TEST REPORT

APPLICANT	:	BLU Products, Inc.
PRODUCT NAME	:	Smart Phone
MODEL NAME	:	A160
BRAND NAME	:	BLU
FCC ID	:	YHLBLU160LW
STANDARD(S)	:	47 CFR Part 2 47 CFR Part 22 Subpart H 47 CFR Part 24 Subpart E
RECEIPT DATE	:	2025-02-11
TEST DATE	:	2025-02-17 to 2025-03-03
ISSUE DATE	:	2025-03-13

Edited by: Zeng Xiaoying (Rapporteur)

Approved by: Shen Junsheng (Supervisor)

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Change History		
Version	Date	Reason for change
1.0	2025-03-13	First edition

1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	BLU Products, Inc.
Applicant Address:	8600 NW 36th Street, Suite #300 Miami, FL 33166, USA
Manufacturer:	BLU Products, Inc.
Manufacturer Address:	8600 NW 36th Street, Suite #300 Miami, FL 33166, USA

1.2. Equipment Under Test (EUT) Description

Product Name:	Smart Phone	
Sample No.:	2#, 5#	
Hardware Version:	A571-MB-V6.0	
Software Version:	BLU_A160LL_V01_20250214	
Modulation Type:	GSM/GPRS Mode with GMSK Modulation EDGE Mode with 8PSK Modulation WCDMA Mode with QPSK Modulation HSDPA Mode with QPSK Modulation HSUPA Mode with QPSK Modulation HSUP+ Mode with QPSK Modulation	
Operating Frequency Range:	GSM 850MHz	Tx: 824MHz-849MHz
		Rx: 869MHz-894MHz
	GSM 1900MHz	Tx: 1850MHz-1910MHz
		Rx: 1930MHz-1990MHz
	WCDMA Band V	Tx: 824MHz-849MHz
		Rx: 869MHz-894MHz
	WCDMA Band II	Tx: 1850MHz-1910MHz
		Rx: 1930MHz-1990MHz
Antenna Type:	PIFA Antenna	
Antenna Gain:	GSM 850:	0.04dBi
	GSM1900:	-0.58dBi
	WCDMA Band V:	0.04dBi
	WCDMA Band II:	-0.58dBi

Accessory Information:	Battery	
	Brand Name:	BLU
	Model No.:	C664460200L
	Serial No.:	N/A
	Capacity:	2000mAh
	Rated Voltage:	3.7V
	Charge Limit:	4.2V
	Manufacturer:	HuNan ADF Alternative Energy Technology Co.,Ltd
	AC Adapter	
	Brand Name:	BLU
	Model No.:	US-DC-0550
	Serial No.:	N/A
	Rated Output:	5.0V⎓550mA
	Rated Input:	100-240V~50/60Hz, 0.15A
	Manufacturer:	ShenZhen East Sun Electronic CO., LTD

Note 1: The transmitter (Tx) frequency arrangement of the Cellular 850MHz band used by the EUT can be represented with the formula F(n)=824.2+0.2*(n-128), 128<=n<=251; the lowest, middle, highest channel numbers (ARFCHs) used and tested in this report are separately 128 (824.2MHz), 189 (836.4MHz) and 251 (848.8MHz).

Note 2: The transmitter (Tx) frequency arrangement of the PCS 1900MHz band used by the EUT can be represented with the formula F(n)=1850.2+0.2*(n-512), 512<=n<=810; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 512 (1850.2MHz), 661 (1880.0MHz) and 810 (1909.8MHz).

Note 3: The transmitter (Tx) frequency arrangement of the WCDMA Band V used by the EUT can be represented with the formula F(n)=826.4+0.2*(n-4132), 4132<=n<=4233; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 4132 (826.4MHz), 4182(836.4MHz) and 4233 (846.6MHz).

Note 4: The transmitter (Tx) frequency arrangement of the WCDMA Band II used by the EUT can be represented with the formula F(n)=1852.4+0.2*(n-9262), 9262<=n<=9538; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 9262 (1852.4MHz), 9400 (1880MHz) and 9538 (1907.6MHz).

Note 5: All test modes and data rates were considered and evaluated respectively by performing full test. Test modes are chosen to be reported as the worst case below:

GSM mode and EDGE mode for GSM 850;

GSM mode and EDGE mode for GSM 1900;

WCDMA mode for WCDMA band V;

WCDMA mode for WCDMA band II;

Note 6: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.3. Maximum E.R.P./E.I.R.P. and Emission Designator

Test Mode	Maximum E.R.P./E.I.R.P. (W)	Emission Designator
GSM850(GSM)	0.719	245KGXW
GSM850(EDGE)	0.173	248KG7W
GSM1900(GSM)	0.622	246KGXW
GSM1900(EDGE)	0.323	245KG7W
WCDMA Band V	0.108	4M18F9W
WCDMA Band II	0.142	4M17F9W

1.4. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2, Part 22, Part 24 and Part 27 for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 2 (10-1-12 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10-1-12 Edition)	Public Mobile Services
3	47 CFR Part 24 (10-1-12 Edition)	Personal Communications Services

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Test Date	Test Engineer	Result	Method Determination/ Remark
1	2.1046	Conducted RF Output Power	Mar. 04, 2025	Yu Zhizheng	PASS	No deviation
2	24.232(d)	Peak -Average Ratio	Feb. 26, 2025	Gan Jing	PASS	No deviation
3	2.1049	Occupied Bandwidth	Feb. 26, 2025	Gan Jing	PASS	No deviation
4	2.1055, 22.355, 24.235	Frequency Stability	Mar. 04, 2025	Gan Jing	PASS	No deviation
5	2.1051, 22.917(a), 24.238(a)	Conducted Out of Band Emissions	Feb. 26, 2025 Mar. 04, 2025	Gan Jing	PASS	No deviation
6	2.1051, 22.917(a), 24.238(a)	Band Edge	Feb. 26, 2025	Gan Jing	PASS	No deviation
7	22.913(a), 24.232(c)	Transmitter Radiated Power (E.I.P.R./E.R.P.)	Mar. 04, 2025	Gan Jing	PASS	No deviation
8	2.1051, 22.917(a), 24.238(a)	Radiated Out of Band Emissions	Feb. 17, 2025	Li Hanbin	PASS	No deviation

Note 1: The tests were performed according to the method of measurements prescribed in KDB 971168 D01 v03r01 and ANSI/TIA-603-E-2016.

Note 2: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in

the "Remark" of the above table.

Note 3: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

1.5. Environmental Conditions

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

Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR Part 2, Part 22H, 24E Requirements

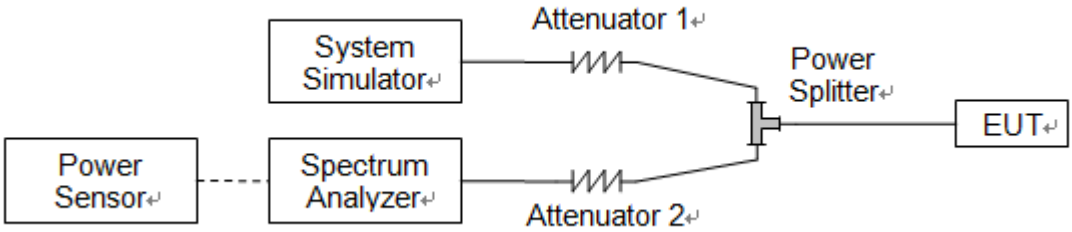
2.1. Conducted RF Output Power

2.1.1. Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

2.1.2. Test Description

Test Setup:



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

2.1.3.Test Results

GSM850	Average Power (dBm)		
TX Channel	**128**	**189**	**251**
Frequency (MHz)	**824.2**	**836.4**	**848.8**
GSM 1 Tx slot	30.59	30.65	30.60
GPRS 1 Tx slot	30.62	30.68	30.58
GPRS 2 Tx slots	28.59	28.67	28.62
GPRS 3 Tx slots	26.60	26.67	26.65
GPRS 4 Tx slots	23.65	23.68	23.63
EDGE 1 Tx slot	24.42	24.48	24.44
EDGE 2 Tx slots	23.25	23.35	23.28
EDGE 3 Tx slots	21.21	21.29	21.16
EDGE 4 Tx slots	19.30	19.35	19.43

GSM1900	Average Power (dBm)		
TX Channel	**512**	**661**	**810**
Frequency (MHz)	**1850.2**	**1880**	**1909.8**
GSM 1 Tx slot	28.52	28.47	28.45
GPRS 1 Tx slot	28.48	28.48	28.47
GPRS 2 Tx slots	26.17	26.22	26.18
GPRS 3 Tx slots	24.72	24.78	24.77
GPRS 4 Tx slots	22.77	22.81	22.78
EDGE 1 Tx slot	25.60	25.67	25.54
EDGE 2 Tx slots	24.15	24.25	24.20
EDGE 3 Tx slots	22.98	23.02	22.93
EDGE 4 Tx slots	20.51	20.58	20.53

WCDMA Band V	Average Power (dBm)		
TX Channel	**4132**	**4182**	**4233**
Frequency (MHz)	**826.4**	**836.4**	**846.6**
RMC 12.2Kbps	22.33	22.43	22.36
HSDPA Subtest-1	22.28	22.20	22.24
HSDPA Subtest-2	21.89	21.71	21.73
HSDPA Subtest-3	20.91	20.82	20.67
HSDPA Subtest-4	20.35	20.32	20.20
HSUPA Subtest-1	22.14	22.18	22.08
HSUPA Subtest-2	22.24	22.24	22.10
HSUPA Subtest-3	22.09	22.15	22.01
HSUPA Subtest-4	22.25	22.26	22.09
HSUPA Subtest-5	22.13	22.19	22.02
HSPA+ (16QAM) Subtest-1	22.08	22.12	22.17

WCDMA Band II	Average Power (dBm)		
TX Channel	**9262**	**9400**	**9538**
Frequency (MHz)	**1852.4**	**1880.0**	**1907.6**
RMC 12.2Kbps	22.00	22.10	22.03
HSDPA Subtest-1	21.98	22.06	21.90
HSDPA Subtest-2	21.91	22.00	21.72
HSDPA Subtest-3	21.02	21.03	20.79
HSDPA Subtest-4	20.72	20.73	20.52
HSUPA Subtest-1	21.40	21.29	21.19
HSUPA Subtest-2	21.36	21.25	21.14
HSUPA Subtest-3	21.33	21.28	21.14
HSUPA Subtest-4	21.32	21.22	21.08
HSUPA Subtest-5	21.33	21.29	21.10
HSPA+ (16QAM) Subtest-1	21.36	21.28	21.33

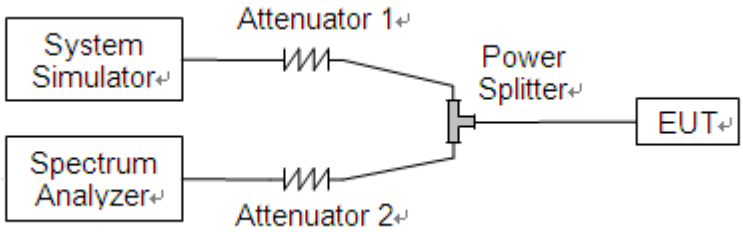
2.2. Peak to Average Ratio

2.2.1.Requirement

According to FCC 24.232(d) and 27.50(d), the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

2.2.2.Test Description

Test Setup:



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

2.2.3.Test procedure

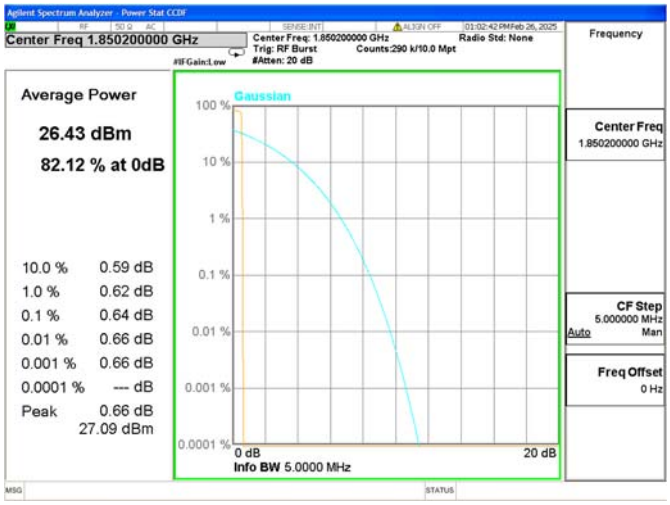
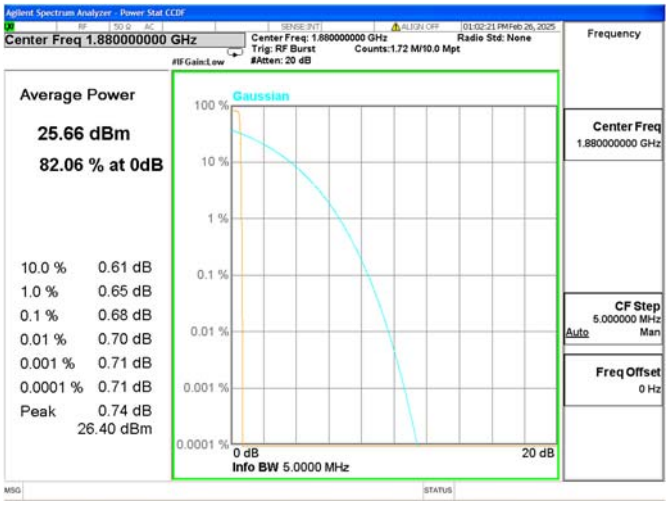
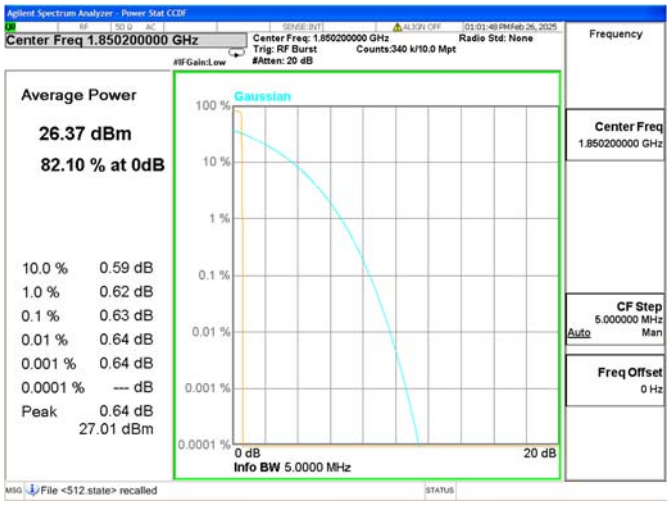
1. For GSM/EDGE operating mode:
a. Set RBW=1MHz, VBW=3MHz, peak detector in spectrum analyzer.
b. Set EUT in maximum output power, and triggered the bust signal.
c. Measured respectively the peak level and mean level, and the deviation was recorded as Peak to Average ratio.
2. For UMTS operating mode:
a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%.

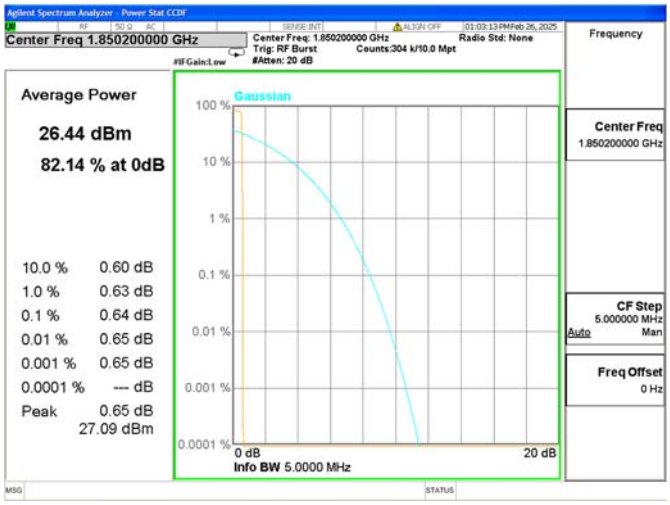
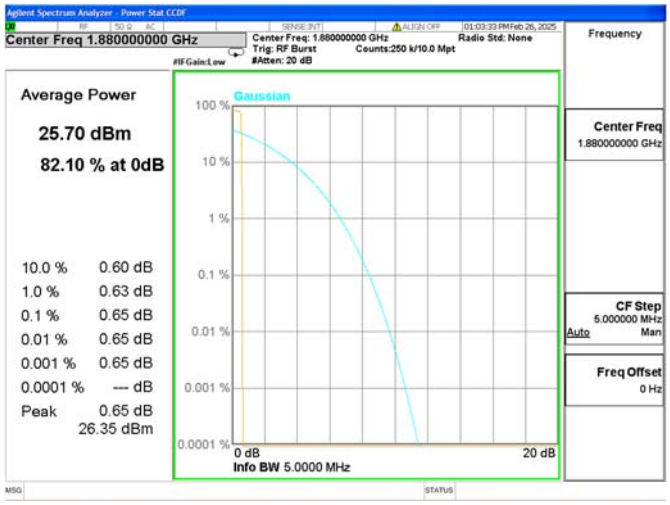
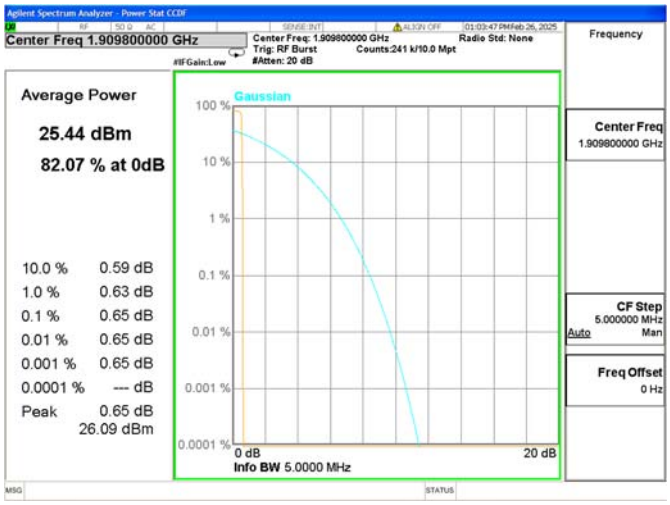
2.2.4.Test Result

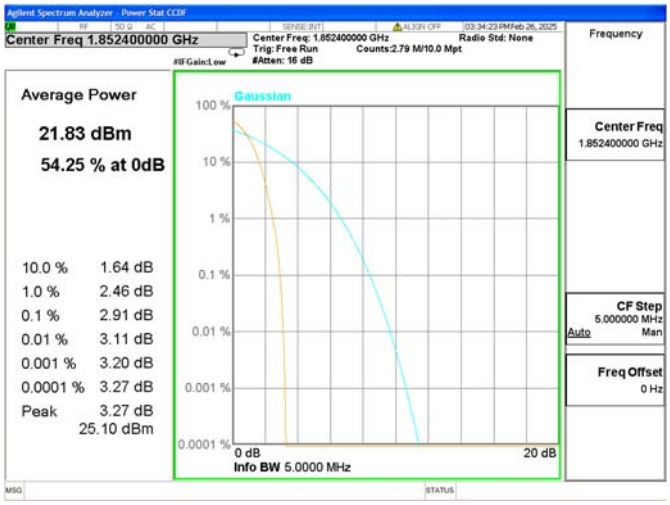
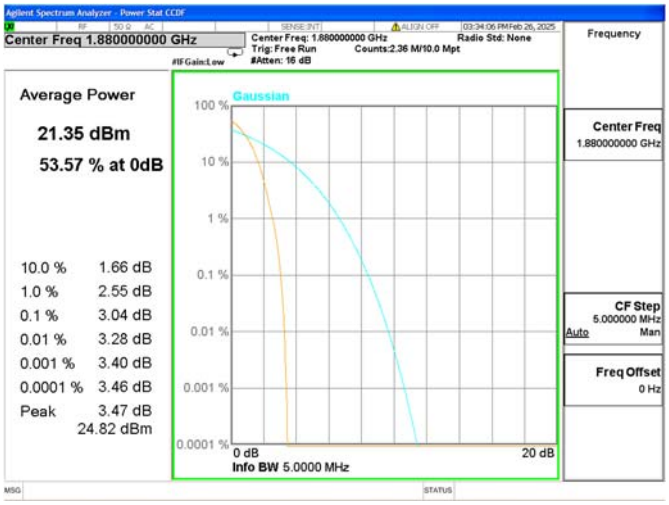
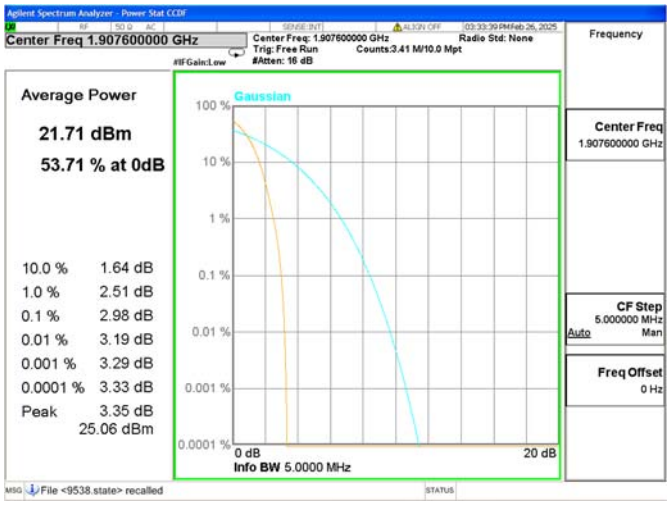
A. Test Verdict:

GSM1900					
Mode	**Channel**	**Frequency (MHz)**	**Peak to Average ratio (dB)**	**Limit (dB)**	**Verdict**
GSM	512	1850.2	0.64	13	PASS
	661	1880.0	0.68		PASS
	810	1909.8	0.63		PASS
EDGE	512	1850.2	0.64		PASS
	661	1880.0	0.65		PASS
	810	1909.8	0.65		PASS

WCDMA Band II					
Mode	**Channel**	**Frequency (MHz)**	**Peak to Average ratio (dB)**	**Limit (dB)**	**Verdict**
WCDMA	9262	1852.4	2.91	13	PASS
	9400	1880.0	3.04		PASS
	9538	1907.6	2.98		PASS

GSM1900(GSM), CH512, 1850.2MHz	GSM1900(GSM), CH661, 1880.0MHz
	
GSM1900(GSM), CH810, 1909.8MHz	
	

GSM1900(EDGE), CH512, 1850.2MHz	GSM1900(EDGE), CH661, 1880.0MHz
	
GSM1900(EDGE), CH810, 1909.8MHz	
	

WCDMA Band II, CH9262, 1852.4MHz	WCDMA Band II, CH9400, 1880.0MHz
	
WCDMA Band II, CH9538, 1907.6MHz	
	

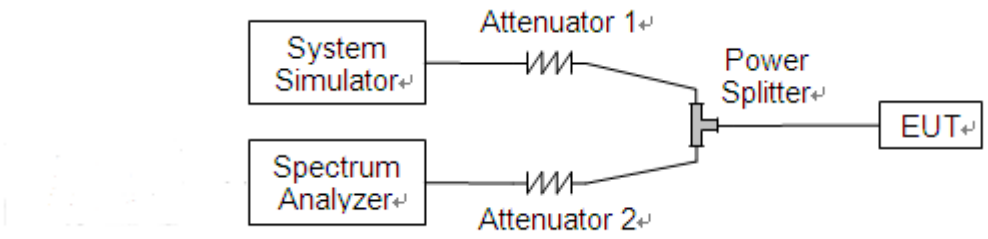
2.3. Occupied Bandwidth

2.3.1.Requirement

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. Occupied bandwidth is also known as the 99% emission bandwidth.

