



FCC Test Report

Report No: FCS20235103W02

Issued for

Applicant:	Shenzhen Guang Xin Yi Electronics Co., Ltd.
Address:	501,Yufeng ind Area,Shangtang,Longhua New Area, Shenzhen China
Product Name:	Car MP3 Player
Brand Name:	N/A
Model Name:	GZ01
Series Model:	GZ03, GZ05, GZ06,GZ07,GZ11,GZ13 ,GZ15,GZ21 , GZ24 ,GZ25, GZ29, GZ32, G67, G47, G61, G68, G63, G32, G33, G11, G11S, G13, G15, G7, G7S, AP02, AP06 , AP06S, G21, G24, G45, G52, G57, ER9, Q7, Q7S, Q8S
FCC ID:	2AIFL-GZ01
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TEST REPORT CERTIFICATION

Applicant's name.....: Shenzhen Guang Xin Yi Electronics Co., Ltd.
Address.....: 501,Yufeng ind Area,Shangtang,Longhua New Area,
Shenzhen China

Manufacture's Name.....: Shenzhen Guang Xin Yi Electronics Co., Ltd.
Address.....: 501,Yufeng ind Area,Shangtang,Longhua New Area,
Shenzhen China

Product description

Product Name.....: Car MP3 Player
Brand Name.....: N/A
Model Name.....: GZ01
GZ03, GZ05, GZ06,GZ07,GZ11,GZ13 ,GZ15,GZ21 ,GZ24 ,GZ25,
Series Model.....: GZ29, GZ32, G67, G47, G61, G68, G63, G32, G33, G11, G11S,
G13, G15, G7, G7S, AP02, AP06 , AP06S, G21, G24, G45, G52, G57,
ER9, Q7, Q7S, Q8S

Test Standards.....: FCC Part15.239

Test procedure.....: ANSI C63.10: 2013,ANSI C63.4: 2014

This device described above has been tested by STS, 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.

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Date of Test.....:

Date (s) of performance of tests.....: May 17, 2023 ~ May 23, 2023

Date of Issue.....: May 23 , 2023

Test Result.....: **Pass**

Tested by

: 

(Scott Shen)

Reviewed by

: 

(Duke Qian)

Approved by

: 

(Jack Wang)



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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 15.239			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	N/A	--
15.209 15.239(b) (c)	Radiated Emission	PASS	--
15.239(b)	field strength emission	PASS	--
15.203	Antenna Requirement	PASS	--
15.239(a)	20dB Bandwidth	PASS	--

NOTE: (1)" N/A" denotes test is not applicable in this Test Report

(2) All tests are according to ANSI C63.4-2014 and 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
Laboray Accreditations	
FCC Test Firm Registration Number: 514908	
CNAS Number: L15566	
Designation number: CN0127	
A2LA accreditation number: 5545.01	
ISED Number: 25801	

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 %**.

No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	$\pm 2.88\text{dB}$
2	Conducted Emission (150KHz-30MHz)	$\pm 2.67\text{dB}$
3	RF power,conducted	$\pm 0.71\text{dB}$
4	Spurious emissions,conducted	$\pm 0.63\text{dB}$
5	All emissions,radiated (9KHz-30MHz)	$\pm 3.02\text{dB}$
6	All emissions,radiated (30MHz-200MHz)	$\pm 3.80\text{dB}$
7	All emissions,radiated (200MHz-1000MHz)	$\pm 3.97\text{dB}$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Name	Car MP3 Player								
Trade Name	N/A								
Model Name	GZ01								
Serial Model	GZ03, GZ05, GZ06,GZ07,GZ11,GZ13 ,GZ15,GZ21 ,GZ24 , GZ25, GZ29, GZ32, G67, G47, G61, G68, G63, G32, G33, G11, G11S, G13, G15, G7, G7S, AP02, AP06 , AP06S, G21, G24, G45, G52, G57, ER9, Q7, Q7S, Q8S								
Model Difference	We (Shenzhen Guang Xin Yi Electronics Co., Ltd.) hereby state that all the models are electrical identical including the same software parameter and hardware design (i.e., circuit design, PCB Layout, RF module/circuit, antenna type(s) and antenna location, components on PCB, etc.), same mechanical structure and design (including product enclosure, materials, etc.), the only difference is the model name and appearance color.								
Product Description	<table border="1"> <tr> <td>Operation Frequency:</td><td>88.1MHz ~107.9MHz</td></tr> <tr> <td>Modulation Type:</td><td>FM</td></tr> <tr> <td>Antenna Designation:</td><td>Please see Note 3.</td></tr> <tr> <td>Antenna Gain (dBi)</td><td>-0.68dBi</td></tr> </table>	Operation Frequency:	88.1MHz ~107.9MHz	Modulation Type:	FM	Antenna Designation:	Please see Note 3.	Antenna Gain (dBi)	-0.68dBi
Operation Frequency:	88.1MHz ~107.9MHz								
Modulation Type:	FM								
Antenna Designation:	Please see Note 3.								
Antenna Gain (dBi)	-0.68dBi								
Adapter	DC 12V-24V								
Battery	N/A								
Hardware version number	V1.0								
Software version number	V1.0								
Connecting I/O Port(s)	Please refer to the User's Manual								

