TESTREPORT

Applicant Name :	INFINIX MOBILITY LIMITED
Address :	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Report Number :	SZNS220927-44143E-RF-00C
FCC ID:	2AIZN-X6515

Test Standard (s)

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

Sample Description

Product Type:	Mobile Phone
Model No.:	X6515
Multiple Model(s) No.:	N/A
Trade Mark:	Infinix
Date Received:	2022/09/27
Report Date:	2022/10/14

Test Result:	Pass*

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

Prepared and Checked By:

Andy Yu
EMC Engineer

Approved By:

Candy Li
EMC Engineer

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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 38: 2570-2620MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	GSM850/WCDMA Band5/LTE Band 5: -4.5dBi PCS1900/WCDMA Band 2/ LTE Band 2: 1.8dBi WCDMA Band 4/ LTE Band 4: 1.9dBi LTE Band 7/LTE Band 38/LTE Band 41: 0.6dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery, DC 5V from adapter
Sample serial number	SZNS220927-44143E-RF-S1 for Radiated Emissions Test SZNS220927-44143E-RF-S2 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: U100XSA Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2.0A
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 Subpart 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	836.4	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560

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

Equipment Modifications

No modification was made to the EUT.

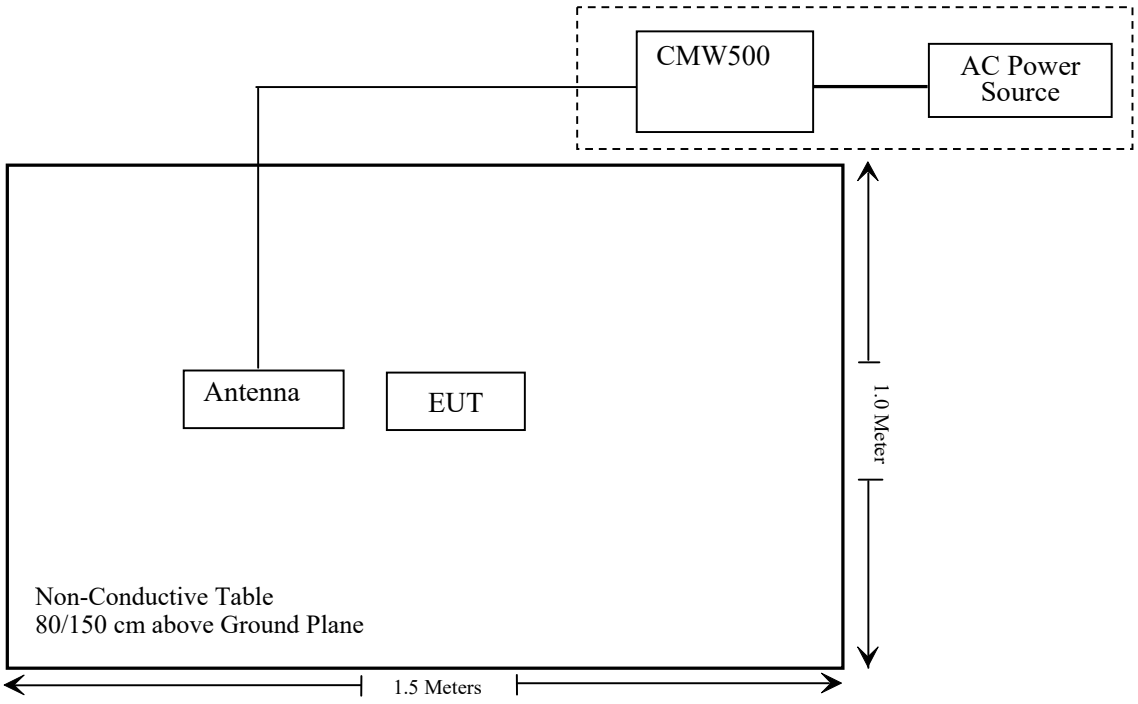
Support Equipment List and Details

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

Support Cable Description

Cable Description	Length (m)	From / Port	To
Un-shielded 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 (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 (h) (m)	Band Edge	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliant

Note: * Please refer to SAR report number: SZNS220927-44143E-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	2021/11/11	2022/11/10
Radiated Emission Test Software: e3 19821b (V9)					
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
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
Wainwright	High Pass Filter	WHKX3.6/18 G-10SS	5	2021/12/14	2022/12/13
CD	High Pass Filter	HPM-1.2/18G -60	110	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	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	2022/07/06	2023/07/05
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	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
Gongwen	Temp. & Humid. Chamber	HSD-500	109	2021/10/14	2022/10/13
Fluke	Multi Meter	45	7664009	2021/12/14	2022/12/13
Manson	DC Power Source	KPS-6604	ATCS-205	NCR	NCR
Unknown	RF Coaxial Cable	No.33	RF-03	Each time	

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

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

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: SZNS220927-44143E-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(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.

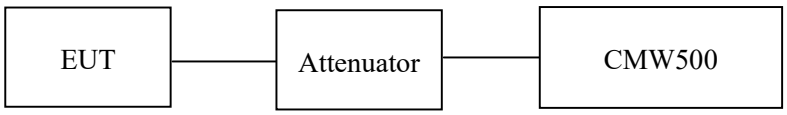
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

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.



Test Data

Environmental Conditions

Temperature:	27.4 ℃
Relative Humidity:	58%
ATM Pressure:	101.0 kPa

The testing was performed by Andy Yu from 2022-09-30 to 2022-10-09.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	32.80	26.15	38.45
	190	836.6	33.00	26.35	38.45
	251	848.8	33.00	26.35	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	32.88	31.89	29.93	28.83	26.23	25.24	23.28	22.18	38.45
	190	836.6	33.05	32.02	30.07	29.00	**26.40**	25.37	23.42	22.35	38.45
	251	848.8	33.01	31.98	30.03	28.96	26.36	25.33	23.38	22.31	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	26.71	24.96	22.63	21.27	20.06	18.31	15.98	14.62	38.45
	190	836.6	26.67	25.15	22.56	21.14	20.02	18.50	15.91	14.49	38.45
	251	848.8	26.77	25.28	22.63	21.22	**20.12**	18.63	15.98	14.57	38.45

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		23.24	23.22	23.20	**16.59**	16.57	16.55
	HSDPA	1	22.21	22.15	22.11	15.56	15.50	15.46
		2	22.18	22.07	22.14	15.53	15.42	15.49
		3	22.22	22.06	22.13	15.57	15.41	15.48
		4	22.11	22.09	22.16	15.46	15.44	15.51
	HSUPA	1	21.80	21.74	21.81	15.15	15.09	15.16
		2	21.52	21.38	21.77	14.87	14.73	15.12
		3	21.47	21.46	21.59	14.82	14.81	14.94
		4	21.36	21.53	21.46	14.71	14.88	14.81
		5	21.55	21.47	21.44	14.90	14.82	14.79
	HSPA+	1	21.67	21.33	21.58	15.02	14.68	14.93

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For GSM850 / WCDMA Band5: Antenna Gain = -4.5dBi = -6.65dBd (0dBd=2.15dBi)
Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	29.90	31.70	33
	661	1880.0	30.00	31.80	33
	810	1909.8	30.10	**31.90**	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	29.80	28.85	26.97	25.87	31.60	30.65	28.77	27.67	33
	661	1880.0	29.95	29.04	27.13	26.06	31.75	30.84	28.93	27.86	33
	810	1909.8	30.04	29.13	27.26	26.19	31.84	30.93	29.06	27.99	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	26.89	26.09	23.97	22.90	**28.69**	27.89	25.77	24.70	33
	661	1880.0	26.47	25.65	23.55	22.55	28.27	27.45	25.35	24.35	33
	810	1909.8	26.57	25.37	23.39	22.29	28.37	27.17	25.19	24.09	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		23.72	23.47	23.49	**25.52**	25.27	25.29
	HSDPA	1	22.66	22.44	24.46	24.24	24.24	21.70
		2	22.55	22.51	24.35	24.31	24.13	21.59
		3	22.34	22.31	24.14	24.11	24.16	21.62
		4	22.41	22.41	24.21	24.21	24.29	21.75
	HSUPA	1	22.33	22.07	24.13	23.87	23.76	21.22
		2	22.25	22.02	24.05	23.82	23.78	21.24
		3	22.31	22.03	24.11	23.83	23.81	21.27
		4	22.26	22.05	24.06	23.85	23.83	21.29
		5	22.29	22.10	24.09	23.90	23.77	21.23
	HSPA+	1	22.17	22.11	23.97	23.91	23.76	21.22

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For PCS1900 / WCDMA Band2: Antenna Gain = 1.8dBi
Limit: EIRP≤33dBm

AWS Band

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		23.67	23.79	23.69	25.57	**25.69**	25.59
	HSDPA	1	22.60	22.70	24.50	24.50	24.60	24.48
		2	22.69	22.58	24.59	24.59	24.48	24.34
		3	22.72	22.63	24.62	24.62	24.53	24.43
		4	22.76	22.64	24.66	24.66	24.54	24.38
	HSUPA	1	22.21	22.35	24.11	24.11	24.25	24.07
		2	22.01	22.12	23.91	23.91	24.02	23.99
		3	22.06	22.06	23.96	23.96	23.96	24.02
		4	22.07	22.14	23.97	23.97	24.04	24.04
		5	22.09	22.09	23.99	23.99	23.99	24.06
	HSPA+	1	22.11	22.07	24.01	24.01	23.97	24.03

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band4: Antenna Gain = 1.9dBi
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	20.52	20.59	20.26	22.32	22.39	22.06
		RB1#3	20.66	20.76	20.41	22.46	22.56	22.21
		RB1#5	20.53	20.59	20.23	22.33	22.39	22.03
		RB3#0	20.64	20.69	20.32	22.44	22.49	22.12
		RB3#3	20.63	20.70	20.33	22.43	22.50	22.13
		RB6#0	19.66	19.65	19.33	21.46	21.45	21.13
	16QAM	RB1#0	19.57	19.60	19.39	21.37	21.40	21.19
		RB1#3	19.78	19.79	19.56	21.58	21.59	21.36
		RB1#5	19.60	19.61	19.43	21.40	21.41	21.23
		RB3#0	19.72	19.86	19.46	21.52	21.66	21.26
		RB3#3	19.66	19.87	19.42	21.46	21.67	21.22
		RB6#0	18.56	18.68	18.32	20.36	20.48	20.12
3.0	QPSK	RB1#0	20.57	20.88	20.57	22.37	**22.68**	22.37
		RB1#8	20.55	20.86	20.59	22.35	22.66	22.39
		RB1#14	20.48	20.85	20.55	22.28	22.65	22.35
		RB6#0	19.57	19.84	19.53	21.37	21.64	21.33
		RB6#9	19.58	19.81	19.56	21.38	21.61	21.36
		RB15#0	19.59	19.87	19.61	21.39	21.67	21.41
	16QAM	RB1#0	20.22	20.02	19.65	**22.02**	21.82	21.45
		RB1#8	20.16	19.99	19.6	21.96	21.79	21.40
		RB1#14	20.10	19.99	19.57	21.90	21.79	21.37
		RB6#0	18.66	18.85	18.49	20.46	20.65	20.29
		RB6#9	18.57	18.86	18.51	20.37	20.66	20.31
		RB15#0	18.68	18.84	18.63	20.48	20.64	20.43

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	20.53	20.17	20.14	22.33	21.97	21.94
		RB1#13	20.60	20.31	20.26	22.40	22.11	22.06
		RB1#24	20.46	20.14	20.15	22.26	21.94	21.95
		RB15#0	19.59	19.36	19.29	21.39	21.16	21.09
		RB15#10	19.62	19.33	19.30	21.42	21.13	21.10
		RB25#0	19.59	19.31	19.23	21.39	21.11	21.03
	16QAM	RB1#0	19.79	19.30	19.06	21.59	21.10	20.86
		RB1#13	19.85	19.38	19.18	21.65	21.18	20.98
		RB1#24	19.73	19.26	19.10	21.53	21.06	20.90
		RB15#0	18.58	18.41	18.34	20.38	20.21	20.14
		RB15#10	18.60	18.36	18.30	20.40	20.16	20.10
		RB25#0	18.59	18.34	18.30	20.39	20.14	20.10
10.0	QPSK	RB1#0	20.60	20.19	20.08	22.40	21.99	21.88
		RB1#25	20.65	20.30	20.25	22.45	22.10	22.05
		RB1#49	20.49	20.12	20.10	22.29	21.92	21.90
		RB25#0	19.62	19.24	19.23	21.42	21.04	21.03
		RB25#25	19.61	19.12	19.16	21.41	20.92	20.96
		RB50#0	19.62	19.22	19.19	21.42	21.02	20.99
	16QAM	RB1#0	19.57	19.79	19.24	21.37	21.59	21.04
		RB1#25	19.72	19.89	19.42	21.52	21.69	21.22
		RB1#49	19.51	19.76	19.28	21.31	21.56	21.08
		RB25#0	18.74	18.28	18.24	20.54	20.08	20.04
		RB25#25	18.71	18.23	18.17	20.51	20.03	19.97
		RB50#0	18.66	18.24	18.2	20.46	20.04	20.00

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	20.51	20.64	20.80	22.31	22.44	22.60
		RB1#38	20.48	20.70	20.87	22.28	22.50	**22.67**
		RB1#74	20.31	20.50	20.80	22.11	22.30	22.60
		RB36#0	19.61	19.78	19.97	21.41	21.58	21.77
		RB36#39	19.55	19.67	19.96	21.35	21.47	21.76
		RB75#0	19.55	19.72	19.93	21.35	21.52	21.73
	16QAM	RB1#0	20.11	19.86	20.28	21.91	21.66	22.08
		RB1#38	19.91	19.63	20.07	21.71	21.43	21.87
		RB1#74	18.61	18.76	18.98	20.41	20.56	20.78
		RB36#0	18.56	18.66	18.92	20.36	20.46	20.72
		RB36#39	18.59	18.72	18.91	20.39	20.52	20.71
		RB75#0	20.51	20.64	20.80	22.31	22.44	**22.60**
20.0	QPSK	RB1#0	20.36	20.22	19.94	22.16	22.02	21.74
		RB1#50	20.63	20.56	20.30	**22.43**	22.36	22.10
		RB1#99	20.12	20.02	19.89	21.92	21.82	21.69
		RB50#0	19.47	19.47	19.27	21.27	21.27	21.07
		RB50#50	19.47	19.33	19.11	21.27	21.13	20.91
		RB100#0	19.69	19.49	19.54	21.49	21.29	21.34
	16QAM	RB1#0	20.06	19.74	19.83	21.86	21.54	21.63
		RB1#50	19.47	19.25	19.51	21.27	21.05	21.31
		RB1#99	18.53	18.48	18.24	20.33	20.28	20.04
		RB50#0	18.48	18.36	18.15	20.28	20.16	19.95
		RB50#50	18.53	18.42	18.21	20.33	20.22	20.01
		RB100#0	20.63	20.56	20.30	**22.43**	22.36	22.10

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band2: Antenna Gain = 1.8dBi
Limit: EIRP≤33dBm

LTE Band 4

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.00	21.12	20.99	22.90	23.02	22.89
		RB1#3	21.10	21.30	21.14	23.00	23.20	23.04
		RB1#5	20.98	21.11	20.95	22.88	23.01	22.85
		RB3#0	21.07	21.25	21.11	22.97	23.15	23.01
		RB3#3	21.05	21.27	21.04	22.95	23.17	22.94
		RB6#0	20.10	20.19	20.06	22.00	22.09	21.96
	16QAM	RB1#0	20.11	20.17	20.01	22.01	22.07	21.91
		RB1#3	20.27	20.32	20.20	22.17	22.22	22.10
		RB1#5	20.08	20.18	20.00	21.98	22.08	21.90
		RB3#0	20.05	20.39	20.28	21.95	22.29	22.18
		RB3#3	20.10	20.30	20.29	22.00	22.20	22.19
		RB6#0	19.09	19.15	19.07	20.99	21.05	20.97
3.0	QPSK	RB1#0	21.22	21.49	21.75	23.12	23.39	**23.65**
		RB1#8	21.22	21.46	21.70	23.12	23.36	23.60
		RB1#14	21.18	21.42	21.67	23.08	23.32	23.57
		RB6#0	20.17	20.50	20.72	22.07	22.40	22.62
		RB6#9	20.18	20.45	20.60	22.08	22.35	22.50
		RB15#0	20.23	20.51	20.74	22.13	22.41	22.64
	16QAM	RB1#0	20.68	21.09	20.94	22.58	**22.99**	22.84
		RB1#8	20.65	21.04	20.83	22.55	22.94	22.73
		RB1#14	20.64	21.00	20.83	22.54	22.90	22.73
		RB6#0	19.13	19.55	19.68	21.03	21.45	21.58
		RB6#9	19.12	19.51	19.69	21.02	21.41	21.59
		RB15#0	19.27	19.54	19.68	21.17	21.44	21.58

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	21.11	20.81	21.28	23.01	22.71	23.18
		RB1#13	21.26	20.94	21.39	23.16	22.84	23.29
		RB1#24	21.09	20.82	21.19	22.99	22.72	23.09
		RB15#0	20.16	19.96	20.30	22.06	21.86	22.20
		RB15#10	20.27	19.88	20.32	22.17	21.78	22.22
		RB25#0	20.17	19.86	20.32	22.07	21.76	22.22
	16QAM	RB1#0	20.25	19.96	20.45	22.15	21.86	22.35
		RB1#13	20.35	19.91	20.38	22.25	21.81	22.28
		RB1#24	20.19	19.81	20.22	22.09	21.71	22.12
		RB15#0	19.21	19.02	19.35	21.11	20.92	21.25
		RB15#10	19.36	18.91	19.33	21.26	20.81	21.23
		RB25#0	19.23	18.97	19.33	21.13	20.87	21.23
10.0	QPSK	RB1#0	21.18	20.98	21.43	23.08	22.88	23.33
		RB1#25	21.40	21.08	21.47	23.30	22.98	23.37
		RB1#49	21.22	20.84	21.26	23.12	22.74	23.16
		RB25#0	20.19	20.09	20.53	22.09	21.99	22.43
		RB25#25	20.26	20.19	20.41	22.16	22.09	22.31
		RB50#0	20.25	19.99	20.43	22.15	21.89	22.33
	16QAM	RB1#0	20.25	20.50	20.90	22.15	22.40	22.80
		RB1#25	20.46	20.64	21.02	22.36	22.54	22.92
		RB1#49	20.22	20.53	20.77	22.12	22.43	22.67
		RB25#0	19.30	19.07	19.44	21.20	20.97	21.34
		RB25#25	19.42	19.13	19.57	21.32	21.03	21.47
		RB50#0	19.27	19.19	19.56	21.17	21.09	21.46

