



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

**Electric Skateboard
MODEL NUMBER: D3M**

FCC ID: 2AJ4RJOMOD3

REPORT NUMBER: 4787645928-2

ISSUE DATE: January 13, 2017

Prepared for

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	01/13/2017	Initial Issue	

Summary of Test Results			
Clause	Test Items	FCC/IC Rules	Test Results
1	20dB Bandwidth	FCC 15.249 (d)	Complied
2	TX Spurious Emission	FCC 15.249 (a)(d)(e) FCC 15.209 FCC 15.205	Complied
3	Conducted Emission Test For AC Power Port	FCC 15.207	Complied

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Dongguan Jomo Electronics Co., Ltd.
Address: Block 1, No.1 ChiTian East Road, BaiShigang Village,
ChangPing Town, Dongguan, GuangDong

Manufacturer Information

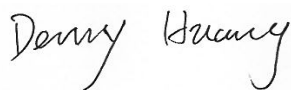
Company Name: Dongguan Jomo Electronics Co., Ltd.
Address: Block 1, No.1 ChiTian East Road, BaiShigang Village,
ChangPing Town, Dongguan, GuangDong

EUT Description

Product Name: Electric Skateboard
Brand Name: N/A
Model Name: D3M
Date Tested: January 10, 2017 ~ January 13, 2017

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

Test Location	Dongguan Dongdian Testing Service Co., Ltd
Address	No. 17, Zongbu Road 2, Songshan Lake Sci&Tech Park, Dongguan City, Guangdong Province, 523808, China
Accreditation Certificate	<p>Dongguan Dongdian Testing Service Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is until January 31, 2018.</p> <p>Dongguan Dongdian Testing Service Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 270092, Renewal date March 11, 2015, valid time is until March 11, 2018.</p> <p>The 3m Alternate Test Site of Dongguan Dongdian Testing Service Co., Ltd. Has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No.10288A on April 23, 2015, valid time is until April 23, 2018.</p>

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.32dB
Radiated Disturbance, 9k to 30 MHz	2.76dB (9KHz-150KHz) 2.45dB(150KHz-30MHz)
Radiated Disturbance, 30 to 1000 MHz	4.70 dB (Antenna Polarize: V) 4.84 dB (Antenna Polarize: H)
Radiated Disturbance, 1 to 18 GHz	4.10dB(1-6GHz) 4.40dB (6GHz-18Gz)

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Equipment	Electric Skateboard		
Model Name	D3M		
Product Description	Operation Frequency	2415 MHz ~ 2479 MHz	
	Modulation Type	Data Rate	
	GFSK	250K/bps	
Power Supply	3.7V		
Battery	3.7V from built-in battery		
Adapter	N/A		

5.2. MAXIMUM OUTPUT POWER

Frequency Range (MHz)	Channel Number	Field strength (dB μ V/m)		
2415-2479	15-79[66]	92.88		

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2415-2479	Integral Antenna	1.5

5.4. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
15	2415	36	2436	58	2458
16	2416	37	2437	59	2459
17	2417	38	2438	60	2460
18	2418	39	2439	61	2461
19	2419	40	2440	62	2462
20	2420	41	2441	63	2463
21	2421	42	2442	64	2464
22	2422	43	2443	65	2465
23	2423	44	2444	66	2466
24	2424	45	2445	67	2467
25	2425	46	2446	68	2468
26	2426	47	2447	69	2469
27	2427	48	2448	70	2470
28	2428	49	2449	71	2471
29	2429	50	2450	72	2472
30	2430	51	2451	73	2473
31	2431	52	2452	74	2474
32	2432	53	2453	75	2475
33	2433	54	2454	76	2476
34	2434	55	2455	77	2477
35	2435	56	2456	78	2478
36	2436	57	2457	79	2479

5.5. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
GFSK	CH 15, CH 47, CH 79	2415MHz, 2447MHz, 2479MHz

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	FCC ID
1	N/A	N/A	N/A	N/A

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)
1	USB	USB	Shielded	0.8m

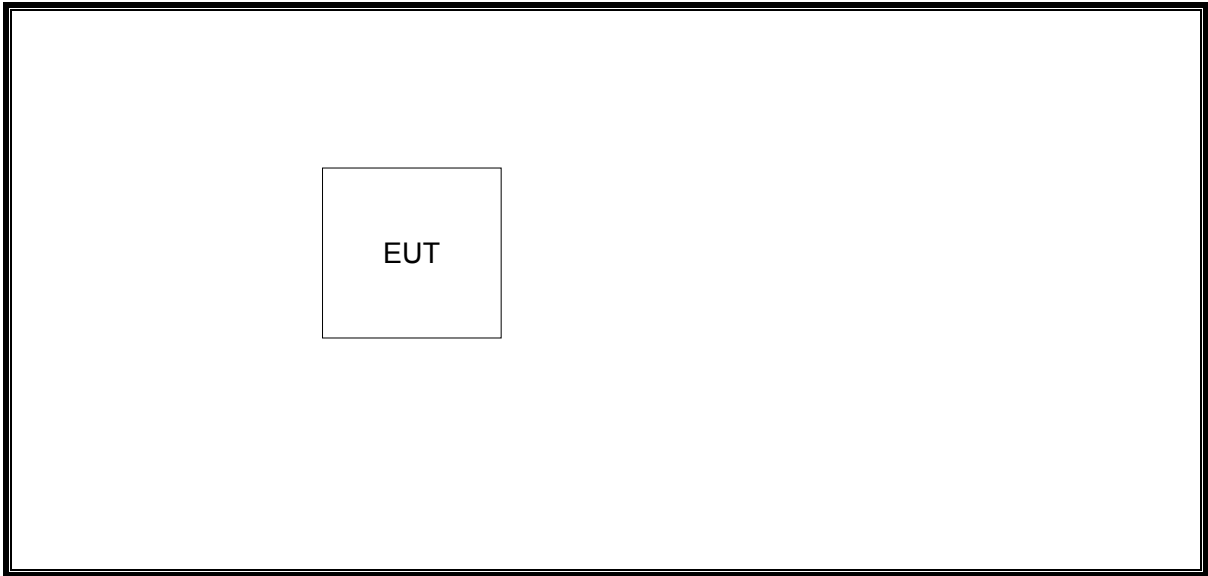
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	N/A	N/A	N/A	N/A

TEST SETUP

The EUT have the engineer mode inside.

