RF Test Report

FCC ID: 2AVE6TG4XL

Change II

Report No.	:	TBR-C-202406-0055-12
Applicant	:	Tractive GmbH
Equipment Under Test (EUT)		
EUT Name	:	Tractive DOG XL
Model No.	:	TG4XL
Series Model No.	:	----
Brand Name	:	Tractive
Sample ID	:	HC-C-202406-0055-01-01-1#&HC-C-202406-0055-01-01-2#
Receipt Date	:	2024-07-08
Test Date	:	2024-07-08 to 2024-07-19
Issue Date	:	2024-07-25
Standards	:	FCC Part 15 Subpart C 15.247
Test Method	:	ANSI C63.10: 2013 KDB 558074 D01 15.247 Meas Guidance v05r02
Conclusions	:	**PASS** In the configuration tested, the EUT complied with the standards specified above.
Tested By	:	Mike Yan
Reviewed By	:	Wade.LV
Approved By	:	IVAN SU

Mike Yan

Wade Lv

Ivan Su

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

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Contents

Revision History

Report No.	Version	Description	Issued Date
TBR-C-202406-0055-12	Rev.01	Initial issue of report	2024-07-25

1. General Information about EUT

1.1 Client Information

Applicant	:	Tractive GmbH
Address	:	Poststrasse 4, 4061 Pasching, AUSTRIA
Manufacturer	:	Tractive GmbH
Address	:	Poststrasse 4, 4061 Pasching, AUSTRIA

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Tractive DOG XL	
Models No.	:	TG4XL	
Model Different	:	----	
Product Description	:	Operation Frequency:	Bluetooth LE 5.0: 2402MHz~2480MHz
		Number of Channel:	40 channels
		Antenna Gain:	-1.65dBi SMD Chip Antenna
		Modulation Type:	GFSK
		Bit Rate of Transmitter:	1Mbps&2Mbps
Power Rating	:	USB Input: DC 5V/1A DC 3.7V 3000mAh 11.1Wh Rechargeable Li-ion battery	
Software Version	:	v4	
Hardware Version	:	v4	

Remark:

(1) The antenna gain and adapter provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.

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

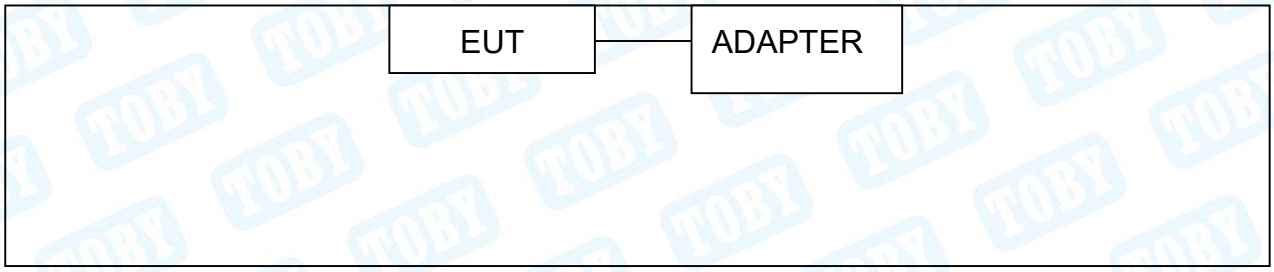
(3) The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

(4)Channel List:

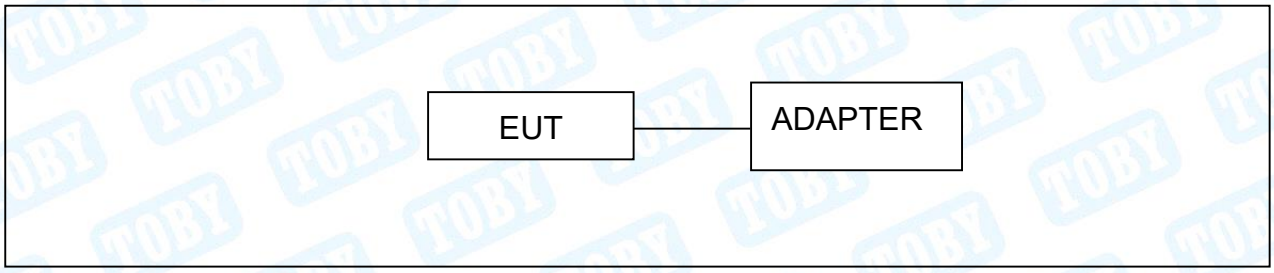
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	**2402**	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	**19**	**2440**	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	**39**	**2480**
12	2426	26	2454		
13	2428	27	2456		

1.3 Block Diagram Showing the Configuration of System Tested

Conducted Test



Radiated Test



1.4 Description of Support Units

Equipment Information				
Name	**Model**	**FCC ID/SDOC**	**Manufacturer**	**Used "√"**
Adapter	X552	----	UGREEN	√
Cable Information				
Number	**Shielded Type**	**Ferrite Core**	**Length**	**Note**
Cable 1	Yes	NO	0.5M	Accessory
Note: The cables is provided by the Applicant, the adapter is provided by Toby test lab.				

1.5 Description of Test Mode

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 follow was evaluated respectively.

For Conducted Test	
Final Test Mode	**Description**
Mode 1	TX Mode
For Radiated Test	
Final Test Mode	**Description**
Mode 2	TX 1Mbps Mode (Channel 00/19/39)
Mode 3	TX 2Mbps Mode (Channel 00/19/39)

Note:

(1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:

BLE Mode: GFSK Modulation Transmitting mode.

(2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.

(3) The EUT is considered a portable unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

During testing channel& Power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of RF setting.

Test Software Version	Direct Test Mode V2.2.0		
Frequency	2402MHz	2440MHz	2480MHz
BLE 1M	0	0	0
BLE 2M	0	0	0

1.7 Measurement Uncertainty

The reported uncertainty of measurement y±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 %.