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.12	21.38	21.64	23.02	23.28	23.54
		RB1#38	21.21	21.44	21.63	23.11	23.34	23.53
		RB1#74	21.12	21.30	21.45	23.02	23.20	23.35
		RB36#0	20.22	20.54	20.73	22.12	22.44	22.63
		RB36#39	20.30	20.43	20.71	22.20	22.33	22.61
		RB75#0	20.26	20.48	20.71	22.16	22.38	22.61
	16QAM	RB1#0	20.55	21.02	20.79	22.45	22.92	22.69
		RB1#38	20.63	21.06	20.84	22.53	22.96	22.74
		RB1#74	20.51	20.97	20.62	22.41	22.87	22.52
		RB36#0	19.17	19.53	19.72	21.07	21.43	21.62
		RB36#39	19.20	19.44	19.67	21.10	21.34	21.57
		RB75#0	19.24	19.52	19.72	21.14	21.42	21.62
20.0	QPSK	RB1#0	20.96	20.87	21.20	22.86	22.77	23.10
		RB1#50	21.41	21.09	21.54	23.31	22.99	**23.44**
		RB1#99	20.88	20.60	21.07	22.78	22.50	22.97
		RB50#0	20.18	20.01	20.42	22.08	21.91	22.32
		RB50#50	20.25	19.94	20.36	22.15	21.84	22.26
		RB100#0	20.20	19.93	20.41	22.10	21.83	22.31
	16QAM	RB1#0	20.22	20.31	20.56	22.12	22.21	22.46
		RB1#50	20.67	20.60	20.97	22.57	22.50	**22.87**
		RB1#99	20.21	20.22	20.42	22.11	22.12	22.32
		RB50#0	19.17	19.02	19.55	21.07	20.92	21.45
		RB50#50	19.30	19.09	19.49	21.20	20.99	21.39
		RB100#0	19.25	18.99	19.47	21.15	20.89	21.37

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band4: Antenna Gain = 1.9dBi
Limit: EIRP≤30dBm

LTE Band 5

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	22.31	21.89	21.97	15.66	15.24	15.32
		RB1#3	22.45	22.07	22.12	15.80	15.42	15.47
		RB1#5	22.31	21.90	21.95	15.66	15.25	15.30
		RB3#0	22.38	21.92	22.09	15.73	15.27	15.44
		RB3#3	22.38	22.03	22.08	15.73	15.38	15.43
		RB6#0	21.43	20.98	21.11	14.78	14.33	14.46
	16QAM	RB1#0	21.44	20.89	21.01	14.79	14.24	14.36
		RB1#3	21.65	21.10	21.20	15.00	14.45	14.55
		RB1#5	21.44	20.91	21.01	14.79	14.26	14.36
		RB3#0	21.32	21.03	21.28	14.67	14.38	14.63
		RB3#3	21.37	21.00	21.32	14.72	14.35	14.67
		RB6#0	20.42	19.95	20.11	13.77	13.30	13.46
3.0	QPSK	RB1#0	22.44	22.29	22.10	15.79	15.64	15.45
		RB1#8	22.37	22.26	22.06	15.72	15.61	15.41
		RB1#14	22.33	22.20	22.04	15.68	15.55	15.39
		RB6#0	21.39	21.27	21.06	14.74	14.62	14.41
		RB6#9	21.36	21.25	21.07	14.71	14.60	14.42
		RB15#0	21.40	21.29	21.10	14.75	14.64	14.45
	16QAM	RB1#0	21.43	21.91	21.26	14.78	15.26	14.61
		RB1#8	21.37	21.79	21.24	14.72	15.14	14.59
		RB1#14	21.34	21.72	21.21	14.69	15.07	14.56
		RB6#0	20.31	20.36	20.10	13.66	13.71	13.45
		RB6#9	20.25	20.29	20.12	13.60	13.64	13.47
		RB15#0	20.39	20.36	20.08	13.74	13.71	13.43

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	22.28	22.36	22.15	15.63	15.71	15.50
		RB1#13	22.38	22.41	22.24	15.73	15.76	15.59
		RB1#24	22.25	22.28	22.06	15.60	15.63	15.41
		RB15#0	21.4	21.44	21.32	14.75	14.79	14.67
		RB15#10	21.34	21.40	21.23	14.69	14.75	14.58
		RB25#0	21.32	21.41	21.20	14.67	14.76	14.55
	16QAM	RB1#0	21.21	21.63	21.21	14.56	14.98	14.56
		RB1#13	21.27	21.72	21.31	14.62	15.07	14.66
		RB1#24	21.17	21.55	21.16	14.52	14.90	14.51
		RB15#0	20.43	20.40	20.31	13.78	13.75	13.66
		RB15#10	20.38	20.39	20.25	13.73	13.74	13.60
		RB25#0	20.38	20.38	20.26	13.73	13.73	13.61
10.0	QPSK	RB1#0	22.39	22.52	22.22	15.74	15.87	15.57
		RB1#25	22.52	22.64	22.33	15.87	**15.99**	15.68
		RB1#49	22.26	22.44	22.15	15.61	15.79	15.50
		RB25#0	21.46	21.57	21.40	14.81	14.92	14.75
		RB25#25	21.41	21.50	21.24	14.76	14.85	14.59
		RB50#0	21.43	21.56	21.29	14.78	14.91	14.64
	16QAM	RB1#0	21.43	22.16	21.41	14.78	15.51	14.76
		RB1#25	21.54	22.20	21.46	14.89	**15.55**	14.81
		RB1#49	21.29	21.97	21.33	14.64	15.32	14.68
		RB25#0	20.52	20.60	20.42	13.87	13.95	13.77
		RB25#25	20.49	20.55	20.26	13.84	13.90	13.61
		RB50#0	20.47	20.55	20.33	13.82	13.90	13.68

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For Band5: Antenna Gain = -4.5dBi = -6.65dBd (0dBd=2.15dBi)
Limit: ERP≤38.45dBm

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	17.53	17.69	17.57	18.13	18.29	18.17
		RB1#13	17.68	17.80	17.73	18.28	18.40	18.33
		RB1#24	17.56	17.69	17.62	18.16	18.29	18.22
		RB15#0	16.63	16.85	16.72	17.23	17.45	17.32
		RB15#10	16.63	16.84	16.70	17.23	17.44	17.30
		RB25#0	16.64	16.81	16.64	17.24	17.41	17.24
	16QAM	RB1#0	16.84	16.81	16.48	17.44	17.41	17.08
		RB1#13	17.00	16.87	16.61	17.60	17.47	17.21
		RB1#24	16.86	16.80	16.47	17.46	17.40	17.07
		RB15#0	15.69	15.95	15.80	16.29	16.55	16.40
		RB15#10	15.74	15.93	15.77	16.34	16.53	16.37
		RB25#0	15.75	15.95	15.76	16.35	16.55	16.36
10.0	QPSK	RB1#0	17.12	17.96	17.62	17.72	18.56	18.22
		RB1#25	17.26	18.09	17.66	17.86	**18.69**	18.26
		RB1#49	17.16	17.91	17.54	17.76	18.51	18.14
		RB25#0	16.15	17.10	16.61	16.75	17.70	17.21
		RB25#25	16.23	17.07	16.61	16.83	17.67	17.21
		RB50#0	16.21	17.05	16.63	16.81	17.65	17.23
	16QAM	RB1#0	16.15	17.61	16.74	16.75	18.21	17.34
		RB1#25	16.30	17.63	16.86	16.90	**18.23**	17.46
		RB1#49	16.22	17.57	16.72	16.82	18.17	17.32
		RB25#0	15.39	16.23	15.69	15.99	16.83	16.29
		RB25#25	15.41	16.19	15.70	16.01	16.79	16.30
		RB50#0	15.32	16.16	15.65	15.92	16.76	16.25

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	17.04	17.74	17.07	17.64	18.34	17.67
		RB1#38	17.16	17.79	17.11	17.76	18.39	17.71
		RB1#74	17.03	17.65	16.96	17.63	18.25	17.56
		RB36#0	16.19	16.94	16.15	16.79	17.54	16.75
		RB36#39	16.26	16.88	16.14	16.86	17.48	16.74
		RB75#0	16.19	16.92	16.14	16.79	17.52	16.74
	16QAM	RB1#0	16.51	17.37	16.26	17.11	17.97	16.86
		RB1#38	16.65	17.40	16.26	17.25	18.00	16.86
		RB1#74	16.56	17.30	16.14	17.16	17.90	16.74
		RB36#0	15.21	15.93	15.19	15.81	16.53	15.79
		RB36#39	15.30	15.90	15.21	15.90	16.50	15.81
		RB75#0	15.25	15.98	15.20	15.85	16.58	15.80
20.0	QPSK	RB1#0	17.19	17.32	17.61	17.79	17.92	18.21
		RB1#50	17.59	17.70	17.89	18.19	18.30	**18.49**
		RB1#99	17.22	17.25	17.54	17.82	17.85	18.14
		RB50#0	16.44	16.51	16.86	17.04	17.11	17.46
		RB50#50	16.54	16.47	16.85	17.14	17.07	17.45
		RB100#0	16.48	16.47	16.89	17.08	17.07	17.49
	16QAM	RB1#0	16.56	16.54	17.25	17.16	17.14	17.85
		RB1#50	16.99	16.88	17.59	17.59	17.48	**18.19**
		RB1#99	16.53	16.46	17.11	17.13	17.06	17.71
		RB50#0	15.49	15.62	15.98	16.09	16.22	16.58
		RB50#50	15.55	15.54	15.92	16.15	16.14	16.52
		RB100#0	15.54	15.58	15.93	16.14	16.18	16.53

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band7: Antenna Gain = 0.6dBi
Limit: EIRP≤33dBm

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	17.47	16.71	16.64	18.07	17.31	17.24
		RB1#13	17.54	16.79	16.64	18.14	17.39	17.24
		RB1#24	17.41	16.72	16.48	18.01	17.32	17.08
		RB15#0	16.50	15.78	15.58	17.10	16.38	16.18
		RB15#10	16.45	15.76	15.61	17.05	16.36	16.21
		RB25#0	16.46	15.77	15.64	17.06	16.37	16.24
	16QAM	RB1#0	16.53	15.95	15.65	17.13	16.55	16.25
		RB1#13	16.60	16.01	15.66	17.20	16.61	16.26
		RB1#24	16.48	15.92	15.53	17.08	16.52	16.13
		RB15#0	15.47	14.80	14.55	16.07	15.40	15.15
		RB15#10	15.47	14.82	14.59	16.07	15.42	15.19
		RB25#0	15.50	14.75	14.66	16.10	15.35	15.26
10.0	QPSK	RB1#0	17.59	16.91	16.55	18.19	17.51	17.15
		RB1#25	17.79	17.13	16.80	18.39	17.73	17.40
		RB1#49	17.47	16.78	16.45	18.07	17.38	17.05
		RB25#0	16.51	15.93	15.64	17.11	16.53	16.24
		RB25#25	16.52	15.88	15.55	17.12	16.48	16.15
		RB50#0	16.49	15.93	15.54	17.09	16.53	16.14
	16QAM	RB1#0	16.62	16.08	15.46	17.22	16.68	16.06
		RB1#25	16.85	16.32	15.70	17.45	16.92	16.30
		RB1#49	16.58	15.99	15.36	17.18	16.59	15.96
		RB25#0	15.55	14.93	14.64	16.15	15.53	15.24
		RB25#25	15.55	14.90	14.58	16.15	15.50	15.18
		RB50#0	15.54	14.92	14.56	16.14	15.52	15.16

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	17.50	16.68	16.69	18.10	17.28	17.29
		RB1#38	17.52	16.65	16.76	18.12	17.25	17.36
		RB1#74	17.31	16.45	16.56	17.91	17.05	17.16
		RB36#0	16.49	15.75	15.82	17.09	16.35	16.42
		RB36#39	16.47	15.68	15.68	17.07	16.28	16.28
		RB75#0	16.51	15.74	15.76	17.11	16.34	16.36
	16QAM	RB1#0	16.69	15.82	15.57	17.29	16.42	16.17
		RB1#38	16.72	15.85	15.68	17.32	16.45	16.28
		RB1#74	16.52	15.63	15.50	17.12	16.23	16.10
		RB36#0	15.54	14.70	14.75	16.14	15.30	15.35
		RB36#39	15.51	14.65	14.63	16.11	15.25	15.23
		RB75#0	15.51	14.67	14.75	16.11	15.27	15.35
20.0	QPSK	RB1#0	17.39	17.36	17.15	17.99	17.96	17.75
		RB1#50	17.79	17.72	17.58	**18.39**	18.32	18.18
		RB1#99	17.20	17.12	17.00	17.80	17.72	17.60
		RB50#0	16.41	16.50	16.38	17.01	17.10	16.98
		RB50#50	16.38	16.43	16.28	16.98	17.03	16.88
		RB100#0	16.41	16.45	16.35	17.01	17.05	16.95
	16QAM	RB1#0	16.59	16.39	16.17	17.19	16.99	16.77
		RB1#50	17.01	16.80	16.57	**17.61**	17.40	17.17
		RB1#99	16.42	16.18	15.96	17.02	16.78	16.56
		RB50#0	15.46	15.49	15.44	16.06	16.09	16.04
		RB50#50	15.43	15.43	15.32	16.03	16.03	15.92
		RB100#0	15.47	15.45	15.36	16.07	16.05	15.96

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band38: Antenna Gain = 0.6dBi
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	17.42	16.94	16.29	18.02	17.54	16.89
		RB1#13	17.53	17.00	16.38	18.13	17.60	16.98
		RB1#24	17.39	16.87	16.22	17.99	17.47	16.82
		RB15#0	16.49	15.99	15.34	17.09	16.59	15.94
		RB15#10	16.49	15.97	15.32	17.09	16.57	15.92
		RB25#0	16.47	15.96	15.30	17.07	16.56	15.90
	16QAM	RB1#0	16.68	15.93	15.34	17.28	16.53	15.94
		RB1#13	16.76	16.03	15.43	17.36	16.63	16.03
		RB1#24	16.67	15.90	15.28	17.27	16.50	15.88
		RB15#0	15.54	14.95	14.35	16.14	15.55	14.95
		RB15#10	15.52	14.94	14.35	16.12	15.54	14.95
		RB25#0	15.51	15.02	14.40	16.11	15.62	15.00
10.0	QPSK	RB1#0	17.56	17.07	16.62	18.16	17.67	17.22
		RB1#25	17.82	17.31	16.85	**18.42**	17.91	17.45
		RB1#49	17.52	17.03	16.50	18.12	17.63	17.10
		RB25#0	16.58	16.09	15.65	17.18	16.69	16.25
		RB25#25	16.58	16.01	15.59	17.18	16.61	16.19
		RB50#0	16.57	16.06	15.61	17.17	16.66	16.21
	16QAM	RB1#0	16.48	16.18	15.85	17.08	16.78	16.45
		RB1#25	16.73	16.41	16.10	**17.33**	17.01	16.70
		RB1#49	16.43	16.07	15.74	17.03	16.67	16.34
		RB25#0	15.61	15.14	14.68	16.21	15.74	15.28
		RB25#25	15.62	15.07	14.59	16.22	15.67	15.19
		RB50#0	15.58	15.09	14.60	16.18	15.69	15.20

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	17.21	16.63	16.69	17.81	17.23	17.29
		RB1#38	17.28	16.71	16.65	17.88	17.31	17.25
		RB1#74	17.10	16.53	16.44	17.70	17.13	17.04
		RB36#0	16.26	15.7	15.69	16.86	16.30	16.29
		RB36#39	16.25	15.66	15.62	16.85	16.26	16.22
		RB75#0	16.23	15.72	15.69	16.83	16.32	16.29
	16QAM	RB1#0	16.11	15.82	15.88	16.71	16.42	16.48
		RB1#38	16.26	15.89	15.86	16.86	16.49	16.46
		RB1#74	16.07	15.71	15.65	16.67	16.31	16.25
		RB36#0	15.23	14.74	14.68	15.83	15.34	15.28
		RB36#39	15.22	14.69	14.60	15.82	15.29	15.20
		RB75#0	15.23	14.72	14.61	15.83	15.32	15.21
20.0	QPSK	RB1#0	17.12	17.14	16.75	17.72	17.74	17.35
		RB1#50	17.56	17.59	17.09	18.16	**18.19**	17.69
		RB1#99	17.00	17.02	16.49	17.60	17.62	17.09
		RB50#0	16.31	16.24	15.89	16.91	16.84	16.49
		RB50#50	16.30	16.17	15.80	16.90	16.77	16.40
		RB100#0	16.29	16.20	15.85	16.89	16.80	16.45
	16QAM	RB1#0	16.12	16.37	15.81	16.72	16.97	16.41
		RB1#50	16.58	16.80	16.18	17.18	**17.40**	16.78
		RB1#99	15.99	16.25	15.62	16.59	16.85	16.22
		RB50#0	15.36	15.27	14.94	15.96	15.87	15.54
		RB50#50	15.39	15.18	14.79	15.99	15.78	15.39
		RB100#0	15.31	15.18	14.87	15.91	15.78	15.47

