FCC Test Report

(Co-located)

Report No.:	RFBBGM-WTW-P22090842-7
FCC ID:	WIYS1E2001
Test Model:	S1E2
Received Date:	Sep. 26, 2022
Test Date:	Oct. 31, 2022
Issued Date:	Nov. 18, 2022
Applicant:	CASTLES TECHNOLOGY CO., LTD.
Address:	6F, NO. 207-5, SEC. 3, BEIXIN RD., XINDIAN DISTRICT, NEW TAIPEI CITY 23143, TAIWAN (R. O. C.)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBBGM-WTW-P22090842-7	Original Release	Nov. 18, 2022

1 Certificate of Conformity

Product:	POS Terminal
Brand:	CASTLES TECHNOLOGY
Test Model:	S1E2
Sample Status:	Identical Prototype
Applicant:	CASTLES TECHNOLOGY CO., LTD.
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart E (Section 15.407) 47 CFR FCC Part 15, Subpart C (Section 15.225) 47 CFR FCC Part 15, Subpart C (Section 15.215) ANSI C63.10-2013 FCC Part 22, Subpart H FCC Part 24, Subpart E FCC Part 27, Subpart C, H, F, L FCC Part 2

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Vera Huang , **Date:** Nov. 18, 2022

Vera Huang / Specialist

Approved by : Jeremy Lin , **Date:** Nov. 18, 2022

Jeremy Lin / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart E (Section 15.407) 47 CFR FCC Part 15, Subpart C (Section 15.225, 15.215) FCC Part 22, Subpart H FCC Part 24, Subpart E FCC Part 27, Subpart C, H, F, L FCC Part 2			
FCC Clause	**Test Item**	**Result**	**Remarks**
15.205 / 15.209 / 15.247(d) / 15.225 (d) / 15.407(b) (1/2/3/4(i/ii)/9)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -3.2 dB at 2390.00 MHz.
2.1053 22.917 24.238 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.42 dB at 3490.00 MHz.

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	POS Terminal	
Brand	CASTLES TECHNOLOGY	
Test Model	S1E2	
Status of EUT	Identical Prototype	
Power Supply Rating	5.0 Vdc (adapter) 3.75 Vdc (Li-ion battery)	
Modulation Type	WLAN	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
	BT	GFSK, π/4-DQPSK, 8DPSK
	WCDMA	BPSK (Uplink)
	HSDPA/DC-HSDPA	QPSK (Uplink)
	HSUPA	QPSK (Uplink)
	HSPA+	16QAM (16QAM Uplink is not supported)
	DC-HSDPA	64QAM
	LTE	QPSK, 16QAM
	NFC	ASK
Data Rate	WLAN	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11b: 11.0 / 5.5 / 2.0 / 1.0 Mbps 802.11g: 54.0 / 48.0 / 36.0 / 24.0 / 18.0 / 12.0 / 9.0 / 6.0 Mbps 802.11n: up to 150Mbps
	BT	1/2/3 Mbps
	NFC	Type A: 106 kbit/s Type B: 106 kbit/s Type F: 212 kbit/s, 424 kbit/s
Operating Frequency	WLAN	2412 ~ 2462 MHz 5180 ~ 5240 MHz, 5745 ~ 5825 MHz
	BT	2402 ~ 2480 MHz
	WCDMA Band 2	1852.4 ~ 1907.6 MHz
	WCDMA Band 4	1712.4 ~ 1752.6 MHz
	WCDMA Band 5	826.4 ~ 846.6 MHz
	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	1850.7 ~ 1909.3 MHz
	LTE Band 2 (Channel Bandwidth: 3 MHz)	1851.5 ~ 1908.5 MHz
	LTE Band 2 (Channel Bandwidth: 5 MHz)	1852.5 ~ 1907.5 MHz
	LTE Band 2 (Channel Bandwidth: 10 MHz)	1855.0 ~ 1905.0 MHz
	LTE Band 2 (Channel Bandwidth: 15 MHz)	1857.5 ~ 1902.5 MHz
	LTE Band 2 (Channel Bandwidth: 20 MHz)	1860.0 ~ 1900.0 MHz

Operating Frequency	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	1710.7 ~ 1754.3 MHz
	LTE Band 4 (Channel Bandwidth: 3 MHz)	1711.5 ~ 1753.5 MHz
	LTE Band 4 (Channel Bandwidth: 5 MHz)	1712.5 ~ 1752.5 MHz
	LTE Band 4 (Channel Bandwidth: 10 MHz)	1715.0 ~ 1750.0 MHz
	LTE Band 4 (Channel Bandwidth: 15 MHz)	1717.5 ~ 1747.5 MHz
	LTE Band 4 (Channel Bandwidth: 20 MHz)	1720.0 ~ 1745.0 MHz
	LTE Band 5 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz
	LTE Band 5 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz
	LTE Band 5 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz
	LTE Band 5 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz
	LTE Band 7 (Channel Bandwidth: 5 MHz)	2502.5 ~ 2567.5 MHz
	LTE Band 7 (Channel Bandwidth: 10 MHz)	2505 ~ 2565 MHz
	LTE Band 7 (Channel Bandwidth: 15 MHz)	2507.5 ~ 2562.5 MHz
	LTE Band 7 (Channel Bandwidth: 20 MHz)	2510 ~ 2560 MHz
	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	699.7 ~ 715.3 MHz
	LTE Band 12 (Channel Bandwidth: 3 MHz)	700.5 ~ 714.5 MHz
	LTE Band 12 (Channel Bandwidth: 5 MHz)	701.5 ~ 713.5 MHz
	LTE Band 12 (Channel Bandwidth: 10 MHz)	704.0 ~ 711.0 MHz
	LTE Band 13 (Channel Bandwidth: 5 MHz)	779.5 ~ 784.5 MHz
	LTE Band 13 (Channel Bandwidth: 10 MHz)	782.0 MHz
	LTE Band 17 (Channel Bandwidth: 5 MHz)	706.5 ~ 713.5 MHz
	LTE Band 17 (Channel Bandwidth: 10 MHz)	709.0 ~ 711.0 MHz
	NFC	13.56 MHz
Number of Channel	WLAN	2412 ~ 2462 MHz 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40) 5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)
	BT	79
	NFC	1

Antenna Type	Refer to Note as below
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	Tx Function
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX

2. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	CASTLES TECHNOLOGY	1A52-UB52A	I/P: 100-240 Vac, 50-60 Hz, 0.3 A O/P: 5 Vdc, 2 A
Battery	CASTLES TECHNOLOGY	S1E	3.75 Vdc
USB Cable	N/A	N/A	2m shielded cable w/o core

3. The antenna information is listed as below.

WWAN Antenna										
Ant. Type	PIFA antenna									
Band	**WCDMA**			**LTE**						
	II	**IV**	**V**	**2**	**4**	**5**	**7**	**12**	**13**	**17**
Gain (dBi)	0.077	-6.906	-0.985	0.077	-6.906	-0.985	2.622	-1.054	-0.031	-1.054

WLAN Antenna			
Antenna Type	**Antenna Gain (dBi)**		
	BT/WLAN 2.4 GHz	**5180 ~ 5240 MHz**	**5745 ~ 5825 MHz**
Dipole antenna	0.611	0.658	1.612

4. Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.
5. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.
6. The EUT contains certified smart module with FCC ID: WIYSLM758A.
7. BT & WWAN & NFC technology can transmit at same time.
8. WLAN 2.4G & WWAN & NFC technology can transmit at same time.
9. WLAN 5G & WWAN & NFC technology can transmit at same time.

3.2 Description of Test Modes

For 2.4G

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

7 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	7	2442
4	2427	8	2447
5	2432	9	2452
6	2437		

For 5180 ~ 5240 MHz

4 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

For 5745 ~ 5825 MHz

5 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

BT EDR

79 channels are provided to this EUT:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

NFC

1 channel was provided to this EUT:

Channel	Frequency (MHz)
1	13.56

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to		Description
	RE≥1G	RE<1G	
-	√	√	-

Where RE≥1G: Radiated Emission above 1GHz & Bandedge Measurement RE<1G: Radiated Emission below 1GHz

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane.**

Radiated Emission Test (Above 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
1	BT EDR + WCDMA Band 5 + NFC	2402 ~ 2480	0, 39, 78	39 + 4233 + 1	GFSK
		826.4 ~ 846.6	4132, 4182, 4233		WCDMA
		13.56	1		ASK
2	BT EDR + WCDMA Band 2 + NFC	2402 ~ 2480	0, 39, 78	39 + 9538 + 1	GFSK
		1852.4 ~ 1907.6	9262, 9400, 9538		WCDMA
		13.56	1		ASK
3	BT EDR + LTE Band 4 + NFC	2402 ~ 2480	0, 39, 78	39 + 20300 + 1	GFSK
		1710.7 ~ 1754.3	20050, 20175, 20300		WCDMA
		13.56	1		ASK
4	802.11g + WCDMA Band 5 + NFC	2412 ~ 2462	1, 6, 11	1 + 4233 + 1	OFDM
		826.4 ~ 846.6	4132, 4182, 4233		WCDMA
		13.56	1		ASK
5	802.11g + WCDMA Band 2 + NFC	2412 ~ 2462	1, 6, 11	1 + 9538 + 1	OFDM
		1852.4 ~ 1907.6	9262, 9400, 9538		WCDMA
		13.56	1		ASK
6	802.11g + LTE Band 4 + NFC	2412 ~ 2462	1, 6, 11	1 + 20300 + 1	OFDM
		1710.7 ~ 1754.3	20050, 20175, 20300		WCDMA
		13.56	1		ASK
7	802.11a + WCDMA Band 5 + NFC	5180-5240	36, 40, 48	36 + 4233 + 1	OFDM
		826.4 ~ 846.6	4132, 4182, 4233		WCDMA
		13.56	1		ASK
8	802.11a + WCDMA Band 2 + NFC	5180-5240	36, 40, 48	36 + 9538 + 1	OFDM
		1852.4 ~ 1907.6	9262, 9400, 9538		WCDMA
		13.56	1		ASK
9	802.11a + LTE Band 4 + NFC	5180-5240	36, 40, 48	36 + 20300 + 1	OFDM
		1710.7 ~ 1754.3	20050, 20175, 20300		WCDMA
		13.56	1		ASK

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Freq. Range (MHz)	Available Channel	Tested Channel	Modulation Technology
1	BT EDR + WCDMA Band 5 + NFC	2402 ~ 2480	0, 39, 78	39 + 4233 + 1	GFSK
		826.4 ~ 846.6	4132, 4182, 4233		WCDMA
		13.56	1		ASK
2	BT EDR + WCDMA Band 2 + NFC	2402 ~ 2480	0, 39, 78	39 + 9538 + 1	GFSK
		1852.4 ~ 1907.6	9262, 9400, 9538		WCDMA
		13.56	1		ASK
3	BT EDR + LTE Band 4 + NFC	2402 ~ 2480	0, 39, 78	39 + 20300 + 1	GFSK
		1710.7 ~ 1754.3	20050, 20175, 20300		WCDMA
		13.56	1		ASK
4	802.11g + WCDMA Band 5 + NFC	2412 ~ 2462	1, 6, 11	1 + 4233 + 1	OFDM
		826.4 ~ 846.6	4132, 4182, 4233		WCDMA
		13.56	1		ASK
5	802.11g + WCDMA Band 2 + NFC	2412 ~ 2462	1, 6, 11	1 + 9538 + 1	OFDM
		1852.4 ~ 1907.6	9262, 9400, 9538		WCDMA
		13.56	1		ASK
6	802.11g + LTE Band 4 + NFC	2412 ~ 2462	1, 6, 11	1 + 20300 + 1	OFDM
		1710.7 ~ 1754.3	20050, 20175, 20300		WCDMA
		13.56	1		ASK
7	802.11a + WCDMA Band 5 + NFC	5180-5240	36, 40, 48	36 + 4233 + 1	OFDM
		826.4 ~ 846.6	4132, 4182, 4233		WCDMA
		13.56	1		ASK
8	802.11a + WCDMA Band 2 + NFC	5180-5240	36, 40, 48	36 + 9538 + 1	OFDM
		1852.4 ~ 1907.6	9262, 9400, 9538		WCDMA
		13.56	1		ASK
9	802.11a + LTE Band 4 + NFC	5180-5240	36, 40, 48	36 + 20300 + 1	OFDM
		1710.7 ~ 1754.3	20050, 20175, 20300		WCDMA
		13.56	1		ASK

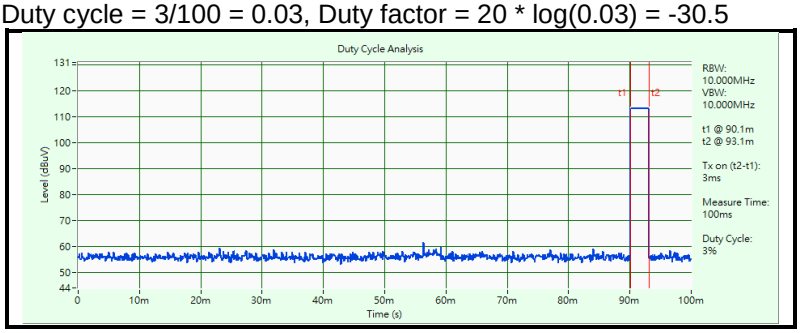
Test Condition:

Applicable to	Environmental Conditions	Input Power (System)	Tested by
RE≥1G	24 deg. C, 69 % RH	120 Vac, 60 Hz	Titan Hsu
RE<1G	24 deg. C, 69 % RH	120 Vac, 60 Hz	Titan Hsu

3.3 Duty Cycle of Test Signal

BT

Duty cycle = 3/100 = 0.03, Duty factor = 20 * log(0.03) = -30.5



WLAN

Duty cycle of test signal is ≥ 98 %, duty factor is not required.