Note:

- For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- Table for filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	NA	VGBX	Chip Antenna	N/A	-0.68	FM Antenna

CHANNEL LIST

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	88.1	2	88.2	3	88.3
~					
100	98	101	98.1	102	98.2
~					
197	107.7	198	107.8	199	107.9

2.2 DESCRIPTION OF TEST MODES

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

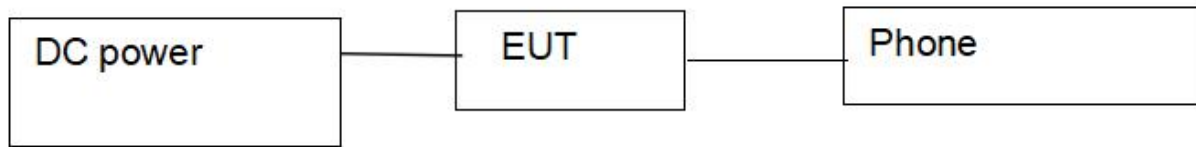
Pretest Mode	Description
Mode 1	TX Mode(Low channel)
Mode 2	TX Mode(Middle channel)
Mode 3	TX Mode(High channel)

	For Radiated Emission
Final Test Mode	Description
Mode 1	TX Mode(Low channel)
Mode 2	TX Mode(Middle channel)
Mode 3	TX Mode(High channel)

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported
- (3) We have been tested for all available U.S. voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	Voltage source	ZHAOXIN	RXN-605D-II	N/A	Test use
2	Phone	apple	iPhone 13	N/A	This is for testing only in report.

Item	Shielded Type	Ferrite Core	Length	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.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESRP3	101947	2022.08.30	2023.08.29
Bilog Antenna	SCHWARZBEC K	VULB 9168	34678	2022.08.30	2023.08.29
Horn Antenna	SCHWARZBEC K	BBHA 9120D(1201)	9120D-1343	2022.08.30	2023.08.29
Pre-mpifier(20M-3GHz)	EM	EMC330N	980622	2022.08.30	2023.08.29
Pre-mpifier(1G-26.5G)	Agilent	4035A00118	8449B	2022.08.30	2023.08.29
Temperature & Humidity	victor	HTC-1	N/A	2022.08.30	2023.08.29
Spectrum Analyzer	R&S	FSV40-N	N/A	2022.08.30	2023.08.29
High frequency amplifier	R&S	LNPA_1840-50	N/A	2022.08.30	2023.08.29
Active ring antenna	N/A	ZN30900C	N/A	2022.08.30	2023.08.29
Test SW	EZ-EMC(Ver.STSLAB 03A1 RE)				

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	FCS-E020	2022.08.30	2023.08.29
LISN	R&S	ENV216	FCS-E007	2022.08.30	2023.08.29
LISN	ETS	3810/2NM	FCS-E009	2022.08.30	2023.08.29
Temperature & Humidity	HTC-1	victor	FCS-E008	2022.08.30	2023.08.29
Testing Software	EZ-EMC(Ver.EMC-CON 3A1.1)				

RF Connected Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
RF power sensor	Agilent	U2021XA	N/A	2022.08.30	2023.08.29
RF power sensor	DARE	RPR3006W	N/A	2022.08.30	2023.08.29
Audio frequency analyzer	R&S	UPL	100689	2022.08.30	2023.08.29
MXG Vector Signal	Agilent	N5182A	MY48180543	2022.08.30	2023.08.29
MXA SIGNAL Analyzer	Agilent	N9020A	MY53420162	2022.08.30	2023.08.29
Broadband wireless communication tester	CI	CMW500	N/A	2022.08.30	2023.08.29
Programmable constant temperature and humidity test chamber	Wei achieves	GX-3000-80LT	N/A	2022.08.30	2023.08.29
Test SW	EZ-EMC(Ver.STSLAB 03A1 RE)				

3. RADIATED EMISSION MEASUREMENT

3.1 RADIATED EMISSION LIMITS

RADIATED EMISSION LIMITS (FCC 15.209)

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

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

NOTE:

- Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].
- In the emission tables above, the tighter limit applies at the Band edge.