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band41: Antenna Gain = 0.6dBi
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.58	13
	Middle	3.49	13
	High	3.55	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.62	13
	Middle	3.72	13
	High	3.87	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.56	13
	Middle	3.68	13
	High	3.44	13
HSDPA (16QAM)	Low	3.52	13
	Middle	3.52	13
	High	3.57	13
HSUPA (BPSK)	Low	3.42	13
	Middle	3.45	13
	High	3.52	13
HSPA+	Low	3.46	13
	Middle	3.57	13
	High	3.52	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.52	13
	Middle	3.54	13
	High	3.46	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.52	13
	Middle	3.56	13
	High	3.53	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.42	13
	Middle	3.57	13
	High	3.56	13
HSDPA (16QAM)	Low	3.55	13
	Middle	3.52	13
	High	3.44	13
HSUPA (BPSK)	Low	3.43	13
	Middle	3.42	13
	High	3.51	13
HSPA+	Low	3.44	13
	Middle	3.52	13
	High	3.43	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.33	13
	Middle	3.29	13
	High	3.38	13
HSDPA (16QAM)	Low	3.31	13
	Middle	3.30	13
	High	3.31	13
HSUPA (BPSK)	Low	3.40	13
	Middle	3.12	13
	High	3.11	13
HSPA+	Low	3.33	13
	Middle	3.31	13
	High	3.39	13

LTE Band 2 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.74	5.29	5.61	13	Pass
QPSK (100RB Size)	5.80	5.67	5.90	13	Pass
16QAM (1RB Size)	6.60	6.25	6.96	13	Pass
16QAM (100RB Size)	6.54	6.60	6.63	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.06	5.00	4.71	13	Pass
QPSK (100RB Size)	5.67	5.51	5.67	13	Pass
16QAM (1RB Size)	6.41	6.06	5.83	13	Pass
16QAM (100RB Size)	6.54	6.41	6.54	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.90	5.06	5.10	13	Pass
QPSK (50RB Size)	5.64	5.74	5.64	13	Pass
16QAM (1RB Size)	5.93	6.47	6.47	13	Pass
16QAM (50RB Size)	6.44	6.51	6.38	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.71	5.67	5.80	13	Pass
QPSK (100RB Size)	5.77	5.80	5.77	13	Pass
16QAM (1RB Size)	6.92	6.47	6.60	13	Pass
16QAM (100RB Size)	6.57	6.73	6.54	13	Pass

LTE Band 38 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	8.23	9.01	7.08	13	Pass
QPSK (100RB Size)	10.35	7.53	7.98	13	Pass
16QAM (1RB Size)	9.33	9.17	8.49	13	Pass
16QAM (100RB Size)	8.27	8.37	8.40	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.70	8.33	7.21	13	Pass
QPSK (100RB Size)	8.04	8.14	8.04	13	Pass
16QAM (1RB Size)	9.65	8.10	8.94	13	Pass
16QAM (100RB Size)	8.30	10.22	7.76	13	Pass

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

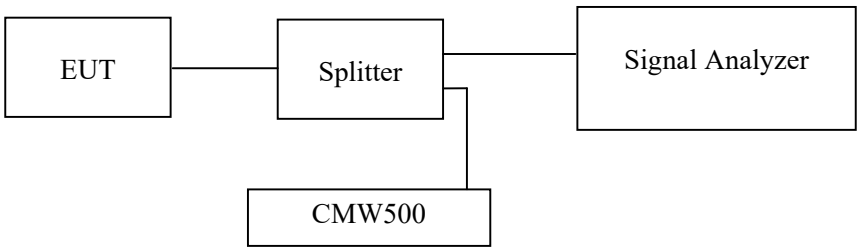
Applicable Standard

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:	27.4 ℃
Relative Humidity:	58%
ATM Pressure:	101.0 kPa

The testing was performed by Andy Yu from 2022-09-30 to 2022-10-09.

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	247.00	321.00
	190	836.6	245.00	318.00
	251	848.8	246.00	315.00
EGPRS(8PSK)	128	824.2	248.00	305.00
	190	836.6	249.00	308.00
	251	848.8	246.00	312.00

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.17	4.74
	836.4	4.17	4.77
	846.6	4.16	4.73
HSDPA	826.4	4.17	4.73
	836.4	4.20	4.82
	846.6	4.17	4.73
HSUPA	826.4	4.17	4.74
	836.4	4.22	4.76
	846.6	4.17	4.74

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM (GMSK)	512	1850.2	248.00	314.00
	661	1880.0	243.00	315.00
	810	1909.8	244.00	316.00
EGPRS(8PSK)	512	1850.2	244.00	317.00
	661	1880.0	248.00	313.00
	810	1909.8	250.00	312.00

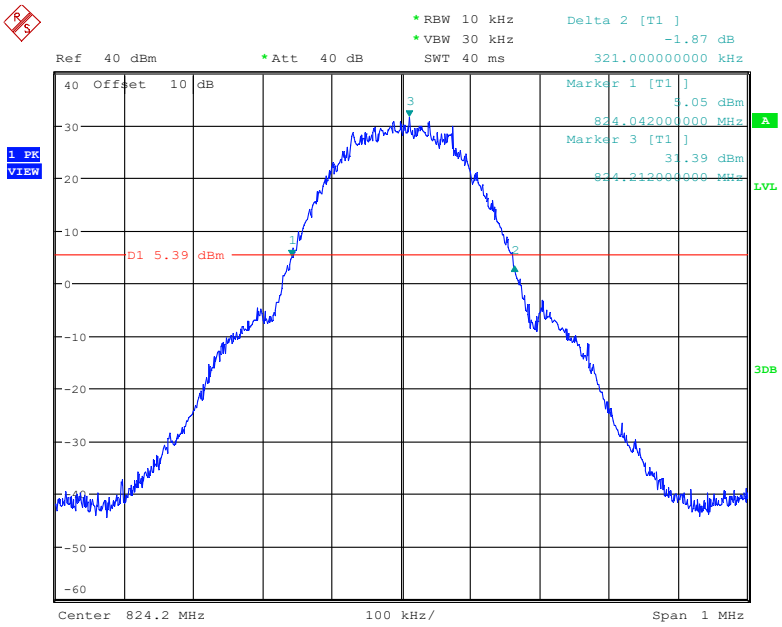
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.17	4.76
	1880.0	4.17	4.74
	1907.6	4.17	4.74
HSDPA	1852.4	4.17	4.73
	1880.0	4.17	4.74
	1907.6	4.22	5.09
HSUPA	1852.4	4.20	4.74
	1880.0	4.20	4.88
	1907.6	4.26	5.40

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.17	4.74
	1732.6	4.17	4.73
	1752.6	4.17	4.73
HSDPA	1712.4	4.19	4.88
	1732.6	4.19	4.74
	1752.6	4.19	4.85
HSUPA	1712.4	4.23	5.15
	1732.6	4.17	4.71
	1752.6	4.20	4.85

Cellular Band (Part 22H)

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



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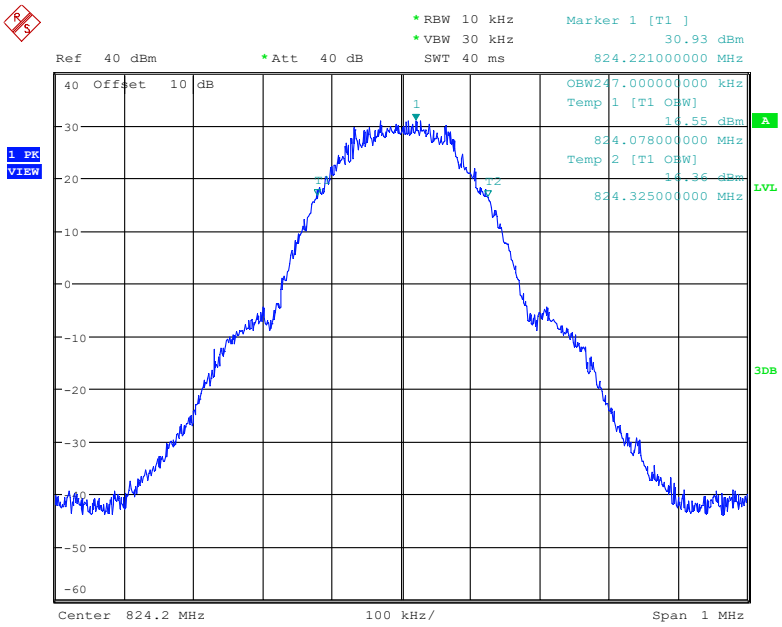
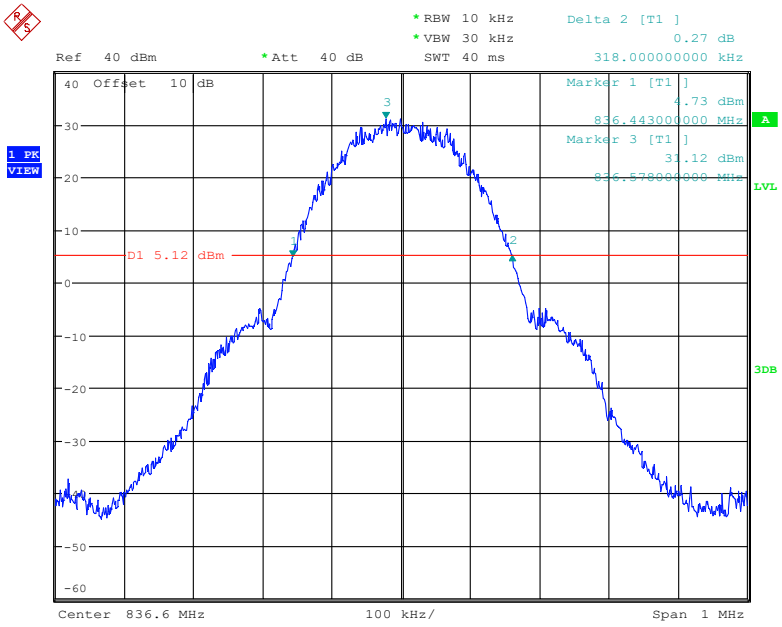


Date: 30.SEP.2022 09:58:05

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



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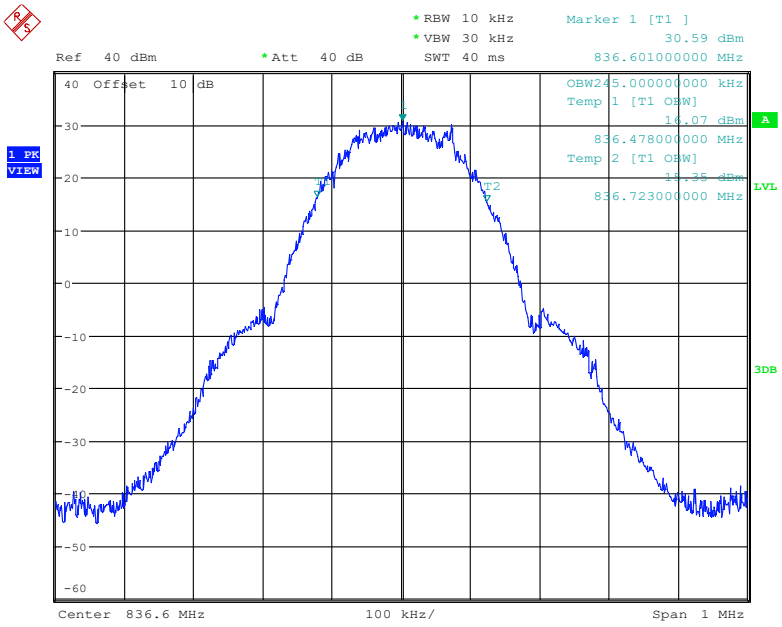

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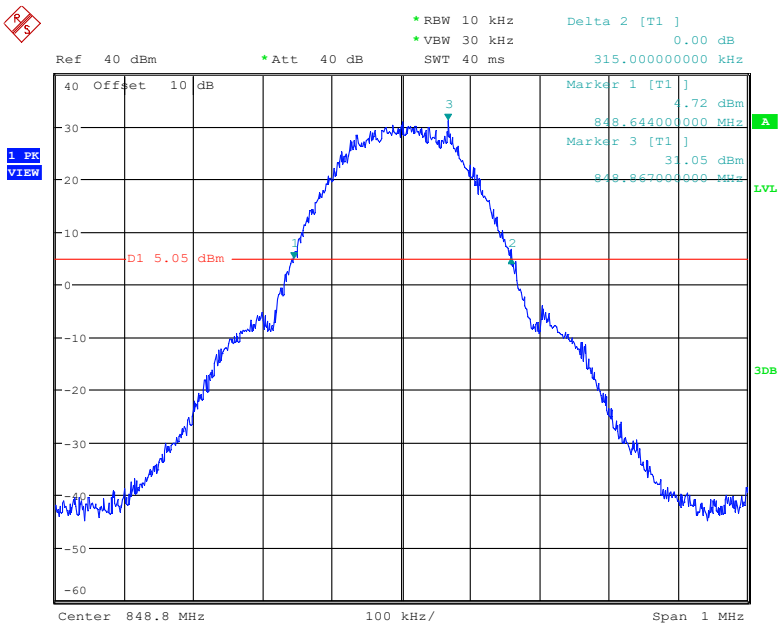
26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



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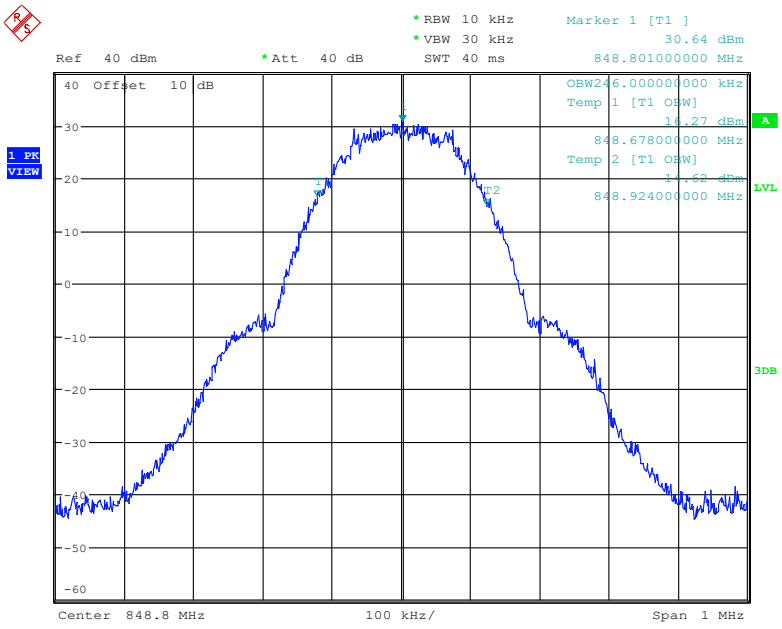
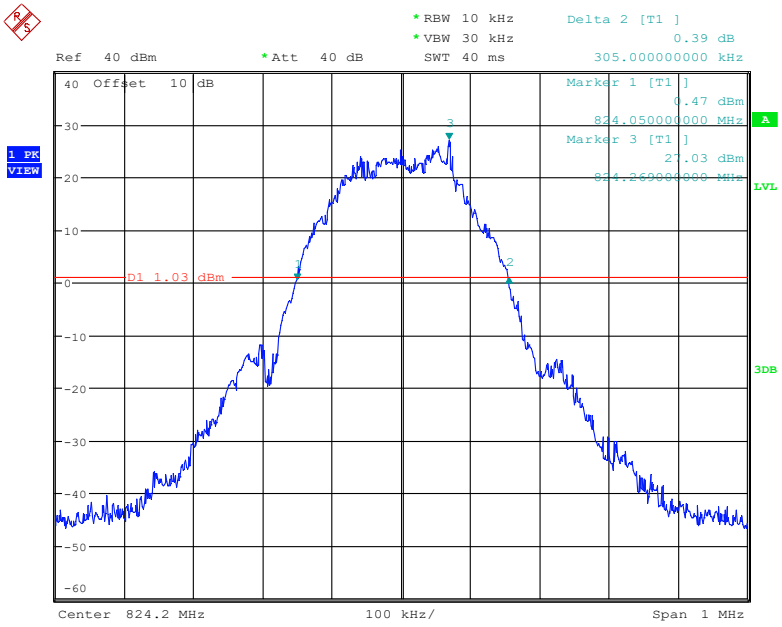


Date: 30.SEP.2022 09:47:33

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



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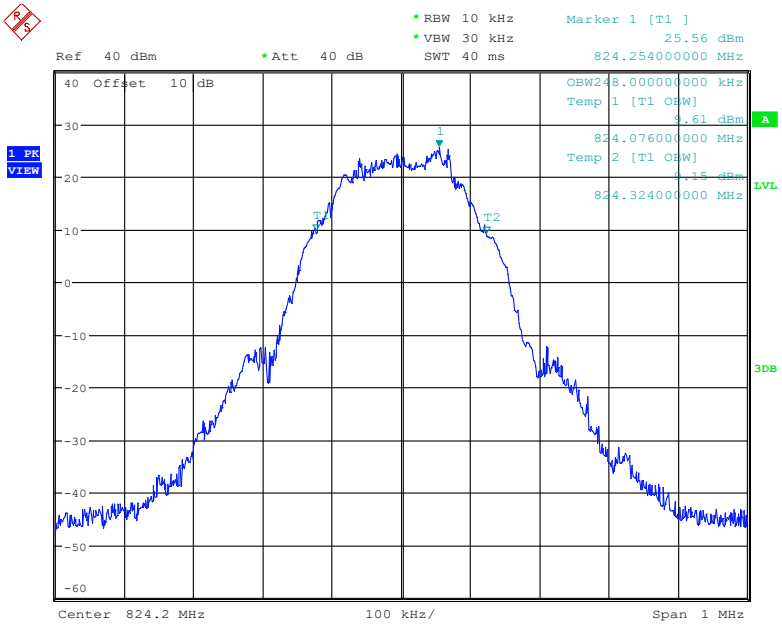

