TESTREPORT

Applicant Name :	ITEL MOBILE LIMITED
Address :	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT Hong Kong
Report Number :	RA221026-49391E-RF-00C
FCC ID:	2AJMN-S661LP

Test Standard (s)

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

Sample Description

Product Type:	Mobile Phone
Model No.:	S661LP
Multiple Model(s) No.:	N/A
Trade Mark:	itel
Date Received:	2022/10/26
Report Date:	2022/11/23

Test Result:	Pass*

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

Prepared and Checked By:

Nick Fang
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*	GSM850/WCDMA Band5/LTE Band 5: -1.6dBi PCS1900/WCDMA Band 2/ LTE Band 2: -0.5dBi WCDMA Band 4/ LTE Band 4/ LTE Band 66: -0.7dBi LTE Band 7/ LTE Band 38/ LTE Band 41: -0.4dBi LTE Band 12/ LTE Band 17: -1.9dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5V/7.5V from adapter
Sample serial number	1NMV-3 for Conducted and Radiated Emissions 1NMT-1 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: U180ISA Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 2.4A or DC 7.5V,2.4A,18.0W Max
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)

Objective

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

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±0.73dB
Unwanted Emission, conducted		±1.6dB
RF Frequency		$\pm 0.082*10^{-7}$
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
DCS1900	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	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704	707.5	711
LTE B17	5	706.5	710	713.5
	10	709	710	711

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770

Equipment Modifications

No modification was made to the EUT.

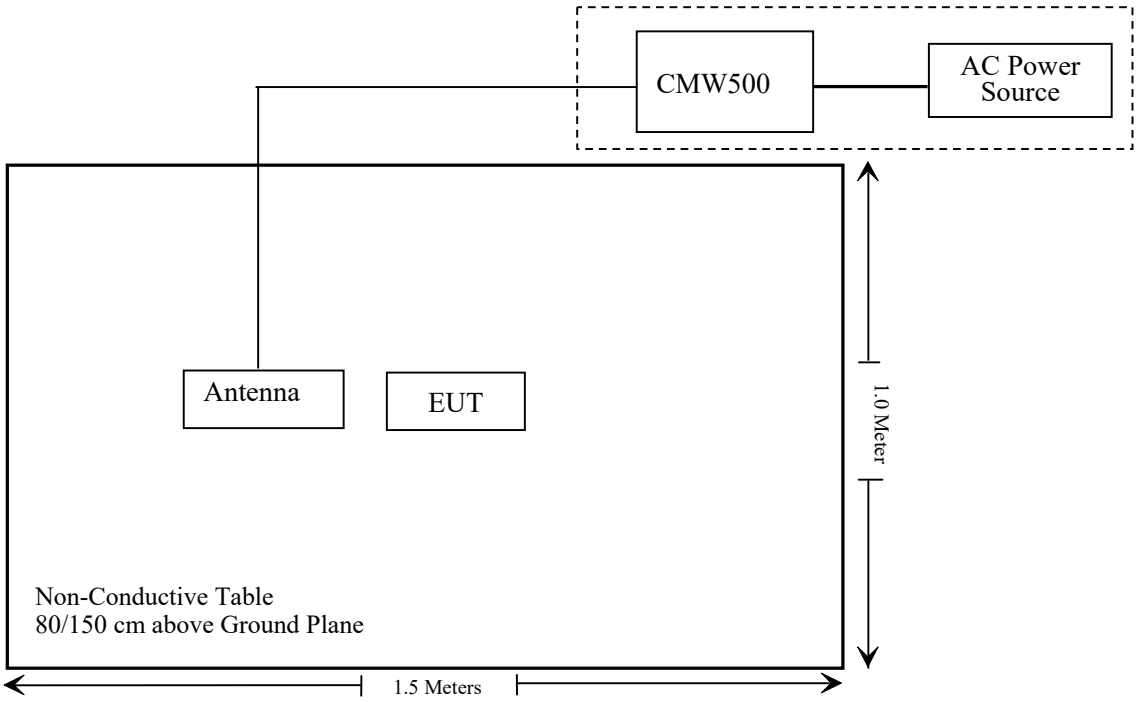
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-116218-UY

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 (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 (g)(h) (m)	Band Edge	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliant

Note: * Please refer to SAR report number: RA221026-49391E-SA.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2021/11/09	2022/11/08
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
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
Unknown	RFCoaxialCable	No.16	N200	2021/12/14	2022/12/13
Agilent	Signal Generator	N5183A	MY51040755	2021/12/13	2022/12/12

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
SPECTRUM ANALYZER	Rohde & Schwarz	FSU26	200982	2022/07/04	2023/07/03
Rohde&Schwarz	Spectrum Analyzer	FSV-40	101948	2021/12/13	2022/12/12
WEINSCHEL	10dB Attenuator	5324	AU 3842	2021/12/14	2022/12/13
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2021/12/14	2022/12/13
REALE	Temp. & Humid. Chamber	RHP-800BT	R20170318310	2021/12/14	2022/12/13
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2021/12/13	2022/12/12
Fluke	Multi Meter	45	7664009	2021/12/14	2022/12/13
Manson	DC Power Source	KPS-6604	ATCS-205	NCR	NCR

* 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: RA221026-49391E-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.

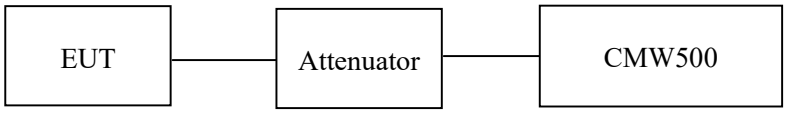
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

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

Test Procedure

Conducted method:

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



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

Test Data

Environmental Conditions

Temperature:	26.3~27.2 ℃
Relative Humidity:	56.2~58.1%
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-11-02 to 2022-11-17.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	33.10	29.35	38.45
	190	836.6	33.10	29.35	38.45
	251	848.8	33.00	29.25	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	33.14	32.49	30.56	28.36	29.39	28.74	26.81	24.61	38.45
	190	836.6	33.08	32.49	30.59	28.35	29.33	28.74	26.84	24.60	38.45
	251	848.8	33.03	32.43	30.47	28.27	29.28	28.68	26.72	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	26.70	25.27	23.69	21.04	22.95	21.52	19.94	17.29	38.45
	190	836.6	26.79	25.45	23.83	21.22	23.04	21.70	20.08	17.47	38.45
	251	848.8	26.58	25.16	23.55	20.92	22.83	21.41	19.80	17.17	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		22.79	22.88	23.17	19.04	19.13	19.42
	HSDPA	1	22.04	21.89	22.28	18.29	18.14	18.53
		2	22.06	21.78	22.13	18.31	18.03	18.38
		3	22.07	21.92	22.15	18.32	18.17	18.40
		4	22.08	21.94	22.24	18.33	18.19	18.49
	HSUPA	1	22.07	21.88	22.21	18.32	18.13	18.46
		2	22.04	21.79	22.16	18.29	18.04	18.41
		3	22.03	21.85	22.24	18.28	18.10	18.49
		4	22.05	21.64	22.16	18.30	17.89	18.41
		5	22.11	21.77	22.34	18.36	18.02	18.59
	HSPA+	1	22.06	21.64	22.17	18.31	17.89	18.42

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For GSM850 / WCDMA Band5: Antenna Gain = -1.6dBi = -3.75dBd (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	29.60	29.10	33
	661	1880.0	29.60	29.10	33
	810	1909.8	29.20	28.70	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	29.52	29.06	27.38	25.29	29.02	28.56	26.88	24.79	33
	661	1880.0	29.49	28.83	27.14	25.09	28.99	28.33	26.64	24.59	33
	810	1909.8	29.20	28.47	26.83	24.75	28.70	27.97	26.33	24.25	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	26.32	24.75	24.13	21.20	25.82	24.25	23.63	20.70	33
	661	1880.0	26.44	24.82	24.49	21.46	25.94	24.32	23.99	20.96	33
	810	1909.8	25.85	24.31	23.69	20.80	25.35	23.81	23.19	20.30	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		20.85	20.89	20.77	20.35	20.39	20.27
	HSDPA	1	20.51	20.7	20.62	20.01	20.20	20.12
		2	20.44	20.61	20.45	19.94	20.11	19.95
		3	20.36	20.56	20.54	19.86	20.06	20.04
		4	20.41	20.55	20.47	19.91	20.05	19.97
	HSUPA	1	20.56	20.72	20.58	20.06	20.22	20.08
		2	20.35	20.62	20.57	19.85	20.12	20.07
		3	20.42	20.54	20.46	19.92	20.04	19.96
		4	20.44	20.49	20.61	19.94	19.99	20.11
		5	20.36	20.54	20.47	19.86	20.04	19.97
	HSPA+	1	20.37	20.67	20.63	19.87	20.17	20.13

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		19.47	19.55	19.47	18.77	18.85	18.77
	HSDPA	1	18.25	18.57	18.21	17.55	17.87	17.51
		2	18.14	18.41	18.17	17.44	17.71	17.47
		3	18.33	18.43	18.23	17.63	17.73	17.53
		4	18.17	18.51	18.21	17.47	17.81	17.51
	HSUPA	1	18.30	18.57	18.25	17.60	17.87	17.55
		2	18.17	18.47	18.22	17.47	17.77	17.52
		3	18.22	18.52	18.14	17.52	17.82	17.44
		4	18.34	18.33	18.31	17.64	17.63	17.61
		5	18.16	18.41	18.17	17.46	17.71	17.47
	HSPA+	1	18.28	18.35	18.33	17.58	17.65	17.63

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	20.08	20.58	19.93	19.58	20.08	19.43
		RB1#3	20.31	20.69	19.96	19.81	20.19	19.46
		RB1#5	20.17	20.50	19.73	19.67	20.00	19.23
		RB3#0	20.21	20.66	19.97	19.71	20.16	19.47
		RB3#3	20.26	20.61	19.86	19.76	20.11	19.36
		RB6#0	19.31	19.65	19.05	18.81	19.15	18.55
	16QAM	RB1#0	19.28	19.53	18.97	18.78	19.03	18.47
		RB1#3	19.53	19.65	19.04	19.03	19.15	18.54
		RB1#5	19.39	19.47	18.90	18.89	18.97	18.40
		RB3#0	19.29	19.79	19.30	18.79	19.29	18.80
		RB3#3	19.36	19.76	19.22	18.86	19.26	18.72
		RB6#0	18.37	18.72	18.17	17.87	18.22	17.67
3.0	QPSK	RB1#0	20.16	20.67	20.08	19.66	20.17	19.58
		RB1#8	20.41	20.67	20.00	19.91	20.17	19.50
		RB1#14	20.41	20.53	19.70	19.91	20.03	19.20
		RB6#0	19.32	19.85	19.31	18.82	19.35	18.81
		RB6#9	19.49	19.75	19.08	18.99	19.25	18.58
		RB15#0	19.44	19.84	19.24	18.94	19.34	18.74
	16QAM	RB1#0	19.30	19.76	19.70	18.80	19.26	19.20
		RB1#8	19.57	19.76	19.64	19.07	19.26	19.14
		RB1#14	19.57	19.61	19.32	19.07	19.11	18.82
		RB6#0	18.40	18.82	18.39	17.90	18.32	17.89
		RB6#9	18.58	18.72	18.16	18.08	18.22	17.66
		RB15#0	18.44	18.9	18.31	17.94	18.40	17.81

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	19.85	20.38	19.90	19.35	19.88	19.40
		RB1#13	20.55	20.66	20.17	20.05	20.16	19.67
		RB1#24	20.35	20.15	19.44	19.85	19.65	18.94
		RB15#0	19.36	19.81	19.37	18.86	19.31	18.87
		RB15#10	19.56	19.71	19.22	19.06	19.21	18.72
		RB25#0	19.43	19.73	19.24	18.93	19.23	18.74
	16QAM	RB1#0	19.13	19.55	18.90	18.63	19.05	18.40
		RB1#13	19.86	19.82	19.22	19.36	19.32	18.72
		RB1#24	19.66	19.30	18.48	19.16	18.80	17.98
		RB15#0	18.38	18.84	18.39	17.88	18.34	17.89
		RB15#10	18.60	18.74	18.23	18.10	18.24	17.73
		RB25#0	18.47	18.77	18.29	17.97	18.27	17.79
10.0	QPSK	RB1#0	19.51	20.71	20.20	19.01	20.21	19.70
		RB1#25	20.26	20.70	20.34	19.76	20.20	19.84
		RB1#49	20.09	20.84	20.18	19.59	20.34	19.68
		RB25#0	18.86	19.96	19.53	18.36	19.46	19.03
		RB25#25	19.76	19.93	19.60	19.26	19.43	19.10
		RB50#0	19.35	19.91	19.58	18.85	19.41	19.08
	16QAM	RB1#0	18.53	19.80	19.83	18.03	19.30	19.33
		RB1#25	19.31	19.70	19.91	18.81	19.20	19.41
		RB1#49	20.16	19.82	19.75	19.66	19.32	19.25
		RB25#0	17.93	19.02	18.61	17.43	18.52	18.11
		RB25#25	18.83	18.99	18.70	18.33	18.49	18.20
		RB50#0	18.39	18.95	18.60	17.89	18.45	18.10

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	19.66	21.05	20.06	19.16	20.55	19.56
		RB1#38	20.63	20.65	20.20	20.13	20.15	19.70
		RB1#74	21.05	20.47	19.71	20.55	19.97	19.21
		RB36#0	19.21	20.14	19.39	18.71	19.64	18.89
		RB36#39	20.07	19.79	19.30	19.57	19.29	18.80
		RB75#0	19.65	19.96	19.34	19.15	19.46	18.84
	16QAM	RB1#0	18.76	20.44	19.68	18.26	19.94	19.18
		RB1#38	19.77	20.09	19.80	19.27	19.59	19.30
		RB1#74	20.22	19.87	19.33	19.72	19.37	18.83
		RB36#0	18.30	19.10	18.44	17.80	18.60	17.94
		RB36#39	19.17	18.74	18.37	18.67	18.24	17.87
		RB75#0	18.76	18.91	18.40	18.26	18.41	17.90
20.0	QPSK	RB1#0	19.22	21.45	20.14	18.72	20.95	19.64
		RB1#50	20.33	20.56	20.20	19.83	20.06	19.70
		RB1#99	21.14	21.22	20.28	20.64	20.72	19.78
		RB50#0	18.72	20.20	19.22	18.22	19.70	18.72
		RB50#50	19.90	20.07	19.54	19.40	19.57	19.04
		RB100#0	19.34	20.12	19.37	18.84	19.62	18.87
	16QAM	RB1#0	18.31	21.05	19.51	17.81	20.55	19.01
		RB1#50	19.53	20.21	19.55	19.03	19.71	19.05
		RB1#99	20.29	20.81	19.71	19.79	20.31	19.21
		RB50#0	17.85	19.14	18.27	17.35	18.64	17.77
		RB50#50	19.06	19.00	18.62	18.56	18.50	18.12
		RB100#0	18.49	19.06	18.46	17.99	18.56	17.96

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	19.95	20.00	20.02	19.25	19.30	19.32
		RB1#3	20.04	20.06	20.14	19.34	19.36	19.44
		RB1#5	20.03	20.05	20.12	19.33	19.35	19.42
		RB3#0	20.10	20.20	20.08	19.40	19.50	19.38
		RB3#3	20.15	20.15	19.96	19.45	19.45	19.26
		RB6#0	19.08	19.05	18.86	18.38	18.35	18.16
	16QAM	RB1#0	19.77	19.64	19.99	19.07	18.94	19.29
		RB1#3	19.74	19.66	19.99	19.04	18.96	19.29
		RB1#5	19.75	19.70	19.98	19.05	19.00	19.28
		RB3#0	19.18	19.15	19.18	18.48	18.45	18.48
		RB3#3	19.23	19.16	19.15	18.53	18.46	18.45
		RB6#0	18.38	18.33	18.61	17.68	17.63	17.91
3.0	QPSK	RB1#0	20.06	20.00	19.93	19.36	19.30	19.23
		RB1#8	20.07	20.14	19.95	19.37	19.44	19.25
		RB1#14	19.91	20.12	19.87	19.21	19.42	19.17
		RB6#0	19.14	19.07	19.05	18.44	18.37	18.35
		RB6#9	18.96	19.06	18.98	18.26	18.36	18.28
		RB15#0	19.02	19.17	19.05	18.32	18.47	18.35
	16QAM	RB1#0	19.79	18.89	19.28	19.09	18.19	18.58
		RB1#8	19.81	18.90	19.17	19.11	18.20	18.47
		RB1#14	19.65	18.91	19.08	18.95	18.21	18.38
		RB6#0	18.26	18.35	18.00	17.56	17.65	17.30
		RB6#9	18.08	18.34	18.41	17.38	17.64	17.71
		RB15#0	18.13	18.20	18.11	17.43	17.50	17.41

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	20.08	20.02	19.94	19.38	19.32	19.24
		RB1#13	20.00	20.12	20.05	19.30	19.42	19.35
		RB1#24	20.02	20.04	19.94	19.32	19.34	19.24
		RB15#0	19.08	19.03	18.93	18.38	18.33	18.23
		RB15#10	18.86	19.13	18.96	18.16	18.43	18.26
		RB25#0	18.91	19.16	19.12	18.21	18.46	18.42
	16QAM	RB1#0	19.26	18.74	18.11	18.56	18.04	17.41
		RB1#13	19.13	18.78	18.21	18.43	18.08	17.51
		RB1#24	19.11	18.80	18.19	18.41	18.10	17.49
		RB15#0	18.02	18.21	18.08	17.32	17.51	17.38
		RB15#10	17.95	18.23	18.19	17.25	17.53	17.49
		RB25#0	17.97	18.06	18.16	17.27	17.36	17.46
10.0	QPSK	RB1#0	20.15	20.04	19.97	19.45	19.34	19.27
		RB1#25	20.02	20.10	19.88	19.32	19.40	19.18
		RB1#49	19.98	20.14	19.96	19.28	19.44	19.26
		RB25#0	18.91	19.10	18.89	18.21	18.40	18.19
		RB25#25	18.97	19.10	19.00	18.27	18.40	18.30
		RB50#0	18.93	19.17	19.03	18.23	18.47	18.33
	16QAM	RB1#0	19.26	18.54	19.27	18.56	17.84	18.57
		RB1#25	19.05	18.56	19.23	18.35	17.86	18.53
		RB1#49	19.08	18.58	19.27	18.38	17.88	18.57
		RB25#0	18.16	18.30	18.00	17.46	17.60	17.30
		RB25#25	18.10	18.26	18.06	17.40	17.56	17.36
		RB50#0	18.03	18.17	18.18	17.33	17.47	17.48

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	20.17	19.93	19.97	19.47	19.23	19.27
		RB1#38	20.04	20.07	19.88	19.34	19.37	19.18
		RB1#74	20.14	20.02	19.93	19.44	19.32	19.23
		RB36#0	18.95	19.08	19.04	18.25	18.38	18.34
		RB36#39	19.01	19.14	18.83	18.31	18.44	18.13
		RB75#0	18.93	19.18	18.92	18.23	18.48	18.22
	16QAM	RB1#0	19.23	19.39	19.31	18.53	18.69	18.61
		RB1#38	19.08	19.47	19.23	18.38	18.77	18.53
		RB1#74	19.18	19.44	19.25	18.48	18.74	18.55
		RB36#0	18.09	18.15	18.20	17.39	17.45	17.50
		RB36#39	18.06	18.20	18.21	17.36	17.50	17.51
		RB75#0	18.07	18.24	18.07	17.37	17.54	17.37
20.0	QPSK	RB1#0	20.04	20.06	20.35	19.34	19.36	19.65
		RB1#50	19.82	20.28	20.22	19.12	19.58	19.52
		RB1#99	20.08	20.17	20.23	19.38	19.47	19.53
		RB50#0	18.95	19.05	19.05	18.25	18.35	18.35
		RB50#50	19.12	19.13	18.91	18.42	18.43	18.21
		RB100#0	18.85	19.15	19.07	18.15	18.45	18.37
	16QAM	RB1#0	19.46	19.74	18.58	18.76	19.04	17.88
		RB1#50	19.25	19.78	18.42	18.55	19.08	17.72
		RB1#99	19.43	19.78	18.43	18.73	19.08	17.73
		RB50#0	18.13	18.11	18.20	17.43	17.41	17.50
		RB50#50	18.17	18.14	18.22	17.47	17.44	17.52
		RB100#0	18.03	18.13	18.03	17.33	17.43	17.33

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	22.76	22.96	23.16	19.01	19.21	19.41
		RB1#3	22.78	23.07	23.19	19.03	19.32	19.44
		RB1#5	22.70	23.00	23.21	18.95	19.25	19.46
		RB3#0	22.96	23.00	23.14	19.21	19.25	19.39
		RB3#3	22.94	23.03	23.21	19.19	19.28	19.46
		RB6#0	21.85	21.93	22.18	18.10	18.18	18.43
	16QAM	RB1#0	22.60	21.62	22.73	18.85	17.87	18.98
		RB1#3	22.56	21.64	22.79	18.81	17.89	19.04
		RB1#5	22.55	21.65	22.78	18.80	17.90	19.03
		RB3#0	21.78	22.19	22.15	18.03	18.44	18.40
		RB3#3	21.85	22.10	22.27	18.10	18.35	18.52
		RB6#0	21.00	21.32	21.43	17.25	17.57	17.68
3.0	QPSK	RB1#0	22.72	23.04	23.17	18.97	19.29	19.42
		RB1#8	22.71	23.10	23.08	18.96	19.35	19.33
		RB1#14	22.83	23.10	23.15	19.08	19.35	19.40
		RB6#0	21.85	22.02	22.17	18.10	18.27	18.42
		RB6#9	21.91	21.95	22.19	18.16	18.2	18.44
		RB15#0	21.87	21.99	22.17	18.12	18.24	18.42
	16QAM	RB1#0	22.62	21.60	22.36	18.87	17.85	18.61
		RB1#8	22.59	21.67	22.33	18.84	17.92	18.58
		RB1#14	22.68	21.65	22.34	18.93	17.90	18.59
		RB6#0	20.99	21.25	21.23	17.24	17.50	17.48
		RB6#9	21.03	21.30	21.33	17.28	17.55	17.58
		RB15#0	20.97	21.11	21.32	17.22	17.36	17.57

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.93	22.97	23.20	19.18	19.22	19.45
		RB1#13	22.93	22.91	23.09	19.18	19.16	19.34
		RB1#24	22.95	23.00	23.09	19.20	19.25	19.34
		RB15#0	21.77	21.84	22.10	18.02	18.09	18.35
		RB15#10	21.96	22.10	22.13	18.21	18.35	18.38
		RB25#0	21.87	22.11	22.19	18.12	18.36	18.44
	16QAM	RB1#0	22.09	21.70	21.30	18.34	17.95	17.55
		RB1#13	22.06	21.73	21.31	18.31	17.98	17.56
		RB1#24	22.08	21.79	21.32	18.33	18.04	17.57
		RB15#0	20.84	21.07	21.23	17.09	17.32	17.48
		RB15#10	20.82	21.15	21.35	17.07	17.40	17.60
		RB25#0	20.91	21.01	21.34	17.16	17.26	17.59
10.0	QPSK	RB1#0	22.96	22.87	22.92	19.21	19.12	19.17
		RB1#25	22.96	22.99	22.96	19.21	19.24	19.21
		RB1#49	23.02	23.07	23.15	19.27	19.32	19.40
		RB25#0	21.97	21.91	22.07	18.22	18.16	18.32
		RB25#25	22.04	22.08	22.16	18.29	18.33	18.41
		RB50#0	21.95	22.06	22.01	18.2	18.31	18.26
	16QAM	RB1#0	22.09	21.40	22.25	18.34	17.65	18.50
		RB1#25	22.02	21.56	22.28	18.27	17.81	18.53
		RB1#49	22.06	21.58	22.40	18.31	17.83	18.65
		RB25#0	21.11	21.18	21.16	17.36	17.43	17.41
		RB25#25	21.13	21.24	21.29	17.38	17.49	17.54
		RB50#0	21.04	21.05	21.59	17.29	17.3	17.84

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For Band5: Antenna Gain = -1.6dBi = -3.75dBd (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	18.34	18.98	18.41	17.94	18.58	18.01
		RB1#13	19.06	19.38	18.82	18.66	18.98	18.42
		RB1#24	18.75	18.85	18.33	18.35	18.45	17.93
		RB15#0	18.03	18.52	18.03	17.63	18.12	17.63
		RB15#10	18.20	18.46	18.01	17.80	18.06	17.61
		RB25#0	18.09	18.45	17.98	17.69	18.05	17.58
	16QAM	RB1#0	17.85	18.26	17.60	17.45	17.86	17.20
		RB1#13	18.58	18.66	18.03	18.18	18.26	17.63
		RB1#24	18.27	18.13	17.53	17.87	17.73	17.13
		RB15#0	16.97	17.48	17.14	16.57	17.08	16.74
		RB15#10	17.14	17.42	17.10	16.74	17.02	16.70
		RB25#0	17.04	17.42	17.10	16.64	17.02	16.70
10.0	QPSK	RB1#0	18.13	19.31	18.90	17.73	18.91	18.50
		RB1#25	18.78	19.39	18.80	18.38	18.99	18.40
		RB1#49	19.54	19.67	19.01	19.14	19.27	18.61
		RB25#0	17.56	18.65	18.29	17.16	18.25	17.89
		RB25#25	18.32	18.80	18.33	17.92	18.40	17.93
		RB50#0	17.96	18.73	18.31	17.56	18.33	17.91
	16QAM	RB1#0	17.24	18.51	18.74	16.84	18.11	18.34
		RB1#25	17.98	18.58	18.71	17.58	18.18	18.31
		RB1#49	18.69	18.88	18.87	18.29	18.48	18.47
		RB25#0	16.62	17.65	17.41	16.22	17.25	17.01
		RB25#25	17.38	17.79	17.45	16.98	17.39	17.05
		RB50#0	17.00	17.66	17.40	16.60	17.26	17.00

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	18.40	19.70	19.58	18.00	19.30	19.18
		RB1#38	19.06	19.37	18.98	18.66	18.97	18.58
		RB1#74	19.62	19.49	18.83	19.22	19.09	18.43
		RB36#0	17.82	18.83	18.57	17.42	18.43	18.17
		RB36#39	18.57	18.69	18.10	18.17	18.29	17.70
		RB75#0	18.20	18.75	18.34	17.80	18.35	17.94
	16QAM	RB1#0	17.51	19.26	19.22	17.11	18.86	18.82
		RB1#38	18.26	18.96	18.69	17.86	18.56	18.29
		RB1#74	18.78	19.07	18.49	18.38	18.67	18.09
		RB36#0	16.87	17.72	17.61	16.47	17.32	17.21
		RB36#39	17.63	17.58	17.14	17.23	17.18	16.74
		RB75#0	17.27	17.64	17.37	16.87	17.24	16.97
20.0	QPSK	RB1#0	18.05	20.02	19.98	17.65	19.62	19.58
		RB1#50	18.82	19.32	19.22	18.42	18.92	18.82
		RB1#99	19.78	20.37	19.61	19.38	19.97	19.21
		RB50#0	17.46	18.81	18.71	17.06	18.41	18.31
		RB50#50	18.58	19.00	18.43	18.18	18.60	18.03
		RB100#0	18.04	18.89	18.57	17.64	18.49	18.17
	16QAM	RB1#0	17.37	19.76	19.33	16.97	19.36	18.93
		RB1#50	18.19	19.08	18.65	17.79	18.68	18.25
		RB1#99	19.12	20.11	18.94	18.72	19.71	18.54
		RB50#0	16.37	17.70	17.75	15.97	17.30	17.35
		RB50#50	17.49	17.87	17.45	17.09	17.47	17.05
		RB100#0	16.96	17.78	17.62	16.56	17.38	17.22

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	22.62	22.93	23.08	18.57	18.88	19.03
		RB1#3	22.63	22.96	23.07	18.58	18.91	19.02
		RB1#5	22.65	22.89	23.08	18.60	18.84	19.03
		RB3#0	22.66	23.11	22.90	18.61	19.06	18.85
		RB3#3	22.58	23.11	23.09	18.53	19.06	19.04
		RB6#0	21.79	22.09	21.94	17.74	18.04	17.89
	16QAM	RB1#0	22.46	22.69	21.53	18.41	18.64	17.48
		RB1#3	22.39	22.75	21.71	18.34	18.70	17.66
		RB1#5	22.53	22.75	21.74	18.48	18.70	17.69
		RB3#0	21.59	21.96	22.04	17.54	17.91	17.99
		RB3#3	21.56	21.97	22.03	17.51	17.92	17.98
		RB6#0	20.71	21.41	21.18	16.66	17.36	17.13
3.0	QPSK	RB1#0	22.63	23.06	22.97	18.58	19.01	18.92
		RB1#8	22.62	23.05	22.92	18.57	19.00	18.87
		RB1#14	22.91	23.08	22.94	18.86	19.03	18.89
		RB6#0	21.67	22.03	22.00	17.62	17.98	17.95
		RB6#9	21.93	22.09	21.99	17.88	18.04	17.94
		RB15#0	21.69	22.11	21.95	17.64	18.06	17.90
	16QAM	RB1#0	22.43	21.57	22.10	18.38	17.52	18.05
		RB1#8	22.46	21.58	22.10	18.41	17.53	18.05
		RB1#14	22.70	21.61	22.15	18.65	17.56	18.10
		RB6#0	20.71	21.30	20.91	16.66	17.25	16.86
		RB6#9	20.94	21.62	21.03	16.89	17.57	16.98
		RB15#0	20.63	21.37	20.99	16.58	17.32	16.94

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.65	22.93	23.01	18.60	18.88	18.96
		RB1#13	22.93	22.85	23.02	18.88	18.80	18.97
		RB1#24	23.20	22.84	22.93	19.15	18.79	18.88
		RB15#0	21.75	22.05	21.89	17.70	18.00	17.84
		RB15#10	21.89	22.12	21.92	17.84	18.07	17.87
		RB25#0	21.93	22.02	21.91	17.88	17.97	17.86
	16QAM	RB1#0	21.77	21.62	21.21	17.72	17.57	17.16
		RB1#13	22.05	21.52	21.06	18.00	17.47	17.01
		RB1#24	22.23	21.56	21.13	18.18	17.51	17.08
		RB15#0	20.50	21.05	21.13	16.45	17.00	17.08
		RB15#10	20.82	21.38	21.07	16.77	17.33	17.02
		RB25#0	21.00	21.27	21.05	16.95	17.22	17.00
10.0	QPSK	RB1#0	22.65	23.05	22.88	18.60	19.00	18.83
		RB1#25	23.04	23.18	22.86	18.99	19.13	18.81
		RB1#49	22.96	23.13	22.86	18.91	19.08	18.81
		RB25#0	21.97	22.10	22.03	17.92	18.05	17.98
		RB25#25	21.98	22.10	21.86	17.93	18.05	17.81
		RB50#0	22.07	22.09	21.92	18.02	18.04	17.87
	16QAM	RB1#0	21.83	21.42	22.11	17.78	17.37	18.06
		RB1#25	22.18	21.63	22.03	18.13	17.58	17.98
		RB1#49	22.20	21.61	22.12	18.15	17.56	18.07
		RB25#0	21.03	21.15	21.39	16.98	17.10	17.34
		RB25#25	21.17	21.54	21.02	17.12	17.49	16.97
		RB50#0	21.48	21.46	21.51	17.43	17.41	17.46

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	23.04	22.84	23.02	18.99	18.79	18.97
		RB1#13	23.01	22.76	22.93	18.96	18.71	18.88
		RB1#24	23.01	22.80	22.93	18.96	18.75	18.88
		RB15#0	22.06	22.11	22.06	18.01	18.06	18.01
		RB15#10	22.07	22.01	21.84	18.02	17.96	17.79
		RB25#0	21.97	21.93	21.91	17.92	17.88	17.86
	16QAM	RB1#0	22.11	21.61	21.20	18.06	17.56	17.15
		RB1#13	22.00	21.43	21.08	17.95	17.38	17.03
		RB1#24	22.05	21.57	21.14	18.00	17.52	17.09
		RB15#0	20.97	21.42	21.16	16.92	17.37	17.11
		RB15#10	21.33	21.41	21.03	17.28	17.36	16.98
		RB25#0	21.08	21.24	20.95	17.03	17.19	16.90
10.0	QPSK	RB1#0	22.99	23.11	23.06	18.94	19.06	19.01
		RB1#25	22.90	23.10	22.89	18.85	19.05	18.84
		RB1#49	22.92	23.09	22.92	18.87	19.04	18.87
		RB25#0	22.01	22.05	21.96	17.96	18.00	17.91
		RB25#25	22.08	21.96	21.97	18.03	17.91	17.92
		RB50#0	22.12	21.95	21.92	18.07	17.90	17.87
	16QAM	RB1#0	22.16	21.55	22.22	18.11	17.50	18.17
		RB1#25	22.17	21.53	22.16	18.12	17.48	18.11
		RB1#49	22.16	21.50	22.17	18.11	17.45	18.12
		RB25#0	21.15	21.41	21.48	17.10	17.36	17.43
		RB25#25	21.11	21.16	21.09	17.06	17.11	17.04
		RB50#0	21.47	21.38	21.42	17.42	17.33	17.37

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	22.44	22.39	22.31	22.04	21.99	21.91
		RB1#13	22.36	22.30	22.36	21.96	21.90	21.96
		RB1#24	22.36	22.30	22.32	21.96	21.90	21.92
		RB15#0	21.50	21.30	21.31	21.10	20.90	20.91
		RB15#10	21.47	21.27	21.33	21.07	20.87	20.93
		RB25#0	21.45	21.26	21.27	21.05	20.86	20.87
	16QAM	RB1#0	21.55	21.50	21.74	21.15	21.10	21.34
		RB1#13	21.58	21.72	21.53	21.18	21.32	21.13
		RB1#24	21.36	21.91	21.73	20.96	21.51	21.33
		RB15#0	20.75	20.49	20.59	20.35	20.09	20.19
		RB15#10	20.79	20.54	20.60	20.39	20.14	20.20
		RB25#0	20.47	20.49	20.58	20.07	20.09	20.18
10.0	QPSK	RB1#0	22.76	22.37	22.51	22.36	21.97	22.11
		RB1#25	22.70	22.36	22.49	22.30	21.96	22.09
		RB1#49	22.74	22.29	22.45	22.34	21.89	22.05
		RB25#0	21.41	21.48	21.27	21.01	21.08	20.87
		RB25#25	21.45	21.42	21.44	21.05	21.02	21.04
		RB50#0	21.48	21.34	21.35	21.08	20.94	20.95
	16QAM	RB1#0	21.73	21.29	21.63	21.33	20.89	21.23
		RB1#25	21.55	21.35	21.60	21.15	20.95	21.20
		RB1#49	21.96	21.36	21.55	21.56	20.96	21.15
		RB25#0	20.85	20.90	20.37	20.45	20.50	19.97
		RB25#25	20.83	20.86	20.45	20.43	20.46	20.05
		RB50#0	20.67	20.47	20.44	20.27	20.07	20.04

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	22.72	22.35	22.49	22.32	21.95	22.09
		RB1#38	22.59	22.23	22.46	22.19	21.83	22.06
		RB1#74	22.67	22.25	22.47	22.27	21.85	22.07
		RB36#0	21.47	21.35	21.45	21.07	20.95	21.05
		RB36#39	21.45	21.24	21.29	21.05	20.84	20.89
		RB75#0	21.42	21.30	21.37	21.02	20.90	20.97
	16QAM	RB1#0	21.70	21.12	21.55	21.30	20.72	21.15
		RB1#38	21.41	20.68	21.57	21.01	20.28	21.17
		RB1#74	22.15	20.50	21.61	21.75	20.10	21.21
		RB36#0	20.54	20.65	20.53	20.14	20.25	20.13
		RB36#39	20.43	20.71	20.53	20.03	20.31	20.13
		RB75#0	20.60	20.54	20.42	20.20	20.14	20.02
20.0	QPSK	RB1#0	22.52	22.57	22.18	22.12	22.17	21.78
		RB1#50	22.39	22.76	22.17	21.99	22.36	21.77
		RB1#99	22.49	22.70	22.24	22.09	22.30	21.84
		RB50#0	21.39	21.26	21.24	20.99	20.86	20.84
		RB50#50	21.48	21.39	21.42	21.08	20.99	21.02
		RB100#0	21.31	21.28	21.32	20.91	20.88	20.92
	16QAM	RB1#0	21.16	22.18	21.87	20.76	21.78	21.47
		RB1#50	21.22	22.24	21.89	20.82	21.84	21.49
		RB1#99	21.18	22.22	21.89	20.78	21.82	21.49
		RB50#0	20.65	20.49	20.65	20.25	20.09	20.25
		RB50#50	20.71	20.59	20.65	20.31	20.19	20.25
		RB100#0	20.49	20.45	20.55	20.09	20.05	20.15

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	22.84	22.28	22.69	22.44	21.88	22.29
		RB1#13	22.71	22.31	22.63	22.31	21.91	22.23
		RB1#24	22.70	22.18	22.77	22.30	21.78	22.37
		RB15#0	21.59	21.28	21.54	21.19	20.88	21.14
		RB15#10	21.64	21.24	21.63	21.24	20.84	21.23
		RB25#0	21.58	21.22	21.62	21.18	20.82	21.22
	16QAM	RB1#0	22.04	21.20	21.96	21.64	20.80	21.56
		RB1#13	22.03	21.40	21.96	21.63	21.00	21.56
		RB1#24	21.92	21.50	21.72	21.52	21.10	21.32
		RB15#0	21.01	20.56	20.78	20.61	20.16	20.38
		RB15#10	20.90	20.67	20.75	20.50	20.27	20.35
		RB25#0	21.03	20.31	20.80	20.63	19.91	20.40
10.0	QPSK	RB1#0	22.68	22.53	22.71	22.28	22.13	22.31
		RB1#25	22.61	22.46	22.81	22.21	22.06	22.41
		RB1#49	22.76	22.54	22.85	22.36	22.14	22.45
		RB25#0	21.72	21.31	21.61	21.32	20.91	21.21
		RB25#25	21.66	21.33	21.72	21.26	20.93	21.32
		RB50#0	21.72	21.23	21.66	21.32	20.83	21.26
	16QAM	RB1#0	21.75	21.55	21.81	21.35	21.15	21.41
		RB1#25	21.88	21.56	21.94	21.48	21.16	21.54
		RB1#49	22.23	21.55	22.00	21.83	21.15	21.60
		RB25#0	20.96	20.48	20.90	20.56	20.08	20.50
		RB25#25	20.89	20.46	20.86	20.49	20.06	20.46
		RB50#0	20.85	20.41	20.92	20.45	20.01	20.52

