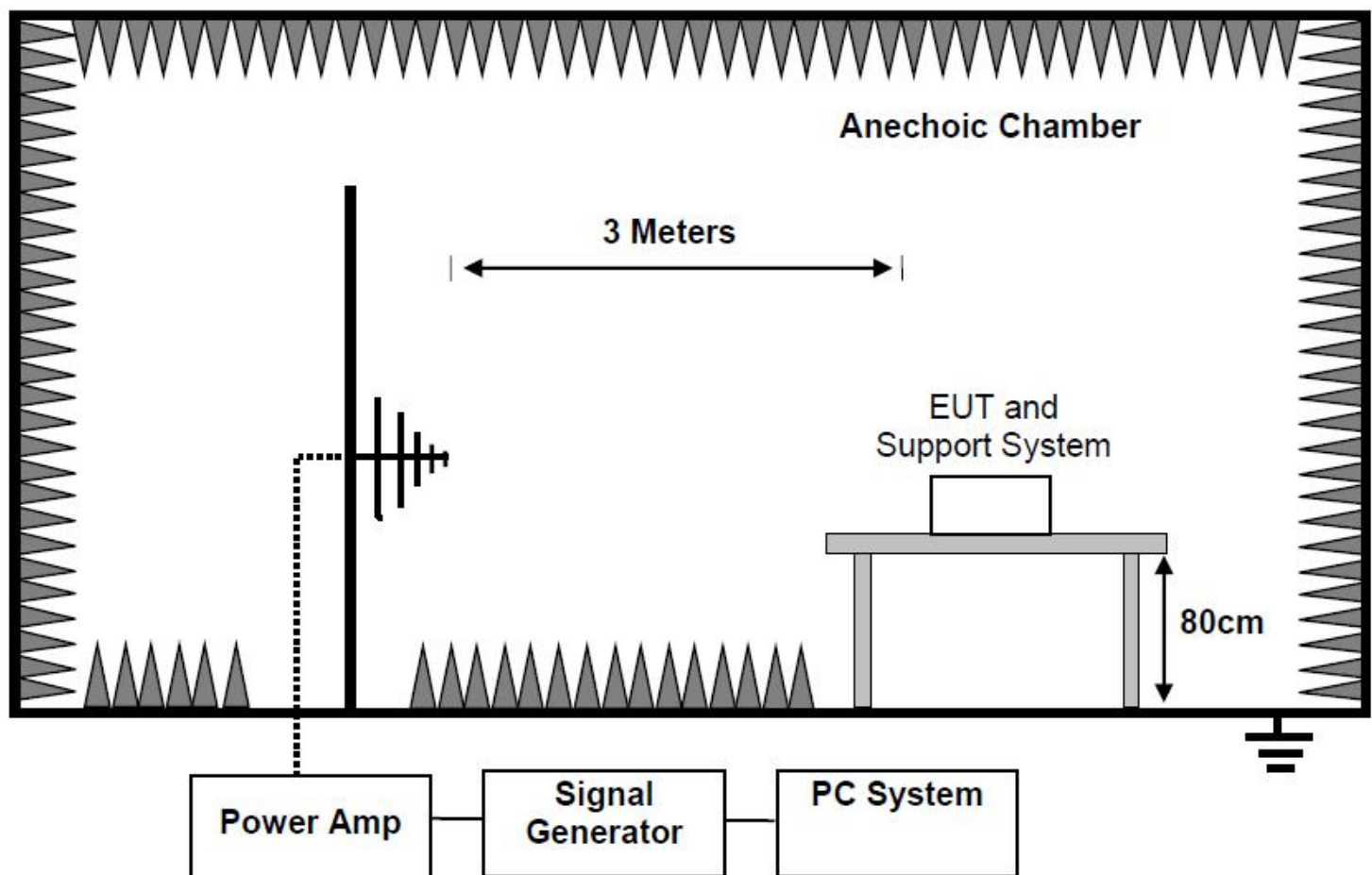
The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber.

The testing distance from antenna to the EUT was 3 meters.

The other condition as following manner:

- The frequency range is swept from 80 MHz to 6000 MHz with the signal 80% amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed 1.5×10^{-3} decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

4.3.3 TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

4.3.4 TEST RESULTS

Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 12V	Test Mode:	Mode1

BT TEST RESULTS

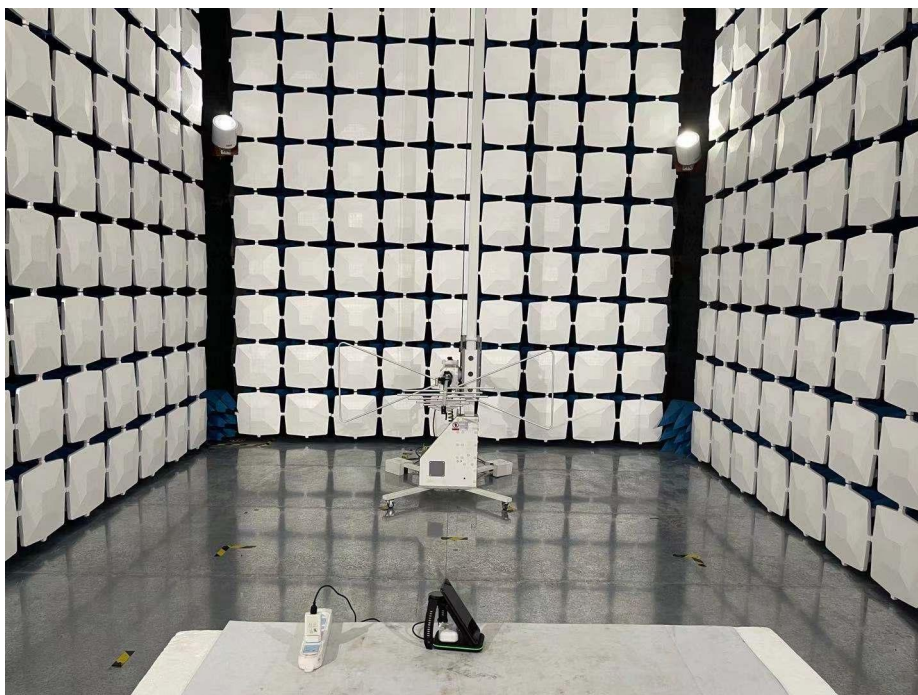
Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Observation	Perform. Criteria	Results	Judgment
80-6000	H / V	3 V/m (rms) AM Modulated 1000Hz, 80%	Front	CT,CR	A	A	PASS
			Rear				
			Left				
			Right				

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions.

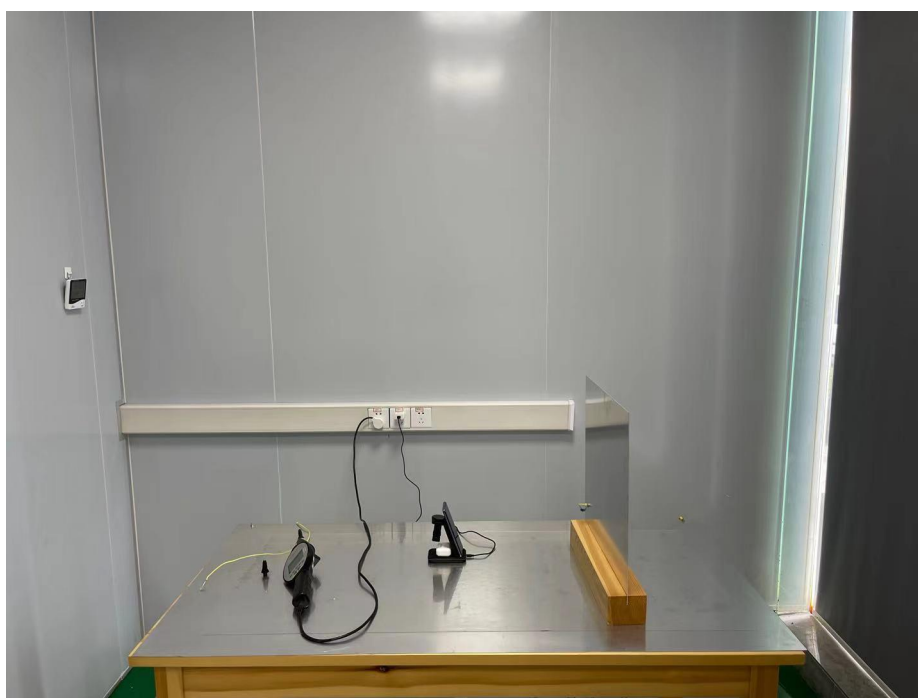
Note:

- 1) N/A - denotes test is not applicable in this test report.
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 4) Criteria C: The system shut down during the test.

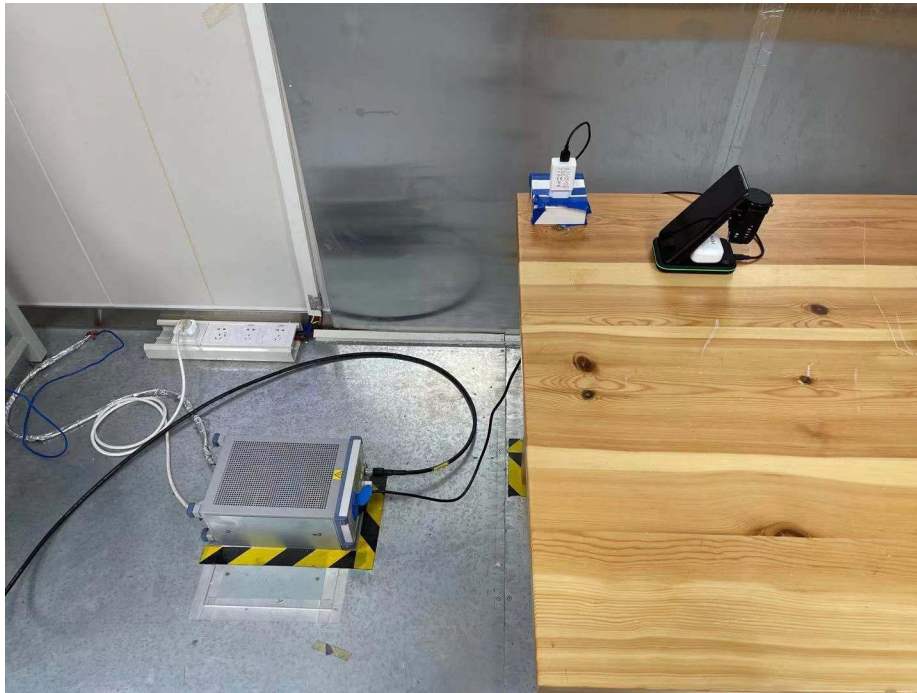
APPENDIX I- TEST SETUP RE



ESD



CE



※※※※※END OF THE REPORT※※※※※

Guanyu(Dongguan) Intelligent Technology Co.,Ltd

LVD REPORT

Prepared For:	Guanyu(Dongguan) Intelligent Technology Co.,Ltd 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China
Manufacturer :	Guanyu(Dongguan) Intelligent Technology Co.,Ltd 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China
Trade Mark:	Guany
Product Name:	Wireless Charger
Main Test Model:	GY-Z8A
Additional Models :	GY-Z8, GY-Z8B, GY-Z8C, GY-Z8D, GY-Z8S, GY-Z11, GY-Z11S
Prepared By:	TST Testing Technology Co., Ltd. Room 201, No.20, Houjie Avenue East, Houjie Town, Dongguan City, Guangdong, China
Test Date:	Jul. 09, 2021 To Jul. 14, 2021
Date of Report:	Jul. 14, 2021
Report No.:	TST202107Q3169-1SR



Test Report J62368-1 Audio/video, information and communication technology equipment – Part 1: Safety requirements	
Testing laboratory	: TST Testing Technology Co., Ltd.
Address	: Room 201, No.20, Houjie Avenue East, Houjie Town, Dongguan City, Guangdong, China
Testing location	: TST Testing Technology Co., Ltd.
Applicant	: Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address	: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang' an town ,Dongguan City ,Guangdong China
Standard	: J62368-1(H30)
Procedure deviation	: N/A.
Non-standard test method	: N/A.
Type of test object	: Wireless Charger
Trademark	: Guany
Model/type reference	: GY-Z8A
Rating	: Normal working voltage: 9V Over voltage: 13.3V Under voltage:4.3V
Manufacturer	: Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address	: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang' an town ,Dongguan City ,Guangdong China
Test item particulars:	
Equipment mobility	: Portable equipment
Operation condition	: Continuous
Class of equipment	: Class III
Protection against ingress of water .:	: N/A.
Possible test case verdicts :	
test case does not apply to the test object	: N(.A.)
test object does meet the requirement	: P(ass)
test object does not meet the requirement	: F(ail)



General remarks:	
<p>"(see remark #)" refers to a remark appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a comma is used as the decimal separator. The test results presented in this report relate only to the object tested. This report shall not be reproduced except in full without the written approval of the testing laboratory.</p>	<p>Attached with:</p> <p>A. photo documentation</p>

Wireless Charger

Model : GY-Z8A

Rating: Normal working voltage: 9V

Over voltage: 13.3V

Under voltage:4.3V



Guanyu(Dongguan) Intelligent Technology Co.,Ltd



Name and address of the testing laboratory : TST Testing Technology(Dongguan) Co.,Ltd.
Room 201, No.20, Houjie Avenue East, Houjie
Town, Dongguan City, Guangdong, China

Test by : Grace Jul. 14, 2021
Signature Date

Technician
Title

Reported by : Apple Li Jul. 14, 2021
Signature Date

Project Engineer
Title

Approved by : Andy Jul. 14, 2021
Signature Date

Andy/ Manager



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components		P
4.1.15	Markings and instructions	See Annex F	P
4.4.5	Safeguard robustness		N/A
4.5	Explosion		N/A
5	ELECTRICALLY-CAUSED INJURY		P
5.2	Classification of electrical energy sources	ES1.	P
5.2.1	Electrical energy source classifications		P
5.2.2	ES1, ES2 and ES3 limits	ES1	P
5.2.2.2	Steady-state voltage and current		N/A
5.2.2.3	Capacitor		N/A
5.2.2.4	Single pulses		N/A
5.2.2.5	Repetitive pulses		N/A
5.2.2.6	Ringling signals		N/A
5.2.2.7	Audio signals		N/A
5.3	Protection against electrical energy sources	ES1.	P
5.3.2.2	Safeguards between ES2 and ordinary persons		N/A
5.3.2.3	Safeguards between ES3 and ordinary persons		N/A
5.3.3.2	Safeguards between ES3 and instructed persons		N/A
5.3.4.2	Safeguards between ES3 and skilled persons		N/A
5.3.5.2	Safeguard between ES1, ES2 and ES3		N/A
5.3.5.3	Protection of ES2 against ES3		N/A
5.3.6.1	Accessibility to electrical energy sources and safeguards for ordinary persons		N/A
	Accessibility to electrical energy sources and safeguards for instructed persons are prevented from access to.....:		N/A
5.3.6.2	Contact requirements Air gap (mm)		N/A
5.3.6.4	Terminals for connecting stripped wire		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4	Insulation materials and requirements		N/A
5.4.1.2	Properties of insulating material	No insulation considered	N/A
5.4.1.3	Humidity conditioning		P
	Relative humidity (%)..... :	95%	
	Temperature (°C), :	28°C	
	Duration (h)..... :	48h	
5.4.1.4	Frequency:		N/A
	Alternative electric strength test for solid insulation		
5.4.1.5	Maximum operating temperature for insulating materials	See appended table 5.4.1.5	N/A
5.4.1.6	Pollution degree:		N/A
5.4.1.7	Insulation in transformers with varying dimensions		N/A
5.4.1.8	Insulation in circuits generating starting pulses		N/A
5.4.1.9	Determination of working voltage		N/A
5.4.1.10	Insulating surfaces		N/A
5.4.1.11	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.11.2	Vicat softening temperature (°C):		N/A
5.4.1.11.3	Ball pressure	See appended table 5.4.1.11.3	N/A
5.4.2	Clearances		N/A
5.4.2.3	Determination of Clearances		N/A
	Transient Voltage.....:		
	Required withstand voltage:		
	Measured peak working voltage.....:		
5.4.2.4	Determination of transient voltages		N/A
5.4.2.5	Determination of required withstand voltage		N/A
5.4.2.6	Measurement of transient voltage levels		N/A
5.4.2.7	Determination of the minimum clearance		N/A
5.4.2.8	Minimum clearances based on electric strength test		N/A
5.4.2.9	Multiplication factors for clearances and test voltage.....:		N/A
5.4.3	Creepage distances		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.3.1	General		N/A
5.4.3.2.2	Material Group	IIIb	
5.4.4	Solid insulation		N/A
5.4.4.2	Minimum distance through insulation		N/A
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Semiconductor solid insulation		N/A
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material		N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz		N/A
	High frequency peak working voltage V_{PW} (V).....:		
	Total thickness d (mm)		
	Breakdown electric field strength E_p (kV/mm)		
	Reduction Factor K_R (kV/mm)		
	Breakdown electric field strength E_F		
	Actual electric strength V_W (kV)		
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Antenna Terminal connections		N/A
	Insulation resistance (M Ω).....:		
5.4.6	Insulation of internal wire as part of supplementary insulation		N/A
5.4.7	Thermal cycling test procedure		N/A
5.4.8	Test for degree 1 environment and for an insulating compound		N/A
5.4.9	Tests for semiconductor components and for cemented joints		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11	Electric strength test	See appended table 5.4.11	P
5.4.11.1	Test procedure for a solid insulation type test		P
5.4.11.2	Test procedure for routine tests		N/A
5.4.12	Protection against overvoltages between external circuit		N/A
5.4.12.1	Parts and circuits separated from external circuits		N/A
5.4.13	Insulation between external circuits and earthed circuitry		N/A
5.4.13.1	Exceptions to separation between external circuits and earth		N/A
5.4.13.2	Requirements		N/A
	Rated operating voltage U_{op} (V).....:		
	Nominal voltage U_{pea} (V).....:		
	Max increase due to variation U_{sp} :		
	Max increase due to ageing U_{sa}:		
	$U_{op}=U_{peak} + U_{sp} + U_{sa}$:		
5.5	Components as safeguards		
5.5.1	General	Components used as safeguards only inside separately approved	P
5.5.2	Components as basic safeguard and supplementary safeguard		N/A
5.5.2.2	Capacitors and RC units as basic safeguards and supplementary safeguard		N/A
5.5.2.3	Safeguards against capacitor discharge		N/A
	Capacitance (nF):		
	Charged voltage (V):		
	Measured voltage after 2 s (V):		
5.5.2.4	Transformers as basic safeguard or supplementary safeguard		N/A
5.5.2.5	Optocouplers as basic safeguard or supplementary safeguard		N/A
5.5.2.6	Relay as basic safeguard or supplementary safeguard		N/A
5.5.2.7	Resistors as basic safeguard or supplementary safeguard		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.8	SPD as basic safeguard		N/A
5.5.2.9	Other components as basic safeguards between ES1 and ES2		N/A
5.5.3	Components as reinforced safeguard		N/A
5.5.3.1	General requirements		N/A
5.5.3.2	Capacitors and RC		N/A
5.5.3.3	Transformer		N/A
5.5.3.4	Optocouplers		N/A
5.5.3.5	Relays		N/A
5.5.3.6	Resistors		N/A
5.5.4	Insulation between the mains and external circuit consisting of a coaxial		N/A
5.5.5	Components and parts that may bridge insulation		N/A
5.5.5.1	Access to ES2 or ES3		N/A
5.6	Protective conductor		N/A
5.6.1	General requirements		N/A
5.6.2	Corrosion		N/A
5.6.3	Colour of insulation		N/A
5.6.4	Test for low current-carrying protective conductors resistance (), voltage drop (V), test current (A), duration (min)		N/A
5.6.5	Protective conductors used as basic safeguard between ES1 and ES2		N/A
5.6.5.1	General		N/A
5.6.5.2	Fault current-carrying protective conductors		N/A
5.6.5.2.3	Protective earthing conductor size (mm ²)		
	Protective bonding conductor size (mm ²).		
5.6.6	Protective conductors used as supplementary safeguard		N/A
5.6.6.1	General		N/A
5.6.6.2	Size of protective earthing conductors and terminals, Rated current (A)		N/A
	Conductor size.....		
	Terminal size		



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.6.3.	Size of protective bonding conductors and terminals, Rated current (A)		N/A
	Conductor size (mm ²).....		
	Terminal size (mm).....		
5.6.6.4	Resistance of protective conductors and their terminations		N/A
5.6.6.4.1	Protective bonding conductors and terminals rated 80 A or more		N/A
5.6.6.4.2	Protective Bonding Conductor		N/A
	Resistance ().....		
	Voltage drop (V)		
	Test current (A)		
	Duration (min).....		
5.6.7	Protective earthing conductors serving as double or reinforced safeguard		N/A
5.6.7.1	General		N/A
5.6.7.2	Requirements for protective earthing conductors serving as reinforced safeguard		N/A
5.6.7.3	Terminations		N/A
	Terminal size (mm).....		
5.6.8	Reliable earthing		N/A
5.6.8.2	Reliable earthing for protection		N/A
5.6.8.3	Reliable earthing when the basic safeguard between ES1 & ES2 is provided by earthing ES1		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		--
5.7.2	Measuring devices and networks		P
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection)	No interconnected equipment.	
	Multiple connections to mains (one connection at a time/simultaneous connections)		
5.7.4	Unearthed conductive accessible parts		N/A
5.7.4.1	Unearthed parts accessible to ordinary persons		N/A
5.7.4.2	Unearthed parts accessible to instructed persons		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.5	Earthed accessible conductive parts		N/A
5.7.6	Protective conductor current		N/A
	Supply Voltage (V).....:		
	Measured current (mA)		
	Instructional Safeguard		N/A
5.7.7	Prospective touch voltage and touch current due to external circuits		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA)		N/A
	B) Equipment whose external circuits are not referenced to earth. Measured current (mA)		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	Refer to Energy Source identification and classification table for power source	P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault	(See appended table 6.2.2)	P
6.2.2.4	PS1	(See appended table 6.2.2)	P
6.2.2.5	PS2		N/A
6.2.2.6	PS3		N/A
6.2.3	Classification of potential ignition sources		N/A
6.2.3.1	Arcing PIS		N/A
	Component, location		
6.2.3.2	Resistive PIS		N/A
	Component, location		
6.3	Safeguards against fire under normal operating conditions and abnormal operating conditions		
6.3.1	Requirements	See appended table 6.3.2	P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Protection Method		P



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		P
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		P
6.4.3.2	Supplementary Safeguards		P
6.4.3.3	Single Fault Conditions		P
6.4.5	Control of fire spread in PS2 circuits	Considered for all internal circuits of units except battery compartments.	N/A
6.4.5.2	Supplementary safeguards	See Annex G	N/A
6.4.6	Control of fire spread in PS3 circuit	Considered for separately	N/A
6.4.7	Separation of combustible materials from a PIS	considered to comply with requirements.	P
6.4.7.1	General		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		N/A
6.4.8.1.1	Requirements for a fire barrier		N/A
6.4.8.1.2	Requirements for a fire enclosure		P
6.4.8.2	Constructional requirements for a fire enclosure and a fire barrier		N/A
6.4.8.2.1	Fire enclosure and fire barrier openings		N/A
6.4.8.2.2	Fire barrier dimensions		N/A
6.4.8.2.3	Fire Enclosure dimensions, top openings (mm) .. :		N/A
	Needle Flame test		N/A
6.4.8.2.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c): dimensions (mm) :		N/A
6.4.8.2.5	Integrity of the fire enclosure, condition met: a), b) or c): dimensions (mm) :		N/A
6.4.8.3	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating :		N/A
6.5	Internal and external wiring		P
6.5.1	General		P
6.5.2	Cross-sectional area (mm ²):		--
6.5.3	Flammability		P



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.5.4	Requirements for interconnection to building wiring	See Annex Q	P
6.6	Likelihood of fire due to entry of foreign objects, Construction and dimensions (mm) :	See Annex P	P
6.7	Safeguards against fire due to connection to secondary equipment		P
	External port limited to PS2		P

7	CHEMICALLY-CAUSED INJURY		N/A
7.2	Reduction of exposure to hazardous chemicals		N/A
7.3	Ozone exposure		N/A
7.4	Use of PPE		N/A
	Type of PPE..... :		
7.5	Use of instructional safeguards and instructions		N/A
	Instruction Safeguard (ISO 7010)		N/A
7.6	Batteries		N/A

8	MECHANICALLY-CAUSED INJURY		P
8.1	General		P
8.2	Mechanical energy source classifications	MS1: No sharp edges or corners.	P
8.3	Protection against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
8.4.2	Instructional safeguard		N/A
8.5	Safeguards against moving parts		N/A
8.5.2	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	Instructional Safeguard.....:		
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.2.1	Safeguards and Safety Interlocks		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard.....:		
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)		N/A
8.5.5	Protection of persons against loosening, exploding or imploding parts		N/A
8.5.5.1	Protection against MS3 parts		N/A
8.5.5.2.1	Mechanical enclosure requirements for rotating solid media		N/A
8.5.5.2.2	High pressure lamps		N/A
8.6	Stability		N/A
8.6.1	Product classification		N/A
	Instructional Safeguard.....:		
8.6.2	Static stability for floor standing equipment		N/A
8.6.2.1	Requirements		N/A
8.6.2.2	Static stability test		N/A
	Applied Force.....:		
8.6.2.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		
8.6.3	Non-floor standing equipment having controls that are accessed during normal use or having displays with moving images		N/A
8.6.3.1	Glass slide test		N/A
8.6.3.2	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		
8.7	Equipment mounted to wall or ceiling		P
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)		N/A
8.7.2	Direction and applied force.....:		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.8.2	Applied Force		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force.....		N/A
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard.....		
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force.....		
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)		
8.10.6	Thermoplastic temperature stability (°C).....		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.2	Mechanical strength test, variable <i>N</i>		N/A
8.11.3	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas		N/A
	Button/Ball diameter (mm)		

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	Refer to Energy Source identification and classification table for thermal energy source	P
9.3	Protection against thermal energy sources		P
9.3.2	Protection of ordinary person		P
9.3.2.1	Protection of ordinary person against TS1		P
9.3.2.2	Protection of ordinary person against TS2		N/A
	Instructional Safeguard..... :		N/A
9.3.2.3	Protection of ordinary person against TS3		N/A
9.3.2.4	Identify safeguards		N/A
9.3.3	Protection of instructed person		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
9.3.3.1	Protection of instructed person against TS2		N/A
9.3.3.2	Protection of instructed person against TS3 (Identify safeguards) :		N/A
9.3.4	Protection of skilled person		N/A
	Instructional Safeguard :		N/A
9.4.1	Equipment safeguard		P
9.4.1.2	Temperatures on Accessible Surfaces		P
9.4.2	Instructional safeguard :		N/A

