TESTREPORT

Applicant Name :	TECNO MOBILE LIMITED
Address :	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Report Number:	RA221206-59345E-RF-00E
FCC ID:	2ADYY-Kl5Q

Test Standard (s)

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

Sample Description

Product Type:	Mobile Phone
Model No.:	Kl5q
Multiple Model(s) No.:	N/A
Trade Mark:	TECNO
Date Received:	2022/12/06
Report Date:	2023/01/11

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Andy Yu
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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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

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 17: 704-716MHz(TX); 734-746MHz(RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	B2/PCS1900: -0.5dBi ; B5/GSM850 :-1.5dBi ; B12/17: -1.9dBi ; B7/38/41 :-0.4dBi ; B4/66 :-0.7dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5V/7.5V from adapter
Sample serial number	1U1D-1 for Conducted and Radiated Emissions Test 1U1N-7 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Extreme condition*	L.V.: Low Voltage 3.45V_{DC} N.V.: Normal Voltage 3.85V_{DC} H.V.: High Voltage 4.4V_{DC} (provided by the applicant)
Adapter information	Model: U180TSA Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 2.4A or DC 7.5V, 2.4A 18.0W Max

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part24-Subpart E, Part 27 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

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.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±0.73dB
Unwanted Emission, conducted		±1.6dB
RF Frequency		±0.082*10^{-7}
Emissions, Radiated	30MHz - 1GHz	±4.28dB
	1GHz - 18GHz	±4.98dB
	18GHz - 26.5GHz	±5.06dB
Temperature		±1℃
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 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. 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.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

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
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	836.4	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	707.5	711
LTE B17	5	706.5	710	713.5
	10	709	710	711
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
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.

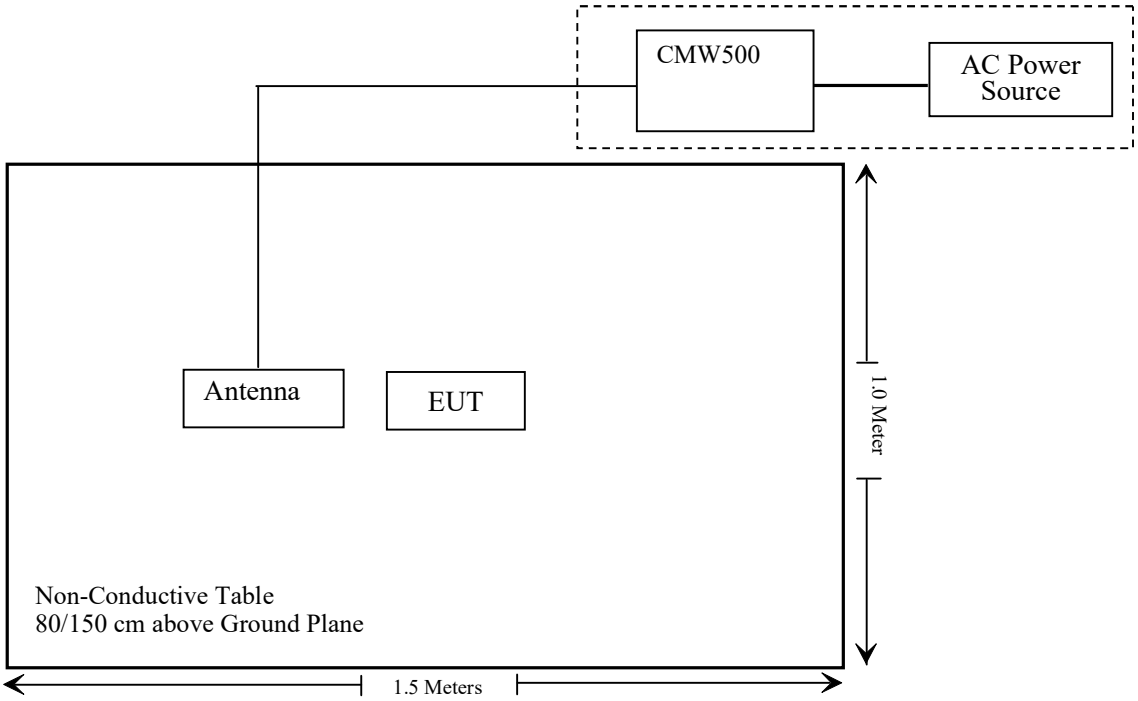
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

Support Cable Description

Cable Description	Length (m)	From / Port	To
Unshielded Un-detachable AC cable	1.2	AC Power	CMW500

Block Diagram of Test Setup



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(b)(c) (d) (h)	RF Output Power	Compliant
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliant
§ 2.1051; §22.917 (a); § 24.238 (a); §27.53;	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53(c)(g) (h) (m)	Band Edge	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliant

Note: * Please refer to SAR report number: RA221206-59345E-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
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-024-1)	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-025-1)	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9850/2F-20	720 (ATC-BA-024)	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9850/2F-20	720 (ATC-BA-025)	2020/01/05	2023/01/04
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
Wainwright	High Pass Filter	WHKX3.6/18 G-10SS	5	2022/11/25	2023/11/24
CD	High Pass Filter	HPM-1.2/18G -60	110	2022/11/25	2023/11/24
Unknown	RFCoaxialCable	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
SPECTRUM ANALYZER	Rohde & Schwarz	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
REALE	Temp. & Humid. Chamber	RHP-800BT	R20170318310	2022/11/23	2023/11/22
Fluke	Multi Meter	45	7664009	2022/12/14	2023/12/13
Manson	DC Power Source	KPS-6604	ATCS-205	NCR	NCR
Unknown	RF Coaxial Cable	No.33	RF-03	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: RA221206-59345E-SA.

FCC§2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E& 27, 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(c)(d)(h)- 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(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.

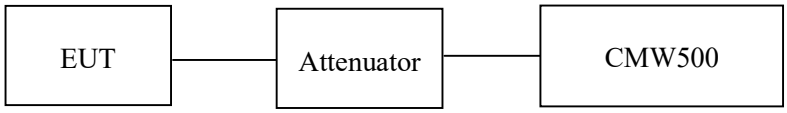
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

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

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 included in the result.

Test Data

Environmental Conditions

Temperature:	25~27.2 ℃
Relative Humidity:	37~56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang from 2022-12-20 to 2023-01-08.

Conducted Power

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	33.40	29.75	38.45
	190	836.6	33.40	29.75	38.45
	251	848.8	33.30	29.65	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	32.22	31.28	29.44	28.28	28.57	27.63	25.79	24.63	38.45
	190	836.6	32.31	31.32	29.43	28.29	28.66	27.67	25.78	24.64	38.45
	251	848.8	32.28	31.19	29.31	28.17	28.63	27.54	25.66	24.52	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	27.83	26.29	23.82	22.67	24.18	22.64	20.17	19.02	38.45
	190	836.6	28.01	26.36	23.96	22.65	24.36	22.71	20.31	19.00	38.45
	251	848.8	27.94	26.20	23.86	22.58	24.29	22.55	20.21	18.93	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		23.49	23.46	23.47	19.84	19.81	19.82
	HSDPA	1	22.40	22.41	22.36	18.75	18.76	18.71
		2	22.35	22.27	22.17	18.70	18.62	18.52
		3	22.25	22.18	22.27	18.60	18.53	18.62
		4	22.26	22.26	22.26	18.61	18.61	18.61
	HSUPA	1	21.74	21.70	21.97	18.09	18.05	18.32
		2	21.55	21.52	21.56	17.90	17.87	17.91
		3	21.45	21.43	21.54	17.80	17.78	17.89
		4	21.63	21.48	21.48	17.98	17.83	17.83
		5	21.52	21.56	21.64	17.87	17.91	17.99
	HSPA+	1	21.47	21.42	21.48	17.82	17.77	17.83

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For GSM850 / WCDMA Band5: Antenna Gain = -1.5dBi = -3.65dBd (0dBd=2.15(dBi)
Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	31.10	30.60	33
	661	1880.0	31.10	30.60	33
	810	1909.8	31.00	30.50	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	30.03	29.11	27.24	26.03	29.53	28.61	26.74	25.53	33
	661	1880.0	29.98	29.05	27.15	26.00	29.48	28.55	26.65	25.50	33
	810	1909.8	29.91	28.96	27.08	25.91	29.41	28.46	26.58	25.41	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	27.56	26.50	24.36	23.18	27.06	26.00	23.86	22.68	33
	661	1880.0	27.32	26.24	24.07	22.95	26.82	25.74	23.57	22.45	33
	810	1909.8	27.30	26.07	23.95	22.79	26.8	25.57	23.45	22.29	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		22.67	22.59	22.46	22.17	22.09	21.96
	HSDPA	1	21.11	21.05	20.91	20.61	20.55	20.41
		2	21.10	21.02	20.88	20.60	20.52	20.38
		3	21.05	21.01	20.87	20.55	20.51	20.37
		4	21.07	21.07	20.96	20.57	20.57	20.46
	HSUPA	1	20.69	20.68	20.47	20.19	20.18	19.97
		2	20.85	20.67	20.56	20.35	20.17	20.06
		3	20.72	20.52	20.41	20.22	20.02	19.91
		4	20.65	20.64	20.35	20.15	20.14	19.85
		5	20.47	20.59	20.64	19.97	20.09	20.14
	HSPA+	1	20.58	20.57	20.58	20.08	20.07	20.08

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For PCS1900 / WCDMA Band2: Antenna Gain = -0.5dBi
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		17.77	17.87	17.93	17.07	17.17	17.23
	HSDPA	1	16.19	16.26	16.35	15.49	15.56	15.65
		2	16.15	16.24	16.28	15.45	15.54	15.58
		3	16.24	16.28	16.17	15.54	15.58	15.47
		4	16.17	16.34	16.27	15.47	15.64	15.57
	HSUPA	1	15.87	15.93	15.94	15.17	15.23	15.24
		2	15.88	15.92	15.87	15.18	15.22	15.17
		3	15.92	15.94	15.86	15.22	15.24	15.16
		4	15.84	15.91	15.87	15.14	15.21	15.17
		5	15.79	15.88	15.83	15.09	15.18	15.13
	HSPA+	1	15.83	15.87	15.84	15.13	15.17	15.14

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band4: Antenna Gain = -0.7dBi
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	18.75	18.63	18.45	18.25	18.13	17.95
		RB1#3	18.93	18.76	18.61	18.43	18.26	18.11
		RB1#5	18.77	18.60	18.43	18.27	18.10	17.93
		RB3#0	18.90	18.74	18.50	18.40	18.24	18.00
		RB3#3	18.90	18.71	18.49	18.40	18.21	17.99
		RB6#0	17.81	17.67	17.47	17.31	17.17	16.97
	16QAM	RB1#0	17.75	17.63	17.54	17.25	17.13	17.04
		RB1#3	17.98	17.90	17.73	17.48	17.40	17.23
		RB1#5	17.82	17.63	17.51	17.32	17.13	17.01
		RB3#0	18.00	17.91	17.48	17.50	17.41	16.98
		RB3#3	17.94	17.90	17.49	17.44	17.40	16.99
		RB6#0	16.73	16.73	16.50	16.23	16.23	16.00
3.0	QPSK	RB1#0	18.86	18.70	18.49	18.36	18.20	17.99
		RB1#8	18.81	18.63	18.50	18.31	18.13	18.00
		RB1#14	18.88	18.63	18.52	18.38	18.13	18.02
		RB6#0	17.80	17.66	17.45	17.30	17.16	16.95
		RB6#9	17.78	17.63	17.44	17.28	17.13	16.94
		RB15#0	17.84	17.70	17.49	17.34	17.20	16.99
	16QAM	RB1#0	17.91	18.31	17.61	17.41	17.81	17.11
		RB1#8	17.84	18.28	17.63	17.34	17.78	17.13
		RB1#14	17.87	18.28	17.61	17.37	17.78	17.11
		RB6#0	16.77	16.72	16.47	16.27	16.22	15.97
		RB6#9	16.75	16.79	16.49	16.25	16.29	15.99
		RB15#0	16.90	16.71	16.43	16.4	16.21	15.93

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	18.74	18.60	18.42	18.24	18.10	17.92
		RB1#13	18.88	18.75	18.54	18.38	18.25	18.04
		RB1#24	18.75	18.61	18.42	18.25	18.11	17.92
		RB15#0	17.83	17.69	17.54	17.33	17.19	17.04
		RB15#10	17.89	17.67	17.49	17.39	17.17	16.99
		RB25#0	17.81	17.69	17.53	17.31	17.19	17.03
	16QAM	RB1#0	17.85	17.52	17.72	17.35	17.02	17.22
		RB1#13	17.97	17.60	17.81	17.47	17.10	17.31
		RB1#24	17.85	17.50	17.71	17.35	17.00	17.21
		RB15#0	16.91	16.79	16.51	16.41	16.29	16.01
		RB15#10	16.90	16.75	16.48	16.40	16.25	15.98
		RB25#0	16.88	16.74	16.52	16.38	16.24	16.02
10.0	QPSK	RB1#0	18.82	18.69	18.51	18.32	18.19	18.01
		RB1#25	18.98	18.83	18.64	18.48	18.33	18.14
		RB1#49	18.79	18.60	18.52	18.29	18.10	18.02
		RB25#0	17.82	17.72	17.62	17.32	17.22	17.12
		RB25#25	17.82	17.68	17.49	17.32	17.18	16.99
		RB50#0	17.84	17.68	17.51	17.34	17.18	17.01
	16QAM	RB1#0	17.88	18.32	17.67	17.38	17.82	17.17
		RB1#25	18.03	18.46	17.74	17.53	17.96	17.24
		RB1#49	17.82	18.26	17.62	17.32	17.76	17.12
		RB25#0	16.92	16.78	16.62	16.42	16.28	16.12
		RB25#25	16.97	16.74	16.53	16.47	16.24	16.03
		RB50#0	16.88	16.70	16.55	16.38	16.20	16.05

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	18.75	18.68	18.51	18.25	18.18	18.01
		RB1#38	18.82	18.67	18.51	18.32	18.17	18.01
		RB1#74	18.70	18.51	18.40	18.20	18.01	17.90
		RB36#0	17.78	17.72	17.61	17.28	17.22	17.11
		RB36#39	17.80	17.66	17.49	17.30	17.16	16.99
		RB75#0	17.80	17.71	17.55	17.30	17.21	17.05
	16QAM	RB1#0	18.21	18.32	17.62	17.71	17.82	17.12
		RB1#38	18.26	18.29	17.63	17.76	17.79	17.13
		RB1#74	18.11	18.15	17.51	17.61	17.65	17.01
		RB36#0	16.78	16.69	16.61	16.28	16.19	16.11
		RB36#39	16.78	16.68	16.50	16.28	16.18	16.00
		RB75#0	16.80	16.70	16.55	16.30	16.20	16.05
20.0	QPSK	RB1#0	18.57	18.55	18.40	18.07	18.05	17.90
		RB1#50	18.87	18.87	18.73	18.37	18.37	18.23
		RB1#99	18.48	18.41	18.31	17.98	17.91	17.81
		RB50#0	17.84	17.80	17.74	17.34	17.30	17.24
		RB50#50	17.69	17.70	17.40	17.19	17.20	16.90
		RB100#0	17.79	17.75	17.57	17.29	17.25	17.07
	16QAM	RB1#0	18.19	17.86	17.64	17.69	17.36	17.14
		RB1#50	18.56	18.13	17.90	18.06	17.63	17.40
		RB1#99	18.13	17.67	17.50	17.63	17.17	17.00
		RB50#0	16.83	16.85	16.74	16.33	16.35	16.24
		RB50#50	16.76	16.71	16.41	16.26	16.21	15.91
		RB100#0	16.84	16.78	16.64	16.34	16.28	16.14

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band2: Antenna Gain = -0.5dB
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	21.76	21.76	21.80	21.06	21.06	21.10
		RB1#3	21.94	21.97	21.93	21.24	21.27	21.23
		RB1#5	21.77	21.76	21.77	21.07	21.06	21.07
		RB3#0	21.88	21.86	21.90	21.18	21.16	21.20
		RB3#3	21.85	21.93	21.83	21.15	21.23	21.13
		RB6#0	20.84	20.88	20.88	20.14	20.18	20.18
	16QAM	RB1#0	20.92	20.85	20.80	20.22	20.15	20.10
		RB1#3	21.11	21.02	20.89	20.41	20.32	20.19
		RB1#5	20.91	20.86	20.80	20.21	20.16	20.10
		RB3#0	20.81	20.98	21.07	20.11	20.28	20.37
		RB3#3	20.81	20.99	21.07	20.11	20.29	20.37
		RB6#0	19.85	19.78	19.88	19.15	19.08	19.18
3.0	QPSK	RB1#0	21.88	21.85	21.90	21.18	21.15	21.20
		RB1#8	21.87	21.81	21.88	21.17	21.11	21.18
		RB1#14	21.84	21.78	21.88	21.14	21.08	21.18
		RB6#0	20.79	20.81	20.92	20.09	20.11	20.22
		RB6#9	20.84	20.87	20.89	20.14	20.17	20.19
		RB15#0	20.84	20.89	20.91	20.14	20.19	20.21
	16QAM	RB1#0	20.90	21.50	21.07	20.20	20.80	20.37
		RB1#8	20.87	21.45	21.02	20.17	20.75	20.32
		RB1#14	20.83	21.42	21.04	20.13	20.72	20.34
		RB6#0	19.75	19.93	19.89	19.05	19.23	19.19
		RB6#9	19.76	19.89	19.94	19.06	19.19	19.24
		RB15#0	19.88	19.94	19.85	19.18	19.24	19.15

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	21.78	21.76	21.83	21.08	21.06	21.13
		RB1#13	21.86	21.91	21.91	21.16	21.21	21.21
		RB1#24	21.77	21.81	21.80	21.07	21.11	21.10
		RB15#0	20.85	20.91	20.90	20.15	20.21	20.20
		RB15#10	20.87	20.90	20.92	20.17	20.20	20.22
		RB25#0	20.85	20.87	20.86	20.15	20.17	20.16
	16QAM	RB1#0	20.83	20.72	21.12	20.13	20.02	20.42
		RB1#13	20.94	20.81	21.22	20.24	20.11	20.52
		RB1#24	20.84	20.74	21.08	20.14	20.04	20.38
		RB15#0	19.91	19.94	19.87	19.21	19.24	19.17
		RB15#10	19.89	19.97	19.88	19.19	19.27	19.18
		RB25#0	19.87	19.95	19.89	19.17	19.25	19.19
10.0	QPSK	RB1#0	21.87	21.80	21.84	21.17	21.10	21.14
		RB1#25	22.01	21.96	22.05	21.31	21.26	21.35
		RB1#49	21.83	21.83	21.83	21.13	21.13	21.13
		RB25#0	20.82	20.91	20.94	20.12	20.21	20.24
		RB25#25	20.85	20.94	20.93	20.15	20.24	20.23
		RB50#0	20.84	20.94	20.93	20.14	20.24	20.23
	16QAM	RB1#0	20.87	21.45	21.05	20.17	20.75	20.35
		RB1#25	20.99	21.62	21.19	20.29	20.92	20.49
		RB1#49	20.88	21.49	21.02	20.18	20.79	20.32
		RB25#0	19.92	20.00	19.95	19.22	19.30	19.25
		RB25#25	19.95	20.00	19.93	19.25	19.30	19.23
		RB50#0	19.84	19.95	19.95	19.14	19.25	19.25

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	21.78	21.73	21.77	21.08	21.03	21.07
		RB1#38	21.83	21.84	21.89	21.13	21.14	21.19
		RB1#74	21.72	21.75	21.75	21.02	21.05	21.05
		RB36#0	20.90	20.91	20.96	20.20	20.21	20.26
		RB36#39	20.95	20.96	20.98	20.25	20.26	20.28
		RB75#0	20.90	20.92	20.96	20.20	20.22	20.26
	16QAM	RB1#0	21.16	21.35	20.98	20.46	20.65	20.28
		RB1#38	21.25	21.48	21.07	20.55	20.78	20.37
		RB1#74	21.19	21.38	20.94	20.49	20.68	20.24
		RB36#0	19.82	19.87	19.92	19.12	19.17	19.22
		RB36#39	19.88	19.95	19.92	19.18	19.25	19.22
		RB75#0	19.83	19.93	19.96	19.13	19.23	19.26
20.0	QPSK	RB1#0	21.61	21.60	21.68	20.91	20.90	20.98
		RB1#50	21.95	22.01	22.07	21.25	21.31	21.37
		RB1#99	21.57	21.61	21.68	20.87	20.91	20.98
		RB50#0	20.84	20.90	20.96	20.14	20.20	20.26
		RB50#50	20.85	20.96	20.93	20.15	20.26	20.23
		RB100#0	20.84	20.92	20.96	20.14	20.22	20.26
	16QAM	RB1#0	21.21	20.94	20.94	20.51	20.24	20.24
		RB1#50	21.55	21.37	21.31	20.85	20.67	20.61
		RB1#99	21.23	20.98	20.92	20.53	20.28	20.22
		RB50#0	19.82	19.90	19.96	19.12	19.20	19.26
		RB50#50	19.87	19.92	19.94	19.17	19.22	19.24
		RB100#0	19.88	19.95	19.95	19.18	19.25	19.25

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band4: Antenna Gain = -0.7dBi
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	23.51	22.93	22.95	19.86	19.28	19.30
		RB1#3	23.19	23.11	23.01	19.54	19.46	19.36
		RB1#5	23.04	22.89	22.89	19.39	19.24	19.24
		RB3#0	23.08	23.04	23.02	19.43	19.39	19.37
		RB3#3	23.10	23.02	22.97	19.45	19.37	19.32
		RB6#0	22.15	22.06	22.02	18.50	18.41	18.37
	16QAM	RB1#0	22.17	21.98	21.92	18.52	18.33	18.27
		RB1#3	22.39	22.16	22.13	18.74	18.51	18.48
		RB1#5	22.24	22.01	21.98	18.59	18.36	18.33
		RB3#0	22.10	22.15	22.20	18.45	18.50	18.55
		RB3#3	22.13	22.17	22.22	18.48	18.52	18.57
		RB6#0	21.17	21.17	21.06	17.52	17.52	17.41
3.0	QPSK	RB1#0	23.58	23.52	23.45	19.93	19.87	19.80
		RB1#8	23.60	23.48	23.38	19.95	19.83	19.73
		RB1#14	23.56	23.46	23.19	19.91	19.81	19.54
		RB6#0	22.60	22.52	22.07	18.95	18.87	18.42
		RB6#9	22.61	22.49	22.28	18.96	18.84	18.63
		RB15#0	22.61	22.57	22.08	18.96	18.92	18.43
	16QAM	RB1#0	22.68	23.10	22.12	19.03	19.45	18.47
		RB1#8	22.69	23.06	22.16	19.04	19.41	18.51
		RB1#14	22.67	23.00	22.14	19.02	19.35	18.49
		RB6#0	21.57	21.63	21.02	17.92	17.98	17.37
		RB6#9	21.60	21.60	21.21	17.95	17.95	17.56
		RB15#0	21.70	21.64	21.18	18.05	17.99	17.53

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	23.48	23.42	23.33	19.83	19.77	19.68
		RB1#13	23.59	23.56	23.47	19.94	19.91	19.82
		RB1#24	23.48	23.38	23.06	19.83	19.73	19.41
		RB15#0	22.58	22.59	22.18	18.93	18.94	18.53
		RB15#10	22.68	22.53	22.25	19.03	18.88	18.60
		RB25#0	22.61	22.53	22.14	18.96	18.88	18.49
	16QAM	RB1#0	22.63	22.38	22.18	18.98	18.73	18.53
		RB1#13	22.73	22.44	22.34	19.08	18.79	18.69
		RB1#24	22.63	22.32	22.20	18.98	18.67	18.55
		RB15#0	21.62	21.64	21.05	17.97	17.99	17.40
		RB15#10	21.70	21.55	21.09	18.05	17.90	17.44
		RB25#0	21.62	21.59	21.10	17.97	17.94	17.45
10.0	QPSK	RB1#0	23.57	23.57	23.42	19.92	19.92	19.77
		RB1#25	23.72	23.67	23.56	20.07	20.02	19.91
		RB1#49	23.52	23.47	23.24	19.87	19.82	19.59
		RB25#0	22.67	22.64	22.59	19.02	18.99	18.94
		RB25#25	22.64	22.56	22.24	18.99	18.91	18.59
		RB50#0	22.64	22.59	22.12	18.99	18.94	18.47
	16QAM	RB1#0	22.79	22.63	22.61	19.14	18.98	18.96
		RB1#25	22.94	22.70	22.86	19.29	19.05	19.21
		RB1#49	22.72	22.55	22.69	19.07	18.90	19.04
		RB25#0	21.65	21.74	21.36	18.00	18.09	17.71
		RB25#25	21.66	21.61	21.41	18.01	17.96	17.76
		RB50#0	21.64	21.63	21.30	17.99	17.98	17.65

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For Band5: Antenna Gain = -1.5dBi = -3.65dBd (0dBd=2.15dBi)
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	21.47	21.34	21.55	21.07	20.94	21.15
		RB1#13	21.58	21.50	21.67	21.18	21.10	21.27
		RB1#24	21.48	21.27	21.44	21.08	20.87	21.04
		RB15#0	20.55	20.53	20.62	20.15	20.13	20.22
		RB15#10	20.63	20.53	20.59	20.23	20.13	20.19
		RB25#0	20.57	20.46	20.41	20.17	20.06	20.01
	16QAM	RB1#0	20.79	20.47	20.01	20.39	20.07	19.61
		RB1#13	20.93	20.54	20.41	20.53	20.14	20.01
		RB1#24	20.80	20.42	20.16	20.40	20.02	19.76
		RB15#0	19.55	19.61	19.33	19.15	19.21	18.93
		RB15#10	19.65	19.62	19.60	19.25	19.22	19.20
		RB25#0	19.65	19.62	19.59	19.25	19.22	19.19
10.0	QPSK	RB1#0	21.43	21.40	21.54	21.03	21.00	21.14
		RB1#25	21.67	21.55	21.80	21.27	21.15	21.40
		RB1#49	21.48	21.43	21.33	21.08	21.03	20.93
		RB25#0	20.53	20.52	20.51	20.13	20.12	20.11
		RB25#25	20.65	20.54	20.45	20.25	20.14	20.05
		RB50#0	20.59	20.54	20.47	20.19	20.14	20.07
	16QAM	RB1#0	20.55	21.02	20.37	20.15	20.62	19.97
		RB1#25	20.67	21.15	20.45	20.27	20.75	20.05
		RB1#49	20.56	21.00	20.31	20.16	20.60	19.91
		RB25#0	19.70	19.63	19.55	19.30	19.23	19.15
		RB25#25	19.83	19.67	19.70	19.43	19.27	19.30
		RB50#0	19.70	19.63	19.55	19.30	19.23	19.15

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	21.45	21.33	21.36	21.05	20.93	20.96
		RB1#38	21.54	21.46	21.44	21.14	21.06	21.04
		RB1#74	21.37	21.39	21.11	20.97	20.99	20.71
		RB36#0	20.54	20.54	20.26	20.14	20.14	19.86
		RB36#39	20.63	20.46	20.28	20.23	20.06	19.88
		RB75#0	20.61	20.53	20.27	20.21	20.13	19.87
	16QAM	RB1#0	20.60	20.75	20.65	20.20	20.35	20.25
		RB1#38	20.71	20.85	20.82	20.31	20.45	20.42
		RB1#74	20.54	20.80	20.69	20.14	20.40	20.29
		RB36#0	19.63	19.62	19.22	19.23	19.22	18.82
		RB36#39	19.67	19.62	19.23	19.27	19.22	18.83
		RB75#0	19.65	19.60	19.37	19.25	19.20	18.97
20.0	QPSK	RB1#0	21.18	21.23	21.28	20.78	20.83	20.88
		RB1#50	21.66	21.63	21.52	21.26	21.23	21.12
		RB1#99	21.15	20.80	20.90	20.75	20.40	20.50
		RB50#0	20.50	20.31	20.03	20.10	19.91	19.63
		RB50#50	20.56	20.50	20.19	20.16	20.10	19.79
		RB100#0	20.51	20.46	20.13	20.11	20.06	19.73
	16QAM	RB1#0	20.85	20.31	20.05	20.45	19.91	19.65
		RB1#50	21.23	20.87	20.57	20.83	20.47	20.17
		RB1#99	20.84	20.53	20.13	20.44	20.13	19.73
		RB50#0	19.54	19.49	19.11	19.14	19.09	18.71
		RB50#50	19.66	19.51	19.15	19.26	19.11	18.75
		RB100#0	19.64	19.52	19.15	19.24	19.12	18.75

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band7: Antenna Gain = -0.4dBi
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	23.38	19.29	23.45	19.33	15.24	19.40
		RB1#3	23.59	23.66	23.60	19.54	19.61	19.55
		RB1#5	23.40	23.47	23.44	19.35	19.42	19.39
		RB3#0	23.51	23.69	23.60	19.46	19.64	19.55
		RB3#3	23.56	23.69	23.59	19.51	19.64	19.54
		RB6#0	22.51	22.59	22.53	18.46	18.54	18.48
	16QAM	RB1#0	19.66	22.61	22.44	15.61	18.56	18.39
		RB1#3	19.84	22.76	22.63	15.79	18.71	18.58
		RB1#5	19.64	22.60	22.48	15.59	18.55	18.43
		RB3#0	19.69	22.81	22.80	15.64	18.76	18.75
		RB3#3	19.63	22.75	22.81	15.58	18.70	18.76
		RB6#0	18.62	21.56	21.55	14.57	17.51	17.50
3.0	QPSK	RB1#0	23.62	23.64	23.49	19.57	19.59	19.44
		RB1#8	23.63	23.66	23.46	19.58	19.61	19.41
		RB1#14	23.59	23.59	23.42	19.54	19.54	19.37
		RB6#0	22.54	22.56	22.54	18.49	18.51	18.49
		RB6#9	22.56	22.56	22.47	18.51	18.51	18.42
		RB15#0	22.64	22.63	22.57	18.59	18.58	18.52
	16QAM	RB1#0	22.73	22.70	23.09	18.68	18.65	19.04
		RB1#8	22.81	22.67	23.09	18.76	18.62	19.04
		RB1#14	22.82	22.65	23.03	18.77	18.60	18.98
		RB6#0	21.57	21.55	21.62	17.52	17.50	17.57
		RB6#9	21.62	21.56	21.63	17.57	17.51	17.58
		RB15#0	21.59	21.72	21.64	17.54	17.67	17.59

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	23.50	23.57	23.46	19.45	19.52	19.41
		RB1#13	23.66	23.65	23.60	19.61	19.60	19.55
		RB1#24	23.52	23.50	23.45	19.47	19.45	19.40
		RB15#0	22.67	22.64	22.69	18.62	18.59	18.64
		RB15#10	22.56	22.67	22.51	18.51	18.62	18.46
		RB25#0	22.58	22.67	22.54	18.53	18.62	18.49
	16QAM	RB1#0	22.35	22.91	22.53	18.30	18.86	18.48
		RB1#13	22.57	23.02	22.62	18.52	18.97	18.57
		RB1#24	22.48	22.85	22.49	18.43	18.80	18.44
		RB15#0	21.74	21.64	21.74	17.69	17.59	17.69
		RB15#10	21.63	21.71	21.57	17.58	17.66	17.52
		RB25#0	21.68	21.63	21.62	17.63	17.58	17.57
10.0	QPSK	RB1#0	23.56	23.64	23.60	19.51	19.59	19.55
		RB1#25	23.70	23.74	23.64	19.65	19.69	19.59
		RB1#49	23.62	23.52	23.52	19.57	19.47	19.47
		RB25#0	22.83	22.64	22.52	18.78	18.59	18.47
		RB25#25	22.72	22.71	22.43	18.67	18.66	18.38
		RB50#0	22.77	22.70	22.52	18.72	18.65	18.47
	16QAM	RB1#0	22.77	22.68	23.26	18.72	18.63	19.21
		RB1#25	22.89	22.73	23.25	18.84	18.68	19.20
		RB1#49	22.77	22.54	23.06	18.72	18.49	19.01
		RB25#0	21.88	21.82	21.60	17.83	17.77	17.55
		RB25#25	21.80	21.84	21.50	17.75	17.79	17.45
		RB50#0	21.83	21.77	21.54	17.78	17.72	17.49

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For Band12: Antenna Gain =-1.9dBi = -4.05dBd (0dBd=2.15dBi)
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	23.43	23.23	23.20	19.38	19.18	19.15
		RB1#13	23.50	23.28	23.29	19.45	19.23	19.24
		RB1#24	23.38	22.96	22.89	19.33	18.91	18.84
		RB15#0	22.25	22.27	22.23	18.20	18.22	18.18
		RB15#10	22.51	22.37	22.03	18.46	18.32	17.98
		RB25#0	22.34	22.27	22.12	18.29	18.22	18.07
	16QAM	RB1#0	22.47	22.33	21.78	18.42	18.28	17.73
		RB1#13	22.61	22.31	21.93	18.56	18.26	17.88
		RB1#24	22.35	22.11	21.86	18.30	18.06	17.81
		RB15#0	21.22	21.47	21.34	17.17	17.42	17.29
		RB15#10	21.47	21.38	21.21	17.42	17.33	17.16
		RB25#0	21.47	21.41	21.45	17.42	17.36	17.40
10.0	QPSK	RB1#0	23.43	23.44	23.47	19.38	19.39	19.42
		RB1#25	23.69	23.57	23.54	19.64	19.52	19.49
		RB1#49	23.38	23.33	23.40	19.33	19.28	19.35
		RB25#0	22.44	22.45	22.40	18.39	18.40	18.35
		RB25#25	22.39	22.33	22.36	18.34	18.28	18.31
		RB50#0	22.46	22.39	22.38	18.41	18.34	18.33
	16QAM	RB1#0	22.47	23.08	22.65	18.42	19.03	18.60
		RB1#25	22.60	23.14	22.80	18.55	19.09	18.75
		RB1#49	22.40	22.95	22.54	18.35	18.90	18.49
		RB25#0	21.56	21.48	21.47	17.51	17.43	17.42
		RB25#25	21.50	21.40	21.41	17.45	17.35	17.36
		RB50#0	21.49	21.44	21.41	17.44	17.39	17.36

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For Band17: Antenna Gain = -1.9dBi = -4.05dBd (0dBd=2.15dBi)
Limit: ERP≤34.77dBm

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	22.55	22.47	22.37	22.15	22.07	21.97
		RB1#13	22.65	22.57	22.48	22.25	22.17	22.08
		RB1#24	22.58	22.43	22.37	22.18	22.03	21.97
		RB15#0	21.60	21.56	21.42	21.20	21.16	21.02
		RB15#10	21.58	21.51	21.48	21.18	21.11	21.08
		RB25#0	21.58	21.54	21.38	21.18	21.14	20.98
	16QAM	RB1#0	21.78	21.46	21.38	21.38	21.06	20.98
		RB1#13	21.85	21.56	21.47	21.45	21.16	21.07
		RB1#24	21.77	21.44	21.42	21.37	21.04	21.02
		RB15#0	20.57	20.50	20.46	20.17	20.10	20.06
		RB15#10	20.61	20.48	20.40	20.21	20.08	20.00
		RB25#0	20.56	20.54	20.46	20.16	20.14	20.06
10.0	QPSK	RB1#0	22.63	22.57	22.50	22.23	22.17	22.10
		RB1#25	22.92	22.85	22.71	22.52	22.45	22.31
		RB1#49	22.64	22.55	22.48	22.24	22.15	22.08
		RB25#0	21.62	21.60	21.51	21.22	21.20	21.11
		RB25#25	21.64	21.59	21.42	21.24	21.19	21.02
		RB50#0	21.63	21.58	21.51	21.23	21.18	21.11
	16QAM	RB1#0	21.69	21.70	21.40	21.29	21.30	21.00
		RB1#25	21.95	21.93	21.61	21.55	21.53	21.21
		RB1#49	21.74	21.66	21.37	21.34	21.26	20.97
		RB25#0	20.66	20.58	20.51	20.26	20.18	20.11
		RB25#25	20.65	20.57	20.54	20.25	20.17	20.14
		RB50#0	20.67	20.55	20.49	20.27	20.15	20.09

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	22.52	22.48	22.45	22.12	22.08	22.05
		RB1#38	22.66	22.55	22.46	22.26	22.15	22.06
		RB1#74	22.52	22.42	22.37	22.12	22.02	21.97
		RB36#0	21.65	21.65	21.65	21.25	21.25	21.25
		RB36#39	21.68	21.62	21.50	21.28	21.22	21.10
		RB75#0	21.67	21.64	21.53	21.27	21.24	21.13
	16QAM	RB1#0	21.70	21.63	21.36	21.30	21.23	20.96
		RB1#38	21.82	21.71	21.39	21.42	21.31	20.99
		RB1#74	21.71	21.51	21.29	21.31	21.11	20.89
		RB36#0	20.66	20.56	20.49	20.26	20.16	20.09
		RB36#39	20.68	20.53	20.42	20.28	20.13	20.02
		RB75#0	20.63	20.56	20.49	20.23	20.16	20.09
20.0	QPSK	RB1#0	22.42	22.34	22.26	22.02	21.94	21.86
		RB1#50	22.91	22.87	22.74	22.51	22.47	22.34
		RB1#99	22.40	22.29	22.18	22.00	21.89	21.78
		RB50#0	21.54	21.50	21.46	21.14	21.10	21.06
		RB50#50	21.54	21.48	21.39	21.14	21.08	20.99
		RB100#0	21.56	21.52	21.43	21.16	21.12	21.03
	16QAM	RB1#0	21.64	21.38	21.21	21.24	20.98	20.81
		RB1#50	22.12	21.83	21.69	21.72	21.43	21.29
		RB1#99	21.62	21.35	21.20	21.22	20.95	20.80
		RB50#0	20.56	20.49	20.52	20.16	20.09	20.12
		RB50#50	20.59	20.45	20.44	20.19	20.05	20.04
		RB100#0	20.54	20.51	20.47	20.14	20.11	20.07

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band38: Antenna Gain = -0.4dBi
Limit: EIRP≤33dBm