2.3.2.Test Description

Test Setup:



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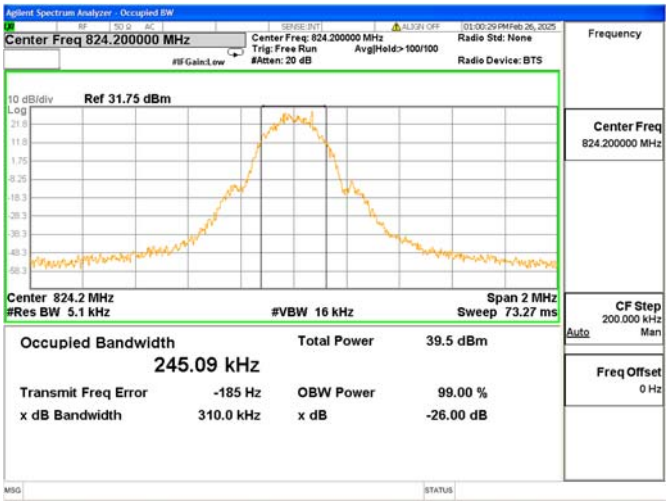
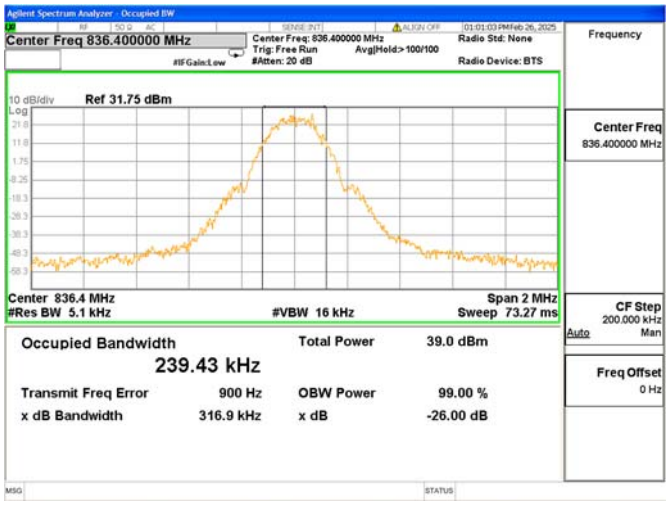
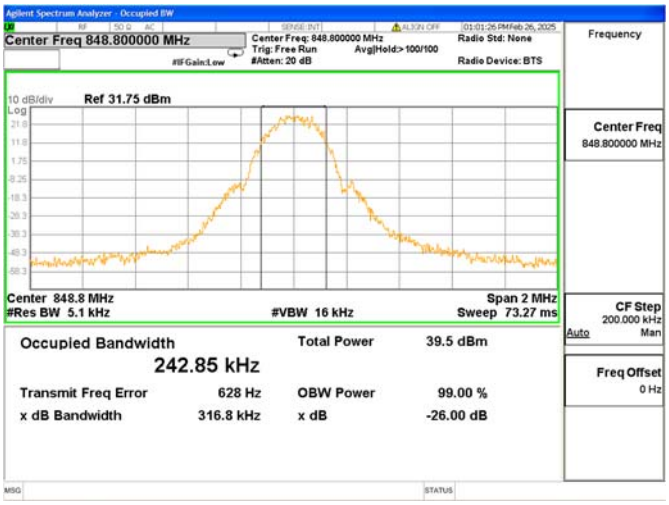
2.3.3.Test Result

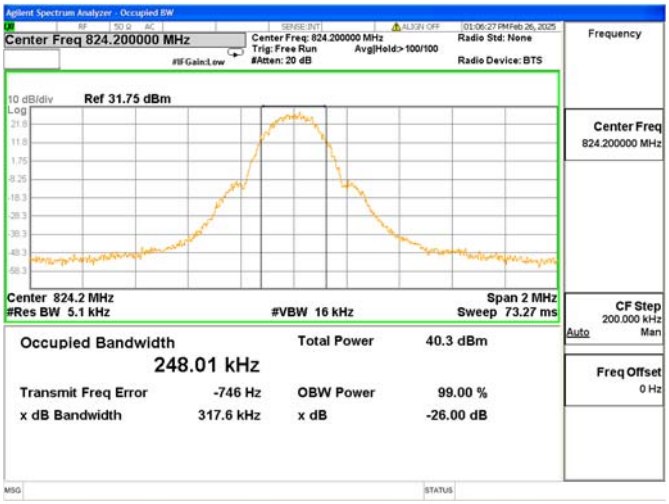
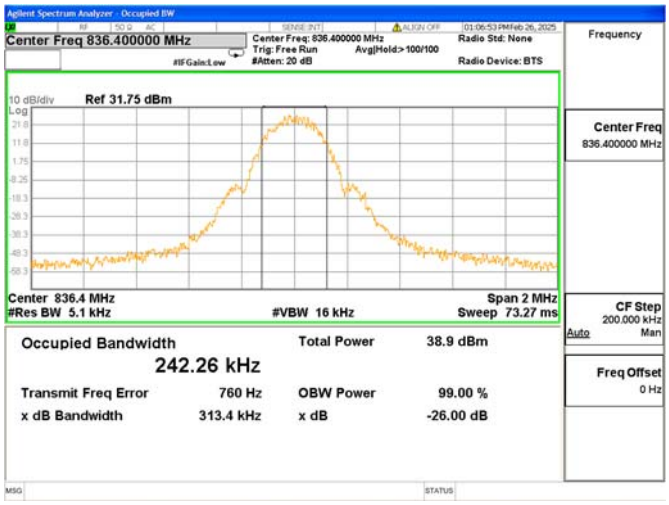
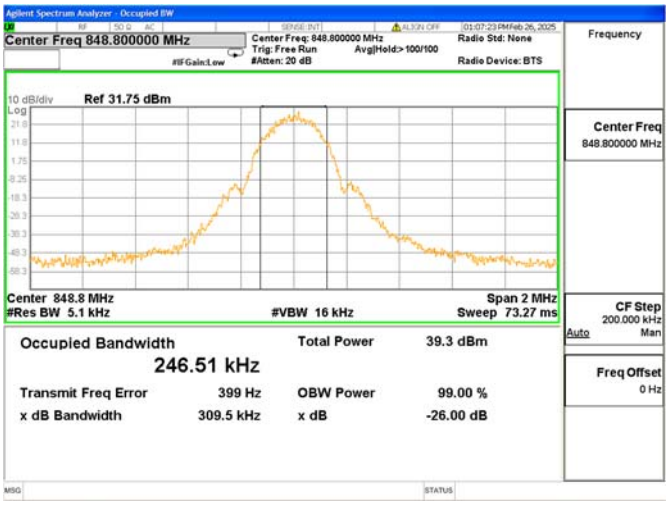
GSM850				
Mode	**Channel**	**Frequency (MHz)**	**99% Occupied Bandwidth (kHz)**	**26dB Bandwidth (kHz)**
GSM	128	824.2	245.09	310.00
	189	836.4	239.43	316.90
	251	848.8	242.85	316.80
EDGE	128	824.2	248.01	317.60
	189	836.4	242.26	313.40
	251	848.8	246.51	309.50

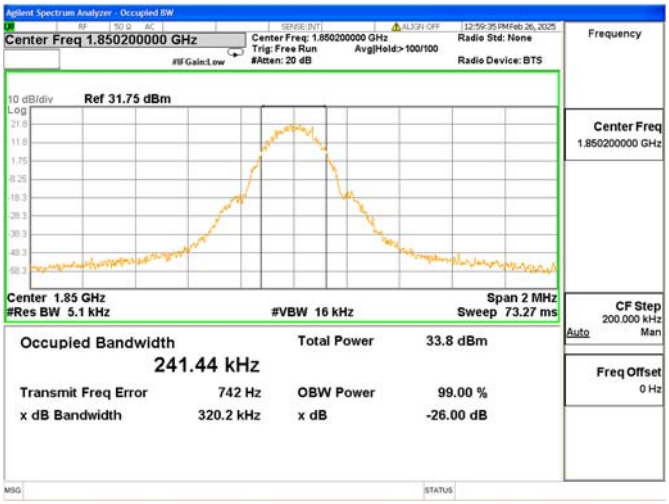
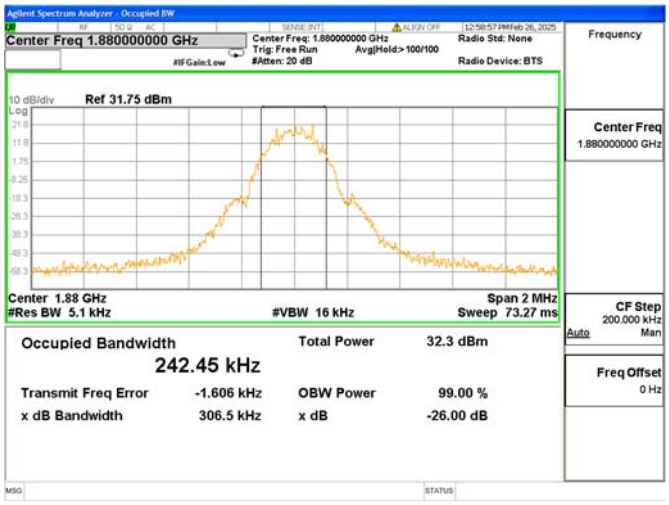
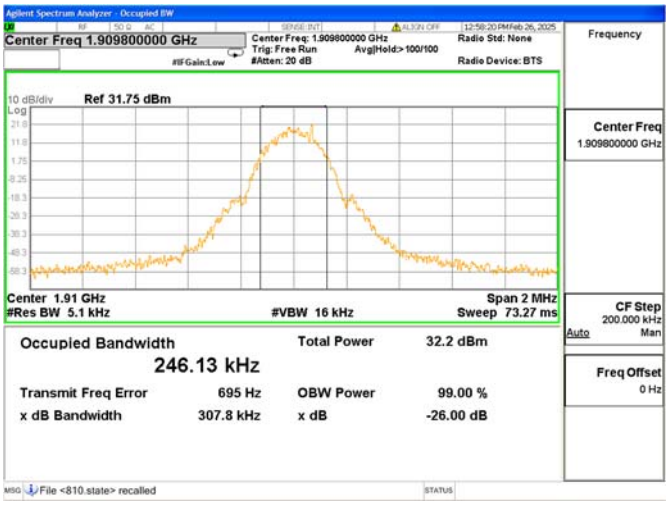
GSM1900				
Mode	**Channel**	**Frequency (MHz)**	**99% Occupied Bandwidth (kHz)**	**26dB Bandwidth (kHz)**
GSM	512	1850.2	241.44	320.20
	661	1880.0	242.45	306.50
	810	1909.8	246.13	307.80
EDGE	512	1850.2	244.50	314.90
	661	1880.0	244.07	314.30
	810	1909.8	243.51	304.80

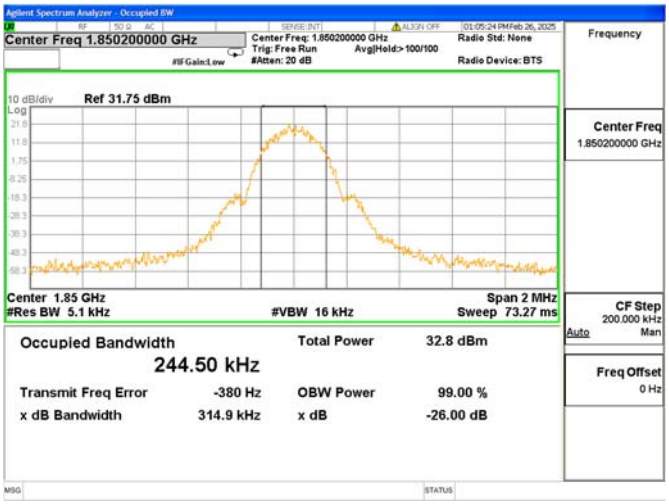
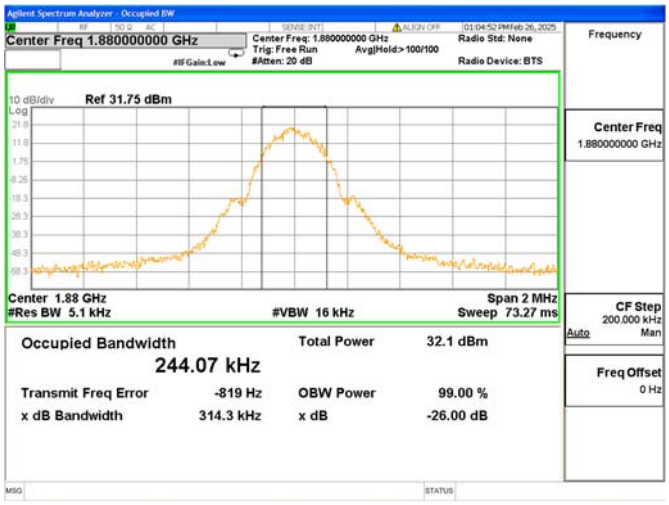
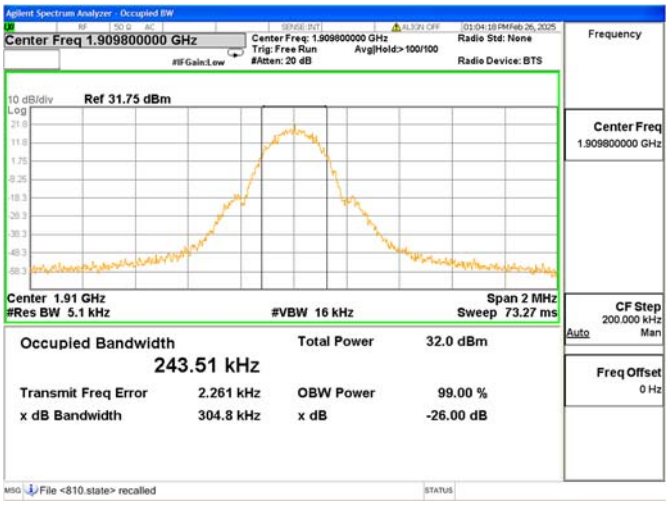
WCDMA Band V				
Mode	**Channel**	**Frequency (MHz)**	**99% Occupied Bandwidth (MHz)**	**26dB Bandwidth (MHz)**
WCDMA	4132	826.4	4.17	4.71
	4182	836.4	4.16	4.69
	4233	846.6	4.18	4.71

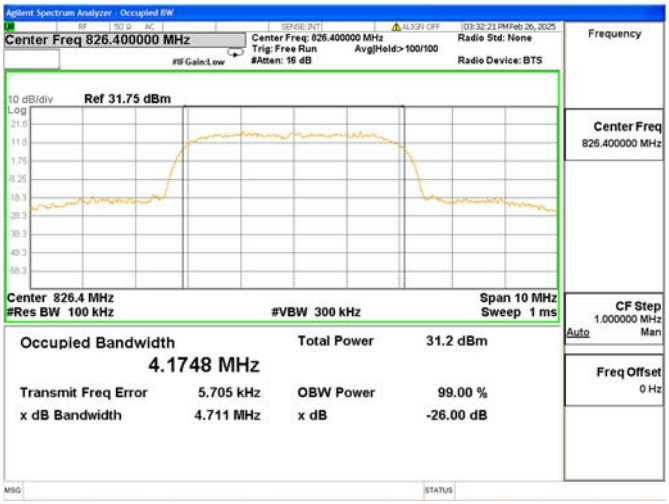
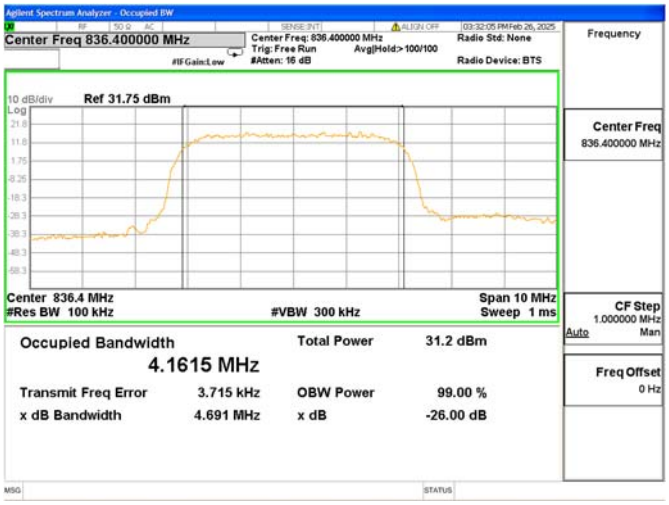
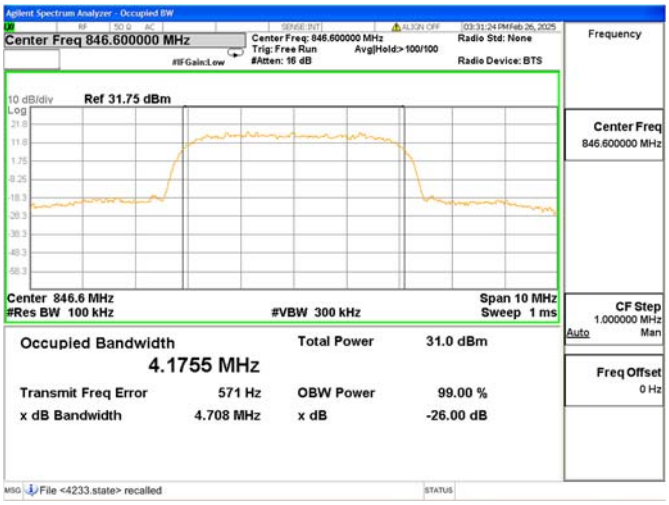
WCDMA Band II				
Mode	**Channel**	**Frequency (MHz)**	**99% Occupied Bandwidth (MHz)**	**26dB Bandwidth (MHz)**
WCDMA	9262	1852.4	4.17	4.70
	9400	1880.0	4.17	4.69
	9538	1907.6	4.16	4.70

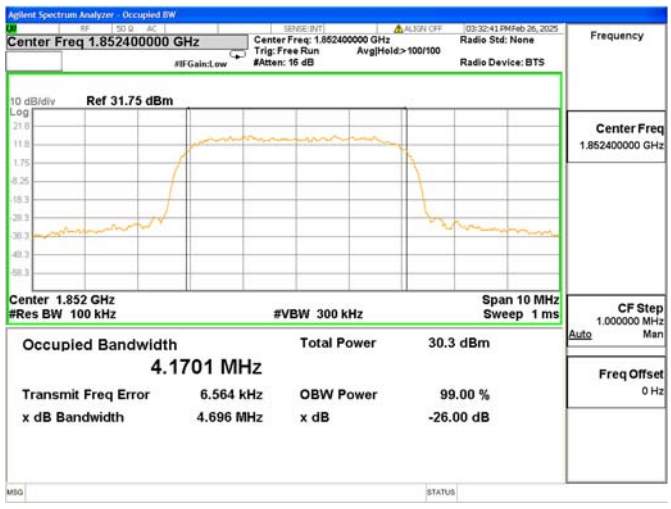
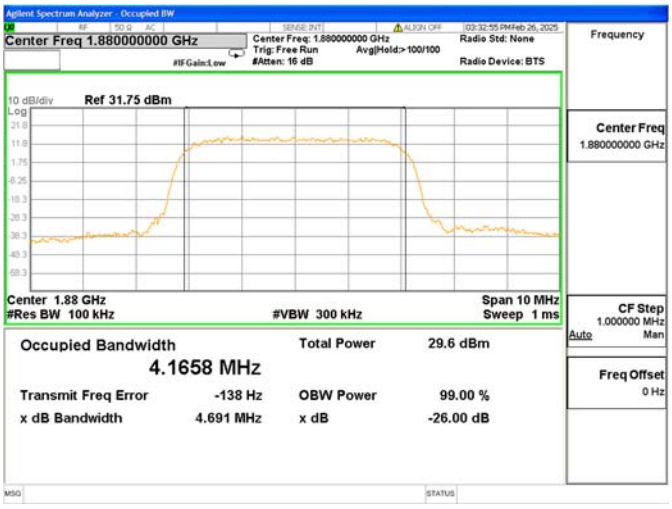
GSM850(GSM), CH128, 824.2MHz	GSM850(GSM), CH189, 836.4MHz
	
GSM850(GSM), CH251, 848.8MHz	
	

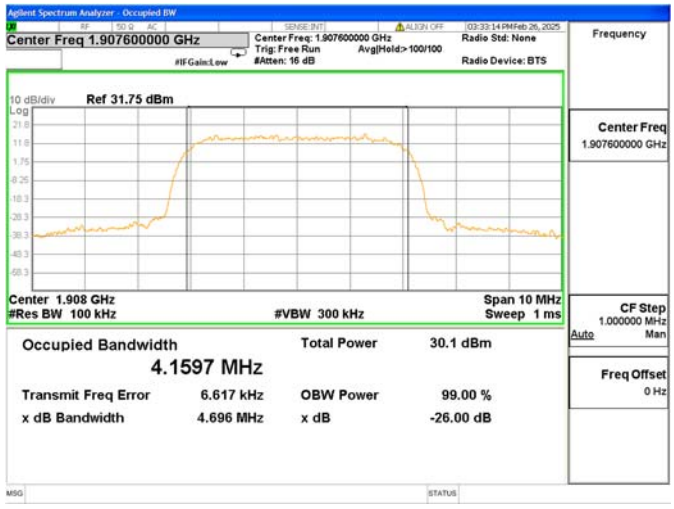
GSM850(EDGE), CH128, 824.2MHz	GSM850(EDGE), CH189, 836.4MHz
	
GSM850(EDGE), CH251, 848.8MHz	
	

GSM1900(GSM), CH512, 1850.2MHz	GSM1900(GSM), CH661, 1880.0MHz
	
GSM1900(GSM), CH810, 1909.8MHz	
	

GSM1900(EDGE), CH512, 1850.2MHz	GSM1900(EDGE), CH661, 1880.0MHz
	
GSM1900(EDGE), CH810, 1909.8MHz	
	

WCDMA Band V, CH4132, 826.4MHz	WCDMA Band V, CH4182, 836.4MHz
	
WCDMA Band V, CH4233, 846.6MHz	
	

WCDMA Band II, CH9262, 1852.4MHz	WCDMA Band II, CH9400, 1880.0MHz
	

WCDMA Band II, CH9538, 1907.6MHz	
	

2.4. Frequency Stability

2.4.1.Requirement

According to FCC section 22.355, 24.235 and 27.54 the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

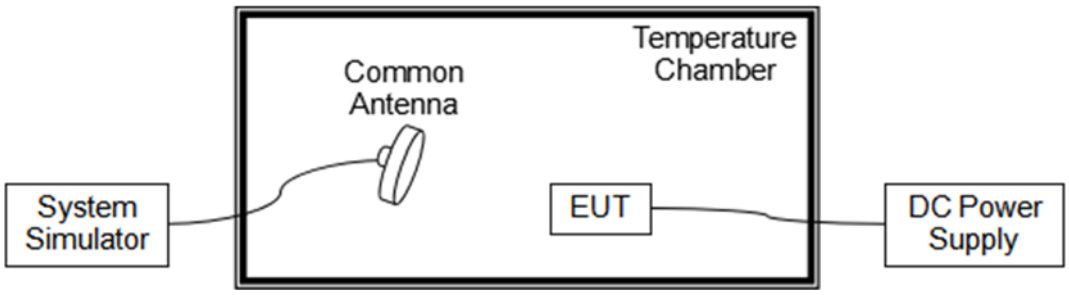
(a) The temperature is varied from-30°C to +50°C at intervals of not more than 10°C.