Duty cycle of test signal is < 98 %, duty factor shall be considered.

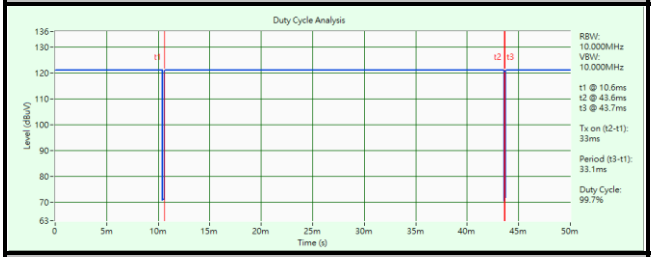
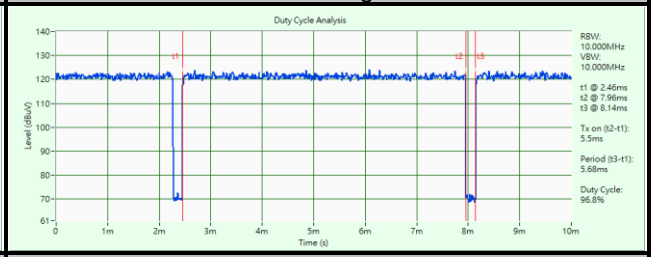
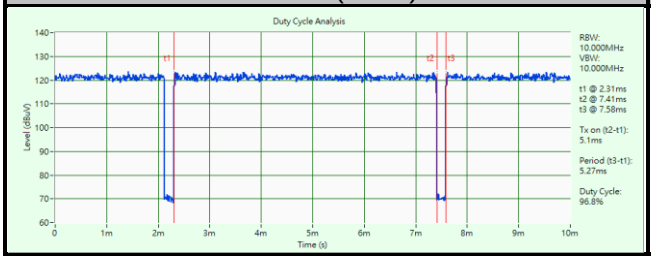
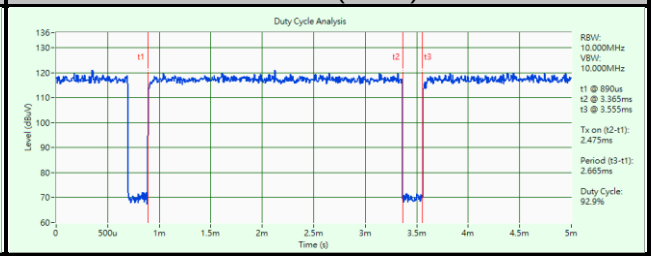
WLAN 2.4G:

802.11b: Duty cycle = 33/33.1 = 0.997

802.11g: Duty cycle = 5.5/5.68 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

802.11n (HT20): Duty cycle = 5.1/5.27 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

802.11n (HT40): Duty cycle = 2.475/2.665 = 0.929, Duty factor = 10 * log(1/0.929) = 0.32

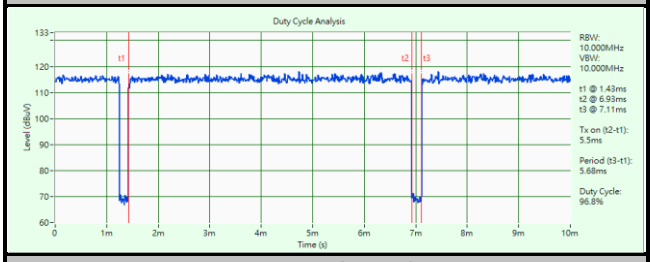
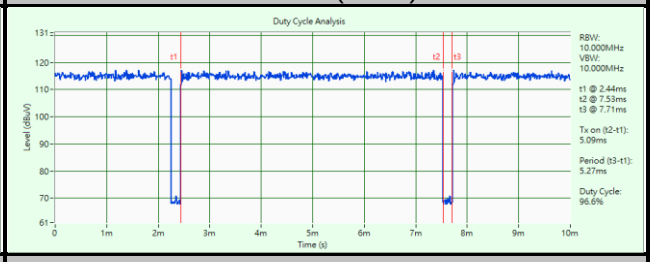
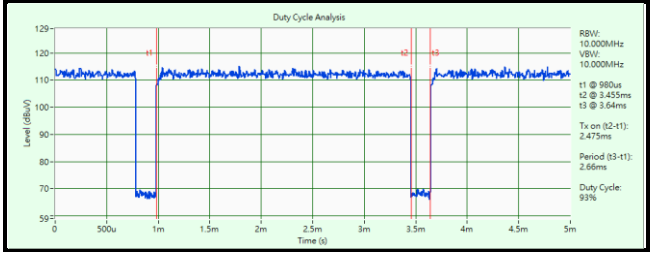
802.11b	802.11g
	
802.11n (HT20)	**802.11n (HT40)**
	

WLAN 5G:

802.11a: Duty cycle = 5.5/5.68 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

802.11n (HT20): Duty cycle = 5.09/5.27 = 0.966, Duty factor = 10 * log(1/0.966) = 0.15

802.11n (HT40): Duty cycle = 2.475/2.66 = 0.930, Duty factor = 10 * log(1/0.930) = 0.31

802.11a	802.11n (HT20)
	
802.11n (HT40)	
	

3.4 Description of Support Units

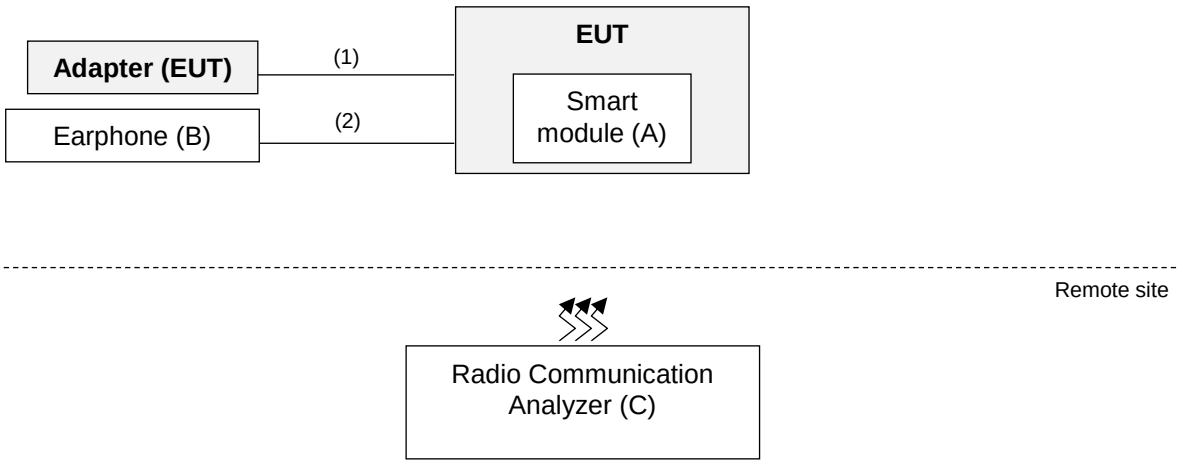
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
A	Smart module	CASTLES TECHNOLOGY	SLM758	N/A	N/A
B	Earphone	APPLE	MB77PFEB	N/A	N/A
C	Radio Communication Analyzer	Anritsu	MT8821C	6261806803	N/A

Note: Items C acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	2	Y	0	Provided by client
2.	Audio Cable	1	1.2	N	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:

FCC Part 15, Subpart E (15.407)
FCC Part 15, Subpart C (15.247)
FCC Part 15, Subpart C (15.225)
FCC Part 15, Subpart C (15.215)
ANSI C63.10-2013
FCC 47 CFR Part 2
FCC 47 CFR Part 22
FCC 47 CFR Part 24
FCC 47 CFR Part 27
ANSI 63.26-2015
All test items have been performed and recorded as per the above standards.

References Test Guidance:
KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 414788 D01 Radiated Test Site v01r01
KDB 971168 D01 Power Meas License Digital Systems v03r01
ANSI/TIA/EIA-603-E 2016
All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

For WLAN & BT & NFC

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/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:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Limits of Unwanted Emission Out of the Restricted Bands

<table>
<tr><th colspan="3">Applicable To</th><th colspan="2">Limit</th></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedures New Rules v02r01</td><td colspan="2">Field Strength at 3 m</td></tr>
<tr><td>PK: 74 (dBµV/m)</td><td>AV: 54 (dBµV/m)</td></tr>
<tr><th>Frequency Band</th><th colspan="2">Applicable To</th><th>EIRP Limit</th><th>Equivalent Field Strength at 3 m</th></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2 (dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2 (dBµV/m) *1
PK:105.2 (dBµV/m) *2
PK: 110.8 (dBµV/m) *3
PK:122.2 (dBµV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

Note:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ µV/m, where P is the eirp (Watts).

For WWAN

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit is equal to -13 dBm.

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102579	2022/07/01	2023/06/30
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	2022/04/11	2023/04/10
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	2022/10/26	2023/10/25
HORN Antenna SCHWARZBECK	9120D	209	2021/11/14	2022/11/13
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	2021/11/14	2022/11/13
Loop Antenna TESEQ	HLA 6121	45745	2022/07/27	2023/07/26
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	2022/07/09	2023/07/08
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	2022/03/19	2023/03/18
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	2022/05/14	2023/05/13
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	2022/07/09	2023/07/08
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104- SM-SM-8000	Cable-CH3-03 (309224+170907)	2022/07/09	2023/07/08
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6261806803	Feb. 16, 2022	Feb. 15, 2023

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.

4.1.3 Test Procedures

For WLAN & BT & NFC

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

1. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

6. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.

3. For WLAN: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.

4. For BT: Fundamental frequency and band edge & harmonic:

   The average value of fundamental frequency is :average value = peak value + 20*log(Duty cycle) where the duty cycle correction factor is calculated from following formula:

   20*Log(Duty cycle) = 20*log (3 ms/100) = -30.5 dB, please refer to the plotted duty (see section 3.3)

5. All modes of operation were investigated and the worst-case emissions are reported.

For WWAN

1. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
2. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
4. Following C63.26 section 5.5 and 5.2.7

   EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.

   ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:

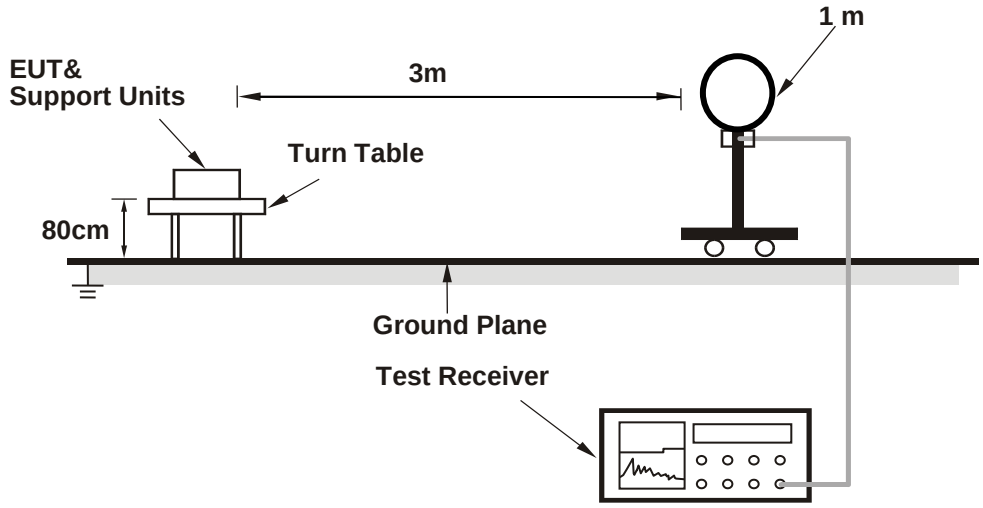
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.1.4 Deviation from Test Standard

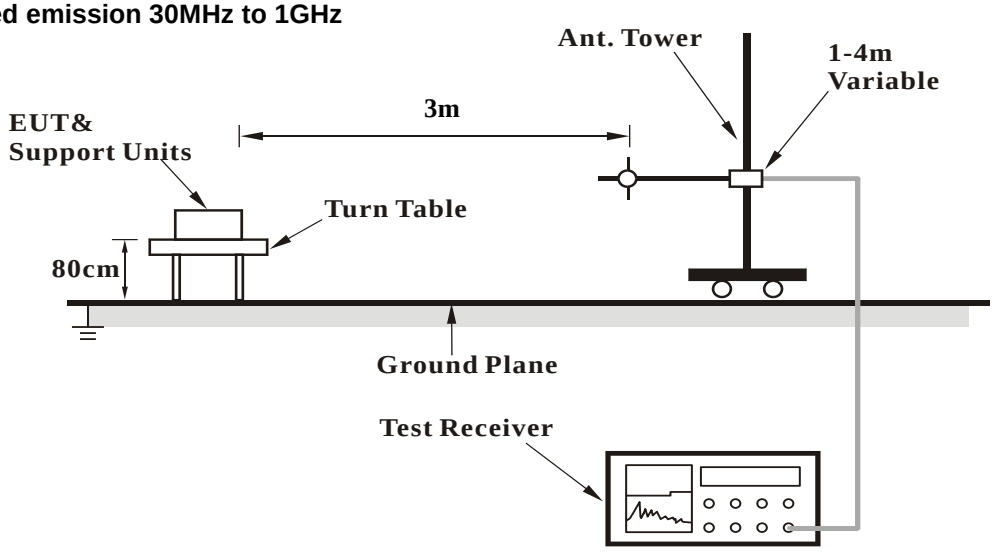
No deviation.

4.1.5 Test Setup

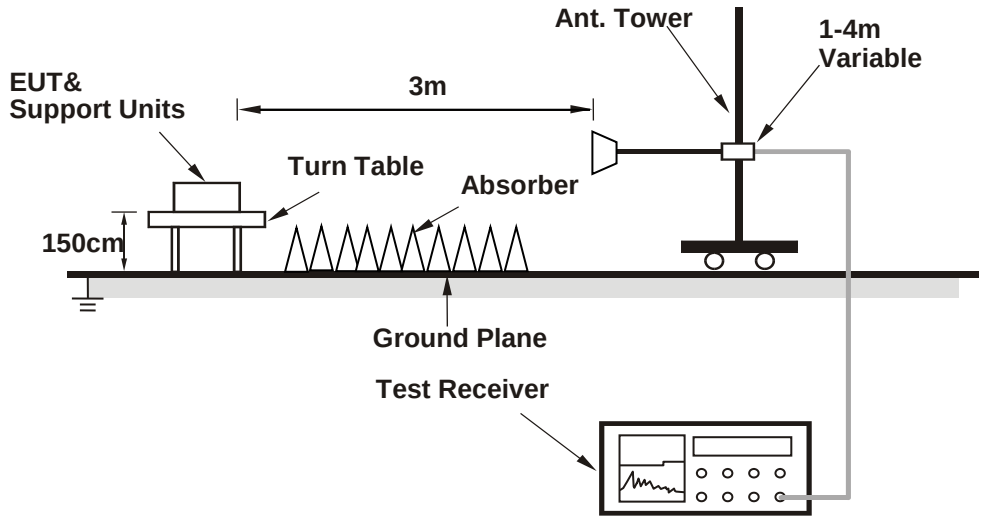
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

1. Placed the EUT on the testing table.
2. Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Mode 1

Above 1 GHz Data :

BT EDR, Ch39 + WCDMA Band 5, Ch 4233 + NFC, Ch1

Frequency Range	1 GHz ~ 25 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	103.1 PK			1.22 H	162	68.2	34.9
2	*2441.00	72.6 AV			1.22 H	162	37.7	34.9
3	4882.00	52.1 PK	74.0	-21.9	2.25 H	188	38.5	13.6
4	4882.00	21.6 AV	54.0	-32.4	2.25 H	188	8.0	13.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	98.1 PK			1.13 V	288	63.2	34.9
2	*2441.00	67.6 AV			1.13 V	288	32.7	34.9
3	4882.00	51.6 PK	74.0	-22.4	2.45 V	185	38.0	13.6
4	4882.00	21.1 AV	54.0	-32.9	2.45 V	185	7.5	13.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. For Fundamental frequency and band edge & harmonic:

The average value of fundamental frequency is :average value = peak value + 20*log(Duty cycle) where the duty cycle correction factor is calculated from following formula:

20*Log(Duty cycle) = 20*log (3 ms/100) = -30.5 dB , please refer to the plotted duty (see section 3.3)

Frequency Range	1 GHz ~ 18 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-43.99	-13.00	-30.99	2.93 H	241	55.16	-99.15
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-41.97	-13.00	-28.97	1.95 V	122	57.18	-99.15

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Below 1GHz data:

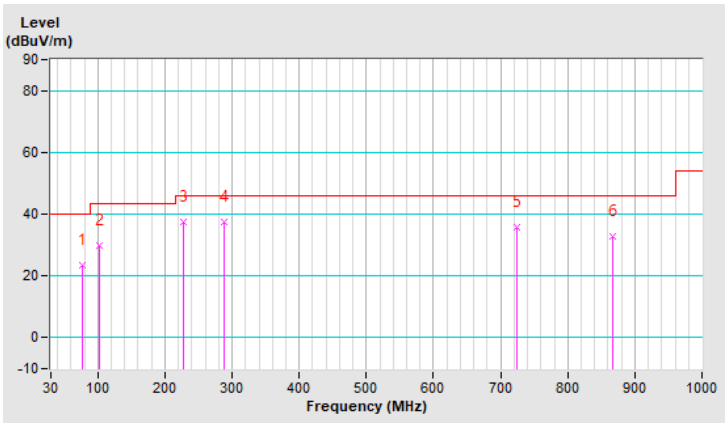
BT EDR, Ch39 + WCDMA Band 5, Ch 4233 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	76.56	23.3 QP	40.0	-16.7	1.00 H	10	35.4	-12.1
2	101.78	29.7 QP	43.5	-13.8	1.49 H	276	42.8	-13.1
3	227.88	37.5 QP	46.0	-8.5	1.49 H	166	48.6	-11.1
4	288.02	37.4 QP	46.0	-8.6	1.00 H	171	45.1	-7.7
5	724.52	35.9 QP	46.0	-10.1	1.49 H	161	35.1	0.8
6	866.14	32.6 QP	46.0	-13.4	1.49 H	43	28.6	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

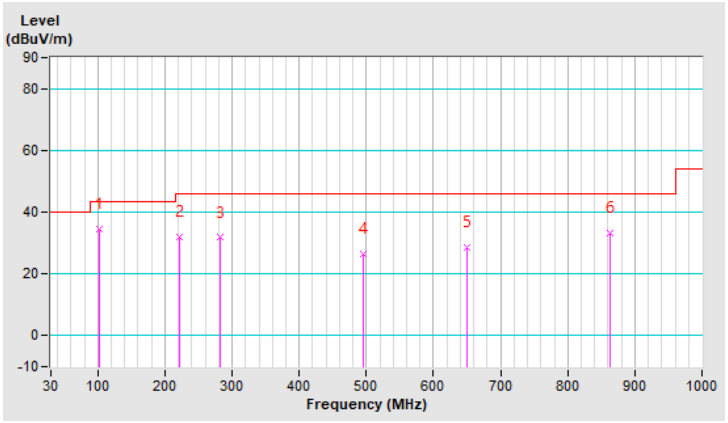


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	101.78	34.4 QP	43.5	-9.1	1.49 V	6	47.5	-13.1
2	222.06	32.0 QP	46.0	-14.0	2.00 V	200	43.2	-11.2
3	282.20	31.7 QP	46.0	-14.3	1.49 V	238	39.5	-7.8
4	495.60	26.4 QP	46.0	-19.6	1.49 V	345	30.8	-4.4
5	650.80	28.5 QP	46.0	-17.5	1.00 V	250	29.3	-0.8
6	862.26	33.2 QP	46.0	-12.8	1.49 V	232	29.2	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

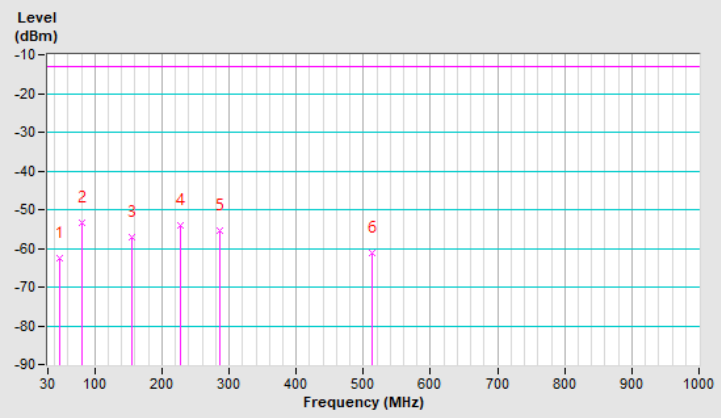


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	47.46	-62.48	-13.00	-49.48	1.49 H	150	43.84	-106.32
2	80.44	-53.23	-13.00	-40.23	1.49 H	136	57.30	-110.53
3	156.10	-57.05	-13.00	-44.05	1.49 H	288	48.85	-105.90
4	227.88	-54.13	-13.00	-41.13	1.49 H	154	54.37	-108.50
5	286.08	-55.30	-13.00	-42.30	1.00 H	162	49.84	-105.14
6	513.06	-61.07	-13.00	-48.07	1.49 H	202	40.21	-101.28

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

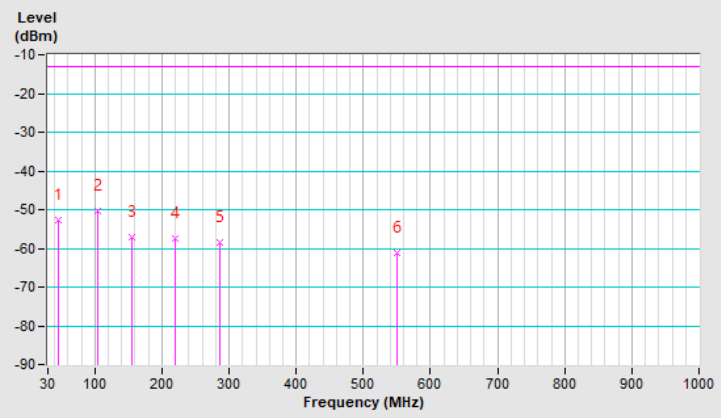


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-52.60	-13.00	-39.60	1.00 V	205	53.74	-106.34
2	103.72	-50.34	-13.00	-37.34	1.49 V	230	59.66	-110.00
3	156.10	-56.96	-13.00	-43.96	1.49 V	129	48.94	-105.90
4	220.12	-57.46	-13.00	-44.46	1.49 V	140	51.12	-108.58
5	286.08	-58.39	-13.00	-45.39	1.49 V	241	46.75	-105.14
6	549.92	-61.20	-13.00	-48.20	1.00 V	214	39.57	-100.77

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



Mode 2

Above 1 GHz Data :