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2 TEST PROCEDURE

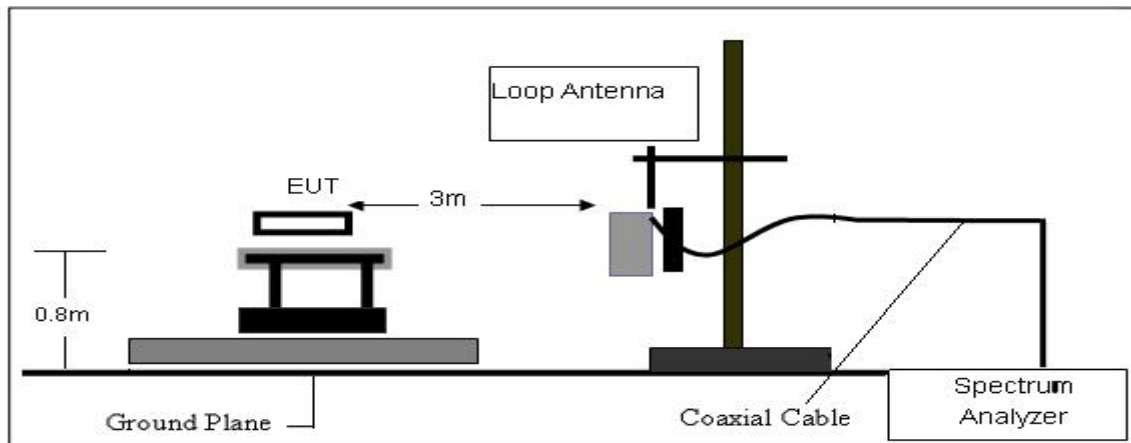
- The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. For the test Antenna
- In the frequency range of 9KHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.
- 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.
- 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:

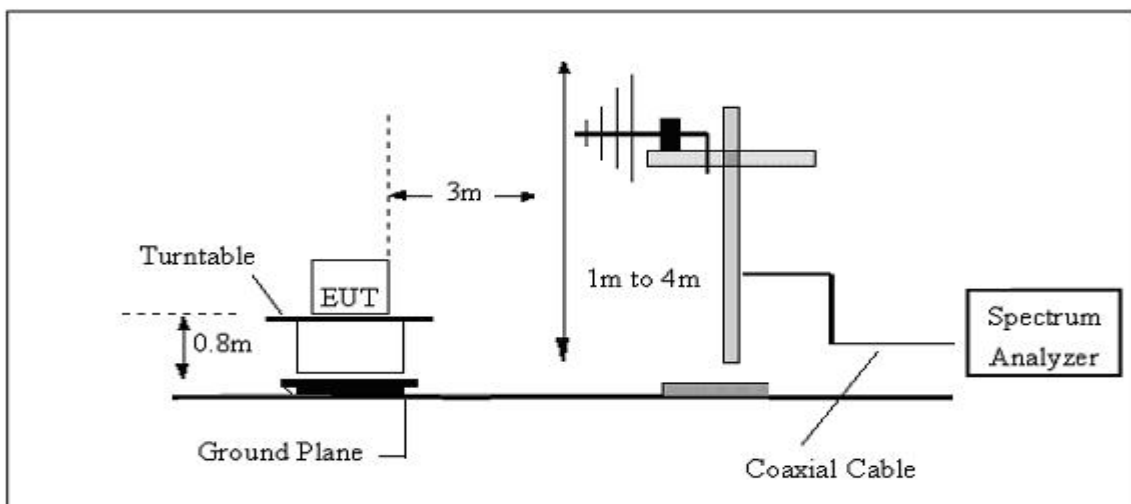
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.3 TEST SETUP

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



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



3.4 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 follows during the testing.

3.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$

3.6 TEST RESULTS

(Radiated Emission<30MHz (9KHz-30MHz, H-field))

Temperature:	20 °C	Relative Humidity:	48%
Test Voltage:	DC 12V	Polarization:	--
Test Mode:	Mode 1		

Freq.	Reading	Correct factor	Limit	Margin	State
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dB)	P/F
0.1898	60.13	11.97	102.04	-29.94	PASS
0.7867	35.18	11.90	69.69	-22.61	PASS
2.4584	32.25	11.25	69.54	-26.04	PASS
3.5330	30.18	11.18	69.54	-28.18	PASS
13.4432	40.19	11.05	69.54	-18.30	PASS

Temperature:	20 °C	Relative Humidity:	48%
Test Voltage:	DC 12V	Polarization:	--
Test Mode:	Mode 2		

Freq.	Reading	Correct factor	Limit	Margin	State
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dB)	P/F
0.1500	60.13	12.02	104.08	-31.93	PASS
0.5480	45.18	11.76	73.28	-16.34	PASS
3.6126	32.25	11.21	69.54	-26.08	PASS
10.8164	34.18	11.18	69.54	-24.18	PASS
13.5120	38.19	11.20	69.54	-20.15	PASS