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	23.33	23.50	23.27	22.93	23.10	22.87
		RB1#13	23.55	23.74	23.43	23.15	23.34	23.03
		RB1#24	23.41	23.51	23.26	23.01	23.11	22.86
		RB15#0	23.41	23.61	23.43	23.01	23.21	23.03
		RB15#10	23.48	23.63	23.35	23.08	23.23	22.95
		RB25#0	23.40	23.55	23.38	23.00	23.15	22.98
	16QAM	RB1#0	23.48	23.44	23.25	23.08	23.04	22.85
		RB1#13	23.66	23.58	23.43	23.26	23.18	23.03
		RB1#24	23.55	23.41	23.26	23.15	23.01	22.86
		RB15#0	23.39	23.47	23.40	22.99	23.07	23.00
		RB15#10	23.49	23.45	23.33	23.09	23.05	22.93
		RB25#0	23.33	23.43	23.37	22.93	23.03	22.97
10.0	QPSK	RB1#0	23.46	23.70	23.33	23.06	23.30	22.93
		RB1#25	23.76	24.00	23.59	23.36	23.60	23.19
		RB1#49	23.52	23.72	23.31	23.12	23.32	22.91
		RB25#0	23.42	23.61	23.39	23.02	23.21	22.99
		RB25#25	23.54	23.63	23.43	23.14	23.23	23.03
		RB50#0	23.47	23.57	23.42	23.07	23.17	23.02
	16QAM	RB1#0	23.27	23.55	23.47	22.87	23.15	23.07
		RB1#25	23.60	23.81	23.70	23.20	23.41	23.30
		RB1#49	23.38	23.53	23.44	22.98	23.13	23.04
		RB25#0	23.37	23.50	23.34	22.97	23.10	22.94
		RB25#25	23.47	23.49	23.36	23.07	23.09	22.96
		RB50#0	23.38	23.40	23.37	22.98	23.00	22.97

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	23.37	23.65	23.30	22.97	23.25	22.90
		RB1#38	23.53	23.76	23.36	23.13	23.36	22.96
		RB1#74	23.51	23.67	23.27	23.11	23.27	22.87
		RB36#0	23.65	23.87	23.52	23.25	23.47	23.12
		RB36#39	23.75	23.87	23.52	23.35	23.47	23.12
		RB75#0	23.67	23.85	23.55	23.27	23.45	23.15
	16QAM	RB1#0	23.22	23.69	23.42	22.82	23.29	23.02
		RB1#38	23.37	23.74	23.48	22.97	23.34	23.08
		RB1#74	23.35	23.62	23.41	22.95	23.22	23.01
		RB36#0	23.50	23.72	23.44	23.10	23.32	23.04
		RB36#39	23.58	23.70	23.46	23.18	23.30	23.06
		RB75#0	23.57	23.66	23.44	23.17	23.26	23.04
20.0	QPSK	RB1#0	23.18	23.48	23.20	22.78	23.08	22.80
		RB1#50	23.78	23.99	23.66	23.38	23.59	23.26
		RB1#99	23.40	23.47	23.13	23.00	23.07	22.73
		RB50#0	23.37	23.55	23.38	22.97	23.15	22.98
		RB50#50	23.56	23.53	23.39	23.16	23.13	22.99
		RB100#0	23.48	23.52	23.38	23.08	23.12	22.98
	16QAM	RB1#0	23.13	23.52	23.19	22.73	23.12	22.79
		RB1#50	23.69	23.98	23.64	23.29	23.58	23.24
		RB1#99	23.30	23.54	23.15	22.90	23.14	22.75
		RB50#0	23.35	23.40	23.28	22.95	23.00	22.88
		RB50#50	23.53	23.39	23.37	23.13	22.99	22.97
		RB100#0	23.38	23.37	23.31	22.98	22.97	22.91

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band41: Antenna Gain = -0.4dBi
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	21.97	22.00	22.09	21.27	21.30	21.39
		RB1#3	22.14	22.21	22.27	21.44	21.51	21.57
		RB1#5	21.98	22.01	22.11	21.28	21.31	21.41
		RB3#0	22.02	22.16	22.24	21.32	21.46	21.54
		RB3#3	22.05	22.19	22.19	21.35	21.49	21.49
		RB6#0	20.96	21.07	21.15	20.26	20.37	20.45
	16QAM	RB1#0	21.08	21.02	21.13	20.38	20.32	20.43
		RB1#3	21.28	21.26	21.26	20.58	20.56	20.56
		RB1#5	21.07	21.09	21.12	20.37	20.39	20.42
		RB3#0	21.03	21.25	21.41	20.33	20.55	20.71
		RB3#3	21.07	21.25	21.44	20.37	20.55	20.74
		RB6#0	20.08	20.04	20.17	19.38	19.34	19.47
3.0	QPSK	RB1#0	22.04	22.12	22.16	21.34	21.42	21.46
		RB1#8	22.00	22.08	22.13	21.30	21.38	21.43
		RB1#14	22.04	22.10	22.12	21.34	21.40	21.42
		RB6#0	20.99	21.01	21.13	20.29	20.31	20.43
		RB6#9	20.89	21.05	21.14	20.19	20.35	20.44
		RB15#0	21.01	21.12	21.19	20.31	20.42	20.49
	16QAM	RB1#0	21.19	21.18	21.84	20.49	20.48	21.14
		RB1#8	21.18	21.19	21.79	20.48	20.49	21.09
		RB1#14	21.15	21.12	21.78	20.45	20.42	21.08
		RB6#0	20.01	20.02	20.22	19.31	19.32	19.52
		RB6#9	20.04	20.05	20.23	19.34	19.35	19.53
		RB15#0	20.02	20.19	20.30	19.32	19.49	19.60

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	21.86	22.05	22.12	21.16	21.35	21.42
		RB1#13	22.01	22.15	22.26	21.31	21.45	21.56
		RB1#24	21.88	22.05	22.17	21.18	21.35	21.47
		RB15#0	21.00	21.16	21.21	20.30	20.46	20.51
		RB15#10	21.03	21.10	21.17	20.33	20.40	20.47
		RB25#0	21.00	21.10	21.18	20.30	20.40	20.48
	16QAM	RB1#0	21.06	20.93	21.46	20.36	20.23	20.76
		RB1#13	21.09	21.04	21.58	20.39	20.34	20.88
		RB1#24	21.03	20.95	21.46	20.33	20.25	20.76
		RB15#0	20.05	20.20	20.22	19.35	19.50	19.52
		RB15#10	20.08	20.15	20.15	19.38	19.45	19.45
		RB25#0	20.04	20.19	20.21	19.34	19.49	19.51
10.0	QPSK	RB1#0	22.00	22.07	22.14	21.30	21.37	21.44
		RB1#25	22.15	22.24	22.23	21.45	21.54	21.53
		RB1#49	21.99	22.07	22.10	21.29	21.37	21.40
		RB25#0	20.99	21.09	21.24	20.29	20.39	20.54
		RB25#25	21.00	21.10	21.18	20.30	20.40	20.48
		RB50#0	21.03	21.11	21.25	20.33	20.41	20.55
	16QAM	RB1#0	21.15	21.15	21.81	20.45	20.45	21.11
		RB1#25	21.33	21.26	21.89	20.63	20.56	21.19
		RB1#49	21.16	21.08	21.78	20.46	20.38	21.08
		RB25#0	20.09	20.25	20.36	19.39	19.55	19.66
		RB25#25	20.06	20.25	20.25	19.36	19.55	19.55
		RB50#0	20.03	20.23	20.29	19.33	19.53	19.59

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	18.98	19.08	19.09	18.28	18.38	18.39
		RB1#38	19.06	19.12	19.18	18.36	18.42	18.48
		RB1#74	18.95	18.97	19.03	18.25	18.27	18.33
		RB36#0	18.03	18.19	18.27	17.33	17.49	17.57
		RB36#39	18.05	18.12	18.20	17.35	17.42	17.50
		RB75#0	18.02	18.14	18.20	17.32	17.44	17.50
	16QAM	RB1#0	18.11	18.52	18.74	17.41	17.82	18.04
		RB1#38	18.23	18.59	18.82	17.53	17.89	18.12
		RB1#74	18.12	18.44	18.74	17.42	17.74	18.04
		RB36#0	17.08	17.14	17.26	16.38	16.44	16.56
		RB36#39	17.07	17.09	17.20	16.37	16.39	16.50
		RB75#0	17.05	17.13	17.22	16.35	16.43	16.52
20.0	QPSK	RB1#0	18.81	18.91	18.88	18.11	18.21	18.18
		RB1#50	19.19	19.31	19.24	18.49	18.61	18.54
		RB1#99	18.87	18.91	18.85	18.17	18.21	18.15
		RB50#0	18.05	18.24	18.33	17.35	17.54	17.63
		RB50#50	18.08	18.15	18.08	17.38	17.45	17.38
		RB100#0	18.05	18.14	18.22	17.35	17.44	17.52
	16QAM	RB1#0	18.12	18.17	18.52	17.42	17.47	17.82
		RB1#50	18.56	18.55	18.92	17.86	17.85	18.22
		RB1#99	18.21	18.15	18.53	17.51	17.45	17.83
		RB50#0	17.05	17.24	17.39	16.35	16.54	16.69
		RB50#50	17.12	17.18	17.11	16.42	16.48	16.41
		RB100#0	17.10	17.22	17.25	16.40	16.52	16.55

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band 66: Antenna Gain = -0.7dBi
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit(dB)
GSM	Low	10.00	13
	Middle	9.29	13
	High	10.67	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	12.98	13
	Middle	12.34	13
	High	12.82	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.04	13
	Middle	3.04	13
	High	3.04	13
HSDPA (16QAM)	Low	3.94	13
	Middle	8.43	13
	High	3.85	13
HSUPA (QPSK)	Low	3.85	13
	Middle	3.72	13
	High	3.78	13
HSPA+	Low	3.58	13
	Middle	3.64	13
	High	3.55	13

PCS Band

Mode	Channel	PAR (dB)	Limit(dB)
GSM	Low	10.67	13
	Middle	8.33	13
	High	10.54	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	12.05	13
	Middle	8.33	13
	High	10.54	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.04	13
	Middle	3.04	13
	High	3.04	13
HSDPA (16QAM)	Low	3.94	13
	Middle	8.43	13
	High	3.85	13
HSUPA (QPSK)	Low	8.43	13
	Middle	8.40	13
	High	8.46	13
HSPA+	Low	7.55	13
	Middle	7.62	13
	High	7.38	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.24	13
	Middle	3.24	13
	High	3.24	13
HSDPA (16QAM)	Low	3.88	13
	Middle	3.94	13
	High	3.85	13
HSUPA (QPSK)	Low	3.94	13
	Middle	4.17	13
	High	3.94	13
HSPA+	Low	3.88	13
	Middle	3.61	13
	High	3.48	13

LTE Bands:

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)	6.12	5.45	6.14	13	Pass
QPSK (100RB Size)	5.68	5.04	6.14	13	Pass
16QAM (1RB Size)	7.16	6.03	5.83	13	Pass
16QAM (100RB Size)	7.07	5.48	7.04	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.16	5.30	5.71	13	Pass
QPSK (100RB Size)	5.28	5.71	5.62	13	Pass
16QAM (1RB Size)	5.48	5.86	6.12	13	Pass
16QAM (100RB Size)	5.51	5.59	6.72	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.65	4.62	4.29	13	Pass
QPSK (50RB Size)	5.48	5.48	5.45	13	Pass
16QAM (1RB Size)	5.35	5.42	5.29	13	Pass
16QAM (50RB Size)	6.31	6.28	6.31	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.33	4.72	4.52	13	Pass
QPSK (100RB Size)	5.97	4.72	4.46	13	Pass
16QAM (1RB Size)	4.84	4.90	5.33	13	Pass
16QAM (100RB Size)	4.72	5.16	5.22	13	Pass

LTE Band 12 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.13	5.03	5.29	13	Pass
QPSK (50RB Size)	5.71	5.8	5.54	13	Pass
16QAM (1RB Size)	4.87	6.15	6.28	13	Pass
16QAM (50RB Size)	6.57	6.6	6.54	13	Pass

LTE Band 17 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.42	5.51	5.42	13	Pass
QPSK (50RB Size)	5.67	5.71	5.61	13	Pass
16QAM (1RB Size)	6.09	6.35	6.41	13	Pass
16QAM (50RB Size)	6.57	6.54	6.51	13	Pass

LTE Band 38 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.41	4.67	3.86	13	Pass
QPSK (100RB Size)	5.01	4.14	4.35	13	Pass
16QAM (1RB Size)	4.64	5.07	4.46	13	Pass
16QAM (100RB Size)	4.32	5.07	4.58	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.83	3.33	4.17	13	Pass
QPSK (100RB Size)	3.71	4.14	3.97	13	Pass
16QAM (1RB Size)	4.06	4.35	4.03	13	Pass
16QAM (100RB Size)	4.96	3.68	4.32	13	Pass

LTE Band 66 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.83	5.59	5.71	13	Pass
QPSK (100RB Size)	5.59	5.62	6.17	13	Pass
16QAM (1RB Size)	7.13	6.41	6.84	13	Pass
16QAM (100RB Size)	7.07	6.20	7.16	13	Pass

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

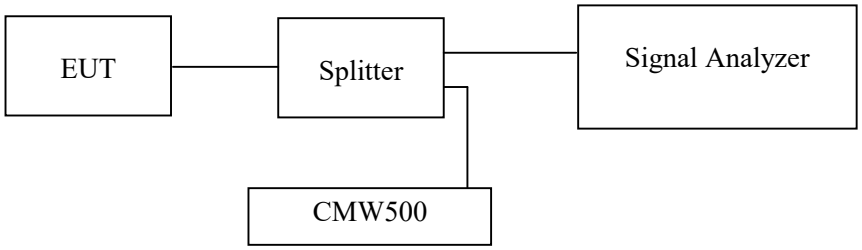
Applicable Standard

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

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 included in plot.

Test Data

Environmental Conditions

Temperature:	25~27.2 ℃
Relative Humidity:	37~56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang from 2022-12-20 to 2022-12-28.

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	244.00	315.00
	190	836.6	246.00	317.00
	251	848.8	245.00	318.00
EGPRS(8PSK)	128	824.2	249.00	319.00
	190	836.6	247.00	322.00
	251	848.8	249.00	317.00

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.19	4.74
	836.6	4.17	4.74
	846.6	4.16	4.73
HSDPA	826.4	4.19	4.73
	836.6	4.22	5.10
	846.6	4.19	4.74
HSUPA	826.4	4.22	5.03
	836.6	4.20	4.94
	846.6	4.19	4.77

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	246.00	315.00
	661	1880.0	245.00	318.00
	810	1909.8	245.00	315.00
EGPRS(8PSK)	512	1850.2	250.00	325.00
	661	1880.0	250.00	320.00
	810	1909.8	251.00	327.00

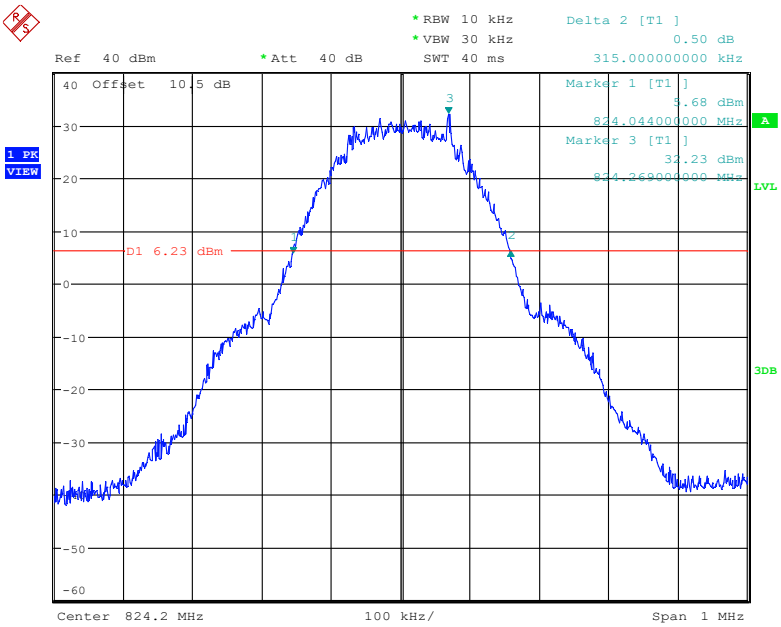
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.17	4.74
	1880.0	4.17	4.74
	1907.6	4.17	4.74
HSDPA	1852.4	4.20	4.85
	1880.0	4.20	4.83
	1907.6	4.17	4.73
HSUPA	1852.4	4.17	4.74
	1880.0	4.18	4.83
	1907.6	4.20	4.97

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.19	4.73
	1732.6	4.17	4.71
	1752.6	4.17	4.71
HSDPA	1712.4	4.19	4.73
	1732.6	4.19	4.74
	1752.6	4.19	4.73
HSUPA	1712.4	4.19	4.74
	1732.6	4.20	4.74
	1752.6	4.20	4.74

Cellular Band (Part 22H)

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



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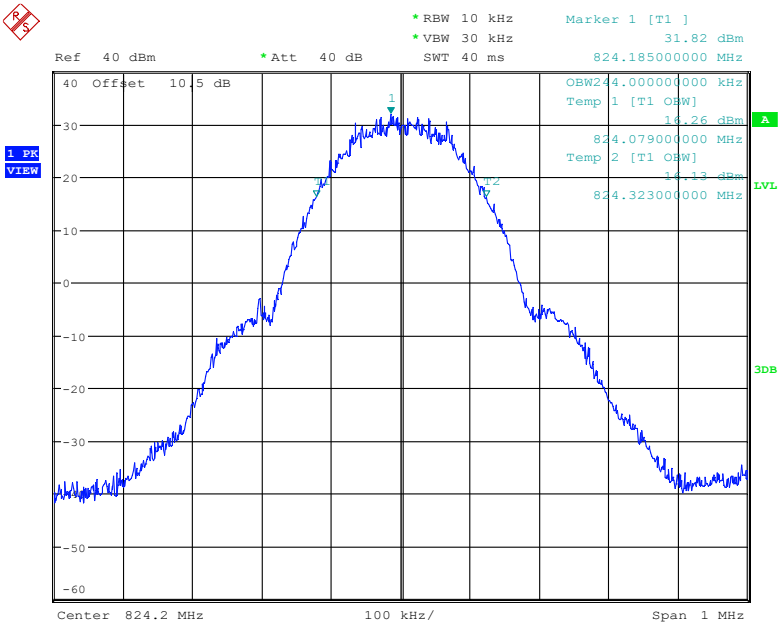

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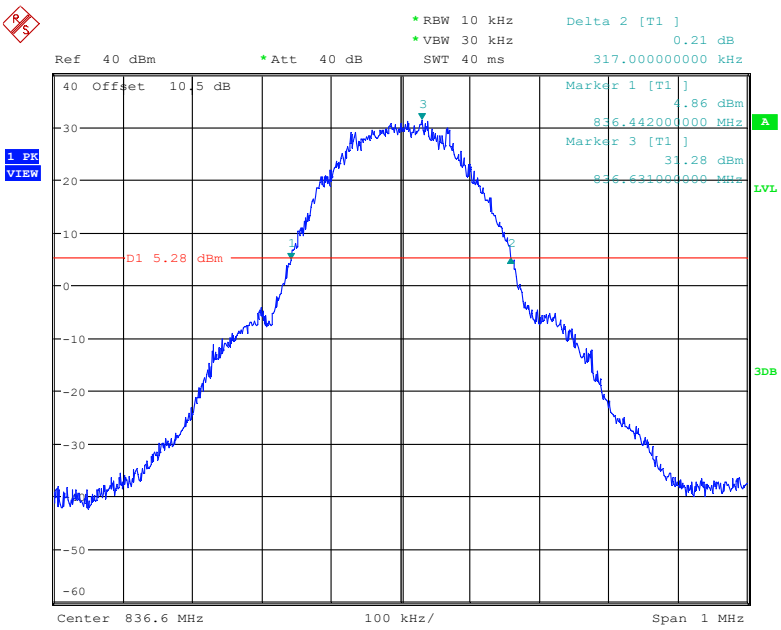
26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



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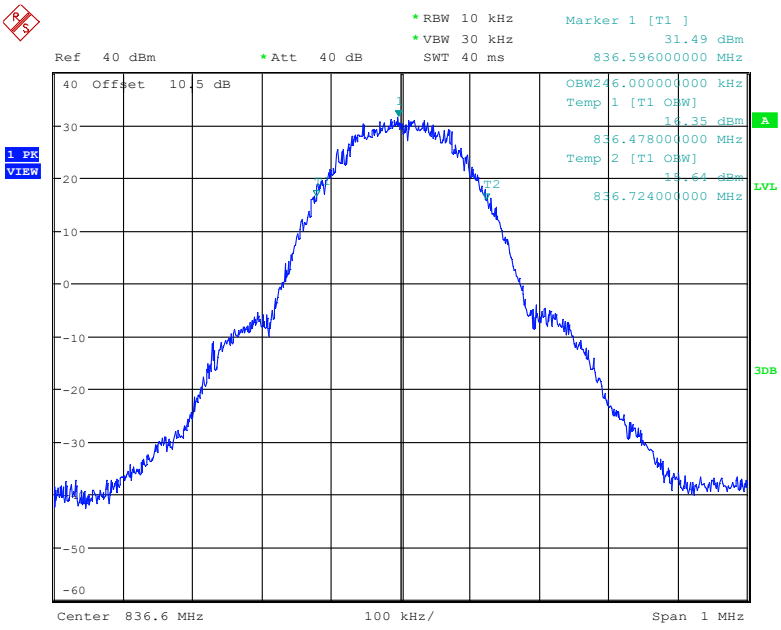
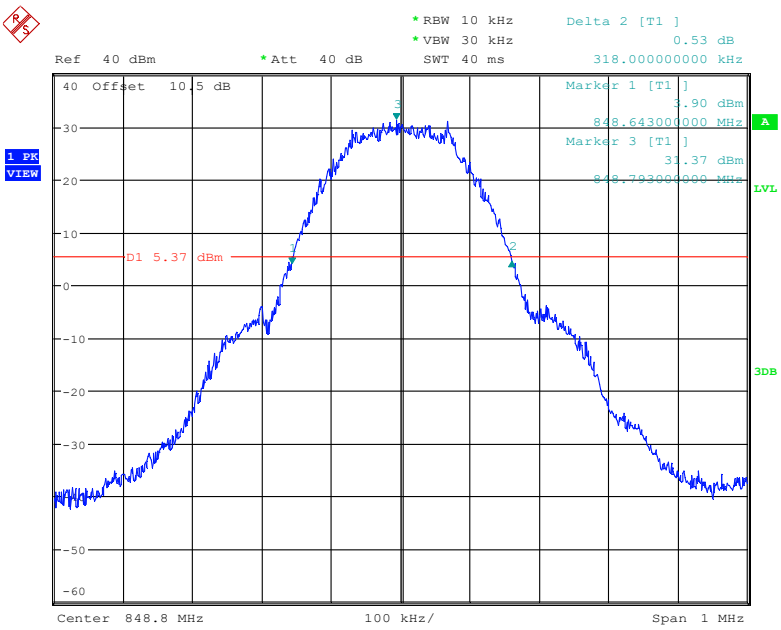


Date: 20.DEC.2022 15:22:28

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



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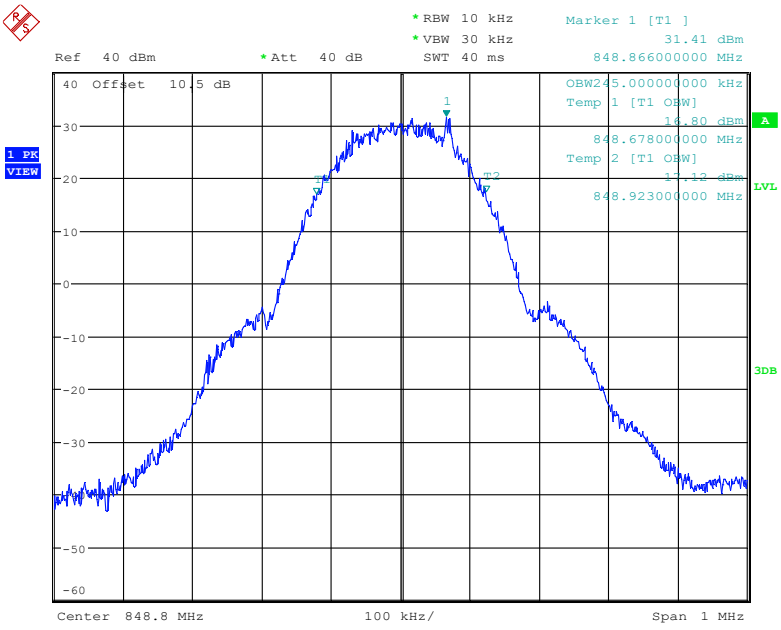
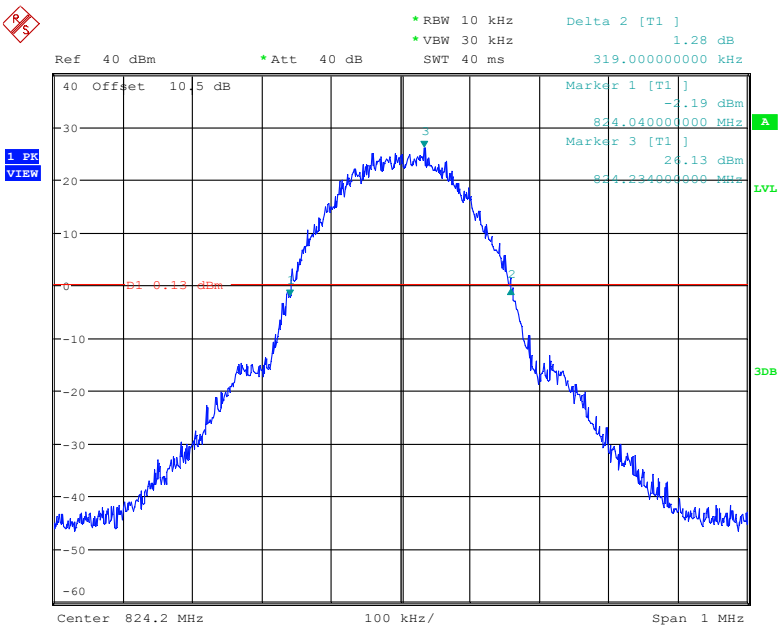
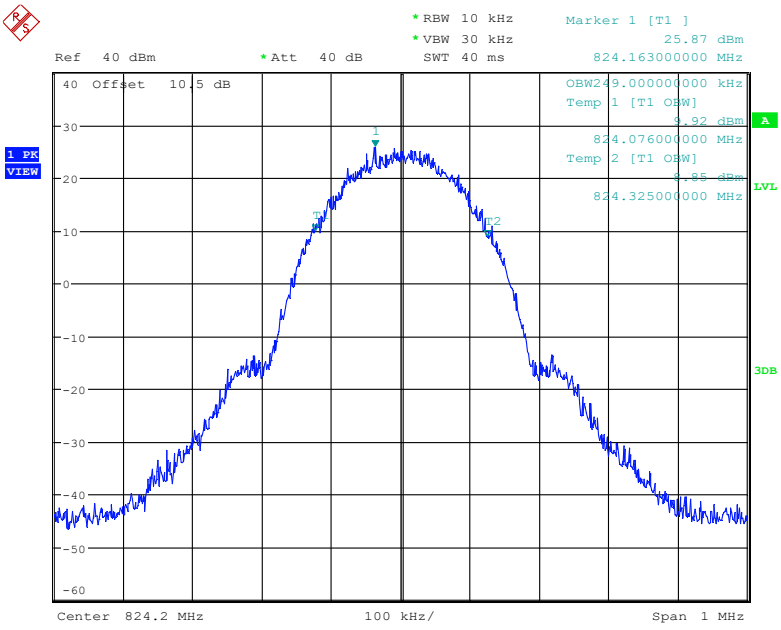


Date: 20.DEC.2022 15:33:57

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

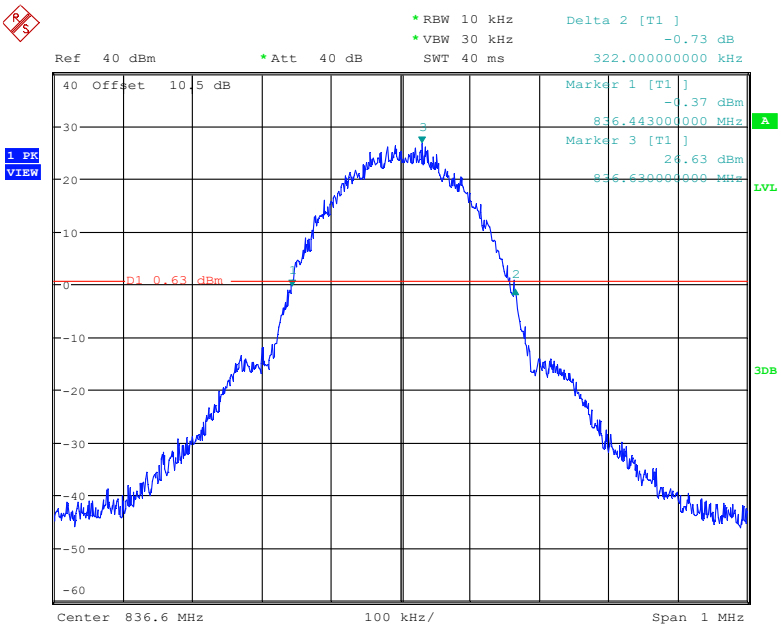


Date: 20.DEC.2022 15:47:47



Date: 20.DEC.2022 15:47:07

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



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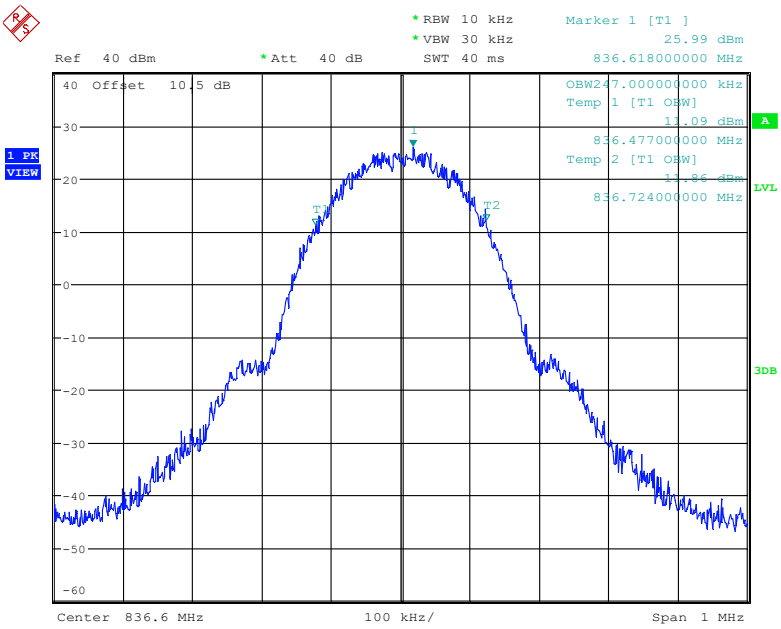

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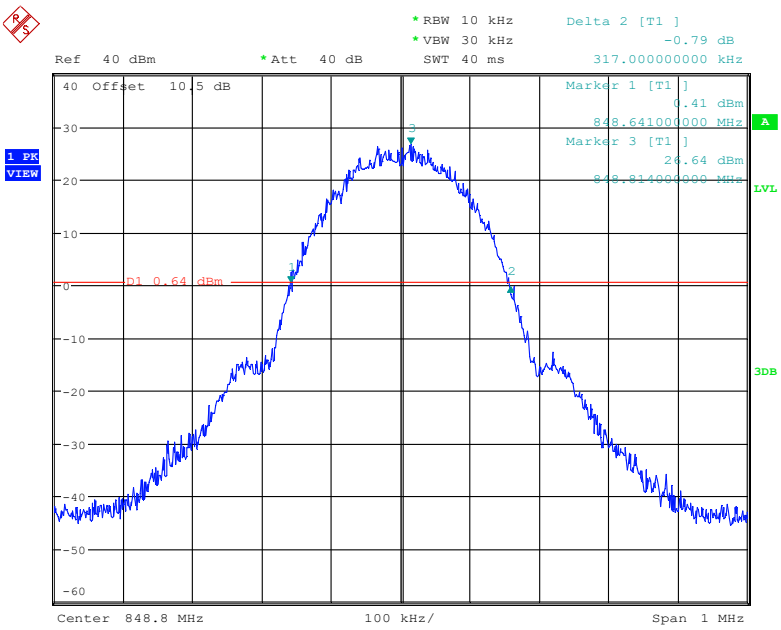
26 dB Emissions &99% Occupied Bandwidth for EGPRS (8PSK) Mode, High channel



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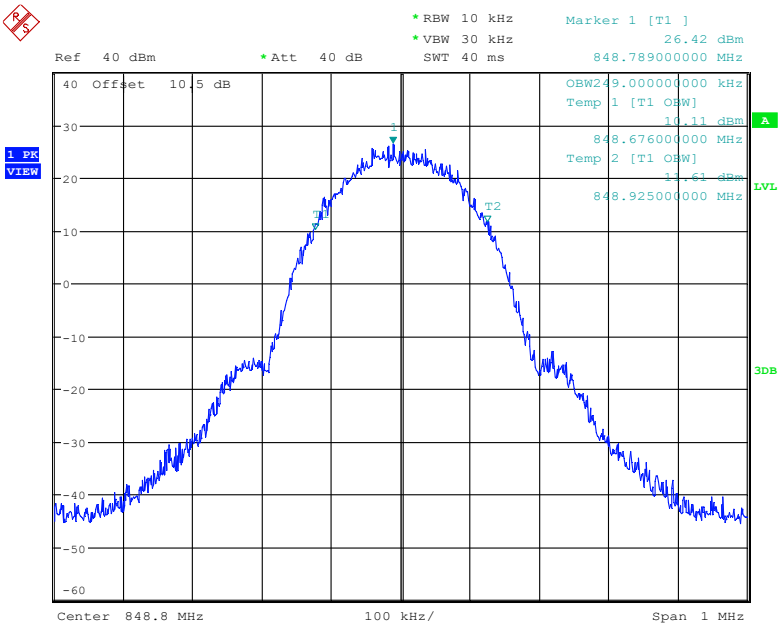
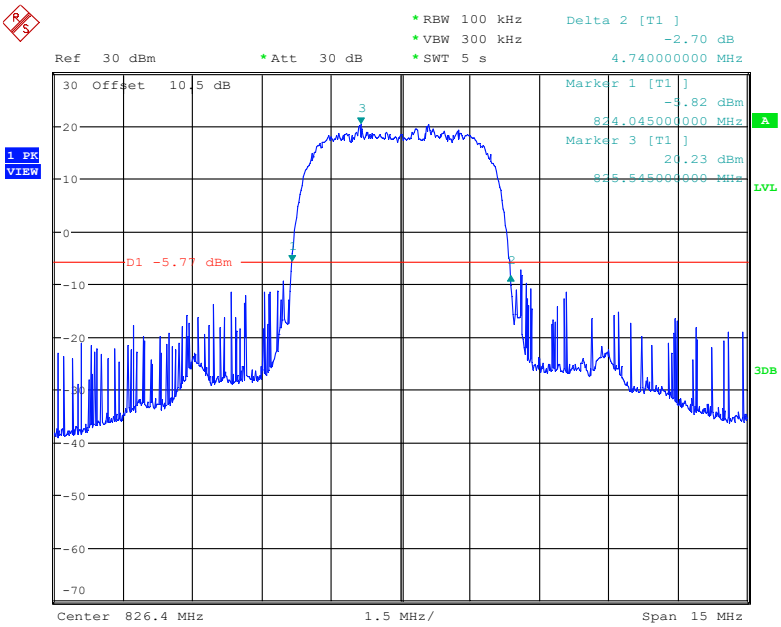


Date: 20.DEC.2022 15:57:24

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



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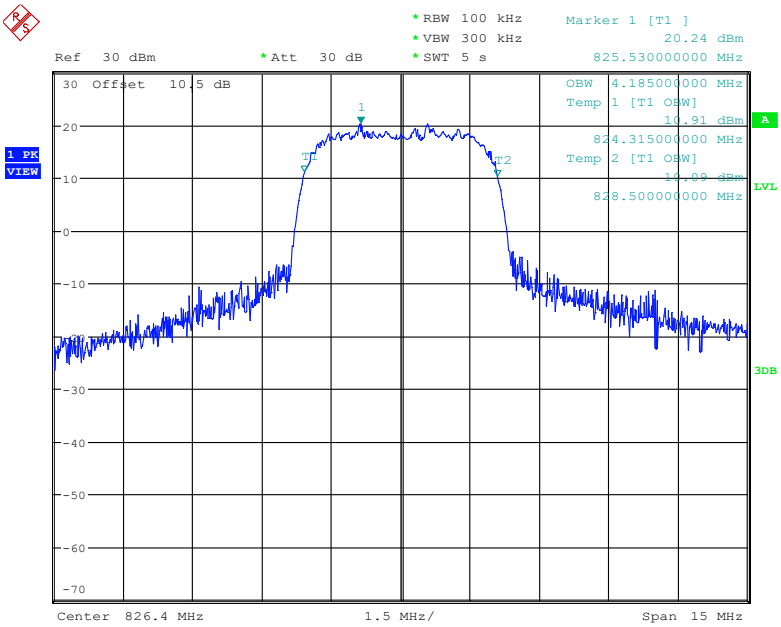
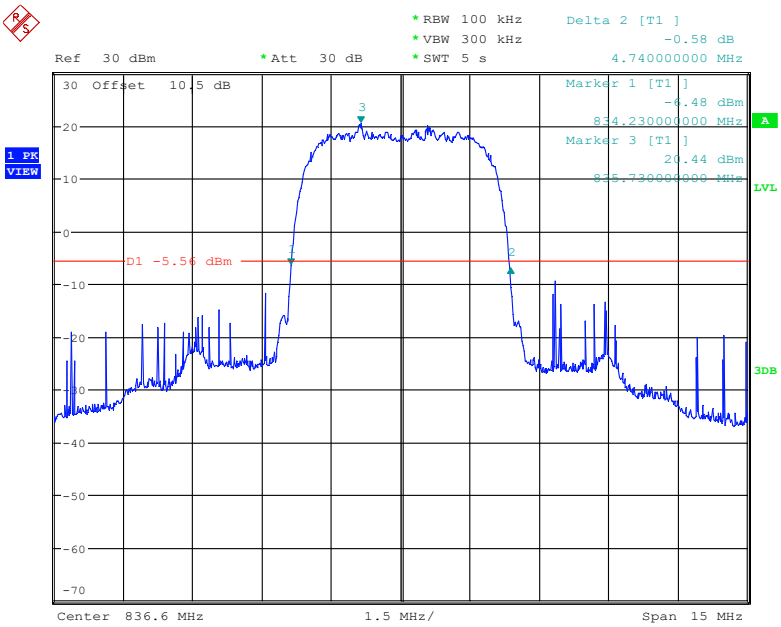