SETUP DIAGRAM FOR TEST



5.7. MEASURING INSTRUMENT AND SOFTWARE USED

Instrument (Conducted for RF Port)						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	Spectrum Analyzer	Agilent	E4447A	MY50180031	2016/07/06	1 Year
Instrument (Radiated Tests)						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Expired date
<input checked="" type="checkbox"/>	EMI Test Receiver	R&S	ESU8	100316	2016/10/16	1 Year
<input checked="" type="checkbox"/>	Spectrum analyzer	R&S	FSU26	1166.1660.26	2016/10/16	1 Year
<input checked="" type="checkbox"/>	Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	2016/10/27	1 Year
<input checked="" type="checkbox"/>	Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	2016/10/27	1 Year
<input checked="" type="checkbox"/>	Double Ridged Horn Antenna	R&S	HF907	100276	2016/10/12	1 Year
<input checked="" type="checkbox"/>	Pre-amplifier	A.H.	PAM-0118	360	2016/10/16	1 Year
<input checked="" type="checkbox"/>	RF Cable	HUBSER	CP-X2	W11.03	2016/10/16	1 Year
<input checked="" type="checkbox"/>	RF Cable	HUBSER	CP-X1	W12.02	2016/10/16	1 Year
<input checked="" type="checkbox"/>	MI Cable	HUBSER	C10-01-01-1M	1091629	2016/10/16	1 Year
<input checked="" type="checkbox"/>	Test software	Audix	E3	V 6.11111b	N/A	N/A
Instrument (Line Conducted Emission (AC Main))						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Expired date
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESU8	100316	2016/10/16	1 Year
<input checked="" type="checkbox"/>	LISN 1	R&S	ENV216	101109	2016/10/16	1 Year
<input checked="" type="checkbox"/>	LISN 2	R&S	ESH2-Z5	100309	2016/10/16	1 Year
<input checked="" type="checkbox"/>	Pulse Limiter	R&S	ESH3-Z2	101242	2016/10/16	1 Year
<input checked="" type="checkbox"/>	CE Cable 1	HUBSER	ESU8/RF2	W10.01	2016/10/16	1 Year
<input checked="" type="checkbox"/>	Test software	Audix	E3	V 6.11111b	N/A	N/A

6. ANTENNA PORT TEST RESULTS

6.1. 20 dB BANDWIDTH

LIMITS

FCC Part15 (15.249) , Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.249(d)	Bandwidth	for reporting purposes only	2400-2483.5

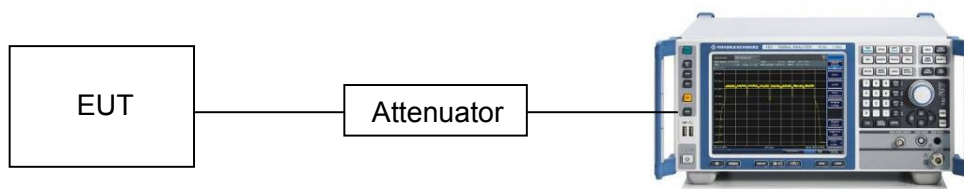
TEST PROCEDURE

Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100KHz
VBW	$\geq 3 \times \text{RBW}$
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and 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 20 dB relative to the maximum level measured in the fundamental emission.

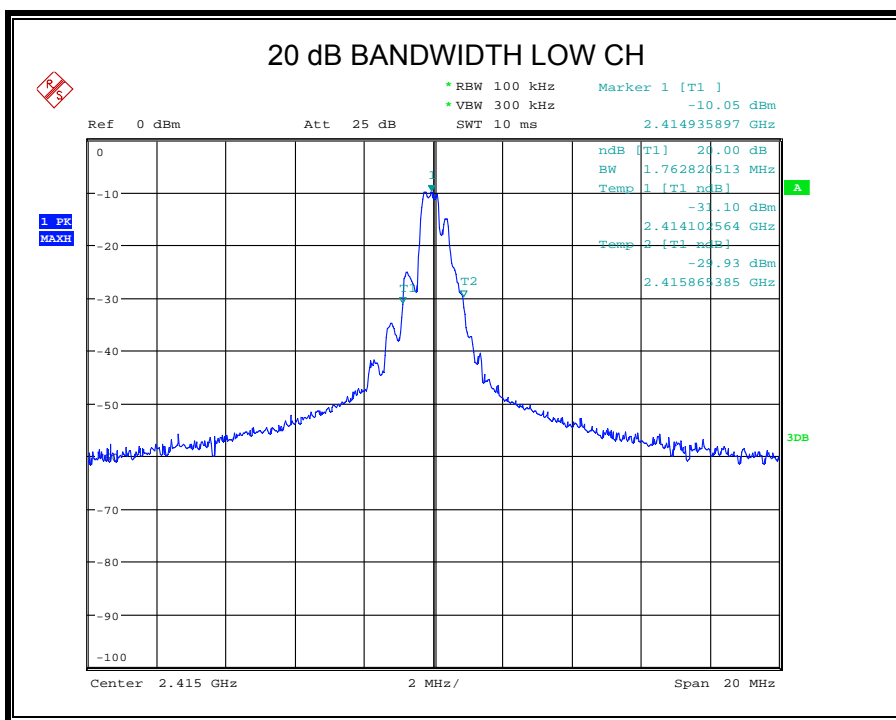
TEST SETUP



RESULTS

Channel	Frequency (MHz)	20dB bandwidth (MHz)	Result
Low	2415	1.763	Pass
Middle	2447	1.762	Pass
High	2479	1.760	Pass

Worst bandwidth Plots:



NOTE: 3 channels all have been tested , only worse case is reported

7. RADIATED TEST RESULTS

7.1. LIMITS AND PROCEDURE

LIMITS

Please refer to FCC §15.205 and §15.209

Please refer to FCC §15.249 (a)(d)(e)

The field strength of emissions from intentional radiators operated within these frequency bands			
Frequency (MHz)	Field strength of Fundamental	Field strength of Harmonics	Distance (m)
902 - 928	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
2400 – 2483.5	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
5725 – 5875	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3

Emissions radiated outside of the specified frequency bands			
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m	
		Quasi-Peak	
30 - 88	100	40	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
		74	54

Restricted bands of operation

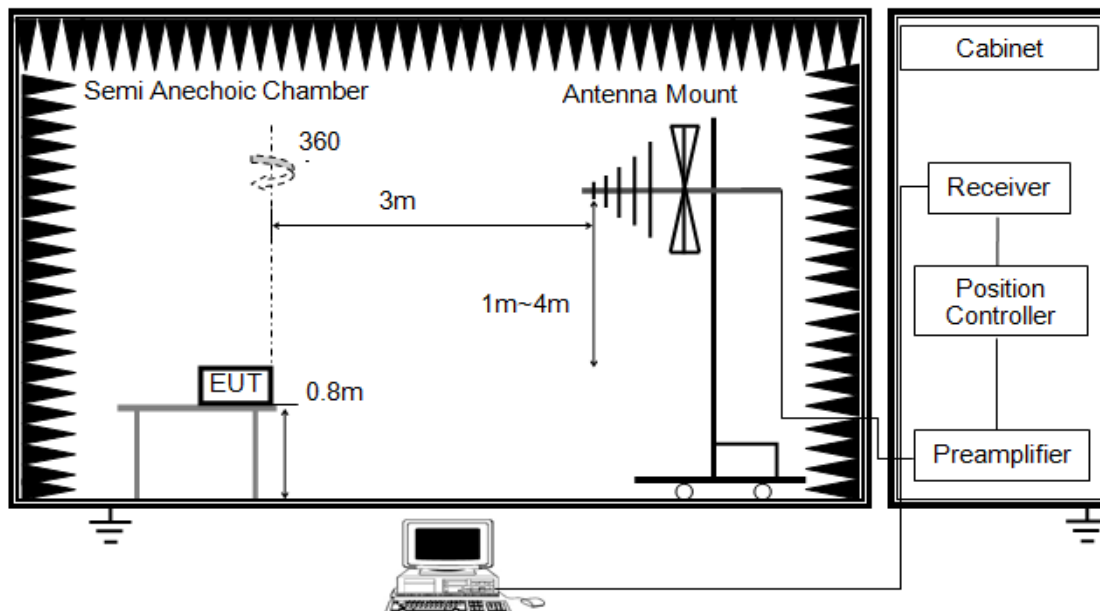
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

Note: ¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

²Above 38.6

TEST SETUP AND PROCEDURE

Below 1G

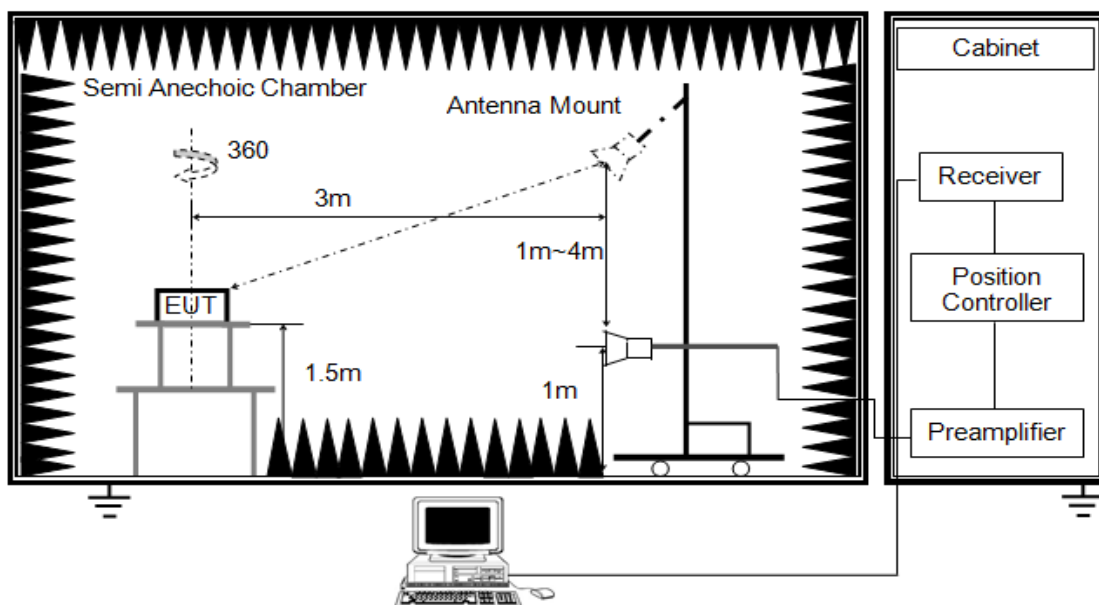


The setting of the spectrum analyser

RBW	120KHz
VBW	300KHz
Sweep	Auto
Detector	QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2014.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, 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 emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

7. For the actual test configuration, please refer to the related Item in this test report (Photographs of the Test Configuration) ABOVE 1G