Temperature:	20 °C	Relative Humidity:	48%
Test Voltage:	DC 12V	Polarization:	--
Test Mode:	Mode 3		

Freq.	Reading	Correct factor	Limit	Margin	State
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dB)	P/F
0.2694	70.13	11.75	99.00	-17.12	PASS
1.0256	45.18	11.95	67.38	-10.25	PASS
2.0206	33.25	11.25	69.54	-25.04	PASS
7.3538	46.18	11.39	69.54	-11.97	PASS
12.8860	43.26	11.18	69.54	-15.10	PASS

Between 30-1000MHz

Temperature:	26 °C	Relative Humidity:	54%
Test Voltage:	DC 12V	Phase:	Horizontal
Test Mode:	Mode 1		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
38.4808	33.26	-17.34	15.92	40.00	-24.08	QP
74.6568	46.94	-21.14	25.80	40.00	-14.20	QP
119.8555	42.82	-20.60	22.22	43.50	-21.28	QP
231.7178	42.84	-17.81	25.03	46.00	-20.97	QP
497.6764	33.33	-13.19	20.14	46.00	-25.86	QP
801.7862	36.09	-9.82	26.27	46.00	-19.73	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit

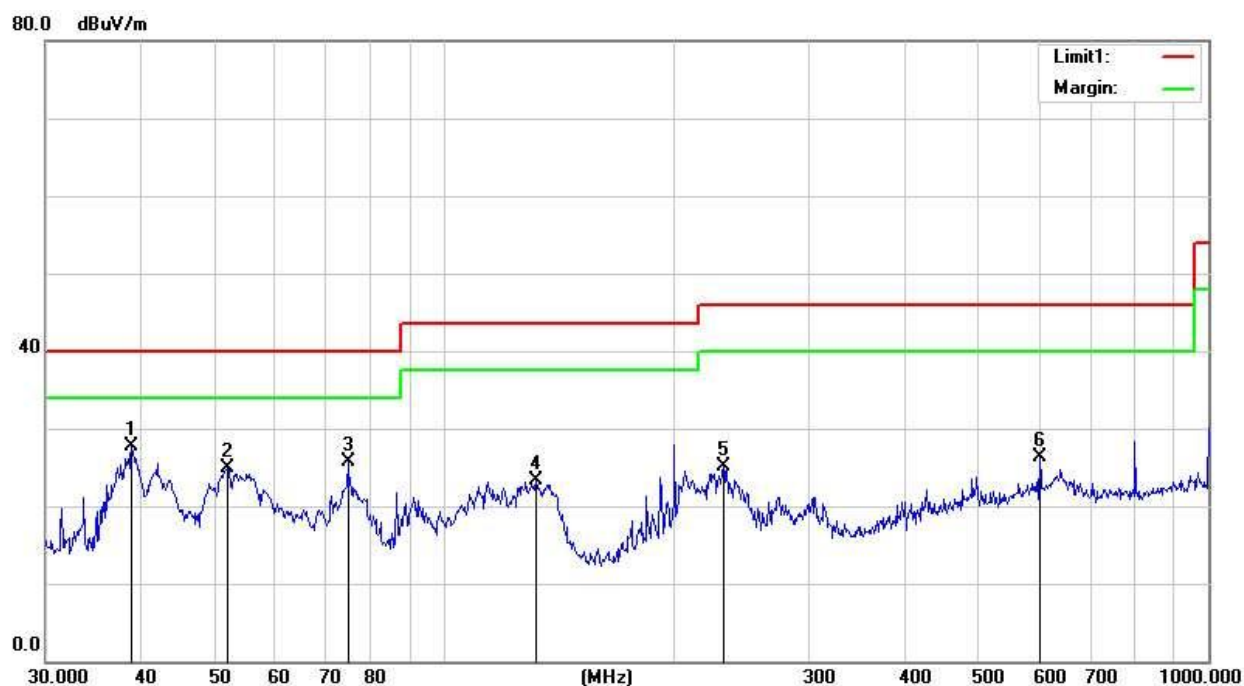


Temperature:	26 °C	Relative Humidity:	54%
Test Voltage:	DC 12V	Phase:	Vertical
Test Mode:	Mode 1		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
38.8880	67.97	-40.24	27.73	40.00	-12.27	QP
52.0251	65.19	-40.24	24.95	40.00	-15.05	QP
74.6568	66.04	-40.24	25.80	40.00	-14.20	QP
131.7576	63.61	-40.24	23.37	43.50	-20.13	QP
231.7178	65.27	-40.24	25.03	46.00	-20.97	QP
601.4265	66.51	-40.24	26.27	46.00	-19.73	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	26 °C	Relative Humidity:	54%