10	RADIATION		--
10.2	Radiation energy source classifications		N/A
10.3	Requirements for electromagnetic radiation		N/A
10.3.1	General		N/A
10.3.1.1	Protection of persons from non-ionizing radiation		N/A
10.3.1.2	Non-ionizing radiation from lasers		N/A
	Laser Class, conditions:		
10.3.1.3	Non-ionizing optical radiation from lamps and lamp systems (including LEDs)		N/A
10.3.1.3.1	Identification of lamp or lamp system :		N/A
10.3.1.3.2a	UV radiation		N/A
	Instructional Safeguard (person and text) :		
10.3.1.3.2b	Visible Radiation		N/A
	Instructional Safeguard (person and text) :		
10.3.2	Non-ionizing radiation from radio frequencies in the range 0 Hz to 300 GHz		N/A
10.3.3	Protection of persons from ionizing radiation (X-radiation)		N/A
10.3.3.2	Maximum radiation (pA/kg):		
10.3.3.3	Supply voltage (V), distance (mm):		
10.3.3.4	Abnormal and Single fault condition:		N/A
10.3.4	Protection of materials from lamps that produce UV radiation		N/A
10.4	Protection against acoustic energy sources		N/A
10.4.1	Safeguards		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.4.3	Protection of ordinary persons from acoustic energy sources (instructional safeguard)		N/A
10.6	Protection against acoustic energy sources		P
10.6.1	General		P
10.6.2	Classification		P
	Acoustic output,dB(A).....		P
	Output voltage, unweighted r.m.s.....		N/A
10.6.4	Protection of persons		P
	Instruction safeguards.....		P
	Equipment safeguard prevent ordinary person to RS2.....		N/A
	Means to actively inform user of increase sound pressure.....		P
	Equipment safeguard prevent ordinary person to RS2.....		N/A
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		P
10.6.5.1	Corded passive listening devices with analogue input		N/A
	Input Voltage with 94dB(A) L_{Aeq} acoustic pressure output.....		N/A
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)		N/A


B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements	See Test Item Particulars and appended test tables	P
	Audio Amplifiers and equipment with audio amplifiers		N/A
B.2.5	Input test	See appended table B.2.5	N/A
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements		P
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test	USB connector	P



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.3.4	Setting of voltage selector		N/A
B.3.5	Maximum load at output terminals		N/A
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short- circuited		N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		P
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions		P

C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
C.2.4	Xenon-arc light exposure apparatus		N/A
D	TEST GENERATORS		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		P
E.1	Audio amplifier normal operating conditions		P
	Audio signal voltage (V).....:		
E.2	Audio amplifier abnormal operating conditions		P
F	ANNEX F, EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements		P
	Instructions – Language		
F.2	Letter symbols and graphical symbols		P
	Letter symbols		P
	Graphic symbols EN, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification	See the marking label	P
F.3.2.2	Model identification.....:	See the marking label	P
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment without direct connection to mains		P
F.3.3.2	Nature of supply voltage.....:		P
F.3.3.3	Rated voltage	See the marking label	P
F.3.3.4	Rated frequency		N/A
F.3.3.5	Rated current or rated power	See the marking label	P
F.3.3.6	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings.....:		N/A
F.3.5.2	Switch position identification marking.....:		P
F.3.5.3	Replacement fuse identification and rating markings.....:		N/A
F.3.5.4	Replacement battery identification marking		P
	Language	English	
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
	-Complete equipment (IEC60417-5017)		N/A
	-Sub-assembly/component (IEC60417-5017 or – 5019)		N/A
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.1.4	Terminal marking location		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		N/A
F.3.7	Equipment IP rating marking	Ordinary equipment.	--
F.3.8	Durability, legibility and permanence of markings	Marking (printed on the enclosure) comply with the requirements	P
F.3.9	Test for permanence of markings		P
F.4	Instructions		--
	Instructions given for installation or initial use		P
	Equipment for use in locations where children not likely to be present marked with the relevant marking		N/A
	Equipment intended for use only in restricted access area		N/A
	Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	Protective earthing employed as safeguard		N/A
	Protective earthing conductor current exceeding ES 2 limits		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbols used on equipment		P
	Permanently connected equipment not provided with all-pole mains switch		N/A
	Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where -instructional safeguardl is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A

G	COMPONENTS		P
G.1	Switches		N/A
G.1.1	General requirements		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	Thermal cut-offs		N/A
G.2.1 a), b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.2.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3	Thermal links		N/A
G.3.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)		
	Single Fault Condition		
	Test Voltage (V) and Insulation Resistance ()...		
G.4	PTC Thermistors		N/A
G.5	Overcurrent protection devices		N/A
G.6	Protective devices not mentioned in G.2 to G.5		N/A
	Compliance (device and single fault condition)		N/A
G.7	Transformers		N/A
G.7.1	Requirements applied (IEC61204-7, IEC61558-1/- 2, and/or EN62368-1)		N/A
	Position.....		
	Method of protection.....		
G.7.2	Insulation		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Protection from displacement of windings..... :		N/A
G.7.3	Overload test		N/A
G.7.3.1	Test conditions		N/A
G.7.3.2	Winding Temperatures testing in the unit		N/A
G.7.3.3	Winding Temperatures - Alternative test method		N/A
G.8	Motors		N/A
G.8.1	General requirements		N/A
	Position..... :		
G.8.2	Test conditions		N/A
G.8.3	Running overload test		N/A
G.8.4	Locked-rotor overload test		N/A
	Test duration (days) :		
G.8.5	Running overload test for d.c. motors in secondary circuits		N/A
G.8.5.2	Tested in the unit		N/A
G.8.5.3	Tested on the Bench - Alternative test method; test time (h) :		N/A
G.8.5.4	Electric strength test (V):		N/A
G.8.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.8.6.2	Tested in the unit		N/A
G.8.6.3	Tested on the bench - Alternative test method; test time (h) :		N/A
G.8.7.1	Electric strength test for ES2 or ES3 motors (V) :		N/A
G.8.7.2	Maximum temperatures		N/A
G.8.8	Motors with capacitors		N/A
G.8.9	Three-phase motors		N/A
G.8.10	Series motors		N/A
	Operating voltage..... :		
G.9	Mains supply cords		N/A
G.9.1	General requirements		N/A
	Type..... :		
	Rated current (A) :		



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Cross-sectional area (mm ²), (AWG) :		
G.9.2	Compliance and test method		N/A
G.9.3	Cord anchorages and strain relief for non- detachable power supply cords		N/A
G.9.3.1	General requirements		N/A
G.9.3.2	Cord strain relief		N/A
G.9.3.2.1	Requirements		N/A
	Strain relief test force (N)..... :		
G.9.3.2.2	Strain relief mechanism failure		N/A
G.9.3.2.3	Cord sheath or jacket position, distance (mm):		
G.9.3.2.4	Strain relief comprised of polymeric material		N/A
G.9.4	Cord Entry		N/A
G.9.5	Non-detachable cord bend protection		N/A
G.9.5.1	Requirements		N/A
G.9.5.2	Mass (g) :		
	Diameter (m) :		
	Temperature (C) :		
G.9.6	Cord Replacement		N/A
G.9.7	Supply wiring space		N/A
G.9.7.2	Stranded wire		N/A
G.9.7.2.1	Test with 8 mm strand		N/A
G.10	Metal oxide varistors		N/A
G.10.1	General requirements		N/A
G.10.2	Basic safeguard		N/A
G.10.3	Supplementary safeguard		N/A
G.10.3.2	Sudden failure		N/A
G.10.3.3	Gradual failure		N/A
G.11	WOUND COMPONENTS		N/A
G.11.1	Wire insulation in wound components		N/A
G.11.1.1	General (thickness (mm), or number of layers		N/A
G.11.1.2	Solvent-based enamel winding insulation		N/A
G.11.1.3	Protection against mechanical stress in wound components		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.11.2	Additional insulation in wound components		N/A
G.11.2.1	General requirements		N/A
G.11.2.2	Dimension (mm) or test		N/A
G.11.3	Endurance test on wound components		N/A
G.11.3.1	General test requirements		N/A
G.11.3.3	Heat run test		N/A
	Time (s)		
	Temperature (°C)		
G.11.3.4	Vibration Test		N/A
G.11.3.5	Wound Components supplied by mains		N/A
G.12	Circuits generating starting pulses		N/A
G.12.1	Insulation in circuits generating starting pulses		N/A
G.12.2	Clearances in circuits generating starting pulses		N/A
	Spacing or Electric Strength Test (specify option and test results)		N/A
G.13	IC current limiters		N/A
	IC current limiters in PS1 or PS 2 fulfil all the conditions as set out		N/A
G.14	Test for resistors serving as safeguard		N/A
G.14.1	General requirements		N/A
G.14.2	Resistor test		N/A
G.14.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.14.3.1	General requirements		N/A
G.14.3.2	Voltage surge test		N/A
G.14.3.3	Impulse test		N/A
G.15	Capacitor and RC units serving as safeguards bridging insulation		N/A
G.15.1	General requirements		N/A
G.15.2	Conditioning of capacitors and RC units		N/A
G.15.3	Rules for selecting capacitors		N/A
G.16	Optocouplers as safeguards		N/A
	Optocouplers comply with IEC 60747-5-5 with testing conditions as indicated		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.17	Relays		N/A
G.17.1	General requirements		N/A
G.17.2	Requirements for relays		N/A
G.17.3	Overload test		N/A
G.17.4	Electric strength test		N/A
G.17.5	Relay controlling mains socket-outlets		N/A
G.17.6	Test method		N/A
G.17.7	Compliance		N/A
G.18	Printed boards		P
G.18.1	General requirements		N/A
G.18.2	Uncoated printed boards		P
G.18.3	Coated printed boards		N/A
G.18.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction).....:		N/A
G.18.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) :		
G.18.6	Tests on coated printed boards		N/A
G.18.6.1	Sample preparation and preliminary inspection		N/A
G.18.6.2	Thermal conditioning		N/A
G.18.6.3	Electric strength test		N/A
G.18.6.4	Abrasion resistance test		N/A
G.19	Coating on components terminals		N/A
G.19.1	Requirements		N/A
G.19.2	Compliance and test method		N/A
G.20	Mains connectors		N/A
	Mains connector configuration:		
G.21	Liquid filled components		N/A
G.21.1	General requirements		N/A
G.21.2	Requirements		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.21.3	Compliance and test methods		N/A
G.21.3.1	Hydrostatic pressure test		N/A
G.21.3.2	Creep resistance test		N/A
G.21.3.3	Tubing and fittings compatibility test		N/A
G.21.3.4	Vibration test		N/A
G.21.3.5	Thermal cycling test		N/A
G.21.3.6	Force test		N/A
G.21.4	Compliance		N/A
G.22	Connectors other than mains connectors		N/A
	Plug is shaped that insertion into mains socket- outlets or appliance coupler is unlikely		N/A

H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General requirements		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringling signal		N/A
H.3.1.1	Frequency (Hz)		
H.3.1.2	Voltage (V)		
H.3.1.3	Cadence; time (s) and voltage (V)		
H.3.1.4	Single fault current (mA):.....		
H.3.2	Tripping device and monitoring voltage.....		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....		

J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N/A
	General requirements	See separate test report	

K	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method :		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type & circuit location) :		N/A
K.7.2	Overload test, Current (A) :		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNED DEVICES		N/A
L.1	General requirements		N/A
L.1.1	General		N/A
L.1.2	Permanently connected equipment		N/A
L.1.3	Parts that remain energized		N/A
L.1.4	Single phase equipment		N/A
L.1.5	Three-phase equipment		N/A
L.1.6	Switches as disconnect devices		N/A
L.1.7	Plugs as disconnect devices		N/A
L.1.8	Multiple power sources		N/A
M	BATTERIES AND FUEL CELLS		N/A
M.1	General requirements		N/A
M.2	Safety of battery cells and batteries		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) .. :		N/A
M.3	Protection in battery circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Test method		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance		N/A
M.4	Endurance of a battery and its enclosure		N/A
M.4.1	Requirements		N/A
M.4.2	Compliance and test method		N/A
	Replaceable battery (instructional safeguard text):		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		N/A
M.6.2	Leakage current (mA)		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s) :		
M.8.2.3	Correction factors..... :		
M.8.2.4	Calculation of distance d (mm) :		
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) :		N/A
N	ELECTROCHEMICAL POTENTIALS		--
	Metal(s) used :		
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		--
	Figures O.1 to O.20 of this Annex applied.....:		
P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS, FOREIGN LIQUIDS, AND SPILLAGE OF INTERNAL LIQUIDS		--
P.1	General requirements		P
P.2	Safeguards against entry of solid foreign objects		N/A
P.2.1	Top and side openings		N/A
	Location and Dimensions (mm) :		
P.2.2	Transportable equipment		N/A
P.2.2.1	Openings in transportable equipment provided with energy storage devices, such as batteries		N/A
P.2.2.2	Transportable equipment without batteries and having accessible floating conductive parts (identification of supplementary safeguard) :		N/A
P.2.2.3	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
	Non-transportable (identification of safeguards) . :		N/A
	Transportable (identification of safeguards) :		N/A
Q	INTERCONNECTION WITH BUILDING WIRING		N/A
Q.1	Limited power sources		N/A
	- Inherently limited output		N/A
	- Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
	- Overcurrent protective device limited output		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- an IC current limiter complying with G.13		N/A
Q.2	Compliance and test method		N/A
Q.3	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) :		
	Current limiting method :		N/A
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). :		N/A
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		P
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		P
	Samples, material :		
	Wall thickness (mm) :		
	Conditioning (°C) :		
	Test flame according to IEC 60695-11-5 with conditions as set out		P
	- Material not consumed completely		P
	- Material extinguishes within 30s		P
	- No burning of layer or wrapping tissue		P
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material :		
	Wall thickness (mm) :		
	Conditioning (°C) :		
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material :		
	Wall thickness (mm) :		



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material		
	Wall thickness (mm)		
	Conditioning (test condition), (°C)		
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	- After every test specimen was not consumed completely		N/A
	- After fifth flame application, flame extinguished within 1 min		N/A

T	MECHANICAL STRENGTH TESTS		N/A
T.1	General requirements		N/A
T.2	Steady force test, 10 N		N/A
T.3	Steady force test, 30 N		N/A
T.4	Steady force test, 100 N		N/A
T.5	Steady force test, 250 N		N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test		N/A
T.8	Stress relief test		N/A
T.9	Glass breakage		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J) :		
T.9.3	Fragmentation test and compliance		N/A
T.10	Test for telescoping or rod antennas		N/A
	Torque value (Nm) :		



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen		N/A



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	List of critical components				P
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity 1)
PCB	Various	Various	V-0 130°C	--	UL
Plastic Enclosure	Various	Various	V-0	--	UL
¹⁾ an asterisk indicates a mark which assures the agreed level of surveillance					

5.4.1.5, 6.3.2, 9.0, B.2.6, B.2.7	TABLE: Thermal requirements					P	
	Supply voltage (V) :	9V					
	Ambient T _{min} (°C) :	25.0					
	Ambient T _{max} (°C) :	25.2					
Maximum measured temperature T of part/at:		T (°C)				Allowed T _{max} (°C)	
PCB		42.4				125	
Plastic enclosure		41.7				80	
Ambient		25.0				--	
Supplementary information:							
Temperature T of winding:	t ₁ (°C)	R ₁ ()	t ₂ (°C)	R ₂ ()	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
Supplementary information:							



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.11.3	TABLE: Ball pressure test of thermoplastics		P
	Allowed impression diameter (mm)	2 mm	
Part	Test temperature (°C)	Impression diameter (mm)	
PCB	125	0.8	
Plastic Enclosure	75	0.9	
Supplementary information:			

5.4.2, 5.4.3, 5.4.4.5 a), b)	TABLE: Minimum Clearances/Creepage distance						N/A
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) ¹⁾	Required cl (mm)	cl (mm) ²⁾	Required ³⁾ cr (mm)	cr (mm)
--	--	--	--	1.3	*	2.5	*
Supplementary information:							
Note 1: Only for frequency above 30 kHz							
Note 2: See table 5.4.2.8 if this is based on electric strength test (5.4.2.8) Note 3:							
Provide Material Group							
*Switching power supply separately approved.							

5.4.2.8	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
--		--	--	--
Supplementary information:				

5.4.4.2, 5.4.4.5c), 5.5.2.7	TABLE Distance through insulation measurements				N/A
Distance through insulation di at/of:		Up (V)	Test voltage (V)	Required di (mm)	di (mm)
Supplementary information:					



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.11	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
Input-output		DC	500	No
--		--	--	--
Basic/supplementary:				
--		--	--	--
Reinforced:				
--		--	--	--
Routine Tests:				
--		--	--	--
--		--	--	--
Supplementary information:				

5.6.6.4	TABLE: Resistance of protective conductors and terminations				N/A
Accessible part		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
--		--	--	--	--
Supplementary information:					

5.7.4.1	TABLE: Unearthed conductive parts accessible for ordinary person		N/A
Supply voltage (V): :	--	—	
Earthed neutral conductor [Voltage differences less than 1% or more]: :	--	—	
Specify method used for measurement as described in IEC60990, sub-clause 4.3:..... :	--	—	
5.7.4.1a)	TABLE: Unearthed conductive parts accessible (for ordinary person)		N/A
Unearthed accessible part	Prospective touch voltage (V)	Touch current (mA)	
--	--	--	
--	--	--	
After fault of the applicable basic safeguard			



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
--	--	--	
After fault of the applicable supplementary safeguard			
--	--	--	
--	--	--	
Supplementary Information: For fault conditions, identify the safeguard that was faulted e.g., -Accessible Part/basic insulation.I			
5.7.4.1b)	TABLE: Unearthed conductive parts accessible (>ES2 voltage limits)		N/A
Unearthed accessible part, at which the prospective touch voltage exceeds the ES2 limits		Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
		1	--
		2	--
		3	--
		4	--
		5	--
		6	--
		8	--
Supplementary Information: If touch current measurements are not needed, indicate -N/AI in the space provided. IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. If the touch current did not exceed ES2 limits, indicate, -PASS.I			
5.7.4.2	TABLE: Unearthed conductive parts accessible to instructed persons		N/A
Supply voltage (V):		--	—
Earthed neutral conductor [Voltage differences less than 1% or more]:		--	—
Specify method used for measurement as described in IEC60990, sub-clause 4.3		--	—
5.7.4.2 a)	TABLE: Unearthed conductive parts accessible to instructed persons		N/A
Unearthed accessible part		Prospective touch voltage (V)	Touch current (mA)
--		--	--
--		--	--
--		--	--
--		--	--



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.7.2 b)	TABLE: Unearthed conductive parts accessible (>ES2 voltage limits)		N/A
Unearthed accessible part, at which the prospective touch voltage exceeds the ES2 limits		Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
		1	--
		2	--
		3	--
		4	--
		5	--
		6	--
		8	--
Supplementary Information: If touch current measurements are not needed, indicate -N/AI in the space provided. IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. If the touch current did not exceed ES2 limits, indicate, -PASS.I			

5.7.5	TABLE: Earthed accessible conductive part		N/A
Supply voltage		--	—
Earthed neutral conductor [Voltage differences less than 1% or more].....		--	—
Specify method used for measurement as described in IEC60990, sub-clause 4.3		--	—
Earthed accessible conductive part		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
		1	--
		2*	--
		3	--
		4	--
		5	--
		6	--
		8	--
Supplementary Information: IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.			



J62368-1				
Clause	Requirement + Test		Result - Remark	Verdict
8.5	TABLE: Fan Blade Classification			N/A
Variable		Value		
Mass, m		kg		
Fan blade radius, r		mm		
Rotational speed, N		rpm		
K factor (figure 47), K				
Classification formula		$\frac{N}{15,000} \frac{K}{2,400} \frac{1}{1}$	$\frac{N}{22,000} \frac{K}{3,600} \frac{1}{1}$	
Classification calculation				
Classification: MS:				
Supplementary information:				

8.5.5.2.1	TABLE: Rotating Solid Media		N/A
Variable		Value	
Media thickness (mm).....:			
Total media mass, M (kg)			
Constant, S.....:		0,250 (no deflector)	0,125 (deflector)
Velocity, v (m/s)			
Media outer radius, R _o (m)			
Force {F =S x (mv ²)/R _o } (N).....:			
Smallest dia of media, X (mm)			
Test Result			
Supplementary information:			

8.5.5.2.2	TABLE: High Pressure Lamp		N/A
Description	Values	Energy Source Classification	
Lamp type.....:		—	
Manufacturer		—	
Cat no.:		—	
Pressure (cold) (MPa)		MS_	



J62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Pressure (operating) (MPa)		MS_
	Operating time (minutes)		—
	Explosion method.....		—
	Max particle length escaping enclosure (mm)...		MS_
	Max particle length beyond 1 m (mm)		MS_
	Overall result		
Supplementary information:			

B.2.5	TABLE: Input test						N
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
--	--	--	--	--	--	-	--
Supplementary information:							
Equipment may be have rated current or rated power or both. Both should be measured							

B.3 & B.4	TABLE: Abnormal operating and fault condition tests							P
Ambient temperature (C) :					25.3 C			
Power source for EUT: Manufacturer, model/type, output rating .. :					--			
Component No.	Abnormal/ Fault	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (C)	Observation
Input	s-c	13.3	1mins	--	--	--	--	Unit shut down, no components damage, no hazards.
Supplementary information: Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column —Abnormal/Fault. Specify if test condition by indicating —Abnormal then the condition for a Clause B.3 test or —Single Fault then the condition for Clause B.4.								



ANNEX A:

Photo-documentation

Photo 1 General appearance of EUT**Photo 2** General appearance of EUT



Photo 3 General appearance of EUT



*** End of Report ***



TST Testing Technology

Certificate Of Compliance

Certificate No. : TST202107Q3169-1SC
Applicant : Guanyu(Dongguan) Intelligent Technology Co.,Ltd
1001 Room ,No#3 building ,No#36 Fuxing road, Chang' an town ,Dongguan
City ,Guangdong China
Manufacturer : Guanyu(Dongguan) Intelligent Technology Co.,Ltd
1001 Room ,No#3 building ,No#36 Fuxing road, Chang' an town ,Dongguan
City ,Guangdong China
Product Name : Wireless Charger
Trade Mark : Guany
Main Test Model : GY-Z8A
Additional Models : GY-Z8, GY-Z8B, GY-Z8C, GY-Z8D, GY-Z8S, GY-Z11, GY-Z11S
Test Standard : J62368-1(H30)
As shown in the Test Report No. : TST202102Q3169-1SR

The EUT described above has been tested by us with the listed standards and found in compliance with the council LVD directive. It is possible to use PSE marking to demonstrate the compliance with this LVD Directive.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number. TST202107Q3169-1SR

Approved by: Andy Zheng



Manager

Jul. 14, 2021

TST Testing Technology Co., Ltd

Room 201, No.20, Houjie Avenue East, Houjie Town, Dongguan City, Guangdong, China

Tel: 86-0769-85088050 Fax: 86-0769-85088450 E-mail: tst@tst-test.com <http://www.tst-test.com>



TST Testing Technology

Certificate Of Compliance

Certificate No. : TST202107Q3169-3RC

Applicant : Guanyu(Dongguan) Intelligent Technology Co.,Ltd
1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China

Manufacturer : Guanyu(Dongguan) Intelligent Technology Co.,Ltd
1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China

Trade Mark : Guany

Sample Name : Wireless Charger

Main Model : GY-Z8A

Additional Models : GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11
IEC62321-1:2013
IEC62321-3-1:2013
IEC62321-4:2013/AMD1:2017

Test Standard : IEC62321-5:2013
IEC62321-6:2015
IEC62321-7-1:2015
IEC62321-7-2:2017
IEC62321-8:2017

As shown in the Test Report No. : TST202107Q3169-3RR

The EUT described above has been consolidated by us and found in compliance with the council RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number. TST202107Q3169-3RR

Approved by: Andy Zheng



RoHS

Manager

Jul.14,2021

TST Testing Technology Co., Ltd

Room 201, No.20, Houjie Avenue East, Houjie Town, Dongguan City, Guangdong, China

Tel: 86-0769-85088050 Fax: 86-0769-85088450 E-mail: tst@tst-test.com <http://www.tst-test.com>



Test Report

Report No : TST202107Q3169-3RR Date: Jul.14,2021

Page 1 of 11

**Applicant/
Manufacture:** Guanyu(Dongguan) Intelligent Technology Co.,Ltd

Address: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China

Trade Mark: Guany

The following sample(s) was /were submitted and identified on behalf of the clients as :

Sample Name: Wireless Charger

Main Model: GY-Z8A

Series Model: GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11

Sample Received Date: Jul.07,2021

Testing Period: Jul.07,2021 To Jul.14,2021

Test Requested:

1. As specified by client ,to screen Lead(Pb),Cadmium(Cd),Mercury(Hg), Chromium(Cr)and Bromine(Br)in the submitted sample(s)by XRF.
2. As specified by client ,when screening results exceed the XRF screening limit in IEC62321:2013 Edition 1.0,further use of wet chemical methods are required to test Lead(Pb),Cadmium(Cd),Mercury(Hg),Hexavalent Chromium(Cr(VI)),Polybrominated Biphenyls(PBBs),Polybrominated Diphenyl Ethers(PBDEs),Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutylphthalate (DBP) , and Diisobutyl phthalate (DIBP) in the submitted sample(s).

Test Method: Please refer to next page(s).

Test Result: Please refer to next page(s).

Test Conclusion: The test results comply with the limits of RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of



**Andy Zheng
Technical Director**

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

Report No : TST202107Q3169-3RR

Date: Jul.14,2021

Page 2 of 11

1. Pb, Cd, Cr(VI), Hg, PBBs&PBDEs

Test Method:

A. Disassembly, disjointment and mechanical sample preparation

—Ref. to IEC 62321-2:2013, Disassembly, disjointment and mechanical sample preparation.

B. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in this report.

(1) Screening – Lead, mercury, cadmium, total chromium and total bromine

—Ref. to IEC 62321-3-1:2013, Screening for Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry.