BT EDR, Ch39 + WCDMA Band 2, Ch 9538 + NFC, Ch1

Frequency Range	1 GHz ~ 25 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	103.4 PK			1.21 H	165	68.5	34.9
2	*2441.00	72.9 AV			1.21 H	165	38.0	34.9
3	4882.00	52.0 PK	74.0	-22.0	2.29 H	188	38.4	13.6
4	4882.00	21.5 AV	54.0	-32.5	2.29 H	188	7.9	13.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	98.2 PK			1.15 V	285	63.3	34.9
2	*2441.00	67.7 AV			1.15 V	285	32.8	34.9
3	4882.00	51.4 PK	74.0	-22.6	2.44 V	188	37.8	13.6
4	4882.00	20.9 AV	54.0	-33.1	2.44 V	188	7.3	13.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. For Fundamental frequency and band edge & harmonic:

The average value of fundamental frequency is :average value = peak value + 20*log(Duty cycle) where the duty cycle correction factor is calculated from following formula:

20*Log(Duty cycle) = 20*log (3 ms/100) = -30.5 dB , please refer to the plotted duty (see section 3.3)

Frequency Range	1 GHz ~ 20 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3815.20	-41.83	-13.00	-28.83	2.71 H	261	46.16	-87.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3815.20	-39.91	-13.00	-26.91	1.65 V	195	48.08	-87.99

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Below 1GHz data:

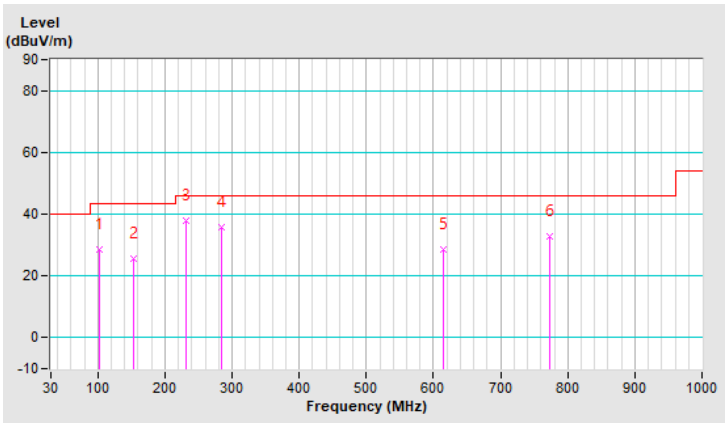
BT EDR, Ch39 + WCDMA Band 2, Ch 9538 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	101.78	28.7 QP	43.5	-14.8	1.49 H	313	41.8	-13.1
2	154.16	25.6 QP	43.5	-17.9	1.49 H	272	34.1	-8.5
3	231.76	37.7 QP	46.0	-8.3	1.00 H	166	48.4	-10.7
4	284.14	35.6 QP	46.0	-10.4	1.49 H	168	43.3	-7.7
5	613.94	28.4 QP	46.0	-17.6	1.49 H	142	29.7	-1.3
6	773.02	32.7 QP	46.0	-13.3	1.00 H	6	30.2	2.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

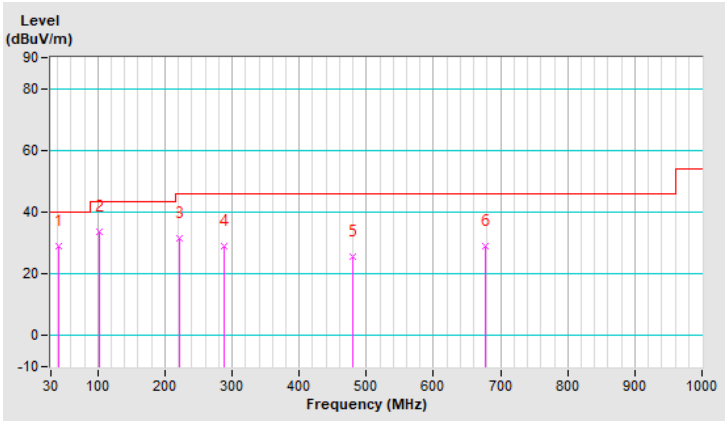


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.64	29.1 QP	40.0	-10.9	1.00 V	27	38.3	-9.2
2	101.78	33.8 QP	43.5	-9.7	1.49 V	223	46.9	-13.1
3	222.06	31.7 QP	46.0	-14.3	1.49 V	199	42.9	-11.2
4	288.02	29.1 QP	46.0	-16.9	1.00 V	263	36.8	-7.7
5	480.08	25.7 QP	46.0	-20.3	1.49 V	340	30.2	-4.5
6	677.96	28.8 QP	46.0	-17.2	1.49 V	335	29.4	-0.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

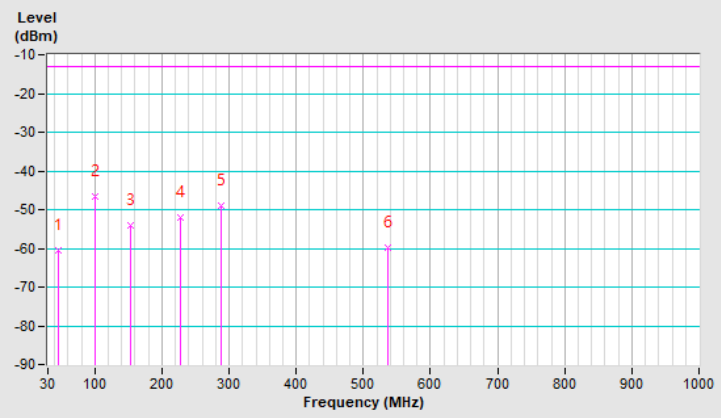


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-60.38	-13.00	-47.38	1.00 H	153	43.81	-104.19
2	99.84	-46.58	-13.00	-33.58	1.00 H	338	61.92	-108.50
3	154.16	-54.02	-13.00	-41.02	1.00 H	269	49.65	-103.67
4	227.88	-51.87	-13.00	-38.87	1.00 H	154	54.48	-106.35
5	288.02	-49.10	-13.00	-36.10	1.50 H	168	53.87	-102.97
6	536.34	-59.69	-13.00	-46.69	1.00 H	8	39.13	-98.82

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

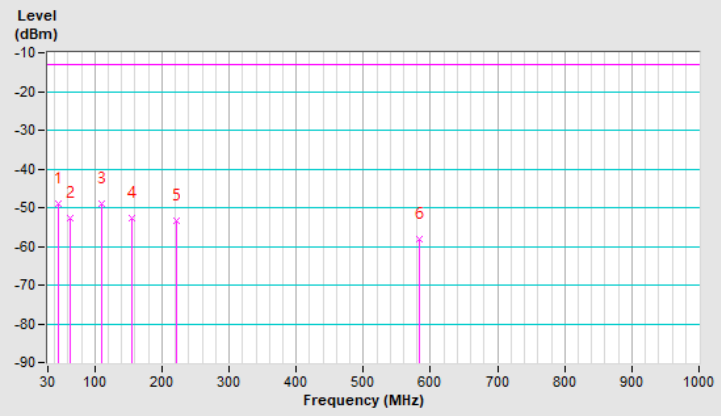


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-49.10	-13.00	-36.10	1.50 V	15	55.09	-104.19
2	62.98	-52.64	-13.00	-39.64	1.00 V	358	52.12	-104.76
3	109.54	-48.96	-13.00	-35.96	1.00 V	275	58.17	-107.13
4	156.10	-52.74	-13.00	-39.74	1.00 V	297	51.01	-103.75
5	222.06	-53.52	-13.00	-40.52	1.00 V	123	52.96	-106.48
6	582.90	-58.00	-13.00	-45.00	1.50 V	178	39.63	-97.63

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



Mode 3

Above 1 GHz Data :

BT EDR, Ch39 + LTE Band 4, Ch 20300 + NFC, Ch1

Frequency Range	1 GHz ~ 25 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	103.4 PK			1.22 H	165	68.5	34.9
2	*2441.00	72.9 AV			1.22 H	165	38.0	34.9
3	4882.00	52.2 PK	74.0	-21.8	2.29 H	190	38.6	13.6
4	4882.00	21.7 AV	54.0	-32.3	2.29 H	190	8.1	13.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	98.1 PK			1.55 V	282	63.2	34.9
2	*2441.00	67.6 AV			1.55 V	282	32.7	34.9
3	4882.00	51.6 PK	74.0	-22.4	2.45 V	187	38.0	13.6
4	4882.00	21.1 AV	54.0	-32.9	2.45 V	187	7.5	13.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. For Fundamental frequency and band edge & harmonic:

The average value of fundamental frequency is :average value = peak value + 20*log(Duty cycle) where the duty cycle correction factor is calculated from following formula:

20*Log(Duty cycle) = 20*log (3 ms/100) = -30.5 dB , please refer to the plotted duty (see section 3.3)

Frequency Range	1 GHz ~ 18 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-35.59	-13.00	-22.59	3.09 H	248	53.72	-89.31
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-33.55	-13.00	-20.55	1.75 V	99	55.76	-89.31

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Below 1GHz data:

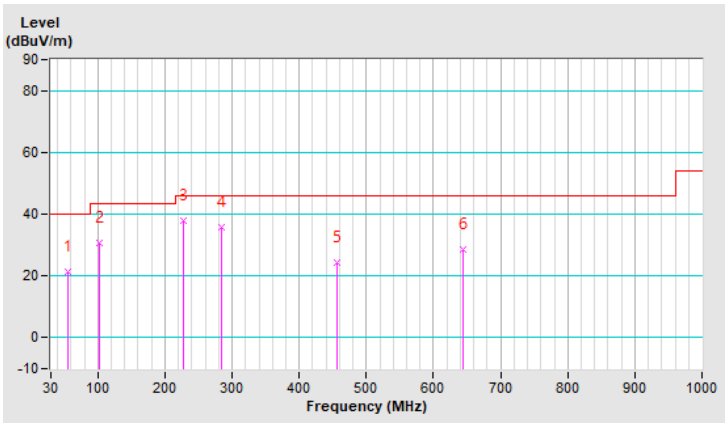
BT EDR, Ch39 + LTE Band 4, Ch 20300 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	55.22	21.4 QP	40.0	-18.6	1.00 H	115	30.4	-9.0
2	101.78	30.7 QP	43.5	-12.8	1.49 H	288	43.8	-13.1
3	227.88	37.9 QP	46.0	-8.1	1.49 H	170	49.0	-11.1
4	284.14	35.8 QP	46.0	-10.2	1.49 H	153	43.5	-7.7
5	456.80	24.3 QP	46.0	-21.7	1.49 H	130	29.0	-4.7
6	644.98	28.7 QP	46.0	-17.3	1.00 H	290	29.6	-0.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

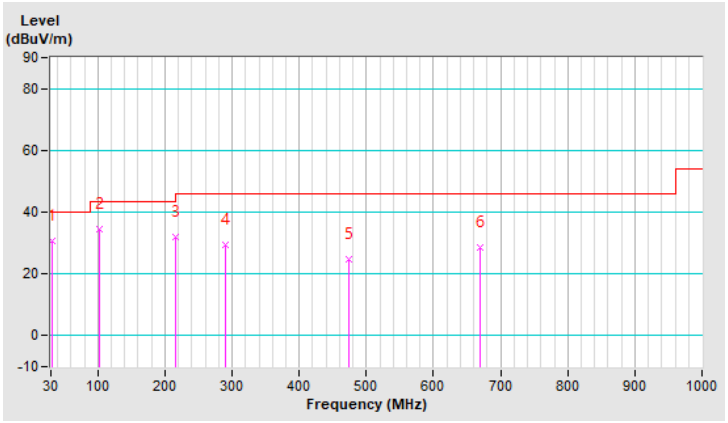


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.94	30.7 QP	40.0	-9.3	1.00 V	354	41.1	-10.4
2	101.78	34.5 QP	43.5	-9.0	1.49 V	6	47.6	-13.1
3	216.24	32.1 QP	46.0	-13.9	2.00 V	201	43.3	-11.2
4	289.96	29.6 QP	46.0	-16.4	1.49 V	234	37.2	-7.6
5	474.26	24.7 QP	46.0	-21.3	1.00 V	315	29.3	-4.6
6	670.20	28.7 QP	46.0	-17.3	1.49 V	97	29.4	-0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