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	22.60	22.49	22.76	22.20	22.09	22.36
		RB1#38	22.41	22.44	22.78	22.01	22.04	22.38
		RB1#74	22.43	22.49	22.85	22.03	22.09	22.45
		RB36#0	21.64	21.44	21.44	21.24	21.04	21.04
		RB36#39	21.56	21.27	21.54	21.16	20.87	21.14
		RB75#0	21.68	21.32	21.65	21.28	20.92	21.25
	16QAM	RB1#0	21.81	21.51	21.72	21.41	21.11	21.32
		RB1#38	21.85	21.54	21.70	21.45	21.14	21.30
		RB1#74	21.90	21.40	21.69	21.50	21.00	21.29
		RB36#0	20.85	20.54	20.53	20.45	20.14	20.13
		RB36#39	20.78	20.43	20.64	20.38	20.03	20.24
		RB75#0	20.84	20.45	20.79	20.44	20.05	20.39
20.0	QPSK	RB1#0	22.88	22.20	22.45	22.48	21.80	22.05
		RB1#50	22.82	22.25	22.55	22.42	21.85	22.15
		RB1#99	22.84	22.16	22.82	22.44	21.76	22.42
		RB50#0	21.68	21.28	21.49	21.28	20.88	21.09
		RB50#50	21.77	21.33	21.53	21.37	20.93	21.13
		RB100#0	21.77	21.21	21.51	21.37	20.81	21.11
	16QAM	RB1#0	22.36	21.86	21.25	21.96	21.46	20.85
		RB1#50	22.33	21.91	21.35	21.93	21.51	20.95
		RB1#99	22.34	22.01	21.53	21.94	21.61	21.13
		RB50#0	20.92	20.56	20.75	20.52	20.16	20.35
		RB50#50	20.88	20.65	20.80	20.48	20.25	20.40
		RB100#0	20.72	20.53	20.56	20.32	20.13	20.16

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	19.16	19.40	18.85	18.46	18.70	18.15
		RB1#3	19.34	19.57	19.01	18.64	18.87	18.31
		RB1#5	19.18	19.38	18.81	18.48	18.68	18.11
		RB3#0	19.26	19.52	18.96	18.56	18.82	18.26
		RB3#3	19.30	19.50	18.99	18.60	18.80	18.29
		RB6#0	18.37	18.58	17.91	17.67	17.88	17.21
	16QAM	RB1#0	18.25	18.65	17.81	17.55	17.95	17.11
		RB1#3	18.52	18.82	18.00	17.82	18.12	17.30
		RB1#5	18.36	18.61	17.81	17.66	17.91	17.11
		RB3#0	18.64	18.61	18.04	17.94	17.91	17.34
		RB3#3	18.68	18.60	18.01	17.98	17.90	17.31
		RB6#0	17.41	17.67	17.07	16.71	16.97	16.37
3.0	QPSK	RB1#0	19.19	19.55	18.96	18.49	18.85	18.26
		RB1#8	19.46	19.56	18.97	18.76	18.86	18.27
		RB1#14	19.44	19.41	18.83	18.74	18.71	18.13
		RB6#0	18.43	18.68	18.01	17.73	17.98	17.31
		RB6#9	18.60	18.61	17.94	17.90	17.91	17.24
		RB15#0	18.55	18.67	18.01	17.85	17.97	17.31
	16QAM	RB1#0	18.47	18.65	18.56	17.77	17.95	17.86
		RB1#8	18.74	18.66	18.60	18.04	17.96	17.90
		RB1#14	18.72	18.52	18.43	18.02	17.82	17.73
		RB6#0	17.44	17.69	17.29	16.74	16.99	16.59
		RB6#9	17.61	17.61	17.22	16.91	16.91	16.52
		RB15#0	17.47	17.78	17.28	16.77	17.08	16.58

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	18.90	19.30	19.07	18.20	18.60	18.37
		RB1#13	19.67	19.64	19.21	18.97	18.94	18.51
		RB1#24	19.38	19.06	18.60	18.68	18.36	17.90
		RB15#0	18.51	18.69	18.16	17.81	17.99	17.46
		RB15#10	18.72	18.60	18.01	18.02	17.90	17.31
		RB25#0	18.59	18.61	18.05	17.89	17.91	17.35
	16QAM	RB1#0	18.34	18.51	17.90	17.64	17.81	17.20
		RB1#13	19.12	18.84	18.10	18.42	18.14	17.40
		RB1#24	18.84	18.27	17.47	18.14	17.57	16.77
		RB15#0	17.45	17.80	17.43	16.75	17.10	16.73
		RB15#10	17.66	17.71	17.26	16.96	17.01	16.56
		RB25#0	17.54	17.72	17.32	16.84	17.02	16.62
10.0	QPSK	RB1#0	18.49	19.86	20.35	17.79	19.16	19.65
		RB1#25	19.29	19.65	19.50	18.59	18.95	18.80
		RB1#49	20.29	19.95	19.43	19.59	19.25	18.73
		RB25#0	17.99	18.94	19.05	17.29	18.24	18.35
		RB25#25	18.90	18.96	18.50	18.20	18.26	17.80
		RB50#0	18.48	18.96	18.78	17.78	18.26	18.08
	16QAM	RB1#0	17.71	18.99	19.86	17.01	18.29	19.16
		RB1#25	18.49	18.74	18.64	17.79	18.04	17.94
		RB1#49	19.50	19.05	18.54	18.80	18.35	17.84
		RB25#0	17.04	18.08	18.21	16.34	17.38	17.51
		RB25#25	17.94	18.09	17.65	17.24	17.39	16.95
		RB50#0	17.49	17.99	17.91	16.79	17.29	17.21

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	18.52	20.11	20.27	17.82	19.41	19.57
		RB1#38	19.53	19.51	18.72	18.83	18.81	18.02
		RB1#74	20.56	19.57	17.69	19.86	18.87	16.99
		RB36#0	18.11	19.07	19.01	17.41	18.37	18.31
		RB36#39	19.31	18.70	17.42	18.61	18.00	16.72
		RB75#0	18.73	18.88	18.28	18.03	18.18	17.58
	16QAM	RB1#0	17.73	19.63	20.03	17.03	18.93	19.33
		RB1#38	18.72	18.52	18.51	18.02	17.82	17.81
		RB1#74	19.81	18.59	17.51	19.11	17.89	16.81
		RB36#0	17.10	17.55	18.01	16.40	16.85	17.31
		RB36#39	18.30	17.15	16.40	17.60	16.45	15.70
		RB75#0	17.73	17.34	17.29	17.03	16.64	16.59
20.0	QPSK	RB1#0	17.34	20.10	20.62	16.64	19.40	19.92
		RB1#50	18.66	18.97	19.30	17.96	18.27	18.60
		RB1#99	20.26	20.14	18.39	19.56	19.44	17.69
		RB50#0	16.74	18.63	19.45	16.04	17.93	18.75
		RB50#50	18.63	18.56	17.89	17.93	17.86	17.19
		RB100#0	17.79	18.58	18.74	17.09	17.88	18.04
	16QAM	RB1#0	16.39	19.81	20.12	15.69	19.11	19.42
		RB1#50	17.89	18.64	18.81	17.19	17.94	18.11
		RB1#99	19.38	19.84	17.88	18.68	19.14	17.18
		RB50#0	15.92	17.61	18.45	15.22	16.91	17.75
		RB50#50	17.87	17.49	16.89	17.17	16.79	16.19
		RB100#0	16.92	17.54	17.77	16.22	16.84	17.07

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	8.30	13
	Middle	10.00	13
	High	10.77	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	12.28	13
	Middle	12.12	13
	High	12.98	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.11	13
	Middle	3.27	13
	High	3.11	13
HSDPA (16QAM)	Low	3.88	13
	Middle	3.88	13
	High	4.10	13
HSUPA (QPSK)	Low	8.88	13
	Middle	3.88	13
	High	3.97	13
HSPA+	Low	3.82	13
	Middle	3.77	13
	High	3.94	13

PCS Band

Mode	Channel	PAR (dB)	Limit(dB)
GSM	Low	9.52	13
	Middle	9.39	13
	High	10.00	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	11.57	13
	Middle	11.89	13
	High	12.53	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	2.92	13
	Middle	8.43	13
	High	2.50	13
HSDPA (16QAM)	Low	3.75	13
	Middle	3.46	13
	High	3.46	13
HSUPA (QPSK)	Low	3.72	13
	Middle	8.43	13
	High	3.27	13
HSPA+	Low	3.55	13
	Middle	3.69	13
	High	3.41	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.11	13
	Middle	2.76	13
	High	3.08	13
HSDPA (16QAM)	Low	4.04	13
	Middle	3.62	13
	High	3.91	13
HSUPA (QPSK)	Low	3.97	13
	Middle	3.53	13
	High	3.97	13
HSPA+	Low	3.62	13
	Middle	3.48	13
	High	3.51	13

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

LTE Band 2 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.83	3.51	4.64	13	Pass
QPSK (100RB Size)	5.16	4.52	4.84	13	Pass
16QAM (1RB Size)	6.03	4.12	5.71	13	Pass
16QAM (100RB Size)	5.88	5.36	5.68	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.87	5.01	3.77	13	Pass
QPSK (100RB Size)	5.30	4.81	5.25	13	Pass
16QAM (1RB Size)	5.16	5.45	4.46	13	Pass
16QAM (100RB Size)	6.14	5.71	6.14	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.58	5.35	5.13	13	Pass
QPSK (50RB Size)	5.64	5.61	5.67	13	Pass
16QAM (1RB Size)	6.6	6.06	6.57	13	Pass
16QAM (50RB Size)	6.38	6.41	6.44	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.17	4.72	4.72	13	Pass
QPSK (100RB Size)	5.30	5.36	5.19	13	Pass
16QAM (1RB Size)	6.03	4.75	5.36	13	Pass
16QAM (100RB Size)	5.33	5.36	6.00	13	Pass

LTE Band 12 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.1	4.97	5.06	13	Pass
QPSK (50RB Size)	5.71	5.48	5.77	13	Pass
16QAM (1RB Size)	6.22	6.19	6.47	13	Pass
16QAM (50RB Size)	6.57	6.38	6.51	13	Pass

LTE Band 17 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.32	4.9	5.22	13	Pass
QPSK (50RB Size)	5.54	5.64	5.77	13	Pass
16QAM (1RB Size)	6.15	6.03	6.6	13	Pass
16QAM (50RB Size)	6.47	6.44	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)	5.01	5.28	5.19	13	Pass
QPSK (100RB Size)	5.71	4.81	5.42	13	Pass
16QAM (1RB Size)	5.94	5.48	5.01	13	Pass
16QAM (100RB Size)	6.43	6.35	5.28	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.67	6.14	5.30	13	Pass
QPSK (100RB Size)	5.19	5.30	5.68	13	Pass
16QAM (1RB Size)	5.10	4.99	5.86	13	Pass
16QAM (100RB Size)	5.30	5.30	6.17	13	Pass

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LTE Band 66 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.54	4.35	4.81	13	Pass
QPSK (100RB Size)	5.51	5.57	5.19	13	Pass
16QAM (1RB Size)	5.65	4.61	5.88	13	Pass
16QAM (100RB Size)	5.65	6.32	6.12	13	Pass

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

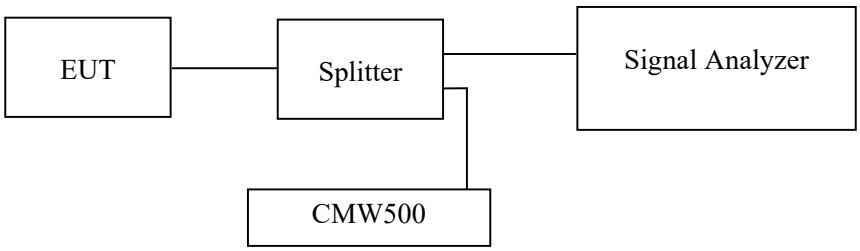
Applicable Standard

FCC 47 §2.1049, §22.917, §22.905, §24.238, and §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 was added into plots.

Test Data

Environmental Conditions

Temperature:	26.3~27.2 ℃
Relative Humidity:	56.2~58.1%
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-11-02 to 2022-11-15.

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	317.00
	190	836.6	243.00	318.00
	251	848.8	243.00	317.00
EGPRS(8PSK)	128	824.2	250.00	318.00
	190	836.6	248.00	318.00
	251	848.8	248.00	319.00

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.14	4.70
	836.6	4.14	4.70
	846.6	4.14	4.70
HSDPA	826.4	4.14	4.68
	836.6	4.16	4.68
	846.6	4.16	4.70
HSUPA	826.4	4.14	4.71
	836.6	4.16	4.70
	846.6	4.16	4.70

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	243.00	319.00
	661	1880.0	241.00	316.00
	810	1909.8	245.00	318.00
EGPRS(8PSK)	512	1850.2	244.00	315.00
	661	1880.0	245.00	316.00
	810	1909.8	247.00	313.00

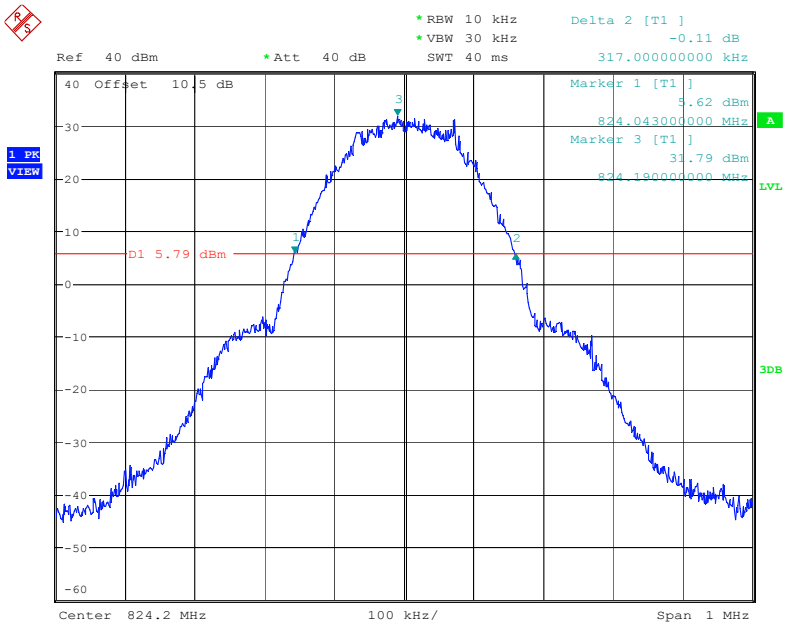
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.16	4.71
	1880.0	4.17	4.73
	1907.6	4.16	4.73
HSDPA	1852.4	4.16	4.70
	1880.0	4.17	4.71
	1907.6	4.16	4.71
HSUPA	1852.4	4.16	4.70
	1880.0	4.17	4.71
	1907.6	4.16	4.71

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.16	4.70
	1732.6	4.14	4.70
	1752.6	4.16	4.70
HSDPA	1712.4	4.16	4.70
	1732.6	4.17	4.70
	1752.6	4.16	4.71
HSUPA	1712.4	4.16	4.70
	1732.6	4.16	4.70
	1752.6	4.14	4.70

Cellular Band (Part 22H)

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



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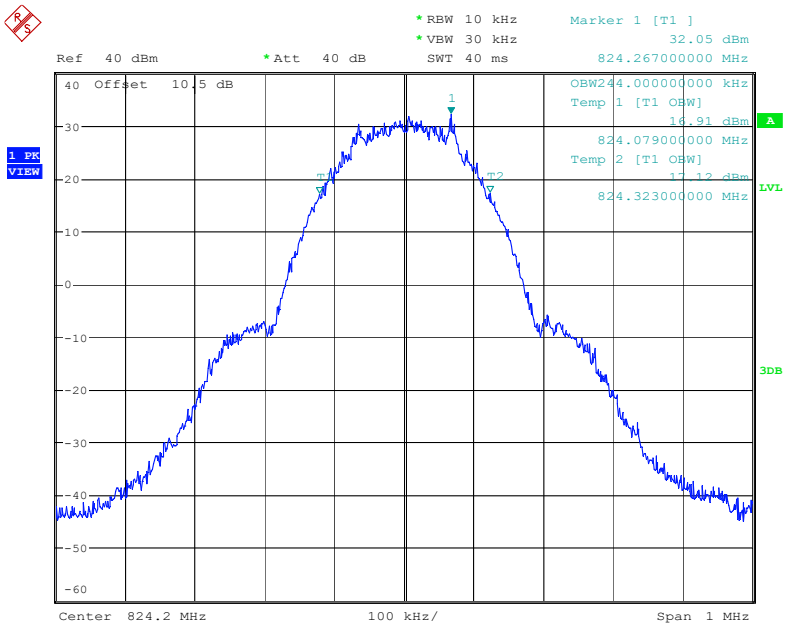

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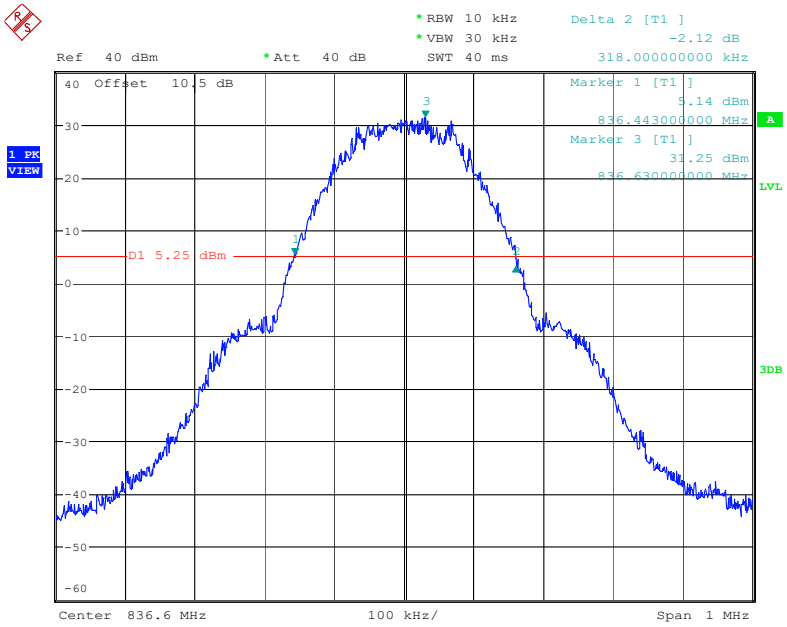
26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



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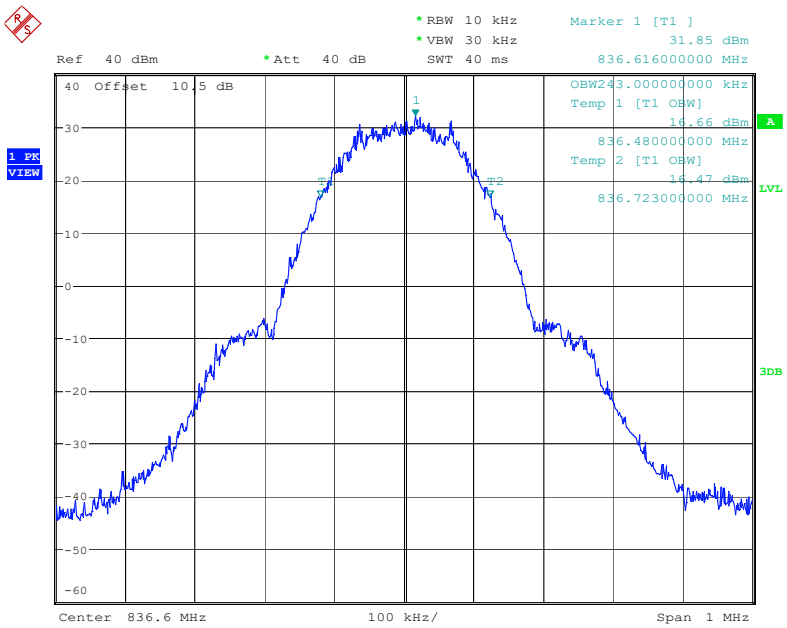
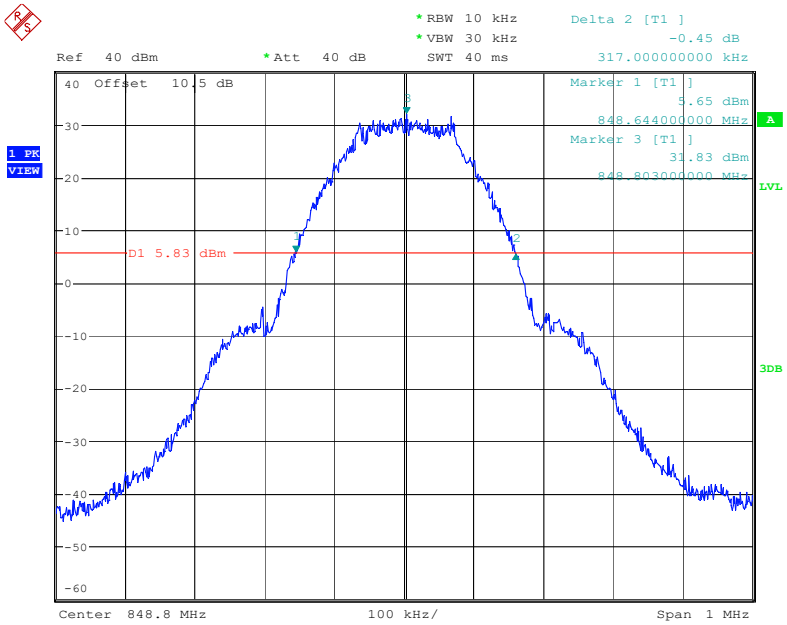


Date: 2.NOV.2022 16:42:47

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



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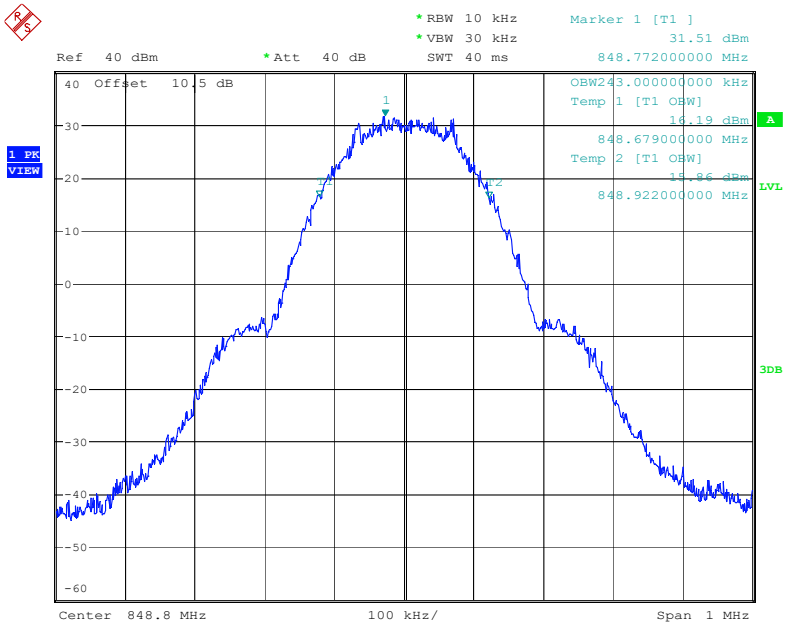
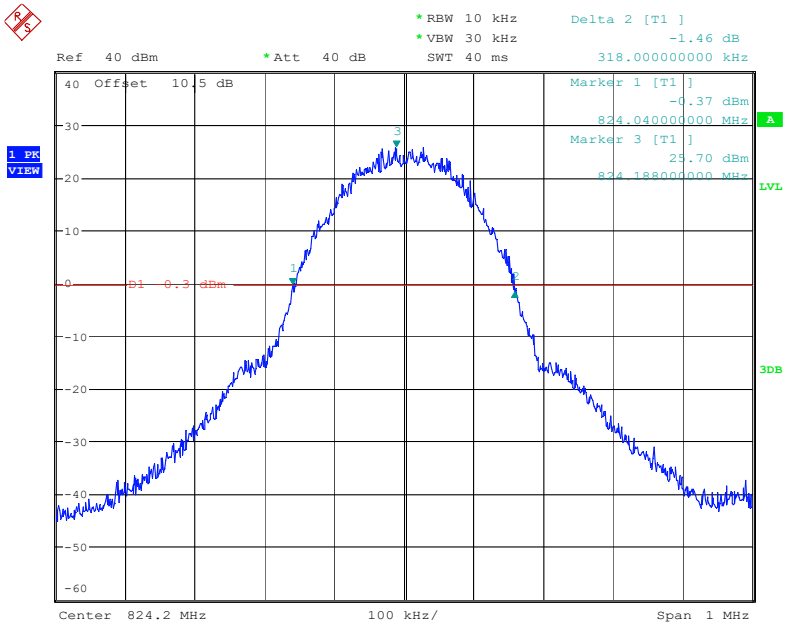


Date: 2.NOV.2022 16:47:12

26 dB Emission Bandwidth for GSM(8PSK) Mode, Low channel



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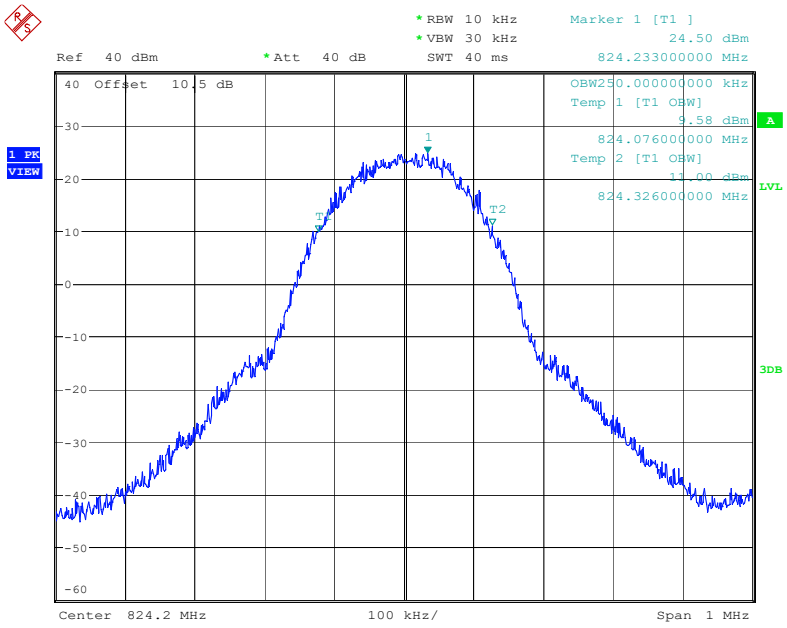
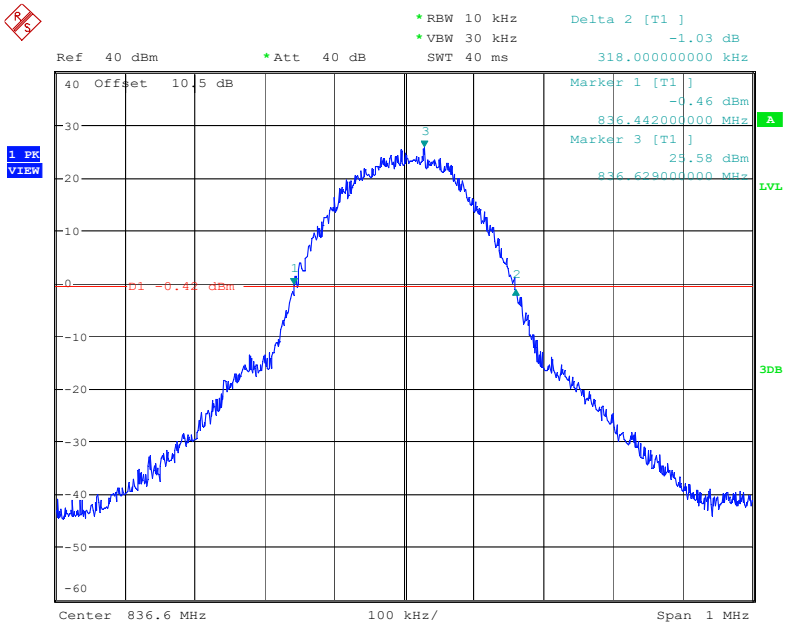


Date: 2.NOV.2022 17:06:48

26 dB Emission Bandwidth for GSM(8PSK) Mode, Middle channel



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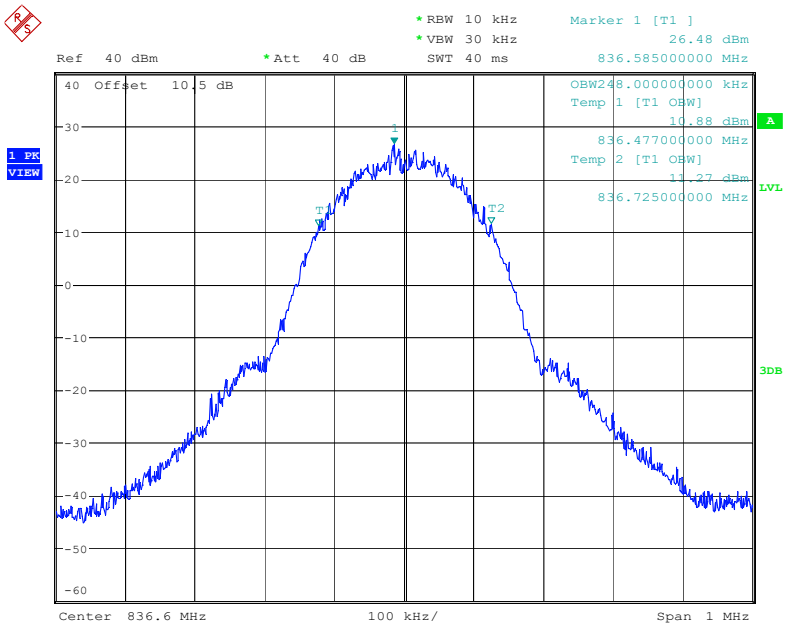
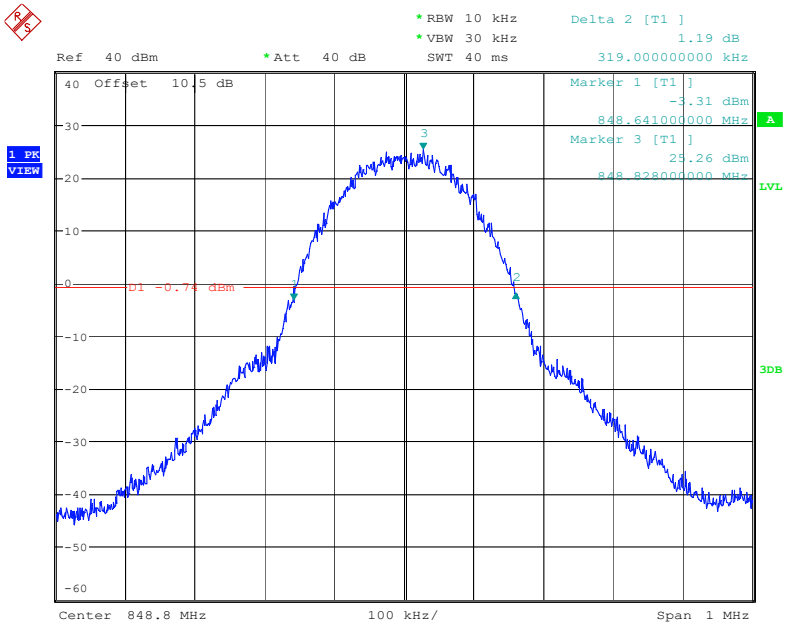


Date: 2.NOV.2022 17:12:00

26 dB Emission Bandwidth for GSM(8PSK) Mode, High channel



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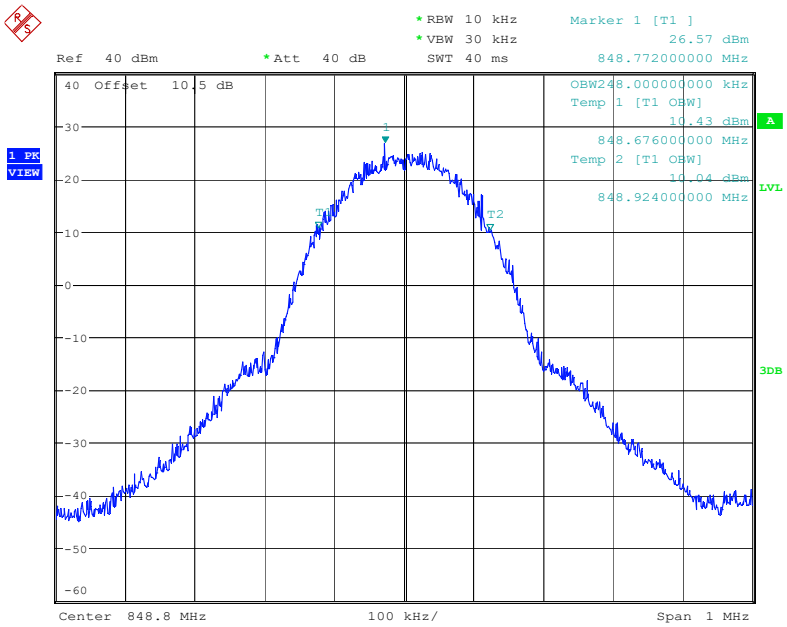

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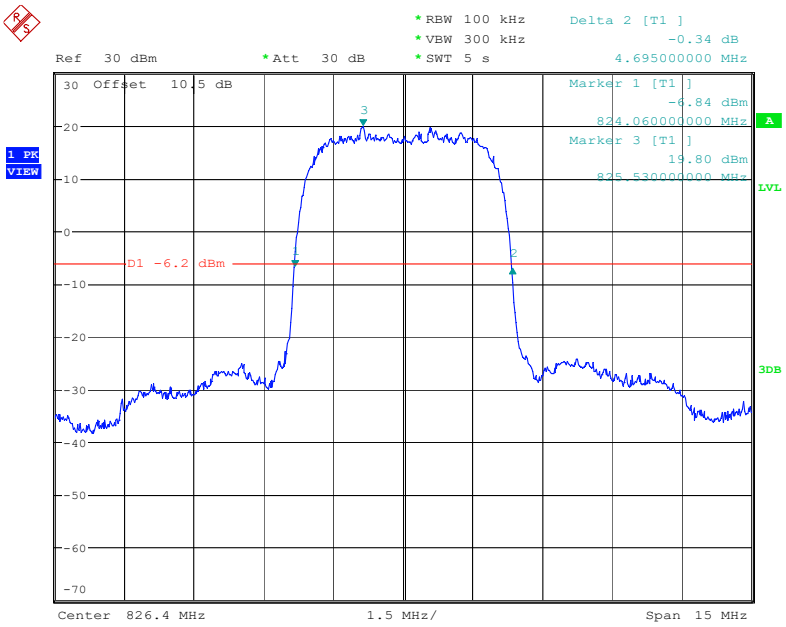
26 dB Emission Bandwidth for RMC (BPSK) Mode, Low channel



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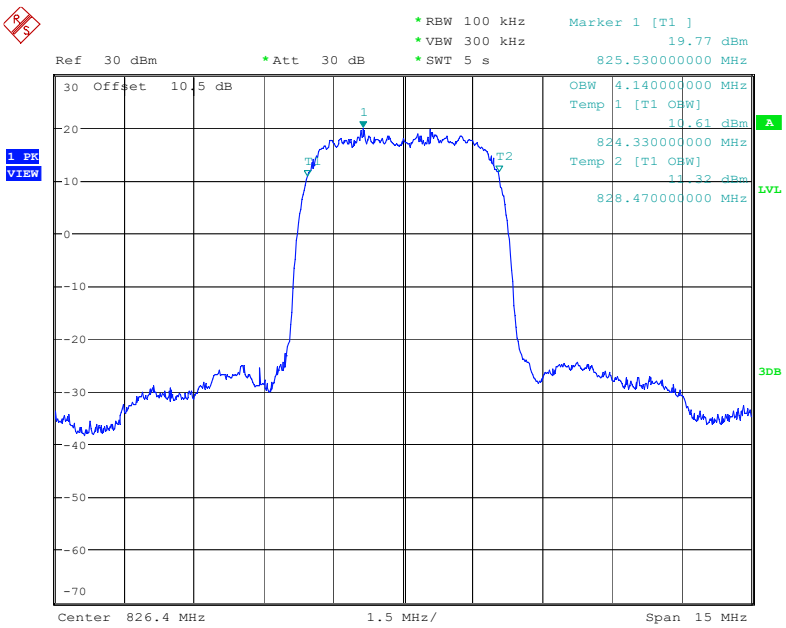