(2) Wet chemical test method

Test Item(s)	Test Method	Test Equipment	Unit	MDL	Limit
Pb	IEC62321-5:2013	ICP-OES	mg/kg	2	1000
Cd	IEC62321-5:2013	ICP-OES	mg/kg	2	100
Hg	IEC 62321-4:2013 /AMD1:2017	ICP-OES	mg/kg	2	1000
Cr(VI) (Metal)	IEC62321-7-1:2015	UV-Vis	μg/cm2	0.1	0.13
Cr(VI) (Nonmetal)	IEC62321-7-2:2017	UV-Vis	mg/kg	8	1000
PBBs	IEC62321-6:2015	GC-MS	mg/kg	5	1000
PBDEs	IEC62321-6:2015	GC-MS	mg/kg	5	1000

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

Report No : TST202107Q3169-3RR

Date: Jul.14,2021

Page 3 of 11

Test result(s):

No.	Sample Description	Results of XRF					Chemical confirmation results (mg/kg)	Conclusion
		Pb	Cd	Hg	Cr	Br		
1	Black plastic shell	BL	BL	BL	BL	X	PBBs:N.D. PBDEs:N.D.	Pass
2	Black plastic baffle	BL	BL	BL	BL	BL	---	Pass
3	Black plastic bracket	BL	BL	BL	BL	X	PBBs:N.D. PBDEs:N.D.	Pass
4	Black plastic terminal	BL	BL	BL	BL	BL	---	Pass
5	White plastic connection port	BL	BL	BL	BL	BL	---	Pass
6	Black rubber tape	BL	BL	BL	BL	BL	---	Pass
7	Black rubber pad	BL	BL	BL	BL	BL	---	Pass
8	Black rubber foot pad	BL	BL	BL	BL	BL	---	Pass
9	Black label paper	BL	BL	BL	BL	BL	---	Pass
10	White ink	BL	BL	BL	BL	BL	---	Pass
11	USB	BL	BL	BL	BL	---	---	Pass
12	Type-c	BL	BL	BL	BL	---	---	Pass
13	Black electrical wire	BL	BL	BL	BL	BL	---	Pass
14	PCB	BL	BL	BL	BL	X	PBBs:N.D. PBDEs:N.D.	Pass
15	IC	BL	BL	BL	BL	BL	---	Pass
16	Resistance	BL	BL	BL	BL	BL	---	Pass
17	Capacitance	BL	BL	BL	BL	BL	---	Pass
18	Inductance	BL	BL	BL	BL	BL	---	Pass
19	Triode	BL	BL	BL	BL	BL	---	Pass

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

Report No : TST202107Q3169-3RR

Date: Jul.14,2021

Page 4 of 11

No.	Sample Description	Results of XRF					Chemical confirmation results (mg/kg)	Conclusion
		Pb	Cd	Hg	Cr	Br		
20	LED	BL	BL	BL	BL	BL	---	Pass
21	Sensor	BL	BL	BL	BL	BL	---	Pass
22	Transformer	BL	BL	BL	BL	BL	---	Pass
23	Pink coil	BL	BL	BL	BL	BL	---	Pass
24	Orange plastic tape	BL	BL	BL	BL	BL	---	Pass
25	Black foam	BL	BL	BL	BL	BL	---	Pass
26	magnet	BL	BL	BL	BL	---	---	Pass
27	Golden wire	BL	BL	BL	BL	---	---	Pass
28	Pin	BL	BL	BL	BL	---	---	Pass
29	Screw	BL	BL	BL	X	---	Cr ⁶⁺ :N.D.	Pass
30	Silver metal interface	BL	BL	BL	BL	---	---	Pass
31	Silver metal baffle	BL	BL	BL	BL	---	---	Pass

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

Report No : TST202107Q3169-3RR

Date: Jul.14,2021

Page 5 of 11

Remark:

- It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).
- The XRF screening test for RoHS elements-The reading may be different to the actual content in the sample be of non-uniformity composition.
- Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Pb, Cd, Hg), UV-VIS for Cr(VI) and GC/MSD (for PBBs/PBDEs) is recommended to be performed if the concentration exceeds the below warning value according to IEC 62321-3-1:2013.

Attached table 1, XRF screening limits in mg/kg for regulated elements in various matrices:

Element	Polymer Material	Metallic Material	Composite Material
Pb	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma \leq X < 1500 + 3\sigma \leq OL$
Cd	$BL \leq 70 - 3\sigma \leq X < 130 + 3\sigma \leq OL$	$BL \leq 70 - 3\sigma \leq X < 130 + 3\sigma \leq OL$	$LOD < X < 150 + 3\sigma \leq OL$
Hg	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma \leq X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma \leq X < 1500 + 3\sigma \leq OL$
Cr	$BL \leq 700 - 3\sigma < X$	$BL \leq 700 - 3\sigma < X$	$BL \leq 500 - 3\sigma < X$
Br	$BL \leq 300 - 3\sigma < X$	--	$BL \leq 250 - 3\sigma < X$

XRF detection limits in mg/kg for regulated elements in various material

Element	Polymer Material	Metallic Material	Composite Material
Pb	10	50	50
Cd	10	50	50
Hg	10	50	50
Cr	10	50	50
Br	10	50	50

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

Report No : TST202107Q3169-3RR Date: Jul.14,2021

Page 6 of 11

Note:

- BL = Under the XRF screening limit
- OL = Future chemical test will be conducted while result is above the screening limit
- X = inconclusive, the region where need further chemical testing by ICP-OES (for Pb, Cd, Hg), UV-VIS (for Cr(VI)) and GC/MSD (for PBBs, PBDEs).
- 3σ =The reproducibility of analytical instruments
- LOD=Detection limit
- “---” = Not Applicable
- mg/kg=0.0001%
- N.D.=Not Detected(<MDL)
- MDL = Method Detection Limit
- Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.
- *=According to 2011/65/EU Annex, point 6-Lead as an alloying element is steel containing up to 0.35% lead by weight, aluminum containing up to 0.4% lead by weight and as a copper alloy, containing up to 4% lead by weight can be exempted.

2. Phthalates—DBP, BBP, DEHP & DIBP

Test Item(s)	Test Method	Test Equipment	Unit	MDL	Limit
Dibutyl Phthalate(DBP)	IEC62321-8:2017	GC-MS	mg/kg	30	1000
Benzylbutyl Phthalate (BBP)	IEC62321-8:2017	GC-MS	mg/kg	30	1000
Di-(2-ethylhexyl) Phthalate(DEHP)	IEC62321-8:2017	GC-MS	mg/kg	30	1000
Diisobutyl phthalate (DIBP)	IEC62321-8:2017	GC-MS	mg/kg	30	1000

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

Report No : TST202107Q3169-3RR

Date: Jul.14,2021

Page 7 of 11

Test result(s):

Part No.	Test item (mg/kg)				Conclusion
	DBP	BBP	DEHP	DIBP	
1+2+3	N.D.	N.D.	N.D.	N.D.	Pass
4+5	N.D.	N.D.	N.D.	N.D.	Pass
6+7+8	N.D.	N.D.	N.D.	N.D.	Pass
9	N.D.	N.D.	N.D.	N.D.	Pass
10	N.D.	N.D.	N.D.	N.D.	Pass
13	N.D.	N.D.	156	N.D.	Pass
14+15+16	N.D.	N.D.	N.D.	N.D.	Pass
17+18+19	N.D.	N.D.	N.D.	N.D.	Pass
20+21+22	N.D.	N.D.	N.D.	N.D.	Pass
23	N.D.	N.D.	N.D.	N.D.	Pass
24	N.D.	N.D.	N.D.	N.D.	Pass
25	N.D.	N.D.	N.D.	N.D.	Pass

Note:

- mg/kg=0.0001%
- ND=Not Detected(<MDL)
- *1 = The samples were resubmitted on

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

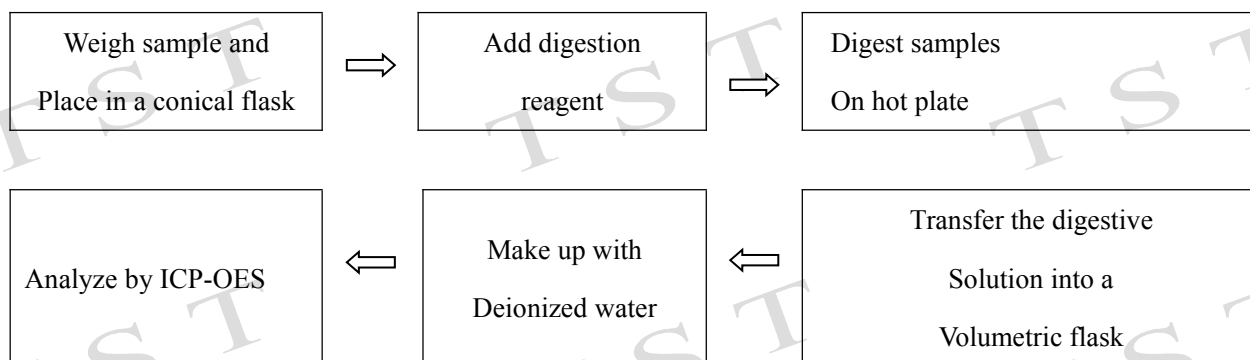
Report No : TST202107Q3169-3RR

Date: Jul.14,2021

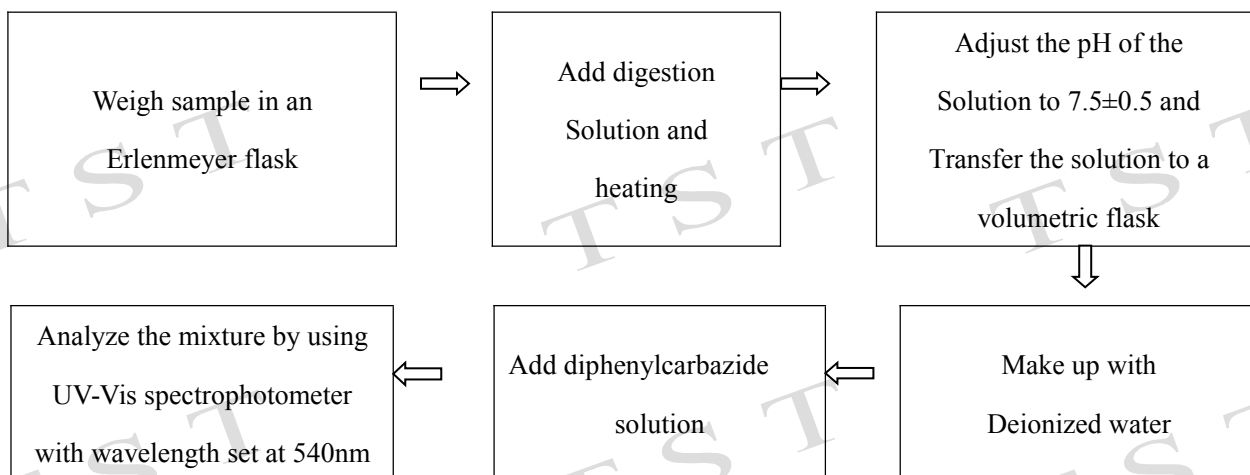
Page 8 of 11

Chemical Test Process:

1.Test for Pb/ CdContent



2.Test for Chromium(VI)Content



Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



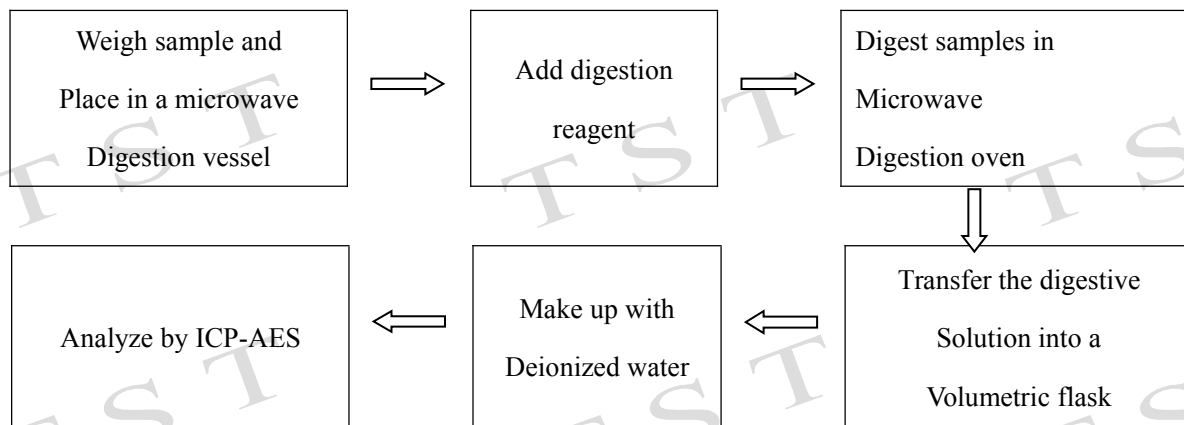
Test Report

Report No : TST202107Q3169-3RR

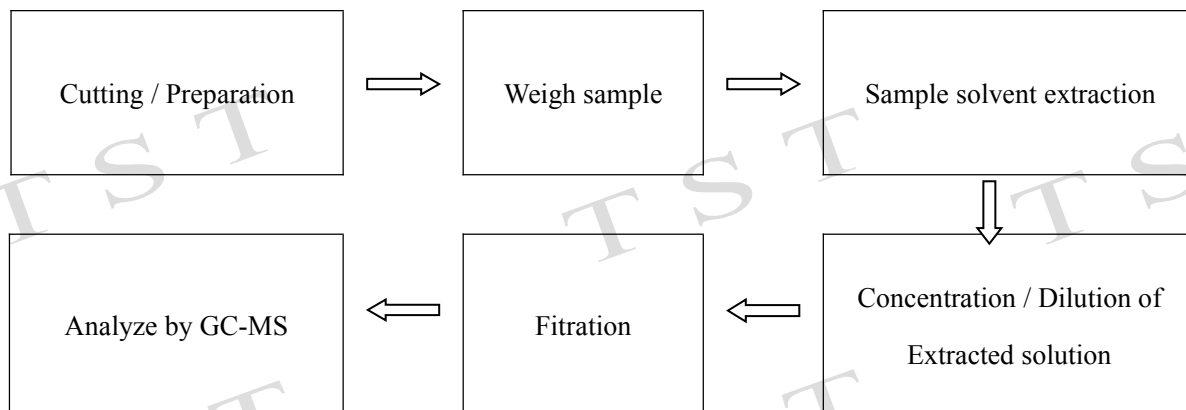
Date: Jul.14,2021

Page 9 of 11

3.Test for Hg Contents



4.Test for PBBs/PBDES/DIBP/DBP/BBP/DEHP



Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



Test Report

Report No : TST202107Q3169-3RR

Date: Jul.14,2021

Page 10 of 11

Sample photo:



Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.

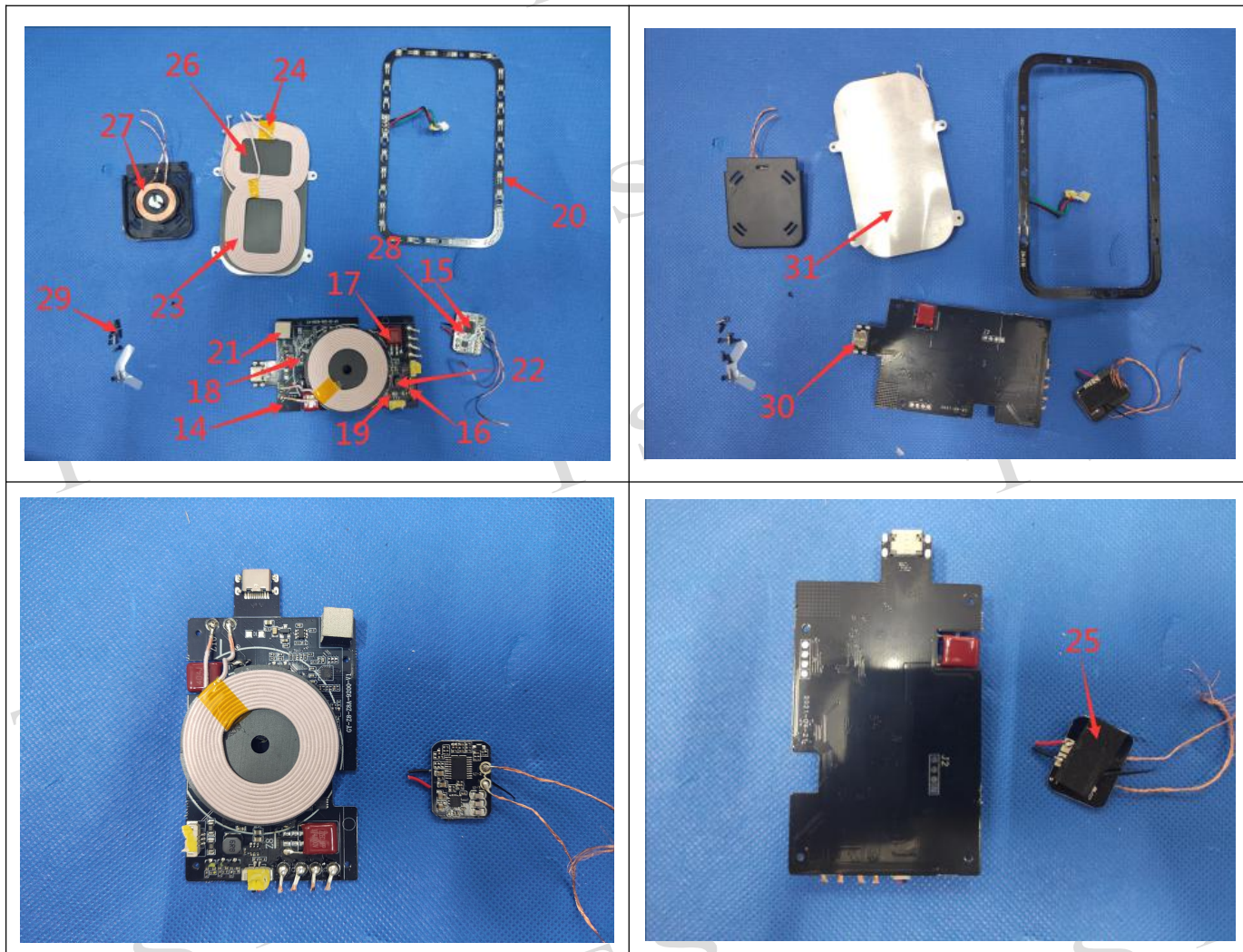


Test Report

Report No : TST202107Q3169-3RR

Date: Jul.14,2021

Page 11 of 11



*** End of Report ***

Unless otherwise agreed in writing, this document is issued by the company subject to its general conditions of service printed overleaf, available on request or accessible at <http://www.tst-test.com/about-1.asp?id=12>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of TST, this test report shall not be copied except in full and published as advertisement.



SAFTEY TEST REPORT

Report No: FCS202107010A01

Issued for

Applicant:	Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address:	1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan City ,Guangdong China
Product Name:	Wireless Charger
Brand Name:	Guany
Model Name:	GY-Z8A
Series Model:	GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
Test Standard:	EN 62368-1:2014+A11:2017
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

**TEST REPORT****IEC 62368-1****Audio/video, information and communication technology equipment
Part 1: Safety requirements****Report Number.**: FCS202107010A01**Tested by (+ signature)**: Scott Shen *Scott Shen***Reviewed by (+ signature)**: Duke Qian *Duke Qian***Approved by (+ signature)**: Kait Chen *Kait Chen***Date of issue**.....: 13 Jul. 2021**Total number of pages**.....: 53 pages**Testing laboratory**: Flux Compliance Service Laboratory.**Address**: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye
West Road Hi-Tech Industrial, Song shan lake Dongguan**Applicant's name**.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd**Address**: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang ' an
town ,Dongguan City ,Guangdong China**Test specification:****Standard**: EN 62368-1:2014+A11:2017**Test procedure**: IEC Scheme**Non-standard test method.:** N/A**Test Report Form No**.....: IEC62368_1B**Test Report Form(s) Originator**: UL(US)**Master TRF**.....: 2014-03**This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of FCS Test.****Test item description**: Wireless Charger**Trade Mark**: Guany**Manufacturer**: Guanyu(Dongguan) Intelligent Technology Co.,Ltd**Address**: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang ' an
town ,Dongguan City ,Guangdong China**Model/Type reference**.....: GY-Z8A,GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S**Ratings**: Input: DC 9V/2A
Phone Output: 5W,7.5W,10W,15W
Headphone Output: 3W
Watch Output: 2.5W

Summary of testing:

Tests performed (name of test and test clause):

EN 62368-1:2014+A11:2017

The submitted samples were found to comply with the requirements of above specification.

Testing location:

Flux Compliance Service Laboratory.

Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye,West Road Hi-Tech Industrial, Song shan lake Dongguan

Comment:

This report also includes:

- Photo documentation: 7 pages

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

(Additional requirements for markings. See 1.7 NOTE)

Product: Wireless Charger

Trade Mark : Guany

Model : GY-Z8A **Input:** DC 9V/2A



Guanyu(Dongguan) Intelligent Technology Co.,Ltd

1001 Room ,No#3 building ,No#36 Fuxing road,

Chang'an town ,Dongguan City ,Guangdong China

Made in China.

Remark on above marking:

1, The height of CE symbols is more than 5 mm;

2, The height of WEEE symbols is more than 7 mm.

Test item particulars..... :	
Classification of use by..... :	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input type="checkbox"/> Children likely to be present
Supply Connection..... :	<input type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input checked="" type="checkbox"/> External Circuit - not Mains connected <input checked="" type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance :	<input type="checkbox"/> +10%/-10%
Considered current rating of protective device as part of building or equipment installation..... :	___A Installation location: <input type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> direct piug-in <input checked="" type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC) :	<input type="checkbox"/> OVC <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other:___
Class of equipment :	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III
Access location :	<input type="checkbox"/> restricted access location <input type="checkbox"/> N/A
Pollution degree (PD) :	<input type="checkbox"/> PD1 <input type="checkbox"/> PD2 <input type="checkbox"/> PD3
Manufacturer's specified maxium operating ambient :	___55_°C
IP protection class :	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP:
Power Systems :	<input type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT- V L-L
Altitude during operation (m) :	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> ___m
Altitude of test laboratory (m) :	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> ___m
Mass of equipment (kg) :	1.66Kg
Possible test case verdicts: - test case does not apply to the test object N (not applicable) - test object does meet the requirement P (Pass) - test object does not meet the requirement F (Fail)	
Testing Date of receipt of test item 02 Jul. 2021 Date(s) of performance of tests 02 Jul. 2021 ~ 13 Jul. 2021	

General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
<p>General product information:</p> <p>1. Max. ambient temperature 40°C.</p>	
Additional application considerations-(Considerations used to test a component or sub-assembly)- N/A	
<p>The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided :</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable</p>
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) :	at

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
<p>(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.)</p> <p>(Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.)</p>	
<p>Electrically-caused injury (Clause 5):</p> <p>(Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification)</p> <p>Example: +5 V dc input ES1</p>	
Source of electrical energy	Corresponding classification (ES)
Primary circuit of unit	N/A
Secondary circuit ,output port accessible enclosure	ES1
<p>Electrically-caused fire (Clause 6):</p> <p>(Note: List sub-assembly or circuit designation and corresponding energy source classification)</p> <p>Example: Battery pack (maximum 85 watts): PS2</p>	
Source of power or PIS	Corresponding classification (PS)
Output port	PS1
Primary circuit	N/A
<p>Injury caused by hazardous substances (Clause 7)</p> <p>(Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)</p> <p>Example: Liquid in filled component Glycol</p>	
Source of hazardous substances	Corresponding chemical
No hazardous substances	N/A
<p>Mechanically-caused injury (Clause 8)</p> <p>(Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.)</p> <p>Example: Wall mount unit MS2</p>	
Source of kinetic/mechanical energy	Corresponding classification (MS)
Whole unit	MS1
<p>Thermal burn injury (Clause 9)</p> <p>(Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)</p> <p>Example: Hand-held scanner – thermoplastic enclosure TS1</p>	
Source of thermal energy	Corresponding classification (TS)
Accessible enclosure	TS1
<p>Radiation (Clause 10)</p> <p>(Note: List the types of radiation present in the product and the corresponding energy source classification.)</p> <p>Example: DVD – Class 1 Laser Product RS1</p>	
Type of radiation	Corresponding classification (RS)
No any laser	RS1

ENERGY SOURCE DIAGRAM	
Indicate which energy sources are included in the energy source diagram. Insert diagram below	
<input checked="" type="checkbox"/> ES <input checked="" type="checkbox"/> PS <input checked="" type="checkbox"/> MS <input checked="" type="checkbox"/> TS <input checked="" type="checkbox"/> RS	

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Accessible enclosure	Secondary circuit(ES1)	--	--	--
Output port	Secondary circuit(ES1)	--	--	--
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Plastic enclosure	Secondary circuit(ES1)	--	--	--
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
--	--	--	--	--
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Whole unit	MS1	--	--	--
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Accessible enclosure	TS1	--	--	--
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
--	--	--	--	--
Supplementary Information:				
(1) See attached energy source diagram for additional details.				
(2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault				

4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components		P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions	(See Annex F)	P
4.4.4	Safeguard robustness		N
4.4.4.2	Steady force tests		P
4.4.4.3	Drop tests.....		N
4.4.4.4	Impact tests.....	(See Annex T.6, T9)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests		N
4.4.4.6	Glass Impact tests		N
4.4.4.7	Thermoplastic material tests	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard	(See Annex T)	N
4.4.4.9	Accessibility and safeguard effectiveness		N
4.5	Explosion		N
4.6	Fixing of conductors		N
4.6.1	Fix conductors not to defeat a safeguard		N
4.6.2	10 N force test applied to		N
4.7	Equipment for direct insertion into mains socket - outlets		N
4.7.2	Mains plug part complies with the relevant standard		N
4.7.3	Torque (Nm).....		N
4.8	Products containing coin/button cell batteries		P
4.8.2	Instructional safeguard		P
4.8.3	Battery Compartment Construction		N
	Means to reduce the possibility of children removing the battery		—
4.8.4	Battery Compartment Mechanical Tests.....		N
4.8.5	Battery Accessibility		N
4.9	Likelihood of fire or shock due to entry of conductive object	(See Annex P)	N

5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications	SELV circuit	P
5.2.2	ES1, ES2 and ES3 limits	ES1	P
5.2.2.2	Steady-state voltage and current	See appended table 5.2)	P