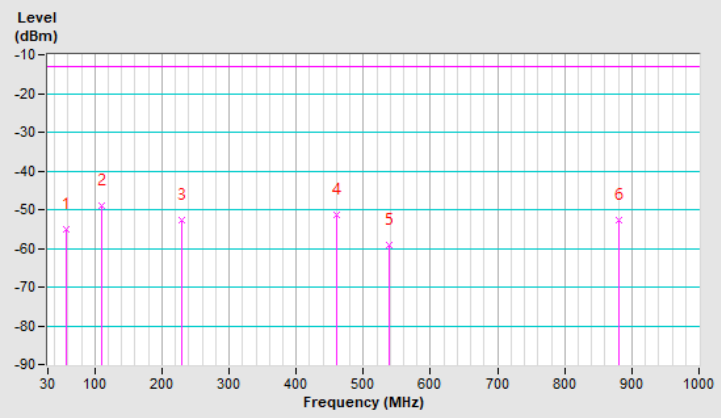


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	57.16	-55.00	-13.00	-42.00	1.00 H	124	49.48	-104.48
2	109.54	-49.14	-13.00	-36.14	1.49 H	290	57.99	-107.13
3	229.82	-52.81	-13.00	-39.81	1.49 H	171	53.39	-106.20
4	460.68	-51.50	-13.00	-38.50	1.00 H	124	48.35	-99.85
5	538.28	-59.17	-13.00	-46.17	1.49 H	36	39.63	-98.80
6	881.66	-52.59	-13.00	-39.59	1.49 H	306	38.40	-90.99

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

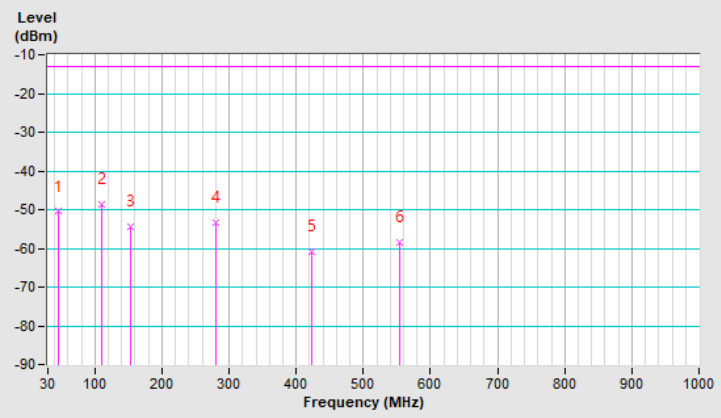


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-50.51	-13.00	-37.51	1.49 V	29	53.68	-104.19
2	109.54	-48.60	-13.00	-35.60	1.00 V	191	58.53	-107.13
3	154.16	-54.55	-13.00	-41.55	1.49 V	137	49.12	-103.67
4	280.26	-53.54	-13.00	-40.54	1.49 V	222	49.56	-103.10
5	423.82	-61.00	-13.00	-48.00	1.00 V	201	39.61	-100.61
6	553.80	-58.51	-13.00	-45.51	1.49 V	89	40.01	-98.52

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



Mode 4

Above 1 GHz Data :

802.11g, Ch1 + WCDMA Band 5, Ch 4233 + NFC, Ch1

Frequency Range	1 GHz ~ 25 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.1 PK	74.0	-6.9	1.92 H	162	32.2	34.9
2	2390.00	50.7 AV	54.0	-3.3	1.92 H	162	15.8	34.9
3	*2412.00	105.7 PK			1.92 H	162	70.8	34.9
4	*2412.00	95.3 AV			1.92 H	162	60.4	34.9
5	4824.00	52.1 PK	74.0	-21.9	2.44 H	192	38.5	13.6
6	4824.00	39.1 AV	54.0	-14.9	2.44 H	192	25.5	13.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.9 PK	74.0	-10.1	1.18 V	255	29.0	34.9
2	2390.00	48.1 AV	54.0	-5.9	1.18 V	255	13.2	34.9
3	*2412.00	100.6 PK			1.18 V	255	65.7	34.9
4	*2412.00	90.4 AV			1.18 V	255	55.5	34.9
5	4824.00	51.6 PK	74.0	-22.4	3.15 V	155	38.0	13.6
6	4824.00	38.8 AV	54.0	-15.2	3.15 V	155	25.2	13.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

Frequency Range	1 GHz ~ 18 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-43.90	-13.00	-30.90	2.99 H	235	55.25	-99.15
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-42.12	-13.00	-29.12	1.95 V	120	57.03	-99.15

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Below 1GHz data:

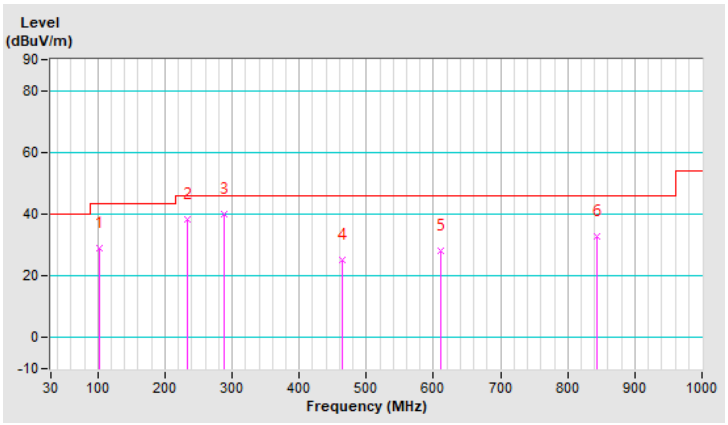
802.11g, Ch1 + WCDMA Band 5, Ch 4233 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	101.78	29.0 QP	43.5	-14.5	1.50 H	329	42.1	-13.1
2	233.70	38.1 QP	46.0	-7.9	1.00 H	174	48.4	-10.3
3	288.02	39.8 QP	46.0	-6.2	1.00 H	154	47.5	-7.7
4	464.56	25.0 QP	46.0	-21.0	1.00 H	54	29.5	-4.5
5	610.06	28.3 QP	46.0	-17.7	1.50 H	267	29.7	-1.4
6	842.86	32.8 QP	46.0	-13.2	1.00 H	172	29.1	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

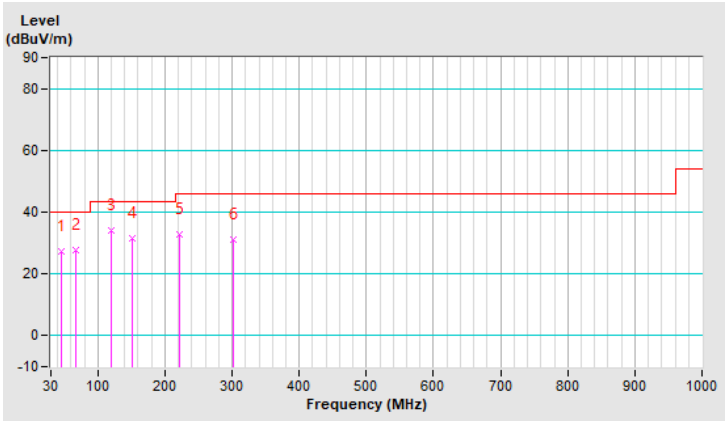


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	27.5 QP	40.0	-12.5	1.50 V	146	36.5	-9.0
2	66.86	27.7 QP	40.0	-12.3	1.00 V	100	37.9	-10.2
3	119.24	34.1 QP	43.5	-9.4	1.00 V	128	45.1	-11.0
4	150.28	31.5 QP	43.5	-12.0	1.50 V	126	40.0	-8.5
5	222.06	32.9 QP	46.0	-13.1	1.00 V	128	44.1	-11.2
6	301.60	30.9 QP	46.0	-15.1	1.00 V	359	38.2	-7.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

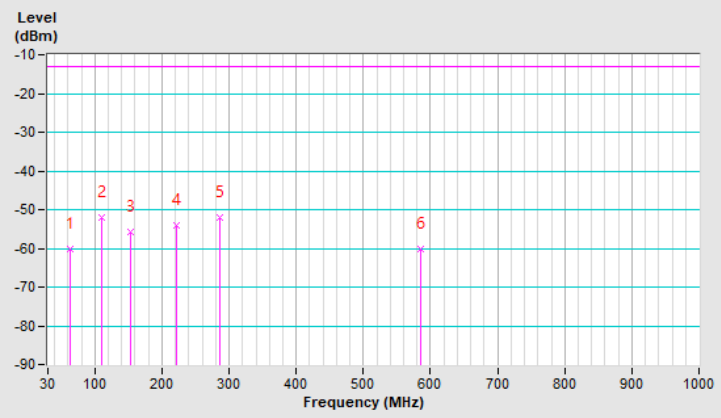


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	62.98	-60.30	-13.00	-47.30	1.50 H	318	46.61	-106.91
2	109.54	-52.14	-13.00	-39.14	1.00 H	318	57.14	-109.28
3	154.16	-55.90	-13.00	-42.90	1.00 H	288	49.92	-105.82
4	222.06	-54.11	-13.00	-41.11	1.00 H	157	54.52	-108.63
5	286.08	-52.20	-13.00	-39.20	1.50 H	157	52.94	-105.14
6	584.84	-60.29	-13.00	-47.29	1.00 H	5	39.43	-99.72

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

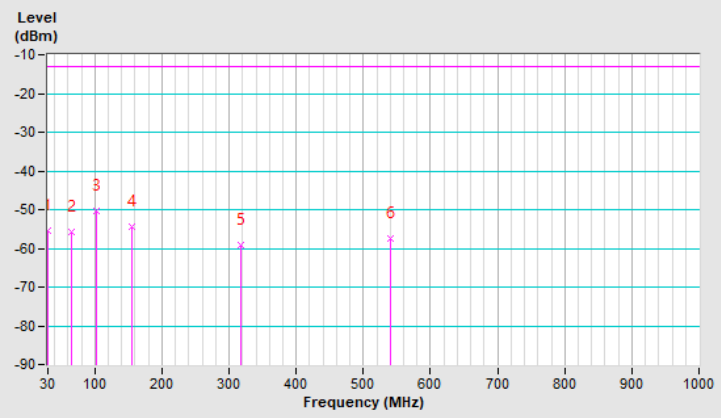


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	-55.30	-13.00	-42.30	1.00 V	237	52.45	-107.75
2	64.92	-55.79	-13.00	-42.79	1.00 V	65	51.72	-107.51
3	101.78	-50.20	-13.00	-37.20	1.50 V	205	60.20	-110.40
4	156.10	-54.57	-13.00	-41.57	1.00 V	129	51.33	-105.90
5	317.12	-59.10	-13.00	-46.10	1.00 V	113	45.29	-104.39
6	540.22	-57.60	-13.00	-44.60	1.50 V	106	43.33	-100.93

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



Mode 5

Above 1 GHz Data :

802.11g, Ch1 + WCDMA Band 2, Ch 9538 + NFC, Ch1

Frequency Range	1 GHz ~ 25 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.1 PK	74.0	-6.9	1.93 H	162	32.2	34.9
2	2390.00	50.6 AV	54.0	-3.4	1.93 H	162	15.7	34.9
3	*2412.00	105.6 PK			1.93 H	162	70.7	34.9
4	*2412.00	95.2 AV			1.93 H	162	60.3	34.9
5	4824.00	52.4 PK	74.0	-21.6	2.45 H	185	38.8	13.6
6	4824.00	39.0 AV	54.0	-15.0	2.45 H	185	25.4	13.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.0 PK	74.0	-10.0	1.12 V	251	29.1	34.9
2	2390.00	48.2 AV	54.0	-5.8	1.12 V	251	13.3	34.9
3	*2412.00	100.6 PK			1.12 V	251	65.7	34.9
4	*2412.00	90.3 AV			1.12 V	251	55.4	34.9
5	4824.00	51.6 PK	74.0	-22.4	3.05 V	153	38.0	13.6
6	4824.00	38.7 AV	54.0	-15.3	3.05 V	153	25.1	13.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

Frequency Range	1 GHz ~ 20 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3815.20	-41.86	-13.00	-28.86	2.77 H	258	46.13	-87.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3815.20	-39.74	-13.00	-26.74	1.68 V	189	48.25	-87.99