Date: 20.DEC.2022 17:47:18

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



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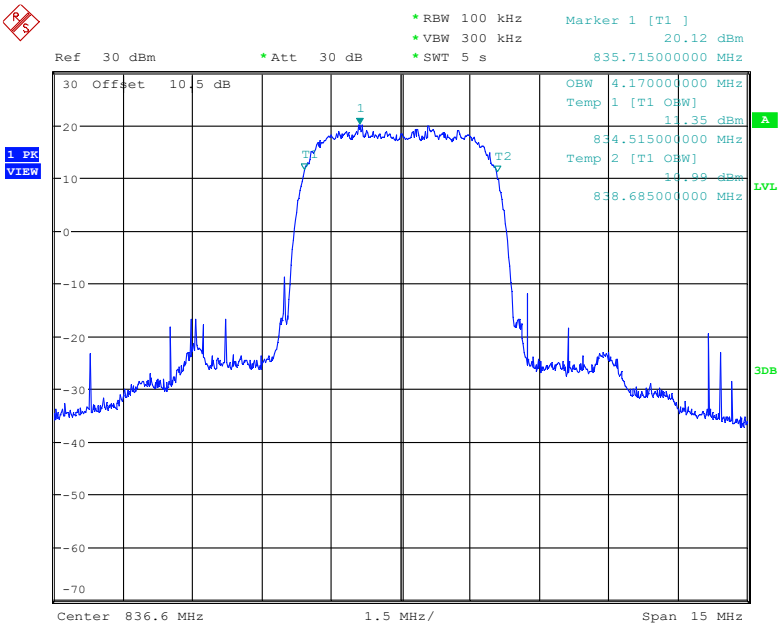

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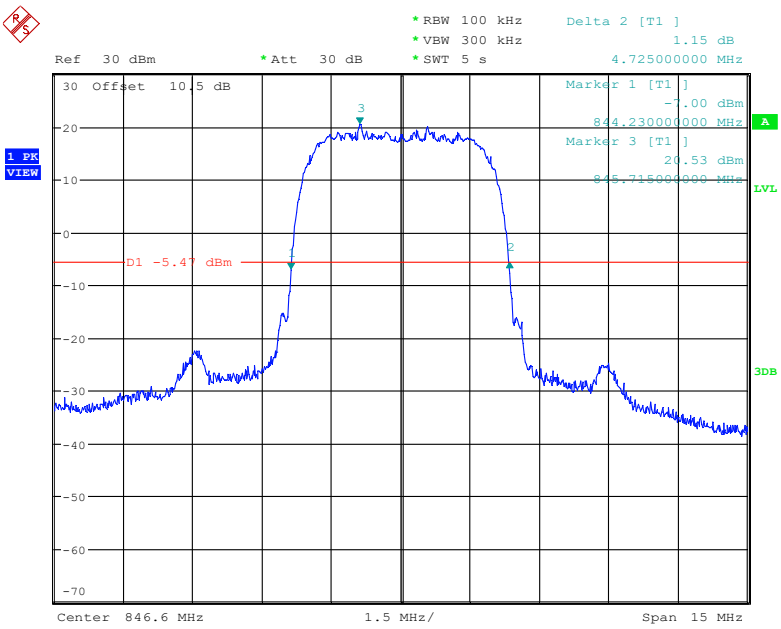
26 dB Emissions &99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



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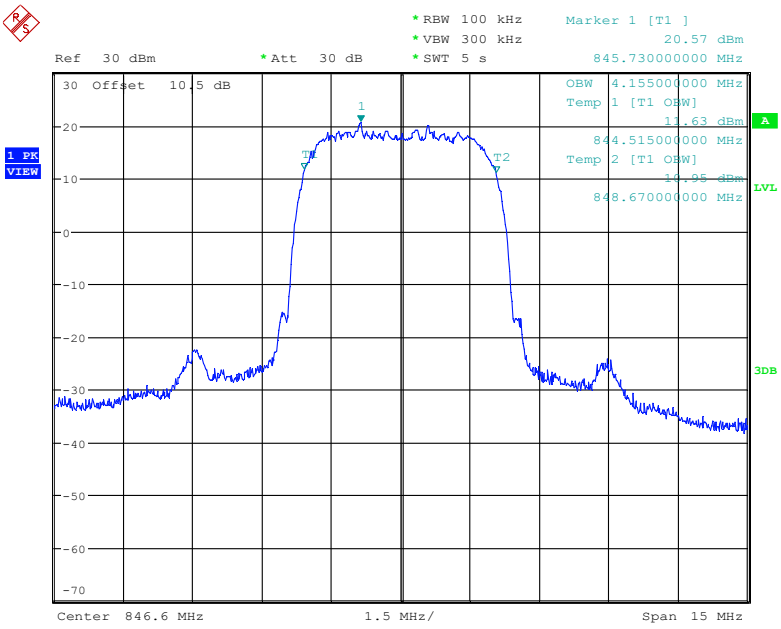

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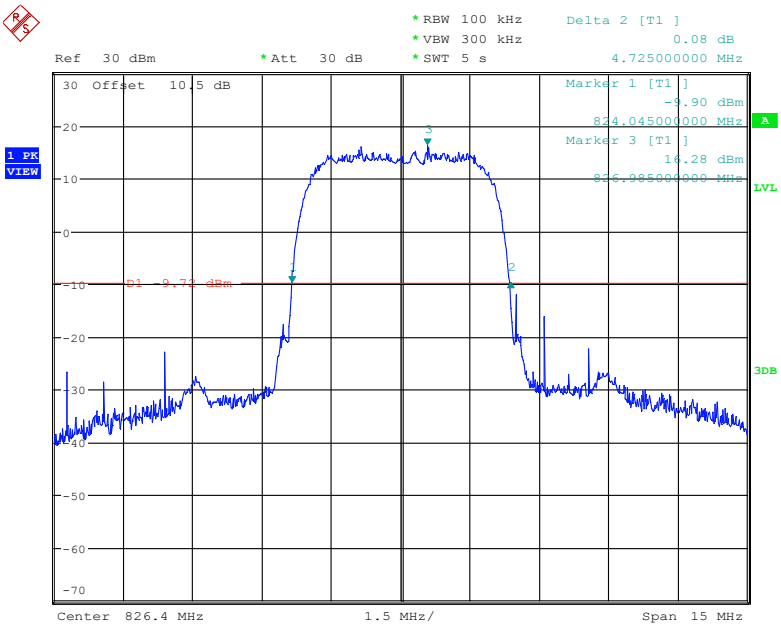
26 dB Emissions &99% Occupied Bandwidth for HSDPA (QPSK) Mode, Low channel



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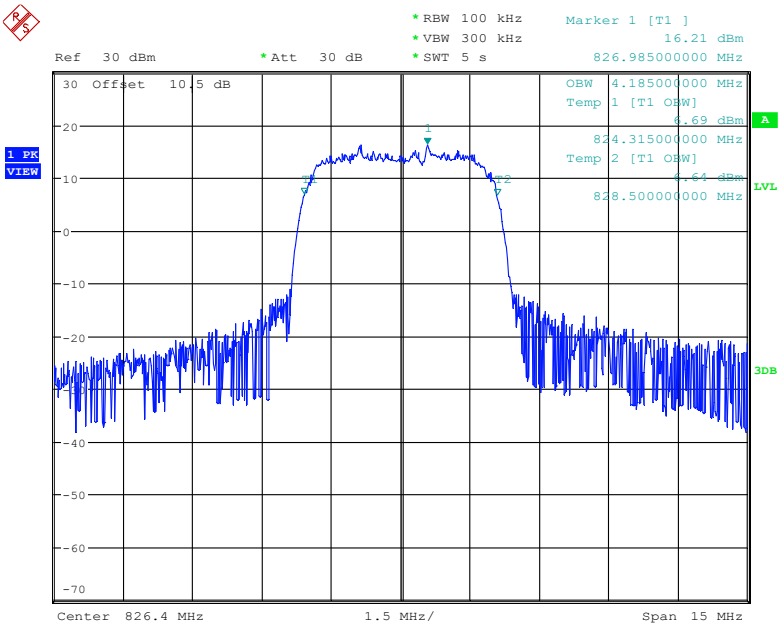

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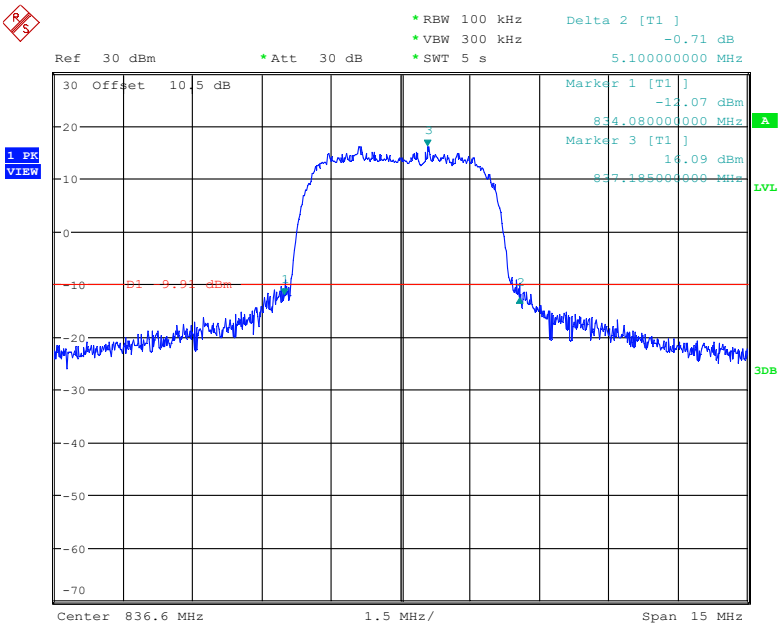
26 dB Emissions &99% Occupied Bandwidth for HSDPA (QPSK) Mode, Middle channel



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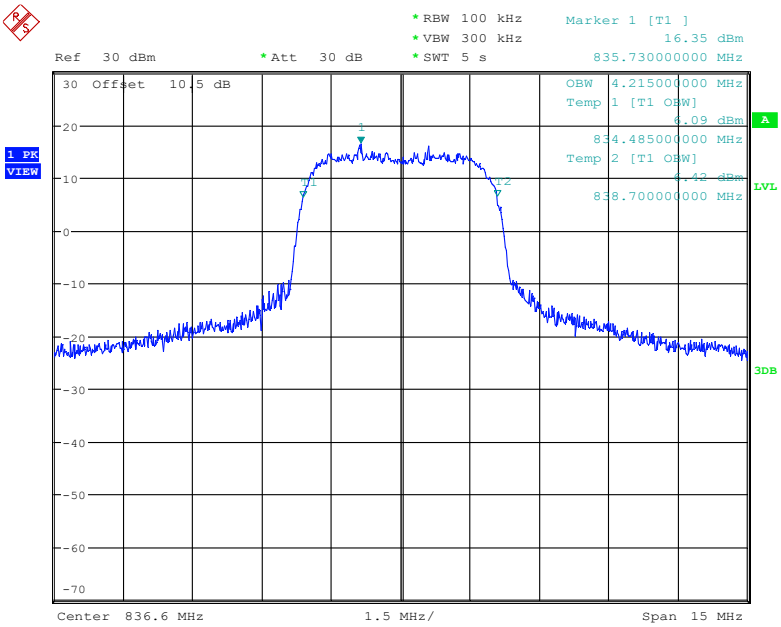

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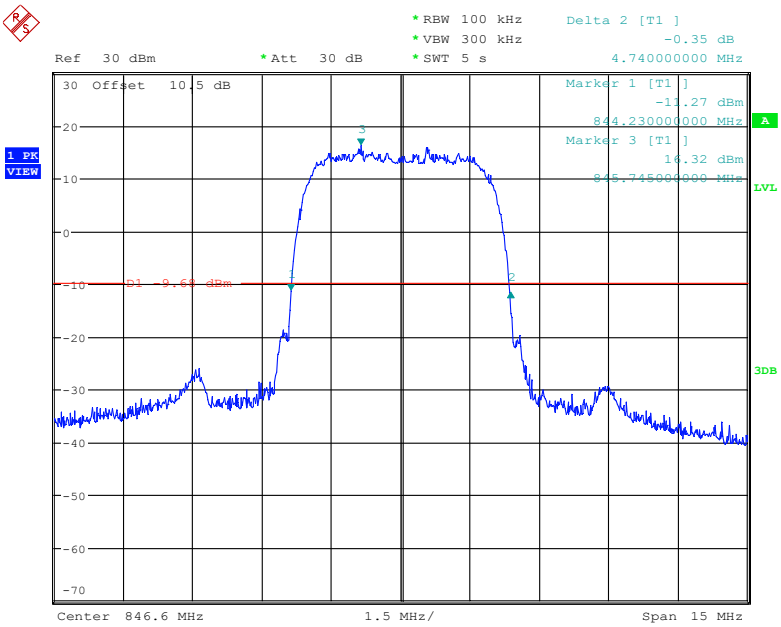
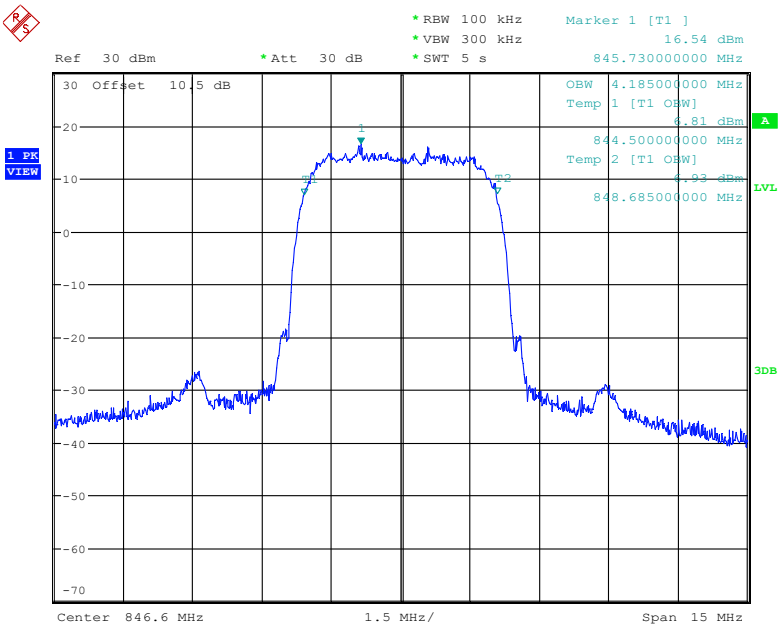
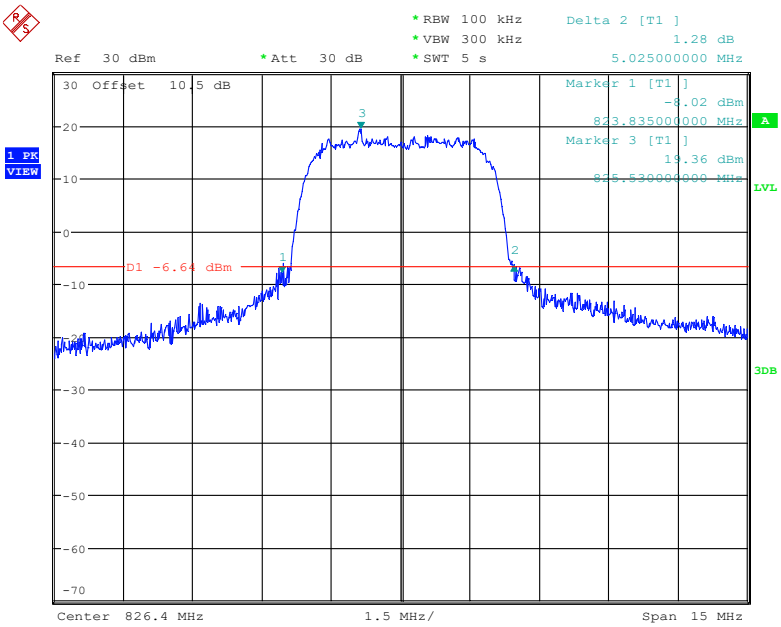
26 dB Emissions &99% Occupied Bandwidth for HSDPA (QPSK) Mode, High channel





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



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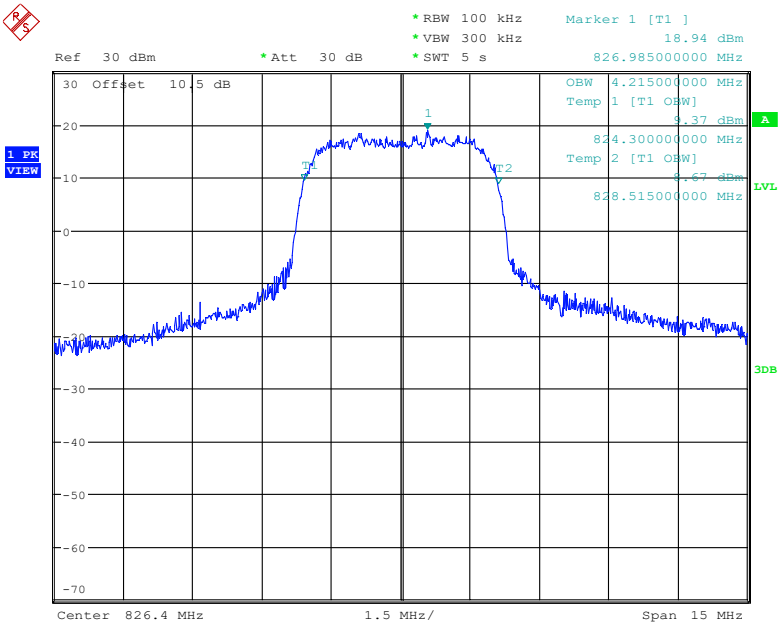
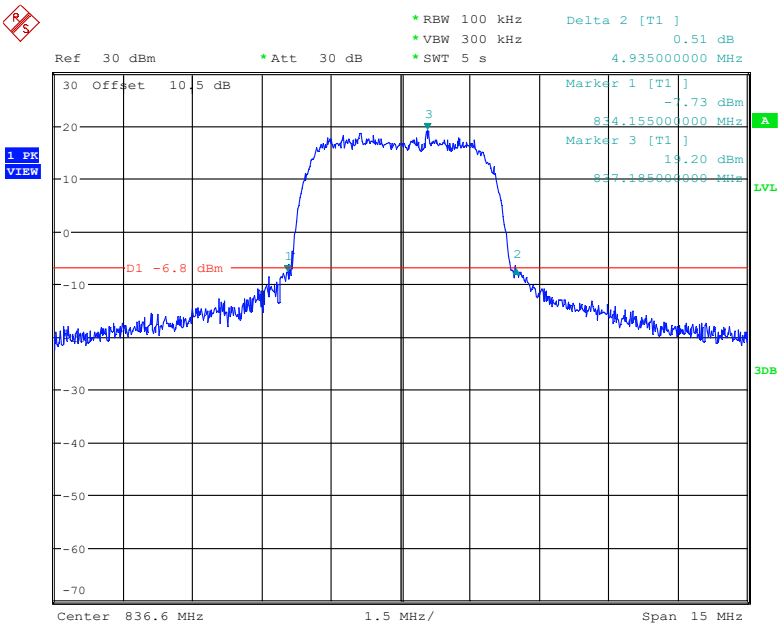


Date: 21.DEC.2022 09:47:13

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



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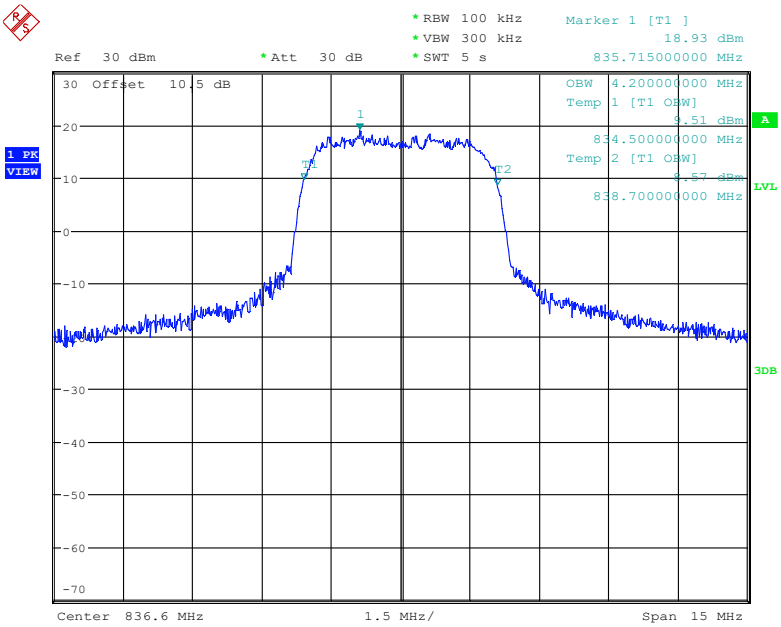
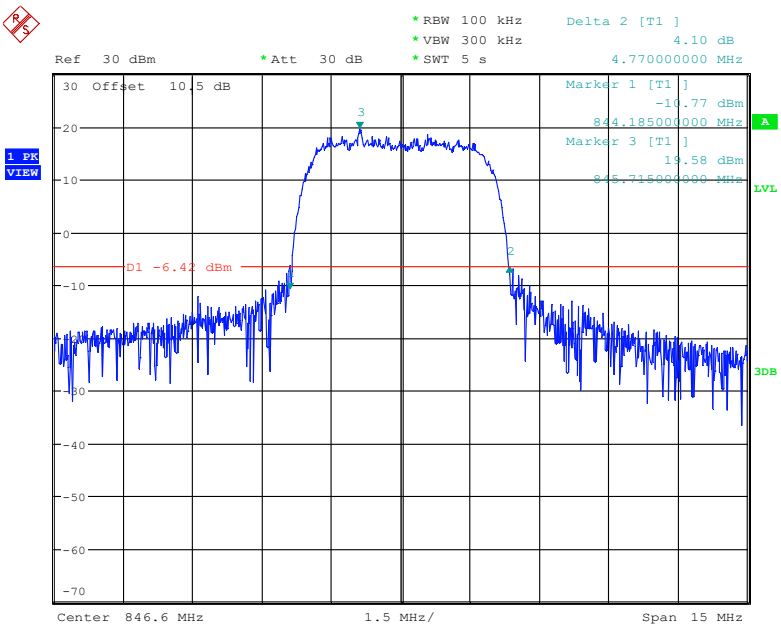
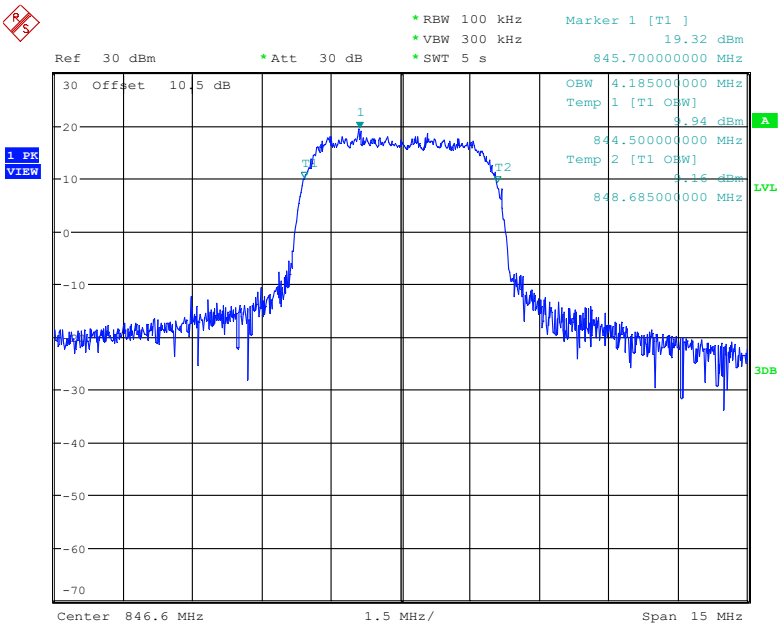


Date: 21.DEC.2022 09:51:56

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



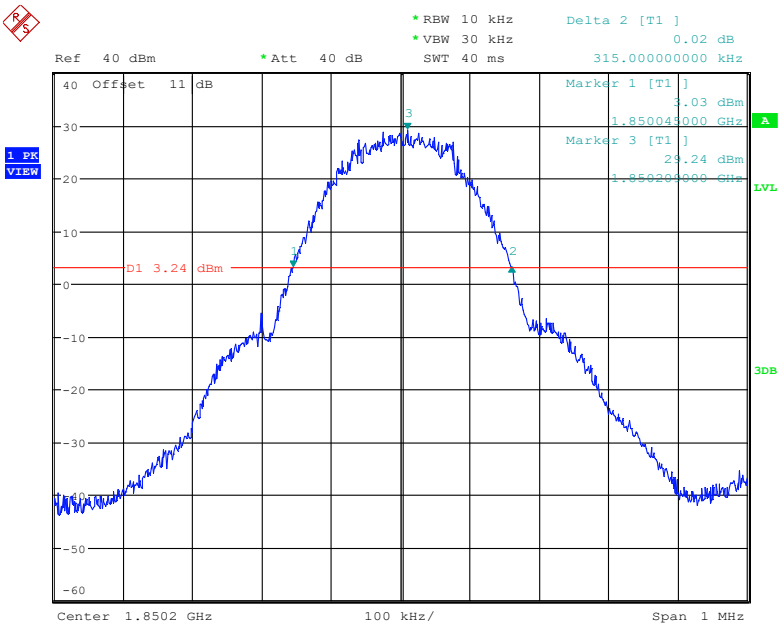
Date: 21.DEC.2022 09:55:17



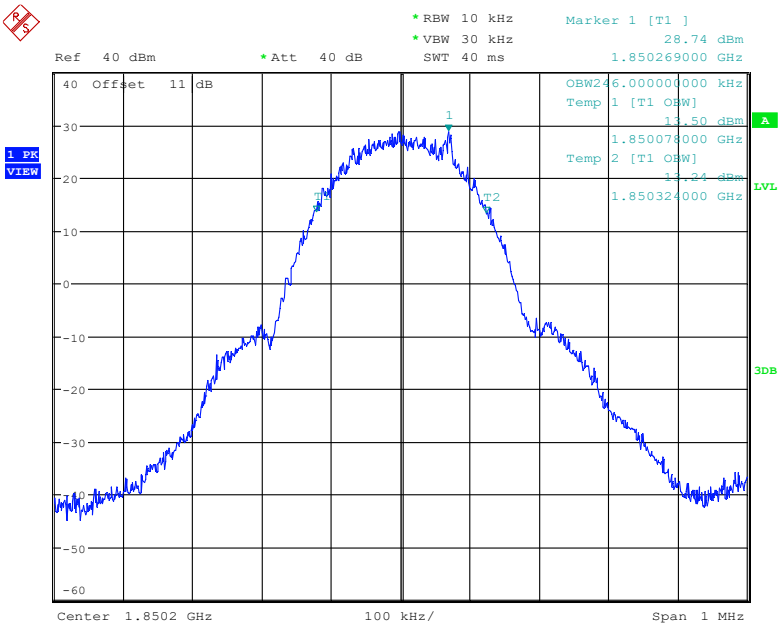
Date: 21.DEC.2022 09:54:37

PCS Band (Part 24E)