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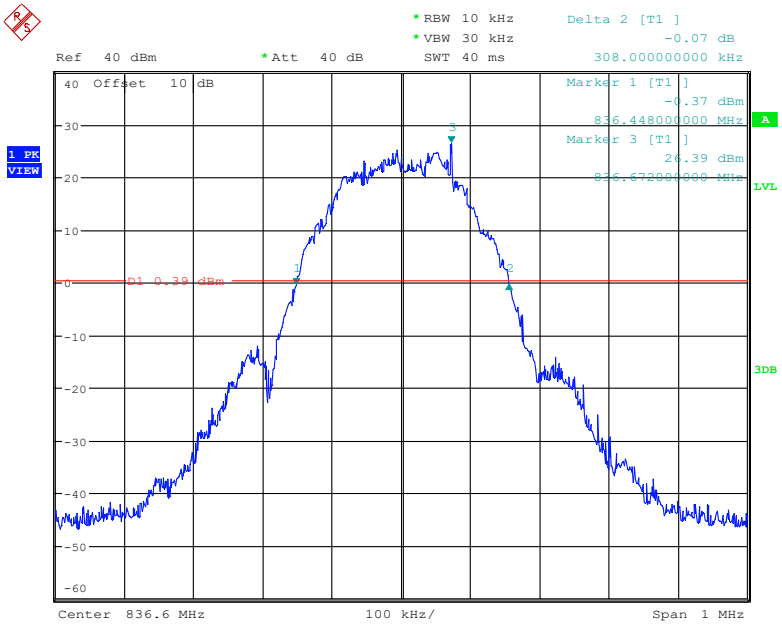
26 dB Emission Bandwidth for GSM(8PSK) Mode, Middle channel



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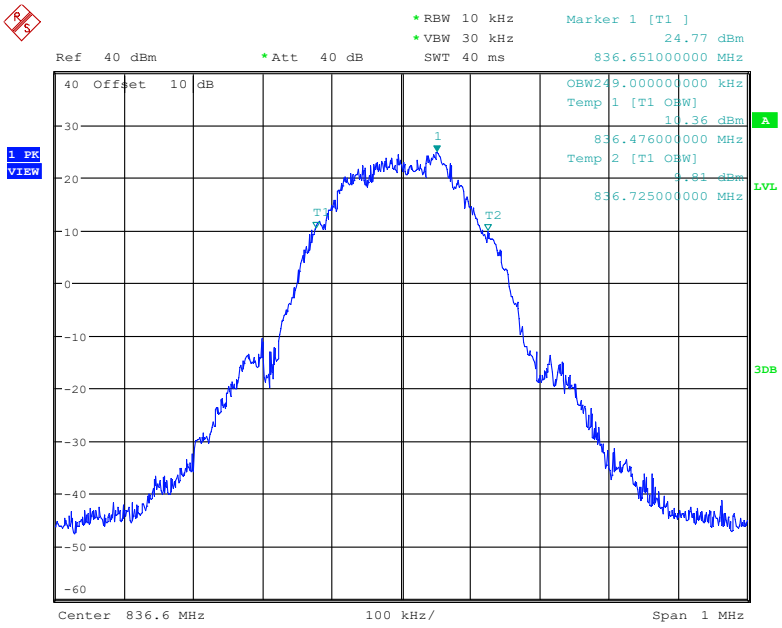

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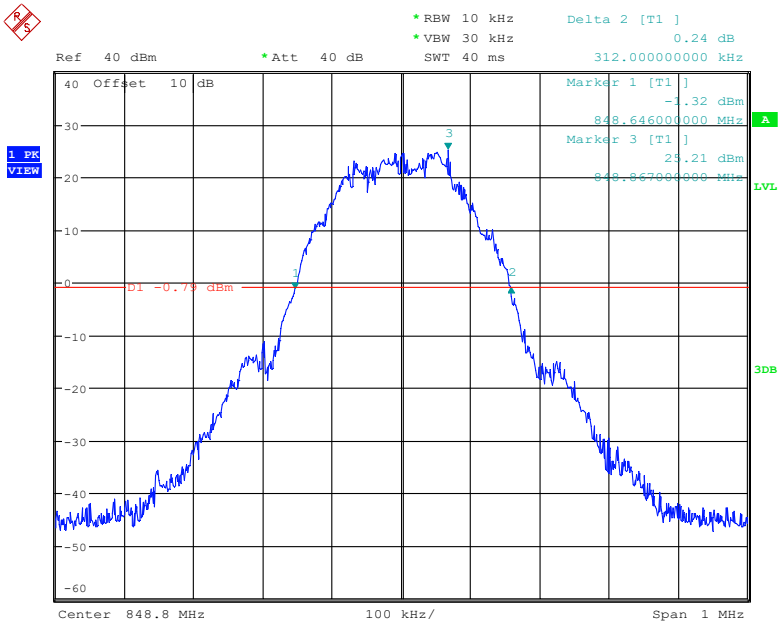
26 dB Emission Bandwidth for GSM(8PSK) Mode, High channel



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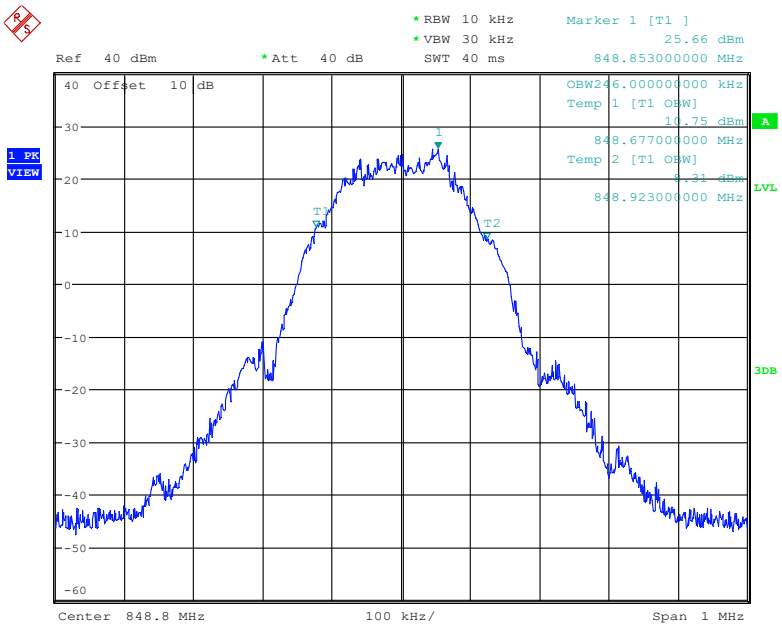

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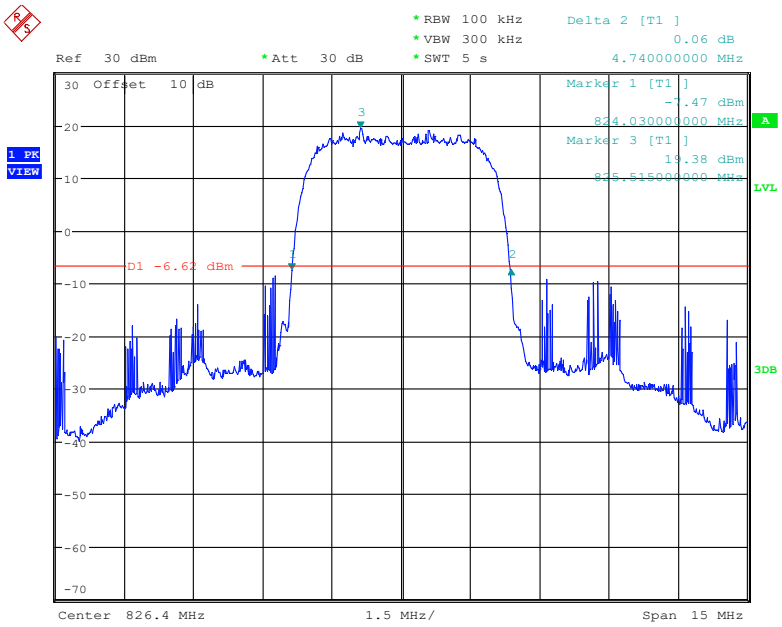
26 dB Emission Bandwidth for RMC (BPSK) Mode, Low channel



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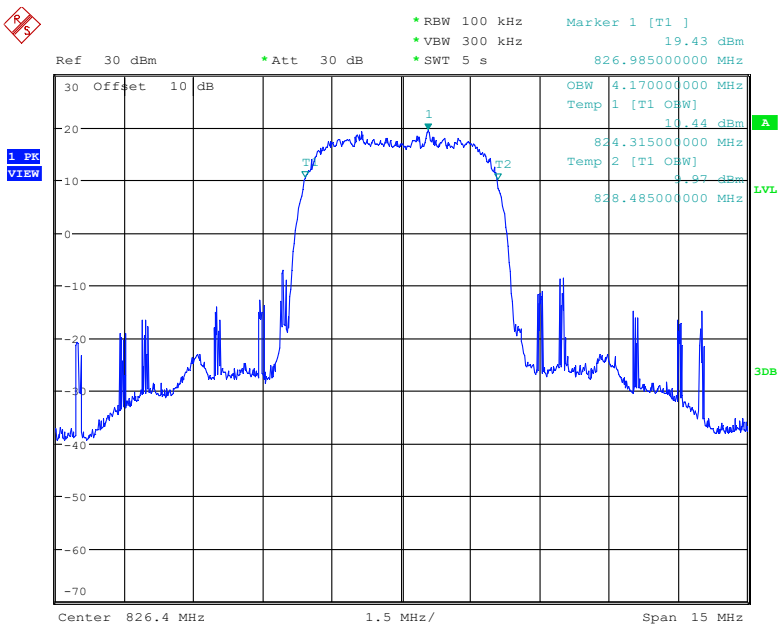
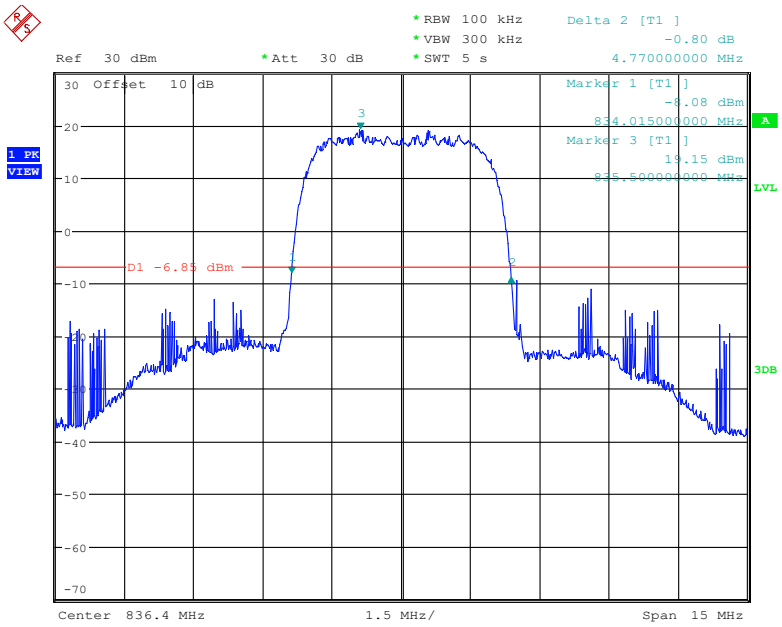
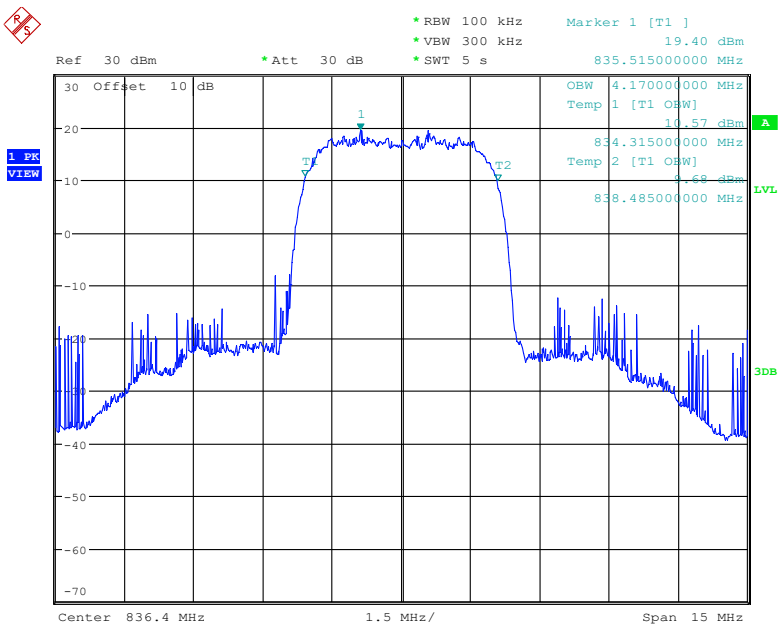