Test Voltage:	DC 12V	Phase:	Horizontal
Test Mode:	Mode 2		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
49.0145	30.41	-16.37	14.04	40.00	-25.96	QP
61.1316	30.85	-17.47	13.38	40.00	-26.62	QP
110.5687	30.92	-17.07	13.85	43.50	-29.65	QP
203.5228	30.65	-15.48	15.17	43.50	-28.33	QP
437.1200	30.94	-11.46	19.48	46.00	-26.52	QP
638.3686	30.26	-7.11	23.15	46.00	-22.85	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	26 °C	Relative Humidity:	54%
Test Voltage:	DC 12V	Phase:	Vertical
Test Mode:	Mode 2		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
43.6584	44.28	-29.65	14.63	40.00	-25.37	QP
56.1974	44.05	-29.62	14.43	40.00	-25.57	QP
107.8877	43.07	-28.81	14.26	43.50	-29.24	QP
206.3976	41.90	-26.13	15.77	43.50	-27.73	QP
467.2350	45.71	-24.97	20.74	46.00	-25.26	QP
760.7036	47.90	-22.60	25.30	46.00	-20.70	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit

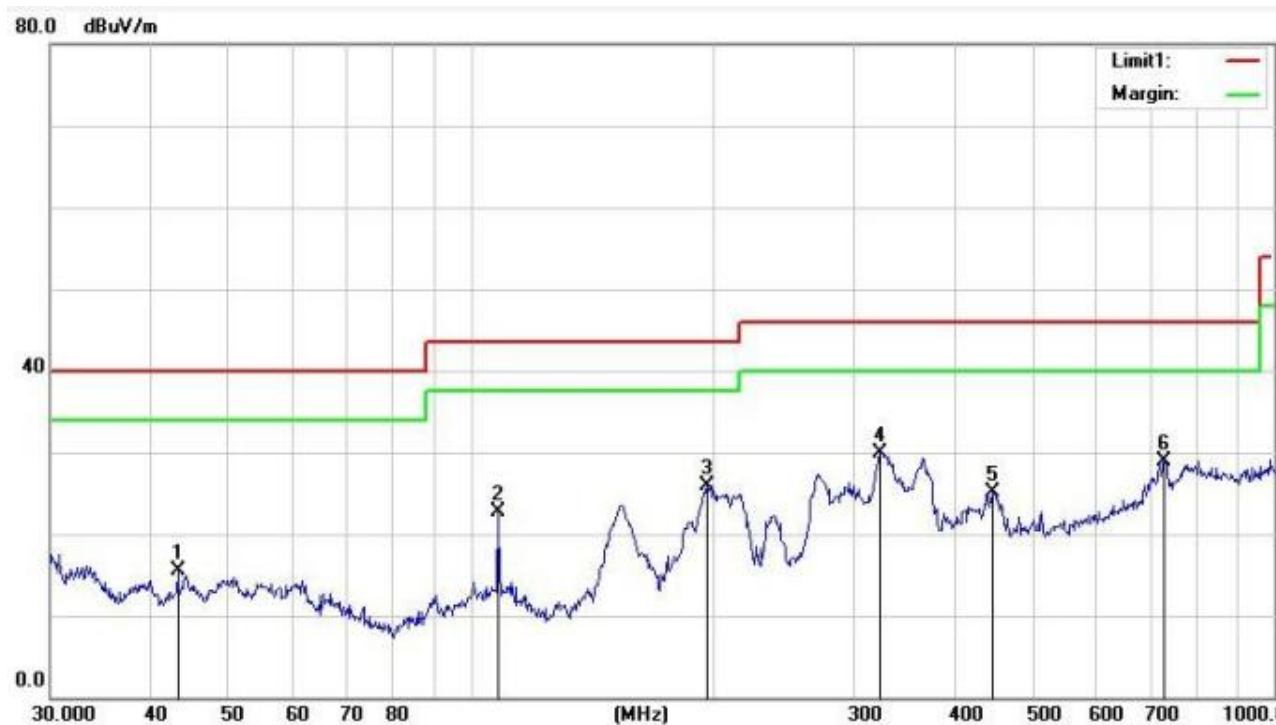


Temperature:	26 °C	Relative Humidity:	54%
Test Voltage:	DC 12V	Phase:	Horizontal
Test Mode:	Mode 3		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
43.2017	32.45	-16.92	15.53	40.00	-24.47	QP
108.2667	39.76	-17.07	22.69	43.50	-20.81	QP
196.5098	42.16	-16.17	25.99	43.50	-17.51	QP
323.3204	43.21	-13.21	30.00	46.00	-16.00	QP
446.4141	36.27	-11.09	25.18	46.00	-20.82	QP
729.3582	34.40	-5.51	28.89	46.00	-17.11	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit