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	±3.50 dB ±3.10 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	±4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	±4.50 dB
Radiated Emission	Level Accuracy: Above 1000MHz	±4.20 dB

1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F., Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

A2LA Certificate No.: 4750.01

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

IC Registration No.: (11950A)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056.

2. Test Summary

Standard Section	Test Item	Test Sample(s)	Judgment	Remark
FCC				
FCC 15.207(a)	Conducted Emission	HC-C-202406-0055-01-01-1#	PASS	N/A
FCC 15.209 & 15.247(d)	Radiated Unwanted Emissions	HC-C-202406-0055-01-01-1#	PASS	N/A
FCC 15.203	Antenna Requirement	/	PASS	N/A
FCC 15.247(a)(2)	6dB Bandwidth	/	PASS	N/A
/	99% Occupied bandwidth	/	PASS	N/A
FCC 15.247(b)(3)	Peak Output Power and E.I.R.P	/	PASS	N/A
FCC 15.247(e)	Power Spectral Density	/	PASS	N/A
FCC 15.247(d)	Band Edge Measurements	/	PASS	N/A
FCC 15.207	Conducted Unwanted Emissions	/	PASS	N/A
FCC 15.247(d)	Emissions in Restricted Bands	/	PASS	N/A
/	On Time and Duty Cycle	/	/	N/A

Note:

(1) N/A is an abbreviation for Not Applicable.

(2) This report is Class II change report for the original equipment have changed, the transmitter module itself has not changed. More information about the test data please refer to the original test report.

3. Test Software

Test Item	Test Software	Manufacturer	Version No.
Conducted Emission	EZ-EMC	EZ	CDI-03A2
Radiation Emission	EZ-EMC	EZ	FA-03A2RE
Radiation Emission	EZ-EMC	EZ	FA-03A2RE+
RF Conducted Measurement	MTS-8310	MWRFtest	V2.0.0.0
RF Test System	JS1120	Tonscend	V3.2.22

4. Test Equipment and Test Site

Test Site				
No.	**Test Site**	**Manufacturer**	**Specification**	**Used**
TB-EMCSR001	Shielding Chamber #1	YIHENG	7.5*4.0*3.0 (m)	√
TB-EMCSR002	Shielding Chamber #2	YIHENG	8.0*4.0*3.0 (m)	X
TB-EMCCA001	3m Anechoic Chamber #A	ETS	9.0*6.0*6.0 (m)	X
TB-EMCCB002	3m Anechoic Chamber #B	YIHENG	9.0*6.0*6.0 (m)	√

Conducted Emission Test					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jun. 17, 2024	Jun. 16, 2025
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jun. 17, 2024	Jun. 16, 2025
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jun. 17, 2024	Jun. 16, 2025
LISN	Rohde & Schwarz	ENV216	101131	Jun. 17, 2024	Jun. 16, 2025
Radiation Emission Test (B Site)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
Spectrum Analyzer	Agilent	N9020A	MY49100060	Aug. 30, 2023	Aug. 29, 2024
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jun. 17, 2024	Jun. 16, 2025
EMI Test Receiver	Rohde & Schwarz	ESU-8	100472/008	Feb. 23, 2024	Feb. 22, 2025
Bilog Antenna	SCHWARZBECK	VULB 9168	1225	Nov. 13, 2023	Nov. 12, 2025
Horn Antenna	SCHWARZBECK	BBHA 9120 D	2463	Jun. 14, 2024	Jun. 13, 2026
Horn Antenna	SCHWARZBECK	BBHA 9170	1118	Feb. 27, 2024	Feb. 26, 2026
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jun. 14, 2024	Jun. 13, 2026
HF Amplifier	Tonscend	TAP9E6343	AP21C806117	Aug. 30, 2023	Aug. 29, 2024
HF Amplifier	Tonscend	TAP051845	AP21C806141	Aug. 30, 2023	Aug. 29, 2024
HF Amplifier	Tonscend	TAP0184050	AP21C806129	Aug. 30, 2023	Aug. 29, 2024
Highpass Filter	CD	HPM-6.4/18G	---	N/A	N/A
Highpass Filter	CD	HPM-2.8/18G	---	N/A	N/A
Highpass Filter	XINBO	XBLBQ-HTA67(8-25G)	22052702-1	N/A	N/A

5. Conducted Emission

5.1 Test Standard and Limit

5.1.1 Test Standard

FCC Part 15.207

5.1.2 Test Limit

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

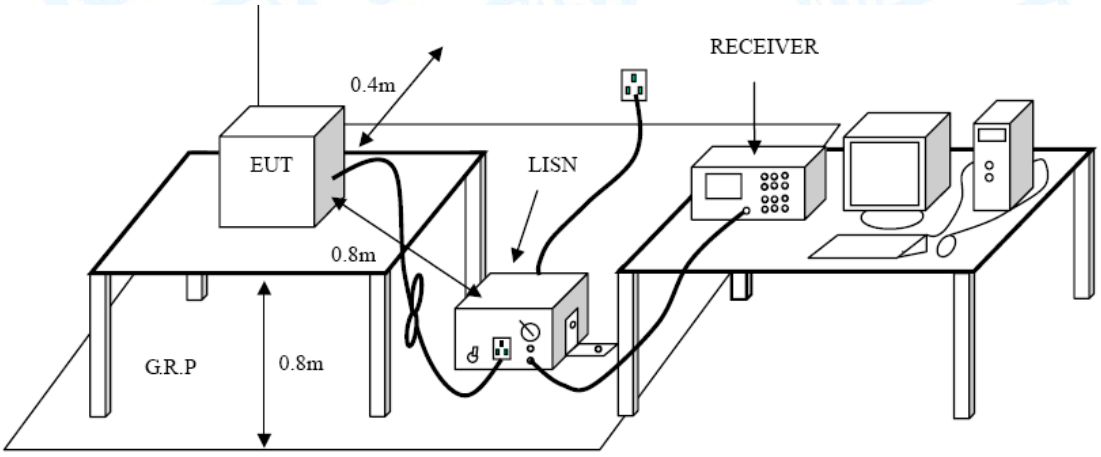
Notes:

(1) *Decreasing linearly with logarithm of the frequency.