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

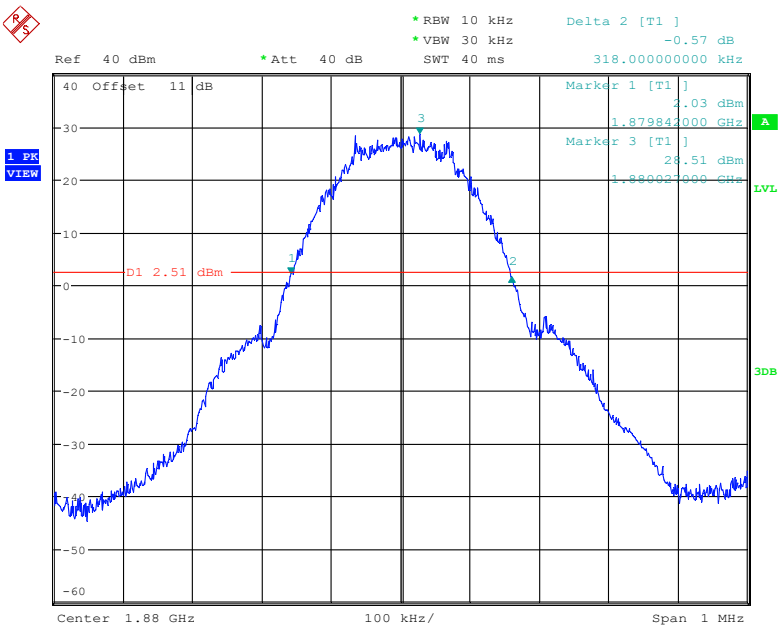


Date: 20.DEC.2022 16:05:22

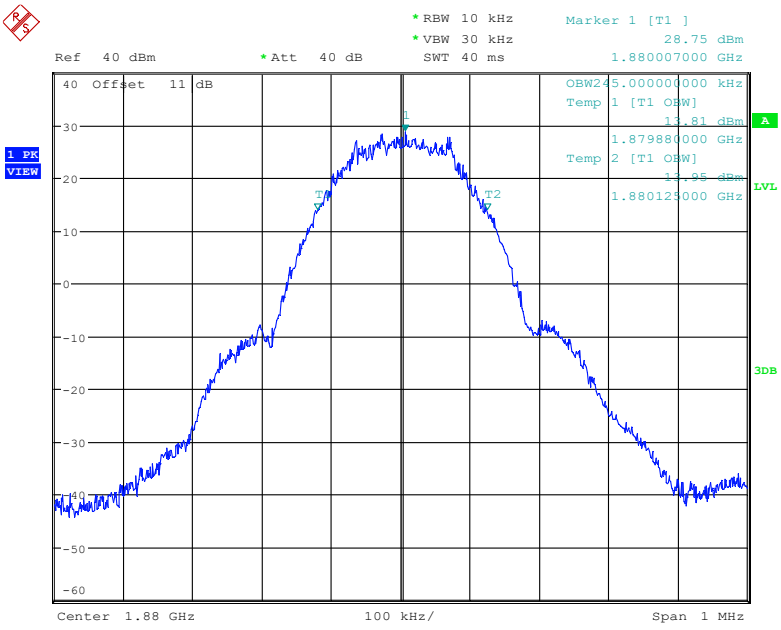


Date: 20.DEC.2022 16:04:43

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

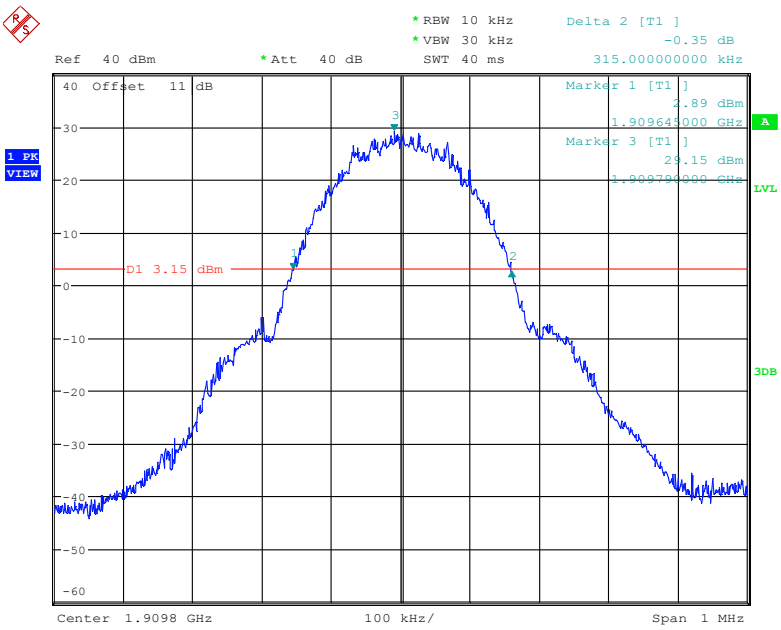


Date: 20.DEC.2022 16:14:01

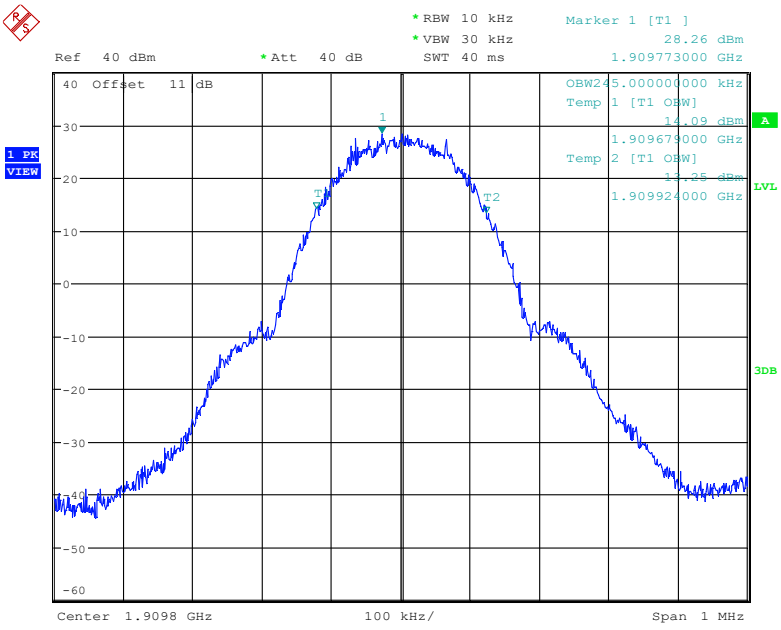


Date: 20.DEC.2022 16:13:22

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

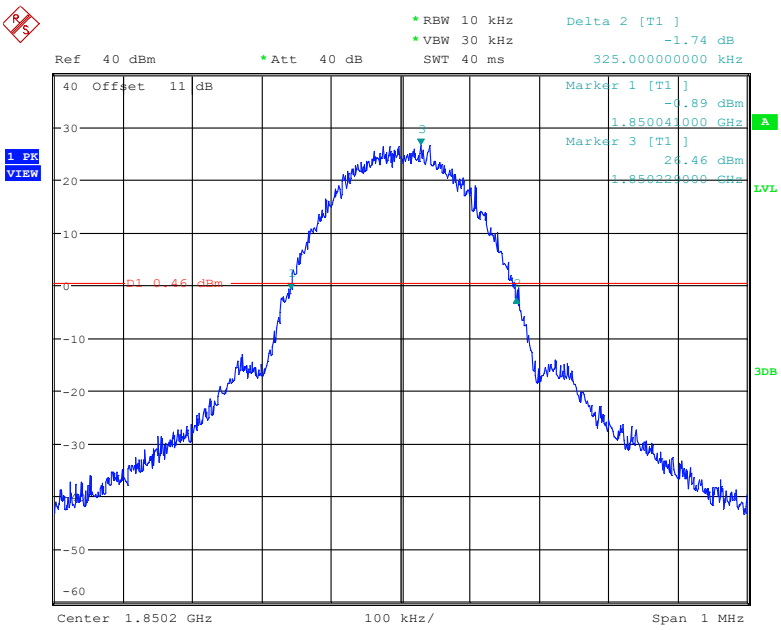


Date: 20.DEC.2022 16:19:41

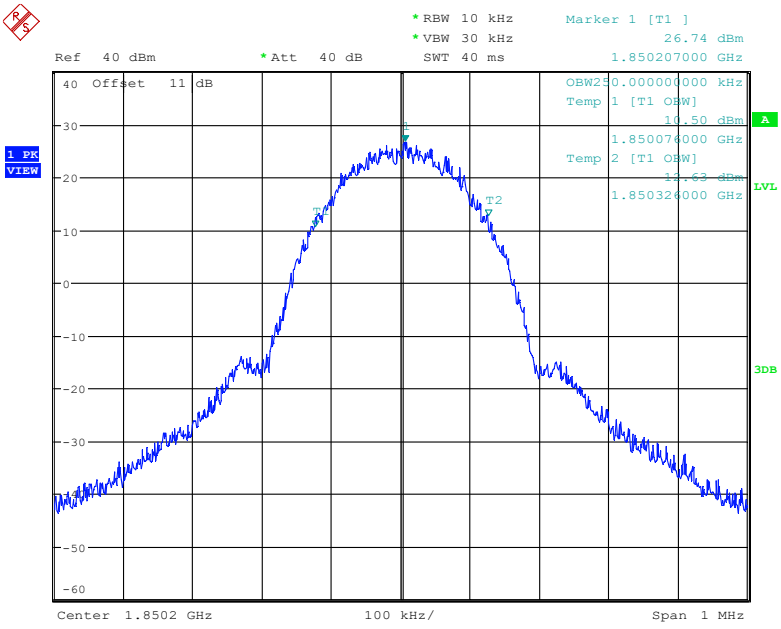


Date: 20.DEC.2022 16:19:02

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

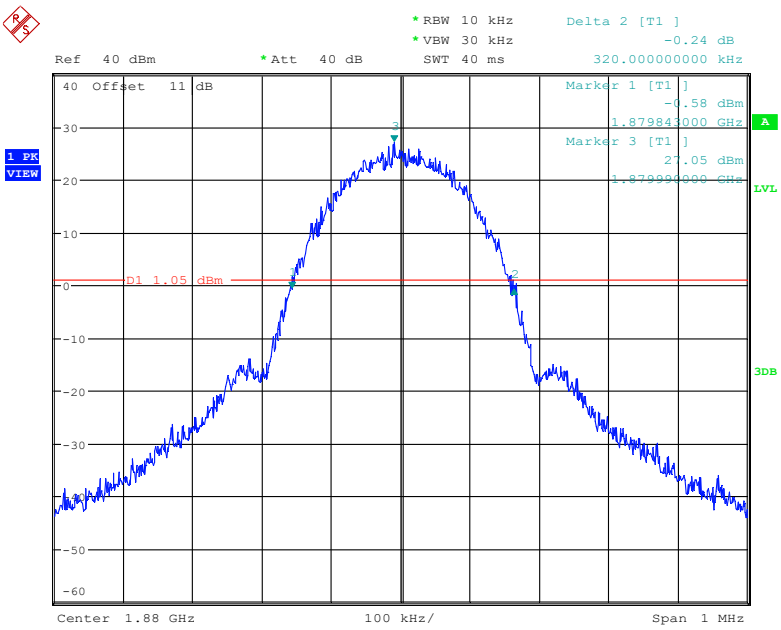


Date: 20.DEC.2022 16:28:48

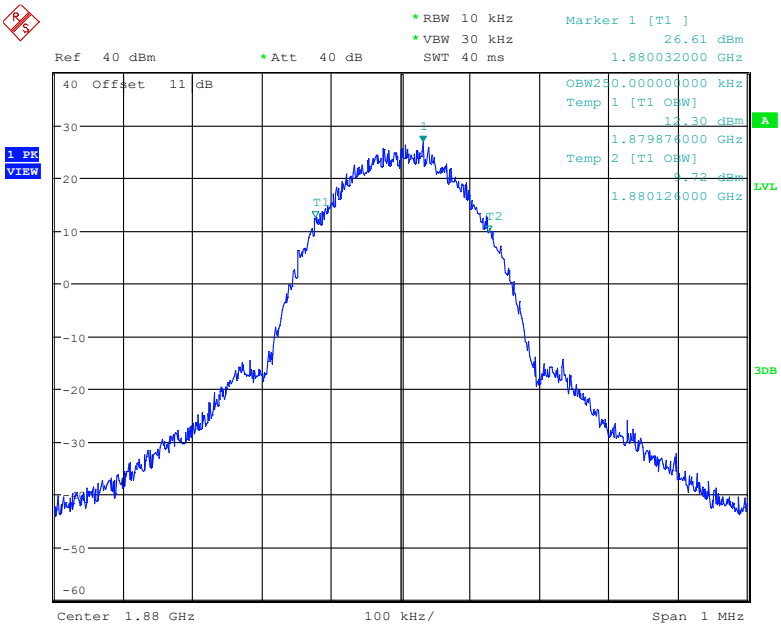


Date: 20.DEC.2022 16:28:10

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

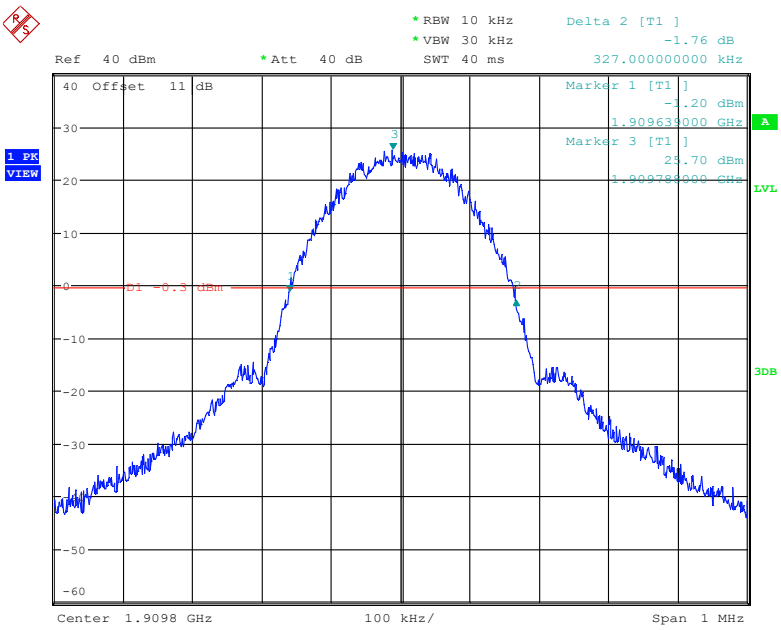


Date: 20.DEC.2022 16:36:18

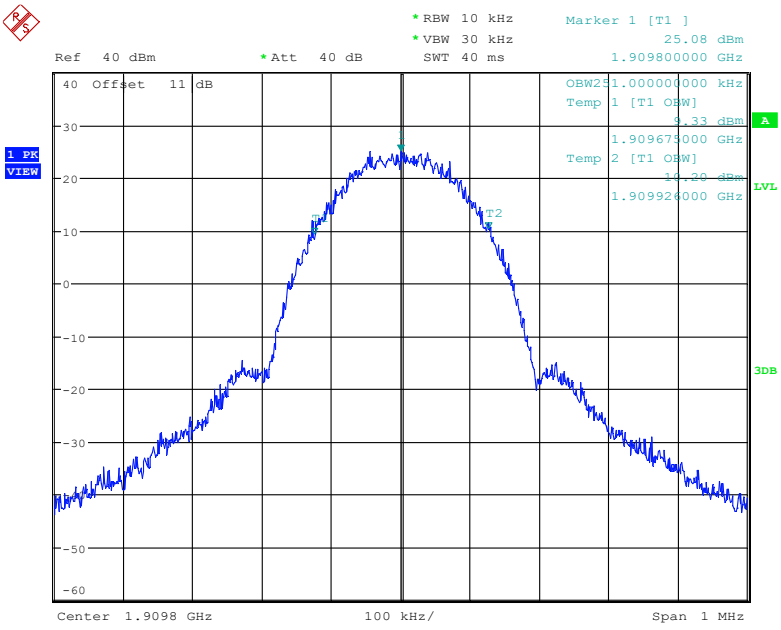


Date: 20.DEC.2022 16:35:29

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

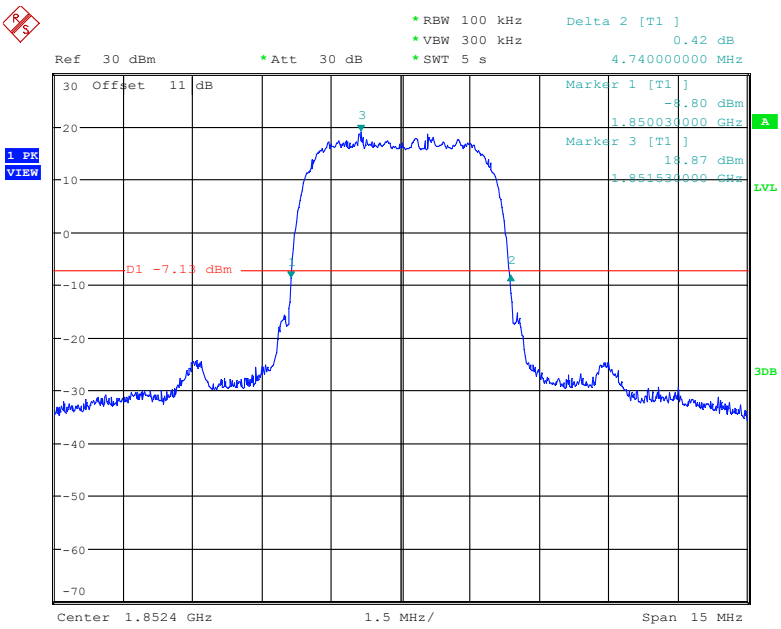


Date: 20.DEC.2022 16:43:31

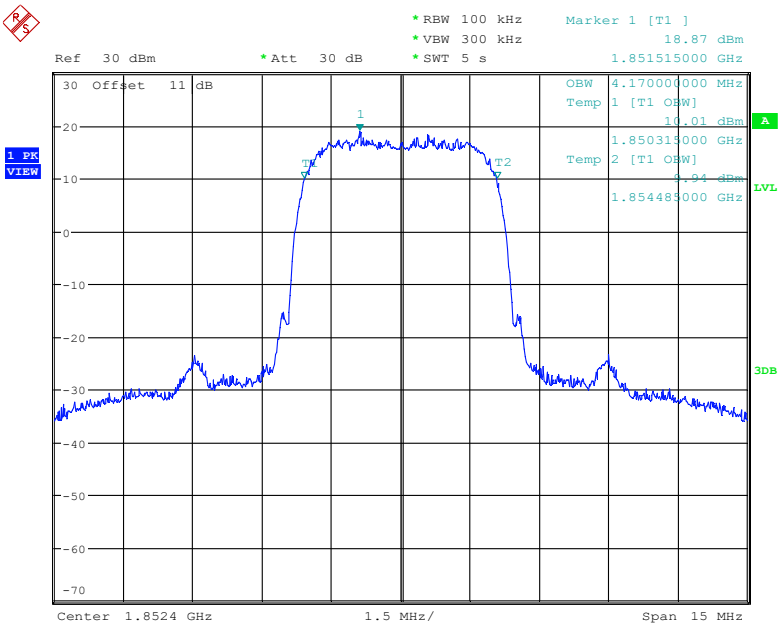


Date: 20.DEC.2022 16:42:51

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

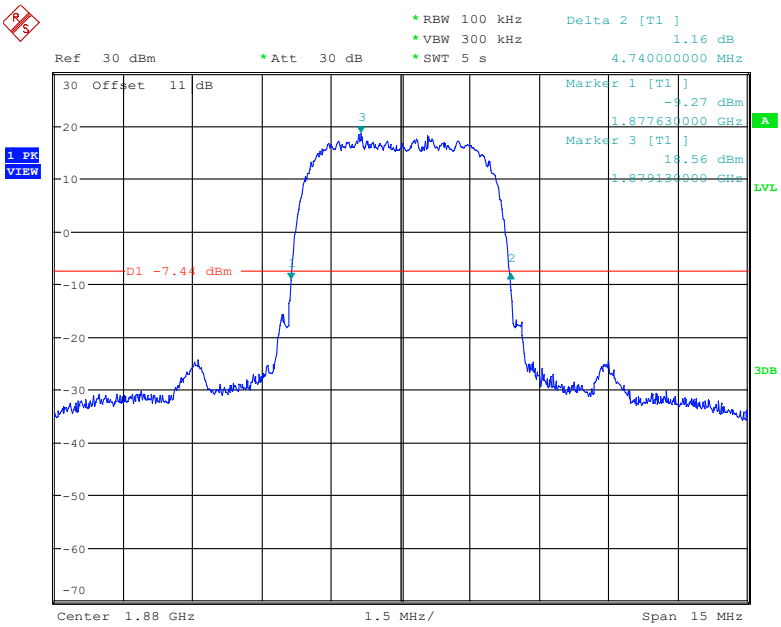


Date: 20.DEC.2022 16:53:13

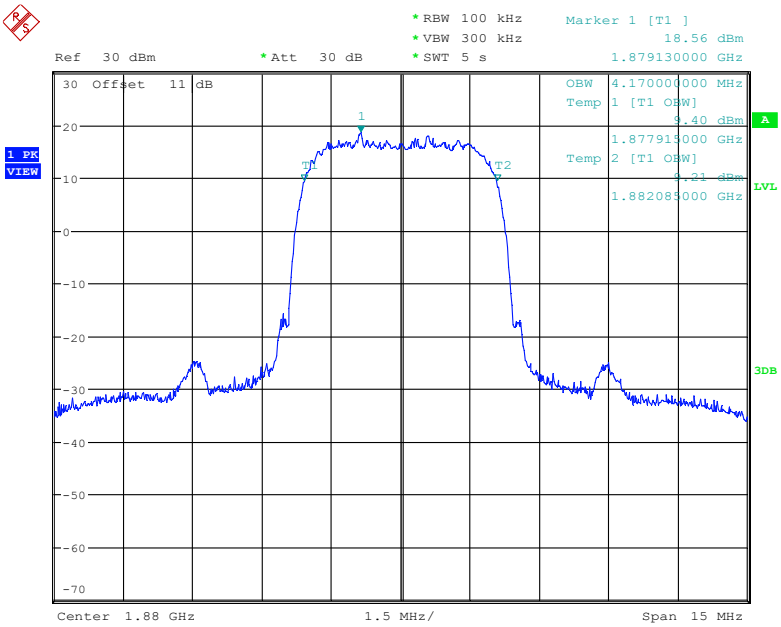


Date: 20.DEC.2022 16:52:34

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

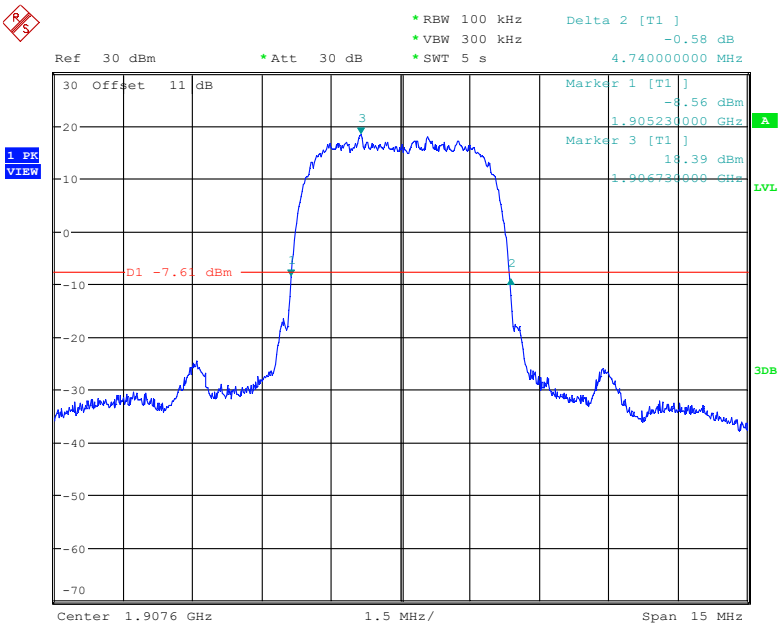


Date: 20.DEC.2022 16:59:45

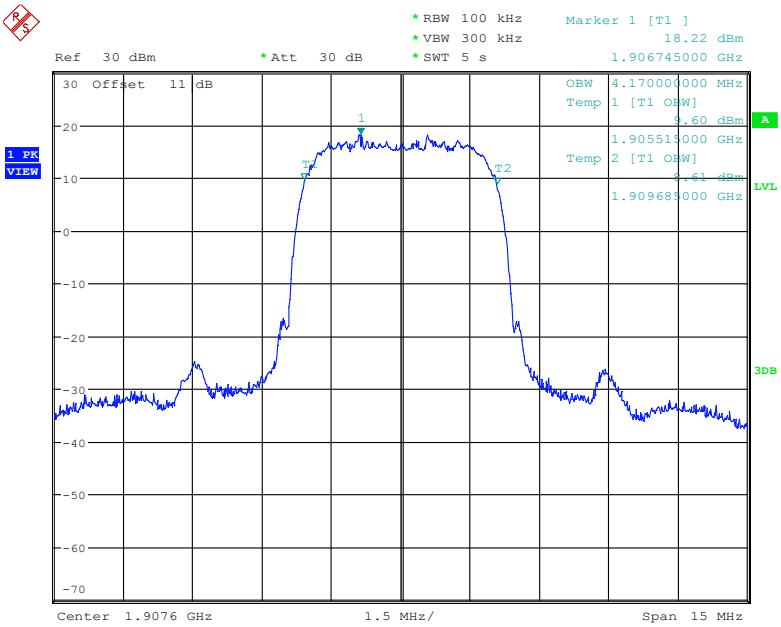


Date: 20.DEC.2022 16:59:04

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

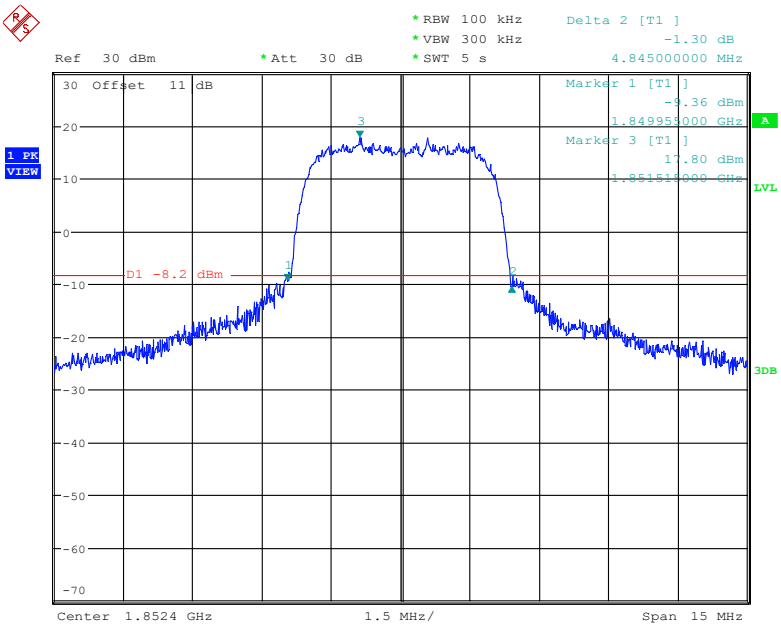


Date: 20.DEC.2022 17:09:55

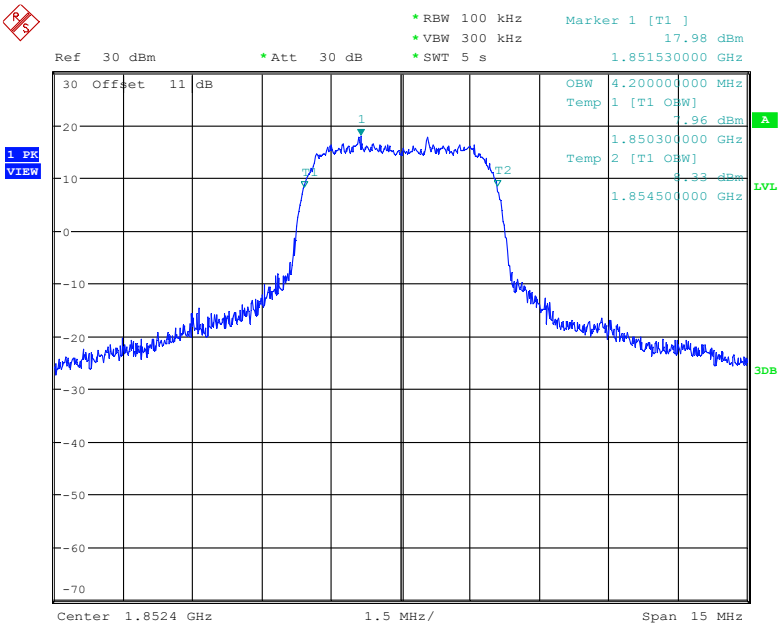


Date: 20.DEC.2022 17:09:16

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

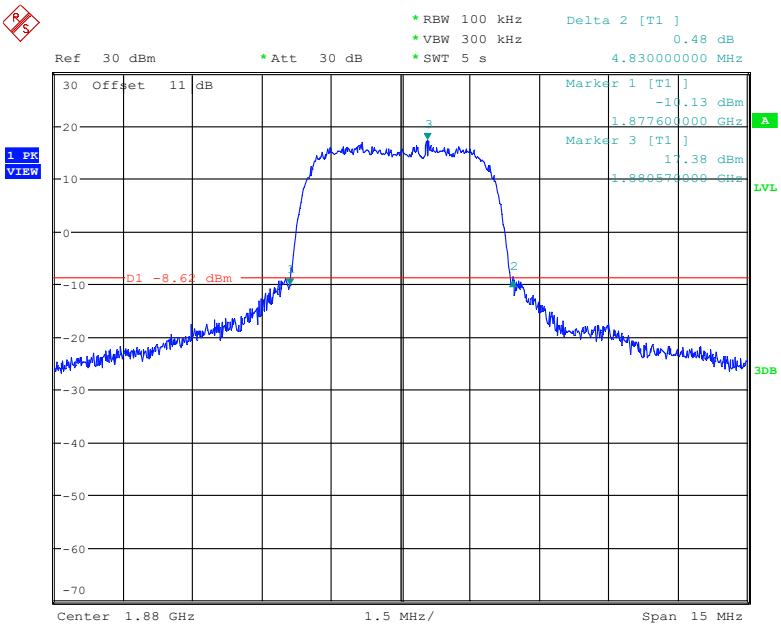


Date: 20.DEC.2022 18:38:34

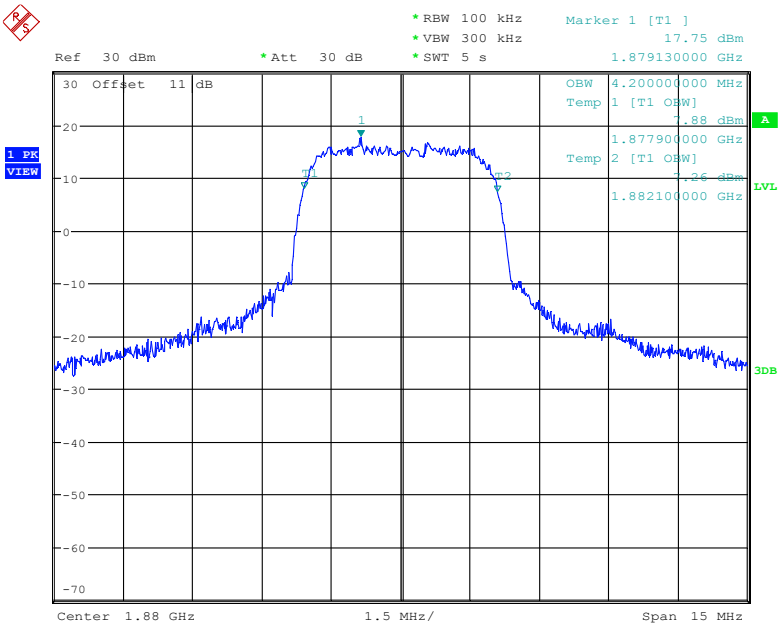


Date: 20.DEC.2022 18:37:54

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

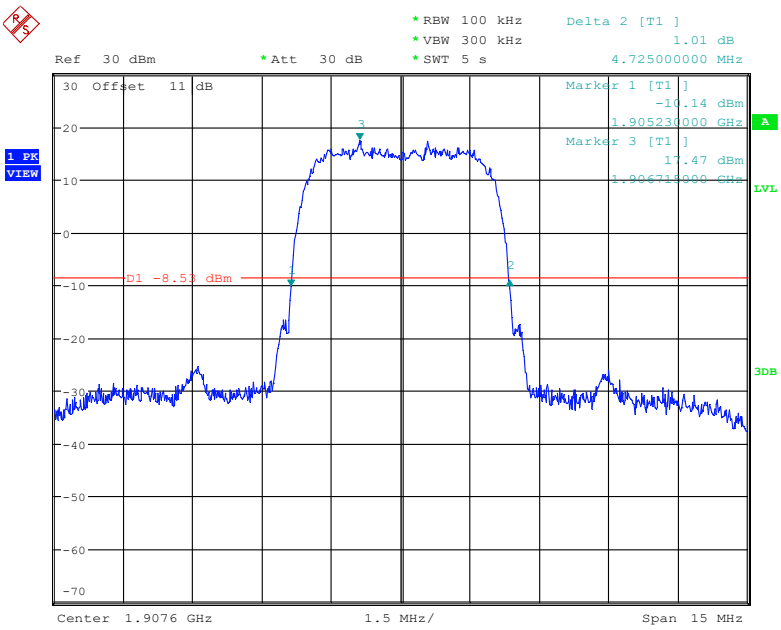


Date: 20.DEC.2022 18:44:46

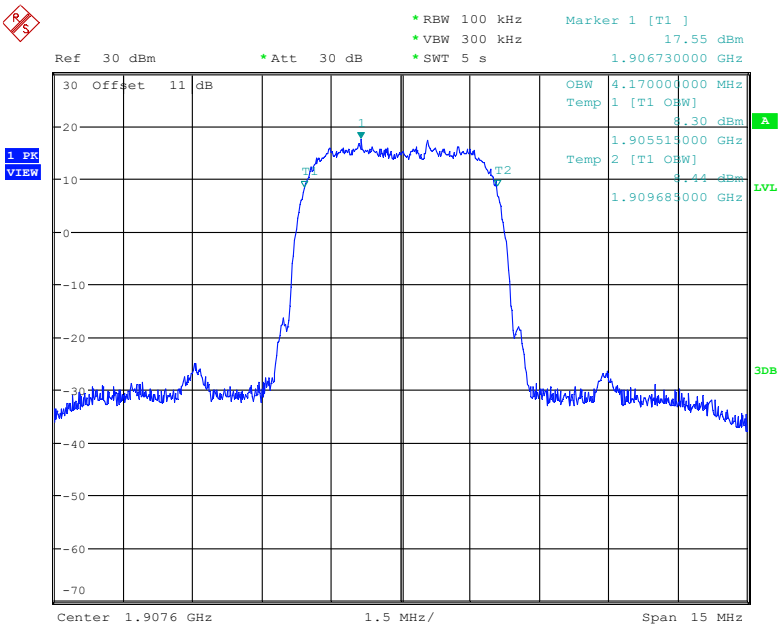


Date: 20.DEC.2022 18:44:07

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

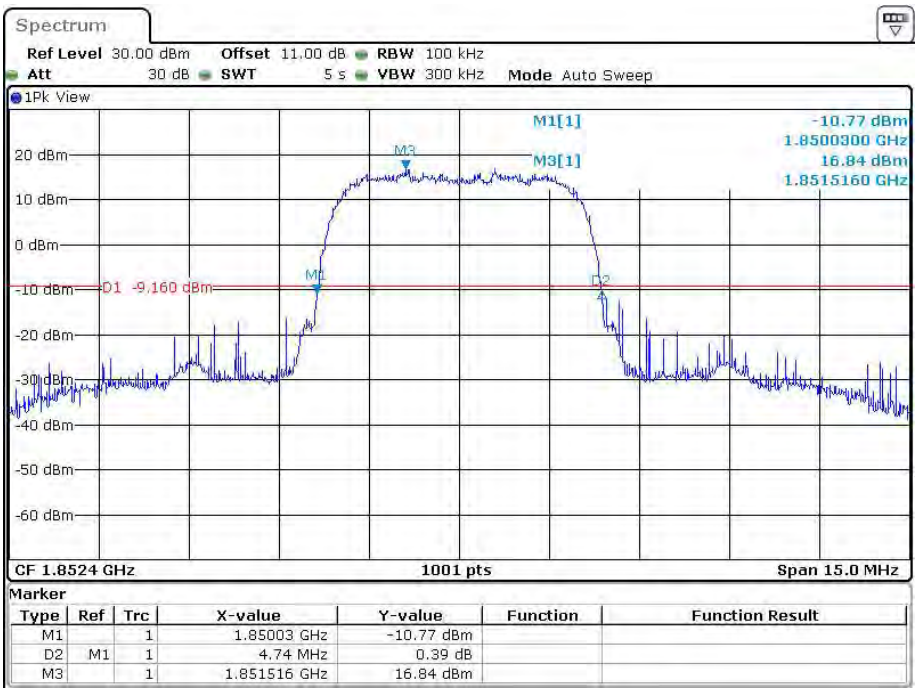


Date: 20.DEC.2022 18:49:03

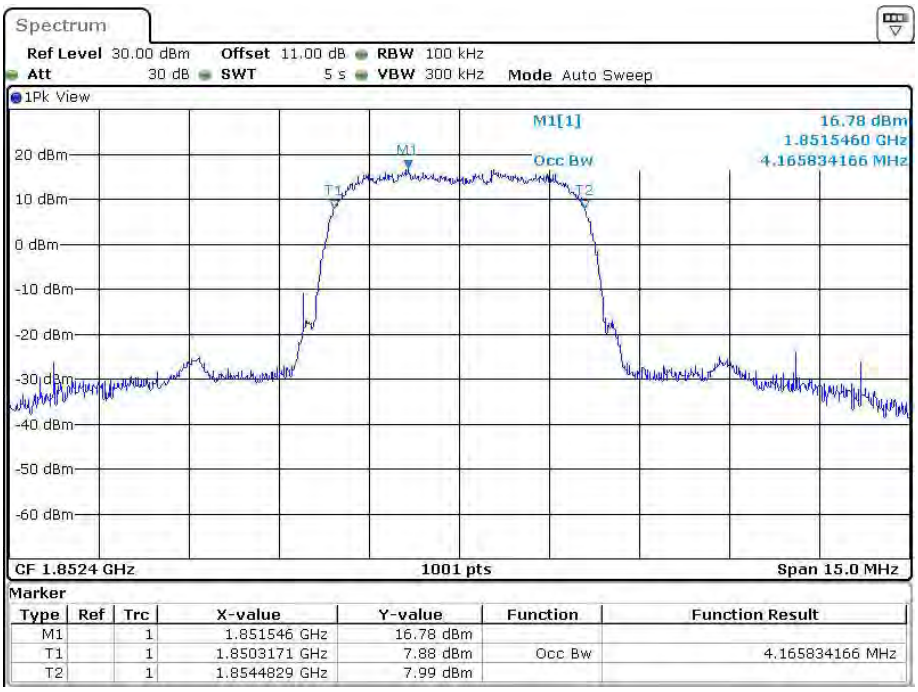


Date: 20.DEC.2022 18:48:22

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

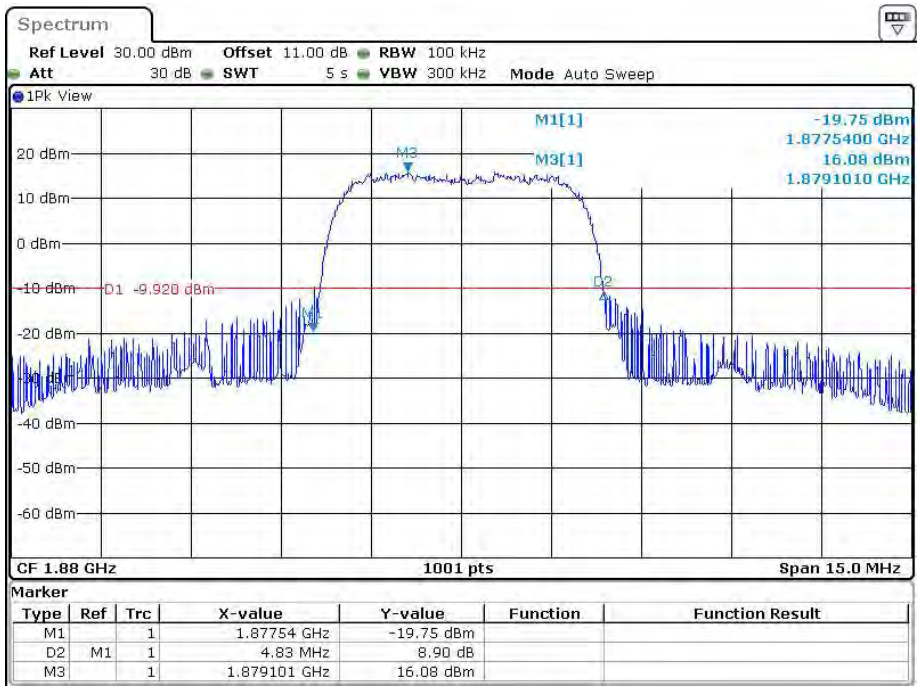


Date: 22.DEC.2022 15:45:22

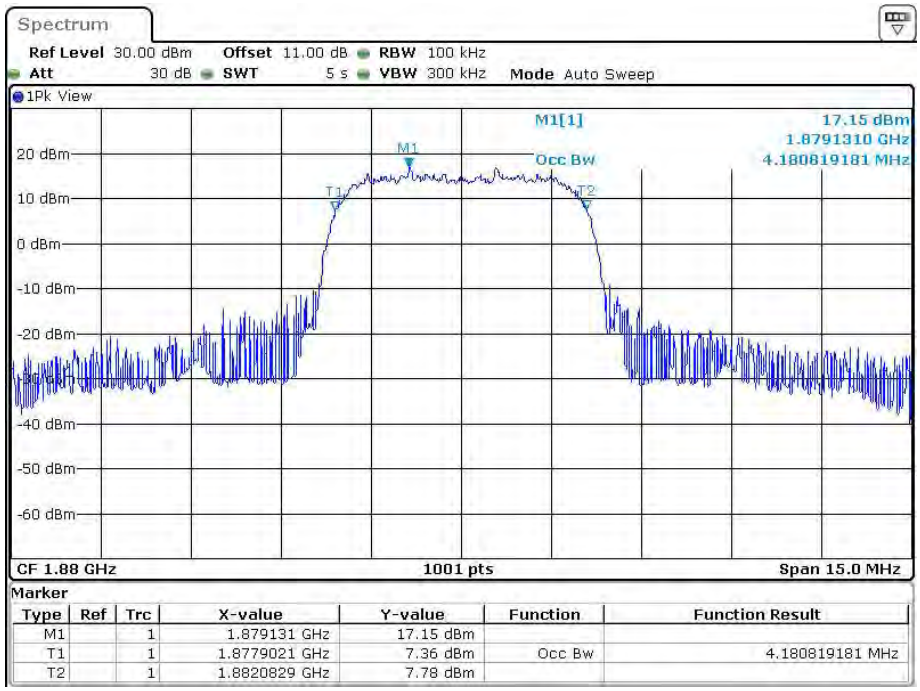


Date: 22.DEC.2022 15:44:43

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

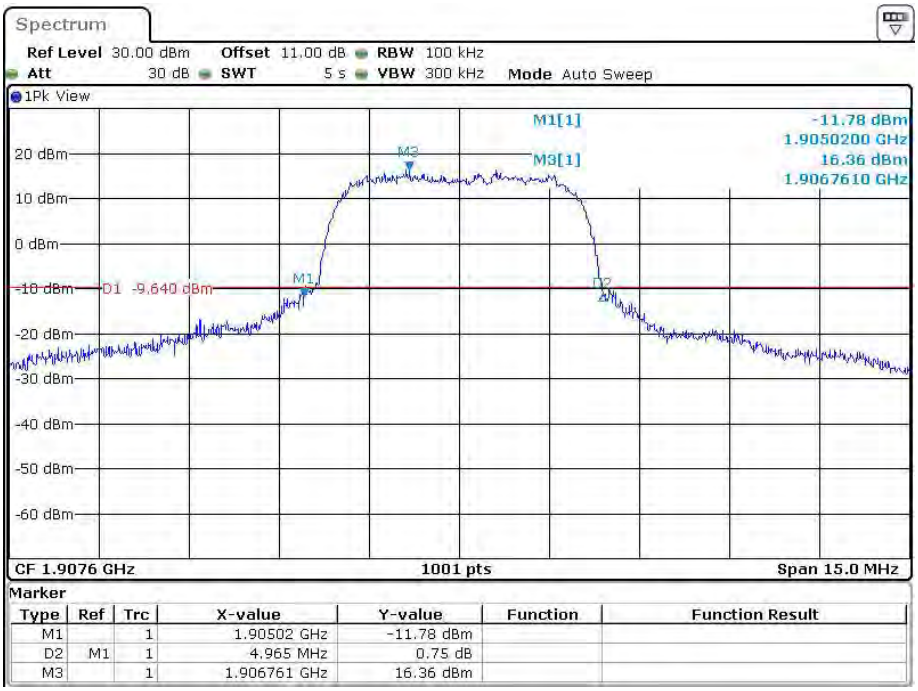


Date: 22.DEC.2022 15:58:14

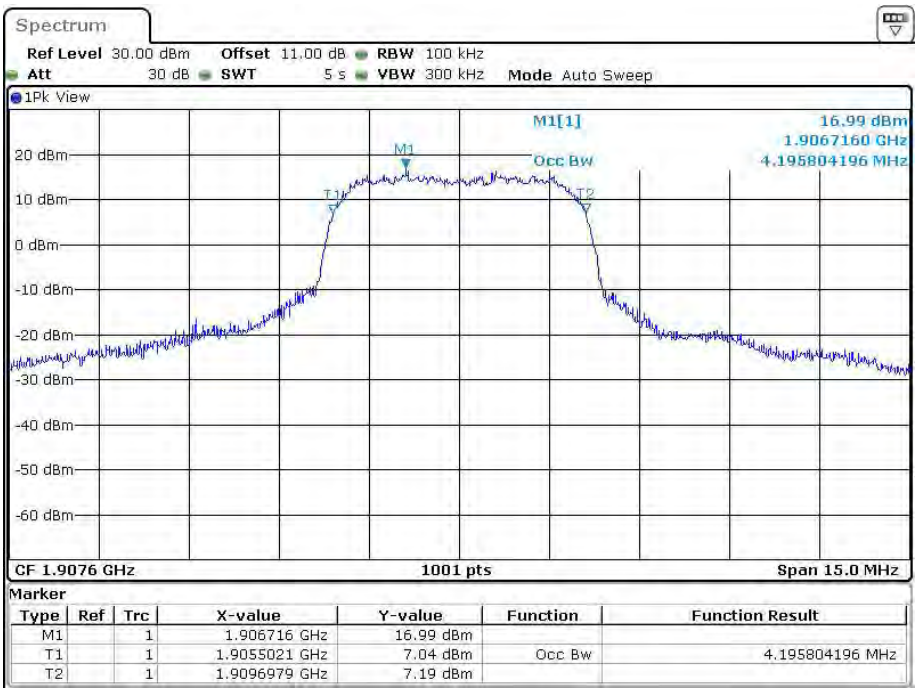


Date: 22.DEC.2022 15:57:35

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



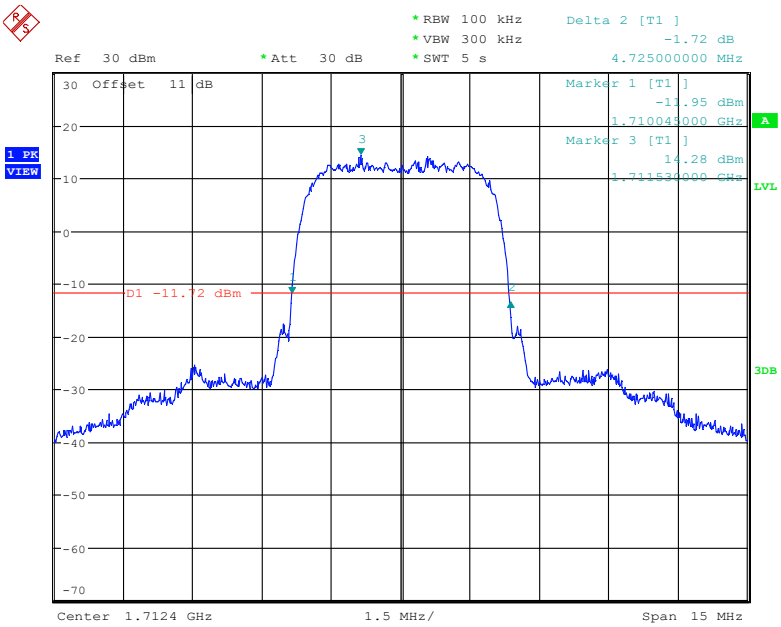
Date: 22.DEC.2022 15:54:08



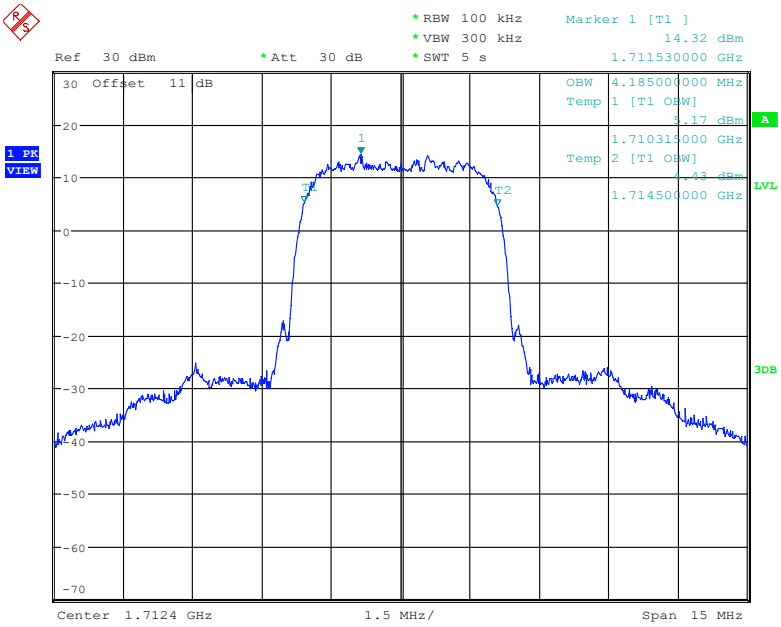
Date: 22.DEC.2022 15:53:29

AWS Band

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

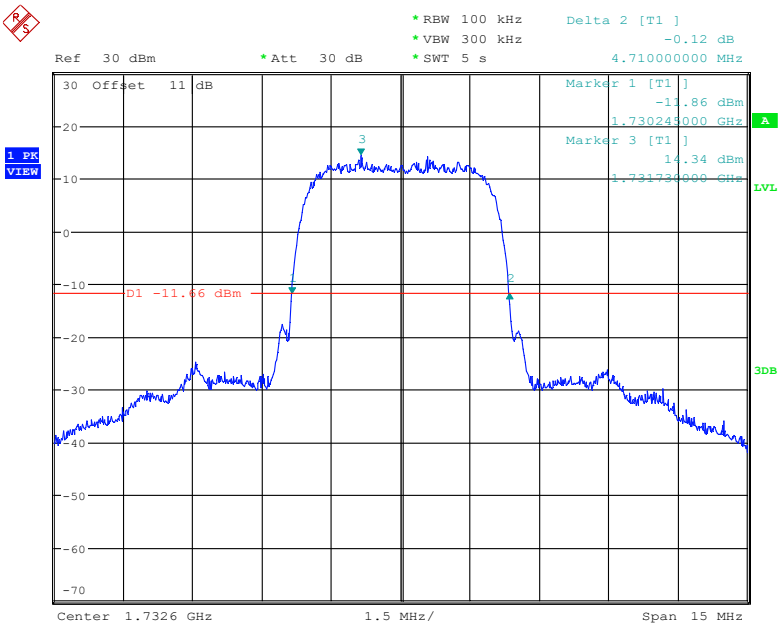


Date: 20.DEC.2022 17:16:49

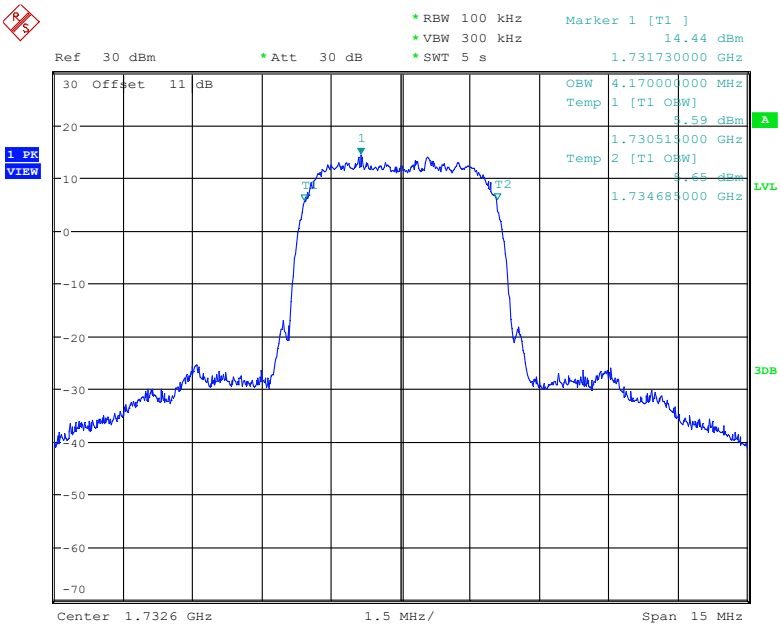


Date: 20.DEC.2022 17:16:08

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

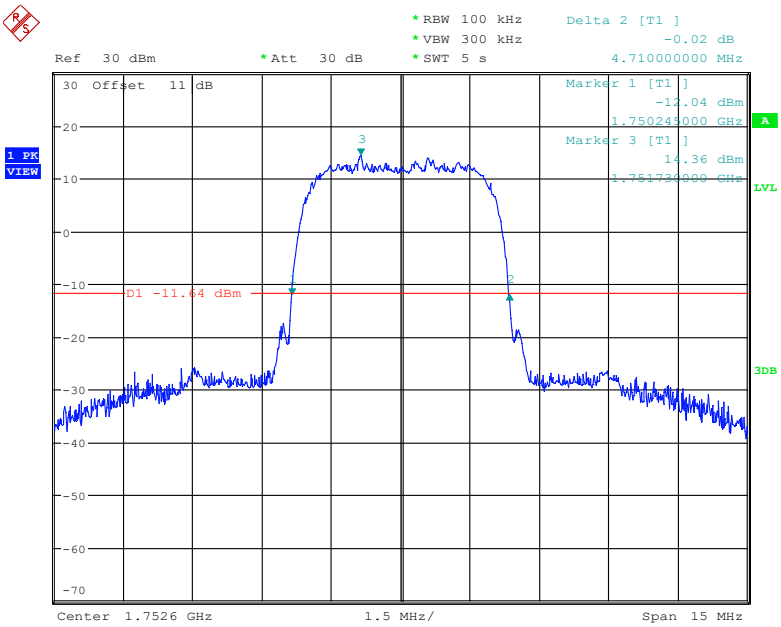


Date: 20.DEC.2022 17:20:55

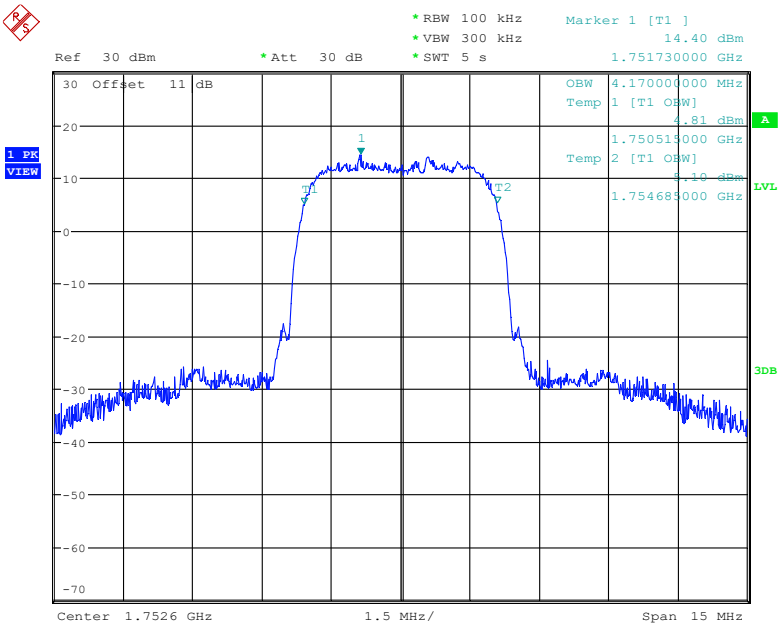


Date: 20.DEC.2022 17:20:14

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

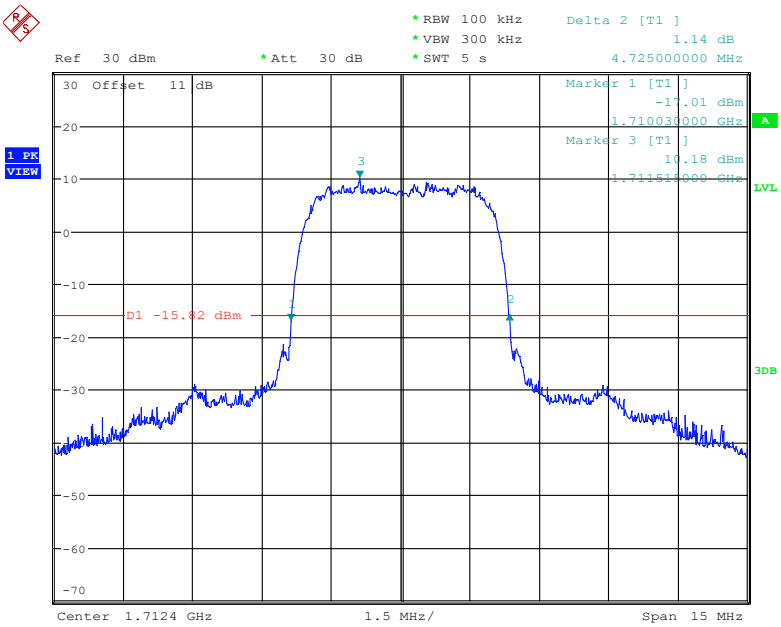


Date: 20.DEC.2022 17:24:23

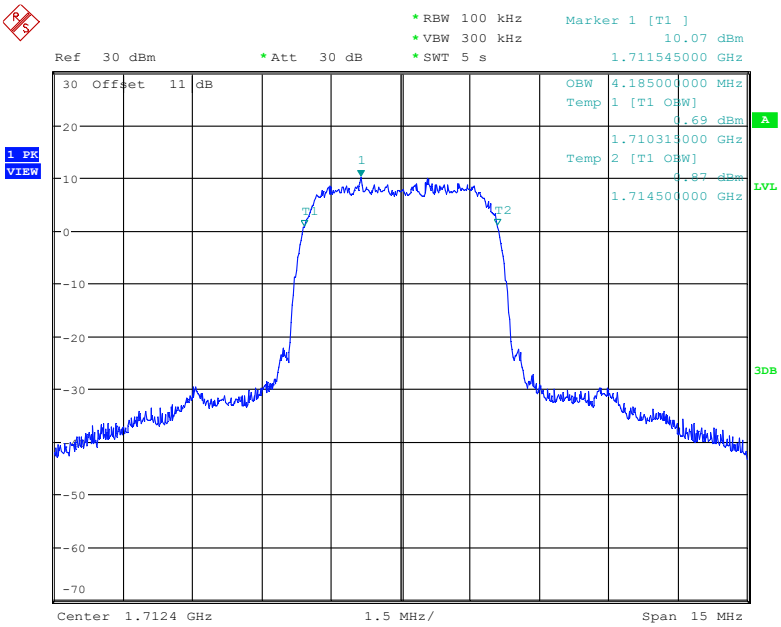


Date: 20.DEC.2022 17:23:44

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

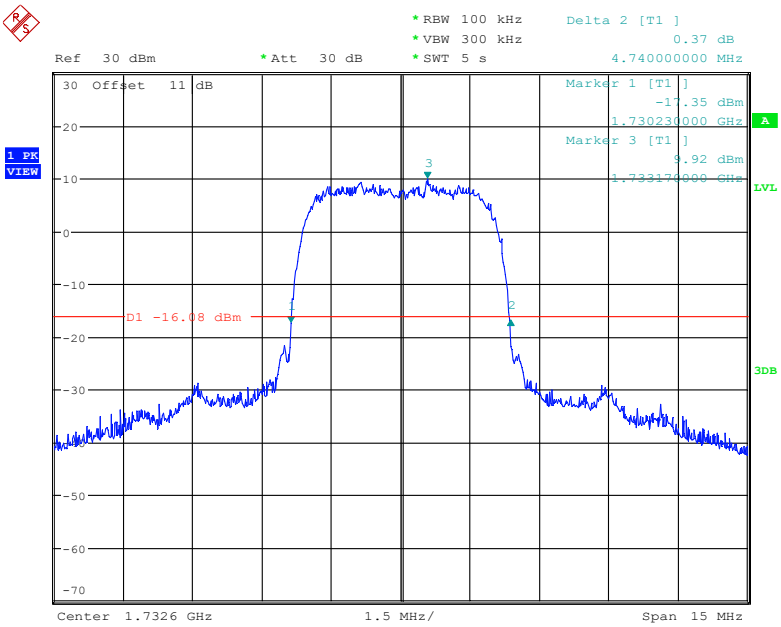


Date: 20.DEC.2022 18:23:48

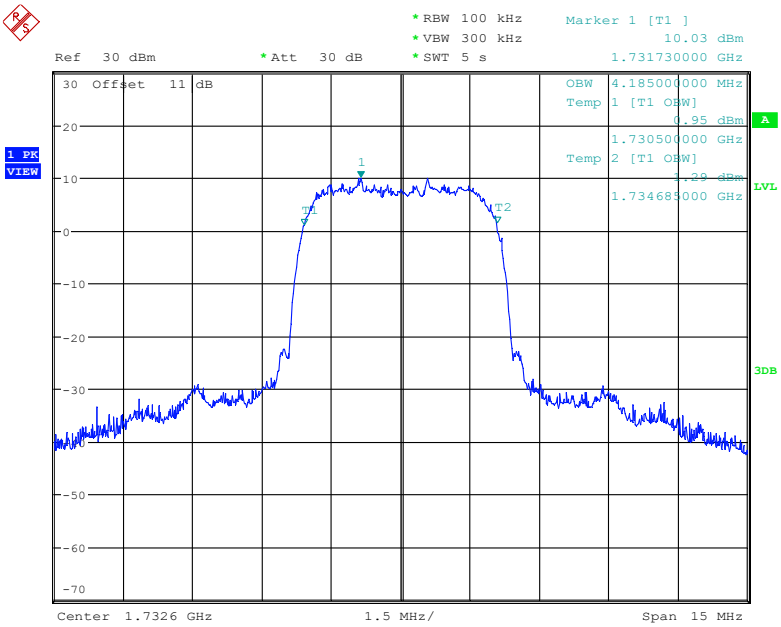


Date: 20.DEC.2022 18:23:08

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

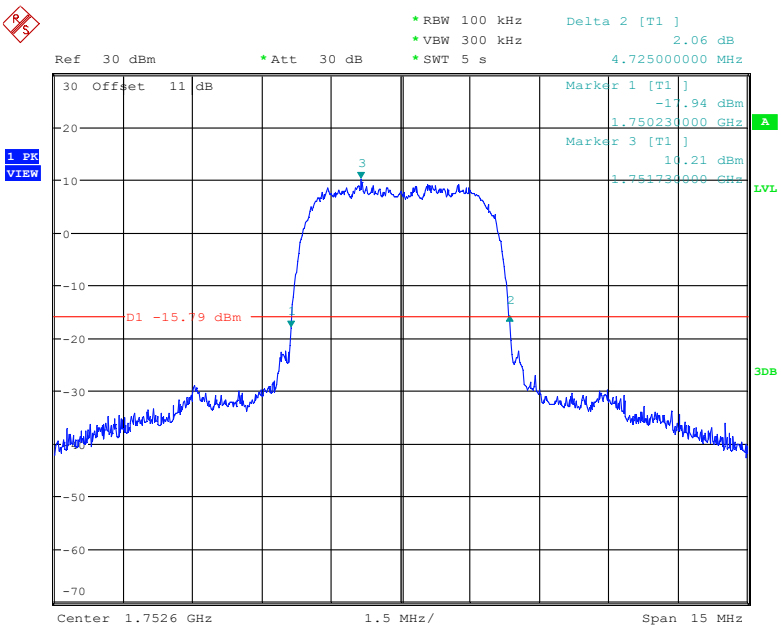


Date: 20.DEC.2022 18:27:58

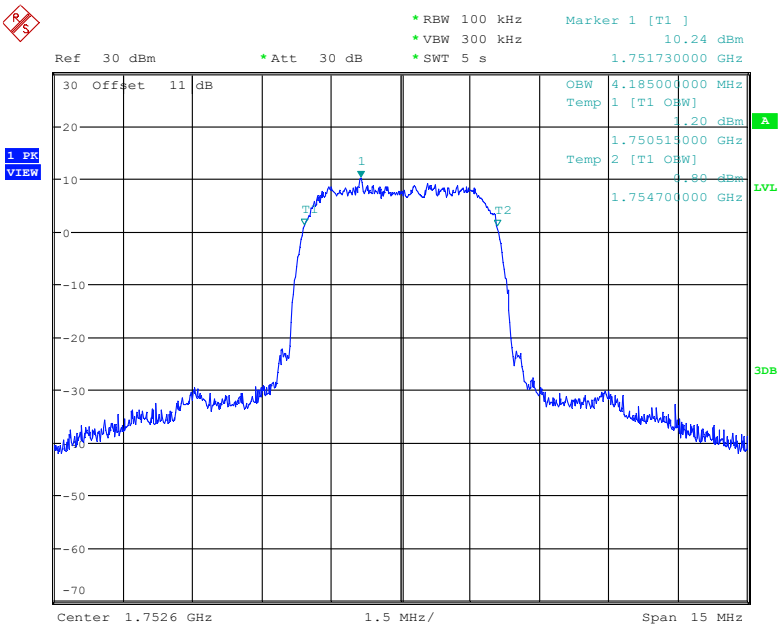


Date: 20.DEC.2022 18:27:19

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

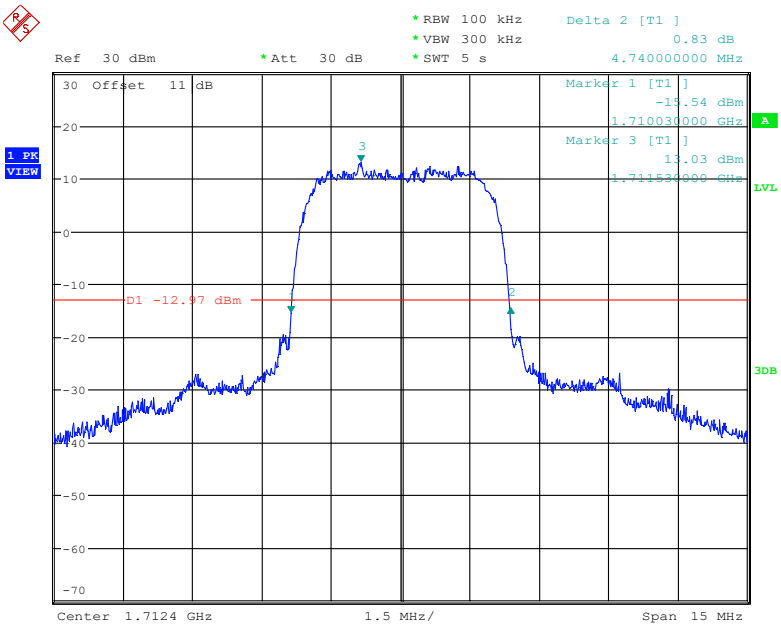


Date: 20.DEC.2022 18:31:38

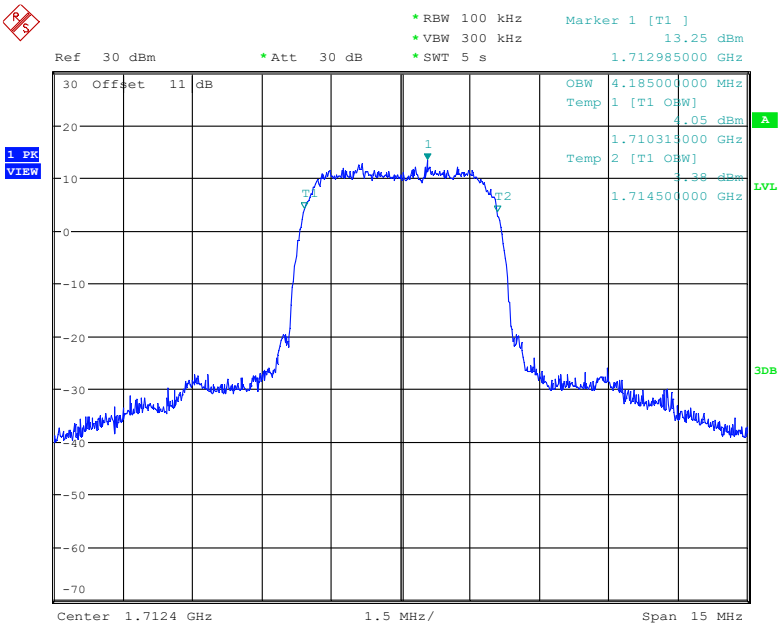


Date: 20.DEC.2022 18:30:59

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

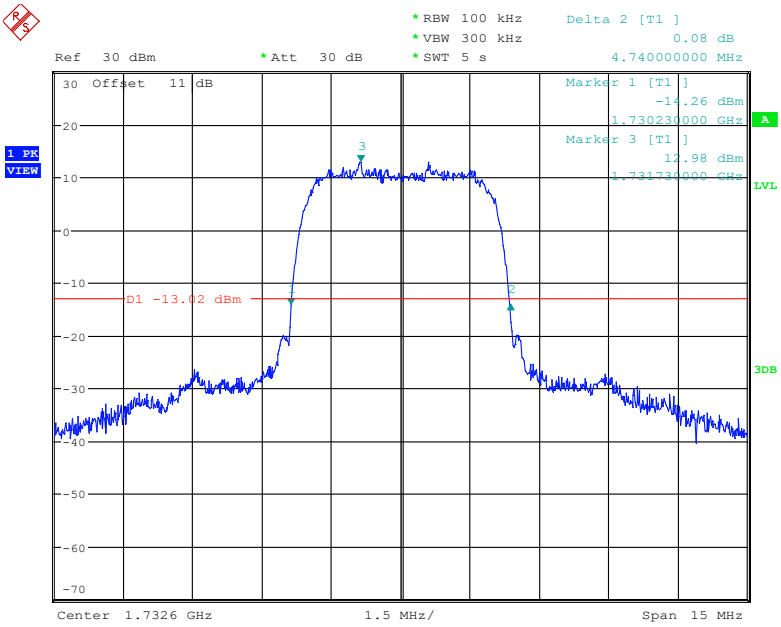


Date: 21.DEC.2022 09:33:34

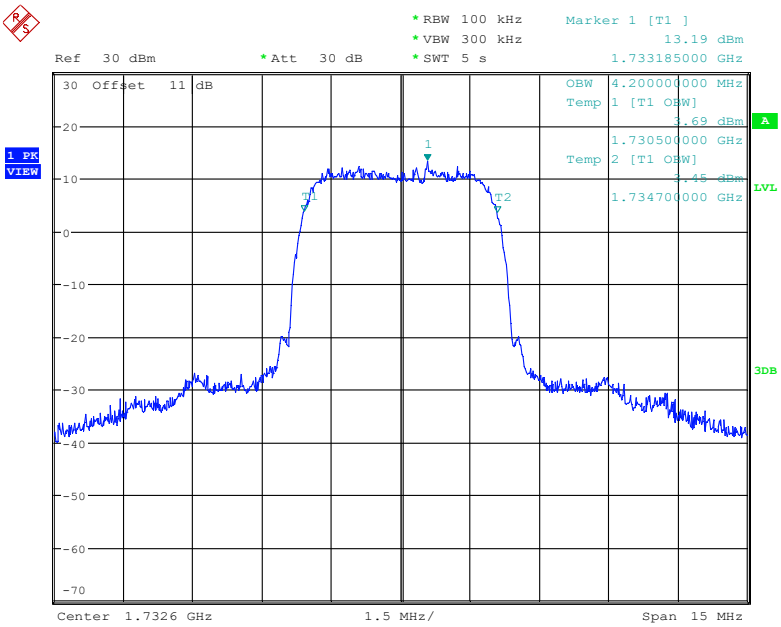


Date: 21.DEC.2022 09:32:49

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

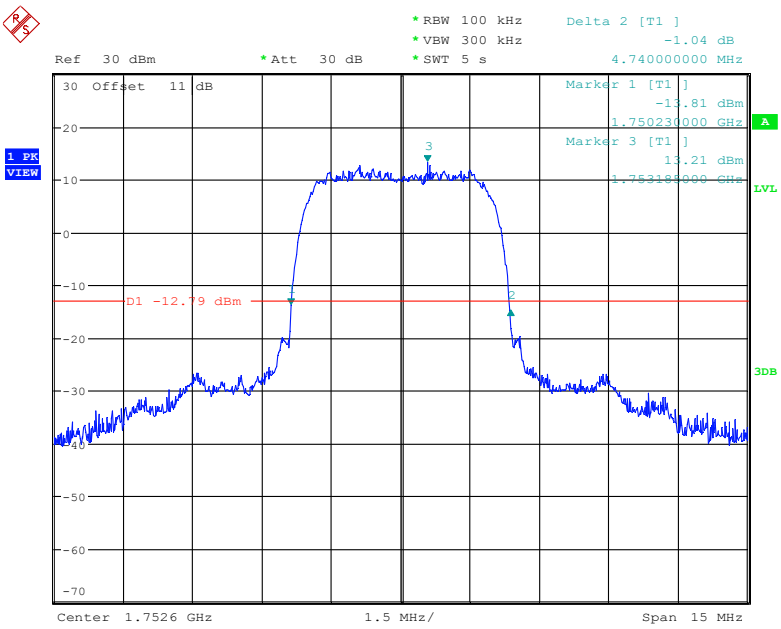


Date: 21.DEC.2022 09:37:36

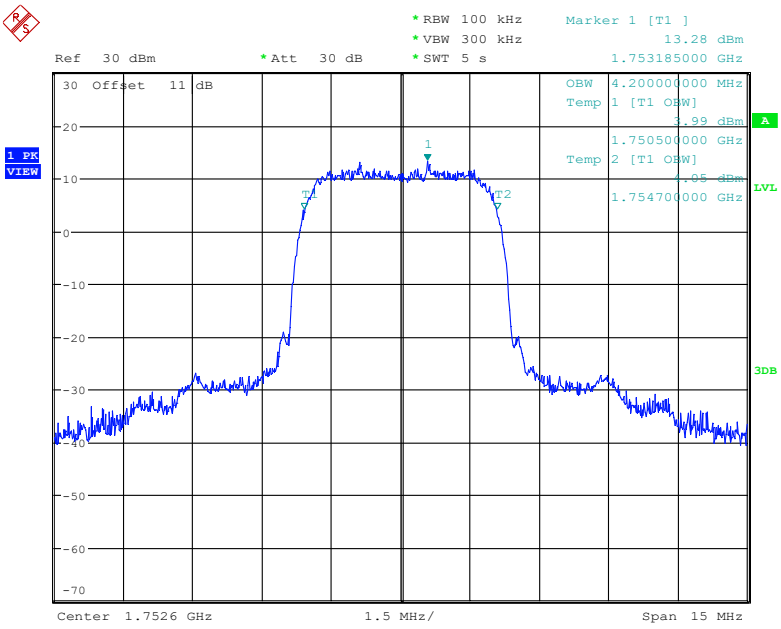


Date: 21.DEC.2022 09:36:57

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



Date: 21.DEC.2022 09:43:07



Date: 21.DEC.2022 09:42:28

