



TESTREPORT

Applicant Name : HONG KONG YO YOUNG INTELLIGENT CO., LIMITED
Address : 19H MAXGRAND PLAZA NO.3 TAI YAU STREET SAN PO
KONG,KOWLOON,HONGKONG
Report Number : RA230509-25068E-RF-00E
FCC ID: 2A8X4-RAPTOR

Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E; FCC PART 90

Sample Description

Product Type: Smart phone
Model No.: RAPTOR
Multiple Model(s) No.: Air2 Pro ,Air2, B2 Pro, B2, B2 Ultra
Trade Mark: IIIF150
Date Received: 2023/05/09
Report Date: 2023/07/03

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

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EMC Engineer

Approved By:

Candy Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

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FCC -2G,3G,4G

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RA230509-25068E-RF-00E	Original Report	2023-07-03

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Smart phone
Tested model	RAPTOR
Multiple Model(s)	Air2 Pro, Air2, B2 Pro, B2, B2 Ultra (model difference see product declaration letter of similarity)
Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 13: 777-787MHz(TX); 746-756MHz(RX) LTE Band 17: 704-716MHz(TX); 734-746MHz(RX) LTE Band 25: 1850-1915MHz(TX); 1930-1995MHz(RX) LTE Band 26: 814-849MHz(TX); 859-894MHz(RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 40 Low: 2305-2315MHz(TX/RX) LTE Band 40 Upper: 2350-2360MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX) CDMA BC0: 824-849MHz(TX); 869-894MHz(RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	Main Antenna: GSM850/WCDMA B5/LTE B5/LTE B26/CDMA BC0: -5.69dBi WCDMA B2: 0.93dBi, LTE B13: -0.14dBi, LTE B12/B17: -2.65dBi DIV antenna : PCS1900/ LTE B2/LTE B25: 1.41dBi, LTE B7: 1.53dBi LTE B38/LTE B41: 1.68dBi, LTE B40: 1.59dBi WCDMA B4/LTE B4/LTE B66: 1.4dBi (provided by the applicant)
Voltage Range	DC 3.89V from battery or DC 3.3-20V from adapter
Test Sample serial number	25M6-2 for Radiated Emissions Test 25M6-1 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Extreme condition*	L.V.: Low Voltage 3.4VDC N.V.: Normal Voltage 3.89VDC H.V.: High Voltage 4.48VDC (provided by the applicant)
Adapter information	Model: FC462U Input: 100-240V, 50/60Hz, 1.5A Max Output: DC 5V, 3A or DC 9V, 3A or DC 12V, 3A or DC 15V, 3A or DC 20V, 3.25A Max PPS: 3.3-20V, 3.25A Max

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part 24-Subpart E, Part 27, and Part 90 of the Federal Communication Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous Wireless Communications Services
Part 90 – Private Land Mobile Radio Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF Frequency		0.082×10^{-7}
RF output power, conducted		0.71dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz - 30MHz	2.06dB
	30MHz - 1GHz	5.08dB
	1GHz - 18GHz	4.96dB
	18GHz - 26.5GHz	5.16dB
	26.5GHz - 40GHz	4.64dB
Temperature		1°C
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0016. The Registration Number is 30241.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Test was performed as below table:

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.6	848.8
PCS1900	0.25	1850.2	1880	1909.8
CDMA BC0	1.25	824.7	836.52	848.31
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704.0	707.5	711
LTE B13	5	779.5	782	784.5
	10	/	782	/
LTE B17	5	706.5	710	713.5
	10	709	710	711

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
LTE B25	1.4	1850.7	1882.5	1914.3
	3	1851.5	1882.5	1913.5
	5	1852.5	1882.5	1912.5
	10	1855	1882.5	1910
	15	1857.5	1882.5	1907.5
	20	1860	1882.5	1905
LTE B26(Part 22H)	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
	15	831.5	836.5	841.5
LTE B26(Part 90S)	1.4	814.7	819	823.3
	3	815.5	819	822.5
	5	816.5	819	821.5
	10	/	819	/
LTE B26 (Part 22H&Part 90 cross channel)	1.4	/	824	/
	3	/	824	/
	5	/	824	/
	10	/	824	/
	15	821.5	824	/
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE B40 Low	5	2307.5	2310	2312.5
	10	/	2310	/
LTE B40 Upper	5	2352.5	2355	2357.5
	10	/	2355	/
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770

Equipment Modifications

No modification was made to the EUT.

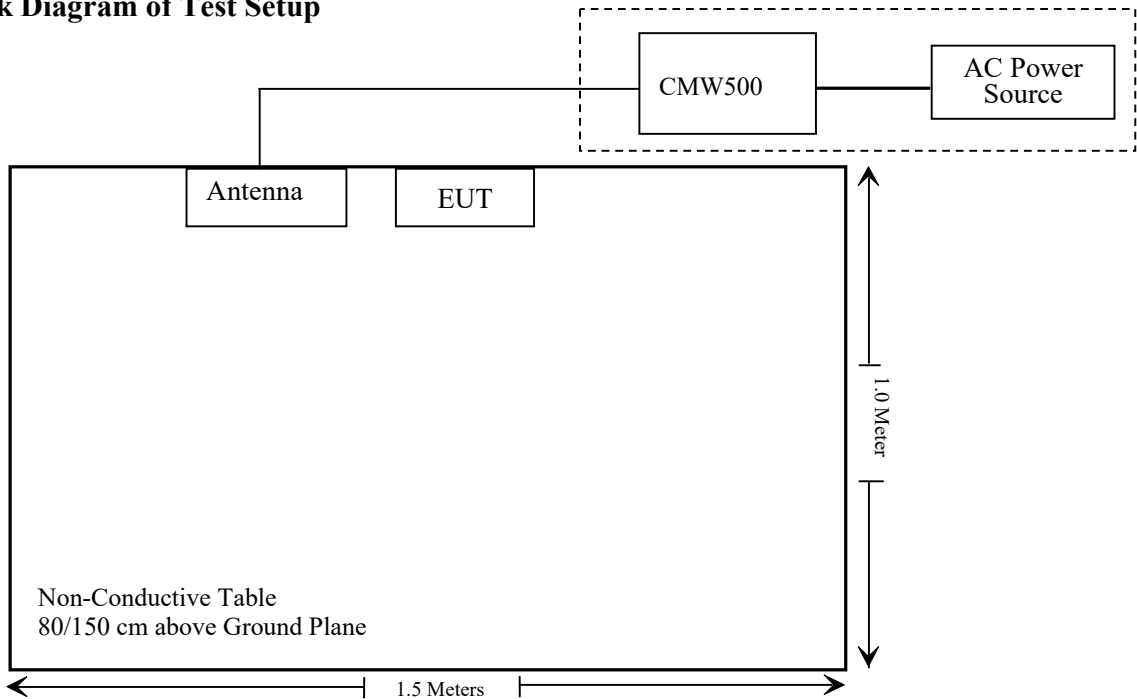
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-11621 8-UY

Support Cable Description

Cable Description	Length (m)	From / Port	To
Unshielded Detachable AC Cable	1.2	AC Power	CMW500

Block Diagram of Test Setup



Note: the support table edge was flush with center of turntable

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 1.1307 ,§2.1093	RF Exposure (SAR)	Compliant*
§2.1046; § 22.913 (a) (d); § 24.232 (c) (d); §27.50; §90.635	RF Output Power	Compliant
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53 §90.209	Occupied Bandwidth	Compliant
§ 2.1051; §22.917 (a); § 24.238 (a); §27.53; §90.691	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53 §90.691	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53 §90.691	Band Edge	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54; §90.213	Frequency stability	Compliant

Note: * Please refer to SAR report number: RA230509-25068E-SA.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	Test Receiver	ESR	102725	2022/11/25	2023/11/24
Rohde & Schwarz	Spectrum Analyzer	FSV40	101949	2022/11/25	2023/11/24
SONOMA INSTRUMENT	Amplifier	310 N	186131	2022/11/08	2023/11/07
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2022/11/08	2023/11/07
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2022/11/08	2023/11/07
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.11	N1000	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.12	N040	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.13	N300	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.14	N800	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.15	N600	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.16	N650	2022/11/25	2023/11/24
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2023/02/14	2026/02/13
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2022/12/26	2025/12/25
Schwarzbeck	Horn Antenna	BBHA9120D	837	2023/02/22	2026/02/21
PASTERNAK	Horn Antenna	PE9852/2F-20	1120 (ATC-BA-024-1)	2023/01/04	2026/01/03
PASTERNAK	Horn Antenna	PE9852/2F-20	1120 (ATC-BA-025-1)	2023/01/04	2026/01/03
PASTERNAK	Horn Antenna	PE9850/2F-20	720 (ATC-BA-024)	2023/01/04	2026/01/03
PASTERNAK	Horn Antenna	PE9850/2F-20	720 (ATC-BA-025)	2023/01/04	2026/01/03
Unknown	RF Coaxial Cable	No.16	N200	2022/11/25	2023/11/24
Agilent	Signal Generator	N5183A	MY51040755	2022/11/25	2023/11/24

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101948	2022/11/25	2023/11/24
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200982	2022/07/04	2023/07/03
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2022/11/25	2023/11/24
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2022/11/25	2023/11/24
HP	6dB Attenuator	3dB Attenuator	06151	2022/11/25	2023/11/24
Fluke	Multi Meter	45	7664009	2022/11/23	2023/11/22
Manson	DC Power Source	KPS-6604	ATCS-205	NCR	NCR
BACL	Temp. & Humid. Chamber	BTH-150-40	30192	2023/02/09	2024/02/08
Unknown	RF Coaxial Cable	No.31	RF-01	Each time	

* Statement of Traceability: Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307(b)&§2.1093 - RF EXPOSURE INFORMATION

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: RA230509-25068E-SA.

FCC§2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E& 27& 90, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046,§ 22.913 (a) (d)&§ 24.232(c) (d); §27.50 ; §90.635- RF OUTPUT POWER

Applicable Standard

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (c),mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

According to §27.50(a), For mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, *except that* for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305–2315 MHz and 2350–2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305–2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

According to §27.50(b), Portable stations (hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

According to §27.50(c), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

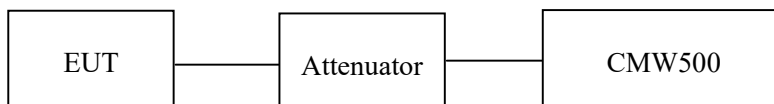
According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2496-2690MHz.

According to §90.635, the maximum ERP must not exceed 100Watts (50dBm) for 814-824MHz.

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.



Note: the path loss (cable loss and attenuator) has including in the test result.

Test Data**Environmental Conditions**

Temperature:	26.5~28.8 °C
Relative Humidity:	46.8~51.6%
ATM Pressure:	101.0 kPa

The testing was performed by Jacob Huang from 2023-05-21 to 2023-06-07.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP (dBm)	Limit (dBm)
GSM	128	824.2	32.2	23.78	38.45
	190	836.6	32.4	23.98	38.45
	251	848.8	32.6	24.18	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	32.05	30.97	28.98	27.97	23.63	22.55	20.56	19.55	38.45
	190	836.6	32.25	31.19	29.20	28.18	23.83	22.77	20.78	19.76	38.45
	251	848.8	32.45	31.41	29.55	28.35	24.03	22.99	21.13	19.93	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.2	25.45	24.13	21.91	20.60	17.03	15.71	13.49	12.18	38.45
	190	836.6	25.40	24.08	21.85	20.59	16.98	15.66	13.43	12.17	38.45
	251	848.8	25.29	23.95	21.70	20.46	16.87	15.53	13.28	12.04	38.45

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		23.13	23.26	23.43	14.71	14.84	15.01
	HSDPA	1	22.06	22.19	22.35	13.64	13.77	13.93
		2	22.05	22.12	22.36	13.63	13.70	13.94
		3	22.04	22.13	22.28	13.62	13.71	13.86
		4	22.06	22.15	22.32	13.64	13.73	13.90
	HSUPA	1	21.60	21.80	21.92	13.18	13.38	13.50
		2	21.62	21.78	21.88	13.20	13.36	13.46
		3	21.63	21.82	21.89	13.21	13.40	13.47
		4	21.58	21.83	21.93	13.16	13.41	13.51
		5	21.56	21.84	21.90	13.14	13.42	13.48
	HSPA+	1	21.52	21.562	21.54	13.10	13.14	13.12

2G:**RC1+SO55:**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
CDMA 1*RTT (BC0)	1013	824.70	23.45	15.03	38.45
	384	836.52	23.64	15.22	38.45
	777	848.31	23.69	15.27	38.45

RC3+SO55:

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
CDMA 1*RTT (BC0)	1013	824.70	23.79	15.37	38.45
	384	836.52	23.92	15.50	38.45
	777	848.31	24.23	15.81	38.45

RC3+SO32(FCH):

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
CDMA 1*RTT (BC0)	1013	824.70	23.15	14.73	38.45
	384	836.52	23.35	14.93	38.45
	777	848.31	23.42	15.00	38.45

RC3+SO32(SCH):

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
CDMA 1*RTT (BC0)	1013	824.70	23.26	14.84	38.45
	384	836.52	23.45	15.03	38.45
	777	848.31	23.58	15.16	38.45

3G:**RTAP 153.6kbps Subtype 0:**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
CDMA EV-DO (BC0)	1013	824.70	23.49	15.07	38.45
	384	836.52	23.61	15.19	38.45
	777	848.31	23.80	15.38	38.45

RETAP 4096pbs Subtype 2:

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
CDMA EV-DO (BC0)	1013	824.70	23.80	15.38	38.45
	384	836.52	23.91	15.49	38.45
	777	848.31	24.11	15.69	38.45

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)– Cable loss(dB)
 GSM850/WCDMA Band5/CDMA BC0: Antenna Gain = -5.69dBi = -7.84dBd (0dBd=2.15dBi)
 Cable Loss=0.58dB*(provided by the applicant)
 Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	29.5	30.91	33
	661	1880.0	29.4	30.81	33
	810	1909.8	29.5	30.91	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	29.48	28.52	26.50	25.43	30.89	29.93	27.91	26.84	33
	661	1880.0	29.42	28.44	26.37	25.30	30.83	29.85	27.78	26.71	33
	810	1909.8	29.52	28.56	26.44	25.34	30.93	29.97	27.85	26.75	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	25.43	24.41	22.32	21.34	26.84	25.82	23.73	22.75	33
	661	1880.0	25.29	24.21	22.14	21.19	26.70	25.62	23.55	22.60	33
	810	1909.8	24.96	23.90	21.95	20.92	26.37	25.31	23.36	22.33	33

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

PCS1900: Antenna Gain = 1.41dBi

Limit: EIRP≤33dBm

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		23.38	23.23	23.13	23.47	23.32	23.22
	HSDPA	1	22.33	22.17	22.04	22.42	22.26	22.13
		2	22.35	22.14	22.05	22.44	22.23	22.14
		3	22.37	22.16	22.06	22.46	22.25	22.15
		4	22.41	22.18	22.10	22.50	22.27	22.19
	HSUPA	1	21.96	21.70	21.66	22.05	21.79	21.75
		2	21.95	21.72	21.65	22.04	21.81	21.74
		3	21.93	21.75	21.63	22.02	21.84	21.72
		4	21.96	21.70	21.67	22.05	21.79	21.76
		5	21.98	21.72	21.68	22.07	21.81	21.77
	HSPA+	1	21.88	21.85	21.82	21.97	21.94	21.91

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)– Cable loss(dB)

WCDMA Band2: Antenna Gain =0.93dBi

Cable Loss=0.84dB*(which provided by the applicant)

Limit: EIRP≤33dBm

AWS Band

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		23.25	23.09	23.32	24.65	24.49	24.72
	HSDPA	1	22.19	22.04	22.25	23.59	23.44	23.65
		2	22.12	22.05	22.21	23.52	23.45	23.61
		3	22.15	22.06	22.26	23.55	23.46	23.66
		4	22.16	22.08	22.23	23.56	23.48	23.63
	HSUPA	1	21.75	21.59	21.88	23.15	22.99	23.28
		2	21.74	21.56	21.82	23.14	22.96	23.22
		3	21.76	21.58	21.84	23.16	22.98	23.24
		4	21.73	21.55	21.86	23.13	22.95	23.26
		5	21.71	21.59	21.88	23.11	22.99	23.28
	HSPA+	1	21.56	21.54	21.53	22.96	22.94	22.93

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For WCDMA Band4: Antenna Gain =1.4dBi

Limit: EIRP≤30dBm

LTE Band 2

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.39	22.29	22.26	23.80	23.70	23.67
		RB1#3	22.45	22.34	22.28	23.86	23.75	23.69
		RB1#5	22.39	22.29	22.25	23.80	23.70	23.66
		RB3#0	22.47	22.41	22.32	23.88	23.82	23.73
		RB3#3	22.52	22.41	22.34	23.93	23.82	23.75
		RB6#0	21.58	21.50	21.44	22.99	22.91	22.85
	16QAM	RB1#0	21.39	21.27	21.34	22.80	22.68	22.75
		RB1#3	21.46	21.34	21.42	22.87	22.75	22.83
		RB1#5	21.39	21.29	21.33	22.80	22.70	22.74
		RB3#0	21.56	21.57	21.30	22.97	22.98	22.71
		RB3#3	21.56	21.62	21.28	22.97	23.03	22.69
		RB6#0	20.51	20.50	20.43	21.92	21.91	21.84
3.0	QPSK	RB1#0	22.29	22.17	22.16	23.70	23.58	23.57
		RB1#8	22.36	22.29	22.23	23.77	23.70	23.64
		RB1#14	22.26	22.17	22.14	23.67	23.58	23.55
		RB6#0	21.40	21.39	21.32	22.81	22.80	22.73
		RB6#9	21.43	21.38	21.29	22.84	22.79	22.70
		RB15#0	21.45	21.39	21.33	22.86	22.80	22.74
	16QAM	RB1#0	21.31	21.78	21.25	22.72	23.19	22.66
		RB1#8	21.37	21.88	21.35	22.78	23.29	22.76
		RB1#14	21.33	21.75	21.26	22.74	23.16	22.67
		RB6#0	20.45	20.50	20.35	21.86	21.91	21.76
		RB6#9	20.45	20.44	20.40	21.86	21.85	21.81
		RB15#0	20.53	20.46	20.26	21.94	21.87	21.67

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.37	22.30	22.20	23.78	23.71	23.61
		RB1#13	22.49	22.37	22.31	23.90	23.78	23.72
		RB1#24	22.37	22.26	22.21	23.78	23.67	23.62
		RB15#0	21.38	21.34	21.31	22.79	22.75	22.72
		RB15#10	21.38	21.28	21.18	22.79	22.69	22.59
		RB25#0	21.39	21.29	21.21	22.80	22.70	22.62
	16QAM	RB1#0	21.63	21.34	21.07	23.04	22.75	22.48
		RB1#13	21.78	21.48	21.23	23.19	22.89	22.64
		RB1#24	21.66	21.35	21.10	23.07	22.76	22.51
		RB15#0	20.35	20.35	20.31	21.76	21.76	21.72
		RB15#10	20.36	20.32	20.19	21.77	21.73	21.60
		RB25#0	20.40	20.34	20.28	21.81	21.75	21.69
10.0	QPSK	RB1#0	22.42	22.36	22.22	23.83	23.77	23.63
		RB1#25	22.51	22.37	22.27	23.92	23.78	23.68
		RB1#49	22.49	22.34	22.25	23.90	23.75	23.66
		RB25#0	21.39	21.32	21.28	22.80	22.73	22.69
		RB25#25	21.45	21.29	21.17	22.86	22.70	22.58
		RB50#0	21.44	21.32	21.20	22.85	22.73	22.61
	16QAM	RB1#0	21.57	21.35	21.81	22.98	22.76	23.22
		RB1#25	21.61	21.38	21.87	23.02	22.79	23.28
		RB1#49	21.58	21.31	21.81	22.99	22.72	23.22
		RB25#0	20.44	20.42	20.32	21.85	21.83	21.73
		RB25#25	20.47	20.40	20.22	21.88	21.81	21.63
		RB50#0	20.42	20.36	20.23	21.83	21.77	21.64

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.33	22.33	22.23	23.74	23.74	23.64
		RB1#38	22.47	22.42	22.34	23.88	23.83	23.75
		RB1#74	22.34	22.25	22.20	23.75	23.66	23.61
		RB36#0	21.42	21.37	21.18	22.83	22.78	22.59
		RB36#39	21.45	21.28	21.21	22.86	22.69	22.62
		RB75#0	21.43	21.33	21.24	22.84	22.74	22.65
	16QAM	RB1#0	21.95	21.45	21.59	23.36	22.86	23.00
		RB1#38	22.07	21.51	21.71	23.48	22.92	23.12
		RB1#74	21.95	21.36	21.59	23.36	22.77	23.00
		RB36#0	20.42	20.33	20.19	21.83	21.74	21.60
		RB36#39	20.44	20.31	20.15	21.85	21.72	21.56
		RB75#0	20.45	20.32	20.22	21.86	21.73	21.63
20.0	QPSK	RB1#0	22.31	22.21	22.16	23.72	23.62	23.57
		RB1#50	22.52	22.39	22.33	23.93	23.80	23.74
		RB1#99	22.36	22.15	22.16	23.77	23.56	23.57
		RB50#0	21.42	21.33	21.19	22.83	22.74	22.60
		RB50#50	21.43	21.27	21.13	22.84	22.68	22.54
		RB100#0	21.43	21.31	21.17	22.84	22.72	22.58
	16QAM	RB1#0	21.51	21.82	21.42	22.92	23.23	22.83
		RB1#50	21.74	21.95	21.61	23.15	23.36	23.02
		RB1#99	21.50	21.71	21.47	22.91	23.12	22.88
		RB50#0	20.40	20.36	20.18	21.81	21.77	21.59
		RB50#50	20.46	20.27	20.06	21.87	21.68	21.47
		RB100#0	20.45	20.34	20.19	21.86	21.75	21.60

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band2: Antenna Gain = 1.41dBi

Limit: EIRP≤33dBm

LTE Band 4

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.15	22.07	22.14	23.55	23.47	23.54
		RB1#3	22.21	22.13	22.18	23.61	23.53	23.58
		RB1#5	22.13	22.09	22.16	23.53	23.49	23.56
		RB3#0	22.25	22.20	22.25	23.65	23.60	23.65
		RB3#3	22.29	22.21	22.23	23.69	23.61	23.63
		RB6#0	21.32	21.25	21.31	22.72	22.65	22.71
	16QAM	RB1#0	21.15	21.08	21.21	22.55	22.48	22.61
		RB1#3	21.23	21.14	21.30	22.63	22.54	22.70
		RB1#5	21.14	21.10	21.20	22.54	22.50	22.60
		RB3#0	21.35	21.41	21.21	22.75	22.81	22.61
		RB3#3	21.34	21.42	21.24	22.74	22.82	22.64
		RB6#0	20.32	20.33	20.42	21.72	21.73	21.82
3.0	QPSK	RB1#0	22.00	21.98	21.98	23.40	23.38	23.38
		RB1#8	22.09	22.07	22.11	23.49	23.47	23.51
		RB1#14	21.90	21.98	21.99	23.30	23.38	23.39
		RB6#0	21.17	21.12	21.13	22.57	22.52	22.53
		RB6#9	21.17	21.12	21.19	22.57	22.52	22.59
		RB15#0	21.16	21.13	21.16	22.56	22.53	22.56
	16QAM	RB1#0	21.04	21.07	20.97	22.44	22.47	22.37
		RB1#8	21.12	21.18	21.11	22.52	22.58	22.51
		RB1#14	20.98	21.04	21.04	22.38	22.44	22.44
		RB6#0	20.19	20.22	20.18	21.59	21.62	21.58
		RB6#9	20.18	20.28	20.20	21.58	21.68	21.60
		RB15#0	20.30	20.17	20.26	21.70	21.57	21.66

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.28	22.26	22.24	23.68	23.66	23.64
		RB1#13	22.37	22.37	22.41	23.77	23.77	23.81
		RB1#24	22.13	22.27	22.29	23.53	23.67	23.69
		RB15#0	21.28	21.27	21.29	22.68	22.67	22.69
		RB15#10	21.31	21.28	21.29	22.71	22.68	22.69
		RB25#0	21.26	21.24	21.29	22.66	22.64	22.69
	16QAM	RB1#0	21.37	21.12	21.55	22.77	22.52	22.95
		RB1#13	21.41	21.23	21.68	22.81	22.63	23.08
		RB1#24	21.26	21.09	21.56	22.66	22.49	22.96
		RB15#0	20.37	20.37	20.33	21.77	21.77	21.73
		RB15#10	20.38	20.38	20.33	21.78	21.78	21.73
		RB25#0	20.40	20.40	20.39	21.80	21.80	21.79
10.0	QPSK	RB1#0	22.18	22.04	22.11	23.58	23.44	23.51
		RB1#25	22.22	21.99	22.17	23.62	23.39	23.57
		RB1#49	22.16	22.07	22.14	23.56	23.47	23.54
		RB25#0	21.07	20.91	21.06	22.47	22.31	22.46
		RB25#25	21.15	21.06	21.09	22.55	22.46	22.49
		RB50#0	21.14	21.00	21.07	22.54	22.40	22.47
	16QAM	RB1#0	21.19	21.68	21.21	22.59	23.08	22.61
		RB1#25	21.24	21.66	21.29	22.64	23.06	22.69
		RB1#49	21.13	21.66	21.27	22.53	23.06	22.67
		RB25#0	20.23	20.05	20.18	21.63	21.45	21.58
		RB25#25	20.31	20.19	20.17	21.71	21.59	21.57
		RB50#0	20.20	20.08	20.11	21.60	21.48	21.51

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.11	21.97	21.98	23.51	23.37	23.38
		RB1#38	22.23	22.17	22.14	23.63	23.57	23.54
		RB1#74	22.10	22.06	22.10	23.50	23.46	23.50
		RB36#0	21.09	20.95	21.05	22.49	22.35	22.45
		RB36#39	21.09	21.11	21.10	22.49	22.51	22.50
		RB75#0	21.13	21.04	21.11	22.53	22.44	22.51
	16QAM	RB1#0	21.24	21.37	21.58	22.64	22.77	22.98
		RB1#38	21.37	21.55	21.75	22.77	22.95	23.15
		RB1#74	21.18	21.43	21.70	22.58	22.83	23.10
		RB36#0	20.17	20.02	20.15	21.57	21.42	21.55
		RB36#39	20.20	20.16	20.15	21.60	21.56	21.55
		RB75#0	20.20	20.08	20.15	21.60	21.48	21.55
20.0	QPSK	RB1#0	21.94	21.82	21.96	23.34	23.22	23.36
		RB1#50	22.09	22.16	22.19	23.49	23.56	23.59
		RB1#99	21.92	22.01	22.12	23.32	23.41	23.52
		RB50#0	21.02	20.97	21.03	22.42	22.37	22.43
		RB50#50	21.02	21.12	21.07	22.42	22.52	22.47
		RB100#0	21.00	21.02	21.02	22.40	22.42	22.42
	16QAM	RB1#0	21.53	21.14	21.14	22.93	22.54	22.54
		RB1#50	21.72	21.48	21.39	23.12	22.88	22.79
		RB1#99	21.54	21.27	21.30	22.94	22.67	22.70
		RB50#0	20.03	20.04	20.07	21.43	21.44	21.47
		RB50#50	20.10	20.18	20.16	21.50	21.58	21.56
		RB100#0	20.10	20.10	20.11	21.50	21.50	21.51

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band4: Antenna Gain =1.4dBi

Limit: EIRP≤30dBm

LTE Band5

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.83	23.01	23.21	14.41	14.59	14.79
		RB1#3	22.90	23.04	23.27	14.48	14.62	14.85
		RB1#5	22.88	23.03	23.23	14.46	14.61	14.81
		RB3#0	22.95	23.13	23.33	14.53	14.71	14.91
		RB3#3	22.97	23.12	23.33	14.55	14.70	14.91
		RB6#0	22.03	22.21	22.41	13.61	13.79	13.99
	16QAM	RB1#0	21.84	22.01	22.34	13.42	13.59	13.92
		RB1#3	21.91	22.05	22.39	13.49	13.63	13.97
		RB1#5	21.87	22.00	22.29	13.45	13.58	13.87
		RB3#0	22.01	22.27	22.24	13.59	13.85	13.82
		RB3#3	22.02	22.31	22.28	13.60	13.89	13.86
		RB6#0	21.00	21.23	21.46	12.58	12.81	13.04
3.0	QPSK	RB1#0	22.80	22.92	23.07	14.38	14.50	14.65
		RB1#8	22.86	23.03	23.20	14.44	14.61	14.78
		RB1#14	22.78	22.96	23.12	14.36	14.54	14.70
		RB6#0	21.93	22.09	22.30	13.51	13.67	13.88
		RB6#9	21.97	22.16	22.37	13.55	13.74	13.95
		RB15#0	21.92	22.18	22.32	13.50	13.76	13.90
	16QAM	RB1#0	21.86	22.02	22.12	13.44	13.60	13.70
		RB1#8	22.01	22.19	22.23	13.59	13.77	13.81
		RB1#14	21.93	22.11	22.16	13.51	13.69	13.74
		RB6#0	21.00	21.11	21.27	12.58	12.69	12.85
		RB6#9	21.06	21.25	21.28	12.64	12.83	12.86
		RB15#0	21.00	21.06	21.39	12.58	12.64	12.97

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.04	23.12	23.27	14.62	14.70	14.85
		RB1#13	23.18	23.25	23.44	14.76	14.83	15.02
		RB1#24	23.07	23.21	23.35	14.65	14.79	14.93
		RB15#0	22.04	22.20	22.43	13.62	13.78	14.01
		RB15#10	22.07	22.25	22.37	13.65	13.83	13.95
		RB25#0	22.05	22.23	22.40	13.63	13.81	13.98
	16QAM	RB1#0	22.32	22.22	22.16	13.90	13.80	13.74
		RB1#13	22.47	22.38	22.33	14.05	13.96	13.91
		RB1#24	22.35	22.32	22.29	13.93	13.90	13.87
		RB15#0	21.02	21.25	21.51	12.60	12.83	13.09
		RB15#10	21.06	21.24	21.39	12.64	12.82	12.97
		RB25#0	21.08	21.26	21.46	12.66	12.84	13.04
10.0	QPSK	RB1#0	23.05	23.22	23.27	14.63	14.80	14.85
		RB1#25	23.15	23.30	23.36	14.73	14.88	14.94
		RB1#49	23.19	23.34	23.46	14.77	14.92	15.04
		RB25#0	22.01	22.22	22.28	13.59	13.80	13.86
		RB25#25	22.14	22.29	22.29	13.72	13.87	13.87
		RB50#0	22.04	22.26	22.30	13.62	13.84	13.88
	16QAM	RB1#0	22.20	22.19	22.88	13.78	13.77	14.46
		RB1#25	22.32	22.32	22.94	13.90	13.90	14.52
		RB1#49	22.28	22.34	22.97	13.86	13.92	14.55
		RB25#0	21.03	21.34	21.37	12.61	12.92	12.95
		RB25#25	21.17	21.34	21.39	12.75	12.92	12.97
		RB50#0	21.03	21.26	21.29	12.61	12.84	12.87

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)

For Band5: Antenna Gain = -5.69dBi = -7.84dBd (0dBd=2.15dBi)

Cable Loss=0.58dB*(provided by the applicant)

Limit: ERP≤38.45dBm

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.34	22.16	21.97	23.87	23.69	23.50
		RB1#13	22.45	22.30	22.15	23.98	23.83	23.68
		RB1#24	22.29	22.13	21.99	23.82	23.66	23.52
		RB15#0	21.40	21.23	21.06	22.93	22.76	22.59
		RB15#10	21.39	21.19	21.04	22.92	22.72	22.57
		RB25#0	21.38	21.20	21.00	22.91	22.73	22.53
	16QAM	RB1#0	21.43	21.07	21.27	22.96	22.60	22.80
		RB1#13	21.57	21.18	21.43	23.10	22.71	22.96
		RB1#24	21.43	21.03	21.27	22.96	22.56	22.80
		RB15#0	20.45	20.29	20.04	21.98	21.82	21.57
		RB15#10	20.47	20.24	20.01	22.00	21.77	21.54
		RB25#0	20.45	20.28	20.05	21.98	21.81	21.58
10.0	QPSK	RB1#0	22.40	22.26	22.12	23.93	23.79	23.65
		RB1#25	22.44	22.25	22.13	23.97	23.78	23.66
		RB1#49	22.38	22.20	22.04	23.91	23.73	23.57
		RB25#0	21.39	21.25	21.03	22.92	22.78	22.56
		RB25#25	21.39	21.18	21.07	22.92	22.71	22.60
		RB50#0	21.39	21.26	21.07	22.92	22.79	22.60
	16QAM	RB1#0	21.46	21.84	21.24	22.99	23.37	22.77
		RB1#25	21.48	21.80	21.27	23.01	23.33	22.80
		RB1#49	21.41	21.74	21.18	22.94	23.27	22.71
		RB25#0	20.52	20.34	20.10	22.05	21.87	21.63
		RB25#25	20.52	20.25	20.10	22.05	21.78	21.63
		RB50#0	20.43	20.25	20.05	21.96	21.78	21.58

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.37	22.26	22.04	23.90	23.79	23.57
		RB1#38	22.46	22.27	22.15	23.99	23.80	23.68
		RB1#74	22.30	22.13	21.99	23.83	23.66	23.52
		RB36#0	21.33	21.25	21.07	22.86	22.78	22.60
		RB36#39	21.32	21.22	21.07	22.85	22.75	22.60
		RB75#0	21.35	21.31	21.09	22.88	22.84	22.62
	16QAM	RB1#0	21.48	21.66	21.66	23.01	23.19	23.19
		RB1#38	21.61	21.64	21.77	23.14	23.17	23.30
		RB1#74	21.42	21.53	21.55	22.95	23.06	23.08
		RB36#0	20.41	20.25	20.11	21.94	21.78	21.64
		RB36#39	20.38	20.19	20.08	21.91	21.72	21.61
		RB75#0	20.39	20.22	20.08	21.92	21.75	21.61
20.0	QPSK	RB1#0	22.29	22.17	22.05	23.82	23.70	23.58
		RB1#50	22.44	22.28	22.19	23.97	23.81	23.72
		RB1#99	22.25	22.01	21.95	23.78	23.54	23.48
		RB50#0	21.32	21.22	21.06	22.85	22.75	22.59
		RB50#50	21.40	21.15	21.11	22.93	22.68	22.64
		RB100#0	21.32	21.17	21.09	22.85	22.70	22.62
	16QAM	RB1#0	21.54	21.72	21.38	23.07	23.25	22.91
		RB1#50	21.70	21.79	21.47	23.23	23.32	23.00
		RB1#99	21.46	21.59	21.21	22.99	23.12	22.74
		RB50#0	20.33	20.18	20.06	21.86	21.71	21.59
		RB50#50	20.37	20.17	20.09	21.90	21.70	21.62
		RB100#0	20.34	20.20	20.13	21.87	21.73	21.66

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band7: Antenna Gain = 1.53dBi

Limit: EIRP≤33dBm

LTE Band 12

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.26	23.15	22.97	17.88	17.77	17.59
		RB1#3	23.32	23.23	23.00	17.94	17.85	17.62
		RB1#5	23.23	23.15	22.94	17.85	17.77	17.56
		RB3#0	23.40	23.28	23.10	18.02	17.90	17.72
		RB3#3	23.46	23.30	23.06	18.08	17.92	17.68
		RB6#0	22.51	22.33	22.23	17.13	16.95	16.85
	16QAM	RB1#0	22.32	22.19	22.18	16.94	16.81	16.80
		RB1#3	22.37	22.24	22.21	16.99	16.86	16.83
		RB1#5	22.35	22.18	22.12	16.97	16.80	16.74
		RB3#0	22.49	22.48	22.15	17.11	17.10	16.77
		RB3#3	22.51	22.50	22.13	17.13	17.12	16.75
		RB6#0	21.50	21.49	21.28	16.12	16.11	15.90
3.0	QPSK	RB1#0	23.14	23.02	22.89	17.76	17.64	17.51
		RB1#8	23.20	23.07	22.97	17.82	17.69	17.59
		RB1#14	23.09	22.97	22.85	17.71	17.59	17.47
		RB6#0	22.29	22.22	22.12	16.91	16.84	16.74
		RB6#9	22.29	22.21	22.11	16.91	16.83	16.73
		RB15#0	22.29	22.24	22.14	16.91	16.86	16.76
	16QAM	RB1#0	22.15	22.65	22.10	16.77	17.27	16.72
		RB1#8	22.23	22.71	22.15	16.85	17.33	16.77
		RB1#14	22.15	22.55	22.05	16.77	17.17	16.67
		RB6#0	21.37	21.43	21.17	15.99	16.05	15.79
		RB6#9	21.35	21.40	21.18	15.97	16.02	15.80
		RB15#0	21.44	21.39	21.08	16.06	16.01	15.70

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.42	23.32	23.16	18.04	17.94	17.78
		RB1#13	23.49	23.39	23.23	18.11	18.01	17.85
		RB1#24	23.41	23.26	23.07	18.03	17.88	17.69
		RB15#0	22.38	22.35	22.27	17.00	16.97	16.89
		RB15#10	22.43	22.31	22.22	17.05	16.93	16.84
		RB25#0	22.42	22.33	22.25	17.04	16.95	16.87
	16QAM	RB1#0	22.74	22.41	22.10	17.36	17.03	16.72
		RB1#13	22.83	22.51	22.24	17.45	17.13	16.86
		RB1#24	22.70	22.33	22.08	17.32	16.95	16.70
		RB15#0	21.45	21.49	21.32	16.07	16.11	15.94
		RB15#10	21.51	21.43	21.29	16.13	16.05	15.91
		RB25#0	21.52	21.47	21.33	16.14	16.09	15.95
10.0	QPSK	RB1#0	23.46	23.37	23.40	18.08	17.99	18.02
		RB1#25	23.47	23.39	23.33	18.09	18.01	17.95
		RB1#49	23.38	23.26	23.19	18.00	17.88	17.81
		RB25#0	22.31	22.28	22.34	16.93	16.90	16.96
		RB25#25	22.38	22.29	22.28	17.00	16.91	16.90
		RB50#0	22.36	22.33	22.29	16.98	16.95	16.91
	16QAM	RB1#0	22.50	23.02	22.55	17.12	17.64	17.17
		RB1#25	22.45	23.00	22.46	17.07	17.62	17.08
		RB1#49	22.32	22.86	22.40	16.94	17.48	17.02
		RB25#0	21.53	21.48	21.48	16.15	16.10	16.10
		RB25#25	21.63	21.45	21.35	16.25	16.07	15.97
		RB50#0	21.48	21.41	21.38	16.10	16.03	16.00

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) -Cable loss(dB)

For Band12: Antenna Gain = -2.65dBi = -4.80dBd (0dBd=2.15dBi)

Cable Loss=0.58dB*(provided by the applicant)

Limit: ERP≤34.77dBm

LTE Band 13

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.49	23.53	23.47	20.62	20.66	20.60
		RB1#13	23.65	23.65	23.64	20.78	20.78	20.77
		RB1#24	23.49	23.51	23.50	20.62	20.64	20.63
		RB15#0	22.53	22.56	22.56	19.66	19.69	19.69
		RB15#10	22.52	22.52	22.51	19.65	19.65	19.64
		RB25#0	22.50	22.50	22.50	19.63	19.63	19.63
	16QAM	RB1#0	22.35	22.80	22.56	19.48	19.93	19.69
		RB1#13	22.49	22.91	22.73	19.62	20.04	19.86
		RB1#24	22.40	22.83	22.56	19.53	19.96	19.69
		RB15#0	21.54	21.53	21.60	18.67	18.66	18.73
		RB15#10	21.56	21.50	21.52	18.69	18.63	18.65
		RB25#0	21.56	21.55	21.60	18.69	18.68	18.73
10.0	QPSK	RB1#0	/	23.57	/	/	20.70	/
		RB1#25	/	23.59	/	/	20.72	/
		RB1#49	/	23.55	/	/	20.68	/
		RB25#0	/	22.44	/	/	19.57	/
		RB25#25	/	22.52	/	/	19.65	/
		RB50#0	/	22.51	/	/	19.64	/
	16QAM	RB1#0	/	22.67	/	/	19.80	/
		RB1#25	/	22.75	/	/	19.88	/
		RB1#49	/	22.70	/	/	19.83	/
		RB25#0	/	21.50	/	/	18.63	/
		RB25#25	/	21.56	/	/	18.69	/
		RB50#0	/	21.50	/	/	18.63	/

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) -Cable loss(dB)

For Band13: Antenna Gain =-0.14 dBi =-2.29 dBd (0dBd=2.15dBi)

Cable Loss=0.58dB*(provided by the applicant)

Limit: ERP≤34.77dBm

LTE Band 17

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.26	23.28	23.27	17.88	17.90	17.89
		RB1#13	23.40	23.35	23.29	18.02	17.97	17.91
		RB1#24	23.26	23.22	23.09	17.88	17.84	17.71
		RB15#0	22.27	22.30	22.21	16.89	16.92	16.83
		RB15#10	22.32	22.22	22.23	16.94	16.84	16.85
		RB25#0	22.31	22.27	22.20	16.93	16.89	16.82
	16QAM	RB1#0	22.37	22.15	22.52	16.99	16.77	17.14
		RB1#13	22.47	22.28	22.60	17.09	16.90	17.22
		RB1#24	22.33	22.17	22.51	16.95	16.79	17.13
		RB15#0	21.43	21.49	21.28	16.05	16.11	15.90
		RB15#10	21.46	21.39	21.20	16.08	16.01	15.82
		RB25#0	21.46	21.45	21.30	16.08	16.07	15.92
10.0	QPSK	RB1#0	23.38	23.40	23.38	18.00	18.02	18.00
		RB1#25	23.36	23.37	23.31	17.98	17.99	17.93
		RB1#49	23.25	23.21	23.16	17.87	17.83	17.78
		RB25#0	22.28	22.33	22.33	16.90	16.95	16.95
		RB25#25	22.24	22.21	22.20	16.86	16.83	16.82
		RB50#0	22.28	22.30	22.27	16.90	16.92	16.89
	16QAM	RB1#0	22.51	22.39	22.99	17.13	17.01	17.61
		RB1#25	22.51	22.35	22.94	17.13	16.97	17.56
		RB1#49	22.38	22.25	22.85	17.00	16.87	17.47
		RB25#0	21.42	21.51	21.50	16.04	16.13	16.12
		RB25#25	21.38	21.42	21.39	16.00	16.04	16.01
		RB50#0	21.39	21.45	21.36	16.01	16.07	15.98

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) -Cable loss(dB)

For Band17: Antenna Gain = -2.65dBi = -4.80dBd (0dBd=2.15dBi)

Cable Loss=0.58dB*(provided by the applicant)

Limit: ERP≤34.77dBm

LTE Band 25

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.27	22.18	22.08	23.68	23.59	23.49
		RB1#3	22.35	22.22	22.13	23.76	23.63	23.54
		RB1#5	22.26	22.16	22.10	23.67	23.57	23.51
		RB3#0	22.39	22.29	22.16	23.80	23.70	23.57
		RB3#3	22.39	22.30	22.16	23.80	23.71	23.57
		RB6#0	21.43	21.38	21.25	22.84	22.79	22.66
	16QAM	RB1#0	21.26	21.17	21.18	22.67	22.58	22.59
		RB1#3	21.35	21.23	21.25	22.76	22.64	22.66
		RB1#5	21.30	21.19	21.16	22.71	22.60	22.57
		RB3#0	21.45	21.49	21.11	22.86	22.90	22.52
		RB3#3	21.47	21.51	21.11	22.88	22.92	22.52
		RB6#0	20.40	20.40	20.30	21.81	21.81	21.71
3.0	QPSK	RB1#0	22.13	22.02	21.97	23.54	23.43	23.38
		RB1#8	22.25	22.13	22.08	23.66	23.54	23.49
		RB1#14	22.16	22.03	21.96	23.57	23.44	23.37
		RB6#0	21.31	21.24	21.12	22.72	22.65	22.53
		RB6#9	21.36	21.23	21.11	22.77	22.64	22.52
		RB15#0	21.34	21.25	21.15	22.75	22.66	22.56
	16QAM	RB1#0	21.17	21.67	21.07	22.58	23.08	22.48
		RB1#8	21.24	21.73	21.16	22.65	23.14	22.57
		RB1#14	21.20	21.61	21.08	22.61	23.02	22.49
		RB6#0	20.28	20.36	20.13	21.69	21.77	21.54
		RB6#9	20.33	20.32	20.20	21.74	21.73	21.61
		RB15#0	20.40	20.35	20.09	21.81	21.76	21.50

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.43	22.34	22.20	23.84	23.75	23.61
		RB1#13	22.61	22.46	22.36	24.02	23.87	23.77
		RB1#24	22.45	22.31	22.17	23.86	23.72	23.58
		RB15#0	21.48	21.37	21.22	22.89	22.78	22.63
		RB15#10	21.47	21.32	21.24	22.88	22.73	22.65
		RB25#0	21.47	21.33	21.21	22.88	22.74	22.62
	16QAM	RB1#0	21.70	21.42	21.07	23.11	22.83	22.48
		RB1#13	21.89	21.54	21.21	23.30	22.95	22.62
		RB1#24	21.73	21.41	21.10	23.14	22.82	22.51
		RB15#0	20.44	20.42	20.27	21.85	21.83	21.68
		RB15#10	20.44	20.38	20.24	21.85	21.79	21.65
		RB25#0	20.51	20.38	20.28	21.92	21.79	21.69
10.0	QPSK	RB1#0	22.48	22.40	22.30	23.89	23.81	23.71
		RB1#25	22.55	22.40	22.33	23.96	23.81	23.74
		RB1#49	22.53	22.34	22.27	23.94	23.75	23.68
		RB25#0	21.45	21.34	21.31	22.86	22.75	22.72
		RB25#25	21.48	21.32	21.28	22.89	22.73	22.69
		RB50#0	21.49	21.37	21.32	22.90	22.78	22.73
	16QAM	RB1#0	21.46	22.02	21.42	22.87	23.43	22.83
		RB1#25	21.53	22.04	21.42	22.94	23.45	22.83
		RB1#49	21.51	21.98	21.37	22.92	23.39	22.78
		RB25#0	20.57	20.45	20.36	21.98	21.86	21.77
		RB25#25	20.62	20.42	20.31	22.03	21.83	21.72
		RB50#0	20.50	20.40	20.34	21.91	21.81	21.75

	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.45	22.31	22.25	23.86	23.72	23.66
		RB1#38	22.57	22.42	22.34	23.98	23.83	23.75
		RB1#74	22.46	22.27	22.22	23.87	23.68	23.63
		RB36#0	21.49	21.36	21.34	22.90	22.77	22.75
		RB36#39	21.51	21.34	21.32	22.92	22.75	22.73
		RB75#0	21.50	21.40	21.34	22.91	22.81	22.75
	16QAM	RB1#0	21.83	21.92	21.38	23.24	23.33	22.79
		RB1#38	21.99	22.06	21.49	23.40	23.47	22.90
		RB1#74	21.87	21.86	21.33	23.28	23.27	22.74
		RB36#0	20.49	20.42	20.35	21.90	21.83	21.76
		RB36#39	20.53	20.36	20.33	21.94	21.77	21.74
		RB75#0	20.50	20.38	20.34	21.91	21.79	21.75
20.0	QPSK	RB1#0	22.32	22.35	22.21	23.73	23.76	23.62
		RB1#50	22.57	22.47	22.43	23.98	23.88	23.84
		RB1#99	22.34	22.25	22.22	23.75	23.66	23.63
		RB50#0	21.48	21.48	21.31	22.89	22.89	22.72
		RB50#50	21.57	21.31	21.27	22.98	22.72	22.68
		RB100#0	21.51	21.37	21.27	22.92	22.78	22.68
	16QAM	RB1#0	21.91	21.61	21.40	23.32	23.02	22.81
		RB1#50	22.15	21.78	21.62	23.56	23.19	23.03
		RB1#99	21.93	21.57	21.36	23.34	22.98	22.77
		RB50#0	20.49	20.47	20.33	21.90	21.88	21.74
		RB50#50	20.57	20.34	20.29	21.98	21.75	21.70
		RB100#0	20.48	20.37	20.28	21.89	21.78	21.69

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band25: Antenna Gain = 1.41dBi

Limit: EIRP_≤33dBm

LTE Band 26 (814-824MHz)

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.11	23.13	23.18	14.69	14.71	14.76
		RB1#3	23.18	23.19	23.26	14.76	14.77	14.84
		RB1#5	23.07	23.13	23.19	14.65	14.71	14.77
		RB3#0	23.18	23.24	23.31	14.76	14.82	14.89
		RB3#3	23.20	23.22	23.30	14.78	14.80	14.88
		RB6#0	22.28	22.32	22.37	13.86	13.90	13.95
	16QAM	RB1#0	22.11	22.10	22.33	13.69	13.68	13.91
		RB1#3	22.16	22.21	22.35	13.74	13.79	13.93
		RB1#5	22.09	22.15	22.29	13.67	13.73	13.87
		RB3#0	22.24	22.41	22.27	13.82	13.99	13.85
		RB3#3	22.26	22.44	22.28	13.84	14.02	13.86
		RB6#0	21.20	21.36	21.42	12.78	12.94	13.00
3.0	QPSK	RB1#0	23.01	22.97	23.11	14.59	14.55	14.69
		RB1#8	23.14	23.10	23.19	14.72	14.68	14.77
		RB1#14	23.04	23.02	23.11	14.62	14.60	14.69
		RB6#0	22.20	22.23	22.22	13.78	13.81	13.80
		RB6#9	22.24	22.25	22.29	13.82	13.83	13.87
		RB15#0	22.19	22.22	22.22	13.77	13.80	13.80
	16QAM	RB1#0	21.98	22.59	22.21	13.56	14.17	13.79
		RB1#8	22.10	22.70	22.32	13.68	14.28	13.90
		RB1#14	22.04	22.54	22.22	13.62	14.12	13.80
		RB6#0	21.16	21.31	21.26	12.74	12.89	12.84
		RB6#9	21.20	21.31	21.34	12.78	12.89	12.92
		RB15#0	21.25	21.26	21.20	12.83	12.84	12.78

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.25	23.31	23.32	14.83	14.89	14.90
		RB1#13	23.38	23.42	23.49	14.96	15.00	15.07
		RB1#24	23.28	23.29	23.37	14.86	14.87	14.95
		RB15#0	22.26	22.30	22.32	13.84	13.88	13.90
		RB15#10	22.35	22.36	22.38	13.93	13.94	13.96
		RB25#0	22.25	22.28	22.34	13.83	13.86	13.92
	16QAM	RB1#0	22.33	22.16	22.60	13.91	13.74	14.18
		RB1#13	22.44	22.27	22.73	14.02	13.85	14.31
		RB1#24	22.38	22.24	22.66	13.96	13.82	14.24
		RB15#0	21.23	21.32	21.29	12.81	12.90	12.87
		RB15#10	21.35	21.40	21.33	12.93	12.98	12.91
		RB25#0	21.33	21.37	21.38	12.91	12.95	12.96
10.0	QPSK	RB1#0	/	23.35	/	/	14.93	/
		RB1#25	/	23.40	/	/	14.98	/
		RB1#49	/	23.44	/	/	15.02	/
		RB25#0	/	22.22	/	/	13.80	/
		RB25#25	/	22.34	/	/	13.92	/
		RB50#0	/	22.30	/	/	13.88	/
	16QAM	RB1#0	/	22.33	/	/	13.91	/
		RB1#25	/	22.38	/	/	13.96	/
		RB1#49	/	22.46	/	/	14.04	/
		RB25#0	/	21.35	/	/	12.93	/
		RB25#25	/	21.45	/	/	13.03	/
		RB50#0	/	21.34	/	/	12.92	/

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) -Cable loss(dB)

For Band26: Antenna Gain =-5.69 dBi =-7.84 dBd (0dBd=2.15dBi)

Cable Loss=0.58dB*(provided by the applicant)

Limit: ERP≤50dBm

LTE Band 26 (Cross Channel)

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	/	21.93	/	/	13.51	/
		RB1#3	/	22.00	/	/	13.58	/
		RB1#5	/	22.47	/	/	14.05	/
		RB3#0	/	21.65	/	/	13.23	/
		RB3#3	/	21.56	/	/	13.14	/
		RB6#0	/	22.33	/	/	13.91	/
	16QAM	RB1#0	/	21.58	/	/	13.16	/
		RB1#3	/	21.89	/	/	13.47	/
		RB1#5	/	22.44	/	/	14.02	/
		RB3#0	/	22.29	/	/	13.87	/
		RB3#3	/	22.32	/	/	13.90	/
		RB6#0	/	22.25	/	/	13.83	/
3.0	QPSK	RB1#0	/	22.03	/	/	13.61	/
		RB1#8	/	22.15	/	/	13.73	/
		RB1#14	/	21.88	/	/	13.46	/
		RB6#0	/	21.85	/	/	13.43	/
		RB6#9	/	22.35	/	/	13.93	/
		RB15#0	/	22.05	/	/	13.63	/
	16QAM	RB1#0	/	21.82	/	/	13.40	/
		RB1#8	/	21.83	/	/	13.41	/
		RB1#14	/	22.01	/	/	13.59	/
		RB6#0	/	22.38	/	/	13.96	/
		RB6#9	/	21.71	/	/	13.29	/
		RB15#0	/	22.03	/	/	13.61	/

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	/	22.13	/	/	13.71	
		RB1#3	/	21.71	/	/	13.29	
		RB1#5	/	22.49	/	/	14.07	
		RB3#0	/	21.55	/	/	13.13	
		RB3#3	/	22.28	/	/	13.86	
		RB6#0	/	22.23	/	/	13.81	
	16QAM	RB1#0	/	22.37	/	/	13.95	/
		RB1#3	/	21.70	/	/	13.28	/
		RB1#5	/	22.03	/	/	13.61	/
		RB3#0	/	22.24	/	/	13.82	/
		RB3#3	/	22.45	/	/	14.03	/
		RB6#0	/	22.34	/	/	13.92	/
10.0	QPSK	RB1#0	/	22.19	/	/	13.77	/
		RB1#8	/	22.03	/	/	13.61	/
		RB1#14	/	21.63	/	/	13.21	/
		RB6#0	/	22.17	/	/	13.75	/
		RB6#9	/	22.49	/	/	14.07	/
		RB15#0	/	21.54	/	/	13.12	/
	16QAM	RB1#0	/	22.25	/	/	13.83	/
		RB1#8	/	21.64	/	/	13.22	/
		RB1#14	/	21.95	/	/	13.53	/
		RB6#0	/	21.69	/	/	13.27	/
		RB6#9	/	21.77	/	/	13.35	/
		RB15#0	/	22.19	/	/	13.77	/

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.98	22.38	/	13.56	13.96	/
		RB1#13	22.40	22.36	/	13.98	13.94	/
		RB1#24	21.78	22.42	/	13.36	14.00	/
		RB15#0	21.66	21.39	/	13.24	12.97	/
		RB15#10	21.57	21.46	/	13.15	13.04	/
		RB25#0	21.54	21.31	/	13.12	12.89	/
	16QAM	RB1#0	22.19	22.38	/	13.77	13.96	/
		RB1#13	22.19	22.34	/	13.77	13.92	/
		RB1#24	21.94	22.36	/	13.52	13.94	/
		RB15#0	22.00	21.39	/	13.58	12.97	/
		RB15#10	22.27	21.35	/	13.85	12.93	/
		RB25#0	22.41	21.42	/	13.99	13.00	/

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) -Cable loss(dB)

For Band26: Antenna Gain =-5.69 dBi =-7.84 dBd (0dBd=2.15dBi)

Cable Loss=0.58dB*(provided by the applicant)

Limit: ERP≤38.45dBm

LTE Band 26 (824-849MHz)

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.14	23.28	23.44	14.72	14.86	15.02
		RB1#3	23.24	23.34	23.54	14.82	14.92	15.12
		RB1#5	23.21	23.27	23.50	14.79	14.85	15.08
		RB3#0	23.26	23.42	23.61	14.84	15.00	15.19
		RB3#3	23.29	23.42	23.60	14.87	15.00	15.18
		RB6#0	22.40	22.51	22.64	13.98	14.09	14.22
	16QAM	RB1#0	22.15	22.29	22.57	13.73	13.87	14.15
		RB1#3	22.22	22.36	22.66	13.80	13.94	14.24
		RB1#5	22.22	22.32	22.59	13.80	13.90	14.17
		RB3#0	22.33	22.59	22.54	13.91	14.17	14.12
		RB3#3	22.33	22.59	22.55	13.91	14.17	14.13
		RB6#0	21.27	21.56	21.70	12.85	13.14	13.28
3.0	QPSK	RB1#0	23.09	23.15	23.32	14.67	14.73	14.90
		RB1#8	23.17	23.26	23.45	14.75	14.84	15.03
		RB1#14	23.11	23.19	23.35	14.69	14.77	14.93
		RB6#0	22.20	22.40	22.56	13.78	13.98	14.14
		RB6#9	22.29	22.40	22.58	13.87	13.98	14.16
		RB15#0	22.21	22.41	22.57	13.79	13.99	14.15
	16QAM	RB1#0	22.05	22.71	22.46	13.63	14.29	14.04
		RB1#8	22.21	22.88	22.58	13.79	14.46	14.16
		RB1#14	22.13	22.71	22.50	13.71	14.29	14.08
		RB6#0	21.21	21.46	21.62	12.79	13.04	13.20
		RB6#9	21.24	21.49	21.69	12.82	13.07	13.27
		RB15#0	21.25	21.46	21.53	12.83	13.04	13.11

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.35	23.44	23.54	14.93	15.02	15.12
		RB1#13	23.44	23.60	23.72	15.02	15.18	15.30
		RB1#24	23.35	23.53	23.65	14.93	15.11	15.23
		RB15#0	22.37	22.54	22.69	13.95	14.12	14.27
		RB15#10	22.40	22.53	22.62	13.98	14.11	14.20
		RB25#0	22.34	22.50	22.62	13.92	14.08	14.20
	16QAM	RB1#0	22.19	22.79	22.63	13.77	14.37	14.21
		RB1#13	22.34	22.87	22.81	13.92	14.45	14.39
		RB1#24	22.25	22.80	22.68	13.83	14.38	14.26
		RB15#0	21.40	21.49	21.75	12.98	13.07	13.33
		RB15#10	21.39	21.50	21.66	12.97	13.08	13.24
		RB25#0	21.40	21.50	21.70	12.98	13.08	13.28
10.0	QPSK	RB1#0	23.38	23.43	23.60	14.96	15.01	15.18
		RB1#25	23.43	23.56	23.65	15.01	15.14	15.23
		RB1#49	23.49	23.59	23.69	15.07	15.17	15.27
		RB25#0	22.32	22.49	22.55	13.90	14.07	14.13
		RB25#25	22.33	22.53	22.55	13.91	14.11	14.13
		RB50#0	22.37	22.49	22.58	13.95	14.07	14.16
	16QAM	RB1#0	22.38	22.99	22.68	13.96	14.57	14.26
		RB1#25	22.44	23.11	22.78	14.02	14.69	14.36
		RB1#49	22.44	23.17	22.86	14.02	14.75	14.44
		RB25#0	21.41	21.54	21.64	12.99	13.12	13.22
		RB25#25	21.50	21.60	21.59	13.08	13.18	13.17
		RB50#0	21.38	21.50	21.56	12.96	13.08	13.14