(2) The lower limit shall apply at the transition frequencies.

(3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

5.2 Test Setup



5.3 Test Procedure

● The EUT was placed 0.8 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.

● LISN at least 80 cm from nearest part of EUT chassis.

●The bandwidth of EMI test receiver is set at 9 kHz, and the test frequency band is from 0.15MHz to 30MHz.

5.4 Deviation From Test Standard

No deviation

5.5 EUT Operating Mode

Please refer to the description of test mode.

5.6 Test Data

Please refer to the Attachment A inside test report.

6. Radiated and Conducted Unwanted Emissions

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.209 & FCC Part 15.247(d)

6.1.2 Test Limit

General field strength limits at frequencies Below 30MHz		
Frequency (MHz)	**Field Strength (microvolt/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
Note: 1, The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.		

General field strength limits at frequencies above 30 MHz		
Frequency (MHz)	**Field strength (μV/m at 3 m)**	**Measurement Distance (meters)**
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

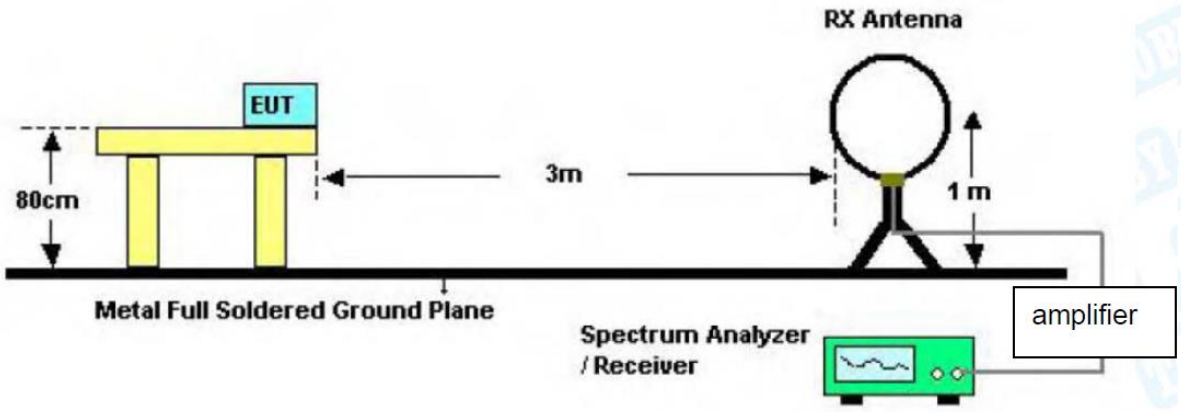
General field strength limits at frequencies Above 1000MHz		
Frequency (MHz)	**Distance of 3m (dBuV/m)**	
	Peak	**Average**
Above 1000	74	54
Note: (1) The tighter limit applies at the band edges. (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)		

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power

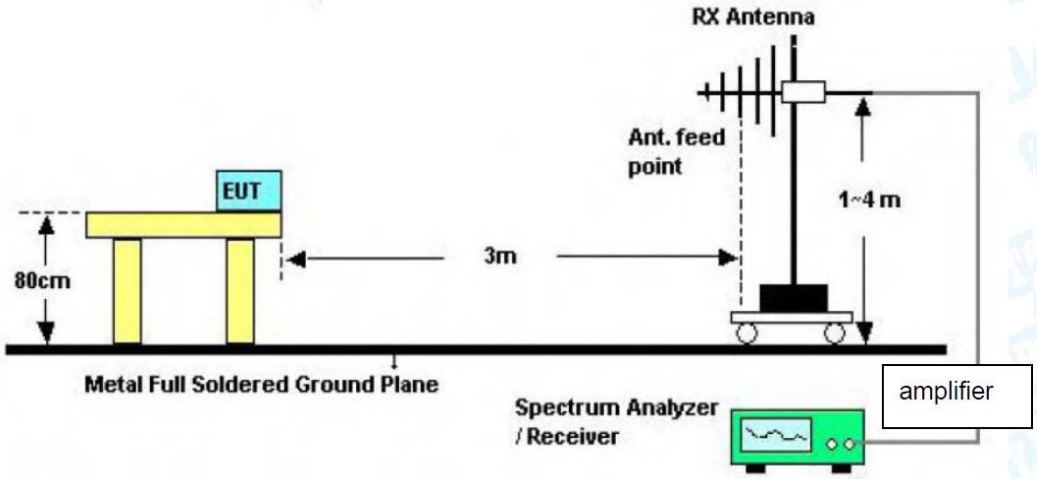
limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