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	1.098	1.296	1.110	1.290	1.098	1.302
	16QAM	1.092	1.296	1.098	1.314	1.110	1.326
3 MHz	QPSK	2.676	2.868	2.700	2.904	2.688	2.904
	16QAM	2.688	2.892	2.688	2.880	2.688	2.868
5 MHz	QPSK	4.500	4.920	4.520	4.960	4.520	4.940
	16QAM	4.500	4.940	4.500	4.920	4.520	4.920
10 MHz	QPSK	8.960	9.640	8.960	9.520	8.960	9.680
	16QAM	8.960	9.600	8.960	9.600	8.960	9.560
15 MHz	QPSK	13.500	15.060	13.500	14.760	13.440	14.760
	16QAM	13.500	14.820	13.500	14.820	13.560	14.700
20 MHz	QPSK	18.000	19.280	18.000	19.440	17.920	19.200
	16QAM	18.000	19.360	18.000	19.280	17.920	19.280

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	1.104	1.314	1.104	1.296	1.098	1.290
	16QAM	1.092	1.290	1.098	1.308	1.110	1.320
3 MHz	QPSK	2.676	2.880	2.688	2.880	2.688	2.880
	16QAM	2.688	2.880	2.688	2.880	2.688	2.856
5 MHz	QPSK	4.520	4.920	4.520	4.960	4.500	4.940
	16QAM	4.500	4.940	4.540	4.940	4.500	4.980
10 MHz	QPSK	8.960	9.640	8.960	9.600	8.960	9.560
	16QAM	8.960	9.560	8.960	9.680	8.960	9.560
15 MHz	QPSK	13.500	14.760	13.500	14.700	13.500	14.760
	16QAM	13.560	14.640	13.500	14.760	13.500	14.700
20 MHz	QPSK	17.920	19.440	18.000	19.360	18.000	19.440
	16QAM	18.000	19.200	18.000	19.440	18.000	19.440

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	1.104	1.308	1.110	1.290	1.110	1.302
	16QAM	1.092	1.290	1.098	1.290	1.104	1.320
3 MHz	QPSK	2.688	2.892	2.688	2.868	2.688	2.880
	16QAM	2.688	2.880	2.688	2.880	2.688	2.880
5 MHz	QPSK	4.500	4.940	4.520	4.940	4.520	4.900
	16QAM	4.520	4.960	4.500	4.940	4.520	4.960
10 MHz	QPSK	8.960	9.600	8.960	9.560	8.960	9.560
	16QAM	8.960	9.560	9.000	9.520	8.960	9.480

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	4.520	4.940	4.500	4.920	4.520	4.920
	16QAM	4.520	4.980	4.500	4.960	4.520	4.920
10 MHz	QPSK	9.000	9.720	8.960	9.600	8.960	9.600
	16QAM	8.960	9.560	8.960	9.640	8.960	9.520
15 MHz	QPSK	13.500	14.760	13.500	14.820	13.500	14.700
	16QAM	13.500	14.820	13.500	14.760	13.500	14.760
20 MHz	QPSK	18.000	19.440	18.000	19.360	18.000	19.360
	16QAM	17.920	19.360	18.000	19.440	18.000	19.360

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	1.104	1.290	1.104	1.302	1.098	1.302
	16QAM	1.098	1.296	1.110	1.326	1.092	1.290
3 MHz	QPSK	2.688	2.892	2.676	2.880	2.688	2.892
	16QAM	2.688	2.880	2.688	2.880	2.688	3.048
5 MHz	QPSK	4.520	5.140	4.540	5.140	4.540	5.160
	16QAM	4.540	5.160	4.560	5.200	4.540	5.140
10 MHz	QPSK	9.000	9.960	8.960	9.880	8.960	9.840
	16QAM	9.000	9.800	9.000	10.000	8.960	10.880

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	4.540	5.180	4.540	5.180	4.560	5.220
	16QAM	4.540	5.160	4.540	5.240	4.540	5.180
10 MHz	QPSK	8.960	9.840	8.960	9.800	8.960	9.800
	16QAM	8.960	9.720	8.960	9.840	8.960	9.760

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	4.500	5.040	4.520	4.940	4.520	4.960
	16QAM	4.500	5.020	4.520	5.120	4.520	5.160
10 MHz	QPSK	8.960	9.920	8.960	9.680	8.960	9.600
	16QAM	8.960	9.600	8.960	9.520	8.960	9.440
15 MHz	QPSK	13.500	15.540	13.560	14.820	13.500	14.820
	16QAM	13.620	16.260	13.560	14.820	13.620	15.240
20 MHz	QPSK	18.000	19.920	17.920	19.520	18.000	19.360
	16QAM	18.000	19.440	17.920	19.440	18.000	19.360

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	4.520	5.200	4.500	5.032	4.520	5.120
	16QAM	4.540	5.096	4.540	4.840	4.520	5.120
10 MHz	QPSK	9.000	9.600	8.960	9.920	8.960	9.760
	16QAM	9.000	10.080	9.000	13.680	8.960	9.640
15 MHz	QPSK	13.500	14.700	13.560	18.720	13.560	15.300
	16QAM	13.560	19.860	13.620	20.760	13.500	15.192
20 MHz	QPSK	18.000	19.520	18.080	20.000	18.000	19.600
	16QAM	18.000	20.080	18.000	24.960	18.000	19.600

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	1.098	1.314	1.098	1.296	1.098	1.296
	16QAM	1.092	1.296	1.092	1.302	1.104	1.308
3 MHz	QPSK	2.688	2.880	2.688	2.892	2.688	2.868
	16QAM	2.688	2.880	2.688	2.880	2.688	2.892
5 MHz	QPSK	4.520	5.120	4.520	5.120	4.520	5.160
	16QAM	4.540	5.220	4.560	5.240	4.520	5.060
10 MHz	QPSK	8.960	9.760	8.960	9.880	8.960	9.800
	16QAM	8.960	9.760	8.960	9.800	8.960	9.800
15 MHz	QPSK	13.500	15.540	13.560	15.240	13.560	15.120
	16QAM	13.500	15.180	13.500	15.060	13.560	15.060
20 MHz	QPSK	18.000	19.600	18.000	19.680	18.000	19.760
	16QAM	18.000	19.600	18.000	19.600	18.000	19.760

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

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

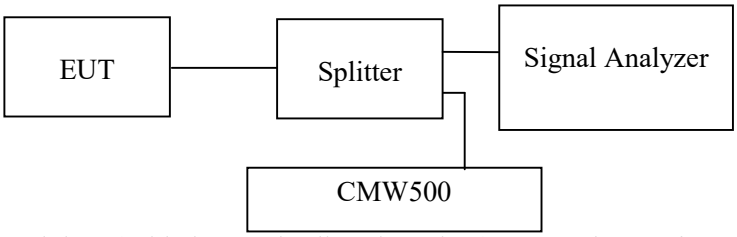
Applicable Standard

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

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 10^{th} harmonic.



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

Test Data

Environmental Conditions

Temperature:	25~27.2 ℃
Relative Humidity:	52~56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang from 2022-12-20 on 2022-12-26.