The setting of the spectrum analyser

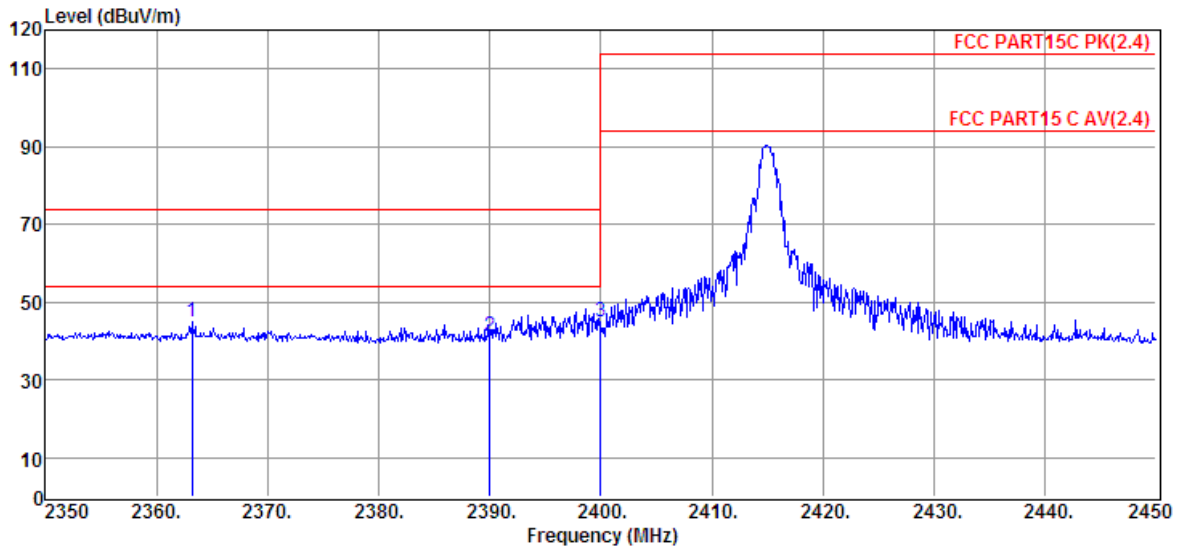
RBW	1MHz
VBW	3MHz for PK /10Hz for Average
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2014.
2. The EUT was arranged to its worst case and then tune the antenna tower (1.5 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 1.5 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: $\text{Antenna Factor} + \text{Cable Loss} + \text{Read Level} - \text{Preamp Factor} = \text{Level}$
6. For measurement above 1GHz, the emission measurement will be measured by the Detector Peak.
7. For fundamental frequency test, set spectrum analyzer's RBW=3MHz, VBW=10MHz. peak detector for PK, RMS detector for AV, Read the Level in spectrum analyzer and record.

8. According exploratory test no any obvious emission were detected from 9KHz to 30MHz and 18GHz to 25GHz, so the final test was performed with frequency range from 30MHz to 18GHz and recorded in below.

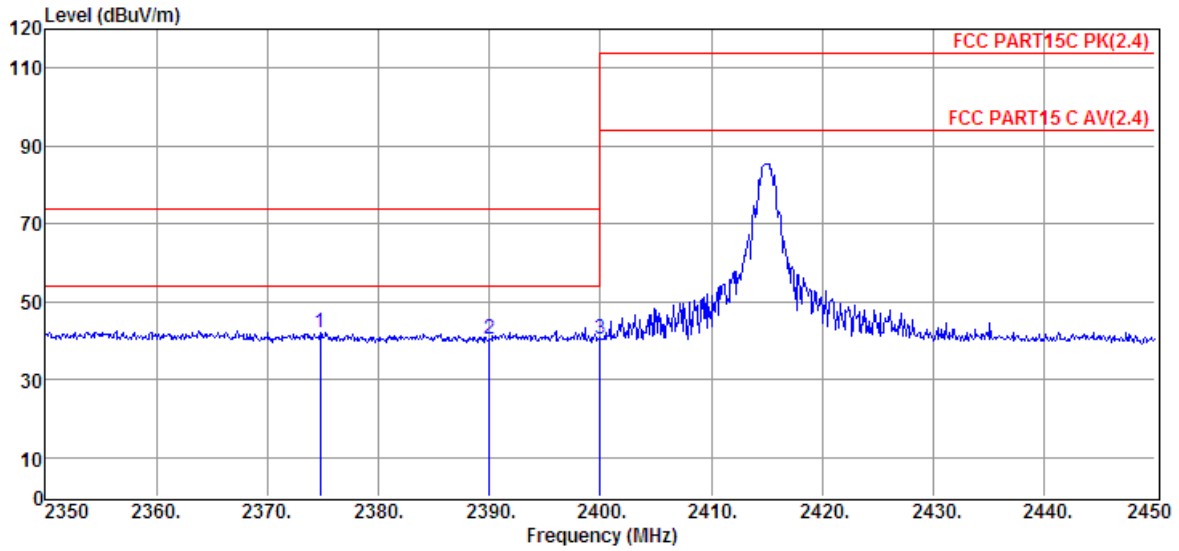
7.2. RESTRICTED BANDEGE

RESTRICTED BANDEGE (LOW CHANNEL, HORIZONTAL)



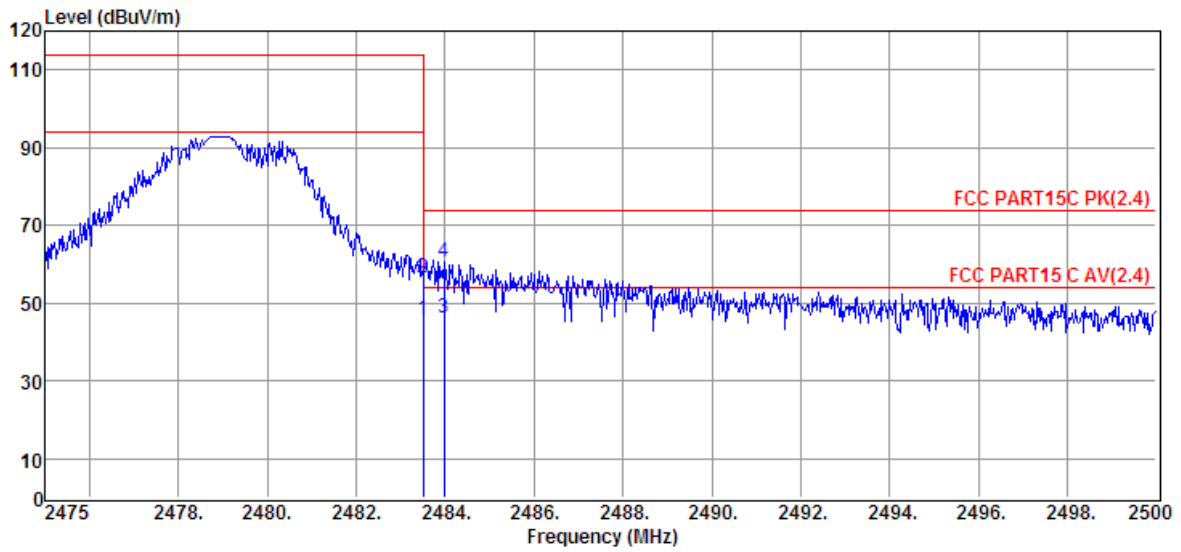
Item (Mark)	Freq. (MHz)	Read Level (dB μ V)	Antenna Factor (dB/m)	PRM Facto r dB	Cable Loss dB	Result Level (dB μ V/m)	Limit Line (dB μ V/m)	Over Limit (dB)	Detecto r	Polarization
1	2363.20	38.73	29.67	29.37	5.98	45.01	74.00	-28.99	Peak	HORIZONTAL
2	2390.00	34.98	29.78	29.41	6.01	41.36	74.00	-32.64	Peak	HORIZONTAL
3	2400.00	38.69	29.82	29.44	6.03	45.10	74.00	-28.90	Peak	HORIZONTAL