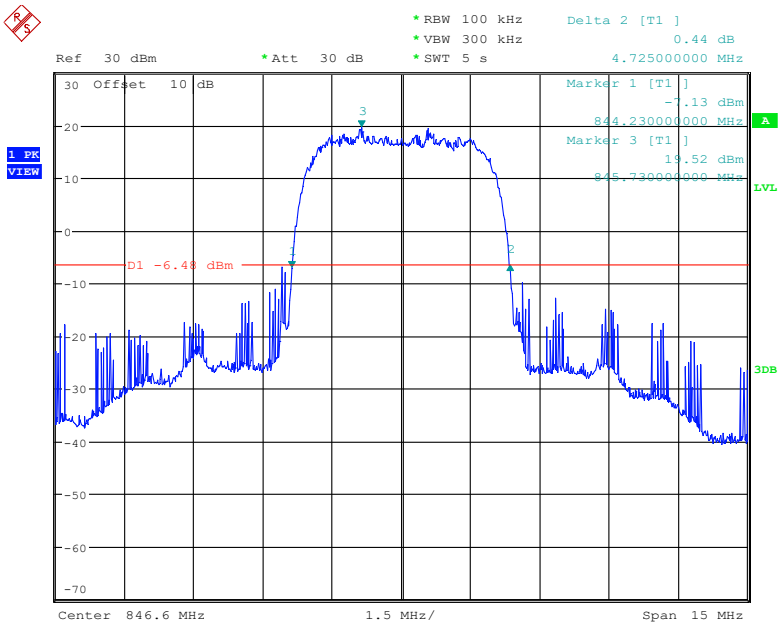
Date: 8.OCT.2022 14:11:37

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

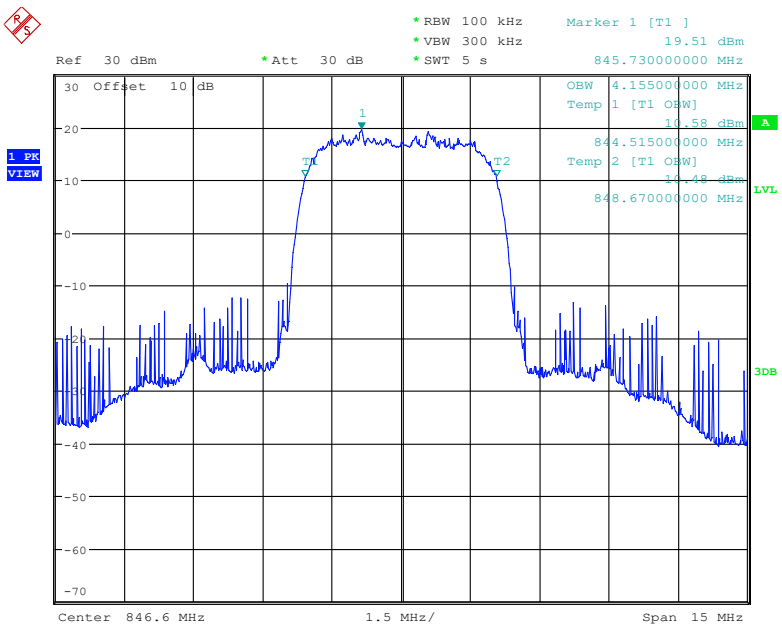




26 dB Emission Bandwidth for RMC (BPSK) Mode, High channel

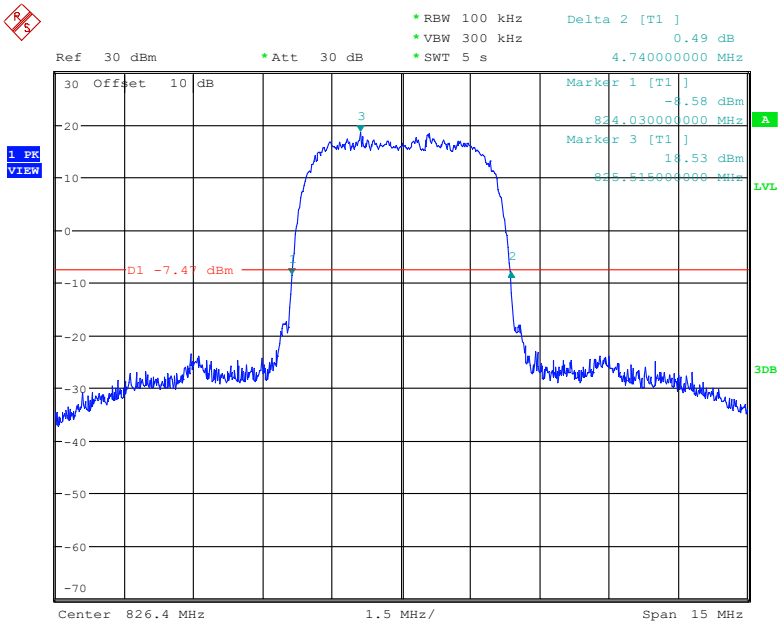


Date: 8.OCT.2022 14:19:12

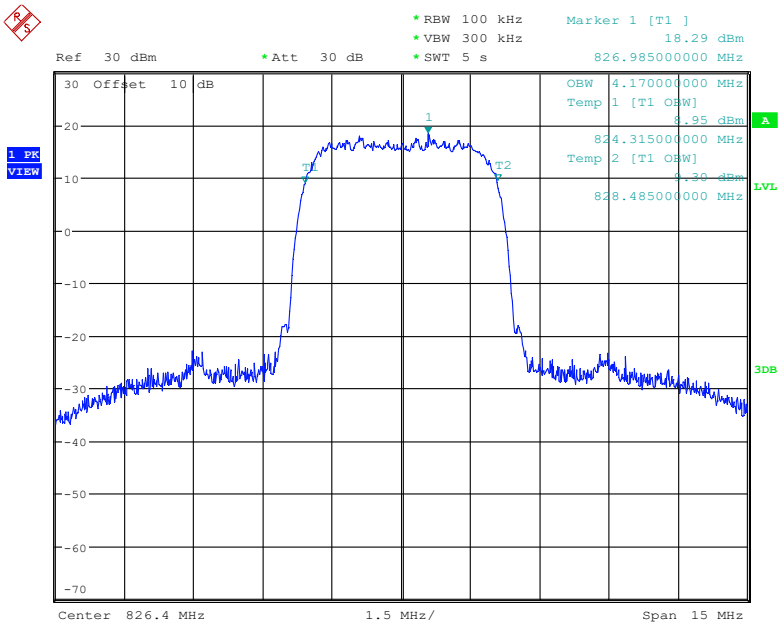


Date: 8.OCT.2022 14:18:32

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

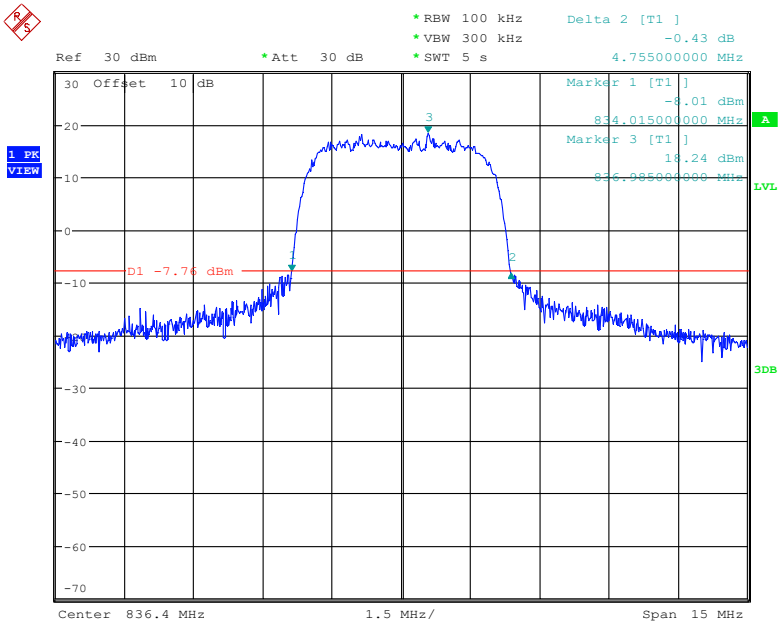


Date: 8.OCT.2022 15:40:28

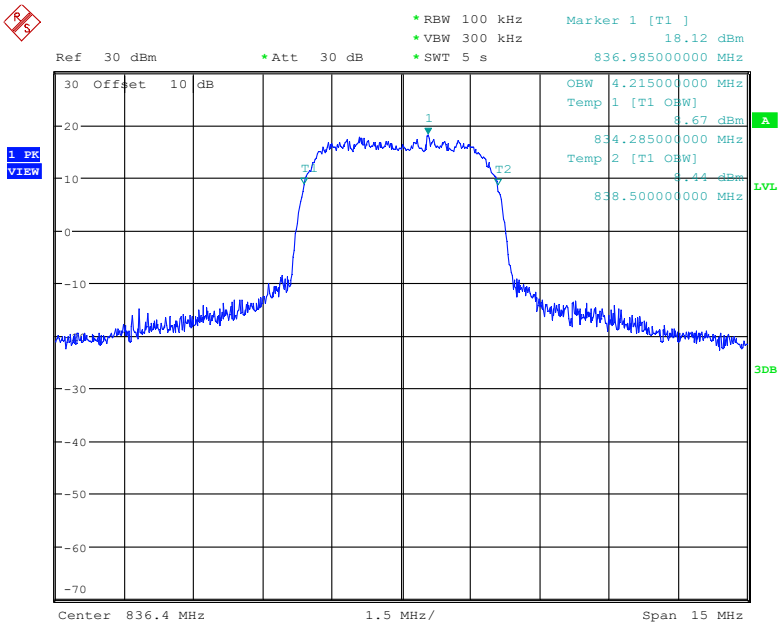


Date: 8.OCT.2022 15:39:48

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

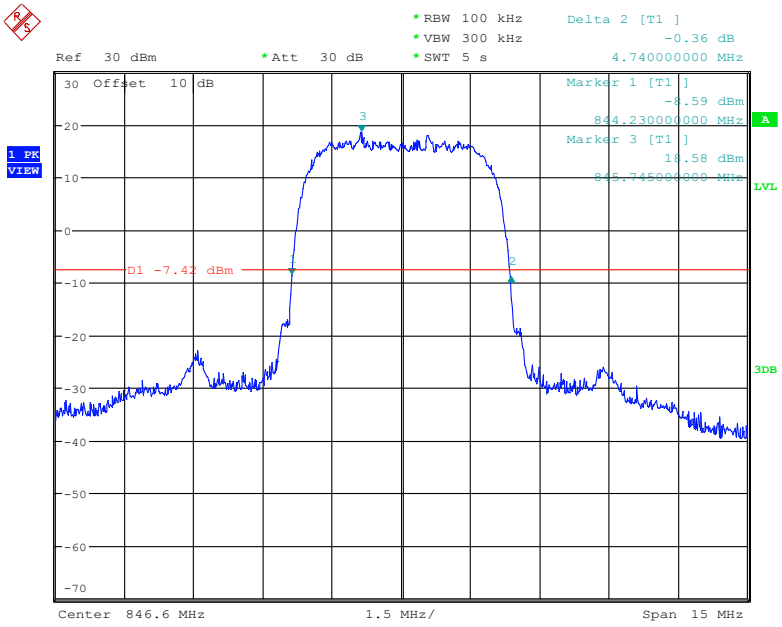


Date: 8.OCT.2022 15:43:49

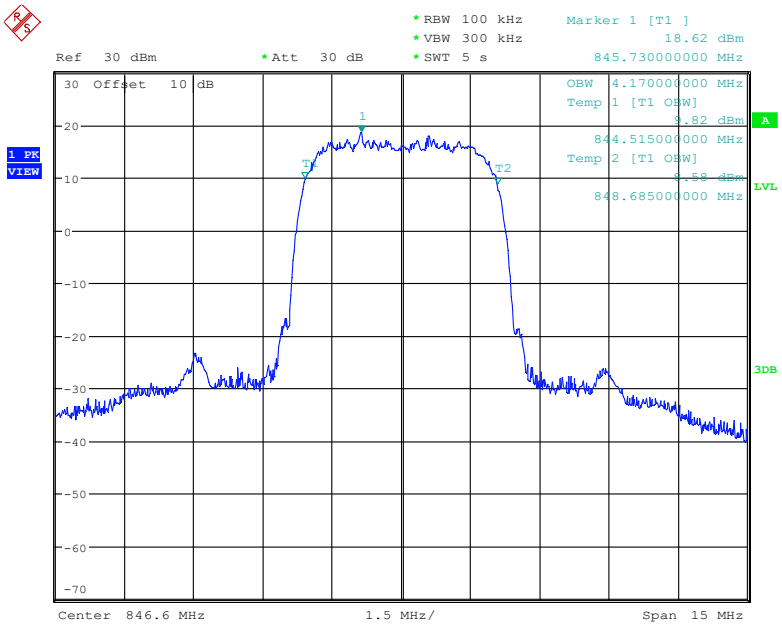


Date: 8.OCT.2022 15:43:09

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

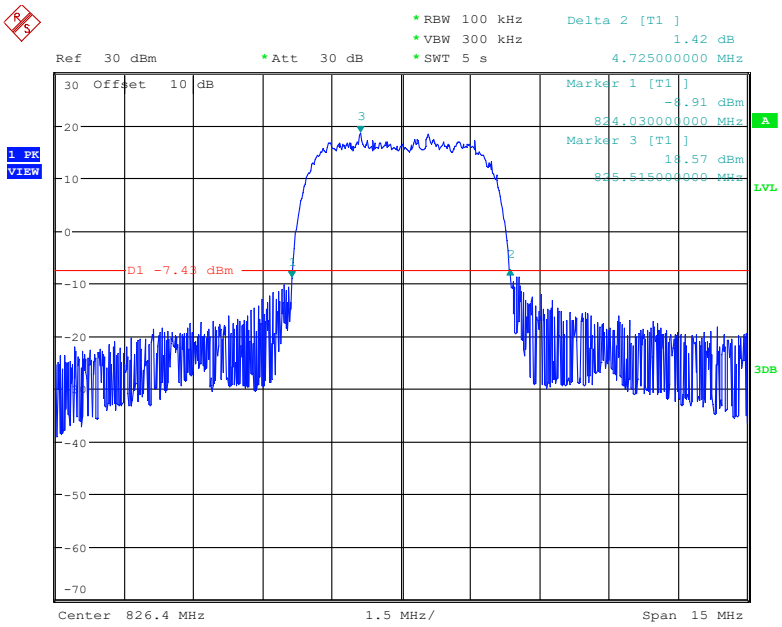


Date: 8.OCT.2022 15:46:35

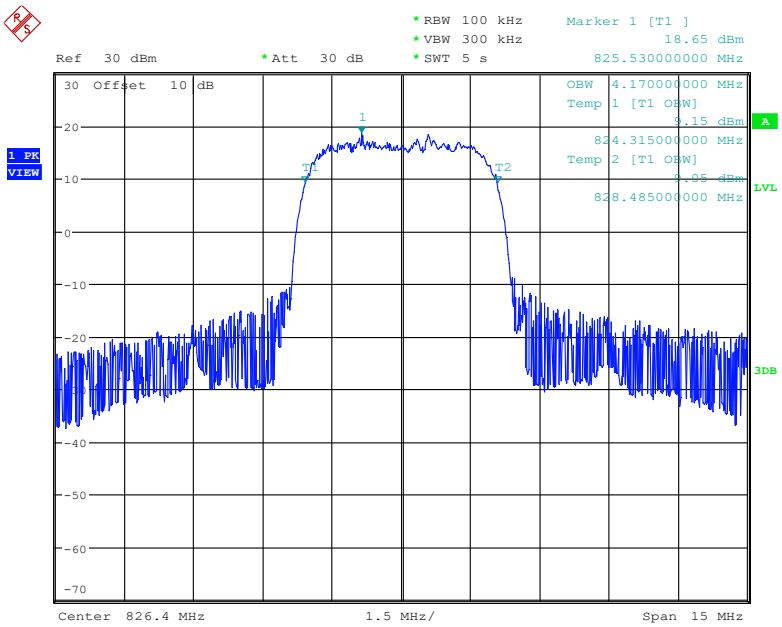


Date: 8.OCT.2022 15:45:55

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

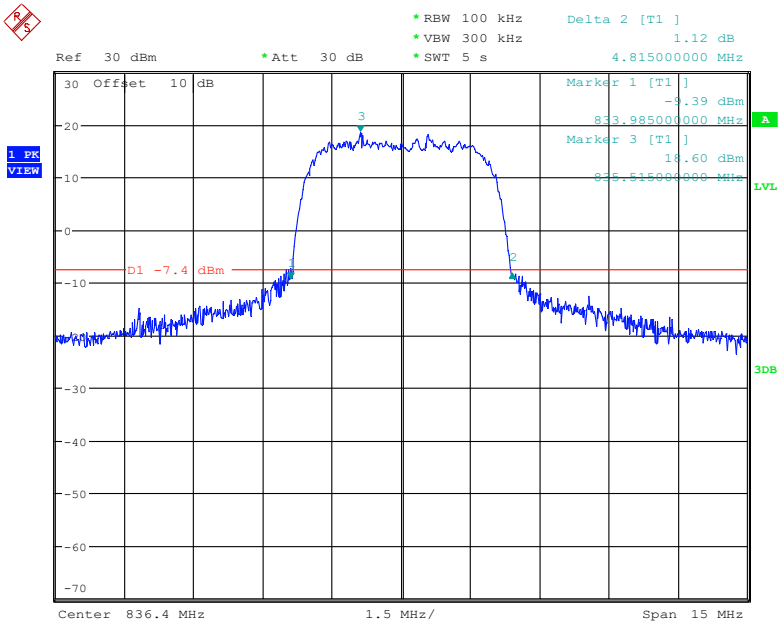


Date: 8.OCT.2022 14:50:20

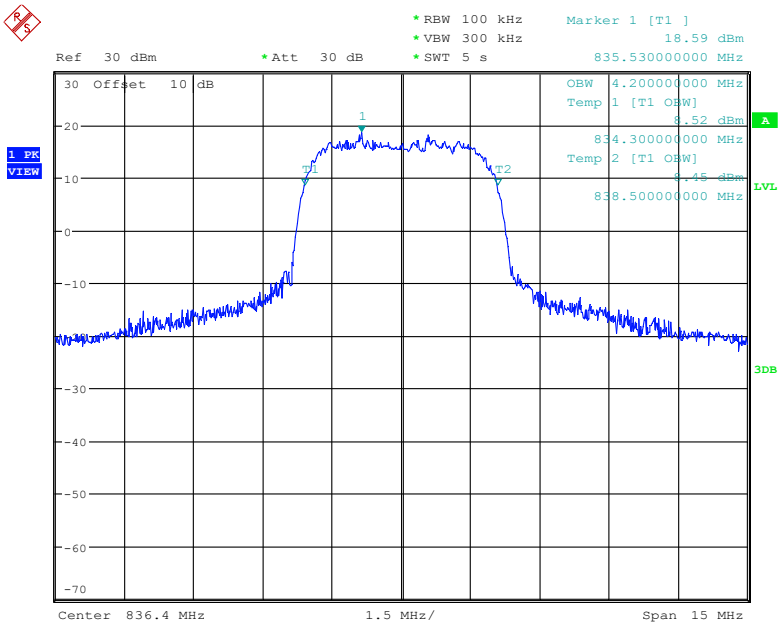


Date: 8.OCT.2022 14:49:39

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

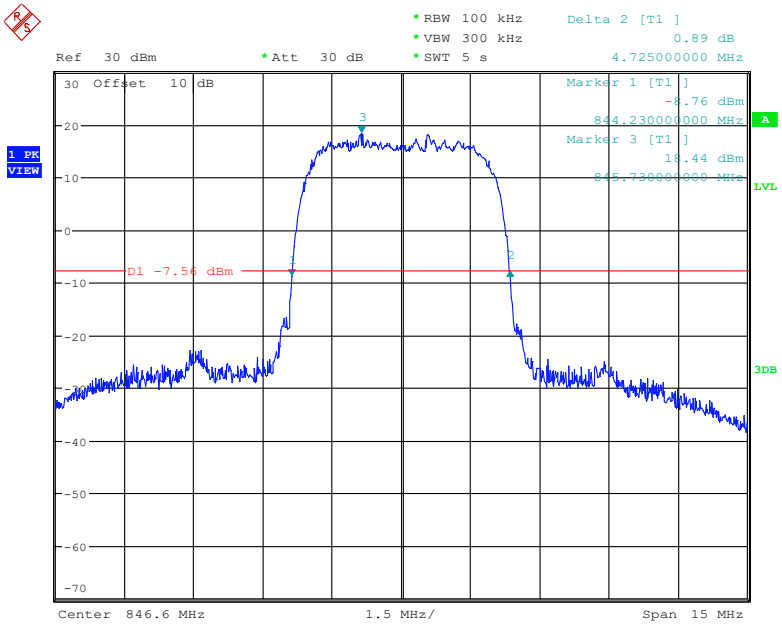


Date: 8.OCT.2022 14:54:11

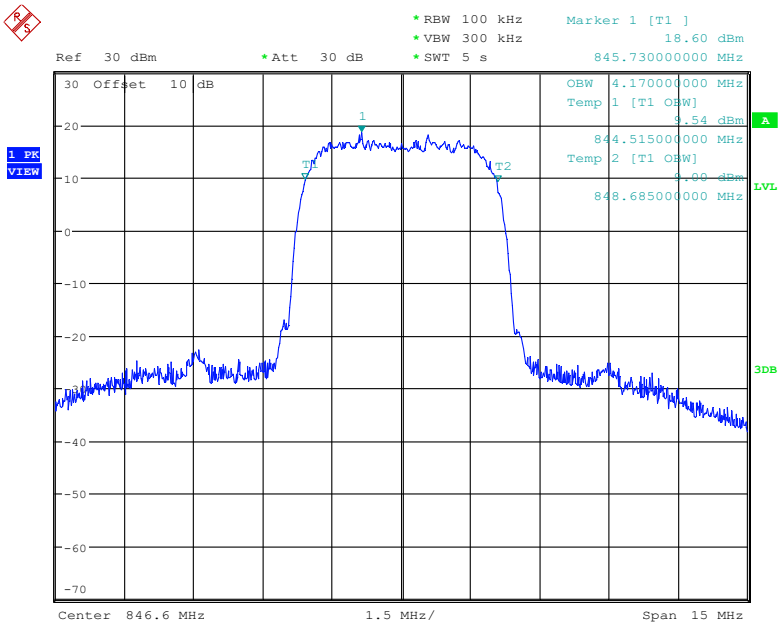


Date: 8.OCT.2022 14:53:32

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



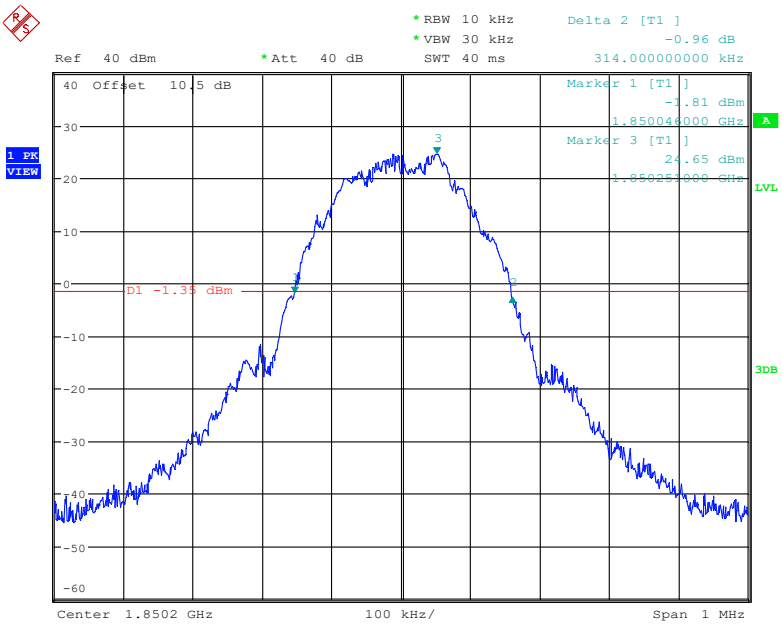
Date: 8.OCT.2022 14:57:14



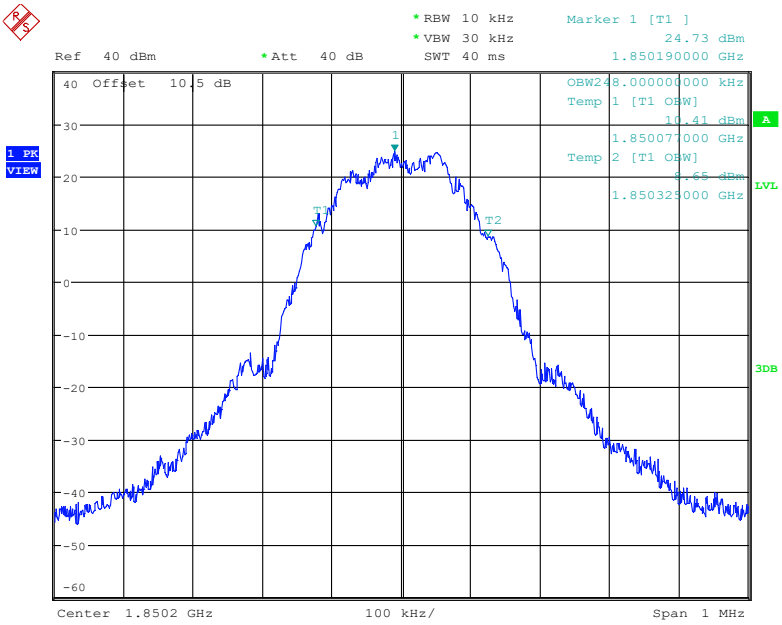
Date: 8.OCT.2022 14:56:34

PCS Band (Part 24E)