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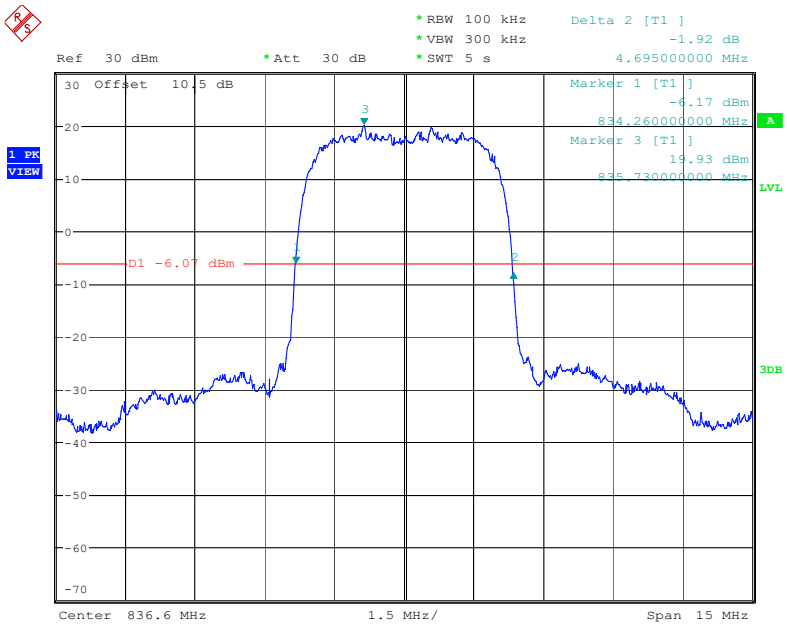
26 dB Emission Bandwidth for RMC (BPSK) Mode, Middle channel



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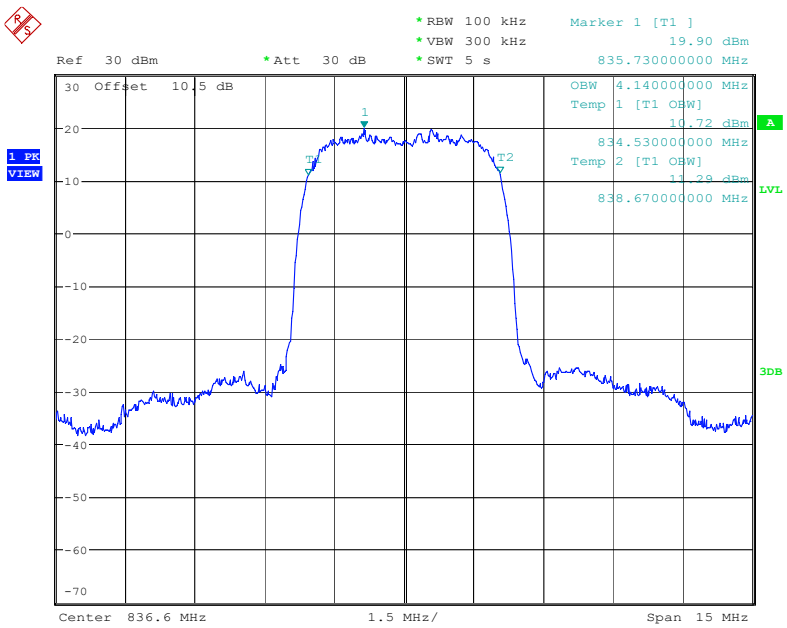

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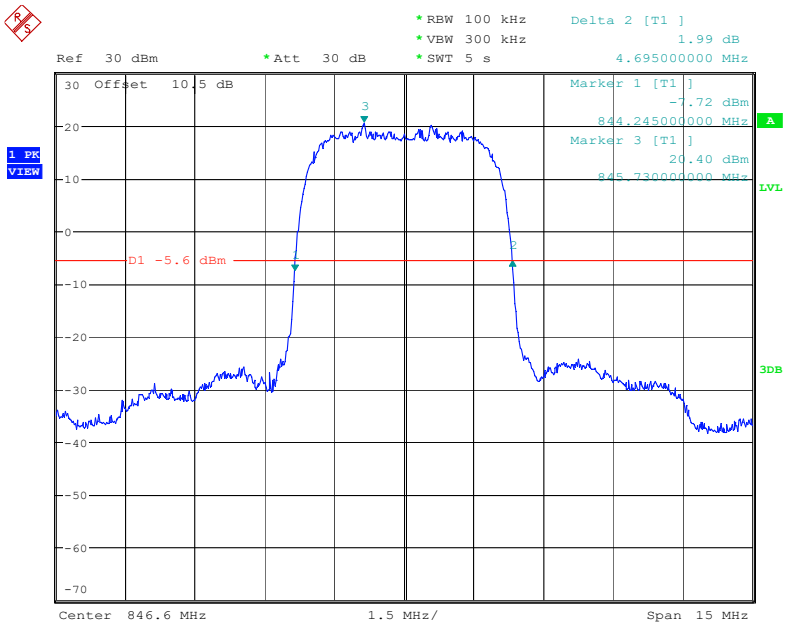
26 dB Emission Bandwidth for RMC (BPSK) Mode, High channel



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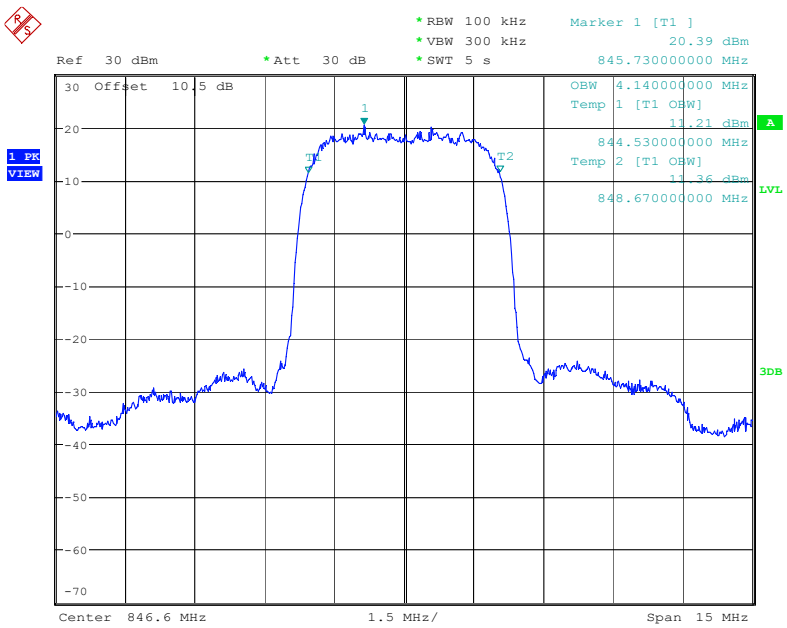
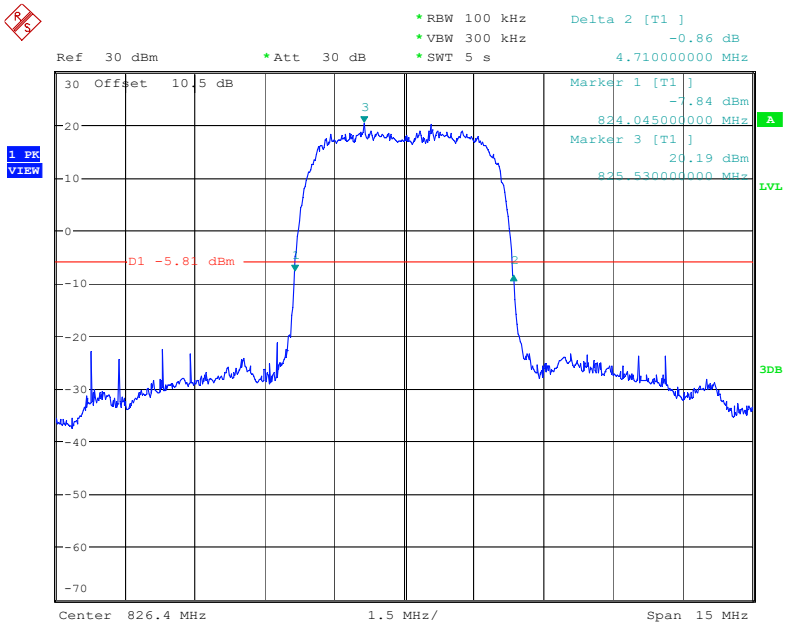


Date: 2.NOV.2022 18:37:09

26 dB Emission Bandwidth for HSUPA (QPSK) Mode, Low channel



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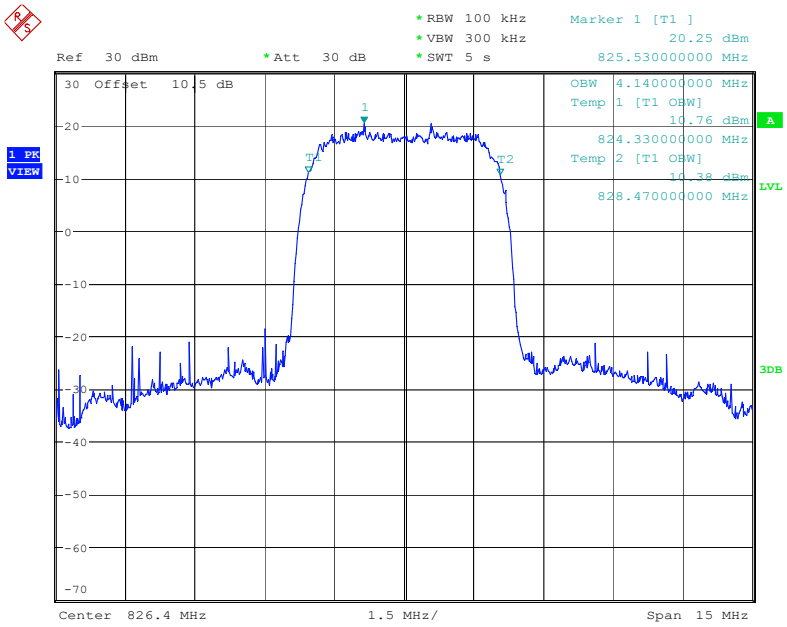

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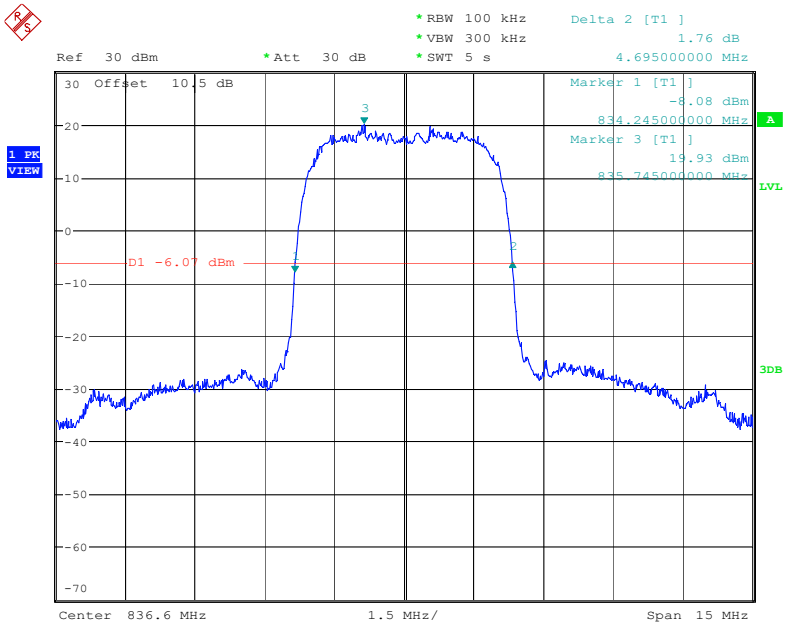
26 dB Emission Bandwidth for HSUPA (QPSK) Mode, Middle channel



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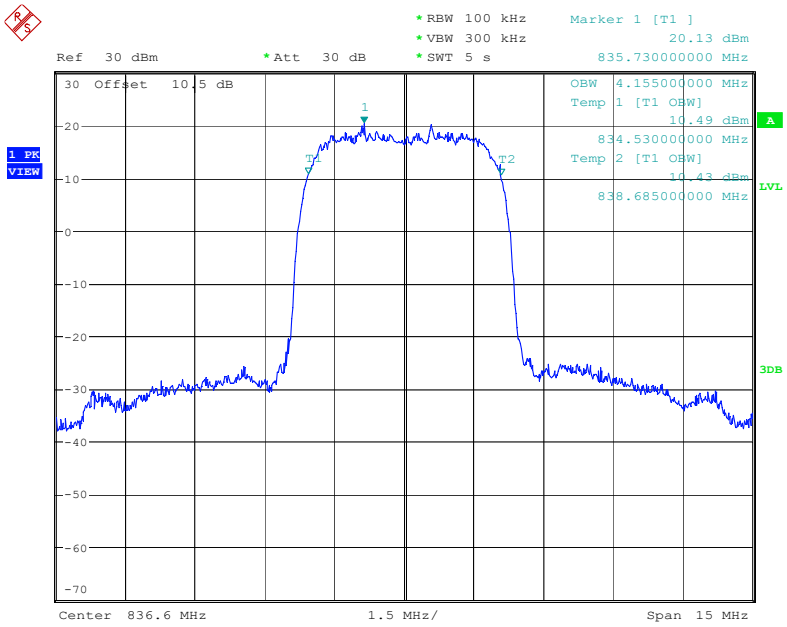

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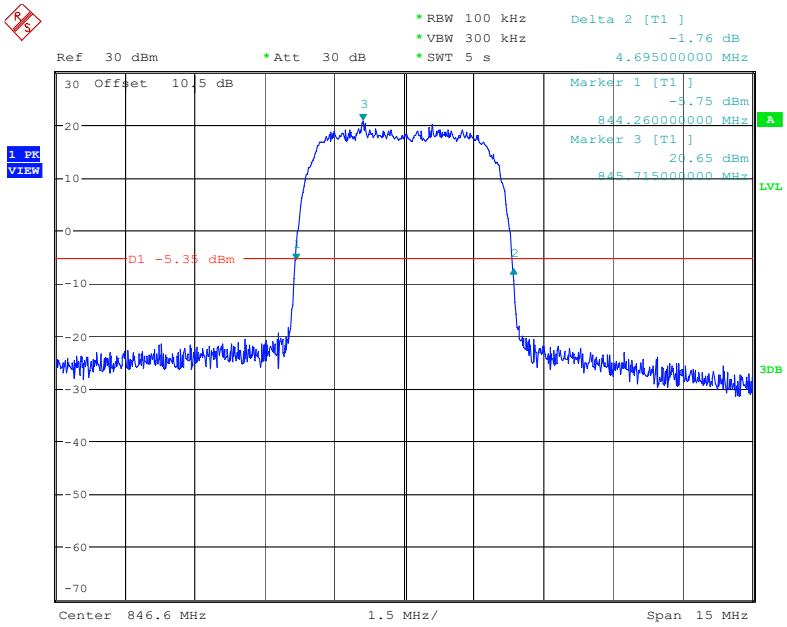
26 dB Emission Bandwidth for HSUPA (QPSK) Mode, High channel



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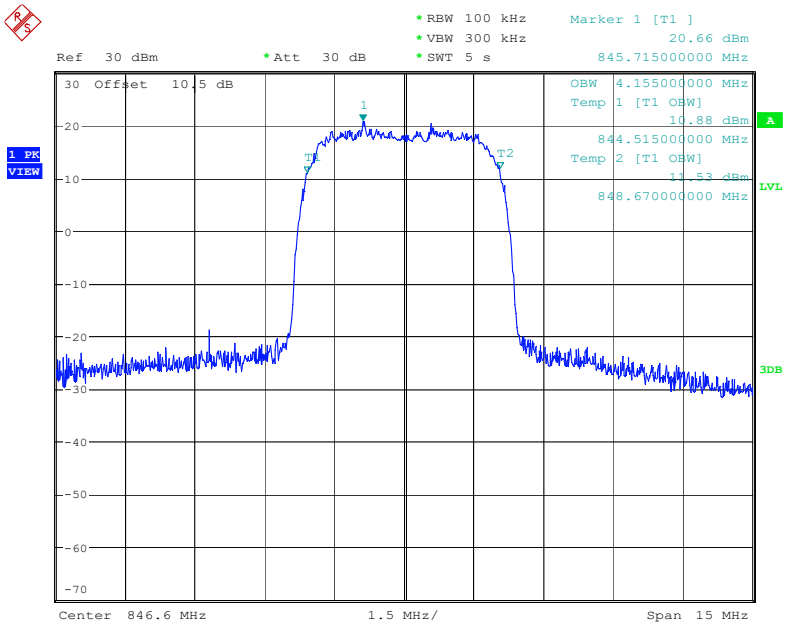

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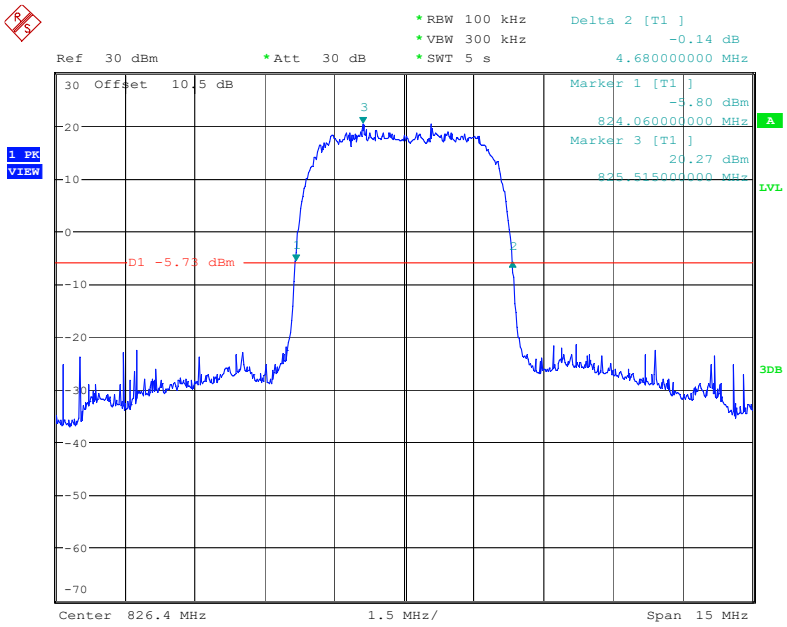
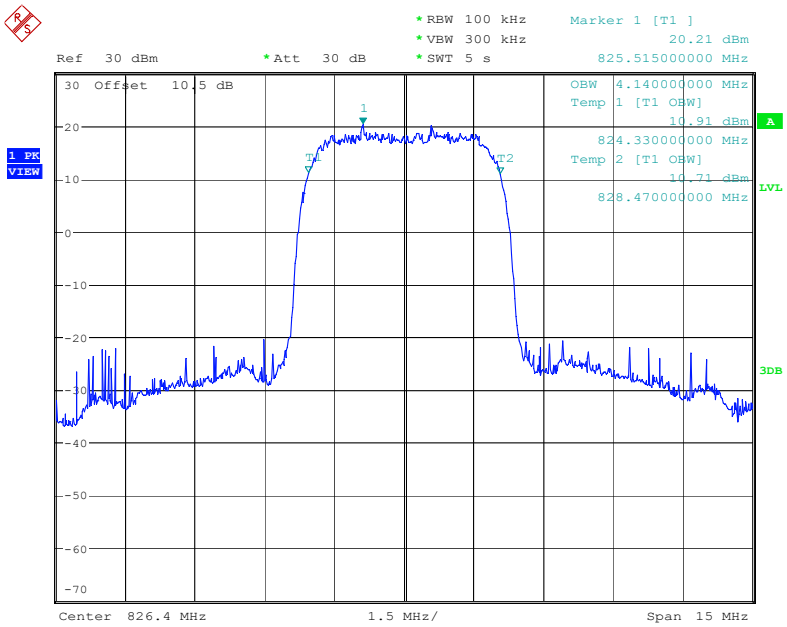
26 dB Emission Bandwidth for HSDPA (16QAM) Mode, Low channel



Date: 2.NOV.2022 18:42:55



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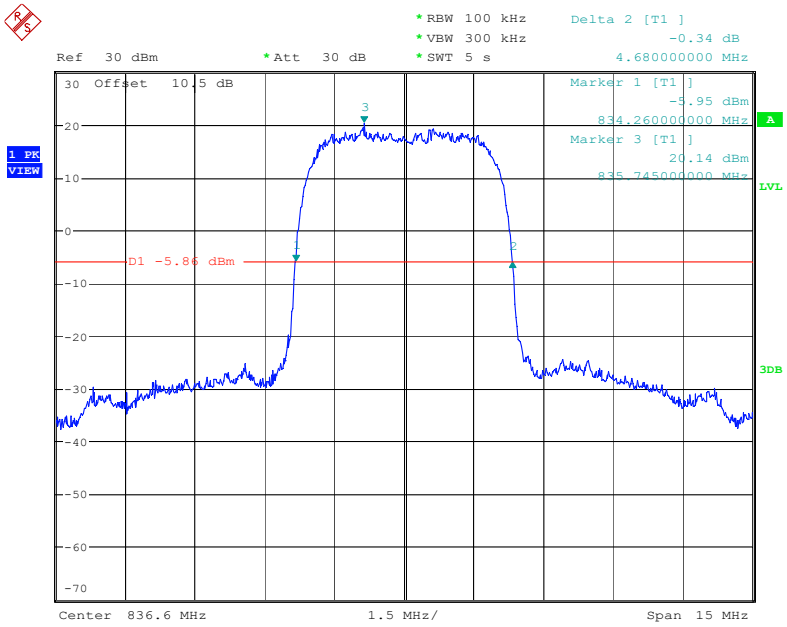
26 dB Emission Bandwidth for HSDPA (16QAM) Mode, Middle channel



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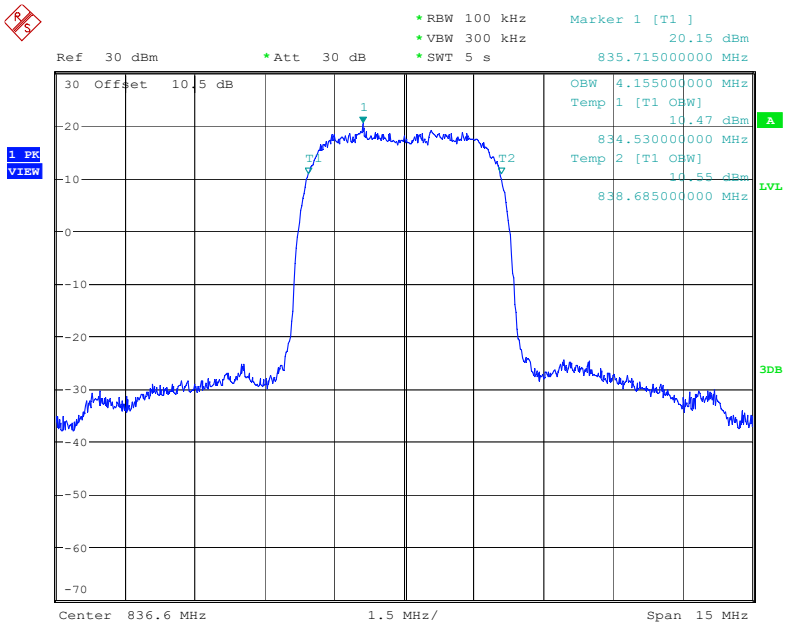
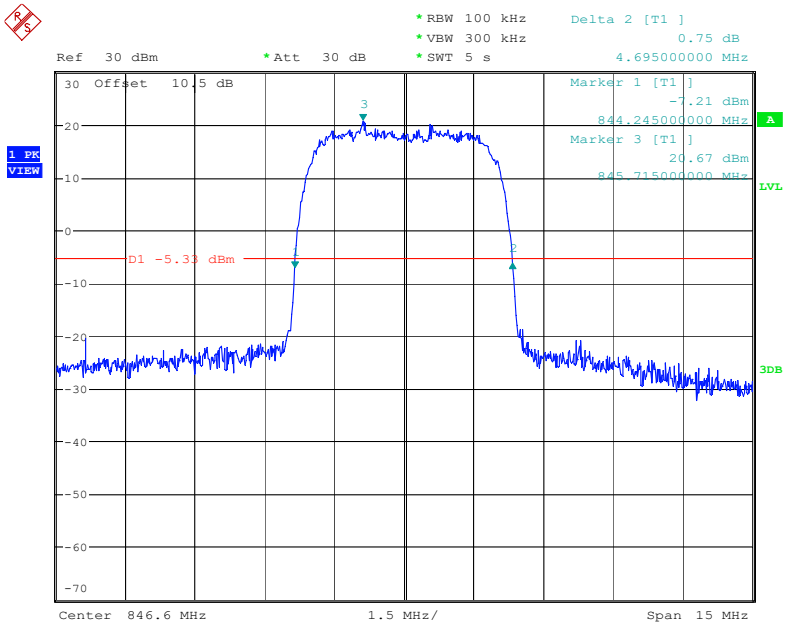
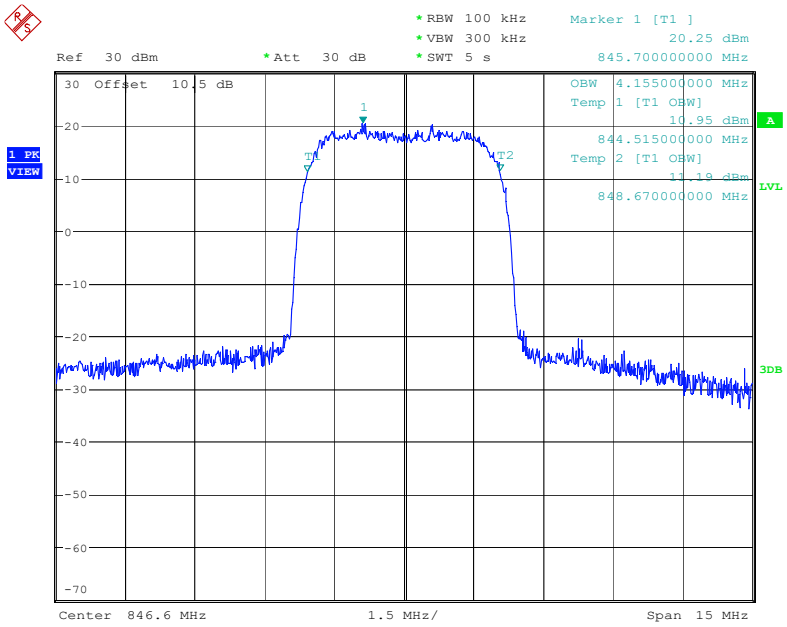


Date: 2.NOV.2022 18:45:40

26 dB Emission Bandwidth for HSDPA (16QAM) Mode, High channel



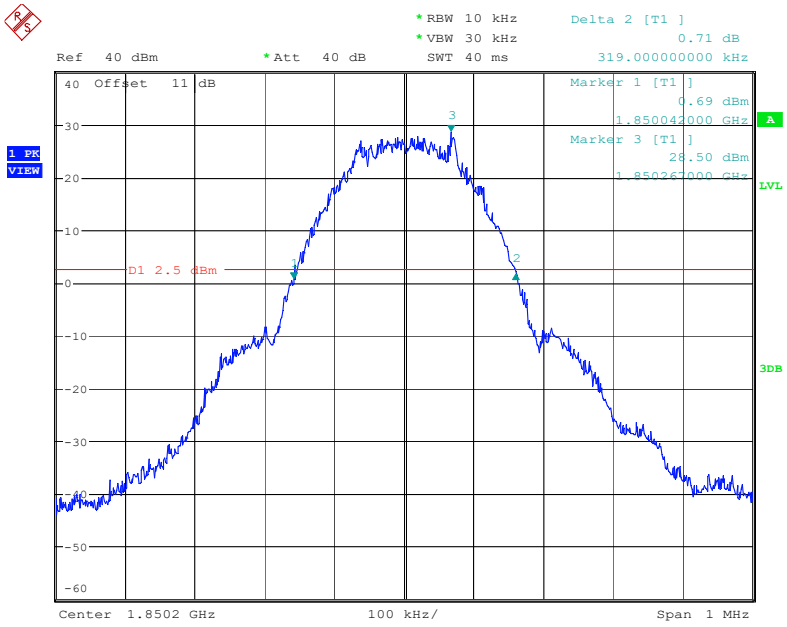
Date: 2.NOV.2022 18:48:49



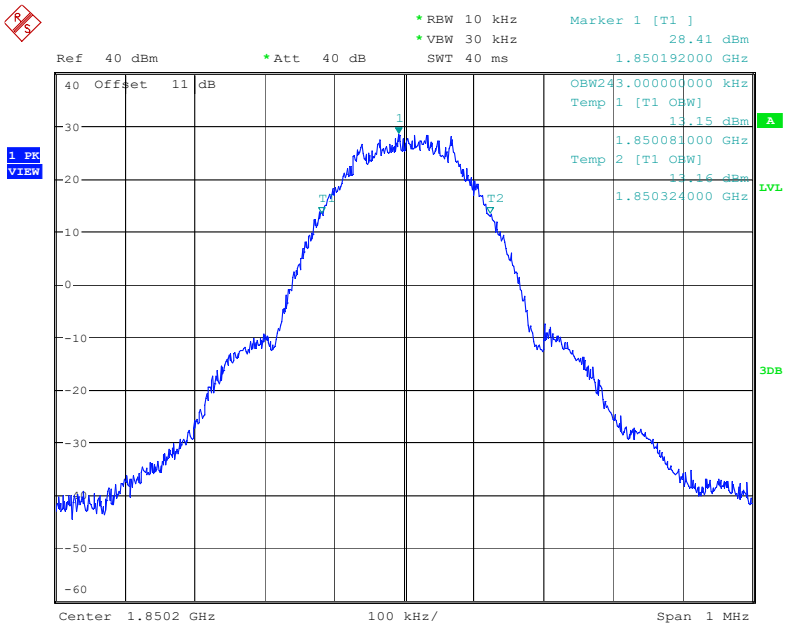
Date: 2.NOV.2022 18:48:11

PCS Band (Part 24E)