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



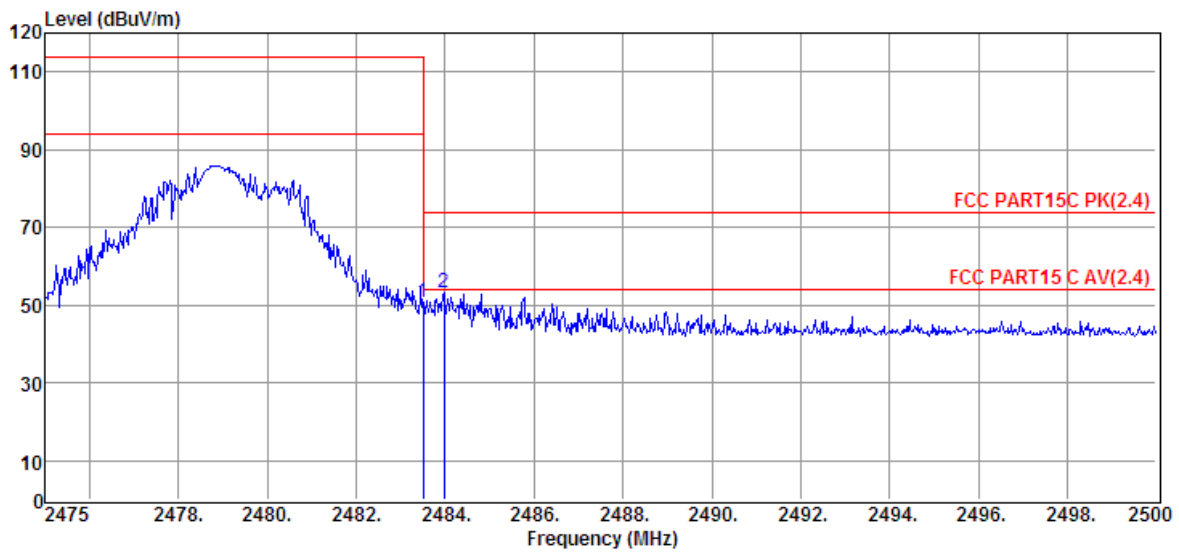
Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Facto r dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detecto r	Polarization
1	2374.80	35.91	29.72	29.38	5.98	42.23	74.00	-31.77	Peak	VERTICAL
2	2390.00	34.20	29.78	29.41	6.01	40.58	74.00	-33.42	Peak	VERTICAL
3	2400.00	33.98	29.82	29.44	6.03	40.39	74.00	-33.61	Peak	VERTICAL

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	39.34	30.14	29.71	6.15	45.92	54.00	-8.08	Average	HORIZONTAL
2	2483.50	49.73	30.14	29.71	6.15	56.31	74.00	-17.69	Peak	HORIZONTAL
3	2483.98	39.68	30.14	29.71	6.15	46.26	54.00	-7.74	Average	HORIZONTAL
4	2483.98	54.06	30.14	29.71	6.15	60.64	74.00	-13.36	Peak	HORIZONTAL

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

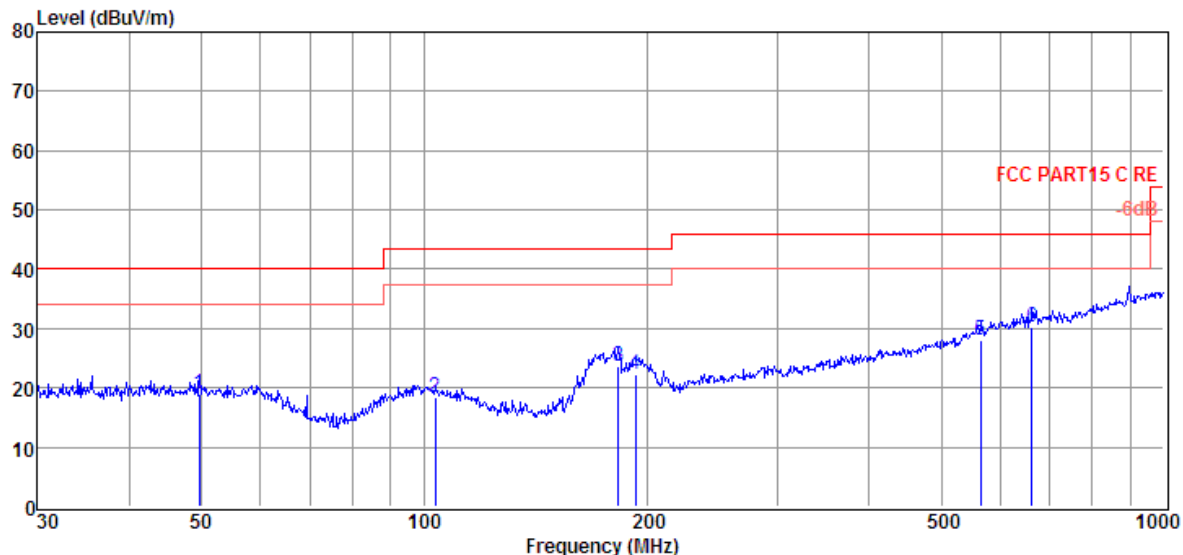


Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	44.32	30.14	29.71	6.15	50.90	74.00	-23.10	Peak	VERTICAL
2	2483.98	46.53	30.14	29.71	6.15	53.11	74.00	-20.89	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