6.2 Test Setup

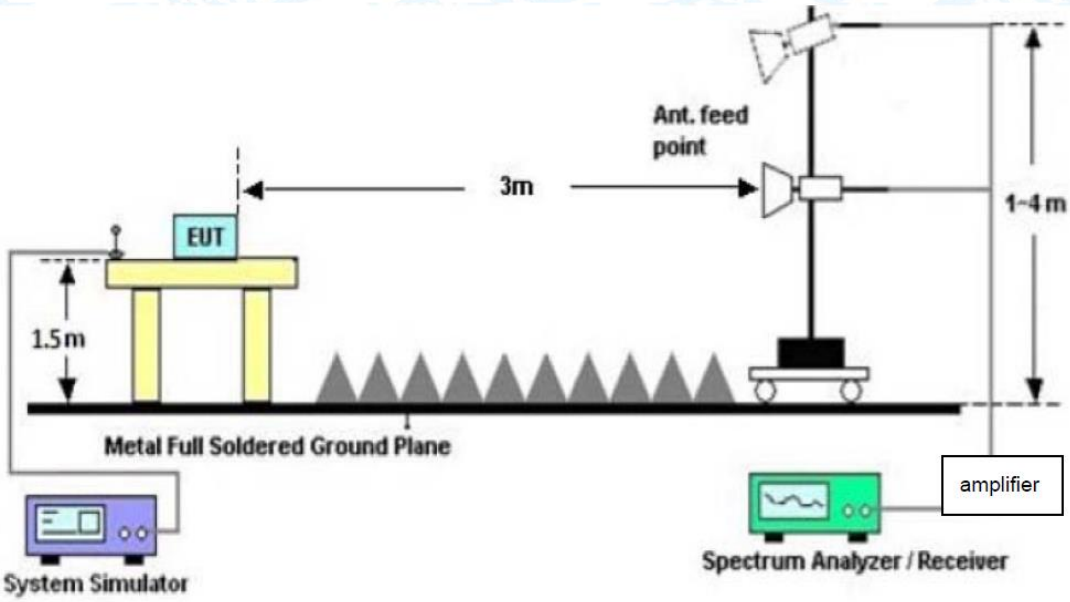
Radiated measurement



Below 30MHz Test Setup

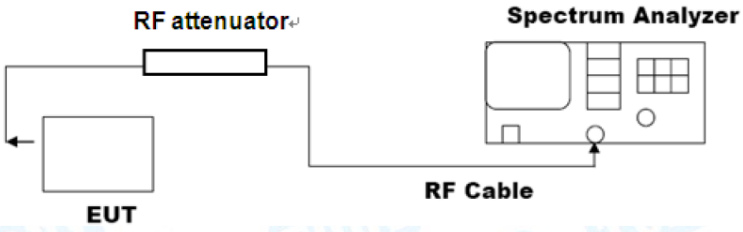


Below 1000MHz Test Setup



Above 1GHz Test Setup

Conducted measurement



6.3 Test Procedure

---Radiated measurement

●The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.

● Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.

● The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make 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 Quasi Peak detector mode re-measured.

●If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Below 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.

●Testing frequency range 30MHz-1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection. Testing frequency range 9KHz-150Hz the measuring instrument use VBW=200Hz with Quasi-peak detection. Testing frequency range 9KHz-30MHz the measuring instrument use VBW=9kHz with Quasi-peak detection.

●Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

●For the actual test configuration, please see the test setup photo.

--- Conducted measurement

●Reference level measurement

Establish a reference level by using the following procedure:

a) Set instrument center frequency to DTS channel center frequency.

b) Set the span to≥1.5 times the DTS bandwidth.

c) Set the RBW = 100 kHz.

d) Set the VBW≥[3*RBW].

e) Detector = peak.

f) Sweep time = auto couple.

g) Trace mode = max hold.

h) Allow trace to fully stabilize.

i) Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

●Emission level measurement

Establish an emission level by using the following procedure:

a) Set the center frequency and span to encompass frequency range to be measured.

b) Set the RBW = 100 kHz.

c) Set the VBW≥[3*RBW].

d) Detector = peak.

e) Sweep time = auto couple.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

6.4 Deviation From Test Standard

No deviation

6.5 EUT Operating Mode

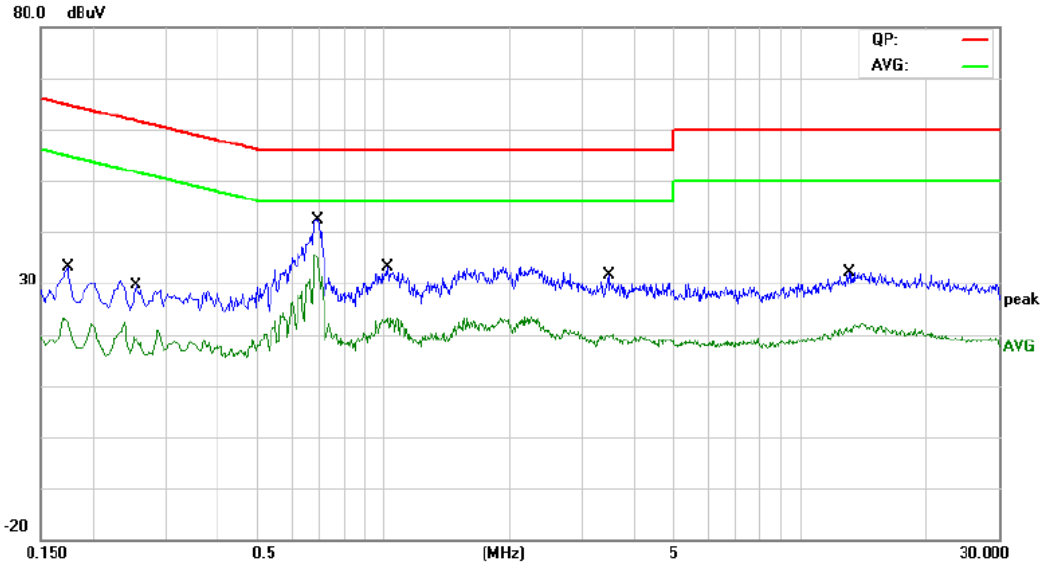
Please refer to the description of test mode.

6.6 Test Data

Radiated measurement please refer to the Attachment B inside test report.

Attachment A-- Conducted Emission Test Data

Test Voltage:	AC 120V/60Hz
Terminal:	Line
Test Mode:	Mode 1(Appearance1)
Remark:	Only worse case is reported.