(b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

Note: The operating temperature of EUT is from -10°C to 55°C, which are specified by the applicant.

2.4.2.Test Description

Test Setup:



The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS via a Common Antenna.

2.4.3.Test Result

The nominal, highest and lowest extreme voltages are separately 3.70V, 4.35V and 3.60V, which are specified by the applicant; the normal temperature here used is 20°C.

GSM850(GSM), CH189, 836.4MHz Limit =±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.70	+20(Ref)	20	0.024	PASS
Normal		-10	19	0.023	
Normal		0	13	0.016	
Normal		+10	20	0.024	
Normal		+20	20	0.024	
Normal		+30	18	0.022	
Normal		+40	2	0.002	
Normal		+50	18	0.022	
Normal		+55	15	0.018	
High	4.35	+20	17	0.020	
BATT.ENDPOINT	3.60	+20	4	0.005	

GSM850(EDGE), CH189, 836.4MHz Limit =±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.70	+20(Ref)	-16	-0.009	PASS
Normal		-10	14	0.007	
Normal		0	19	0.010	
Normal		+10	8	0.004	
Normal		+20	17	0.009	
Normal		+30	-21	-0.011	
Normal		+40	21	0.011	
Normal		+50	-6	-0.003	
Normal		+55	13	0.007	
High	4.35	+20	15	0.008	
BATT.ENDPOINT	3.60	+20	16	0.009	

GSM1900(GSM), CH661, 1880.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.70	+20(Ref)	14	0.007	PASS
Normal		-10	21	0.011	
Normal		0	-9	-0.005	
Normal		+10	17	0.009	
Normal		+20	18	0.010	
Normal		+30	-6	-0.003	
Normal		+40	13	0.007	
Normal		+50	20	0.011	
Normal		+55	18	0.010	
High	4.35	+20	13	0.007	
BATT.ENDPOINT	3.60	+20	-11	-0.006	

GSM1900(EDGE), CH661, 1880.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.70	+20(Ref)	18	0.022	PASS
Normal		-10	22	0.026	
Normal		0	-11	-0.013	
Normal		+10	18	0.022	
Normal		+20	-2	-0.002	
Normal		+30	18	0.022	
Normal		+40	-9	-0.011	
Normal		+50	13	0.016	
Normal		+55	16	0.019	
High	4.35	+20	-10	-0.012	
BATT.ENDPOINT	3.60	+20	19	0.023	

WCDMA Band V, CH4182, 836.4MHz Limit =±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.70	+20(Ref)	19	0.023	PASS
Normal		-10	14	0.017	
Normal		0	15	0.018	
Normal		+10	18	0.022	
Normal		+20	19	0.023	
Normal		+30	0	0.000	
Normal		+40	17	0.020	
Normal		+50	19	0.023	
Normal		+55	15	0.018	
High	4.35	+20	15	0.018	
BATT.ENDPOINT	3.60	+20	14	0.017	

WCDMA Band II, CH9400, 1880.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.70	+20(Ref)	15	0.008	PASS
Normal		-10	14	0.007	
Normal		0	-17	-0.009	
Normal		+10	22	0.012	
Normal		+20	-21	-0.011	
Normal		+30	-8	-0.004	
Normal		+40	14	0.007	
Normal		+50	16	0.009	
Normal		+55	17	0.009	
High	4.35	+20	18	0.010	
BATT.ENDPOINT	3.60	+20	-5	-0.003	

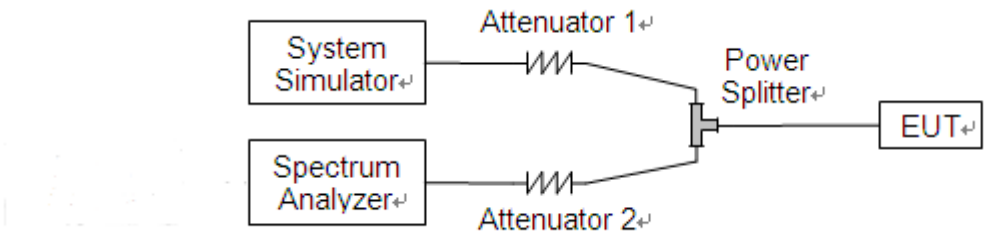
2.5. Conducted Out of Band Emissions

2.5.1.Requirement

According to FCC section 22.917(a), 24.238(a) and 27.53(h) 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. This calculated to be -13dBm. The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency.

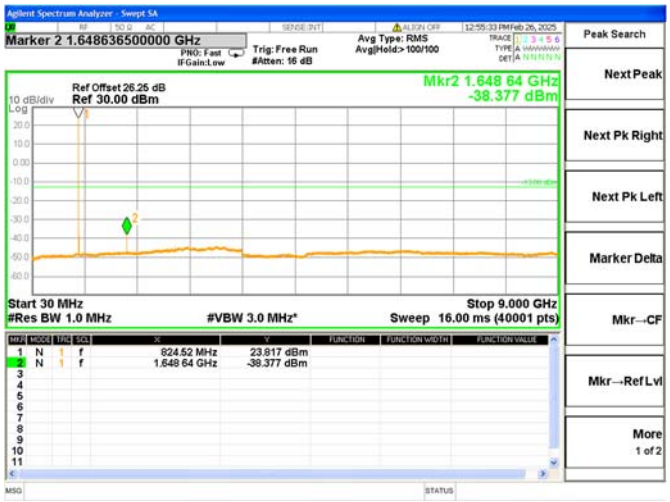
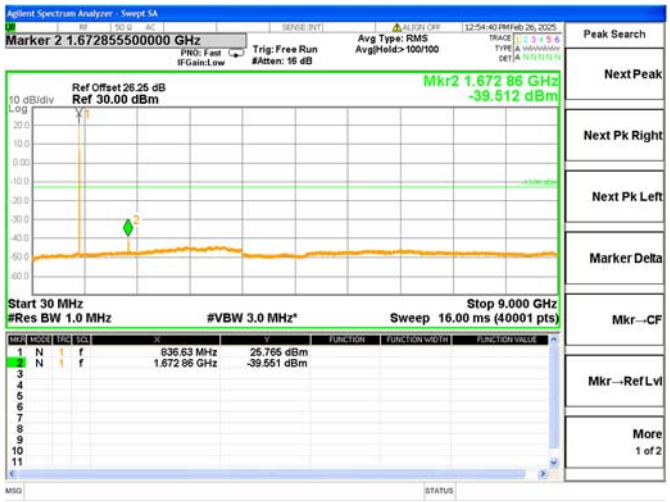
2.5.2.Test Description

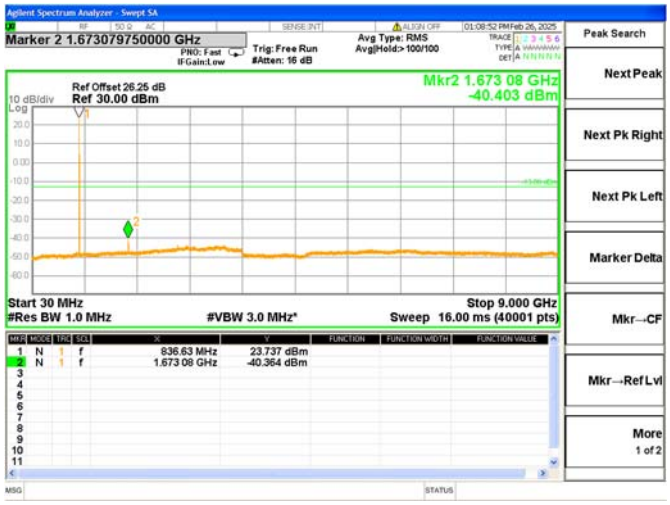
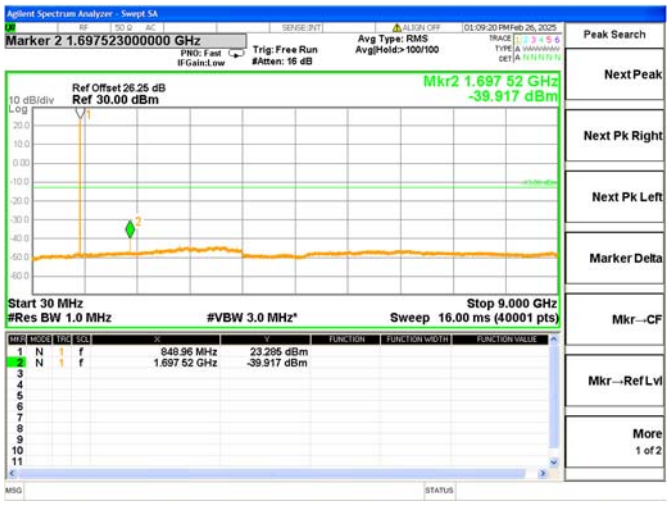
Test Setup:

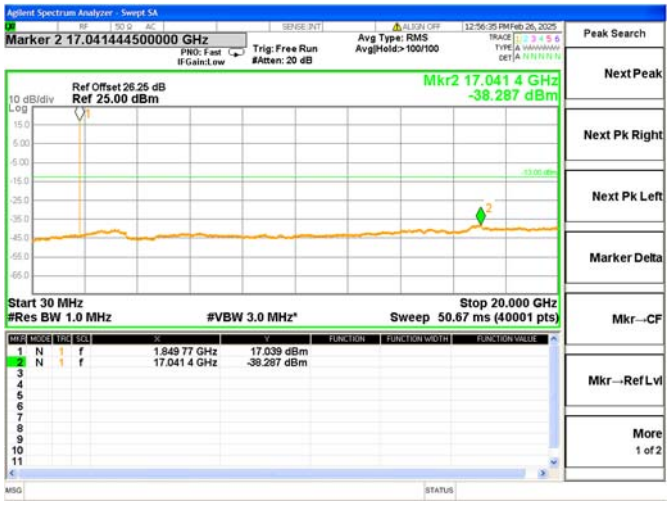
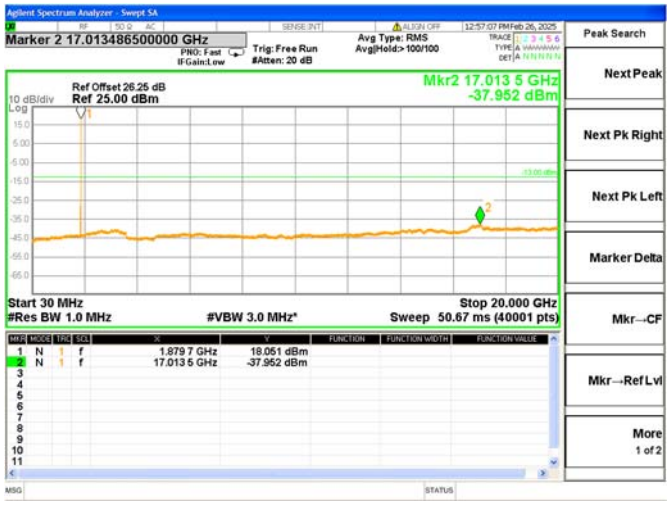
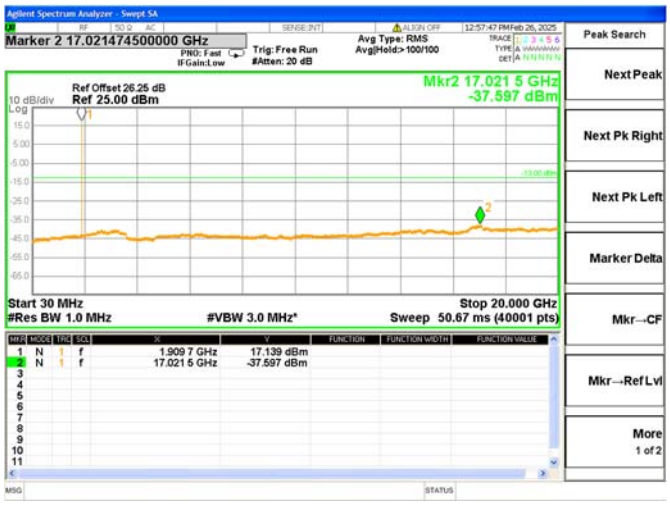


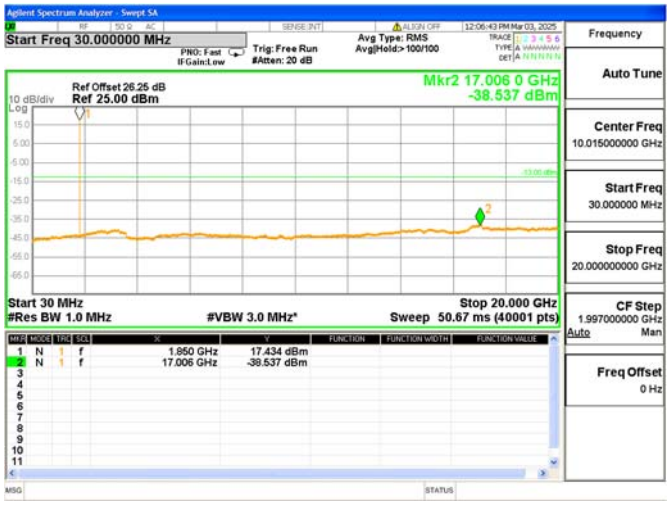
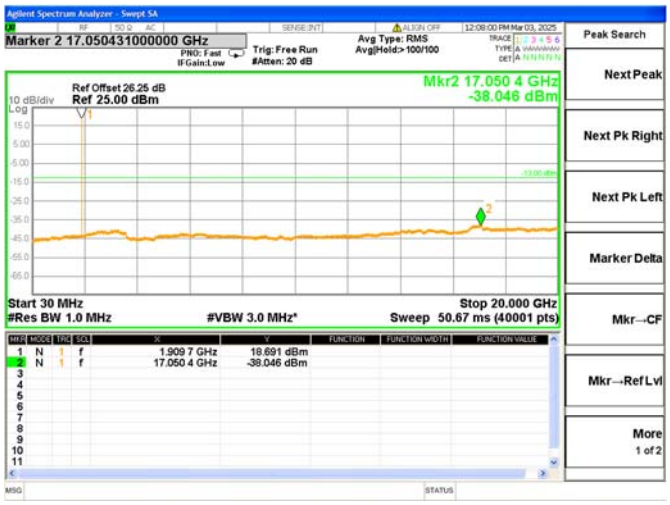
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

2.5.3.Test Result

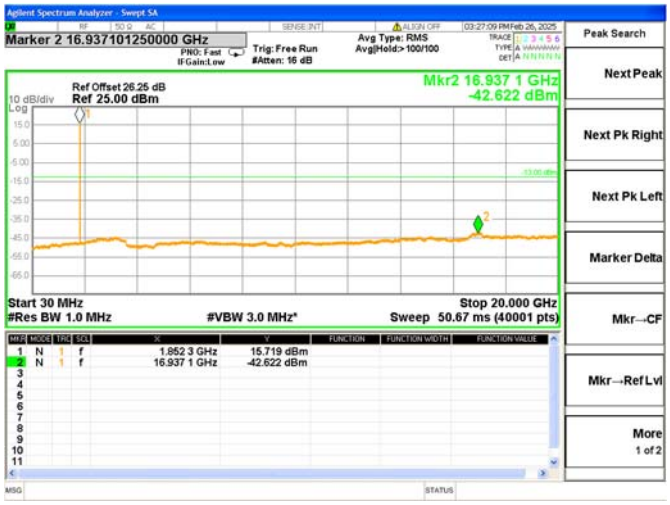
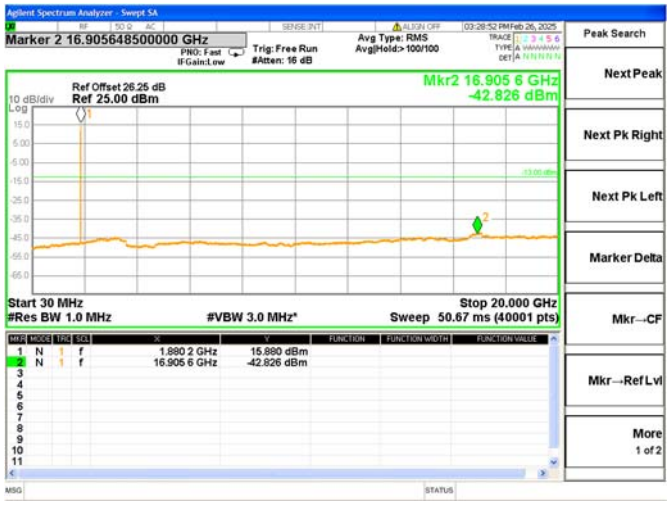
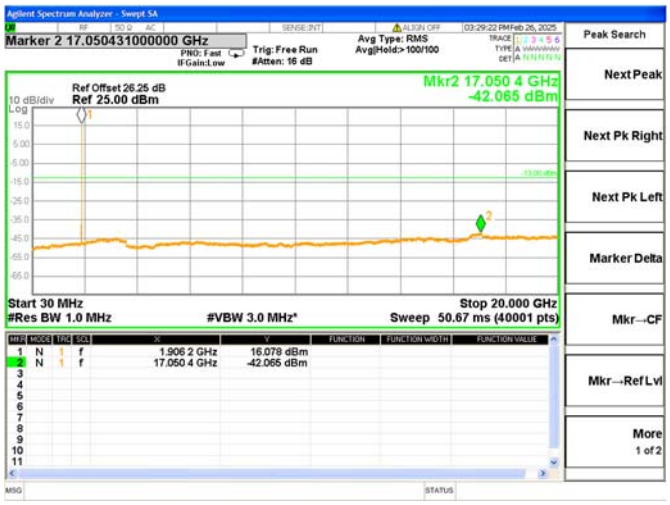
GSM850(GSM), CH128, 824.2MHz	GSM850(GSM), CH189, 836.4MHz
	
GSM850(GSM), CH251, 848.8MHz	

GSM850(EDGE), CH128, 824.2MHz	GSM850(EDGE), CH189, 836.4MHz
	
GSM850(EDGE), CH251, 848.8MHz	
	

GSM1900(GSM), CH512, 1850.2MHz	GSM1900(GSM), CH661, 1880.0MHz
	
GSM1900(GSM), CH810, 1909.8MHz	
	

GSM1900(EDGE), CH512, 1850.2MHz	GSM1900(EDGE), CH661, 1880.0MHz
	
GSM1900(EDGE), CH810, 1909.8MHz	
	

WCDMA Band V, CH4132, 826.4MHz	WCDMA Band V, CH4182, 836.4MHz
WCDMA Band V, CH4233, 846.6MHz	

WCDMA Band II, CH9262, 1852.4MHz	WCDMA Band II, CH9400, 1880.0MHz
	
WCDMA Band II, CH9538, 1907.6MHz	
	

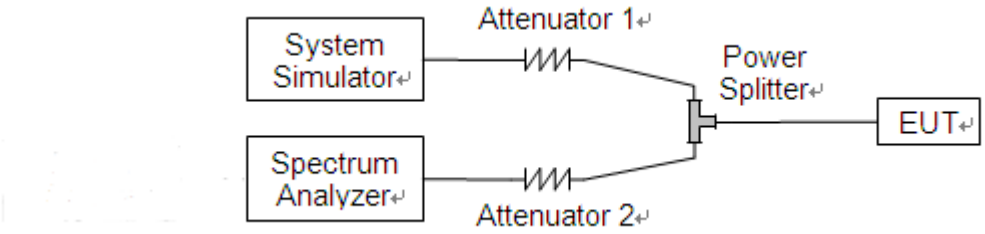
2.6. Band Edge

2.6.1.Requirement

According to FCC section 22.917(a), 24.238(a) and 27.53(h) 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.