7.3. SPURIOUS EMISSIONS BELOW 1 GHz

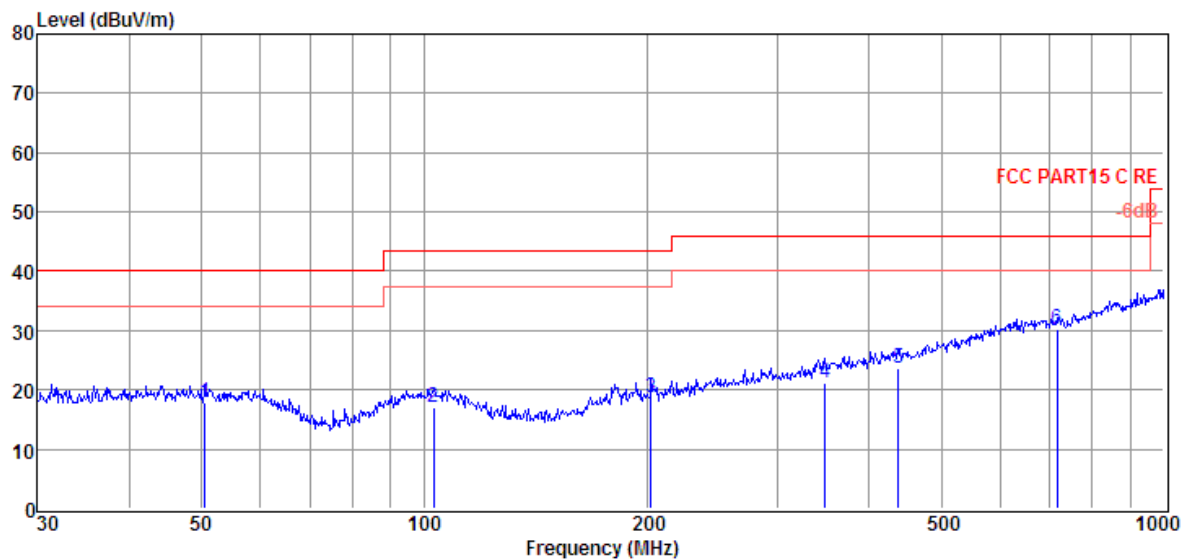
SPURIOUS EMISSIONS BELOW 1 GHz (TX mode, VERTICAL)



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	49.71	3.15	12.04	3.89	19.08	40.00	-20.92	QP	VERTICAL
2	103.44	2.34	11.72	4.32	18.38	43.50	-25.12	QP	VERTICAL
3	183.20	9.39	9.59	4.80	23.78	43.50	-19.72	QP	VERTICAL
4	193.09	7.50	9.99	4.86	22.35	43.50	-21.15	QP	VERTICAL
5	564.64	2.85	18.80	6.39	28.04	46.00	-17.96	QP	VERTICAL
6	663.47	3.92	19.67	6.71	30.30	46.00	-15.70	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

SPURIOUS EMISSIONS BELOW 1 GHz (TX mode, HORIZONTAL)



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	50.59	1.94	11.91	3.90	17.75	40.00	-22.25	QP	HORIZONTAL
2	103.08	1.09	11.75	4.32	17.16	43.50	-26.34	QP	HORIZONTAL
3	202.81	3.41	10.47	4.91	18.79	43.50	-24.71	QP	HORIZONTAL
4	348.03	1.02	14.70	5.58	21.30	46.00	-24.70	QP	HORIZONTAL
5	437.12	1.39	16.41	5.94	23.74	46.00	-22.26	QP	HORIZONTAL
6	716.68	3.52	19.77	6.88	30.17	46.00	-15.83	QP	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