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Below 1GHz data:

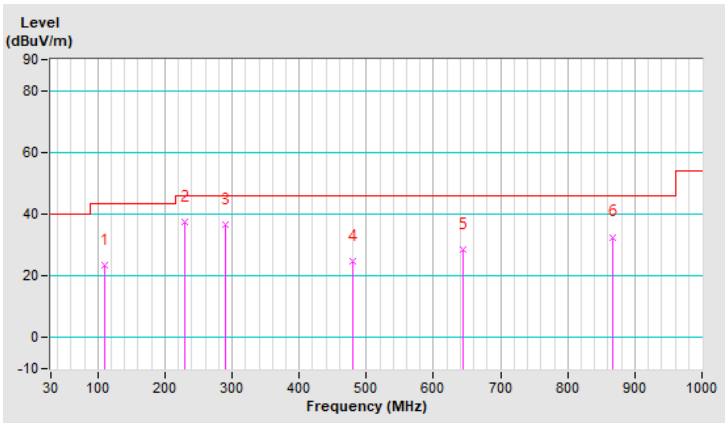
802.11g, Ch1 + WCDMA Band 2, Ch 9538 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	109.54	23.4 QP	43.5	-20.1	1.50 H	275	35.2	-11.8
2	229.82	37.5 QP	46.0	-8.5	1.00 H	185	48.5	-11.0
3	289.96	36.7 QP	46.0	-9.3	1.00 H	168	44.3	-7.6
4	480.08	24.9 QP	46.0	-21.1	1.50 H	174	29.4	-4.5
5	644.98	28.5 QP	46.0	-17.5	1.00 H	5	29.4	-0.9
6	866.14	32.6 QP	46.0	-13.4	1.00 H	245	28.6	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

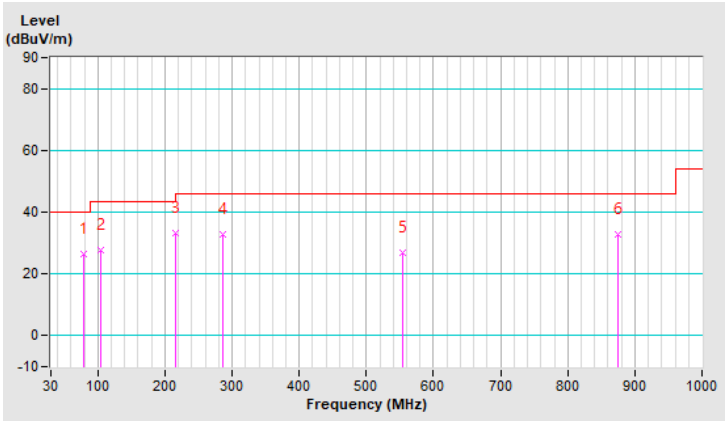


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	78.50	26.4 QP	40.0	-13.6	1.50 V	164	38.9	-12.5
2	103.72	27.6 QP	43.5	-15.9	1.00 V	330	40.3	-12.7
3	216.24	33.1 QP	46.0	-12.9	1.00 V	124	44.3	-11.2
4	286.08	32.6 QP	46.0	-13.4	1.00 V	220	40.3	-7.7
5	553.80	26.7 QP	46.0	-19.3	2.00 V	80	30.0	-3.3
6	873.90	32.8 QP	46.0	-13.2	1.00 V	2	28.7	4.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

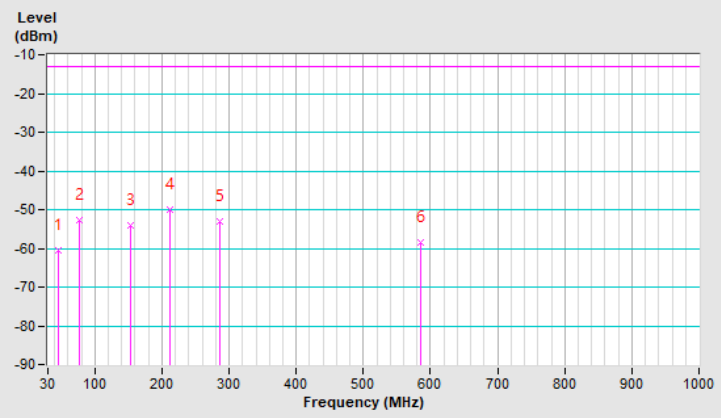


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-60.50	-13.00	-47.50	1.00 H	143	43.69	-104.19
2	76.56	-52.82	-13.00	-39.82	1.50 H	6	54.50	-107.32
3	154.16	-54.23	-13.00	-41.23	1.50 H	276	49.44	-103.67
4	212.36	-50.13	-13.00	-37.13	1.50 H	112	56.34	-106.47
5	286.08	-52.90	-13.00	-39.90	1.00 H	136	50.09	-102.99
6	584.84	-58.38	-13.00	-45.38	1.50 H	315	39.19	-97.57

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

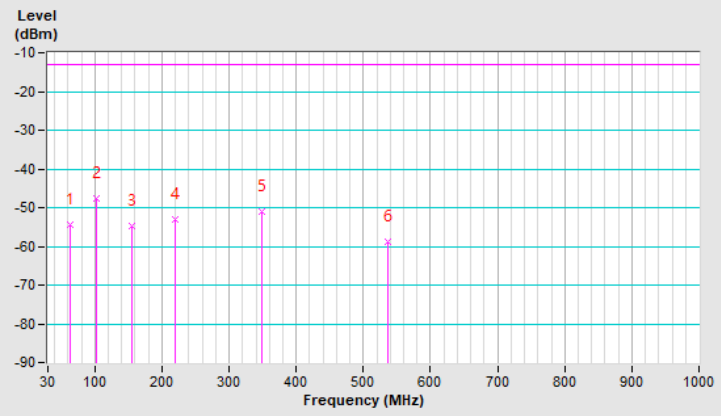


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	62.98	-54.30	-13.00	-41.30	1.50 V	1	50.46	-104.76
2	101.78	-47.62	-13.00	-34.62	1.00 V	273	60.63	-108.25
3	156.10	-54.75	-13.00	-41.75	1.00 V	5	49.00	-103.75
4	220.12	-53.08	-13.00	-40.08	1.00 V	128	53.35	-106.43
5	348.16	-51.10	-13.00	-38.10	1.50 V	280	50.90	-102.00
6	536.34	-58.68	-13.00	-45.68	1.00 V	85	40.14	-98.82

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



Mode 6

Above 1 GHz Data :

802.11g, Ch1 + LTE Band 4, Ch 20300 + NFC, Ch1

Frequency Range	1 GHz ~ 25 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	67.1 PK	74.0	-6.9	1.92 H	166	32.2	34.9
2	2390.00	50.8 AV	54.0	-3.2	1.92 H	166	15.9	34.9
3	*2412.00	105.7 PK			1.92 H	166	70.8	34.9
4	*2412.00	95.4 AV			1.92 H	166	60.5	34.9
5	4824.00	52.3 PK	74.0	-21.7	2.44 H	185	38.7	13.6
6	4824.00	39.1 AV	54.0	-14.9	2.44 H	185	25.5	13.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.9 PK	74.0	-10.1	1.18 V	255	29.0	34.9
2	2390.00	48.1 AV	54.0	-5.9	1.18 V	255	13.2	34.9
3	*2412.00	100.7 PK			1.18 V	255	65.8	34.9
4	*2412.00	90.4 AV			1.18 V	255	55.5	34.9
5	4824.00	51.6 PK	74.0	-22.4	3.05 V	155	38.0	13.6
6	4824.00	38.8 AV	54.0	-15.2	3.05 V	155	25.2	13.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

Frequency Range	1 GHz ~ 18 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-35.43	-13.00	-22.43	3.11 H	245	53.88	-89.31
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-33.42	-13.00	-20.42	1.75 V	100	55.89	-89.31

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Below 1GHz data:

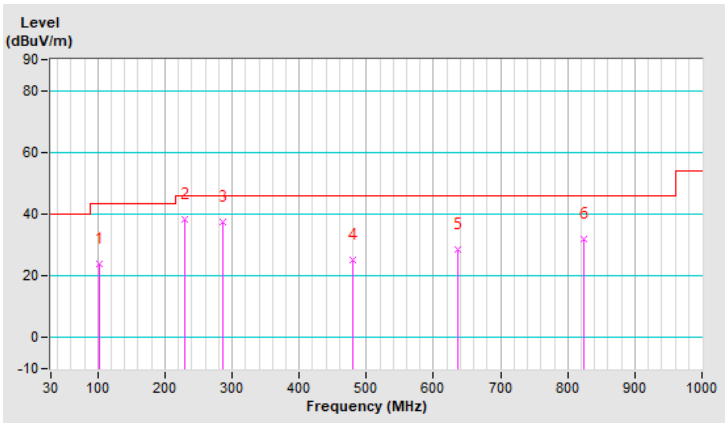
802.11g, Ch1 + LTE Band 4, Ch 20300 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	101.78	24.1 QP	43.5	-19.4	1.50 H	311	37.2	-13.1
2	229.82	38.4 QP	46.0	-7.6	1.00 H	158	49.4	-11.0
3	286.08	37.6 QP	46.0	-8.4	1.00 H	167	45.3	-7.7
4	480.08	25.0 QP	46.0	-21.0	1.00 H	251	29.5	-4.5
5	637.22	28.4 QP	46.0	-17.6	1.00 H	84	29.4	-1.0
6	823.46	32.1 QP	46.0	-13.9	1.50 H	199	28.8	3.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

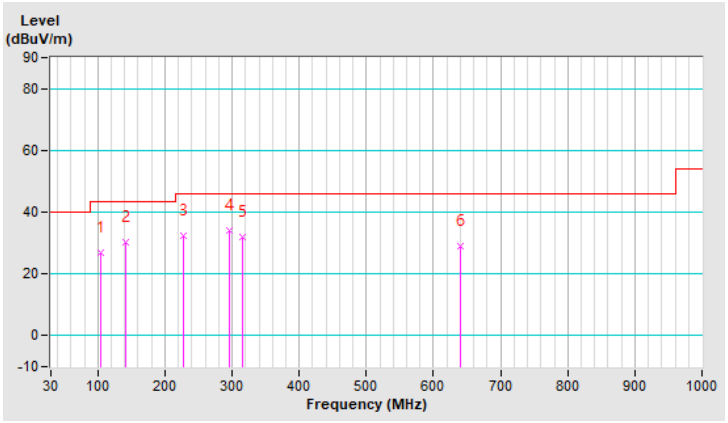


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	103.72	26.9 QP	43.5	-16.6	2.00 V	286	39.6	-12.7
2	140.58	30.1 QP	43.5	-13.4	1.00 V	115	39.1	-9.0
3	227.88	32.5 QP	46.0	-13.5	1.00 V	125	43.6	-11.1
4	295.78	34.2 QP	46.0	-11.8	1.50 V	115	41.8	-7.6
5	315.18	32.1 QP	46.0	-13.9	1.00 V	115	39.2	-7.1
6	641.10	29.1 QP	46.0	-16.9	1.00 V	166	30.1	-1.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

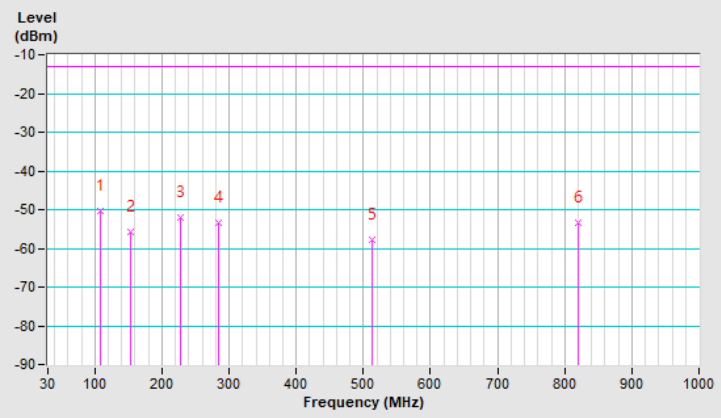


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	107.60	-50.40	-13.00	-37.40	1.00 H	284	56.88	-107.28
2	154.16	-55.80	-13.00	-42.80	1.49 H	287	47.87	-103.67
3	227.88	-51.94	-13.00	-38.94	1.49 H	166	54.41	-106.35
4	284.14	-53.44	-13.00	-40.44	1.49 H	150	49.58	-103.02
5	513.06	-57.90	-13.00	-44.90	1.00 H	104	41.23	-99.13
6	819.58	-53.48	-13.00	-40.48	1.49 H	223	38.57	-92.05