2.6.2.Test Description

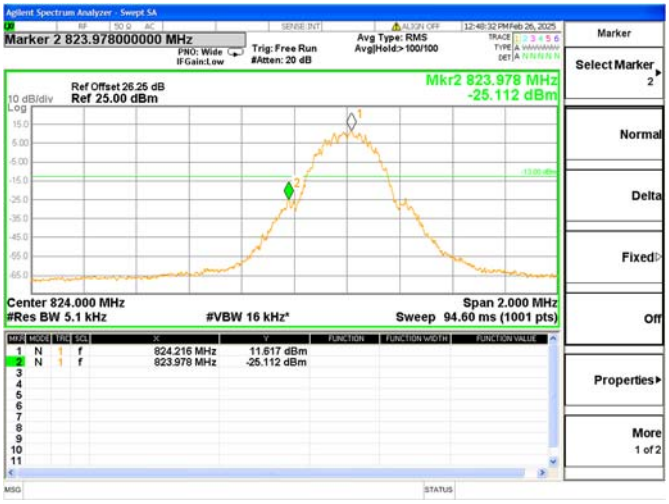
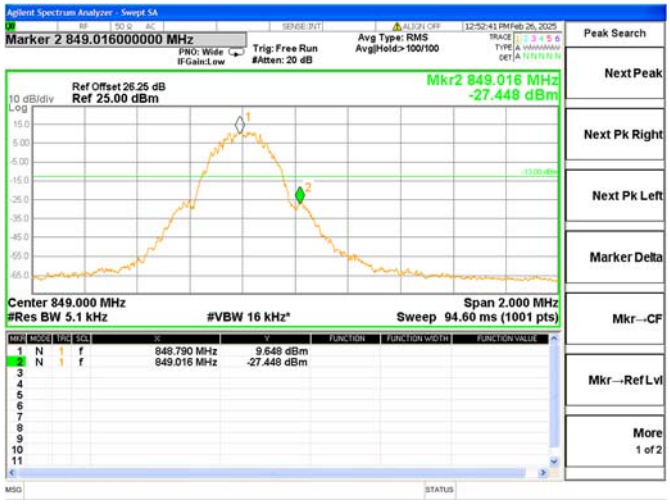
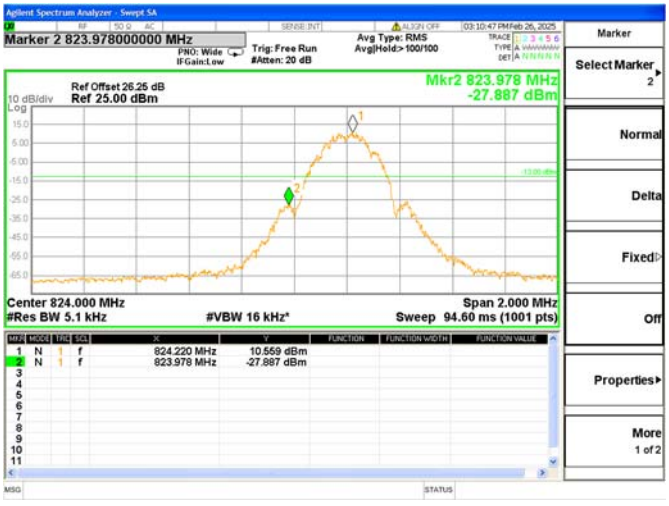
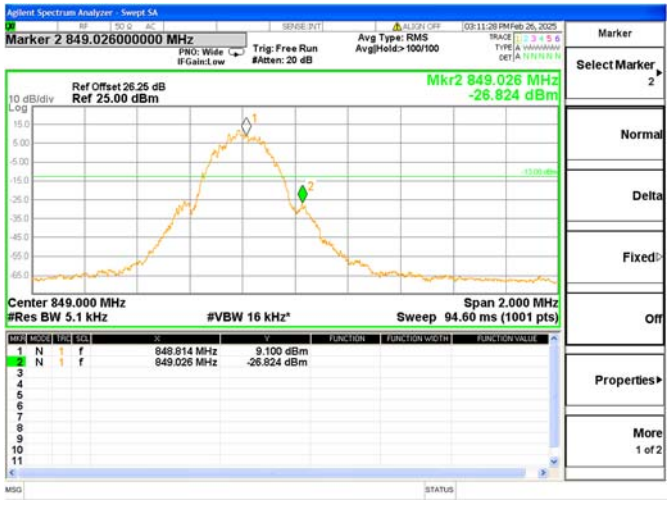
Test Setup:

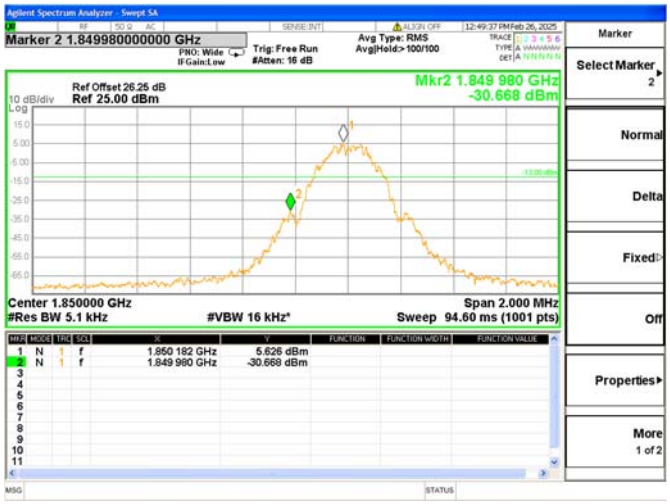
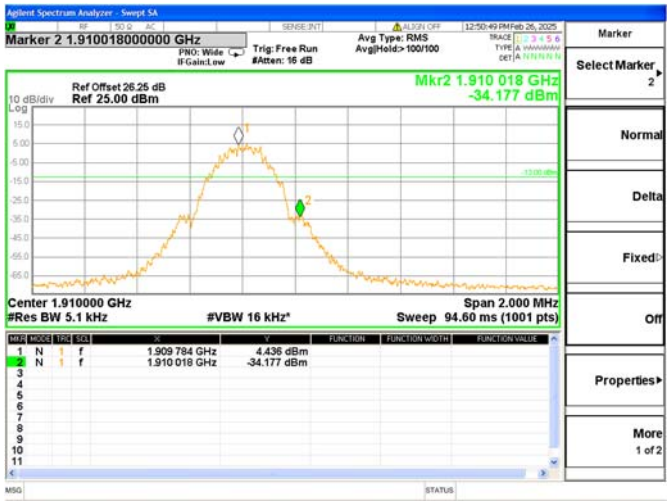
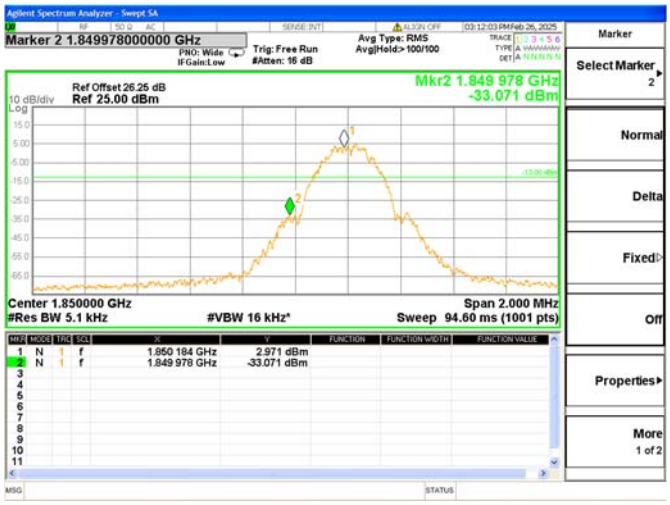
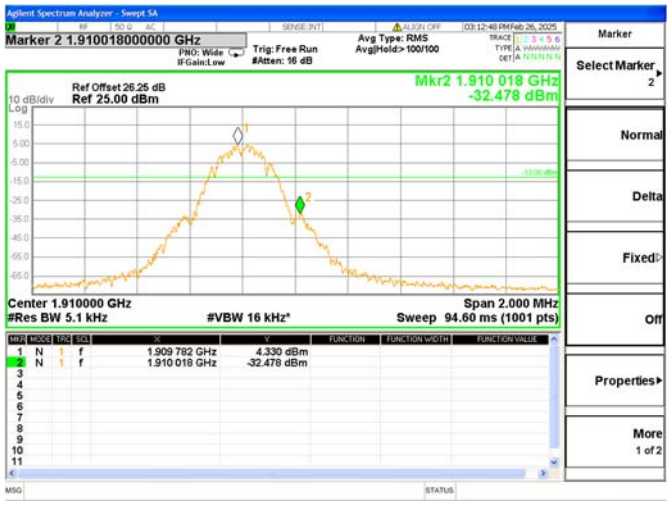


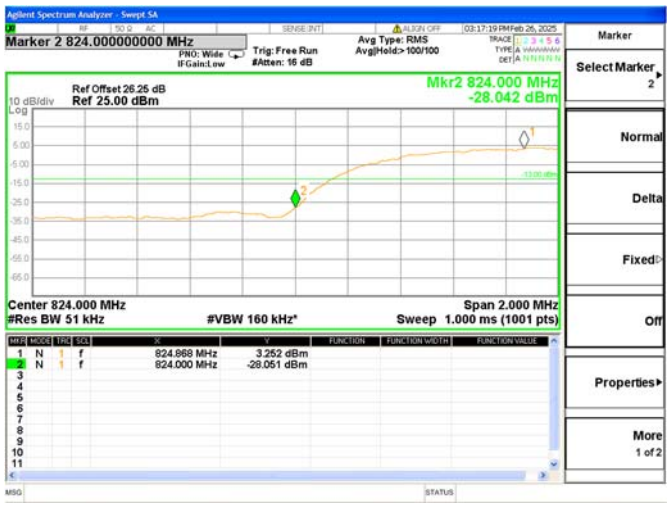
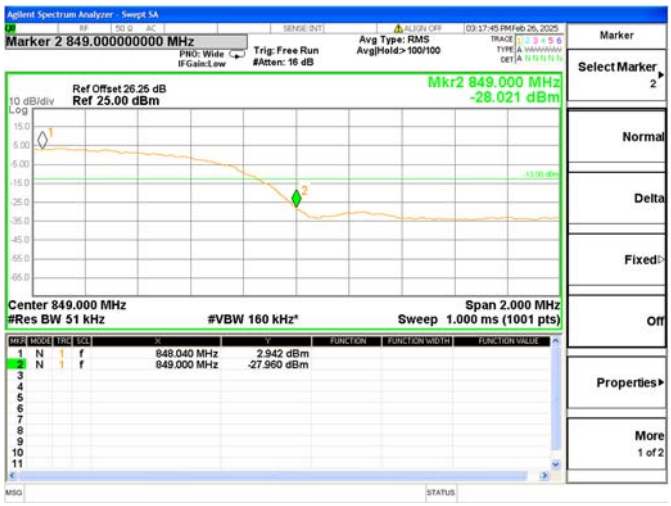
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

2.6.3.Test Result

The lowest and highest channels are tested to verify the band edge emissions.

GSM850(GSM), CH128, 824.2MHz	GSM850(GSM), CH251, 848.8MHz
	
GSM850(EDGE), CH128, 824.2MHz	**GSM850(EDGE), CH251, 848.8MHz**
	

GSM1900(GSM), CH512, 1850.2MHz	GSM1900(GSM), CH810, 1909.8MHz
	
GSM1900(EDGE), CH512, 1850.2MHz	**GSM1900(EDGE), CH810, 1909.8MHz**
	

WCDMA Band V, CH4132, 826.4MHz	WCDMA Band V, CH4233, 846.6MHz
	
WCDMA Band II, CH9262, 1852.4MHz	**WCDMA Band II, CH9538, 1907.6MHz**

2.7. Determining E.R.P. and/or E.I.R.P. from conducted RF output power measurements

2.7.1.Requirement

According to FCC section 22.913, the Effective Radiated Power (E.R.P.) of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
According to FCC section 24.232, the broadband PCS mobile station is limited to 2 Watts e.i.r.p. peak power.
According to FCC section 27.50, mobile, and portable (hand-held) stations is limited to 1 Watts e.i.r.p. peak power.

2.7.2.Test Description

The test setups refer to section 2.1.3
A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power (i.e. GSM850MHz band Power Control Level (PCL) = 5/19 and Power Class = 4, GSM1900MHz band Power Control Level (PCL) = 0/15 and Power Class = 1), and only the test result of the maximum output power was recorded. Please refer to section 2.1.3 of this report.
The relevant equation for determining the maximum E.R.P. or E.I.R.P. from the measured RF output power is given in Equation (1) as follows:
E.R.P. or E.I.R.P. = P_{Meas} + G_T
Where:
E.R.P. or E.I.R.P. effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)
P_{Meas} measured transmitter output power or PSD, in dBm or dBW
G_T gain of the transmitting antenna, in dBd (E.R.P.) or dBi (E.I.R.P.)
For devices utilizing multiple antennas, see ANSI C63.25-2015 6.4 for guidance with respect to determining the effective array transmit antenna gain term to be used in the above equation.
The following equations demonstrate the mathematical relationship between E.R.P. and E.I.R.P.:
a) E.R.P. = E.I.R.P. − 2.15, where E.R.P. and E.I.R.P. are expressed in consistent units.
b) E.I.R.P. = E.R.P. + 2.15, where E.R.P. and E.I.R.P. are expressed in consistent units.

2.7.3.Test Result

GSM850								
Band	Channel	Frequency (MHz)	PCL	Measured E.R.P.		Limit		Verdict
				dBm	W	dBm	W	
GSM	128	824.20	5	28.48	0.705	38.5	7	PASS
	189	836.40	5	28.54	0.714			PASS
	251	848.80	5	28.49	0.706			PASS
GPRS	128	824.20	5	28.51	0.710	38.5	7	PASS
	189	836.40	5	28.57	0.719			PASS
	251	848.80	5	28.47	0.703			PASS
EDGE	128	824.20	5	22.31	0.170	38.5	7	PASS
	189	836.40	5	22.37	0.173			PASS
	251	848.80	5	22.33	0.171			PASS
Note 1: For the GPRS and EDGE mode, all the slots were tested and just the worst data were recorded in this report.								

GSM1900								
Band	Channel	Frequency (MHz)	PCL	Measured E.I.R.P.		Limit		Verdict
				dBm	W	dBm	W	
GSM	512	1850.2	0	27.94	0.622	33	2	PASS
	661	1880.0	0	27.89	0.615			PASS
	810	1909.8	0	27.87	0.612			PASS
GPRS	512	1850.2	0	27.90	0.617	33	2	PASS
	661	1880.0	0	27.90	0.617			PASS
	810	1909.8	0	27.89	0.615			PASS
EDGE	512	1850.2	0	25.02	0.318	33	2	PASS
	661	1880.0	0	25.09	0.323			PASS
	810	1909.8	0	24.96	0.313			PASS
Note 1: For the GPRS and EDGE mode, all the slots were tested and just the worst data were recorded in this report.								

WCDMA Band V							
Band	Channel	Frequency (MHz)	Measured E.R.P.		Limit		Verdict
			dBm	W	dBm	W	
WCDMA	4132	826.4	20.22	0.105	38.5	7	PASS
	4182	836.4	20.32	0.108			PASS
	4233	846.6	20.25	0.106			PASS
HSDPA	4132	826.4	20.17	0.104	38.5	7	PASS
	4182	836.4	20.09	0.102			PASS
	4233	846.6	20.13	0.103			PASS
HSUPA	4132	826.4	20.14	0.103	38.5	7	PASS
	4182	836.4	20.15	0.104			PASS
	4233	846.6	19.99	0.100			PASS
HSUP+	4132	826.4	19.97	0.099	38.5	7	PASS
	4182	836.4	20.01	0.100			PASS
	4233	846.6	20.06	0.101			PASS
Note 1: For the HSDPA and HSUPA mode, all the subtests were tested and just the worst data were recorded in this report.							

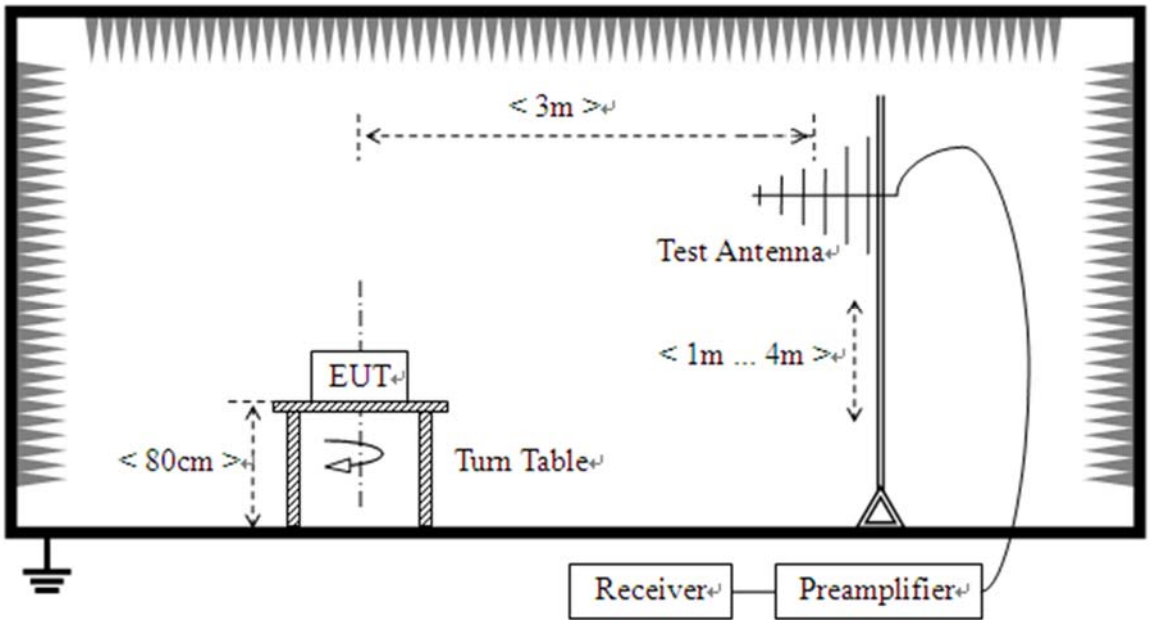
WCDMA Band II							
Band	Channel	Frequency (MHz)	Measured E.I.R.P.		Limit		Verdict
			dBm	W	dBm	W	
WCDMA	9262	1852.4	21.42	0.139	33	2	PASS
	9400	1880.0	21.52	0.142			PASS
	9538	1907.6	21.45	0.140			PASS
HSDPA	9262	1852.4	21.40	0.138	33	2	PASS
	9400	1880.0	21.48	0.141			PASS
	9538	1907.6	21.32	0.136			PASS
HSUPA	9262	1852.4	20.82	0.121	33	2	PASS
	9400	1880.0	20.71	0.118			PASS
	9538	1907.6	20.61	0.115			PASS
HSUP+	9262	1852.4	20.78	0.120	33	2	PASS
	9400	1880.0	20.70	0.117			PASS
	9538	1907.6	20.75	0.119			PASS
Note 1: For the HSDPA and HSUPA mode, all the subtests were tested and just the worst data were recorded in this report.							

2.8. Radiated Out of Band Emissions

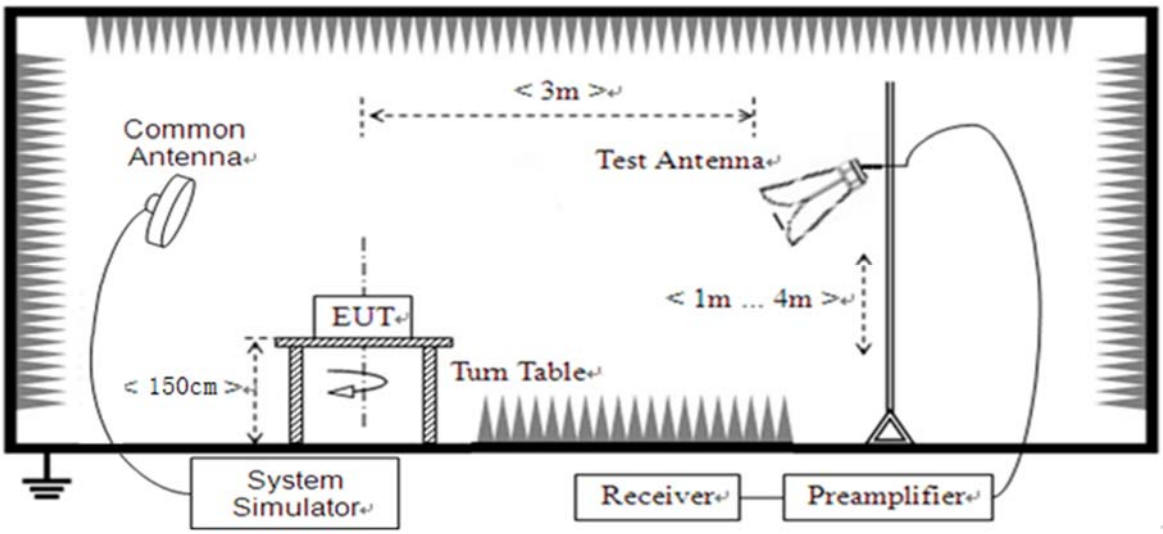
2.8.1.Requirement

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. This calculated to be -13dBm. The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency.

2.8.2.Test Description



(For the test frequency from 30MHz to1GHz)



(For the test frequency above 1GHz)

The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.
A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power and only the test result of the maximum output power was recorded.
In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360°to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.
Note: When doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.8.3.Test Procedure

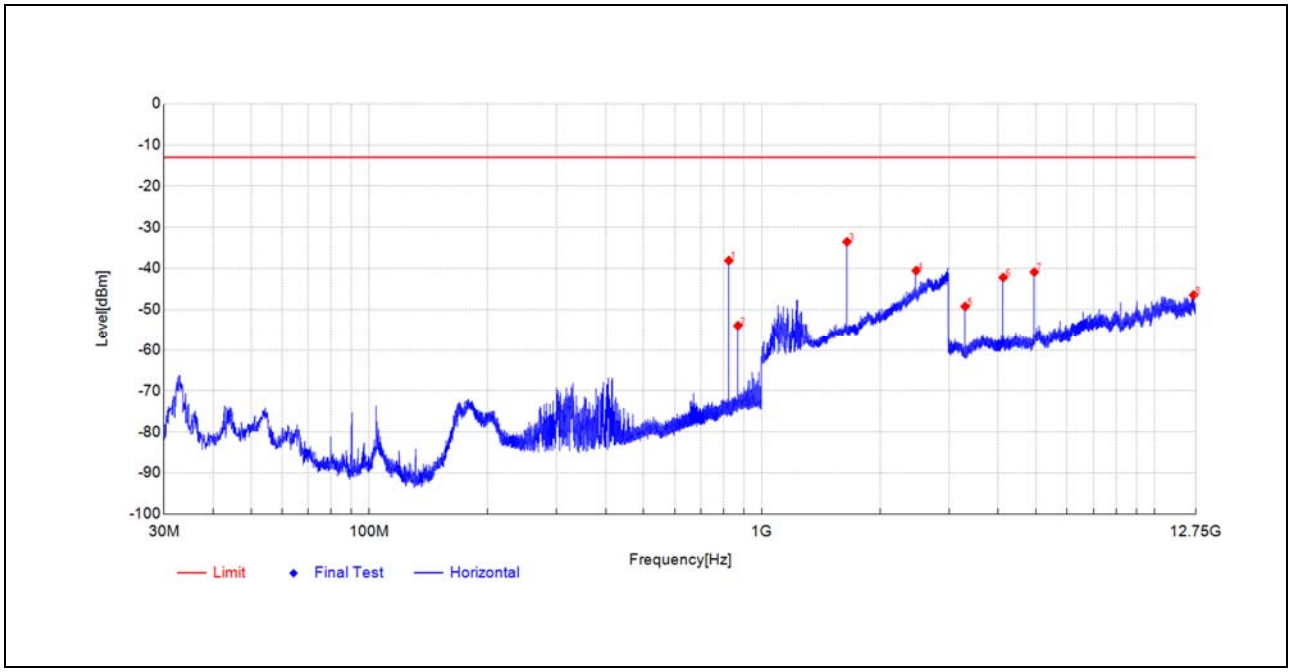
For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements.

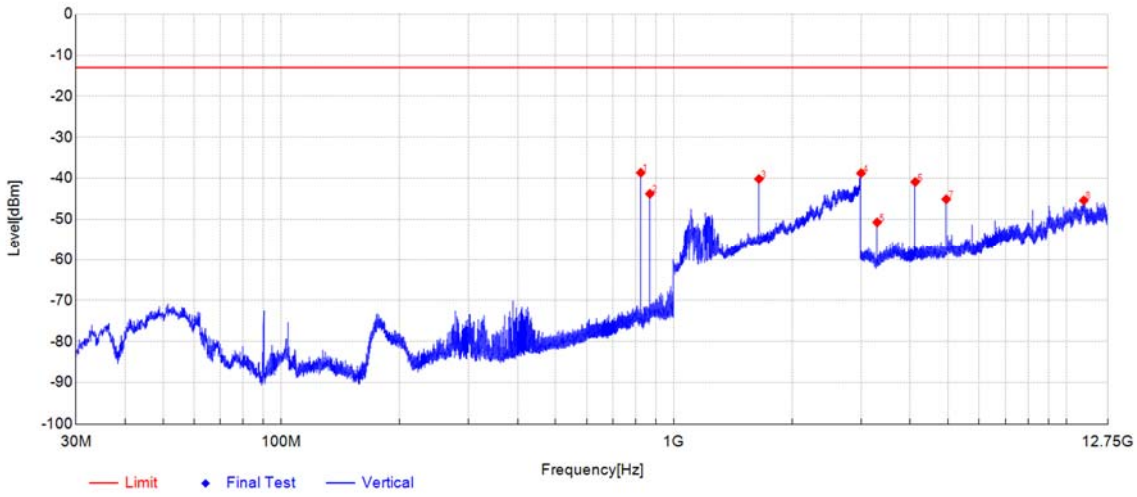
2.8.4.Test Result

Note1: The power of the EUT transmitting frequency should be ignored.
Note2: All test mode and condition mentioned were considered and evaluated respectively by performing full test, only the worst data were recorded and reported.
Note3: All spurious emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.
Note4: NA means the frequency is the basic frequency or the base station frequency, they are no need to verdict.