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

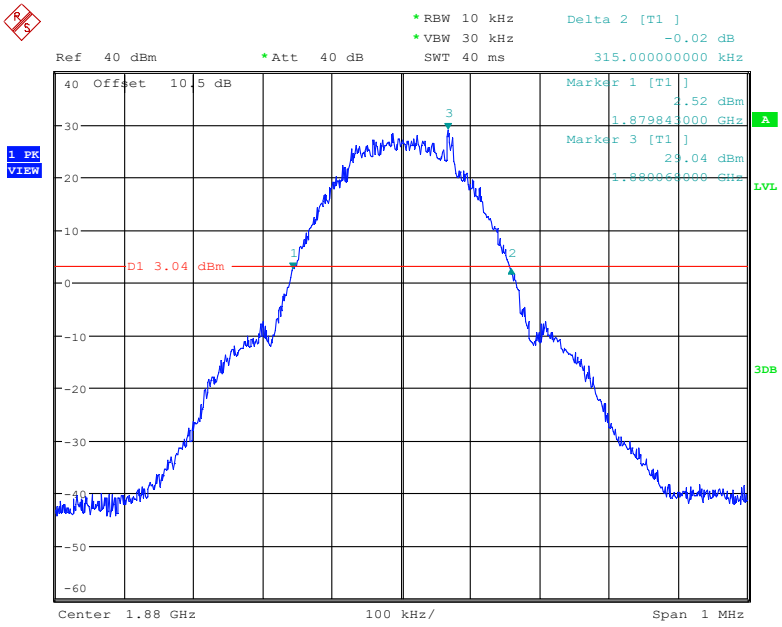


Date: 30.SEP.2022 10:26:02

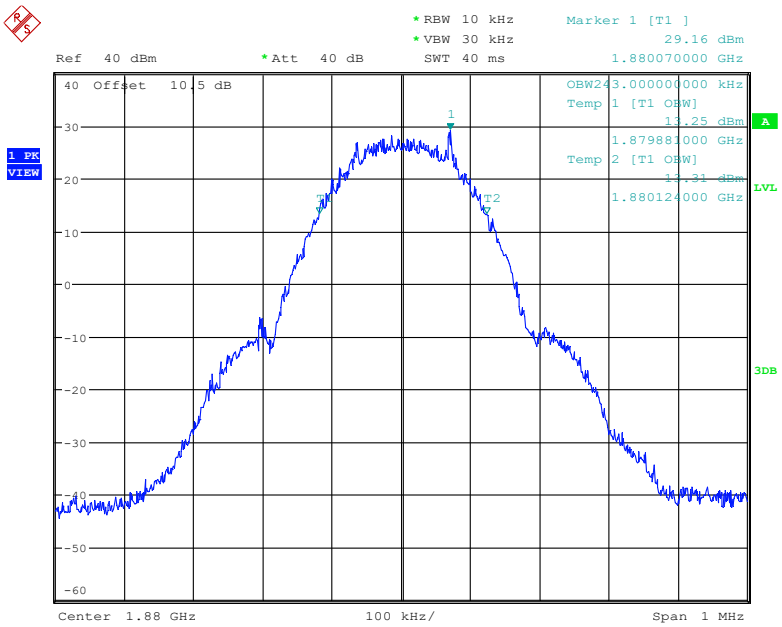


Date: 30.SEP.2022 10:25:22

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

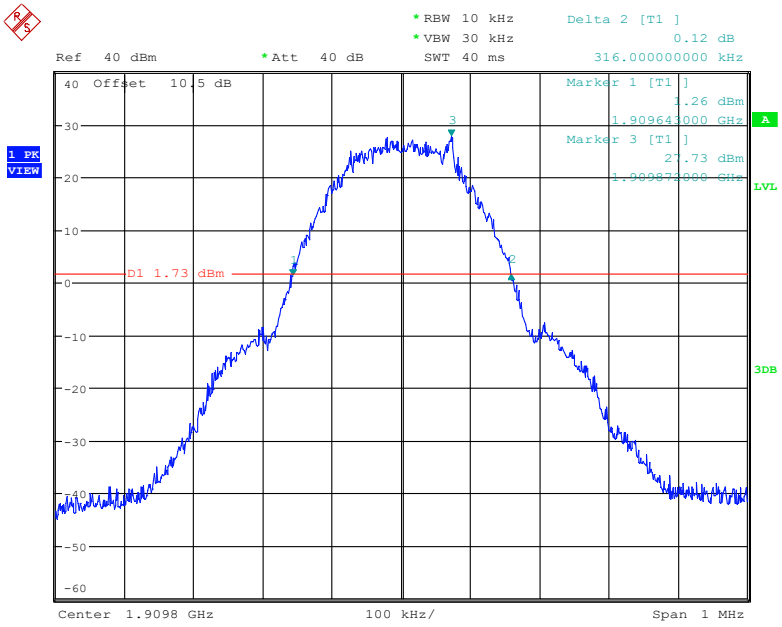


Date: 9.OCT.2022 14:10:11

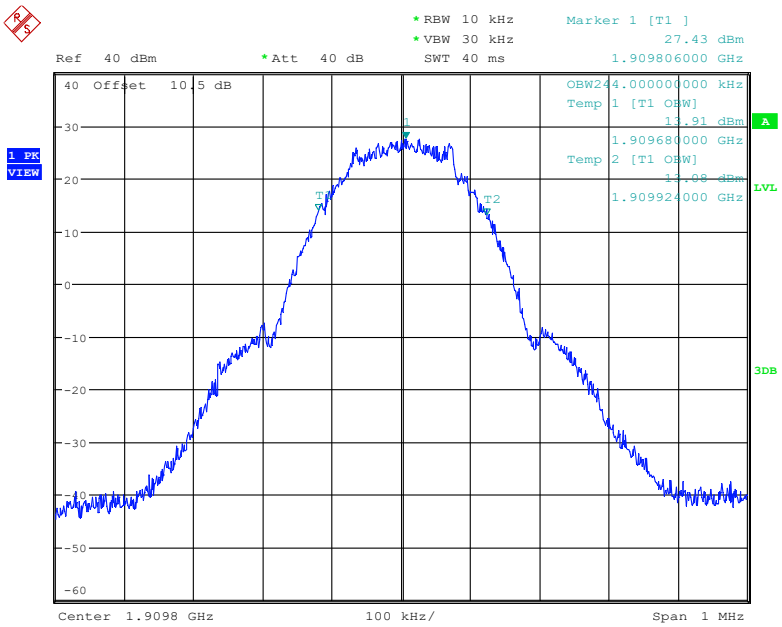


Date: 9.OCT.2022 14:09:31

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

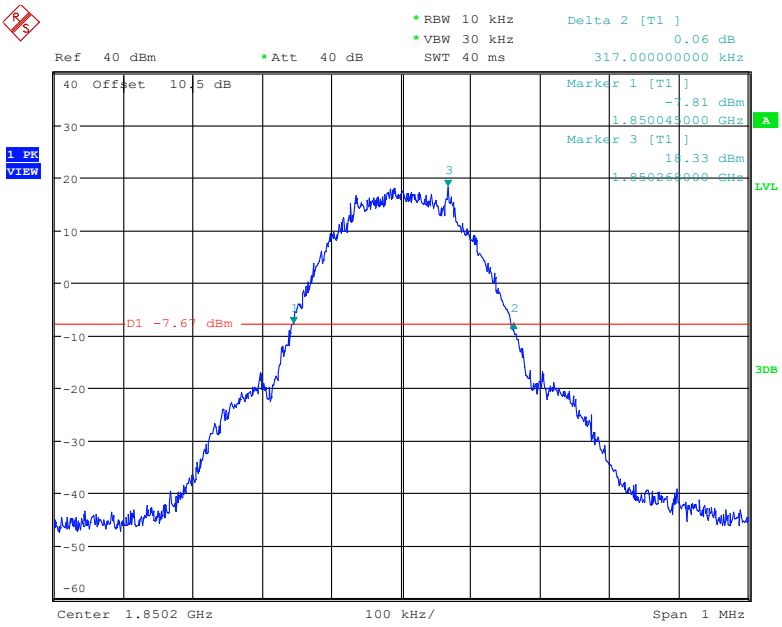


Date: 30.SEP.2022 10:17:07

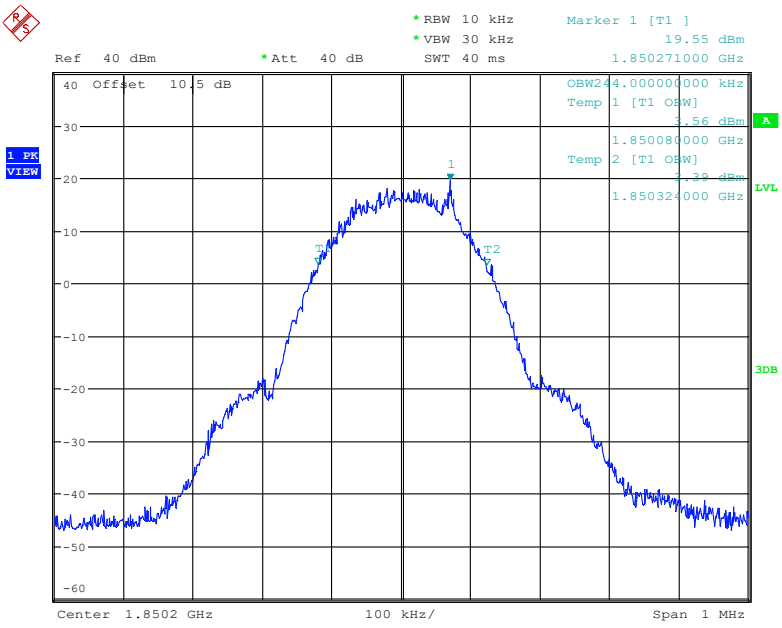


Date: 30.SEP.2022 10:16:27

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

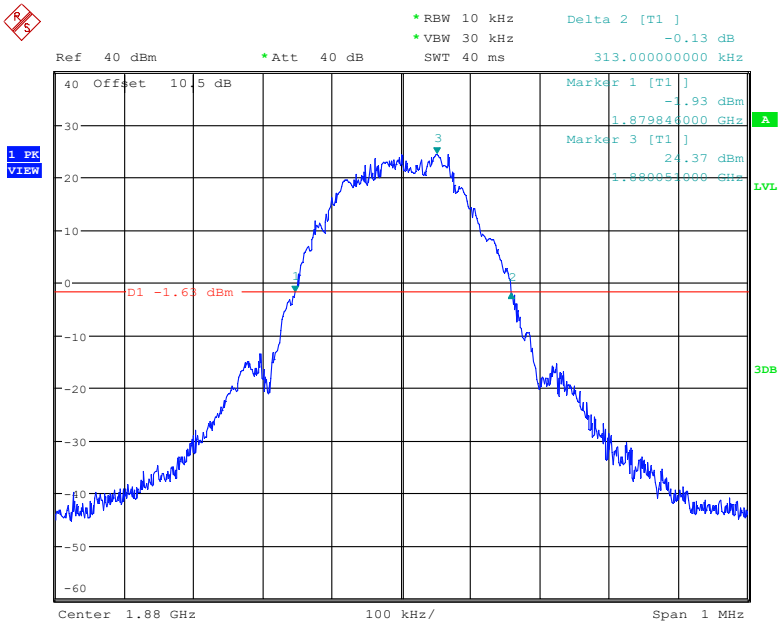


Date: 30.SEP.2022 10:45:19

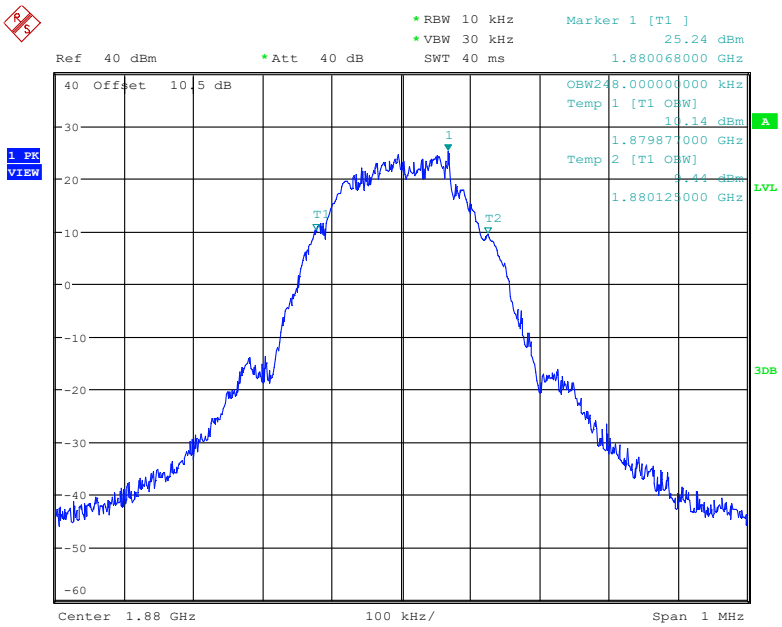


Date: 30.SEP.2022 10:44:41

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

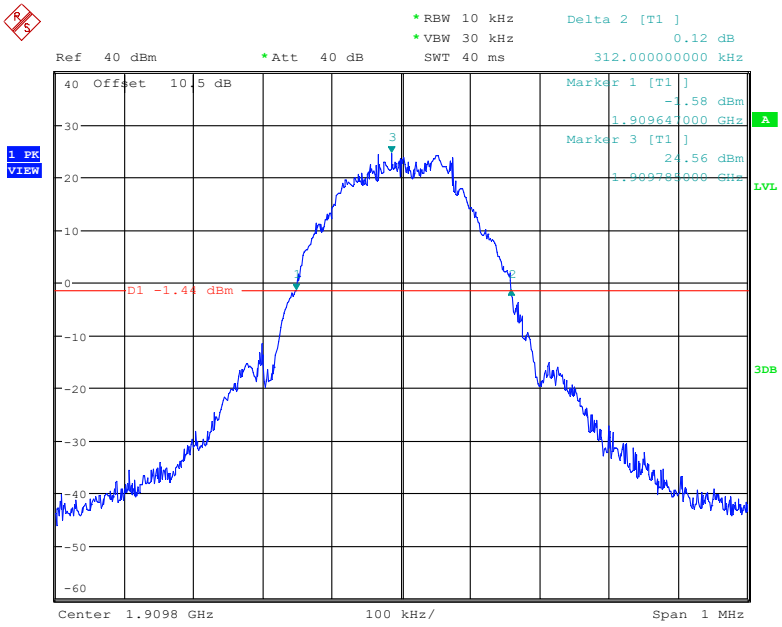


Date: 30.SEP.2022 10:32:32

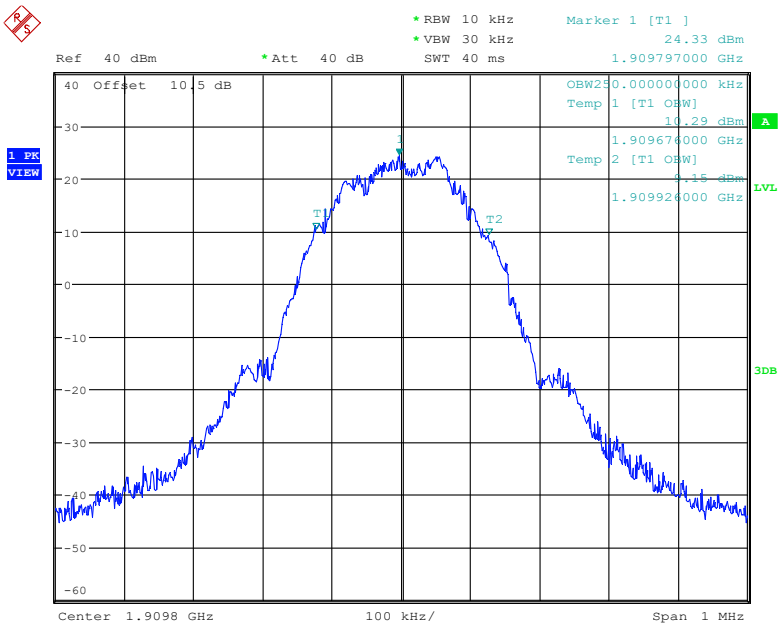


Date: 30.SEP.2022 10:31:51

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