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

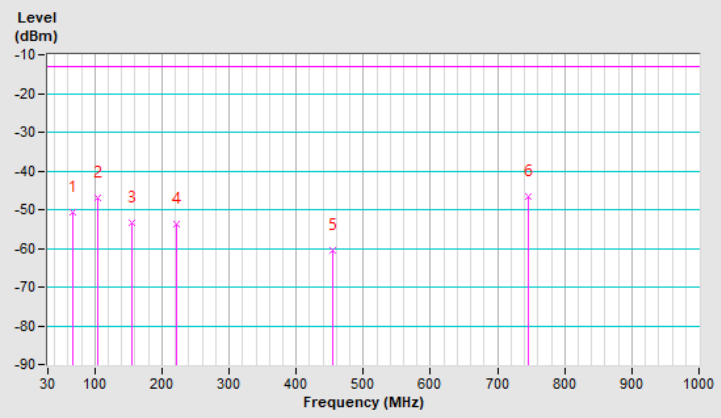


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	66.86	-50.74	-13.00	-37.74	1.00 V	89	54.73	-105.47
2	103.72	-46.79	-13.00	-33.79	1.00 V	5	61.06	-107.85
3	156.10	-53.33	-13.00	-40.33	1.00 V	296	50.42	-103.75
4	222.06	-53.69	-13.00	-40.69	1.00 V	134	52.79	-106.48
5	454.86	-60.39	-13.00	-47.39	1.00 V	5	39.58	-99.97
6	745.86	-46.76	-13.00	-33.76	1.50 V	357	46.80	-93.56

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



Mode 7

Above 1 GHz Data :

802.11a, Ch36 + WCDMA Band 5, Ch 4233 + NFC, Ch1

Frequency Range	1 GHz ~ 40 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.4 PK	74.0	-7.6	1.22 H	177	53.8	12.6
2	5150.00	49.3 AV	54.0	-4.7	1.22 H	177	36.7	12.6
3	*5180.00	106.4 PK			1.22 H	177	63.7	42.7
4	*5180.00	95.8 AV			1.22 H	177	53.1	42.7
5	#10360.00	61.7 PK	68.2	-6.5	1.99 H	212	39.2	22.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.8 PK	74.0	-14.2	1.22 V	202	47.2	12.6
2	5150.00	47.8 AV	54.0	-6.2	1.22 V	202	35.2	12.6
3	*5180.00	100.2 PK			1.22 V	202	57.5	42.7
4	*5180.00	90.4 AV			1.22 V	202	47.7	42.7
5	#10360.00	61.2 PK	68.2	-7.0	2.22 V	185	38.7	22.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

Frequency Range	1 GHz ~ 18 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-43.99	-13.00	-30.99	2.92 H	233	55.16	-99.15
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-42.04	-13.00	-29.04	1.95 V	125	57.11	-99.15

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Below 1GHz data:

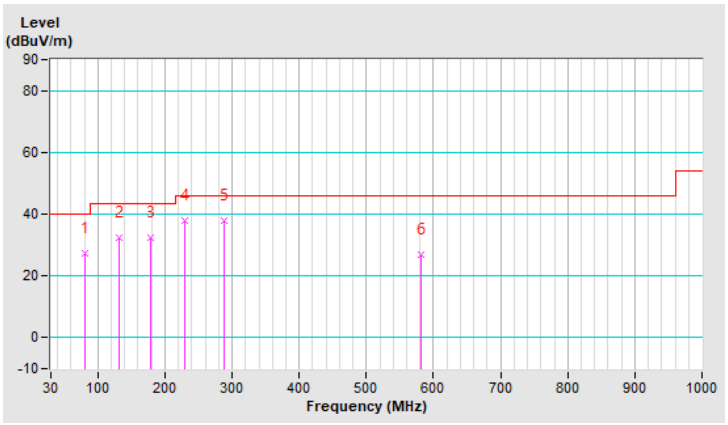
802.11a, Ch36 + WCDMA Band 5, Ch 4233 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	80.44	27.2 QP	40.0	-12.8	1.50 H	123	40.3	-13.1
2	130.88	32.4 QP	43.5	-11.1	1.00 H	130	42.3	-9.9
3	179.38	32.5 QP	43.5	-11.0	1.00 H	130	42.3	-9.8
4	229.82	37.8 QP	46.0	-8.2	1.00 H	181	48.8	-11.0
5	288.02	37.9 QP	46.0	-8.1	1.00 H	147	45.6	-7.7
6	580.96	26.8 QP	46.0	-19.2	2.00 H	231	29.2	-2.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

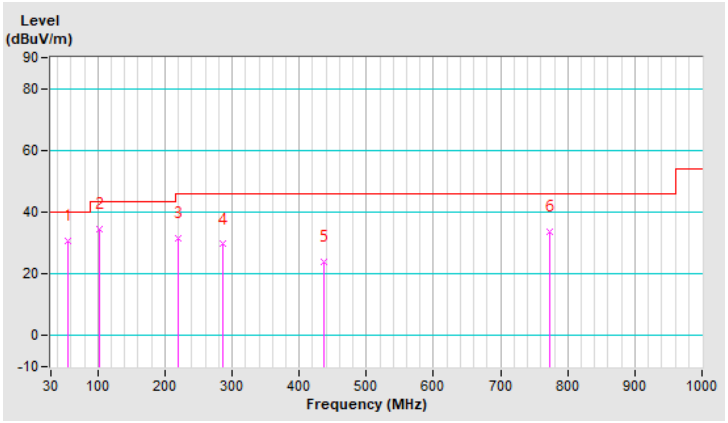


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	55.22	30.7 QP	40.0	-9.3	1.00 V	136	39.7	-9.0
2	101.78	34.3 QP	43.5	-9.2	1.50 V	262	47.4	-13.1
3	220.12	31.4 QP	46.0	-14.6	1.50 V	213	42.5	-11.1
4	286.08	29.6 QP	46.0	-16.4	1.50 V	234	37.3	-7.7
5	437.40	23.8 QP	46.0	-22.2	1.00 V	162	28.8	-5.0
6	773.02	33.8 QP	46.0	-12.2	1.50 V	69	31.3	2.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

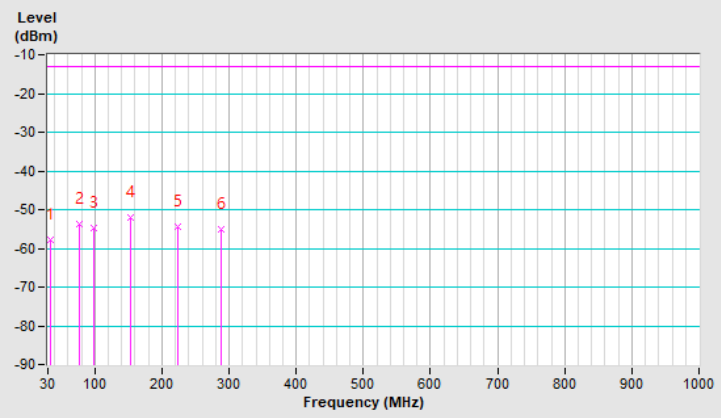


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	33.88	-57.84	-13.00	-44.84	1.50 H	117	49.74	-107.58
2	76.56	-53.80	-13.00	-40.80	2.00 H	266	55.67	-109.47
3	97.90	-54.64	-13.00	-41.64	1.50 H	291	56.37	-111.01
4	154.16	-51.95	-13.00	-38.95	1.50 H	114	53.87	-105.82
5	224.00	-54.30	-13.00	-41.30	1.00 H	166	54.37	-108.67
6	288.02	-55.03	-13.00	-42.03	1.50 H	149	50.09	-105.12

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

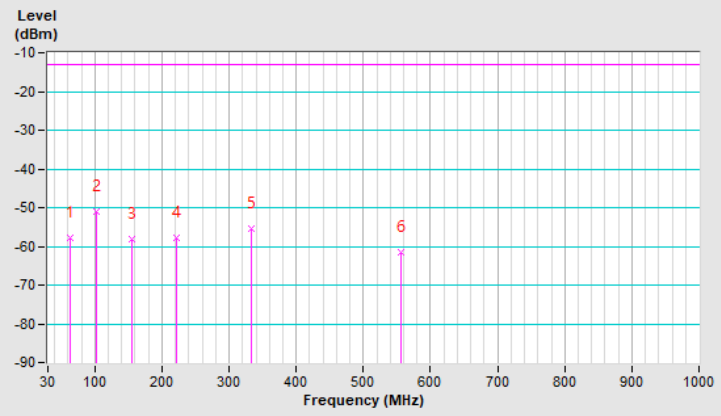


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	62.98	-57.80	-13.00	-44.80	1.00 V	6	49.11	-106.91
2	101.78	-50.89	-13.00	-37.89	1.49 V	233	59.51	-110.40
3	156.10	-58.20	-13.00	-45.20	1.00 V	111	47.70	-105.90
4	222.06	-57.67	-13.00	-44.67	1.49 V	206	50.96	-108.63
5	332.64	-55.31	-13.00	-42.31	1.49 V	334	48.81	-104.12
6	555.74	-61.61	-13.00	-48.61	1.49 V	293	39.02	-100.63

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



Mode 8

Above 1 GHz Data :

802.11a, Ch36 + WCDMA Band 2, Ch 9538 + NFC, Ch1

Frequency Range	1 GHz ~ 40 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.1 PK	74.0	-7.9	1.22 H	179	53.5	12.6
2	5150.00	49.4 AV	54.0	-4.6	1.22 H	179	36.8	12.6
3	*5180.00	106.3 PK			1.22 H	179	63.6	42.7
4	*5180.00	95.9 AV			1.22 H	179	53.2	42.7
5	#10360.00	61.5 PK	68.2	-6.7	1.95 H	207	39.0	22.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.8 PK	74.0	-14.2	1.23 V	205	47.2	12.6
2	5150.00	47.9 AV	54.0	-6.1	1.23 V	205	35.3	12.6
3	*5180.00	100.3 PK			1.23 V	205	57.6	42.7
4	*5180.00	90.2 AV			1.23 V	205	47.5	42.7
5	#10360.00	61.2 PK	68.2	-7.0	2.22 V	187	38.7	22.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

Frequency Range	1 GHz ~ 20 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3815.20	-41.80	-13.00	-28.80	2.71 H	255	46.19	-87.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3815.20	-39.80	-13.00	-26.80	1.69 V	192	48.19	-87.99

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Below 1GHz data:

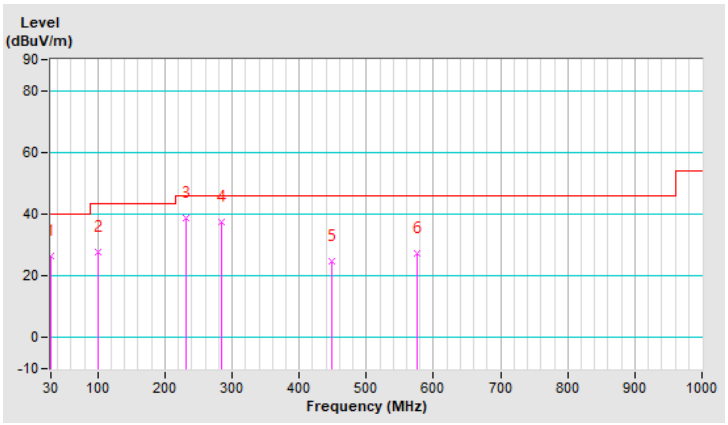
802.11a, Ch36 + WCDMA Band 2, Ch 9538 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	26.5 QP	40.0	-13.5	1.00 H	118	36.9	-10.4
2	99.84	27.7 QP	43.5	-15.8	1.00 H	18	41.0	-13.3
3	231.76	38.6 QP	46.0	-7.4	1.00 H	169	49.3	-10.7
4	284.14	37.5 QP	46.0	-8.5	1.00 H	160	45.2	-7.7
5	449.04	24.7 QP	46.0	-21.3	1.50 H	36	29.5	-4.8
6	575.14	27.3 QP	46.0	-18.7	1.00 H	198	30.0	-2.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