26 dB Emission Bandwidth for GSM(GMSK) Mode, Low channel

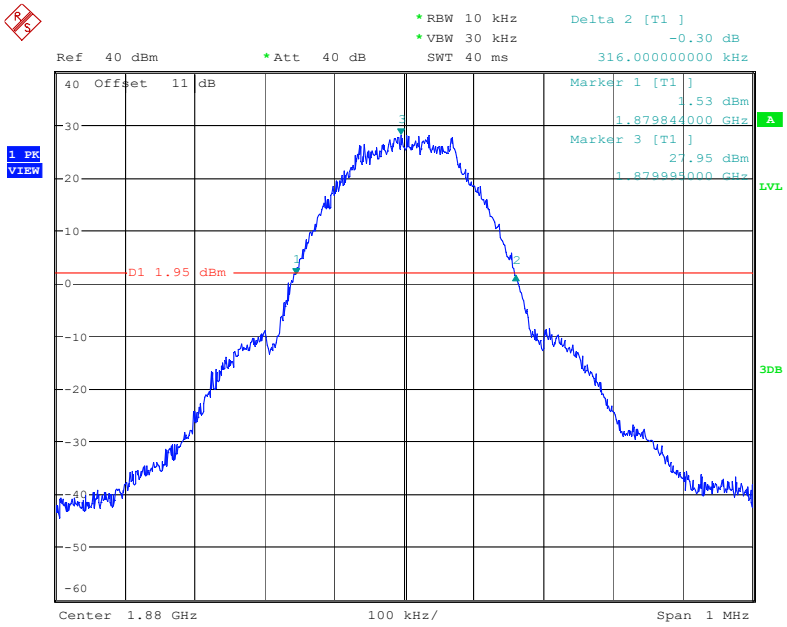


Date: 2.NOV.2022 17:29:37

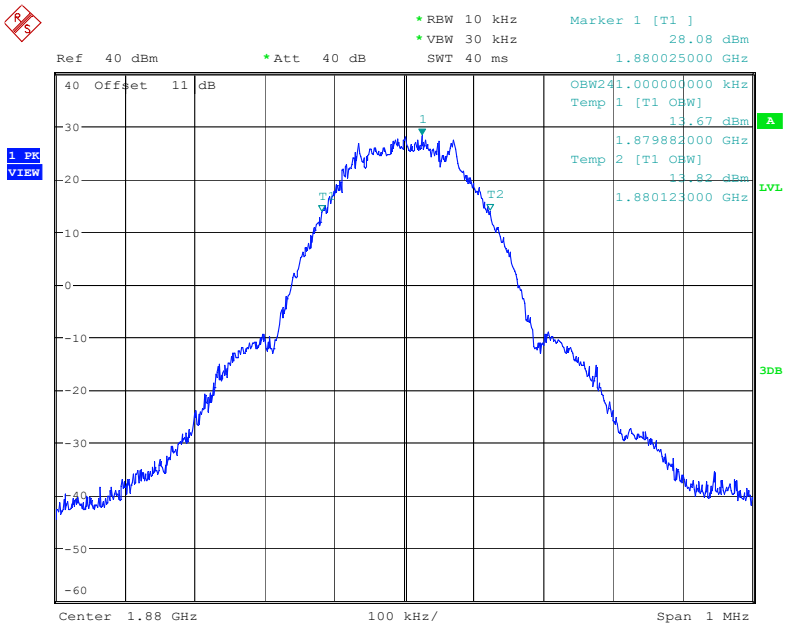


Date: 2.NOV.2022 17:28:58

26 dB Emission Bandwidth for GSM(GMSK) Mode, Middle channel

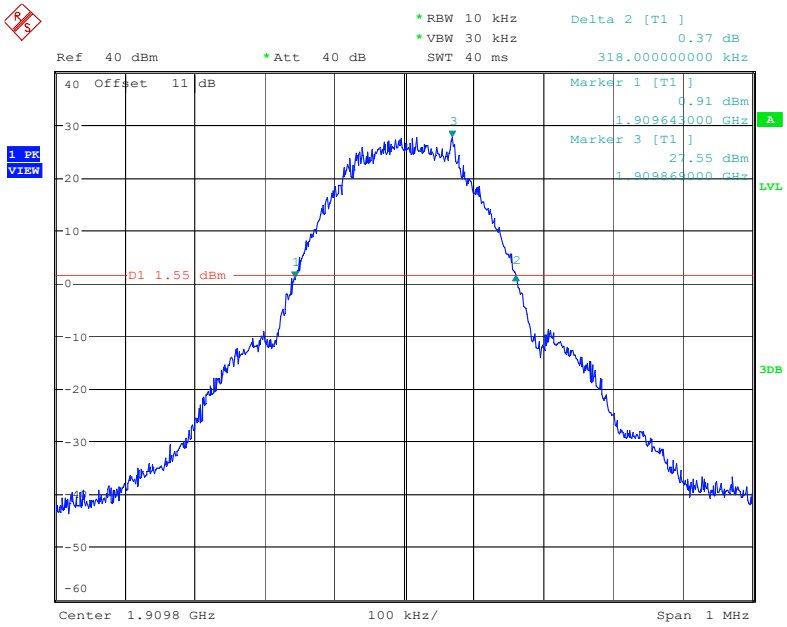


Date: 2.NOV.2022 17:34:55

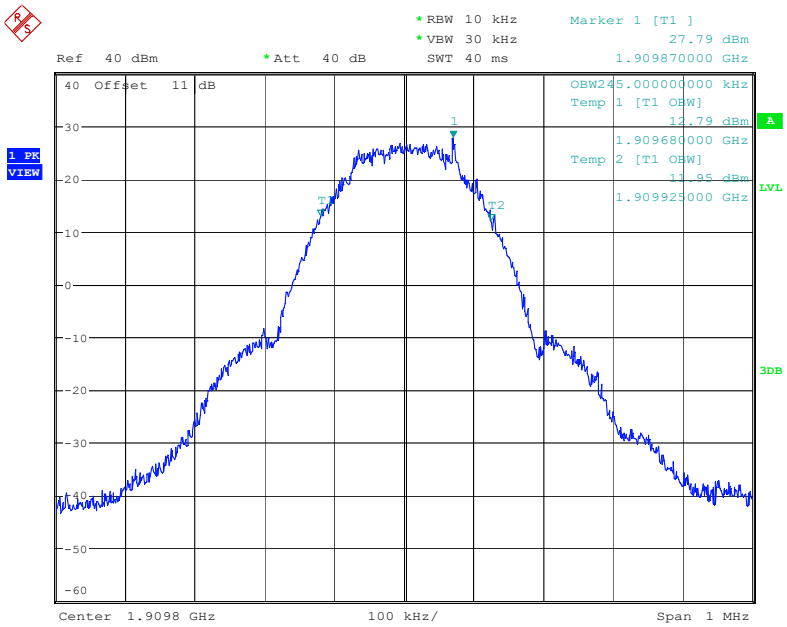


Date: 2.NOV.2022 17:34:16

26 dB Emission Bandwidth for GSM(GMSK) Mode, High channel

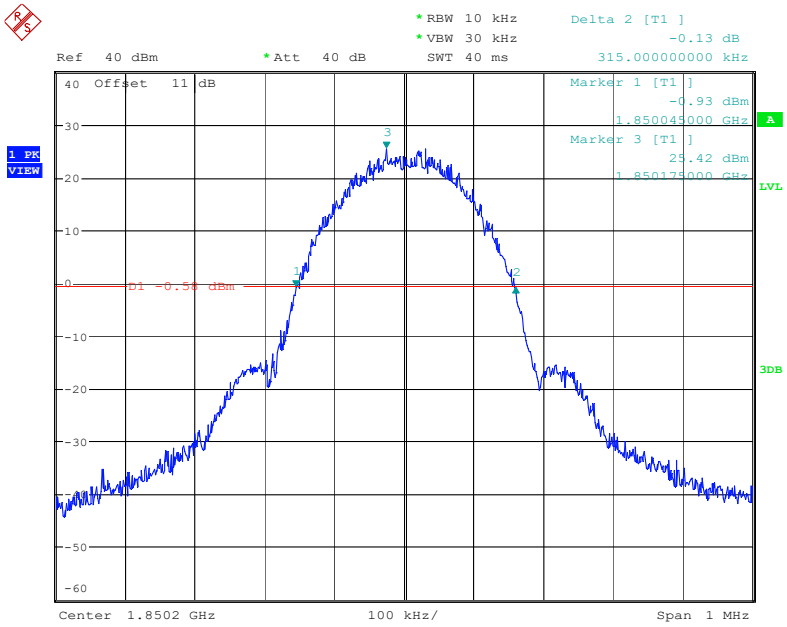


Date: 2.NOV.2022 17:38:52

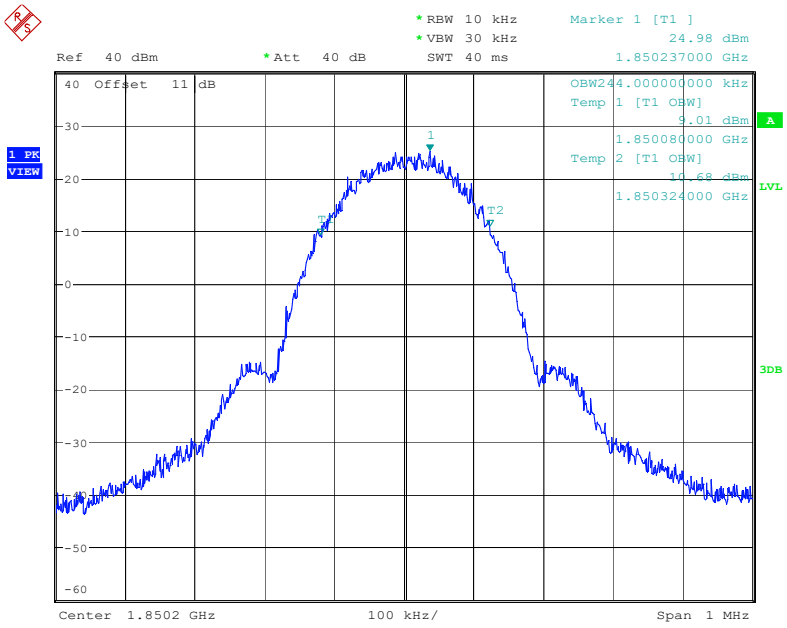


Date: 2.NOV.2022 17:38:13

26 dB Emission Bandwidth for GSM(8PSK) Mode, Low channel

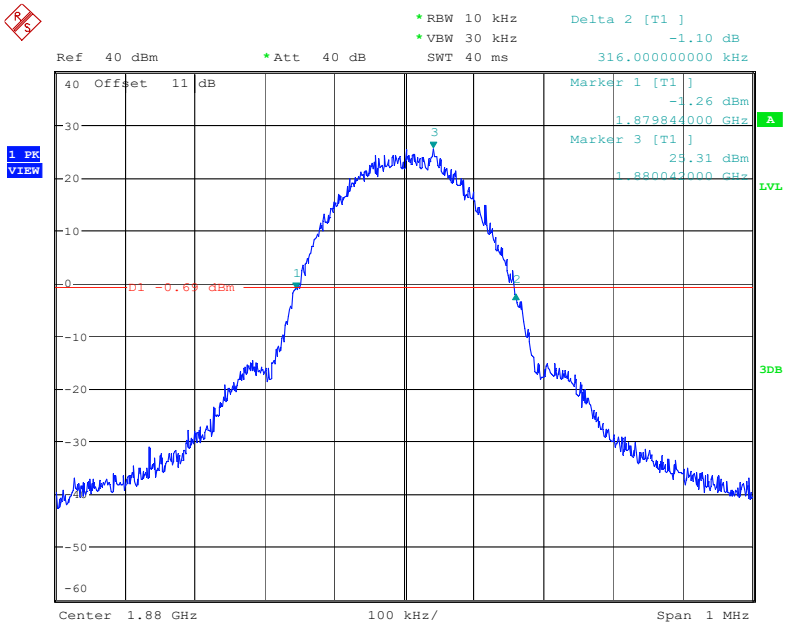


Date: 2.NOV.2022 17:48:43

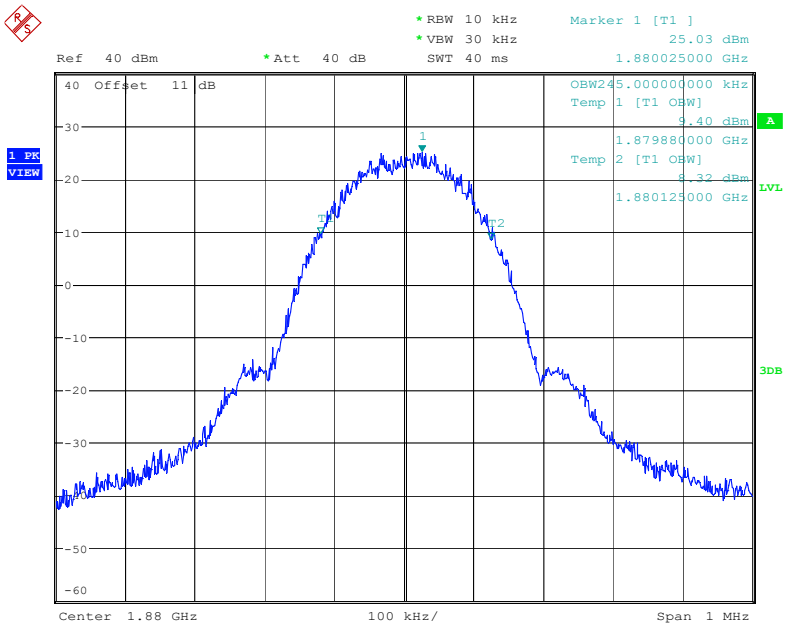


Date: 2.NOV.2022 17:48:04

26 dB Emission Bandwidth for GSM(8PSK) Mode, Middle channel

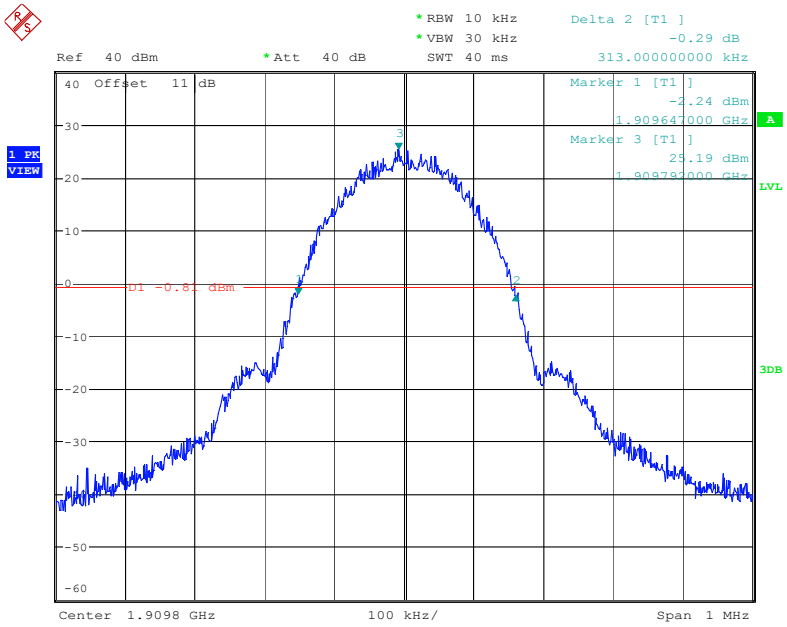


Date: 2.NOV.2022 17:53:55

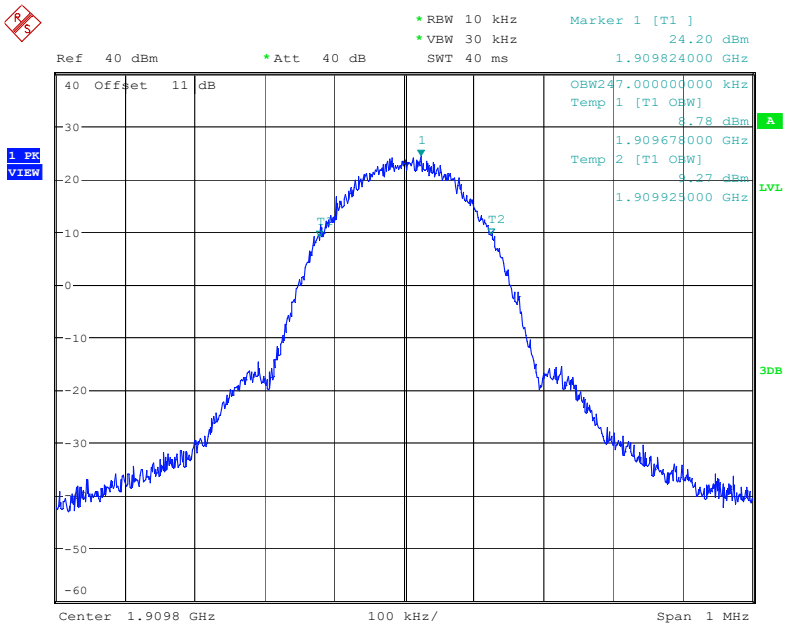


Date: 2.NOV.2022 17:53:15

26 dB Emission Bandwidth for GSM(8PSK) Mode, High channel

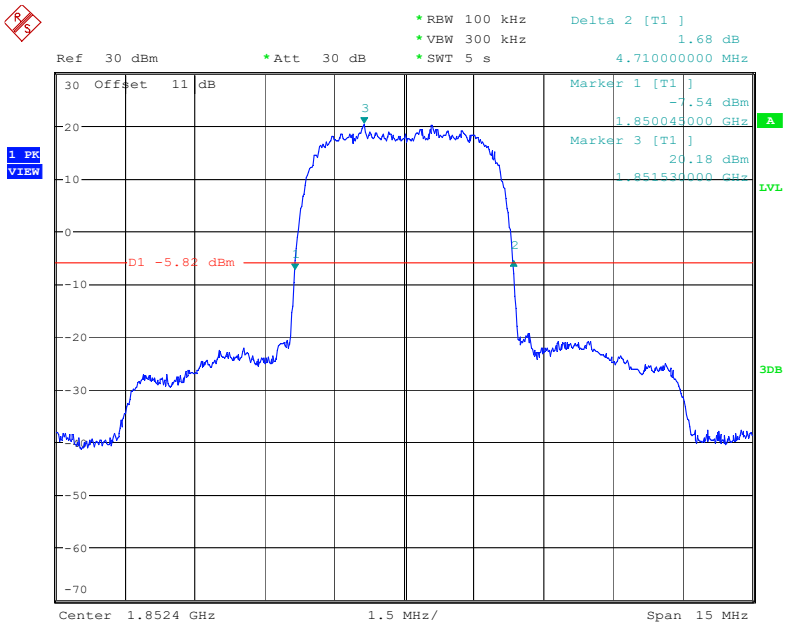


Date: 2.NOV.2022 17:58:21

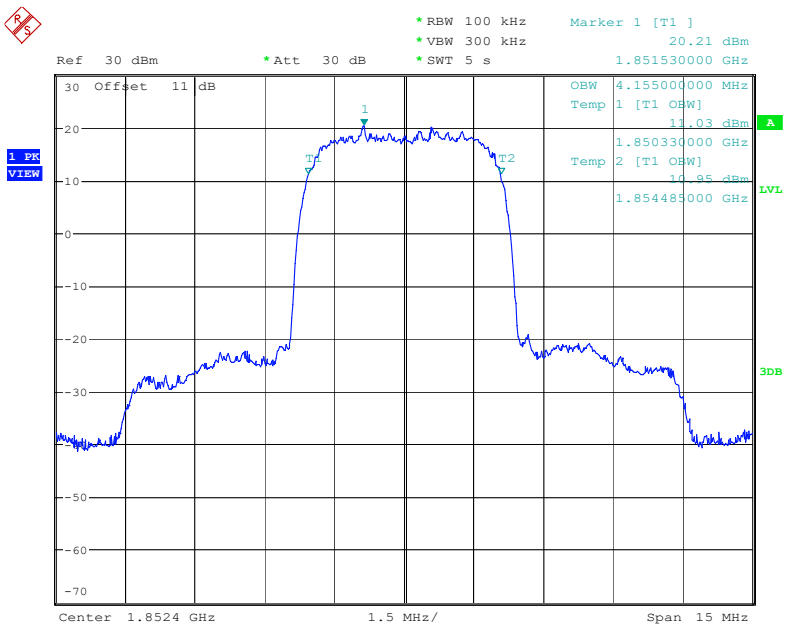


Date: 2.NOV.2022 17:57:41

26 dB Emission Bandwidth for RMC (BPSK) Mode, Low channel

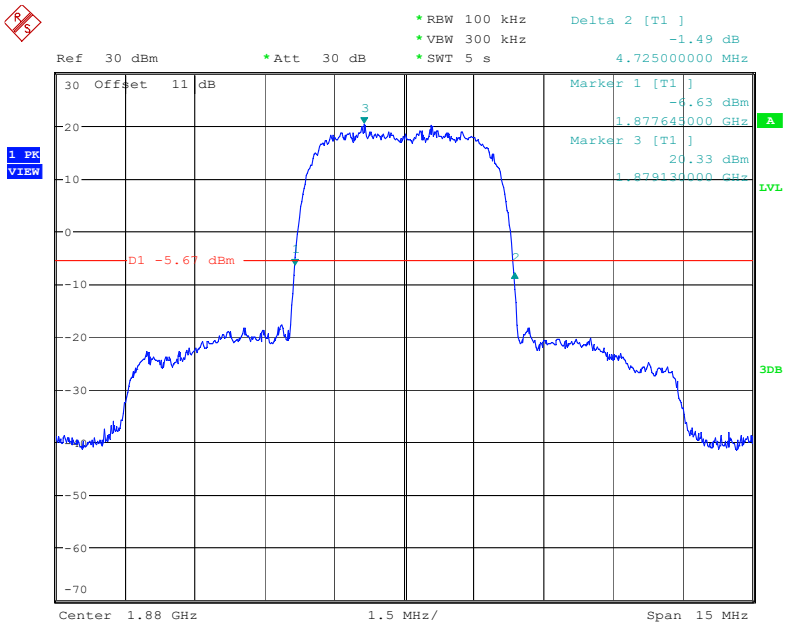


Date: 2.NOV.2022 18:06:07

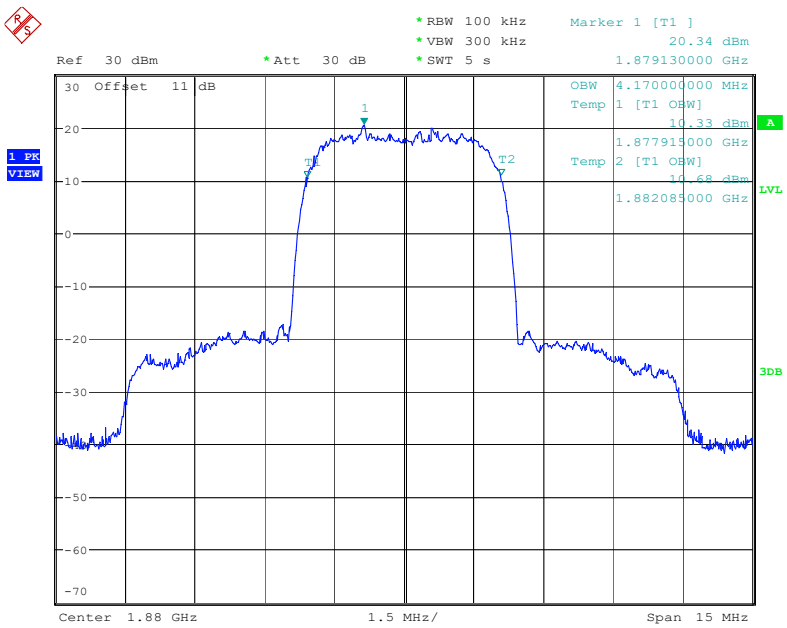


Date: 2.NOV.2022 18:05:26

26 dB Emission Bandwidth for RMC (BPSK) Mode, Middle channel

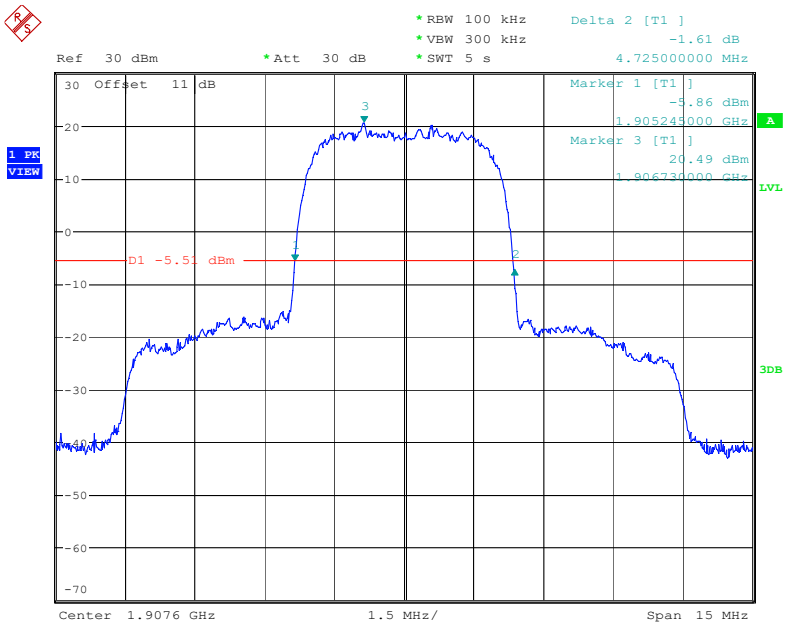


Date: 2.NOV.2022 18:10:05

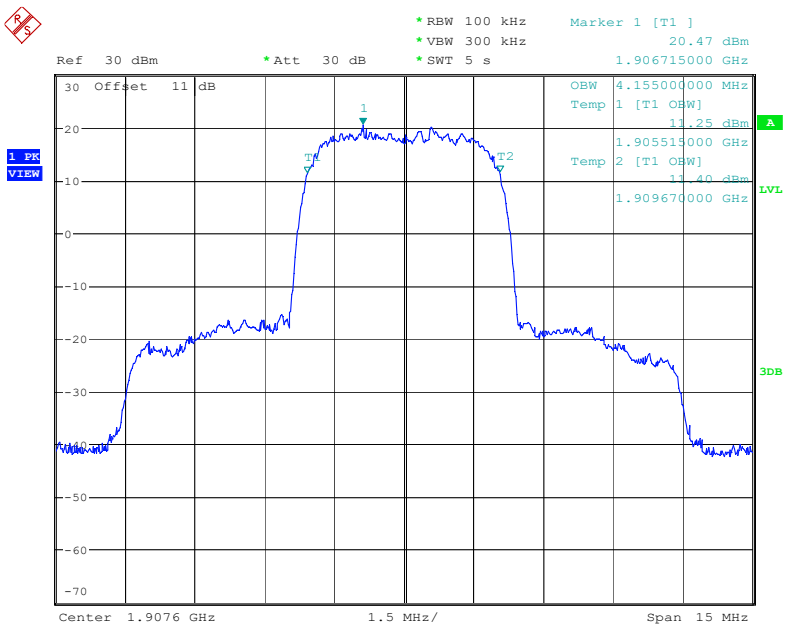


Date: 2.NOV.2022 18:09:26

26 dB Emission Bandwidth for RMC (BPSK) Mode, High channel

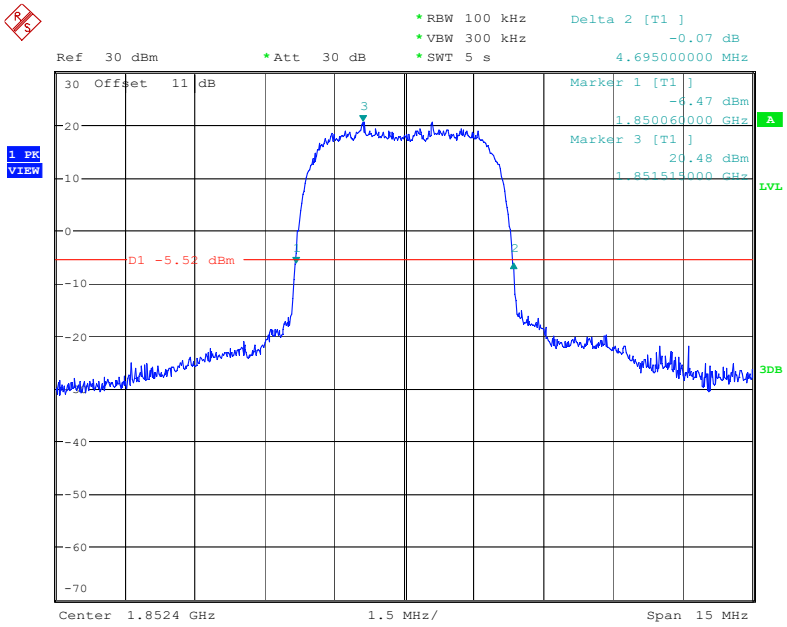


Date: 2.NOV.2022 18:13:23

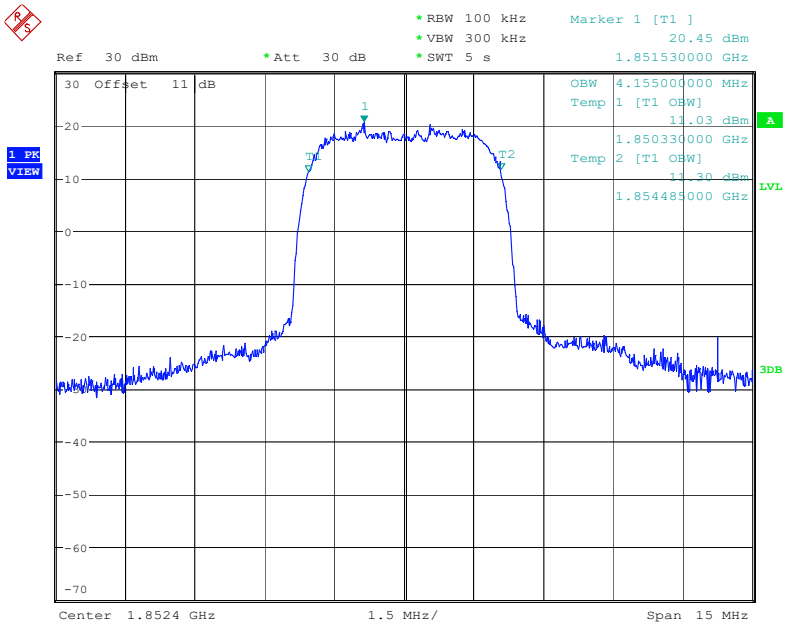


Date: 2.NOV.2022 18:12:44

26 dB Emission Bandwidth for HSUPA (QPSK) Mode, Low channel

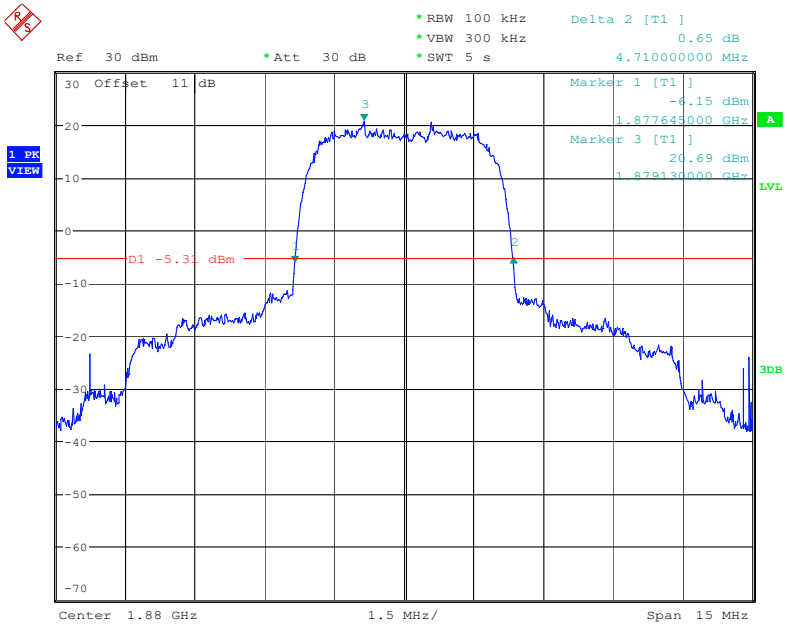


Date: 2.NOV.2022 19:21:04

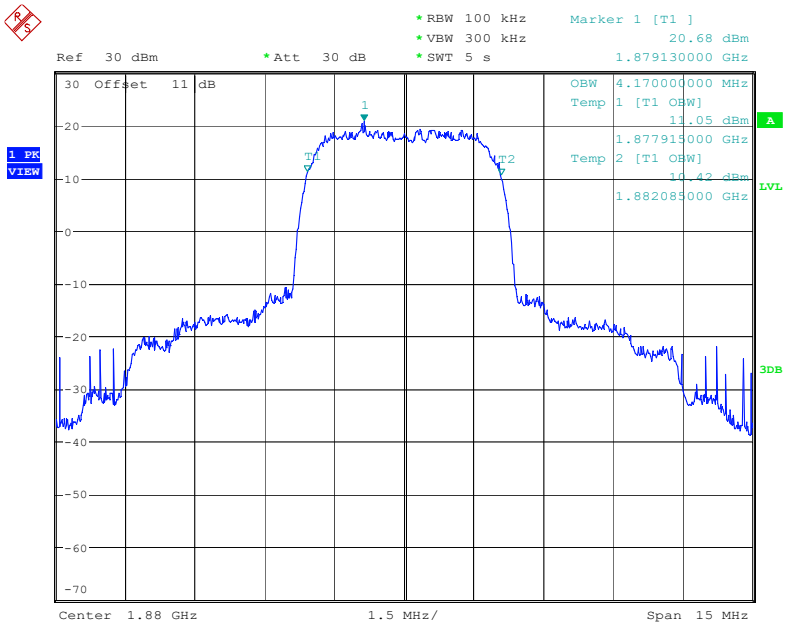


Date: 2.NOV.2022 19:20:25

26 dB Emission Bandwidth for HSUPA (QPSK) Mode, Middle channel

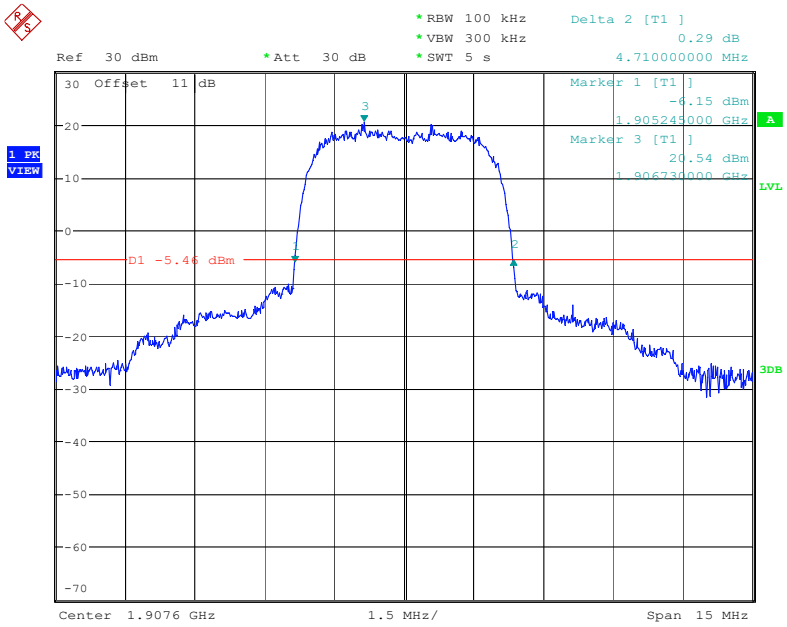


Date: 2.NOV.2022 19:24:20

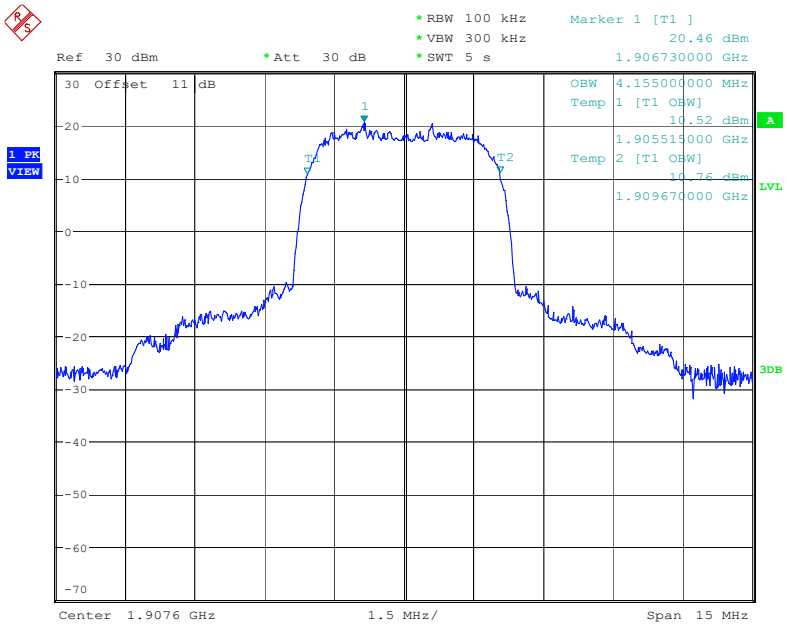


Date: 2.NOV.2022 19:23:41

26 dB Emission Bandwidth for HSUPA (QPSK) Mode, High channel

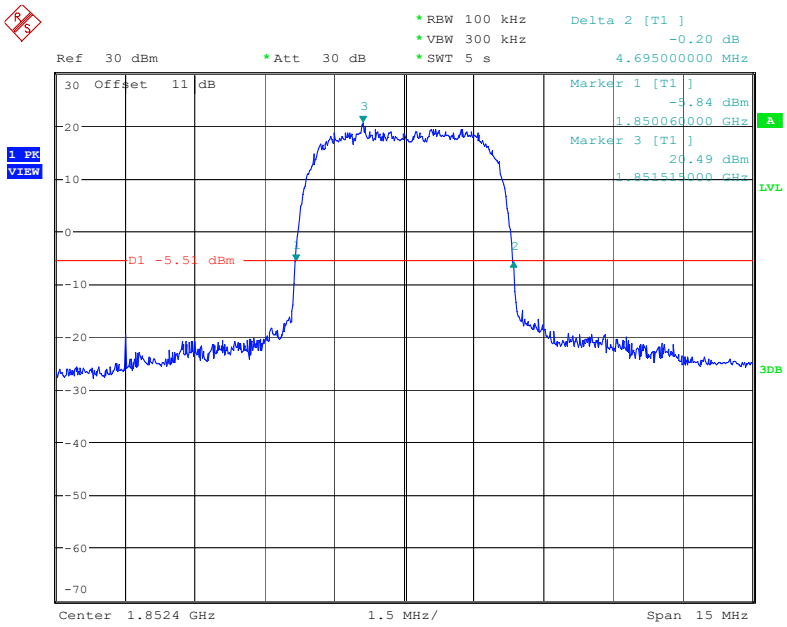


Date: 2.NOV.2022 19:33:21

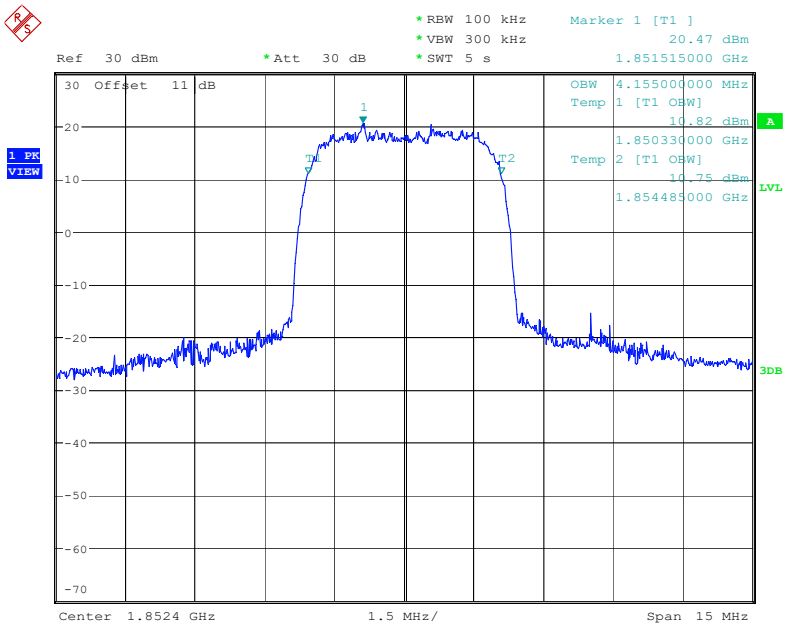


Date: 2.NOV.2022 19:32:42

26 dB Emission Bandwidth for HSDPA (16QAM) Mode, Low channel

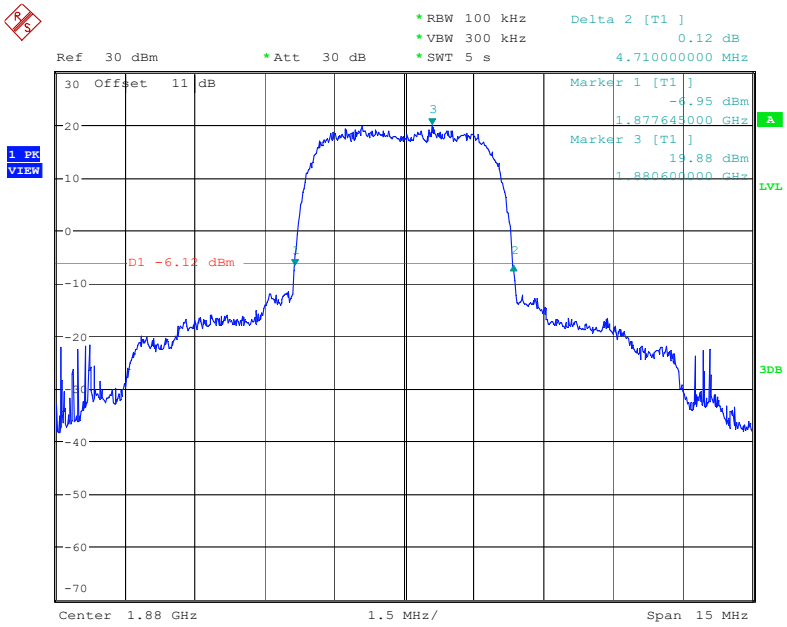


Date: 2.NOV.2022 19:08:47

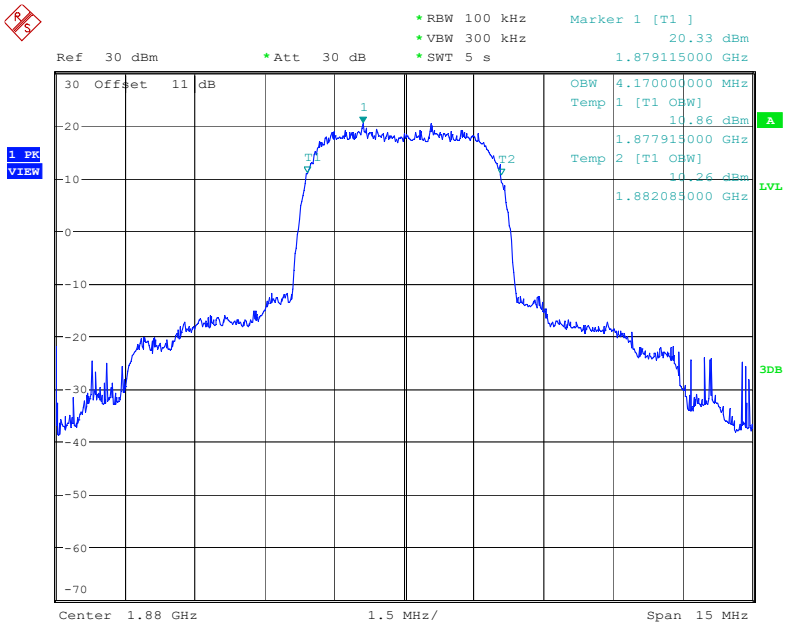


Date: 2.NOV.2022 19:08:08

26 dB Emission Bandwidth for HSDPA (16QAM) Mode, Middle channel

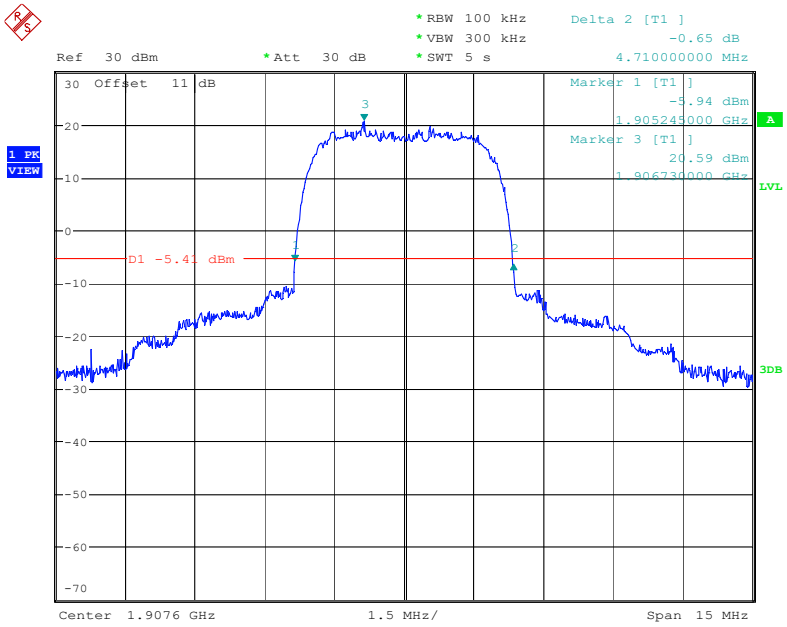


Date: 2.NOV.2022 19:12:42

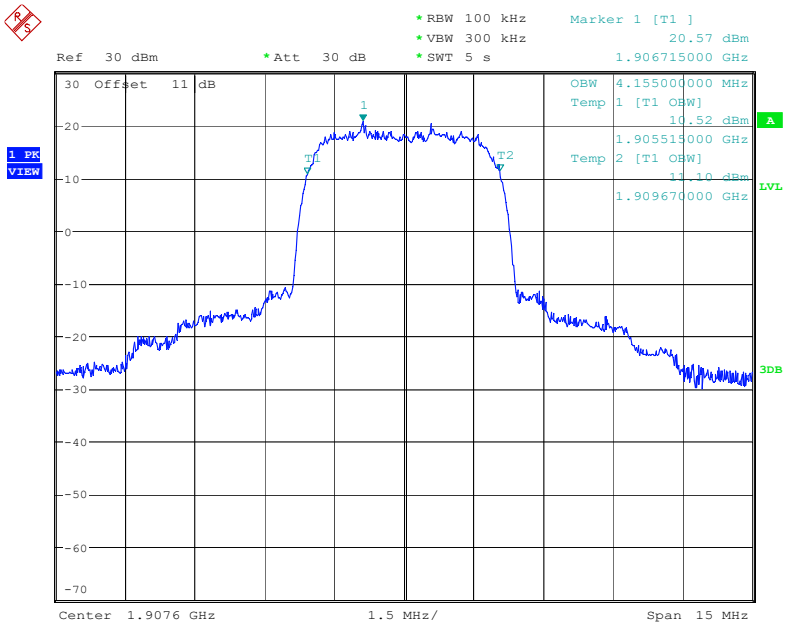


Date: 2.NOV.2022 19:12:03

26 dB Emission Bandwidth for HSDPA (16QAM) Mode, High channel



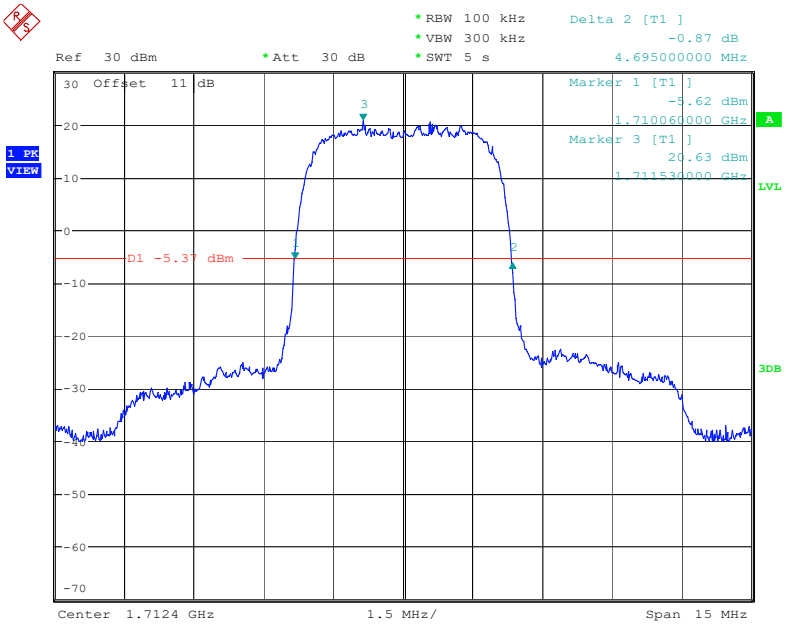
Date: 2.NOV.2022 19:16:03



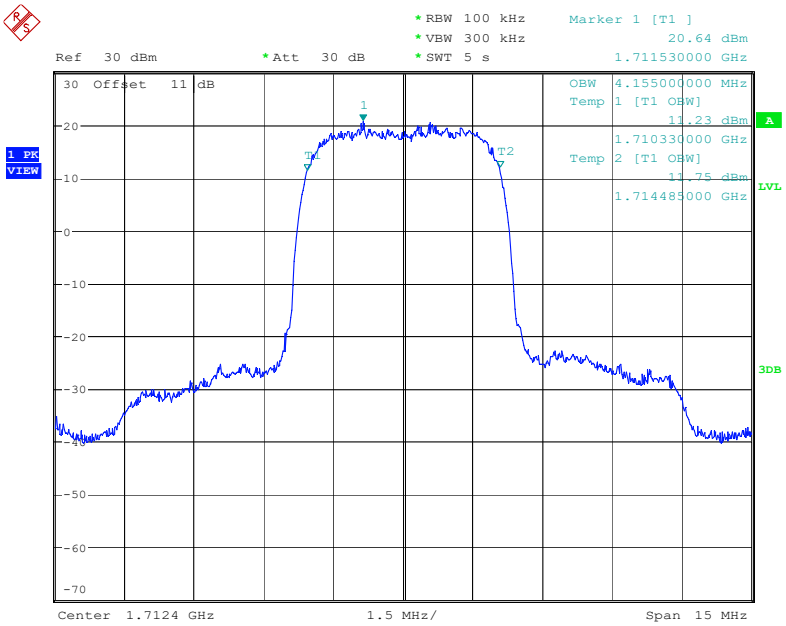
Date: 2.NOV.2022 19:15:24

AWS Band (Part 27)