GSM850(GSM)
Plot for Low Channel

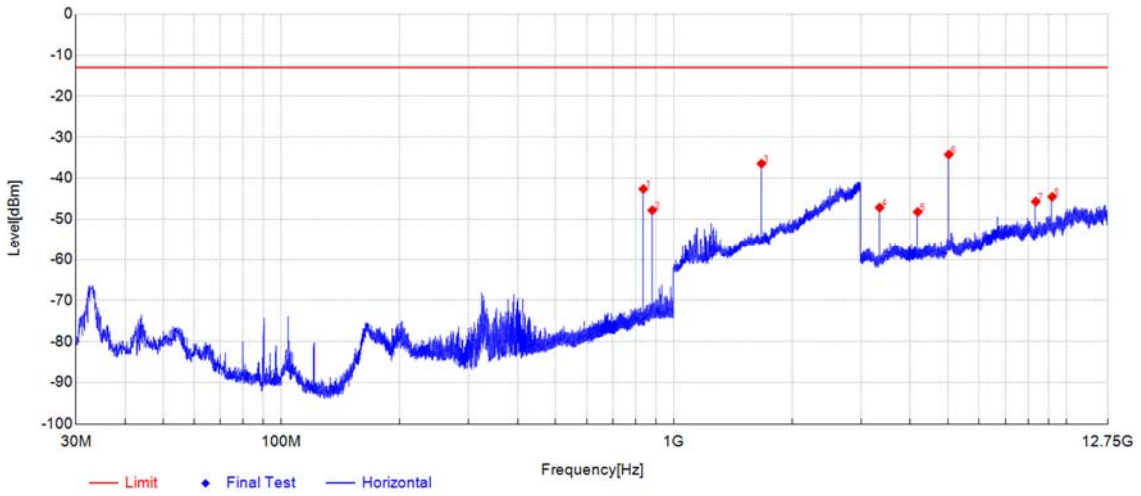


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
824.1302	-32.27	-38.07	-5.8	-	-	Horizontal	PK	NA
869.286	-49.06	-53.92	-4.9	-	-	Horizontal	PK	NA
1648.5297	-36.16	-33.52	2.6	-13.0	20.5	Horizontal	PK	PASS
2472.6945	-50.83	-40.49	10.3	-13.0	27.5	Horizontal	PK	PASS
3296.9023	-47.93	-49.21	-1.3	-13.0	36.2	Horizontal	PK	PASS
4120.8185	-44.27	-42.17	2.1	-13.0	29.2	Horizontal	PK	PASS
4945.2223	-45.81	-40.85	5.0	-13.0	27.9	Horizontal	PK	PASS
12592.042	-69.67	-46.44	23.2	-13.0	33.4	Horizontal	PK	PASS

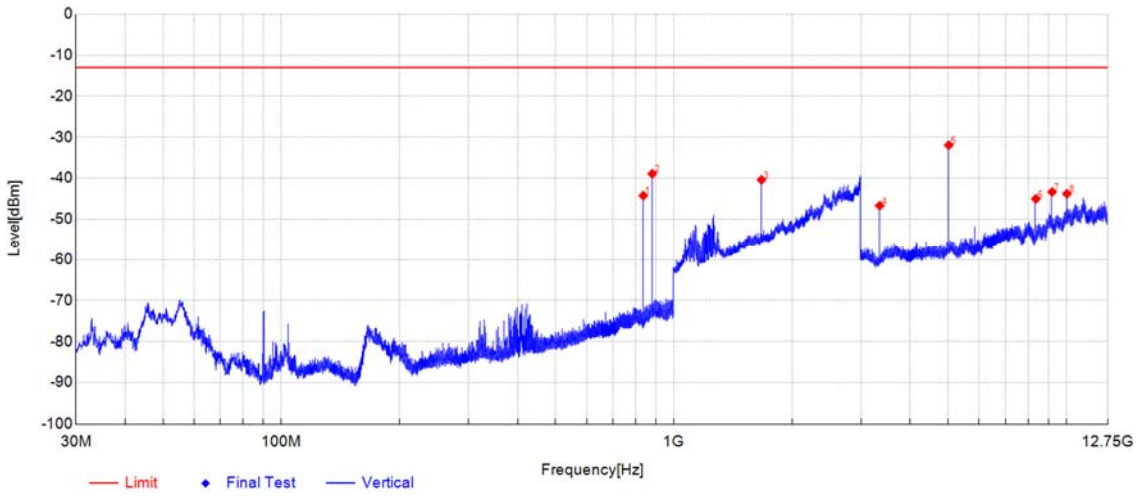


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
824.2272	-32.74	-38.63	-5.9	-	-	Vertical	PK	NA
869.286	-38.90	-43.76	-4.9	-	-	Vertical	PK	NA
1648.1296	-42.65	-40.17	2.5	-13.0	27.2	Vertical	PK	PASS
3000	-56.00	-38.74	17.3	-13.0	25.7	Vertical	PK	PASS
3296.9023	-49.56	-50.73	-1.2	-13.0	37.7	Vertical	PK	PASS
4120.8185	-43.03	-40.89	2.1	-13.0	27.9	Vertical	PK	PASS
4945.7098	-49.78	-45.09	4.7	-13.0	32.1	Vertical	PK	PASS
11077.791	-67.71	-45.39	22.3	-13.0	32.4	Vertical	PK	PASS

Plot for Mid Channel

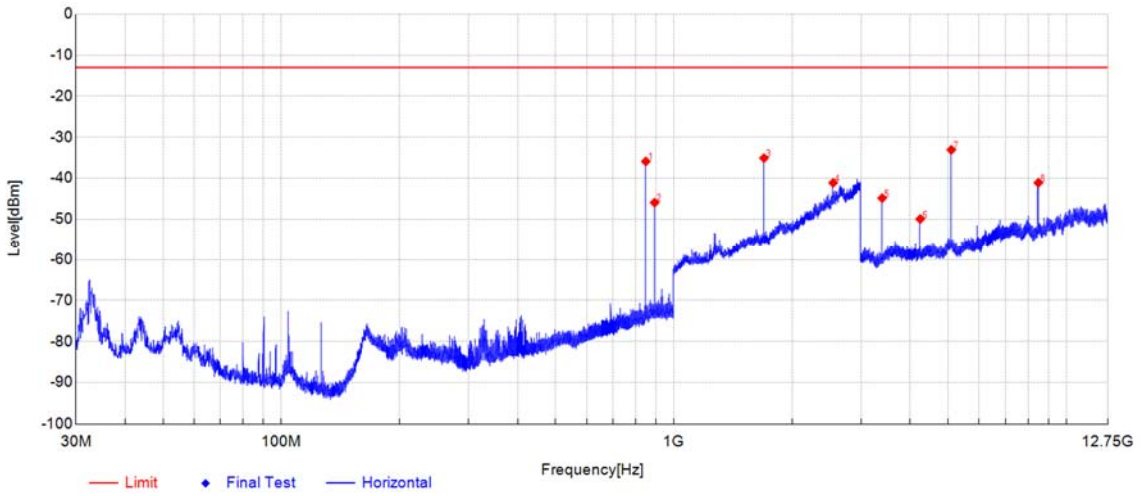


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
836.4498	-37.07	-42.60	-5.5	-	-	Horizontal	PK	NA
881.4601	-43.05	-47.79	-4.7	-	-	Horizontal	PK	NA
1672.9346	-38.94	-36.44	2.5	-13.0	23.4	Horizontal	PK	PASS
3345.6548	-46.53	-47.15	-0.6	-13.0	34.2	Horizontal	PK	PASS
4182.2466	-50.38	-48.21	2.2	-13.0	35.2	Horizontal	PK	PASS
5018.3509	-40.29	-34.20	6.1	-13.0	21.2	Horizontal	PK	PASS
8364.2307	-59.00	-45.68	13.3	-13.0	32.7	Horizontal	PK	PASS
9201.3101	-60.70	-44.52	16.2	-13.0	31.5	Horizontal	PK	PASS

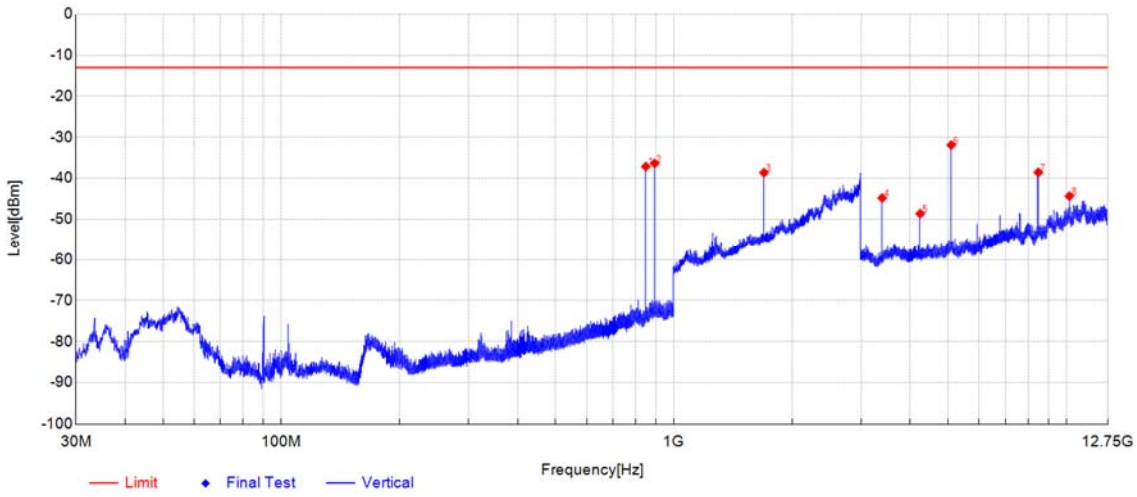


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
836.3043	-38.38	-44.21	-5.8	-	-	Vertical	PK	NA
881.4601	-34.41	-38.88	-4.5	-	-	Vertical	PK	NA
1672.9346	-43.11	-40.36	2.8	-13.0	27.4	Vertical	PK	PASS
3346.1423	-46.17	-46.66	-0.5	-13.0	33.7	Vertical	PK	PASS
5017.8634	-37.42	-31.90	5.5	-13.0	18.9	Vertical	PK	PASS
8364.7182	-57.48	-45.01	12.5	-13.0	32.0	Vertical	PK	PASS
9200.8225	-60.27	-43.32	17.0	-13.0	30.3	Vertical	PK	PASS
10037.414	-62.03	-43.77	18.3	-13.0	30.8	Vertical	PK	PASS

Plot for High Channel



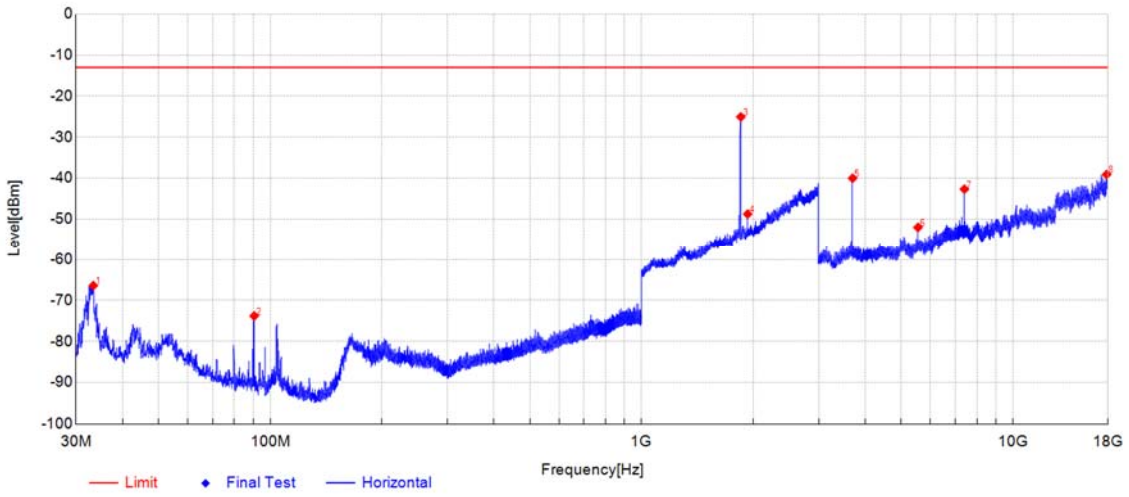
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
848.8664	-30.70	-35.89	-5.2	-	-	Horizontal	PK	NA
893.7312	-41.26	-45.93	-4.7	-	-	Horizontal	PK	NA
1697.3395	-38.00	-35.08	2.9	-13.0	22.1	Horizontal	PK	PASS
2546.7093	-52.13	-41.11	11.0	-13.0	28.1	Horizontal	PK	PASS
3395.3823	-44.96	-44.83	0.1	-13.0	31.8	Horizontal	PK	PASS
4244.1622	-52.21	-49.94	2.3	-13.0	36.9	Horizontal	PK	PASS
5092.4546	-39.13	-33.06	6.1	-13.0	20.1	Horizontal	PK	PASS
8488.5494	-54.84	-41.09	13.8	-13.0	28.1	Horizontal	PK	PASS



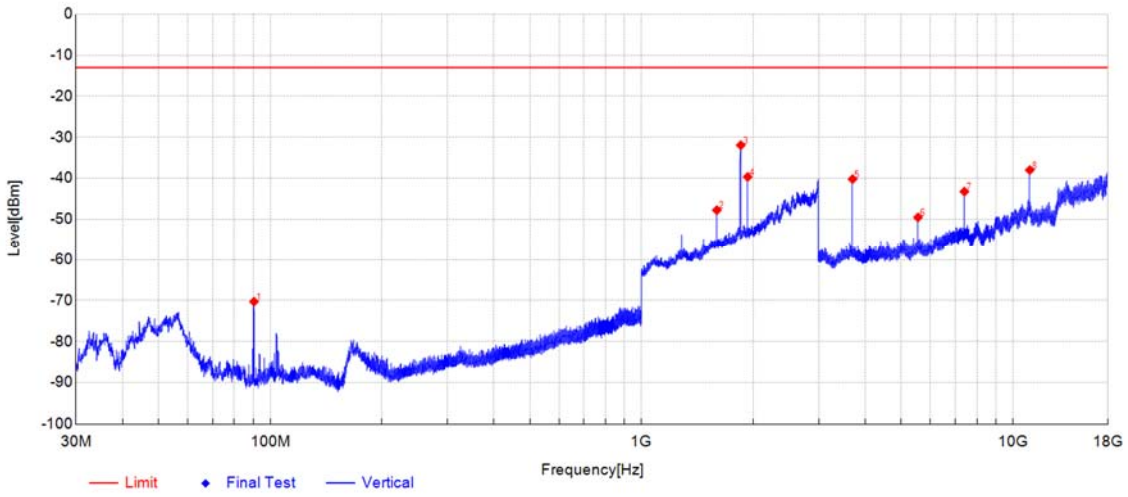
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
848.8664	-31.60	-37.12	-5.5	-	-	Vertical	PK	NA
893.8767	-31.92	-36.35	-4.4	-	-	Vertical	PK	NA
1697.3395	-41.70	-38.61	3.1	-13.0	25.6	Vertical	PK	PASS
3395.3823	-45.04	-44.79	0.3	-13.0	31.8	Vertical	PK	PASS
4244.1622	-50.86	-48.61	2.3	-13.0	35.6	Vertical	PK	PASS
5092.4546	-37.36	-31.89	5.5	-13.0	18.9	Vertical	PK	PASS
8487.5744	-51.91	-38.54	13.4	-13.0	25.5	Vertical	PK	PASS
10185.134	-64.00	-44.33	19.7	-13.0	31.3	Vertical	PK	PASS

GSM1900(GSM)

Plot for Low Channel

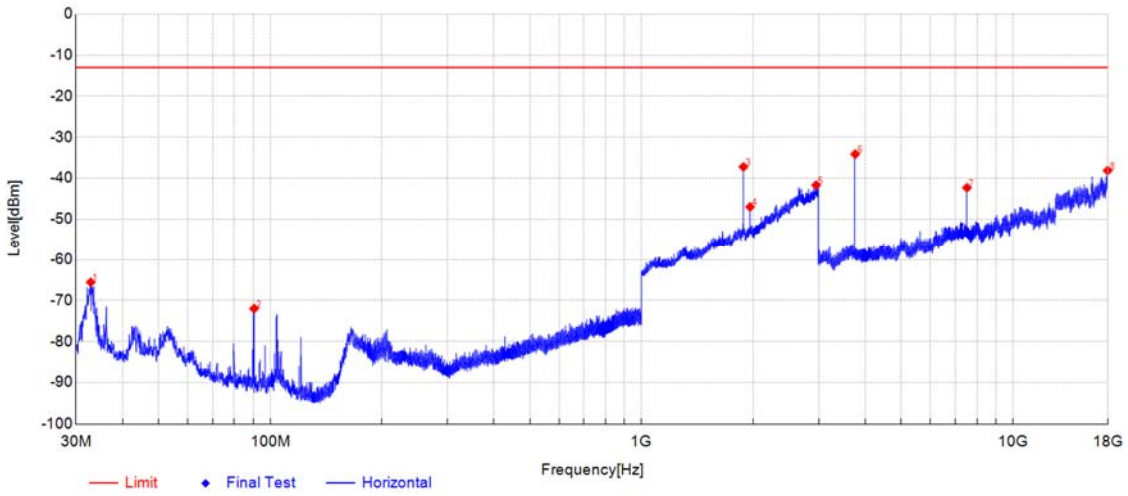


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
33.3952	-51.18	-66.40	-15.2	-13.0	53.4	Horizontal	PK	PASS
90.531	-50.45	-73.81	-23.4	-13.0	60.8	Horizontal	PK	PASS
1850.17	-29.33	-25.05	4.3	-	-	Horizontal	PK	NA
1930.5861	-52.64	-48.72	3.9	-	-	Horizontal	PK	NA
3700.3344	-41.78	-40.00	1.8	-13.0	27.0	Horizontal	PK	PASS
5550.5485	-58.65	-51.99	6.7	-13.0	39.0	Horizontal	PK	PASS
7400.7625	-55.16	-42.66	12.5	-13.0	29.7	Horizontal	PK	PASS
17880.465	-69.75	-39.09	30.7	-13.0	26.1	Horizontal	PK	PASS

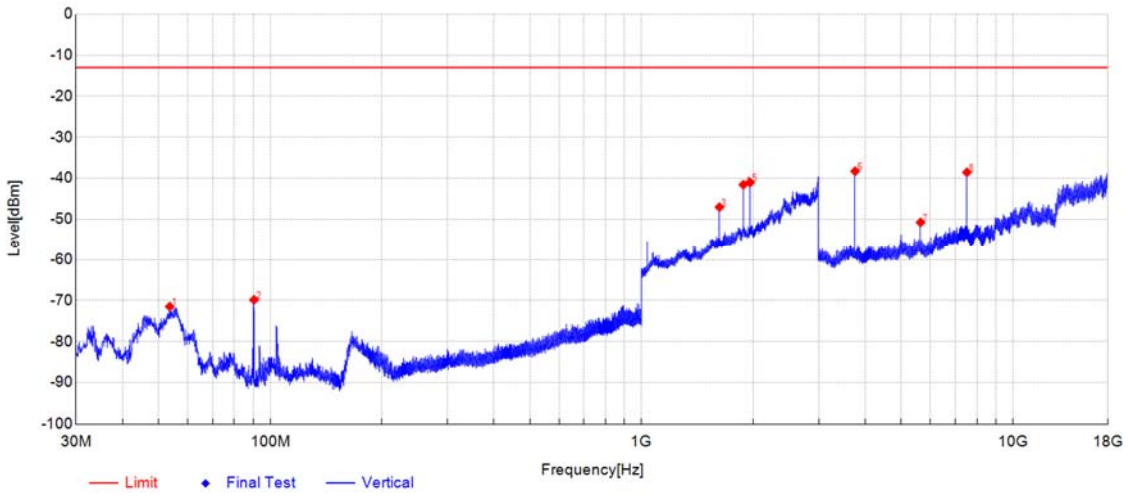


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
90.434	-48.01	-70.29	-22.3	-13.0	57.3	Vertical	PK	PASS
1594.919	-49.48	-47.75	1.7	-13.0	34.8	Vertical	PK	PASS
1850.17	-36.24	-31.92	4.3	-	-	Vertical	PK	NA
1930.186	-43.51	-39.65	3.9	-	-	Vertical	PK	NA
3700.3344	-41.95	-40.18	1.8	-13.0	27.2	Vertical	PK	PASS
5551.0172	-55.86	-49.51	6.4	-13.0	36.5	Vertical	PK	PASS
7400.7625	-54.93	-43.23	11.7	-13.0	30.2	Vertical	PK	PASS
11101.659	-60.36	-37.98	22.4	-13.0	25.0	Vertical	PK	PASS

Plot for Mid Channel

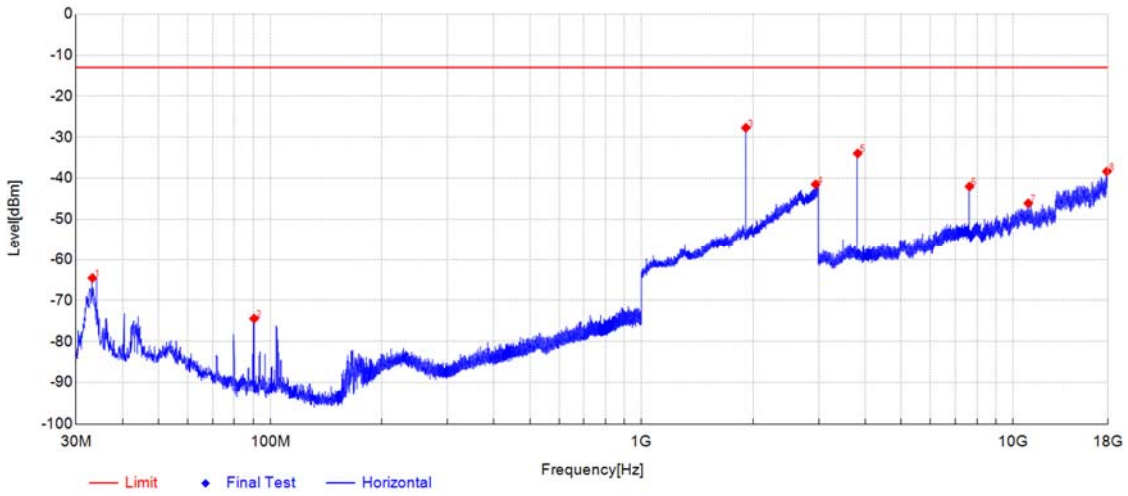


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.8616	-50.35	-65.57	-15.2	-13.0	52.6	Horizontal	PK	PASS
90.4825	-48.62	-71.99	-23.4	-13.0	59.0	Horizontal	PK	PASS
1880.176	-42.51	-37.23	5.3	-	-	Horizontal	PK	NA
1959.792	-51.47	-46.97	4.5	-	-	Horizontal	PK	NA
2951.5903	-55.28	-41.67	13.6	-13.0	28.7	Horizontal	PK	PASS
3759.8675	-35.29	-34.11	1.2	-13.0	21.1	Horizontal	PK	PASS
7519.8287	-54.60	-42.30	12.3	-13.0	29.3	Horizontal	PK	PASS
17988.749	-67.81	-38.12	29.7	-13.0	25.1	Horizontal	PK	PASS