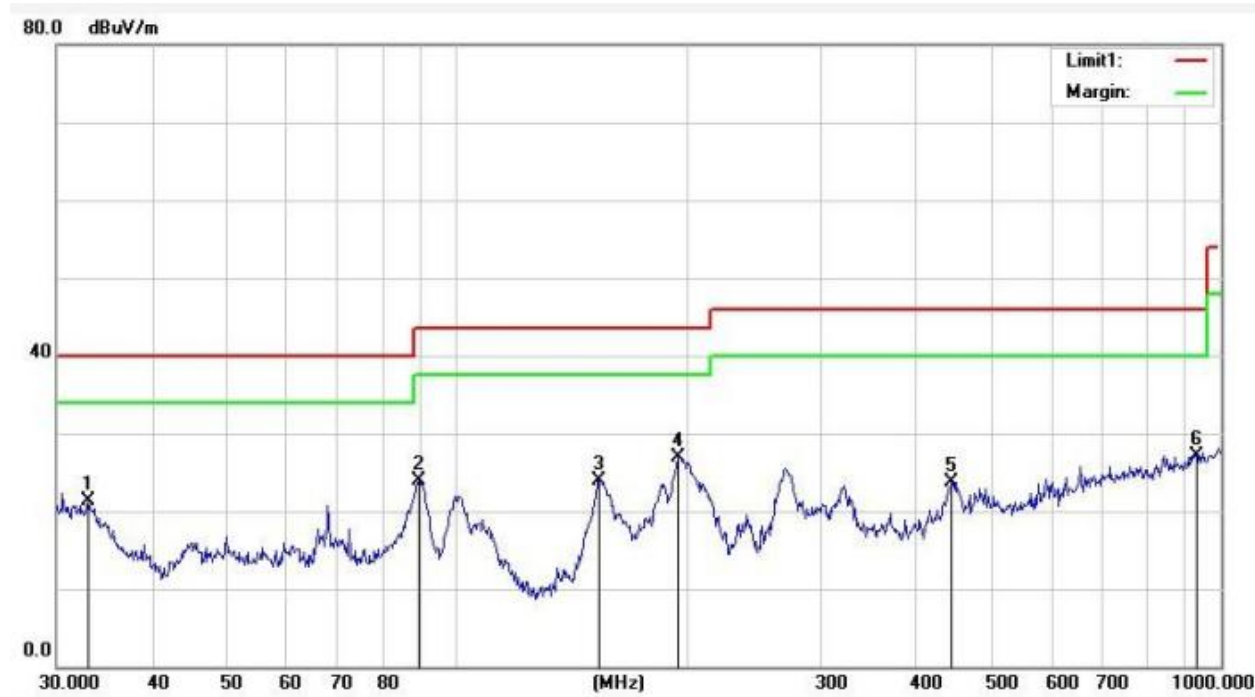


Temperature:	26 °C	Relative Humidity:	54%
Test Voltage:	DC 12V	Phase:	Vertical
Test Mode:	Mode 3		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
32.9791	36.19	-14.96	21.23	40.00	-18.77	QP
89.2764	44.35	-20.44	23.91	43.50	-19.59	QP
153.7385	43.36	-19.37	23.99	43.50	-19.51	QP
195.1365	43.31	-16.44	26.87	43.50	-16.63	QP
444.8514	34.79	-11.15	23.64	46.00	-22.36	QP
929.0082	30.08	-2.89	27.19	46.00	-18.81	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit



Restricted bands around fundamental frequency(Radiated)

Horizontal

Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector Type
88.00	41.03	-16.68	24.35	40	-15.65	QP
108.00	40.11	-15.24	24.87	43.5	-18.63	QP
Remark:Factor=Antenna Factor + Cable Loss + Pre-amplifier						