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	23.37	23.35	23.43	14.95	14.93	15.01
		RB1#38	23.48	23.60	23.63	15.06	15.18	15.21
		RB1#74	23.50	23.60	23.67	15.08	15.18	15.25
		RB36#0	22.35	22.47	22.49	13.93	14.05	14.07
		RB36#39	22.42	22.57	22.57	14.00	14.15	14.15
		RB75#0	22.48	22.51	22.60	14.06	14.09	14.18
	16QAM	RB1#0	22.46	22.77	22.98	14.04	14.35	14.56
		RB1#38	22.63	22.99	23.18	14.21	14.57	14.76
		RB1#74	22.64	23.00	23.23	14.22	14.58	14.81
		RB36#0	21.42	21.45	21.51	13.00	13.03	13.09
		RB36#39	21.45	21.57	21.57	13.03	13.15	13.15
		RB75#0	21.47	21.51	21.59	13.05	13.09	13.17

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) -Cable loss(dB)

For Band26: Antenna Gain =-5.69 dBi =-7.84 dBd (0dBd=2.15dBi)

Cable Loss=0.58dB*(provided by the applicant)

Limit: ERP≤38.45dBm

LTE Band 38

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.06	21.93	21.83	23.74	23.61	23.51
		RB1#13	22.16	22.05	21.94	23.84	23.73	23.62
		RB1#24	22.02	21.89	21.79	23.70	23.57	23.47
		RB15#0	21.05	20.96	20.80	22.73	22.64	22.48
		RB15#10	21.07	20.94	20.83	22.75	22.62	22.51
		RB25#0	21.02	20.90	20.82	22.70	22.58	22.50
	16QAM	RB1#0	21.03	20.97	21.05	22.71	22.65	22.73
		RB1#13	21.17	21.09	21.17	22.85	22.77	22.85
		RB1#24	21.01	20.92	21.04	22.69	22.60	22.72
		RB15#0	19.99	19.94	19.83	21.67	21.62	21.51
		RB15#10	20.00	19.91	19.87	21.68	21.59	21.55
		RB25#0	20.09	19.96	19.78	21.77	21.64	21.46
10.0	QPSK	RB1#0	22.20	22.08	21.98	23.88	23.76	23.66
		RB1#25	22.19	22.08	22.01	23.87	23.76	23.69
		RB1#49	22.11	21.99	21.90	23.79	23.67	23.58
		RB25#0	21.10	21.02	20.85	22.78	22.70	22.53
		RB25#25	21.03	20.92	20.85	22.71	22.60	22.53
		RB50#0	21.12	20.98	20.87	22.80	22.66	22.55
	16QAM	RB1#0	21.42	20.99	21.04	23.10	22.67	22.72
		RB1#25	21.40	20.99	21.08	23.08	22.67	22.76
		RB1#49	21.31	20.91	20.96	22.99	22.59	22.64
		RB25#0	20.11	20.05	19.89	21.79	21.73	21.57
		RB25#25	20.05	19.95	19.87	21.73	21.63	21.55
		RB50#0	20.08	19.97	19.88	21.76	21.65	21.56

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.12	22.03	21.87	23.80	23.71	23.55
		RB1#38	22.20	22.10	22.01	23.88	23.78	23.69
		RB1#74	22.05	21.89	21.83	23.73	23.57	23.51
		RB36#0	21.04	21.00	20.89	22.72	22.68	22.57
		RB36#39	20.98	20.86	20.86	22.66	22.54	22.54
		RB75#0	21.04	20.95	20.89	22.72	22.63	22.57
	16QAM	RB1#0	21.07	21.24	21.10	22.75	22.92	22.78
		RB1#38	21.13	21.31	21.22	22.81	22.99	22.90
		RB1#74	20.98	21.11	21.05	22.66	22.79	22.73
		RB36#0	20.03	20.04	19.84	21.71	21.72	21.52
		RB36#39	19.93	19.93	19.84	21.61	21.61	21.52
		RB75#0	20.02	19.93	19.81	21.70	21.61	21.49
20.0	QPSK	RB1#0	22.12	21.95	21.78	23.80	23.63	23.46
		RB1#50	22.26	22.07	22.00	23.94	23.75	23.68
		RB1#99	21.99	21.78	21.68	23.67	23.46	23.36
		RB50#0	21.07	21.07	20.89	22.75	22.75	22.57
		RB50#50	20.91	20.83	20.85	22.59	22.51	22.53
		RB100#0	20.98	20.96	20.86	22.66	22.64	22.54
	16QAM	RB1#0	21.34	21.01	20.80	23.02	22.69	22.48
		RB1#50	21.43	21.12	20.96	23.11	22.80	22.64
		RB1#99	21.19	20.84	20.67	22.87	22.52	22.35
		RB50#0	20.05	20.03	19.92	21.73	21.71	21.60
		RB50#50	19.92	19.84	19.89	21.60	21.52	21.57
		RB100#0	19.97	19.94	19.85	21.65	21.62	21.53

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band38: Antenna Gain = 1.68dBi

Limit: EIRP ≤ 33dBm

LTE Band 40 (2305-2315MHz)

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB1#0	21.97	22.01	21.95	23.56	23.60	23.54
		RB1#3	22.09	22.13	22.06	23.68	23.72	23.65
		RB1#5	21.93	21.98	21.91	23.52	23.57	23.50
		RB3#0	22.00	22.03	21.99	23.59	23.62	23.58
		RB3#3	22.04	22.05	22.00	23.63	23.64	23.59
		RB6#0	21.99	22.04	22.01	23.58	23.63	23.60
	16QAM	RB1#0	22.07	22.28	22.00	23.66	23.87	23.59
		RB1#3	22.24	21.41	22.12	23.83	23.00	23.71
		RB1#5	22.03	22.30	21.98	23.62	23.89	23.57
		RB3#0	21.10	21.09	20.95	22.69	22.68	22.54
		RB3#3	21.14	21.12	20.98	22.73	22.71	22.57
		RB6#0	21.13	21.09	21.11	22.72	22.68	22.70
10	QPSK	RB1#0	/	22.10	/	/	23.69	/
		RB1#8	/	22.10	/	/	23.69	/
		RB1#14	/	22.03	/	/	23.62	/
		RB6#0	/	21.95	/	/	23.54	/
		RB6#9	/	22.02	/	/	23.61	/
		RB15#0	/	22.03	/	/	23.62	/
	16QAM	RB1#0	/	21.99	/	/	23.58	/
		RB1#8	/	22.01	/	/	23.60	/
		RB1#14	/	21.99	/	/	23.58	/
		RB6#0	/	21.07	/	/	22.66	/
		RB6#9	/	21.10	/	/	22.69	/
		RB15#0	/	21.07	/	/	22.66	/

LTE Band 40 (2350-2360MHz)

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.80	21.81	21.84	23.39	23.40	23.43
		RB1#13	21.93	21.98	21.92	23.52	23.57	23.51
		RB1#24	21.77	21.80	21.81	23.36	23.39	23.40
		RB15#0	21.80	21.80	21.80	23.39	23.39	23.39
		RB15#10	21.88	21.88	21.88	23.47	23.47	23.47
		RB25#0	21.84	21.85	21.84	23.43	23.44	23.43
	16QAM	RB1#0	21.92	22.12	21.86	23.51	23.71	23.45
		RB1#13	22.05	22.24	21.97	23.64	23.83	23.56
		RB1#24	21.88	22.12	21.84	23.47	23.71	23.43
		RB15#0	20.87	20.86	20.75	22.46	22.45	22.34
		RB15#10	20.96	20.94	20.82	22.55	22.53	22.41
		RB25#0	20.93	20.90	20.89	22.52	22.49	22.48
10.0	QPSK	RB1#0	/	21.96	/	/	23.55	/
		RB1#25	/	21.96	/	/	23.55	/
		RB1#49	/	21.94	/	/	23.53	/
		RB25#0	/	21.80	/	/	23.39	/
		RB25#25	/	21.94	/	/	23.53	/
		RB50#0	/	21.90	/	/	23.49	/
	16QAM	RB1#0	/	21.87	/	/	23.46	/
		RB1#25	/	21.94	/	/	23.53	/
		RB1#49	/	21.85	/	/	23.44	/
		RB25#0	/	20.88	/	/	22.47	/
		RB25#25	/	21.02	/	/	22.61	/
		RB50#0	/	20.91	/	/	22.50	/

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band40: Antenna Gain =1.59dBi

Limit: EIRP≤24dBm

LTE Band 41

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.46	22.25	21.92	24.14	23.93	23.60
		RB1#13	22.55	22.40	22.02	24.23	24.08	23.70
		RB1#24	22.46	22.26	21.91	24.14	23.94	23.59
		RB15#0	21.47	21.26	20.95	23.15	22.94	22.63
		RB15#10	21.49	21.23	20.92	23.17	22.91	22.60
		RB25#0	21.46	21.27	20.91	23.14	22.95	22.59
	16QAM	RB1#0	21.53	21.49	20.88	23.21	23.17	22.56
		RB1#13	21.66	21.61	21.03	23.34	23.29	22.71
		RB1#24	21.55	21.49	20.89	23.23	23.17	22.57
		RB15#0	20.51	20.29	19.88	22.19	21.97	21.56
		RB15#10	20.51	20.29	19.85	22.19	21.97	21.53
		RB25#0	20.52	20.23	19.94	22.20	21.91	21.62
10.0	QPSK	RB1#0	22.56	22.40	22.03	24.24	24.08	23.71
		RB1#25	22.64	22.42	21.98	24.32	24.10	23.66
		RB1#49	22.58	22.33	21.97	24.26	24.01	23.65
		RB25#0	21.51	21.31	21.00	23.19	22.99	22.68
		RB25#25	21.51	21.25	20.89	23.19	22.93	22.57
		RB50#0	21.52	21.30	20.97	23.20	22.98	22.65
	16QAM	RB1#0	21.45	21.46	21.20	23.13	23.14	22.88
		RB1#25	21.56	21.48	21.21	23.24	23.16	22.89
		RB1#49	21.51	21.41	21.16	23.19	23.09	22.84
		RB25#0	20.56	20.35	20.01	22.24	22.03	21.69
		RB25#25	20.57	20.28	19.90	22.25	21.96	21.58
		RB50#0	20.54	20.30	19.97	22.22	21.98	21.65

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.49	22.32	22.02	24.17	24.00	23.70
		RB1#38	22.61	22.41	22.05	24.29	24.09	23.73
		RB1#74	22.54	22.22	21.90	24.22	23.90	23.58
		RB36#0	21.44	21.28	20.96	23.12	22.96	22.64
		RB36#39	21.50	21.21	20.87	23.18	22.89	22.55
		RB75#0	21.53	21.26	20.97	23.21	22.94	22.65
	16QAM	RB1#0	21.45	21.53	21.18	23.13	23.21	22.86
		RB1#38	21.57	21.59	21.21	23.25	23.27	22.89
		RB1#74	21.46	21.43	21.08	23.14	23.11	22.76
		RB36#0	20.44	20.33	19.94	22.12	22.01	21.62
		RB36#39	20.45	20.26	19.84	22.13	21.94	21.52
		RB75#0	20.48	20.25	19.89	22.16	21.93	21.57
20.0	QPSK	RB1#0	22.44	22.19	21.90	24.12	23.87	23.58
		RB1#50	22.68	22.38	22.09	24.36	24.06	23.77
		RB1#99	22.51	22.18	21.84	24.19	23.86	23.52
		RB50#0	21.43	21.27	20.95	23.11	22.95	22.63
		RB50#50	21.52	21.22	20.90	23.20	22.90	22.58
		RB100#0	21.50	21.25	20.89	23.18	22.93	22.57
	16QAM	RB1#0	21.64	21.25	20.88	23.32	22.93	22.56
		RB1#50	21.91	21.43	21.09	23.59	23.11	22.77
		RB1#99	21.71	21.27	20.82	23.39	22.95	22.50
		RB50#0	20.45	20.26	19.98	22.13	21.94	21.66
		RB50#50	20.51	20.21	19.92	22.19	21.89	21.60
		RB100#0	20.47	20.23	19.92	22.15	21.91	21.60

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
 For Band41: Antenna Gain =1.68dBi
 Limit: EIRP≤33dBm

LTE Band 66:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.96	21.88	22.19	23.36	23.28	23.59
		RB1#3	22.04	21.96	22.24	23.44	23.36	23.64
		RB1#5	21.97	21.94	22.19	23.37	23.34	23.59
		RB3#0	22.07	22.01	22.27	23.47	23.41	23.67
		RB3#3	22.09	22.00	22.27	23.49	23.40	23.67
		RB6#0	21.16	21.07	21.37	22.56	22.47	22.77
	16QAM	RB1#0	20.97	20.90	21.28	22.37	22.30	22.68
		RB1#3	21.07	20.97	21.36	22.47	22.37	22.76
		RB1#5	21.01	20.88	21.28	22.41	22.28	22.68
		RB3#0	21.16	21.21	21.22	22.56	22.61	22.62
		RB3#3	21.15	21.21	21.25	22.55	22.61	22.65
		RB6#0	20.16	20.16	20.41	21.56	21.56	21.81
3.0	QPSK	RB1#0	21.90	21.77	22.11	23.30	23.17	23.51
		RB1#8	21.98	21.91	22.18	23.38	23.31	23.58
		RB1#14	21.86	21.81	22.11	23.26	23.21	23.51
		RB6#0	21.05	20.98	21.24	22.45	22.38	22.64
		RB6#9	21.05	21.03	21.26	22.45	22.43	22.66
		RB15#0	21.04	21.05	21.27	22.44	22.45	22.67
	16QAM	RB1#0	20.90	21.42	21.22	22.30	22.82	22.62
		RB1#8	21.01	21.51	21.29	22.41	22.91	22.69
		RB1#14	20.85	21.34	21.19	22.25	22.74	22.59
		RB6#0	20.13	20.15	20.30	21.53	21.55	21.70
		RB6#9	20.04	20.14	20.34	21.44	21.54	21.74
		RB15#0	20.15	20.12	20.22	21.55	21.52	21.62

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.13	22.10	22.32	23.53	23.50	23.72
		RB1#13	22.26	22.20	22.50	23.66	23.60	23.90
		RB1#24	22.10	22.13	22.36	23.50	23.53	23.76
		RB15#0	21.14	21.07	21.38	22.54	22.47	22.78
		RB15#10	21.18	21.15	21.36	22.58	22.55	22.76
		RB25#0	21.15	21.12	21.34	22.55	22.52	22.74
	16QAM	RB1#0	21.22	20.94	21.61	22.62	22.34	23.01
		RB1#13	21.30	21.06	21.77	22.70	22.46	23.17
		RB1#24	21.16	20.99	21.61	22.56	22.39	23.01
		RB15#0	20.21	20.24	20.38	21.61	21.64	21.78
		RB15#10	20.27	20.24	20.31	21.67	21.64	21.71
		RB25#0	20.26	20.25	20.40	21.66	21.65	21.80
10.0	QPSK	RB1#0	22.22	22.12	22.43	23.62	23.52	23.83
		RB1#25	22.20	22.21	22.47	23.60	23.61	23.87
		RB1#49	22.12	22.23	22.43	23.52	23.63	23.83
		RB25#0	21.05	21.05	21.41	22.45	22.45	22.81
		RB25#25	21.07	21.17	21.38	22.47	22.57	22.78
		RB50#0	21.12	21.12	21.39	22.52	22.52	22.79
	16QAM	RB1#0	21.21	21.73	21.52	22.61	23.13	22.92
		RB1#25	21.24	21.80	21.58	22.64	23.20	22.98
		RB1#49	21.10	21.79	21.57	22.50	23.19	22.97
		RB25#0	20.23	20.19	20.44	21.63	21.59	21.84
		RB25#25	20.27	20.33	20.41	21.67	21.73	21.81
		RB50#0	20.20	20.19	20.39	21.60	21.59	21.79

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.17	22.10	22.32	23.57	23.50	23.72
		RB1#38	22.17	22.20	22.53	23.57	23.60	23.93
		RB1#74	22.16	22.19	22.39	23.56	23.59	23.79
		RB36#0	21.10	21.08	21.39	22.50	22.48	22.79
		RB36#39	21.07	21.20	21.37	22.47	22.60	22.77
		RB75#0	21.13	21.17	21.41	22.53	22.57	22.81
	16QAM	RB1#0	21.56	21.66	21.44	22.96	23.06	22.84
		RB1#38	21.57	21.76	21.64	22.97	23.16	23.04
		RB1#74	21.50	21.72	21.53	22.90	23.12	22.93
		RB36#0	20.13	20.13	20.41	21.53	21.53	21.81
		RB36#39	20.15	20.22	20.42	21.55	21.62	21.82
		RB75#0	20.13	20.22	20.41	21.53	21.62	21.81
20.0	QPSK	RB1#0	22.06	22.05	22.11	23.46	23.45	23.51
		RB1#50	22.19	22.29	22.46	23.59	23.69	23.86
		RB1#99	22.15	22.22	22.31	23.55	23.62	23.71
		RB50#0	21.00	21.05	21.39	22.40	22.45	22.79
		RB50#50	21.13	21.17	21.32	22.53	22.57	22.72
		RB100#0	21.06	21.09	21.33	22.46	22.49	22.73
	16QAM	RB1#0	21.37	21.27	21.70	22.77	22.67	23.10
		RB1#50	21.46	21.45	22.04	22.86	22.85	23.44
		RB1#99	21.39	21.37	21.90	22.79	22.77	23.30
		RB50#0	20.02	20.10	20.37	21.42	21.50	21.77
		RB50#50	20.21	20.18	20.33	21.61	21.58	21.73
		RB100#0	20.12	20.15	20.35	21.52	21.55	21.75

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band 66: Antenna Gain = 1.4dBi

Limit: EIRP_≤30dBm

Peak-to-average ratio (PAR)**Cellular Band**

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	8.96	13
	Middle	9.88	13
	High	9.91	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	12.61	13
	Middle	12.99	13
	High	12.78	13

Mode	Channel	PAR (dB)	Limit (dB)
CDMA 1*RTT (BC0)	Low	3.47	13
	Middle	3.68	13
	High	3.12	13

Mode	Channel	PAR (dB)	Limit (dB)
CDMA EV-DO (BC0)	Low	3.69	13
	Middle	3.51	13
	High	3.37	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.07	13
	Middle	3.01	13
	High	3.04	13
HSDPA (16QAM)	Low	3.59	13
	Middle	3.59	13
	High	3.62	13
HSUPA (QPSK)	Low	3.77	13
	Middle	3.74	13
	High	3.83	13
HSPA+	Low	3.54	13
	Middle	3.26	13
	High	3.42	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	8.61	13
	Middle	9.86	13
	High	11.36	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	12.75	13
	Middle	12.96	13
	High	12.78	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.13	13
	Middle	3.16	13
	High	3.22	13
HSDPA (16QAM)	Low	3.65	13
	Middle	3.57	13
	High	3.65	13
HSUPA (QPSK)	Low	3.83	13
	Middle	3.77	13
	High	3.80	13
HSPA+	Low	3.54	13
	Middle	3.67	13
	High	3.69	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.16	13
	Middle	3.19	13
	High	3.10	13
HSDPA (16QAM)	Low	3.54	13
	Middle	3.59	13
	High	3.57	13
HSUPA (QPSK)	Low	3.97	13
	Middle	3.80	13
	High	3.80	13
HSPA+	Low	3.86	13
	Middle	3.57	13
	High	3.36	13

LTE Band: (pre-scan all bandwidth, the worst case as below)

LTE Band 2 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.77	5.25	5.91	13	Pass
QPSK (100RB Size)	5.42	5.30	5.25	13	Pass
16QAM (1RB Size)	5.36	6.41	7.25	13	Pass
16QAM (100RB Size)	6.38	6.35	6.03	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.68	6.03	6.12	13	Pass
QPSK (100RB Size)	5.48	5.57	5.39	13	Pass
16QAM (1RB Size)	6.20	6.93	7.45	13	Pass
16QAM (100RB Size)	6.43	6.46	6.38	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.13	4.67	4.81	13	Pass
QPSK (50RB Size)	5.19	5.19	5.22	13	Pass
16QAM (1RB Size)	6.14	5.57	5.57	13	Pass
16QAM (50RB Size)	6.23	6.23	6.26	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.83	5.36	6.06	13	Pass
QPSK (100RB Size)	5.65	5.25	5.36	13	Pass
16QAM (1RB Size)	6.67	6.06	5.59	13	Pass
16QAM (100RB Size)	6.61	6.09	6.35	13	Pass

LTE Band 12 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.81	5.39	5.62	13	Pass
QPSK (50RB Size)	5.48	5.48	5.48	13	Pass
16QAM (1RB Size)	6.29	6.09	6.52	13	Pass
16QAM (50RB Size)	6.35	6.52	6.49	13	Pass

LTE Band 13 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	/	4.41	/	13	Pass
QPSK (50RB Size)	/	5.16	/	13	Pass
16QAM (1RB Size)	/	5.01	/	13	Pass
16QAM (50RB Size)	/	6.26	/	13	Pass

LTE Band 17 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.59	4.96	5.42	13	Pass
QPSK (50RB Size)	5.45	5.54	5.48	13	Pass
16QAM (1RB Size)	5.45	5.97	6.03	13	Pass
16QAM (50RB Size)	6.64	6.52	6.38	13	Pass

LTE Band 25 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.68	5.62	5.42	13	Pass
QPSK (100RB Size)	5.48	5.33	5.33	13	Pass
16QAM (1RB Size)	6.20	6.41	6.78	13	Pass
16QAM (100RB Size)	6.41	6.41	6.26	13	Pass

LTE Band 26 (814-824MHz) 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	/	4.03	/	13	Pass
QPSK (50RB Size)	/	5.13	/	13	Pass
16QAM (1RB Size)	/	5.13	/	13	Pass
16QAM (50RB Size)	/	6.06	/	13	Pass

LTE Band 26 (824-849MHz) 15MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.13	5.01	4.67	13	Pass
QPSK (75RB Size)	5.01	4.99	5.04	13	Pass
16QAM (1RB Size)	6.23	5.68	5.80	13	Pass
16QAM (75RB Size)	5.91	6.03	6.03	13	Pass

LTE Band 38 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.71	9.22	9.51	13	Pass
QPSK (100RB Size)	9.22	9.16	9.16	13	Pass
16QAM (1RB Size)	10.20	9.94	10.26	13	Pass
16QAM (100RB Size)	10.00	10.00	9.97	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.33	9.54	8.87	13	Pass
QPSK (100RB Size)	9.30	9.22	9.04	13	Pass
16QAM (1RB Size)	10.12	10.12	9.59	13	Pass
16QAM (100RB Size)	10.12	9.97	9.88	13	Pass

LTE Band 66 20MHz Bandwidth

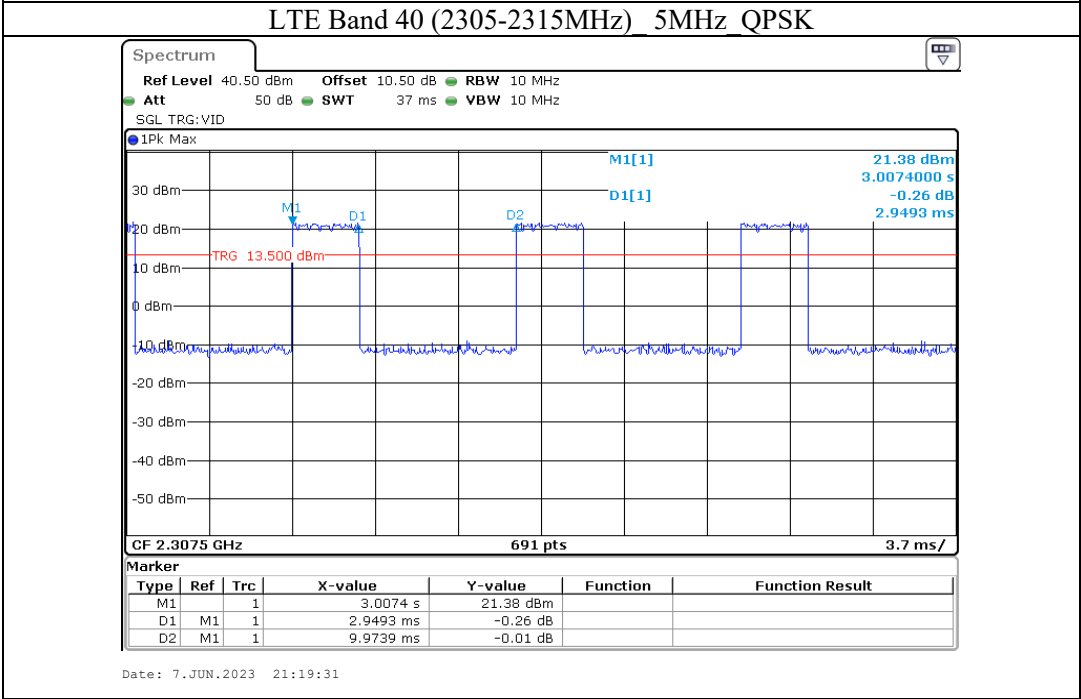
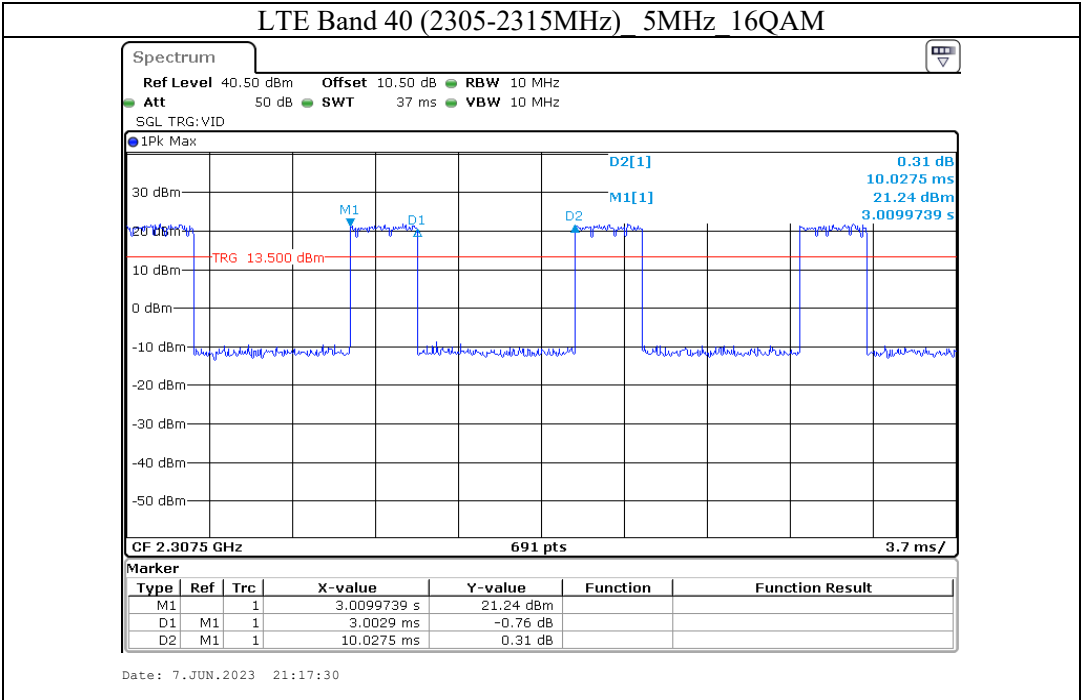
Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.59	6.00	5.57	13	Pass
QPSK (100RB Size)	5.33	5.25	5.36	13	Pass
16QAM (1RB Size)	6.09	7.01	6.84	13	Pass
16QAM (100RB Size)	6.41	6.29	6.23	13	Pass

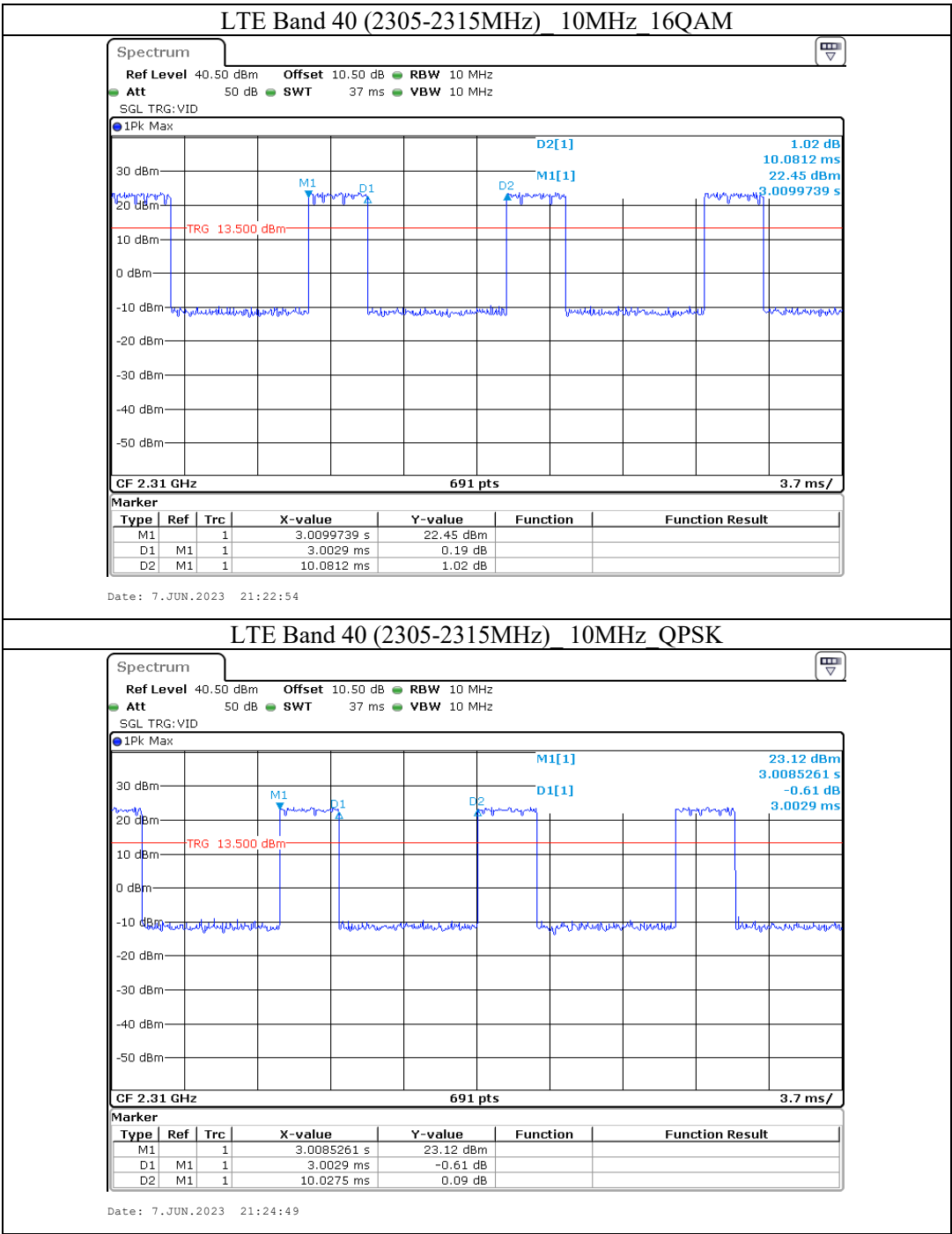
Duty Cycle:**LTE Band 40 (2305-2315MHz)**

Modulation	Test bandwidth	Ton(ms)	Total(ms)	DutyCycle(%)	Limit
16-QAM	5M	3.00	10.03	29.91	38
QPSK	5M	2.95	9.97	29.59	
16-QAM	10M	3.00	10.08	29.76	
QPSK	10M	3.00	10.03	29.91	

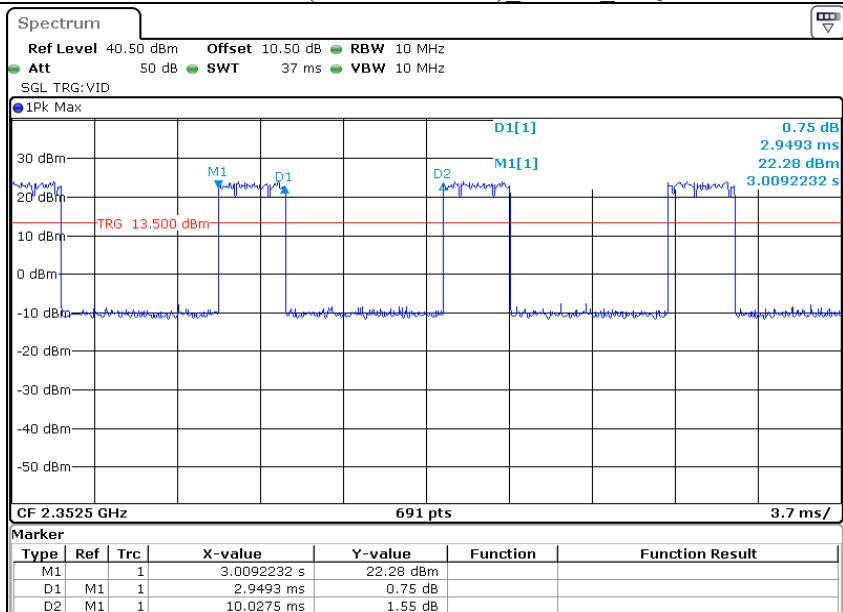
LTE Band 40 (2350-2360 MHz)

Modulation	Test bandwidth	Ton(ms)	Total(ms)	DutyCycle(%)	Limit
16-QAM	5M	2.95	10.03	29.41	38
QPSK	5M	2.95	9.97	29.59	
16-QAM	10M	3.00	10.08	29.76	
QPSK	10M	2.95	10.03	29.41	



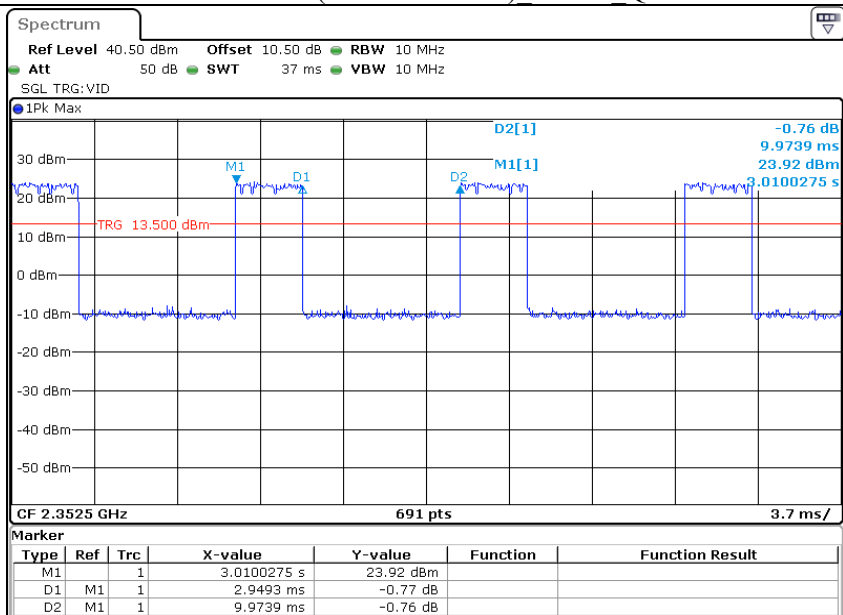


LTE Band 40 (2350-2360MHz) 5MHz 16QAM



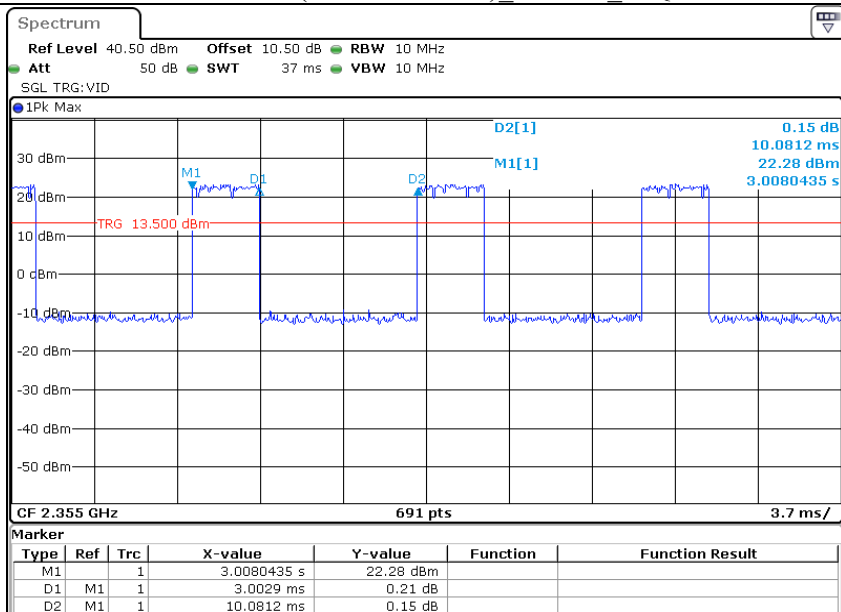
Date: 7.JUN.2023 21:30:16

LTE Band 40 (2350-2360MHz) 5MHz QPSK



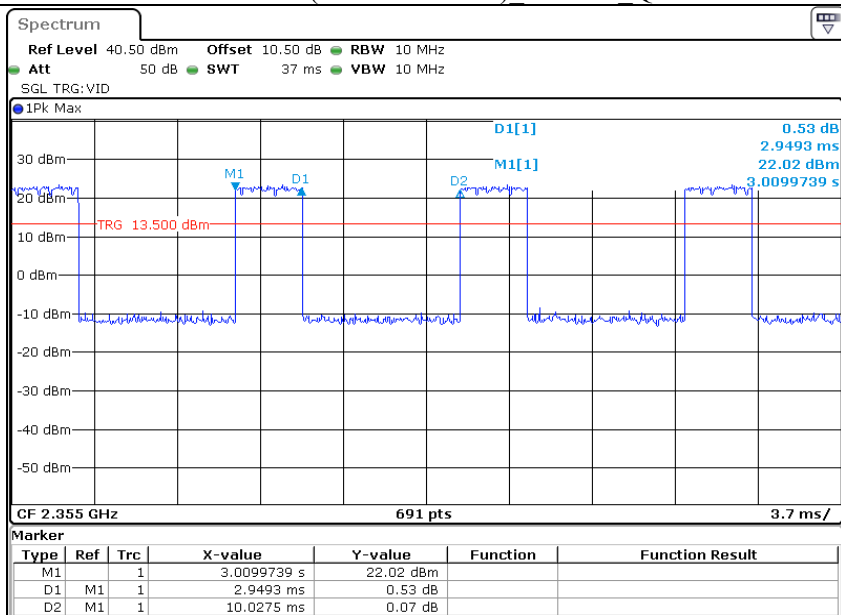
Date: 7.JUN.2023 21:31:34

LTE Band 40 (2350-2360MHz) 10MHz 16QAM



Date: 7.JUN.2023 21:39:07

LTE Band 40 (2350-2360MHz) 10MHz QPSK



Date: 7.JUN.2023 21:35:09

FCC §2.1049, §22.917, §22.905 & §24.238&§27.53 &§90.209- OCCUPIED BANDWIDTH

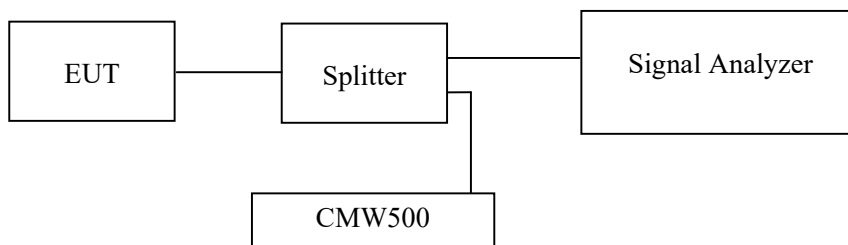
Applicable Standard

FCC 47 §2.1049, §22.917, §22.905, §24.238, §27.53 and §90.209.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.



Note: the worst path loss (cable loss and splitter inset loss) among the test frequency range has added into plot.

Test Data

Environmental Conditions

Temperature:	26.5~28.8 °C
Relative Humidity:	46.8~51.6%
ATM Pressure:	101.0 kPa

The testing was performed by Jacob Huang from 2023-05-21 to 2023-06-06.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables and plots.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	128	824.2	243.756	321.00
	190	836.6	243.756	322.00
	251	848.8	242.757	321.00

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
EDGE(8PSK)	128	824.2	245.754	318.00
	190	836.6	247.752	321.00
	251	848.8	248.751	319.00

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.166	4.725
	836.6	4.151	4.710
	846.6	4.151	4.725
HSDPA	826.4	4.166	4.725
	836.6	4.166	4.725
	846.6	4.151	4.725
HSUPA	826.4	4.166	4.725
	836.6	4.166	4.710
	846.6	4.166	4.710

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
CDMA (1*RTT) BC0	824.70	1.269	1.438
CDMA (1*RTT) BC0	836.52	1.274	1.442
CDMA (1*RTT) BC0	848.31	1.274	1.438
CDMA (EV-DO) BC0	824.70	1.274	1.442
CDMA (EV-DO) BC0	836.52	1.274	1.447
CDMA (EV-DO) BC0	848.31	1.284	1.457

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	242.757	319.00
	661	1880.0	245.754	320.00
	810	1909.8	241.758	315.00

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
EDGE(8PSK)	512	1850.2	251.748	321.00
	661	1880.0	249.750	327.00
	810	1909.8	245.750	328.00

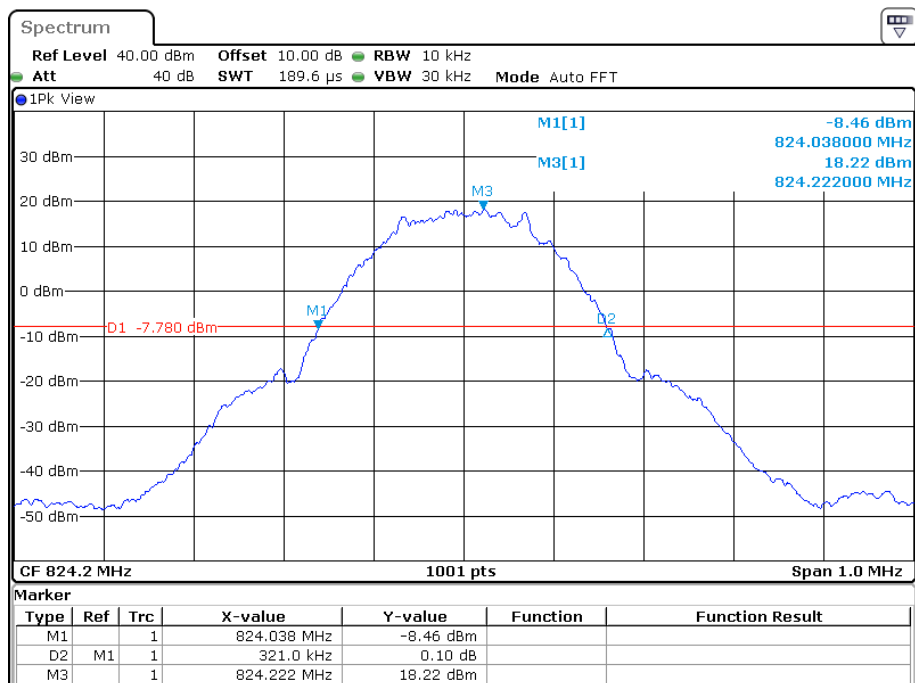
	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.166	4.710
	1880.0	4.151	4.710
	1907.6	4.181	4.740
HSDPA	1852.4	4.196	4.710
	1880.0	4.166	4.725
	1907.6	4.181	4.710
HSUPA	1852.4	4.196	4.740
	1880.0	4.166	4.725
	1907.6	4.181	4.695

AWS Band (Part 27)

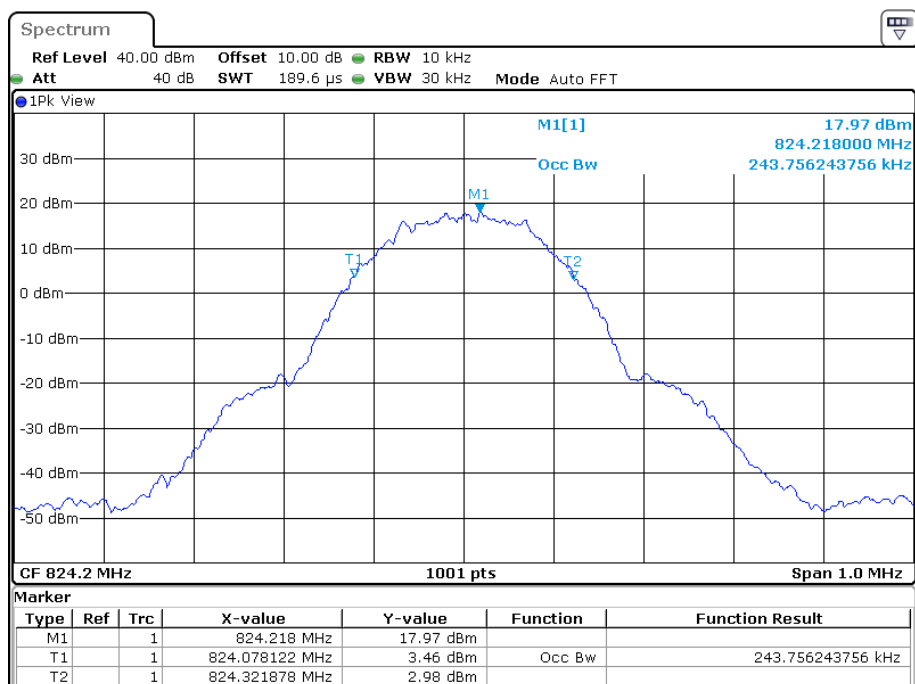
	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.151	4.725
	1732.6	4.166	4.710
	1752.6	4.151	4.710
HSDPA	1712.4	4.181	4.725
	1732.6	4.166	4.740
	1752.6	4.166	4.710
HSUPA	1712.4	4.196	4.725
	1732.6	4.166	4.710
	1752.6	4.166	4.725

Cellular Band (Part 22H)

26 dB Emissions & 99% Occupied Bandwidth for GSM(GMSK) Mode, Low channel

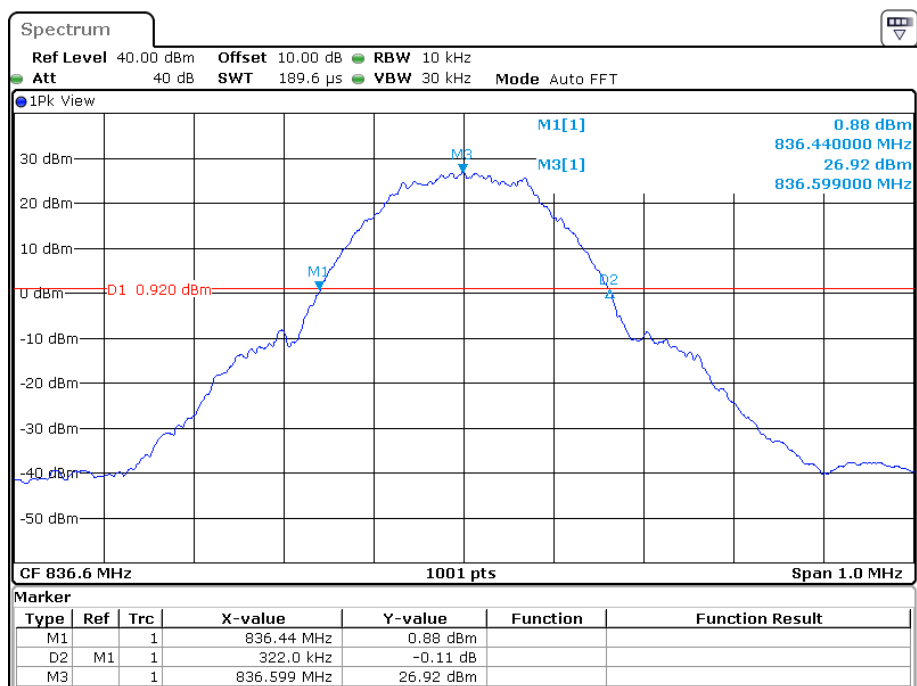


Date: 21.MAY.2023 13:46:25

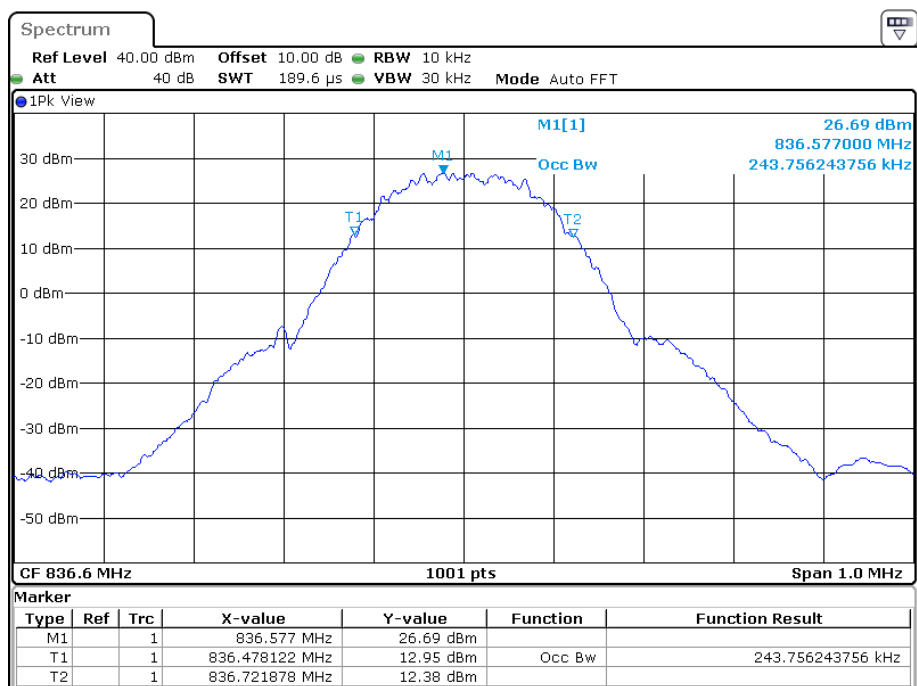


Date: 21.MAY.2023 13:46:03

26 dB Emissions & 99% Occupied Bandwidth for GSM(GMSK) Mode, Middle channel

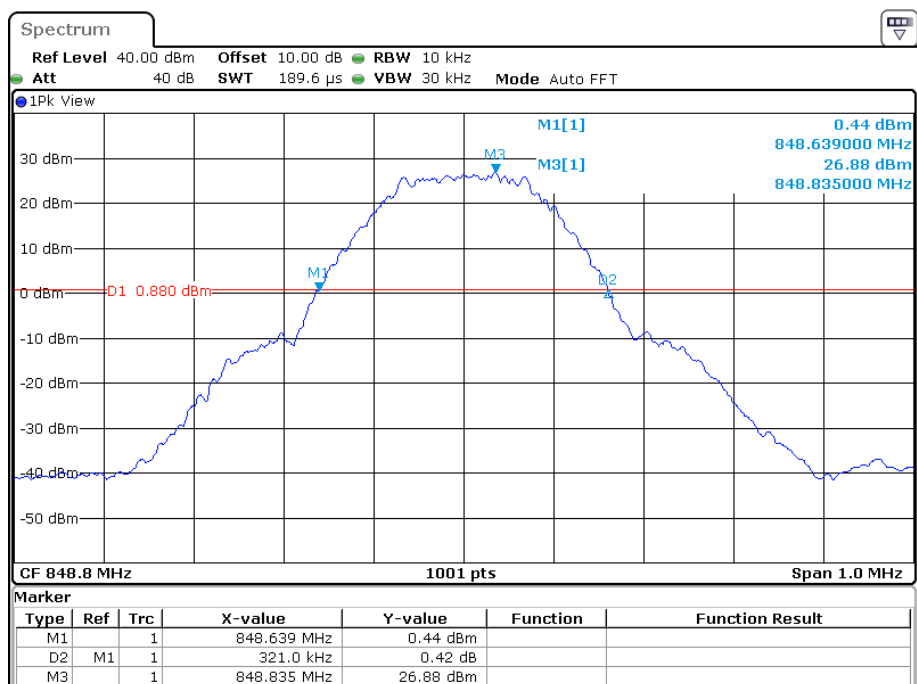


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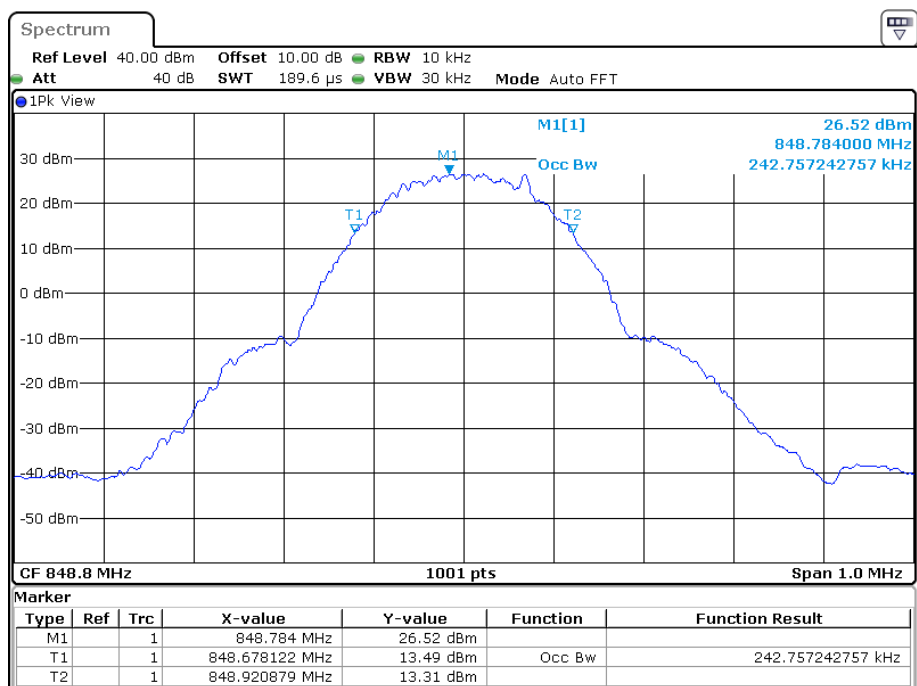