7.4. SPURIOUS EMISSIONS (1~18GHz)

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
Tx mode LCH									
1728.00	44.12	26.83	29.04	5.17	47.08	74.00	-26.92	Peak	VERTICAL
2415.00	81.86	29.82	29.44	6.03	88.27	114.00	-25.73	Peak	VERTICAL
2596.00	44.02	30.51	29.91	6.28	50.90	74.00	-23.10	Peak	VERTICAL
3954.00	37.20	33.27	29.06	7.58	48.99	74.00	-25.01	Peak	VERTICAL
4830.00	37.59	33.74	29.32	8.46	50.47	74.00	-23.53	Peak	VERTICAL
6047.00	35.84	35.08	29.23	9.71	51.40	74.00	-22.60	Peak	VERTICAL
2309.00	43.09	29.45	29.28	5.91	49.17	74.00	-24.83	Peak	HORIZONTAL
2415.00	85.61	29.82	29.44	6.03	92.02	114.00	-21.98	Peak	HORIZONTAL
2743.00	44.77	30.96	30.06	6.46	52.13	74.00	-21.87	Peak	HORIZONTAL
4080.00	36.74	33.47	29.05	7.69	48.85	74.00	-25.15	Peak	HORIZONTAL
4830.00	39.70	33.74	29.32	8.46	52.58	74.00	-21.42	Peak	HORIZONTAL
6796.00	36.24	36.04	30.24	10.24	52.28	74.00	-21.72	Peak	HORIZONTAL
Tx mode MCH									
2447.00	76.50	29.97	29.54	6.08	83.01	114.00	-30.99	Peak	VERTICAL
3464.00	39.26	31.89	29.62	7.26	48.79	74.00	-25.21	Peak	VERTICAL
3947.00	37.88	33.25	29.07	7.58	49.64	74.00	-24.36	Peak	VERTICAL
4430.00	36.91	33.75	29.17	8.08	49.57	74.00	-24.43	Peak	VERTICAL
5998.00	35.29	35.00	29.19	9.68	50.78	74.00	-23.22	Peak	VERTICAL
7041.00	35.35	36.23	30.40	10.47	51.65	74.00	-22.35	Peak	VERTICAL
2447.00	85.44	29.97	29.54	6.08	91.95	114.00	-22.05	Peak	HORIZONTAL
2785.00	46.06	31.09	30.09	6.50	53.56	74.00	-20.44	Peak	HORIZONTAL
3940.00	36.90	33.23	29.07	7.58	48.64	74.00	-25.36	Peak	HORIZONTAL
4894.00	37.61	33.72	29.33	8.56	50.56	74.00	-23.44	Peak	HORIZONTAL
6040.00	35.87	35.07	29.22	9.70	51.42	74.00	-22.58	Peak	HORIZONTAL
6873.00	35.77	36.10	30.30	10.31	51.88	74.00	-22.12	Peak	HORIZONTAL
Tx mode HCH									
2479.00	78.67	30.12	29.69	6.13	85.23	114.00	-28.77	Peak	VERTICAL
3254.00	39.17	31.81	30.00	7.03	48.01	74.00	-25.99	Peak	VERTICAL
4374.00	36.68	33.70	29.14	8.02	49.26	74.00	-24.74	Peak	VERTICAL
5767.00	34.33	34.86	29.21	9.45	49.43	74.00	-24.57	Peak	VERTICAL
6061.00	35.69	35.10	29.23	9.72	51.28	74.00	-22.72	Peak	VERTICAL
6985.00	36.86	36.19	30.37	10.42	53.10	74.00	-20.90	Peak	VERTICAL
2479.00	86.32	30.12	29.69	6.13	92.88	114.00	-21.12	Peak	HORIZONTAL
2834.00	45.63	31.23	30.12	6.57	53.31	74.00	-20.69	Peak	HORIZONTAL
3947.00	37.83	33.25	29.07	7.58	49.59	74.00	-24.41	Peak	HORIZONTAL
4958.00	36.78	33.71	29.34	8.63	49.78	74.00	-24.22	Peak	HORIZONTAL
6047.00	35.38	35.08	29.23	9.71	50.94	74.00	-23.06	Peak	HORIZONTAL
6936.00	35.54	36.15	30.34	10.37	51.72	74.00	-22.28	Peak	HORIZONTAL

Note: According exploratory test no any obvious emission were detected from 9KHz to 30MHz and 18GHz to 25GHz, so the final test was performed with frequency range from 30MHz to 18GHz and recorded in below.

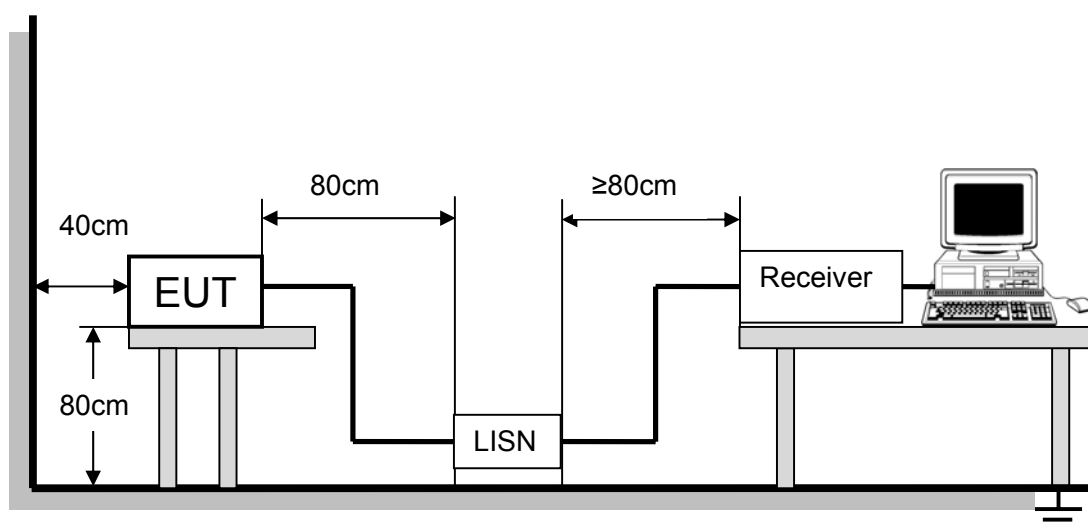
8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