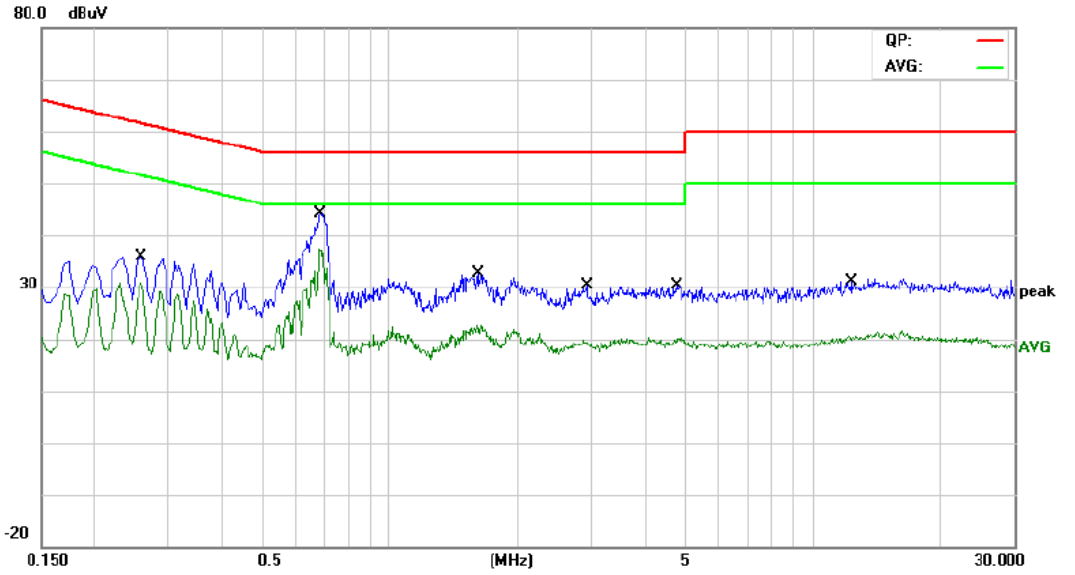


Temperature: 24.5 (C) Humidity: 48 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1748	11.75	9.79	21.54	64.72	-43.18	QP
2		0.1748	7.91	9.79	17.70	54.72	-37.02	AVG
3		0.2540	15.67	9.59	25.26	61.62	-36.36	QP
4		0.2540	11.59	9.59	21.18	51.62	-30.44	AVG
5		0.6939	32.35	9.85	42.20	56.00	-13.80	QP
6	*	0.6939	26.75	9.85	36.60	46.00	-9.40	AVG
7		1.0220	9.43	10.23	19.66	56.00	-36.34	QP
8		1.0220	5.05	10.23	15.28	46.00	-30.72	AVG
9		3.4700	9.69	11.87	21.56	56.00	-34.44	QP
10		3.4700	4.97	11.87	16.84	46.00	-29.16	AVG
11		13.0938	10.77	12.83	23.60	60.00	-36.40	QP
12		13.0938	5.95	12.83	18.78	50.00	-31.22	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Test Voltage:	AC 120V/60Hz
Terminal:	Neutral
Test Mode:	Mode 1(Appearance1)
Remark:	Only worse case is reported.

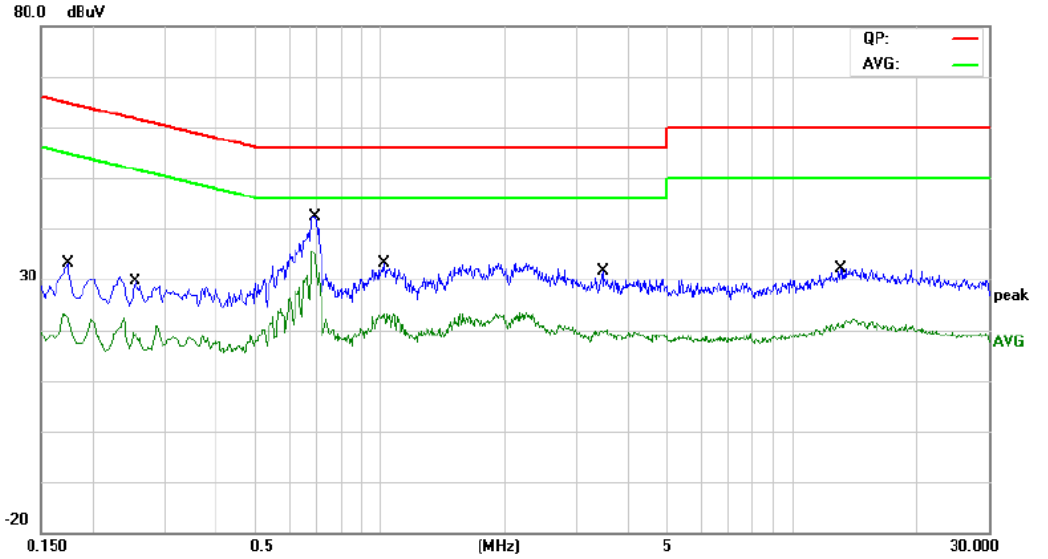


Temperature: 24.5 (C) Humidity: 48 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.2580	18.60	9.56	28.16	61.49	-33.33	QP
2		0.2580	16.51	9.56	26.07	51.49	-25.42	AVG
3		0.6860	25.38	9.83	35.21	56.00	-20.79	QP
4	*	0.6860	17.96	9.83	27.79	46.00	-18.21	AVG
5		1.6140	9.47	10.81	20.28	56.00	-35.72	QP
6		1.6140	5.05	10.81	15.86	46.00	-30.14	AVG
7		2.9219	10.91	11.47	22.38	56.00	-33.62	QP
8		2.9219	6.00	11.47	17.47	46.00	-28.53	AVG
9		4.7659	10.76	12.05	22.81	56.00	-33.19	QP
10		4.7659	6.05	12.05	18.10	46.00	-27.90	AVG
11		12.3536	10.24	12.80	23.04	60.00	-36.96	QP
12		12.3536	5.50	12.80	18.30	50.00	-31.70	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Test Voltage:	AC 120V/60Hz
Terminal:	Line
Test Mode:	Mode 1(Appearance2)
Remark:	Only worse case is reported.