Vertical

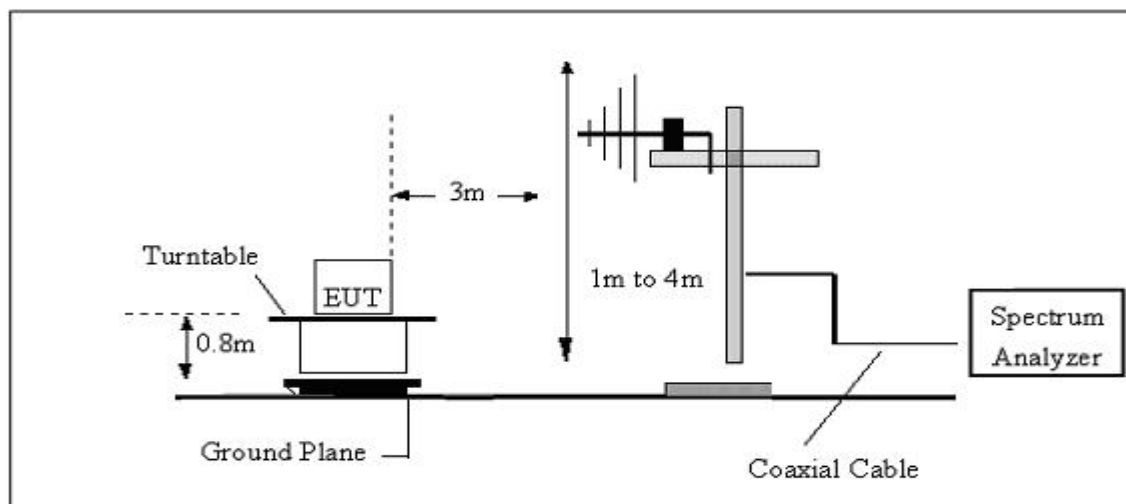
Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector Type
88.00	38.25	-16.68	21.57	40	-18.43	QP
108.00	39.27	-15.24	24.03	43.5	-19.47	QP
Remark:Factor=Antenna Factor + Cable Loss + Pre-amplifier						

4. FIELD STRENGTH EMISSION

4.1 REQUIREMENT

The field strength of any emissions within the permitted 200 kHz band shall not exceed 250 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply.

4.2 TEST SETUP



4.3 EUT OPERATION 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.

4.4 TEST RESULTS

Temperature:	25 °C	Relative Humidity:	50%
Test Voltage:	DC 12V	Test Mode:	TX Mode

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
88.10	78.82	8.45	1.10	36.62	51.75	68.00	-16.25	Horizontal
88.10	77.29	8.45	1.10	36.62	50.22	68.00	-17.78	Vertical
98.10	76.57	8.99	1.18	36.71	50.03	68.00	-17.97	Horizontal
98.10	78.48	8.99	1.18	36.71	51.94	68.00	-16.06	Vertical
107.90	77.60	9.76	1.26	36.78	51.84	68.00	-16.16	Horizontal
107.90	77.50	9.76	1.26	36.78	51.74	68.00	-16.26	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
88.10	60.42	8.45	1.10	36.62	33.35	48.00	-14.65	Horizontal
88.10	60.07	8.45	1.10	36.62	33.00	48.00	-15.00	Vertical
98.10	59.73	8.99	1.18	36.71	33.19	48.00	-14.81	Horizontal
98.10	61.31	8.99	1.18	36.71	34.77	48.00	-13.23	Vertical
107.90	60.13	9.76	1.26	36.78	34.37	48.00	-13.63	Horizontal
107.90	61.08	9.76	1.26	36.78	35.32	48.00	-12.68	Vertical

Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

5. 20DB BANDWIDTH

5.1 APPLIED PROCEDURES / LIMIT

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz.

5.2 TEST PROCEDURE

1. Set RBW = 10kHz.
2. Set the video Mobile Phonewidth (VBW) ≥ 3 RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3 TEST SETUP



5.4 EUT OPERATION CONDITIONS

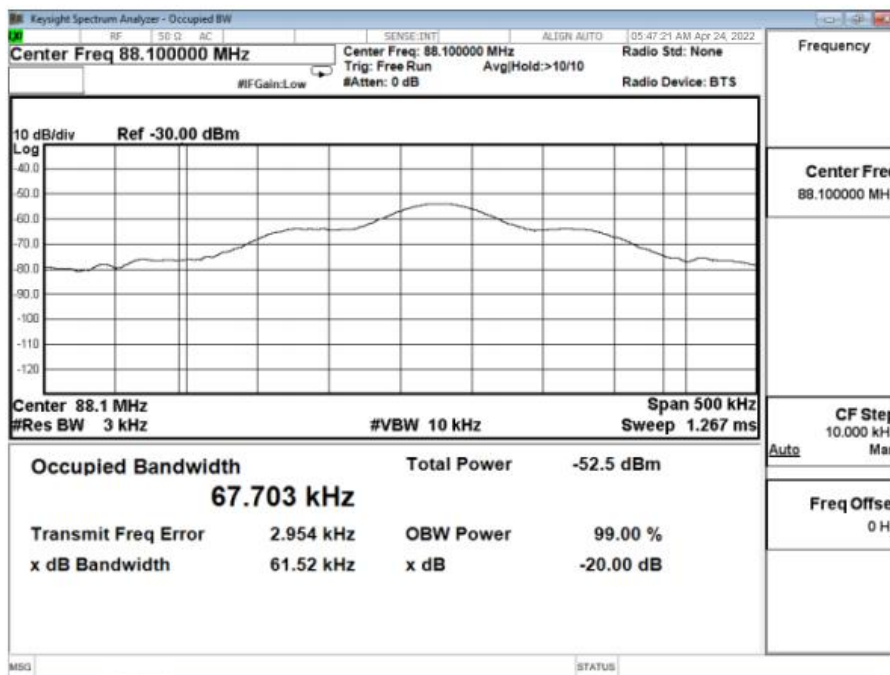
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.5 TEST RESULTS