Date: 21.MAY.2023 13:54:15

26 dB Emissions & 99% Occupied Bandwidth for GSM(GMSK) Mode, High channel

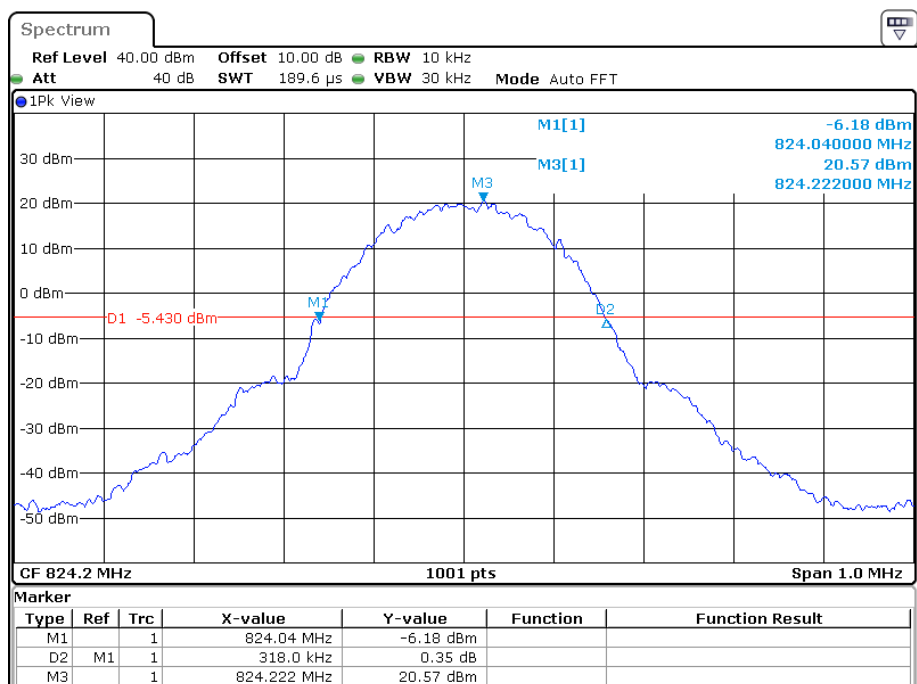


Date: 21.MAY.2023 13:57:44

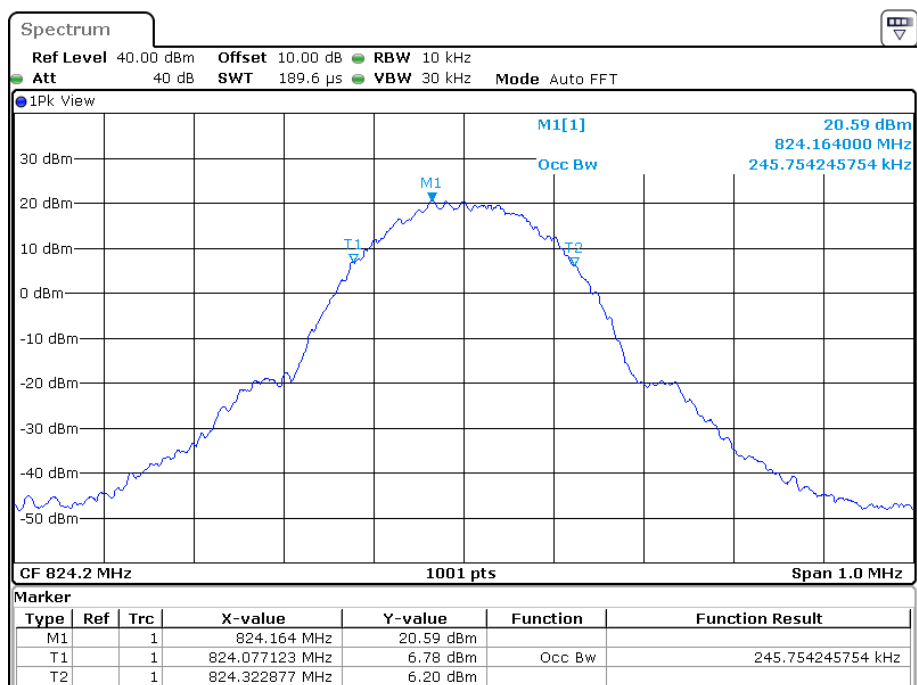


Date: 21.MAY.2023 13:57:23

26 dB Emissions & 99% Occupied Bandwidth for EDGE(8PSK) Mode, Low channel

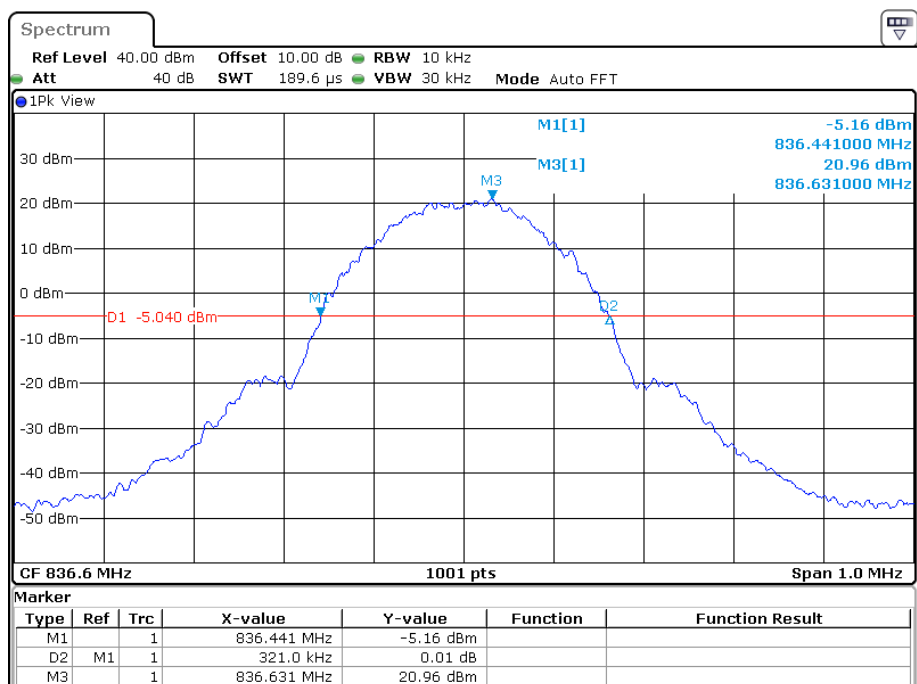


Date: 21.MAY.2023 14:10:39

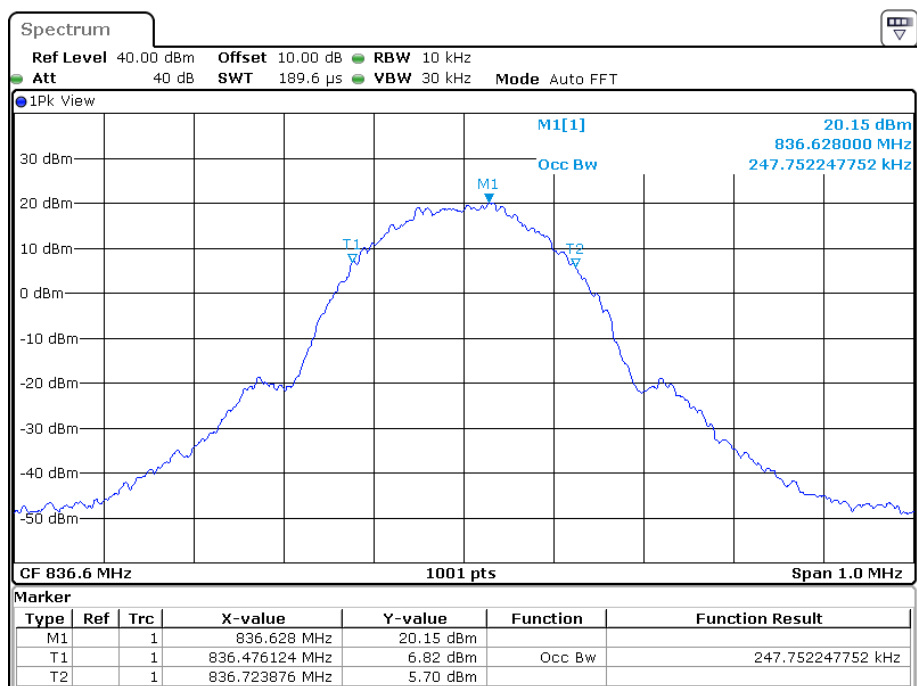


Date: 21.MAY.2023 14:10:16

26 dB Emissions & 99% Occupied Bandwidth for EDGE(8PSK) Mode, Middle channel

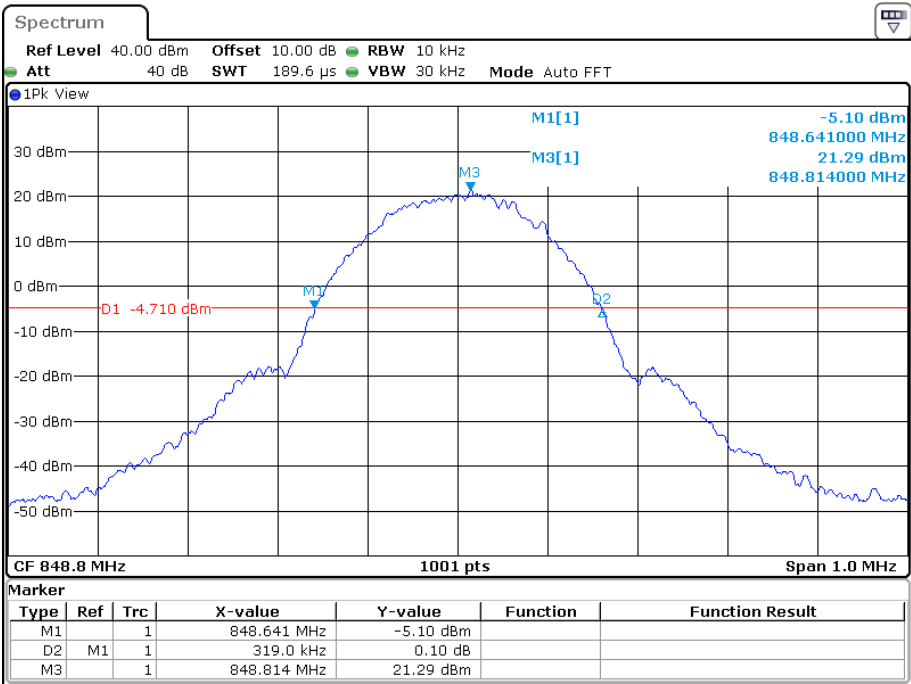


Date: 21.MAY.2023 14:25:18

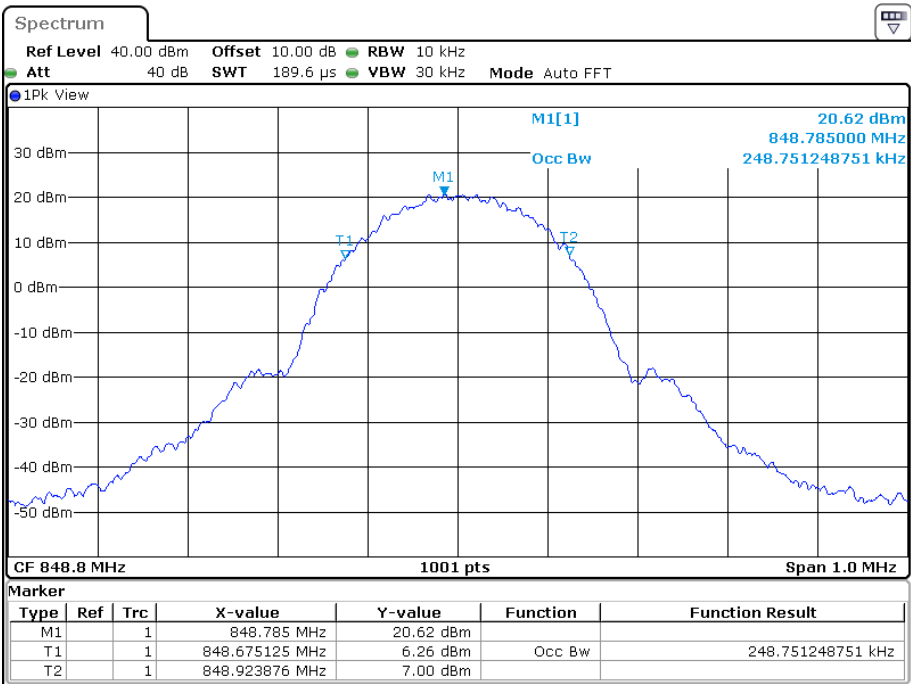


Date: 21.MAY.2023 14:24:46

26 dB Emissions & 99% Occupied Bandwidth for EDGE(8PSK) Mode, High channel

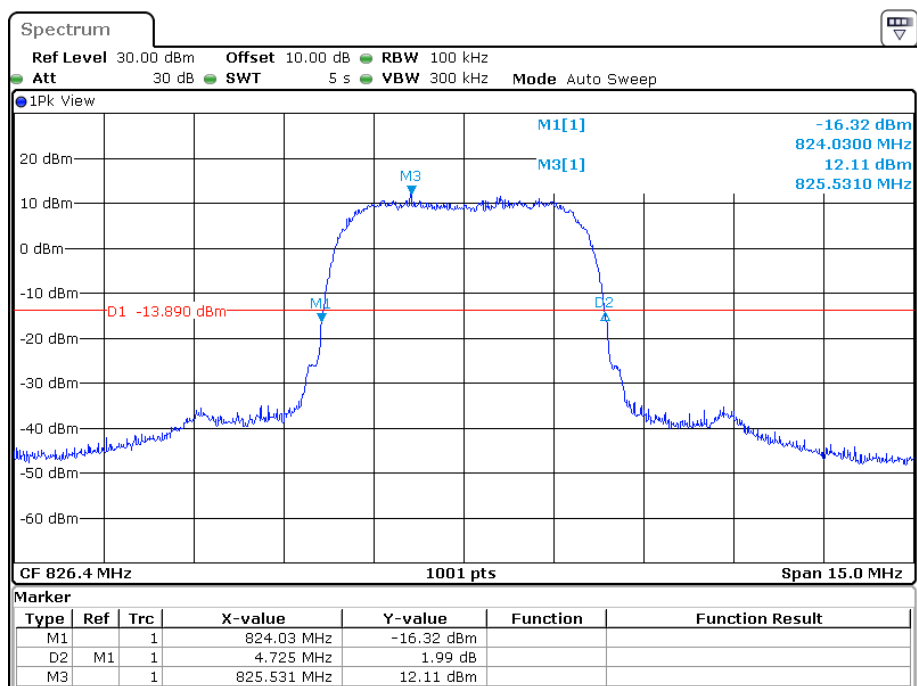


Date: 21.MAY.2023 14:39:53

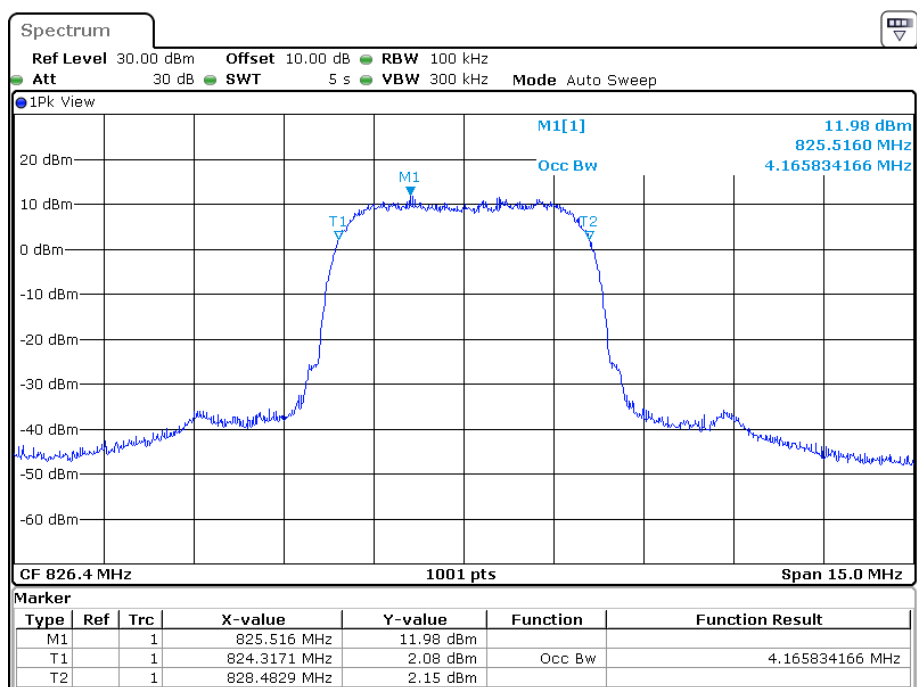


Date: 21.MAY.2023 14:39:22

26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel

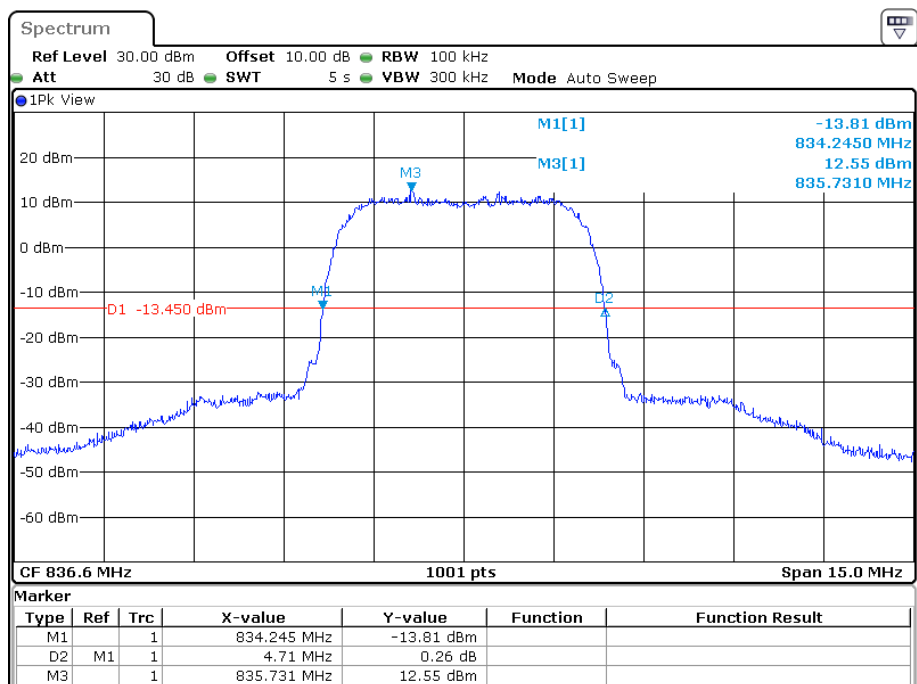


Date: 21.MAY.2023 11:46:35

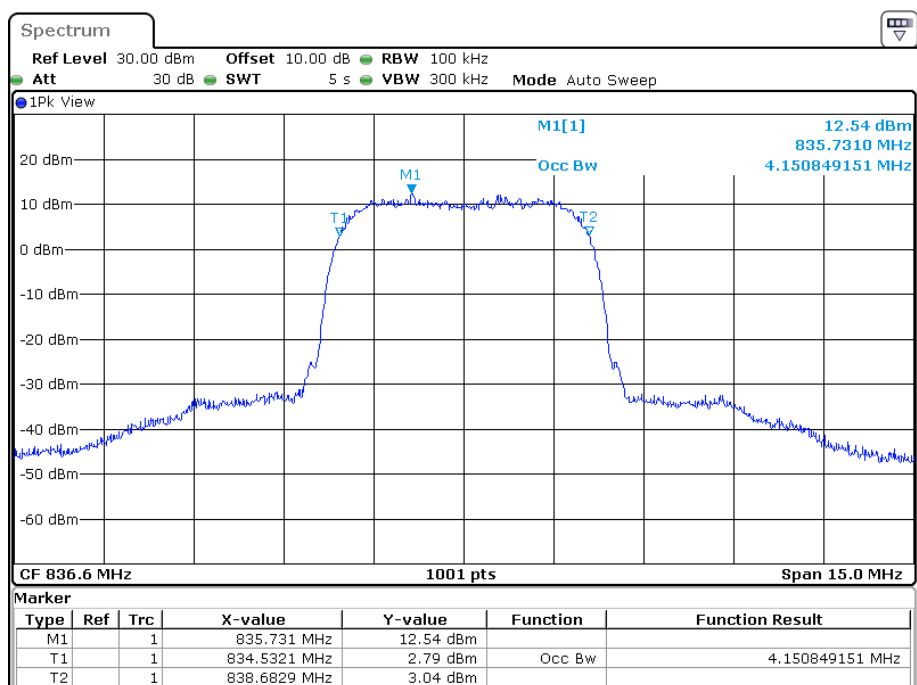


Date: 21.MAY.2023 11:46:08

26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel

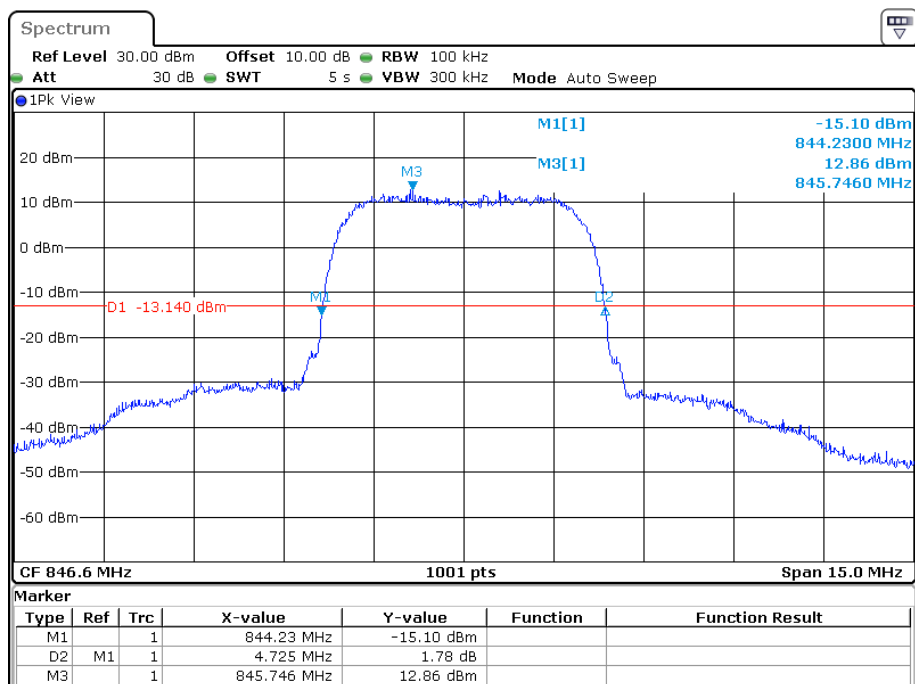


Date: 21.MAY.2023 11:55:06

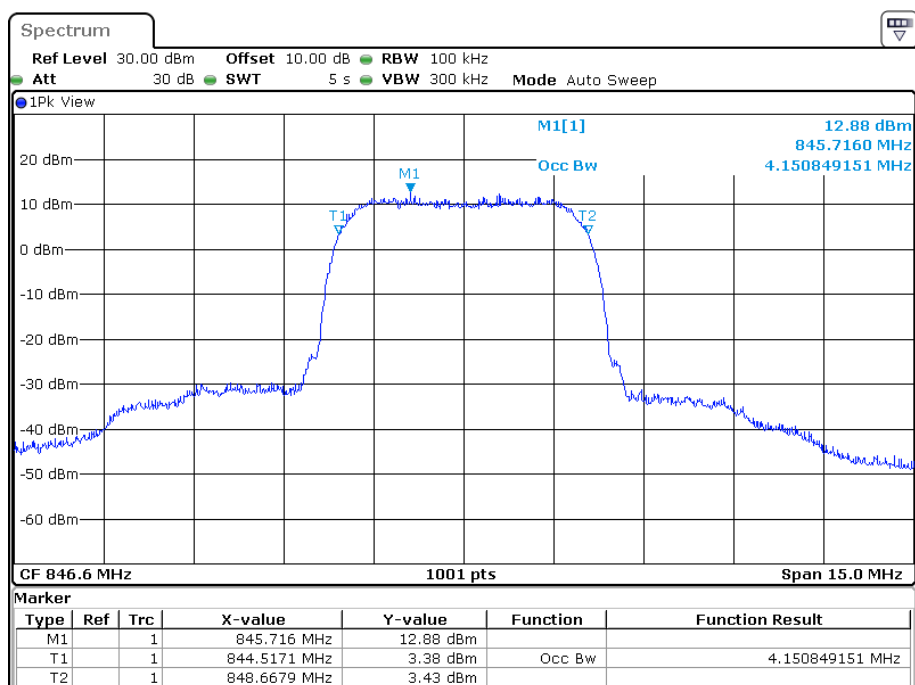


Date: 21.MAY.2023 11:54:39

26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, High channel

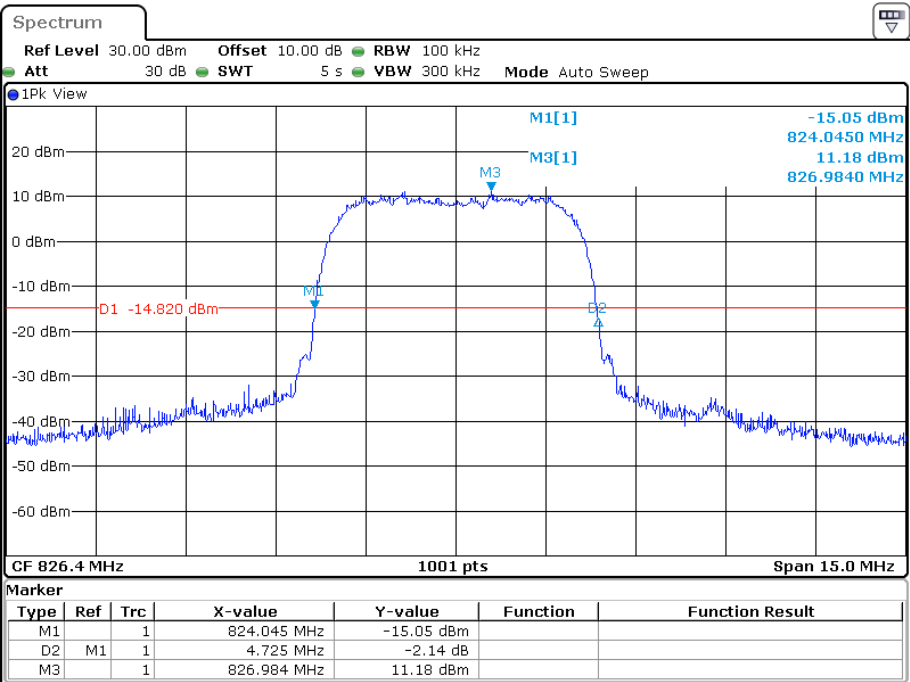


Date: 21.MAY.2023 11:58:24

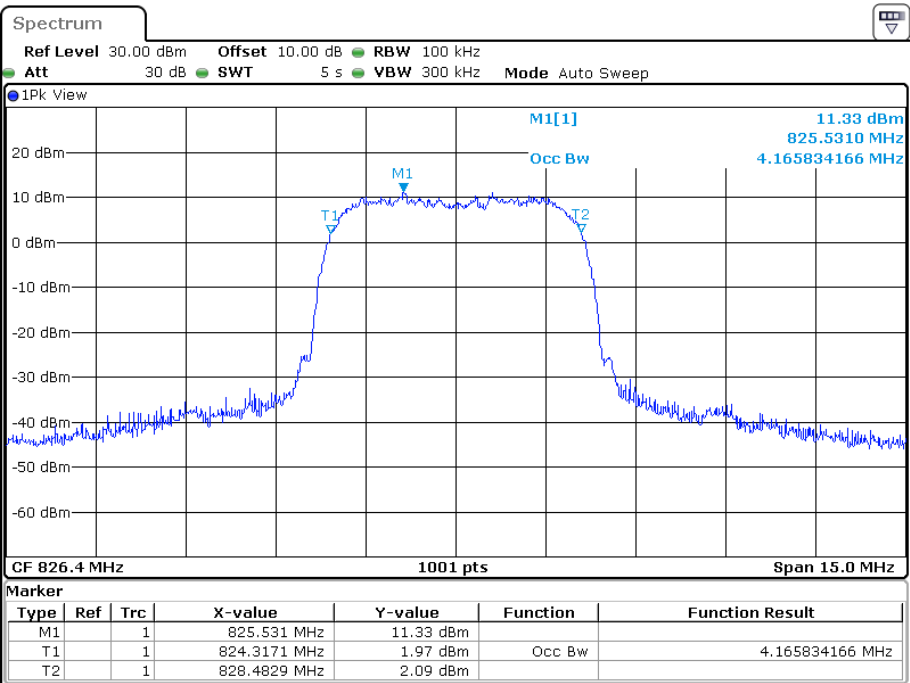


Date: 21.MAY.2023 11:57:57

26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel

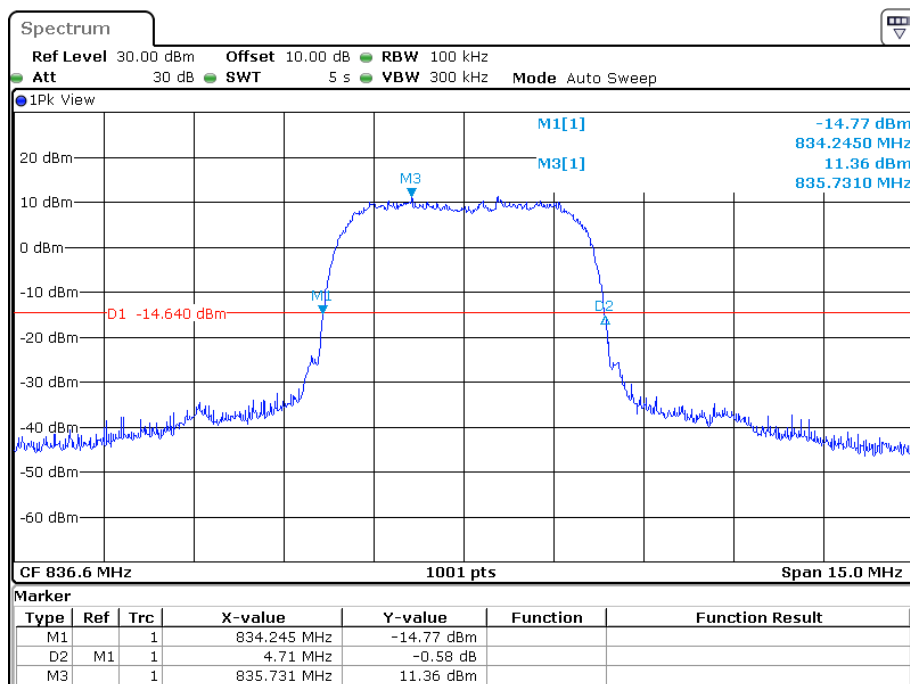


Date: 21.MAY.2023 13:09:41

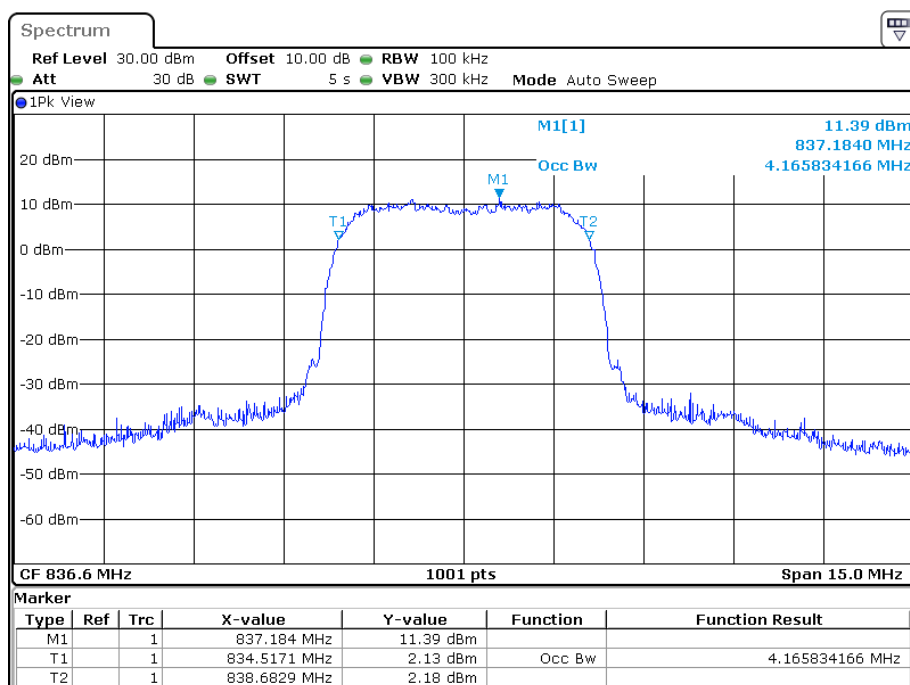


Date: 21.MAY.2023 13:08:14

26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel

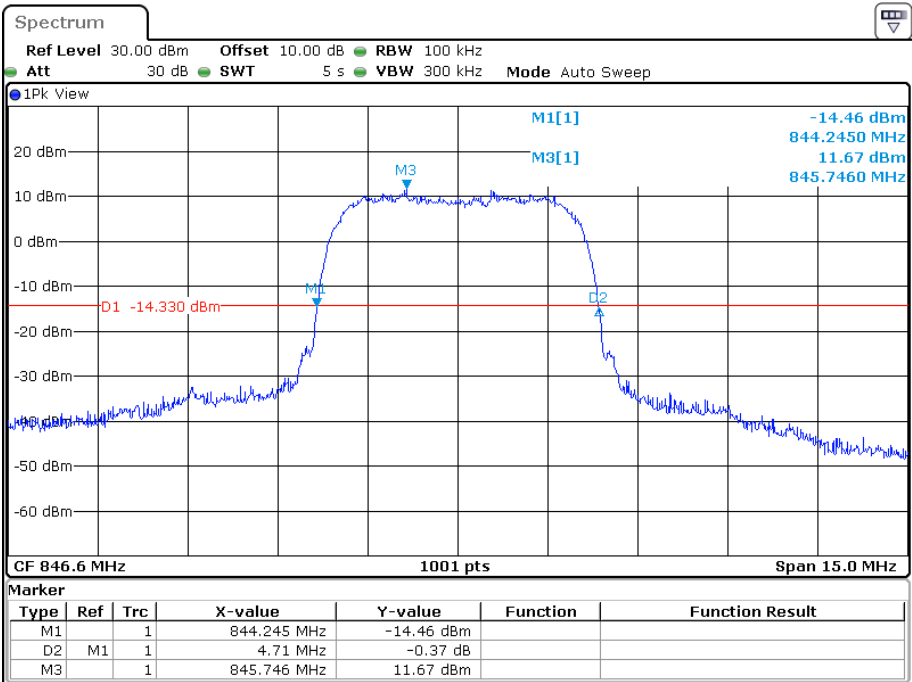


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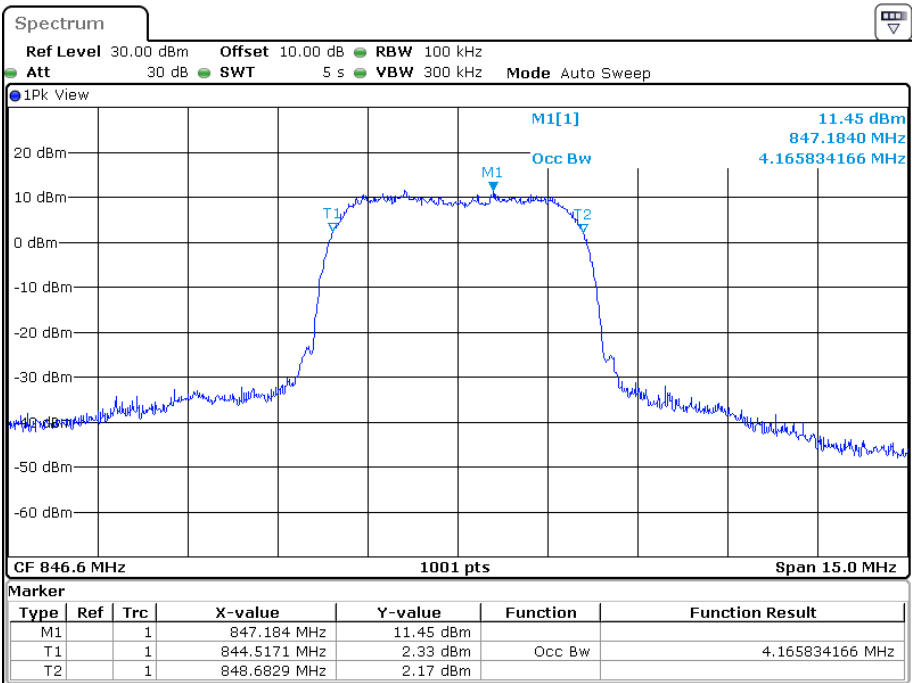


Date: 21.MAY.2023 13:13:09

26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel

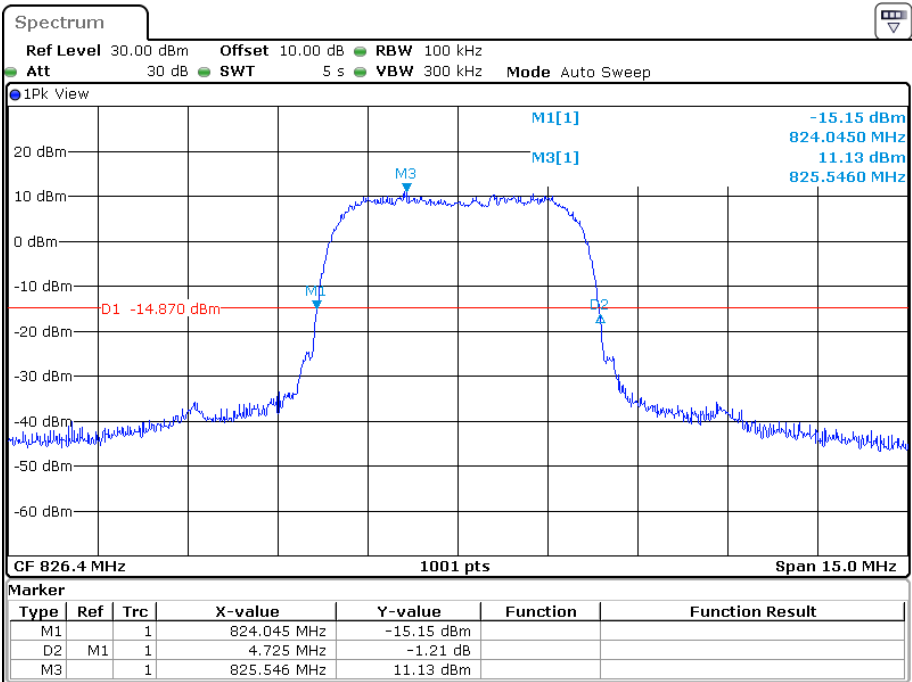


Date: 21.MAY.2023 13:17:32

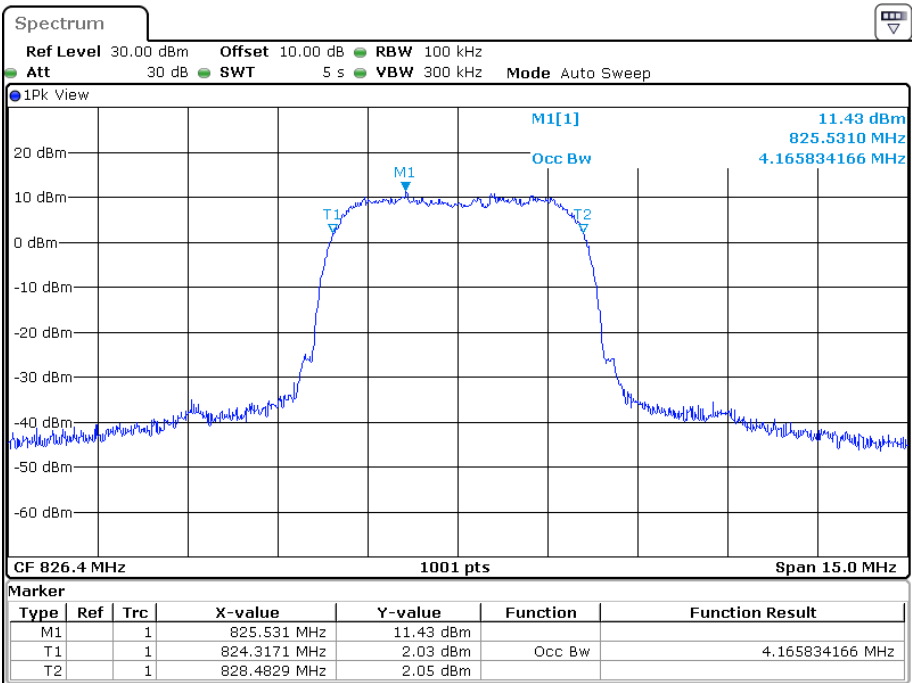


Date: 21.MAY.2023 13:16:49

26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel

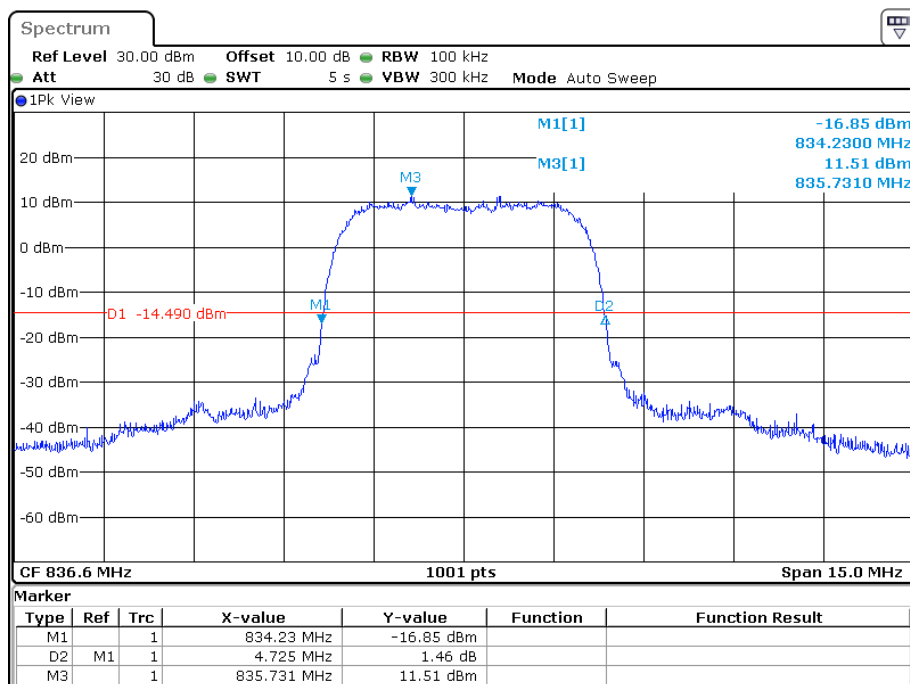


Date: 21.MAY.2023 12:03:40

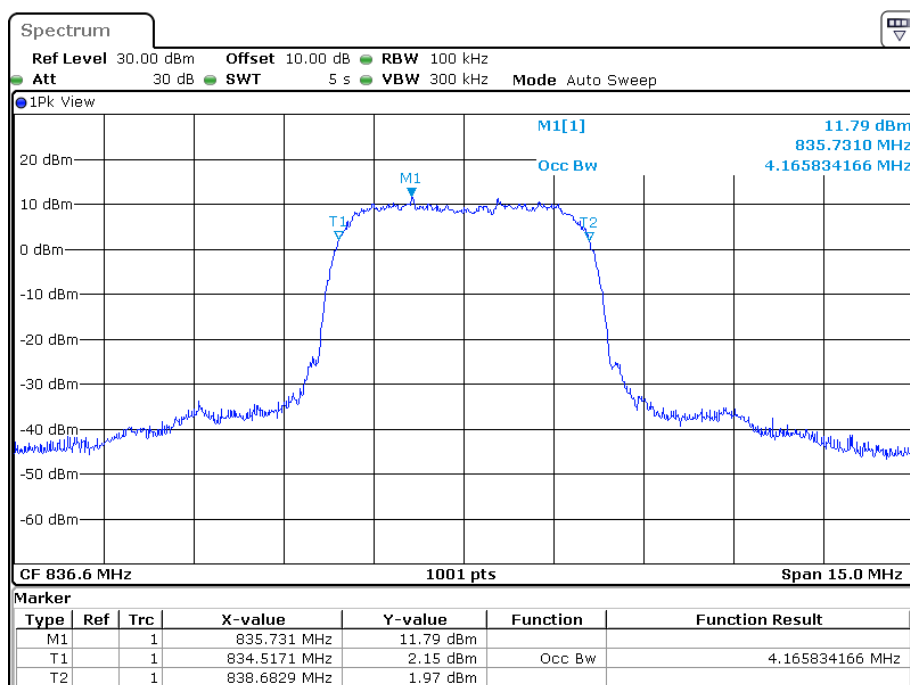


Date: 21.MAY.2023 12:02:59

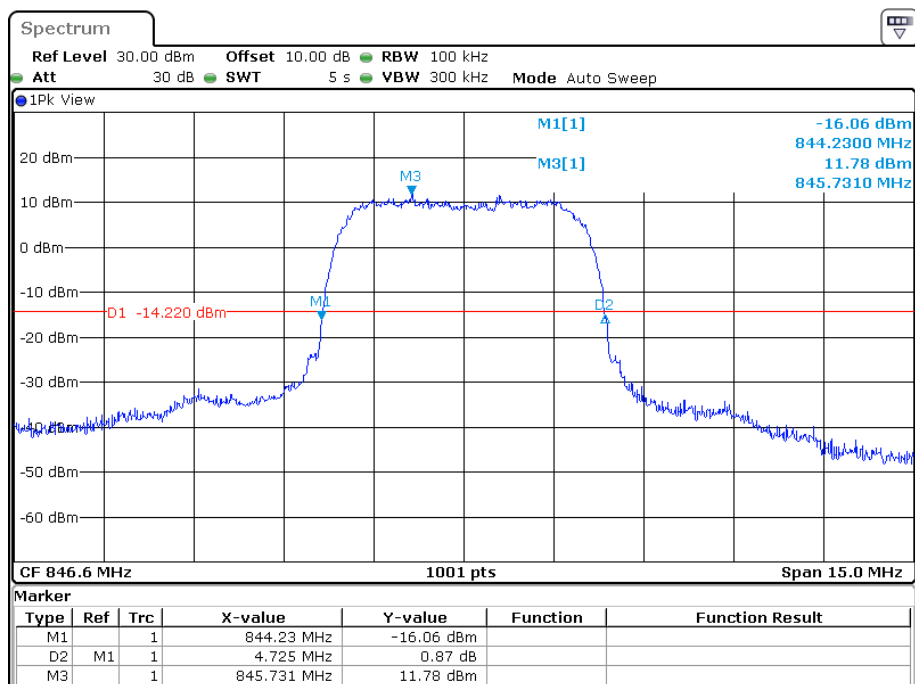
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel



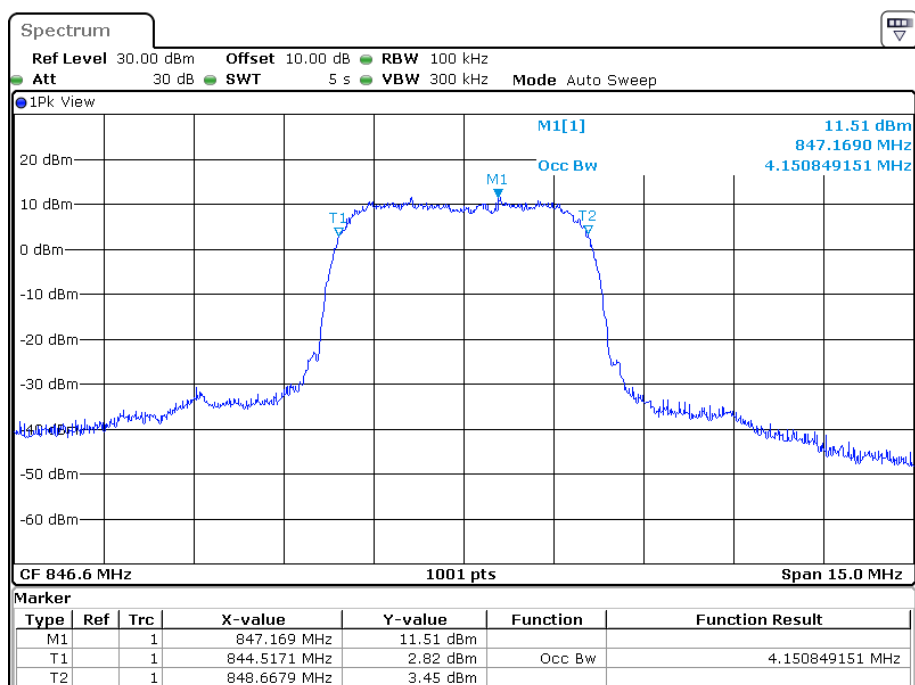
Date: 21.MAY.2023 12:18:13



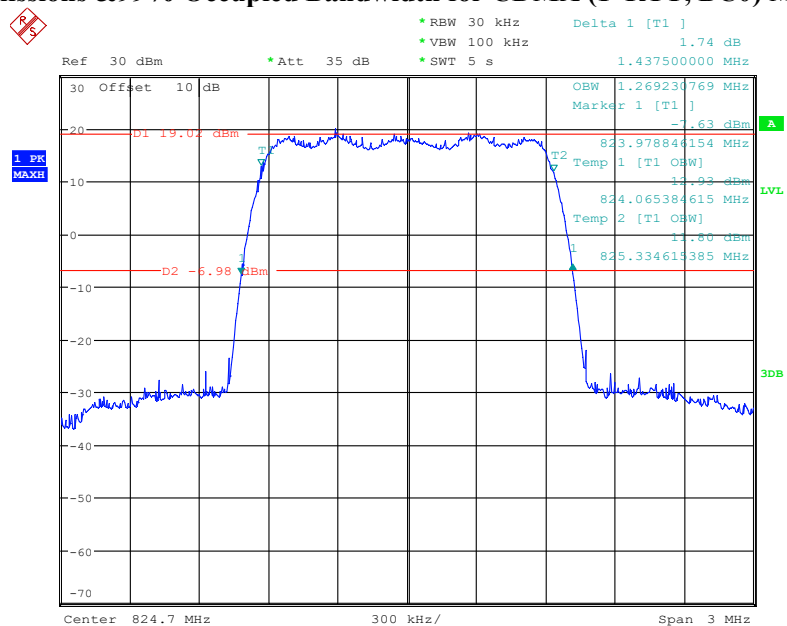
Date: 21.MAY.2023 12:17:31

26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel

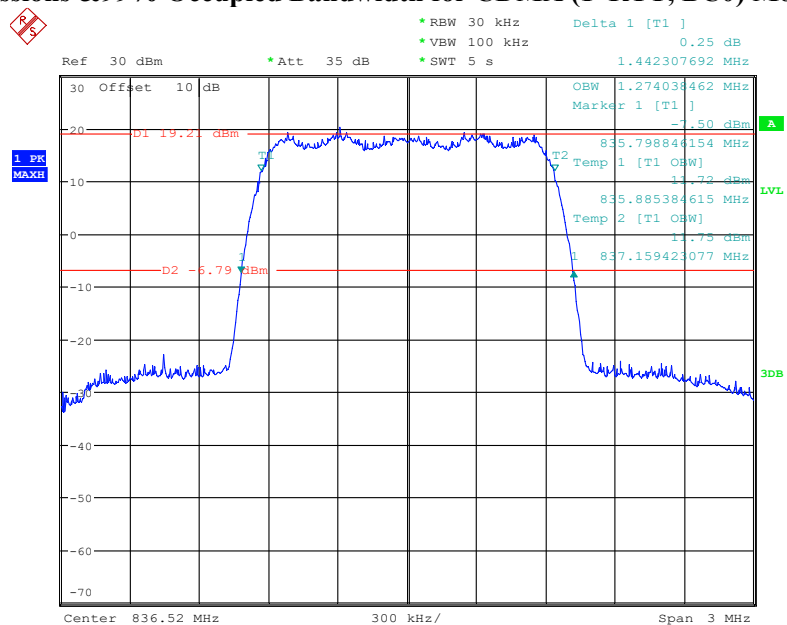
Date: 21.MAY.2023 13:02:29



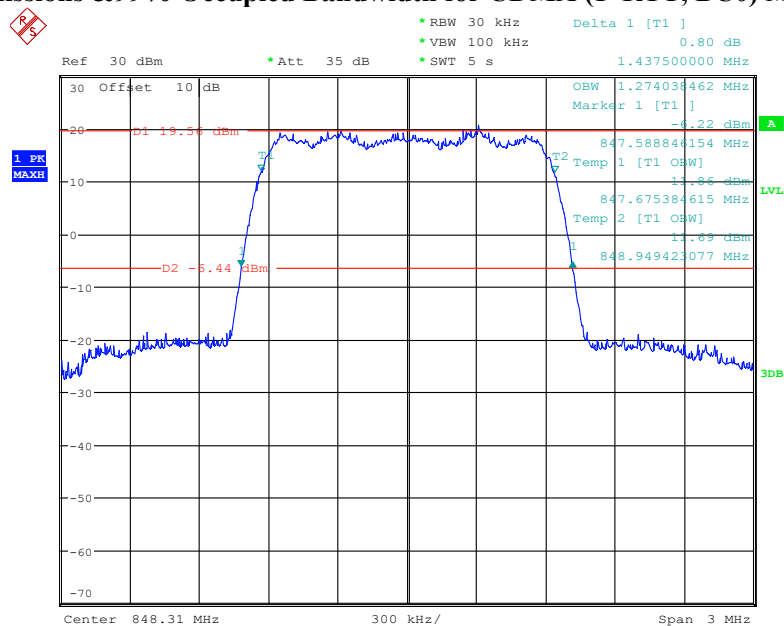
Date: 21.MAY.2023 13:01:47

26 dB Emissions & 99% Occupied Bandwidth for CDMA (1*RTT, BC0) Mode, Low Channel

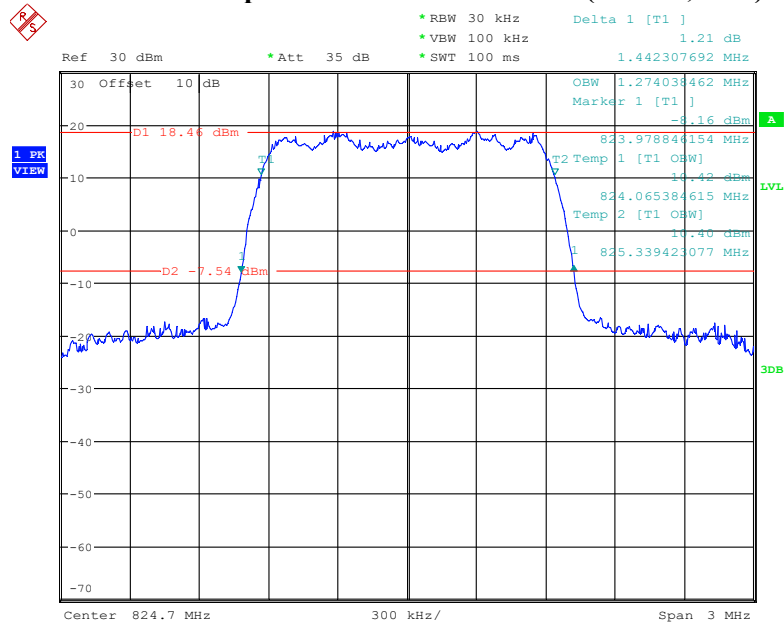
Date: 26.MAY.2023 16:35:32

26 dB Emissions & 99% Occupied Bandwidth for CDMA (1*RTT, BC0) Mode, Middle Channel

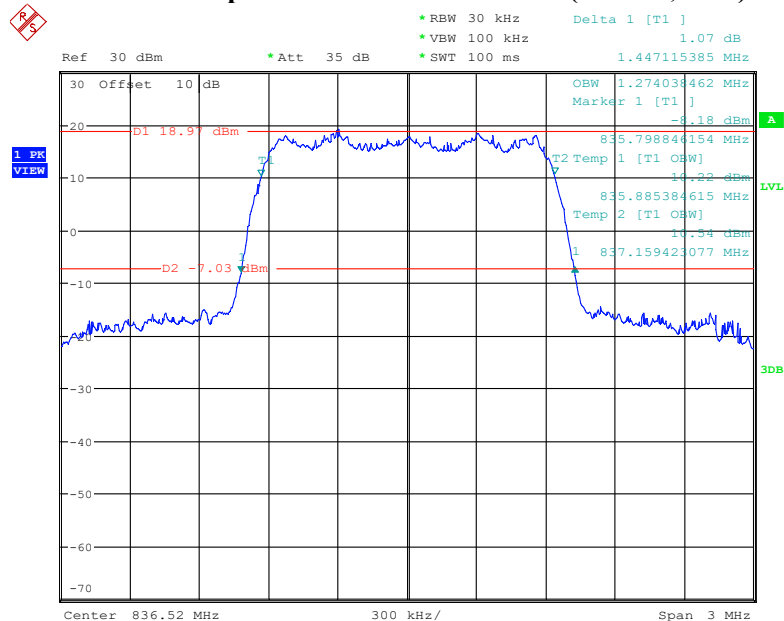
Date: 26.MAY.2023 16:40:40

26 dB Emissions & 99% Occupied Bandwidth for CDMA (1*RTT, BC0) Mode, High Channel

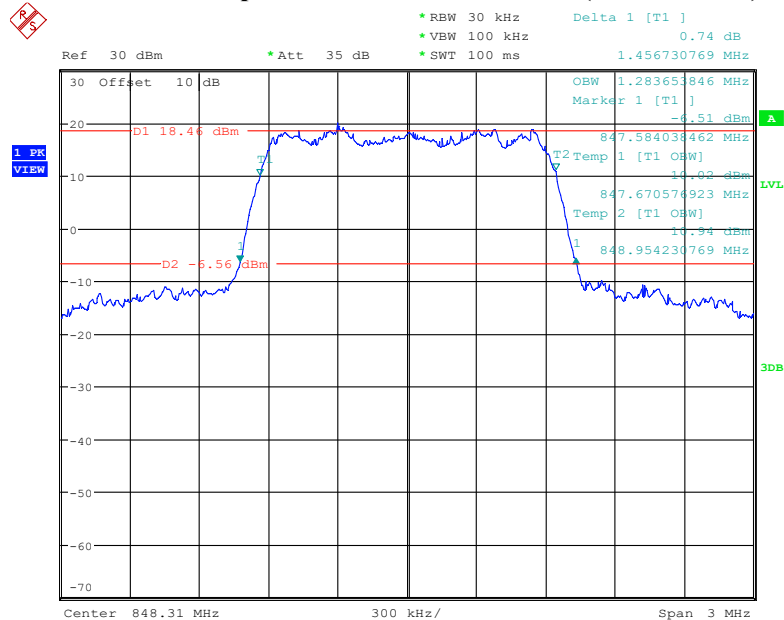
Date: 26.MAY.2023 16:43:54

26 dB Emissions & 99% Occupied Bandwidth for CDMA (EV-DO, BC0) Mode, Low Channel

Date: 26.MAY.2023 17:13:19

26 dB Emissions & 99% Occupied Bandwidth for CDMA (EV-DO, BC0) Mode, Middle Channel

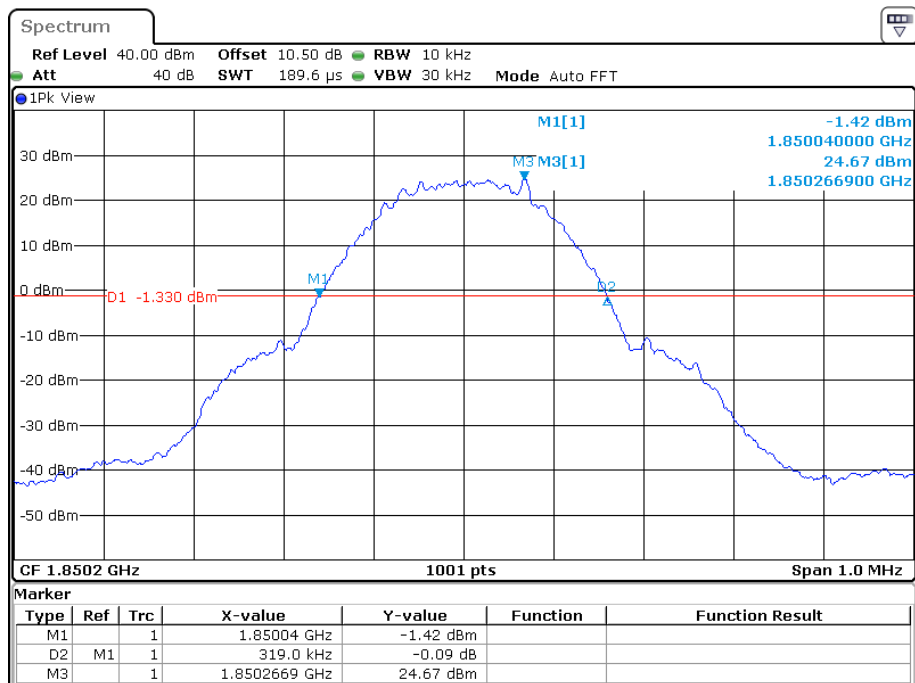
Date: 26.MAY.2023 17:10:43

26 dB Emissions & 99% Occupied Bandwidth for CDMA (EV-DO, BC0) Mode, High Channel

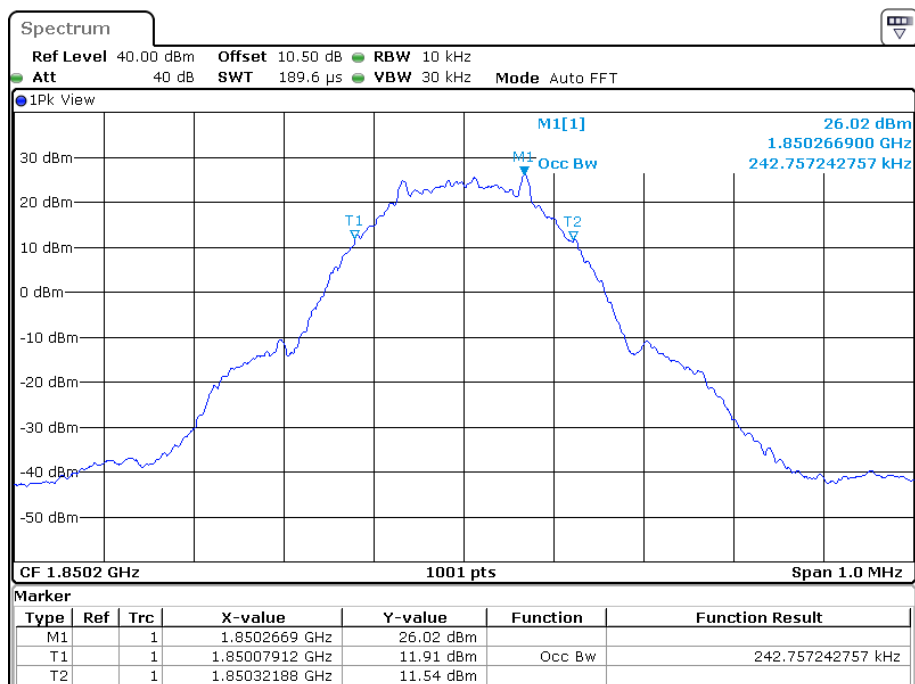
Date: 26.MAY.2023 17:16:46

PCS Band (Part 24E)