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

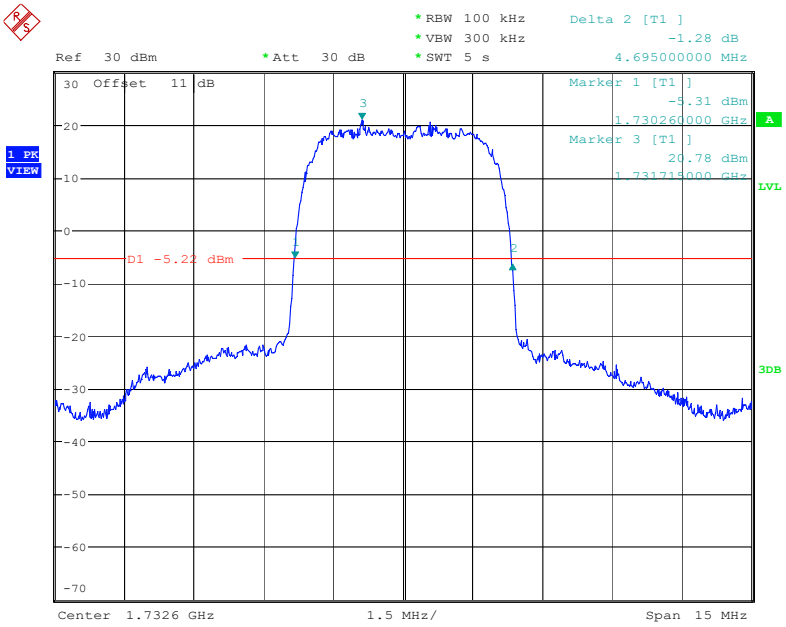


Date: 2.NOV.2022 18:18:13

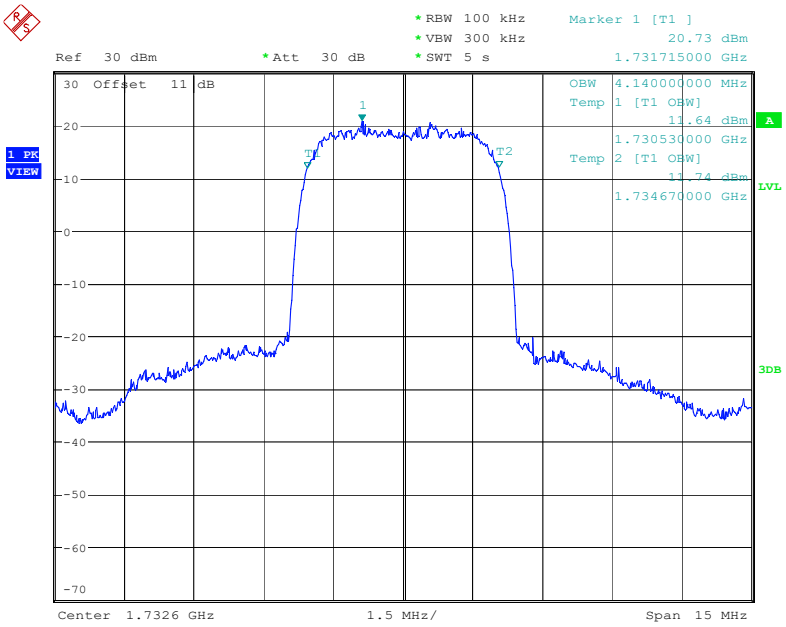


Date: 2.NOV.2022 18:17:33

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

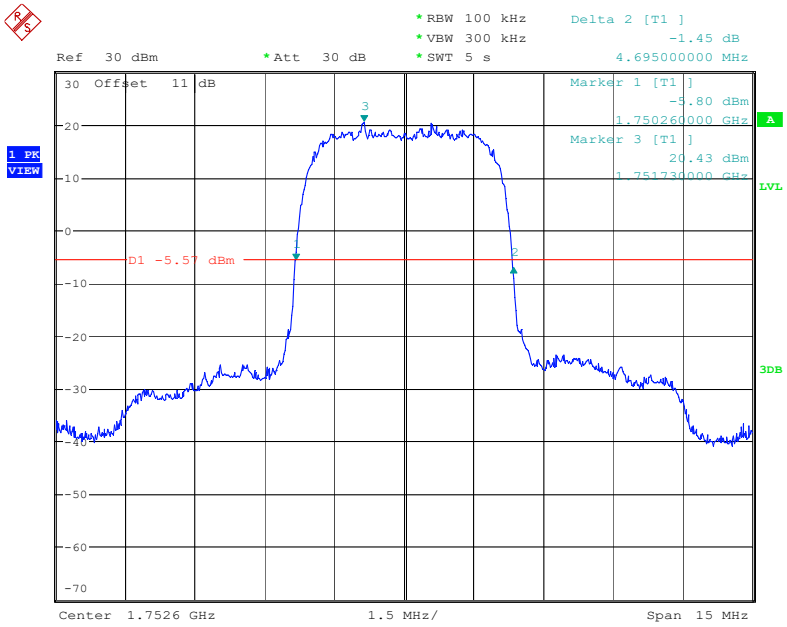


Date: 2.NOV.2022 18:22:10

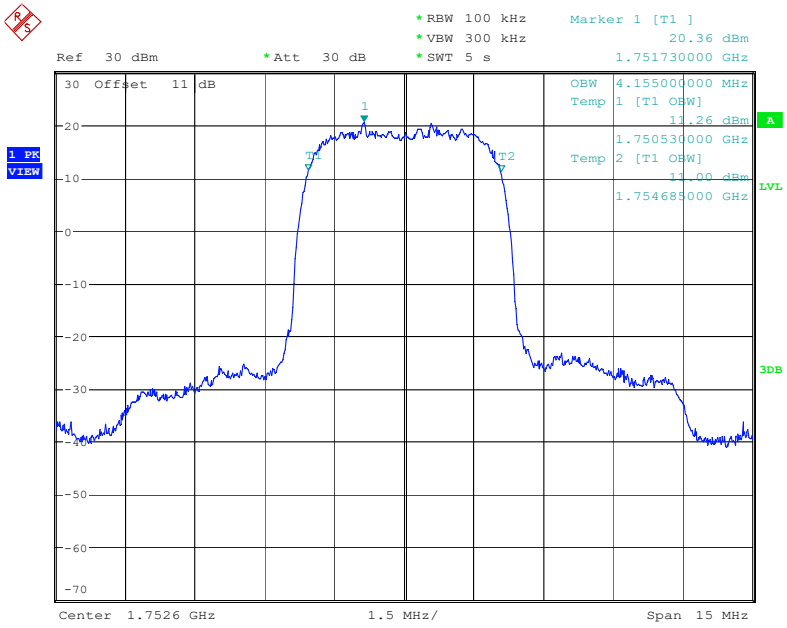


Date: 2.NOV.2022 18:21:31

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

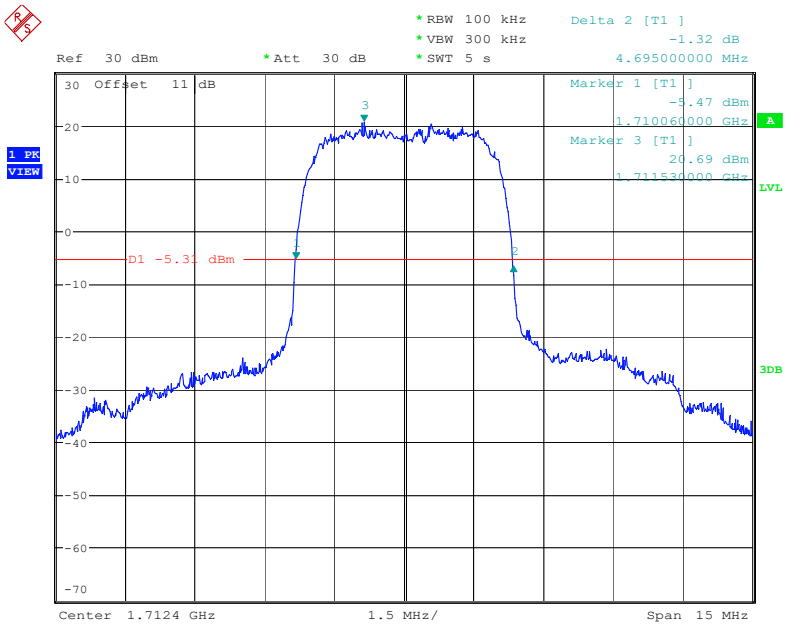


Date: 2.NOV.2022 18:25:22

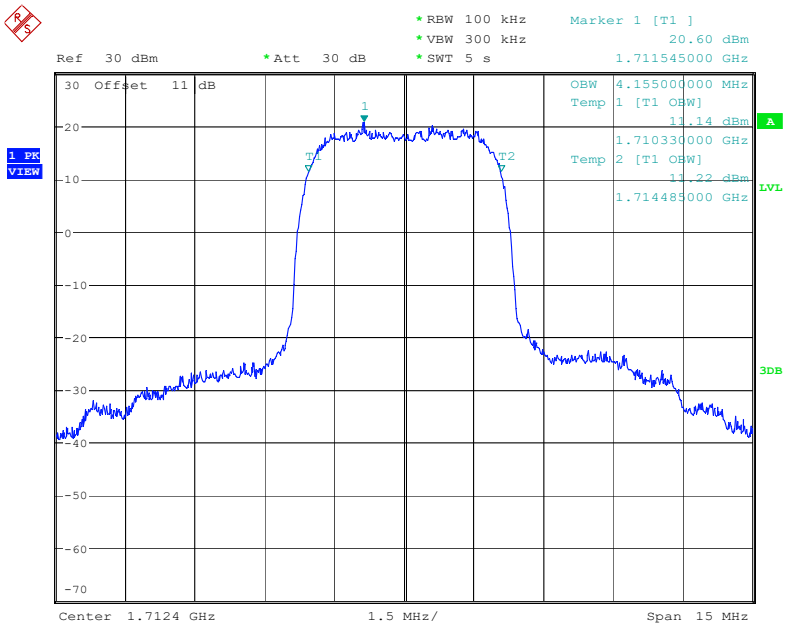


Date: 2.NOV.2022 18:24:43

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

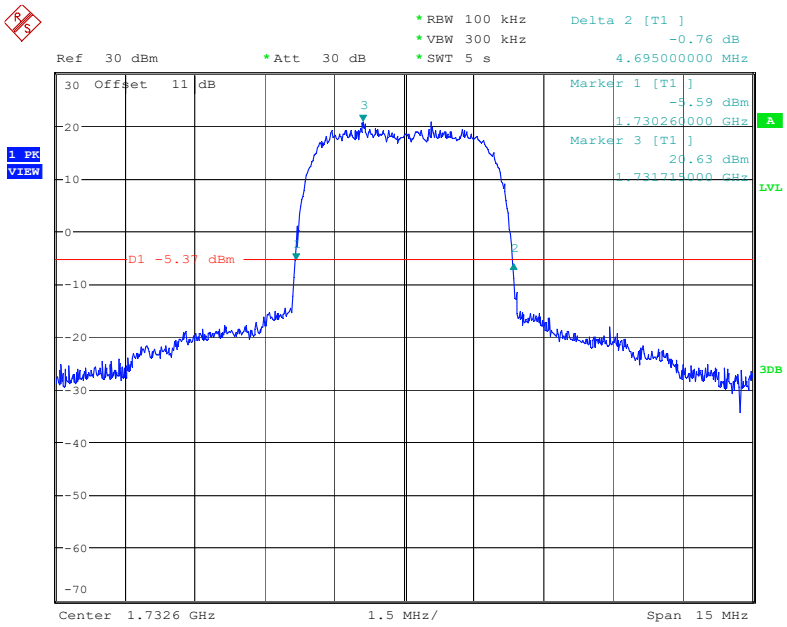


Date: 2.NOV.2022 19:39:40

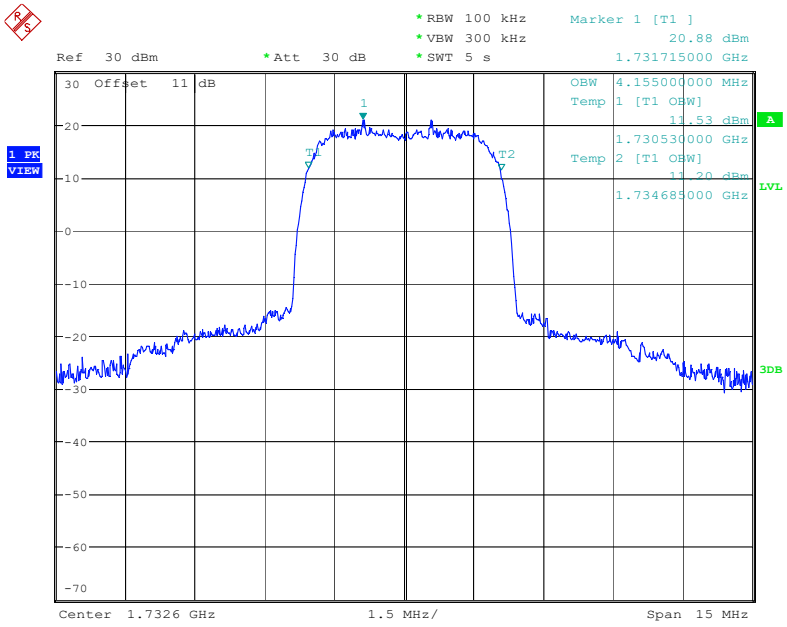


Date: 2.NOV.2022 19:39:00

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

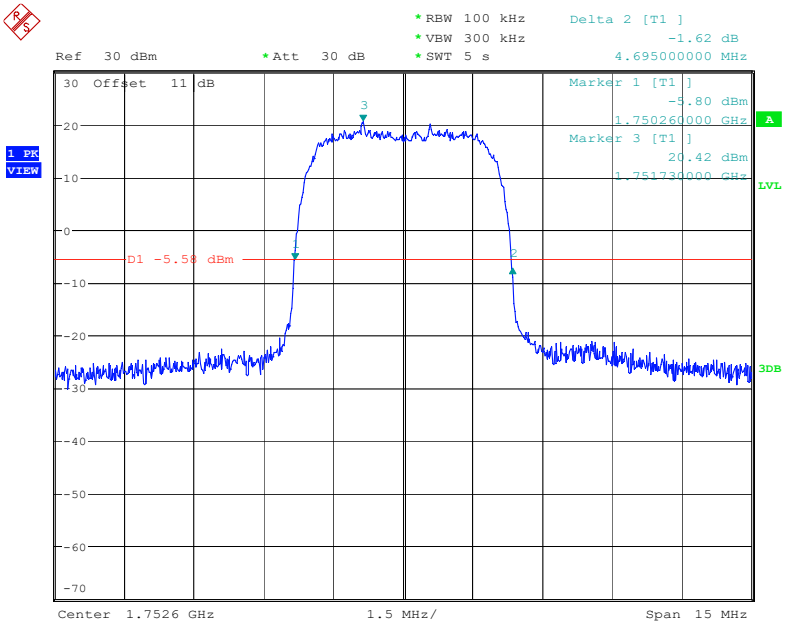


Date: 2.NOV.2022 19:43:31

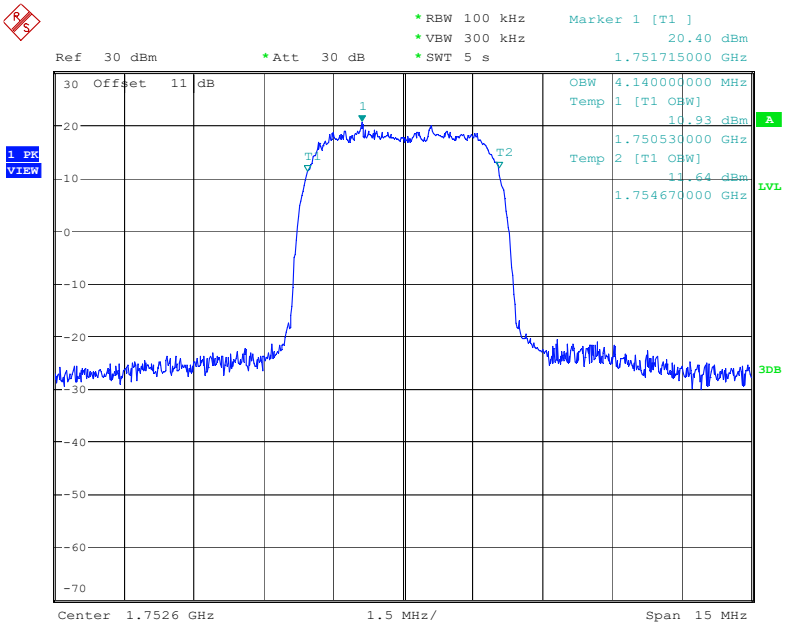


Date: 2.NOV.2022 19:42:52

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

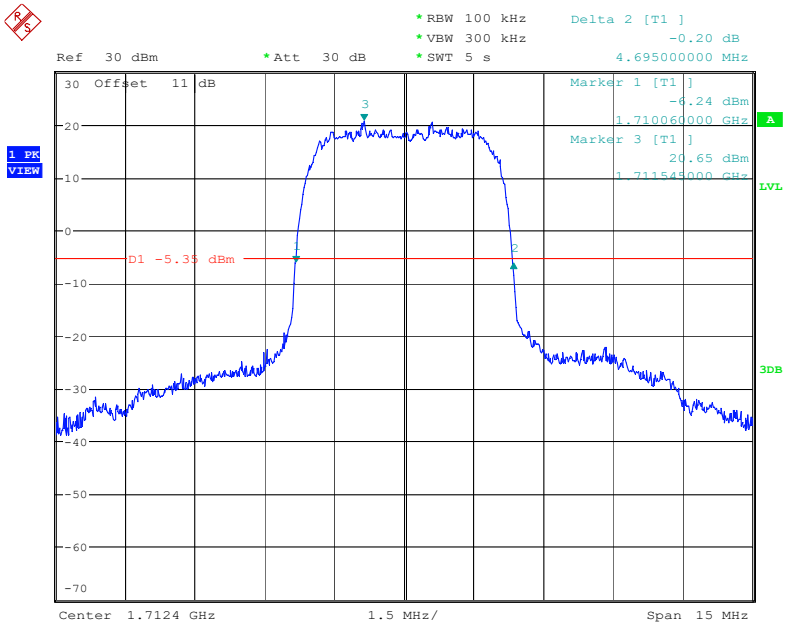


Date: 2.NOV.2022 19:46:52

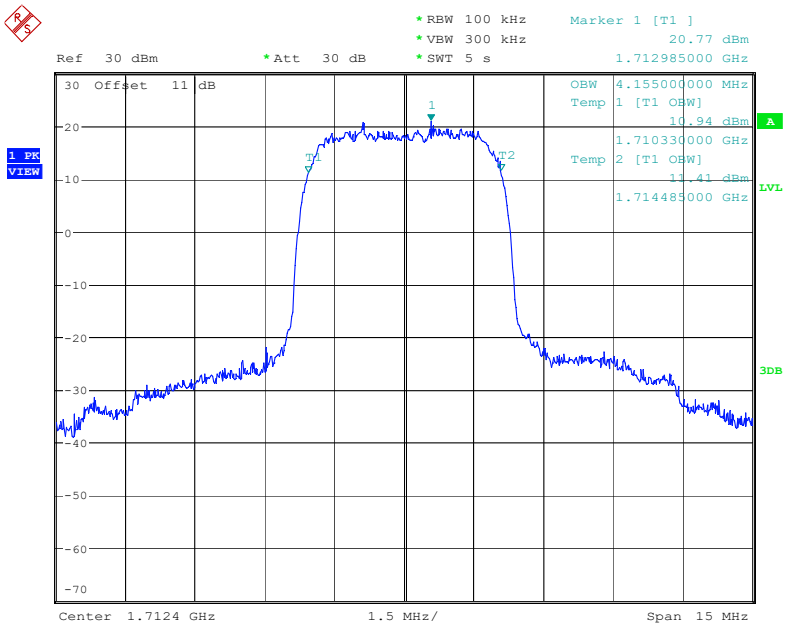


Date: 2.NOV.2022 19:46:13

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

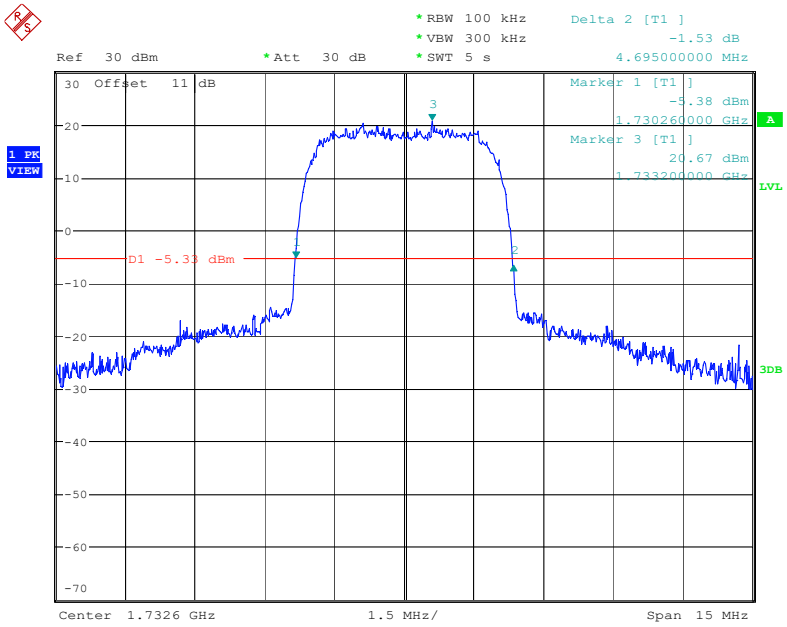


Date: 2.NOV.2022 18:53:33

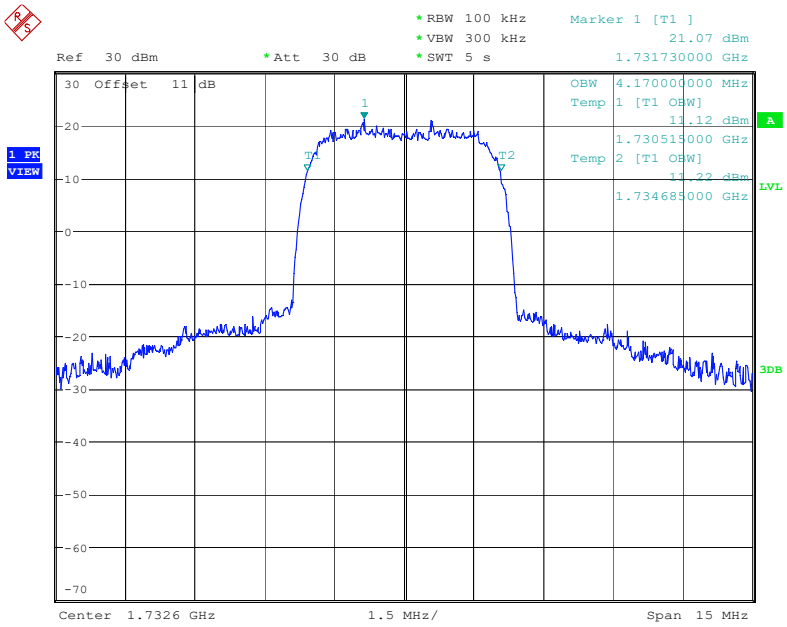


Date: 2.NOV.2022 18:52:54

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

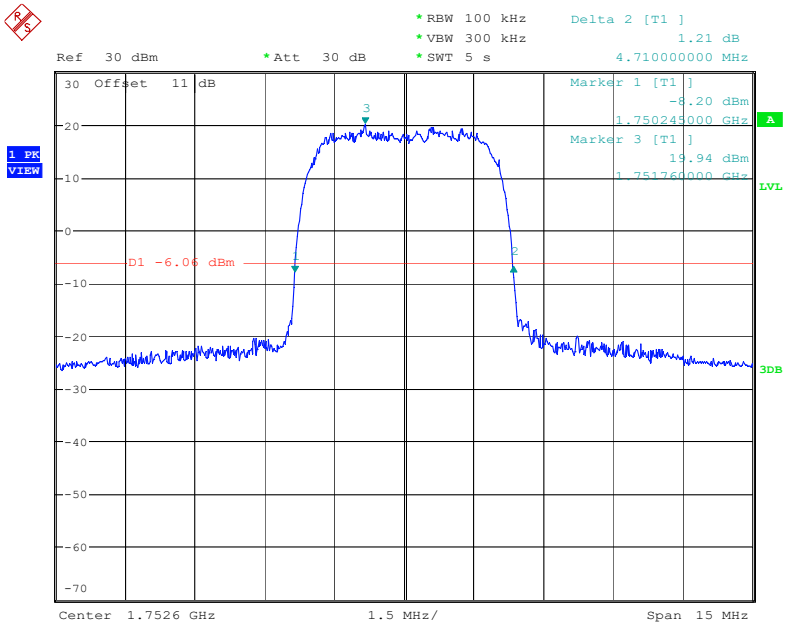


Date: 2.NOV.2022 18:57:25

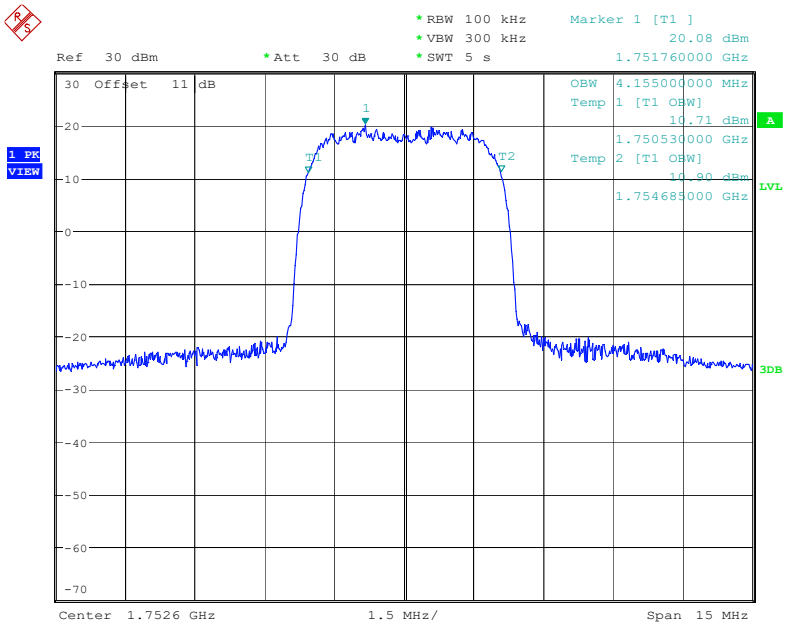


Date: 2.NOV.2022 18:56:46

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



Date: 2.NOV.2022 19:03:25



Date: 2.NOV.2022 19:02:46

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	1.104	1.260	1.110	1.260	1.104	1.266
	16QAM	1.104	1.260	1.116	1.266	1.098	1.254
3 MHz	QPSK	2.700	3.024	2.700	3.024	2.700	3.000
	16QAM	2.688	3.000	2.700	3.024	2.712	3.024
5 MHz	QPSK	4.540	4.980	4.520	4.980	4.540	4.980
	16QAM	4.540	5.000	4.520	5.020	4.520	5.040
10 MHz	QPSK	9.000	9.760	8.960	9.760	8.960	9.760
	16QAM	9.000	9.760	8.960	9.840	8.960	9.680
15 MHz	QPSK	13.560	15.000	13.560	15.120	13.560	15.120
	16QAM	13.560	14.940	13.560	15.060	13.500	15.120
20 MHz	QPSK	17.920	19.520	18.080	19.920	18.000	19.600
	16QAM	18.000	19.840	18.000	19.520	18.000	19.680

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	1.260	1.104	1.254	1.104	1.254
	16QAM	1.098	1.260	1.104	1.260	1.110	1.266
3 MHz	QPSK	2.688	2.976	2.700	3.012	2.700	3.012
	16QAM	2.688	3.000	2.712	3.024	2.700	3.012
5 MHz	QPSK	4.520	5.000	4.520	5.000	4.540	4.980
	16QAM	4.540	5.020	4.540	5.020	4.500	4.980
10 MHz	QPSK	8.960	9.680	8.960	9.800	8.960	9.760
	16QAM	9.000	9.800	8.960	9.840	8.960	9.680
15 MHz	QPSK	13.560	14.940	13.560	15.060	13.560	15.060
	16QAM	13.560	15.120	13.560	15.120	13.500	15.120
20 MHz	QPSK	17.920	19.520	18.000	19.600	18.000	19.680
	16QAM	18.080	19.600	18.000	19.760	18.080	19.680

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	1.254	1.104	1.254	1.104	1.260
	16QAM	1.092	1.248	1.104	1.260	1.110	1.260
3 MHz	QPSK	2.700	2.988	2.688	3.000	2.688	2.988
	16QAM	2.700	3.000	2.688	3.048	2.700	3.024
5 MHz	QPSK	4.520	5.000	4.500	4.960	4.520	4.960
	16QAM	4.520	5.000	4.520	5.000	4.520	4.980
10 MHz	QPSK	8.960	9.760	8.960	9.760	8.960	9.680
	16QAM	9.000	9.800	8.960	9.840	8.960	9.640

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	4.980	4.520	4.940	4.560	5.000
	16QAM	4.540	5.000	4.540	5.020	4.520	4.960
10 MHz	QPSK	8.960	9.720	8.960	9.840	8.960	9.760
	16QAM	9.000	9.760	8.960	9.880	8.960	9.760
15 MHz	QPSK	13.560	15.000	13.560	15.120	13.560	15.120
	16QAM	13.560	15.000	13.560	15.120	13.560	14.940
20 MHz	QPSK	17.920	19.520	18.080	19.840	18.000	19.600
	16QAM	18.000	19.600	18.000	19.840	18.000	19.760

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	1.260	1.104	1.260	1.104	1.254
	16QAM	1.098	1.248	1.098	1.254	1.104	1.260
3 MHz	QPSK	2.700	3.012	2.700	3.000	2.700	3.000
	16QAM	2.688	3.000	2.688	3.012	2.700	3.012
5 MHz	QPSK	4.520	4.980	4.520	4.980	4.560	5.000
	16QAM	4.540	5.020	4.540	5.020	4.520	4.980
10 MHz	QPSK	8.960	9.760	8.960	9.720	8.960	9.680
	16QAM	9.000	9.840	8.960	9.760	8.960	9.800

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	4.500	4.980	4.520	4.980	4.540	5.020
	16QAM	4.500	4.980	4.520	5.020	4.560	5.020
10 MHz	QPSK	8.960	9.640	8.960	9.720	8.960	9.760
	16QAM	8.960	9.720	8.960	9.760	8.960	9.840

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	4.520	4.980	4.520	5.000	4.500	5.020
	16QAM	4.520	5.080	4.500	5.080	4.500	5.000
10 MHz	QPSK	8.960	9.800	9.000	9.800	9.000	9.720
	16QAM	8.960	9.680	9.000	9.840	8.960	9.800
15 MHz	QPSK	13.500	15.060	13.500	15.300	13.620	15.060
	16QAM	13.560	15.060	13.560	15.000	13.500	15.060
20 MHz	QPSK	18.000	19.680	18.000	19.760	18.000	19.600
	16QAM	18.000	19.600	18.000	19.760	18.000	19.760

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	5.000	4.500	4.960	4.500	5.020
	16QAM	4.540	5.020	4.500	5.080	4.500	4.980
10 MHz	QPSK	9.000	9.760	9.000	9.760	8.960	9.760
	16QAM	8.960	9.800	8.960	9.720	8.960	9.720
15 MHz	QPSK	13.500	15.480	13.560	15.000	13.500	15.360
	16QAM	13.620	14.880	13.620	15.060	13.560	15.120
20 MHz	QPSK	18.000	19.840	18.000	19.520	18.000	19.440
	16QAM	18.000	19.600	18.000	19.680	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	1.260	1.104	1.254	1.104	1.260
	16QAM	1.098	1.260	1.110	1.266	1.098	1.254
3 MHz	QPSK	2.700	3.000	2.700	3.024	2.700	2.988
	16QAM	2.688	3.012	2.700	3.036	2.700	3.000
5 MHz	QPSK	4.520	5.000	4.520	5.000	4.520	4.960
	16QAM	4.520	4.980	4.540	5.000	4.520	4.980
10 MHz	QPSK	8.960	9.760	8.960	9.800	8.960	9.680
	16QAM	9.000	9.800	8.960	9.880	8.960	9.760
15 MHz	QPSK	13.560	15.000	13.560	15.120	13.560	15.120
	16QAM	13.560	15.060	13.560	15.060	13.500	14.880
20 MHz	QPSK	17.920	19.600	18.080	19.760	18.000	19.440
	16QAM	18.080	19.600	19.080	19.760	17.920	19.520

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

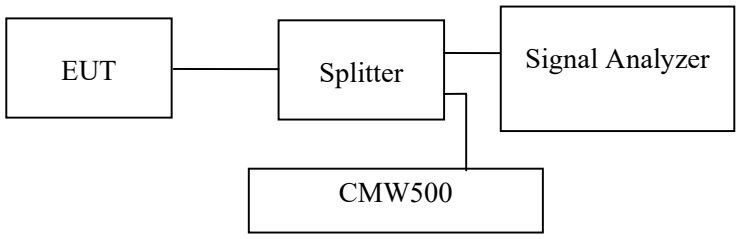
Applicable Standard

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 was added into plots.