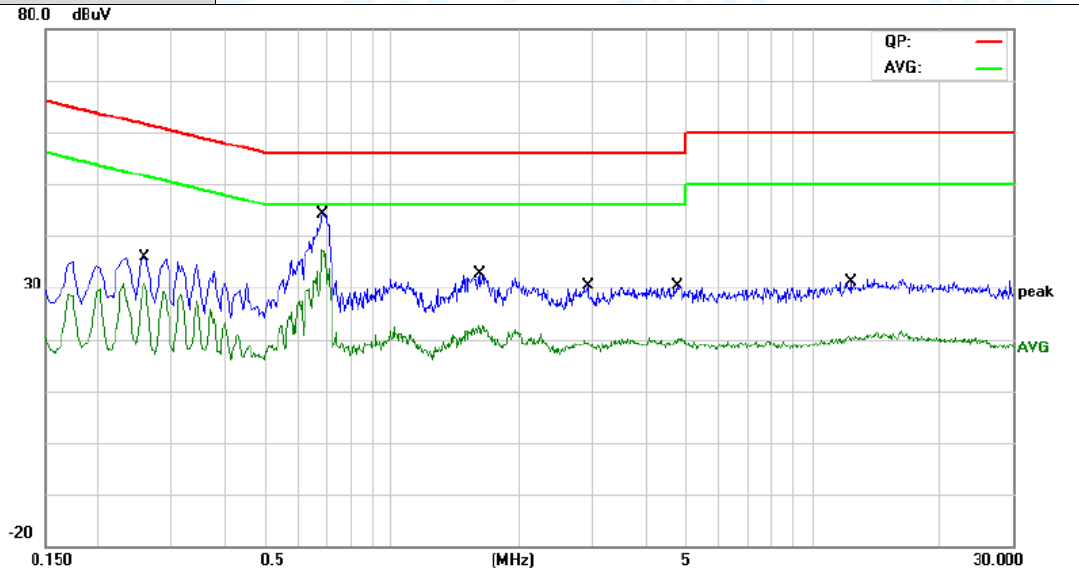


Temperature: 24.5 (C) Humidity: 48 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1748	11.75	9.79	21.54	64.72	-43.18	QP
2		0.1748	7.91	9.79	17.70	54.72	-37.02	AVG
3		0.2540	15.67	9.59	25.26	61.62	-36.36	QP
4		0.2540	11.59	9.59	21.18	51.62	-30.44	AVG
5		0.6939	32.35	9.85	42.20	56.00	-13.80	QP
6	*	0.6939	26.75	9.85	36.60	46.00	-9.40	AVG
7		1.0220	9.43	10.23	19.66	56.00	-36.34	QP
8		1.0220	5.05	10.23	15.28	46.00	-30.72	AVG
9		3.4700	9.69	11.87	21.56	56.00	-34.44	QP
10		3.4700	4.97	11.87	16.84	46.00	-29.16	AVG
11		13.0938	10.77	12.83	23.60	60.00	-36.40	QP
12		13.0938	5.95	12.83	18.78	50.00	-31.22	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Test Voltage:	AC 120V/60Hz
Terminal:	Neutral
Test Mode:	Mode 1(Appearance2)
Remark:	Only worse case is reported.



Temperature: 24.5 (C) Humidity: 48 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.2580	18.60	9.56	28.16	61.49	-33.33	QP
2		0.2580	16.51	9.56	26.07	51.49	-25.42	AVG
3		0.6860	25.38	9.83	35.21	56.00	-20.79	QP
4	*	0.6860	17.96	9.83	27.79	46.00	-18.21	AVG
5		1.6140	9.47	10.81	20.28	56.00	-35.72	QP
6		1.6140	5.05	10.81	15.86	46.00	-30.14	AVG
7		2.9219	10.91	11.47	22.38	56.00	-33.62	QP
8		2.9219	6.00	11.47	17.47	46.00	-28.53	AVG
9		4.7659	10.76	12.05	22.81	56.00	-33.19	QP
10		4.7659	6.05	12.05	18.10	46.00	-27.90	AVG
11		12.3536	10.24	12.80	23.04	60.00	-36.96	QP
12		12.3536	5.50	12.80	18.30	50.00	-31.70	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Attachment B--Unwanted Emissions Data

---Radiated Unwanted Emissions

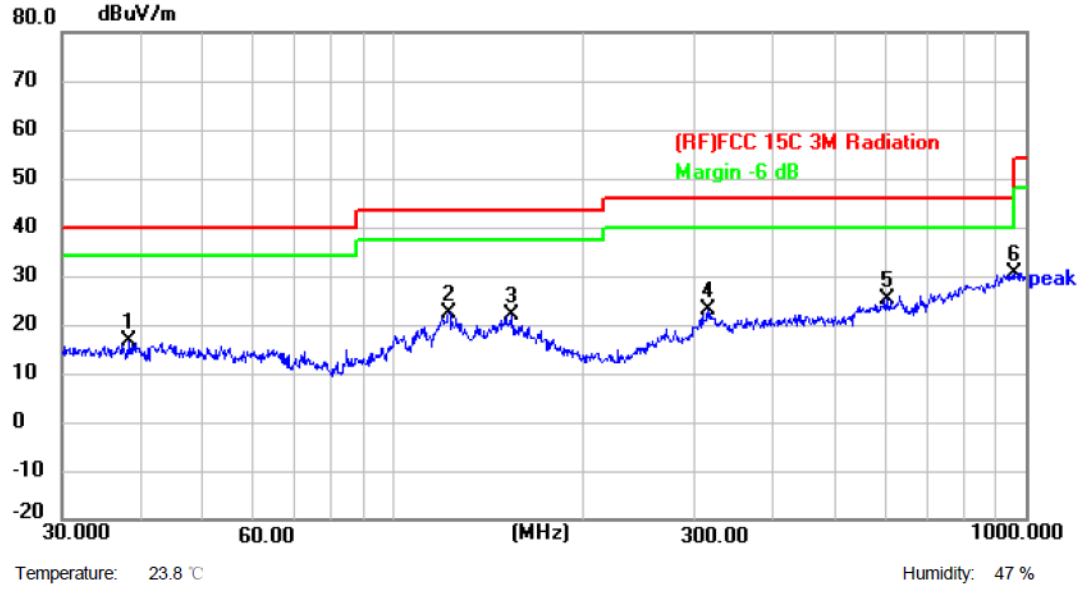
9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB Below the permissible value has no need to be reported.

30MHz~1GHz

Test Voltage:	AC 120V/60Hz
Ant. Pol.	Horizontal
Test Mode:	Mode 2 TX 1Mbps Mode Channel 00(Appearance1)
Remark:	Only worse case is reported.