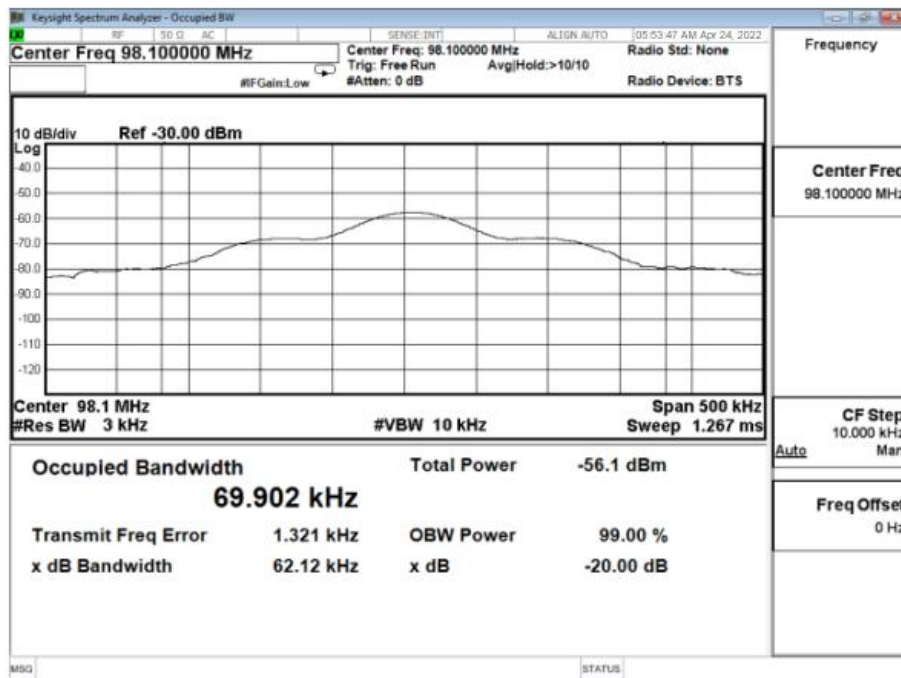
Temperature:	25 °C	Relative Humidity:	60%
Test Voltage:	DC 12V	Test Mode:	TX Mode

Centre Frequency	Measurement	
	20dB Bandwidth (KHz)	Frequency Range (MHz)
88.10	61.52	200
98.10	62.12	200
107.90	62.92	200

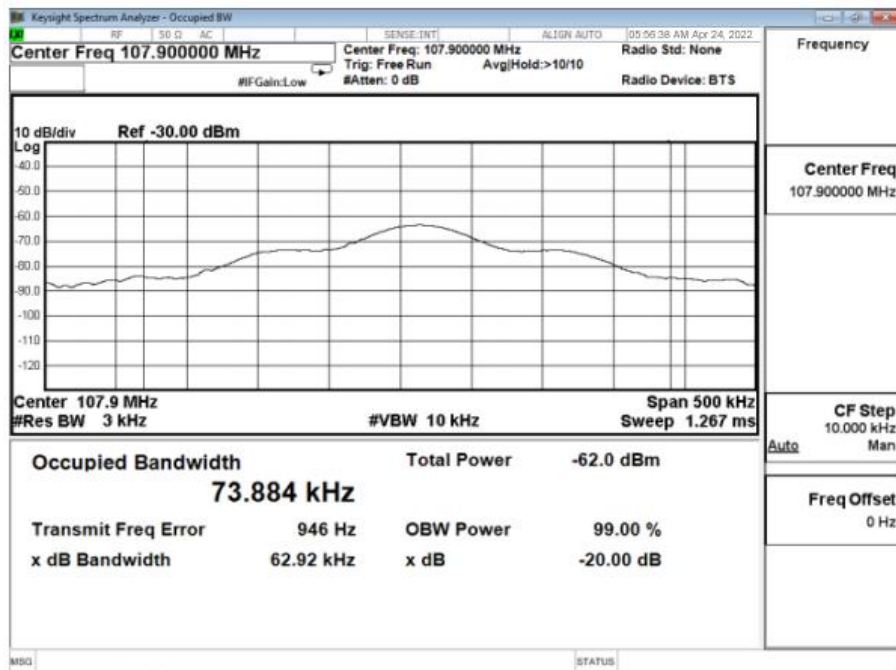
Low channel



Mid channel



High channel



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 EUT antenna is FM Antenna. It comply with the standard requirement.

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