Test Data

Environmental Conditions

Temperature:	27.6 ℃
Relative Humidity:	58 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-11-02 to 2022-11-23.

EUT operation mode: Transmitting

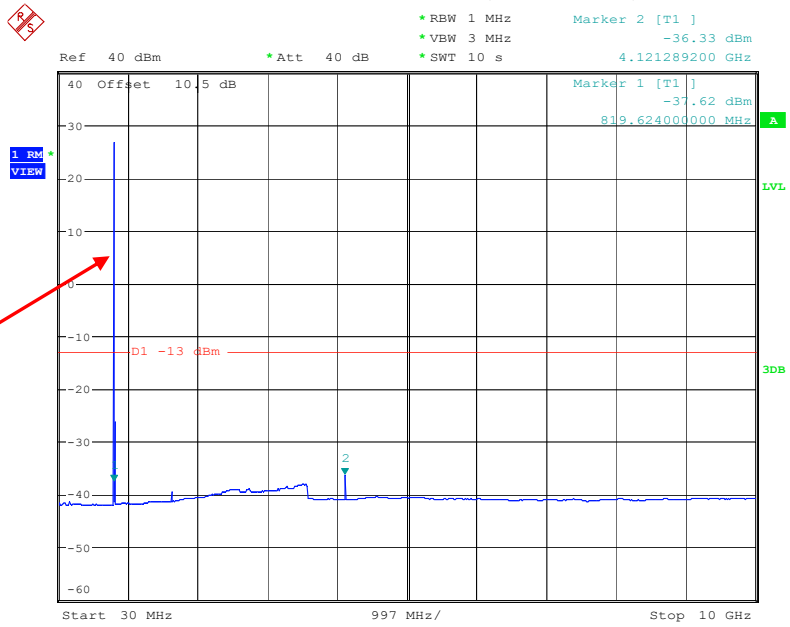
Test result: Pass

Please refer to the following plots.

Cellular Band (Part 22H)

Low Channel:

30 MHz – 10GHz (GSM Mode)

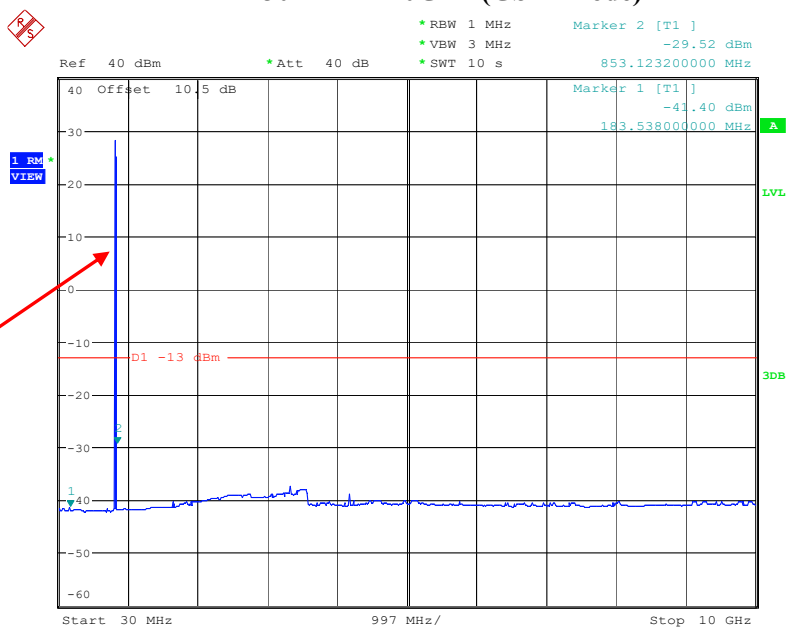


Fundamental test

Date: 2.NOV.2022 16:56:12

Middle Channel:

30 MHz – 10GHz (GSM Mode)

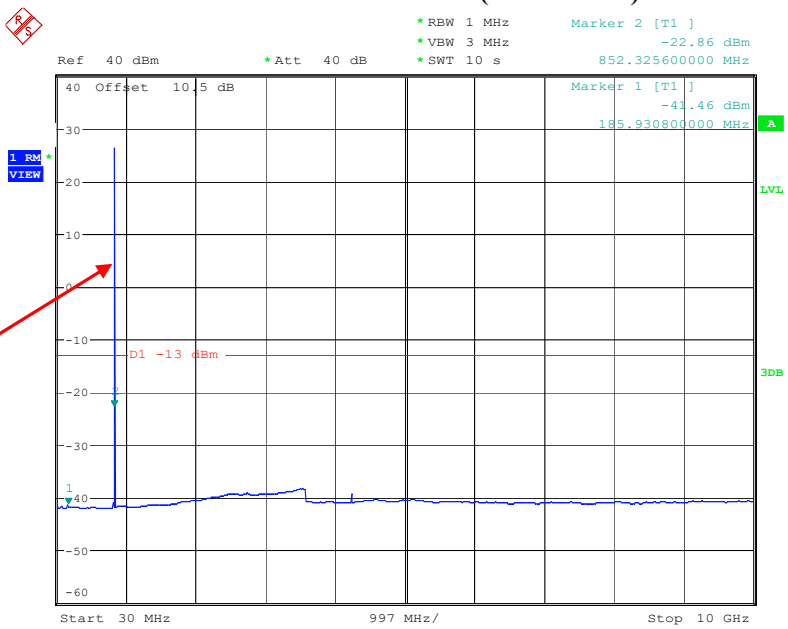


Fundamental test

Date: 2.NOV.2022 16:57:59

High Channel:

30 MHz – 10GHz (GSM Mode)

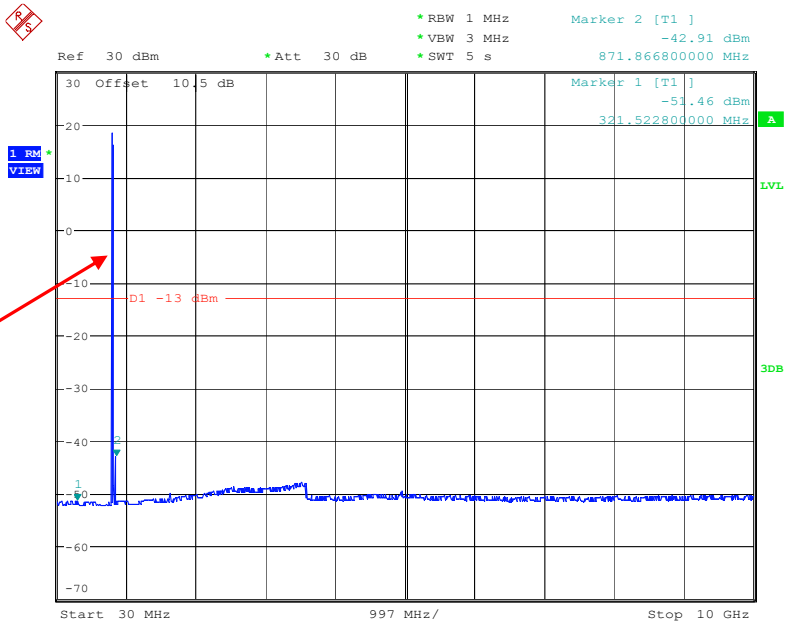


Fundamental test

Date: 2.NOV.2022 17:04:13

Low Channel:

30 MHz – 10GHz (WCDMA Mode)

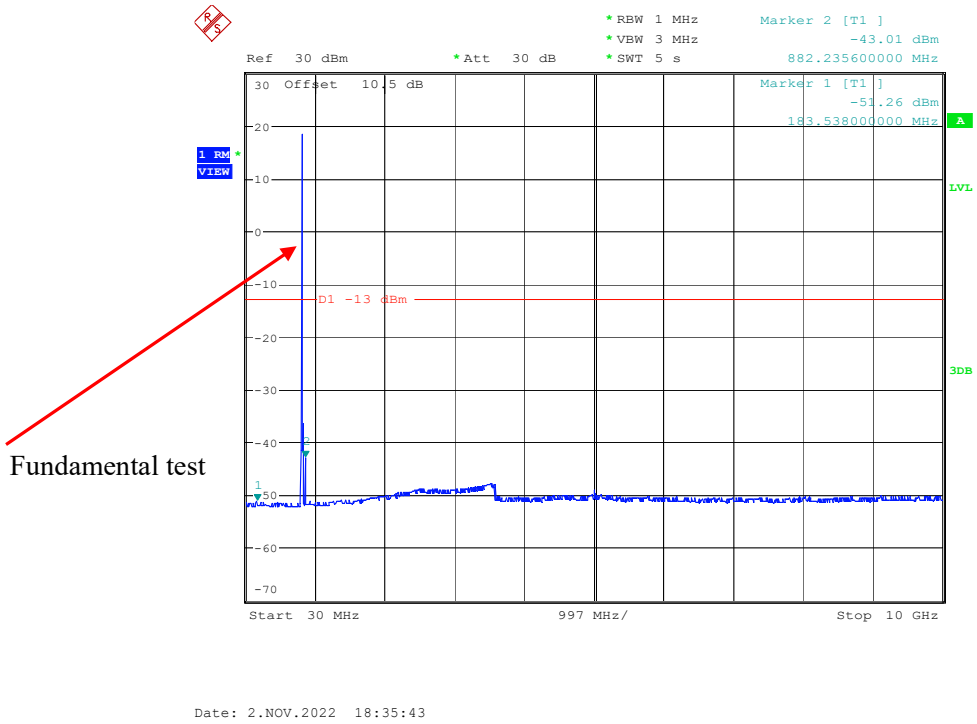


Fundamental test

Date: 2.NOV.2022 18:33:07

Middle Channel:

30 MHz – 10GHz (WCDMA Mode)

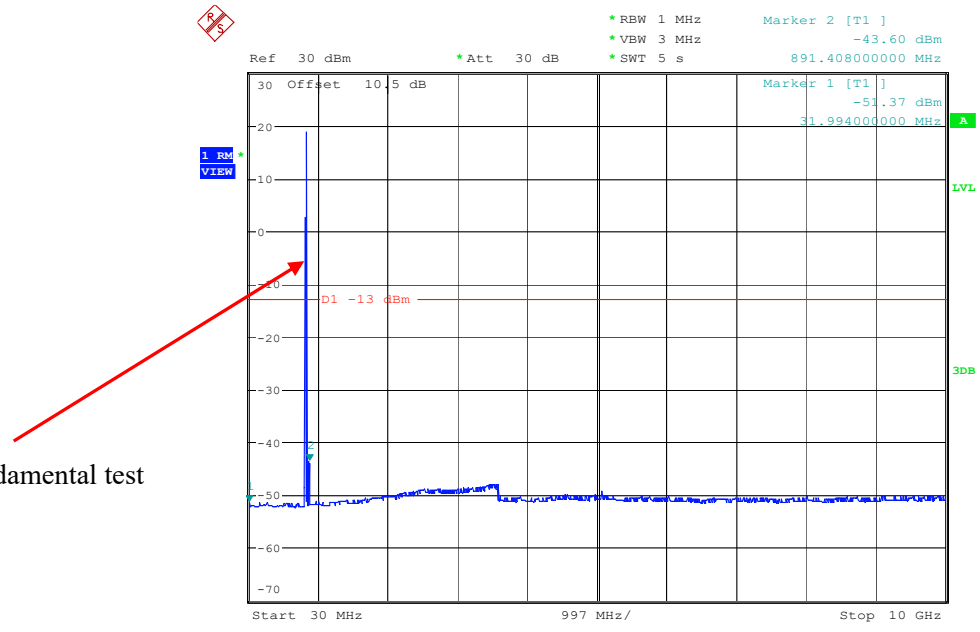


Fundamental test

Date: 2.NOV.2022 18:35:43

High Channel:

30 MHz – 10GHz (WCDMA Mode)



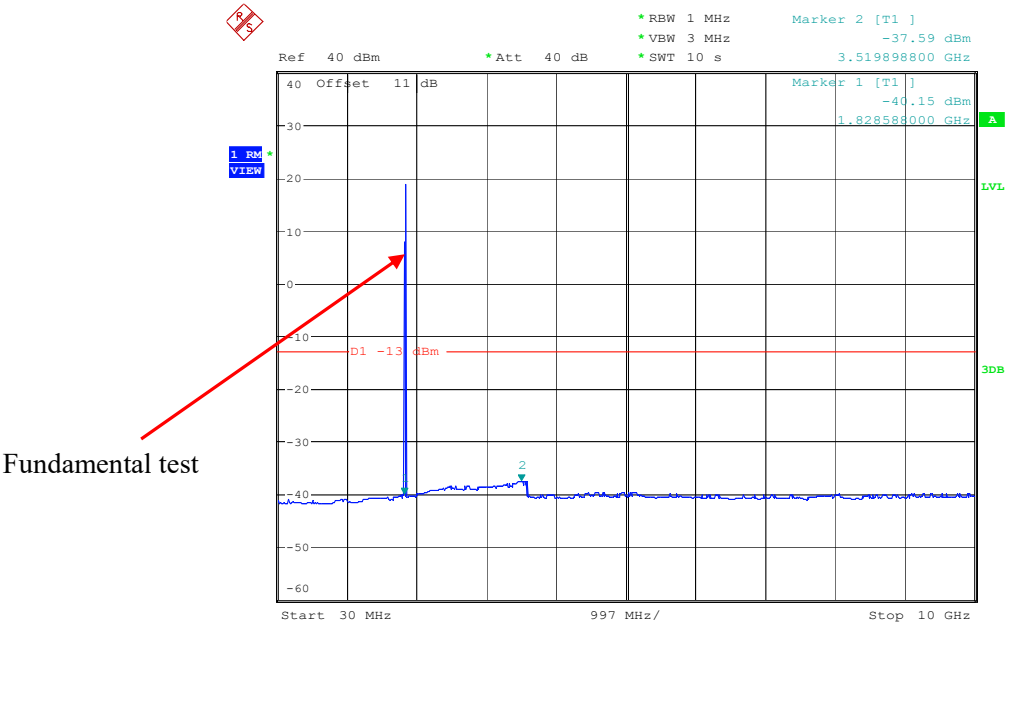
Fundamental test

Date: 2.NOV.2022 18:39:07

PCS Band (Part 24E)

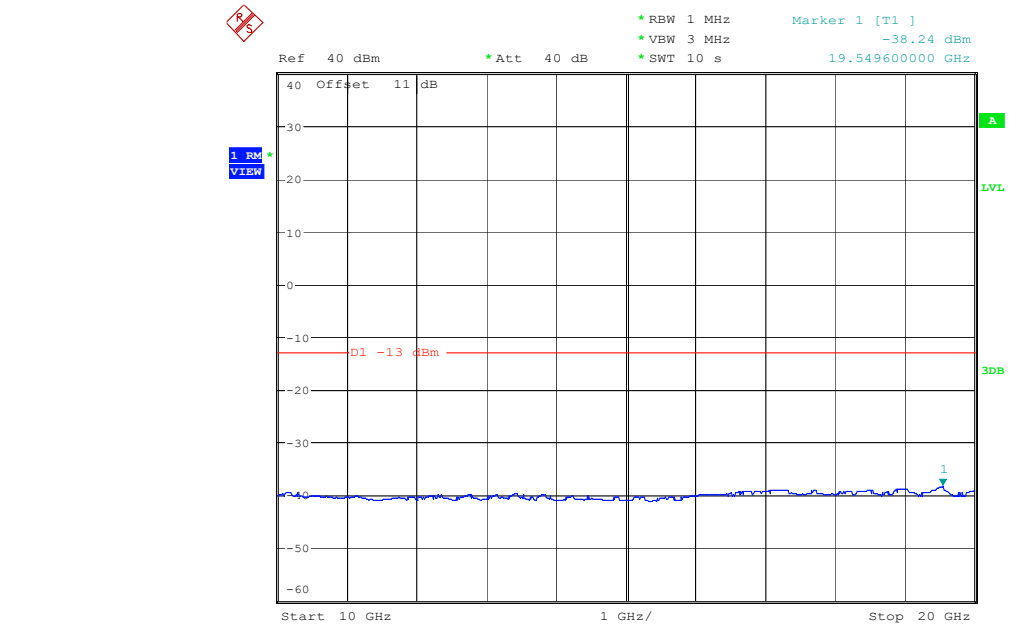
Low Channel:

30 MHz – 10GHz (GSM Mode)



Date: 2.NOV.2022 20:13:51

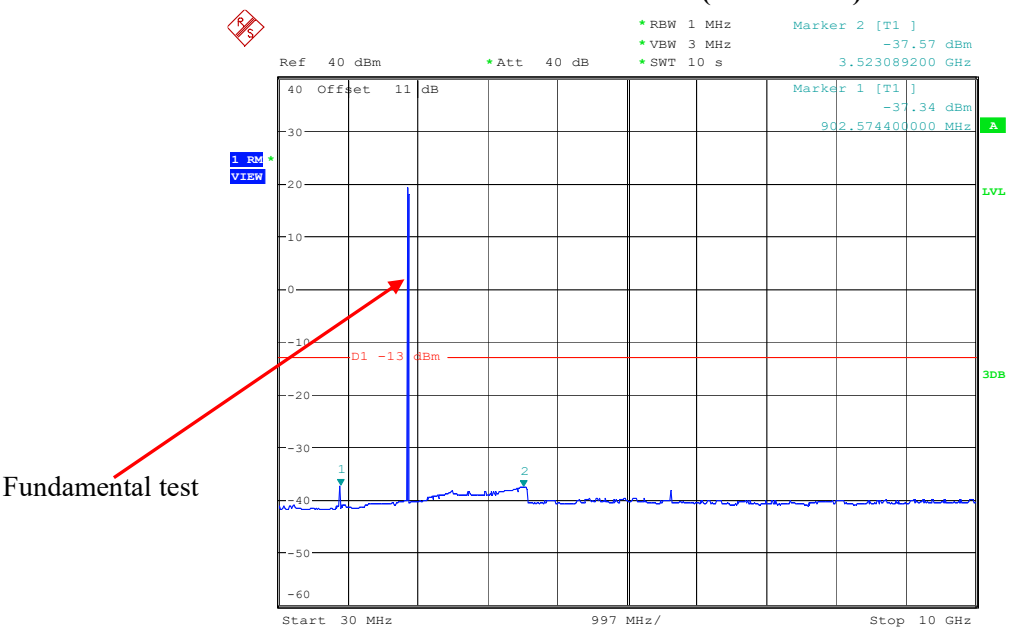
10 GHz – 20GHz (GSM Mode)



Date: 2.NOV.2022 20:15:04

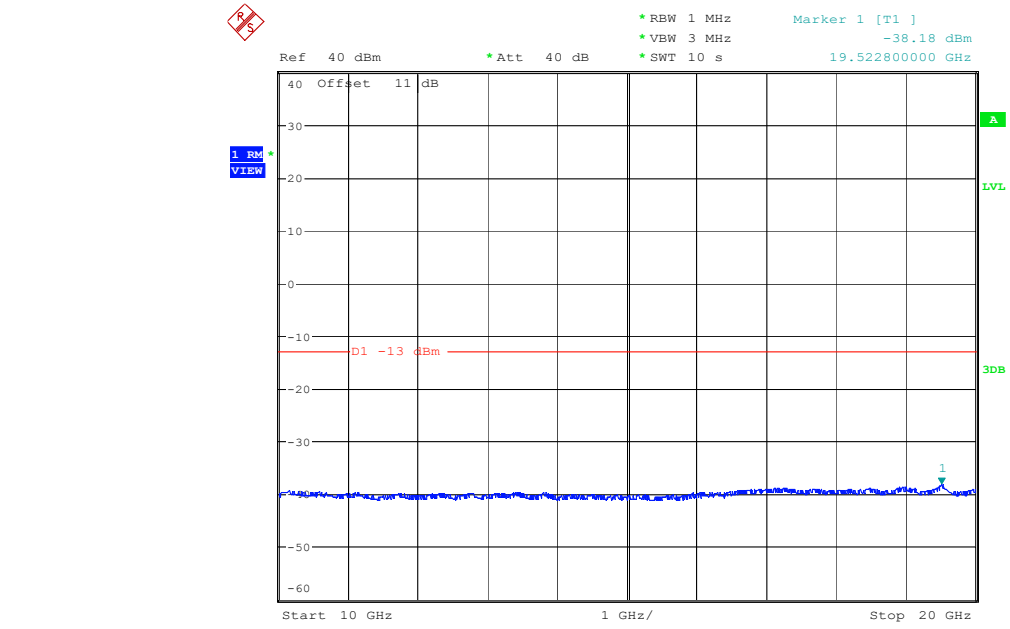
Middle Channel:

30 MHz – 10GHz (GSM Mode)



Date: 2.NOV.2022 20:18:49

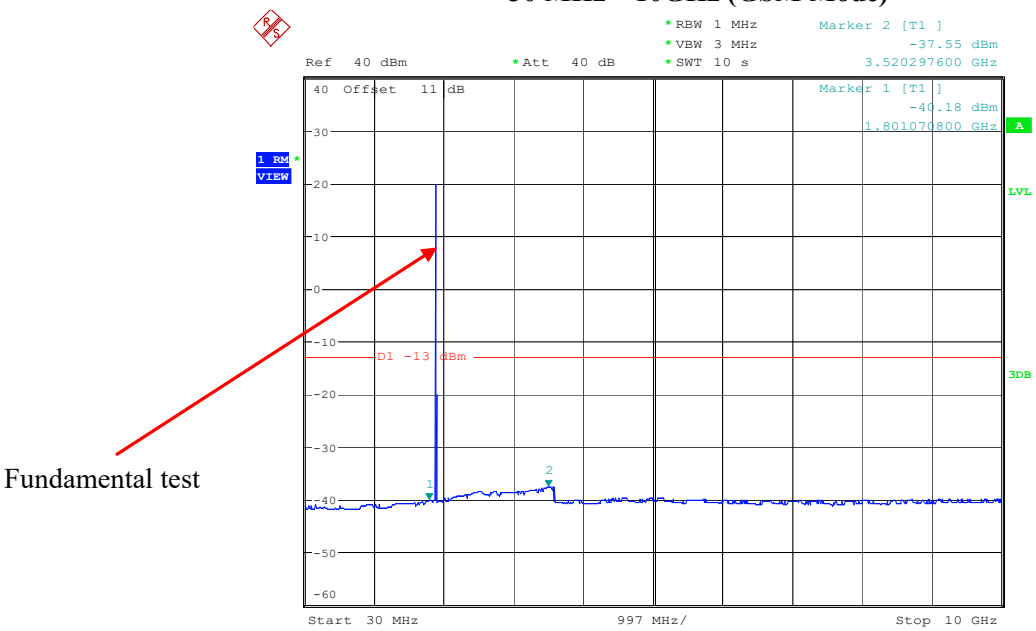
10 GHz – 20GHz (GSM Mode)



Date: 2.NOV.2022 20:19:22

High Channel:

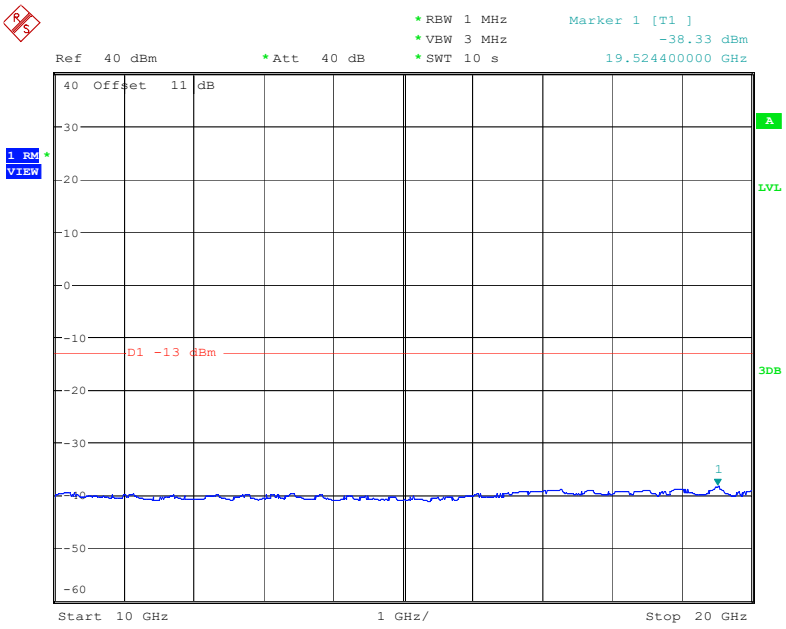
30 MHz – 10GHz (GSM Mode)



Fundamental test

Date: 2.NOV.2022 20:21:27

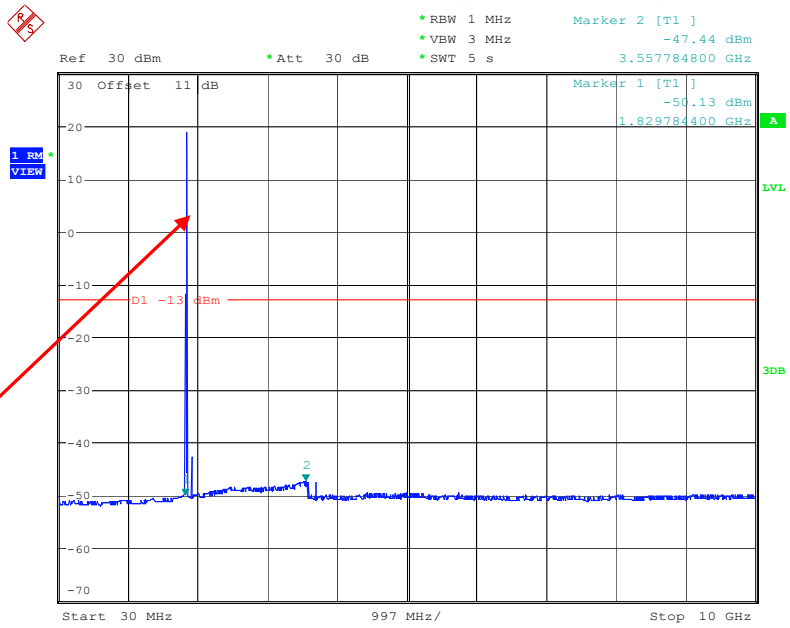
10 GHz – 20GHz (GSM Mode)



Date: 2.NOV.2022 17:44:03

Low Channel:

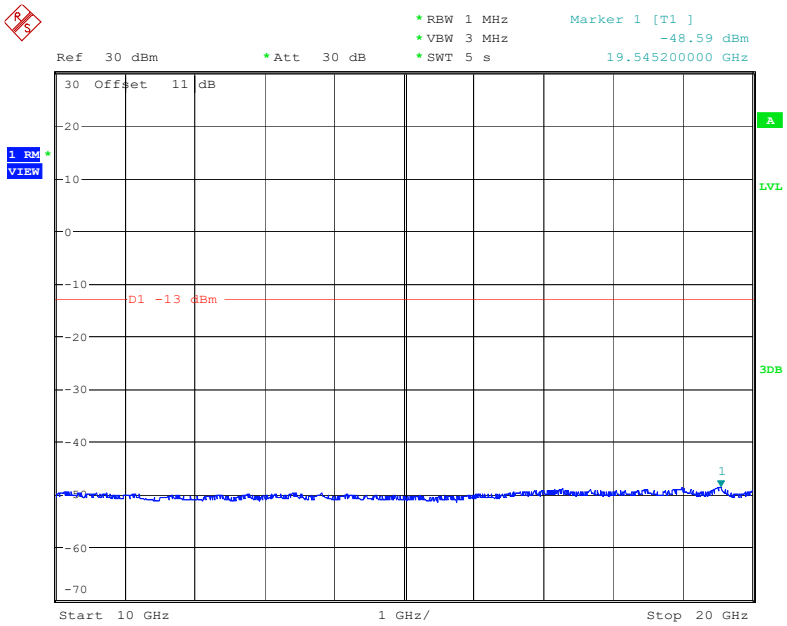
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 2.NOV.2022 18:07:26

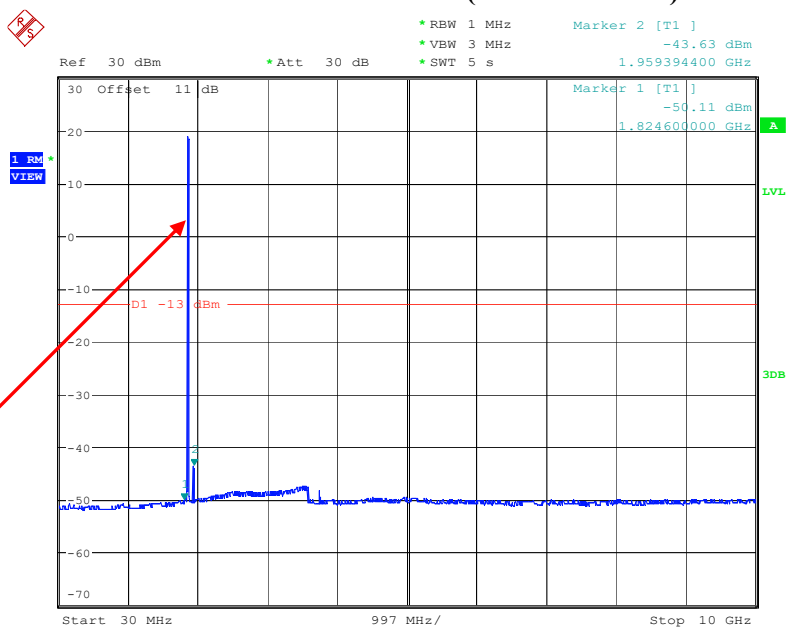
10 GHz – 20GHz (WCDMA Mode)



Date: 2.NOV.2022 18:08:07

Middle Channel:

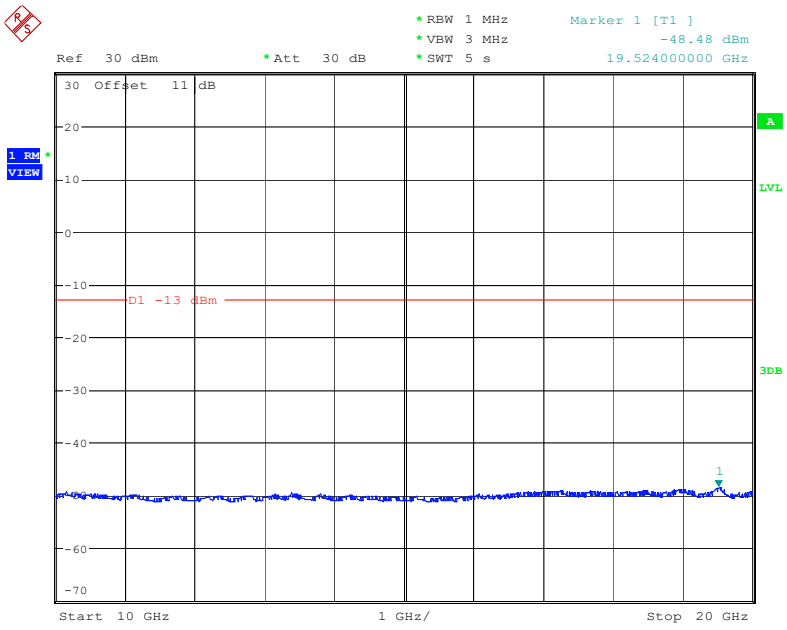
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 2.NOV.2022 18:10:43

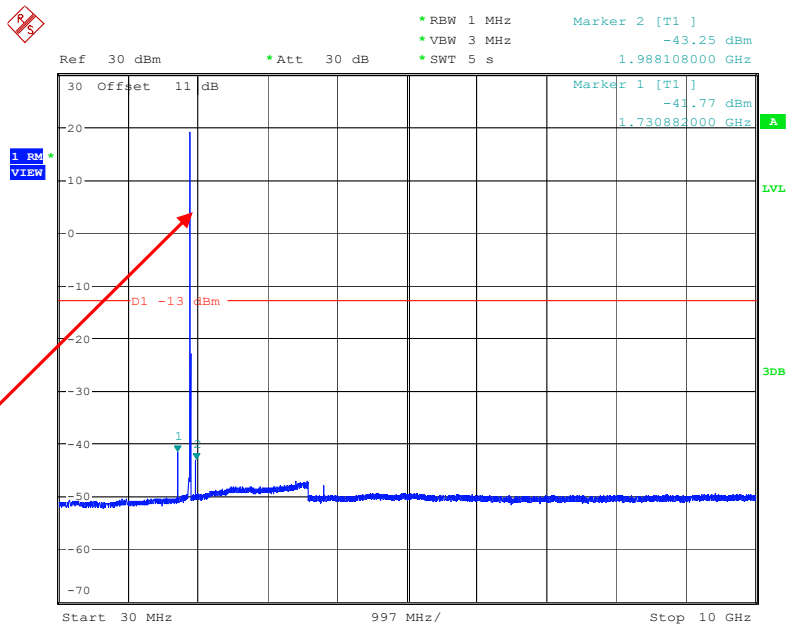
10 GHz – 20GHz (WCDMA Mode)



Date: 2.NOV.2022 18:11:26

High Channel:

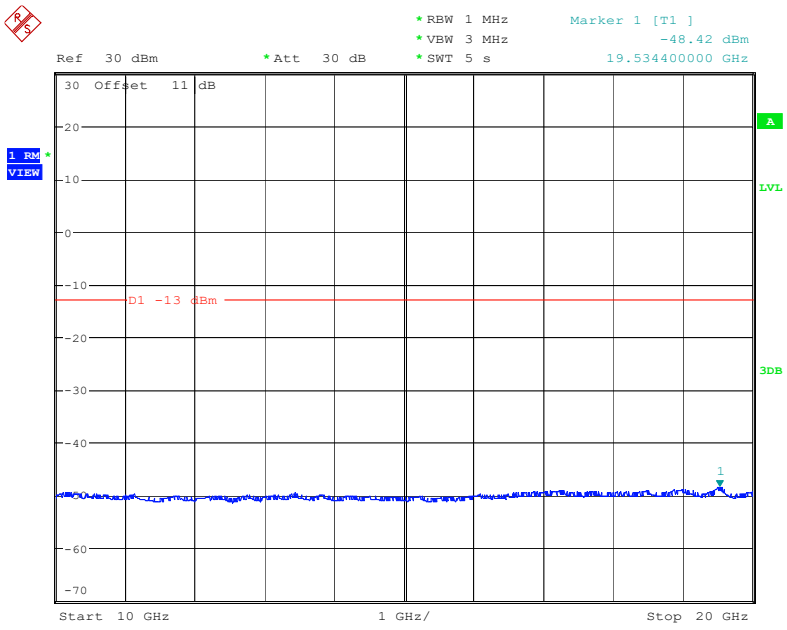
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 2.NOV.2022 18:14:19

10 GHz – 20GHz (WCDMA Mode)

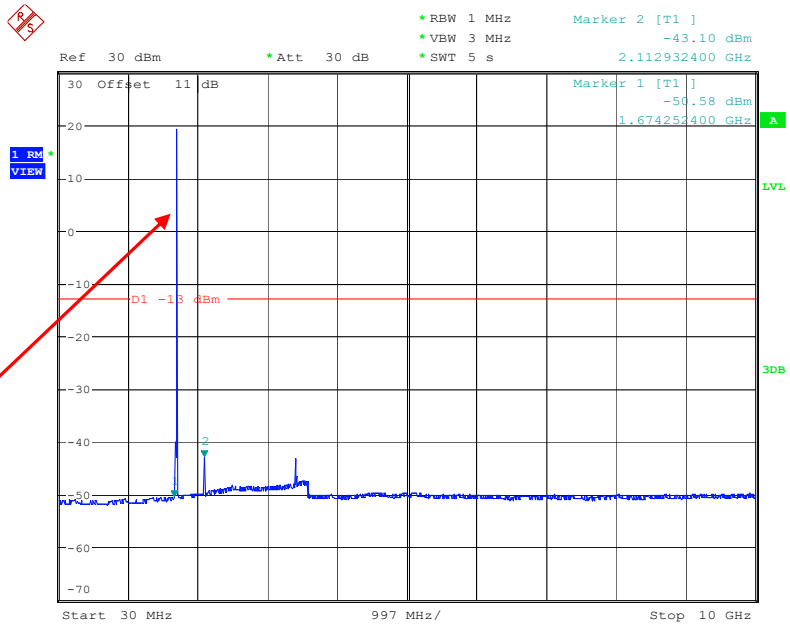


Date: 2.NOV.2022 18:14:59

AWS Band (Part 27)

Low Channel:

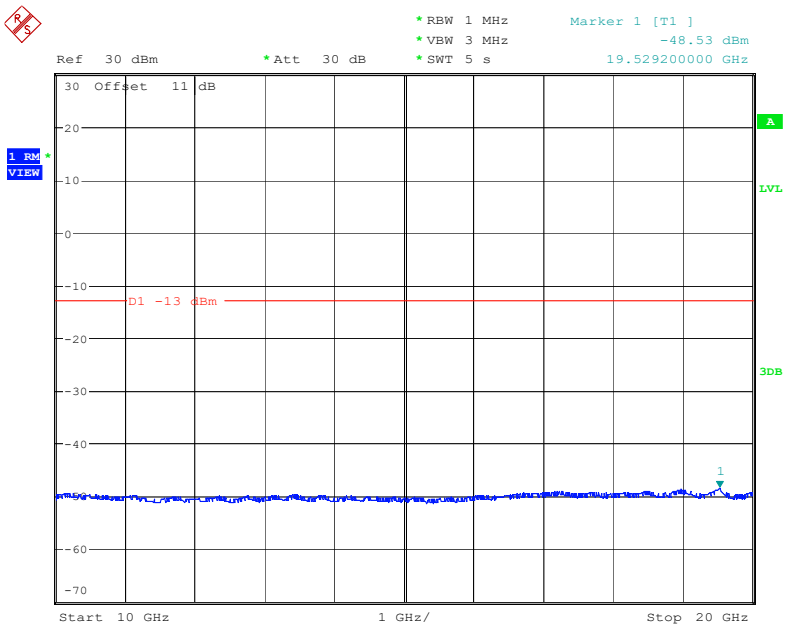
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 2.NOV.2022 18:19:32