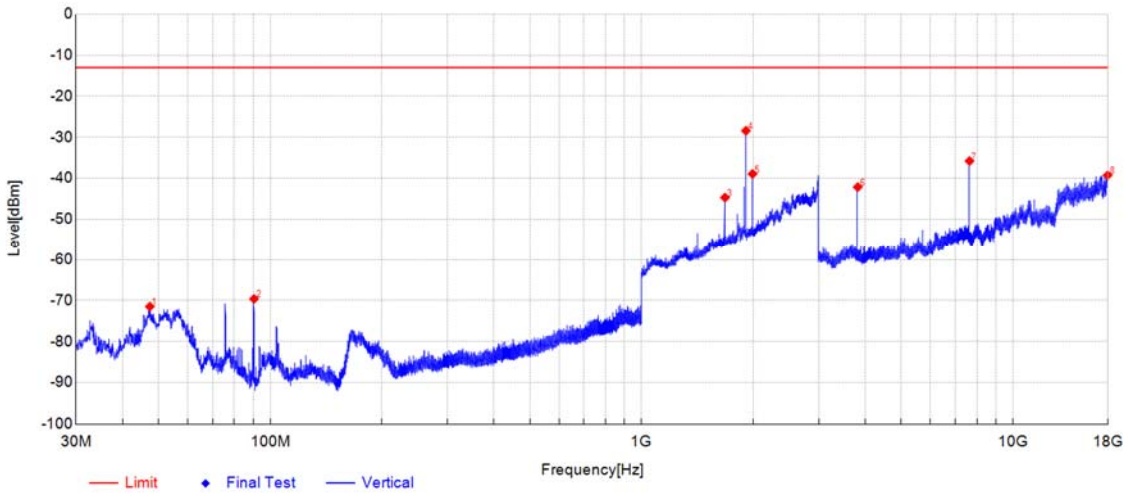


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
53.6207	-54.08	-71.49	-17.4	-13.0	58.5	Vertical	PK	PASS
90.434	-47.57	-69.85	-22.3	-13.0	56.9	Vertical	PK	PASS
1621.3243	-48.92	-47.02	1.9	-13.0	34.0	Vertical	PK	PASS
1880.176	-46.66	-41.55	5.1	-	-	Vertical	PK	NA
1959.792	-45.22	-41.03	4.2	-	-	Vertical	PK	NA
3759.8675	-39.34	-38.26	1.1	-13.0	25.3	Vertical	PK	PASS
5640.0825	-57.44	-50.74	6.7	-13.0	37.7	Vertical	PK	PASS
7519.8287	-50.41	-38.54	11.9	-13.0	25.5	Vertical	PK	PASS

Plot for High Channel



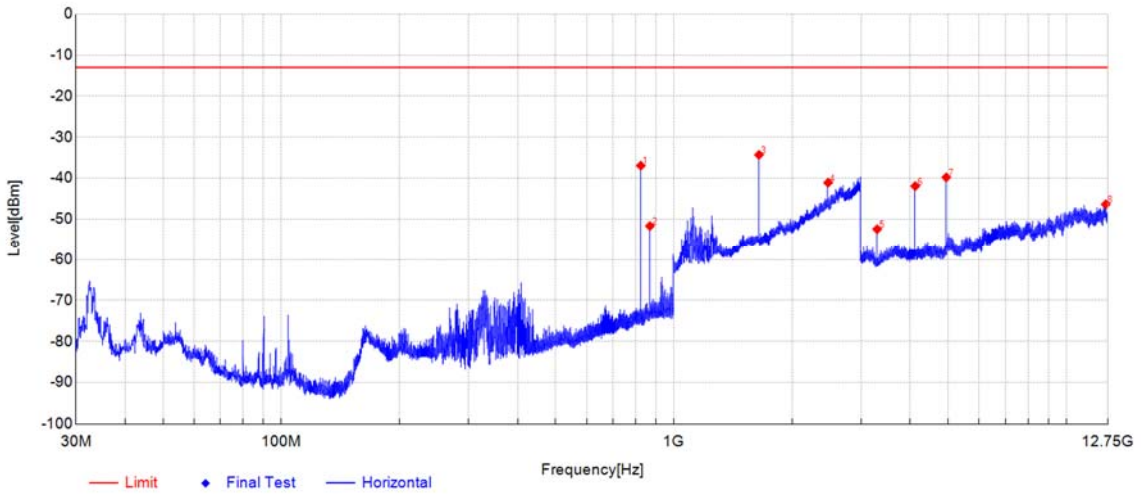
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
33.2012	-49.32	-64.54	-15.2	-13.0	51.5	Horizontal	PK	PASS
90.4825	-51.07	-74.44	-23.4	-13.0	61.4	Horizontal	PK	PASS
1909.3819	-31.93	-27.69	4.2	-	-	Horizontal	PK	NA
2941.5883	-54.50	-41.47	13.0	-13.0	28.5	Horizontal	PK	PASS
3819.4006	-34.82	-33.94	0.9	-13.0	20.9	Horizontal	PK	PASS
7639.3637	-54.08	-42.00	12.1	-13.0	29.0	Horizontal	PK	PASS
11001.343	-67.06	-46.10	21.0	-13.0	33.1	Horizontal	PK	PASS
17913.278	-68.99	-38.35	30.6	-13.0	25.4	Horizontal	PK	PASS



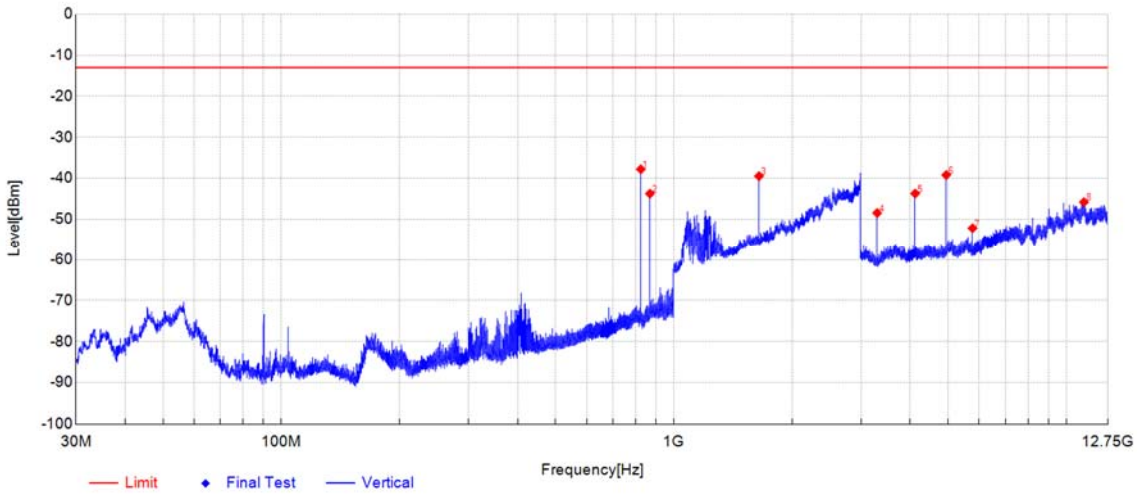
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
47.4124	-52.04	-71.48	-19.4	-13.0	58.5	Vertical	PK	PASS
90.434	-47.34	-69.62	-22.3	-13.0	56.6	Vertical	PK	PASS
1677.3355	-46.90	-44.68	2.2	-13.0	31.7	Vertical	PK	PASS
1909.782	-33.25	-28.40	4.9	-	-	Vertical	PK	NA
1989.798	-43.31	-38.91	4.4	-	-	Vertical	PK	NA
3819.4006	-42.84	-42.14	0.7	-13.0	29.1	Vertical	PK	PASS
7639.3637	-47.17	-35.77	11.4	-13.0	22.8	Vertical	PK	PASS
17992.031	-69.09	-39.24	29.9	-13.0	26.2	Vertical	PK	PASS

GSM850(EDGE)

Plot for Low Channel

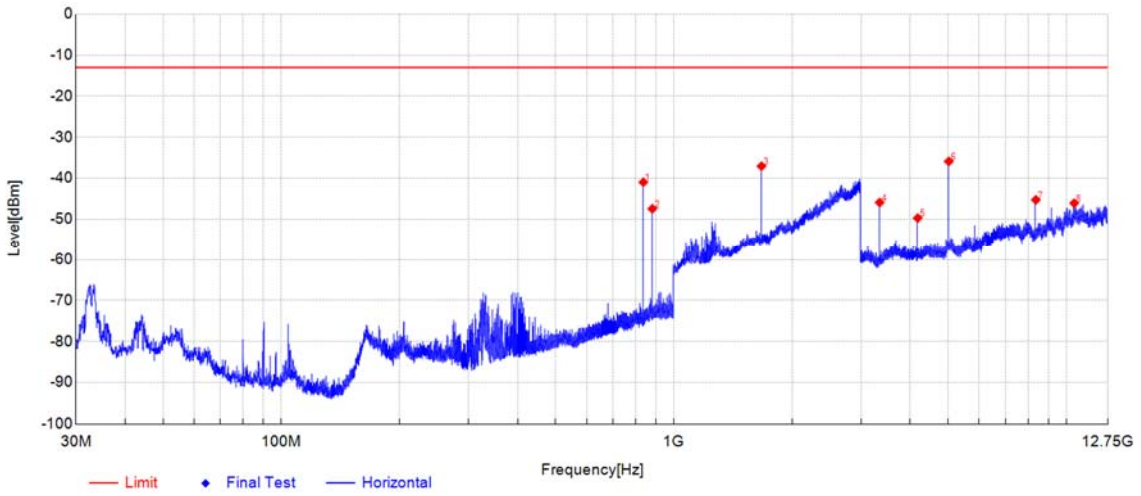


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
824.1302	-31.13	-36.93	-5.8	-	-	Horizontal	PK	NA
869.2375	-46.78	-51.64	-4.9	-	-	Horizontal	PK	NA
1648.5297	-36.94	-34.30	2.6	-13.0	21.3	Horizontal	PK	PASS
2472.6945	-51.42	-41.08	10.3	-13.0	28.1	Horizontal	PK	PASS
3296.9023	-51.15	-52.43	-1.3	-13.0	39.4	Horizontal	PK	PASS
4121.3061	-44.02	-41.91	2.1	-13.0	28.9	Horizontal	PK	PASS
4945.2223	-44.74	-39.78	5.0	-13.0	26.8	Horizontal	PK	PASS
12602.280	-69.55	-46.35	23.2	-13.0	33.4	Horizontal	PK	PASS

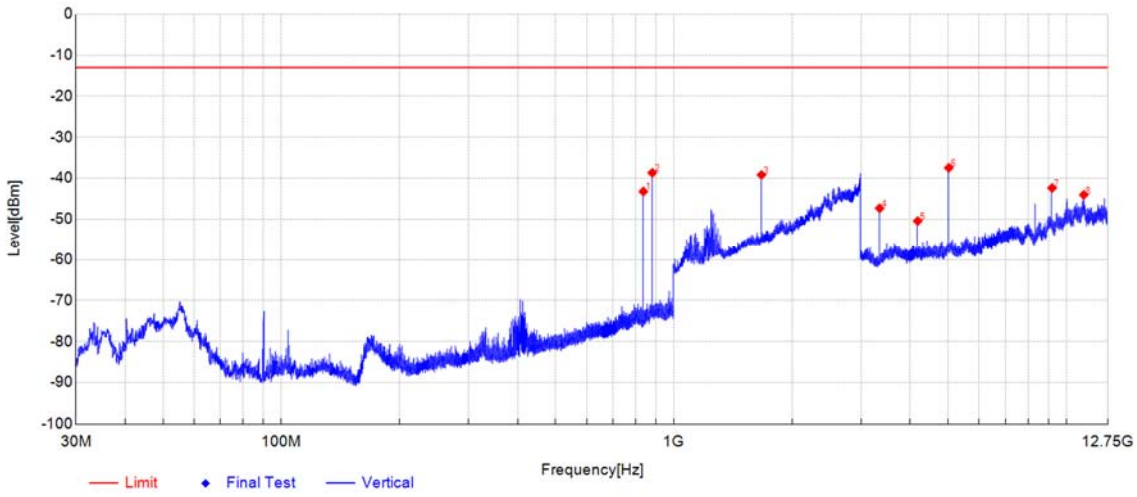


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
824.1302	-31.90	-37.79	-5.9	-	-	Vertical	PK	NA
869.286	-38.86	-43.72	-4.9	-	-	Vertical	PK	NA
1648.5297	-41.93	-39.45	2.5	-13.0	26.5	Vertical	PK	PASS
3296.9023	-47.27	-48.44	-1.2	-13.0	35.4	Vertical	PK	PASS
4120.8185	-45.84	-43.70	2.1	-13.0	30.7	Vertical	PK	PASS
4945.2223	-43.87	-39.18	4.7	-13.0	26.2	Vertical	PK	PASS
5769.626	-58.71	-52.16	6.6	-13.0	39.2	Vertical	PK	PASS
11092.417	-68.17	-45.79	22.4	-13.0	32.8	Vertical	PK	PASS

Plot for Mid Channel

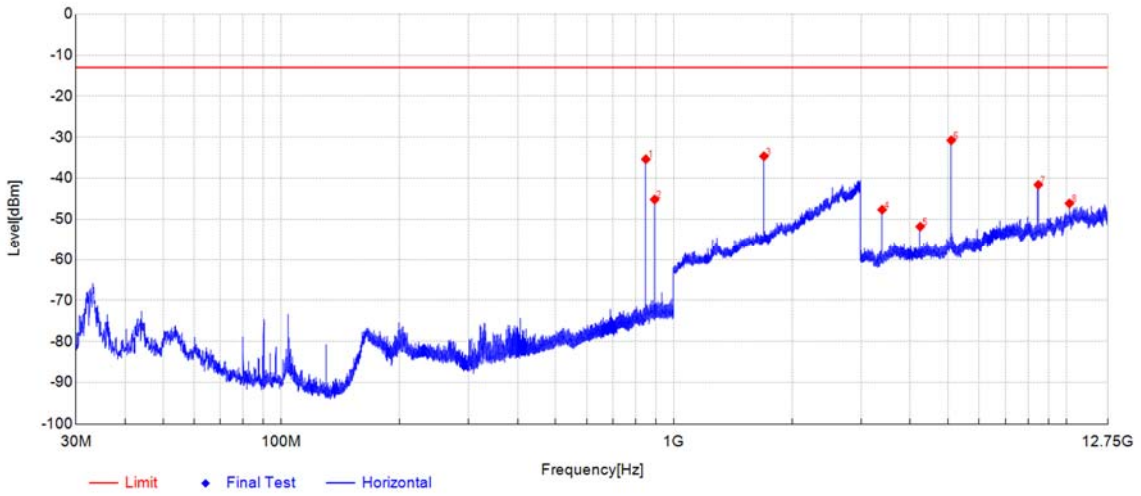


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
836.3528	-35.42	-40.96	-5.5	-	-	Horizontal	PK	NA
881.4601	-42.69	-47.43	-4.7	-	-	Horizontal	PK	NA
1672.5345	-39.55	-37.05	2.5	-13.0	24.1	Horizontal	PK	PASS
3345.6548	-45.28	-45.90	-0.6	-13.0	32.9	Horizontal	PK	PASS
4182.2466	-51.88	-49.71	2.2	-13.0	36.7	Horizontal	PK	PASS
5018.8384	-41.97	-35.88	6.1	-13.0	22.9	Horizontal	PK	PASS
8364.2307	-58.57	-45.25	13.3	-13.0	32.3	Horizontal	PK	PASS
10473.261	-65.79	-46.07	19.7	-13.0	33.1	Horizontal	PK	PASS

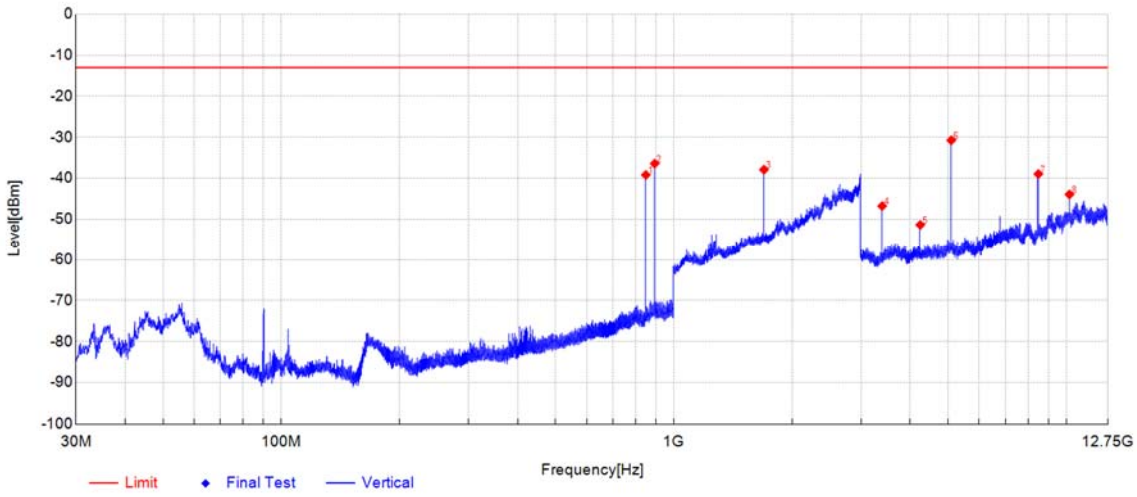


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
836.4983	-37.37	-43.20	-5.8	-	-	Vertical	PK	NA
881.4116	-34.18	-38.65	-4.5	-	-	Vertical	PK	NA
1672.9346	-41.91	-39.16	2.8	-13.0	26.2	Vertical	PK	PASS
3345.6548	-46.80	-47.30	-0.5	-13.0	34.3	Vertical	PK	PASS
4182.2466	-52.68	-50.41	2.3	-13.0	37.4	Vertical	PK	PASS
5018.8384	-42.95	-37.43	5.5	-13.0	24.4	Vertical	PK	PASS
9199.8475	-59.30	-42.34	17.0	-13.0	29.3	Vertical	PK	PASS
11078.278	-66.35	-44.03	22.3	-13.0	31.0	Vertical	PK	PASS

Plot for High Channel



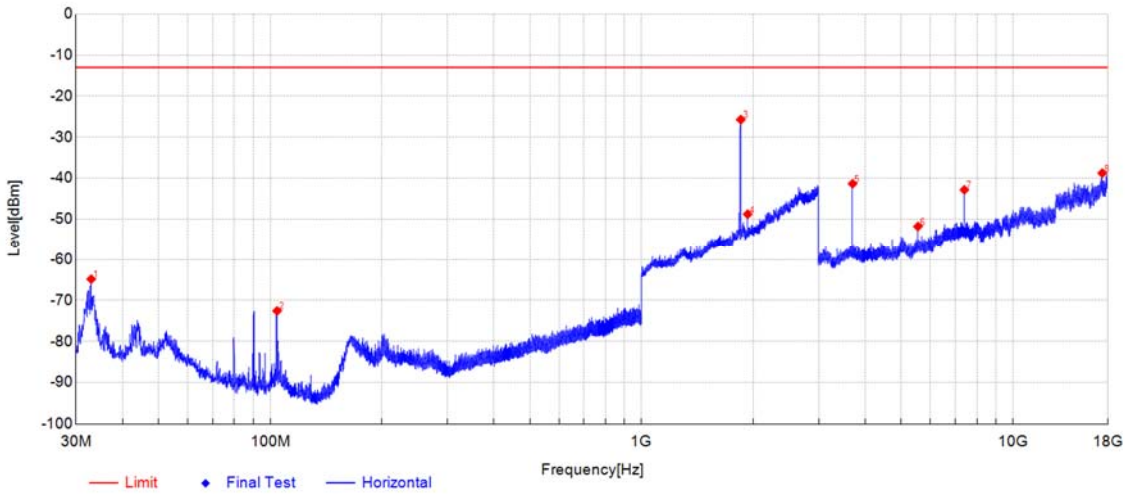
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
848.8179	-30.16	-35.35	-5.2	-	-	Horizontal	PK	NA
893.7797	-40.50	-45.17	-4.7	-	-	Horizontal	PK	NA
1697.7395	-37.56	-34.63	2.9	-13.0	21.6	Horizontal	PK	PASS
3394.8947	-47.79	-47.66	0.1	-13.0	34.7	Horizontal	PK	PASS
4244.1622	-54.06	-51.79	2.3	-13.0	38.8	Horizontal	PK	PASS
5092.9421	-36.82	-30.75	6.1	-13.0	17.8	Horizontal	PK	PASS
8487.5744	-55.33	-41.58	13.8	-13.0	28.6	Horizontal	PK	PASS
10185.134	-65.32	-46.12	19.2	-13.0	33.1	Horizontal	PK	PASS



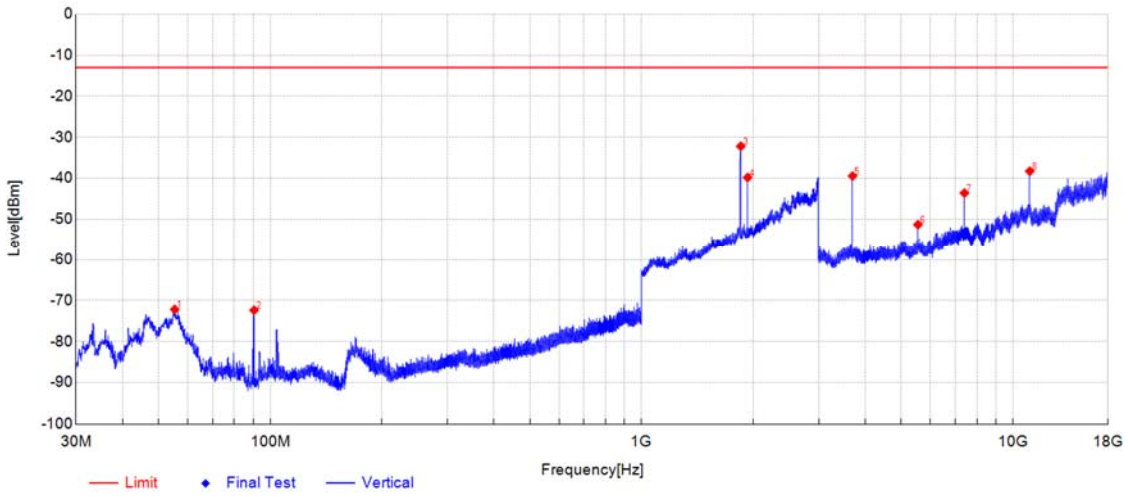
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
848.8179	-33.63	-39.16	-5.5	-	-	Vertical	PK	NA
893.8767	-31.98	-36.41	-4.4	-	-	Vertical	PK	NA
1697.3395	-40.98	-37.89	3.1	-13.0	24.9	Vertical	PK	PASS
3395.3823	-47.00	-46.75	0.3	-13.0	33.8	Vertical	PK	PASS
4244.1622	-53.61	-51.36	2.3	-13.0	38.4	Vertical	PK	PASS
5092.9421	-36.20	-30.73	5.5	-13.0	17.7	Vertical	PK	PASS
8488.5494	-52.31	-38.94	13.4	-13.0	25.9	Vertical	PK	PASS
10184.646	-63.58	-43.92	19.7	-13.0	30.9	Vertical	PK	PASS