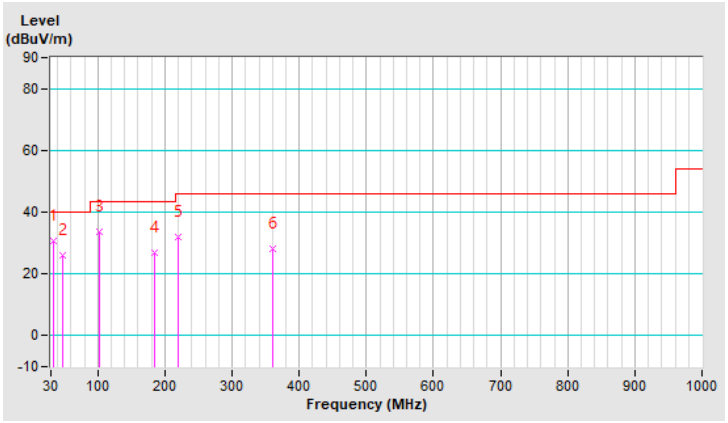


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	33.88	30.7 QP	40.0	-9.3	1.49 V	199	40.8	-10.1
2	47.46	26.1 QP	40.0	-13.9	1.00 V	10	35.0	-8.9
3	101.78	33.6 QP	43.5	-9.9	1.49 V	279	46.7	-13.1
4	185.20	27.0 QP	43.5	-16.5	1.49 V	118	37.5	-10.5
5	220.12	31.8 QP	46.0	-14.2	2.00 V	206	42.9	-11.1
6	359.80	28.1 QP	46.0	-17.9	1.49 V	118	34.5	-6.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

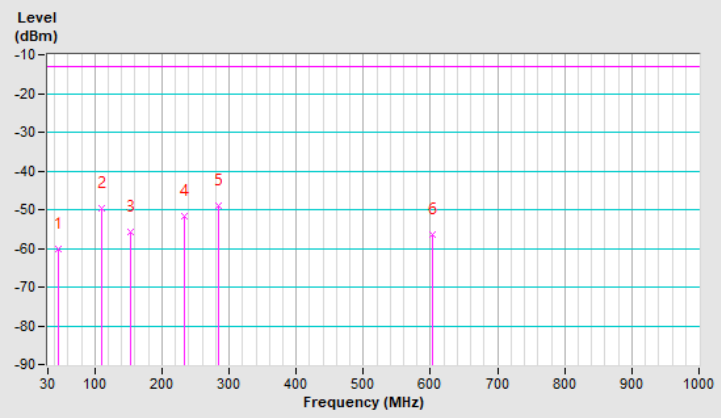


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-60.00	-13.00	-47.00	1.50 H	158	44.19	-104.19
2	109.54	-49.81	-13.00	-36.81	1.00 H	319	57.32	-107.13
3	154.16	-55.67	-13.00	-42.67	1.00 H	270	48.00	-103.67
4	233.70	-51.60	-13.00	-38.60	1.50 H	175	53.99	-105.59
5	284.14	-48.96	-13.00	-35.96	1.00 H	171	54.06	-103.02
6	602.30	-56.50	-13.00	-43.50	1.00 H	229	40.50	-97.00

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

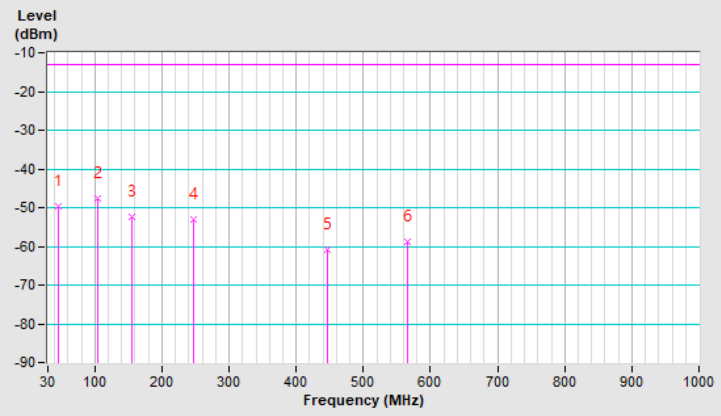


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-49.70	-13.00	-36.70	1.50 V	212	54.49	-104.19
2	103.72	-47.62	-13.00	-34.62	1.00 V	191	60.23	-107.85
3	156.10	-52.21	-13.00	-39.21	1.00 V	153	51.54	-103.75
4	247.28	-53.10	-13.00	-40.10	1.50 V	113	51.39	-104.49
5	447.10	-60.78	-13.00	-47.78	1.00 V	18	39.37	-100.15
6	565.44	-58.76	-13.00	-45.76	1.00 V	97	39.50	-98.26

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



Mode 9

Above 1 GHz Data :

802.11a, Ch36 + LTE Band 4, Ch 20300 + NFC, Ch1

Frequency Range	1 GHz ~ 40 GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.3 PK	74.0	-7.7	1.23 H	178	53.7	12.6
2	5150.00	49.6 AV	54.0	-4.4	1.23 H	178	37.0	12.6
3	*5180.00	106.4 PK			1.23 H	178	63.7	42.7
4	*5180.00	95.9 AV			1.23 H	178	53.2	42.7
5	#10360.00	61.6 PK	68.2	-6.6	1.95 H	202	39.1	22.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.6 PK	74.0	-14.4	1.21 V	205	47.0	12.6
2	5150.00	47.7 AV	54.0	-6.3	1.21 V	205	35.1	12.6
3	*5180.00	100.2 PK			1.21 V	205	57.5	42.7
4	*5180.00	90.2 AV			1.21 V	205	47.5	42.7
5	#10360.00	61.1 PK	68.2	-7.1	2.23 V	185	38.6	22.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

Frequency Range	1 GHz ~ 18 GHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-35.52	-13.00	-22.52	3.05 H	244	53.79	-89.31
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-33.49	-13.00	-20.49	1.72 V	96	55.82	-89.31

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Below 1GHz data:

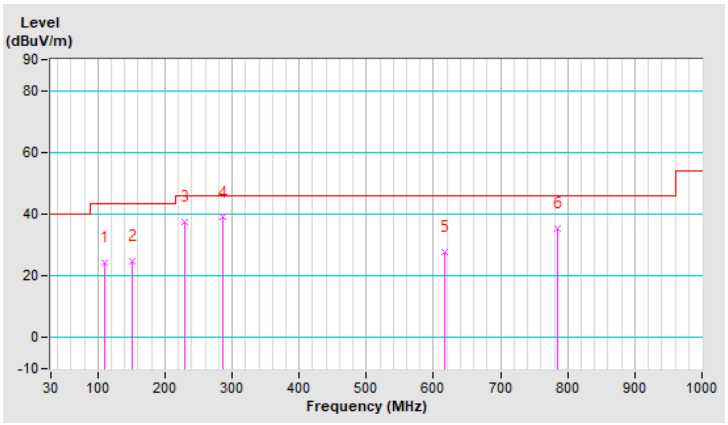
802.11a, Ch36 + LTE Band 4, Ch 20300 + NFC, Ch1

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	109.54	24.3 QP	43.5	-19.2	1.50 H	252	36.1	-11.8
2	152.22	24.6 QP	43.5	-18.9	1.00 H	284	33.2	-8.6
3	229.82	37.6 QP	46.0	-8.4	1.00 H	173	48.6	-11.0
4	286.08	38.9 QP	46.0	-7.1	1.00 H	154	46.6	-7.7
5	615.88	27.7 QP	46.0	-18.3	1.50 H	122	29.0	-1.3
6	784.66	35.2 QP	46.0	-10.8	1.00 H	167	32.8	2.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

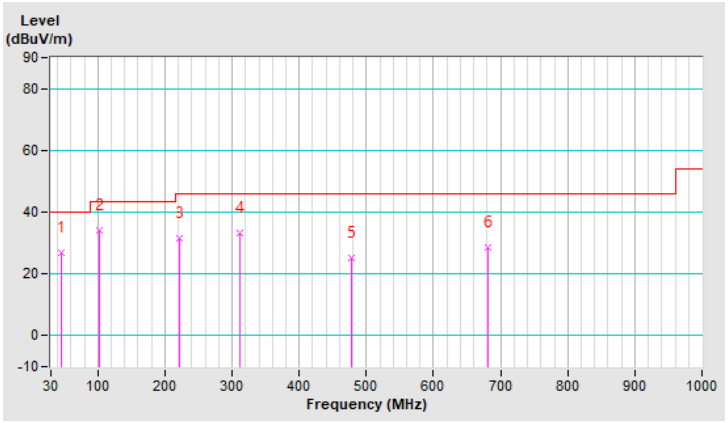


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	27.0 QP	40.0	-13.0	1.00 V	19	36.0	-9.0
2	101.78	33.9 QP	43.5	-9.6	1.49 V	225	47.0	-13.1
3	222.06	31.5 QP	46.0	-14.5	1.49 V	199	42.7	-11.2
4	311.30	33.3 QP	46.0	-12.7	1.49 V	120	40.4	-7.1
5	478.14	25.1 QP	46.0	-20.9	1.00 V	160	29.6	-4.5
6	681.84	28.6 QP	46.0	-17.4	1.49 V	102	29.1	-0.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

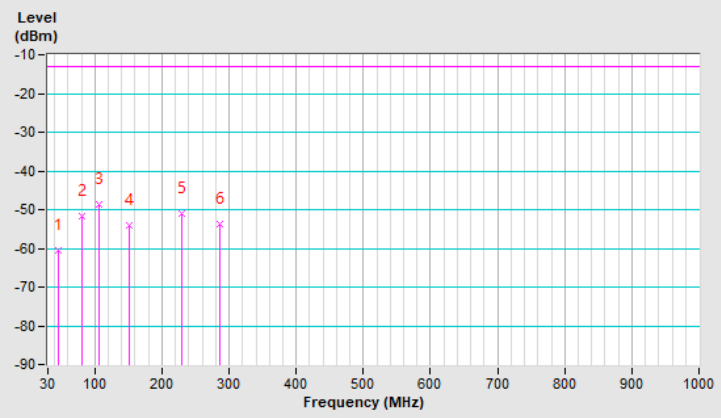


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.52	-60.50	-13.00	-47.50	1.00 H	136	43.69	-104.19
2	80.44	-51.54	-13.00	-38.54	1.49 H	269	56.84	-108.38
3	105.66	-48.80	-13.00	-35.80	1.49 H	286	58.82	-107.62
4	152.22	-54.12	-13.00	-41.12	1.49 H	272	49.68	-103.80
5	229.82	-51.10	-13.00	-38.10	2.00 H	185	55.10	-106.20
6	286.08	-53.85	-13.00	-40.85	1.49 H	157	49.14	-102.99

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

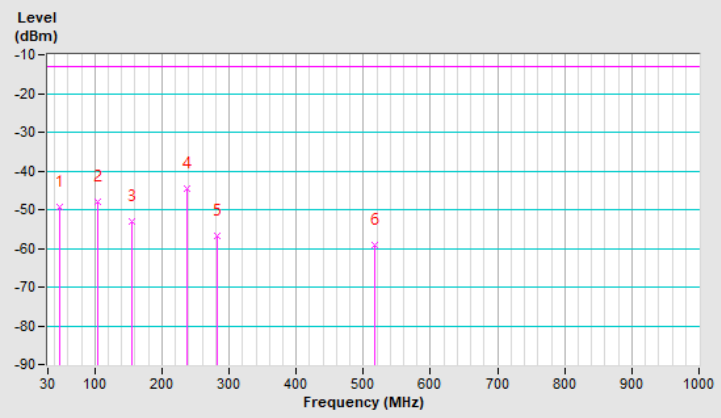


Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	47.46	-49.38	-13.00	-36.38	1.01 V	0	54.79	-104.17
2	103.72	-47.88	-13.00	-34.88	1.01 V	302	59.97	-107.85
3	156.10	-52.97	-13.00	-39.97	1.01 V	302	50.78	-103.75
4	237.58	-44.70	-13.00	-31.70	1.49 V	94	60.41	-105.11
5	282.20	-56.68	-13.00	-43.68	1.49 V	240	46.38	-103.06
6	516.94	-59.26	-13.00	-46.26	1.49 V	238	39.82	-99.08

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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