26 dB Emissions & 99% Occupied Bandwidth for GSM(GMSK) Mode, Low channel

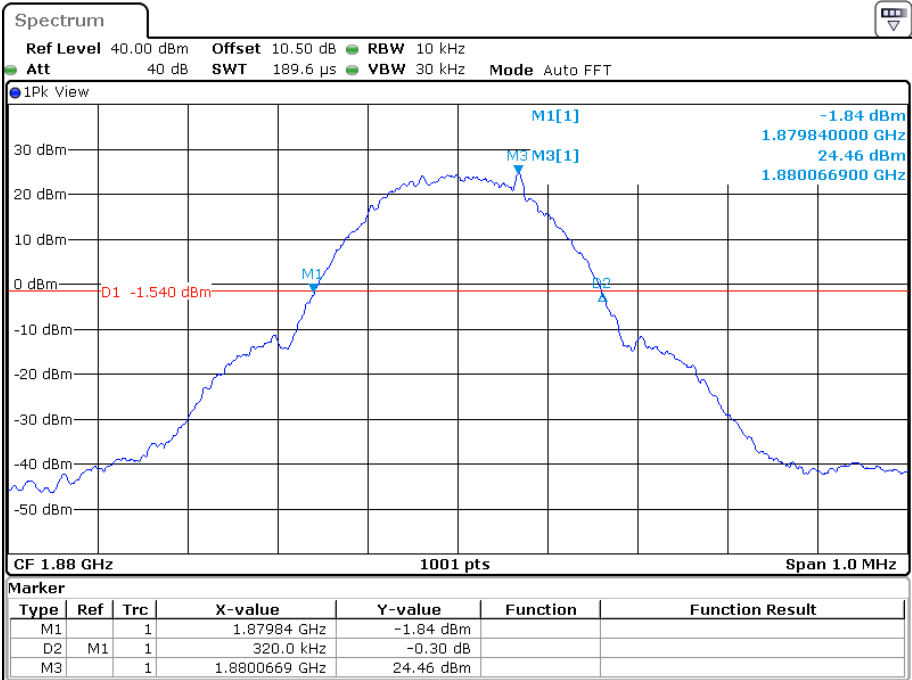


Date: 21.MAY.2023 14:52:14

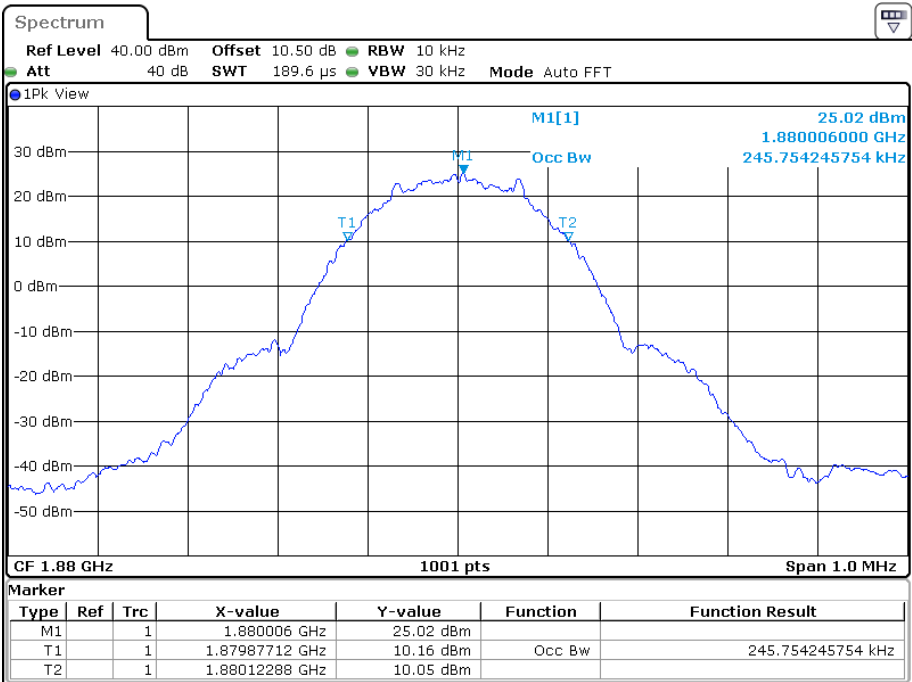


Date: 21.MAY.2023 14:51:53

26 dB Emissions & 99% Occupied Bandwidth for GSM(GMSK) Mode, Middle channel

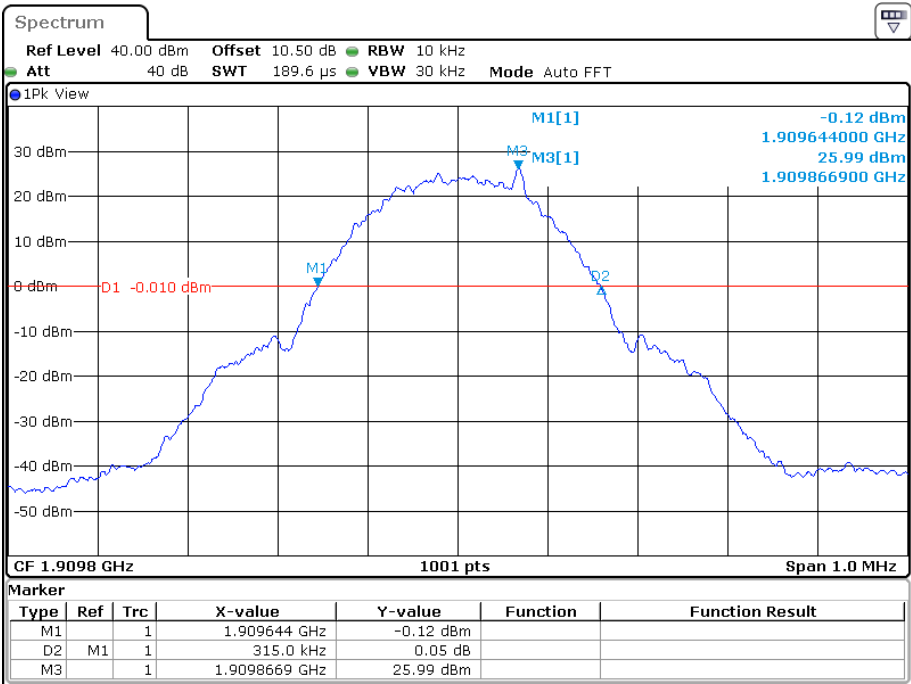


Date: 21.MAY.2023 14:59:04

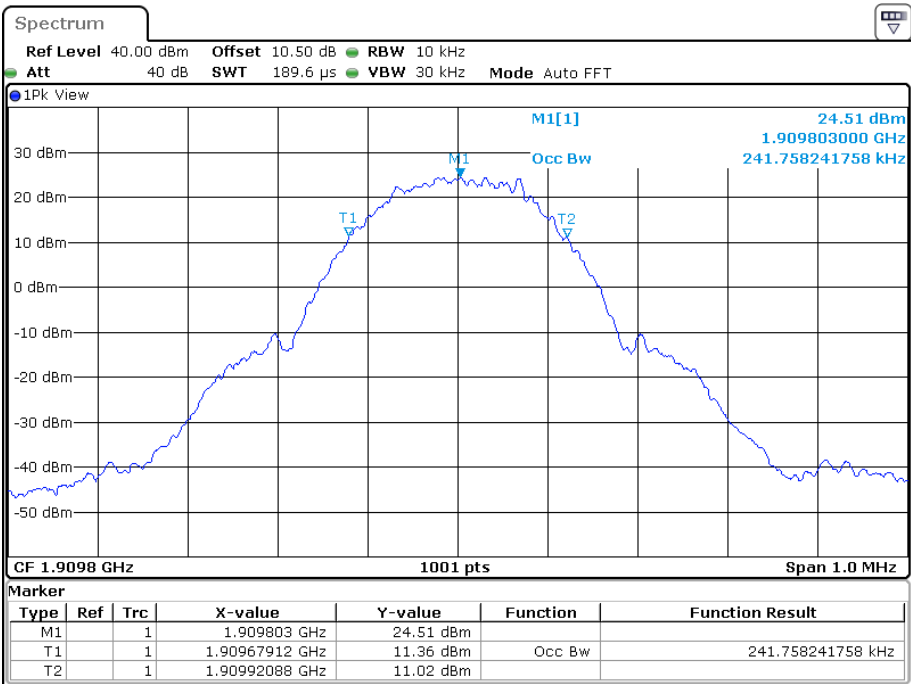


Date: 21.MAY.2023 14:58:42

26 dB Emissions & 99% Occupied Bandwidth for GSM(GMSK) Mode, High channel

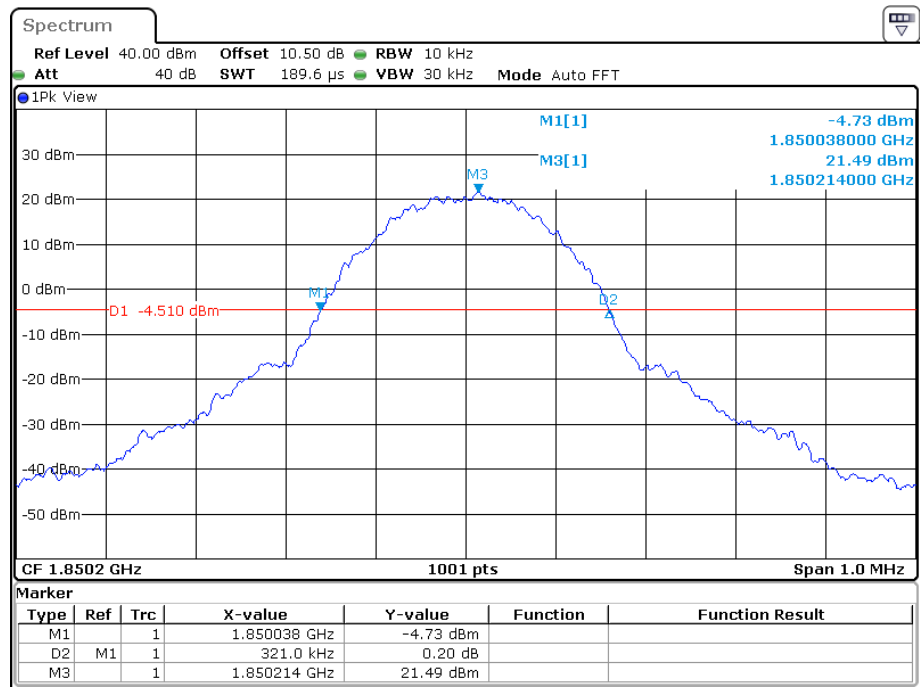


Date: 21.MAY.2023 15:02:57

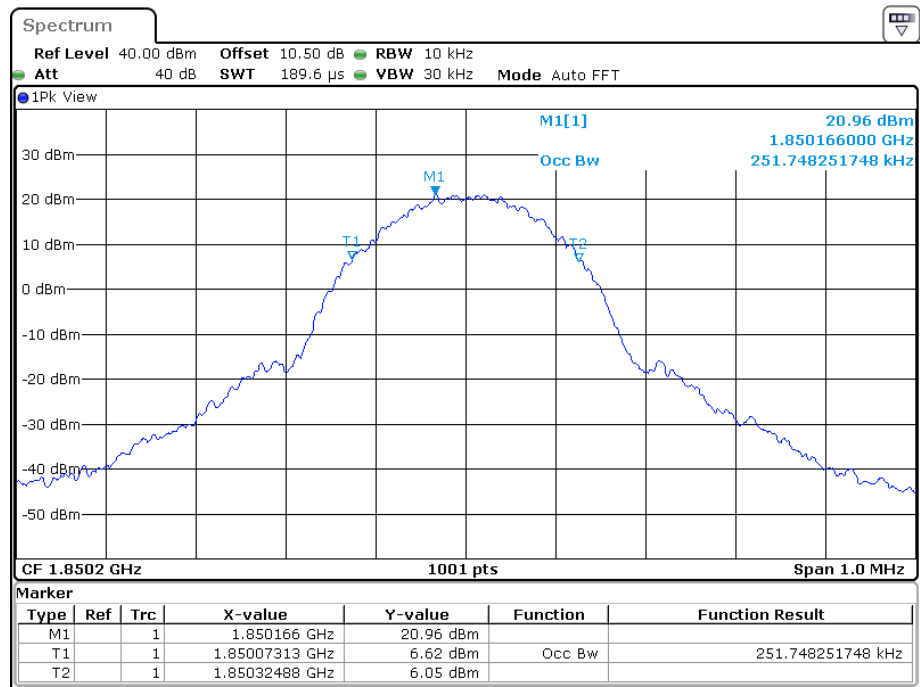


Date: 21.MAY.2023 15:02:36

26 dB Emissions & 99% Occupied Bandwidth for EDGE(8PSK) Mode, Low channel

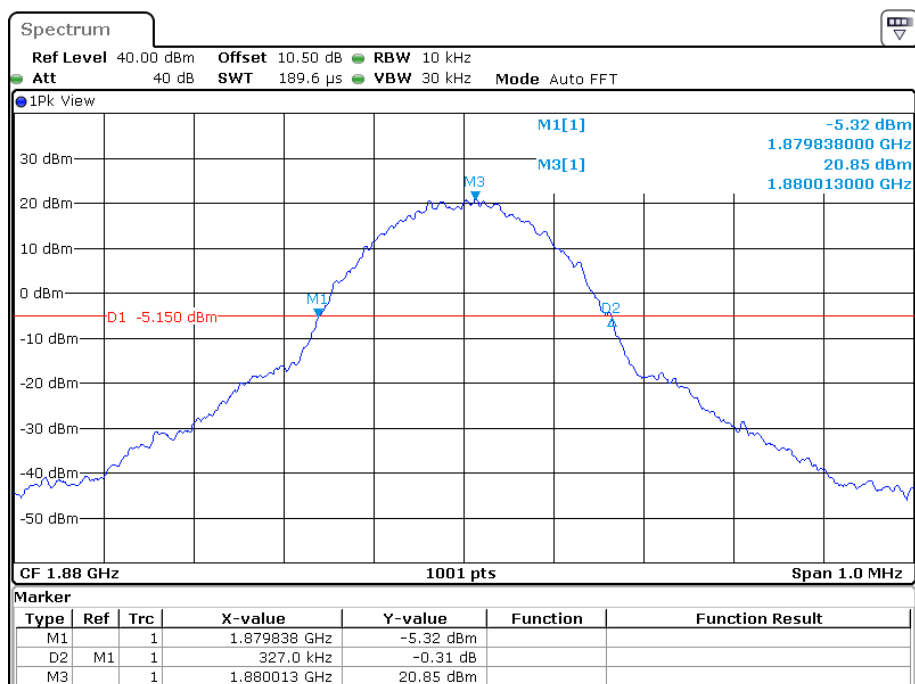


Date: 21.MAY.2023 15:14:46

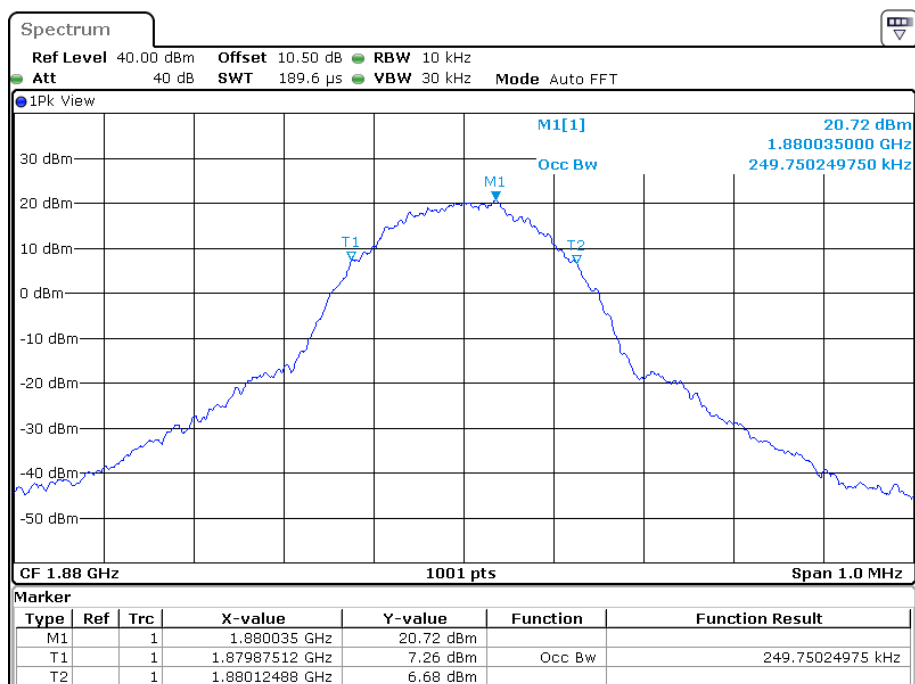


Date: 21.MAY.2023 15:14:14

26 dB Emissions & 99% Occupied Bandwidth for EDGE(8PSK) Mode, Middle channel

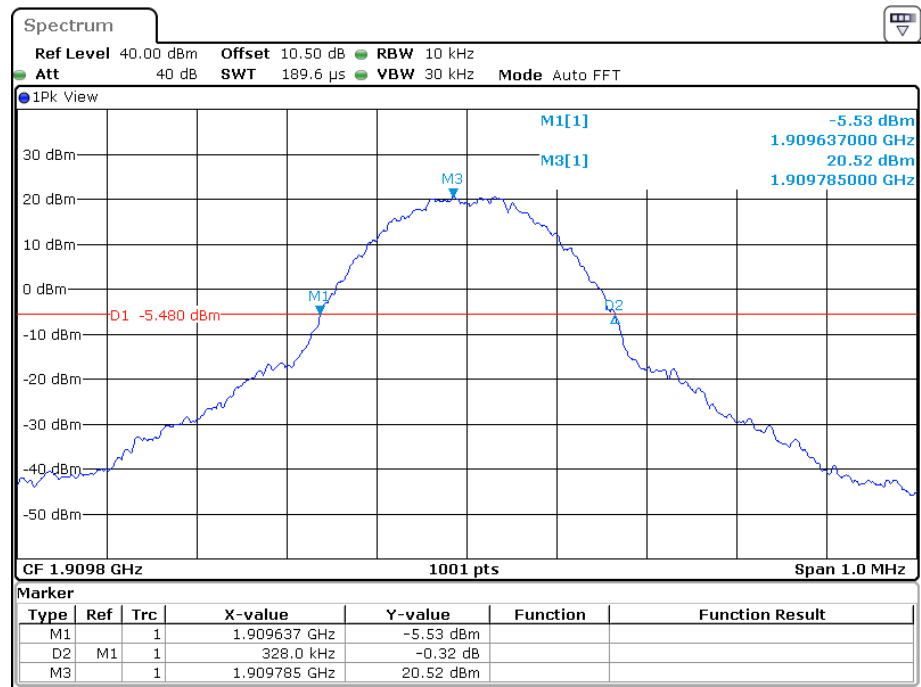


Date: 21.MAY.2023 15:20:50

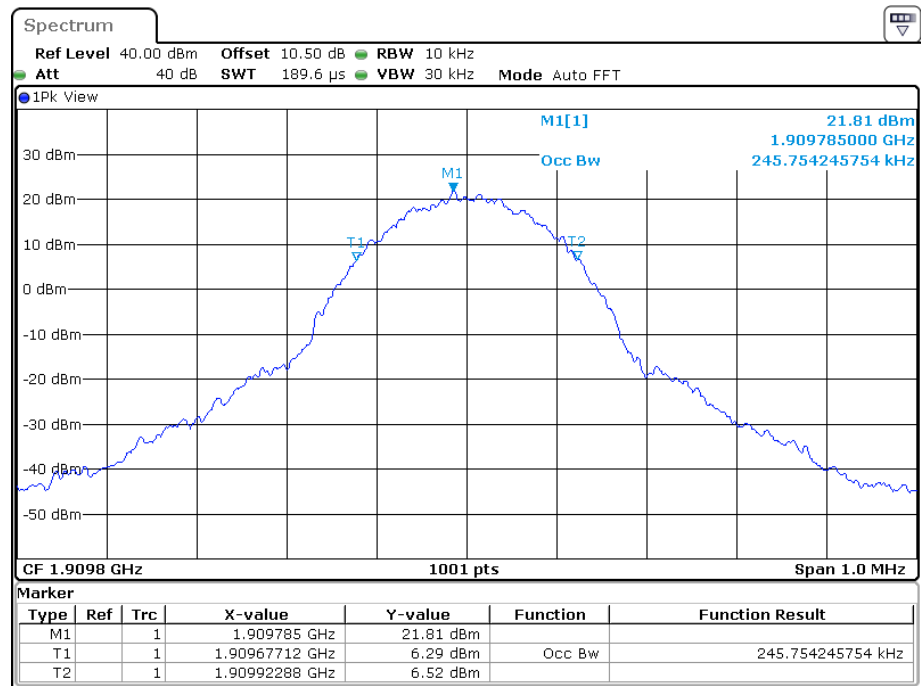


Date: 21.MAY.2023 15:20:28

26 dB Emissions & 99% Occupied Bandwidth for EDGE(8PSK) Mode, High channel

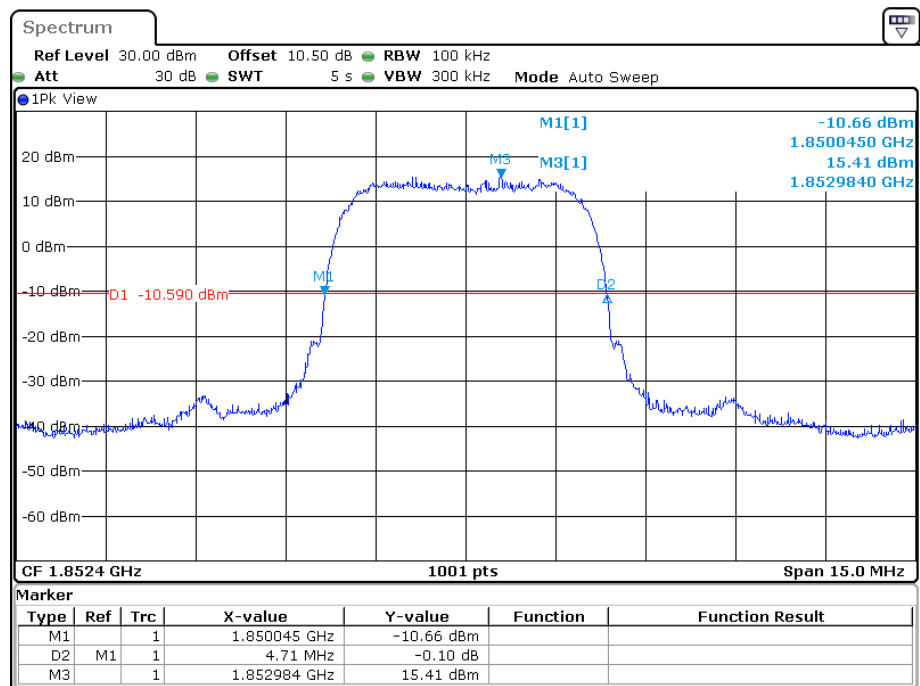


Date: 21.MAY.2023 15:25:22

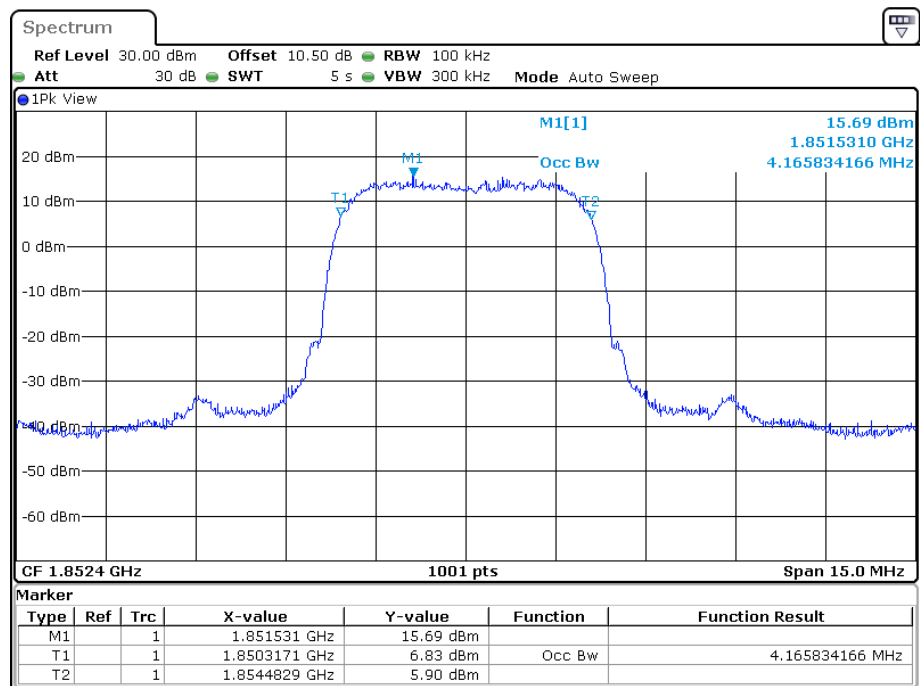


Date: 21.MAY.2023 15:24:50

26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel

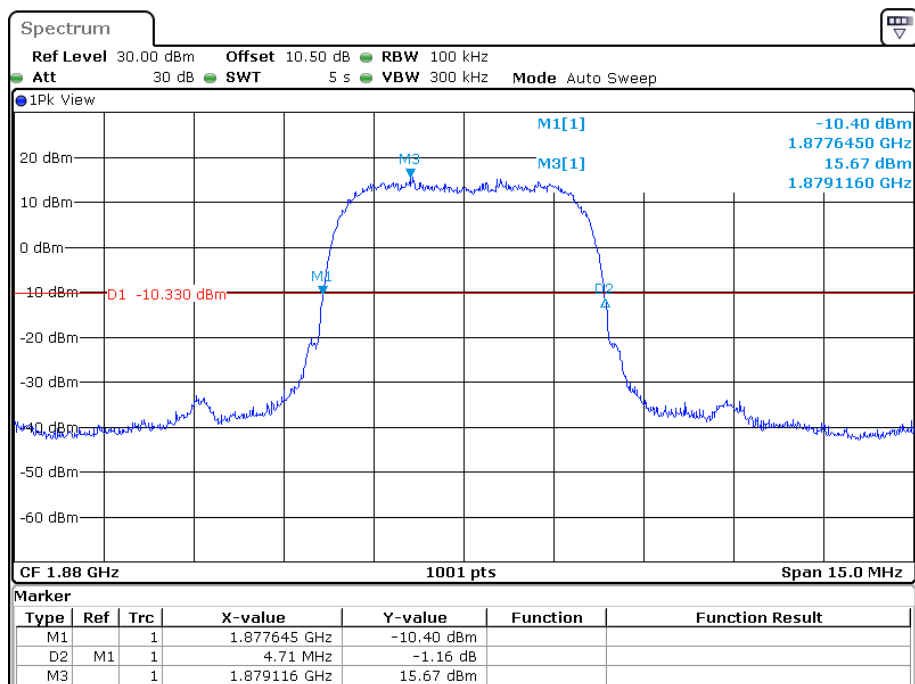


Date: 21.MAY.2023 09:52:30

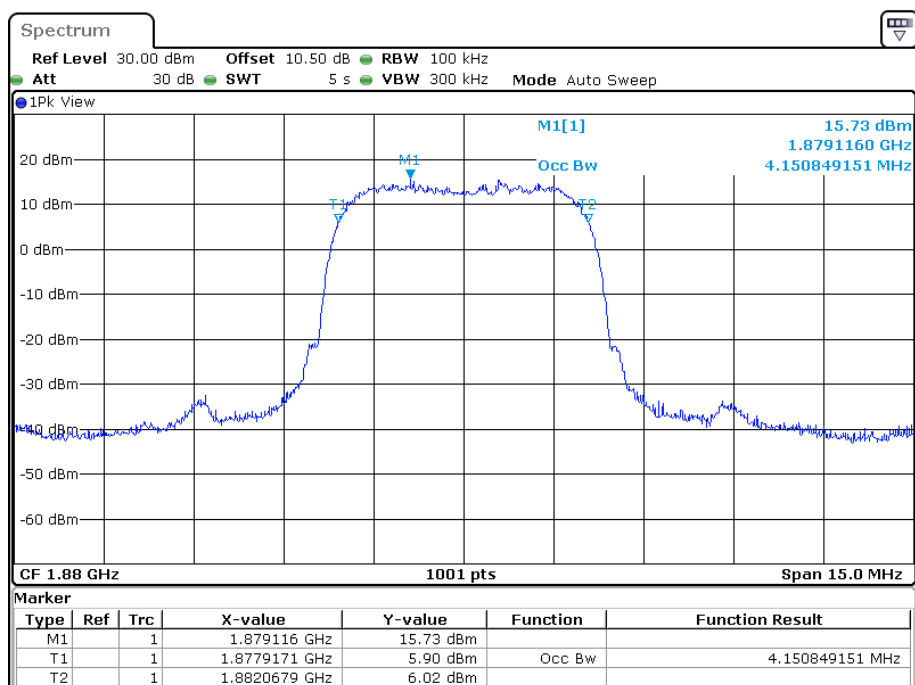


Date: 21.MAY.2023 09:52:01

26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel

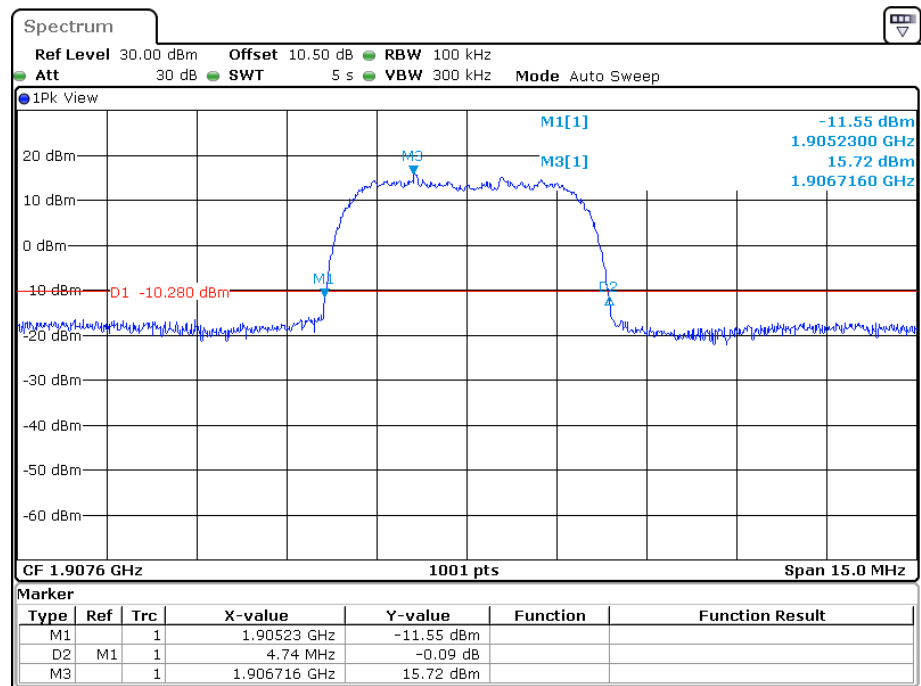


Date: 21.MAY.2023 09:55:42

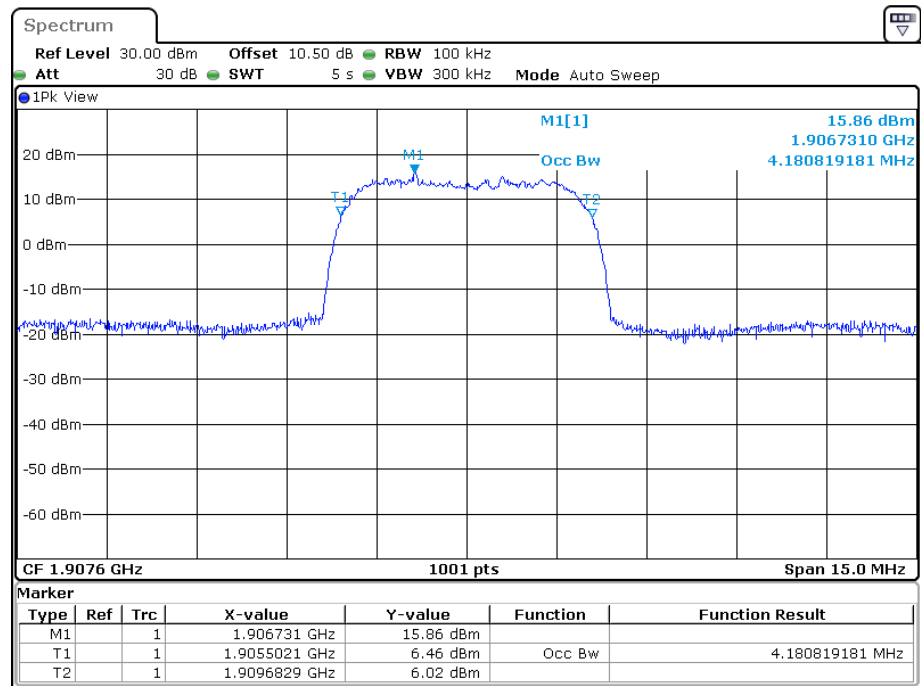


Date: 21.MAY.2023 09:55:15

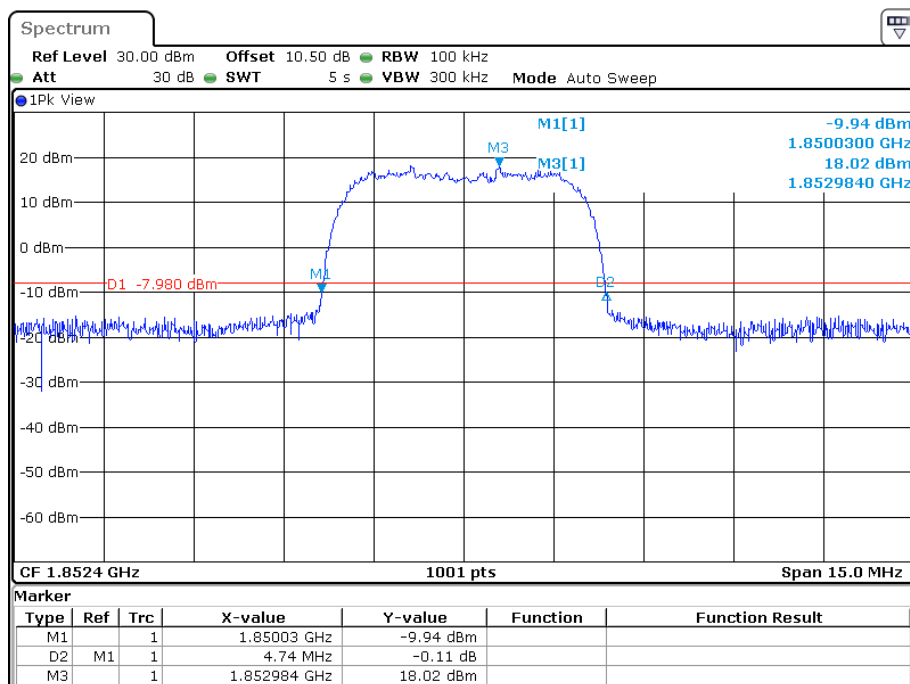
26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



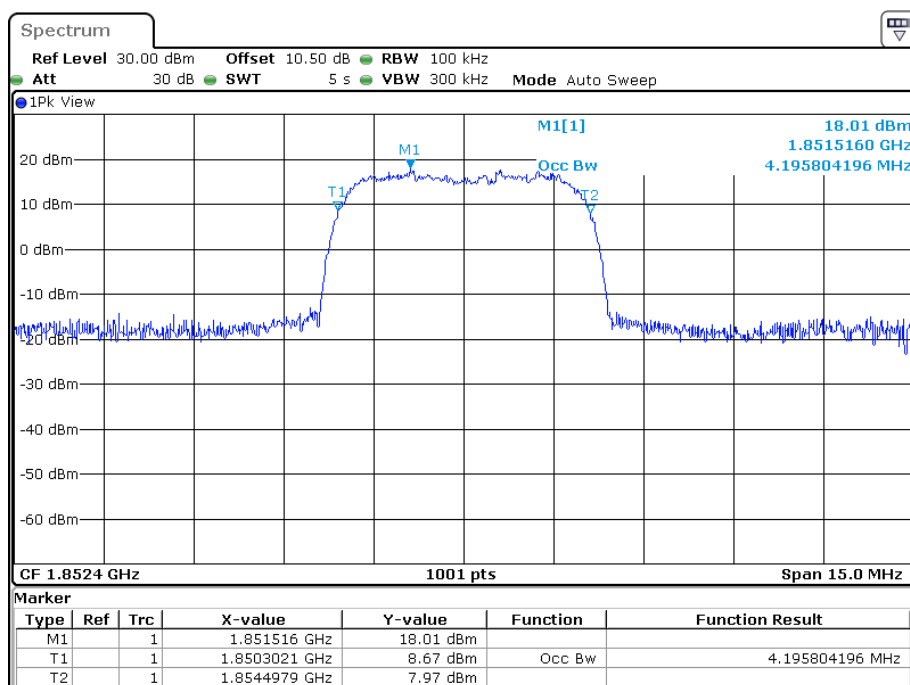
Date: 21.MAY.2023 09:59:24



Date: 21.MAY.2023 09:58:41

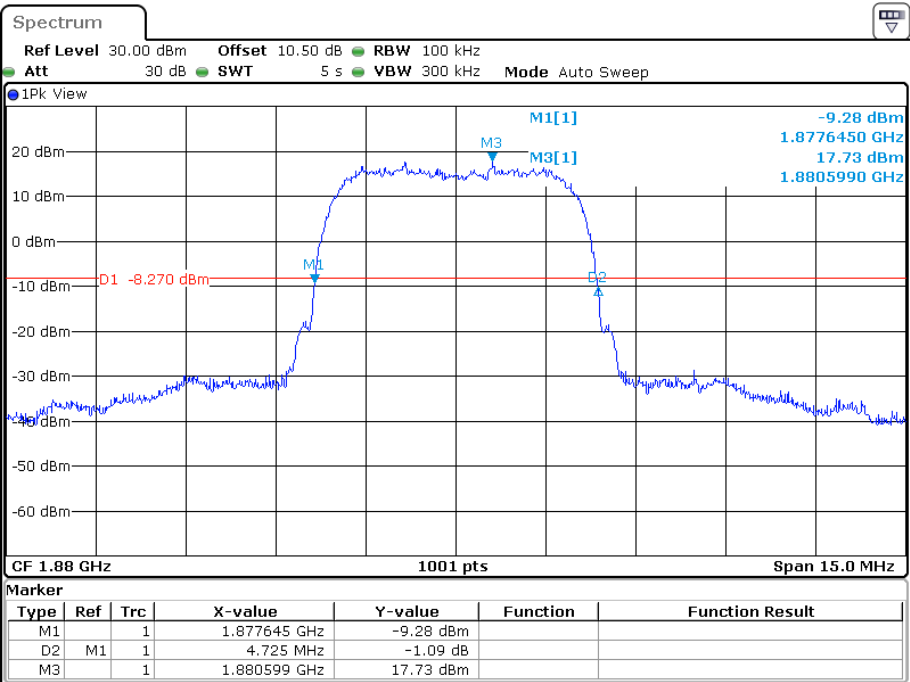
26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel

Date: 21.MAY.2023 10:23:39

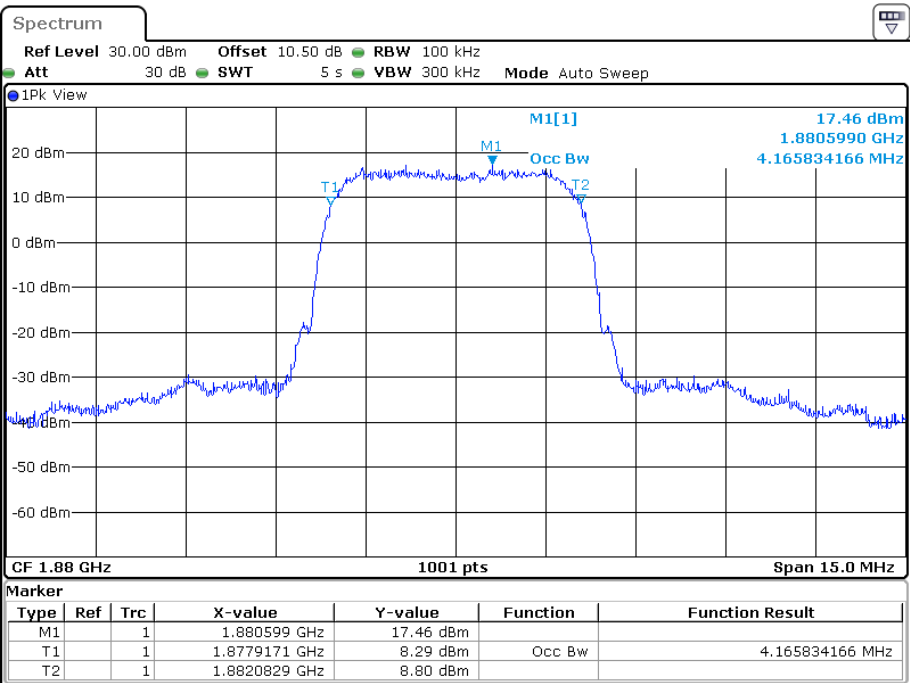


Date: 21.MAY.2023 10:21:40

26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel

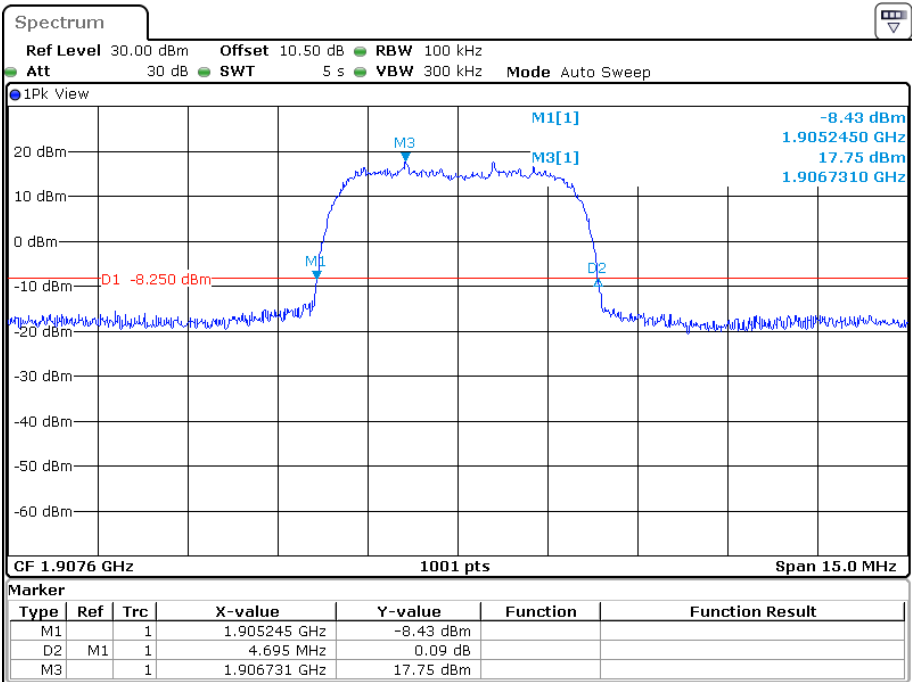


Date: 21.MAY.2023 10:27:00

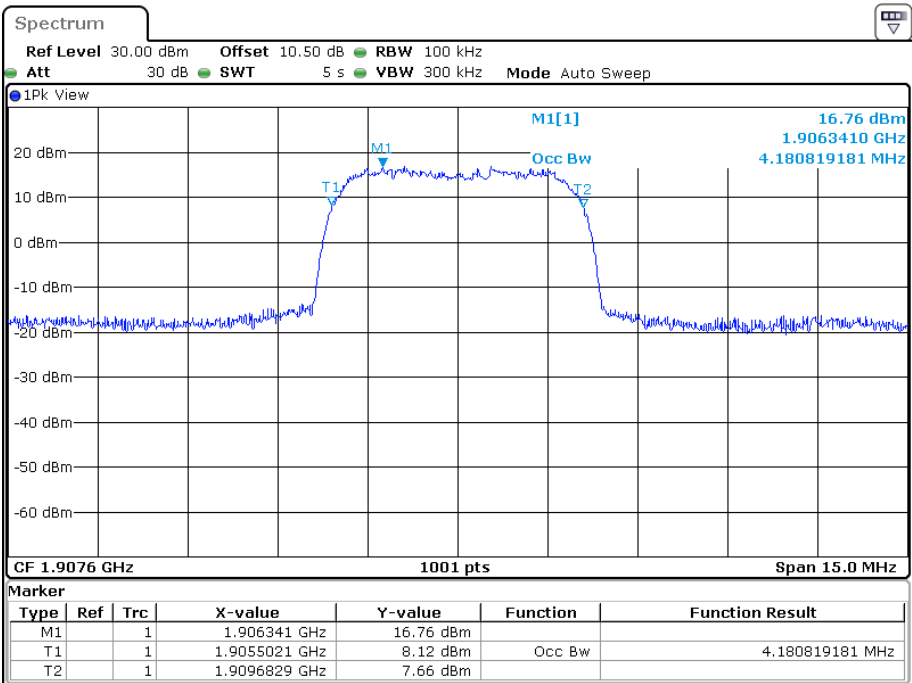


Date: 21.MAY.2023 10:26:18

26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel

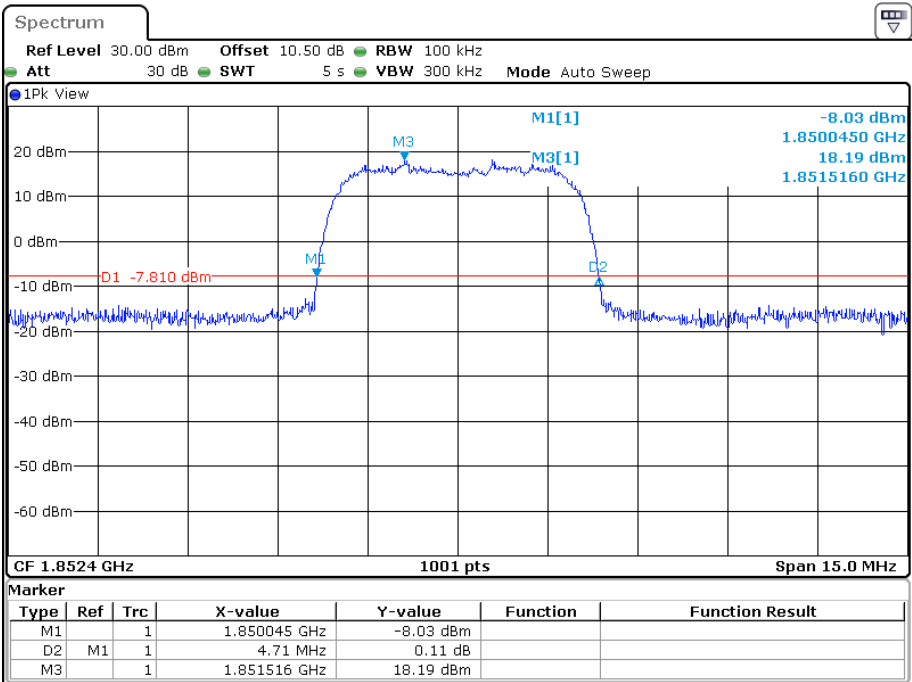


Date: 21.MAY.2023 10:30:45

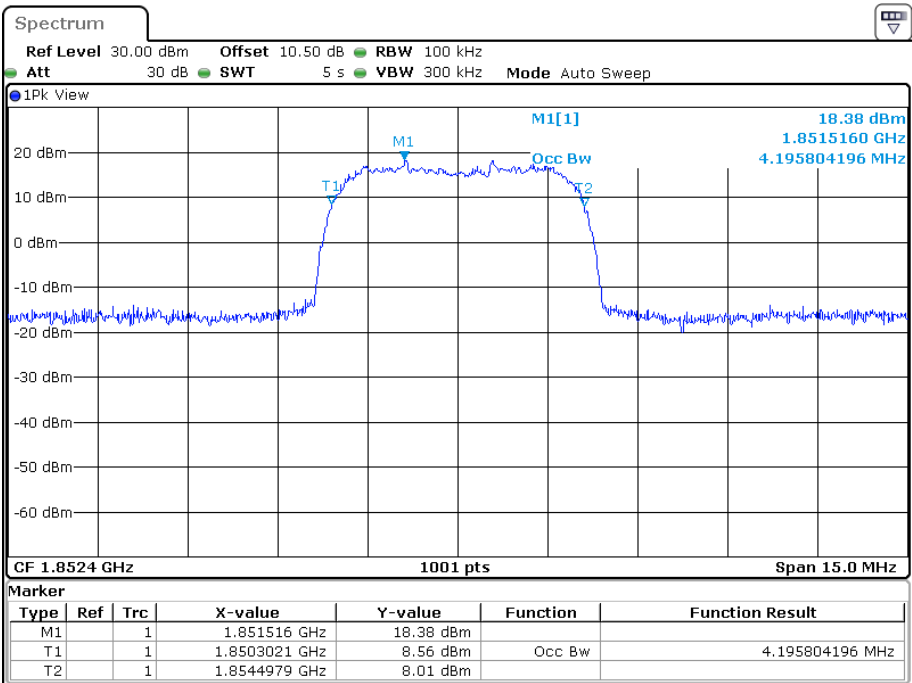


Date: 21.MAY.2023 10:30:02

26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel

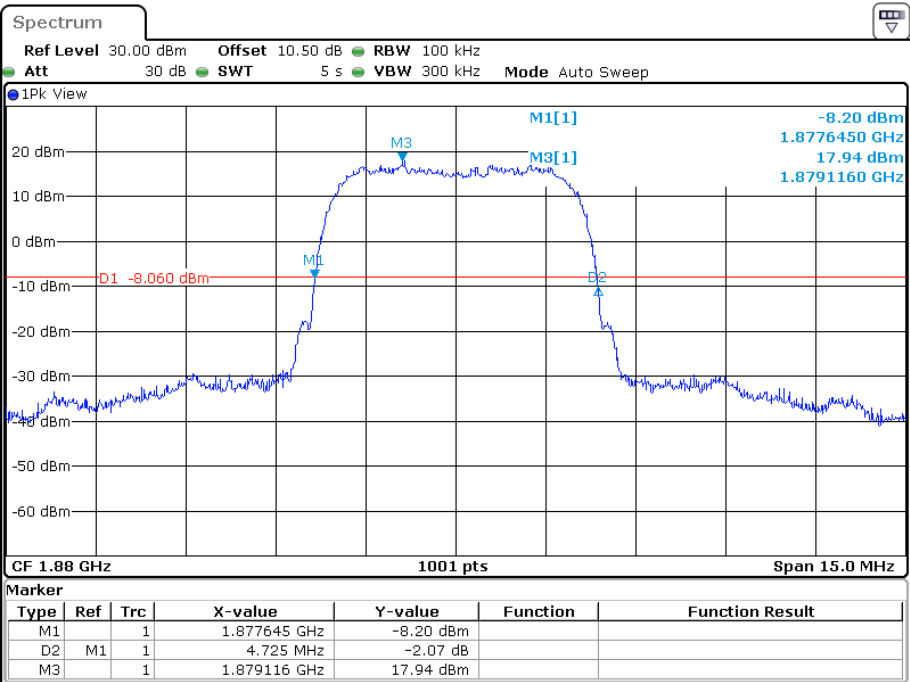


Date: 21.MAY.2023 10:07:57

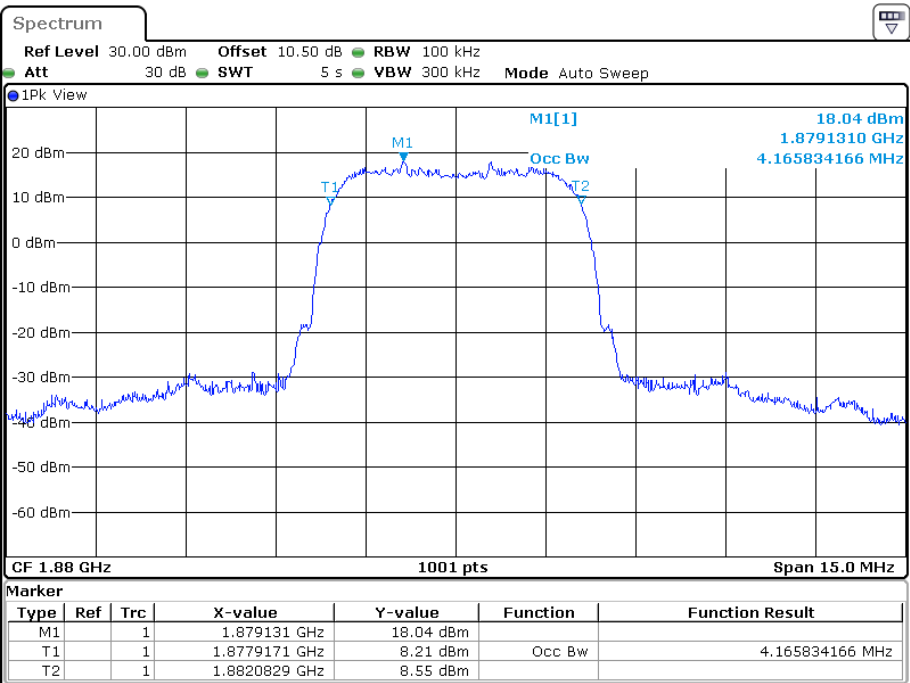


Date: 21.MAY.2023 10:07:15

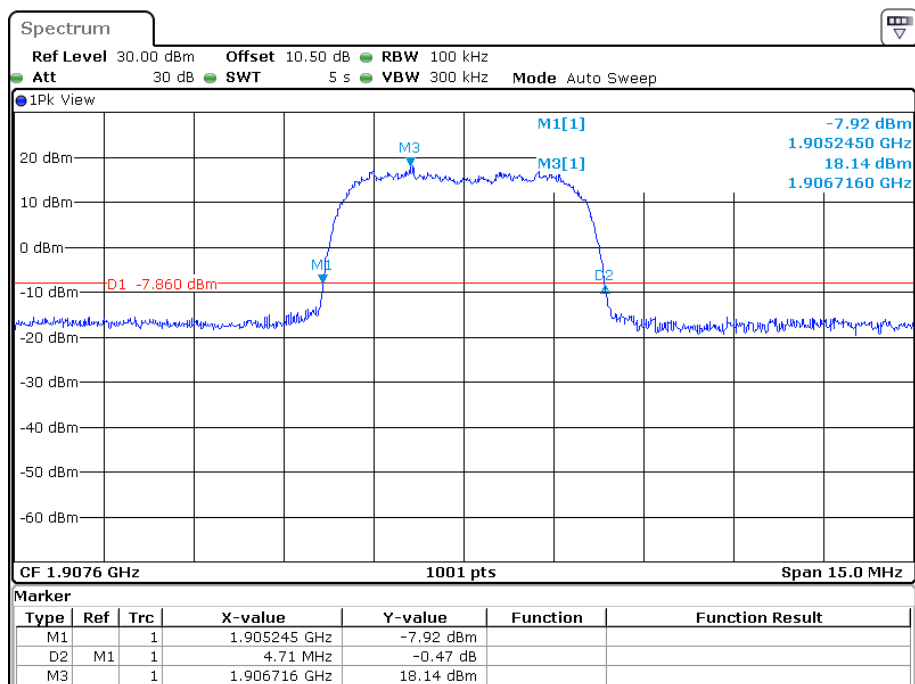
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel