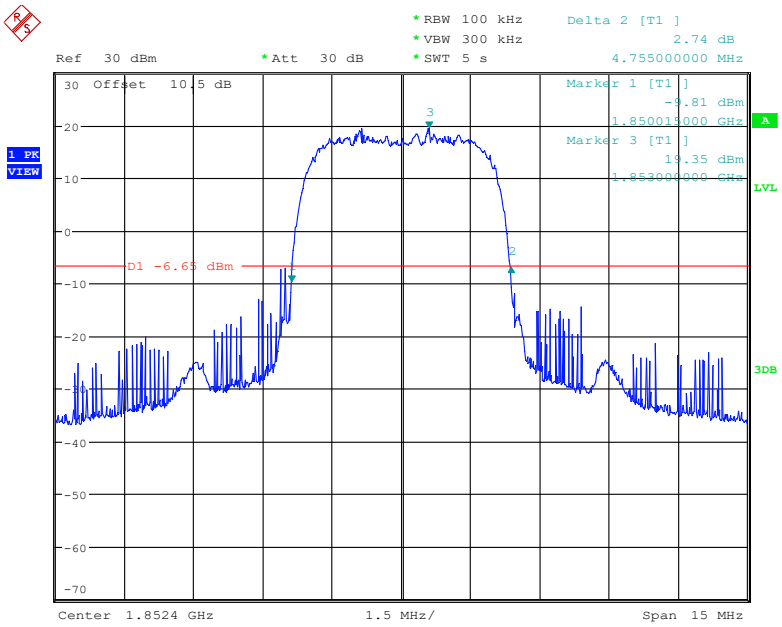


Date: 30.SEP.2022 10:37:07

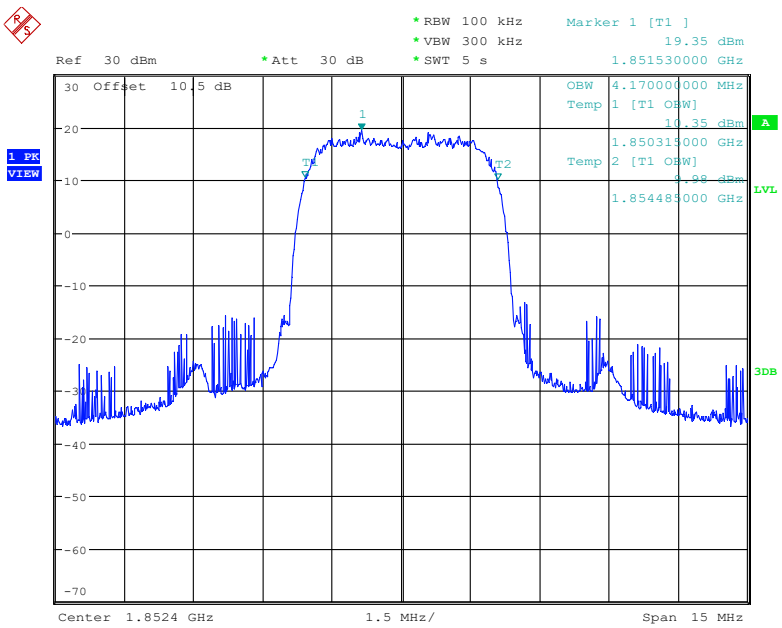


Date: 30.SEP.2022 10:36:29

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

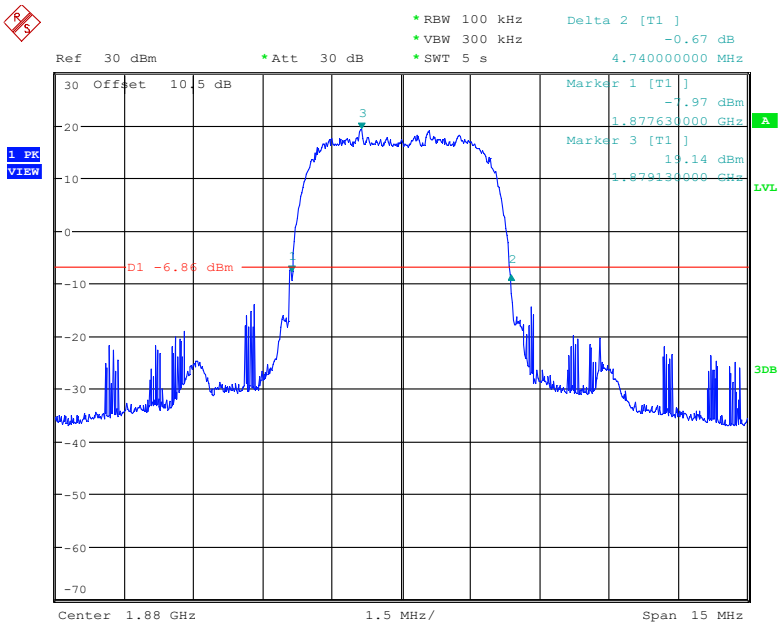


Date: 8.OCT.2022 13:50:57

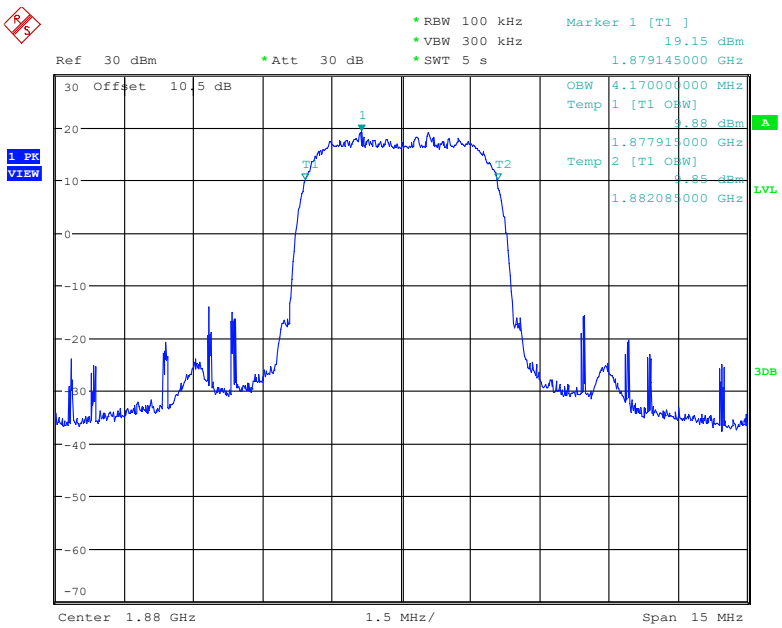


Date: 8.OCT.2022 13:50:18

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

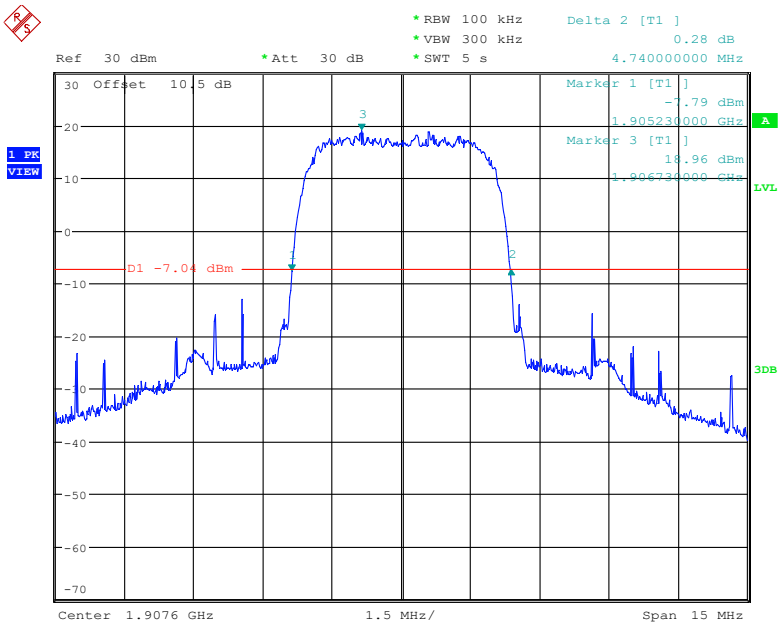


Date: 8.OCT.2022 13:47:31

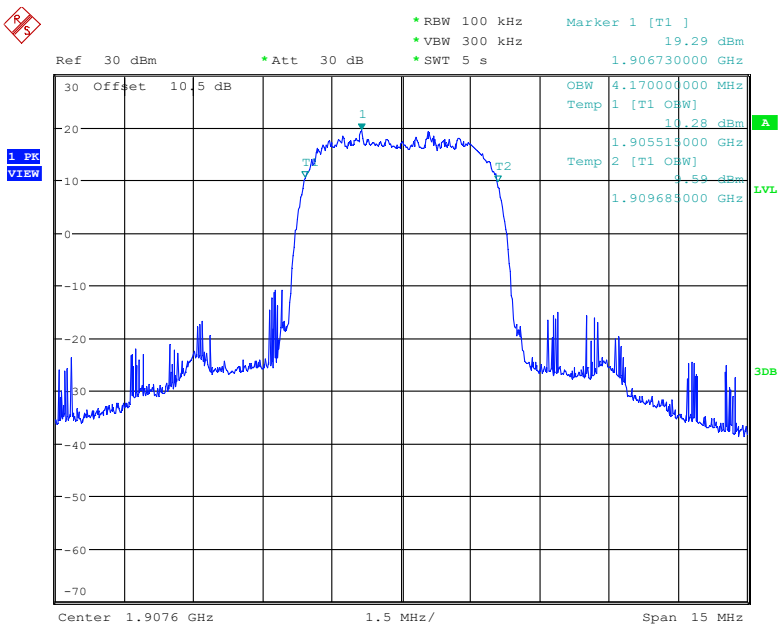


Date: 8.OCT.2022 13:46:50

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

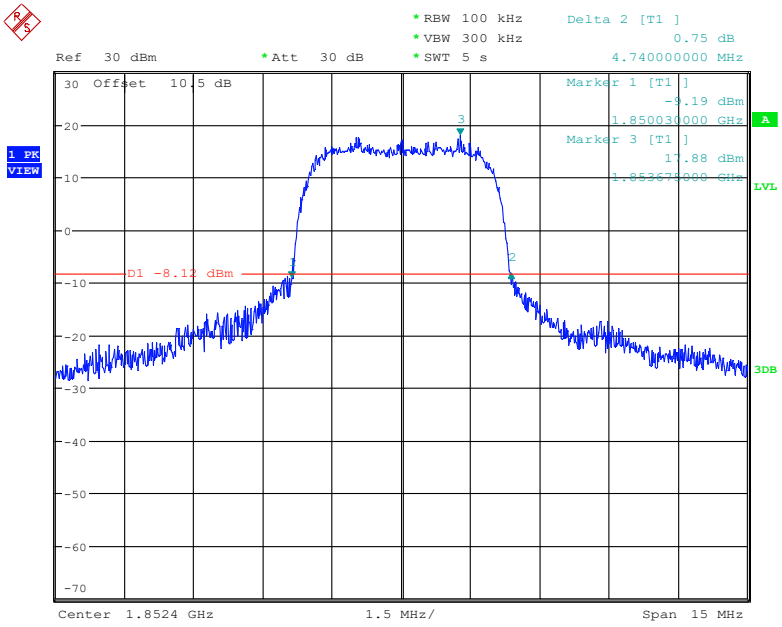


Date: 8.OCT.2022 13:55:00

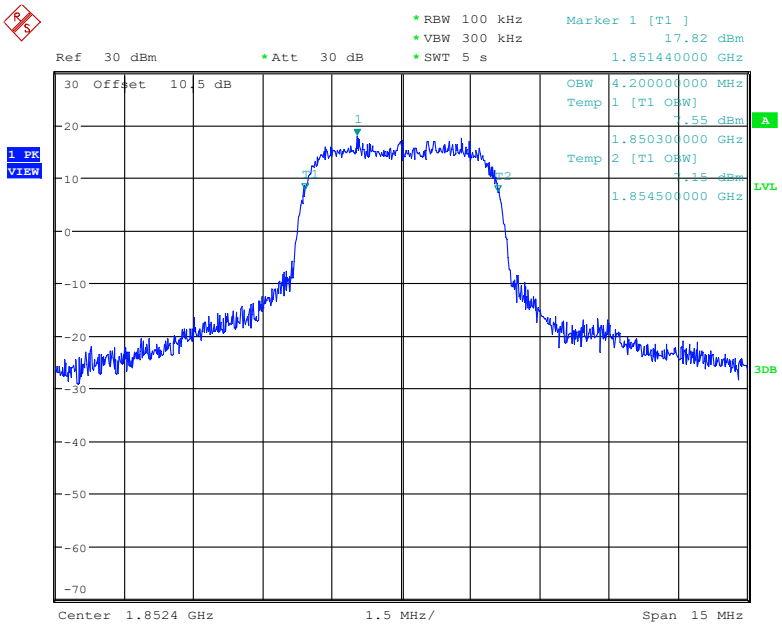


Date: 8.OCT.2022 13:54:21

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

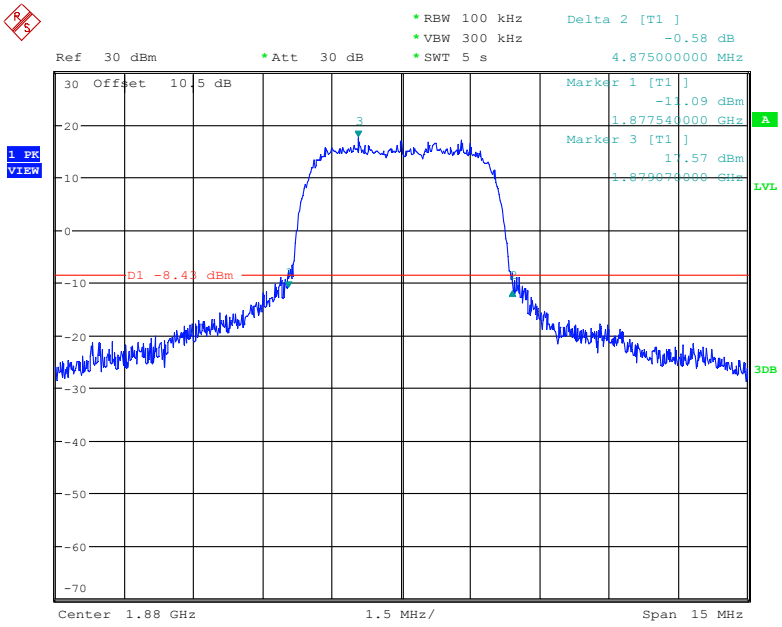


Date: 8.OCT.2022 15:06:08

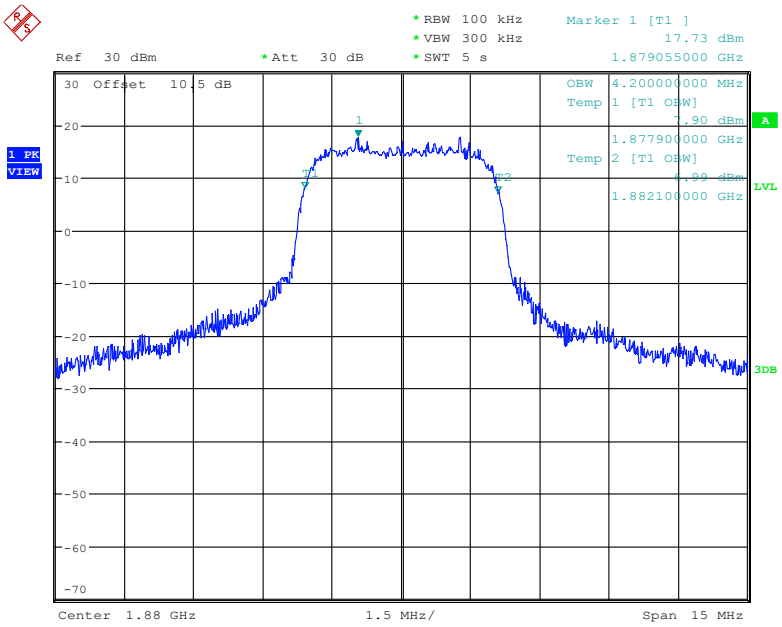


Date: 8.OCT.2022 15:05:28

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

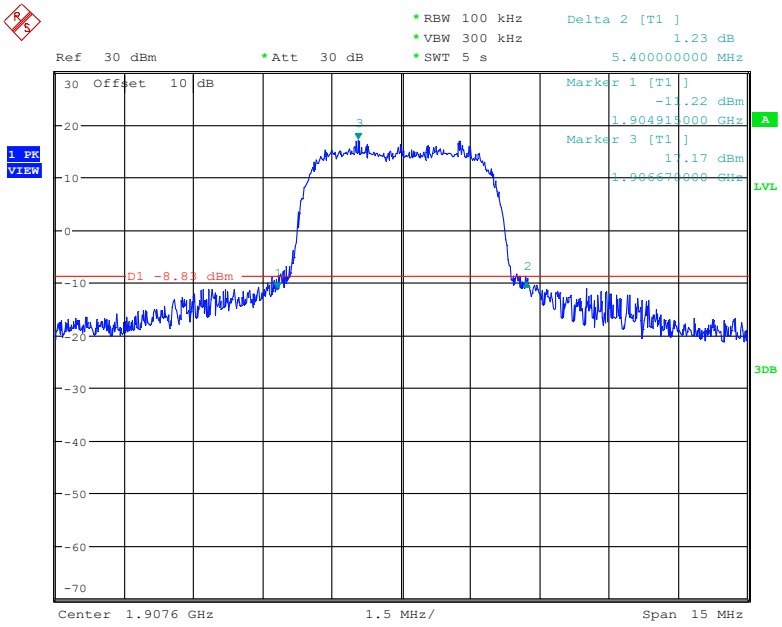


Date: 8.OCT.2022 15:11:18

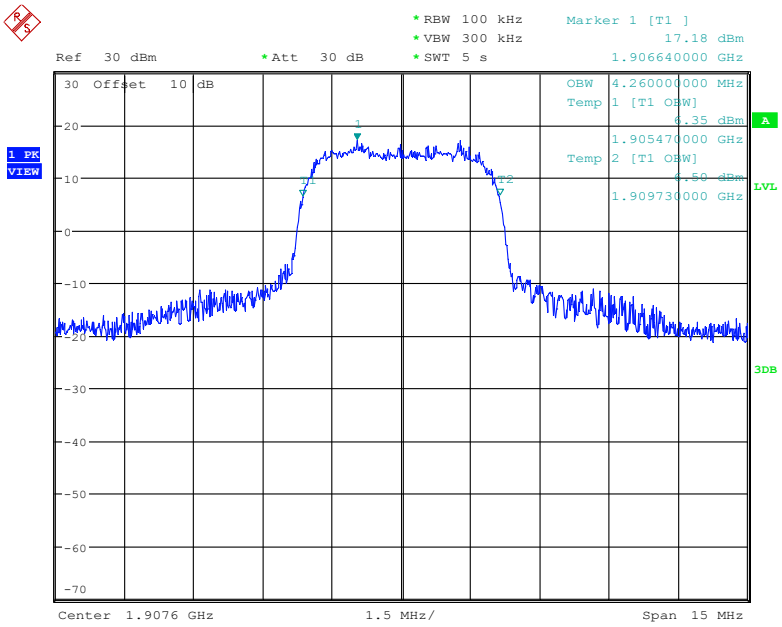