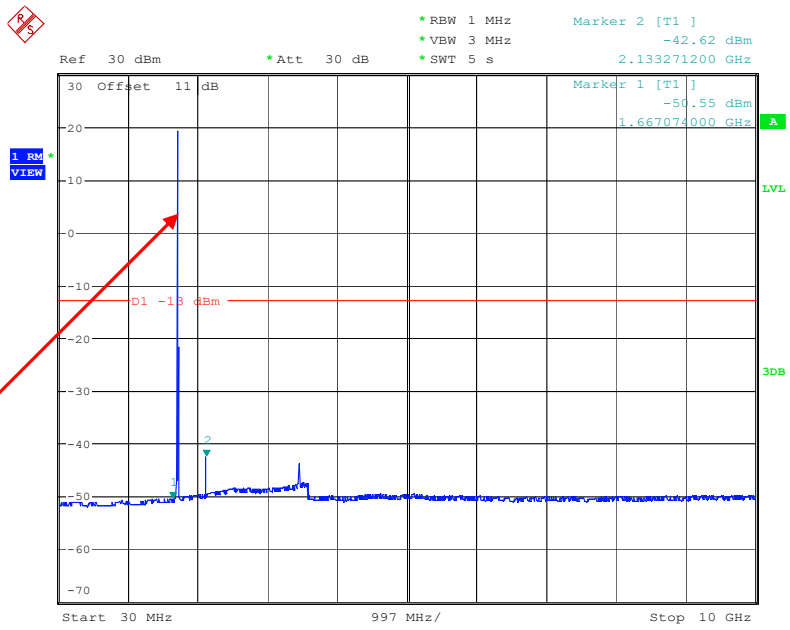
10 GHz – 20GHz (WCDMA Mode)



Date: 2.NOV.2022 18:20:13

Middle Channel:

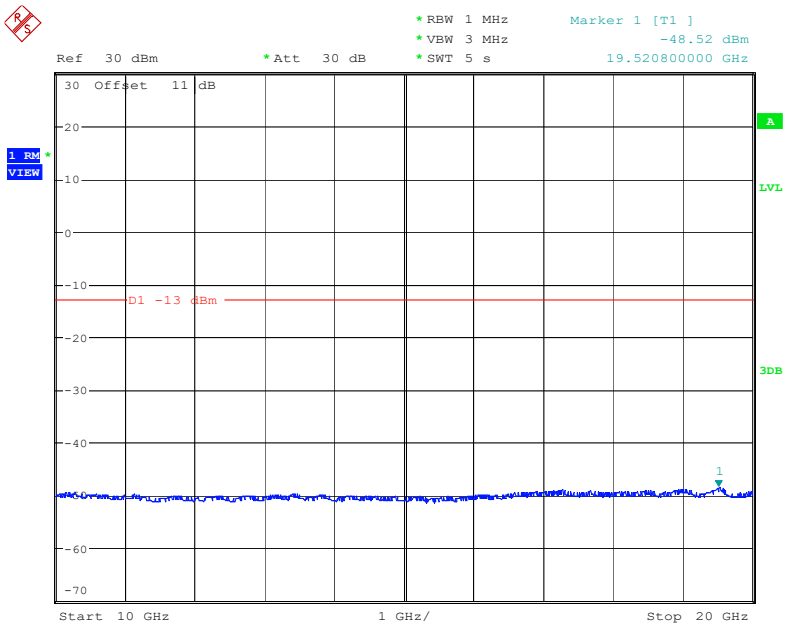
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 2.NOV.2022 18:22:50

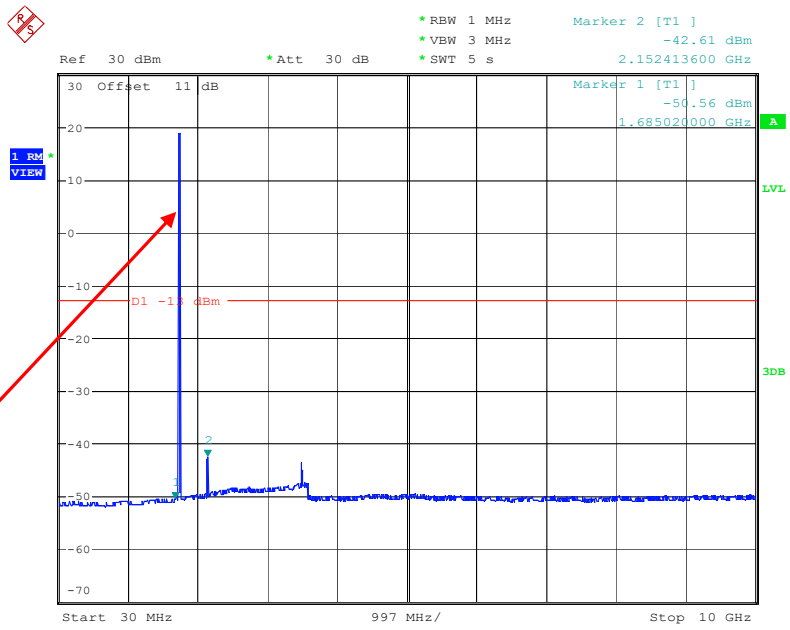
10 GHz – 20GHz (WCDMA Mode)



Date: 2.NOV.2022 18:23:31

High Channel:

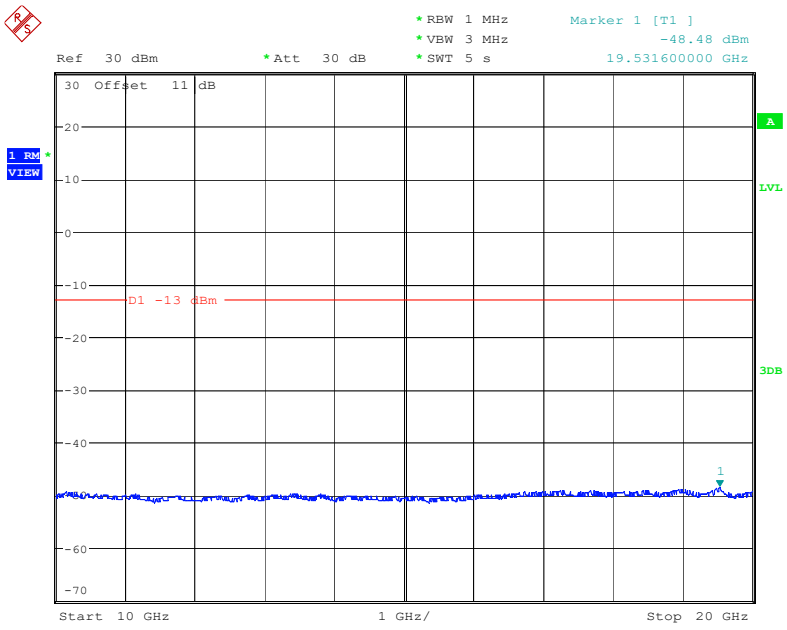
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 2.NOV.2022 18:26:41

10 GHz – 20GHz (WCDMA Mode)



Date: 2.NOV.2022 18:27:23

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:	21.2~25.5℃
Relative Humidity:	45~52%
ATM Pressure:	101.0kPa

The testing was performed by Leo Li from 2022-11-03 to 2022-11-08.

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)				
GSM 850								
Low Channel 824.2MHz								
1648.4	-54.30	28	1.4	H	3.5	-50.80	-13	-37.80
1648.4	-52.90	86	1.4	V	3.1	-49.80	-13	-36.80
2472.6	-50.70	23	2.3	H	6.6	-44.10	-13	-31.10
2472.6	-48.90	151	1.7	V	5.8	-43.10	-13	-30.10
3296.8	-47.50	344	1.6	H	6.4	-41.10	-13	-28.10
3296.8	-47.90	306	2.3	V	5.7	-42.20	-13	-29.20
Middle Channel 836.6MHz								
1673.2	-48.00	251	1.2	H	3.8	-44.20	-13	-31.20
1673.2	-49.70	108	2.1	V	3.1	-46.60	-13	-33.60
2509.8	-46.00	118	2.1	H	6.2	-39.80	-13	-26.80
2509.8	-47.70	73	2.5	V	5.6	-42.10	-13	-29.10
3346.4	-47.70	108	2	H	6.6	-41.10	-13	-28.10
3346.4	-47.00	18	2.4	V	5.4	-41.60	-13	-28.60
High Channel 848.8MHz								
1697.6	-52.80	342	2.5	H	4.1	-48.70	-13	-35.70
1697.6	-51.40	90	1.8	V	3.1	-48.30	-13	-35.30
2546.4	-48.80	279	2.5	H	6.1	-42.70	-13	-29.70
2546.4	-48.50	335	2.2	V	5.8	-42.70	-13	-29.70
3395.2	-49.20	133	1.3	H	6.2	-43.00	-13	-30.00
3395.2	-48.30	17	1.5	V	5.4	-42.90	-13	-29.90

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 Band 5								
Low Channel 826.4MHz								
1652.8	-54.80	22	1.7	H	3.5	-51.30	-13	-38.30
1652.8	-54.10	97	2	V	3.1	-51.00	-13	-38.00
2479.2	-49.70	183	1.4	H	6.6	-43.10	-13	-30.10
2479.2	-51.00	330	2.3	V	5.8	-45.20	-13	-32.20
3305.6	-43.50	349	2	H	6.4	-37.10	-13	-24.10
3305.6	-42.90	328	2.3	V	5.7	-37.20	-13	-24.20
Middle Channel 836.6MHz								
1673.2	-56.50	58	2	H	3.8	-52.70	-13	-39.70
1673.2	-56.50	198	2	V	3.1	-53.40	-13	-40.40
2509.8	-52.60	64	1.3	H	6.2	-46.40	-13	-33.40
2509.8	-52.00	133	1.8	V	5.6	-46.40	-13	-33.40
3346.4	-44.50	338	1.1	H	6.6	-37.90	-13	-24.90
3346.4	-43.60	99	2	V	5.4	-38.20	-13	-25.20
High Channel 846.6MHz								
1693.2	-56.50	209	1.1	H	4.1	-52.40	-13	-39.40
1693.2	-55.30	359	2.2	V	3.1	-52.20	-13	-39.20
2539.8	-52.30	187	2.1	H	6.1	-46.20	-13	-33.20
2539.8	-51.80	161	2.5	V	5.8	-46.00	-13	-33.00
3386.4	-43.00	132	1.3	H	6.2	-36.80	-13	-23.80
3386.4	-40.40	120	1.5	V	5.4	-35.00	-13	-22.00

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								
Low Channel 1850.2MHz								
3700.4	-48.50	179	2	H	8.1	-40.40	-13	-27.40
3700.4	-46.50	50	1.1	V	7.6	-38.90	-13	-25.90
Middle Channel 1880MHz								
3760.0	-48.40	219	1.1	H	8.8	-39.60	-13	-26.60
3760.0	-47.20	291	2.3	V	8	-39.20	-13	-26.20
High Channel 1909.80MHz								
3819.6	-48.50	145	1.6	H	8.7	-39.80	-13	-26.80
3819.6	-46.50	35	1.3	V	7.9	-38.60	-13	-25.60

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Low Channel 1852.4MHz								
3704.8	-53.50	213	1.4	H	8.1	-45.40	-13	-32.40
3704.8	-50.80	13	1.7	V	7.6	-43.20	-13	-30.20
Middle Channel 1880MHz								
3760.0	-53.40	208	1.9	H	8.8	-44.60	-13	-31.60
3760.0	-53.30	344	1.6	V	8	-45.30	-13	-32.30
High Channel 1907.6MHz								
3815.2	-54.20	54	1.7	H	8.7	-45.50	-13	-32.50
3815.2	-52.60	188	1.2	V	7.9	-44.70	-13	-31.70

30MHz-20GHz:

AWS Band (Part 27E)

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 Band 4								
Low Channel 1712.4MHz								
3424.8	-49.70	293	1.1	H	6.4	-43.30	-13	-30.30
3424.8	-48.20	71	1.2	V	5.8	-42.40	-13	-29.40
Middle Channel 1732.6MHz								
3465.2	-49.20	359	1.2	H	7	-42.20	-13	-29.20
3465.2	-49.10	313	2.1	V	6.2	-42.90	-13	-29.90
High Channel 1752.6MHz								
3505.2	-51.60	34	2.5	H	7.8	-43.80	-13	-30.80
3505.2	-49.70	12	2	V	6.5	-43.20	-13	-30.20

LTE Band: *(Pre-scan with 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								
3701.4	-50.10	168	2.3	H	8.1	-42.00	-13	-29.00
3701.4	-48.70	132	1.4	V	7.6	-41.10	-13	-28.10
5552.1	-38.30	284	1.7	H	9.6	-28.70	-13	-15.70
5552.1	-37.30	76	2	V	9.1	-28.20	-13	-15.20
1.4MHz Bandwidth, QPSK, Middle Channel								
3760.0	-50.30	161	1	H	8.8	-41.50	-13	-28.50
3760.0	-49.80	305	1.4	V	8	-41.80	-13	-28.80
5640.0	-35.70	138	2.4	H	10.2	-25.50	-13	-12.50
5640.0	-35.20	120	1.8	V	9.4	-25.80	-13	-12.80
1.4MHz Bandwidth, QPSK, High Channel								
3818.6	-48.50	300	1	H	8.7	-39.80	-13	-26.80
3818.6	-48.50	230	2	V	7.9	-40.60	-13	-27.60
5727.9	-40.70	217	2.1	H	10.6	-30.10	-13	-17.10
5727.9	-40.80	15	1.1	V	10.2	-30.60	-13	-17.60

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 4								
Test frequency range: 30MHz-20GHz								
1.4MHz Bandwidth, QPSK, Low Channel								
3421.4	-42.20	224	1.8	H	6.4	-35.80	-13	-22.80
3421.4	-42.30	223	1.7	V	5.8	-36.50	-13	-23.50
5132.1	-37.80	110	2.4	H	11.4	-26.40	-13	-13.40
5132.1	-36.00	357	1.9	V	10.8	-25.20	-13	-12.20
1.4MHz Bandwidth, QPSK, Middle Channel								
3465.0	-48.50	51	1	H	7	-41.50	-13	-28.50
3465.0	-48.70	98	1	V	6.2	-42.50	-13	-29.50
5197.5	-31.60	226	1.7	H	10.4	-21.20	-13	-8.20
5197.5	-30.40	281	2.3	V	9.8	-20.60	-13	-7.60
1.4MHz Bandwidth, QPSK, High Channel								
3508.6	-45.10	92	1.6	H	7.8	-37.30	-13	-24.30
3508.6	-45.10	127	1.7	V	6.5	-38.60	-13	-25.60
5262.9	-38.00	66	2	H	9.4	-28.60	-13	-15.60
5262.9	-38.20	297	2.2	V	9	-29.20	-13	-16.20

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 5								
Test frequency range: 30MHz-10GHz								
1.4MHz Bandwidth, QPSK, Low Channel								
1649.4	-57.60	38	1.6	H	3.5	-54.10	-13	-41.10
1649.4	-56.10	287	2.2	V	3.1	-53.00	-13	-40.00
2474.1	-52.00	42	2.3	H	6.6	-45.40	-13	-32.40
2474.1	-48.10	45	1	V	5.8	-42.30	-13	-29.30
3298.8	-34.90	251	1.2	H	6.4	-28.50	-13	-15.50
3298.8	-36.80	72	2.4	V	5.7	-31.10	-13	-18.10
1.4MHz Bandwidth, QPSK, Middle Channel								
1673.0	-50.40	236	1.6	H	3.8	-46.60	-13	-33.60
1673.0	-50.70	1	2.1	V	3.1	-47.60	-13	-34.60
2509.5	-48.80	107	1.1	H	6.2	-42.60	-13	-29.60
2509.5	-46.30	273	1.8	V	5.6	-40.70	-13	-27.70
3346.0	-30.40	165	2	H	6.6	-23.80	-13	-10.80
3346.0	-31.30	98	1.1	V	5.4	-25.90	-13	-12.90
1.4MHz Bandwidth, QPSK, High Channel								
1696.6	-53.30	8	1	H	4.1	-49.20	-13	-36.20
1696.6	-54.00	121	1.3	V	3.1	-50.90	-13	-37.90
2544.9	-48.30	7	2.2	H	6.1	-42.20	-13	-29.20
2544.9	-45.10	237	2.1	V	5.8	-39.30	-13	-26.30
3393.2	-31.60	235	2.1	H	6.2	-25.40	-13	-12.40
3393.2	-33.50	237	1.2	V	5.4	-28.10	-13	-15.10

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								
5005.0	-41.10	101	2.2	H	10.8	-30.30	-25	-5.30
5005.0	-42.50	338	2.1	V	10.2	-32.30	-25	-7.30
7507.5	-53.20	51	1.1	H	20.4	-32.80	-25	-7.80
7507.5	-54.00	142	2.1	V	20.1	-33.90	-25	-8.90
5MHz Bandwidth, QPSK, Middle Channel								
5070.0	-40.40	308	2.4	H	11.1	-29.30	-25	-4.30
5070.0	-40.50	279	2.4	V	10.8	-29.70	-25	-4.70
7605.0	-56.80	190	2.2	H	21.2	-35.60	-25	-10.60
7605.0	-57.10	43	1.6	V	20.1	-37.00	-25	-12.00
5MHz Bandwidth, QPSK, High Channel								
5135.0	-39.40	160	2.1	H	11.3	-28.10	-25	-3.10
5135.0	-40.00	268	1.9	V	10.8	-29.20	-25	-4.20
7702.5	-56.30	78	1.5	H	21.2	-35.10	-25	-10.10
7702.5	-57.80	157	2.3	V	21	-36.80	-25	-11.80

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 12								
Test frequency range: 30MHz-10GHz								
1.4MHz Bandwidth, QPSK, Low Channel								
1399.4	-54.40	320	1.2	H	5.9	-48.50	-13	-35.50
1399.4	-57.00	20	1.7	V	5.9	-51.10	-13	-38.10
2099.1	-49.30	289	1	H	6.3	-43.00	-13	-30.00
2099.1	-50.70	339	2.3	V	5.1	-45.60	-13	-32.60
2798.8	-43.20	170	2.2	H	6.7	-36.50	-13	-23.50
2798.8	-36.40	114	2	V	6.7	-29.70	-13	-16.70
1.4MHz Bandwidth, QPSK, Middle Channel								
1415.0	-59.00	53	1.8	H	5.9	-53.10	-13	-40.10
1415.0	-59.30	171	2	V	5.9	-53.40	-13	-40.40
2122.5	-46.60	161	1	H	6.3	-40.30	-13	-27.30
2122.5	-49.50	43	1	V	5.1	-44.40	-13	-31.40
2830.0	-53.20	236	2.2	H	6.7	-46.50	-13	-33.50
2830.0	-46.70	312	1.8	V	6.7	-40.00	-13	-27.00
1.4MHz Bandwidth, QPSK, High Channel								
1430.6	-61.10	235	1.6	H	5.9	-55.20	-13	-42.20
1430.6	-61.00	186	1.2	V	5.9	-55.10	-13	-42.10
2145.9	-44.90	59	1.5	H	6.3	-38.60	-13	-25.60
2145.9	-48.80	250	2.4	V	5.1	-43.70	-13	-30.70
2861.2	-44.70	272	1.3	H	6.7	-38.00	-13	-25.00
2861.2	-35.60	18	1.8	V	6.7	-28.90	-13	-15.90

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								
1413.0	-60.80	290	2.5	H	5.8	-55.00	-13	-42.00
1413.0	-59.50	239	1.5	V	5.1	-54.40	-13	-41.40
2119.5	-47.80	29	2.4	H	6.5	-41.30	-13	-28.30
2119.5	-49.90	17	2.4	V	5.7	-44.20	-13	-31.20
2826.0	-54.60	166	1.9	H	7.1	-47.50	-13	-34.50
2826.0	-46.00	307	2.4	V	6.5	-39.50	-13	-26.50
5MHz Bandwidth, QPSK, Middle Channel								
1420.0	-58.90	33	2.5	H	5.8	-53.10	-13	-40.10
1420.0	-57.60	169	1.4	V	5.1	-52.50	-13	-39.50
2130.0	-45.70	126	2	H	6.5	-39.20	-13	-26.20
2130.0	-50.80	328	1.1	V	5.7	-45.10	-13	-32.10
2840.0	-47.00	247	1.1	H	7.1	-39.90	-13	-26.90
2840.0	-38.20	105	1.9	V	6.5	-31.70	-13	-18.70
5MHz Bandwidth, QPSK, High Channel								
1427.0	-59.10	205	2.2	H	5.8	-53.30	-13	-40.30
1427.0	-59.00	337	1.1	V	5.1	-53.90	-13	-40.90
2140.5	-45.60	237	1.3	H	6.5	-39.10	-13	-26.10
2140.5	-49.50	147	2.1	V	5.7	-43.80	-13	-30.80
2854.0	-44.90	23	2.3	H	7.1	-37.80	-13	-24.80
2854.0	-35.80	10	1.3	V	6.5	-29.30	-13	-16.30

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 38								
Test frequency range: 30MHz-26.5GHz								
5MHz Bandwidth, QPSK, Low Channel 2572.5MHz								
5145.0	-44.70	275	1.8	H	11.4	-33.30	-25	-8.30
5145.0	-45.60	161	1.1	V	10.7	-34.90	-25	-9.90
7717.5	-65.20	13	2.4	H	20.5	-44.70	-25	-19.70
7717.5	-65.60	79	2.2	V	20.3	-45.30	-25	-20.30
5MHz Bandwidth, QPSK, Middle Channel 2595MHz								
5190.0	-42.50	16	2.1	H	10.5	-32.00	-25	-7.00
5190.0	-43.70	211	1.5	V	10	-33.70	-25	-8.70
7785.0	-61.50	129	2.1	H	18.3	-43.20	-25	-18.20
7785.0	-61.90	302	1.8	V	18	-43.90	-25	-18.90
5MHz Bandwidth, QPSK, High Channel 2617.5MHz								
5235.0	-40.50	86	2	H	9.7	-30.80	-25	-5.80
5235.0	-41.90	53	2.2	V	9.2	-32.70	-25	-7.70
7852.5	-60.70	279	1.6	H	18.2	-42.50	-25	-17.50
7852.5	-60.90	284	2.2	V	17.6	-43.30	-25	-18.30

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 41								
Test frequency range: 30MHz-27GHz								
5MHz Bandwidth, QPSK, Low Channel								
5075.0	-43.50	354	1.6	H	11.2	-32.30	-25	-7.30
5075.0	-44.50	347	2.3	V	10.9	-33.60	-25	-8.60
7612.5	-65.70	338	1.2	H	21.2	-44.50	-25	-19.50
7612.5	-65.30	247	1.7	V	20.2	-45.10	-25	-20.10
5MHz Bandwidth, QPSK, Middle Channel								
5190.0	-41.60	253	1.5	H	10.5	-31.10	-25	-6.10
5190.0	-42.10	43	1.2	V	10	-32.10	-25	-7.10
7785.0	-61.30	178	1.8	H	18.3	-43.00	-25	-18.00
7785.0	-61.70	86	1.5	V	18	-43.70	-25	-18.70
5MHz Bandwidth, QPSK, High Channel								
5305.0	-39.10	202	2.4	H	9.6	-29.50	-25	-4.50
5305.0	-39.40	48	1.6	V	8.8	-30.60	-25	-5.60
7957.5	-61.50	278	1.8	H	18.9	-42.60	-25	-17.60
7957.5	-62.40	37	1.2	V	18.5	-43.90	-25	-18.90

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								
3421.4	-42.00	117	1.5	H	6.4	-35.60	-13	-22.60
3421.4	-42.20	147	1.9	V	5.7	-36.50	-13	-23.50
5132.1	-38.00	32	1.7	H	11.3	-26.70	-13	-13.70
5132.1	-36.30	17	2	V	10.8	-25.50	-13	-12.50
1.4MHz Bandwidth, QPSK, Middle Channel								
3490.0	-45.40	312	2.5	H	7.6	-37.80	-13	-24.80
3490.0	-45.20	359	1.2	V	6.4	-38.80	-13	-25.80
5235.0	-33.90	278	2.2	H	9.7	-24.20	-13	-11.20
5235.0	-33.70	136	1.7	V	9.2	-24.50	-13	-11.50
1.4MHz Bandwidth, QPSK, High Channel								
3558.6	-45.10	261	1.2	H	7.8	-37.30	-13	-24.30
3558.6	-45.00	115	2.1	V	7	-38.00	-13	-25.00
5337.9	-31.90	296	1.2	H	9.4	-22.50	-13	-9.50
5337.9	-31.30	0	2.4	V	8.7	-22.60	-13	-9.60

Note:
Absolute Level = Reading Level + Substituted Factor
Substituted Factor contains: SG Level - Cable loss+ Antenna Gain
Margin = Absolute Level –Limit
Other emissions that are more than 20dB below the limit was not recorded.

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.

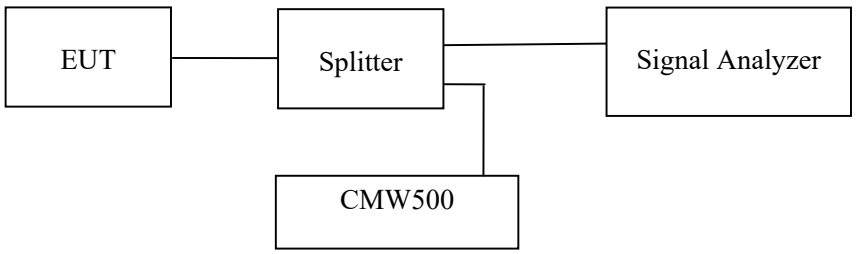
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to FCC §27.53(g) (h) (m) 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.

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 was added into plots.

Test Data

Environmental Conditions

Temperature:	26.3~27.2 ℃
Relative Humidity:	56.2~58.1%
ATM Pressure:	101.0 kPa

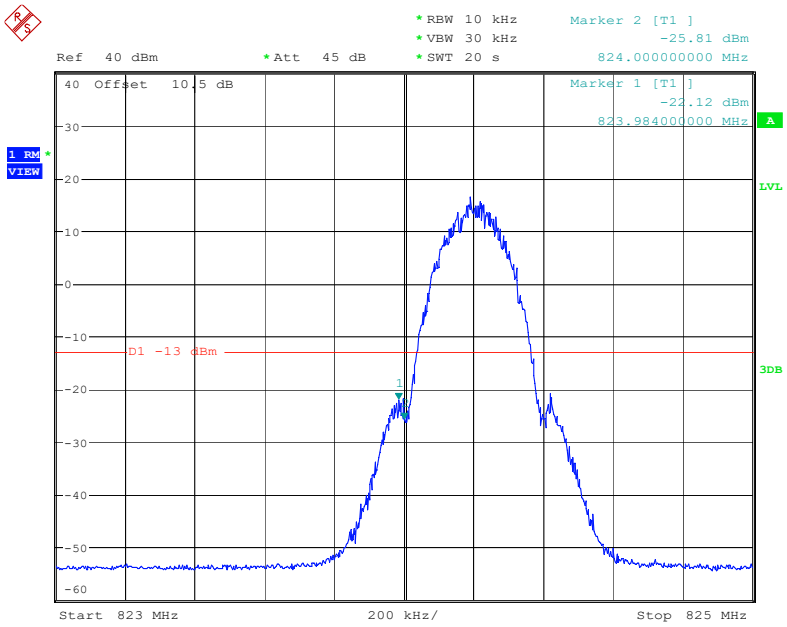
The testing was performed by Cat Kang from 2022-11-02 to 2022-11-03.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

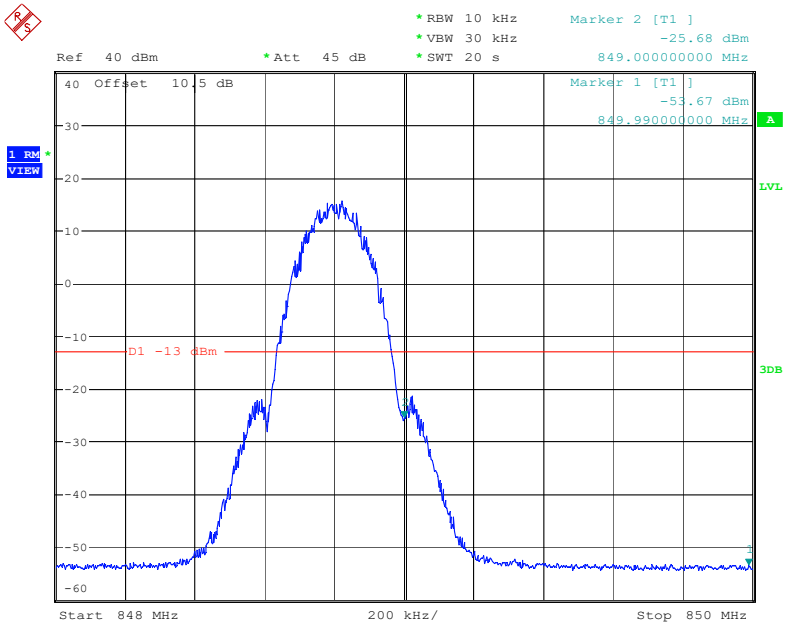
Please refer to the following plots.