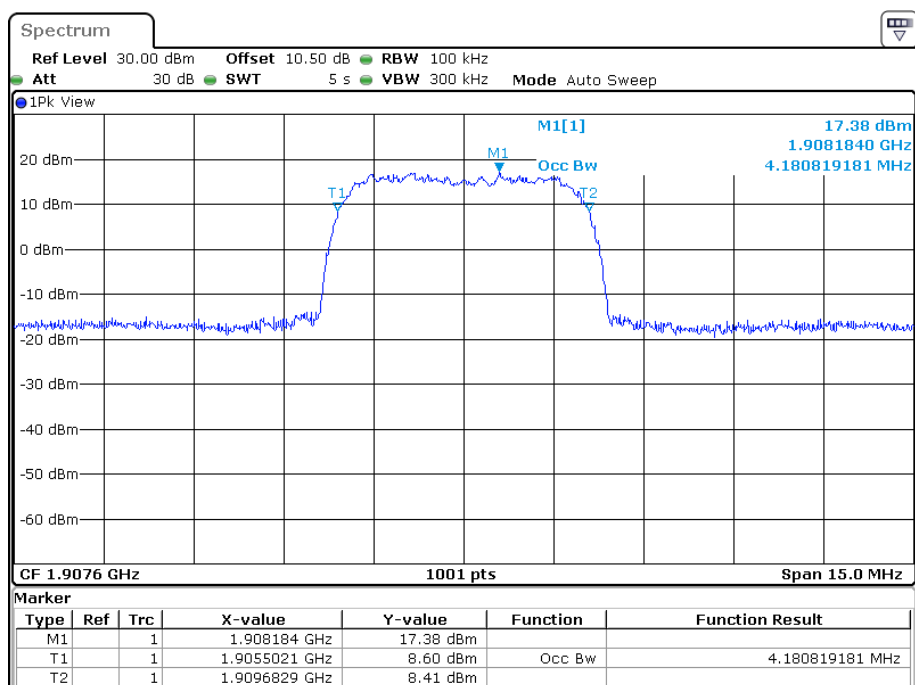
Date: 21.MAY.2023 10:13:56



Date: 21.MAY.2023 10:13:14

26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel

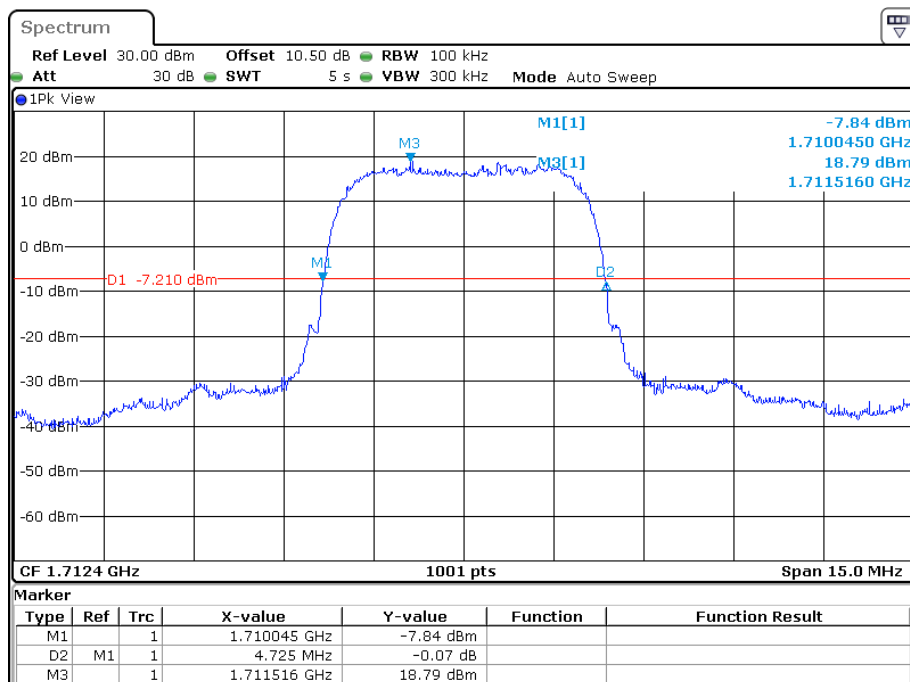
Date: 21.MAY.2023 10:17:13



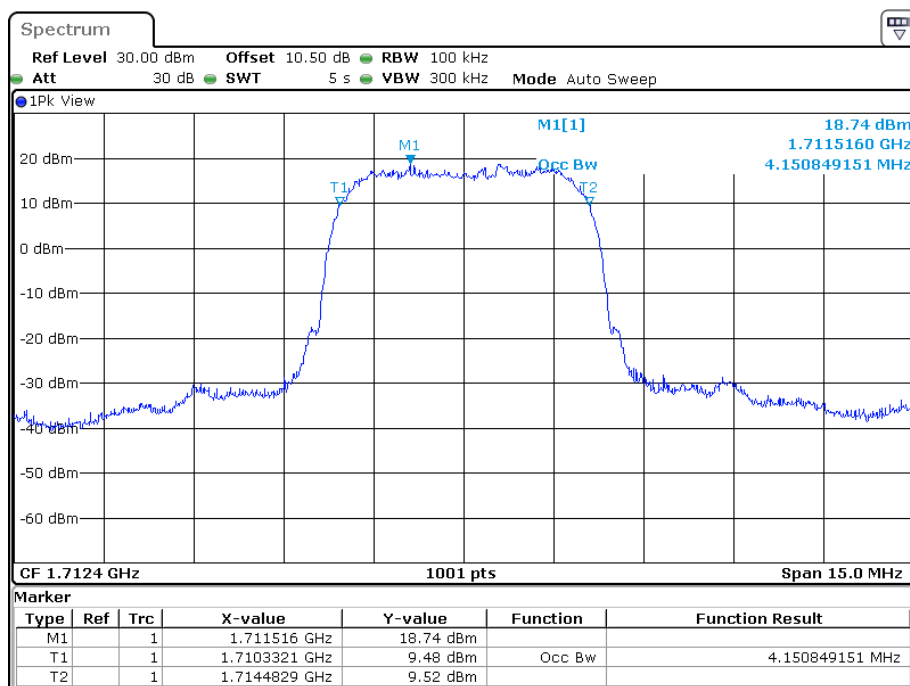
Date: 21.MAY.2023 10:16:32

AWS Band

26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel

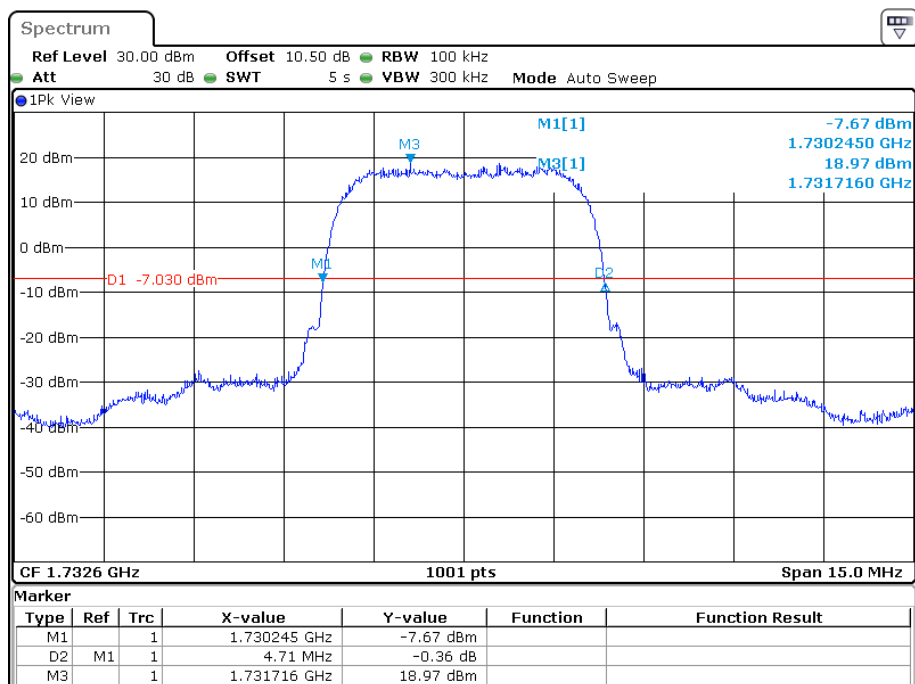


Date: 21.MAY.2023 10:39:49

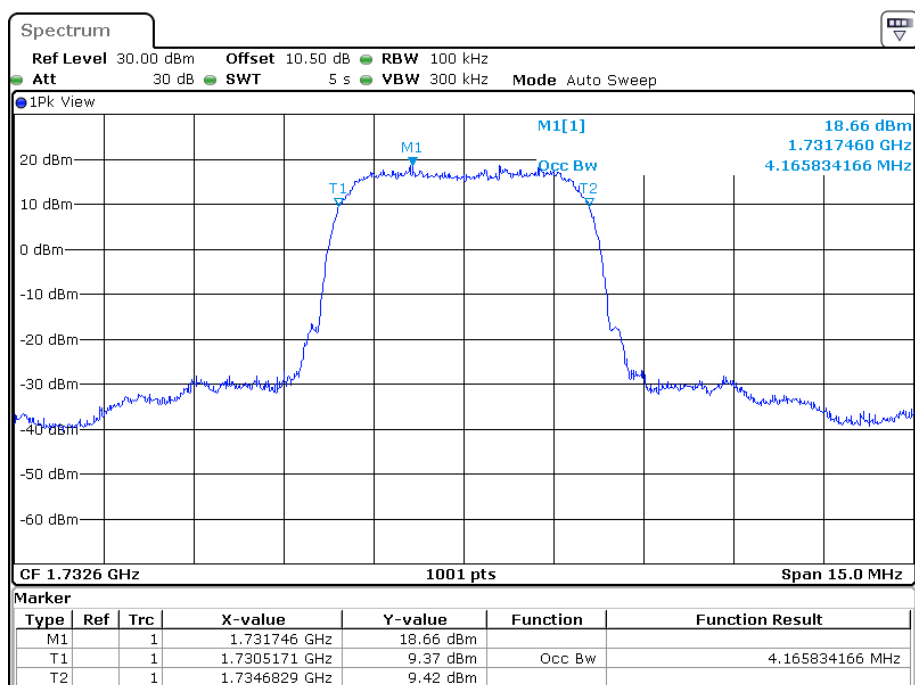


Date: 21.MAY.2023 10:39:22

26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel

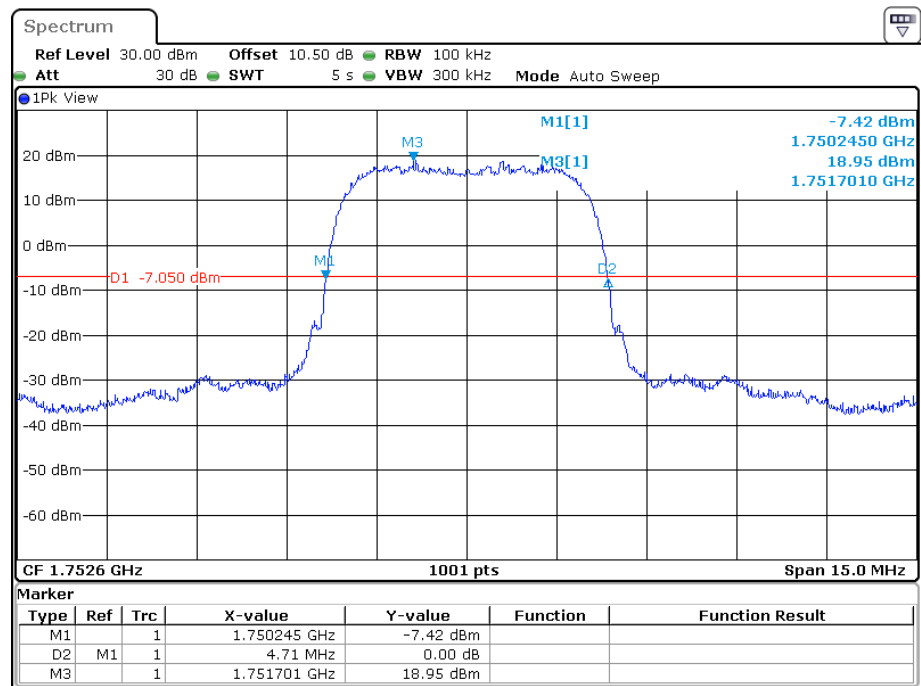


Date: 21.MAY.2023 10:44:24

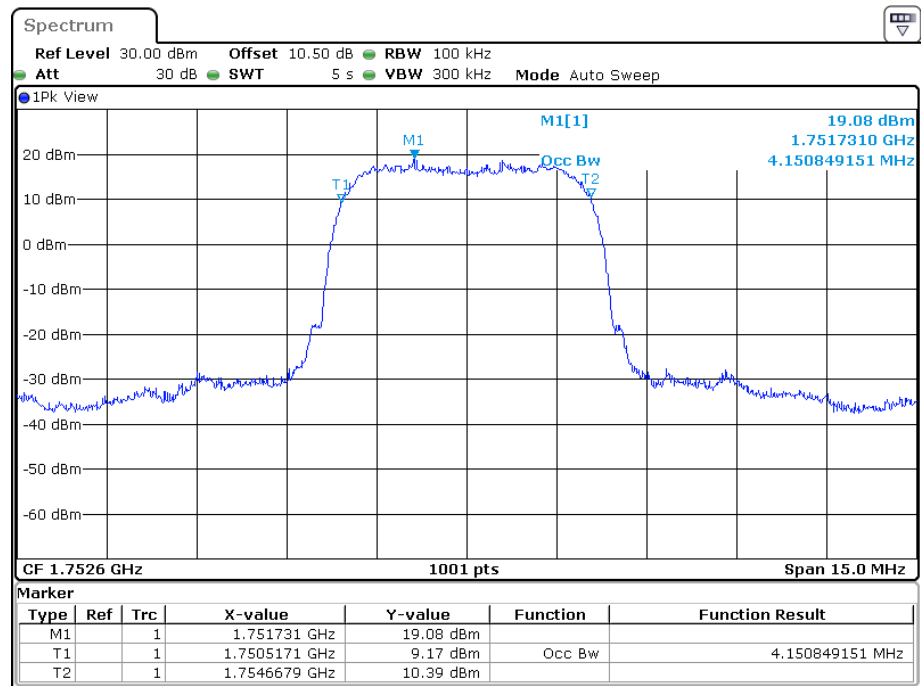


Date: 21.MAY.2023 10:43:57

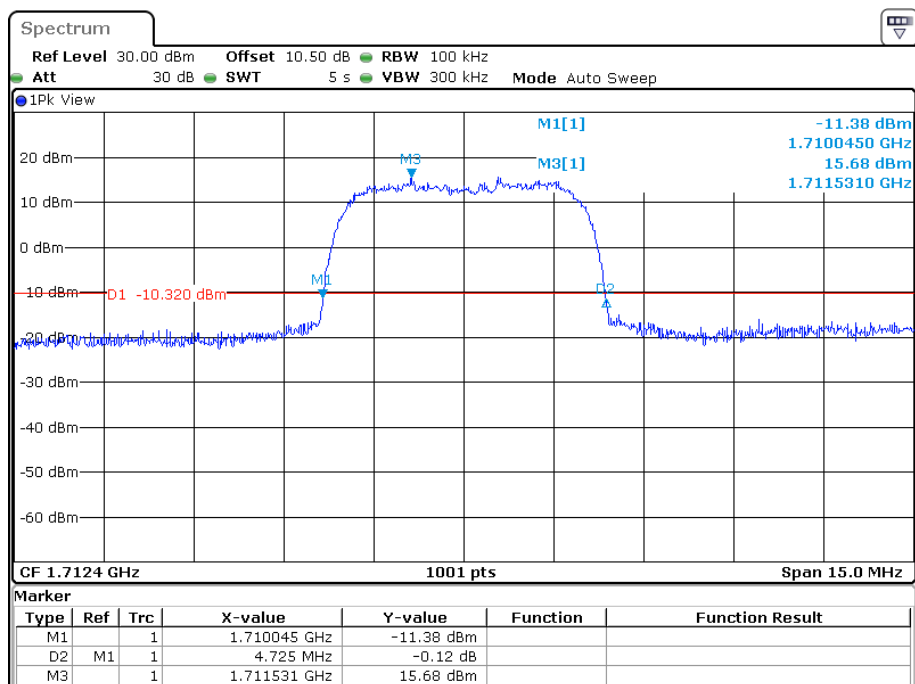
26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



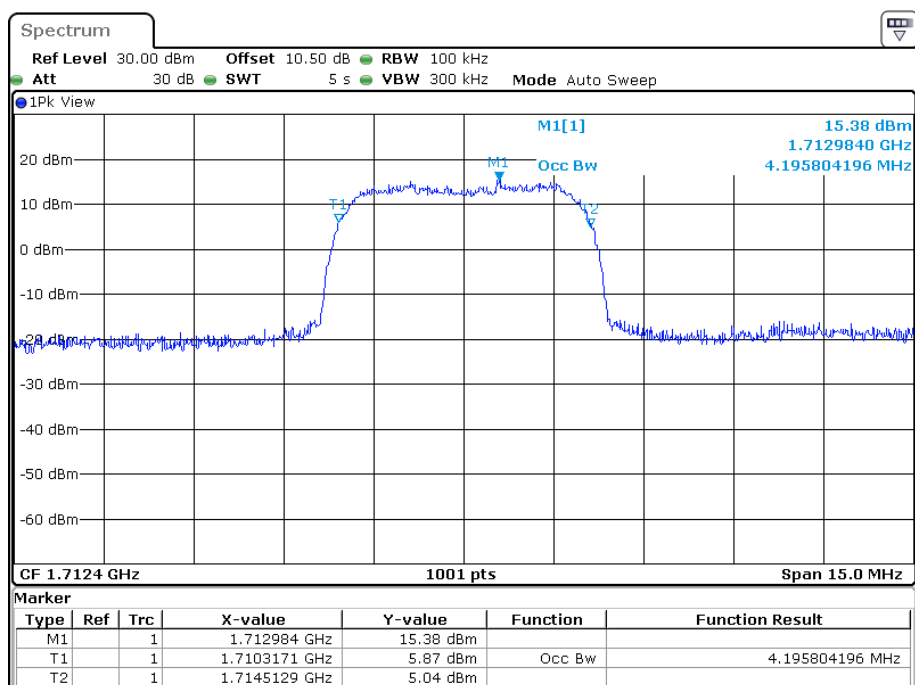
Date: 21.MAY.2023 10:47:43



Date: 21.MAY.2023 10:47:16

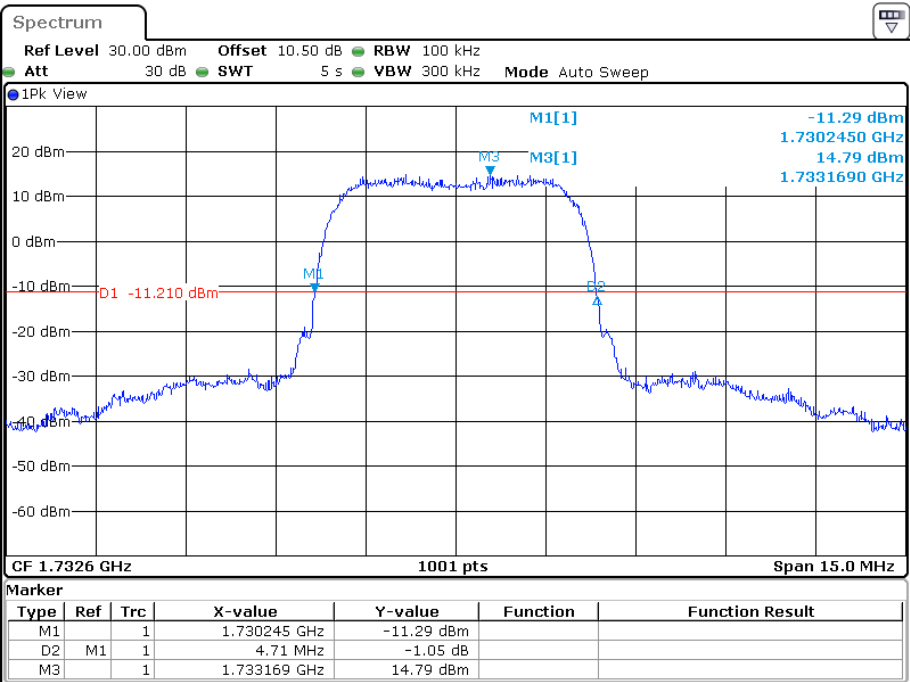
26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel

Date: 21.MAY.2023 11:23:05

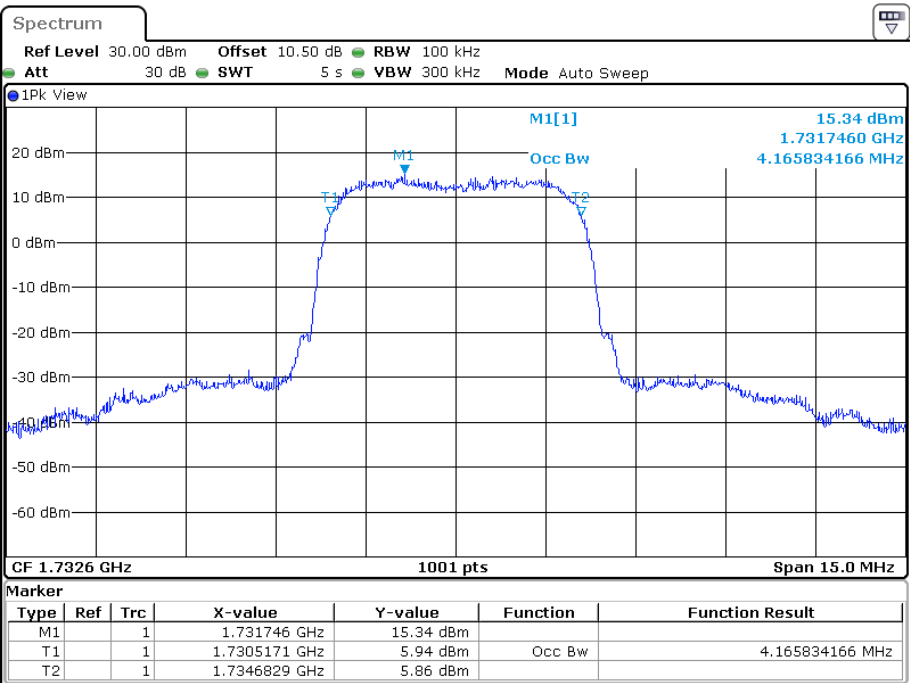


Date: 21.MAY.2023 11:22:24

26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel

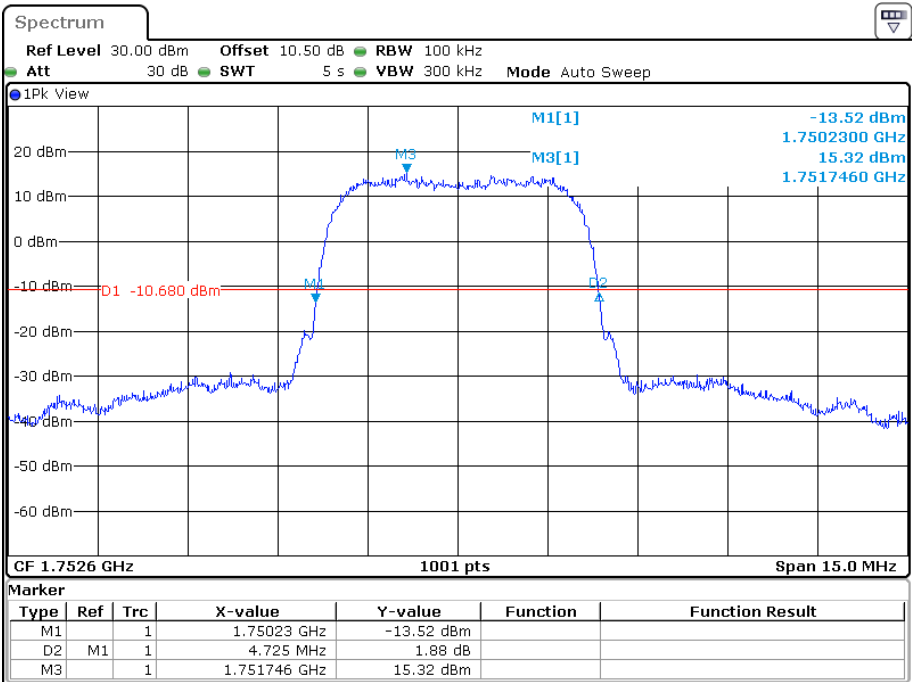


Date: 21.MAY.2023 11:30:17

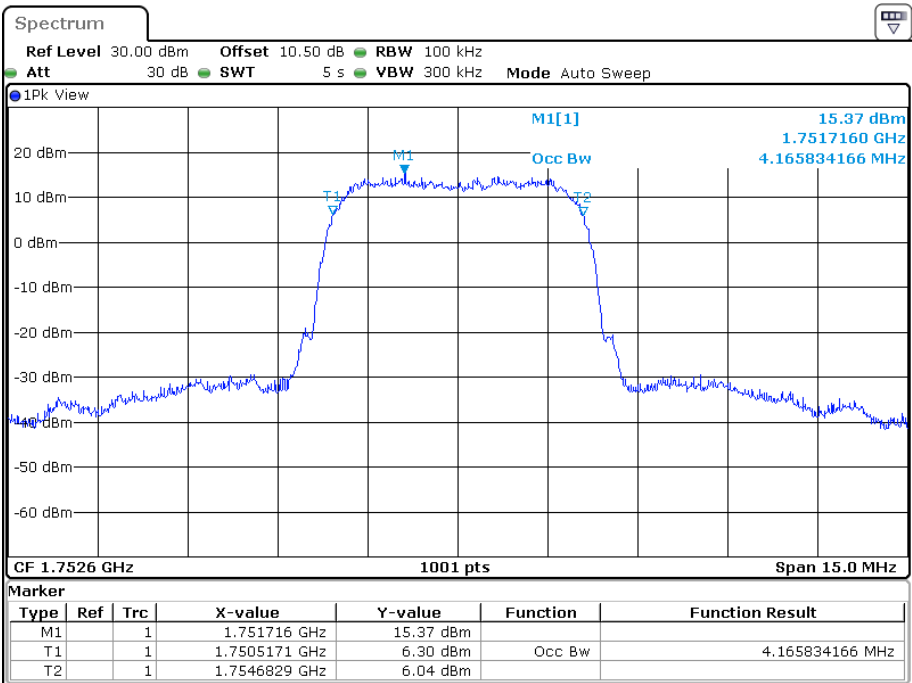


Date: 21.MAY.2023 11:29:51

26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel

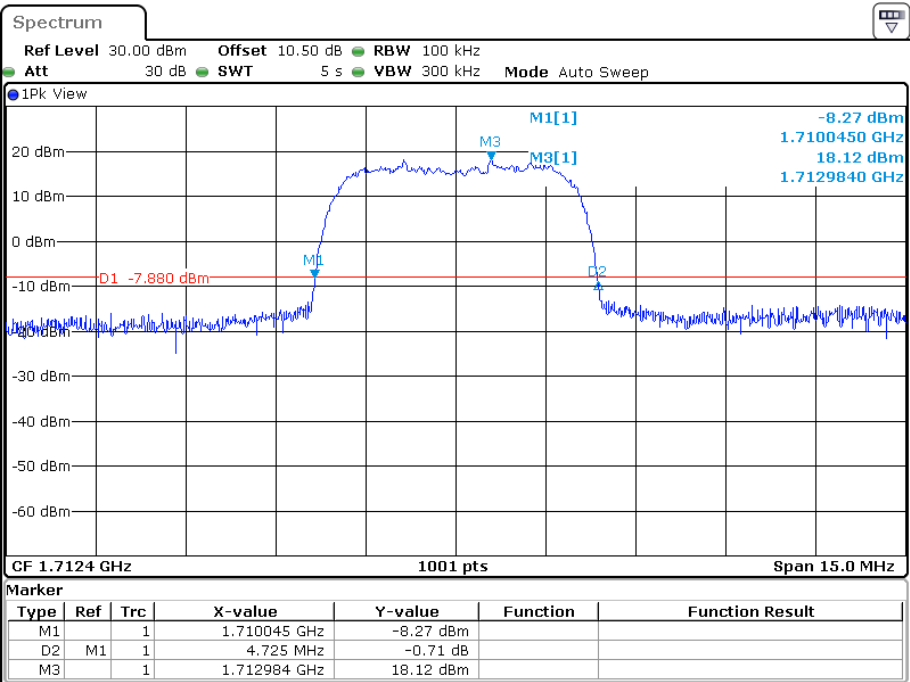


Date: 21.MAY.2023 11:40:32

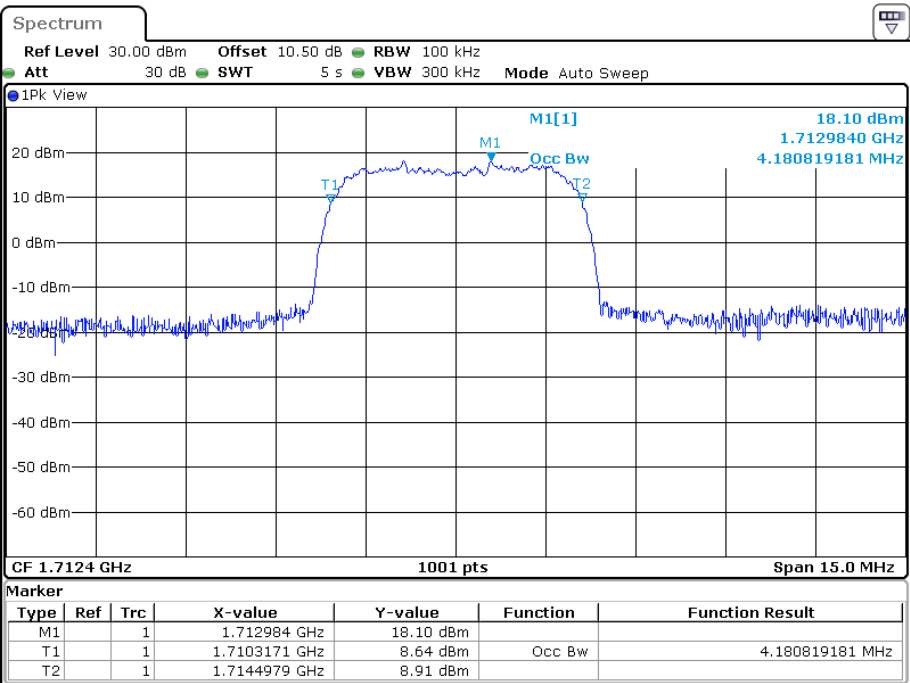


Date: 21.MAY.2023 11:40:05

26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel

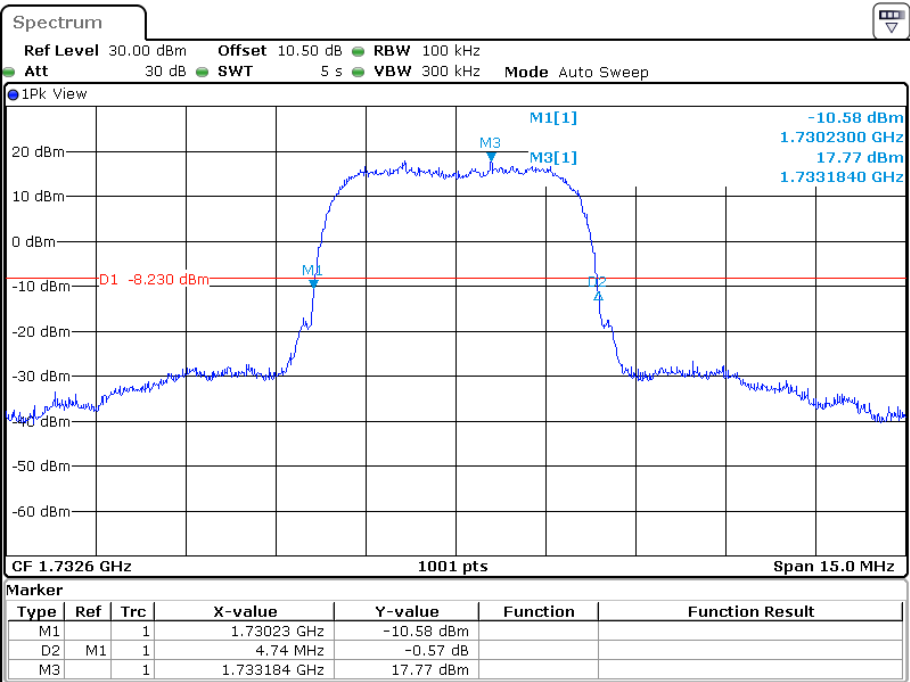


Date: 21.MAY.2023 10:56:22

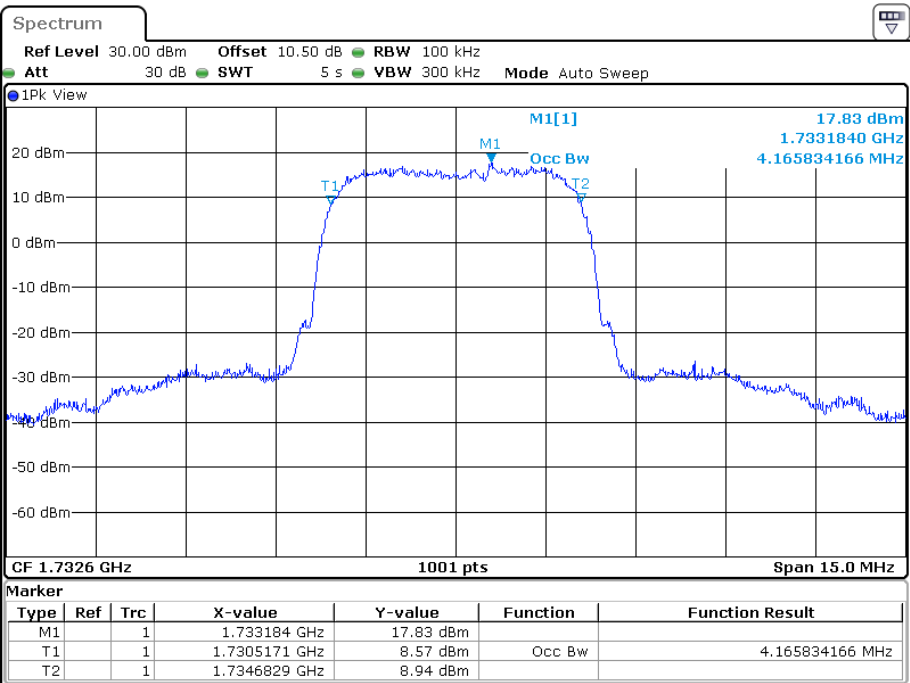


Date: 21.MAY.2023 10:54:39

26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel

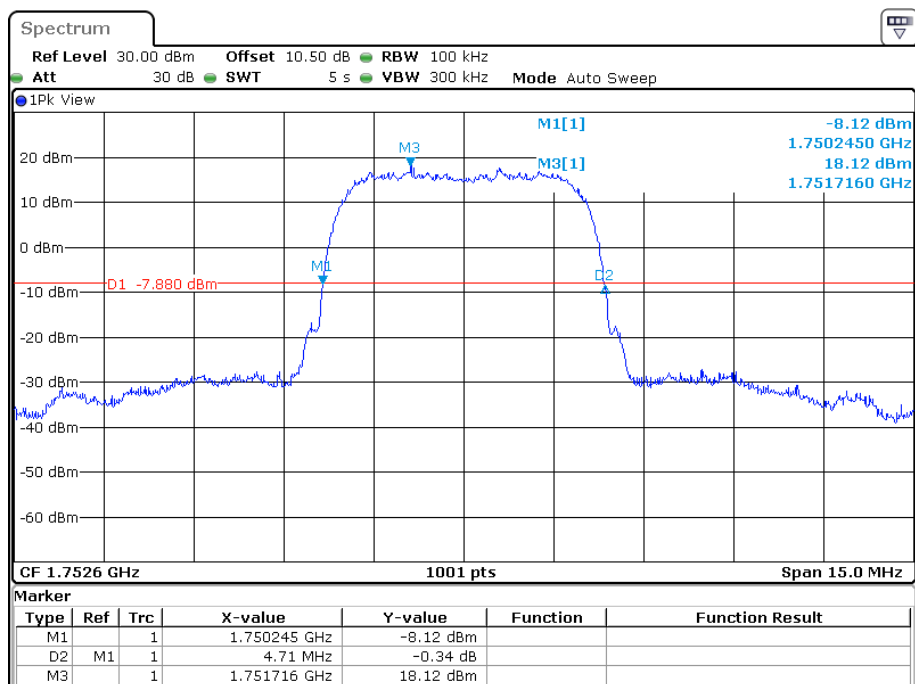


Date: 21.MAY.2023 11:00:14

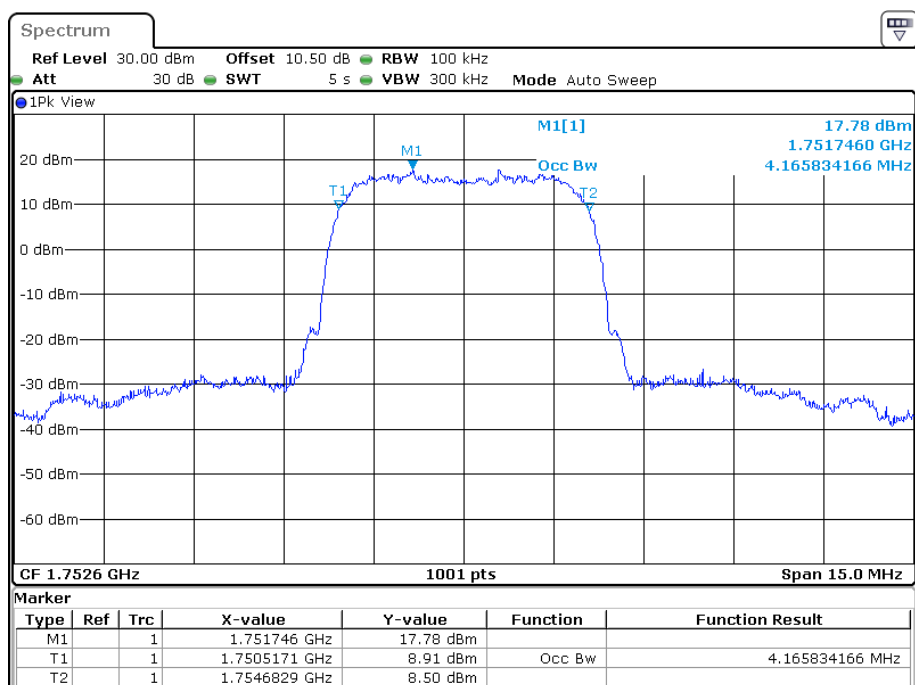


Date: 21.MAY.2023 10:59:47

26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 21.MAY.2023 11:05:05



Date: 21.MAY.2023 11:04:22

LTE Band 2:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.096	1.278	1.102	1.302
	16QAM	1.096	1.290	1.096	1.302	1.090	1.278
3 MHz	QPSK	2.683	2.928	2.683	2.916	2.683	2.928
	16QAM	2.683	2.940	2.683	2.952	2.683	2.940
5 MHz	QPSK	4.491	4.920	4.511	4.960	4.511	4.920
	16QAM	4.511	4.940	4.511	4.960	4.511	4.940
10 MHz	QPSK	8.942	9.600	8.942	9.640	8.982	9.680
	16QAM	8.942	9.840	8.942	9.640	8.942	9.640
15 MHz	QPSK	13.473	14.640	13.533	14.700	13.413	14.580
	16QAM	13.533	14.700	13.413	14.640	13.413	14.580
20 MHz	QPSK	17.964	19.200	17.884	19.120	17.884	19.360
	16QAM	17.964	19.360	17.884	19.200	17.884	19.200

LTE Band 4:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.102	1.302	1.102	1.278
	16QAM	1.102	1.296	1.090	1.278	1.102	1.284
3 MHz	QPSK	2.683	2.940	2.683	2.904	2.683	2.928
	16QAM	2.683	2.928	2.683	2.952	2.683	2.952
5 MHz	QPSK	4.511	4.940	4.491	4.900	4.511	4.960
	16QAM	4.511	4.940	4.511	4.960	4.511	4.920
10 MHz	QPSK	8.942	9.680	8.942	9.640	8.942	9.600
	16QAM	8.942	9.560	8.942	9.680	8.942	9.680
15 MHz	QPSK	13.473	14.640	13.413	14.580	13.413	14.640
	16QAM	13.473	14.580	13.473	14.580	13.473	14.580
20 MHz	QPSK	17.884	19.120	17.884	19.200	17.884	19.200
	16QAM	17.884	19.200	17.884	19.120	17.964	19.200

LTE Band 5:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.096	1.284	1.102	1.296
	16QAM	1.102	1.284	1.102	1.302	1.090	1.272
3 MHz	QPSK	2.683	2.928	2.683	2.916	2.683	2.940
	16QAM	2.683	2.940	2.683	2.952	2.683	2.940
5 MHz	QPSK	4.491	4.920	4.511	4.940	4.491	4.920
	16QAM	4.511	4.940	4.511	4.920	4.511	4.960
10 MHz	QPSK	8.942	9.680	8.942	9.520	8.982	9.600
	16QAM	8.942	9.600	8.942	9.640	8.902	9.600

LTE Band 7:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.491	4.920	4.511	4.920	4.511	4.960
	16QAM	4.511	4.960	4.491	4.920	4.511	4.960
10 MHz	QPSK	8.942	9.680	8.942	9.680	8.942	9.600
	16QAM	8.982	9.600	8.942	9.640	8.942	9.600
15 MHz	QPSK	13.533	14.640	13.533	14.700	13.413	14.640
	16QAM	13.533	14.640	13.473	14.580	13.473	14.640
20 MHz	QPSK	17.964	19.440	17.964	19.200	17.964	19.200
	16QAM	17.964	19.200	17.884	19.200	17.884	19.280

LTE Band 12:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.096	1.278	1.102	1.296
	16QAM	1.102	1.290	1.096	1.302	1.090	1.272
3 MHz	QPSK	2.683	2.940	2.683	2.904	2.683	2.928
	16QAM	2.683	2.928	2.683	2.940	2.683	2.940
5 MHz	QPSK	4.491	4.920	4.511	4.960	4.511	4.960
	16QAM	4.531	5.120	4.491	4.920	4.511	4.920
10 MHz	QPSK	8.942	9.600	8.942	9.680	8.942	10.080
	16QAM	8.942	9.600	8.942	9.680	8.942	9.560

LTE Band 13:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.511	4.940	4.491	4.900	4.511	4.920
	16QAM	4.511	4.940	4.511	4.960	4.511	4.880
10 MHz	QPSK	/	/	8.942	9.600	/	/
	16QAM	/	/	8.942	9.640	/	/

LTE Band 17:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.491	4.920	4.511	4.940	4.511	4.920
	16QAM	4.511	4.960	4.511	4.920	4.511	4.920
10 MHz	QPSK	8.942	9.600	8.942	9.680	8.942	9.640
	16QAM	8.942	9.560	8.942	9.600	8.942	9.560

LTE Band 25:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.096	1.284	1.102	1.302
	16QAM	1.096	1.290	1.096	1.302	1.090	1.278
3 MHz	QPSK	2.683	2.928	2.683	2.916	2.683	2.928
	16QAM	2.683	2.940	2.683	2.940	2.683	2.928
5 MHz	QPSK	4.511	4.920	4.511	4.940	4.491	4.920
	16QAM	4.511	4.900	4.511	4.940	4.511	4.960
10 MHz	QPSK	8.942	9.600	8.942	9.680	8.942	9.680
	16QAM	8.942	9.600	8.942	9.680	8.942	9.560
15 MHz	QPSK	13.533	14.700	13.533	14.640	13.473	14.640
	16QAM	13.533	14.700	13.473	14.640	13.533	14.640
20 MHz	QPSK	18.044	19.440	17.884	19.120	17.884	19.200
	16QAM	17.884	19.280	17.964	19.200	17.884	19.280

LTE Band 26 (814-824MHz):

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.096	1.284	1.102	1.296
	16QAM	1.102	1.278	1.096	1.302	1.090	1.280
3 MHz	QPSK	2.683	2.916	2.683	2.940	2.683	2.928
	16QAM	2.683	2.928	2.683	2.940	2.683	2.952
5 MHz	QPSK	4.511	4.920	4.491	4.920	4.511	4.940
	16QAM	4.511	4.940	4.511	4.960	4.511	4.920
10 MHz	QPSK	/	/	8.942	9.680	/	/
	16QAM	/	/	8.942	9.600	/	/

LTE Band 26 (Cross channel):

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	/	/	1.103	1.272	/	/
	16QAM	/	/	1.094	1.281	/	/
3 MHz	QPSK	/	/	2.674	2.935	/	/
	16QAM	/	/	2.674	2.918	/	/
5 MHz	QPSK	/	/	4.501	4.920	/	/
	16QAM	/	/	4.515	4.920	/	/
10 MHz	QPSK	/	/	8.915	9.609	/	/
	16QAM	/	/	8.944	9.609	/	/
15 MHz	QPSK	13.459	14.718	13.533	14.731	/	/
	16QAM	13.459	14.674	13.473	14.671	/	/

LTE Band 26 (824-849MHz):

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.096	1.284	1.102	1.296
	16QAM	1.102	1.278	1.102	1.302	1.090	1.272
3 MHz	QPSK	2.683	2.940	2.683	2.916	2.683	2.940
	16QAM	2.683	2.940	2.683	2.952	2.683	2.940
5 MHz	QPSK	4.511	4.940	4.511	4.920	4.511	4.920
	16QAM	4.511	4.920	4.511	4.940	4.491	4.940
10 MHz	QPSK	8.942	9.600	8.942	9.640	8.902	9.560
	16QAM	8.942	9.600	8.942	9.560	8.942	9.600
15 MHz	QPSK	13.473	14.640	13.533	14.640	13.473	14.580
	16QAM	13.473	14.640	13.533	14.640	13.473	14.700

LTE Band 38:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.511	5.040	4.491	4.920	4.511	4.960
	16QAM	4.511	4.940	4.511	4.940	4.511	5.040
10 MHz	QPSK	8.942	9.640	8.942	9.560	8.982	9.880
	16QAM	8.942	9.520	8.942	9.640	8.942	9.520
15 MHz	QPSK	13.533	14.640	13.413	14.700	13.533	14.640
	16QAM	13.473	14.580	13.473	14.700	13.473	14.700
20 MHz	QPSK	17.884	19.040	17.884	19.120	17.884	19.120
	16QAM	17.884	19.200	17.884	19.280	17.884	19.360

LTE Band 40 (2350-2360MHz):

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.511	4.900	4.511	4.980	4.511	4.960
	16QAM	4.511	4.960	4.511	4.940	4.511	4.980
10 MHz	QPSK	/	/	8.942	9.680	/	/
	16QAM	/	/	8.942	9.560	/	/

LTE Band 40 (2305-2315MHz):

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.511	4.900	4.511	4.940	4.511	4.960
	16QAM	4.511	4.940	4.511	4.940	4.511	5.000
10 MHz	QPSK	/	/	8.942	9.640	/	/
	16QAM	/	/	8.942	9.560	/	/

LTE Band 41:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.511	4.960	4.511	4.960	4.491	4.940
	16QAM	4.491	4.980	4.511	4.920	4.511	4.960
10 MHz	QPSK	8.942	9.560	8.942	9.600	8.942	9.560
	16QAM	8.942	9.840	8.942	9.560	8.942	9.520
15 MHz	QPSK	13.473	14.520	13.473	14.580	13.413	14.580
	16QAM	13.533	14.760	13.473	14.520	13.473	14.820
20 MHz	QPSK	17.884	19.120	17.884	19.200	17.884	19.120
	16QAM	17.964	19.360	17.884	19.120	17.884	19.120

LTE Band 66:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.102	1.278	1.096	1.278	1.102	1.296
	16QAM	1.102	1.290	1.096	1.302	1.090	1.272
3 MHz	QPSK	2.683	2.940	2.683	2.904	2.683	2.928
	16QAM	2.683	2.928	2.683	2.940	2.683	2.940
5 MHz	QPSK	4.511	4.940	4.491	4.920	4.511	4.940
	16QAM	4.511	4.940	4.511	4.960	4.511	4.920
10 MHz	QPSK	8.942	9.680	8.942	9.680	8.942	9.560
	16QAM	8.942	9.600	8.942	9.560	8.942	9.640
15 MHz	QPSK	13.473	14.580	13.473	14.640	13.413	14.520
	16QAM	13.413	14.580	13.473	14.640	13.533	14.640
20 MHz	QPSK	17.884	19.200	17.884	19.200	17.884	19.280
	16QAM	17.884	19.280	17.884	19.200	17.884	19.440

The test plots of LTE band please refer to the Appendix A.

FCC §2.1051, §22.917(a) & §24.238(a) & §27.53 & §90.691 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

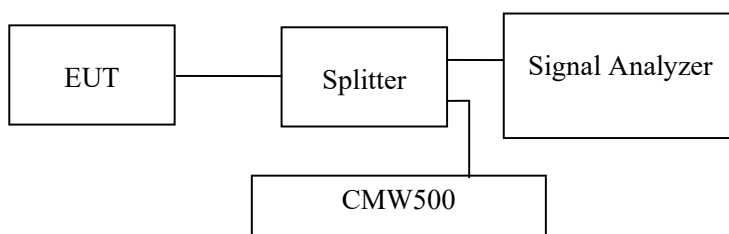
Applicable Standard

FCC §2.1051, §22.917(a) & §24.238(a) & §27.53 & §90.691.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.



Note: the worst path loss (cable loss and splitter inset loss) among the test frequency range has added into plot.

Test Data

Environmental Conditions

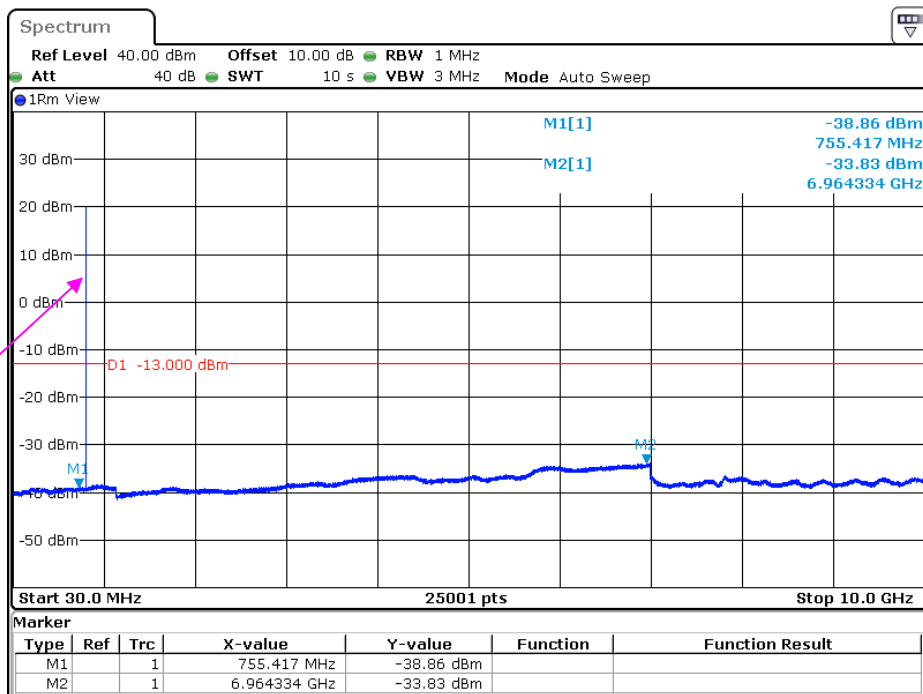
Temperature:	26.5~28.8 °C
Relative Humidity:	46.8~51.6%
ATM Pressure:	101.0 kPa

The testing was performed by Jacob Huang from 2023-05-21 to 2023-07-03.

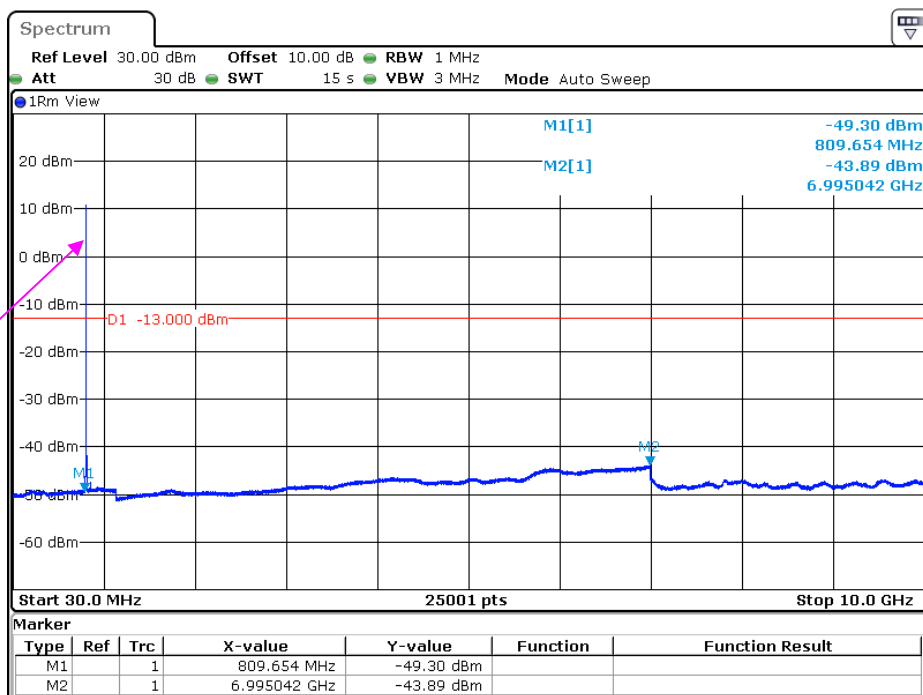
EUT operation mode: Transmitting

Test result: Pass

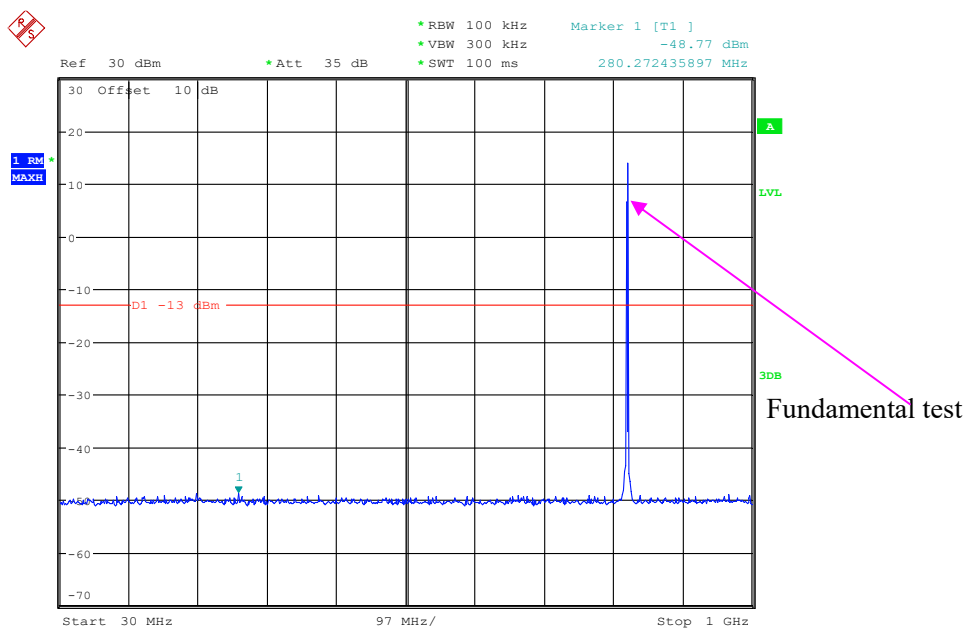
Please refer to the following plots.