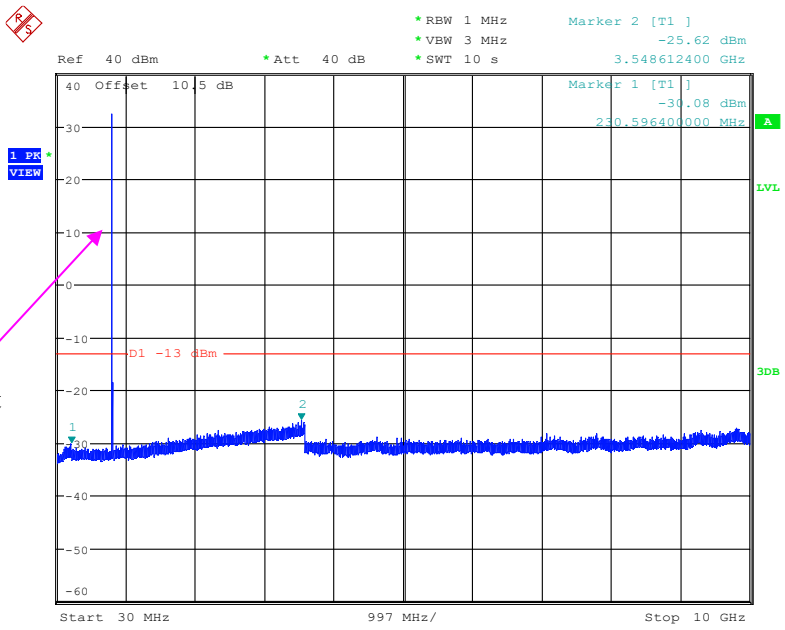
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

Cellular Band (Part 22H)
Low Channel:

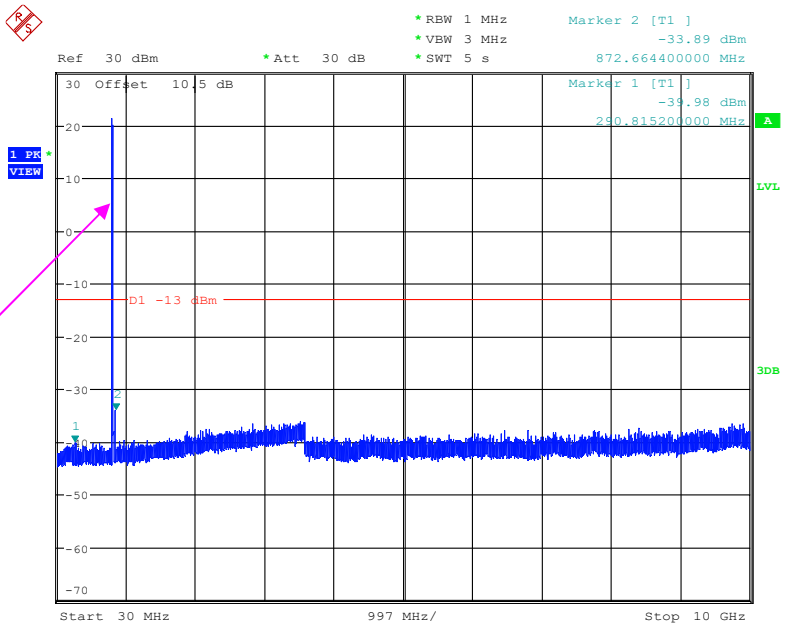
30 MHz – 10 GHz (GSM Mode)



Fundamental test

Date: 20.DEC.2022 15:20:12

30 MHz – 10 GHz (WCDMA Mode)

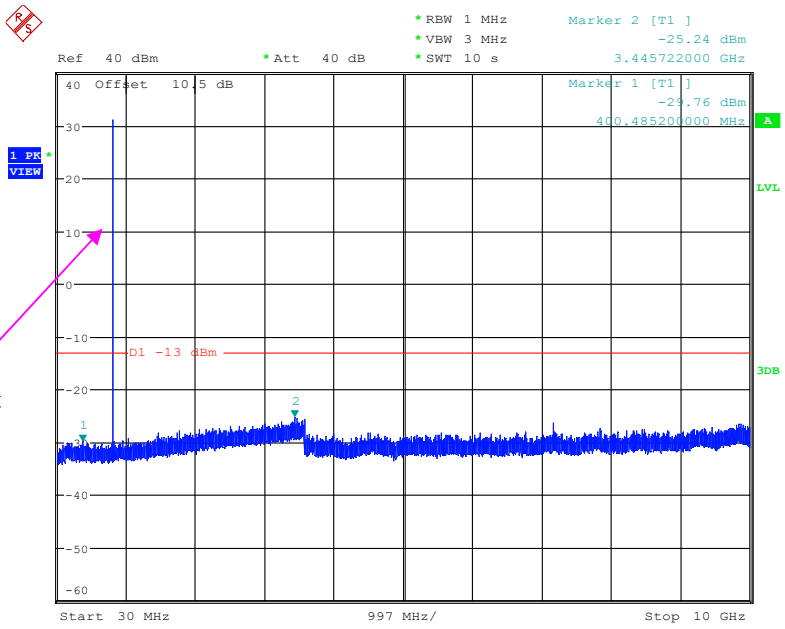


Fundamental test

Date: 27.DEC.2022 18:50:14

Middle Channel:

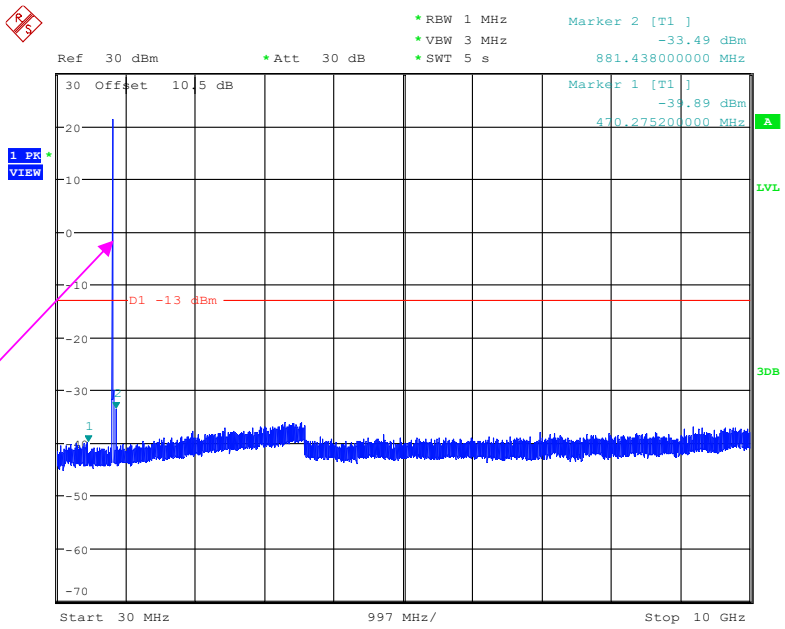
30 MHz – 10 GHz (GSM Mode)



Fundamental test

Date: 20.DEC.2022 15:24:29

30 MHz – 10 GHz (WCDMA Mode)

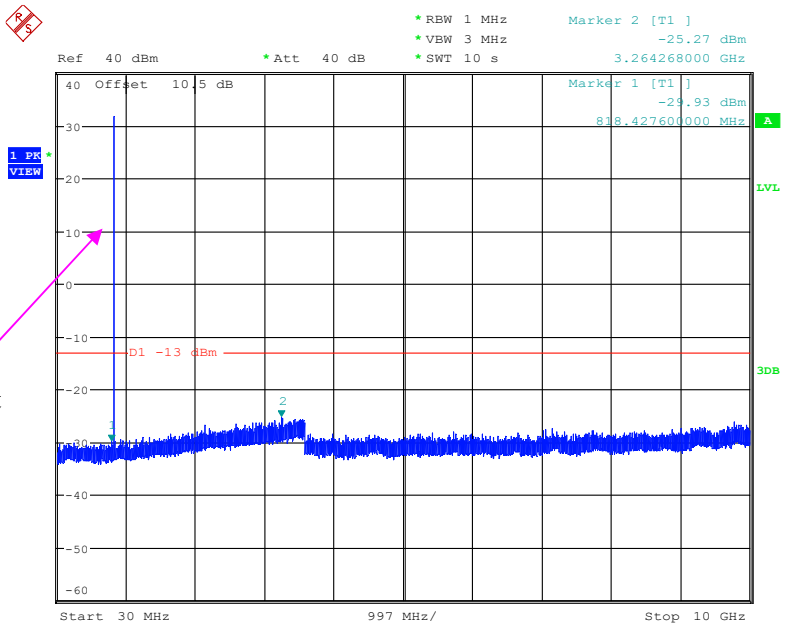


Fundamental test

Date: 27.DEC.2022 18:48:46

High Channel:

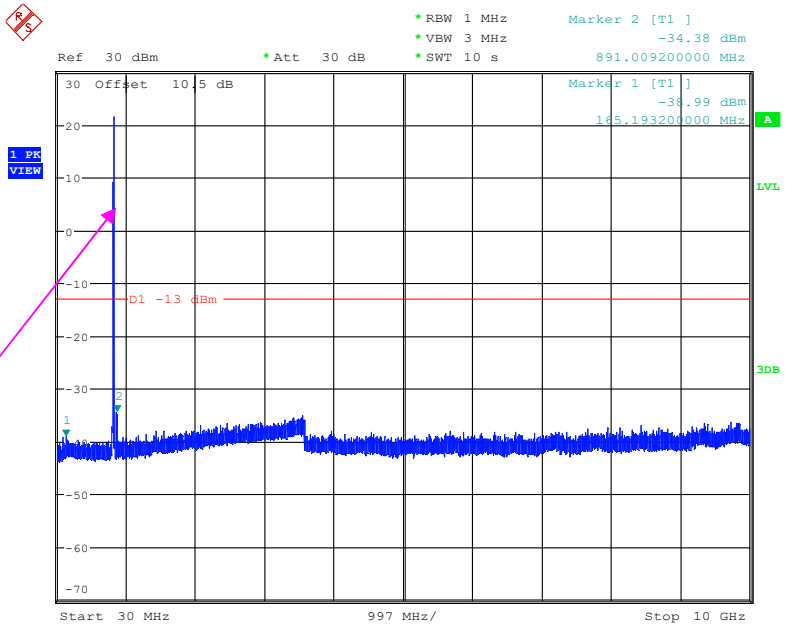
30 MHz – 10 GHz (GSM Mode)



Fundamental test

Date: 20.DEC.2022 15:40:17

30 MHz – 10 GHz (WCDMA Mode)

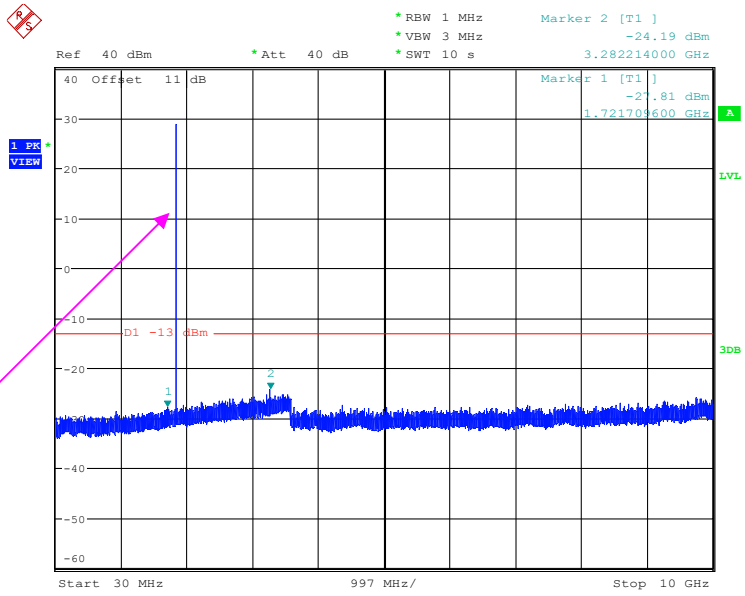


Fundamental test

Date: 20.DEC.2022 17:58:40

PCS Band (Part 24E)
Low Channel:

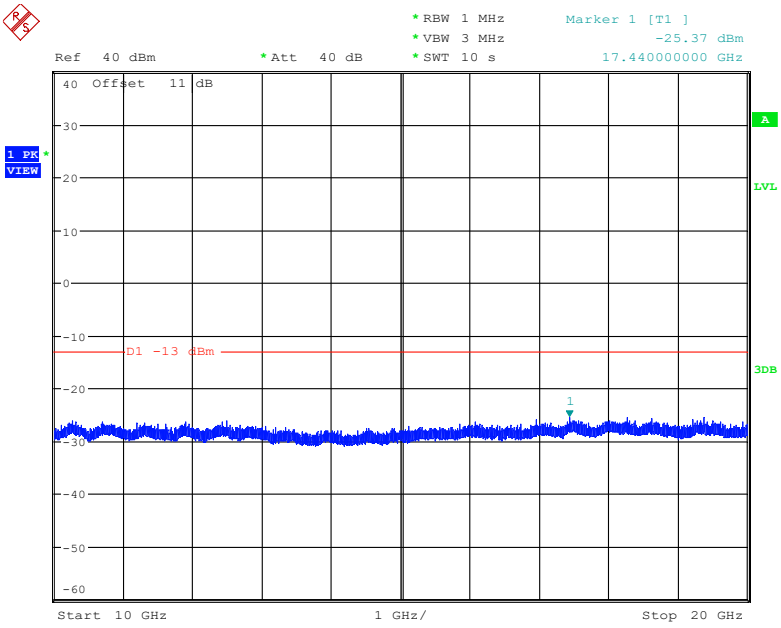
30 MHz – 10 GHz (GSM Mode)



Fundamental test

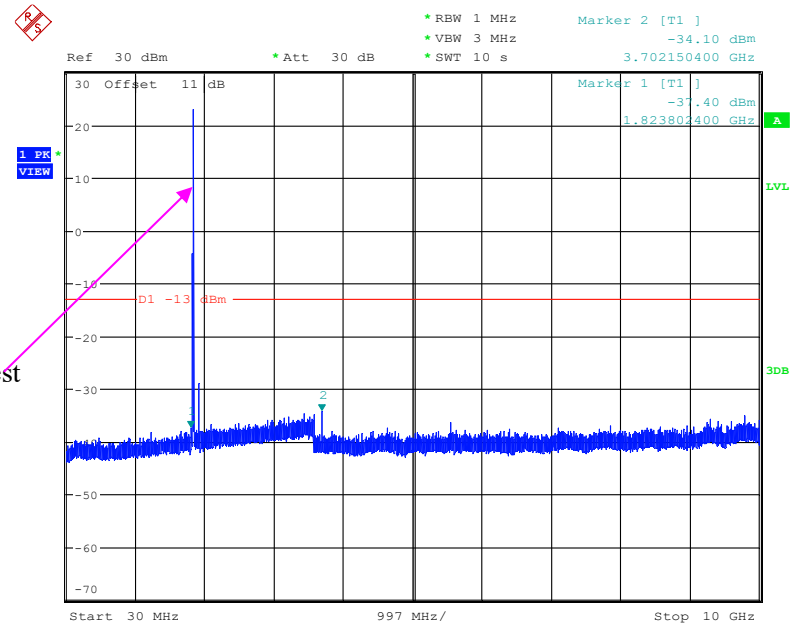
Date: 20.DEC.2022 16:10:13

10 GHz – 20 GHz (GSM Mode)



Date: 20.DEC.2022 16:11:26

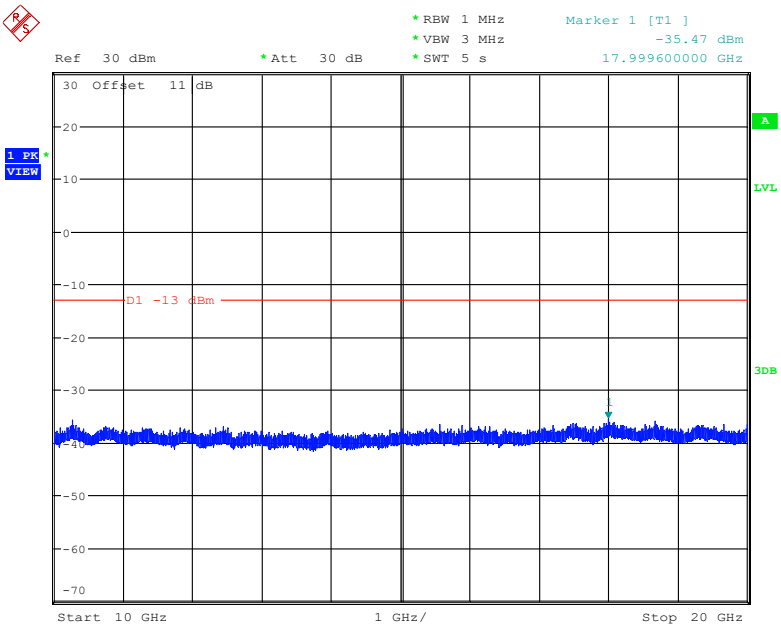
30 MHz – 10 GHz (WCDMA Mode)



Fundamental test

Date: 20.DEC.2022 16:56:55

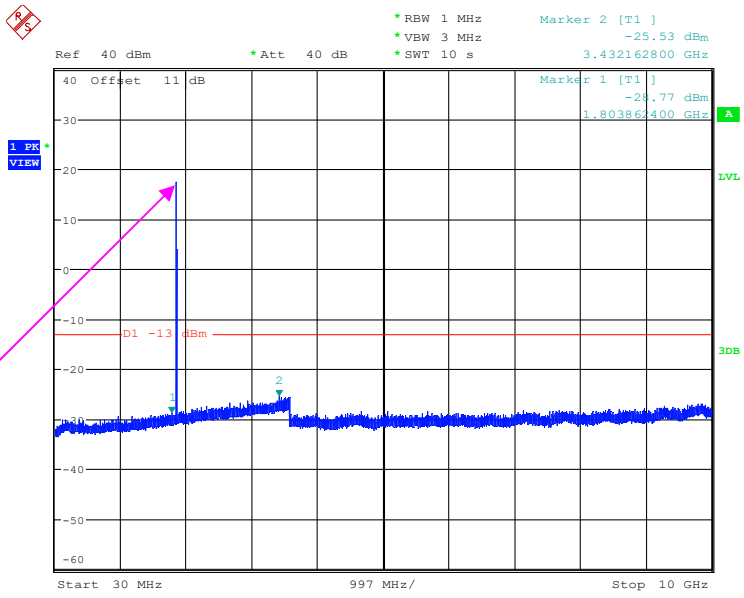
10 GHz – 20 GHz (WCDMA Mode)



Date: 20.DEC.2022 16:57:36

Middle Channel:

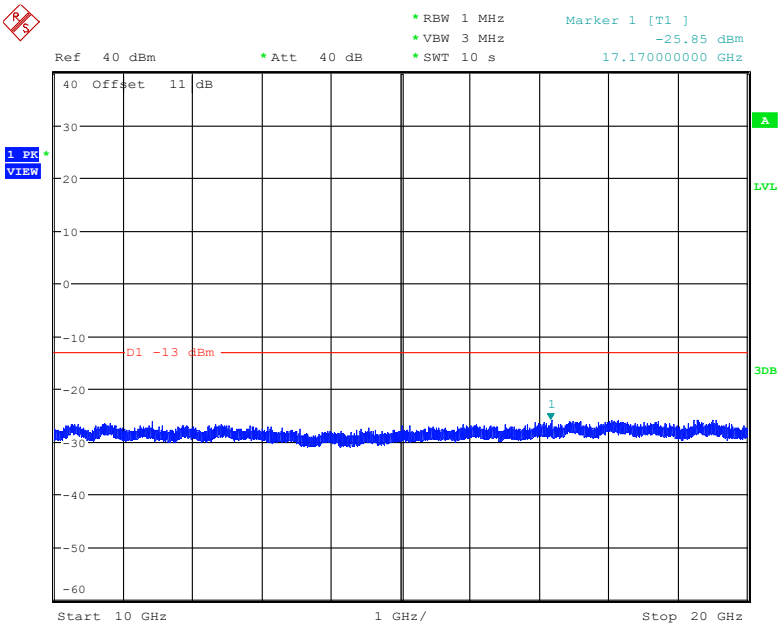
30 MHz – 10 GHz (GSM Mode)



Fundamental test

Date: 20.DEC.2022 16:15:13

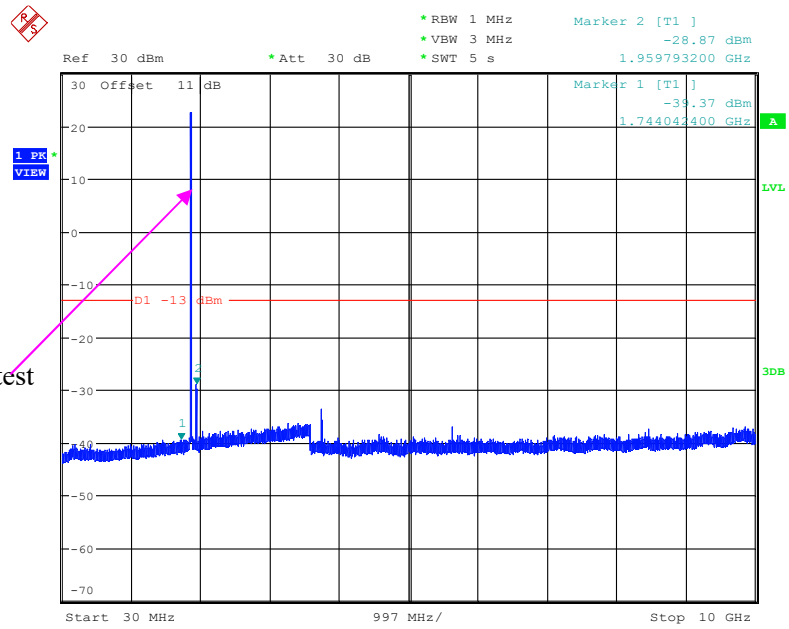
10 GHz – 20 GHz (GSM Mode)



Date: 20.DEC.2022 16:16:25

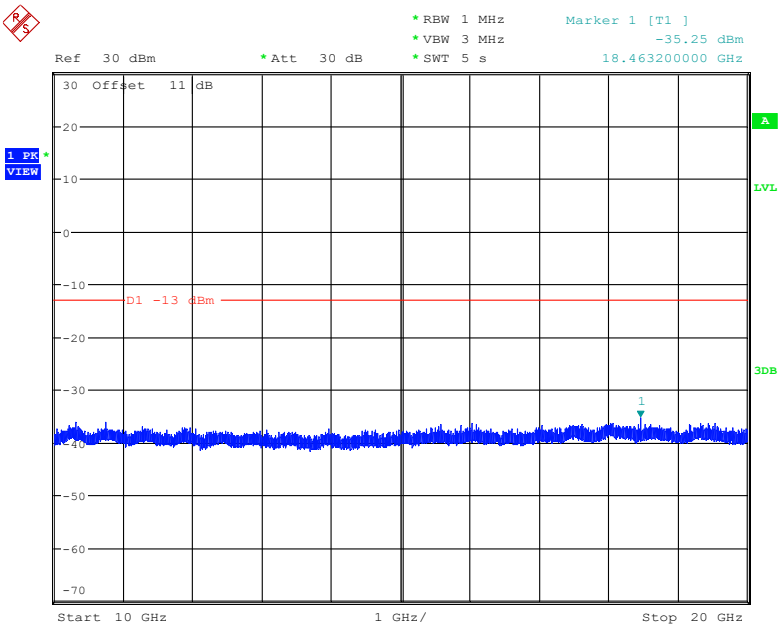
30 MHz – 10 GHz (WCDMA Mode)

Fundamental test



Date: 20.DEC.2022 17:00:25

10 GHz – 20 GHz (WCDMA Mode)

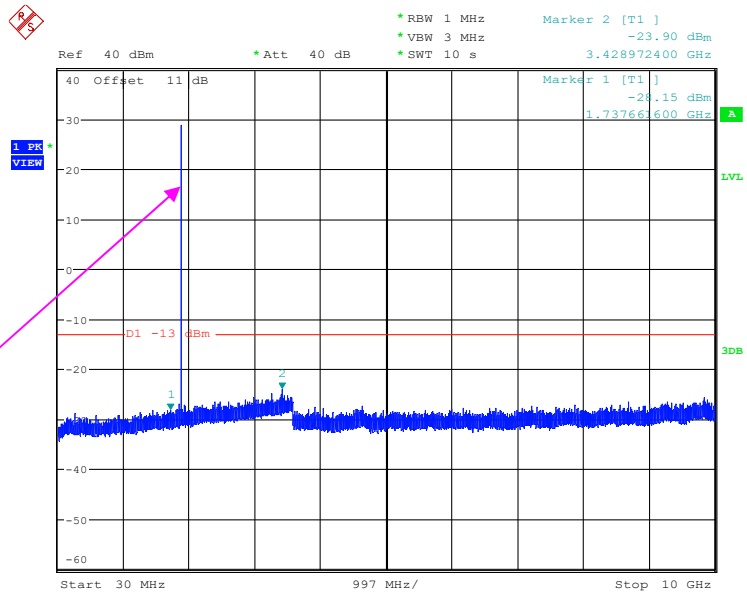


Date: 20.DEC.2022 17:01:06

High Channel:

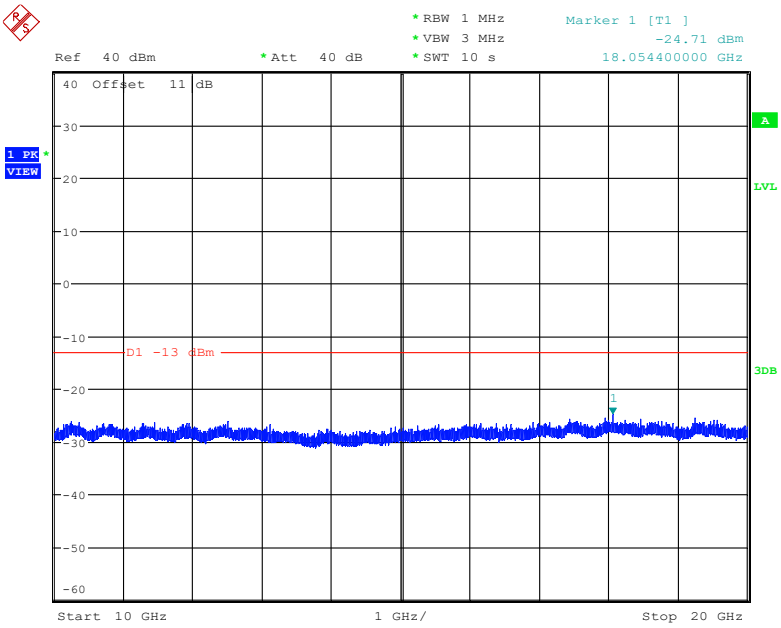
30 MHz – 10 GHz (GSM Mode)

Fundamental test



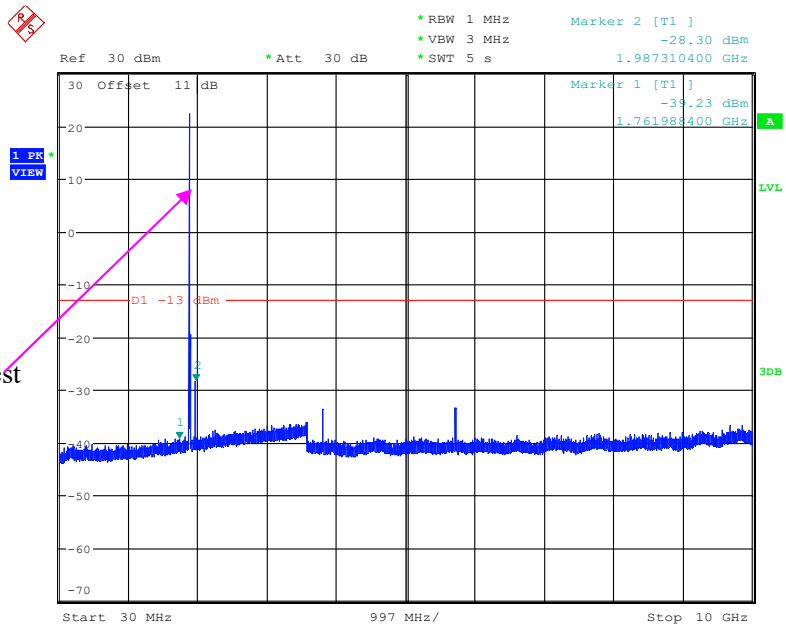
Date: 20.DEC.2022 16:22:13

10 GHz – 20 GHz (GSM Mode)



Date: 20.DEC.2022 16:23:25

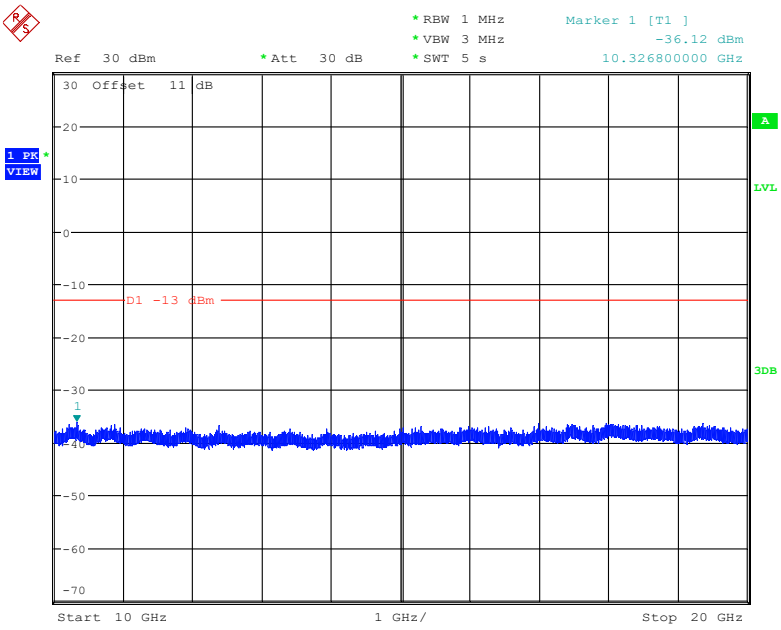
30 MHz – 10 GHz (WCDMA Mode)



Fundamental test

Date: 20.DEC.2022 17:11:16

10 GHz – 20 GHz (WCDMA Mode)

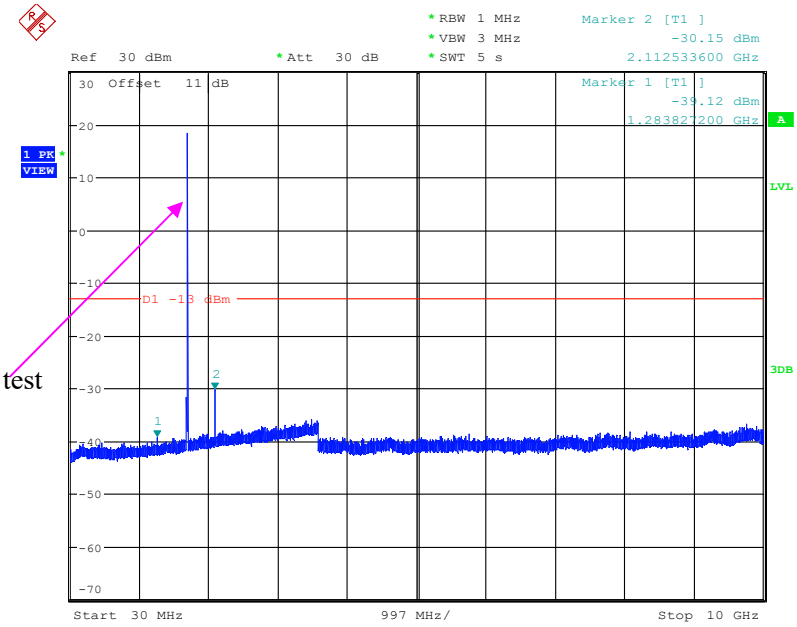


Date: 20.DEC.2022 17:11:57

AWS BAND
Low Channel:

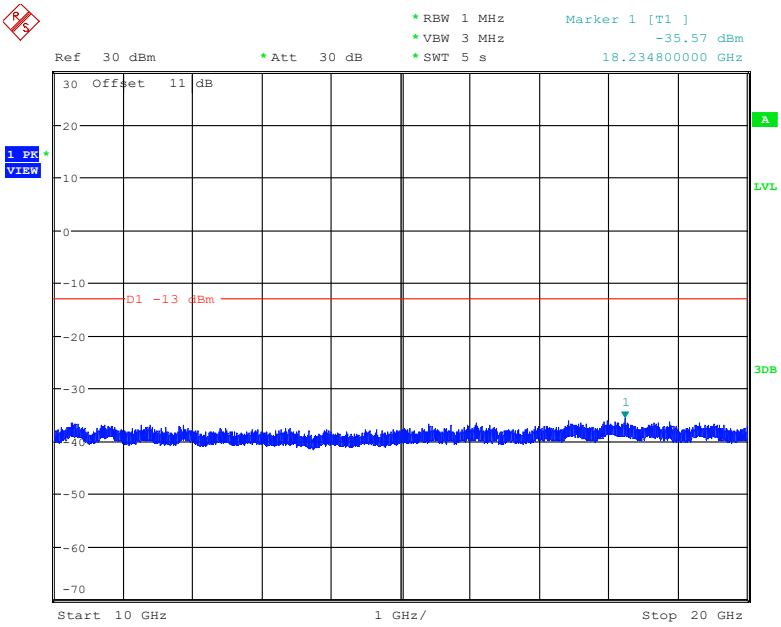
30 MHz – 10 GHz (WCDMA Mode)

Fundamental test



Date: 20.DEC.2022 17:18:08

10 GHz – 20 GHz (WCDMA Mode)

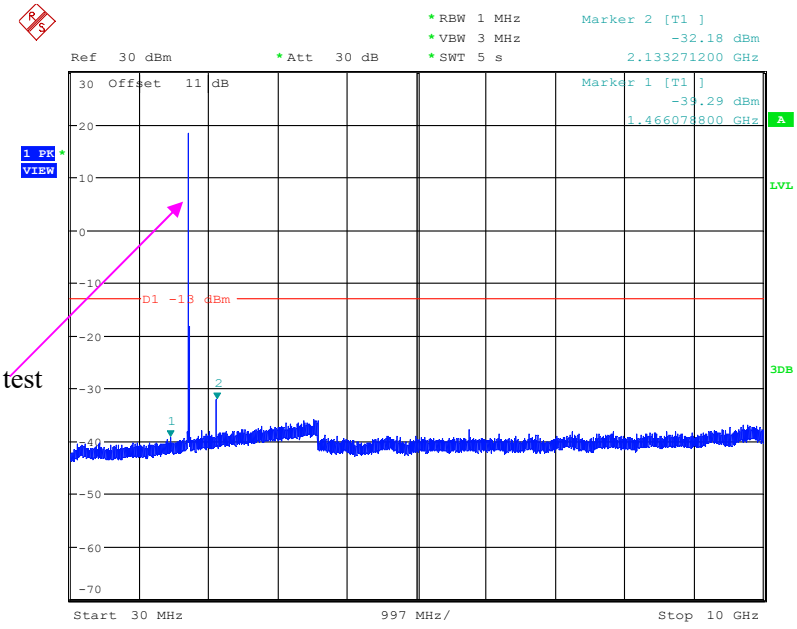


Date: 20.DEC.2022 17:18:51

Middle Channel:

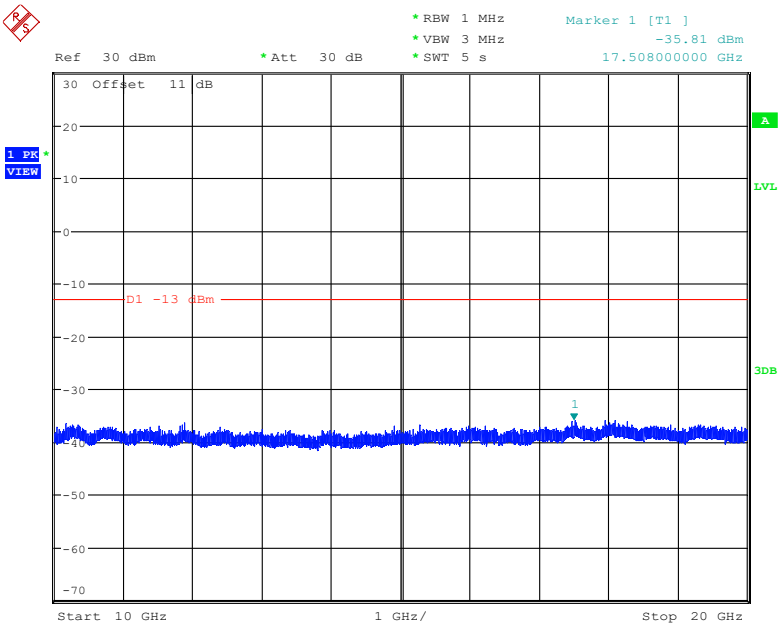
30 MHz – 10 GHz (WCDMA Mode)

Fundamental test



Date: 20.DEC.2022 17:21:34

10 GHz – 20 GHz (WCDMA Mode)

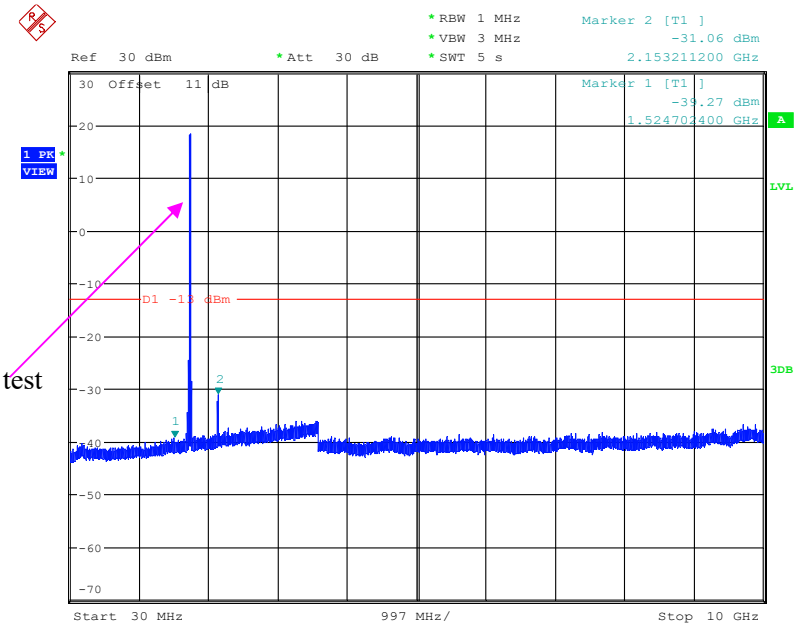


Date: 20.DEC.2022 17:22:17

High Channel:

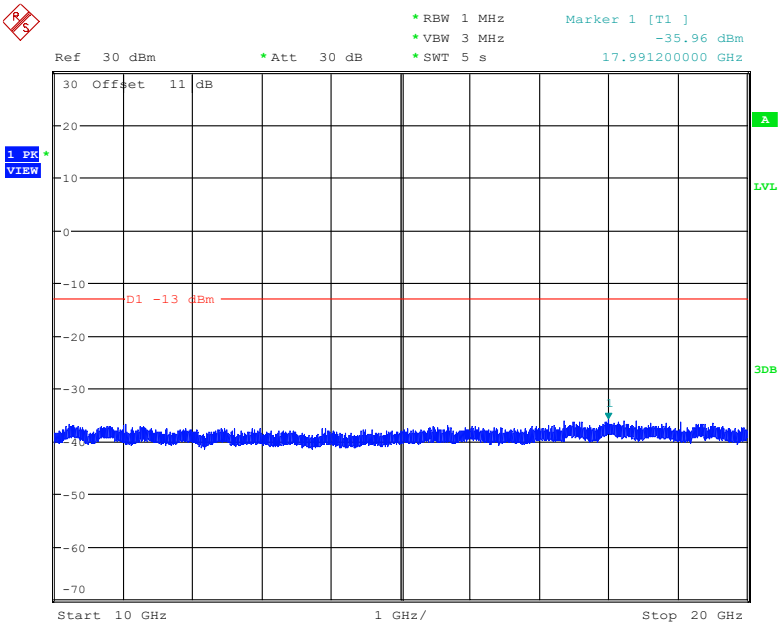
30 MHz – 10 GHz (WCDMA Mode)

Fundamental test



Date: 20.DEC.2022 17:25:45

10 GHz – 20 GHz (WCDMA Mode)



Date: 20.DEC.2022 17:26:25

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

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

Applicable Standard

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

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:	23~25.5 ℃
Relative Humidity:	43~52 %
ATM Pressure:	101.0 kPa

The testing was performed by Jimi Zheng from 2022-12-12 to2022-12-20.