5.2.2.3	Capacitance limits		N
5.2.2.4	Single pulse limits.....		N
5.2.2.5	Limits for repetitive pulses.....		N
5.2.2.6	Ringing signals	(See Annex H)	N
5.2.2.7	Audio signals	(See Clause E.1)	P
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	Ordinary person can access	P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements	SELV circuit	P
	a) Test with test probe from Annex V	No opening existed from the external surface ,and test probes are unlikely to touch hazardous voltage part	P
	b) Electric strength test potential (V).....	Dielectric strength test was not performed	N
	c) Air gap (mm)	No opening for the entrance of test probe (and air gap to the high-voltage part was far more than 0.2mm)	P
5.3.2.4	Terminals for connecting stripped wire		N
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning		N
5.4.1.4	Maximum operating temperature for insulating materials	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree.....	Pollution degree 2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N
5.4.1.5.3	Thermal cycling		N
5.4.1.6	Insulation in transformers with varying dimensions		N
5.4.1.7	Insulation in circuits generating starting pulses		N
5.4.1.8	Determination of working voltage		N
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N
5.4.1.10.2	Vicat softening temperature		N
5.4.1.10.3	Ball pressure		N
5.4.2	Clearances	SELV circuit	N
5.4.2.2	Determining clearance using peak working voltage		N
5.4.2.3	Determining clearance using required withstand voltage		N

	a) a.c. mains transient voltage		—
	b) d.c. mains transient voltage		—
	c) external circuit transient voltage		—
	d) transient voltage determined by measurement		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N
5.4.2.5	Multiplication factors for clearances and test voltages.....		N
5.4.3	Creepage distances		N
5.4.3.1	General		N
5.4.3.3	Material Group		—
5.4.4	Solid insulation		N
5.4.4.2	Minimum distance through insulation		N
5.4.4.3	Insulation compound forming solid insulation		N
5.4.4.4	Solid insulation in semiconductor devices		N
5.4.4.5	Cemented joints		N
5.4.4.6	Thin sheet material		N
5.4.4.6.1	General requirements		N
5.4.4.6.2	Separable thin sheet material		N
	Number of layers (pcs)		N
5.4.4.6.3	Non-separable thin sheet material		N
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....		N
5.4.4.6.5	Mandrel test		N
5.4.4.7	Solid insulation in wound components		N
5.4.4.9	Solid insulation at frequencies >30 kHz.....		N
5.4.5	Antenna terminal insulation		N
5.4.5.1	General		N
5.4.5.2	Voltage surge test		N
	Insulation resistance (MΩ)		—
5.4.6	Insulation of internal wire as part of supplementary safeguard		N
5.4.7	Tests for semiconductor components and for cemented joints		N
5.4.8	Humidity conditioning		P
	Relative humidity (%)		—
	Temperature (°C)		—
	Duration (h)		—
5.4.9	Electric strength test		N

5.4.9.1	Test procedure for a solid insulation type test		N
5.4.9.2	Test procedure for routine tests		N
5.4.10	Protection against transient voltages between external circuit		N
5.4.10.1	Parts and circuits separated from external circuits		N
5.4.10.2	Test methods		N
5.4.10.2.1	General		N
5.4.10.2.2	Impulse test..... :		N
5.4.10.2.3	Steady-state test :		N
5.4.11	Insulation between external circuits and earthed circuitry..... :		N
5.4.11.1	Exceptions to separation between external circuits and earth		N
5.4.11.2	Requirements		N
	Rated operating voltage U_{op} (V) :		—
	Nominal voltage U_{peak} (V) :		—
	Max increase due to variation U_{sp} :		—
	Max increase due to ageing ΔU_{sa} :		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$:		—
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitors and RC units		N
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector :		N
5.5.3	Transformers		N
5.5.4	Optocouplers		N
5.5.5	Relays		N
5.5.6	Resistors		N
5.5.7	SPD's		N
5.5.7.1	Use of an SPD connected to reliable earthing		N
5.5.7.2	Use of an SPD between mains and protective earth		N
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable :	(See Annex G.10.3)	N
5.6	Protective conductor		N
5.6.2	Requirement for protective conductors		N
5.6.2.1	General requirements		N
5.6.2.2	Colour of insulation		N
5.6.3	Requirement for protective earthing conductors		N

	Protective earthing conductor size (mm ²)		—
5.6.4	Requirement for protective bonding conductors		N
5.6.4.1	Protective bonding conductors		N
	Protective bonding conductor size (mm ²).		—
	Protective current rating (A)		—
5.6.4.3	Current limiting and overcurrent protective devices		N
5.6.5	Terminals for protective conductors		N
5.6.5.1	Requirement		N
	Conductor size (mm ²), nominal thread diameter (mm).....		N
5.6.5.2	Corrosion		N
5.6.6	Resistance of the protective system		N
5.6.6.1	Requirements		N
5.6.6.2	Test Method Resistance (Ω)		N
5.6.7	Reliable earthing		N
5.7	Prospective touch voltage, touch current and protective conductor current		N
5.7.2	Measuring devices and networks		N
5.7.2.1	Measurement of touch current		N
5.7.2.2	Measurement of prospective touch voltage		N
5.7.3	Equipment set-up, supply connections and earth connections		N
	System of interconnected equipment (separate connections/single connection).....	No interconnected equipment	—
	Multiple connections to mains (one connection at a time/simultaneous connections).....	No multiple connections to mains	—
5.7.4	Earthed conductive accessible parts		N
5.7.5	Protective conductor current		N
	Supply Voltage (V)		—
	Measured current (mA)		—
	Instructional Safeguard		N
5.7.6	Prospective touch voltage and touch current due to external circuits		N
5.7.6.1	Touch current from coaxial cables		N
5.7.6.2	Prospective touch voltage and touch current from external circuits		N
5.7.7	Summation of touch currents from external circuits		N
	a) Equipment with earthed external circuits Measured current (mA)		N
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA)		N

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	PS1	P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault....:	(See appended table 6.2.2)	N
6.2.2.3	Power measurement for worst-case power source fault	(See appended table 6.2.2)	P
6.2.2.4	PS1	(See appended table 6.2.2)	P
6.2.2.5	PS2		N
6.2.2.6	PS3		N
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS		N
6.2.3.2	Resistive PIS		N
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials.....:	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure		N
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method		N
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits	PS1	P
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	SELV circuit	N
6.4.3.1	General		N
6.4.3.2	Supplementary Safeguards		N
	Special conditions if conductors on printed boards are opened or peeled		N
6.4.3.3	Single Fault Conditions	(See appended table 6.4.3)	P
	Special conditions for temperature limited by fuse		N
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		N
6.4.5.2	Supplementary safeguards		N
6.4.6	Control of fire spread in PS3 circuit		N
6.4.7	Separation of combustible materials from a PIS		P
6.4.7.1	General		P
6.4.7.2	Separation by distance		N
6.4.7.3	Separation by a fire barrier		N
6.4.8	Fire enclosures and fire barriers		P

6.4.8.1	Fire enclosure and fire barrier material properties	Fire enclosure is rated min HB	P
6.4.8.2.1	Requirements for a fire barrier		N
6.4.8.2.2	Requirements for a fire enclosure		N
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N
6.4.8.3.1	Fire enclosure and fire barrier openings		N
6.4.8.3.2	Fire barrier dimensions		N
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm)		N
	Needle Flame test		N
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)		N
	Flammability tests for the bottom of a fire enclosure		N
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c).....		N
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating	Fire enclosure rated min HB	N
6.5	Internal and external wiring		N
6.5.1	Requirements		N
6.5.2	Cross-sectional area (mm ²)		—
6.5.3	Requirements for interconnection to building wiring.....		N
6.6	Safeguards against fire due to connection to additional equipment		N
	External port limited to PS2 or complies with Clause Q.1		N

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N
7.2	Reduction of exposure to hazardous substances		N
7.3	Ozone exposure		N
7.4	Use of personal safeguards (PPE)		N
	Personal safeguards and instructions.....		—
7.5	Use of instructional safeguards and instructions		N
	Instructional safeguard (ISO 7010)		—
7.6	Batteries	(See Annex M)	N

8	MECHANICALLY-CAUSED INJURY		P
8.1	General		P
8.2	Mechanical energy source classifications	MS1	P
8.3	Safeguards against mechanical energy sources	No sharp edges /corners	N

8.4	Safeguards against parts with sharp edges and corners		N
8.4.1	Safeguards		N
8.5	Safeguards against moving parts		N
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N
8.5.2	Instructional Safeguard		—
8.5.4	Special categories of equipment comprising moving parts		N
8.5.4.1	Large data storage equipment		N
8.5.4.2	Equipment having electromechanical device for destruction of media		N
8.5.4.2.1	Safeguards and Safety Interlocks.....		N
8.5.4.2.2	Instructional safeguards against moving parts		N
	Instructional Safeguard		—
8.5.4.2.3	Disconnection from the supply		N
8.5.4.2.4	Probe type and force (N).....		N
8.5.5	High Pressure Lamps		N
8.5.5.1	Energy Source Classification		N
8.5.5.2	High Pressure Lamp Explosion Test		N
8.6	Stability		N
8.6.1	Product classification		N
	Instructional Safeguard		—
8.6.2	Static stability		N
8.6.2.2	Static stability test		N
	Applied Force		—
8.6.2.3	Downward Force Test		N
8.6.3	Relocation stability test		N
	Unit configuration during 10° tilt.....		—
8.6.4	Glass slide test		N
8.6.5	Horizontal force test (Applied Force)		N
	Position of feet or movable parts		—
8.7	Equipment mounted to wall or ceiling		N
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)		N
8.7.2	Direction and applied force		N
8.8	Handles strength		N
8.8.1	Classification		N
8.8.2	Applied Force		N

8.9	Wheels or casters attachment requirements		N
8.9.1	Classification		N
8.9.2	Applied force.....:		—
8.10	Carts, stands and similar carriers		N
8.10.1	General		N
8.10.2	Marking and instructions		N
	Instructional Safeguard		—
8.10.3	Cart, stand or carrier loading test and compliance		N
	Applied force.....:		—
8.10.4	Cart, stand or carrier impact test		N
8.10.5	Mechanical stability		N
	Applied horizontal force (N)		—
8.10.6	Thermoplastic temperature stability (°C)		N
8.11	Mounting means for rack mounted equipment		N
8.11.1	General		N
8.11.2	Product Classification		N
8.11.3	Mechanical strength test, variable <i>N</i>		N
8.11.4	Mechanical strength test 250N, including end stops		N
8.12	Telescoping or rod antennas	(See Annex T)	N
	Button/Ball diameter (mm)		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	TS1	P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard		N

10	RADIATION		P
10.2	Radiation energy source classification		P
10.2.1	General classification		P
10.3	Protection against laser radiation		N
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault		N
	Instructional safeguard.....:		—
	Tool		—
10.4	Protection against visible, infrared, and UV radiation		N

10.4.1	General		N
10.4.1.a)	RS3 for Ordinary and instructed persons		N
10.4.1.b)	RS3 accessible to a skilled person		N
	Personal safeguard (PPE) instructional safeguard		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1...		N
10.4.1.d)	Normal, abnormal, single-fault conditions		N
10.4.1.e)	Enclosure material employed as safeguard is opaque		N
10.4.1.f)	UV attenuation		N
10.4.1.g)	Materials resistant to degradation UV.....		N
10.4.1.h)	Enclosure containment of optical radiation		N
10.4.1.i)	Exempt Group under normal operating conditions.....		N
10.4.2	Instructional safeguard.....		N
10.5	Protection against x-radiation		N
10.5.1	X- radiation energy source that exists equipment		N
	Normal, abnormal, single fault conditions		N
	Equipment safeguards		N
	Instructional safeguard for skilled person		N
10.5.3	Most unfavourable supply voltage to give maximum radiation.....		—
	Abnormal and single-fault condition.....		N
	Maximum radiation (pA/kg)		N
10.6	Protection against acoustic energy sources		N
10.6.1	General		N
10.6.2	Classification		N
	Acoustic output, dB(A)		N
	Output voltage, unweighted r.m.s.		N
10.6.4	Protection of persons		N
	Instructional safeguards		N
	Equipment safeguard prevent ordinary person to RS2		—
	Means to actively inform user of increase sound pressure		—
	Equipment safeguard prevent ordinary person to RS2		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N
10.6.5.1	Corded passive listening devices with analog input		N

	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output		—
10.6.5.2	Corded listening devices with digital input		N
	Maximum dB(A)		—
10.6.5.3	Cordless listening device		N
	Maximum dB(A)		—

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers.....	(See Annex E)	N
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		N
B.3.3	D.C. mains polarity test		N
B.3.4	Setting of voltage selector		N
B.3.5	Maximum load at output terminals.....		P
B.3.6	Reverse battery polarity		N
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited.....	(See appended table B.4)	P
B.4.3	Motor tests		N
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		N
B.4.4.2	Short circuit of creepage distances for functional insulation		N
B.4.4.3	Short circuit of functional insulation on coated printed boards		N
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N
B.4.6	Short circuit or disconnect of passive components		N

B.4.7	Continuous operation of components		N
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		N
B.4.9	Battery charging under single fault conditions.... :		N

C	UV RADIATION		N
C.1	Protection of materials in equipment from UV radiation		N
C.1.2	Requirements		N
C.1.3	Test method		N
C.2	UV light conditioning test		N
C.2.1	Test apparatus		N
C.2.2	Mounting of test samples		N
C.2.3	Carbon-arc light-exposure apparatus		N
C.2.4	Xenon-arc light exposure apparatus		N

D	TEST GENERATORS		N
D.1	Impulse test generators		N
D.2	Antenna interface test generator		N
D.3	Electronic pulse generator		N

E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N
E.1	Audio amplifier normal operating conditions		N
	Audio signal voltage (V) :		—
	Rated load impedance (Ω) :		
E.2	Audio amplifier abnormal operating conditions		N

F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements		P
	Instructions – Language :	English version only	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		N
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification :	See marking plate	—
F.3.2.2	Model identification :	See page 2	—

F.3.3	Equipment rating markings	See marking plate	P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N
F.3.3.3	Nature of supply voltage :		—
F.3.3.4	Rated voltage..... :	See marking plate	—
F.3.3.4	Rated frequency :	See marking plate	—
F.3.3.6	Rated current or rated power..... :	See marking plate	—
F.3.3.7	Equipment with multiple supply connections		N
F.3.4	Voltage setting device		N
F.3.5	Terminals and operating devices		N
F.3.5.1	Mains appliance outlet and socket-outlet markings :		N
F.3.5.2	Switch position identification marking :		N
F.3.5.3	Replacement fuse identification and rating markings :		N
F.3.5.4	Replacement battery identification marking..... :		N
F.3.5.5	Terminal marking location		N
F.3.6	Equipment markings related to equipment classification		N
F.3.6.1	Class I Equipment		N
F.3.6.1.1	Protective earthing conductor terminal		N
F.3.6.1.2	Neutral conductor terminal		N
F.3.6.1.3	Protective bonding conductor terminals		N
F.3.6.2	Class II equipment (IEC60417-5172)		N
F.3.6.2.1	Class II equipment with or without functional earth		N
F.3.6.2.2	Class II equipment with functional earth terminal marking		N
F.3.7	Equipment IP rating marking :	IPX0	—
F.3.8	External power supply output marking		P
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings		P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present -marking		N
	b) Instructions given for installation or initial use		N
	c) Equipment intended to be fastened in place		N
	d) Equipment intended for use only in restricted access area		N
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N

	f) Protective earthing employed as safeguard		N
	g) Protective earthing conductor current exceeding ES 2 limits		N
	h) Symbols used on equipment		P
	i) Permanently connected equipment not provided with all-pole mains switch		N
j)	j) Replaceable components or modules providing safeguard function		N
F.5	Instructional safeguards		N
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		N

G	COMPONENTS		P
G.1	Switches		N
G.1.1	General requirements		N
G.1.2	Ratings, endurance, spacing, maximum load		N
G.2	Relays		N
G.2.1	General requirements		N
G.2.2	Overload test		N
G.2.3	Relay controlling connectors supply power		N
G.2.4	Mains relay, modified as stated in G.2		N
G.3	Protection Devices		N
G.3.1	Thermal cut-offs		N
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N
G.3.1.2	Thermal cut-off connections maintained and secure		N
G.3.2	Thermal links		N
G.3.2.1a)	Thermal links separately tested with IEC 60691		N
G.3.2.1b)	Thermal links tested as part of the equipment		N
	Aging hours (H)..... :		—
	Single Fault Condition..... :		—
	Test Voltage (V) and Insulation Resistance (Ω) . :		—
G.3.3	PTC Thermistors		N
G.3.4	Overcurrent protection devices		N
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N
G.3.5.1	Non-resettable devices suitably rated and marking provided		N

G.3.5.2	Single faults conditions	(See appended Table B.4)	N
G.4	Connectors		N
G.4.1	Spacings		N
G.4.2	Mains connector configuration		N
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N
G.5	Wound Components		N
G.5.1	Wire insulation in wound components	(See Annex J)	N
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N
G.5.1.2 b)	Construction subject to routine testing		N
G.5.2	Endurance test on wound components		N
G.5.2.1	General test requirements		N
G.5.2.2	Heat run test		N
	Time (s).....		—
	Temperature (°C)		—
G.5.2.3	Wound Components supplied by mains		N
G.5.3	Transformers		N
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)		N
	Position		—
	Method of protection		—
G.5.3.2	Insulation		N
	Protection from displacement of windings		—
G.5.3.3	Overload test		N
G.5.3.3.1	Test conditions		N
G.5.3.3.2	Winding Temperatures testing in the unit		N
G.5.3.3.3	Winding Temperatures - Alternative test method		N
G.5.4	Motors		N
G.5.4.1	General requirements		N
	Position		—
G.5.4.2	Test conditions		N
G.5.4.3	Running overload test		N
G.5.4.4	Locked-rotor overload test		N
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N
G.5.4.5.2	Tested in the unit		N
	Electric strength test (V)		—

G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N
	Electric strength test (V)		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N
G.5.4.6.2	Tested in the unit		N
	Maximum Temperature		N
	Electric strength test (V)		N
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		N
	Electric strength test (V)		N
G.5.4.7	Motors with capacitors		N
G.5.4.8	Three-phase motors		N
G.5.4.9	Series motors		N
	Operating voltage		—
G.6	Wire Insulation		N
G.6.1	General		N
G.6.2	Solvent-based enamel wiring insulation		N
G.7	Mains supply cords		N
G.7.1	General requirements		N
	Type		—
	Rated current (A)		—
	Cross-sectional area (mm ²), (AWG)		—
G.7.2	Compliance and test method		N
G.7.3	Cord anchorages and strain relief for non- detachable power supply cords		N
G.7.3.2	Cord strain relief		N
G.7.3.2.1	Requirements		N
	Strain relief test force (N)		—
G.7.3.2.2	Strain relief mechanism failure		N
G.7.3.2.3	Cord sheath or jacket position, distance (mm) ...		—
G.7.3.2.4	Strain relief comprised of polymeric material		N
G.7.4	Cord Entry.....		N
G.7.5	Non-detachable cord bend protection		N
G.7.5.1	Requirements		N
G.7.5.2	Mass (g)		—
	Diameter (m)		—
	Temperature (°C)		—
G.7.6	Supply wiring space		N

G.7.6.2	Stranded wire		N
G.7.6.2.1	Test with 8 mm strand		N
G.8	Varistors		N
G.8.1	General requirements		N
G.8.2	Safeguard against shock		N
G.8.3	Safeguard against fire		N
G.8.3.2	Varistor overload test	:	N
G.8.3.3	Temporary overvoltage	:	N
G.9	Integrated Circuit (IC) Current Limiters		N
G.9.1 a)	Manufacturer defines limit at max. 5A.		N
G.9.1 b)	Limiters do not have manual operator or reset		N
G.9.1 c)	Supply source does not exceed 250 VA	:	—
G.9.1 d)	IC limiter output current (max. 5A).....	:	—
G.9.1 e)	Manufacturers' defined drift	:	—
G.9.2	Test Program 1		N
G.9.3	Test Program 2		N
G.9.4	Test Program 3		N
G.10	Resistors		N
G.10.1	General requirements		N
G.10.2	Resistor test		N
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N
G.10.3.1	General requirements		N
G.10.3.2	Voltage surge test		N
G.10.3.3	Impulse test		N
G.11	Capacitor and RC units		N
G.11.1	General requirements		N
G.11.2	Conditioning of capacitors and RC units		N
G.11.3	Rules for selecting capacitors		N
G.12	Optocouplers		N
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)	:	N
	Type test voltage Vini	:	—
	Routine test voltage, Vini,b	:	—
G.13	Printed boards		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P

G.13.3	Coated printed boards		N
G.13.4	Insulation between conductors on the same inner surface		N
	Compliance with cemented joint requirements (Specify construction)		—
G.13.5	Insulation between conductors on different surfaces		N
	Distance through insulation		N
	Number of insulation layers (pcs)		—
G.13.6	Tests on coated printed boards		N
G.13.6.1	Sample preparation and preliminary inspection		N
G.13.6.2a)	Thermal conditioning		N
G.13.6.2b)	Electric strength test		N
G.13.6.2c)	Abrasion resistance test		N
G.14	Coating on components terminals		N
G.14.1	Requirements	(See G.13)	N
G.15	Liquid filled components		N
G.15.1	General requirements		N
G.15.2	Requirements		N
G.15.3	Compliance and test methods		N
G.15.3.1	Hydrostatic pressure test		N
G.15.3.2	Creep resistance test		N
G.15.3.3	Tubing and fittings compatibility test		N
G.15.3.4	Vibration test		N
G.15.3.5	Thermal cycling test		N
G.15.3.6	Force test		N
G.15.4	Compliance		N
G.16	IC including capacitor discharge function (ICX)		N
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N
b)	Impulse test using circuit 2 with $U_c =$ to transient voltage		N
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N
D2)	Capacitance		—
D3)	Resistance		—

H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N
H.1	General		N
H.2	Method A		N
H.3	Method B		N
H.3.1	Ringling signal		N
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):		—
H.3.2	Tripping device and monitoring voltage		N
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N
H.3.2.2	Tripping device		N
H.3.2.3	Monitoring voltage (V).....		—

J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N
	General requirements	No such wire used	N

K	SAFETY INTERLOCKS		N
K.1	General requirements		N
K.2	Components of safety interlock safeguard mechanism		N
K.3	Inadvertent change of operating mode		N
K.4	Interlock safeguard override		N
K.5	Fail-safe		N
	Compliance.....		N
K.6	Mechanically operated safety interlocks		N
K.6.1	Endurance requirement		N
K.6.2	Compliance and Test method		N
K.7	Interlock circuit isolation		N
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N
K.7.2	Overload test, Current (A)		N
K.7.3	Endurance test		N
K.7.4	Electric strength test	(See appended table 5.4.11)	N

L	DISCONNECT DEVICES		P
L.1	General requirements	Switch	P
L.2	Permanently connected equipment		N

L.3	Parts that remain energized		N
L.4	Single phase equipment	DC input by battery	N
L.5	Three-phase equipment		N
L.6	Switches as disconnect devices		N
L.7	Plugs as disconnect devices		N
L.8	Multiple power sources		N

M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N
M.1	General requirements		N
M.2	Safety of batteries and their cells		N
M.2.1	Requirements		N
M.2.2	Compliance and test method (identify method)....:		N
M.3	Protection circuits		N
M.3.1	Requirements		N
M.3.2	Tests		N
	- Overcharging of a rechargeable battery		N
	- Unintentional charging of a non-rechargeable battery		N
	- Reverse charging of a rechargeable battery		N
	- Excessive discharging rate for any battery		N
M.3.3	Compliance :		N
M.4	Additional safeguards for equipment containing secondary lithium battery		N
M.4.1	General		N
M.4.2	Charging safeguards		N
M.4.2.1	Charging operating limits		N
M.4.2.2a)	Charging voltage, current and temperature..... :		—
M.4.2.2 b)	Single faults in charging circuitry :		—
M.4.3	Fire Enclosure		N
M.4.4	Endurance of equipment containing a secondary lithium battery		N
M.4.4.2	Preparation		N
M.4.4.3	Drop and charge/discharge function tests		N
	Drop		N
	Charge		N
	Discharge		N
M.4.4.4	Charge-discharge cycle test		N
M.4.4.5	Result of charge-discharge cycle test		N
M.5	Risk of burn due to short circuit during carrying		N

M.5.1	Requirement		N
M.5.2	Compliance and Test Method (Test of P.2.3)		N
M.6	Prevention of short circuits and protection from other effects of electric current		N
M.6.1	Short circuits		N
M.6.1.1	General requirements		N
M.6.1.2	Test method to simulate an internal fault		N
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		N
M.6.2	Leakage current (mA)		N
M.7	Risk of explosion from lead acid and NiCd batteries		N
M.7.1	Ventilation preventing explosive gas concentration		N
M.7.2	Compliance and test method		N
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N
M.8.1	General requirements		N
M.8.2	Test method		N
M.8.2.1	General requirements		N
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s)		—
M.8.2.3	Correction factors		—
M.8.2.4	Calculation of distance d (mm)		—
M.9	Preventing electrolyte spillage		N
M.9.1	Protection from electrolyte spillage		N
M.9.2	Tray for preventing electrolyte spillage		N
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing)		N

N	ELECTROCHEMICAL POTENTIALS		N
	Metal(s) used	Pollution degree considered	—

O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Figures O.1 to O.20 of this Annex applied		—

P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		P

	Location and Dimensions (mm)	No openings for entrance of foreign object	—
P.2.3	Safeguard against the consequences of entry of foreign object		N
P.2.3.1	Safeguards against the entry of a foreign object		N
	Openings in transportable equipment		N
	Transportable equipment with metalized plastic parts.....		N
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard)		N
P.3	Safeguards against spillage of internal liquids		N
P.3.1	General requirements		N
P.3.2	Determination of spillage consequences		N
P.3.3	Spillage safeguards		N
P.3.4	Safeguards effectiveness		N
P.4	Metallized coatings and adhesive securing parts		N
P.4.2 a)	Conditioning testing		N
	Tc (°C)		—
	Tr (°C)		—
	Ta (°C)		—
P.4.2 b)	Abrasion testing		N
P.4.2 c)	Mechanical strength testing.....		N

Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		N
Q.1	Limited power sources		N
Q.1.1 a)	Inherently limited output		N
Q.1.1 b)	Impedance limited output		N
	- Regulating network limited output under normal operating and simulated single fault condition		N
Q.1.1 c)	Overcurrent protective device limited output		N
Q.1.1 d)	IC current limiter complying with G.9		N
Q.1.2	Compliance and test method		N
Q.2	Test for external circuits – paired conductor cable		N
	Maximum output current (A)		—
	Current limiting method		—

R	LIMITED SHORT CIRCUIT TEST		N
R.1	General requirements		N
R.2	Determination of the overcurrent protective device and circuit		N

R.3	Test method Supply voltage (V) and short-circuit current (A)).		N
-----	--	--	---

S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N
	Samples, material	—	
	Wall thickness (mm)	—	
	Conditioning (°C)	—	
	Test flame according to IEC 60695-11-5 with conditions as set out		N
	- Material not consumed completely		N
	- Material extinguishes within 30s		N
	- No burning of layer or wrapping tissue		N
S.2	Flammability test for fire enclosure and fire barrier integrity		N
	Samples, material	—	
	Wall thickness (mm)	—	
	Conditioning (°C)	—	
	Test flame according to IEC 60695-11-5 with conditions as set out		N
	Test specimen does not show any additional hole		N
S.3	Flammability test for the bottom of a fire enclosure		N
	Samples, material	—	
	Wall thickness (mm)	—	
	Cheesecloth did not ignite		N
S.4	Flammability classification of materials		N
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N
	Samples, material	—	
	Wall thickness (mm)	—	
	Conditioning (test condition), (°C)	—	
	Test flame according to IEC 60695-11-20 with conditions as set out		
	After every test specimen was not consumed completely		
	After fifth flame application, flame extinguished within 1 min		

T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements		P
T.2	Steady force test, 10 N	(See appended table T.2)	P
T.3	Steady force test, 30 N	(See appended table T3)	N
T.4	Steady force test, 100 N	(See appended table T4)	P
T.5	Steady force test, 250 N	(See appended table T5)	N
T.6	Enclosure impact test	(See appended table T6)	N
	Fall test		P
	Swing test		P
T.7	Drop test		N
T.8	Stress relief test	(See appended table T8)	P
T.9	Impact Test (glass)		N
T.9.1	General requirements		N
T.9.2	Impact test and compliance		N
	Impact energy (J)		—
	Height (m).....		—
T.10	Glass fragmentation test.....	(See sub-clause 4.4.4.9)	N
T.11	Test for telescoping or rod antennas		N
	Torque value (Nm)		—

U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N
U.1	General requirements		N
U.2	Compliance and test method for non-intrinsically protected CRTs		N
U.3	Protective Screen	(See Annex T)	N

V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		P
V.1	Accessible parts of equipment		N
V.2	Accessible part criterion		N

4.1.2	TABLE: List of critical components					
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹	
Plastics Enclosure	Interchangeable	Interchangeable	HB or batter 60℃	UL 94	Test with appliance	
PCB	Shenzhen jiali chuang tech	JLC-1	V-0 130℃	UL 94, UL796	UL	
Internal wire	Interchangeable	Interchangeable	V-1 or better, 130℃	UL 758	UL	
Supplementary information: Provided evidence ensures the agreed level of compliance, See OD-CB2039						

ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment Part 1: Safety requirements)	
Differences according to	EN 62368-1:2014
Attachment Form No.	EU_GD_IEC62368_1B
Attachment Originator	Intertek Semko AB
Master Attachment	Date (2015-08)
Copyright © 2015 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE)	

	CENELEC COMMON MODIFICATIONS (EN)		P
1	NOTE Z1		P
4.Z1	Protective devices included as integral parts of the equipment or as parts of the building installation:		P
	a) Included as parts of the equipment		P
	b) For components in series with the mains; by devices in the building installation		P
	c) For pluggable type B or permanently connected; by devices in the building installation		N
5.4.2.3.2.4	Interconnection with external circuit		N
10.2.1	Additional requirements in 10.5.1		N
10.5.1	RS1 compliance measurement conditions		N
10.6.2.1	EN 71-1:2011, 4.20 and methods and distances		N
10.Z1	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz		N
G.7.1	NOTE Z1		N

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N
4.1.15	Denmark, Finland, Norway and Sweden: Class I pluggable equipment type A marking		N
4.7.3	United Kingdom: Torque test socket-outlet BS 1363, and the plug part BS 1363.		N
5.2.2.2	Denmark: Warning for high touchcurrent		N
5.4.11.1 and Annex G	Finland and Sweden: Separation of the telecommunication network from earth		N
5.5.2.1	Norway: Capacitors rated for the applicable line-to-line voltage (230 V).		N
5.5.6	Finland, Norway and Sweden: Resistors used as basic safeguard or bridging basic insulation comply with G.10.1 and G.10.2.		N
5.6.1	Denmark: Protection for pluggable equipment type A; integral part of the equipment		N
5.6.4.2.1	Ireland and United Kingdom: The protective current rating is taken to be 13 A		N
5.6.5.1	Ireland and United Kingdom: Conductor sizes of flexible cords to be accepted by terminals for equipment rated 10 A to 13 A		N
5.7.5	Denmark: The installation instruction affixed to the equipment if high protective conductor current		N

5.7.6.1	Norway and Sweden: Television distribution system isolation text in user manual		N
5.7.6.2	Denmark: Warning for high touch current		N
B.3.1 and B.4	Ireland and United Kingdom: Tests conducted using an external miniature circuit breaker or protective devices included as an integral part of the direct plug-in equipment		N
G.4.2	Denmark: Appliances rated ≤ 13 A provided with a plug according to DS 60884-2-D1:2011.		N
	Class I equipment provided with socket-outlets provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.		N
	If a single-phase equipment having rated >13 A or poly-phase equipment provided with a supply cord with a plug, plug in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.		N
	Mains socket outlets intended for providing power to Class II apparatus rated 2,5 A in accordance with DS 60884-2-D1:2011 standard sheet DKA 1-4a.		N
	Other current rating socket outlets in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.		N
	Mains socket-outlets with earth in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a		N
G.4.2	United Kingdom: The plug part of direct plug-in equipment assessed to BS 1363		N
G.7.1	United Kingdom: Equipment fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768		N
G.7.1	Ireland: Apparatus provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use		N
G.7.2	Ireland and United Kingdom: A power supply cord for equipment which is rated over 10 A and up to and including 13 A.		N

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N
10.5.2	Germany: Cathode ray tube intended for the display of visual images, authorization or application of type approval and marking.		N
F.1	Italy: The power consumption in Watts (W) indicated on TV receiver and in instruction for use		N
	TV receivers provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language.		N
	Marking for controls and terminals in Italian language.		N

	Conformity declaration according to the above requirements in the instruction manual		N
	First importers of TV receivers manufactured outside EEC previous conformity certification to the Italian Post Ministry and Certification number on the backcover.		N

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests			N
(The following mechanical tests are conducted in the sequence noted.)				
4.8.4.2	TABLE: Stress Relief test			—
Part		Material	Oven Temperature (°C)	Comments
-		-	--	--
4.8.4.3	TABLE: Battery replacement test			—
Battery part no. :				—
Battery Installation/withdrawal		Battery Installation/Removal Cycle		Comments
--		1	--	
		2	--	
		3	--	
		4	--	
		5	--	
		6	--	
		8	--	
		9	--	
		10	--	
4.8.4.4	TABLE: Drop test			—
Impact Area		Drop Distance	Drop No.	Observations
-		-	1	-
-		-	2	-
-		-	3	-
4.8.4.5	TABLE: Impact			—
Impacts per surface		Surface tested	Impact energy (Nm)	Comments
-		-	-	-
4.8.4.6	TABLE: Crush test			—
Test position		Surface tested	Crushing Force (N)	Duration force applied (s)
-		-	-	-
Supplementary information:				

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result			N
Test position	Surface tested	Force (N)	Duration force applied (s)	
-	-	-	-	
Supplementary information:				

5.2	Table: Classification of electrical energy sources						N
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	-	-	Normal	-	-	-	ES1
			Abnormal	-	-	-	
			Single fault – SC/OC(D2)	-	-	-	
2	-	-	Normal	-	-	-	ES1
			Abnormal	-	-	-	
			Single fault – SC/OC	-	-	-	
5.2.2.3 - Capacitance Limits							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class	
				Capacitance, nF	Upk (V)		
1	-	-	Normal	-	-	--	
			Single fault – SC/OC	-	-		
5.2.2.4 - Single Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	lpk (mA)	
-	-	-	Normal	-	-	-	-
			Abnormal	-	-	-	
			Single fault – SC/OC	-	-	-	
5.2.2.5 - Repetitive Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	lpk (mA)	
-	-	-	Normal	-	-	-	-
			Abnormal	-	-	-	
			Single fault – SC/OC	-	-	-	

Test Conditions:

Normal –

Abnormal -

Supplementary information: SC=Short Circuit, OC=Short Circuit

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					P	
	Supply voltage (V)	14.4Vdc	12Vdc	--	--	—	
	Ambient T _{min} (°C)	23.4	23.4	--	--	—	
	Ambient T _{max} (°C)	25.0	25.0	--	--	—	
	Tma (°C)	55.0	55.0	--	--	—	
Maximum measured temperature T of part/at:		T (°C)				Allowed T _{max} (°C)	
SWITCHING ADAPTER surface		72.5	59.4	--	--	Ref.	
Mounting surface near SWITCHING ADAPTER		63.6	57.8	--	--	Ref.	
L1 body		70.4	67.3	--	--	130	
C8 body		63.1	60.7	--	--	105	
PCB near U10		63.5	62.2	--	--	105	
PCB near U1		62.4	61.7	--	--	105	
Supplementary information:							
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
-	-	-	-	-	-	-	B
Supplementary information:							
Note 1: Tma should be considered as directed by applicable requirement							
Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)							

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N
Penetration (mm) :			—
Object/ Part No./Material		Manufacturer/t rademark	T softening (°C)
-		-	-
supplementary information:			

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics				N
Allowed impression diameter (mm) : ≤ 2 mm					—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)		Impression diameter (mm)	
--	--	--		--	

Supplementary information:

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						N
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) ¹	Required cl (mm)	cl (mm) ²	Required ³ cr (mm)	cr (mm)
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
Supplementary information: Note 1: Only for frequency above 30 kHz Note 2: See table 5.4.2.4 if this is based on electric strength test Note 3: Provide Material Group							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			N
	Overvoltage Category (OV):			2
	Pollution Degree:			III
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)
--		--	--	--
--		--	--	--
--		--	--	--
Supplementary information:				

5.4.2.4	TABLE: Clearances based on electric strength test			N
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
--		--	--	--
Supplementary information:				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					N
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
--	--	--	--	--	--	
--	--	--	--	--	--	
Supplementary information:						

5.4.9	TABLE: Electric strength tests			N
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
--		--	--	--
Basic/supplementary:				
5.4.9	TABLE: Electric strength tests			N
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
L to N (fuse resistor disconnect)		--	--	--
Reinforced:				
L/N Input to output terminals		--	--	--
L/N Input to plastic enclosure		--	--	--
T1: primary and secondary		--	--	--
T1: secondary and core (core considered as primary)		--	--	--
One layers insulation tape of T1		--	--	--
Routine Tests:				
--		--	--	--
Supplementary information:				

5.5.2.2	TABLE: Stored discharge on capacitors					N
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification	
--	--	--	--	--	-	
Supplementary information:						
X-capacitors installed for testing are:						
<input type="checkbox"/> bleeding resistor rating:						
<input type="checkbox"/> ICX:						
Notes:						
A. Test Location:						
Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth						
B. Operating condition abbreviations:						
N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition						

5.6.6.2	TABLE: Resistance of protective conductors and terminations				N
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	
-	-	-	-	-	

Supplementary information: --

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		N
Supply voltage..... :			—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
A. L/N to output port B. L/N to plastic enclosure		1	--
		2*	A. 0.082 B. 0.006
		3	--
		4	--
		5	--
		6	--
		8	--
Supplementary Information:			
Notes:			
[1] Supply voltage is the anticipated maximum Touch Voltage			
[2] Earthed neutral conductor [Voltage differences less than 1% or more]			
[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3			
[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.			
[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.			

6.2.2	Table: Electrical power sources (PS) measurements for classification					N
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s ^{*)}	PS Classification	
Output port	Normal condition	Power (W) :	--	--	PS1	
		V _A (V) :	--	--		
		I _A (A) :	--	--		
Output port	Overload	Power (W) :	--	--	PS1	
		V _A (V) :	--	--		
		I _A (A) :	--	--		
Output port	S-C(USB)	Power (W) :	--	--	PS1	
		V _A (V) :	--	--		
		I _A (A) :	--	--		
Supplementary Information: (*) Measurement taken only when limits at 3 seconds exceed PS1 limits						

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				N
Location	Open circuit voltage After 3 s (V _p)	Measured r.m.s current (I _{rms})	Calculated value (V _p x I _{rms})	Arcing PIS? Yes / No	
--	--	--	--	--	
Supplementary information: An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V _p) and normal operating condition rms current (I _{rms}) is greater than 15.					

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				N
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
--	--	--	--	--	--
Supplementary Information: A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter. If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification. A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, <u>or</u> (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.					

8.5.5	TABLE: High Pressure Lamp		N
Description		Values	Energy Source Classification
Lamp type :		--	—
Manufacturer :		--	—
Cat no. :		--	—
Pressure (cold) (MPa) :		--	MS_
Pressure (operating) (MPa) :		--	MS_
Operating time (minutes)..... :		--	—
Explosion method..... :		--	—
Max particle length escaping enclosure (mm). :		--	MS_
Max particle length beyond 1 m (mm) :		--	MS_
Overall result :		--	
Supplementary information:			

B.2.5		TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
12	0.5	1	6	--	--	--	Supplied by DC battery	
--	--	--	--	--	--	--	Supplied by battery	
Supplementary information:								
Equipment may be have rated current or rated power or both. Both should be measured								

B.3		TABLE: Abnormal operating condition tests						N
Ambient temperature (°C)					23.7-24.1			—
Power source for EUT: Manufacturer, model/type, output rating . :					--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
--	--	--	--	--	--	--	--	--
Supplementary information:								
Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.								

B.4		TABLE: Fault condition tests						P
Ambient temperature (°C)								—
Power source for EUT: Manufacturer, model/type, output rating ...:								—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
U1 pin 8 to pin 9	S-C	14.4V	10min	-	0	T-type	-	Unit shutdown rapidly, No hazards
U1 pin 11 to pin 15	S-C	14.4V	10min	-	0	T-type	-	Unit shutdown rapidly, No hazards
U5 pin 2 to pin 3	S-C	14.4V	10min	-	0	T-type	-	Unit shutdown rapidly, No hazards
DN4 pin 2 to pin 3	S-C	14.4V	10min	-	0	T-type	-	Unit shutdown rapidly, No hazards
D8	S-C	14.4V	10min	-	0	T-type	-	Unit shutdown rapidly, No hazards
Supplementary information:								

Annex M	TABLE: Batteries								P	
The tests of Annex M are applicable only when appropriate battery data is not available									P	
Is it possible to install the battery in a reverse polarity position?:									-	
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Max. current during normal condition	-	-	-	N/A	N/A	N/A	N/A	-	-	
Max. current during fault condition	-	-	-	N/A	N/A	N/A	N/A	-	-	
Test results:									Verdict	
- Chemical leaks				After tested, No chemical leaks					P	
- Explosion of the battery				No explosion					P	
- Emission of flame or expulsion of molten metal				No emission of flame or expulsion of molten metal					P	
- Electric strength tests of equipment after completion of tests				--					N	
Supplementary information:										

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries					N
Battery/Cell No.	Test conditions	Measurements			Observation	
		U	I (A)	Temp (C)		
-	Normal	-	-	-	-	
-	Abnormal	-	-	-	-	
-	Single fault –SC/OC	-	-	-	-	
-	Normal	-	-	-	-	
-	Abnormal	-	-	-	-	
-	Single fault – SC/OC	-	-	-	-	
Supplementary Information:						
Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation		
-	-	-	-	-		
-	-	-	-	-		
Supplementary Information:						

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					N
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U _{OC} (V)	I _{SC} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
--	--	--	--	8	--	100
--	--	--	--	8	--	100
Supplementary Information: SC=Short circuit, OC=Open circuit						

T.2, T.3, T.4, T.5	TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Enclosure/Whole unit	Min.HB	Min.1.5	100	5	No visible damage	
Supplementary information:						

T.6, T.9	TABLE: Impact tests				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Enclosure/Whole unit	Min.HB	Min.1.5	1300	No visible damage	
Supplementary information:					

T.7	TABLE: Drop tests				N
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
--	--	--	--	--	
Supplementary information:					

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Enclosure/Whole unit	Min.HB	Min.1.5	70	7	No visible damage	
Supplementary information:						

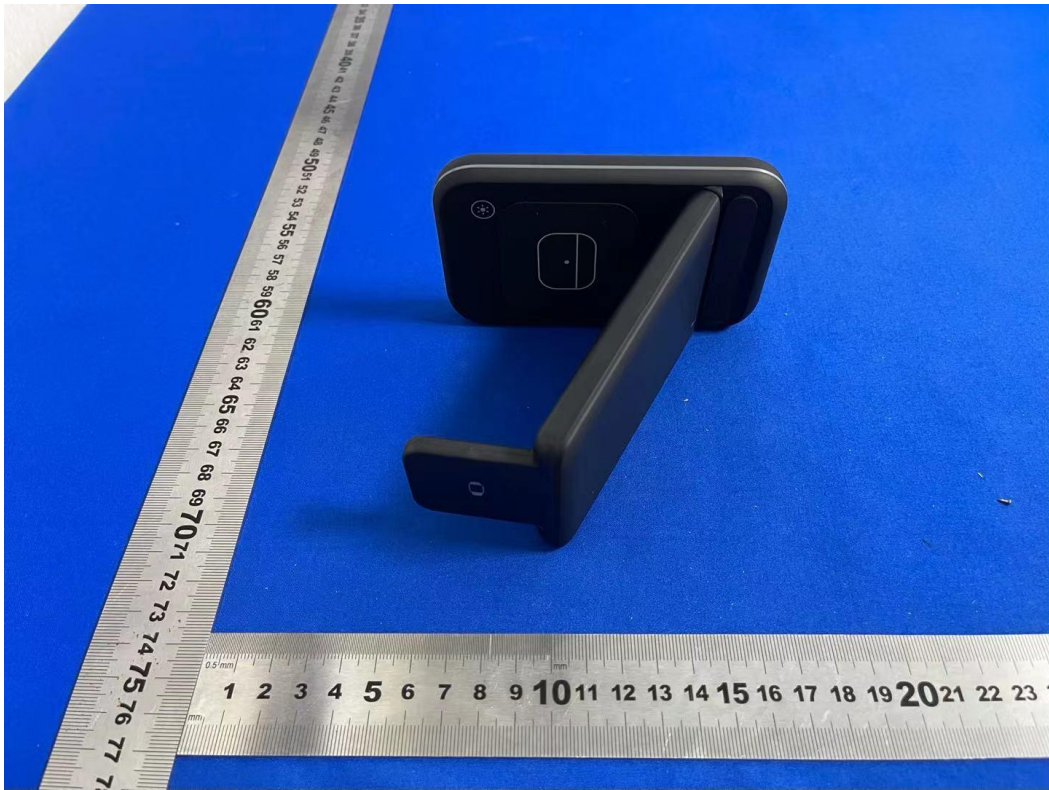
===== End of Test Report =====

Product Photographs

External Photos of EUT



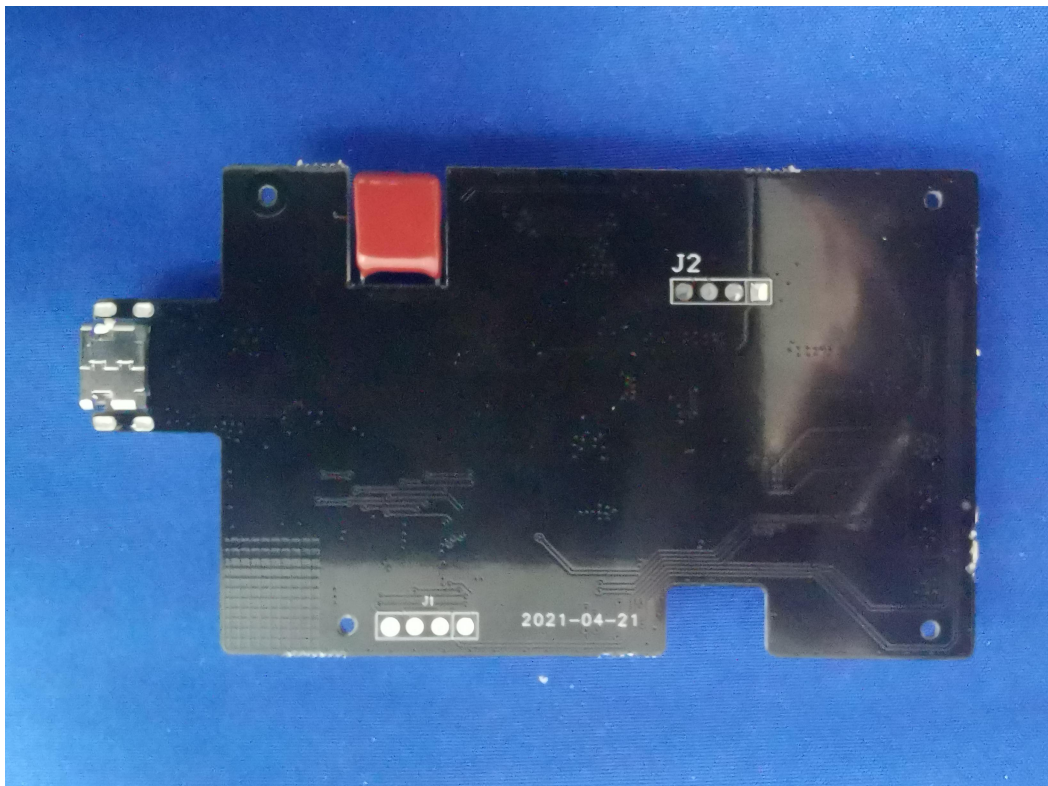
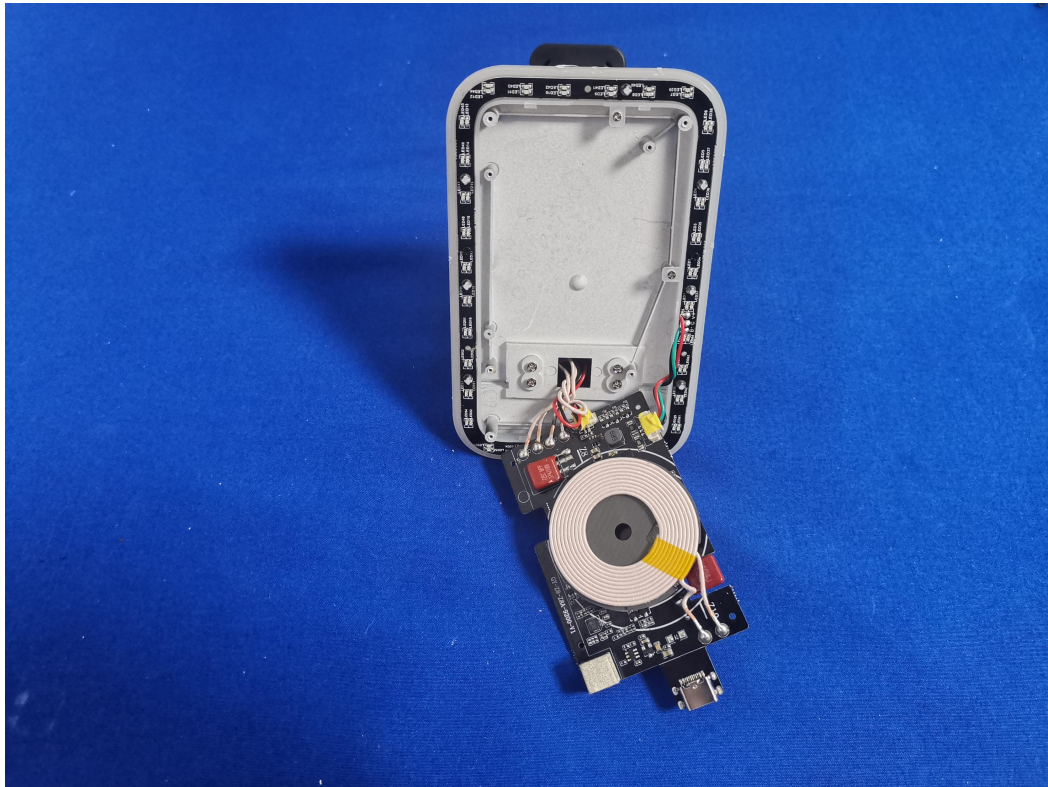


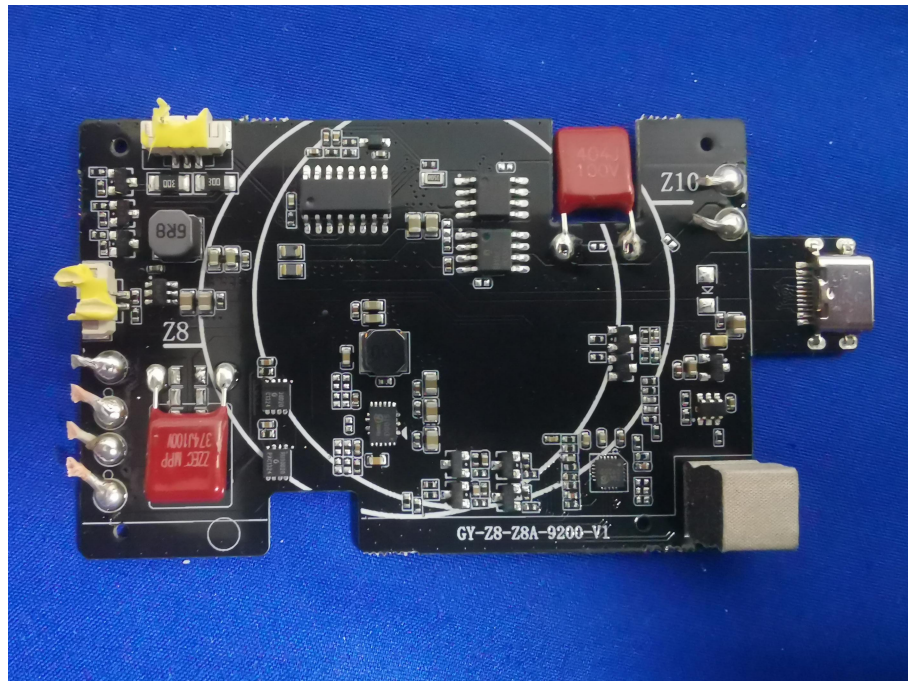


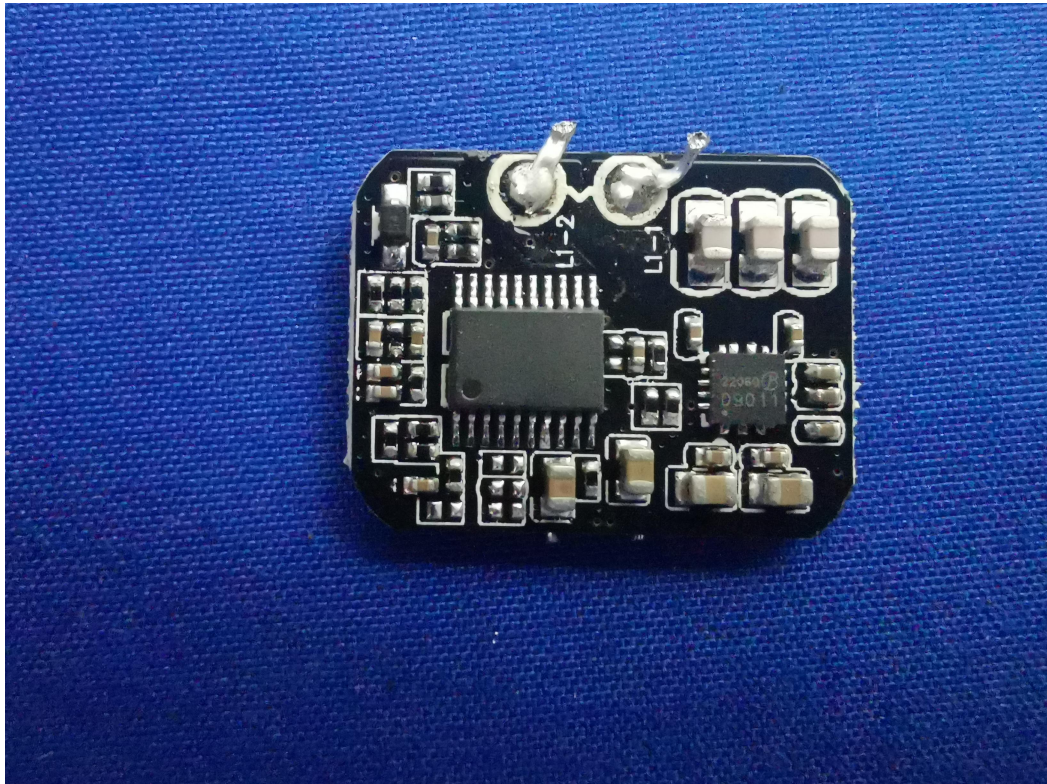
Product Photographs

Internal Photos of EUT













Flux Compliance Service Laboratory.

Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial,
Song shan lake Dongguan

Certificate of Conformity

Certificate No.: FCSR20210701001

Product : Wireless Charger
Model(s) No. : GY-Z8A,GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
Brand Name : Guany
Holder : Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address : 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan
City ,Guangdong China
Manufacturer : Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address : 1001 Room ,No#3 building ,No#36 Fuxing road, Chang'an town ,Dongguan
City ,Guangdong China
Report No. : FCS202107010E01 FCS202107010A01
: FCS202107010W01 FCS202107010H01
Applied Standards : EN 55032:2015 ETSI EN 301 489-1 V2.2.3 (2019-11)
: EN 55035:2017 ETSI EN 301 489-3 V2.1.1 (2019-03)
EN 303417 V1.1.1(2017-09)
EN 62368-1:2014+A11:2017
EN 62479: 2010

*The applicant of the certificate is authorized to use this certificate in connection with EC declaration of conformity to the Directive. The certificate is only applicable to the equipments described above. The submitted sample of the above product has been tested according with Standard(s) used for showing compliance with the essential requirements in the specified directive(s): **2014/53/EU Directive***



Approved by: _____

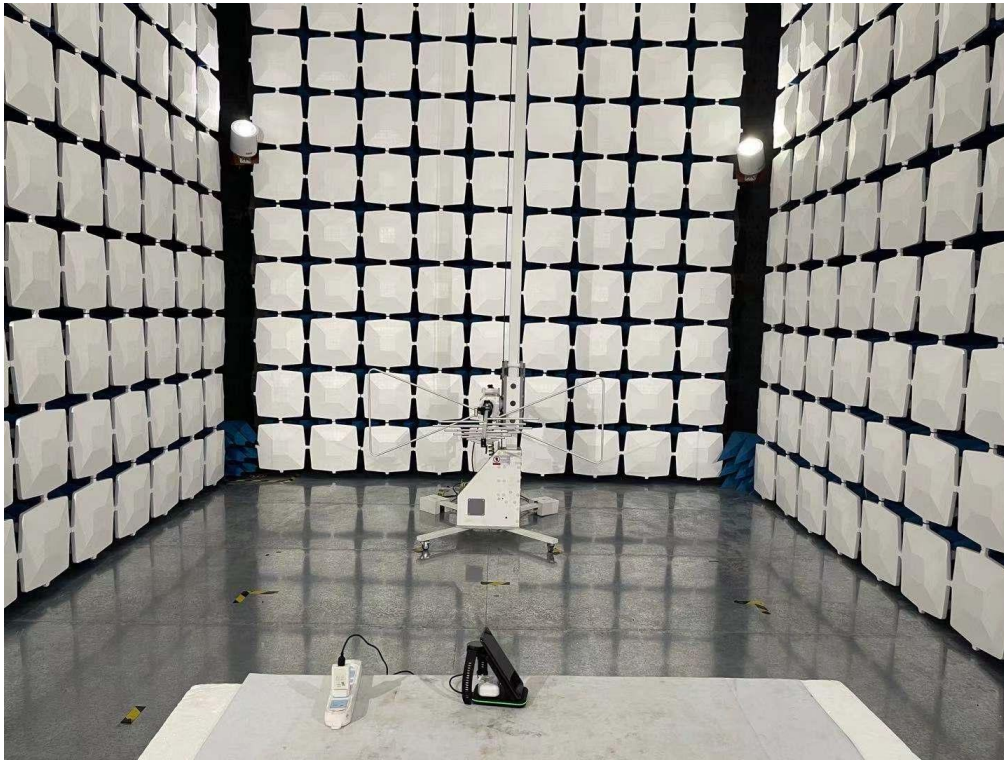
Kait Chen

13 Jul. 2021

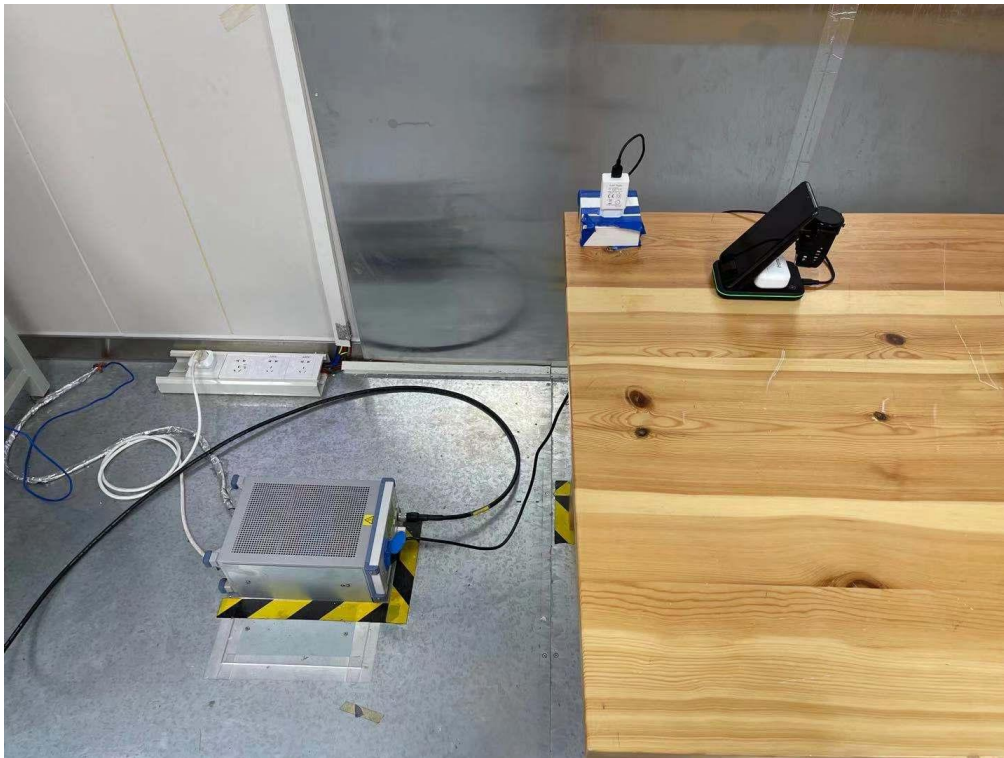
Kait Chen/Technical Director



Blow 1GHz for radiated emission test setup



Conduction emission testing device



Internal photos

Photo 1



Photo 2

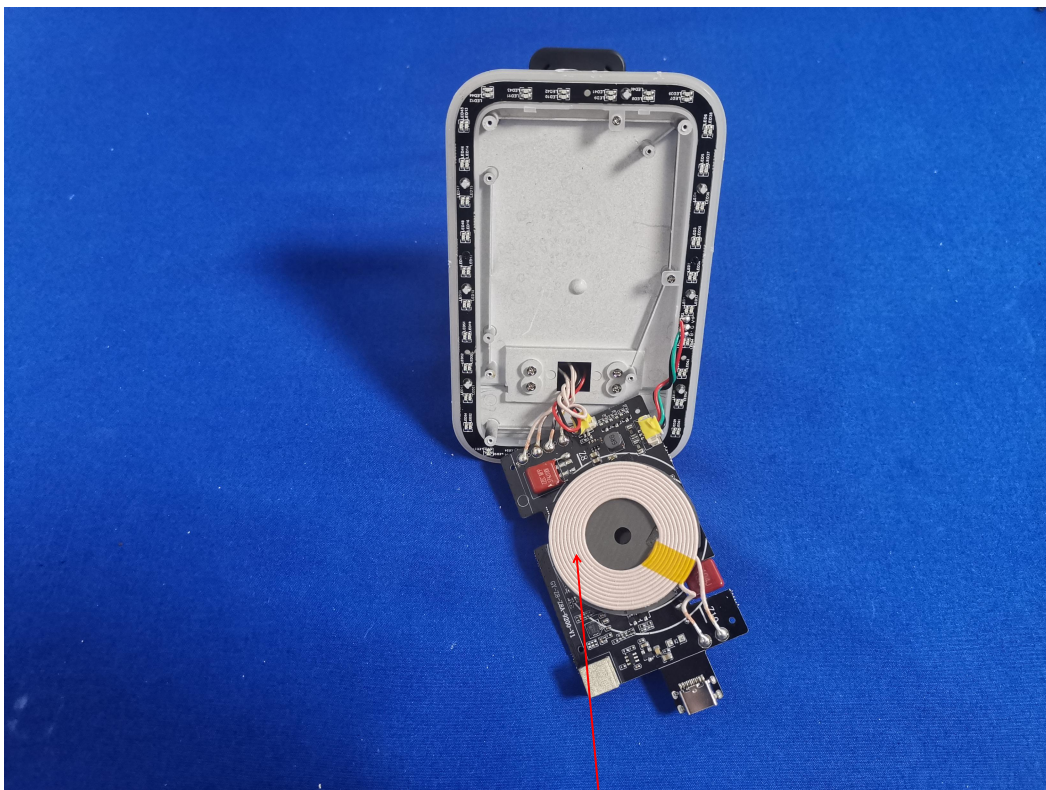


Watch Antenna 1

Photo 3



Photo 4



headset Antenna 2

Photo 5

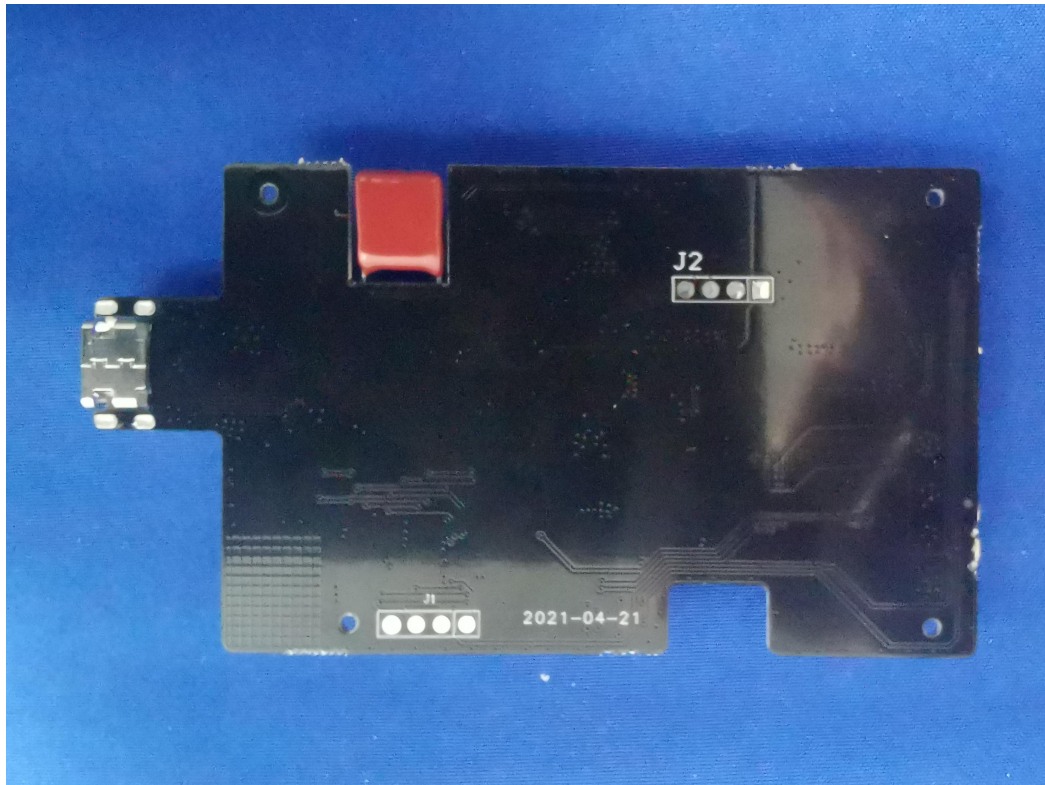


Photo 6

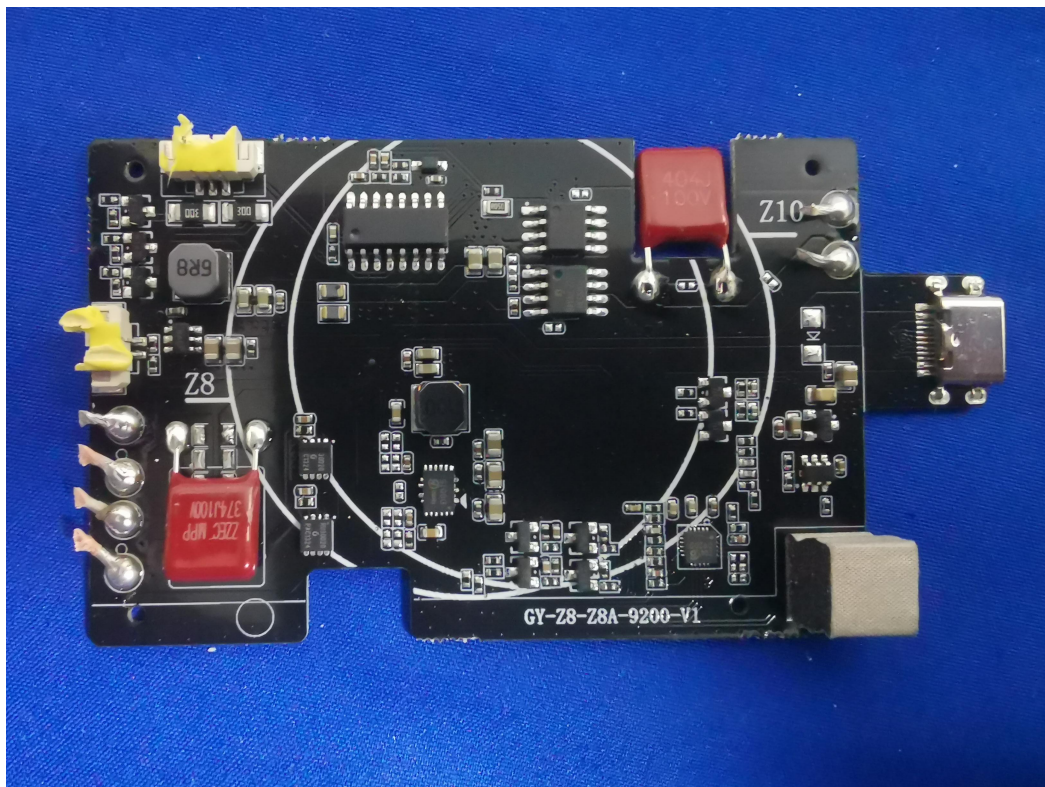


Photo 7

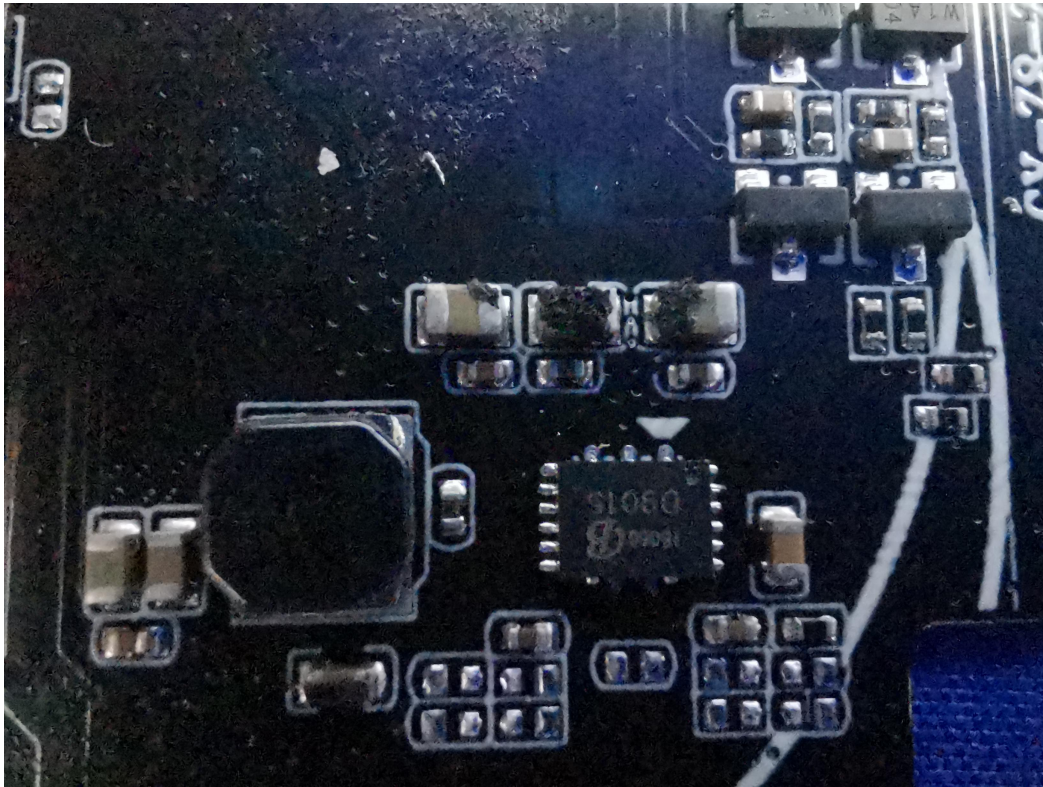


Photo 8

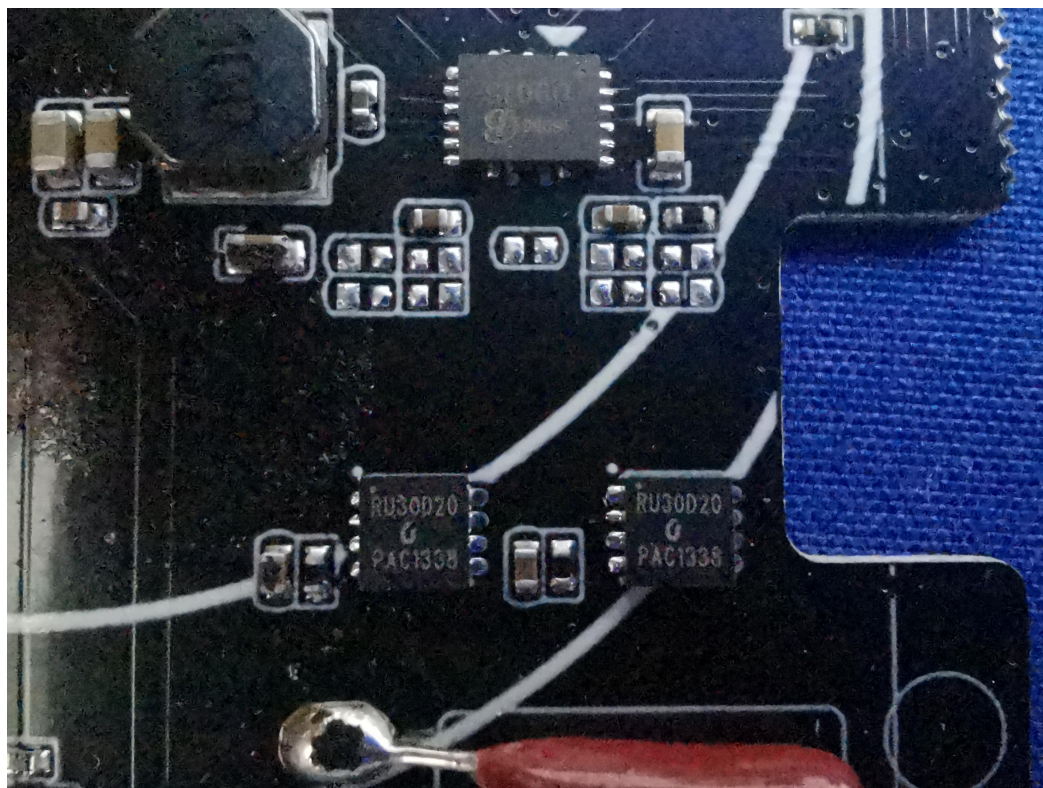


Photo 9

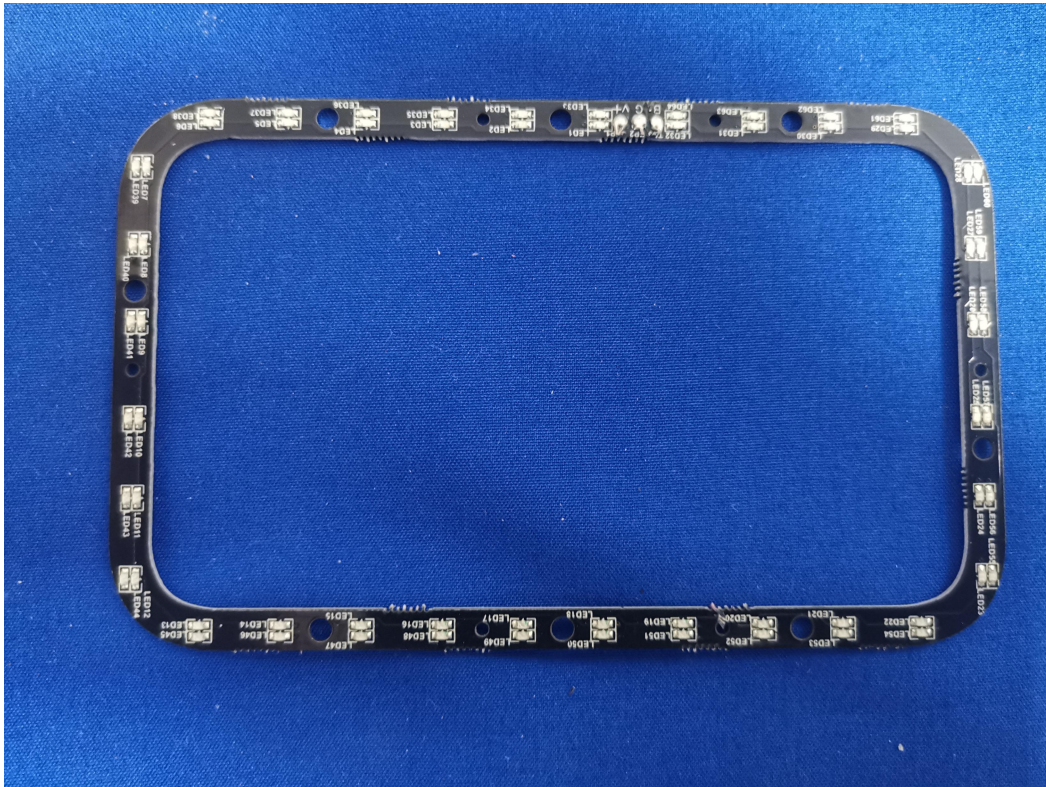
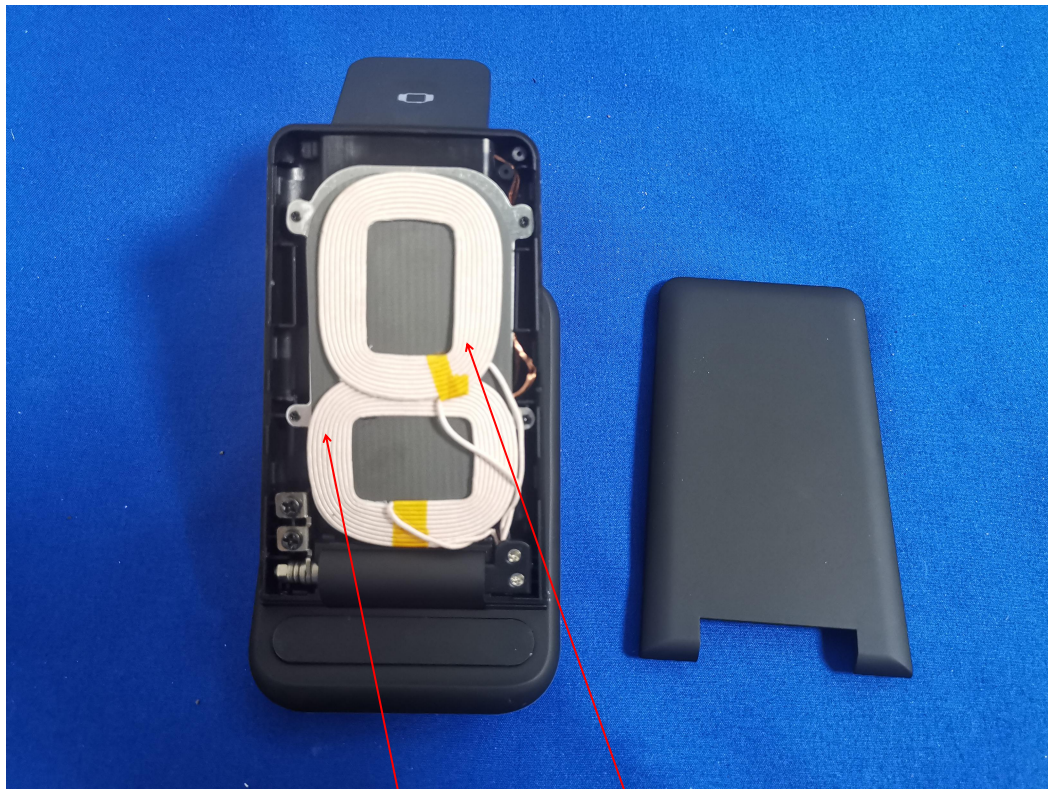