Cellular Band -Low Channel:**30 MHz – 10 GHz (GSM Mode)**

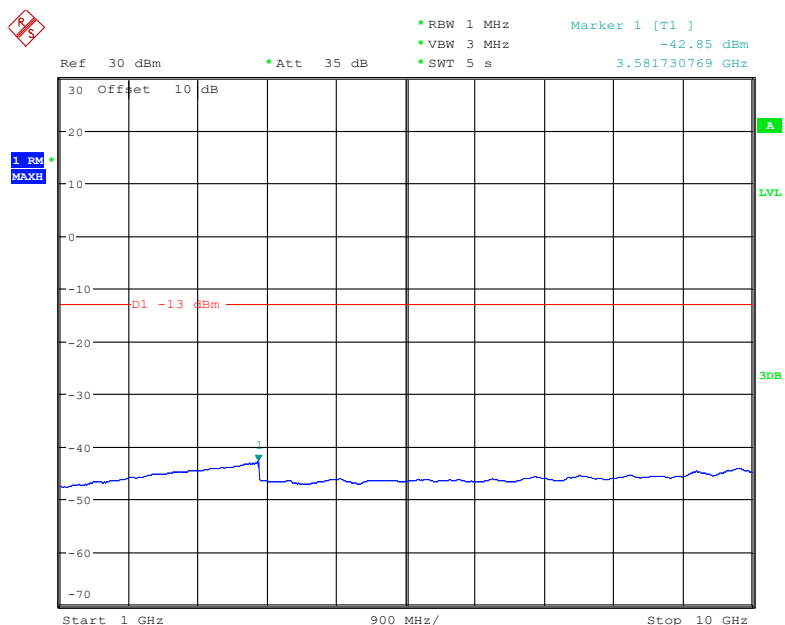
Date: 21.MAY.2023 15:45:29

30 MHz – 10 GHz (WCDMA Mode)

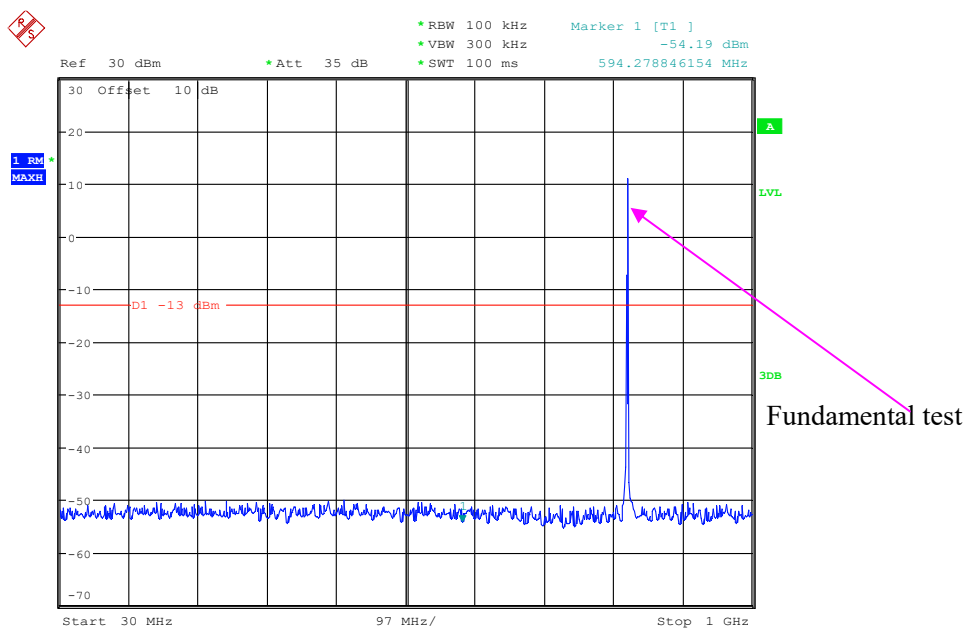
Date: 21.MAY.2023 11:53:44

30 MHz – 1 GHz CDMA (1*RTT BC0)

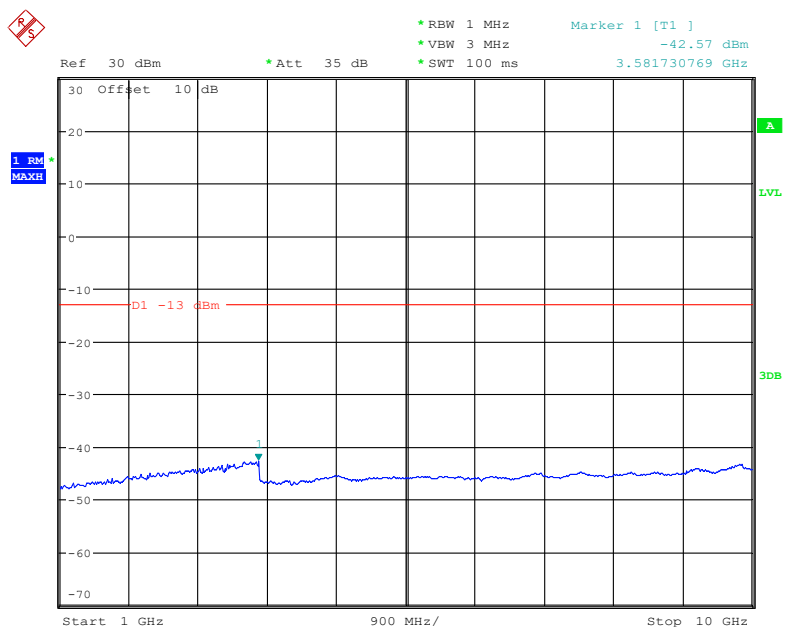
Date: 26.MAY.2023 16:58:16

1 GHz – 10 GHz CDMA (1*RTT BC0)

Date: 26.MAY.2023 16:51:56

30 MHz – 1 GHz CDMA (EV-DO, BC0)

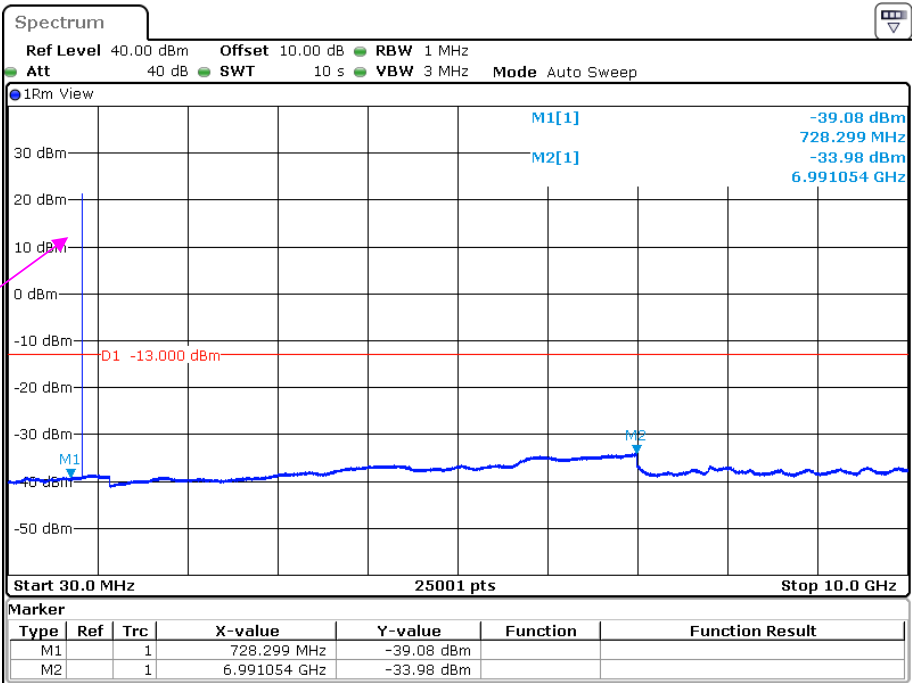
Date: 26.MAY.2023 17:26:30

1 GHz – 10 GHz CDMA (EV-DO, BC0)

Date: 26.MAY.2023 17:29:14

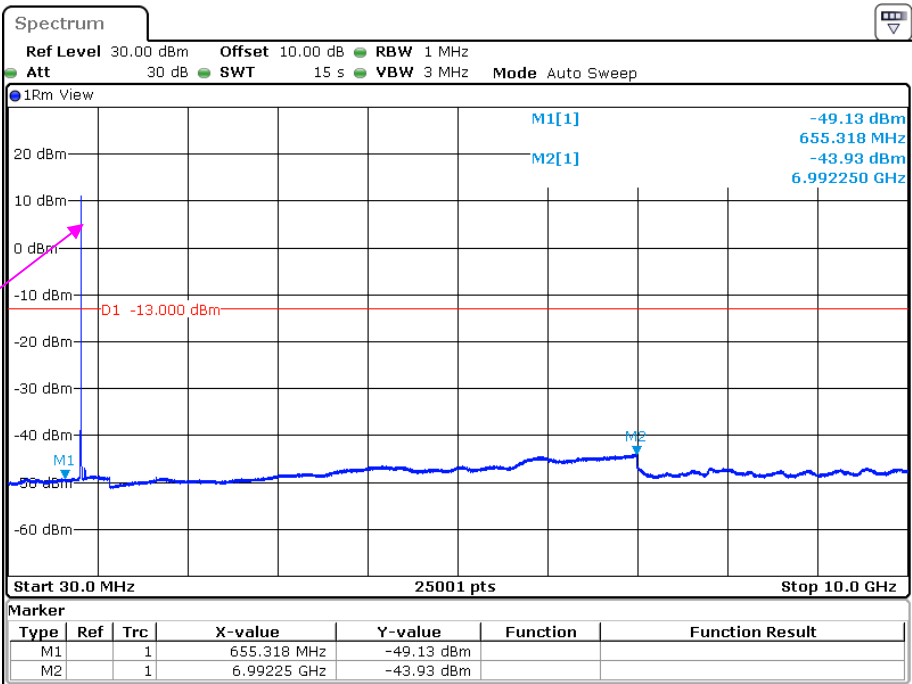
Middle Channel:

30 MHz – 10 GHz (GSM Mode)

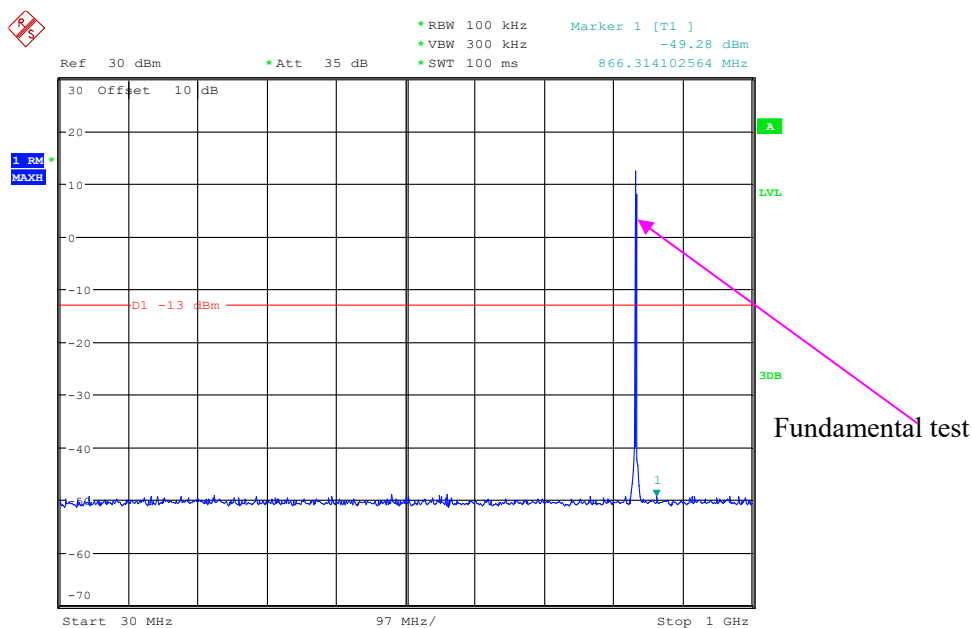


Date: 21.MAY.2023 14:03:50

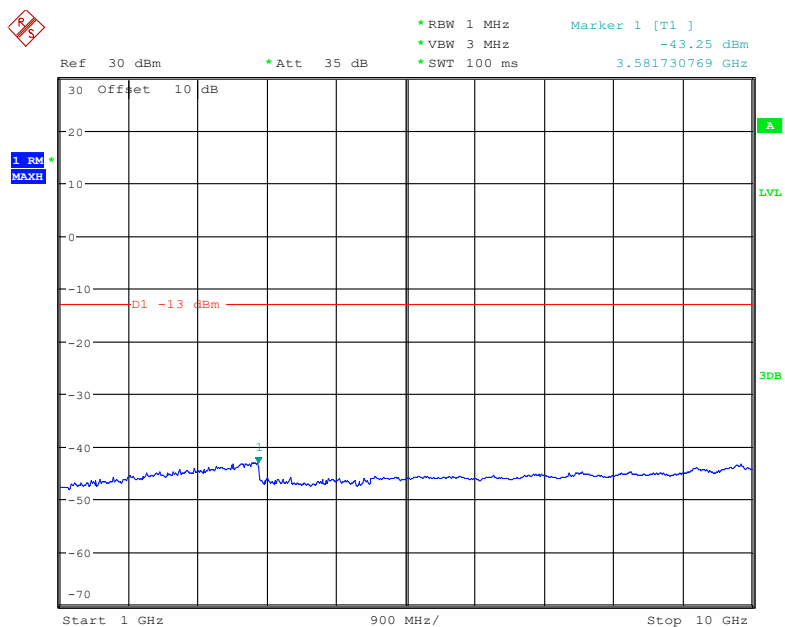
30 MHz – 10 GHz (WCDMA Mode)



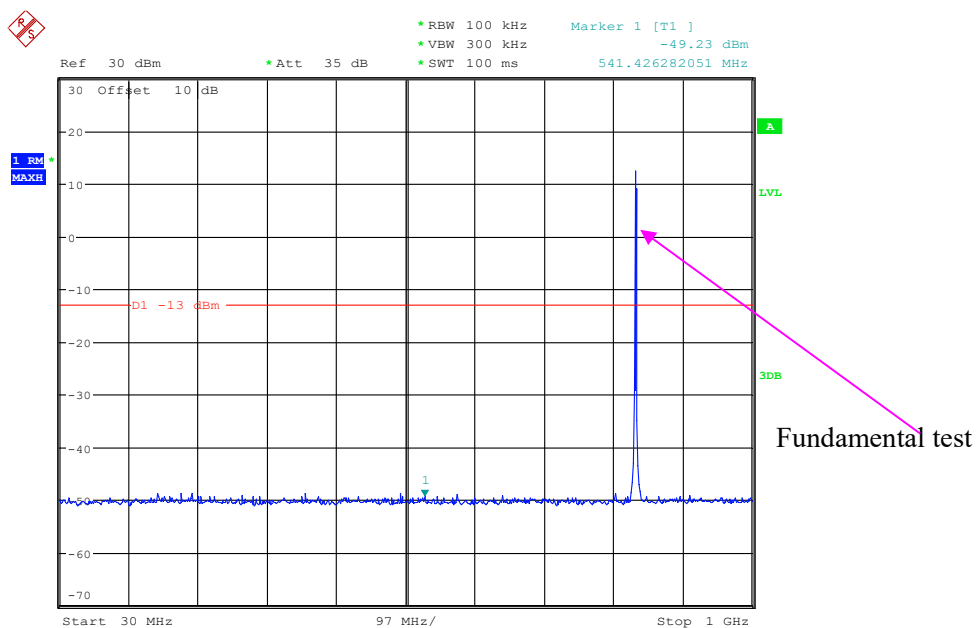
Date: 21.MAY.2023 11:55:53

30 MHz – 1 GHz CDMA (1*RTT BC0)

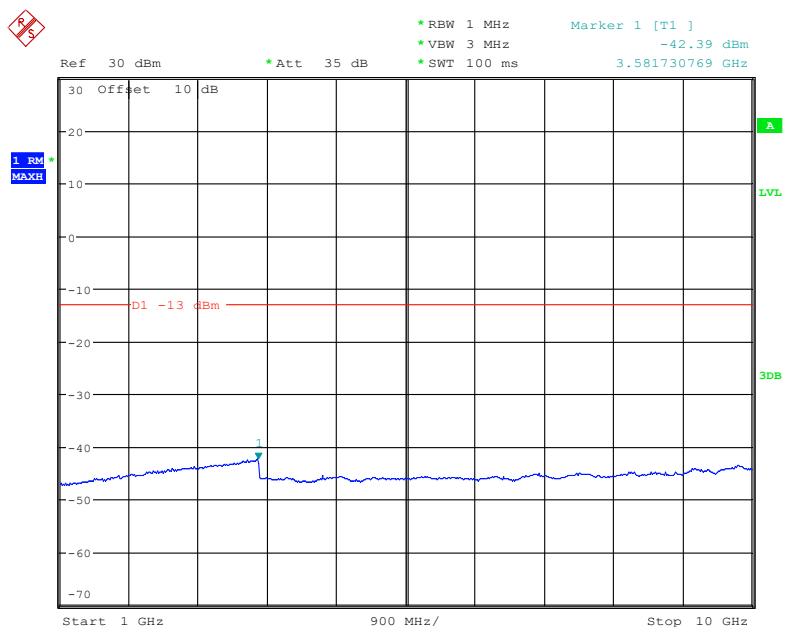
Date: 26.MAY.2023 16:57:24

1 GHz – 10 GHz CDMA (1*RTT BC0)

Date: 26.MAY.2023 16:54:02

30 MHz – 1 GHz CDMA (EV-DO, BC0)

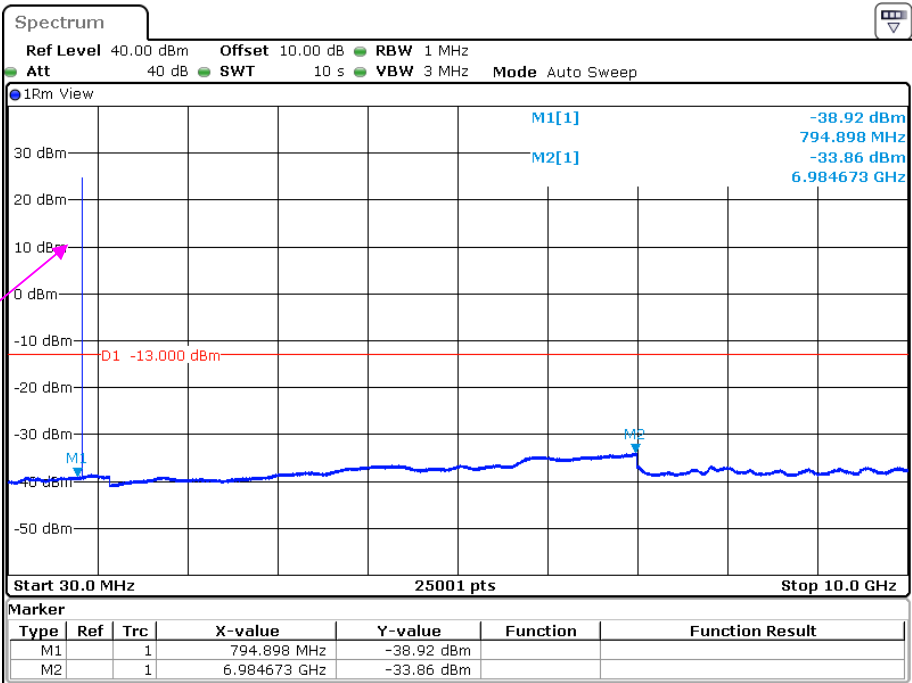
Date: 26.MAY.2023 17:27:16

1 GHz – 10 GHz CDMA (EV-DO, BC0)

Date: 26.MAY.2023 17:30:04

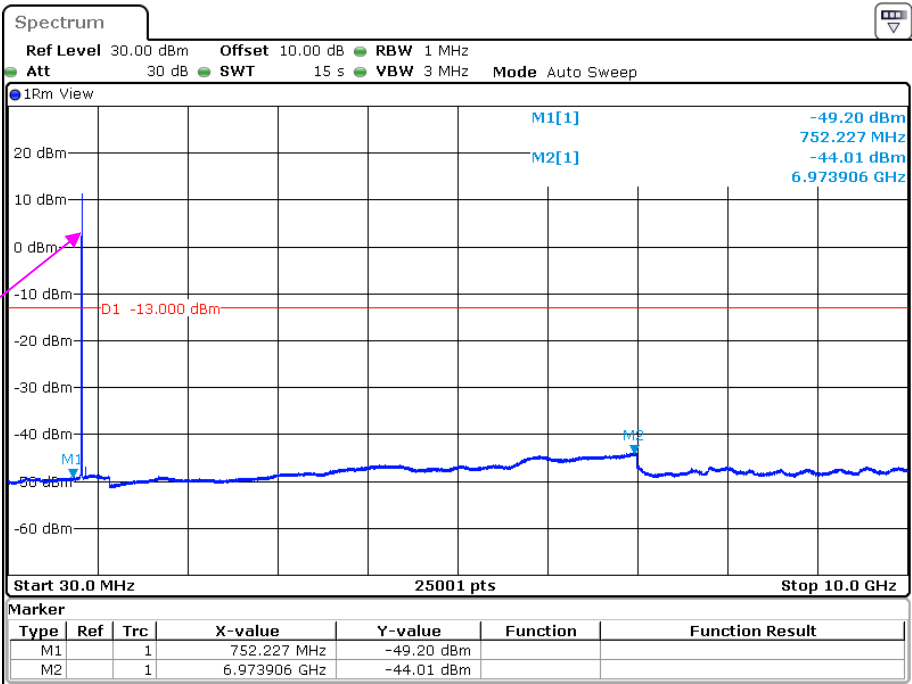
High Channel:

30 MHz – 10 GHz (GSM Mode)

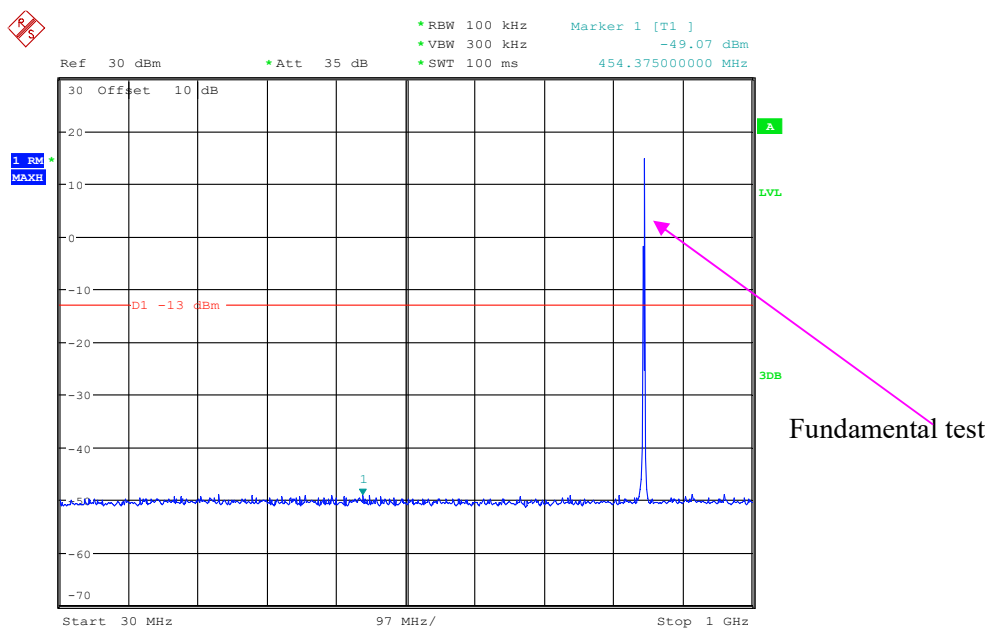


Date: 21.MAY.2023 14:06:35

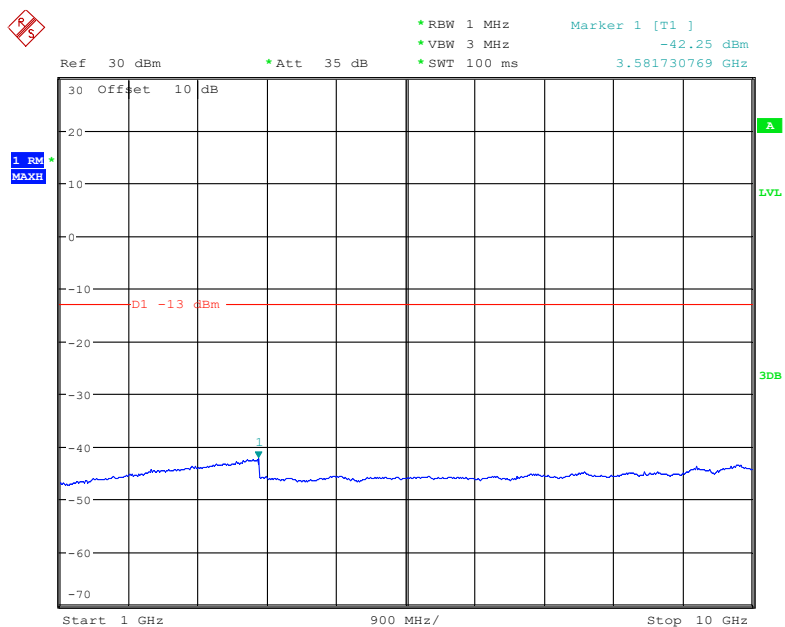
30 MHz – 10 GHz (WCDMA Mode)



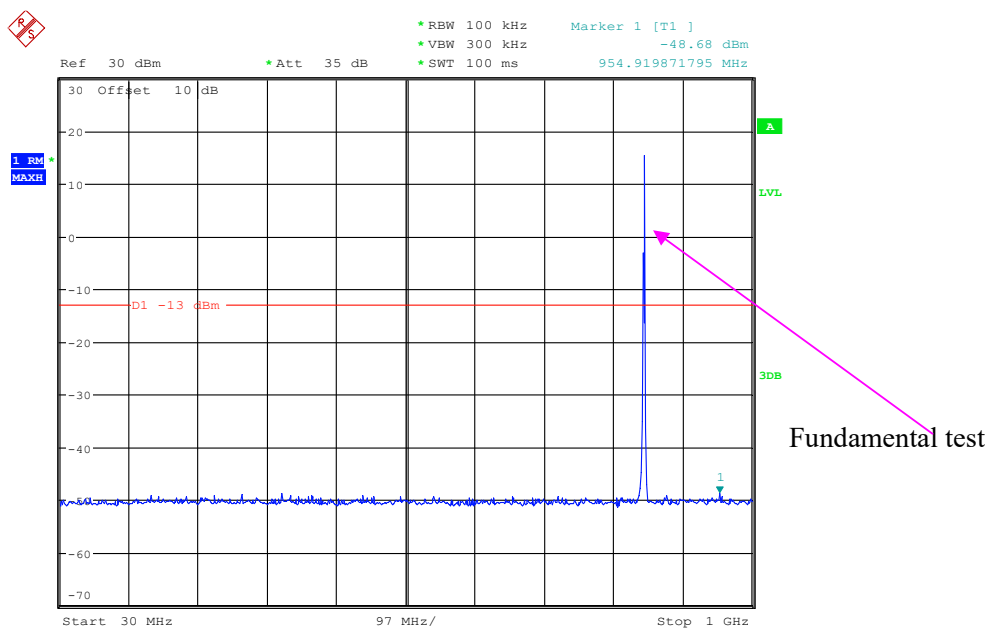
Date: 21.MAY.2023 11:59:39

30 MHz – 1 GHz CDMA (1*RTT BC0)

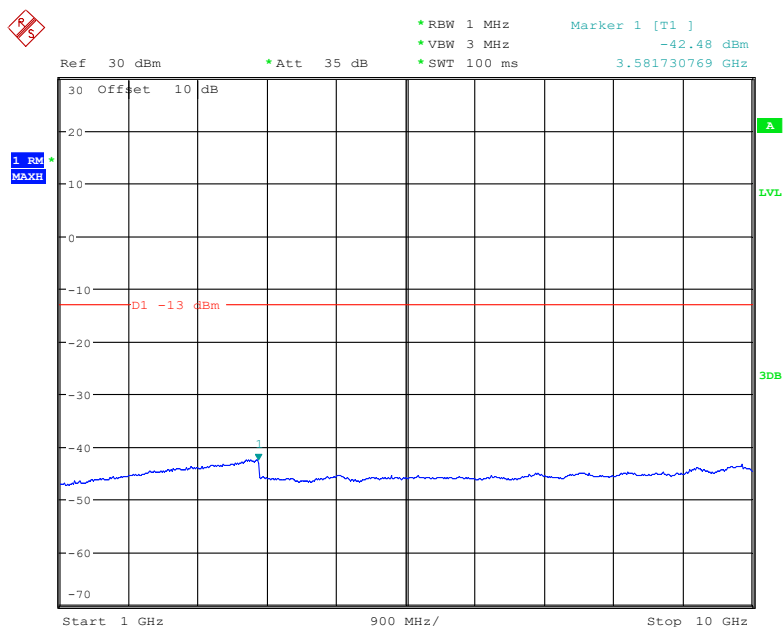
Date: 26.MAY.2023 16:56:43

1 GHz – 10 GHz CDMA (1*RTT BC0)

Date: 26.MAY.2023 16:54:33

30 MHz – 1 GHz CDMA (EV-DO, BC0)

Date: 26.MAY.2023 17:28:01

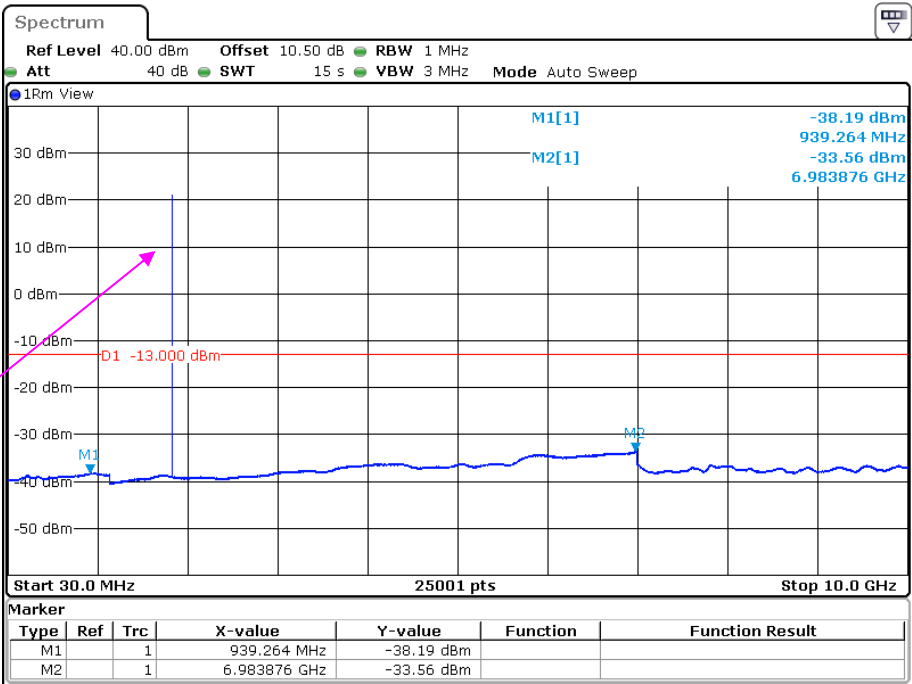
1 GHz – 10 GHz CDMA (EV-DO, BC0)

Date: 26.MAY.2023 17:30:32

PCS Band -Low Channel:

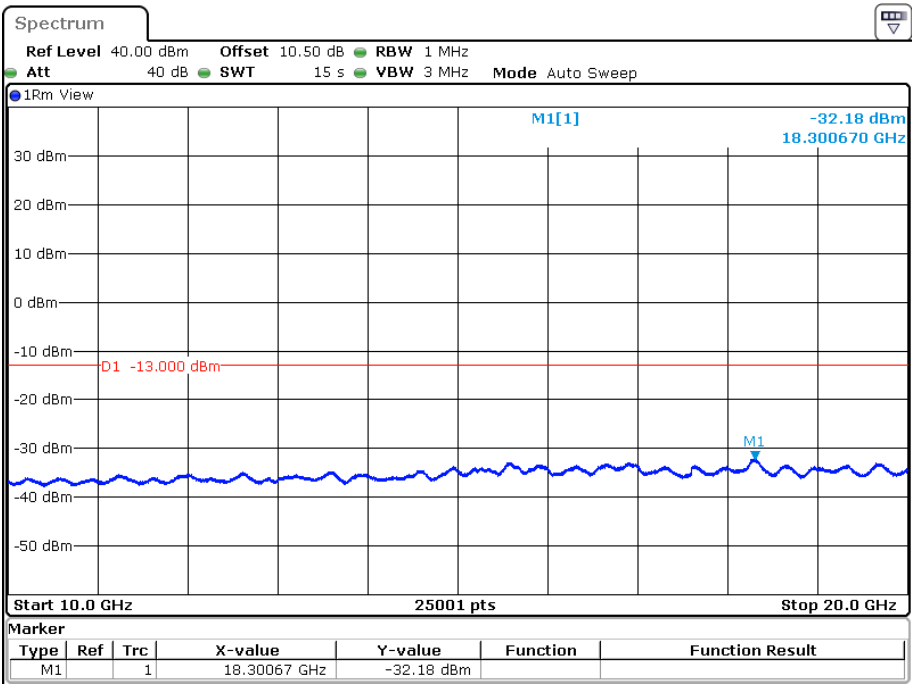
30 MHz – 10 GHz (GSM Mode)

Fundamental test



Date: 21.MAY.2023 14:56:23

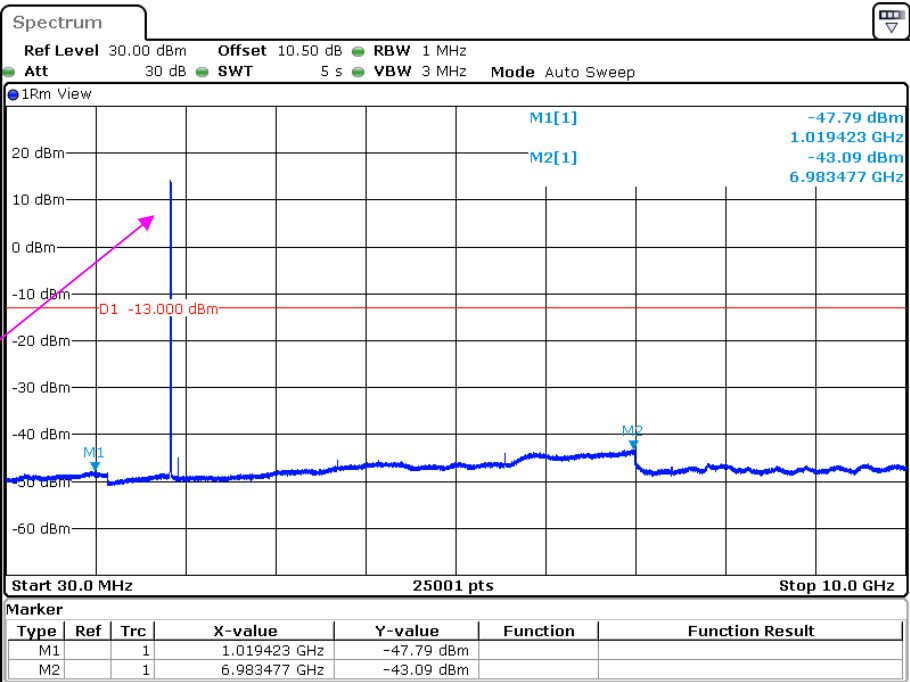
10 GHz – 20 GHz (GSM Mode)



Date: 21.MAY.2023 14:57:12

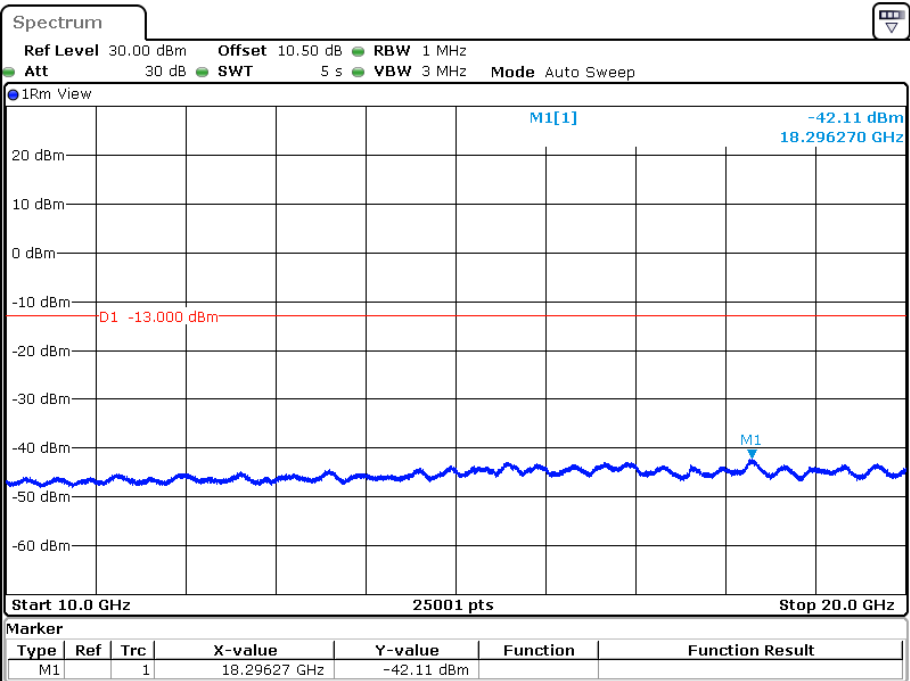
30MHz – 10 GHz (WCDMA Mode)

Fundamental test



Date: 21.MAY.2023 09:53:25

10 GHz – 20 GHz (WCDMA Mode)

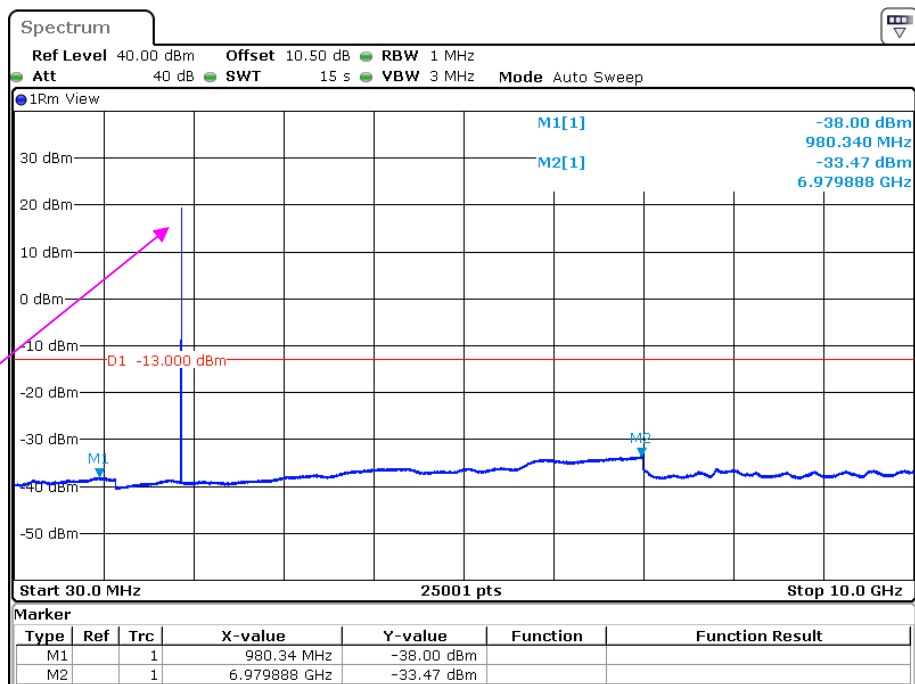


Date: 21.MAY.2023 09:53:55

Middle Channel:

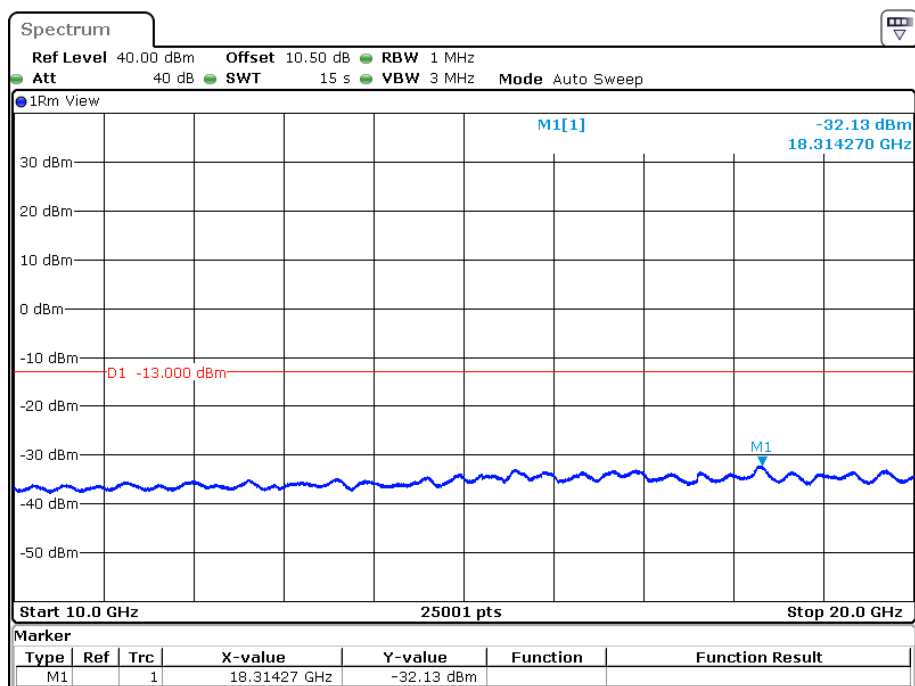
30 MHz – 10 GHz (GSM Mode)

Fundamental test



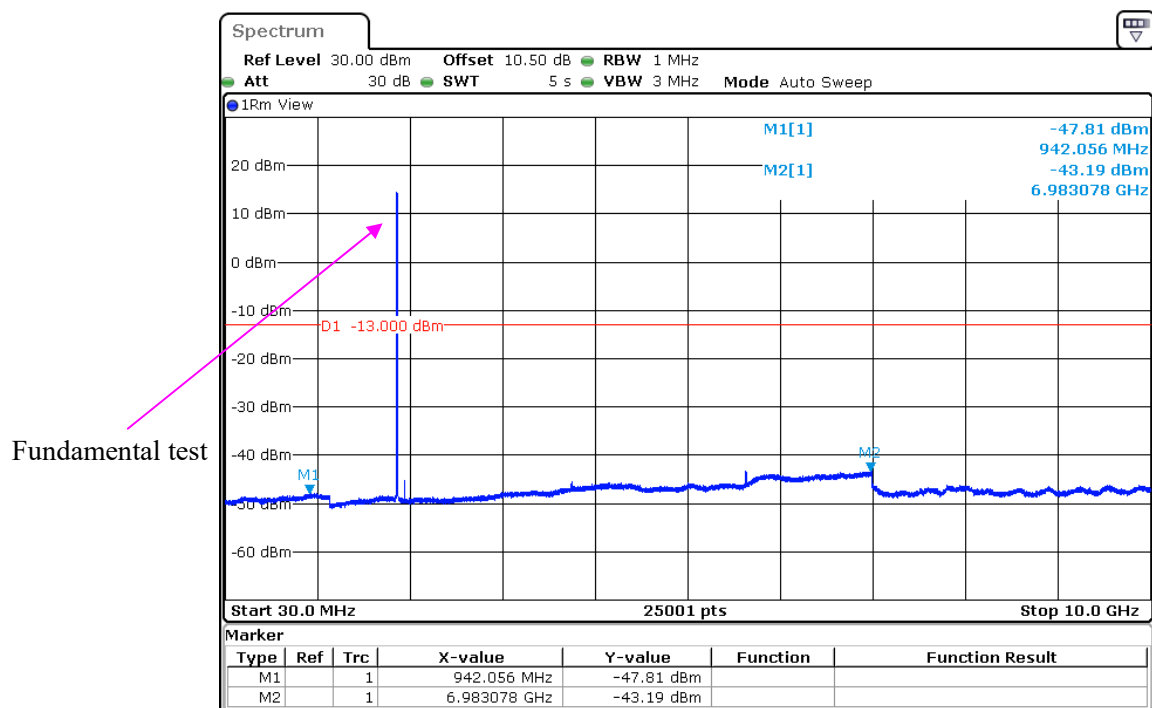
Date: 21.MAY.2023 15:00:27

10 GHz – 20 GHz (GSM Mode)



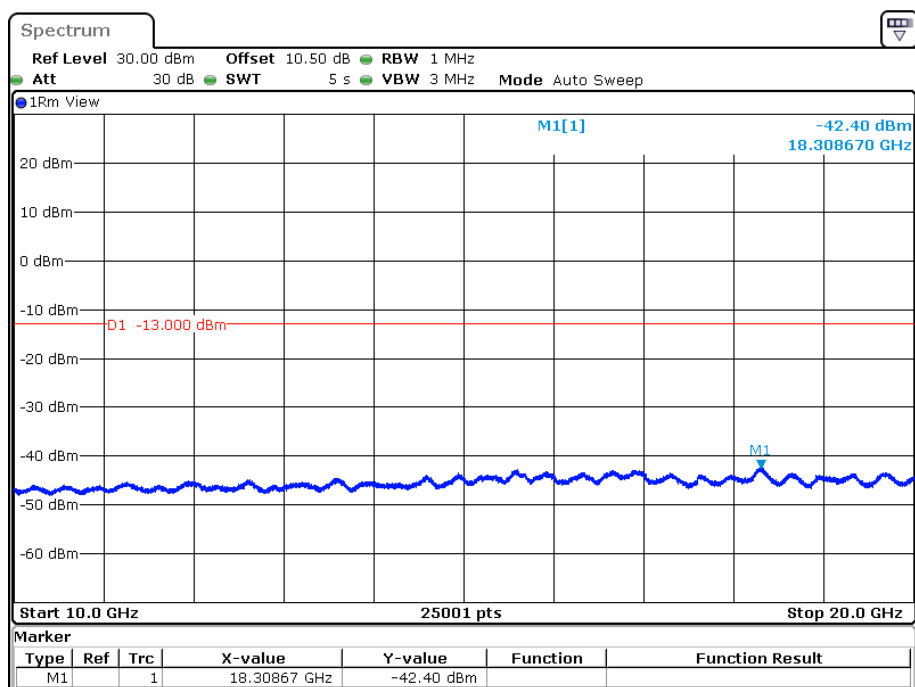
Date: 21.MAY.2023 15:01:18

30 MHz – 10 GHz (WCDMA Mode)

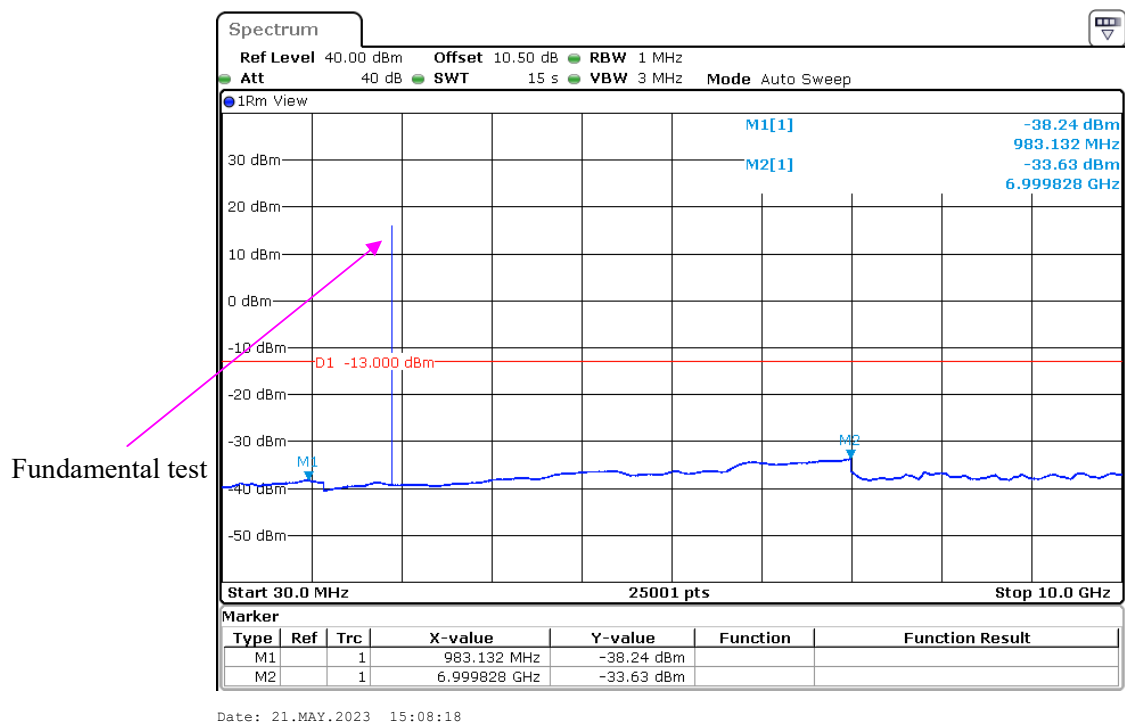
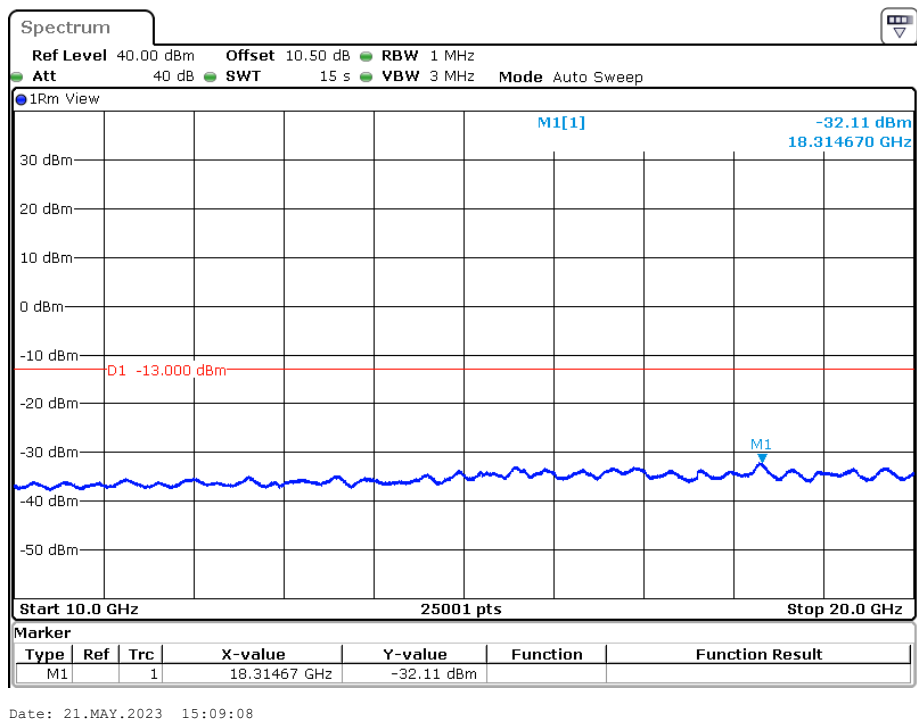


Date: 21.MAY.2023 09:56:10

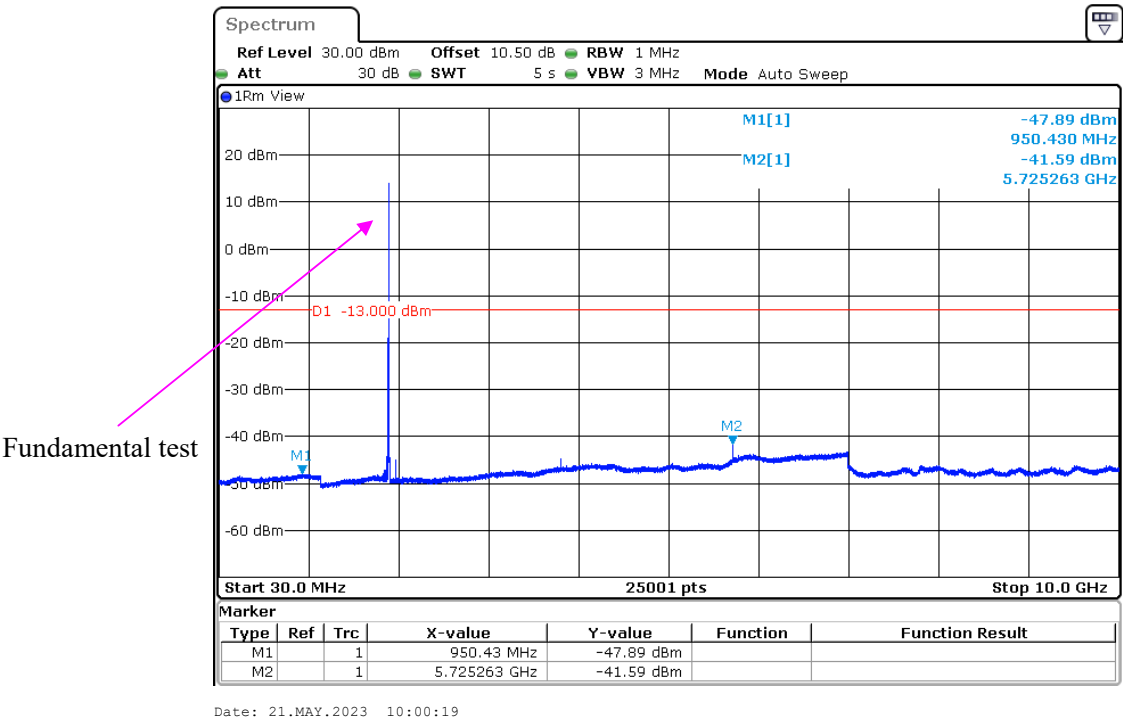
10 GHz – 20 GHz (WCDMA Mode)



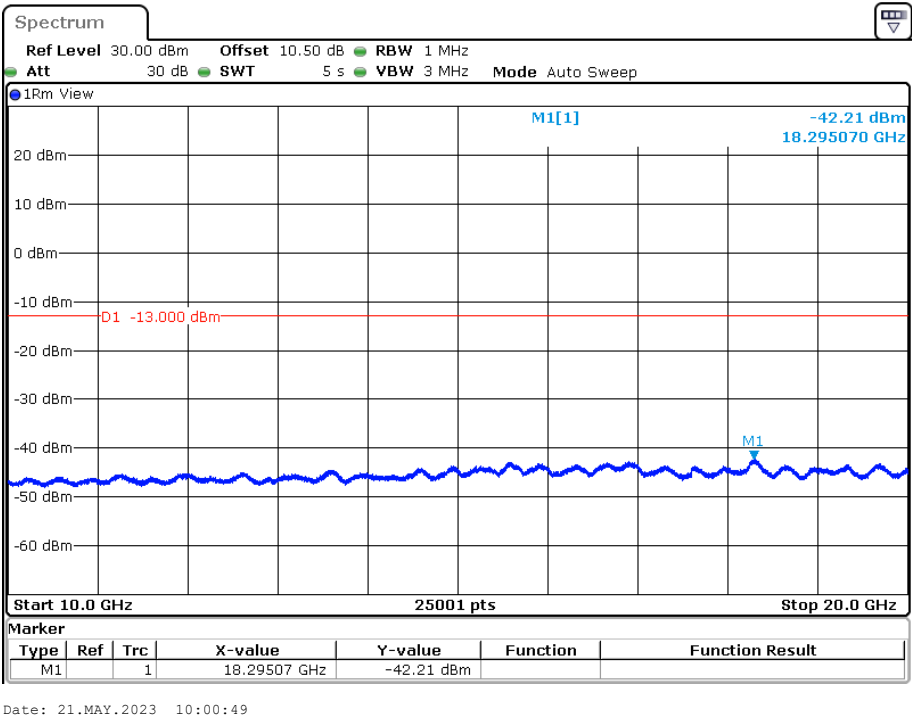
Date: 21.MAY.2023 09:56:40

High Channel:**30 MHz – 10 GHz (GSM Mode)****10 GHz – 20 GHz (GSM Mode)**

30 MHz – 1 GHz (WCDMA Mode)

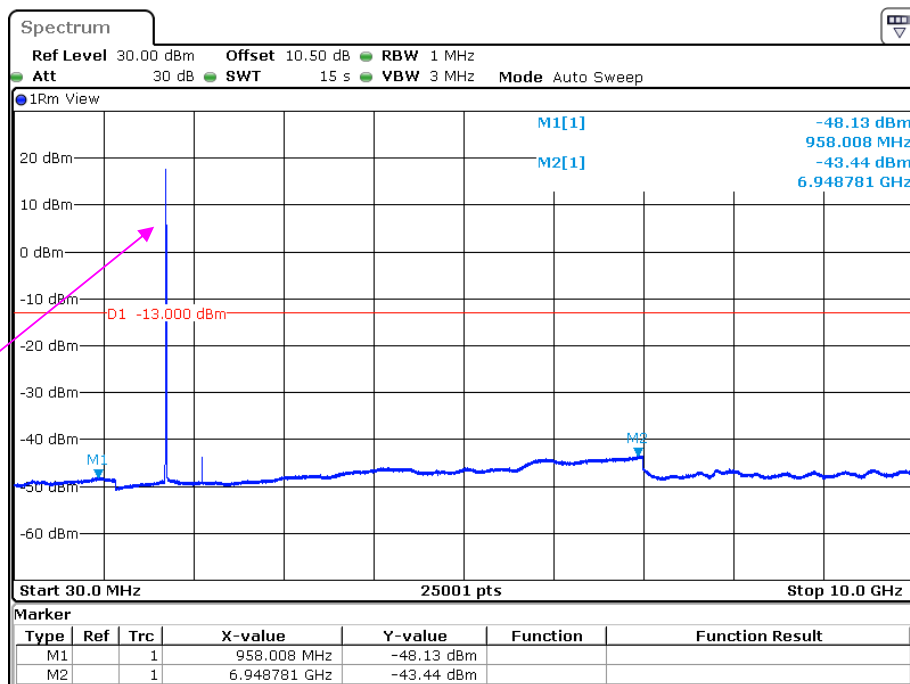


10 GHz – 20 GHz (WCDMA Mode)



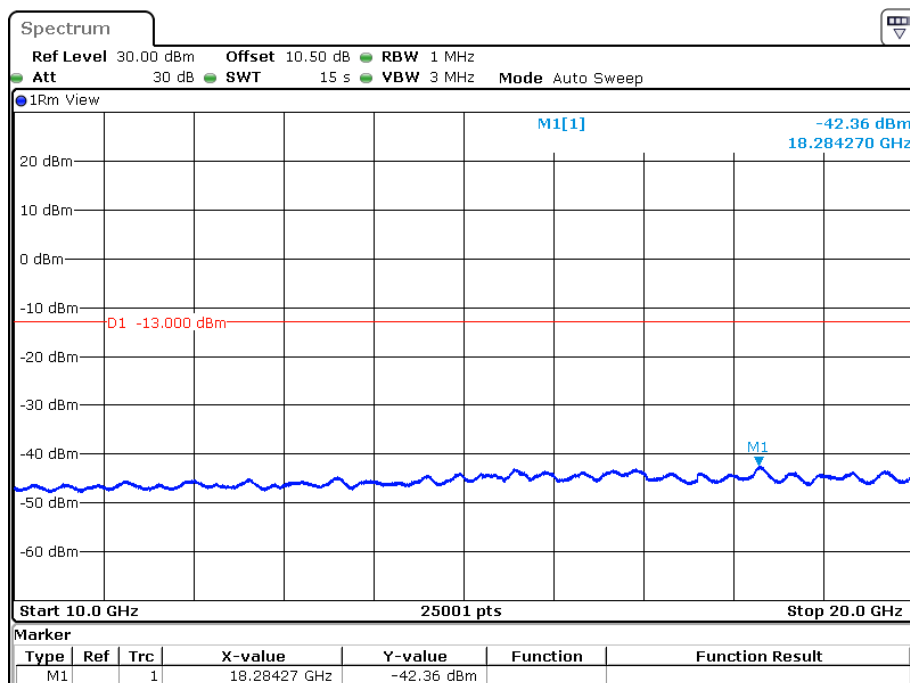
AWS Band-Low Channel:

30MHz – 10 GHz (WCDMA Mode)



Date: 21.MAY.2023 10:41:04

10 GHz – 20 GHz (WCDMA Mode)

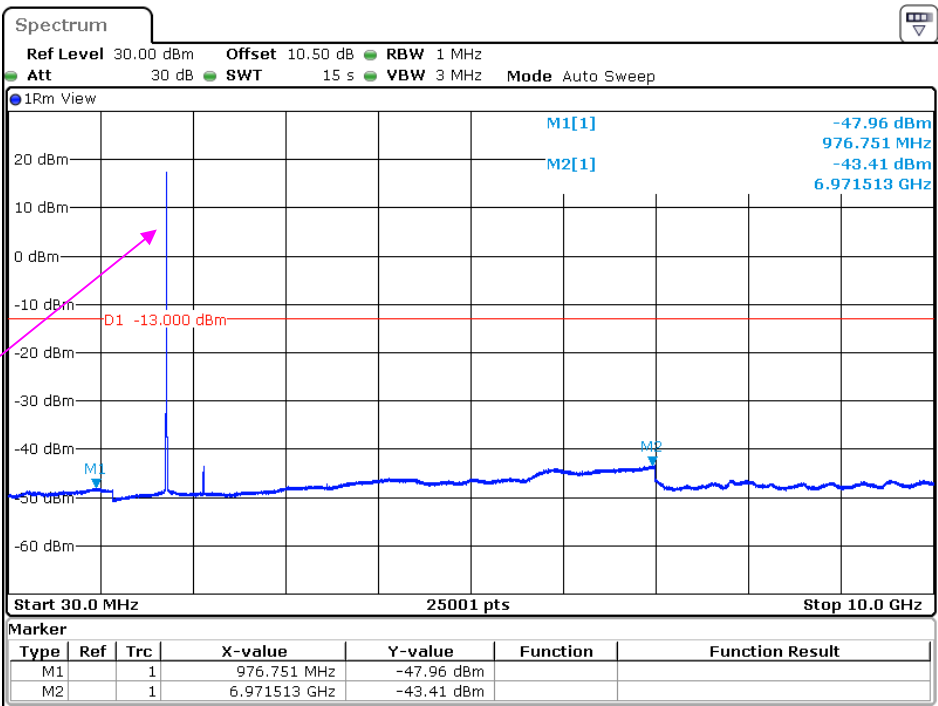


Date: 21.MAY.2023 10:41:54

Middle Channel:

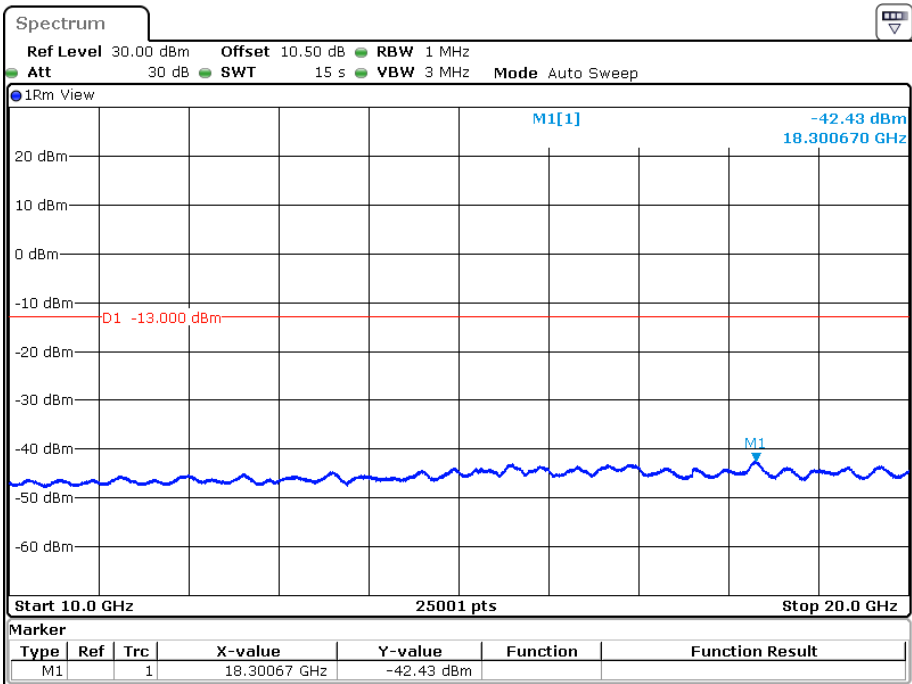
30 MHz – 10 GHz (WCDMA Mode)

Fundamental test



Date: 21.MAY.2023 10:45:12

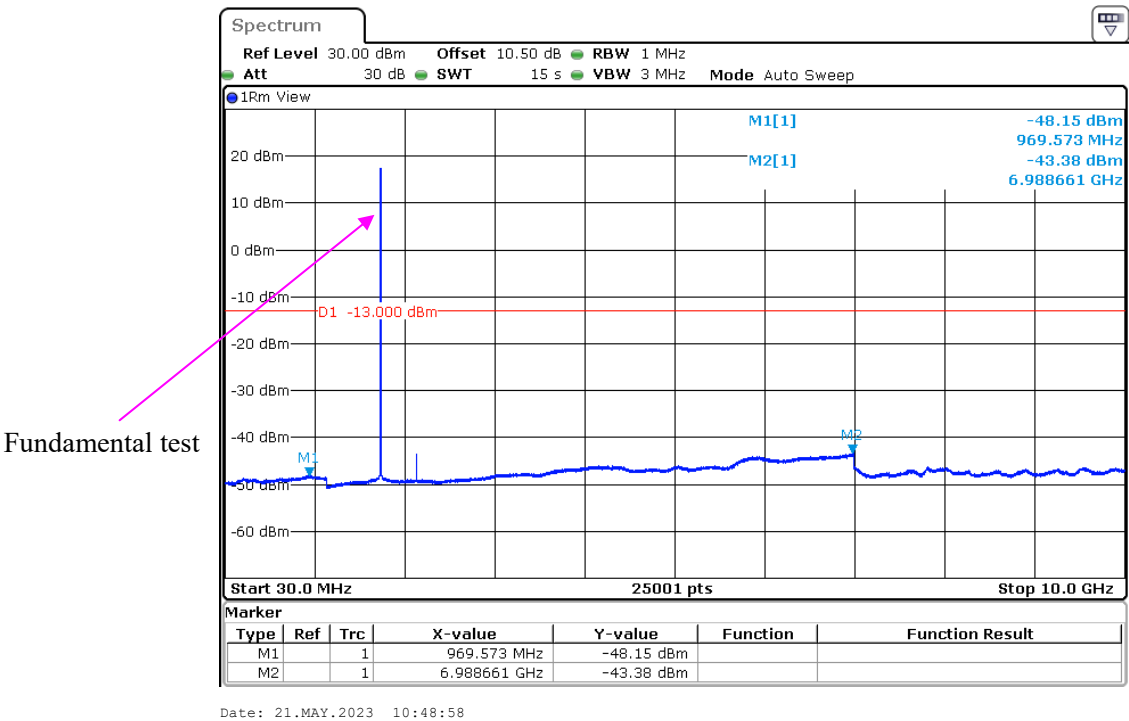
10 GHz – 20 GHz (WCDMA Mode)



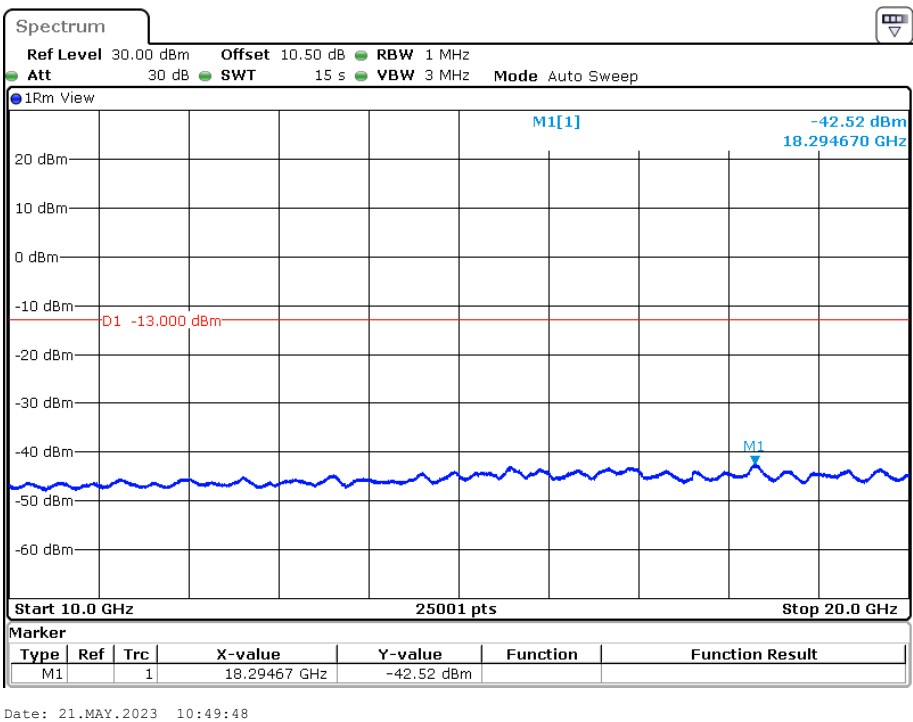
Date: 21.MAY.2023 10:46:02

High Channel:

30 MHz – 1 GHz (WCDMA Mode)



10 GHz – 20 GHz (WCDMA Mode)



The test plots of LTE band please refer to the Appendix B.