GSM1900(EDGE)

Plot for Low Channel

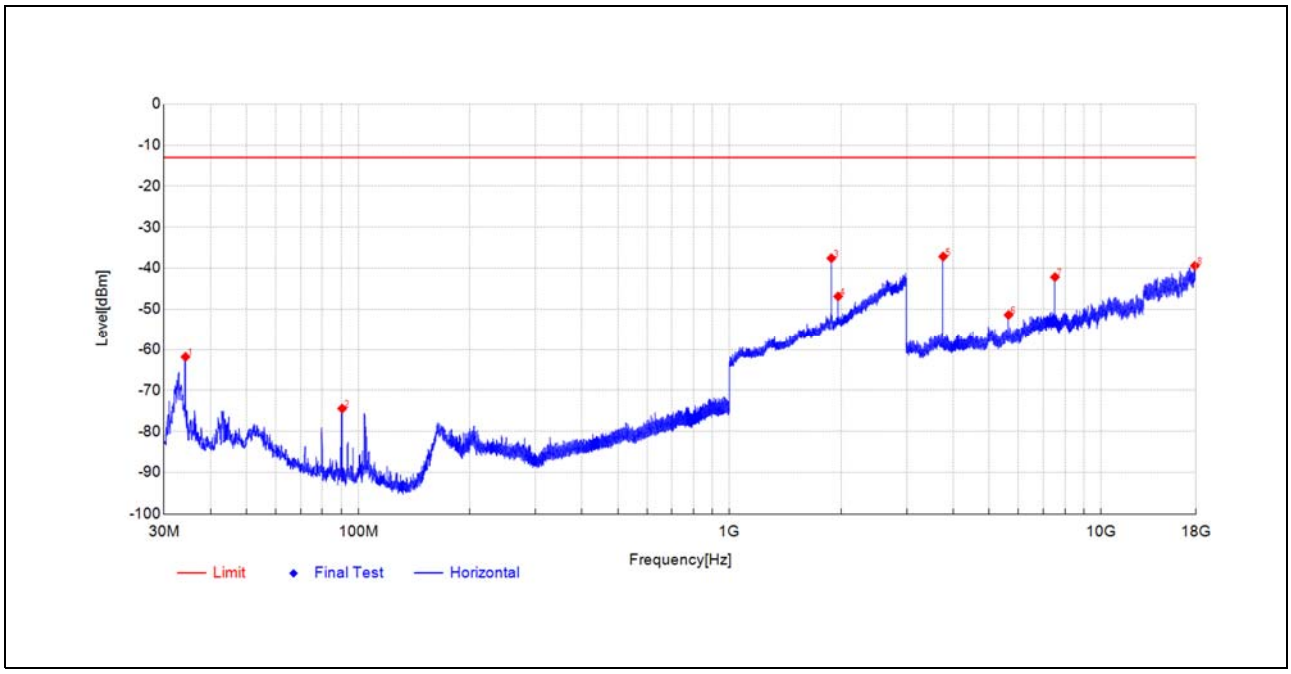


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.9586	-49.62	-64.83	-15.2	-13.0	51.8	Horizontal	PK	PASS
104.3057	-49.85	-72.57	-22.7	-13.0	59.6	Horizontal	PK	PASS
1850.17	-29.98	-25.70	4.3	-	-	Horizontal	PK	NA
1930.186	-52.67	-48.76	3.9	-	-	Horizontal	PK	NA
3700.8032	-43.10	-41.33	1.8	-13.0	28.3	Horizontal	PK	PASS
5550.5485	-58.43	-51.77	6.7	-13.0	38.8	Horizontal	PK	PASS
7400.2938	-55.32	-42.82	12.5	-13.0	29.8	Horizontal	PK	PASS
17404.668	-69.85	-38.76	31.1	-13.0	25.8	Horizontal	PK	PASS

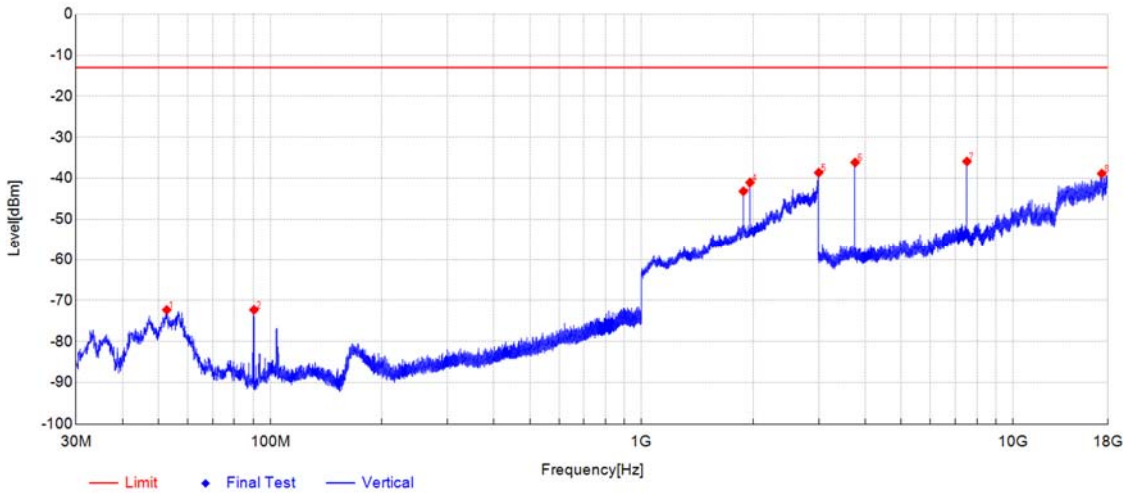


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
55.3183	-55.12	-72.17	-17.1	-13.0	59.2	Vertical	PK	PASS
90.4825	-50.10	-72.38	-22.3	-13.0	59.4	Vertical	PK	PASS
1850.17	-36.50	-32.18	4.3	-	-	Vertical	PK	NA
1930.186	-43.65	-39.79	3.9	-	-	Vertical	PK	NA
3700.3344	-41.20	-39.43	1.8	-13.0	26.4	Vertical	PK	PASS
5550.5485	-57.64	-51.29	6.4	-13.0	38.3	Vertical	PK	PASS
7400.7625	-55.29	-43.59	11.7	-13.0	30.6	Vertical	PK	PASS
11101.190	-60.65	-38.26	22.4	-13.0	25.3	Vertical	PK	PASS

Plot for Mid Channel

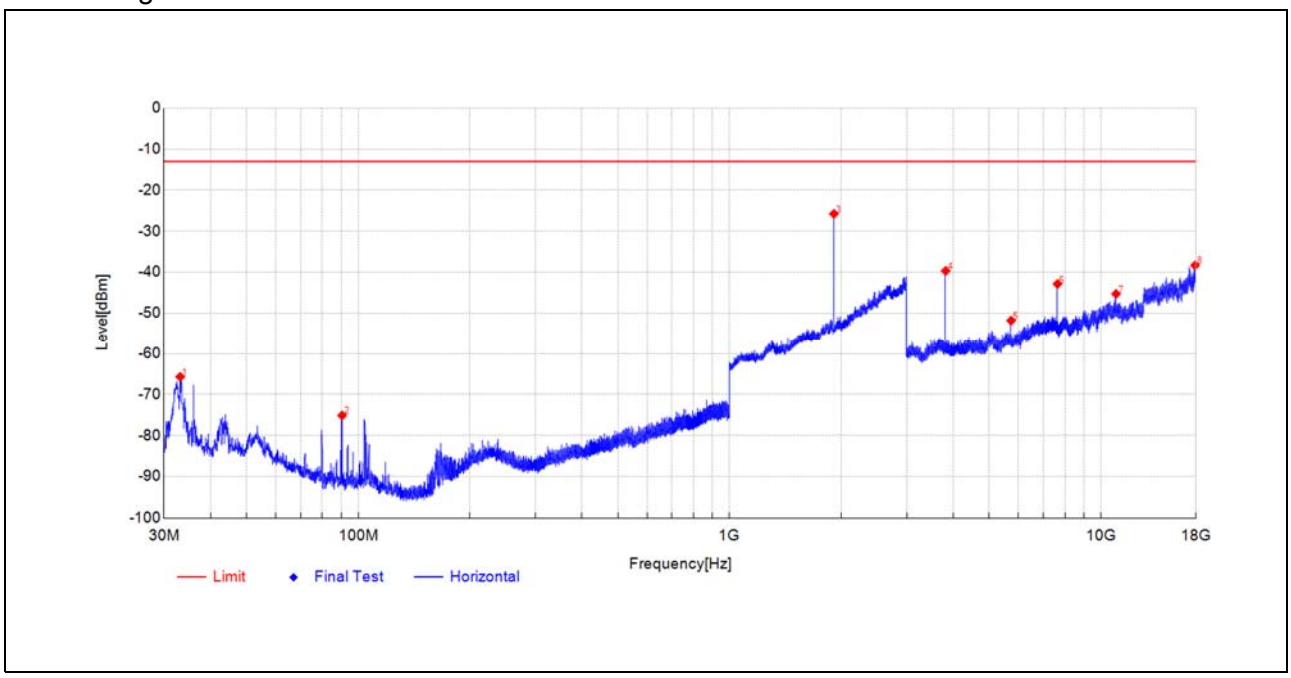


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
34.2682	-46.59	-61.82	-15.2	-13.0	48.8	Horizontal	PK	PASS
90.531	-51.08	-74.44	-23.4	-13.0	61.4	Horizontal	PK	PASS
1879.776	-42.82	-37.54	5.3	-	-	Horizontal	PK	NA
1960.192	-51.35	-46.85	4.5	-	-	Horizontal	PK	NA
3759.8675	-38.32	-37.14	1.2	-13.0	24.1	Horizontal	PK	PASS
5640.0825	-58.49	-51.39	7.1	-13.0	38.4	Horizontal	PK	PASS
7520.2975	-54.43	-42.14	12.3	-13.0	29.1	Horizontal	PK	PASS
17907.653	-70.11	-39.41	30.7	-13.0	26.4	Horizontal	PK	PASS

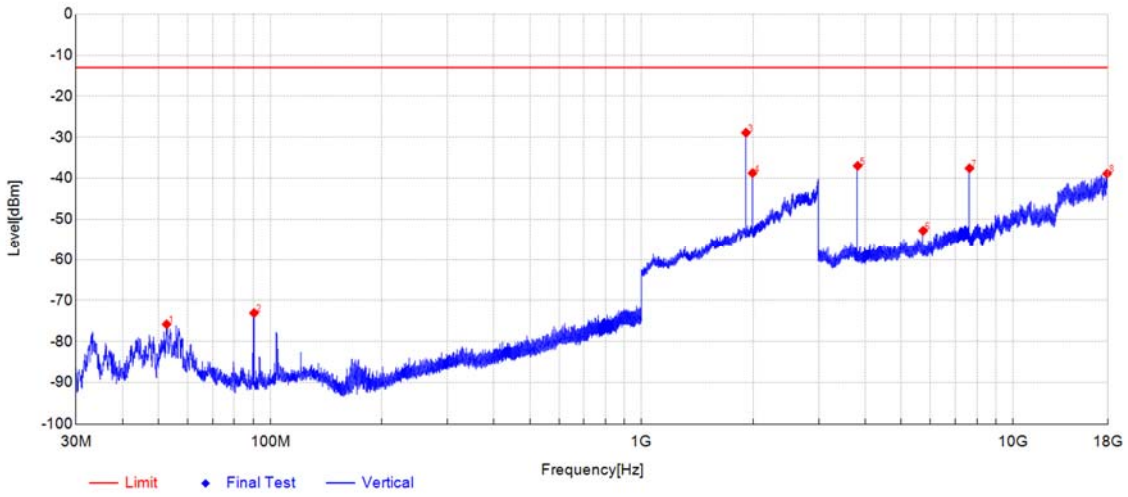


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
52.6506	-54.57	-72.30	-17.7	-13.0	59.3	Vertical	PK	PASS
90.434	-50.01	-72.29	-22.3	-13.0	59.3	Vertical	PK	PASS
1880.176	-48.25	-43.14	5.1	-	-	Vertical	PK	NA
1959.792	-45.19	-41.00	4.2	-	-	Vertical	PK	NA
3000	-54.88	-38.61	16.3	-13.0	25.6	Vertical	PK	PASS
3759.8675	-37.22	-36.14	1.1	-13.0	23.1	Vertical	PK	PASS
7520.2975	-47.74	-35.88	11.9	-13.0	22.9	Vertical	PK	PASS
17354.042	-69.63	-38.85	30.8	-13.0	25.9	Vertical	PK	PASS

Plot for High Channel



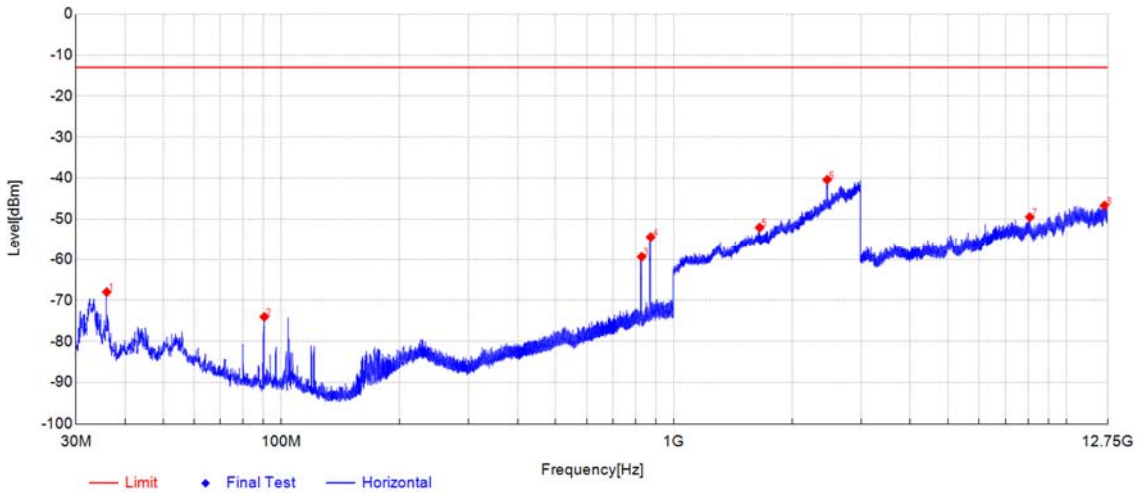
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
33.1527	-50.48	-65.70	-15.2	-13.0	52.7	Horizontal	PK	PASS
90.4825	-51.76	-75.13	-23.4	-13.0	62.1	Horizontal	PK	PASS
1909.782	-29.99	-25.76	4.2	-	-	Horizontal	PK	NA
3819.8694	-40.53	-39.65	0.9	-13.0	26.7	Horizontal	PK	PASS
5729.6166	-59.22	-51.79	7.4	-13.0	38.8	Horizontal	PK	PASS
7639.3637	-54.93	-42.85	12.1	-13.0	29.9	Horizontal	PK	PASS
10982.124	-66.24	-45.27	21.0	-13.0	32.3	Horizontal	PK	PASS
17931.091	-68.72	-38.31	30.4	-13.0	25.3	Horizontal	PK	PASS



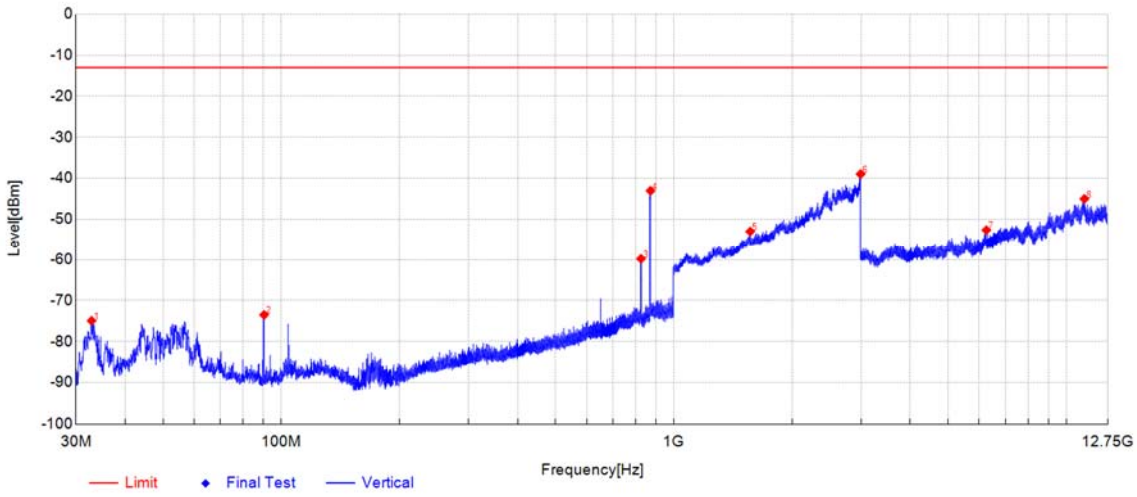
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
52.6021	-58.07	-75.81	-17.7	-13.0	62.8	Vertical	PK	PASS
90.434	-50.80	-73.08	-22.3	-13.0	60.1	Vertical	PK	PASS
1910.182	-33.72	-28.88	4.8	-	-	Vertical	PK	NA
1989.798	-43.12	-38.72	4.4	-	-	Vertical	PK	NA
3819.8694	-37.64	-36.94	0.7	-13.0	23.9	Vertical	PK	PASS
5729.6166	-59.35	-52.80	6.6	-13.0	39.8	Vertical	PK	PASS
7638.895	-48.96	-37.56	11.4	-13.0	24.6	Vertical	PK	PASS
17928.747	-69.44	-38.86	30.6	-13.0	25.9	Vertical	PK	PASS

WCDMA Band V(WCDMA)

Plot for Low Channel

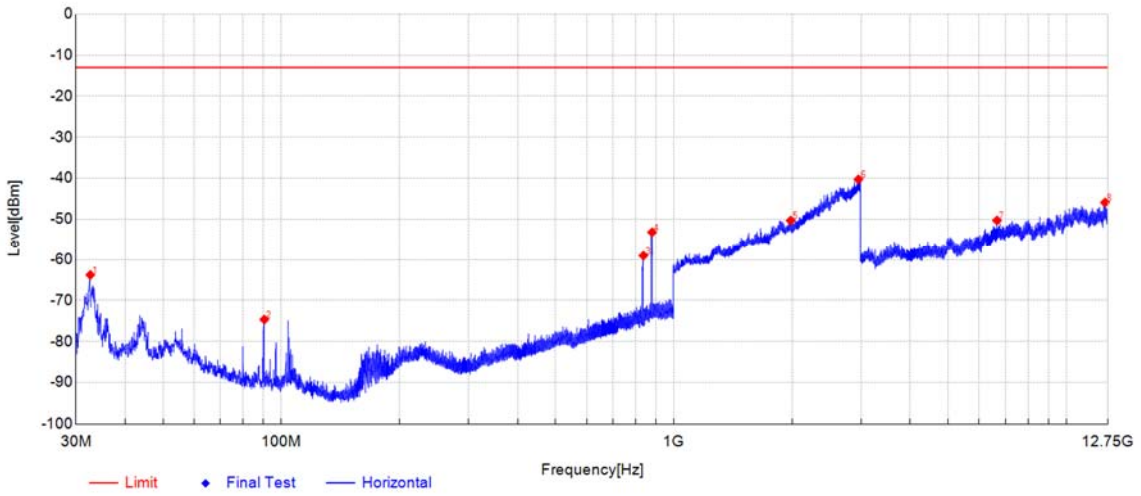


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
35.9173	-52.78	-67.99	-15.2	-13.0	55.0	Horizontal	PK	PASS
90.531	-50.84	-74.02	-23.2	-13.0	61.0	Horizontal	PK	PASS
828.0589	-53.62	-59.36	-5.7	-	-	Horizontal	PK	NA
873.3602	-49.55	-54.37	-4.8	-	-	Horizontal	PK	NA
1655.3311	-54.53	-52.02	2.5	-13.0	39.0	Horizontal	PK	PASS
2458.2917	-50.67	-40.37	10.3	-13.0	27.4	Horizontal	PK	PASS
8072.6911	-62.98	-49.48	13.5	-13.0	36.5	Horizontal	PK	PASS
12509.163	-70.08	-46.67	23.4	-13.0	33.7	Horizontal	PK	PASS

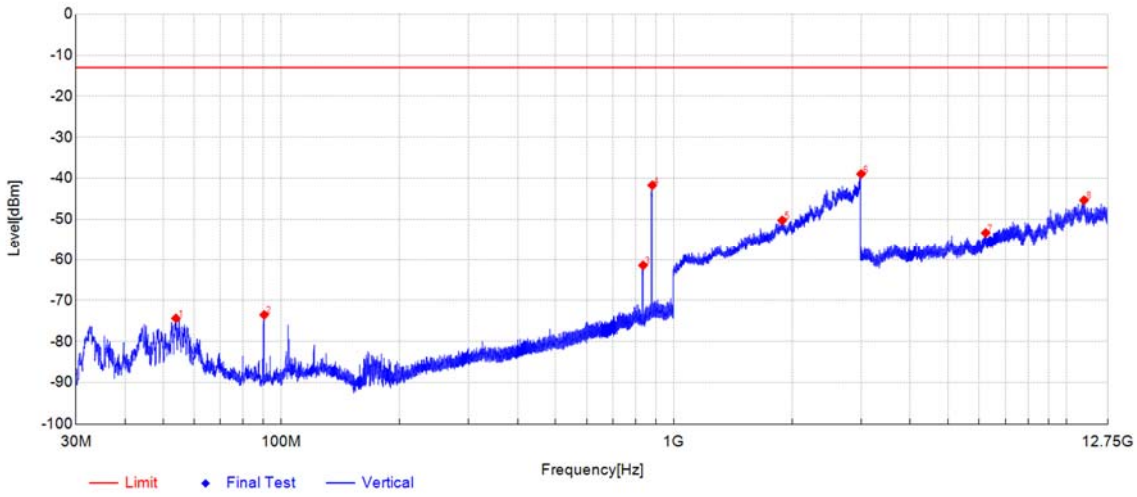


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.8616	-50.71	-74.95	-24.2	-13.0	62.0	Vertical	PK	PASS
90.3855	-51.42	-73.52	-22.1	-13.0	60.5	Vertical	PK	PASS
824.9062	-53.93	-59.83	-5.9	-	-	Vertical	PK	NA
872.3416	-38.29	-43.04	-4.8	-	-	Vertical	PK	NA
1565.7131	-55.58	-52.97	2.6	-13.0	40.0	Vertical	PK	PASS
2991.1982	-55.24	-38.95	16.3	-13.0	26.0	Vertical	PK	PASS
6255.6878	-61.62	-52.63	9.0	-13.0	39.6	Vertical	PK	PASS
11115.818	-67.20	-45.01	22.2	-13.0	32.0	Vertical	PK	PASS