Please refer to FCC §15.207 (a) and RSS-Gen Clause 8.8

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

TEST SETUP AND PROCEDURE

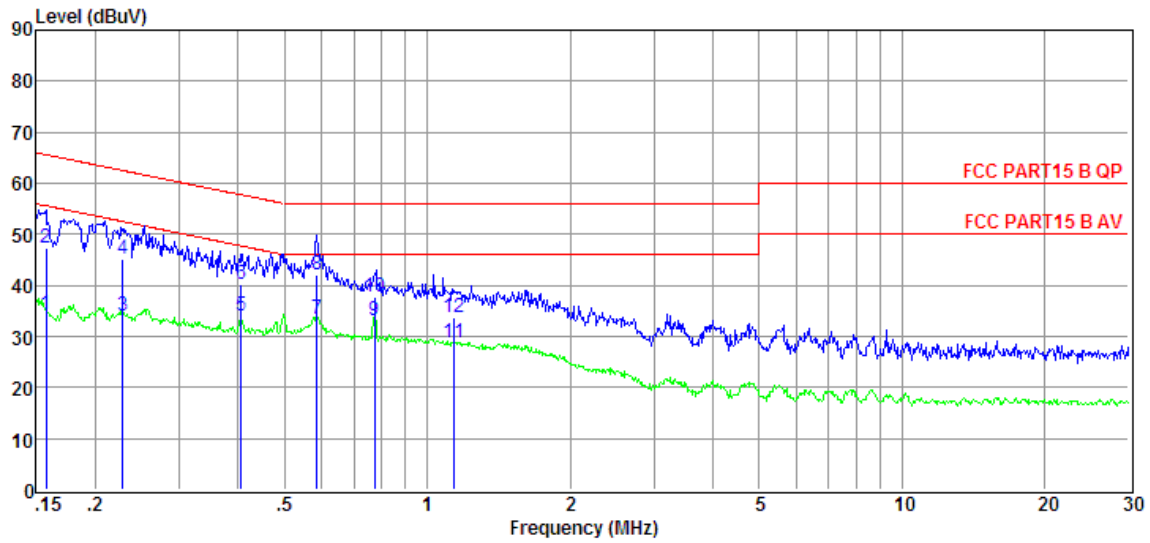


The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 7 and 13 of ANSI C63.4-2014. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

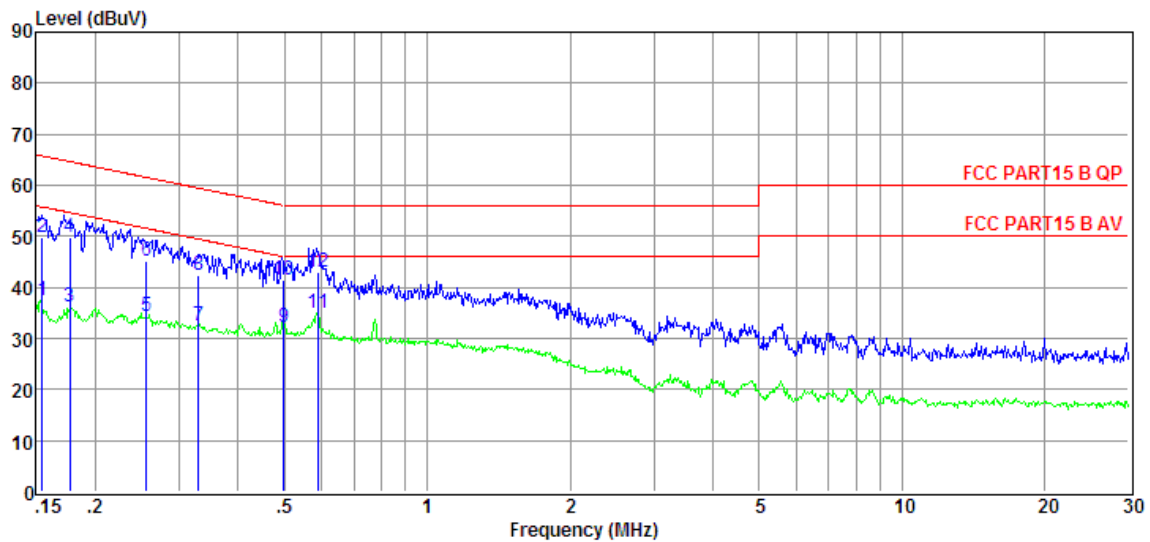
TEST RESULTS

Charging mode:



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.157	14.99	9.61	0.02	9.86	34.48	55.60	-21.12	Average	LINE
2	0.157	27.76	9.61	0.02	9.86	47.25	65.60	-18.35	QP	LINE
3	0.228	14.42	9.61	0.02	9.86	33.91	52.52	-18.61	Average	LINE
4	0.228	25.62	9.61	0.02	9.86	45.11	62.52	-17.41	QP	LINE
5	0.406	14.58	9.61	0.02	9.86	34.07	47.73	-13.66	Average	LINE
6	0.406	20.77	9.61	0.02	9.86	40.26	57.73	-17.47	QP	LINE
7	0.585	13.80	9.61	0.03	9.86	33.30	46.00	-12.70	Average	LINE
8	0.585	22.47	9.61	0.03	9.86	41.97	56.00	-14.03	QP	LINE
9	0.775	13.67	9.61	0.03	9.86	33.17	46.00	-12.83	Average	LINE
10	0.775	18.14	9.61	0.03	9.86	37.64	56.00	-18.36	QP	LINE
11	1.141	9.22	9.62	0.03	9.86	28.73	46.00	-17.27	Average	LINE
12	1.141	14.17	9.62	0.03	9.86	33.68	56.00	-22.32	QP	LINE

- Note: 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
 2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
 4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.155	17.79	9.61	0.02	9.86	37.28	55.74	-18.46	Average	NEUTRAL
2	0.155	30.21	9.61	0.02	9.86	49.70	65.74	-16.04	QP	NEUTRAL
3	0.177	16.84	9.61	0.02	9.86	36.33	54.64	-18.31	Average	NEUTRAL
4	0.177	30.18	9.61	0.02	9.86	49.67	64.64	-14.97	QP	NEUTRAL
5	0.256	14.80	9.61	0.02	9.86	34.29	51.56	-17.27	Average	NEUTRAL
6	0.256	25.56	9.61	0.02	9.86	45.05	61.56	-16.51	QP	NEUTRAL
7	0.330	12.96	9.61	0.02	9.86	32.45	49.44	-16.99	Average	NEUTRAL
8	0.330	22.81	9.61	0.02	9.86	42.30	59.44	-17.14	QP	NEUTRAL
9	0.499	12.75	9.61	0.02	9.86	32.24	46.01	-13.77	Average	NEUTRAL
10	0.499	21.96	9.61	0.02	9.86	41.45	56.01	-14.56	QP	NEUTRAL
11	0.589	15.47	9.61	0.03	9.86	34.97	46.00	-11.03	Average	NEUTRAL
12	0.589	23.50	9.61	0.03	9.86	43.00	56.00	-13.00	QP	NEUTRAL

- Note: 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
 2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
 4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

9. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §15.203

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

ANTENNA CONNECTOR

EUT has an Integrated antenna without antenna connector.

ANTENNA GAIN

The antenna gain of EUT is less than 6 dBi.

END OF REPORT

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