FCC § 2.1053; § 22.917 (a); § 24.238 (a); § 27.53; § 90.691- SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, § 22.917(a) & § 24.238(a) & § 27.53 & § 90.691.

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	25.2~25.5℃
Relative Humidity:	50~51 %
ATM Pressure:	~101.0kPa

The testing was performed by Level Li on 2023-05-18 and 2023-05-24.

Test mode: Transmitting (Pre-scan in the X, Y and Z axes of orientation, the worst case Z-axis of orientation was recorded)

The worst case is as below:

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Test frequency range: 30MHz-10GHz								
GSM850, 824.2MHz								
1648.4	-49.30	227	1.7	H	0.4	-48.90	-13	-35.90
1648.4	-47.60	345	2	V	0.1	-47.50	-13	-34.50
2472.6	-35.80	167	2	H	3.6	-32.20	-13	-19.20
2472.6	-37.00	256	1.7	V	4.2	-32.80	-13	-19.80
3296.8	-45.40	23	1.2	H	4.1	-41.30	-13	-28.30
3296.8	-45.10	6	1.6	V	4.4	-40.70	-13	-27.70
GSM850, 836.6MHz								
1673.2	-47.20	32	1.2	H	0.5	-46.70	-13	-33.70
1673.2	-45.20	33	2.5	V	0.5	-44.70	-13	-31.70
2509.8	-37.20	68	2.1	H	3.6	-33.60	-13	-20.60
2509.8	-38.00	224	1.3	V	3.9	-34.10	-13	-21.10
3346.4	-45.60	287	1.1	H	4.1	-41.50	-13	-28.50
3346.4	-45.00	35	2	V	4.1	-40.90	-13	-27.90
GSM850, 848.8MHz								
1697.6	-46.40	259	2.3	H	0.5	-45.90	-13	-32.90
1697.6	-45.10	262	1.1	V	0.9	-44.20	-13	-31.20
2546.4	-36.10	177	1.2	H	3.5	-32.60	-13	-19.60
2546.4	-37.00	302	2	V	3.8	-33.20	-13	-20.20
3395.2	-45.70	275	1.2	H	4.5	-41.20	-13	-28.20
3395.2	-45.50	333	2.4	V	5.1	-40.40	-13	-27.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Test frequency range: 30MHz-20GHz								
GSM1900, 1850.2MHz								
3700.4	-47.00	82	1.7	H	5.9	-41.10	-13	-28.10
3700.4	-45.60	95	1.6	V	6.4	-39.20	-13	-26.20
5550.6	-43.60	131	1.7	H	9.1	-34.50	-13	-21.50
5550.6	-42.90	22	1.2	V	9.5	-33.40	-13	-20.40
GSM1900, 1880MHz								
3760.0	-47.40	325	1.8	H	6.2	-41.20	-13	-28.20
3760.0	-46.20	257	2.4	V	6.7	-39.50	-13	-26.50
5640.0	-43.00	245	1.3	H	9.1	-33.90	-13	-20.90
5640.0	-42.20	340	1.7	V	9.3	-32.90	-13	-19.90
GSM1900, 1909.8MHz								
3819.6	-46.30	59	1.1	H	6.1	-40.20	-13	-27.20
3819.6	-45.00	102	1.3	V	6.4	-38.60	-13	-25.60
5729.4	-42.90	64	1.4	H	9.1	-33.80	-13	-20.80
5729.4	-41.50	248	1.6	V	9.5	-32.00	-13	-19.00

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Test frequency range: 30MHz-10GHz								
CDMA 1*RTT (BC0), 824.70MHz								
1649.40	-45.30	115	1.7	H	0.4	-44.90	-13	-31.90
1649.40	-43.20	325	2.4	V	0.1	-43.10	-13	-30.10
2474.10	-51.30	343	2.5	H	3.6	-47.70	-13	-34.70
2474.10	-52.20	200	1.1	V	4.2	-48.00	-13	-35.00
3298.80	-48.80	289	1.4	H	4.1	-44.70	-13	-31.70
3298.80	-49.10	218	1.6	V	4.3	-44.80	-13	-31.80
CDMA 1*RTT (BC0), 836.52MHz								
1673.04	-42.80	286	1.2	H	0.5	-42.30	-13	-29.30
1673.04	-41.40	173	2.3	V	0.5	-40.90	-13	-27.90
2509.56	-53.50	198	2.4	H	3.6	-49.90	-13	-36.90
2509.56	-53.00	123	1.1	V	3.9	-49.10	-13	-36.10
3346.08	-48.80	309	2.5	H	4.1	-44.70	-13	-31.70
3346.08	-48.70	89	2.1	V	4.1	-44.60	-13	-31.60
CDMA 1*RTT (BC0), 848.31MHz								
1696.62	-40.20	60	1.5	H	0.5	-39.70	-13	-26.70
1696.62	-38.80	324	2.3	V	0.9	-37.90	-13	-24.90
2544.93	-53.30	247	2	H	3.5	-49.80	-13	-36.80
2544.93	-53.10	180	1.1	V	3.8	-49.30	-13	-36.30
3393.24	-49.00	189	2	H	4.5	-44.50	-13	-31.50
3393.24	-49.10	58	2.5	V	5.1	-44.00	-13	-31.00

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Test frequency range: 30MHz-10GHz								
CDMA EV-DO (BC0),824.7MHz								
1649.40	-41.30	158	2.2	H	0.4	-40.90	-13	-27.90
1649.40	-39.80	102	2	V	0.1	-39.70	-13	-26.70
2474.10	-53.00	212	2.3	H	3.6	-49.40	-13	-36.40
2474.10	-51.30	281	1.5	V	4.2	-47.10	-13	-34.10
3298.80	-49.60	320	1.9	H	4.1	-45.50	-13	-32.50
3298.80	-49.30	304	1.2	V	4.3	-45.00	-13	-32.00
CDMA EV-DO (BC0),836.52MHz								
1673.04	-39.00	336	1.4	H	0.5	-38.50	-13	-25.50
1673.04	-37.90	254	1.4	V	0.5	-37.40	-13	-24.40
2509.56	-49.50	282	2.1	H	3.6	-45.90	-13	-32.90
2509.56	-48.10	145	1.3	V	3.9	-44.20	-13	-31.20
3346.08	-49.00	28	1.7	H	4.1	-44.90	-13	-31.90
3346.08	-48.50	297	1	V	4.1	-44.40	-13	-31.40
CDMA EV-DO (BC0),848.31MHz								
1696.62	-38.30	255	2.4	H	0.5	-37.80	-13	-24.80
1696.62	-36.50	173	2.4	V	0.9	-35.60	-13	-22.60
2544.93	-49.40	338	1.3	H	3.5	-45.90	-13	-32.90
2544.93	-49.70	257	2	V	3.8	-45.90	-13	-32.90
3393.24	-48.90	255	1.6	H	4.5	-44.40	-13	-31.40
3393.24	-49.60	176	2.1	V	5.1	-44.50	-13	-31.50

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Test frequency range: 30MHz-20GHz								
WCDMA Band 2,1852.4MHz								
3704.8	-45.40	21	2.2	H	5.9	-39.50	-13	-26.50
3704.8	-46.70	136	2.3	V	6.4	-40.30	-13	-27.30
5557.2	-47.50	251	2	H	9.1	-38.40	-13	-25.40
5557.2	-46.10	353	1.7	V	9.5	-36.60	-13	-23.60
WCDMA Band2,1880MHz								
3760.0	-45.80	288	2.2	H	6.2	-39.60	-13	-26.60
3760.0	-47.20	199	2	V	6.7	-40.50	-13	-27.50
5640.0	-47.30	76	1.5	H	9.1	-38.20	-13	-25.20
5640.0	-45.70	137	2	V	9.3	-36.40	-13	-23.40
WCDMA Band2,1907.6MHz								
3815.2	-44.50	147	2	H	6.2	-38.30	-13	-25.30
3815.2	-45.90	325	1.8	V	6.4	-39.50	-13	-26.50
5722.8	-46.40	233	1.4	H	9.1	-37.30	-13	-24.30
5722.8	-45.10	285	1.4	V	9.5	-35.60	-13	-22.60
WCDMA Band 4, 1712.4MHz								
3424.8	-47.10	61	2.1	H	4.9	-42.20	-13	-29.20
3424.8	-48.10	317	1.3	V	5.3	-42.80	-13	-29.80
5137.2	-51.60	107	1.9	H	9	-42.60	-13	-29.60
5137.2	-52.30	148	1.2	V	9.3	-43.00	-13	-30.00
WCDMA Band 4, 1732.6MHz								
3465.2	-47.20	83	1.8	H	5.3	-41.90	-13	-28.90
3465.2	-48.90	153	1.2	V	5.5	-43.40	-13	-30.40
5197.8	-50.80	358	2.4	H	8.4	-42.40	-13	-29.40
5197.8	-51.20	63	2	V	8.9	-42.30	-13	-29.30
WCDMA Band 4, 1752.6MHz								
3505.2	-46.60	187	1.5	H	5.7	-40.90	-13	-27.90
3505.2	-48.20	174	1.4	V	5.9	-42.30	-13	-29.30
5257.8	-49.40	239	1.7	H	8.2	-41.20	-13	-28.20
5257.8	-49.60	268	1.5	V	8.5	-41.10	-13	-28.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Test frequency range: 30MHz-10GHz								
WCDMA Band 5,826.4MHz								
1652.8	-46.30	238	2.4	H	0.4	-45.90	-13	-32.90
1652.8	-44.70	236	2	V	0.2	-44.50	-13	-31.50
2479.2	-49.30	140	2.1	H	3.6	-45.70	-13	-32.70
2479.2	-48.20	178	2.2	V	4.1	-44.10	-13	-31.10
3305.6	-47.60	217	1.9	H	4.1	-43.50	-13	-30.50
3305.6	-47.20	316	1.6	V	4.3	-42.90	-13	-29.90
WCDMA Band5,836.6MHz								
1673.2	-46.10	317	2.2	H	0.5	-45.60	-13	-32.60
1673.2	-44.70	272	1.9	V	0.5	-44.20	-13	-31.20
2509.8	-51.10	159	1.6	H	3.6	-47.50	-13	-34.50
2509.8	-50.50	164	2	V	3.9	-46.60	-13	-33.60
3346.4	-47.20	109	1.4	H	4.1	-43.10	-13	-30.10
3346.4	-46.70	93	1.2	V	4.1	-42.60	-13	-29.60
WCDMA Band5,846.6MHz								
1693.2	-45.40	201	1.8	H	0.5	-44.90	-13	-31.90
1693.2	-44.00	78	1.1	V	0.9	-43.10	-13	-30.10
2539.8	-50.10	36	2	H	3.5	-46.60	-13	-33.60
2539.8	-49.20	288	1.8	V	3.8	-45.40	-13	-32.40
3386.4	-47.30	122	1	H	4.4	-42.90	-13	-29.90
3386.4	-47.00	240	1.5	V	4.9	-42.10	-13	-29.10

LTE Band: (Pre-scan with all the bandwidth and modulation, and worst case as below)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 2								
Test frequency range: 30MHz-20GHz								
1.4MHz, QPSK, Low Channel								
3701.4	-45.30	106	1.3	H	5.9	-39.40	-13	-26.40
3701.4	-46.70	73	1.8	V	6.4	-40.30	-13	-27.30
5552.1	-40.60	55	1.9	H	9.1	-31.50	-13	-18.50
5552.1	-42.00	194	2.3	V	9.5	-32.50	-13	-19.50
1.4MHz, QPSK, Middle Channel								
3760.0	-45.50	285	1.1	H	6.2	-39.30	-13	-26.30
3760.0	-47.20	158	1.7	V	6.7	-40.50	-13	-27.50
5640.0	-40.20	172	1.9	H	9.1	-31.10	-13	-18.10
5640.0	-41.60	37	1.3	V	9.3	-32.30	-13	-19.30
1.4MHz, QPSK, High Channel								
3818.6	-44.70	268	2.1	H	6.1	-38.60	-13	-25.60
3818.6	-46.00	103	1.6	V	6.4	-39.60	-13	-26.60
5727.9	-39.40	161	1.4	H	9.1	-30.30	-13	-17.30
5727.9	-40.50	274	2.4	V	9.5	-31.00	-13	-18.00
LTE Band 4								
Test frequency range: 30MHz-20GHz								
1.4MHz, QPSK, Low Channel								
3421.4	-46.40	208	1.1	H	4.8	-41.60	-13	-28.60
3421.4	-47.90	342	1.9	V	5.3	-42.60	-13	-29.60
5132.1	-51.30	138	1.7	H	9	-42.30	-13	-29.30
5132.1	-52.10	88	1.7	V	9.3	-42.80	-13	-29.80
1.4MHz, QPSK, Middle Channel								
3465.0	-46.60	236	2.2	H	5.3	-41.30	-13	-28.30
3465.0	-48.90	15	2.1	V	5.5	-43.40	-13	-30.40
5197.5	-50.60	324	1.2	H	8.4	-42.20	-13	-29.20
5197.5	-51.10	151	1.9	V	8.9	-42.20	-13	-29.20
1.4MHz, QPSK, High Channel								
3508.6	-46.10	153	1.5	H	5.7	-40.40	-13	-27.40
3508.6	-47.80	103	1.1	V	5.9	-41.90	-13	-28.90
5262.9	-49.70	259	1	H	8.3	-41.40	-13	-28.40
5262.9	-49.70	124	2.5	V	8.5	-41.20	-13	-28.20

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 5								
Test frequency range: 30MHz-10GHz								
1.4MHz, QPSK, Low Channel								
1649.4	-49.50	226	2.4	H	0.4	-49.10	-13	-36.10
1649.4	-42.80	264	1.9	V	0.1	-42.70	-13	-29.70
2474.1	-50.60	232	1.1	H	3.6	-47.00	-13	-34.00
2474.1	-49.30	67	1.8	V	4.2	-45.10	-13	-32.10
3298.8	-47.00	113	1.9	H	4.1	-42.90	-13	-29.90
3298.8	-46.80	172	2.3	V	4.3	-42.50	-13	-29.50
1.4MHz, QPSK, Middle Channel								
1673.0	-47.30	213	2.4	H	0.5	-46.80	-13	-33.80
1673.0	-40.30	270	2.4	V	0.5	-39.80	-13	-26.80
2509.5	-50.50	104	1.4	H	3.6	-46.90	-13	-33.90
2509.5	-48.80	124	1.2	V	3.9	-44.90	-13	-31.90
3346.0	-46.90	227	2.1	H	4.1	-42.80	-13	-29.80
3346.0	-46.40	316	1.5	V	4.1	-42.30	-13	-29.30
1.4MHz, QPSK, High Channel								
1696.6	-46.40	220	1.5	H	0.5	-45.90	-13	-32.90
1696.6	-40.00	194	1.1	V	0.9	-39.10	-13	-26.10
2544.9	-49.50	101	1.3	H	3.5	-46.00	-13	-33.00
2544.9	-48.00	295	2.3	V	3.8	-44.20	-13	-31.20
3393.2	-46.90	124	2.5	H	4.5	-42.40	-13	-29.40
3393.2	-46.50	272	1.3	V	5.1	-41.40	-13	-28.40
LTE Band 7								
Test frequency range: 30MHz-26GHz								
5MHz, QPSK, Low Channel								
5005.0	-52.00	260	2.2	H	9.3	-42.70	-25	-17.70
5005.0	-50.70	351	1.2	V	9.2	-41.50	-25	-16.50
7507.5	-58.30	23	1.4	H	15.4	-42.90	-25	-17.90
7507.5	-57.80	3	1.9	V	15.7	-42.10	-25	-17.10
5MHz, QPSK, Middle Channel								
5070.0	-50.60	340	1.2	H	9.1	-41.50	-25	-16.50
5070.0	-50.40	15	1.6	V	9.3	-41.10	-25	-16.10
7605.0	-59.60	7	1.3	H	15.7	-43.90	-25	-18.90
7605.0	-58.80	44	2.4	V	15.6	-43.20	-25	-18.20
5MHz, QPSK, High Channel								
5135.0	-49.80	219	2.3	H	9	-40.80	-25	-15.80
5135.0	-49.40	218	1.3	V	9.3	-40.10	-25	-15.10
7702.5	-58.50	107	1.7	H	15.5	-43.00	-25	-18.00
7702.5	-58.20	299	2.2	V	15.8	-42.40	-25	-17.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 12								
Test frequency range: 30MHz-10GHz								
1.4MHz, QPSK, Low Channel								
1399.4	-50.40	104	2	H	1.6	-48.80	-13	-35.80
1399.4	-52.50	6	2.1	V	1.8	-50.70	-13	-37.70
2099.1	-48.10	245	1.2	H	3.8	-44.30	-13	-31.30
2099.1	-49.50	10	1.3	V	3.8	-45.70	-13	-32.70
2798.8	-51.50	14	2.2	H	3.8	-47.70	-13	-34.70
2798.8	-52.30	219	2	V	4.5	-47.80	-13	-34.80
1.4MHz, QPSK, Middle Channel								
1415.0	-50.20	7	1.7	H	1.7	-48.50	-13	-35.50
1415.0	-52.30	306	2.2	V	1.8	-50.50	-13	-37.50
2122.5	-48.00	160	2.4	H	4	-44.00	-13	-31.00
2122.5	-49.60	80	1.8	V	4	-45.60	-13	-32.60
2830.0	-51.80	28	1.5	H	4.2	-47.60	-13	-34.60
2830.0	-52.30	52	1.1	V	4.7	-47.60	-13	-34.60
1.4MHz, QPSK, High Channel								
1430.6	-49.20	247	1.9	H	1.7	-47.50	-13	-34.50
1430.6	-51.40	214	1.5	V	1.8	-49.60	-13	-36.60
2145.9	-47.30	106	1.6	H	4.2	-43.10	-13	-30.10
2145.9	-48.80	76	1.7	V	4.2	-44.60	-13	-31.60
2861.2	-51.70	147	1.6	H	4.6	-47.10	-13	-34.10
2861.2	-52.50	245	2	V	4.8	-47.70	-13	-34.70

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 13								
Test frequency range: 30MHz-10GHz								
5MHz, QPSK, Low Channel								
1559.0	-49.90	56	2.4	H	0.1	-49.80	-40	-9.80
1559.0	-49.50	200	2.5	V	1	-48.50	-40	-8.50
2338.5	-52.80	2	1.2	H	4.1	-48.70	-13	-35.70
2338.5	-52.20	91	2	V	4.3	-47.90	-13	-34.90
3118.0	-49.60	178	1.6	H	5.1	-44.50	-13	-31.50
3118.0	-49.10	142	1.2	V	5.3	-43.80	-13	-30.80
5MHz, QPSK, Middle Channel								
1564.0	-49.70	278	2.1	H	0.2	-49.50	-40	-9.50
1564.0	-49.10	55	1.8	V	1	-48.10	-40	-8.10
2346.0	-52.60	251	1.6	H	4.2	-48.40	-13	-35.40
2346.0	-51.90	77	2.3	V	4.3	-47.60	-13	-34.60
3128.0	-49.40	67	1.1	H	5.2	-44.20	-13	-31.20
3128.0	-48.90	246	2.1	V	5.4	-43.50	-13	-30.50
5MHz, QPSK, High Channel								
1569.0	-49.10	33	1.5	H	0.2	-48.90	-40	-8.90
1569.0	-48.40	238	1.7	V	0.9	-47.50	-40	-7.50
2353.5	-51.80	114	1.5	H	4.2	-47.60	-13	-34.60
2353.5	-50.30	208	1.2	V	4.3	-46.00	-13	-33.00
3138.0	-49.00	246	1.5	H	5.3	-43.70	-13	-30.70
3138.0	-48.30	171	2.3	V	5.5	-42.80	-13	-29.80

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 17								
Test frequency range: 30MHz-10GHz								
5MHz, QPSK, Low Channel								
1413.0	-50.80	253	2.4	H	1.7	-49.10	-13	-36.10
1413.0	-52.10	358	1.9	V	1.8	-50.30	-13	-37.30
2119.5	-48.10	290	2.1	H	4	-44.10	-13	-31.10
2119.5	-49.80	75	2.2	V	4	-45.80	-13	-32.80
2826.0	-51.80	199	1.3	H	4.2	-47.60	-13	-34.60
2826.0	-52.50	308	2	V	4.6	-47.90	-13	-34.90
5MHz, QPSK, Middle Channel								
1420.0	-50.60	71	1.1	H	1.7	-48.90	-13	-35.90
1420.0	-51.80	110	1.7	V	1.8	-50.00	-13	-37.00
2130.0	-48.00	146	1.3	H	4	-44.00	-13	-31.00
2130.0	-49.70	106	1.8	V	4.1	-45.60	-13	-32.60
2840.0	-51.80	196	1.5	H	4.4	-47.40	-13	-34.40
2840.0	-52.30	124	1	V	4.7	-47.60	-13	-34.60
5MHz, QPSK, High Channel								
1427.0	-49.40	54	2.5	H	1.7	-47.70	-13	-34.70
1427.0	-50.80	134	1.5	V	1.8	-49.00	-13	-36.00
2140.5	-46.90	13	1.7	H	4.1	-42.80	-13	-29.80
2140.5	-48.80	315	2.1	V	4.2	-44.60	-13	-31.60
2854.0	-51.00	130	1	H	4.6	-46.40	-13	-33.40
2854.0	-52.10	301	2.4	V	4.8	-47.30	-13	-34.30
LTE Band 25								
Test frequency range: 30MHz-20GHz								
1.4MHz, QPSK, Low Channel								
3701.4	-45.20	212	2.1	H	5.9	-39.30	-13	-26.30
3701.4	-46.00	50	1.7	V	6.4	-39.60	-13	-26.60
5552.1	-40.70	160	1.1	H	9.1	-31.60	-13	-18.60
5552.1	-41.40	217	1.5	V	9.5	-31.90	-13	-18.90
1.4MHz, QPSK, Middle Channel								
3765.0	-45.80	319	2.3	H	6.3	-39.50	-13	-26.50
3765.0	-46.50	319	1.3	V	6.7	-39.80	-13	-26.80
5647.5	-40.20	323	1.7	H	9.1	-31.10	-13	-18.10
5647.5	-40.90	166	2.3	V	9.4	-31.50	-13	-18.50
1.4MHz, QPSK, High Channel								
3828.6	-44.40	229	1.9	H	5.9	-38.50	-13	-25.50
3828.6	-45.40	101	2.4	V	6.3	-39.10	-13	-26.10
5742.9	-39.50	128	2.5	H	9	-30.50	-13	-17.50
5742.9	-40.20	299	1.1	V	9.5	-30.70	-13	-17.70

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 26								
Test frequency range: 30MHz-10GHz								
1.4MHz, QPSK, Low Channel								
1629.4	-49.00	333	2	H	0.5	-48.50	-13	-35.50
1629.4	-40.30	260	2	V	0.3	-40.00	-13	-27.00
2444.1	-50.80	20	1.3	H	3.7	-47.10	-13	-34.10
2444.1	-49.60	72	1.2	V	4.3	-45.30	-13	-32.30
3258.8	-46.70	315	1.7	H	4.3	-42.40	-13	-29.40
3258.8	-46.30	154	1.3	V	4.7	-41.60	-13	-28.60
1.4MHz, QPSK, Middle Channel								
1663.0	-46.60	7	2.1	H	0.4	-46.20	-13	-33.20
1663.0	-37.40	167	1.8	V	0.3	-37.10	-13	-24.10
2494.5	-49.60	202	1.8	H	3.6	-46.00	-13	-33.00
2494.5	-48.50	126	1.4	V	4	-44.50	-13	-31.50
3326.0	-46.30	230	2	H	4.1	-42.20	-13	-29.20
3326.0	-45.60	251	1.1	V	4.2	-41.40	-13	-28.40
1.4MHz, QPSK, High Channel								
1696.6	-45.90	321	2.1	H	0.5	-45.40	-13	-32.40
1696.6	-36.60	309	1.2	V	0.9	-35.70	-13	-22.70
2544.9	-49.20	338	1.1	H	3.5	-45.70	-13	-32.70
2544.9	-48.20	256	1.1	V	3.8	-44.40	-13	-31.40
3393.2	-46.30	120	2	H	4.5	-41.80	-13	-28.80
3393.2	-46.20	19	2	V	5.1	-41.10	-13	-28.10
LTE Band 38								
Test frequency range: 30MHz-26.5GHz								
5MHz, QPSK, Low Channel								
5145.0	-48.90	173	2.5	H	9	-39.90	-25	-14.90
5145.0	-48.10	5	2.3	V	9.4	-38.70	-25	-13.70
7717.5	-60.10	9	1.1	H	15.5	-44.60	-25	-19.60
7717.5	-59.70	31	2	V	15.9	-43.80	-25	-18.80
5MHz, QPSK, Middle Channel								
5190.0	-48.10	27	1	H	8.5	-39.60	-25	-14.60
5190.0	-46.80	122	2.5	V	9	-37.80	-25	-12.80
7785.0	-59.20	239	2.1	H	15.5	-43.70	-25	-18.70
7785.0	-58.70	130	1	V	15.6	-43.10	-25	-18.10
5MHz, QPSK, High Channel								
5235.0	-47.00	296	2.2	H	8.2	-38.80	-25	-13.80
5235.0	-45.40	275	1.1	V	8.6	-36.80	-25	-11.80
7852.5	-58.50	191	1.6	H	15.4	-43.10	-25	-18.10
7852.5	-58.40	265	2	V	16	-42.40	-25	-17.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 40 Lower(2305-2315MHz)								
Test frequency range: 30MHz-24GHz								
5MHz, QPSK, Low Channel								
4615.0	-65.8	99	1.4	H	10.9	-54.9	-40	-14.9
4615.0	-65.1	108	1.8	V	10.7	-54.4	-40	-14.4
6922.5	-69.6	88	2.2	H	15.0	-54.6	-40	-14.6
6922.5	-70.3	31	1.4	V	14.8	-55.5	-40	-15.5
5MHz, QPSK, Middle Channel								
4620.0	-64.6	31	1.9	H	10.7	-53.9	-40	-13.9
4620.0	-64.1	57	2.5	V	10.7	-53.4	-40	-13.4
6930.0	-68.9	253	2.4	H	15.2	-53.7	-40	-13.7
6930.0	-70.4	83	1.3	V	15.0	-55.4	-40	-15.4
5MHz, QPSK, High Channel								
4625.0	-63.0	263	1.7	H	10.6	-52.4	-40	-12.4
4625.0	-63.1	341	1.2	V	10.7	-52.4	-40	-12.4
6937.5	-69.5	154	2.2	H	15.3	-54.2	-40	-14.2
6937.5	-70.5	291	1.6	V	15.1	-55.4	-40	-15.4
LTE Band 40 Upper(2350-2360MHz)								
Test frequency range: 30MHz-24GHz								
5MHz, QPSK, Low Channel								
4705.0	-66.1	58	1.4	H	10.4	-55.7	-40	-15.7
4705.0	-65.1	75	1.9	V	10.5	-54.6	-40	-14.6
7057.5	-72.3	40	1.1	H	17.4	-54.9	-40	-14.9
7057.5	-68.0	320	2.3	V	15.9	-52.1	-40	-12.1
5MHz, QPSK, Middle Channel								
4710.0	-65.9	258	2.4	H	10.5	-55.4	-40	-15.4
4710.0	-63.7	212	1.1	V	10.5	-53.2	-40	-13.2
7065.0	-63.9	183	1.7	H	17.2	-46.7	-40	-6.7
7065.0	-62.7	129	1.3	V	15.9	-46.8	-40	-6.8
5MHz, QPSK, High Channel								
4715.0	-67.9	84	1.4	H	10.6	-57.3	-40	-17.3
4715.0	-65.5	290	1.4	V	10.5	-55.0	-40	-15.0
7072.5	-73.5	280	2.0	H	17.1	-56.4	-40	-16.4
7072.5	-71.7	263	1.5	V	15.9	-55.8	-40	-15.8

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 41								
Test frequency range: 30MHz-27GHz								
5MHz, QPSK, Low Channel								
5075.0	-48.40	4	1.2	H	9	-39.40	-25	-14.40
5075.0	-47.40	309	1.3	V	9.3	-38.10	-25	-13.10
7612.5	-59.00	111	1.7	H	15.7	-43.30	-25	-18.30
7612.5	-58.30	282	1.7	V	15.7	-42.60	-25	-17.60
5MHz, QPSK, Middle Channel								
5190.0	-47.60	269	1	H	8.5	-39.10	-25	-14.10
5190.0	-46.30	139	1.9	V	9	-37.30	-25	-12.30
7785.0	-57.90	290	2.4	H	15.5	-42.40	-25	-17.40
7785.0	-57.50	118	2	V	15.6	-41.90	-25	-16.90
5MHz, QPSK, High Channel								
5305.0	-46.90	203	1.3	H	8.6	-38.30	-25	-13.30
5305.0	-44.50	325	2.5	V	8.6	-35.90	-25	-10.90
7957.5	-59.30	5	1.5	H	16.7	-42.60	-25	-17.60
7957.5	-58.70	230	1.7	V	16.8	-41.90	-25	-16.90
LTE Band 66								
Test frequency range: 30MHz-20GHz								
1.4MHz, QPSK, Low Channel								
3421.4	-46.10	45	2.4	H	4.8	-41.30	-13	-28.30
3421.4	-48.60	148	2.4	V	5.3	-43.30	-13	-30.30
5132.1	-50.90	214	1.7	H	9	-41.90	-13	-28.90
5132.1	-51.40	341	1.2	V	9.3	-42.10	-13	-29.10
1.4MHz, QPSK, Middle Channel								
3490.0	-46.90	212	1.9	H	5.6	-41.30	-13	-28.30
3490.0	-49.00	354	1.7	V	5.7	-43.30	-13	-30.30
5235.0	-50.10	230	1.6	H	8.2	-41.90	-13	-28.90
5235.0	-50.70	170	1.3	V	8.6	-42.10	-13	-29.10
1.4MHz, QPSK, High Channel								
3558.6	-47.20	152	1.1	H	6.1	-41.10	-13	-28.10
3558.6	-47.80	312	1.1	V	6.1	-41.70	-13	-28.70
5337.9	-48.80	236	1.2	H	8.4	-40.40	-13	-27.40
5337.9	-49.40	324	1.8	V	8.7	-40.70	-13	-27.70

Note:

Absolute Level = Reading Level + Substituted Factor

Substituted Factor contains: SG Level - Cable loss+ Antenna Gain

Margin = Absolute Level - Limit

Other emission which was below limit more than 20dB was not recorded.

FCC§ 22.917 (a);§ 24.238 (a); §27.53(g) (h)(m); §90.691 - BAND EDGES

Applicable Standard

According to § 22.917(a), the power of any emissions 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.

According to §24.238(a), the power of any emissions 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.

According to FCC §27.53 (g) (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.

According to FCC §27.53 (m), the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in [paragraph \(m\)\(6\)](#) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz.

According to § 90.691, (a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $16 \log(f/6.1)$ decibels or $50 + 10 \log(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

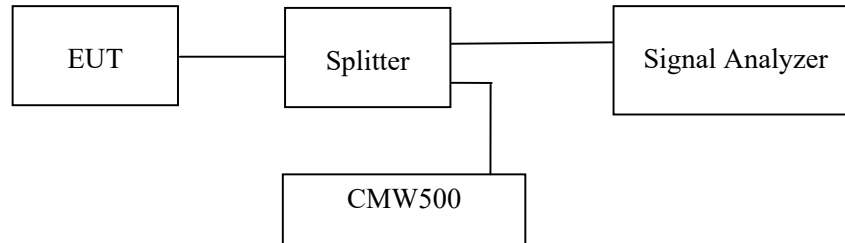
(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Note: the worst path loss (cable loss and splitter inset loss) among the test frequency range has added into plot.

Test Data

Environmental Conditions

Temperature:	26.5~28.8 °C
Relative Humidity:	46.8~51.6%
ATM Pressure:	101.0 kPa

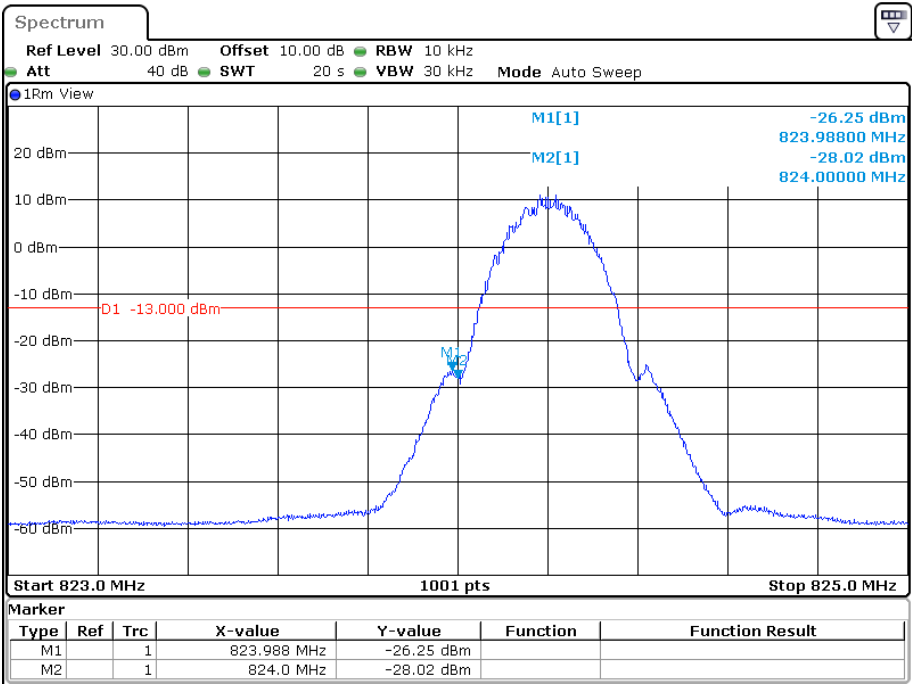
The testing was performed by Jacob Huang from 2023-05-21 to 2023-06-06.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

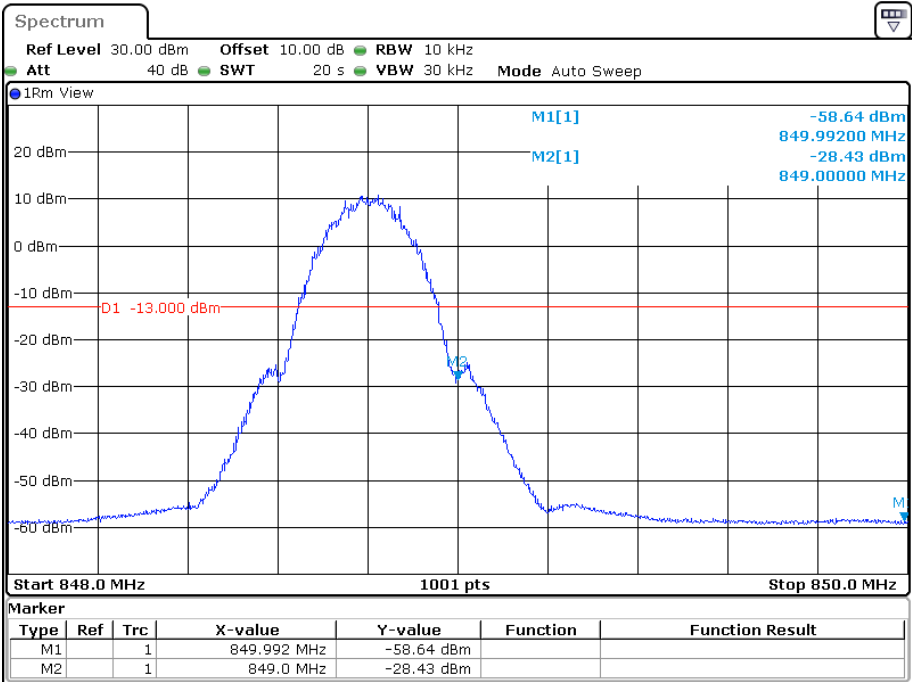
Please refer to the following plots.

Cellular Band, Left Band Edge for GSM (GMSK) Mode



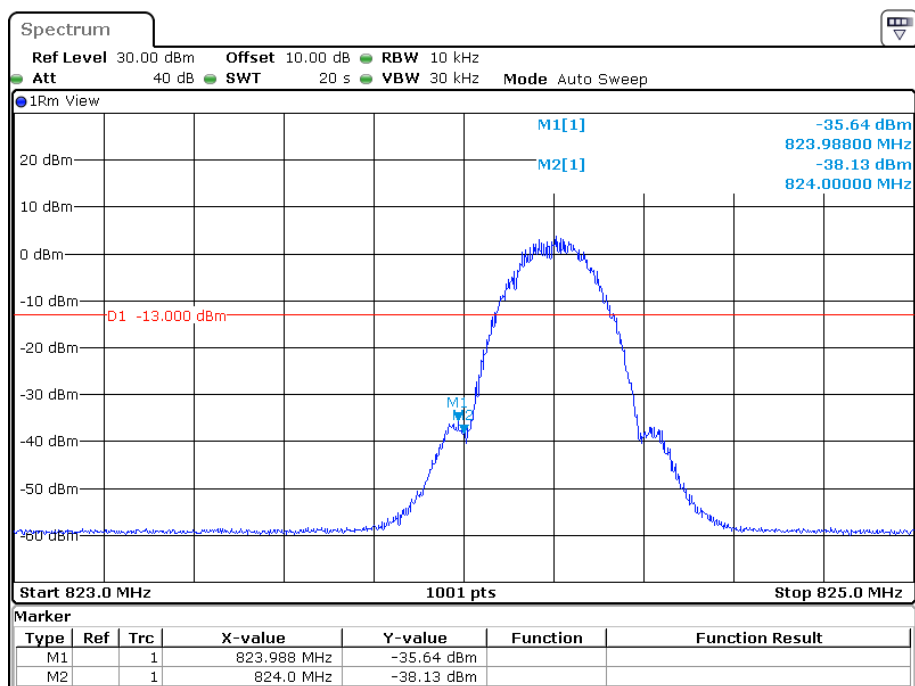
Date: 6.JUN.2023 11:15:56

Cellular Band, Right Band Edge for GSM (GMSK) Mode



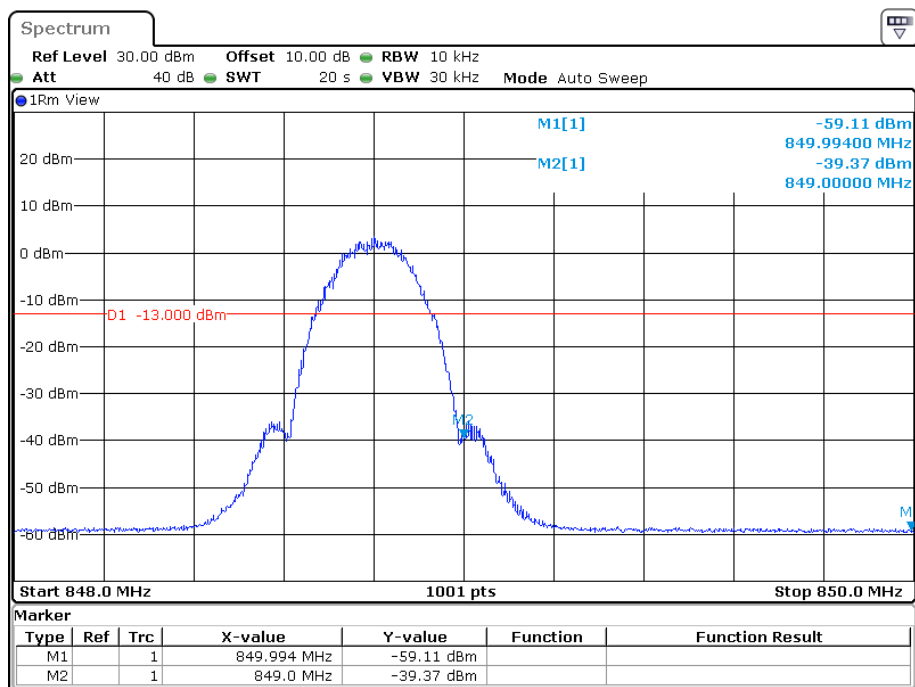
Date: 6.JUN.2023 11:18:27

Cellular Band, Left Band Edge for EDGE(8PSK)Mode



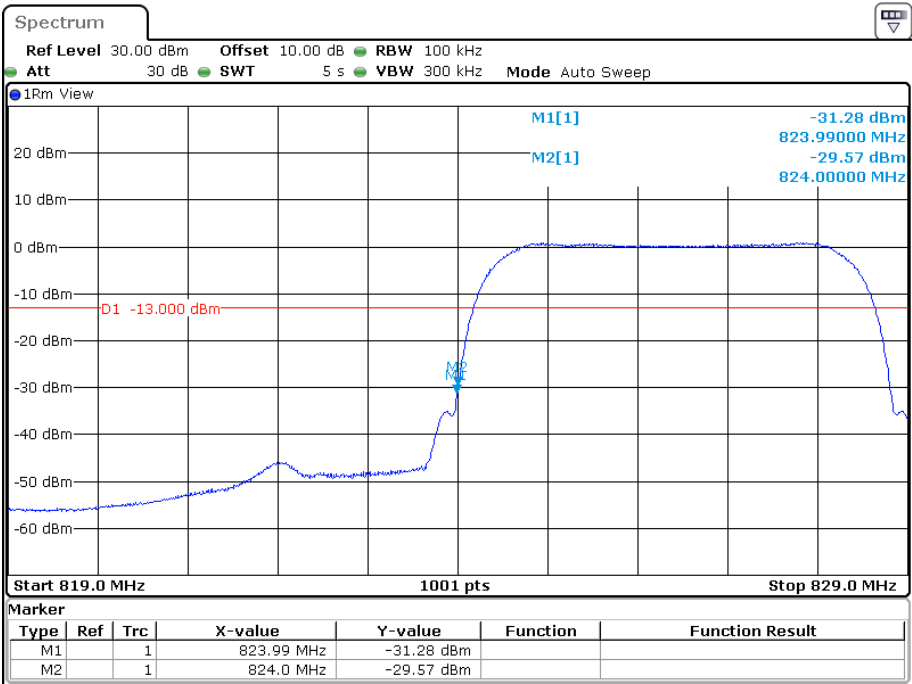
Date: 21.MAY.2023 14:12:00

Cellular Band, Right Band Edge for EDGE(8PSK) Mode



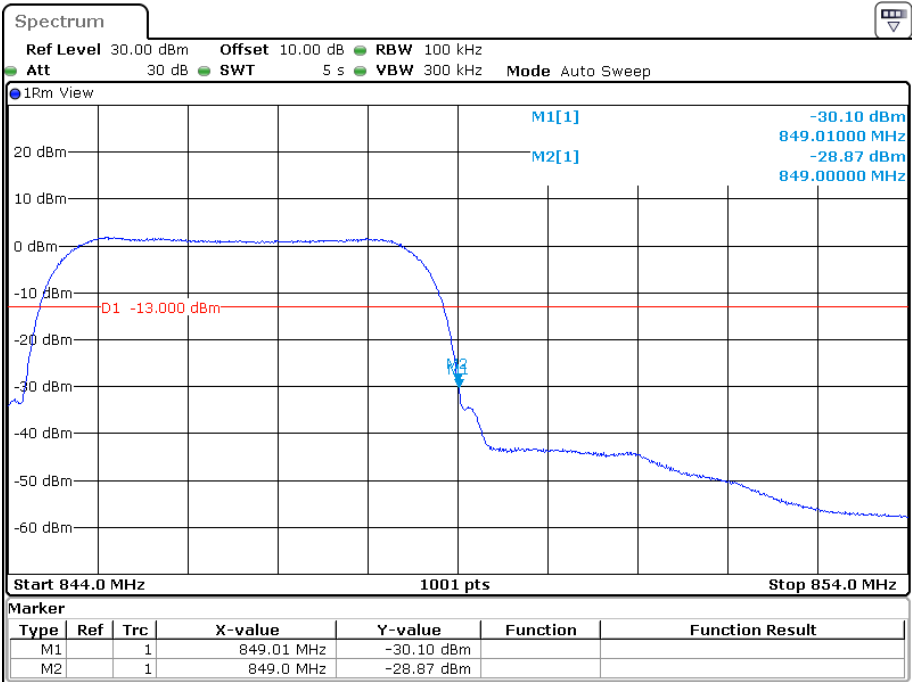
Date: 21.MAY.2023 14:42:01

Cellular Band, Left Band Edge for RMC (BPSK) Mode



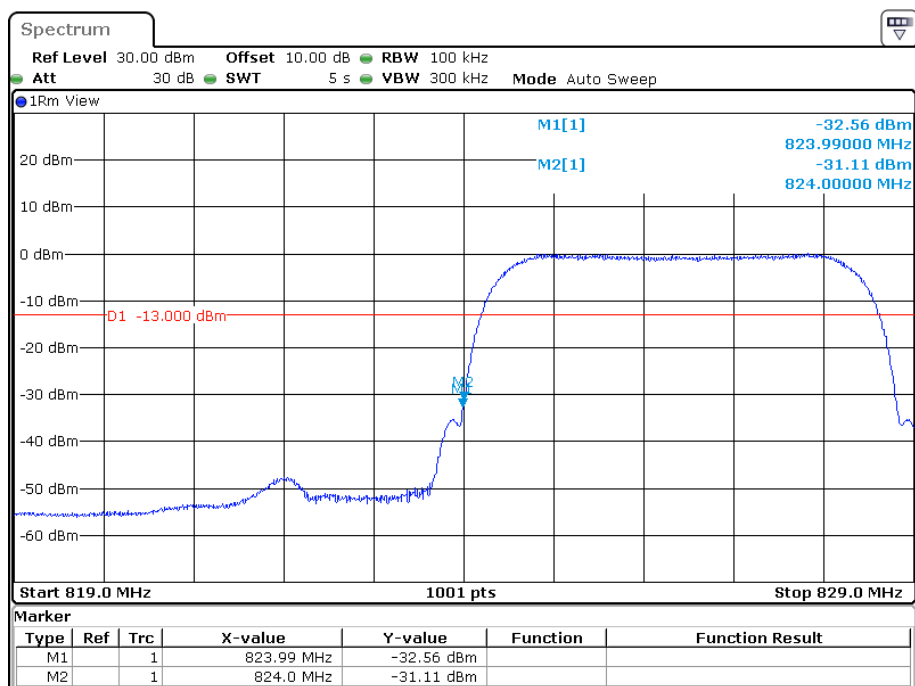
Date: 21.MAY.2023 11:47:03

Cellular Band, Right Band Edge for RMC (BPSK) Mode



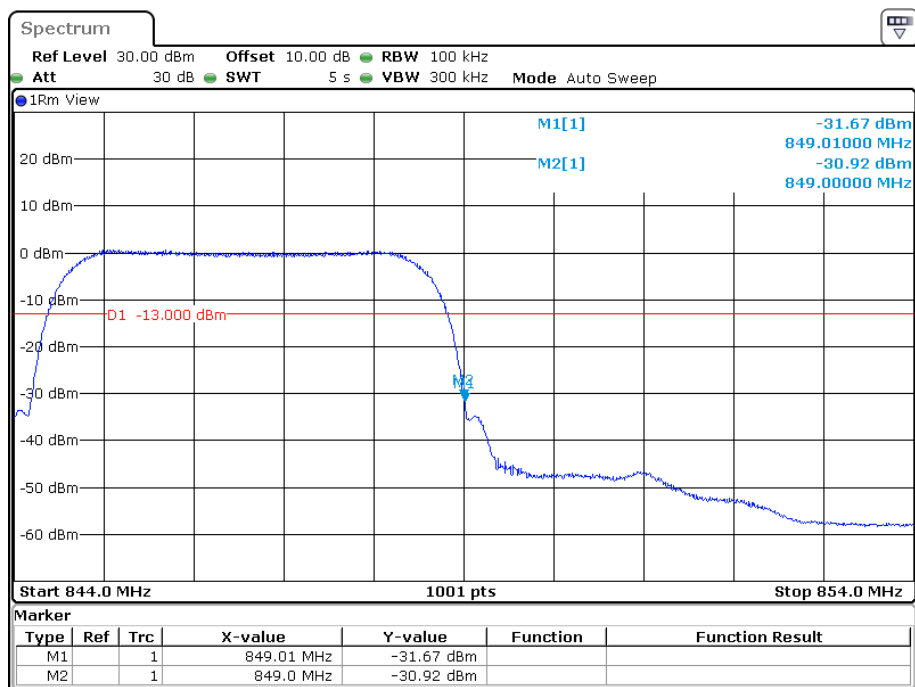
Date: 21.MAY.2023 11:58:51

Cellular Band, Left Band Edge for HSDPA(16QAM) Mode



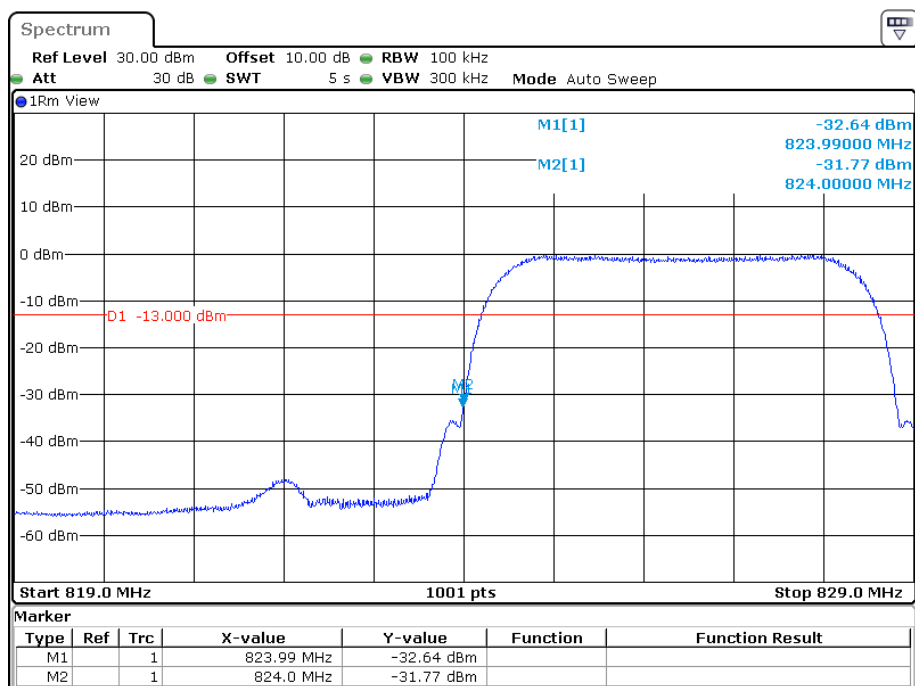
Date: 21.MAY.2023 12:04:07

Cellular Band, Right Band Edge for HSDPA (16QAM) Mode



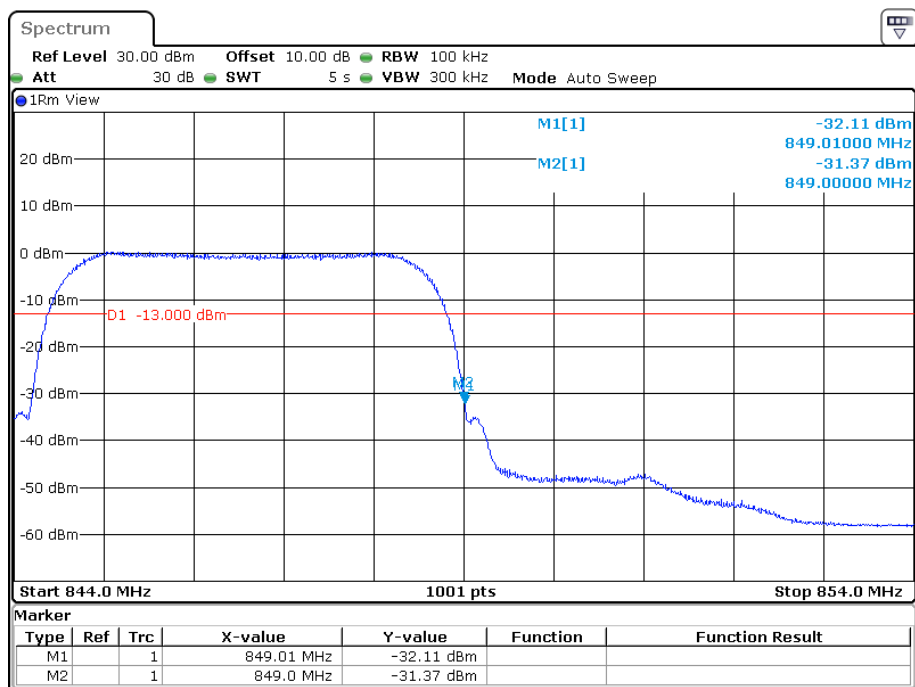
Date: 21.MAY.2023 13:02:56

Cellular Band, Left Band Edge for HSUPA (QPSK) Mode

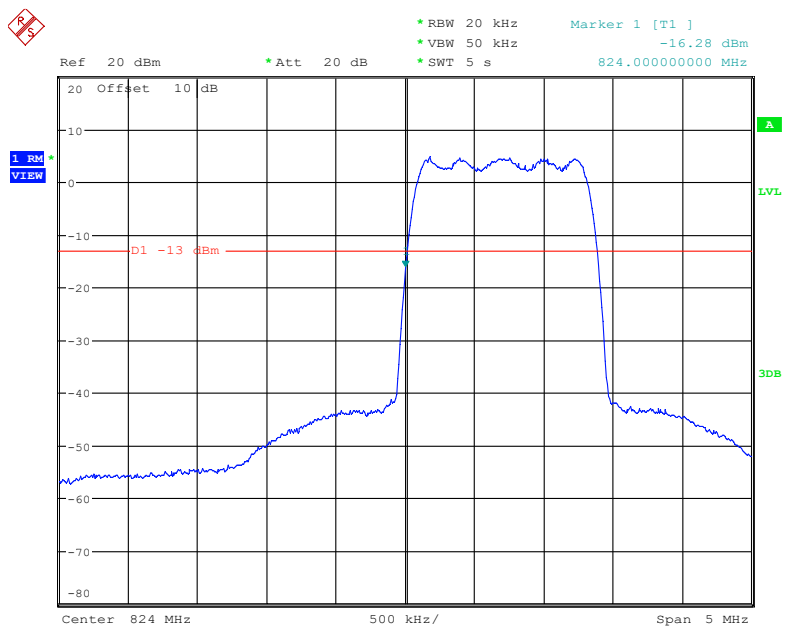


Date: 21.MAY.2023 13:10:08

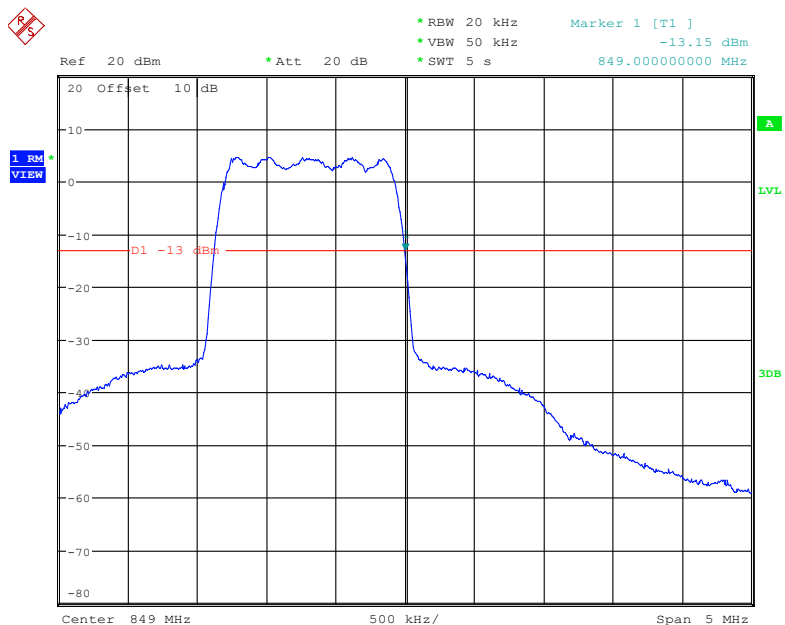
Cellular Band, Right Band Edge for HSUPA (QPSK) Mode