Photo 10



Photo 11



Phone Antenna 3 Phone Antenna 4

Photo 12

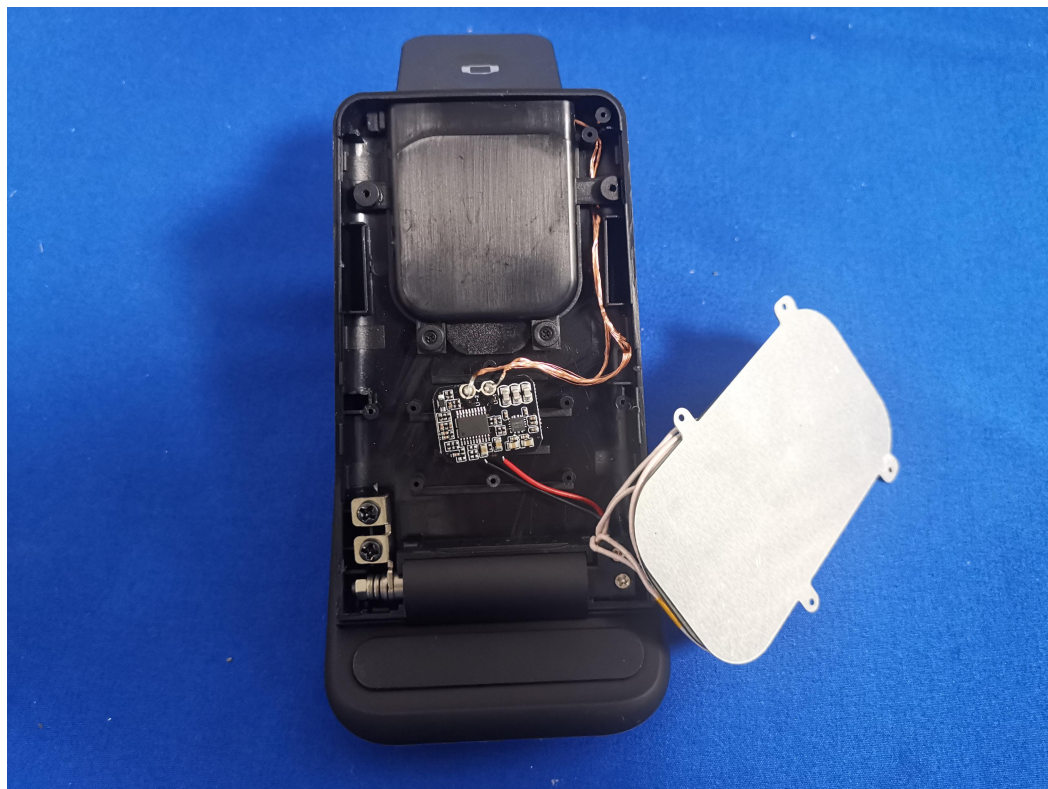


Photo 13

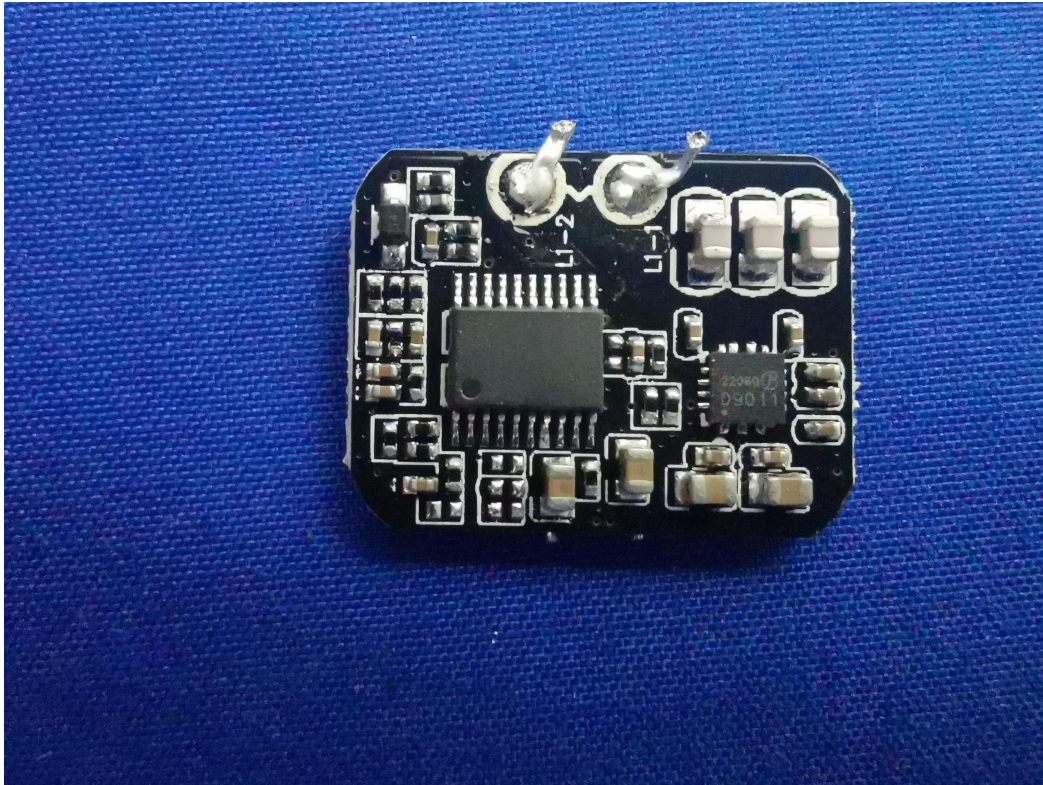


Photo 14





FCC Test Report

Report No: FCS202107010W01

Issued for

Applicant:	Guanyu(Dongguan) Intelligent Technology Co.,Ltd
Address:	1001 Room ,No#3 building ,No#36 Fuxing road, Chang' an town ,Dongguan City ,Guangdong China
Product Name:	Wireless Charger
Brand Name:	Guany
Model Name:	GY-Z8A
Series Model:	GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
FCC ID:	2A2NS-GY-Z8A
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

TEST RESULT CERTIFICATION

Applicant's Name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd

Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang' an town ,Dongguan City ,Guangdong China

Manufacture's Name.....: Guanyu(Dongguan) Intelligent Technology Co.,Ltd

Address.....: 1001 Room ,No#3 building ,No#36 Fuxing road, Chang' an town ,Dongguan City ,Guangdong China

Product Description

Product Name.....: Wireless Charger

Brand Name: Guany

Model Name.....: GY-Z8A

Series Model.....: GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S

Test Standards.....: FCC Rules and Regulations Part 15 Subpart C, Section 209

Test Procedure.....: ANSI C63.10:2013

This device described above has been tested FCS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of FCS, this document may be altered or revised by FCS, personal only, and shall be noted in the revision of the document..

Date of Test.....:

Date (s) of performance of tests.: 02 Jul. 2021 ~ 13 Jul. 2021

Date of Issue.....: 13 Jul. 2021

Test Result.....: Pass

Tested by

:

Scott Shen

(Scott Shen)

Reviewed by

:

Duke Qian

(Duke Qian)

Approved by

:

Kait Chen

(Kait Chen)



Table of Contents	Page
1. SUMMARY OF TEST RESULTS.....	5
1.1 TEST FACTORY.....	6
1.2 MEASUREMENT UNCERTAINTY.....	6
2. GENERAL INFORMATION.....	7
2.1 GENERAL DESCRIPTION OF THE EUT.....	7
2.2 DESCRIPTION OF THE TEST MODES.....	9
2.3 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS.....	10
2.4 EQUIPMENTS LIST.....	11
3 CONDUCTED EMISSION MEASUREMENT.....	12
3.1 LIMIT.....	12
3.2 TEST PROCEDURE.....	12
3.3 TEST SETUP.....	13
3.4 TEST RESULTS.....	14
4. RADIATED EMISSION MEASUREMENT.....	16
4.1 LIMIT.....	16
4.2 TEST PROCEDURE.....	17
4.3 TEST SETUP.....	18
4.4 TEST RESULTS.....	19
5. 20 DB BANDWIDTH TEST.....	23
5.1 LIMIT.....	23
5.2 TEST PROCEDURE.....	23
5.3 TEST SETUP.....	23
5.4 TEST RESULTS.....	24
6. ANTENNA REQUIREMENT.....	25
6.1 STANDARD REQUIREMENT.....	25
6.2 EUT ANTENNA.....	25

Revision History

Rev.	Issue Date	Effect Page	Contents
00	13 Jul. 2021	All	Initial Issue

1. SUMMARY OF TEST RESULTS

FCC Rules and Regulations Part 15 Subpart C, Section 209			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	--
15.209(a) (f)	Radiated Spurious Emission	PASS	--
15.215(c)	20dB Bandwidth	PASS	--
15.203	Antenna Requirement	PASS	--

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report
- (2) All tests are according to ANSI C63.10-2013

1.1 TEST FACTORY

Company Name:	Flux Compliance Service Laboratory
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
FCC Test Firm Registration Number: 514908 Designation number: CN0127 A2LA accreditation number: 5545.01	

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	RF output power, conducted	± 0.71 dB
2	Unwanted Emissions, conducted	± 2.98 dB
3	Conducted Emission (9KHz-150KHz)	± 4.13 dB
4	Conducted Emission (150KHz-30MHz)	± 4.74 dB
5	All emissions,radiated (9KHz -30MHz)	± 3.1 dB
6	All emissions,radiated(<1G) 30MHz-1000MHz	± 3.2 dB
7	All emissions,radiated (1GHz -18GHz)	± 3.66 dB
8	All emissions,radiated (18GHz -40GHz)	± 4.31 dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Wireless Charger
Trade Name	Guany
Model Name	GY-Z8A
Series Model	GY-Z8,GY-Z8B,GY-Z8C,GY-Z8D,GY-Z8S,GY-Z11,GY-Z11S
Model Difference	The above product with same circuit, PCB layout, electrical parts, materials and wiring structures, Appearance shape, the materials of decorative accessories is same, only different color.
Channel List	Please refer to the Note 2.
Operation frequency	115-205KHz
Modulation Type	MSK
Antenna Type	Inductive Loop Antenna with 1.0dBi
Power Supply	Input : DC 9V/2A Phone Output : 5W,7.5W,10W,15W Headphone Output : 3W Watch Output : 2.5W
Hardware version number	V1.0
Software version number	V1.0
Connecting I/O Port(s)	Please refer to the User's Manual

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2. Operation frequency:0.115KHz~0.205KHz

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	FGGH	Inductive Loop Antenna	N/A	1.0dBi	Antenna

.0

2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Test software: KCC

The test software was used to control EUT work in continuous TX mode, and select test channel, Wireless mode as below table

Tested mode, Description	
Mode	Description
Mode 1	Phone 5W, Watch 2.5W, Headset 3W
Mode 2	Phone 7.5W, Watch 2.5W, Headset 3W
Mode 3	Phone 10W, Watch 2.5W, Headset 3W
Mode 4	Phone 15W, Watch 2.5W, Headset 3W
Mode 5	Phone 5W
Mode 6	Phone 7.5W
Mode 7	Phone 10W
Mode 8	Phone 15W
Mode 9	Watch 2.5W
Mode 10	Headset 3W

2.3 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
1	Adapter	HW	0789SK	N/A	This adapter is for testing only in report.
2	Phone	HW	Mate 20	N/A	This phone is for testing only in report.
3	Headset	iHome	XT-12	N/A	This phone is for testing only in report.
4	Watch	MedicTec	WA001	N/A	This phone is for testing only in report.

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.4 EQUIPMENTS LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESRP 3	FCS-E001	2021.05.26	2022.05.25
Signal Analyzer	R&S	FSV40-N	FCS-E012	2021.05.03	2022.05.02
Active loop Antenna	ZHINAN	ZN30900C	FCS-E013	2020.08.09	2021.08.10
Bilog Antenna	SCHWARZBECK	VULB 9168	FCS-E002	2020.08.26	2021.08.25
Horn Antenna	SCHWARZBECK	BBHA 9120D	FCS-E003	2020.08.26	2021.08.25
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	FCS-E018	2021.05.26	2022.05.25
Pre-Amplifier(0.1M-3G Hz)	EMCI	EM330N	FCS-E004	2020.06.26	2021.06.25
Pre-Amplifier (1G-18GHz)	N/A	TSAMP-0518SE	FCS-E014	2021.05.03	2022.05.02
Pre-Amplifier (18G-40GHz)	TERA-MW	TRLA-0400	FCS-E019	2020.08.08	2021.08.07
Temperature & Humidity	HTC-1	victor	FCS-E005	2020.08.26	2021.08.25

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	FCS-E020	2021.05.03	2022.05.02
LISN	R&S	ENV216	FCS-E007	2020.08.08	2021.08.07
LISN	ETS	3810/2NM	FCS-E009	2021.05.03	2022.05.02
Temperature & Humidity	HTC-1	victor	FCS-E008	2020.08.08	2021.08.07

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
Spectrum Analyzer	Keysight	N9020A	FCS-E015	2021.05.03	2022.05.02
Spectrum Analyzer	Agilent	E4447A	MY50180039	2020.08.08	2021.08.07
Spectrum Analyzer	R&S	FSV-40	101499	2020.08.26	2021.08.25

3 CONDUCTED EMISSION MEASUREMENT

3.1 LIMIT

Operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

FREQUENCY (MHz)	Conducted Emissionlimit (dBUV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

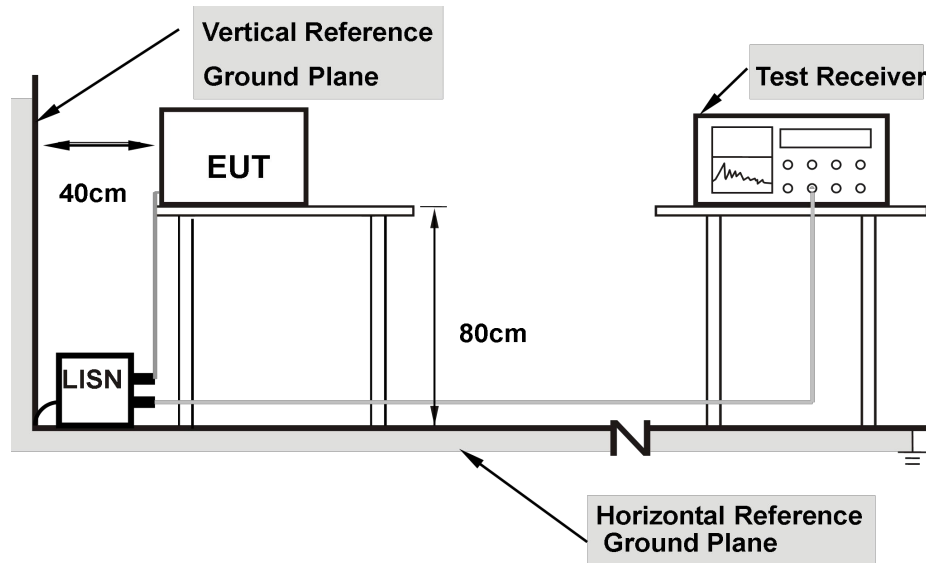
3.2 TEST PROCEDURE

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

- a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3 TEST SETUP



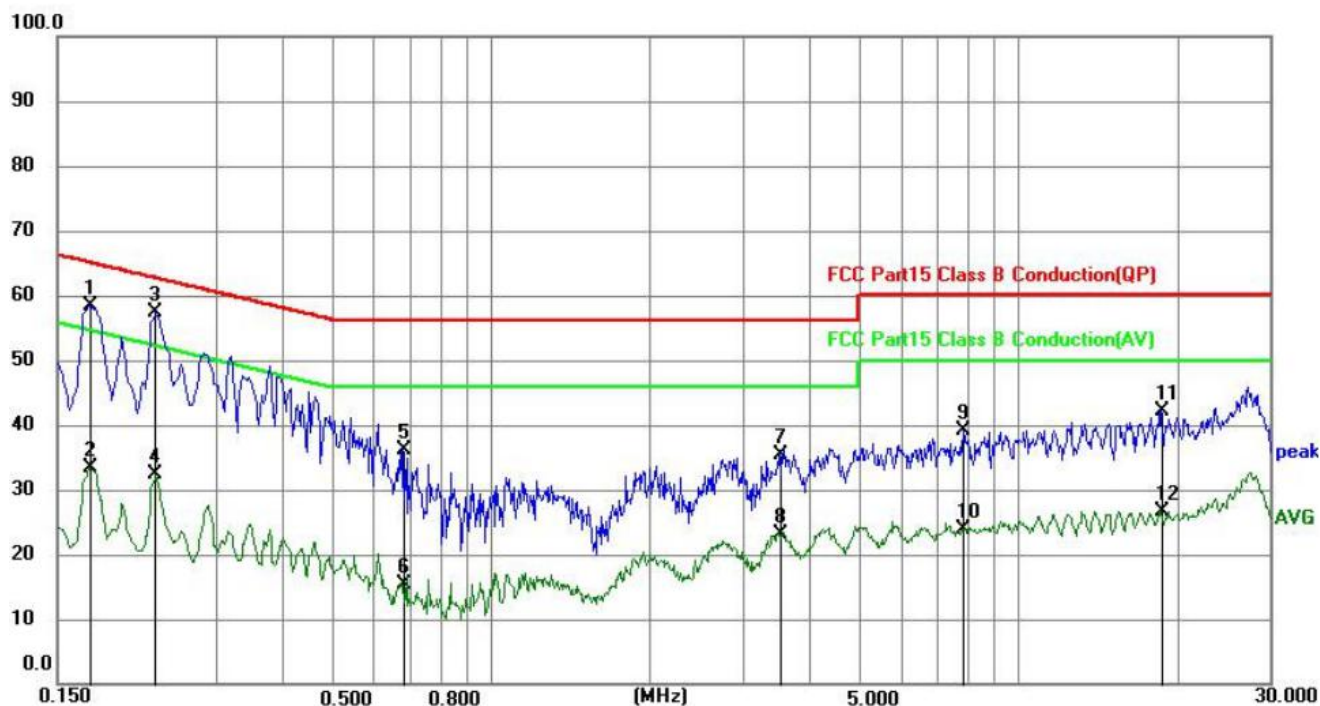
Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.4 TEST RESULTS

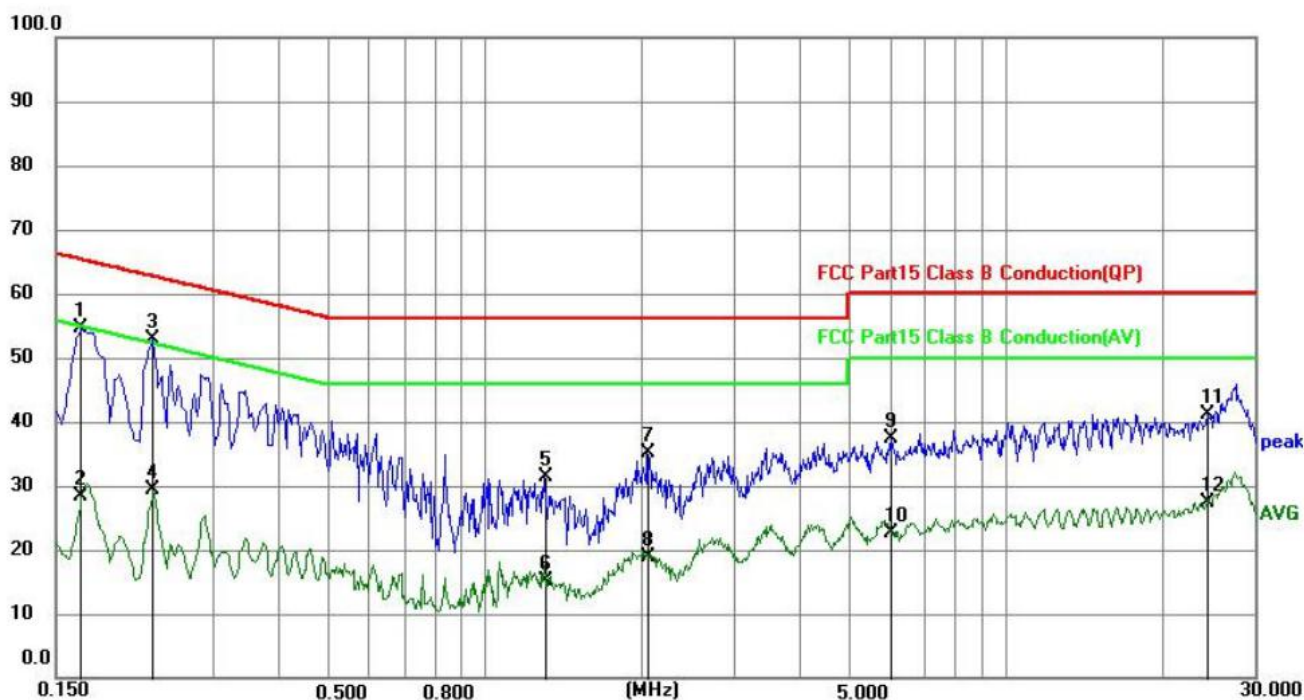
Temperature:	25℃	Relative Humidity:	50%
Test Mode:	Mode 4(Worst)	Test Voltage:	Input AC 120V/60Hz by adapter
Result:	Pass		

L-line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1725	48.66	9.78	58.44	64.84	6.40	QP
2	0.1725	23.60	9.78	33.38	54.84	21.46	AVG
3	0.2310	47.62	9.80	57.42	62.41	4.99	QP
4	0.2310	22.64	9.80	32.44	52.41	19.97	AVG
5	0.6809	26.34	9.88	36.22	56.00	19.78	QP
6	0.6809	5.44	9.88	15.32	46.00	30.68	AVG
7	3.5250	17.84	17.49	35.33	56.00	20.67	QP
8	3.5250	5.63	17.49	23.12	46.00	22.88	AVG
9	7.8855	19.04	20.00	39.04	60.00	20.96	QP
10	7.8855	3.86	20.00	23.86	50.00	26.14	AVG
11	18.6494	22.08	20.16	42.24	60.00	17.76	QP
12	18.6494	6.41	20.16	26.57	50.00	23.43	AVG

N-line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1680	44.79	9.78	54.57	65.06	10.49	QP
2	0.1680	18.63	9.78	28.41	55.06	26.65	AVG
3	0.2310	43.03	9.80	52.83	62.41	9.58	QP
4	0.2310	19.59	9.80	29.39	52.41	23.02	AVG
5	1.2975	19.85	11.41	31.26	56.00	24.74	QP
6	1.2975	3.66	11.41	15.07	46.00	30.93	AVG
7	2.0535	20.19	15.03	35.22	56.00	20.78	QP
8	2.0535	3.83	15.03	18.86	46.00	27.14	AVG
9	6.0270	17.31	20.07	37.38	60.00	22.62	QP
10	6.0270	2.64	20.07	22.71	50.00	27.29	AVG
11	24.3915	20.93	20.27	41.20	60.00	18.80	QP
12	24.3915	7.22	20.27	27.49	50.00	22.51	AVG

4. RADIATED EMISSION MEASUREMENT

4.1 LIMIT

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2013 below has to be followed

LIMITS OF RADIATED EMISSION MEASUREMENT (0.009mhz - 1000mhz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- (5) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	PK=1MHz / 1MHz, AV=1 MHz /10 Hz

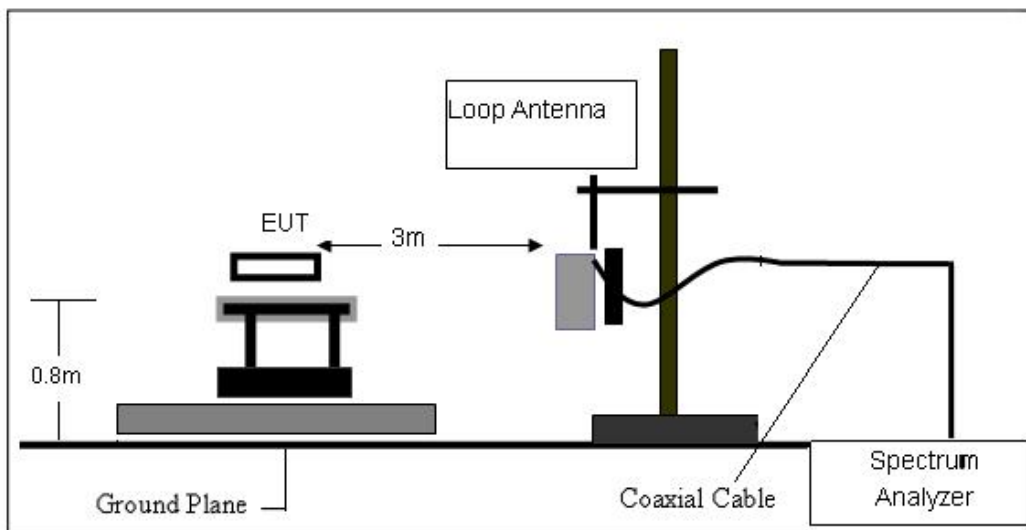
- The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- The EUT was placed on the top of a rotating table 0.8 meters (above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then QuasiPeak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