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:

30MHz-10GHz:

Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM850, 824.2MHz								
959.97	-62.99	314	1.8	H	10	-52.99	-13	-39.99
959.97	-61.65	325	2.1	V	11.7	-49.95	-13	-36.95
1648.4	-55.00	322	2	H	3.5	-51.50	-13	-38.50
1648.4	-54.10	225	1.7	V	3.1	-51.00	-13	-38.00
2472.6	-47.20	98	2	H	6.6	-40.60	-13	-27.60
2472.6	-42.90	115	1.4	V	5.8	-37.10	-13	-24.10
3296.8	-50.40	286	1.4	H	6.4	-44.00	-13	-31.00
3296.8	-49.90	107	2	V	5.7	-44.20	-13	-31.20
GSM850, 836.6MHz								
960.84	-62.12	234	1.3	H	10	-52.12	-13	-39.12
960.84	-62.06	314	1.5	V	11.7	-50.36	-13	-37.36
1673.2	-51.70	68	1.6	H	3.8	-47.90	-13	-34.90
1673.2	-51.60	213	1.4	V	3.1	-48.50	-13	-35.50
2509.8	-42.30	249	1.5	H	6.2	-36.10	-13	-23.10
2509.8	-41.80	30	1.7	V	5.6	-36.20	-13	-23.20
3346.4	-50.30	298	2.5	H	6.6	-43.70	-13	-30.70
3346.4	-49.10	57	1.5	V	5.4	-43.70	-13	-30.70
GSM850, 848.8MHz								
960.03	-61.74	256	1.9	H	10	-51.74	-13	-38.74
960.03	-62.53	72	1.4	V	11.7	-50.83	-13	-37.83
1697.6	-54.20	211	1.1	H	4.1	-50.10	-13	-37.10
1697.6	-51.20	35	1.7	V	3.1	-48.10	-13	-35.10
2546.4	-44.90	27	2.5	H	6.1	-38.80	-13	-25.80
2546.4	-42.20	260	2.2	V	5.8	-36.40	-13	-23.40
3395.2	-51.20	101	2.1	H	6.2	-45.00	-13	-32.00
3395.2	-48.90	238	2.0	V	5.4	-43.50	-13	-30.50

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band5,826.4MHz								
960.45	-62.43	118	1.9	H	10	-52.43	-13	-39.43
960.45	-61.62	265	1.6	V	11.7	-49.92	-13	-36.92
1652.8	-55.50	73	1.3	H	3.5	-52.00	-13	-39.00
1652.8	-54.60	256	1.9	V	3.1	-51.50	-13	-38.50
2479.2	-56.40	96	1.2	H	6.6	-49.80	-13	-36.80
2479.2	-55.30	173	1.7	V	5.8	-49.50	-13	-36.50
3305.6	-50.90	35	1.2	H	6.4	-44.50	-13	-31.50
3305.6	-49.40	64	1.2	V	5.7	-43.70	-13	-30.70
WCDMA Band5,836.6MHz								
960.86	-62.69	140	1.9	H	10	-52.69	-13	-39.69
960.86	-62.29	163	1.5	V	11.7	-50.59	-13	-37.59
1673.2	-56.60	17	2.4	H	3.8	-52.80	-13	-39.80
1673.2	-54.60	66	1.2	V	3.1	-51.50	-13	-38.50
2509.8	-56.30	203	1.3	H	6.2	-50.10	-13	-37.10
2509.8	-53.90	125	1.6	V	5.6	-48.30	-13	-35.30
3346.4	-50.00	122	1.9	H	6.6	-43.40	-13	-30.40
3346.4	-49.00	9	2.4	V	5.4	-43.60	-13	-30.60
WCDMA Band5,846.6MHz								
959.73	-61.51	240	2.3	H	10	-51.51	-13	-38.51
959.73	-62.07	55	1.7	V	11.7	-50.37	-13	-37.37
1693.2	-56.30	255	2.3	H	4.1	-52.20	-13	-39.20
1693.2	-54.90	10	1.8	V	3.1	-51.80	-13	-38.80
2539.8	-56.20	57	1.1	H	6.1	-50.10	-13	-37.10
2539.8	-54.50	65	1.7	V	5.8	-48.70	-13	-35.70
3386.4	-51.20	10	1.7	H	6.2	-45.00	-13	-32.00
3386.4	-48.60	37	1.9	V	5.4	-43.20	-13	-30.20

30MHz-20GHz:

PCS Band (Part 24E)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM 1900, 1850.2MHz								
960.19	-62.18	334	2.5	H	10	-52.18	-13	-39.18
960.19	-62.16	135	1.3	V	11.7	-50.46	-13	-37.46
3700.4	-50.50	95	1.4	H	8.1	-42.40	-13	-29.40
3700.4	-48.90	276	2.4	V	7.6	-41.30	-13	-28.30
GSM1900, 1880MHz								
960.52	-61.83	311	2.2	H	10	-51.83	-13	-38.83
960.52	-62.21	241	2	V	11.7	-50.51	-13	-37.51
3760	-50.80	28	1.5	H	8.8	-42.00	-13	-29.00
3760	-50.10	181	2.2	V	8	-42.10	-13	-29.10
GSM 1900, 1909.8MHz								
960.1	-61.9	203	1.9	H	10	-51.9	-13	-38.9
960.1	-61.74	352	2.3	V	11.7	-50.04	-13	-37.04
3819.6	-50.20	113	2.4	H	8.7	-41.50	-13	-28.50
3819.6	-48.30	256	2	V	7.9	-40.40	-13	-27.40
WCDMA Band2,1852.4MHz								
959.87	-62.47	279	2.4	H	10	-52.47	-13	-39.47
959.87	-61.92	73	2.2	V	11.7	-50.22	-13	-37.22
3704.8	-51.10	137	1.4	H	8.1	-43.00	-13	-30.00
3704.8	-49.90	38	1.9	V	7.6	-42.30	-13	-29.30
WCDMA Band2,1880MHz								
960.52	-62.78	179	2.2	H	10	-52.78	-13	-39.78
960.52	-62.56	175	2.4	V	11.7	-50.86	-13	-37.86
3760	-51.20	170	1.5	H	8.8	-42.40	-13	-29.40
3760	-51.30	237	1.4	V	8	-43.30	-13	-30.30
WCDMA Band2,1907.6MHz								
959.88	-62.22	128	2.2	H	10	-52.22	-13	-39.22
959.88	-62.39	127	2.4	V	11.7	-50.69	-13	-37.69
3815.2	-52.50	328	1.2	H	8.7	-43.80	-13	-30.80
3815.2	-49.30	61	2.5	V	7.9	-41.40	-13	-28.40

AWS Band (Part 27)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band4, 1712.4MHz								
960.31	-62.58	223	1.3	H	10	-52.58	-13	-39.58
960.31	-62.36	23	1.6	V	11.7	-50.66	-13	-37.66
3424.8	-48.10	308	1.4	H	6.4	-41.70	-13	-28.70
3424.8	-46.90	57	2.5	V	5.8	-41.10	-13	-28.10
WCDMA Band4, 1732.6MHz								
960.49	-62.67	323	1.8	H	10	-52.67	-13	-39.67
960.49	-62.09	304	1.3	V	11.7	-50.39	-13	-37.39
3465.2	-47.7	253	1.6	H	7	-40.70	-13	-27.70
3465.2	-47.6	206	2.1	V	6.2	-41.40	-13	-28.40
WCDMA Band4, 1752.6MHz								
959.51	-62.03	344	1.2	H	10	-52.03	-13	-39.03
959.51	-62.61	173	1.6	V	11.7	-50.91	-13	-37.91
3505.2	-50.70	251	1.6	H	7.8	-42.90	-13	-29.90
3505.2	-50.10	16	1.9	V	6.5	-43.60	-13	-30.60

LTE Band: (Pre-scan all bandwidth/modulation, the 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 bandwidth, QPSK, Low channel								
960.36	-63.04	194	2.1	H	10	-53.04	-13	-40.04
960.36	-61.93	11	2.5	V	11.7	-50.23	-13	-37.23
3701.4	-47.80	94	1.6	H	8.1	-39.70	-13	-26.70
3701.4	-46.70	295	1.9	V	7.6	-39.10	-13	-26.10
1.4MHz bandwidth, QPSK, Middle channel								
960.62	-61.85	31	1.3	H	10	-51.85	-13	-38.85
960.62	-62.58	311	1.5	V	11.7	-50.88	-13	-37.88
3760	-47.80	259	1.8	H	8.8	-39.00	-13	-26.00
3760	-46.50	203	1.9	V	8	-38.50	-13	-25.50
1.4MHz bandwidth, QPSK, High channel								
959.36	-62.12	282	1.3	H	10	-52.12	-13	-39.12
959.36	-62.23	232	1.7	V	11.7	-50.53	-13	-37.53
3818.6	-48.80	272	1.2	H	8.7	-40.10	-13	-27.10
3818.6	-47.30	315	2	V	7.9	-39.40	-13	-26.40

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 4								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, QPSK, Low channel								
960.33	-62.25	156	1.9	H	10	-52.25	-13	-39.25
960.33	-62.02	182	2.4	V	11.7	-50.32	-13	-37.32
3421.4	-49.20	230	1.9	H	6.4	-42.80	-13	-29.80
3421.4	-46.80	297	1.6	V	5.8	-41.00	-13	-28.00
5132.1	-50.30	322	1.9	H	11.4	-38.90	-13	-25.90
5132.1	-49.80	161	1.4	V	10.8	-39.00	-13	-26.00
1.4MHz bandwidth, QPSK, Middle channel								
960.48	-61.73	353	2.1	H	10	-51.73	-13	-38.73
960.48	-61.37	323	2.5	V	11.7	-49.67	-13	-36.67
3465	-49.6	125	1.9	H	7	-42.60	-13	-29.60
3465	-49.6	161	2	V	6.2	-43.40	-13	-30.40
5197.5	-50.3	297	1.9	H	10.4	-39.90	-13	-26.90
5197.5	-48.5	265	2.2	V	9.8	-38.70	-13	-25.70
1.4MHz bandwidth, QPSK, High channel								
959.94	-62.29	70	1.2	H	10	-52.29	-13	-39.29
959.94	-62.58	258	2.2	V	11.7	-50.88	-13	-37.88
3508.6	-50.70	33	1.8	H	7.8	-42.90	-13	-29.90
3508.6	-48.40	256	1.1	V	6.5	-41.90	-13	-28.90
5262.9	-49.10	165	1.5	H	9.4	-39.70	-13	-26.70
5262.9	-48.00	90	2	V	9	-39.00	-13	-26.00

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 5								
Test frequency range: 30MHz-10GHz								
1.4MHz bandwidth, QPSK, Low channel								
959.81	-62.25	303	2	H	10	-52.25	-13	-39.25
959.81	-62.02	134	1.1	V	11.7	-50.32	-13	-37.32
1649.4	-57.30	346	2.4	H	3.5	-53.80	-13	-40.80
1649.4	-56.20	26	1.2	V	3.1	-53.10	-13	-40.10
2474.1	-52.90	79	1.5	H	6.6	-46.30	-13	-33.30
2474.1	-50.80	188	2.1	V	5.8	-45.00	-13	-32.00
3298.8	-51.00	258	1.8	H	6.4	-44.60	-13	-31.60
3298.8	-50.00	242	2	V	5.7	-44.30	-13	-31.30
1.4MHz bandwidth, QPSK, Middle channel								
960.75	-62.09	26	2.1	H	10	-52.09	-13	-39.09
960.75	-61.35	69	2.3	V	11.7	-49.65	-13	-36.65
1673.0	-56.10	106	1.2	H	3.8	-52.30	-13	-39.30
1673.0	-54.50	100	1.5	V	3.1	-51.40	-13	-38.40
2509.5	-50.70	6	2.3	H	6.2	-44.50	-13	-31.50
2509.5	-50.80	323	1.7	V	5.6	-45.20	-13	-32.20
3346.0	-50.30	13	2.3	H	6.6	-43.70	-13	-30.70
3346.0	-48.20	41	2.1	V	5.4	-42.80	-13	-29.80
1.4MHz bandwidth, QPSK, High channel								
960.13	-62.21	352	2.3	H	10	-52.21	-13	-39.21
960.13	-62.68	215	2.1	V	11.7	-50.98	-13	-37.98
1696.6	-54.40	341	2.0	H	4.1	-50.30	-13	-37.30
1696.6	-54.50	300	1.5	V	3.1	-51.40	-13	-38.40
2544.9	-51.20	1	1.4	H	6.1	-45.10	-13	-32.10
2544.9	-49.80	76	2.1	V	5.8	-44.00	-13	-31.00
3393.2	-49.60	204	1.4	H	6.2	-43.40	-13	-30.40
3393.2	-48.50	258	2.0	V	5.4	-43.10	-13	-30.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 7								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, QPSK, Low channel								
960.52	-61.72	69	1.1	H	10	-51.72	-25	-26.72
960.52	-61.15	118	2.2	V	11.7	-49.45	-25	-24.45
5005	-51.50	172	1.7	H	10.8	-40.70	-25	-15.70
5005	-46.90	114	1.4	V	10.2	-36.70	-25	-11.70
5MHz bandwidth, QPSK, Middle channel								
959.97	-62.03	140	2	H	10	-52.03	-25	-27.03
959.97	-61.36	246	1.7	V	11.7	-49.66	-25	-24.66
5070	-50.50	121	1.9	H	11.1	-39.40	-25	-14.40
5070	-48.30	297	2.5	V	10.8	-37.50	-25	-12.50
5MHz bandwidth, QPSK, High channel								
960.1	-61.73	181	1.2	H	10	-51.73	-25	-26.73
960.1	-62.34	135	1.4	V	11.7	-50.64	-25	-25.64
5135	-50.20	347	1.6	H	11.3	-38.90	-25	-13.90
5135	-49.30	248	2.4	V	10.8	-38.50	-25	-13.50

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 12								
Test frequency range: 30MHz-10GHz								
1.4MHz bandwidth, QPSK, Low channel								
960.11	-61.74	260	2.2	H	10	-51.74	-13	-38.74
960.11	-61.4	28	2.4	V	11.7	-49.7	-13	-36.7
1399.4	-60.5	154	2	H	6.3	-54.20	-13	-41.20
1399.4	-60.5	136	2	V	5.7	-54.80	-13	-41.80
2099.1	-49.7	328	1.2	H	4.9	-44.80	-13	-31.80
2099.1	-48.3	130	1.9	V	3.9	-44.40	-13	-31.40
2798.8	-56.1	268	2	H	6.6	-49.50	-13	-36.50
2798.8	-53.7	79	1.4	V	6	-47.70	-13	-34.70
1.4MHz bandwidth, QPSK, Middle channel								
960.16	-61.67	333	1.3	H	10	-51.67	-13	-38.67
960.16	-62.15	323	1.5	V	11.7	-50.45	-13	-37.45
1415	-59.5	70	2	H	5.9	-53.60	-13	-40.60
1415	-60.4	48	2.1	V	5.9	-54.50	-13	-41.50
2122.5	-51	287	1.8	H	6.3	-44.70	-13	-31.70
2122.5	-50.8	161	2.4	V	5.1	-45.70	-13	-32.70
2830	-54.8	110	1.1	H	6.7	-48.10	-13	-35.10
2830	-55.6	21	2.4	V	6.7	-48.90	-13	-35.90
1.4MHz bandwidth, QPSK, High channel								
960.18	-61.99	8	1.5	H	10	-51.99	-13	-38.99
960.18	-62.33	129	2.1	V	11.7	-50.63	-13	-37.63
1430.6	-60.6	208	1.6	H	5.9	-54.70	-13	-41.70
1430.6	-60.1	249	1.6	V	5.9	-54.20	-13	-41.20
2145.9	-51.4	244	1.6	H	6.3	-45.10	-13	-32.10
2145.9	-51.1	134	1.5	V	5.1	-46.00	-13	-33.00
2861.2	-54.8	316	1.4	H	6.7	-48.10	-13	-35.10
2861.2	-55.3	354	1.4	V	6.7	-48.60	-13	-35.60

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 bandwidth, QPSK, Low channel								
960.32	-61.53	160	2.2	H	10	-51.53	-13	-38.53
960.32	-61.32	66	1.4	V	11.7	-49.62	-13	-36.62
1413	-55.27	355	1.6	H	-0.53	-55.80	-13	-42.80
1413	-54.96	196	1.3	V	-0.74	-55.70	-13	-42.70
2119.5	-43.91	297	2.3	H	-0.89	-44.80	-13	-31.80
2119.5	-43.18	241	1.9	V	-1.12	-44.30	-13	-31.30
2826	-50.44	325	1.2	H	2.24	-48.20	-13	-35.20
2826	-50.93	195	1.9	V	2.33	-48.60	-13	-35.60
5MHz bandwidth, QPSK, Middle channel								
960.15	-61.53	38	2.1	H	10	-51.53	-13	-38.53
960.15	-61.55	22	1.2	V	11.7	-49.85	-13	-36.85
1420	-55.37	65	1.6	H	-0.53	-55.90	-13	-42.90
1420	-55.36	246	1.1	V	-0.74	-56.10	-13	-43.10
2130	-42.41	290	1.3	H	-0.89	-43.30	-13	-30.30
2130	-43.98	171	1.2	V	-1.12	-45.10	-13	-32.10
2840	-50.64	333	2.2	H	2.24	-48.40	-13	-35.40
2840	-51.63	200	1.1	V	2.33	-49.30	-13	-36.30
5MHz bandwidth, QPSK, High channel								
959.66	-61.76	327	1.8	H	10	-51.76	-13	-38.76
959.66	-61.8	326	2.3	V	11.7	-50.1	-13	-37.1
1427	-53.77	239	1.6	H	-0.53	-54.30	-13	-41.30
1427	-54.56	229	1.1	V	-0.74	-55.30	-13	-42.30
2140.5	-42.51	231	1.5	H	-0.89	-43.40	-13	-30.40
2140.5	-44.18	204	1.5	V	-1.12	-45.30	-13	-32.30
2854	-50.34	230	2	H	2.24	-48.10	-13	-35.10
2854	-50.73	272	1.3	V	2.33	-48.40	-13	-35.40

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 38								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, QPSK, Low channel								
960.25	-62.39	171	2.4	H	10	-52.39	-25	-27.39
960.25	-62.03	40	1.7	V	11.7	-50.33	-25	-25.33
5145	-48	158	2.3	H	11.4	-36.60	-25	-11.60
5145	-47.2	313	1.2	V	10.7	-36.50	-25	-11.50
5MHz bandwidth, QPSK, Middle channel								
960.71	-62.52	95	1.6	H	10	-52.52	-25	-27.52
960.71	-62.08	77	2	V	11.7	-50.38	-25	-25.38
5190	-48.1	83	2.2	H	10.5	-37.60	-25	-12.60
5190	-45.1	16	1.3	V	10	-35.10	-25	-10.10
5MHz bandwidth, QPSK, High channel								
959.79	-61.96	165	2.1	H	10	-51.96	-25	-26.96
959.79	-62.17	59	1.7	V	11.7	-50.47	-25	-25.47
5235	-46.2	126	1.9	H	9.7	-36.50	-25	-11.50
5235	-45.6	93	2.4	V	9.2	-36.40	-25	-11.40

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 41								
Test frequency range: 30MHz-26.55GHz								
5MHz bandwidth, QPSK, Low channel								
960.26	-61.92	313	1.9	H	10	-51.92	-25	-26.92
960.26	-61.57	181	2.1	V	11.7	-49.87	-25	-24.87
5075	-46.8	91	1.3	H	11.2	-35.60	-25	-10.60
5075	-46.8	111	1.6	V	10.8	-36.00	-25	-11.00
5MHz bandwidth, QPSK, Middle channel								
960.88	-62.44	317	1.3	H	10	-52.44	-25	-27.44
960.88	-61.4	62	1.5	V	11.7	-49.7	-25	-24.7
5190	-46.5	110	1.1	H	10.5	-36.00	-25	-11.00
5190	-45.8	299	1.5	V	10	-35.80	-25	-10.80
5MHz bandwidth, QPSK, High channel								
960.17	-62.26	333	2.4	H	10	-52.26	-25	-27.26
960.17	-62.16	221	1.5	V	11.7	-50.46	-25	-25.46
5305	-45.4	3	2.4	H	9.6	-35.80	-25	-10.80
5305	-44.1	171	1.6	V	8.8	-35.30	-25	-10.30

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 66								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, QPSK, Low channel								
959.85	-61.65	70	1.9	H	10	-51.65	-13	-38.65
959.85	-61.73	169	1.9	V	11.7	-50.03	-13	-37.03
3421.4	-50.4	196	2	H	6.4	-44.00	-13	-31.00
3421.4	-47.8	27	2.2	V	5.7	-42.10	-13	-29.10
1.4MHz bandwidth, QPSK, Middle channel								
960.11	-62.02	173	2.1	H	10	-52.02	-13	-39.02
960.11	-62.18	12	1.8	V	11.7	-50.48	-13	-37.48
3490	-50	241	1	H	7.6	-42.40	-13	-29.40
3490	-48.8	197	2.3	V	6.4	-42.40	-13	-29.40
1.4MHz bandwidth, QPSK, High channel								
960.17	-61.96	346	2.1	H	10	-51.96	-13	-38.96
960.17	-62.61	162	2.3	V	11.7	-50.91	-13	-37.91
3558.6	-52.1	18	1.9	H	7.8	-44.30	-13	-31.30
3558.6	-49.4	89	2.3	V	7	-42.40	-13	-29.40

Note:
Absolute Level = Reading Level + Substituted Factor
Substituted Factor contains: SG Level - Cable loss+ Antenna Gain
Margin = Absolute Level - Limit

FCC§ 22.917 (a);§ 24.238 (a); §27.53 (g) (h)(m)- 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.

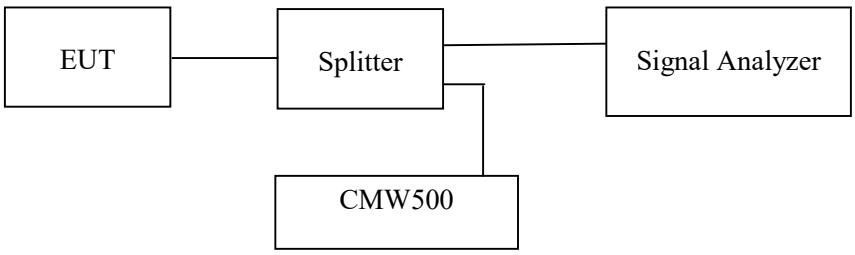
According to FCC §27.53 (g)(h), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

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 that 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.

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 included in plot.

Test Data

Environmental Conditions

Temperature:	25~27.2 ℃
Relative Humidity:	37~56.2 %
ATM Pressure:	101.0 kPa

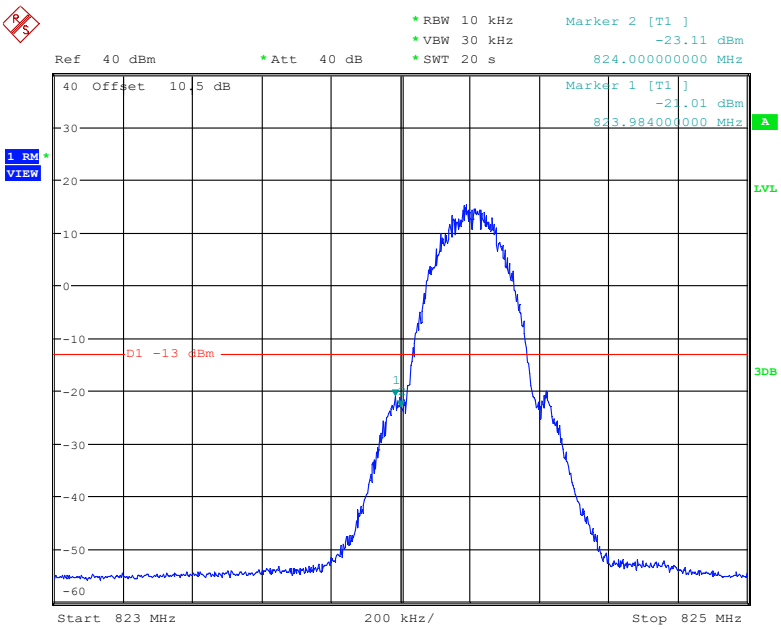
The testing was performed by Glenn Jiang from 2022-12-20 to 2022-12-28.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

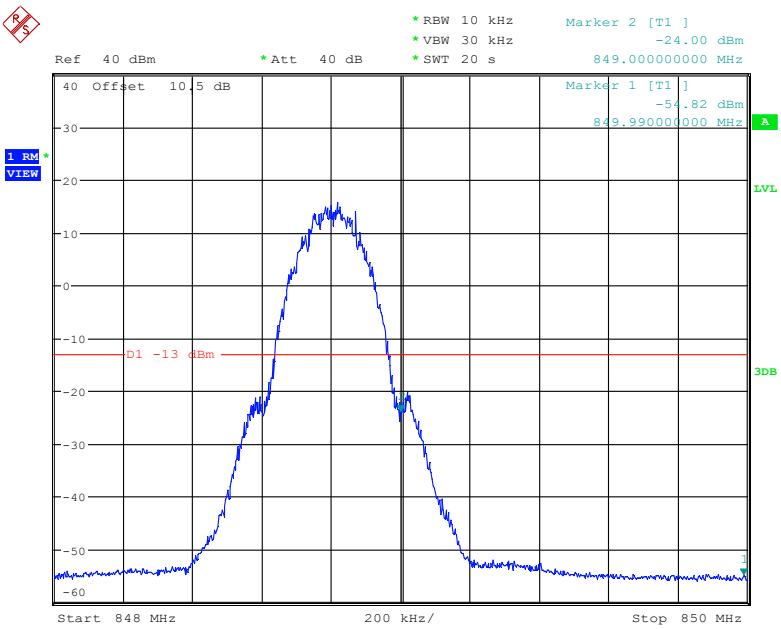
Please refer to the following plots.