Temperature: 23.8 ℃ Humidity: 47 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	38.2120	40.56	-23.90	16.66	40.00	-23.34	peak	P
2	122.8340	45.72	-23.44	22.28	43.50	-21.22	peak	P
3	154.2785	43.64	-21.52	22.12	43.50	-21.38	peak	P
4	314.3763	43.72	-20.62	23.10	46.00	-22.90	peak	P
5	603.5390	38.92	-13.64	25.28	46.00	-20.72	peak	P
6 *	958.7943	37.74	-7.26	30.48	46.00	-15.52	peak	P

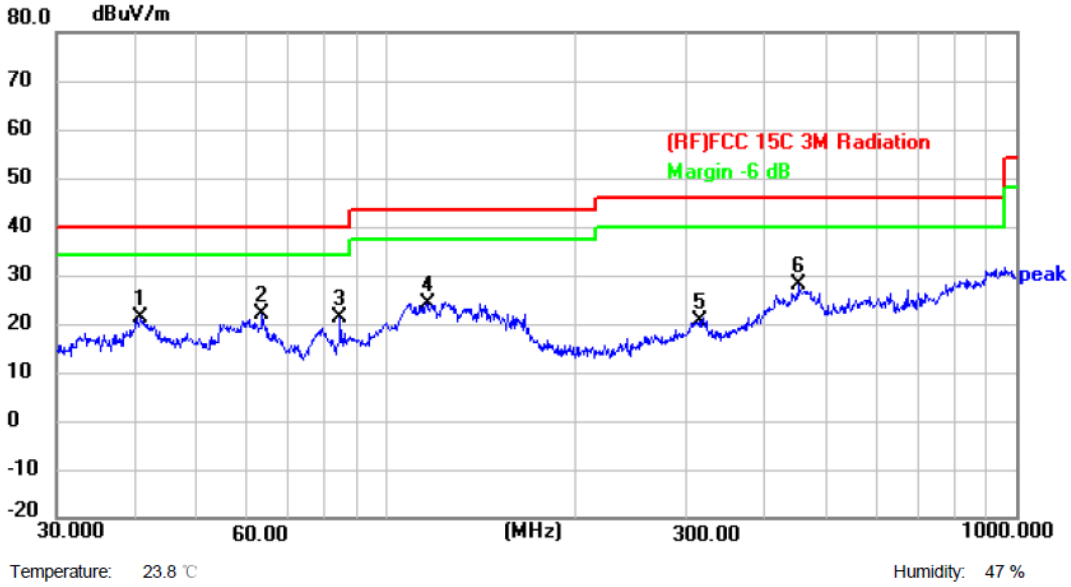
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

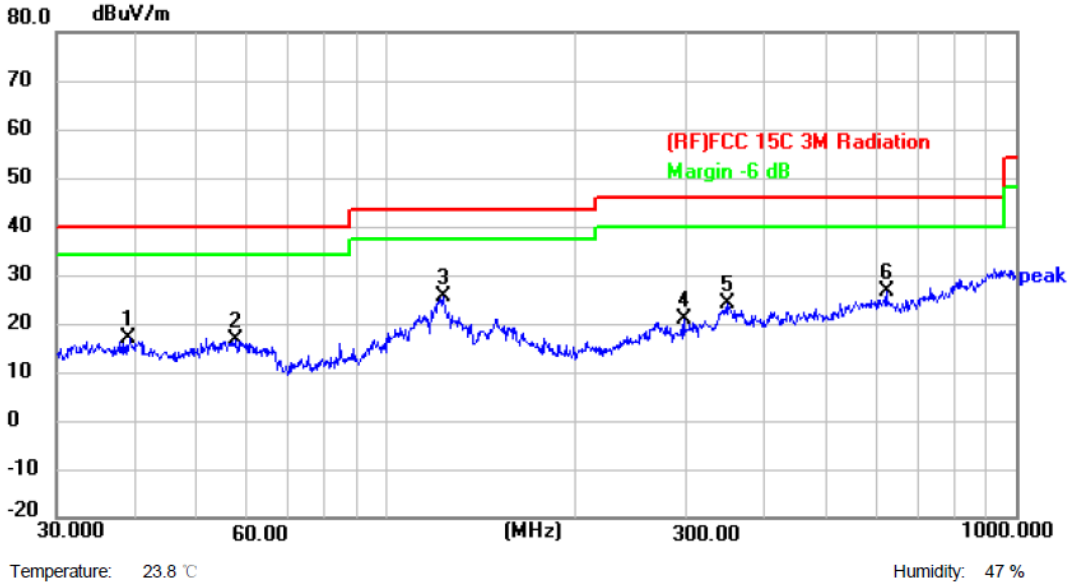
Test Voltage:	AC 120V/60Hz
Ant. Pol.	Vertical
Test Mode:	Mode 2 TX 1Mbps Mode Channel 00(Appearance1)
Remark:	Only worse case is reported.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	40.8444	45.22	-23.90	21.32	40.00	-18.68	peak	P
2	63.5356	46.31	-24.52	21.79	40.00	-18.21	peak	P
3	84.7020	48.30	-27.20	21.10	40.00	-18.90	peak	P
4	116.5400	48.42	-24.19	24.23	43.50	-19.27	peak	P
5	314.3763	41.09	-20.62	20.47	46.00	-25.53	peak	P
6 *	452.7196	45.15	-17.17	27.98	46.00	-18.02	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