Date: 21.MAY.2023 13:17:59

Cellular Band, Left Band Edge for CDMA (1*RTT, BC0) Mode

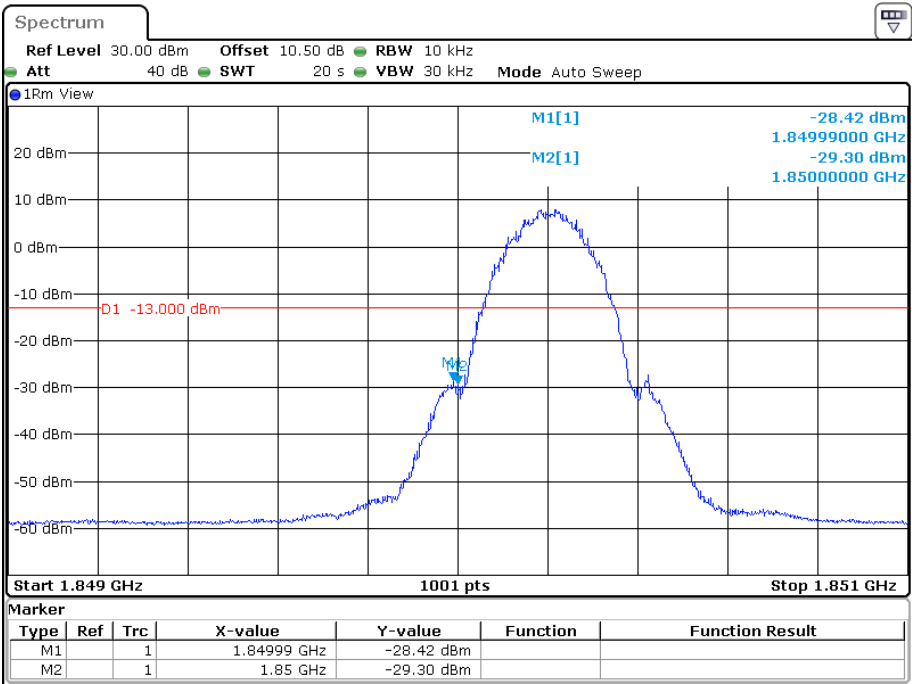
Date: 26.MAY.2023 20:59:25

Cellular Band, Right Band Edge for CDMA (1*RTT, BC0) Mode

Date: 26.MAY.2023 21:00:15

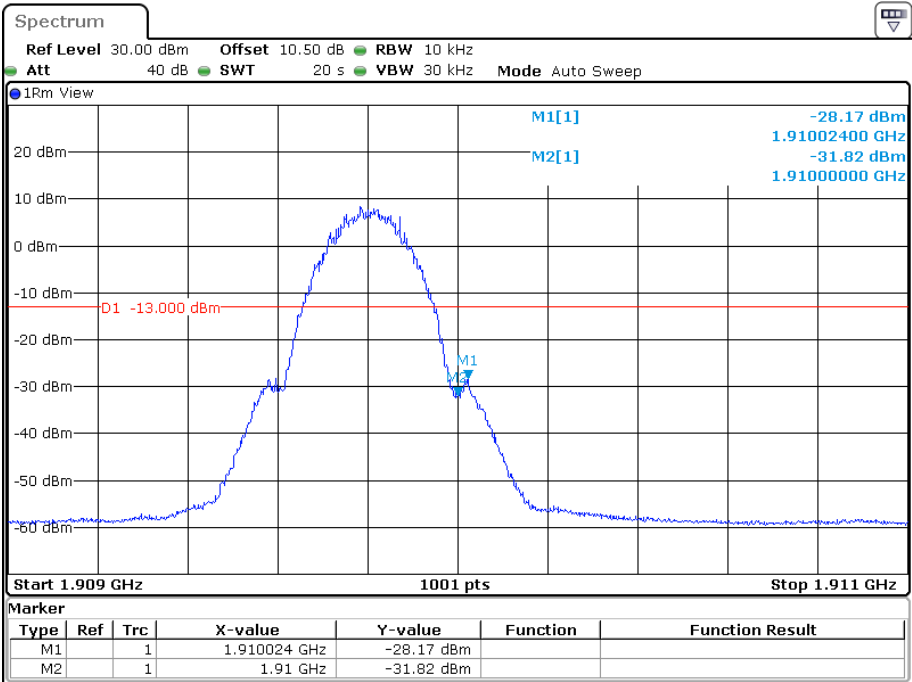


PCS Band, Left Band Edge for GSM (GMSK) Mode



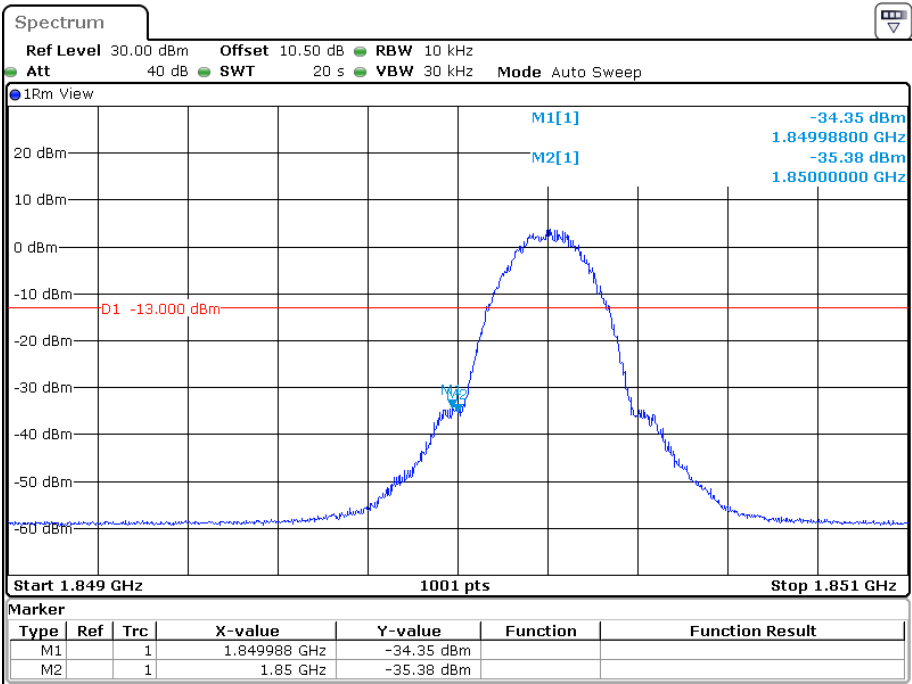
Date: 21.MAY.2023 14:53:48

PCS Band, Right Band Edge for GSM (GMSK) Mode



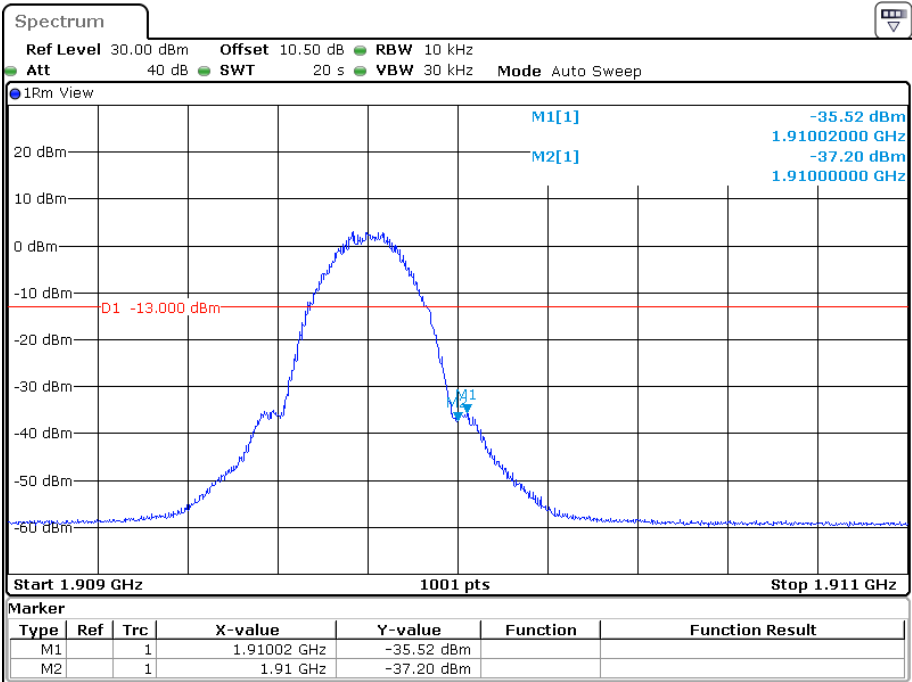
Date: 21.MAY.2023 15:04:31

PCS Band, Left Band Edge for EDGE(8PSK) Mode



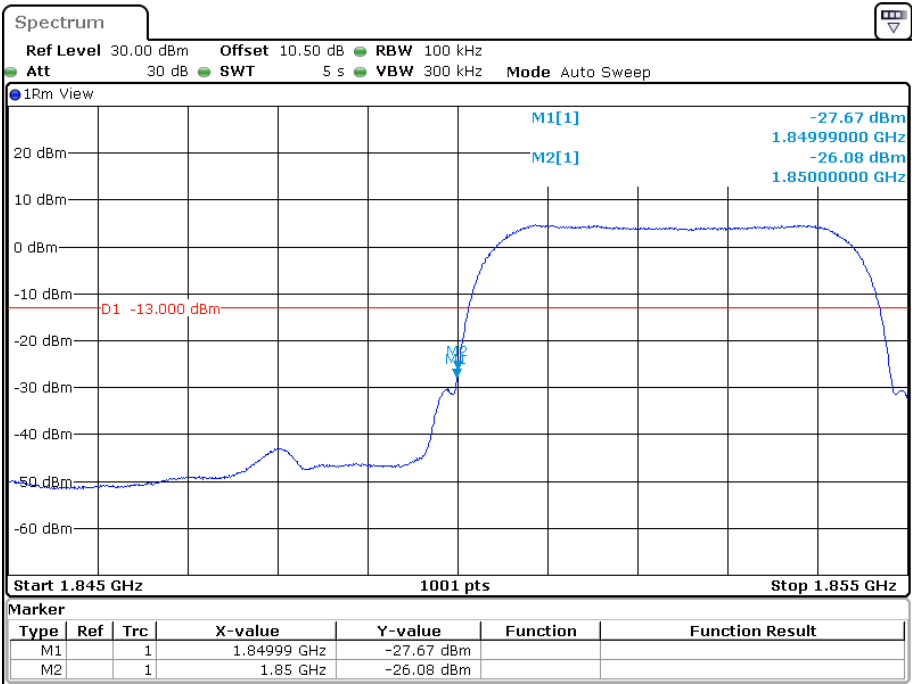
Date: 21.MAY.2023 15:16:20

PCS Band, Right Band Edge for EDGE(8PSK) Mode



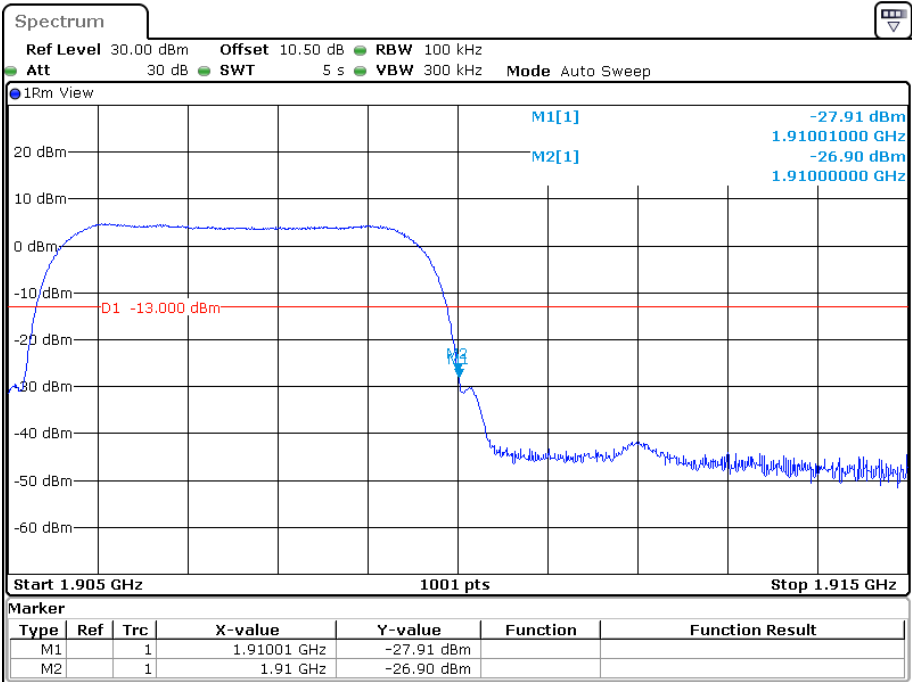
Date: 21.MAY.2023 15:26:56

PCS Band, Left Band Edge for RMC (BPSK) Mode



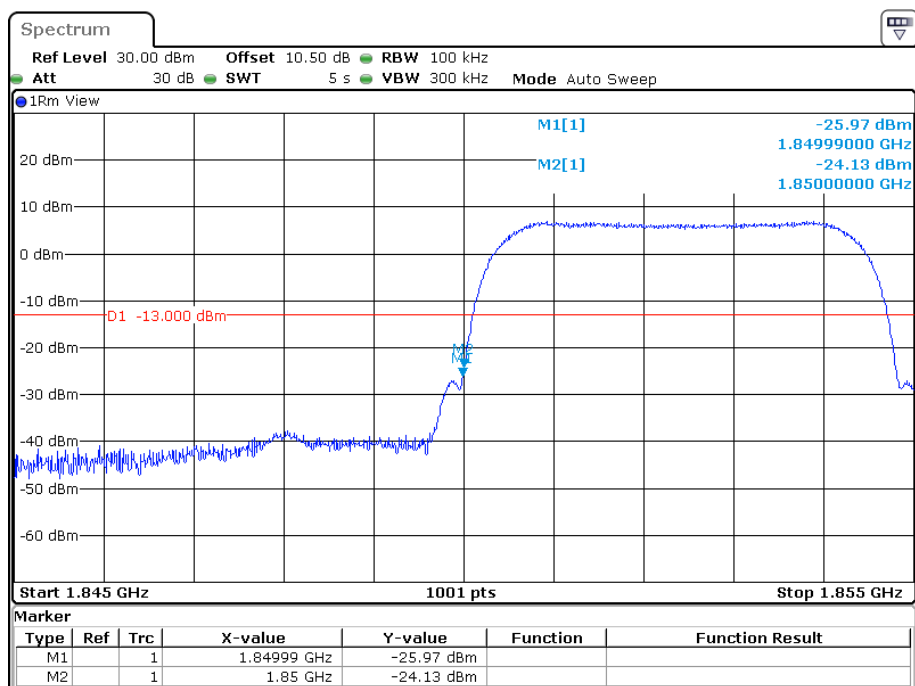
Date: 21.MAY.2023 09:52:58

PCS Band, Right Band Edge for RMC (BPSK) Mode



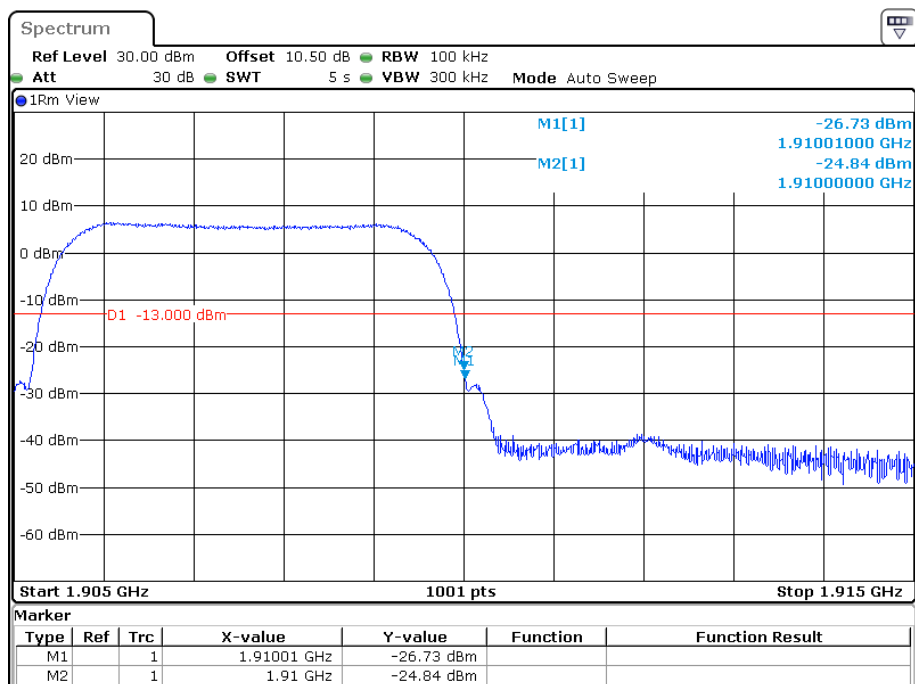
Date: 21.MAY.2023 09:59:52

PCS Band, Left Band Edge for HSDPA(16QAM) Mode



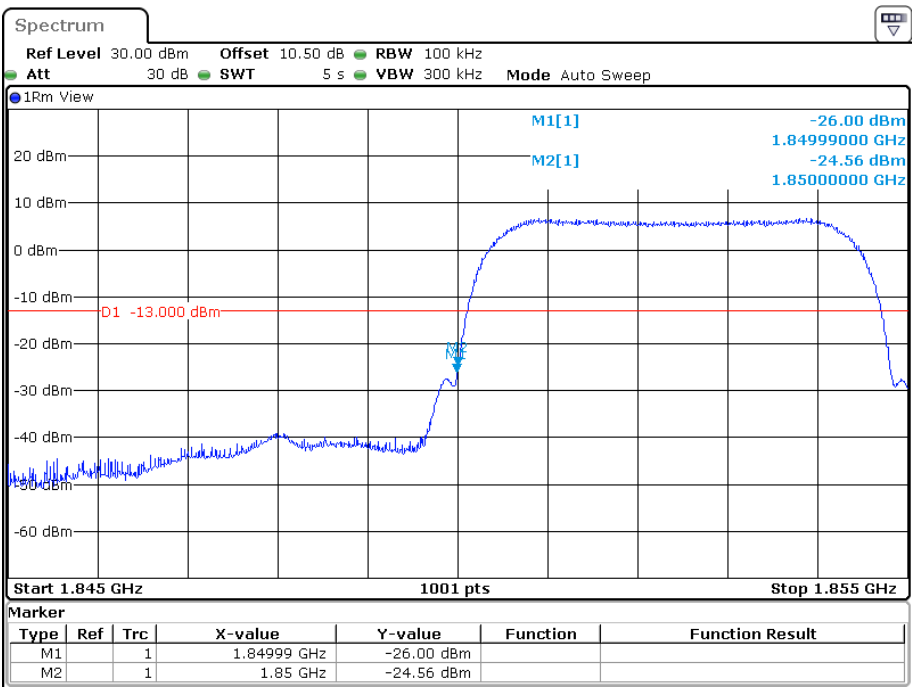
Date: 21.MAY.2023 10:08:25

PCS Band, Right Band Edge for HSDPA (16QAM) Mode



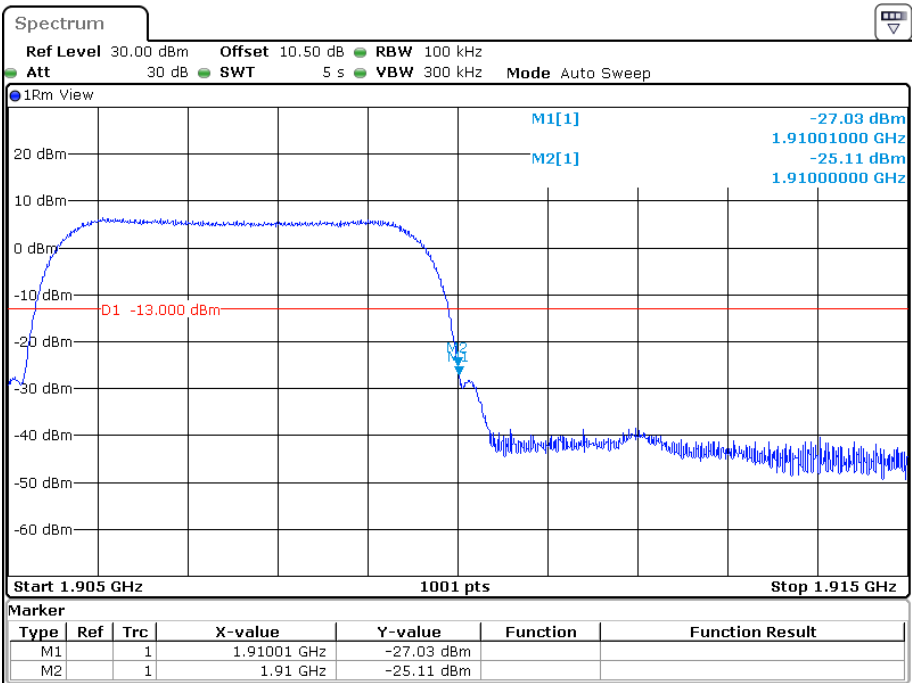
Date: 21.MAY.2023 10:17:41

PCS Band, Left Band Edge for HSUPA (QPSK) Mode



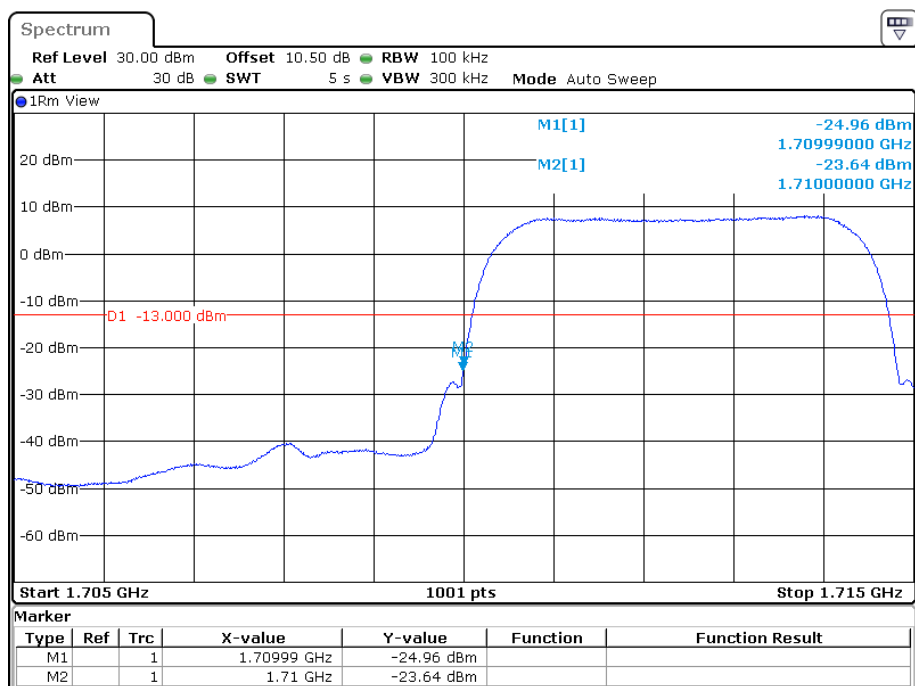
Date: 21.MAY.2023 10:24:06

PCS Band, Right Band Edge for HSUPA (QPSK) Mode



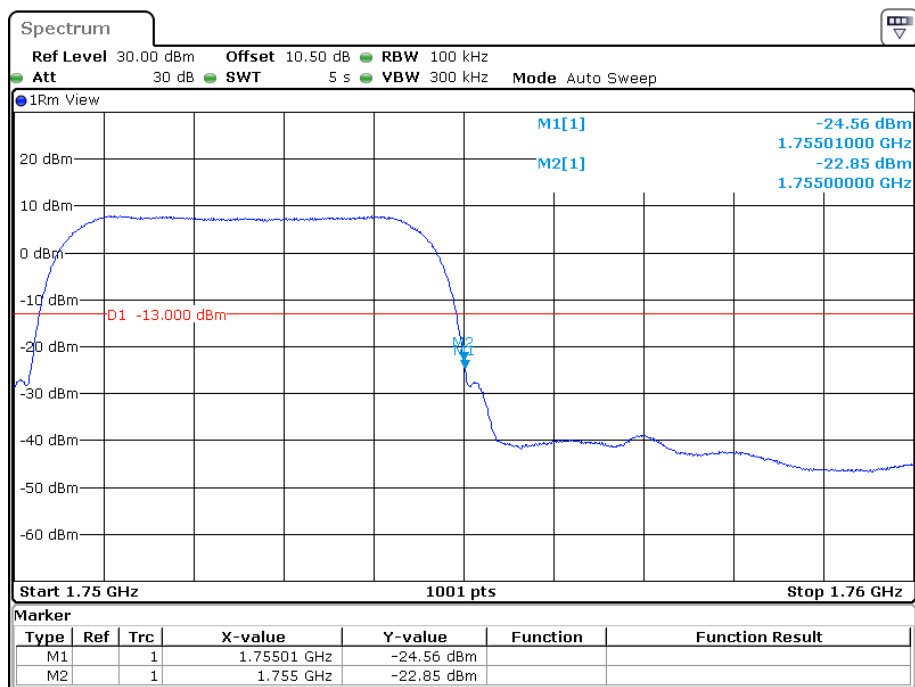
Date: 21.MAY.2023 10:31:12

AWS Band, Left Band Edge for RMC (BPSK) Mode



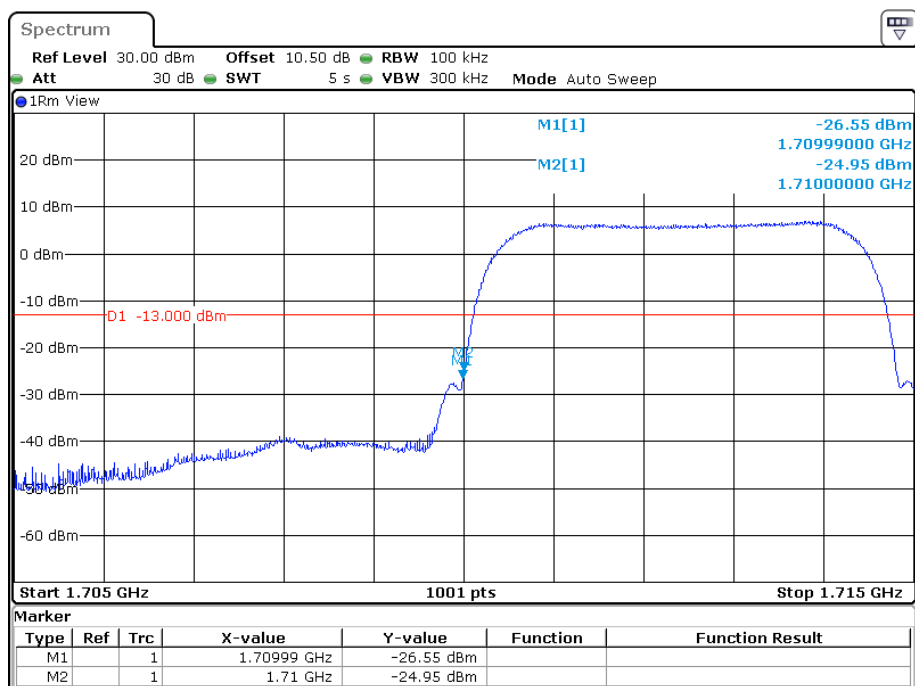
Date: 21.MAY.2023 10:40:16

AWS Band, Right Band Edge for RMC (BPSK) Mode



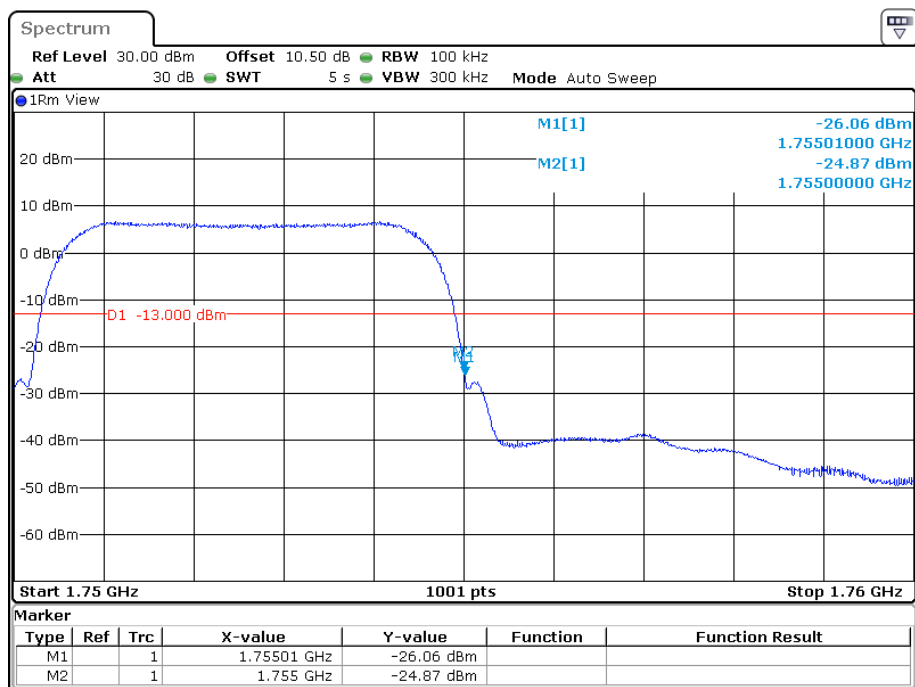
Date: 21.MAY.2023 10:48:10

AWS Band, Left Band Edge for HSDPA(16QAM) Mode



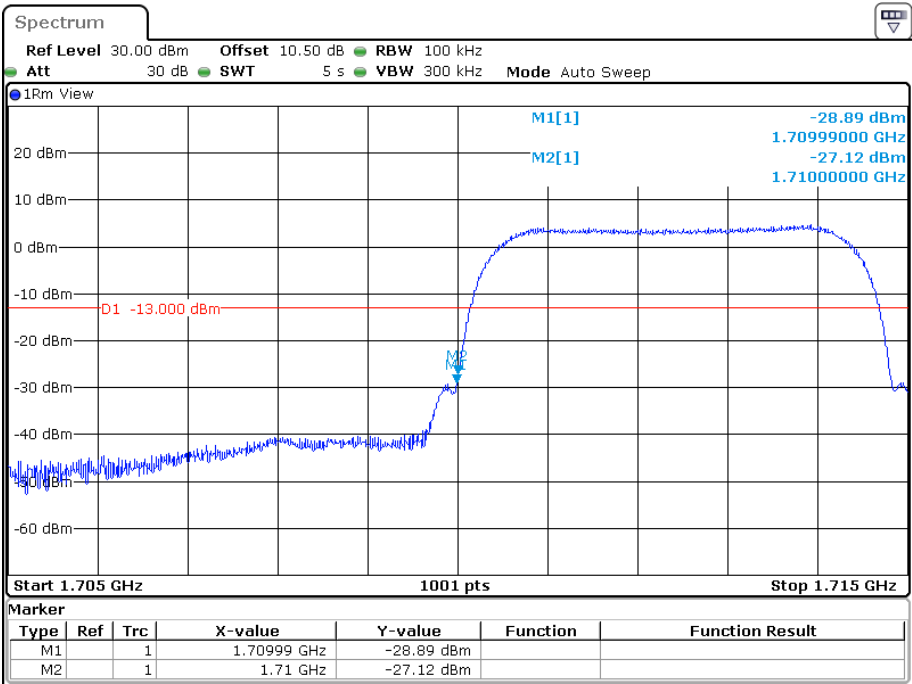
Date: 21.MAY.2023 10:56:49

AWS Band, Right Band Edge for HSDPA (16QAM) Mode



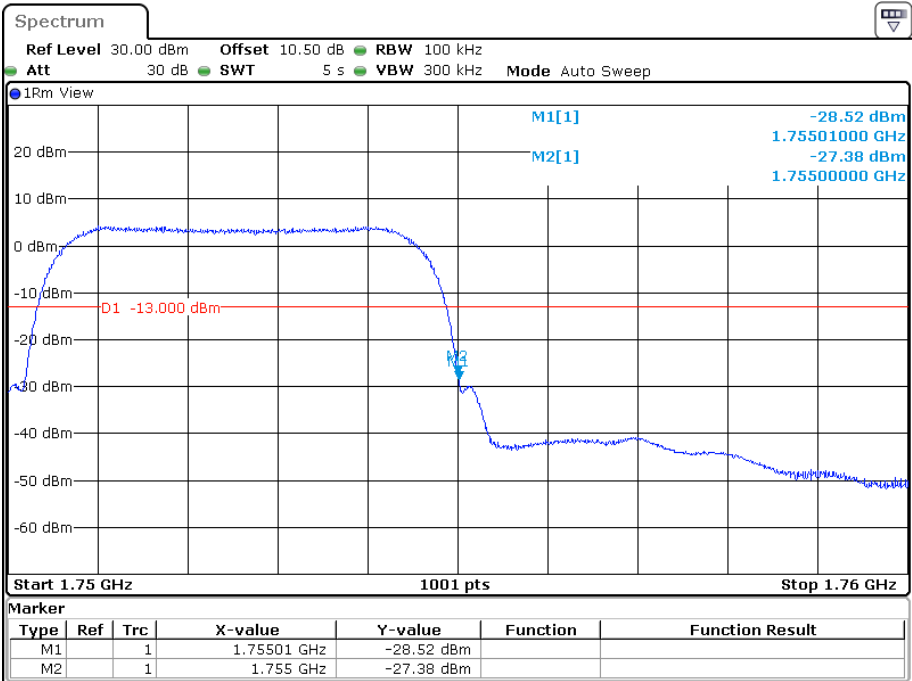
Date: 21.MAY.2023 11:05:32

AWS Band, Left Band Edge for HSUPA (QPSK) Mode



Date: 21.MAY.2023 11:23:34

AWS Band, Right Band Edge for HSUPA (QPSK) Mode



Date: 21.MAY.2023 11:40:58

The test plots of LTE bands please refer to the Appendix C.

FCC § 2.1055; § 22.355; § 24.235; §27.54; §90.213- FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, §22.355, §24.235&§27.54&§90.213.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile > 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

According to §90.213, unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table:

TABLE 1 TO §90.213(a)—MINIMUM FREQUENCY STABILITY

[Parts per million (ppm)]

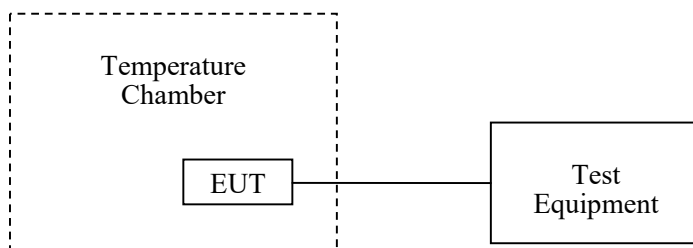
Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	1 2 3 100	100	200
25-50	20	20	50
72-76	5		50
150-174	5 11 5	6 5	4 6 50
216-220	1.0		1.0
220-222 ¹²	0.1	1.5	1.5
421-512	7 11 14 2.5	8 5	8 5
806-809	14 1.0	1.5	1.5
809-824	14 1.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	14 0.1	1.5	1.5
902-928	2.5	2.5	2.5
902-928 ¹³	2.5	2.5	2.5
929-930	1.5		
935-940	0.1	1.5	1.5
1427-1435	9 300	300	300
Above 2450 ¹⁰			

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external AC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The AC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data

Environmental Conditions

Temperature:	26.5~28.8 °C
Relative Humidity:	46.8~51.6%
ATM Pressure:	101.0 kPa

The testing was performed by Jacob Huang from 2023-05-21 to 2023-06-06.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)
GSM Mode

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	4	0.0048	2.5
-20		6	0.0072	2.5
-10		11	0.0131	2.5
0		8	0.0096	2.5
10		1	0.0012	2.5
20		4	0.0048	2.5
30		6	0.0072	2.5
40		8	0.0096	2.5
50		2	0.0024	2.5
20	L.V.	6	0.0072	2.5
	H.V.	4	0.0048	2.5

EDGE Mode

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	8	0.0096	2.5
-20		13	0.0155	2.5
-10		-5	-0.0060	2.5
0		6	0.0072	2.5
10		8	0.0096	2.5
20		1	0.0012	2.5
30		-6	-0.0072	2.5
40		8	0.0096	2.5
50		-7	-0.0084	2.5
20	L.V.	5	0.0060	2.5
	H.V.	4	0.0048	2.5

WCDMA Mode

Middle Channel, $f_0=836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	12	0.0143	2.5
-20		4	0.0048	2.5
-10		6	0.0072	2.5
0		9	0.0108	2.5
10		5	0.0060	2.5
20		-1	-0.0012	2.5
30		6	0.0072	2.5
40		-5	-0.0060	2.5
50		-9	-0.0108	2.5
20	L.V.	6	0.0072	2.5
	H.V.	1	0.0012	2.5

CDMA (1*RTT, BC0) Mode

Middle Channel, $f_0=836.52\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	2	0.0024	2.5
-20		12	0.0143	2.5
-10		8	0.0096	2.5
0		-9	-0.0108	2.5
10		-3	-0.0036	2.5
20		5	0.0060	2.5
30		16	0.0191	2.5
40		4	0.0048	2.5
50		-9	-0.0108	2.5
20	L.V.	5	0.0060	2.5
	H.V.	18	0.0215	2.5

CDMA (EV-DO, BC0) Mode

Middle Channel, $f_0=836.52\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	12	0.0143	2.5
-20		18	0.0215	2.5
-10		6	0.0072	2.5
0		9	0.0108	2.5
10		-8	-0.0096	2.5
20		12	0.0143	2.5
30		-19	-0.0227	2.5
40		-3	-0.0036	2.5
50		8	0.0096	2.5
20	L.V.	10	0.0120	2.5
	H.V.	9	0.0108	2.5

**PCS Band (Part 24E)
GSM Mode**

Middle Channel, $f_0=1880\text{MHz}$					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.0158	1909.9734	1850	1910
-20		1850.0194	1909.9613	1850	1910
-10		1850.0121	1909.9751	1850	1910
0		1850.0215	1909.9598	1850	1910
10		1850.0275	1909.9581	1850	1910
20		1850.0281	1909.9522	1850	1910
30		1850.0125	1909.9705	1850	1910
40		1850.0111	1909.9744	1850	1910
50		1850.0286	1909.9523	1850	1910
20	L.V.	1850.0196	1909.9612	1850	1910
	H.V.	1850.0274	1909.9547	1850	1910

EDGE Mode

Middle Channel, $f_o=1880\text{MHz}$					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.0116	1909.9720	1850	1910
-20		1850.0323	1909.9554	1850	1910
-10		1850.0314	1909.9579	1850	1910
0		1850.0187	1909.9664	1850	1910
10		1850.0131	1909.9673	1850	1910
20		1850.0118	1909.9710	1850	1910
30		1850.0123	1909.9773	1850	1910
40		1850.0229	1909.9634	1850	1910
50		1850.0137	1909.9725	1850	1910
20	L.V.	1850.0139	1909.9750	1850	1910
	H.V.	1850.0207	1909.9651	1850	1910

WCDMA Mode

Middle Channel, $f_o=1880\text{MHz}$					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.0326	1909.9541	1850	1910
-20		1850.0313	1909.9554	1850	1910
-10		1850.0130	1909.9680	1850	1910
0		1850.0109	1909.9747	1850	1910
10		1850.0183	1909.9696	1850	1910
20		1850.0232	1909.9627	1850	1910
30		1850.0164	1909.9712	1850	1910
40		1850.0260	1909.9556	1850	1910
50		1850.0172	1909.9716	1850	1910
20	L.V.	1850.0281	1909.9572	1850	1910
	H.V.	1850.0210	1909.9635	1850	1910

AWS Band (Part 27)

Middle Channel, $f_o=1732.6\text{MHz}$					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1710.0272	1754.9568	1710	1755
-20		1710.0269	1754.9603	1710	1755
-10		1710.0319	1754.9522	1710	1755
0		1710.0217	1754.9620	1710	1755
10		1710.0291	1754.9536	1710	1755
20		1710.0231	1754.9641	1710	1755
30		1710.0305	1754.9590	1710	1755
40		1710.0280	1754.9527	1710	1755
50		1710.0222	1754.9630	1710	1755
20	L.V.	1710.0165	1754.9679	1710	1755
	H.V.	1710.0277	1754.9571	1710	1755

LTE:
QPSK:
Band 2:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.0180	1909.9703	1850	1910
-20		1850.0223	1909.9603	1850	1910
-10		1850.0138	1909.9674	1850	1910
0		1850.0234	1909.9642	1850	1910
10		1850.0143	1909.9715	1850	1910
20		1850.0300	1909.9578	1850	1910
30		1850.0183	1909.9667	1850	1910
40		1850.0133	1909.9688	1850	1910
50		1850.0196	1909.9671	1850	1910
20	L.V.	1850.0188	1909.9684	1850	1910
	H.V.	1850.0248	1909.9647	1850	1910

Band 4:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.0206	1754.9620	1710	1755
-20		1710.0280	1754.9549	1710	1755
-10		1710.0274	1754.9535	1710	1755
0		1710.0205	1754.9613	1710	1755
10		1710.0168	1754.9721	1710	1755
20		1710.0282	1754.9544	1710	1755
30		1710.0190	1754.9699	1710	1755
40		1710.0156	1754.9688	1710	1755
50		1710.0142	1754.9751	1710	1755
20	L.V.	1710.0245	1754.9606	1710	1755
	H.V.	1710.0190	1754.9691	1710	1755

Band 5:

10.0 MHz Middle Channel, $f_0=836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	6	0.0072	2.5
-20		12	0.0143	2.5
-10		16	0.0191	2.5
0		9	0.0108	2.5
10		8	0.0096	2.5
20		-8	-0.0096	2.5
30		-6	-0.0072	2.5
40		5	0.0060	2.5
50		-4	-0.0048	2.5
20	L.V.	-9	-0.0108	2.5
	H.V.	5	0.0060	2.5

Band 7:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2500.0192	2569.9708	2500	2570
-20		2500.0283	2569.9569	2500	2570
-10		2500.0317	2569.9504	2500	2570
0		2500.0477	2569.9417	2500	2570
10		2500.0441	2569.9416	2500	2570
20		2500.0402	2569.9482	2500	2570
30		2500.0269	2569.9533	2500	2570
40		2500.0480	2569.9418	2500	2570
50		2500.0333	2569.9504	2500	2570
20	L.V.	2500.0192	2569.9667	2500	2570
	H.V.	2500.0305	2569.9525	2500	2570

Band 12:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	699.0109	715.9883	699	716
-20		699.0116	715.9877	699	716
-10		699.0110	715.9954	699	716
0		699.0101	715.9904	699	716
10		699.0110	715.9955	699	716
20		699.0120	715.9854	699	716
30		699.0107	715.9893	699	716
40		699.0104	715.9901	699	716
50		699.0113	715.9896	699	716
20	L.V.	699.0103	715.9939	699	716
	H.V.	699.0109	715.9978	699	716

Band 13:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	777.0124	786.9895	777	787
-20		777.0137	786.9872	777	787
-10		777.0131	786.9883	777	787
0		777.0131	786.9880	777	787
10		777.0139	786.9889	777	787
20		777.0131	786.9889	777	787
30		777.0135	786.9878	777	787
40		777.0116	786.9885	777	787
50		777.0103	786.9900	777	787
20	L.V.	777.0128	786.9873	777	787
	H.V.	777.0123	786.9899	777	787

Band 17:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	704.0101	715.9953	704	716
-20		704.0119	715.9926	704	716
-10		704.0115	715.9907	704	716
0		704.0103	715.9917	704	716
10		704.0118	715.9912	704	716
20		704.0110	715.9900	704	716
30		704.0104	715.9956	704	716
40		704.0105	715.9902	704	716
50		704.0100	715.9939	704	716
20	L.V.	704.0114	715.9922	704	716
	H.V.	704.0114	715.9935	704	716

Band 25:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.0234	1914.9650	1850	1915
-20		1850.0202	1914.9623	1850	1915
-10		1850.0113	1914.9771	1850	1915
0		1850.0300	1914.9508	1850	1915
10		1850.0230	1914.9620	1850	1915
20		1850.0133	1914.9743	1850	1915
30		1850.0153	1914.9683	1850	1915
40		1850.0116	1914.9718	1850	1915
50		1850.0174	1914.9640	1850	1915
20	L.V.	1850.0251	1914.9641	1850	1915
	H.V.	1850.0325	1914.9508	1850	1915

Band 26 (814-824MHz):

10.0 MHz Middle Channel, $f_0=819\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	2	0.0024	2.5
-20		6	0.0073	2.5
-10		10	0.0122	2.5
0		-9	-0.0110	2.5
10		-13	-0.0159	2.5
20		21	0.0256	2.5
30		18	0.0220	2.5
40		6	0.0073	2.5
50		9	0.0110	2.5
20	L.V.	14	0.0171	2.5
	H.V.	8	0.0098	2.5

Band 26 (824-849MHz):

10.0 MHz Middle Channel, $f_0=836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	5	0.0060	2.5
-20		9	0.0108	2.5
-10		11	0.0132	2.5
0		10	0.0120	2.5
10		-9	-0.0108	2.5
20		-13	-0.0155	2.5
30		8	0.0096	2.5
40		-3	-0.0036	2.5
50		-1	-0.0012	2.5
20	L.V.	5	0.0060	2.5
	H.V.	9	0.0108	2.5

Band 38:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2570.1234	2619.9852	2570	2620
-20		2570.1265	2619.9841	2570	2620
-10		2570.1247	2619.9862	2570	2620
0		2570.1125	2619.9851	2570	2620
10		2570.1123	2619.9895	2570	2620
20		2570.1251	2619.9841	2570	2620
30		2570.1230	2619.9851	2570	2620
40		2570.1210	2619.9852	2570	2620
50		2570.1204	2619.9856	2570	2620
20	L.V.	2570.1206	2619.9851	2570	2620
	H.V.	2570.1130	2619.9892	2570	2620

Band 40(2305-2315MHz):

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2305.1015	2314.9351	2305	2315
-20		2305.1045	2314.9326	2305	2315
-10		2305.1069	2314.9348	2305	2315
0		2305.1085	2314.9356	2305	2315
10		2305.1071	2314.9330	2305	2315
20		2305.1082	2314.9321	2305	2315
30		2305.1096	2314.9375	2305	2315
40		2305.1035	2314.9312	2305	2315
50		2305.1061	2314.9348	2305	2315
20	L.V.	2305.1048	2314.9335	2305	2315
	H.V.	2305.1059	2314.9324	2305	2315

Band 40(2350-2360MHz):

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2350.0157	2359.9851	2350	2360
-20		2350.0168	2359.9862	2350	2360
-10		2350.0135	2359.9859	2350	2360
0		2350.0124	2359.9884	2350	2360
10		2350.0115	2359.9875	2350	2360
20		2350.0126	2359.9812	2350	2360
30		2350.0159	2359.9853	2350	2360
40		2350.0148	2359.9869	2350	2360
50		2350.0175	2359.9854	2350	2360
20	L.V.	2350.0189	2359.9815	2350	2360
	H.V.	2350.0114	2359.9848	2350	2360

Band 41:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2535.2295	2654.9261	2535	2655
-20		2535.2686	2654.9255	2535	2655
-10		2535.2465	2654.9586	2535	2655
0		2535.1932	2654.9454	2535	2655
10		2535.1151	2654.9262	2535	2655
20		2535.2443	2654.9363	2535	2655
30		2535.1188	2654.9255	2535	2655
40		2535.2754	2654.9146	2535	2655
50		2535.1246	2654.9851	2535	2655
20	L.V.	2535.1312	2654.9632	2535	2655
	H.V.	2535.1841	2654.9545	2535	2655

Band 66:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.0241	1779.9728	1710	1780
-20		1710.0238	1779.9727	1710	1780
-10		1710.0236	1779.9839	1710	1780
0		1710.0235	1779.9756	1710	1780
10		1710.0237	1779.9755	1710	1780
20		1710.0228	1779.9747	1710	1780
30		1710.0257	1779.9749	1710	1780
40		1710.0256	1779.9756	1710	1780
50		1710.0229	1779.9828	1710	1780
20	L.V.	1710.0225	1779.9727	1710	1780
	H.V.	1710.0226	1779.9775	1710	1780

16QAM:**Band 2:**

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.1162	1909.8735	1850	1910
-20		1850.1154	1909.8732	1850	1910
-10		1850.1195	1909.8723	1850	1910
0		1850.1156	1909.8724	1850	1910
10		1850.1147	1909.8754	1850	1910
20		1850.1156	1909.8743	1850	1910
30		1850.1134	1909.8754	1850	1910
40		1850.1122	1909.8735	1850	1910
50		1850.1124	1909.8742	1850	1910
20	L.V.	1850.1135	1909.8734	1850	1910
	H.V.	1850.1043	1909.8747	1850	1910

Band 4:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.2966	1754.7672	1710	1755
-20		1710.2958	1754.7562	1710	1755
-10		1710.2751	1754.7672	1710	1755
0		1710.2652	1754.7452	1710	1755
10		1710.2633	1754.7435	1710	1755
20		1710.2643	1754.7626	1710	1755
30		1710.2572	1754.7625	1710	1755
40		1710.2658	1754.7652	1710	1755
50		1710.2636	1754.7752	1710	1755
20	L.V.	1710.2621	1754.7536	1710	1755
	H.V.	1710.2715	1754.7524	1710	1755

Band 5:

10.0 MHz Middle Channel, f ₀ =836.5MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	9	0.0108	2.5
-20		12	0.0143	2.5
-10		18	0.0215	2.5
0		-9	-0.0108	2.5
10		-6	-0.0072	2.5
20		8	0.0096	2.5
30		-10	-0.0120	2.5
40		5	0.0060	2.5
50		-9	-0.0108	2.5
20	L.V.	6	0.0072	2.5
	H.V.	12	0.0143	2.5

Band 7:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2500.176	2569.926	2500	2570
-20		2500.242	2569.956	2500	2570
-10		2500.318	2569.925	2500	2570
0		2500.209	2569.914	2500	2570
10		2500.198	2569.958	2500	2570
20		2500.297	2569.958	2500	2570
30		2500.193	2569.956	2500	2570
40		2500.314	2569.954	2500	2570
50		2500.386	2569.926	2500	2570
20	L.V.	2500.165	2569.924	2500	2570
	H.V.	2500.282	2569.915	2500	2570

Band 12:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	699.1325	715.8364	699	716
-20		699.1333	715.8325	699	716
-10		699.1315	715.8354	699	716
0		699.1319	715.8324	699	716
10		699.1324	715.8309	699	716
20		699.1313	715.8376	699	716
30		699.1381	715.8315	699	716
40		699.1339	715.8306	699	716
50		699.1334	715.8346	699	716
20	L.V.	699.1364	715.8364	699	716
	H.V.	699.1366	715.8376	699	716

Band 13:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	777.1236	786.9236	777	787
-20		777.1952	786.9568	777	787
-10		777.2951	786.9951	777	787
0		777.3249	786.9456	777	787
10		777.1495	786.9259	777	787
20		777.3624	786.9685	777	787
30		777.1954	786.9451	777	787
40		777.1578	786.9256	777	787
50		777.3648	786.9559	777	787
20	L.V.	777.2164	786.9541	777	787
	H.V.	777.2159	786.9235	777	787

Band 17:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	704.2192	715.9265	704	716
-20		704.1957	715.9254	704	716
-10		704.3992	715.9125	704	716
0		704.1142	715.9123	704	716
10		704.3237	715.9568	704	716
20		704.3557	715.9512	704	716
30		704.5745	715.9415	704	716
40		704.1562	715.9125	704	716
50		704.1663	715.9412	704	716
20	L.V.	704.1967	715.9452	704	716
	H.V.	704.2846	715.9125	704	716

Band 25:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.1236	1914.9567	1850	1915
-20		1850.1958	1914.9451	1850	1915
-10		1850.1753	1914.9784	1850	1915
0		1850.1591	1914.9521	1850	1915
10		1850.1268	1914.9024	1850	1915
20		1850.1481	1914.9238	1850	1915
30		1850.1263	1914.9250	1850	1915
40		1850.1268	1914.9140	1850	1915
50		1850.1582	1914.9256	1850	1915
20	L.V.	1850.1695	1914.9364	1850	1915
	H.V.	1850.1237	1914.9958	1850	1915

Band 26 (814-824MHz):

10.0 MHz Middle Channel, f ₀ =819MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	5	0.0061	2.5
-20		2	0.0024	2.5
-10		1	0.0012	2.5
0		2	0.0024	2.5
10		-5	-0.0061	2.5
20		20	0.0244	2.5
30		4	0.0049	2.5
40		6	0.0073	2.5
50		3	0.0037	2.5
20	L.V.	7	0.0085	2.5
	H.V.	16	0.0195	2.5

Band 26 (824-849MHz):

10.0 MHz Middle Channel, $f_o=836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	8	0.0096	2.5
-20		12	0.0143	2.5
-10		-21	-0.0251	2.5
0		-3	-0.0036	2.5
10		-7	-0.0084	2.5
20		14	0.0167	2.5
30		13	0.0155	2.5
40		5	0.0060	2.5
50		7	0.0084	2.5
20	L.V.	-3	-0.0036	2.5
	H.V.	7	0.0084	2.5

Band 38:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	2570.1235	2619.9965	2570	2620
-20		2570.1125	2619.9954	2570	2620
-10		2570.1124	2619.9952	2570	2620
0		2570.1201	2619.9954	2570	2620
10		2570.1102	2619.9962	2570	2620
20		2570.1126	2619.9865	2570	2620
30		2570.1159	2619.9891	2570	2620
40		2570.1148	2619.9876	2570	2620
50		2570.1135	2619.9859	2570	2620
20	L.V.	2570.1124	2619.9889	2570	2620
	H.V.	2570.1105	2619.9891	2570	2620

Band 40(2305-2315MHz):

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2305.0252	2314.9848	2305	2315
-20		2305.0269	2314.9841	2305	2315
-10		2305.0259	2314.9846	2305	2315
0		2305.0257	2314.9842	2305	2315
10		2305.0215	2314.9845	2305	2315
20		2305.0248	2314.9882	2305	2315
30		2305.0259	2314.9883	2305	2315
40		2305.0235	2314.9886	2305	2315
50		2305.0268	2314.9895	2305	2315
20	L.V.	2305.0295	2314.9812	2305	2315
	H.V.	2305.0262	2314.9835	2305	2315

Band 40(2350-2360MHz):

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2350.0269	2359.9884	2350	2360
-20		2350.0251	2359.9859	2350	2360
-10		2350.0226	2359.9826	2350	2360
0		2350.0235	2359.9825	2350	2360
10		2350.0269	2359.9814	2350	2360
20		2350.0284	2359.9836	2350	2360
30		2350.0251	2359.9825	2350	2360
40		2350.0225	2359.9815	2350	2360
50		2350.0216	2359.9825	2350	2360
20	L.V.	2350.0202	2359.9885	2350	2360
	H.V.	2350.0236	2359.9852	2350	2360

Band 41:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2535.0125	2654.9810	2535	2655
-20		2535.0676	2654.9271	2535	2655
-10		2535.0186	2654.9811	2535	2655
0		2535.0184	2654.9785	2535	2655
10		2535.0590	2654.9329	2535	2655
20		2535.0485	2654.9487	2535	2655
30		2535.0248	2654.9738	2535	2655
40		2535.0162	2654.9753	2535	2655
50		2535.0497	2654.9495	2535	2655
20	L.V.	2535.0161	2654.9818	2535	2655
	H.V.	2535.0622	2654.9332	2535	2655

Band 66:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.0139	1779.9681	1710	1780
-20		1710.0237	1779.9615	1710	1780
-10		1710.0323	1779.9523	1710	1780
0		1710.0228	1779.9599	1710	1780
10		1710.0215	1779.9636	1710	1780
20		1710.0241	1779.9579	1710	1780
30		1710.0259	1779.9564	1710	1780
40		1710.0311	1779.9572	1710	1780
50		1710.0224	1779.9606	1710	1780
20	L.V.	1710.0284	1779.9613	1710	1780
	H.V.	1710.0101	1779.9718	1710	1780

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