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



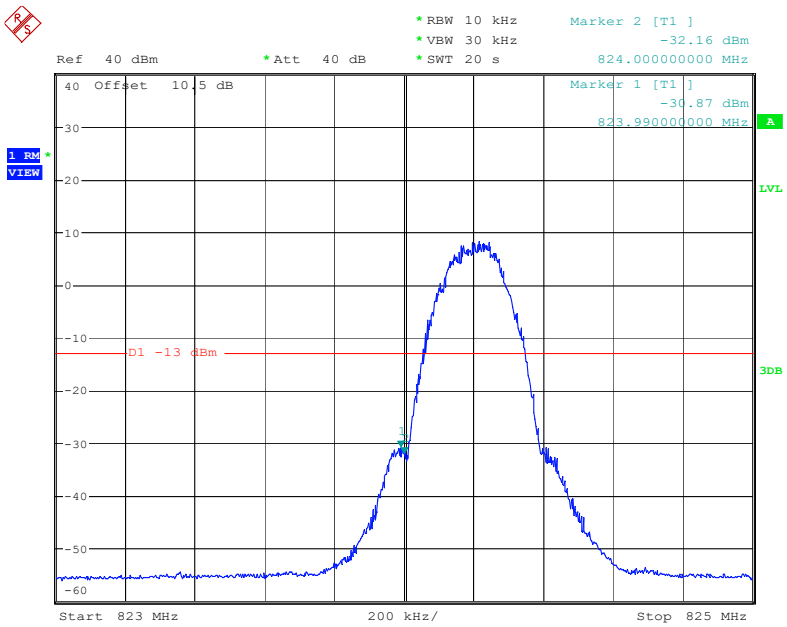
Date: 2.NOV.2022 16:39:38

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



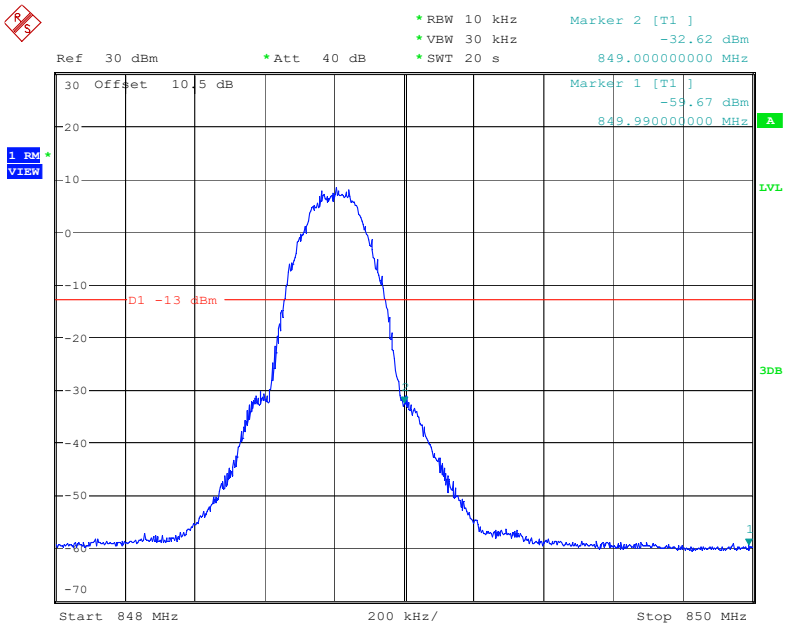
Date: 2.NOV.2022 16:49:16

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



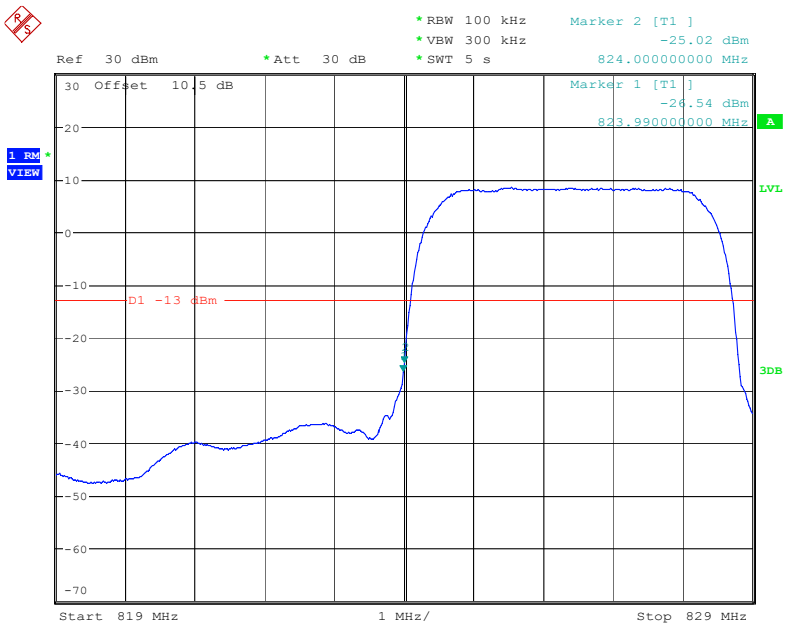
Date: 2.NOV.2022 17:08:57

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



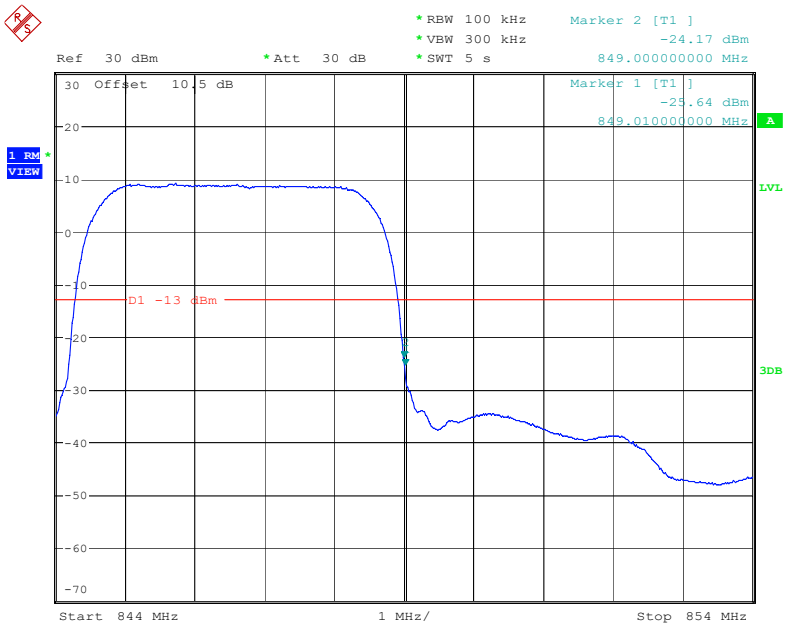
Date: 2.NOV.2022 17:18:36

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



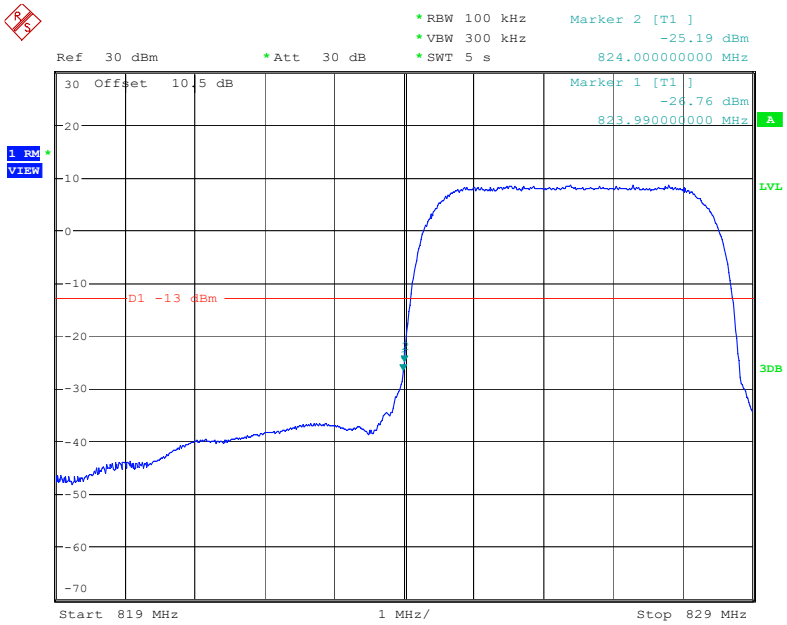
Date: 2.NOV.2022 18:32:28

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



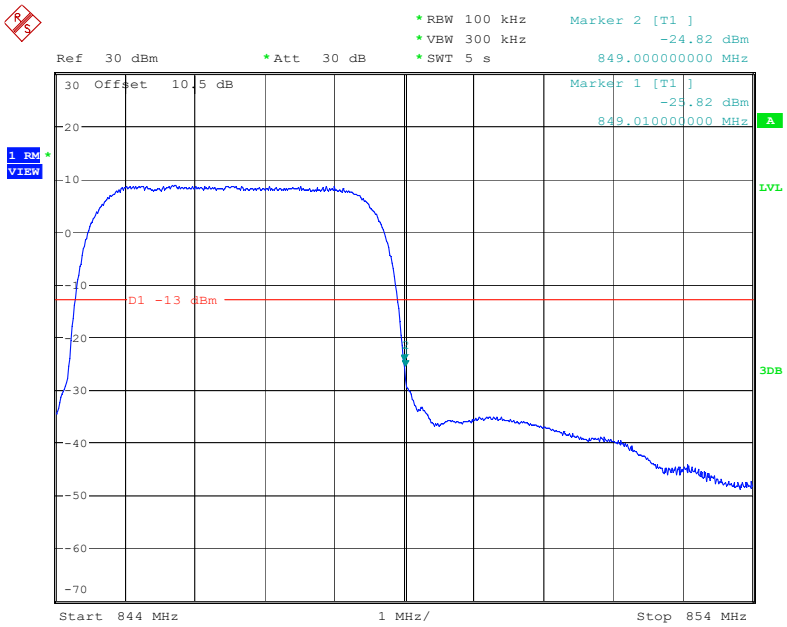
Date: 2.NOV.2022 18:38:27

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



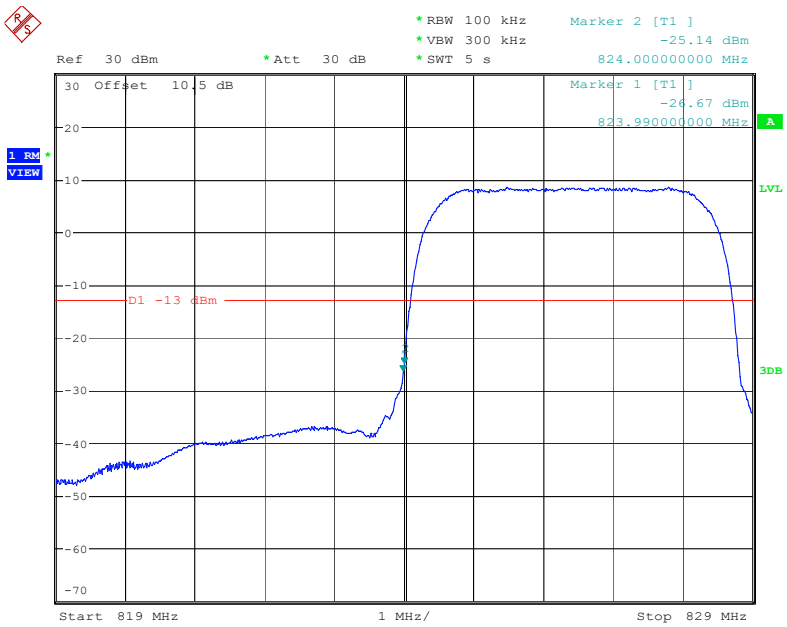
Date: 2.NOV.2022 18:43:35

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



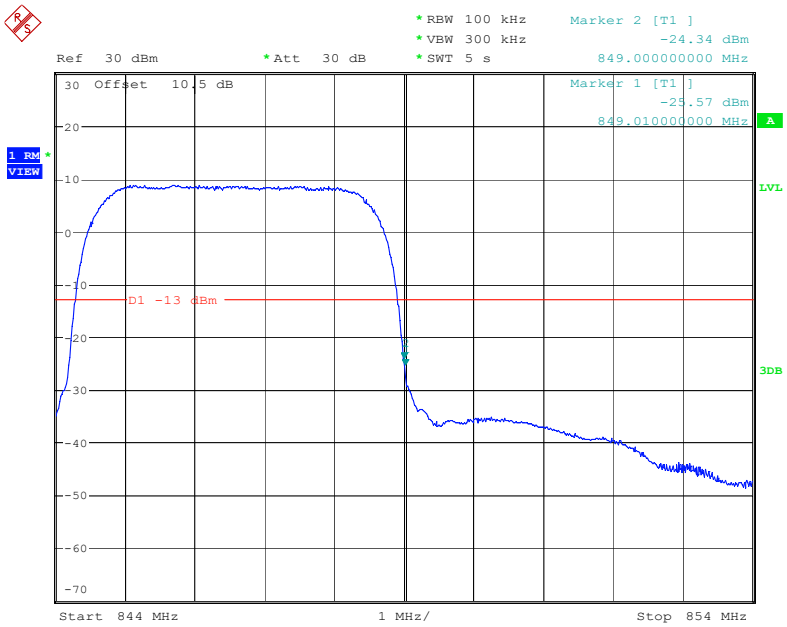
Date: 2.NOV.2022 18:49:28

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



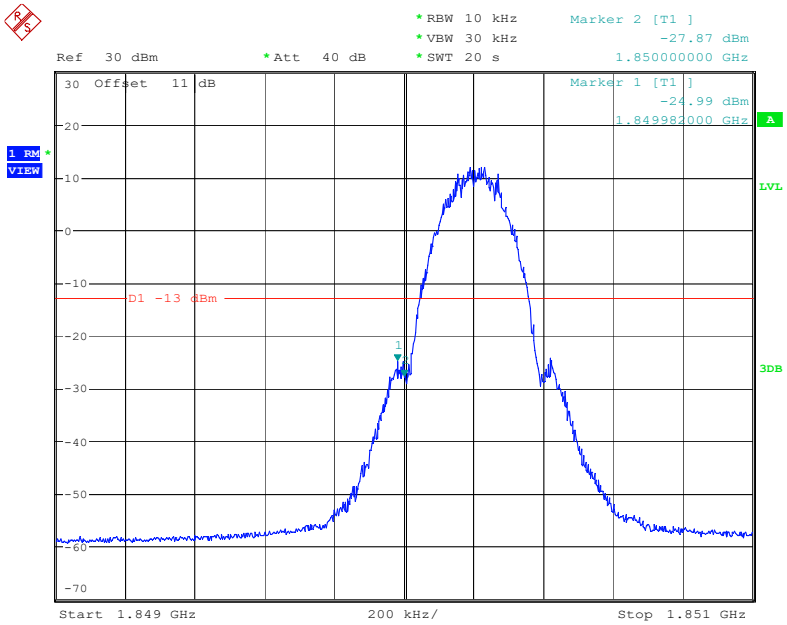
Date: 2.NOV.2022 19:54:17

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



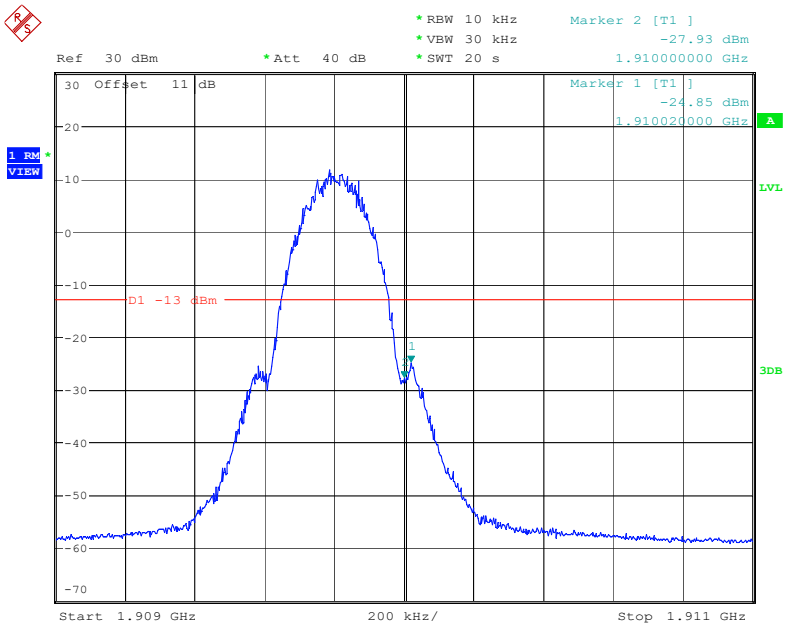
Date: 2.NOV.2022 20:00:53

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



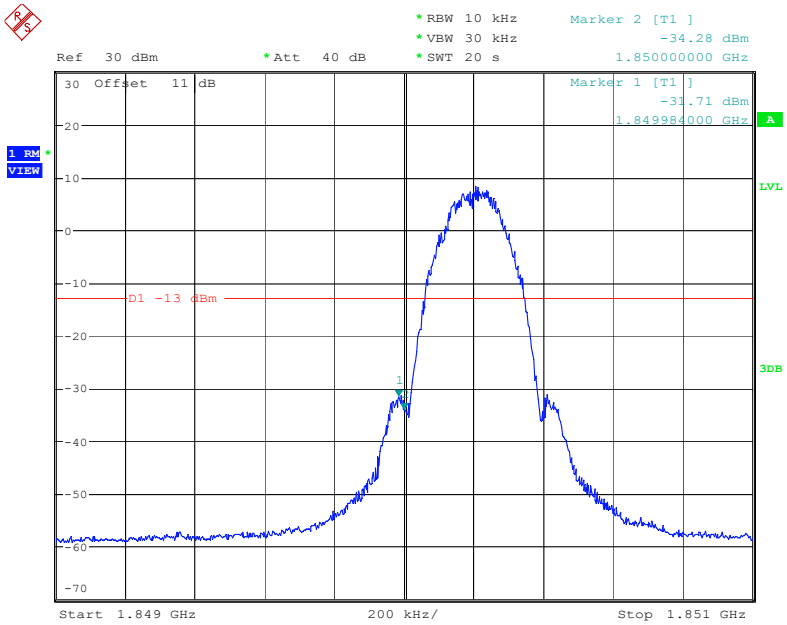
Date: 2.NOV.2022 17:30:34

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



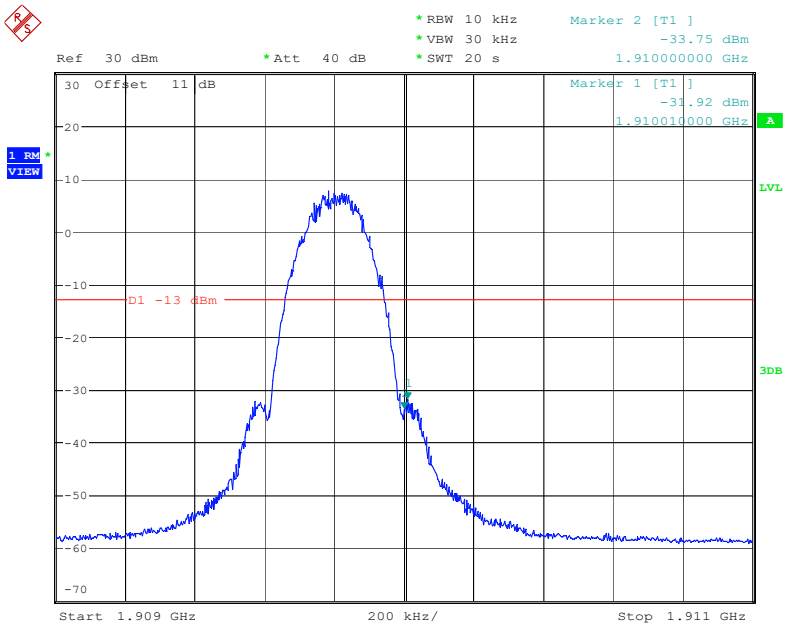
Date: 2.NOV.2022 17:40:23

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



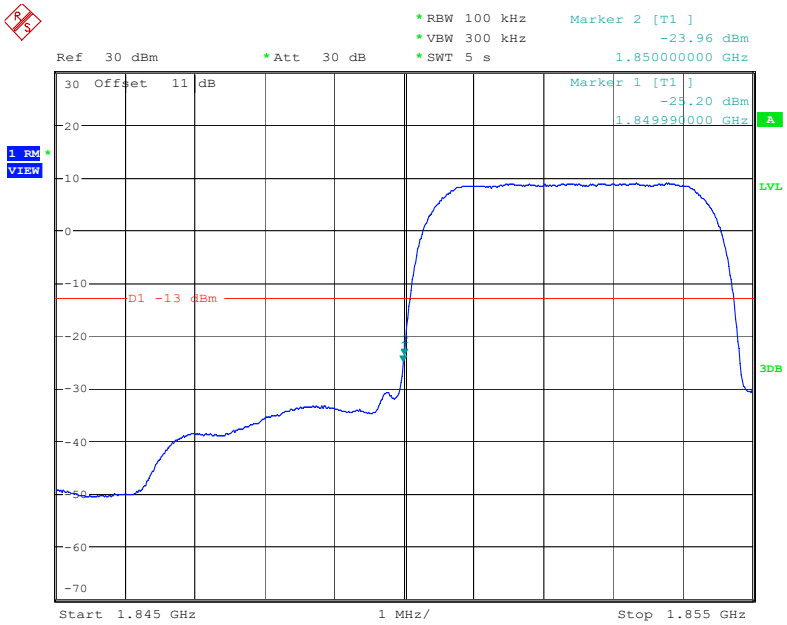
Date: 2.NOV.2022 17:50:11

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



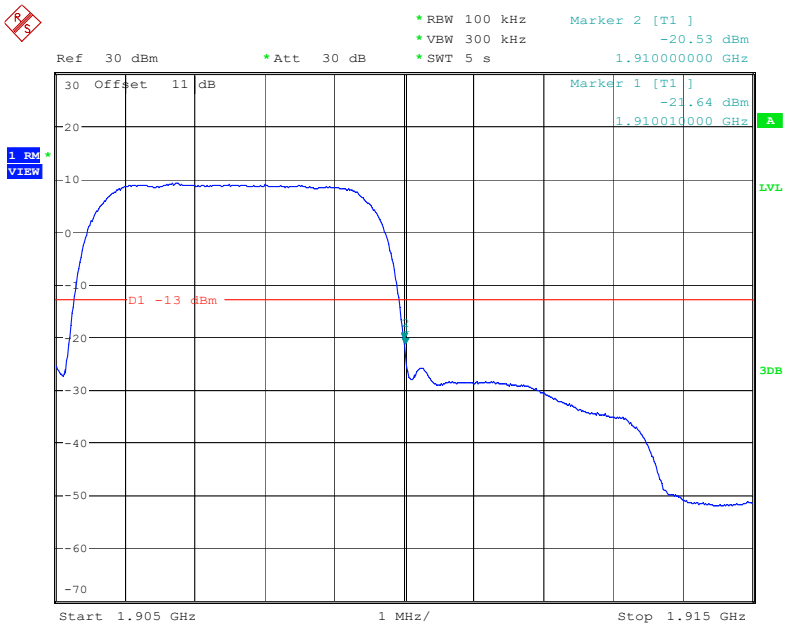
Date: 2.NOV.2022 17:59:50

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



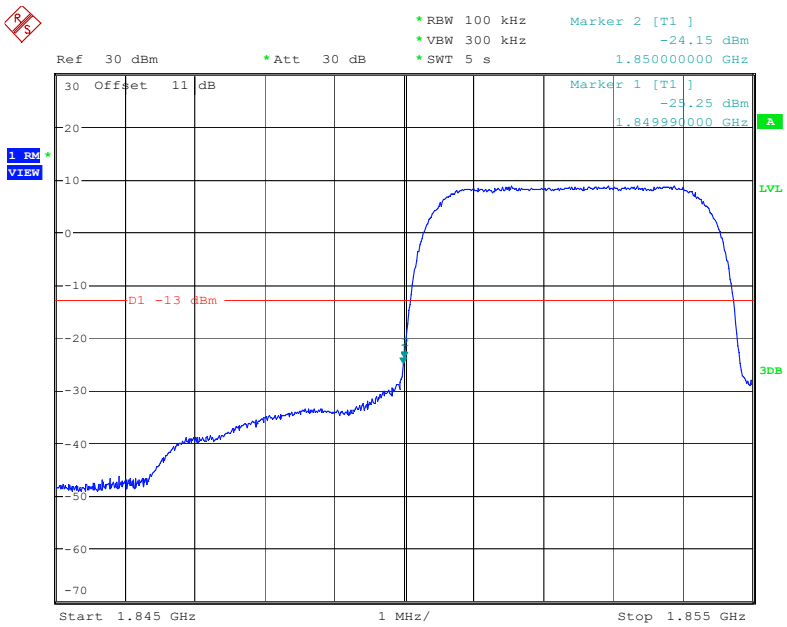
Date: 2.NOV.2022 18:06:46

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



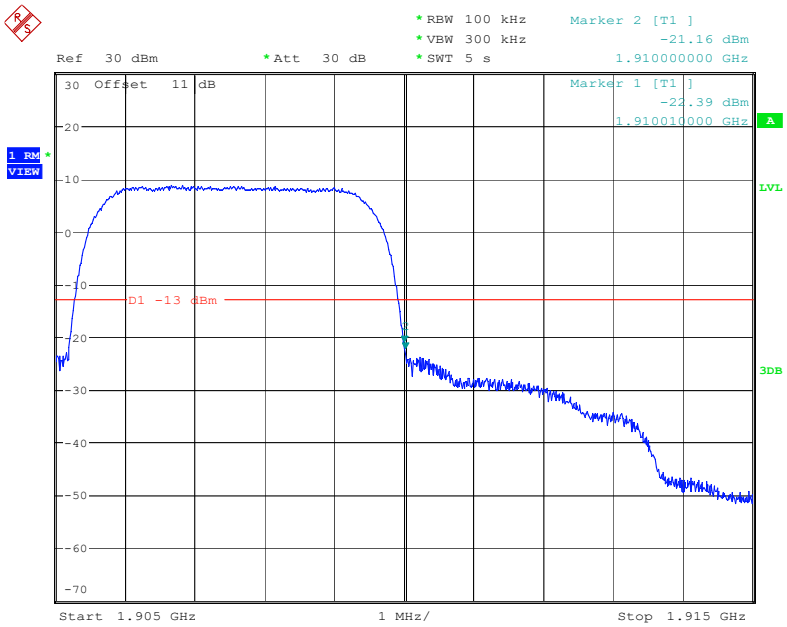
Date: 2.NOV.2022 18:14:03

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



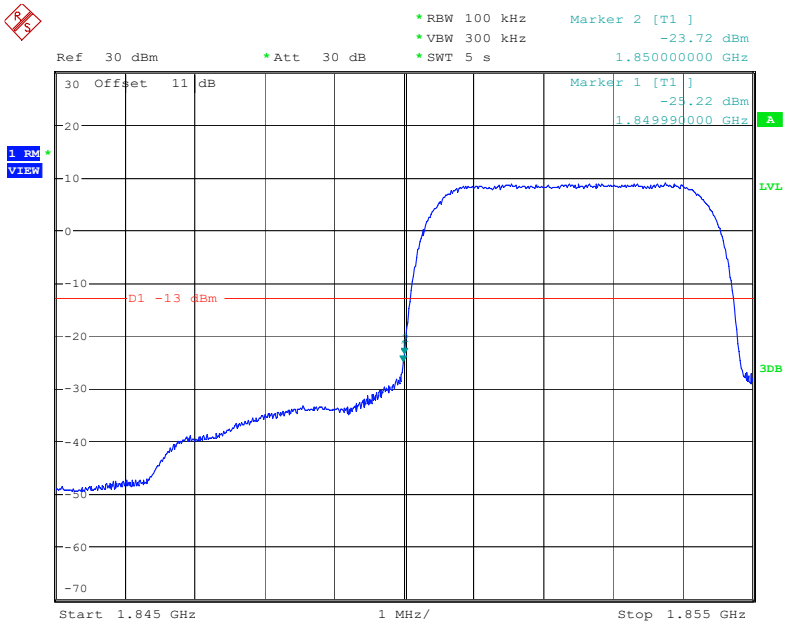
Date: 2.NOV.2022 19:09:28

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



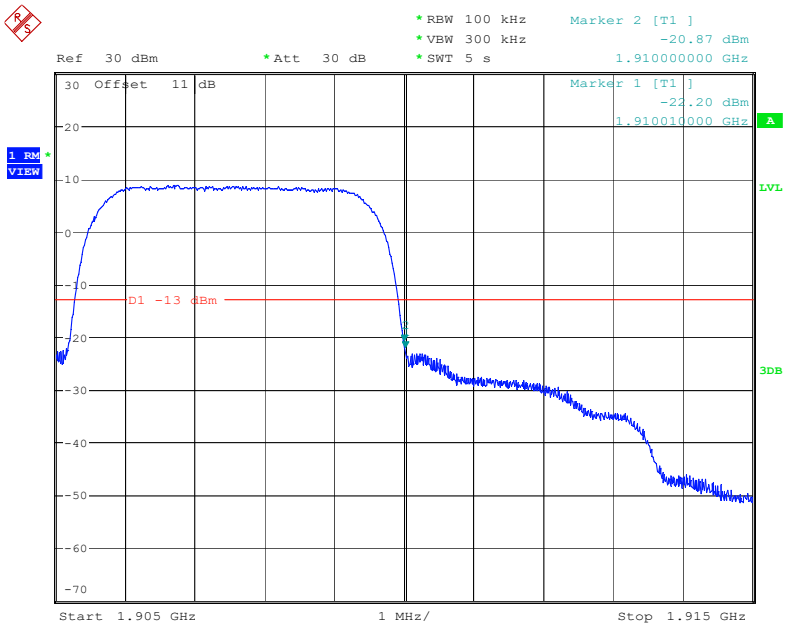
Date: 2.NOV.2022 19:16:44

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



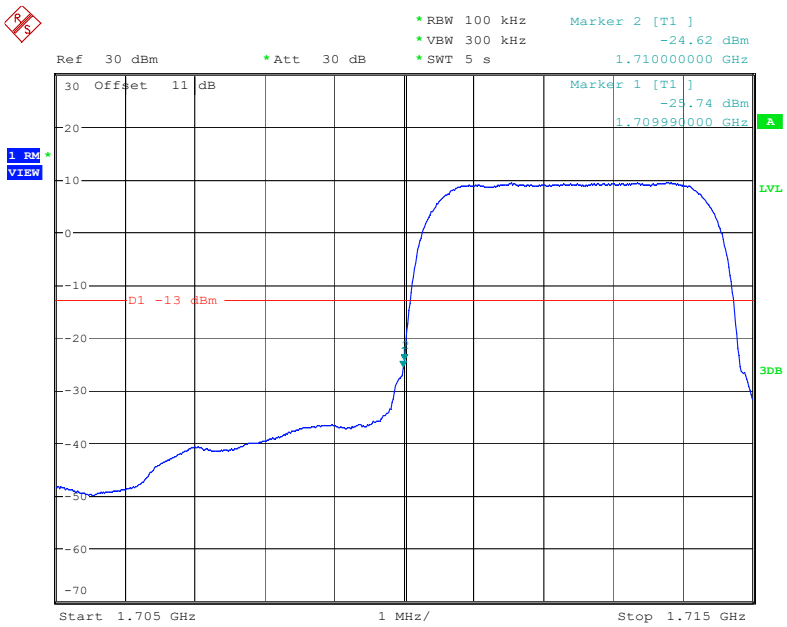
Date: 2.NOV.2022 19:21:43

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



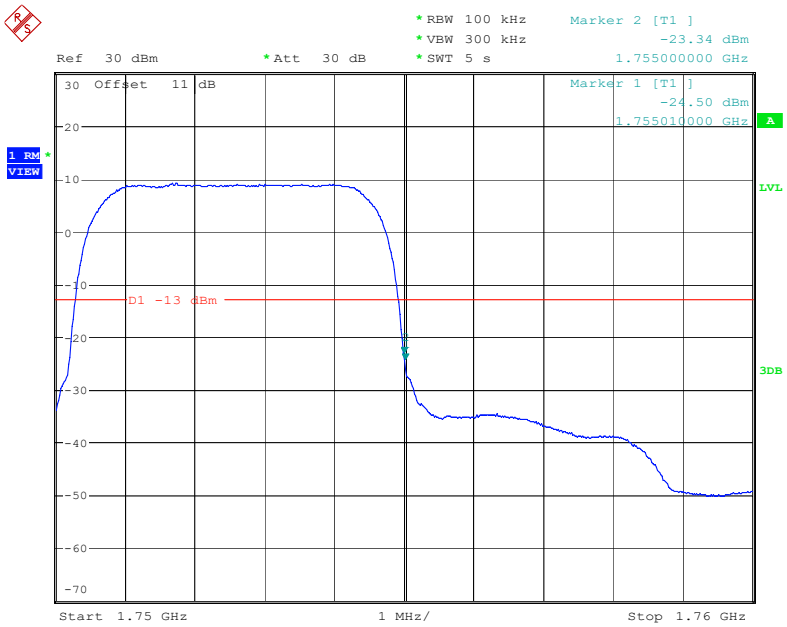
Date: 2.NOV.2022 19:34:01

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



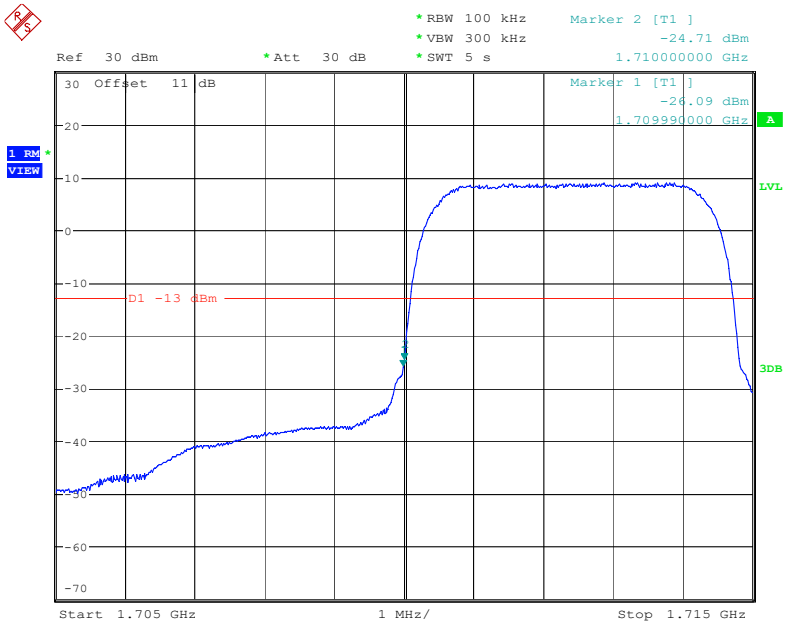
Date: 2.NOV.2022 18:18:53

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



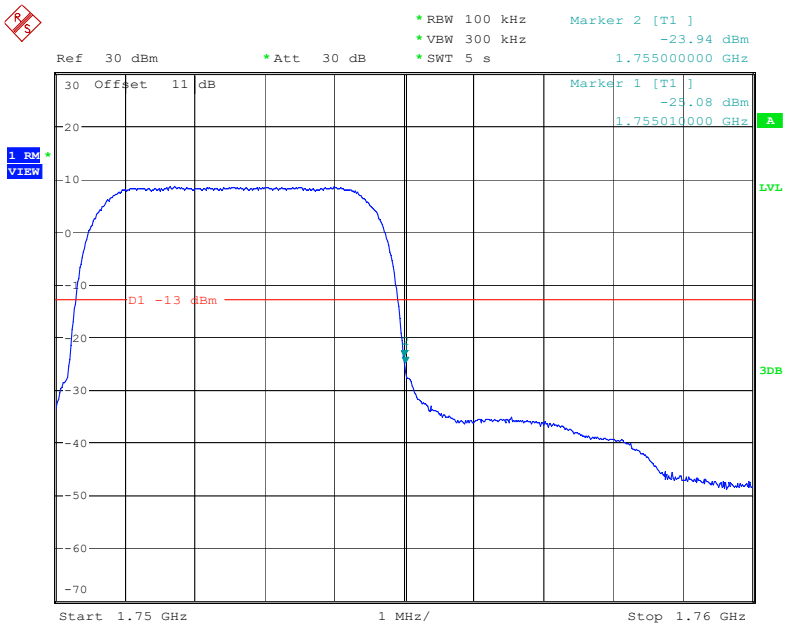
Date: 2.NOV.2022 18:26:01

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



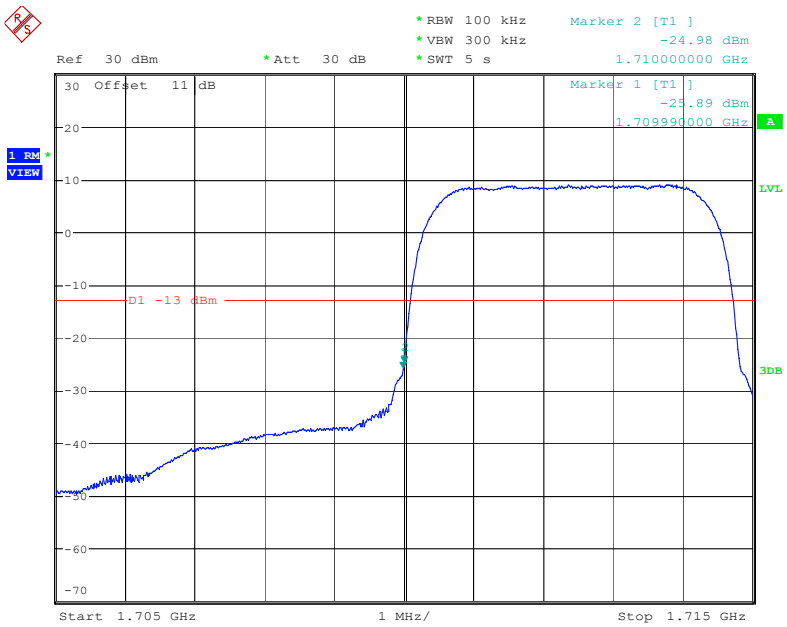
Date: 2.NOV.2022 18:54:13

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



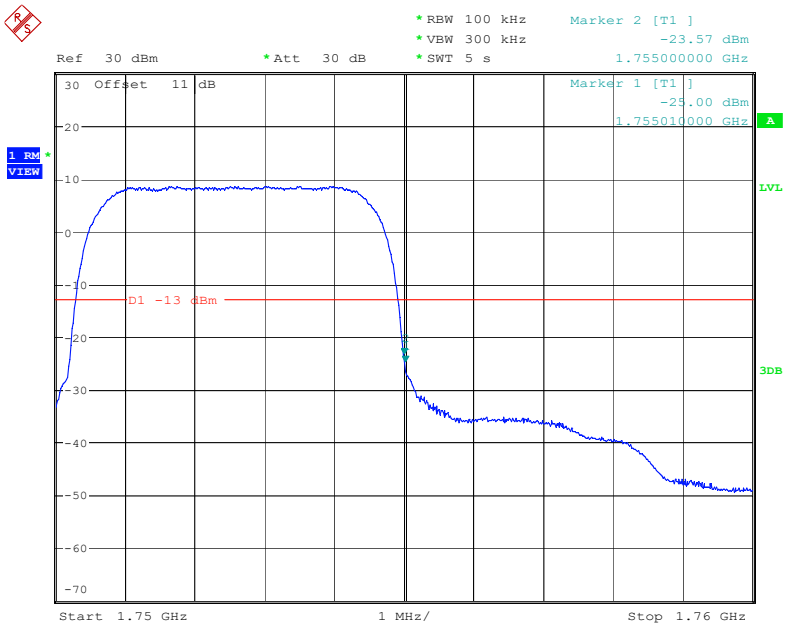
Date: 2.NOV.2022 19:04:06

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



Date: 2.NOV.2022 19:40:19

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



Date: 2.NOV.2022 19:47:32

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

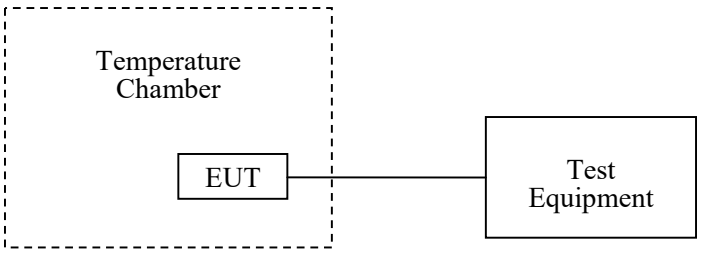
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

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

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

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



Test Data

Environmental Conditions

Temperature:	26.3~27.2 ℃
Relative Humidity:	56.2~58.1%
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-11-02 to 2022-11-17.

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.	-3	-0.0036	2.5
-20		-4	-0.0048	2.5
-10		-5	-0.0060	2.5
0		-3	-0.0036	2.5
10		-7	-0.0084	2.5
20		-8	-0.0096	2.5
30		-6	-0.0072	2.5
40		-8	-0.0096	2.5
50		-4	-0.0048	2.5
20	L.V.	-2	-0.0024	2.5
	H.V.	-7	-0.0084	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.	-5	-0.0060	2.5
-20		-3	-0.0036	2.5
-10		-4	-0.0048	2.5
0		-9	-0.0108	2.5
10		-10	-0.0120	2.5
20		-8	-0.0096	2.5
30		-2	-0.0024	2.5
40		-6	-0.0072	2.5
50		-7	-0.0084	2.5
20	L.V.	-4	-0.0048	2.5
	H.V.	-6	-0.0072	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	0.0012	2.5
-20		3	0.0036	2.5
-10		7	0.0084	2.5
0		8	0.0096	2.5
10		4	0.0048	2.5
20		0	0.0000	2.5
30		2	0.0024	2.5
40		3	0.0036	2.5
50		5	0.0060	2.5
20	L.V.	6	0.0072	2.5
	H.V.	4	0.0048	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.	1850.0686	1909.9263	1850	1910
-20		1850.0816	1909.9310	1850	1910
-10		1850.0532	1909.9359	1850	1910
0		1850.0695	1909.9420	1850	1910
10		1850.0600	1909.9226	1850	1910
20		1850.0830	1909.9088	1850	1910
30		1850.0777	1909.9296	1850	1910
40		1850.0500	1909.9290	1850	1910
50		1850.0816	1909.9324	1850	1910
20	L.V.	1850.0849	1909.9248	1850	1910
	H.V.	1850.0824	1909.9208	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.	1850.0746	1909.9360	1850	1910
-20		1850.0753	1909.9207	1850	1910
-10		1850.0715	1909.9162	1850	1910
0		1850.0936	1909.9441	1850	1910
10		1850.0497	1909.9475	1850	1910
20		1850.0913	1909.9466	1850	1910
30		1850.0442	1909.9094	1850	1910
40		1850.0538	1909.9287	1850	1910
50		1850.0869	1909.9255	1850	1910
20	L.V.	1850.0726	1909.9268	1850	1910
	H.V.	1850.0517	1909.9462	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.	1850.0979	1909.9150	1850	1910
-20		1850.1106	1909.9056	1850	1910
-10		1850.0893	1909.8824	1850	1910
0		1850.0853	1909.9079	1850	1910
10		1850.1089	1909.8875	1850	1910
20		1850.0941	1909.8981	1850	1910
30		1850.0844	1909.9136	1850	1910
40		1850.0776	1909.9117	1850	1910
50		1850.1124	1909.9040	1850	1910
20	L.V.	1850.1025	1909.9112	1850	1910
	H.V.	1850.0827	1909.8876	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:

Temperature (℃)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1850.1003	1909.8865	1850	1910
-20		1850.0895	1909.9029	1850	1910
-10		1850.1076	1909.8968	1850	1910
0		1850.1075	1909.9164	1850	1910
10		1850.1066	1909.8946	1850	1910
20		1850.0873	1909.9074	1850	1910
30		1850.1015	1909.8877	1850	1910
40		1850.1015	1909.8866	1850	1910
50		1850.1210	1909.8970	1850	1910
20	L.V.	1850.0999	1909.8990	1850	1910
	H.V.	1850.0811	1909.9157	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.	-37.19	-0.0445	2.5
-20		-5.99	-0.0072	2.5
-10		7.91	0.0095	2.5
0		-6.51	-0.0078	2.5
10		9.61	0.0115	2.5
20		5.61	0.0067	2.5
30		5.13	0.0061	2.5
40		7.65	0.0091	2.5
50		7.44	0.0089	2.5
20	L.V.	-8.88	-0.0106	2.5
	H.V.	8.35	0.0100	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.	699.1433	715.8872	699	716
-20		699.1441	715.8728	699	716
-10		699.1423	715.8458	699	716
0		699.1427	715.8632	699	716
10		699.1332	715.8417	699	716
20		699.1421	715.8284	699	716
30		699.1389	715.8323	699	716
40		699.1347	715.8314	699	716
50		699.1442	715.8454	699	716
20	L.V.	699.1372	715.8672	699	716
	H.V.	699.1374	715.8678	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 applicant declared the 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:

Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1850.0874	1909.9119	1850	1910
-20		1850.1004	1909.8879	1850	1910
-10		1850.1086	1909.9261	1850	1910
0		1850.1172	1909.8886	1850	1910
10		1850.1102	1909.8881	1850	1910
20		1850.0843	1909.9001	1850	1910
30		1850.1030	1909.9091	1850	1910
40		1850.1189	1909.8902	1850	1910
50		1850.1095	1909.9100	1850	1910
20	L.V.	1850.1117	1909.9280	1850	1910
	H.V.	1850.1078	1909.8984	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.	-17.21	-0.0206	2.5
-20		6.87	0.0082	2.5
-10		-5.95	-0.0071	2.5
0		-9.94	-0.0119	2.5
10		-7.88	-0.0094	2.5
20		-6.64	-0.0079	2.5
30		6.48	0.0077	2.5
40		5.12	0.0061	2.5
50		-5.54	-0.0066	2.5
20	L.V.	7.63	0.0091	2.5
	H.V.	-8.96	-0.0107	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.	699.1325	715.8364	699	716
-20		699.1333	715.8325	699	716
-10		699.1315	715.8354	699	716
0		699.1319	715.8324	699	716
10		699.1324	715.8309	699	716
20		699.1313	715.8376	699	716
30		699.1381	715.8315	699	716
40		699.1339	715.8306	699	716
50		699.1334	715.8346	699	716
20	L.V.	699.1364	715.8364	699	716
	H.V.	699.1366	715.8376	699	716

Band 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 applicant declared the 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 *******