Plot for Mid Channel

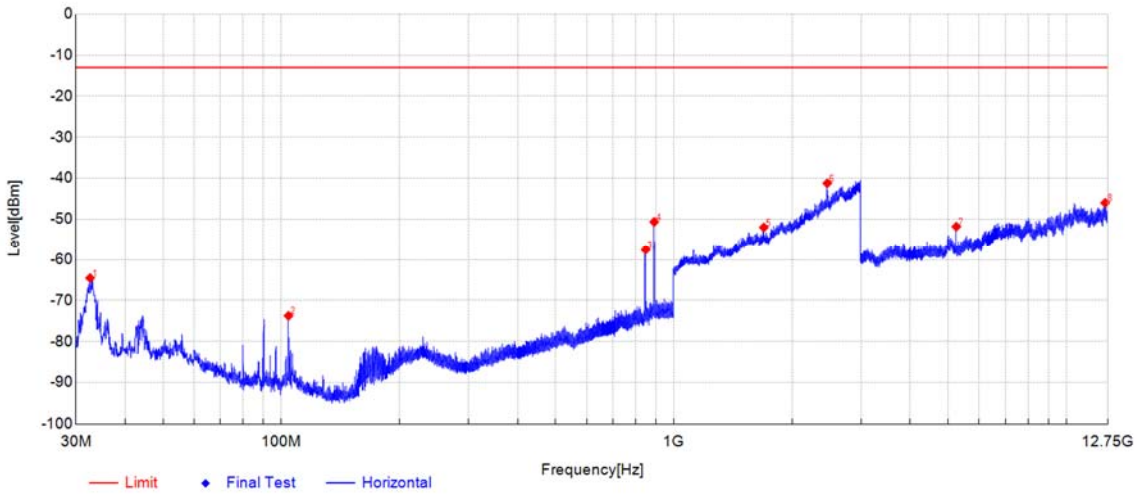


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.6191	-48.60	-63.78	-15.2	-13.0	50.8	Horizontal	PK	PASS
90.531	-51.48	-74.66	-23.2	-13.0	61.7	Horizontal	PK	PASS
836.7893	-53.53	-59.05	-5.5	-	-	Horizontal	PK	NA
880.4415	-48.42	-53.17	-4.8	-	-	Horizontal	PK	NA
1984.5969	-55.67	-50.30	5.4	-13.0	37.3	Horizontal	PK	PASS
2954.3909	-55.39	-40.26	15.1	-13.0	27.3	Horizontal	PK	PASS
6657.8954	-61.63	-50.29	11.3	-13.0	37.3	Horizontal	PK	PASS
12547.677	-69.23	-45.90	23.3	-13.0	32.9	Horizontal	PK	PASS

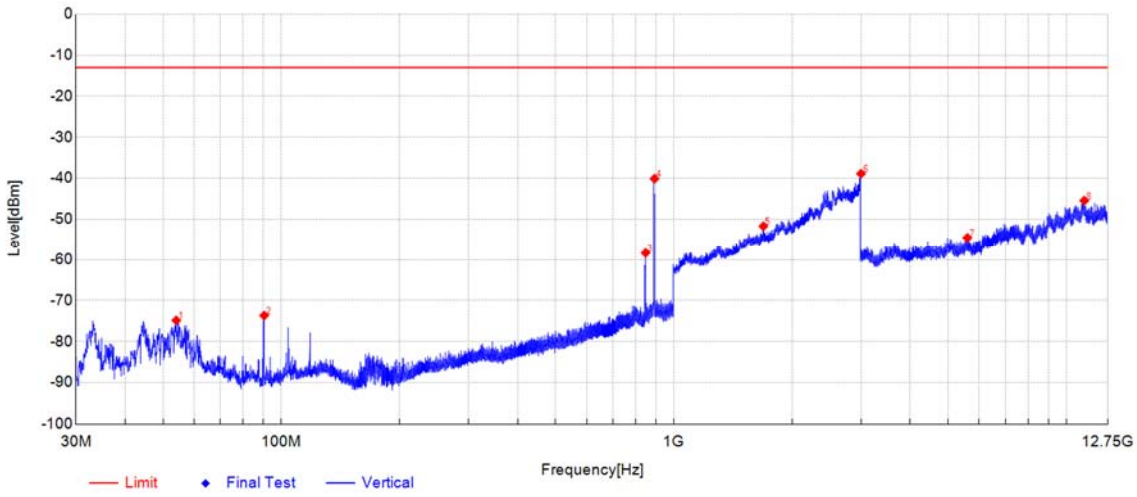


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
53.9117	-57.13	-74.36	-17.2	-13.0	61.4	Vertical	PK	PASS
90.434	-51.41	-73.51	-22.1	-13.0	60.5	Vertical	PK	PASS
835.1403	-55.59	-61.44	-5.9	-	-	Vertical	PK	NA
881.2661	-37.22	-41.69	-4.5	-	-	Vertical	PK	NA
1888.5777	-56.14	-50.25	5.9	-13.0	37.3	Vertical	PK	PASS
3000	-56.19	-38.93	17.3	-13.0	25.9	Vertical	PK	PASS
6233.7492	-62.47	-53.32	9.2	-13.0	40.3	Vertical	PK	PASS
11094.367	-67.73	-45.35	22.4	-13.0	32.4	Vertical	PK	PASS

Plot for High Channel



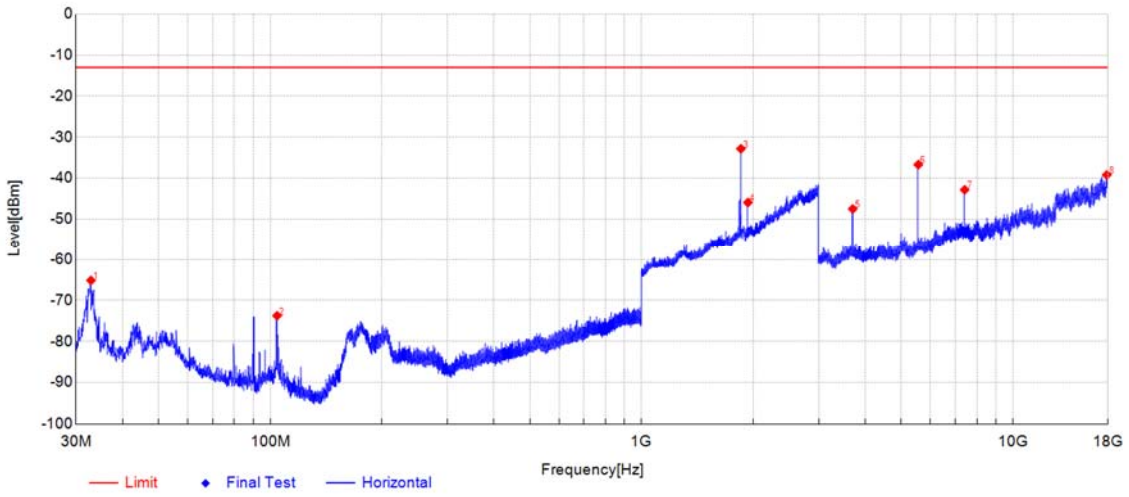
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.5706	-49.35	-64.53	-15.2	-13.0	51.5	Horizontal	PK	PASS
104.3057	-51.25	-73.75	-22.5	-13.0	60.8	Horizontal	PK	PASS
847.8964	-52.38	-57.59	-5.2	-	-	Horizontal	PK	NA
891.5001	-45.95	-50.64	-4.7	-	-	Horizontal	PK	NA
1695.3391	-54.86	-51.99	2.9	-13.0	39.0	Horizontal	PK	PASS
2460.6921	-51.52	-41.21	10.3	-13.0	28.2	Horizontal	PK	PASS
5246.0248	-57.05	-51.79	5.3	-13.0	38.8	Horizontal	PK	PASS
12561.815	-69.29	-45.99	23.3	-13.0	33.0	Horizontal	PK	PASS



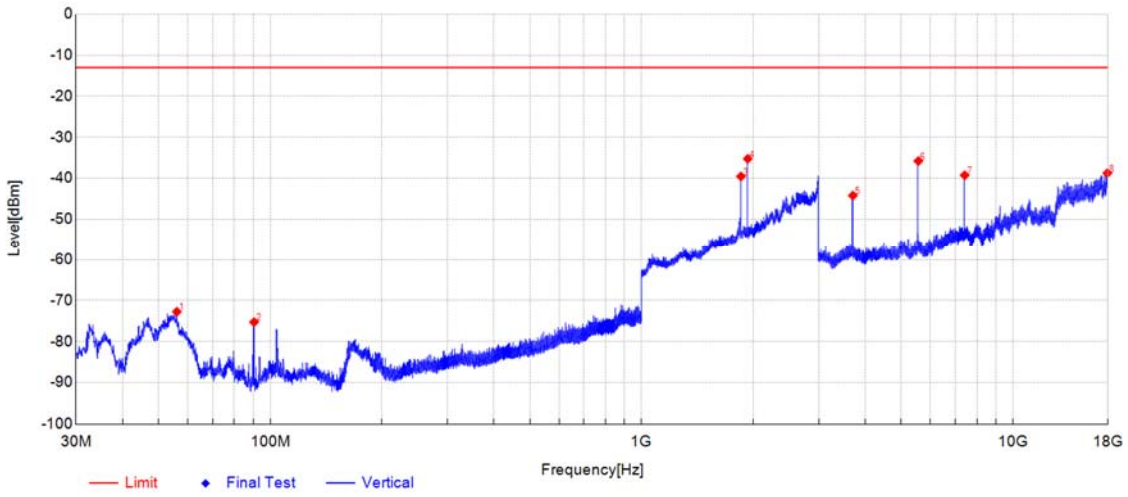
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
54.0087	-57.67	-74.86	-17.2	-13.0	61.9	Vertical	PK	PASS
90.434	-51.58	-73.68	-22.1	-13.0	60.7	Vertical	PK	PASS
847.6539	-52.81	-58.37	-5.6	-	-	Vertical	PK	NA
893.0036	-35.65	-40.08	-4.4	-	-	Vertical	PK	NA
1691.3383	-54.70	-51.67	3.0	-13.0	38.7	Vertical	PK	PASS
2998.7998	-55.99	-38.86	17.1	-13.0	25.9	Vertical	PK	PASS
5596.5548	-61.28	-54.52	6.8	-13.0	41.5	Vertical	PK	PASS
11110.943	-67.68	-45.42	22.3	-13.0	32.4	Vertical	PK	PASS

WCDMA Band II(WCDMA)

Plot for Low Channel

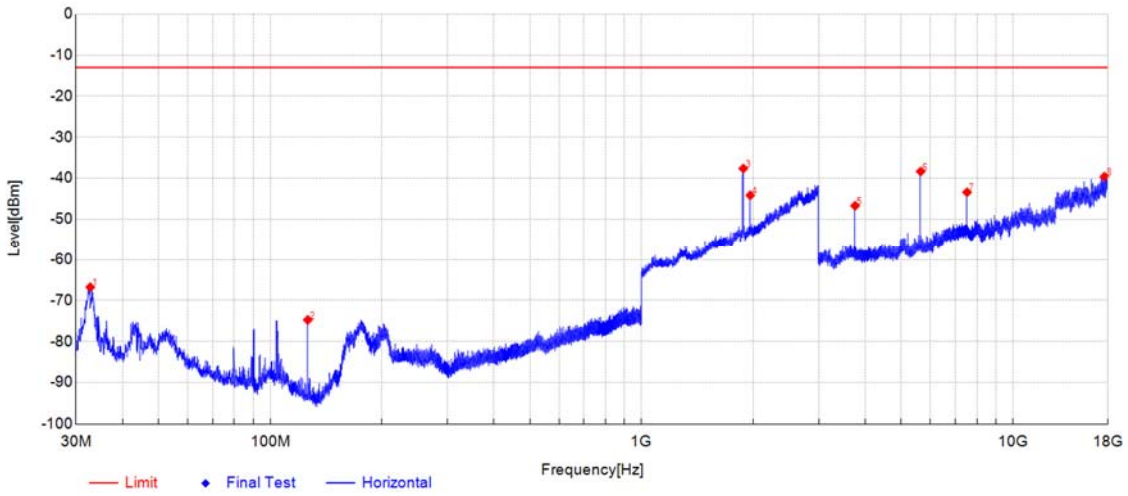


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.9101	-49.92	-65.13	-15.2	-13.0	52.1	Horizontal	PK	PASS
104.3057	-51.04	-73.76	-22.7	-13.0	60.8	Horizontal	PK	PASS
1851.7704	-37.11	-32.81	4.3	-	-	Horizontal	PK	NA
1933.3867	-49.90	-45.92	4.0	-	-	Horizontal	PK	NA
3703.147	-49.23	-47.48	1.8	-13.0	34.5	Horizontal	PK	PASS
5561.7988	-43.37	-36.68	6.7	-13.0	23.7	Horizontal	PK	PASS
7414.8255	-55.31	-42.82	12.5	-13.0	29.8	Horizontal	PK	PASS
17899.215	-69.97	-39.18	30.8	-13.0	26.2	Horizontal	PK	PASS

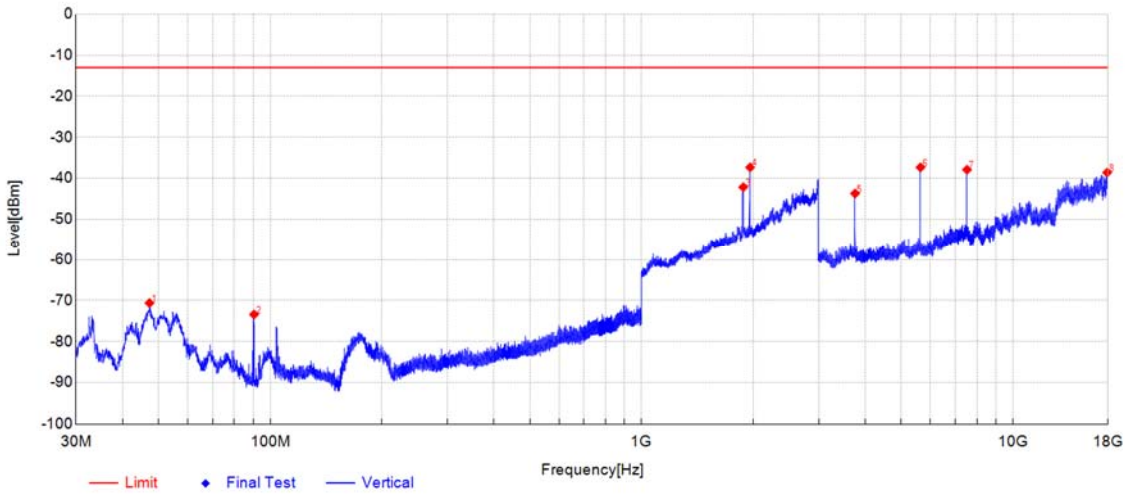


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
56.0458	-55.52	-72.75	-17.2	-13.0	59.8	Vertical	PK	PASS
90.4825	-53.00	-75.28	-22.3	-13.0	62.3	Vertical	PK	PASS
1851.7704	-43.82	-39.53	4.3	-	-	Vertical	PK	NA
1931.7864	-39.10	-35.23	3.9	-	-	Vertical	PK	NA
3707.3659	-45.88	-44.19	1.7	-13.0	31.2	Vertical	PK	PASS
5561.33	-42.22	-35.78	6.4	-13.0	22.8	Vertical	PK	PASS
7415.2942	-51.00	-39.24	11.8	-13.0	26.2	Vertical	PK	PASS
17960.623	-68.94	-38.73	30.2	-13.0	25.7	Vertical	PK	PASS

Plot for Mid Channel

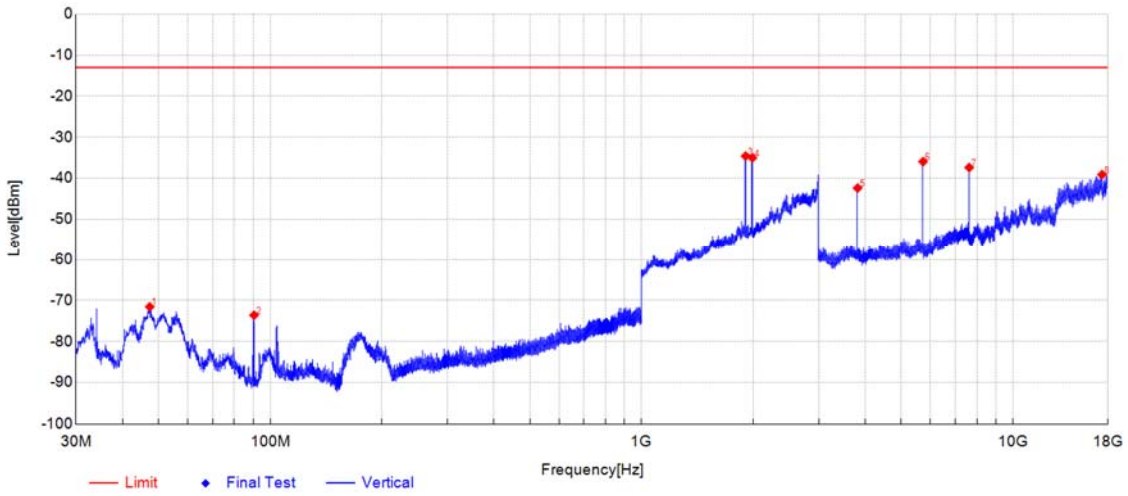


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.7646	-51.56	-66.78	-15.2	-13.0	53.8	Horizontal	PK	PASS
126.1803	-49.06	-74.75	-25.7	-13.0	61.8	Horizontal	PK	PASS
1878.5757	-42.84	-37.61	5.2	-	-	Horizontal	PK	NA
1961.3923	-48.66	-44.15	4.5	-	-	Horizontal	PK	NA
3758.4612	-47.89	-46.69	1.2	-13.0	33.7	Horizontal	PK	PASS
5643.3639	-45.46	-38.35	7.1	-13.0	25.4	Horizontal	PK	PASS
7524.9852	-55.66	-43.40	12.3	-13.0	30.4	Horizontal	PK	PASS
17628.738	-70.86	-39.60	31.3	-13.0	26.6	Horizontal	PK	PASS

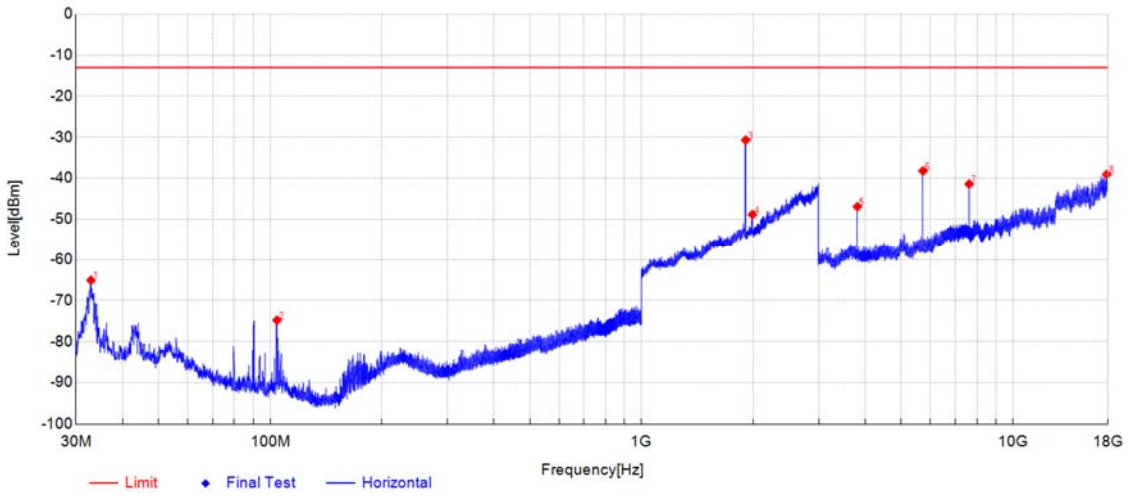


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
47.3154	-51.15	-70.62	-19.5	-13.0	57.6	Vertical	PK	PASS
90.434	-51.14	-73.42	-22.3	-13.0	60.4	Vertical	PK	PASS
1878.5757	-47.21	-42.15	5.1	-	-	Vertical	PK	NA
1960.192	-41.53	-37.32	4.2	-	-	Vertical	PK	NA
3757.5237	-44.80	-43.69	1.1	-13.0	30.7	Vertical	PK	PASS
5636.3324	-44.04	-37.33	6.7	-13.0	24.3	Vertical	PK	PASS
7523.1101	-49.71	-37.88	11.8	-13.0	24.9	Vertical	PK	PASS
17939.529	-69.04	-38.59	30.5	-13.0	25.6	Vertical	PK	PASS

Plot for High Channel



Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
47.3639	-52.10	-71.56	-19.5	-13.0	58.6	Vertical	PK	PASS
90.434	-51.33	-73.61	-22.3	-13.0	60.6	Vertical	PK	PASS
1906.5813	-39.59	-34.58	5.0	-	-	Vertical	PK	NA
1988.1976	-39.48	-35.00	4.5	-	-	Vertical	PK	NA
3817.5255	-43.08	-42.38	0.7	-13.0	29.4	Vertical	PK	PASS
5725.8664	-42.49	-35.94	6.6	-13.0	22.9	Vertical	PK	PASS
7625.3008	-48.68	-37.38	11.3	-13.0	24.4	Vertical	PK	PASS
17377.011	-70.06	-39.11	31.0	-13.0	26.1	Vertical	PK	PASS



Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
32.9101	-49.87	-65.08	-15.2	-13.0	52.1	Horizontal	PK	PASS
104.3057	-52.09	-74.81	-22.7	-13.0	61.8	Horizontal	PK	PASS
1906.5813	-34.95	-30.67	4.3	-	-	Horizontal	PK	NA
1988.5977	-53.19	-48.83	4.4	-	-	Horizontal	PK	NA
3813.3067	-47.74	-46.89	0.9	-13.0	33.9	Horizontal	PK	PASS
5724.9289	-45.62	-38.18	7.4	-13.0	25.2	Horizontal	PK	PASS
7624.3633	-53.34	-41.39	12.0	-13.0	28.4	Horizontal	PK	PASS
17885.152	-69.74	-39.06	30.7	-13.0	26.1	Horizontal	PK	PASS

Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test Items	Uncertainty
Output Power	±2.22dB
Bandwidth	±5%
Conducted Spurious Emission	±2.77dB
Radiated Emission	±2.95dB

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

Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.

4. Test Equipment Utilized

4.1 Conducted Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
EXA Signal Analyzer	MY51511149	N9020A	Agilent	2024.06.19	2025.06.18
Communication Test Station	6200995016	MT8820C	Anritsu	2024.09.11	2025.09.10
Temperature Chamber	S022177101 00089002	KMT-36LF 1A0	KOMEG	2024.09.11	2025.09.10

4.2 List of Software Used

Description	Manufacturer	Software Version
JS36-RSE	Tonscend	5.0.0

4.3 Radiated Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
System Simulator	152038	CMW500	R&S	2024.09.11	2025.09.10
Receiver	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Horn	9120D-963	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.07.03	2025.07.02
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2024.05.30	2025.05.29
Notch Filter	N/A	WRCG-GSM 850	Wainwright	N/A	N/A
Notch Filter	N/A	WRCG-GSM 1900	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV-W Band V	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV-W Band II	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV-W Band IV	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09

END OF REPORT