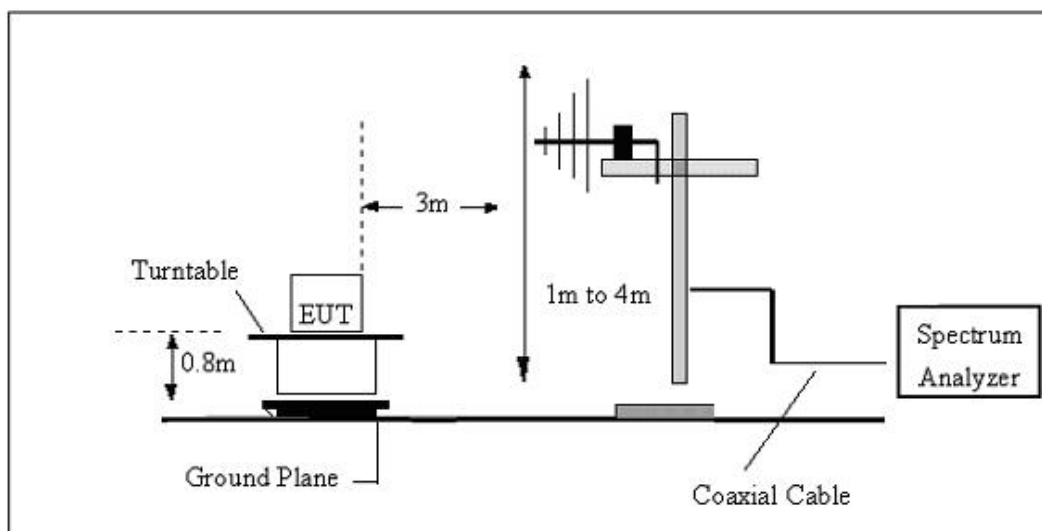
Both horizontal and vertical antenna polarities were tested. The worst case emissions were reported

4.3 TEST SETUP

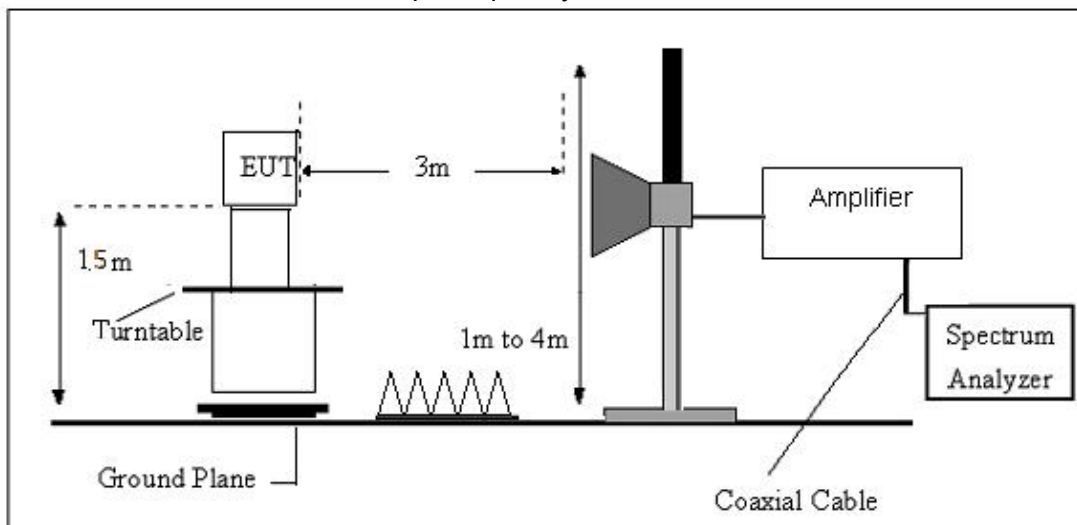
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz

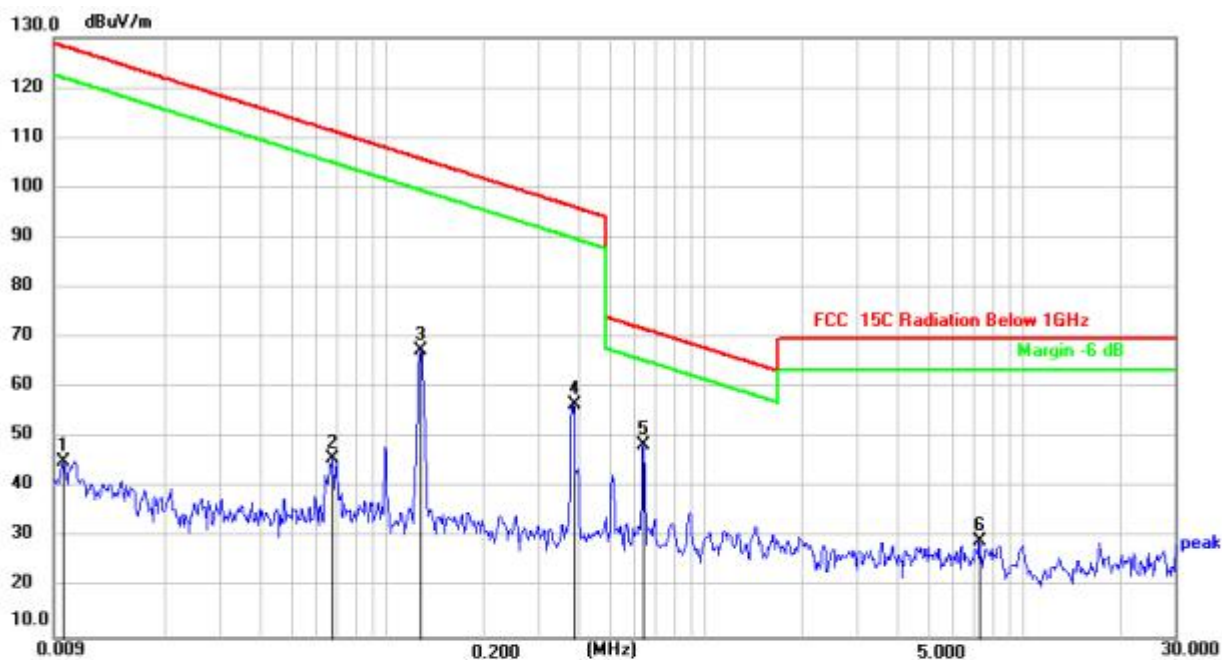


4.4 TEST RESULTS

For spurious emission

(9KHz-30MHz)

Temperature:	23.7°C	Relative Humidity:	61%
Test Voltage:	DC 9V	Phase:	Horizontal
Test Mode:	Mode 4(Worst)		

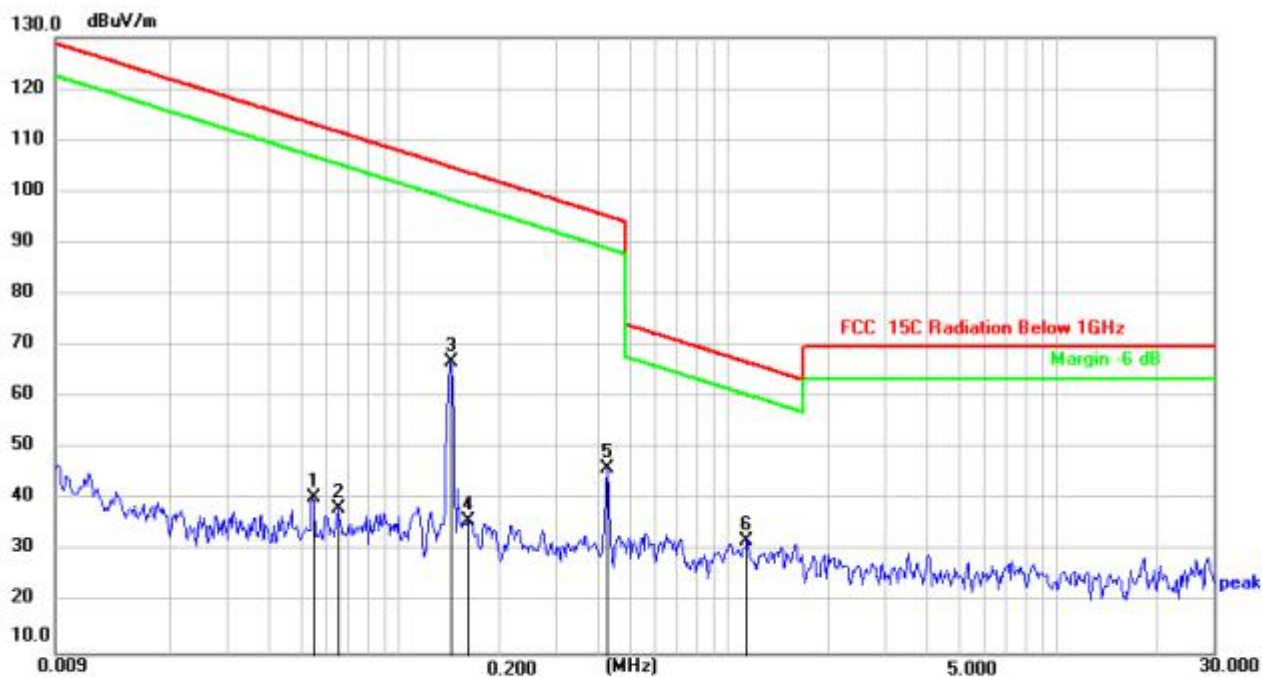


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0096	24.89	20.44	45.33	127.96	-82.63	peak
2	0.0673	25.37	20.52	45.89	111.04	-65.15	peak
3	0.1276	47.18	20.16	67.34	105.49	-38.15	peak
4	0.3849	36.30	20.27	56.57	95.90	-39.33	peak
5 *	0.6416	28.05	20.42	48.47	71.47	-23.00	peak
6	7.2547	8.98	20.50	29.48	69.50	-40.02	peak

Remarks:

1. Final Level =Receiver Read level + Factor

Temperature:	22.7°C	Relative Humidity:	61%
Test Voltage:	DC 9V	Phase:	Vertical
Test Mode:	Mode 4(Worst)		



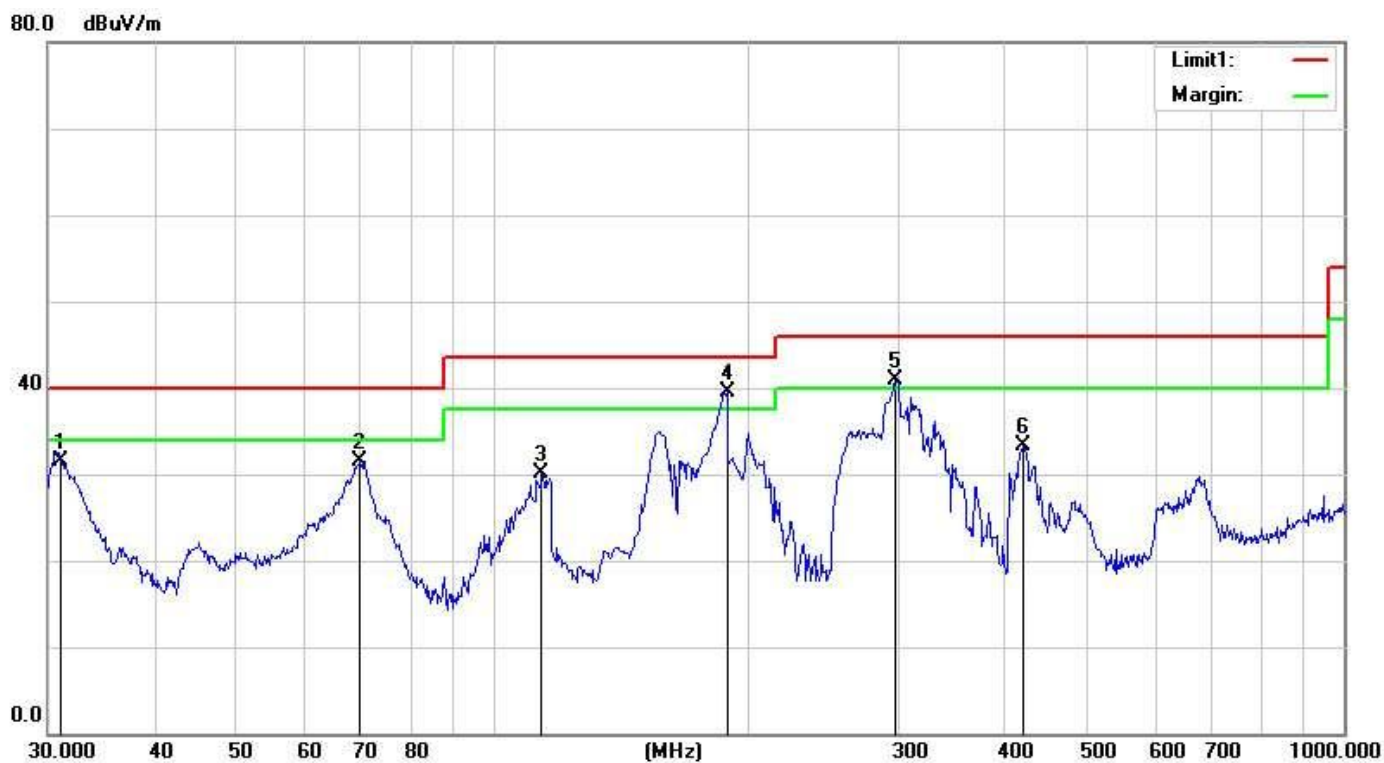
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0545	19.98	20.59	40.57	112.88	-72.31	peak
2	0.0651	17.71	20.53	38.24	111.33	-73.09	peak
3	0.1431	46.83	20.11	66.94	104.49	-37.55	peak
4	0.1616	15.87	20.12	35.99	103.44	-67.45	peak
5	0.4277	25.95	20.30	46.25	94.98	-48.73	peak
6 *	1.1413	11.50	20.54	32.04	66.48	-34.44	peak

Remarks:

1. Final Level =Receiver Read level + Factor

(30MHZ-1000MHZ)

Temperature:	23.7°C	Relative Humidity:	61%
Test Voltage:	DC 9V	Phase:	Horizontal
Test Mode:	Mode 4(Worst)		



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.0703	50.24	-18.83	31.41	40.00	-8.59	QP
2	69.8450	51.95	-20.38	31.57	40.00	-8.43	QP
3	114.1136	48.91	-18.82	30.09	43.50	-13.41	QP
4	188.4122	59.41	-19.87	39.54	43.50	-3.96	QP
5	297.2241	57.10	-16.13	40.97	46.00	-5.03	QP
6	420.5803	47.98	-14.65	33.33	46.00	-12.67	QP

Remarks:

1. Final Level =Receiver Read level + Factor

Temperature:	22.7°C	Relative Humidity:	61%
Test Voltage:	DC 9V	Phase:	Vertical
Test Mode:	Mode 4(Worst)		



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.6378	76.99	-40.24	36.75	40.00	-3.25	QP
2	44.2751	73.40	-40.24	33.16	40.00	-6.84	QP
3	70.0902	76.42	-40.24	36.18	40.00	-3.82	QP
4	158.6676	79.72	-40.24	39.48	43.50	-4.02	QP
5	196.5098	79.44	-40.24	39.20	43.50	-4.30	QP
6	263.8190	82.86	-40.24	42.62	46.00	-3.38	QP

Remarks:

1. Final Level =Receiver Read level + Factor

5. 20 DB BANDWIDTH TEST

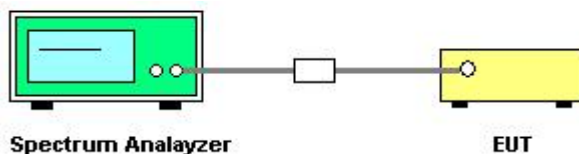
5.1 LIMIT

According to 15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation

5.2 TEST PROCEDURE

- Check the calibration of the measuring instrument using either an internal calibrator or a
- known signal from an external generator
 - Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
 - Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.

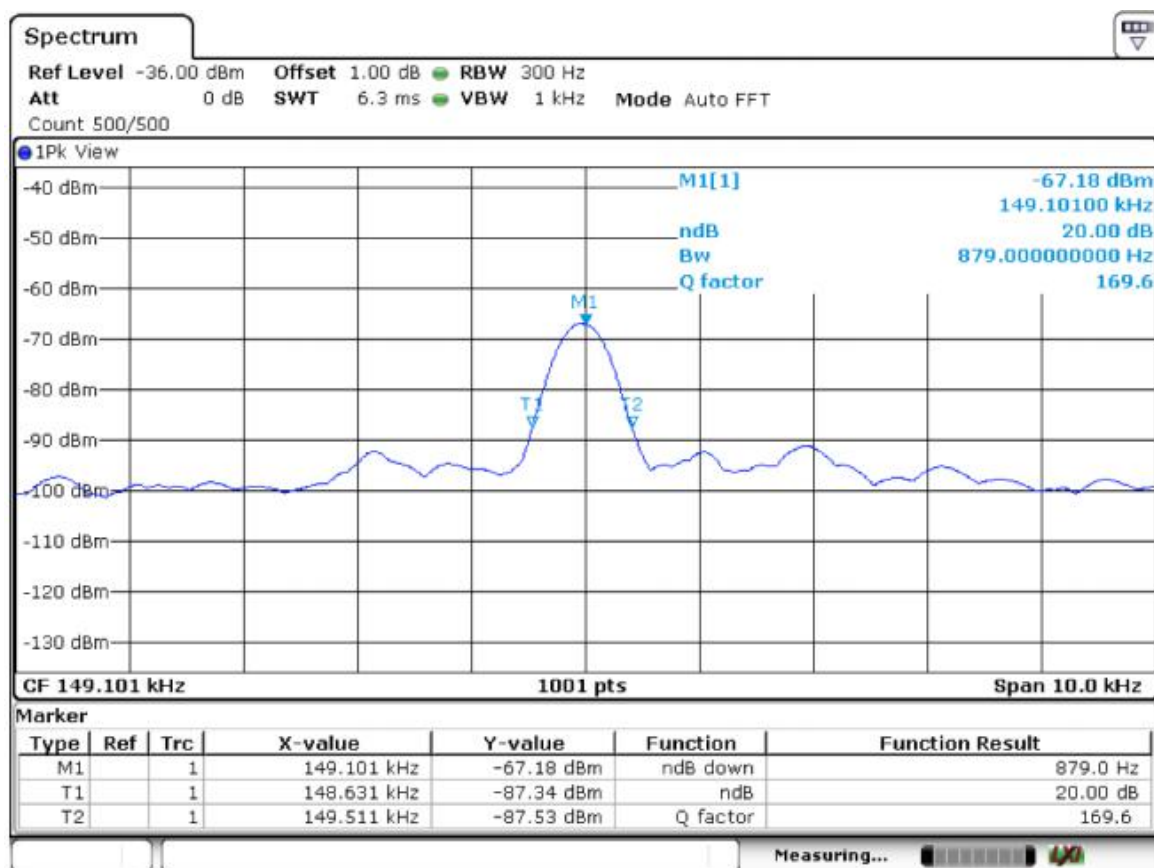
5.3 TEST SETUP



5.4 TEST RESULTS

Temperature:	25°C	Relative Humidity:	50%
Test Mode:	Mode 4(Worst)	Test Voltage:	DC 9V

Frequency (KHz)	20dB Bandwidth (Hz)	Result
149.101	879	PASS



6. ANTENNA REQUIREMENT

6.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

6.2 EUT ANTENNA

The antennas used for this product is Inductive Loop Antenna and no other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 1.0dBi.

*****END OF THE REPORT*****

External photos

Photo 1



Photo 2



Photo 3



Photo 4

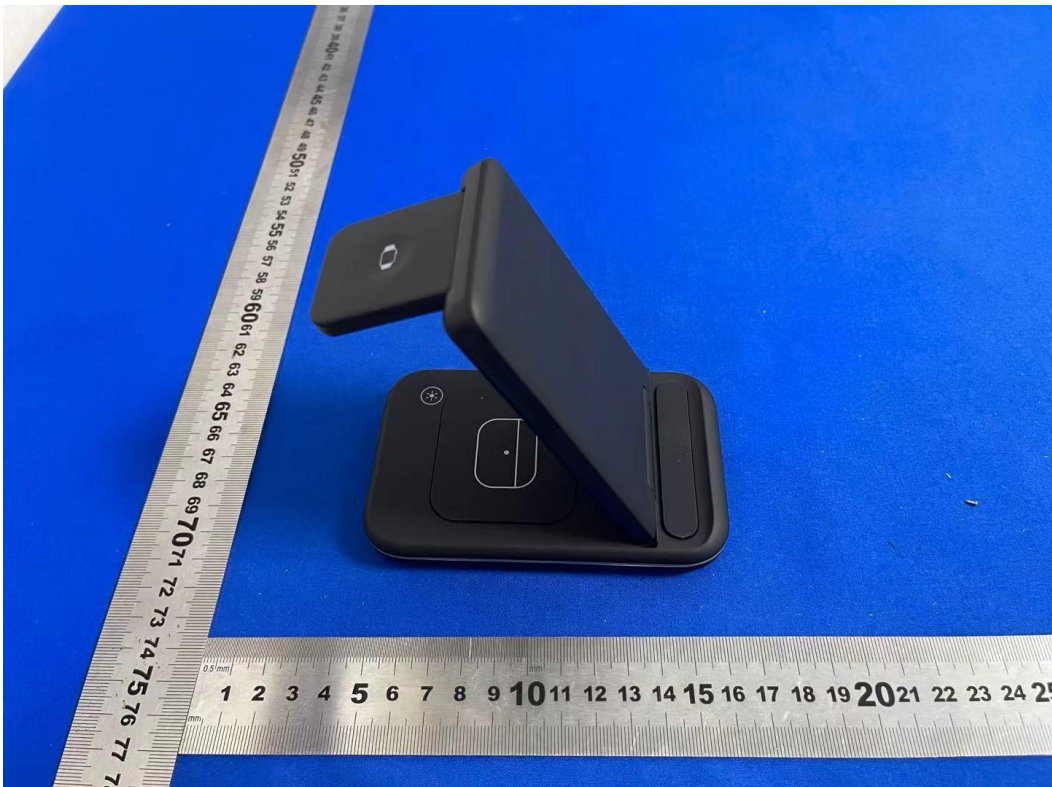


Photo 5

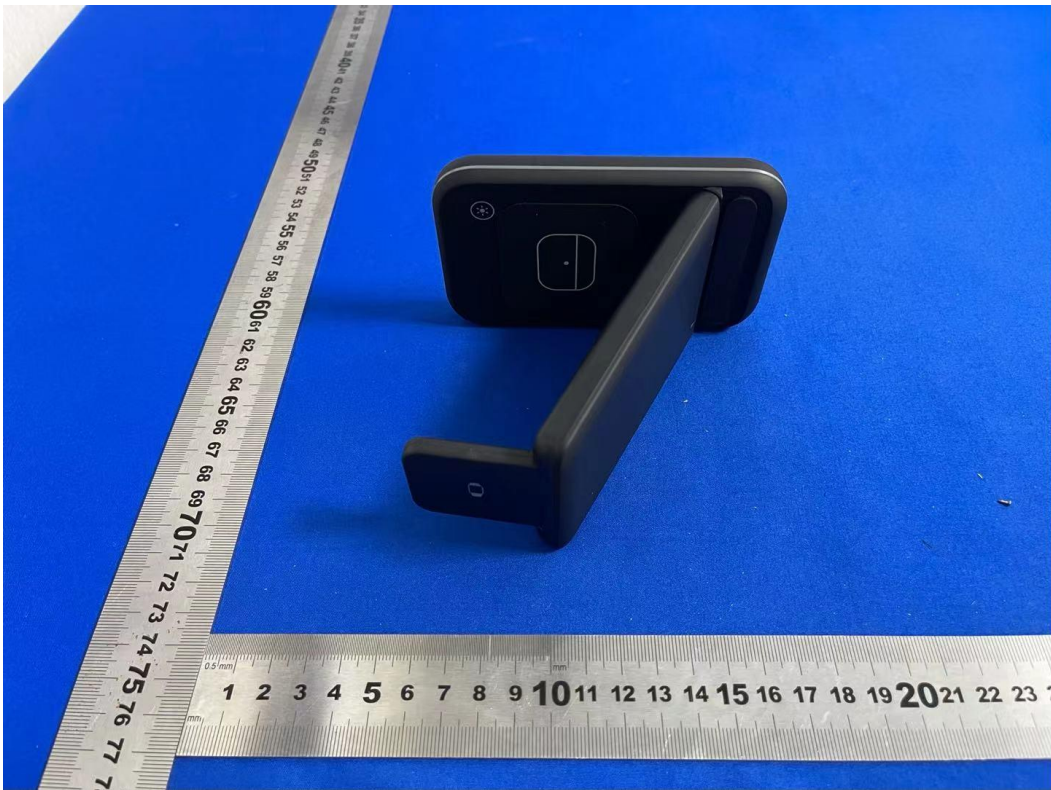


Photo 6



TCB**GRANT OF EQUIPMENT
AUTHORIZATION****TCB**

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

LGAI Technological Center S.A. (APPLUS)
**Ronda de la Font del Carme, s/n
P.O.**
Box 08193,
Barcelona,
Spain

Date of Grant: 08/11/2021**Application Dated: 08/11/2021**

Guanyu(Dongguan) Intelligent Technology Co.,Ltd
1001 Room,No#3 building,
No#36 Fuxing road,Chang'an town,
Dongguan City,Guangdong,
China

Attention: ManFang Wu , Manager

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is
VALID ONLY for the equipment identified hereon for use under the Commission's Rules
and Regulations listed below.

FCC IDENTIFIER: 2A2NS-GY-Z8A

Name of Grantee: Guanyu(Dongguan) Intelligent
Technology Co.,Ltd

Equipment Class: Part 15 Low Power Transmitter Below 1705 kHz
Notes: Wireless Charger

Grant Notes**FCC Rule Parts****15C**

Frequency
Range (MHZ)
0.115 - 0.205

Output
Watts

Frequency
Tolerance

Emission
Designator

The antenna used with this transmitter must be installed to provide a minimum separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures. End-users must be provided with operating procedures for satisfying RF exposure compliance.