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



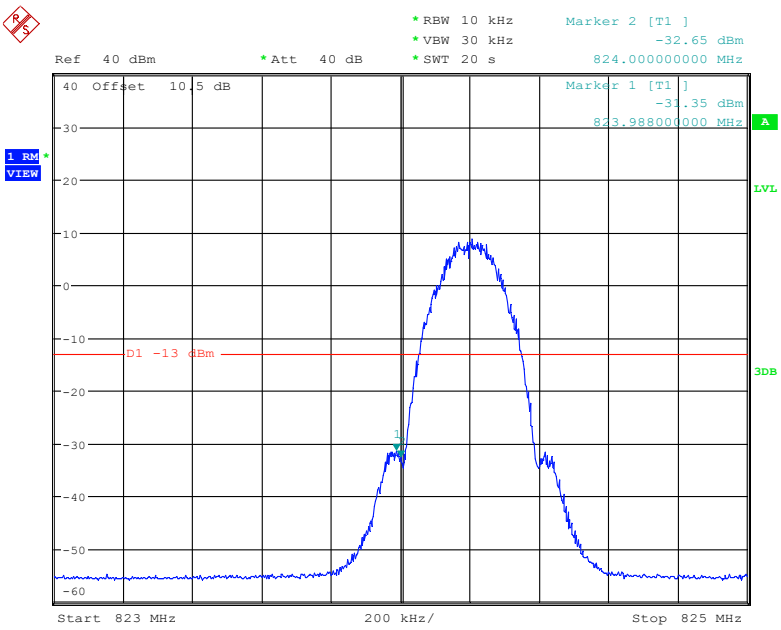
Date: 20.DEC.2022 15:19:01

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



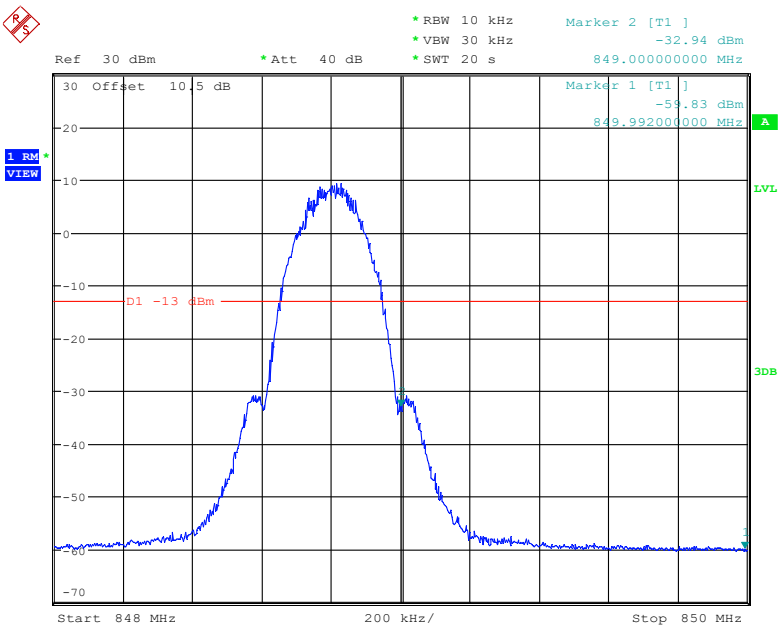
Date: 20.DEC.2022 15:36:06

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



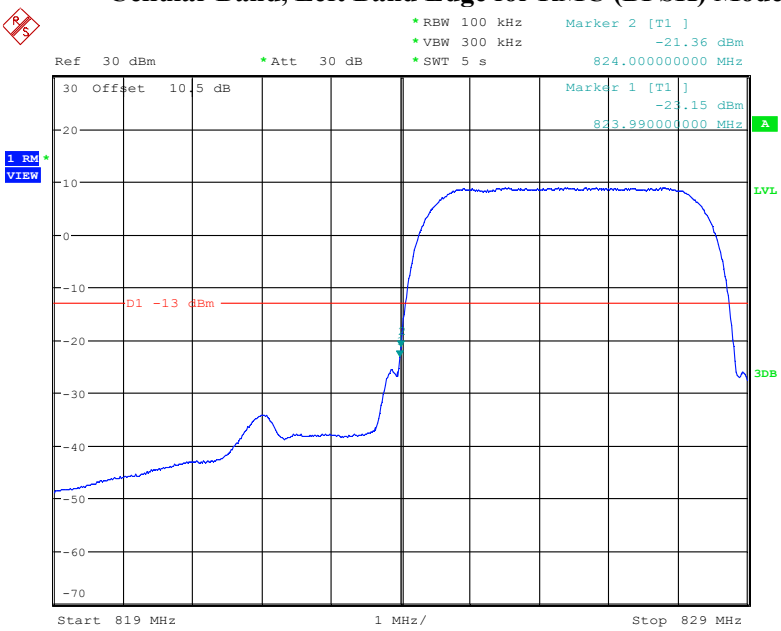
Date: 20.DEC.2022 15:49:18

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



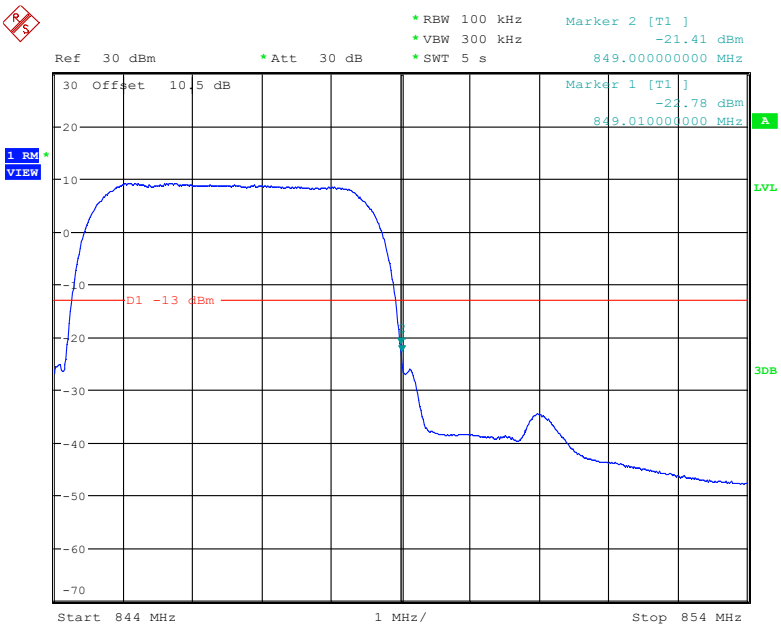
Date: 20.DEC.2022 15:59:34

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



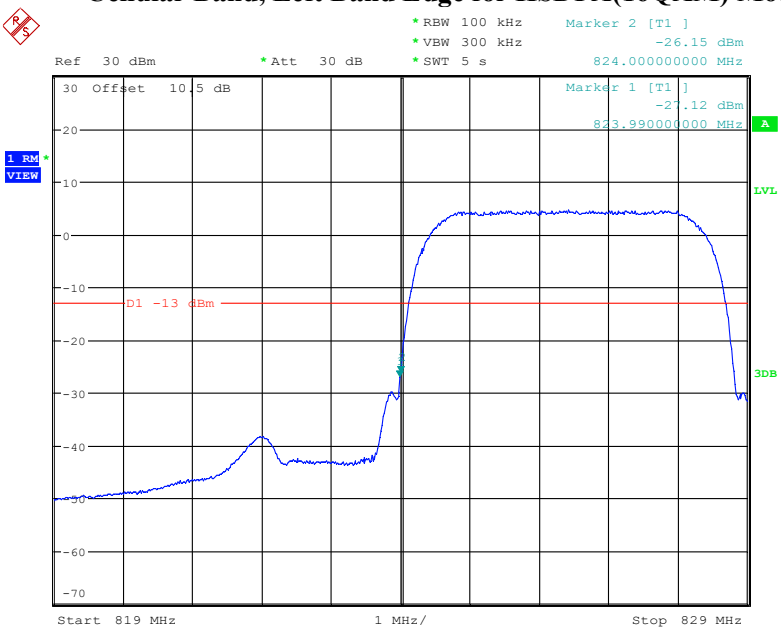
Date: 20.DEC.2022 17:48:37

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



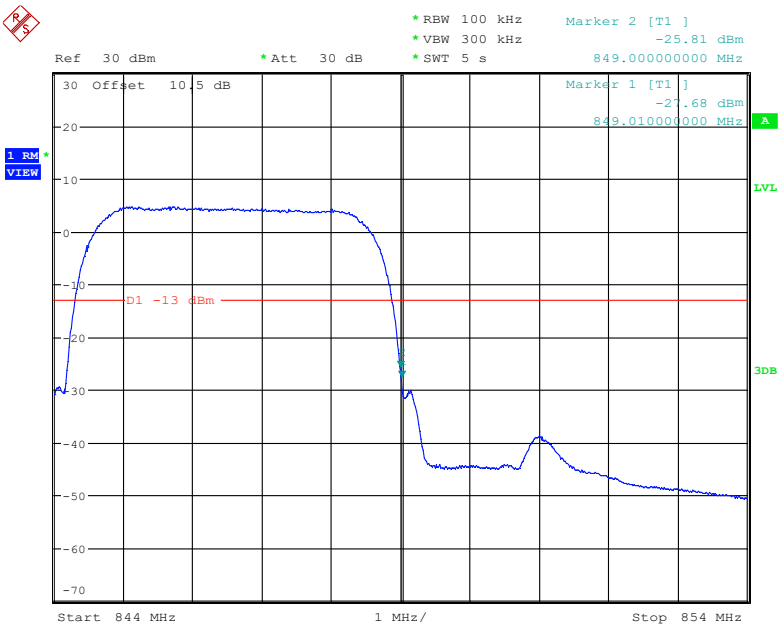
Date: 20.DEC.2022 17:55:08

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



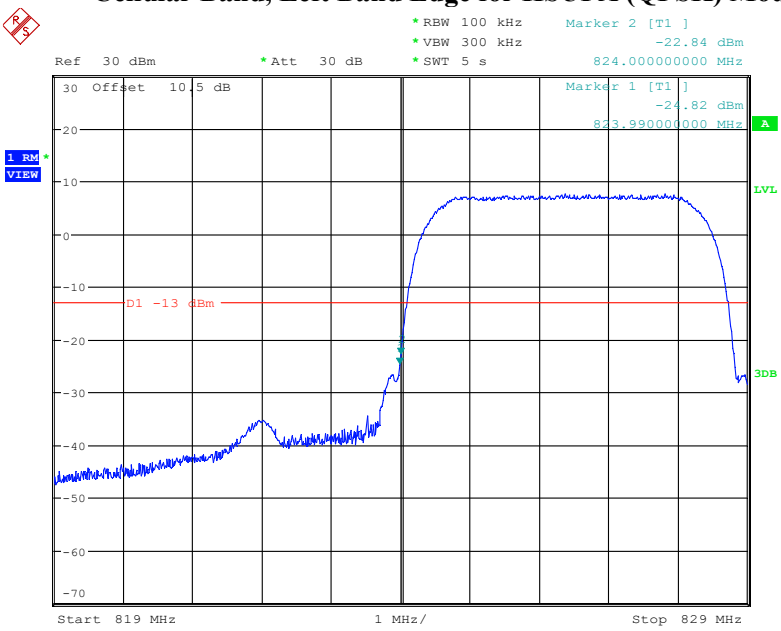
Date: 20.DEC.2022 18:03:16

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



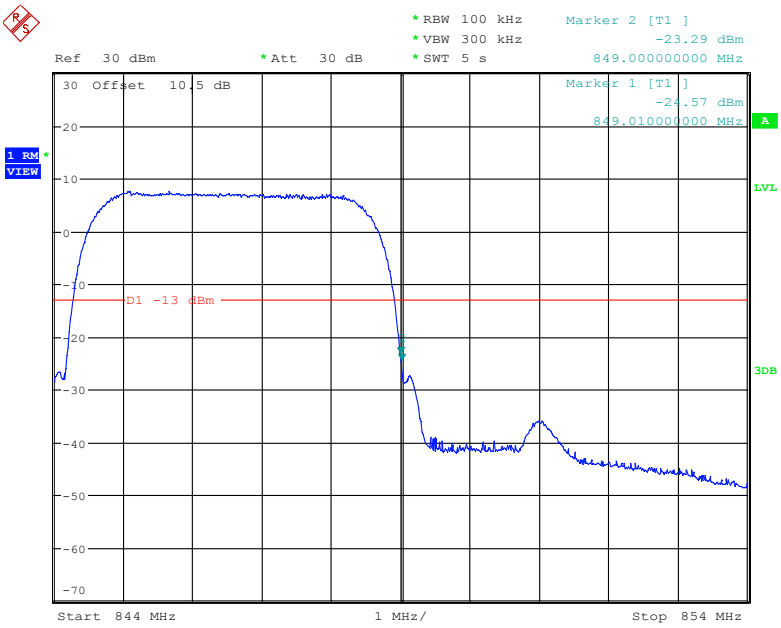
Date: 20.DEC.2022 18:10:21

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



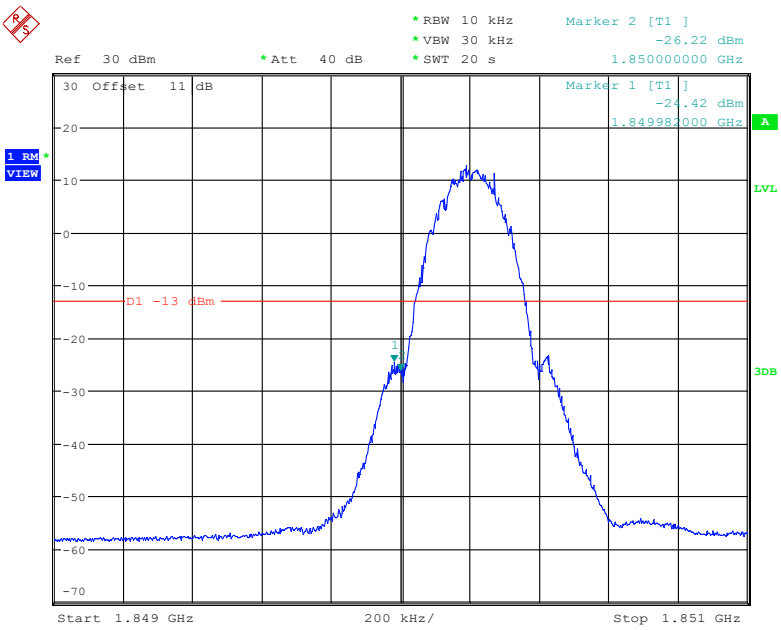
Date: 21.DEC.2022 09:48:32

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



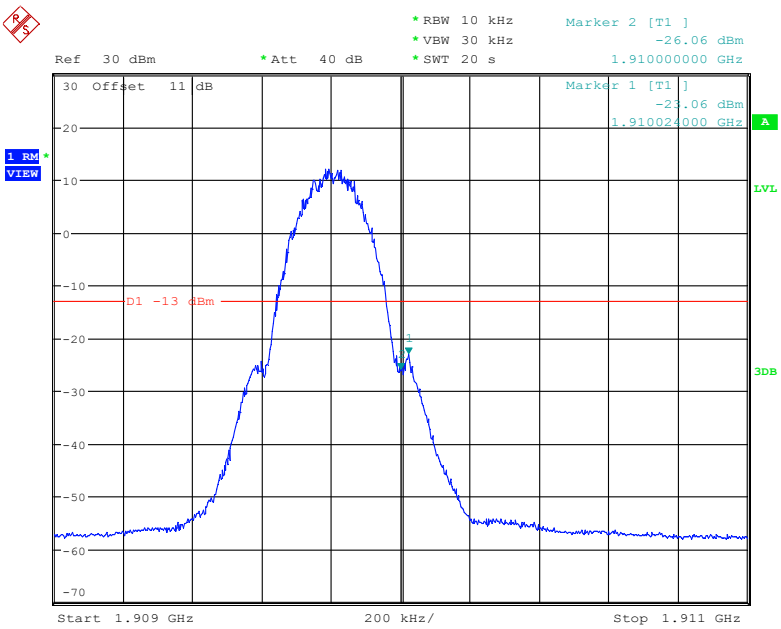
Date: 21.DEC.2022 09:55:55

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



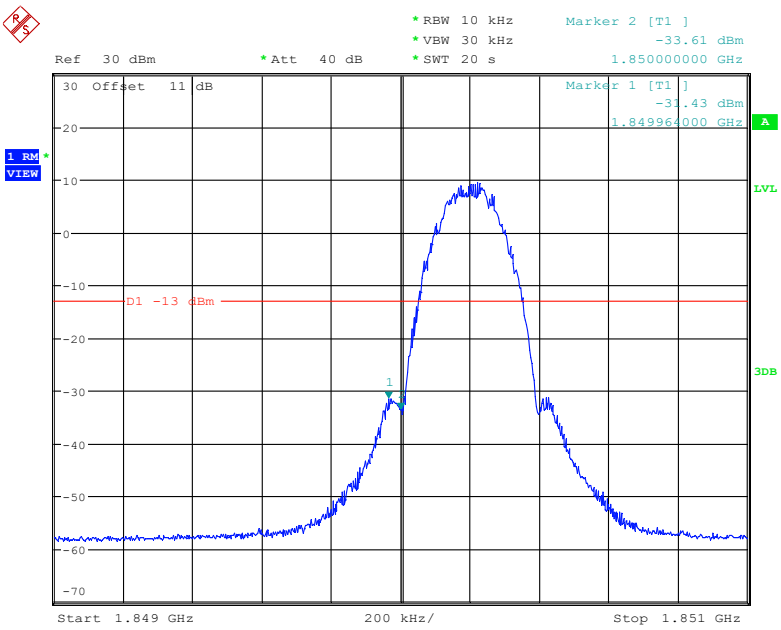
Date: 20.DEC.2022 16:06:53

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



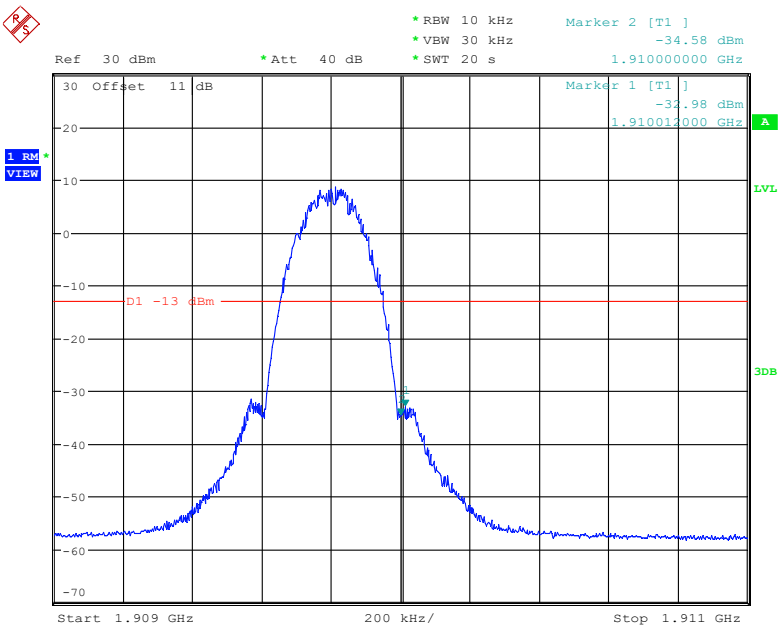
Date: 20.DEC.2022 16:21:12

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



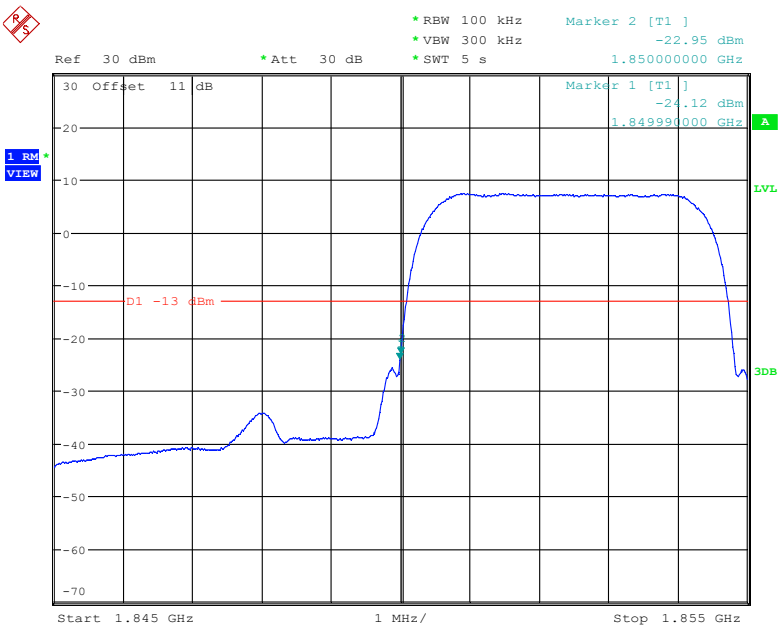
Date: 20.DEC.2022 16:30:19

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



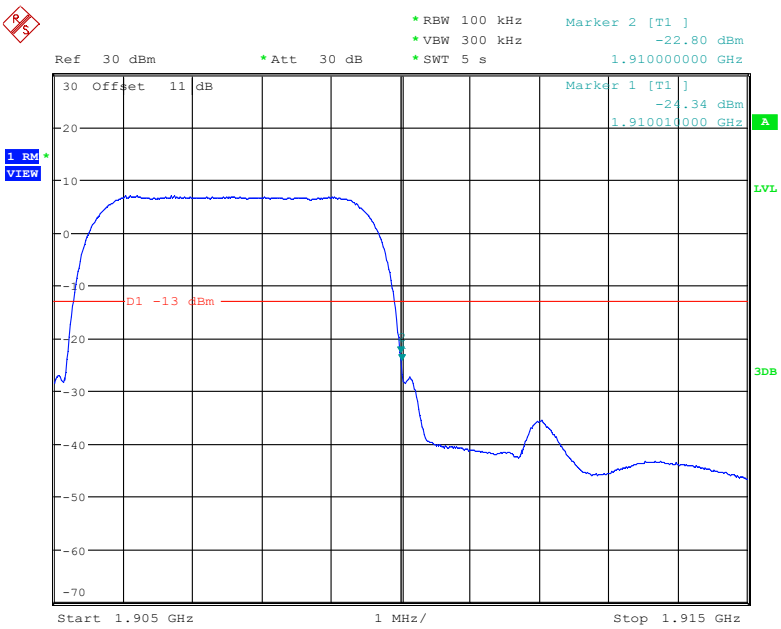
Date: 20.DEC.2022 16:45:02

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



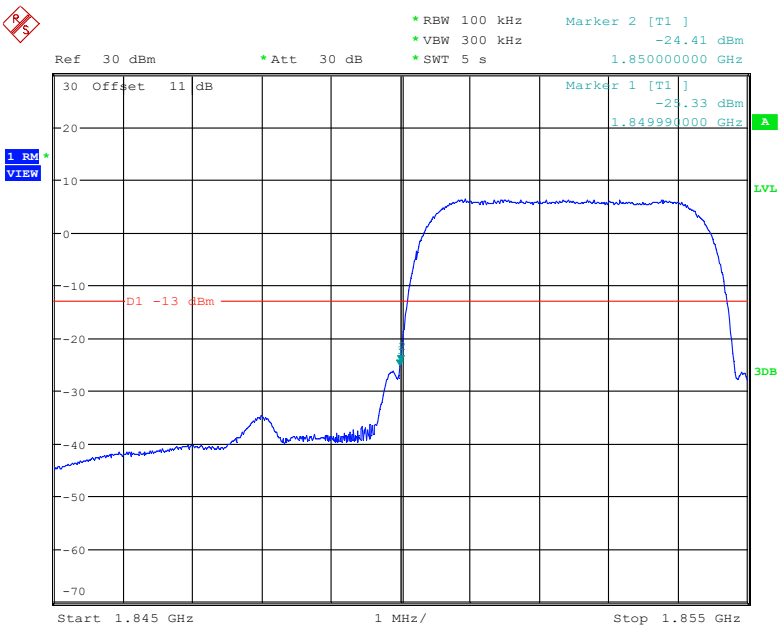
Date: 20.DEC.2022 16:53:53

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



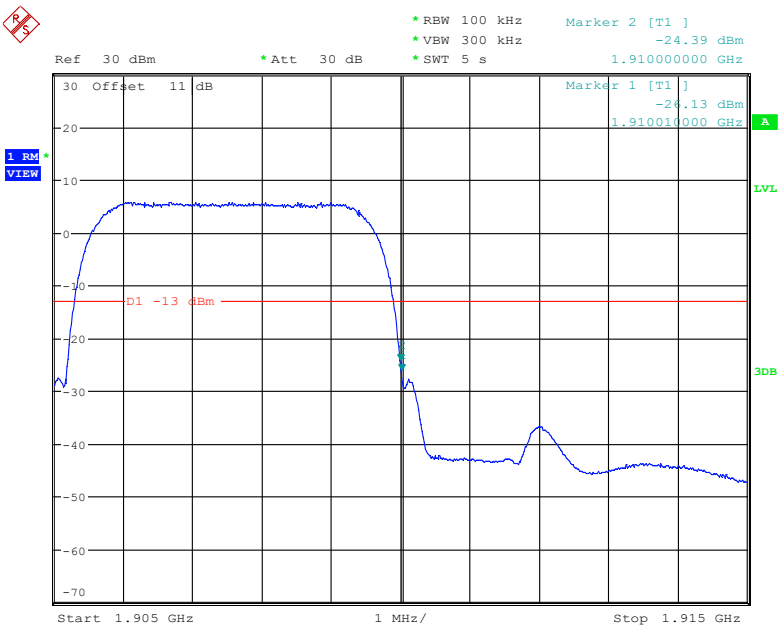
Date: 20.DEC.2022 17:10:36

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



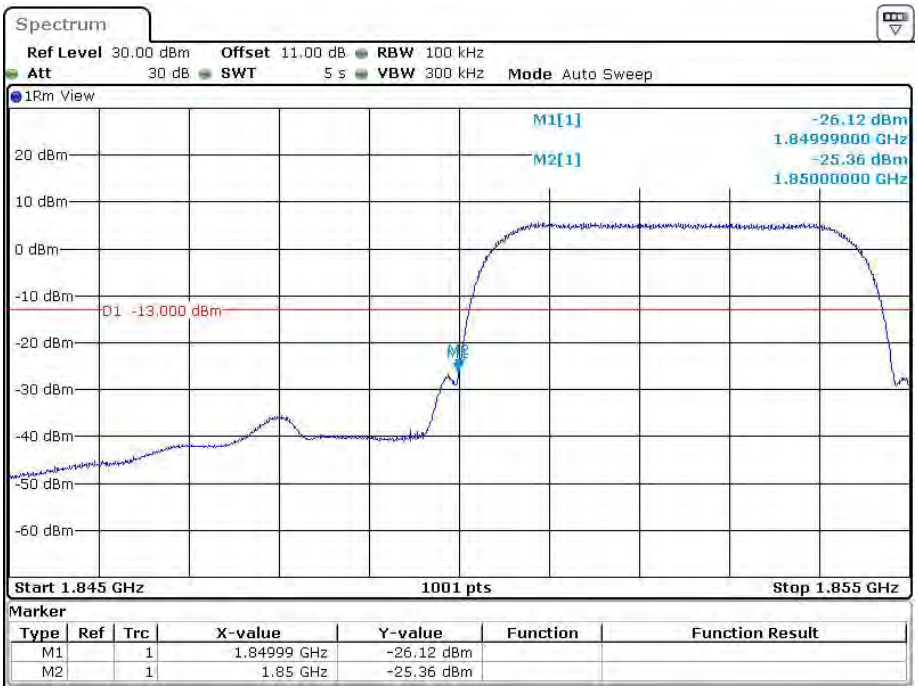
Date: 20.DEC.2022 18:39:14

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



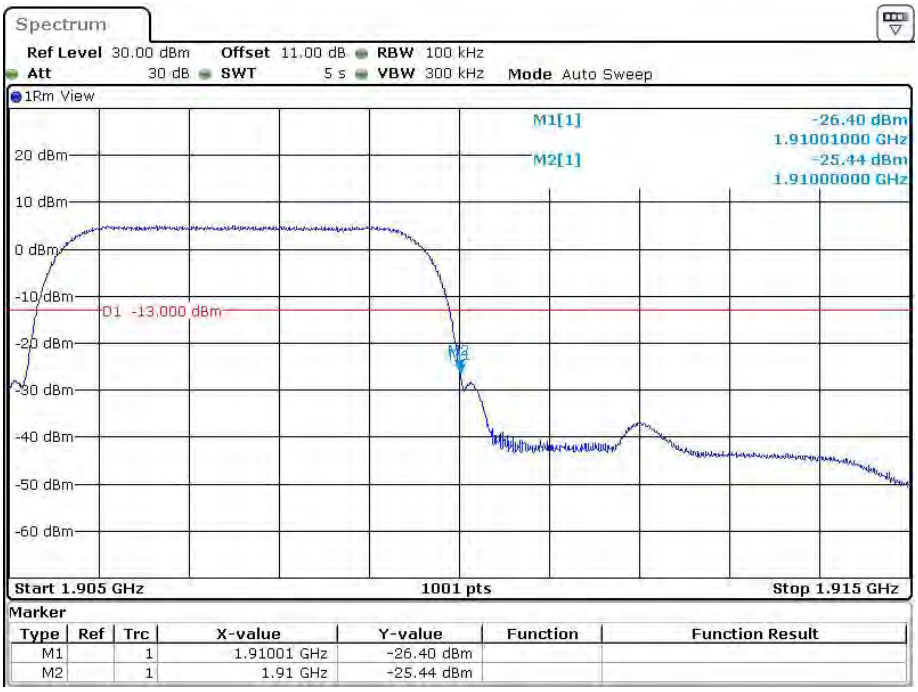
Date: 20.DEC.2022 18:49:42

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



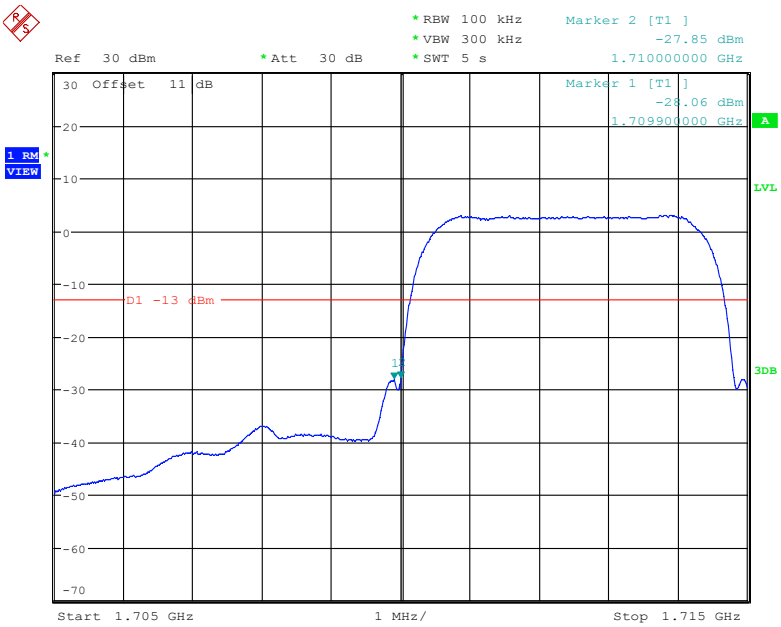
Date: 22.DEC.2022 15:46:00

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



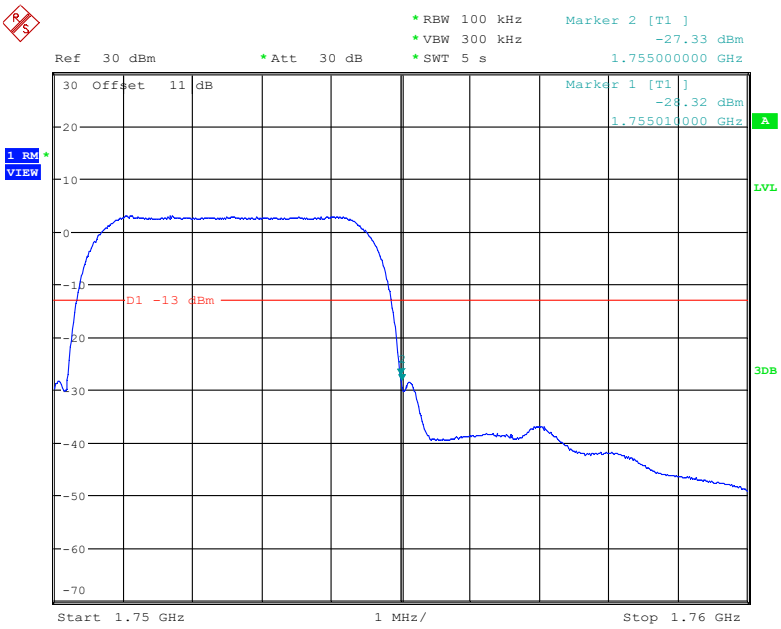
Date: 22.DEC.2022 15:54:46

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



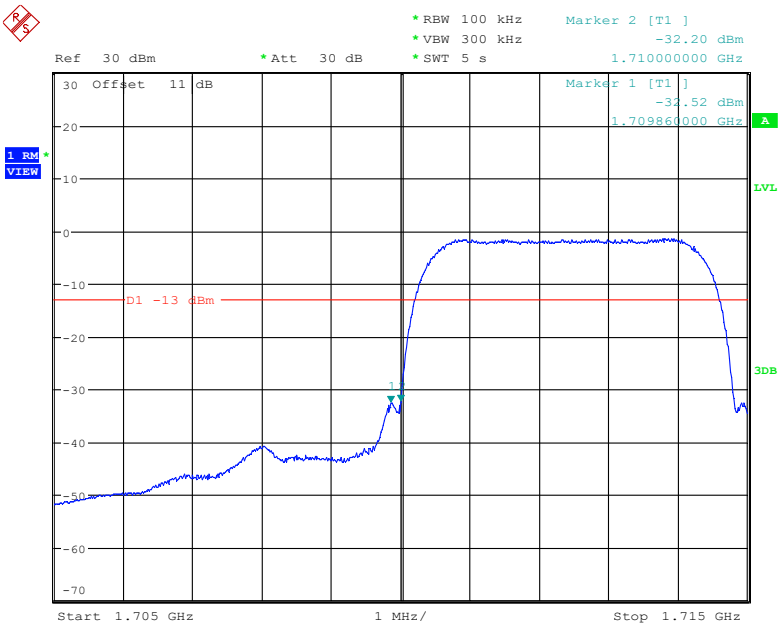
Date: 20.DEC.2022 17:17:27

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



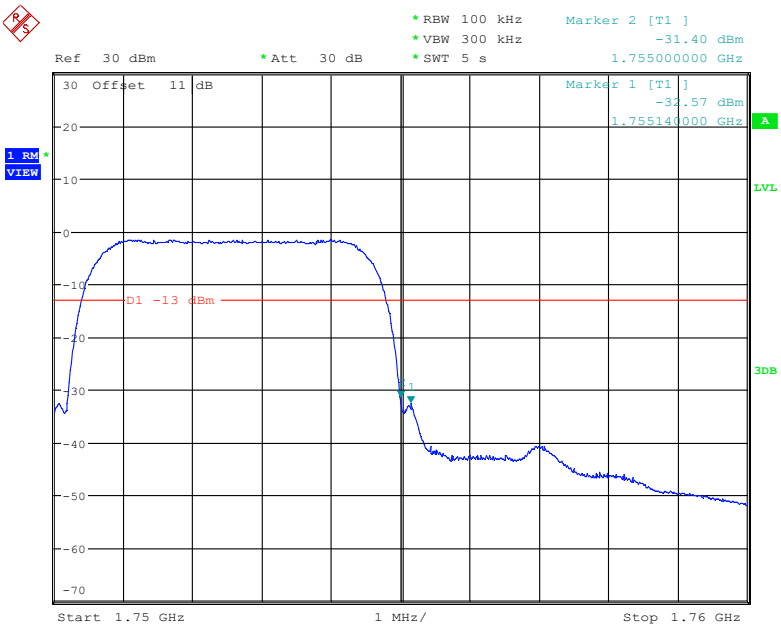
Date: 20.DEC.2022 17:25:03

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



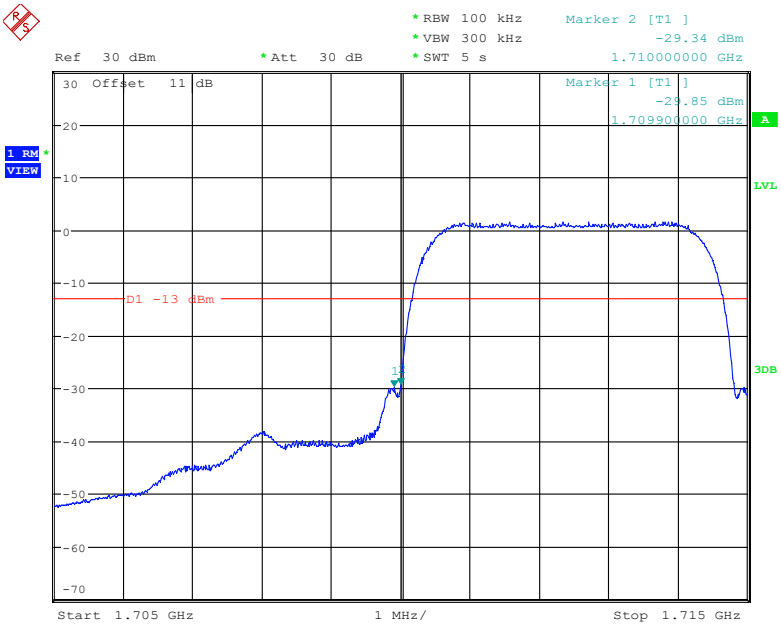
Date: 20.DEC.2022 18:24:28

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



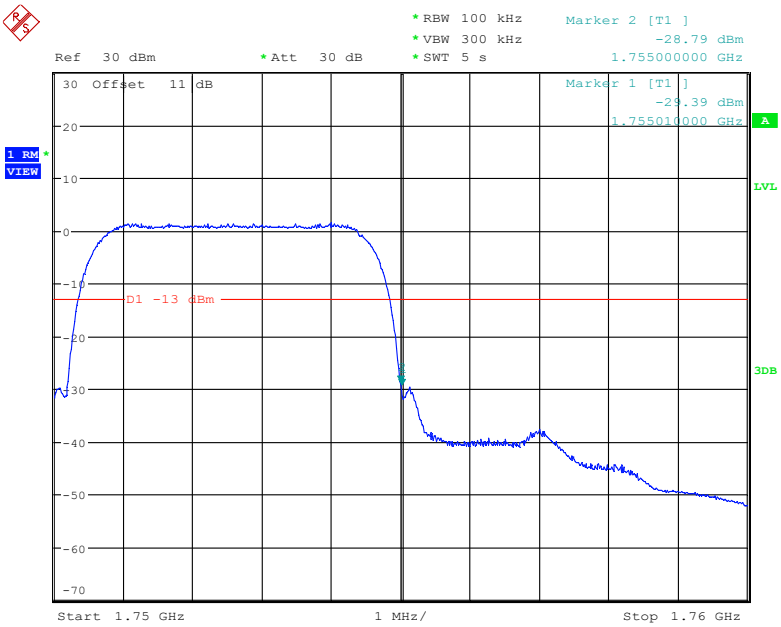
Date: 20.DEC.2022 18:32:18

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



Date: 21.DEC.2022 09:34:13

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



Date: 21.DEC.2022 09:43:48

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

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

Applicable Standard

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

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

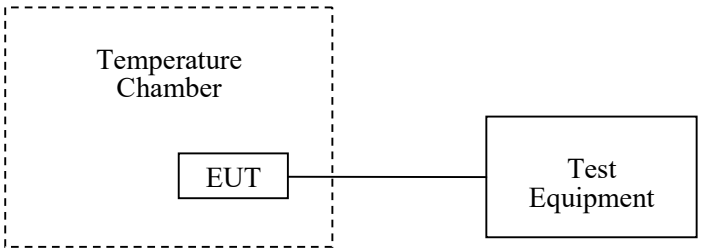
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC 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 DC 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:	25~27.2 ℃
Relative Humidity:	37~56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang from 2022-12-20 to 2023-01-08.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)

GSM Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	7.08	0.0085	2.5
-20		3.48	0.0042	2.5
-10		5.30	0.0063	2.5
0		6.49	0.0078	2.5
10		4.66	0.0056	2.5
20		3.07	0.0037	2.5
30		3.92	0.0047	2.5
40		5.99	0.0072	2.5
50		6.03	0.0072	2.5
20	L.V.	2.06	0.0025	2.5
	H.V.	4.06	0.0049	2.5

EDGE Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	1.56	0.0019	2.5
-20		1.59	0.0019	2.5
-10		1.67	0.0020	2.5
0		1.28	0.0015	2.5
10		1.33	0.0016	2.5
20		1.50	0.0018	2.5
30		1.54	0.0018	2.5
40		1.59	0.0019	2.5
50		1.48	0.0018	2.5
20	L.V.	1.36	0.0016	2.5
	H.V.	1.54	0.0018	2.5

WCDMA Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	1.26	0.0015	2.5
-20		1.43	0.0017	2.5
-10		1.54	0.0018	2.5
0		1.39	0.0017	2.5
10		1.48	0.0018	2.5
20		0.97	0.0012	2.5
30		1.36	0.0016	2.5
40		1.54	0.0018	2.5
50		1.24	0.0015	2.5
20	L.V.	1.36	0.0016	2.5
	H.V.	1.12	0.0013	2.5

PCS Band (Part 24E)

GSM Mode

Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1850.0461	1909.9538	1850	1910
-20		1850.0480	1909.9570	1850	1910
-10		1850.0423	1909.9588	1850	1910
0		1850.0499	1909.9573	1850	1910
10		1850.0496	1909.9588	1850	1910
20		1850.0460	1909.9591	1850	1910
30		1850.0466	1909.9567	1850	1910
40		1850.0442	1909.9589	1850	1910
50		1850.0458	1909.9598	1850	1910
20	L.V.	1850.0434	1909.9534	1850	1910
	H.V.	1850.0419	1909.9553	1850	1910

EDGE Mode

Temperature (℃)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1850.0481	1909.9543	1850	1910
-20		1850.0441	1909.9535	1850	1910
-10		1850.0450	1909.9553	1850	1910
0		1850.0422	1909.9580	1850	1910
10		1850.0477	1909.9521	1850	1910
20		1850.0472	1909.9598	1850	1910
30		1850.0498	1909.9598	1850	1910
40		1850.0433	1909.9524	1850	1910
50		1850.0406	1909.9533	1850	1910
20	L.V.	1850.0482	1909.9573	1850	1910
	H.V.	1850.0445	1909.9523	1850	1910

WCDMA Mode

Temperature (℃)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1850.0392	1909.9760	1850	1910
-20		1850.0365	1909.9753	1850	1910
-10		1850.0330	1909.9765	1850	1910
0		1850.0381	1909.9786	1850	1910
10		1850.0356	1909.9763	1850	1910
20		1850.0381	1909.9782	1850	1910
30		1850.0364	1909.9781	1850	1910
40		1850.0386	1909.9767	1850	1910
50		1850.0392	1909.9790	1850	1910
20	L.V.	1850.0304	1909.9800	1850	1910
	H.V.	1850.0373	1909.9774	1850	1910

AWS Band (Part 27)

Temperature (℃)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1710.0172	1754.9728	1710	1755
-20		1710.0169	1754.9726	1710	1755
-10		1710.0158	1754.9727	1710	1755
0		1710.0159	1754.9733	1710	1755
10		1710.0138	1754.9736	1710	1755
20		1710.0139	1754.9729	1710	1755
30		1710.0137	1754.9725	1710	1755
40		1710.0128	1754.9735	1710	1755
50		1710.0125	1754.9736	1710	1755
20	L.V.	1710.0136	1754.9728	1710	1755
	H.V.	1710.0144	1754.9729	1710	1755

LTE:
QPSK:
Band 2:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1850.1618	1909.7646	1850	1910
-20		1850.1623	1909.7671	1850	1910
-10		1850.1603	1909.7690	1850	1910
0		1850.1629	1909.7635	1850	1910
10		1850.1612	1909.7655	1850	1910
20		1850.1625	1909.7691	1850	1910
30		1850.1617	1909.7648	1850	1910
40		1850.1648	1909.7682	1850	1910
50		1850.1615	1909.7642	1850	1910
20	L.V.	1850.1640	1909.7697	1850	1910
	H.V.	1850.1610	1909.7681	1850	1910

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.1166	1754.8738	1710	1755
-20		1710.1158	1754.8736	1710	1755
-10		1710.1152	1754.8737	1710	1755
0		1710.1154	1754.8738	1710	1755
10		1710.1147	1754.8757	1710	1755
20		1710.1142	1754.8755	1710	1755
30		1710.1139	1754.8754	1710	1755
40		1710.1130	1754.8756	1710	1755
50		1710.1129	1754.8749	1710	1755
20	L.V.	1710.1128	1754.8748	1710	1755
	H.V.	1710.1024	1754.8742	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o =836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-7.71	-0.0092	2.5
-20		-9.61	-0.0115	2.5
-10		6.45	0.0077	2.5
0		-6.00	-0.0072	2.5
10		6.67	0.0080	2.5
20		9.80	0.0117	2.5
30		-6.66	-0.0080	2.5
40		6.96	0.0083	2.5
50		8.36	0.0100	2.5
20	L.V.	-6.87	-0.0082	2.5
	H.V.	5.97	0.0071	2.5

Band 7:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2500.1796	2569.8855	2500	2570
-20		2500.1792	2569.8947	2500	2570
-10		2500.1788	2569.8856	2500	2570
0		2500.1786	2569.8762	2500	2570
10		2500.1987	2569.8828	2500	2570
20		2500.1879	2569.8425	2500	2570
30		2500.1757	2569.8337	2500	2570
40		2500.1656	2569.8926	2500	2570
50		2500.1562	2569.8925	2500	2570
20	L.V.	2500.1528	2569.8835	2500	2570
	H.V.	2500.1431	2569.8741	2500	2570

Band 12:

10 MHz Bandwidth					
Temperature (℃)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	699.1663	715.8862	699	716
-20		699.1625	715.8724	699	716
-10		699.1556	715.8454	699	716
0		699.1424	715.8631	699	716
10		699.1235	715.8412	699	716
20		699.1416	715.8641	699	716
30		699.1247	715.8324	699	716
40		699.1338	715.8316	699	716
50		699.1225	715.8455	699	716
20	L.V.	699.1365	715.8671	699	716
	H.V.	699.1356	715.8547	699	716

Band 17:

10 MHz Bandwidth					
Temperature (℃)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	704.1895	715.9836	704	716
-20		704.1729	715.9825	704	716
-10		704.1368	715.9725	704	716
0		704.1218	715.8898	704	716
10		704.1326	715.8875	704	716
20		704.1265	715.8794	704	716
30		704.1435	715.8972	704	716
40		704.1532	715.8881	704	716
50		704.1232	715.8847	704	716
20	L.V.	704.1447	715.8826	704	716
	H.V.	704.1335	715.8799	704	716

Band 38:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2570.1378	2619.8826	2570	2620
-20		2570.1077	2619.8725	2570	2620
-10		2570.1246	2619.8631	2570	2620
0		2570.1155	2619.8557	2570	2620
10		2570.1056	2619.8425	2570	2620
20		2570.1933	2619.8321	2570	2620
30		2570.1838	2619.8225	2570	2620
40		2570.1729	2619.8125	2570	2620
50		2570.1618	2619.8326	2570	2620
20	L.V.	2570.1520	2619.8222	2570	2620
	H.V.	2570.1021	2619.8124	2570	2620

Band 41:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2535.1758	2654.8871	2535	2655
-20		2535.1678	2654.8852	2535	2655
-10		2535.1565	2654.8766	2535	2655
0		2535.1425	2654.8652	2535	2655
10		2535.1327	2654.8556	2535	2655
20		2535.1228	2654.8438	2535	2655
30		2535.1159	2654.8351	2535	2655
40		2535.1157	2654.8237	2535	2655
50		2535.1939	2654.8065	2535	2655
20	L.V.	2535.1622	2654.8032	2535	2655
	H.V.	2535.1524	2654.8012	2535	2655

Note: the manufacturer declared the operate frequency range is 2535-2655MHz

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**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 (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1850.1629	1909.7672	1850	1910
-20		1850.1621	1909.7665	1850	1910
-10		1850.1610	1909.7637	1850	1910
0		1850.1637	1909.7652	1850	1910
10		1850.1604	1909.7661	1850	1910
20		1850.1650	1909.7684	1850	1910
30		1850.1604	1909.7672	1850	1910
40		1850.1648	1909.7647	1850	1910
50		1850.1645	1909.7639	1850	1910
20	L.V.	1850.1624	1909.7672	1850	1910
	H.V.	1850.1603	1909.7682	1850	1910

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**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_o=836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-5.21	-0.0062	2.5
-20		6.01	0.0072	2.5
-10		7.85	0.0094	2.5
0		6.98	0.0083	2.5
10		-7.07	-0.0085	2.5
20		-9.98	-0.0119	2.5
30		-8.34	-0.0100	2.5
40		6.60	0.0079	2.5
50		-8.49	-0.0101	2.5
20	L.V.	9.00	0.0108	2.5
	H.V.	6.49	0.0078	2.5

Band 7:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2500.1456	2569.8376	2500	2570
-20		2500.1428	2569.8551	2500	2570
-10		2500.1641	2569.8425	2500	2570
0		2500.1255	2569.8537	2500	2570
10		2500.1326	2569.8285	2500	2570
20		2500.1239	2569.8829	2500	2570
30		2500.1351	2569.8836	2500	2570
40		2500.1327	2569.8426	2500	2570
50		2500.1226	2569.8457	2500	2570
20	L.V.	2500.1235	2569.8352	2500	2570
	H.V.	2500.1144	2569.8238	2500	2570

Band 12:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	699.1123	715.8764	699	716
-20		699.1133	715.8823	699	716
-10		699.1212	715.8526	699	716
0		699.1311	715.8727	699	716
10		699.1724	715.8893	699	716
20		699.1514	715.8771	699	716
30		699.1385	715.8812	699	716
40		699.1436	715.8914	699	716
50		699.1234	715.8943	699	716
20	L.V.	699.1353	715.8661	699	716
	H.V.	699.1561	715.8674	699	716

Band 17:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	704.1687	715.8328	704	716
-20		704.1521	715.8317	704	716
-10		704.1862	715.8217	704	716
0		704.1713	715.8394	704	716
10		704.1818	715.8367	704	716
20		704.1757	715.8286	704	716
30		704.1827	715.8464	704	716
40		704.1524	715.8373	704	716
50		704.1724	715.8339	704	716
20	L.V.	704.1739	715.8318	704	716
	H.V.	704.1827	715.8291	704	716

Band 38:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2570.1877	2619.8856	2570	2620
-20		2570.1928	2619.8769	2570	2620
-10		2570.1825	2619.8695	2570	2620
0		2570.1731	2619.8556	2570	2620
10		2570.1636	2619.8492	2570	2620
20		2570.1526	2619.8345	2570	2620
30		2570.1412	2619.8294	2570	2620
40		2570.1375	2619.8113	2570	2620
50		2570.1287	2619.8125	2570	2620
20	L.V.	2570.1178	2619.8785	2570	2620
	H.V.	2570.1134	2619.8643	2570	2620

Band 41:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2535.1456	2654.8655	2535	2655
-20		2535.1442	2654.8582	2535	2655
-10		2535.1372	2654.8486	2535	2655
0		2535.1266	2654.8375	2535	2655
10		2535.1138	2654.8284	2535	2655
20		2535.1175	2654.8182	2535	2655
30		2535.1988	2654.8587	2535	2655
40		2535.1882	2654.8986	2535	2655
50		2535.1829	2654.8882	2535	2655
20	L.V.	2535.1618	2654.8765	2535	2655
	H.V.	2535.1572	2654.8344	2535	2655

Note: the manufacturer declared the operate frequency range is 2535-2655MHz

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.1277	1779.8392	1710	1780
-20		1710.1249	1779.8444	1710	1780
-10		1710.1246	1779.8363	1710	1780
0		1710.1275	1779.8358	1710	1780
10		1710.1265	1779.8362	1710	1780
20		1710.1239	1779.8333	1710	1780
30		1710.1225	1779.8341	1710	1780
40		1710.1246	1779.8368	1710	1780
50		1710.1233	1779.8376	1710	1780
20	L.V.	1710.1258	1779.8356	1710	1780
	H.V.	1710.1252	1779.8354	1710	1780

******* END OF REPORT *******