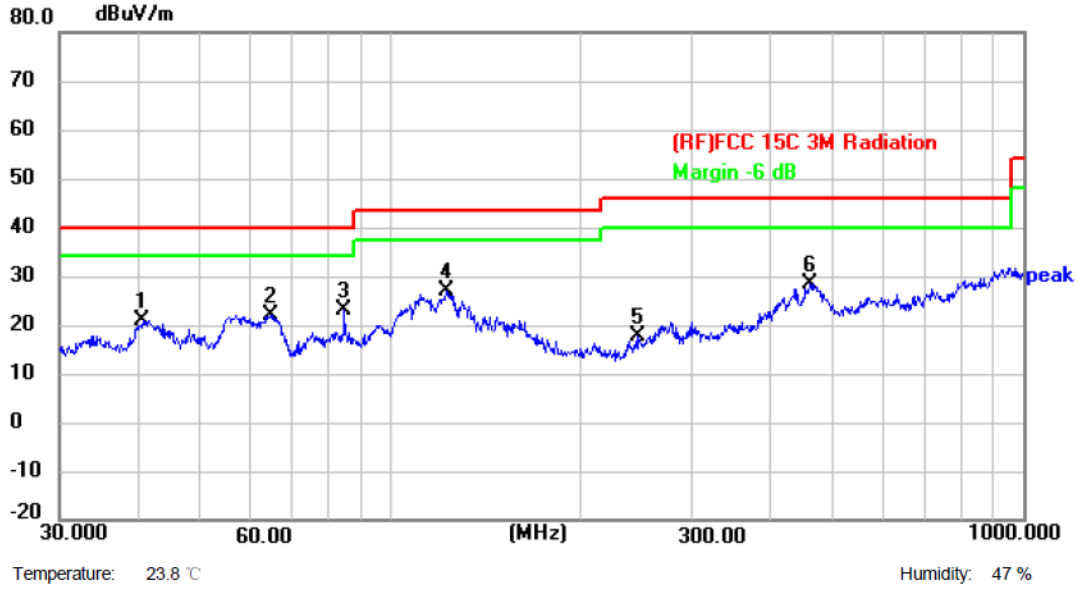
Test Voltage:	AC 120V/60Hz
Ant. Pol.	Horizontal
Test Mode:	Mode 2 TX 1Mbps Mode Channel 00(Appearance2)
Remark:	Only worse case is reported.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	39.1613	40.64	-23.52	17.12	40.00	-22.88	peak	P
2	57.5940	40.82	-24.17	16.65	40.00	-23.35	peak	P
3 *	123.6984	49.15	-23.60	25.55	43.50	-17.95	peak	P
4	297.2240	42.07	-21.31	20.76	46.00	-25.24	peak	P
5	348.0274	44.09	-20.07	24.02	46.00	-21.98	peak	P
6	622.8900	40.08	-13.54	26.54	46.00	-19.46	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
3. Margin (dB) = QuasiPeak (dBµV/m)-Limit QPK(dBµV/m)

Test Voltage:	AC 120V/60Hz
Ant. Pol.	Vertical
Test Mode:	Mode 2 TX 1Mbps Mode Channel 00(Appearance2)
Remark:	Only worse case is reported.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	40.7014	44.74	-23.81	20.93	40.00	-19.07	peak	P
2	64.6594	46.79	-24.68	22.11	40.00	-17.89	peak	P
3	84.7020	50.38	-27.20	23.18	40.00	-16.82	peak	P
4 *	122.8340	50.38	-23.44	26.94	43.50	-16.56	peak	P
5	246.8150	41.89	-24.05	17.84	46.00	-28.16	peak	P
6	459.1143	45.49	-17.11	28.38	46.00	-17.62	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Above 1GHz

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Horizontal		
Test Mode:	BLE(1Mbps) Mode TX 2402MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	7783.000	50.01	-6.70	43.31	74.00	-30.69	peak	P
2 *	9619.000	46.50	-0.15	46.35	74.00	-27.65	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Vertical		
Test Mode:	BLE(1Mbps) Mode TX 2402MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	6023.500	51.62	-10.40	41.22	74.00	-32.78	peak	P
2 *	9466.000	46.26	0.35	46.61	74.00	-27.39	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Horizontal		
Test Mode:	BLE(1Mbps) Mode TX 2440MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	6788.500	50.91	-8.37	42.54	74.00	-31.46	peak	P
2 *	9415.000	47.42	-0.24	47.18	74.00	-26.82	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Vertical		
Test Mode:	BLE(1Mbps) Mode TX 2440MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4927.000	51.92	-11.09	40.83	74.00	-33.17	peak	P
2 *	7859.500	50.35	-6.77	43.58	74.00	-30.42	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Horizontal		
Test Mode:	BLE(1Mbps) Mode TX 2480MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4927.000	51.00	-11.09	39.91	74.00	-34.09	peak	P
2 *	7171.000	51.03	-7.60	43.43	74.00	-30.57	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Vertical		
Test Mode:	BLE(1Mbps) Mode TX 2480MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4952.500	51.94	-11.09	40.85	74.00	-33.15	peak	P
2 *	9568.000	46.65	0.21	46.86	74.00	-27.14	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Horizontal		
Test Mode:	BLE(2Mbps) Mode TX 2402MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	5284.000	52.17	-11.39	40.78	74.00	-33.22	peak	P
2 *	9466.000	46.77	0.35	47.12	74.00	-26.88	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Vertical		
Test Mode:	BLE(2Mbps) Mode TX 2402MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4187.500	52.48	-14.09	38.39	74.00	-35.61	peak	P
2 *	6788.500	50.57	-8.37	42.20	74.00	-31.80	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Horizontal		
Test Mode:	BLE(2Mbps) Mode TX 2440MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	6737.500	50.56	-8.04	42.52	74.00	-31.48	peak	P
2 *	9466.000	47.70	0.35	48.05	74.00	-25.95	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Vertical		
Test Mode:	BLE(2Mbps) Mode TX 2440MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	6635.500	50.54	-8.94	41.60	74.00	-32.40	peak	P
2 *	8777.500	48.28	-3.71	44.57	74.00	-29.43	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Horizontal		
Test Mode:	BLE(2Mbps) Mode TX 2480MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	6584.500	51.01	-8.77	42.24	74.00	-31.76	peak	P
2 *	9466.000	46.15	0.35	46.50	74.00	-27.50	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Temperature:	24.7℃	Relative Humidity:	47%
Test Voltage:	DC 3.7V		
Ant. Pol.	Vertical		
Test Mode:	BLE(2Mbps) Mode TX 2480MHz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	8012.500	48.88	-5.92	42.96	74.00	-31.04	peak	P
2 *	9466.000	46.39	0.35	46.74	74.00	-27.26	peak	P

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

-----END OF THE REPORT------