Date: 8.OCT.2022 15:10:38

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

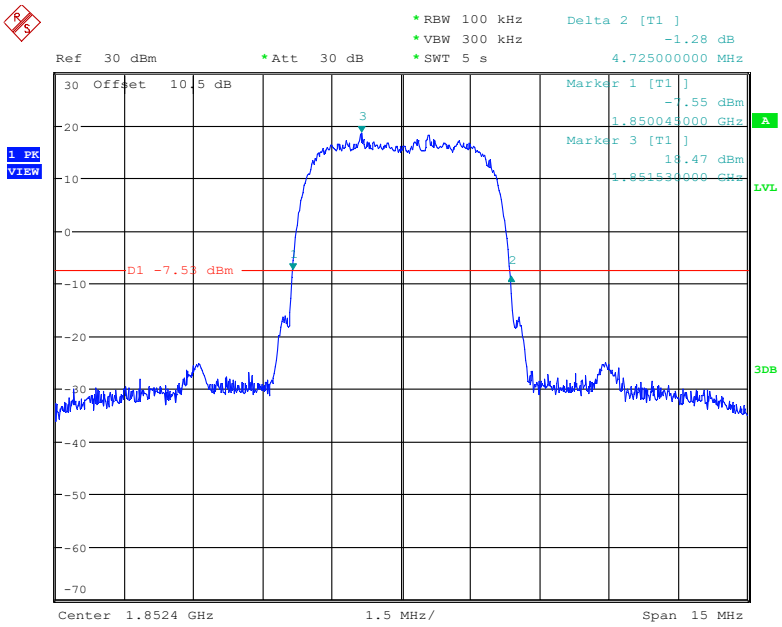


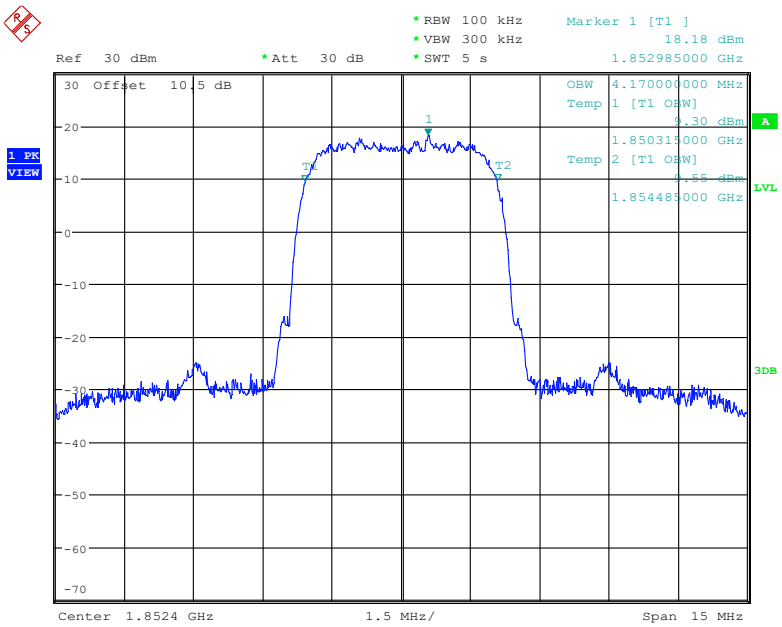
Date: 8.OCT.2022 15:16:42



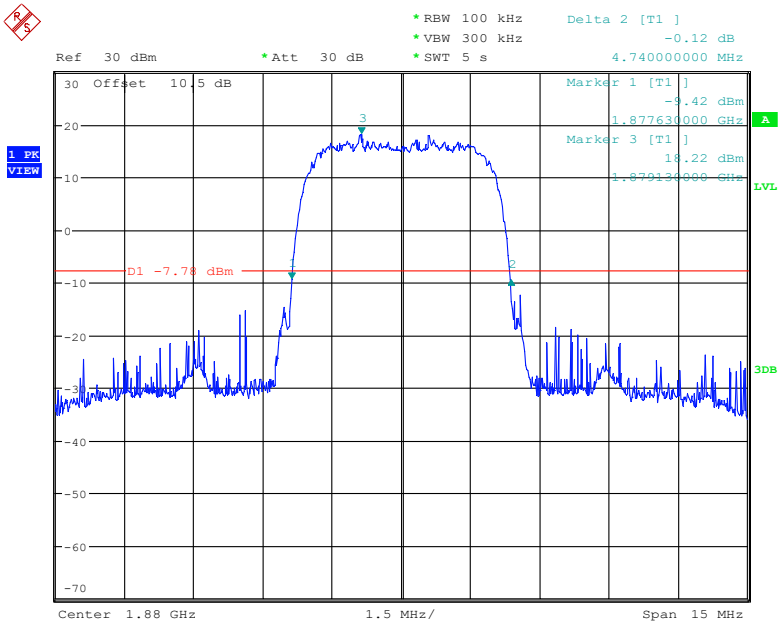
Date: 8.OCT.2022 15:16:01

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

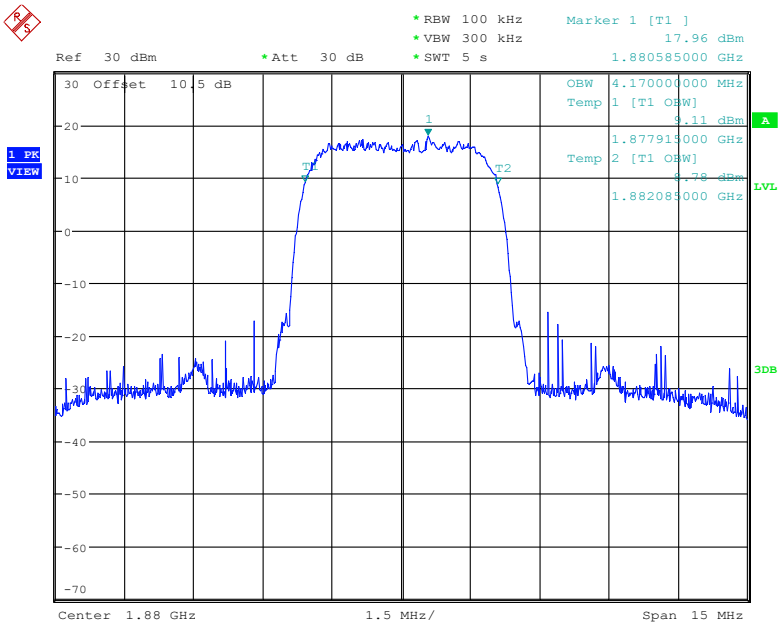




26 dB Emission Bandwidth for HSDPA (16QAM) Mode, Middle channel

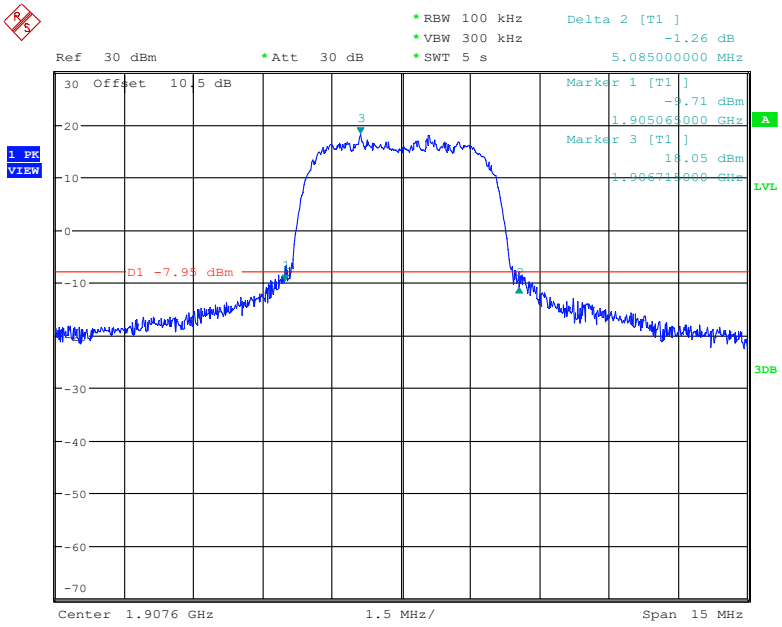


Date: 8.OCT.2022 14:28:32

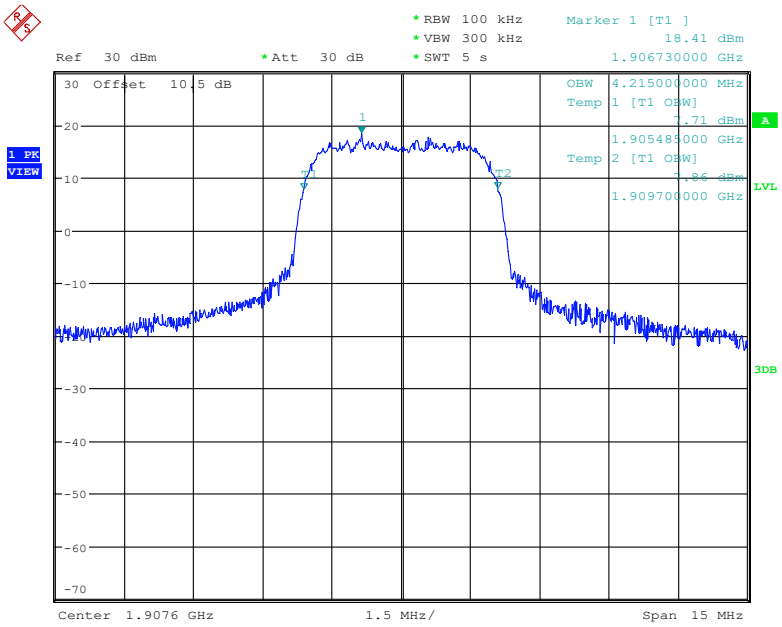


Date: 8.OCT.2022 14:27:53

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



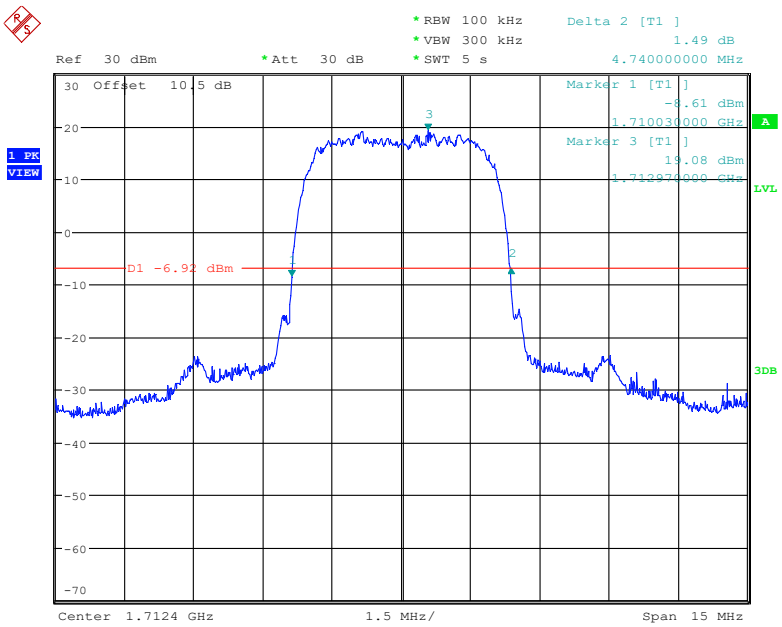
Date: 8.OCT.2022 14:33:14



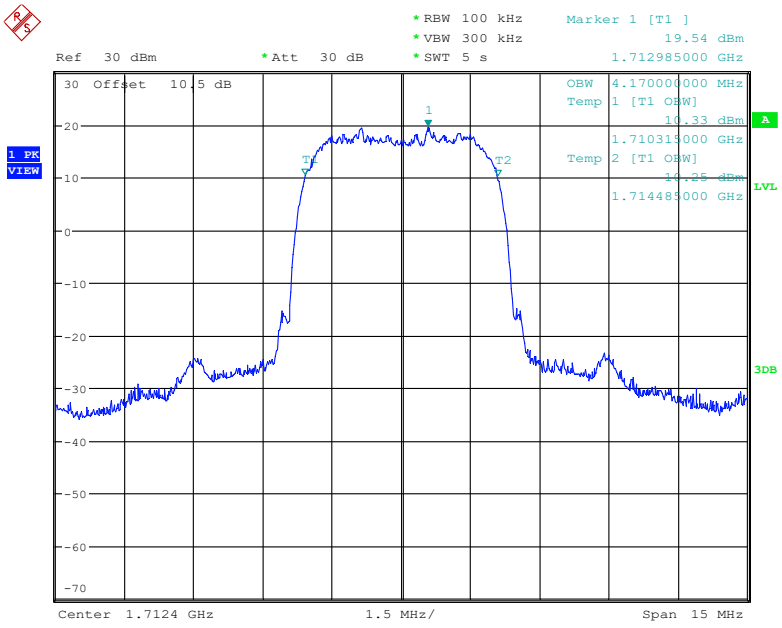
Date: 8.OCT.2022 14:32:31

AWS Band (Part 27)

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

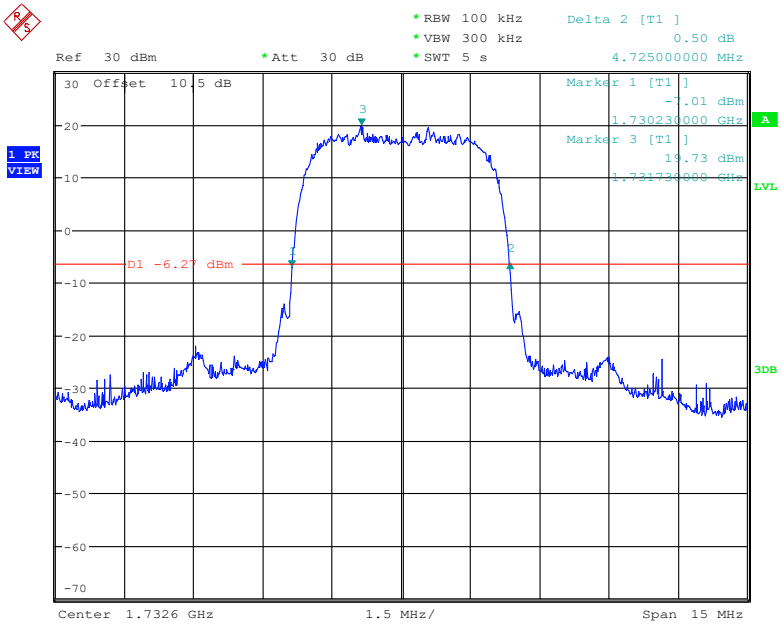


Date: 8.OCT.2022 13:59:21

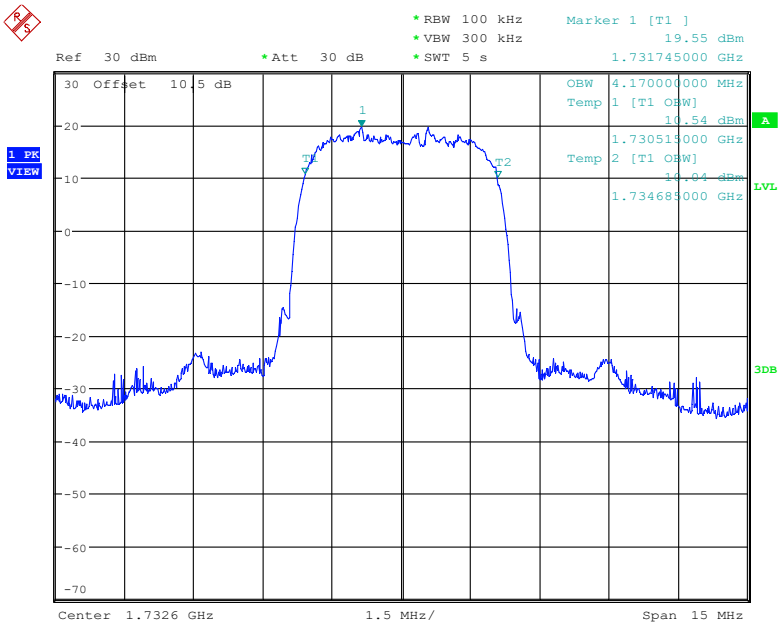


Date: 8.OCT.2022 13:58:41

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

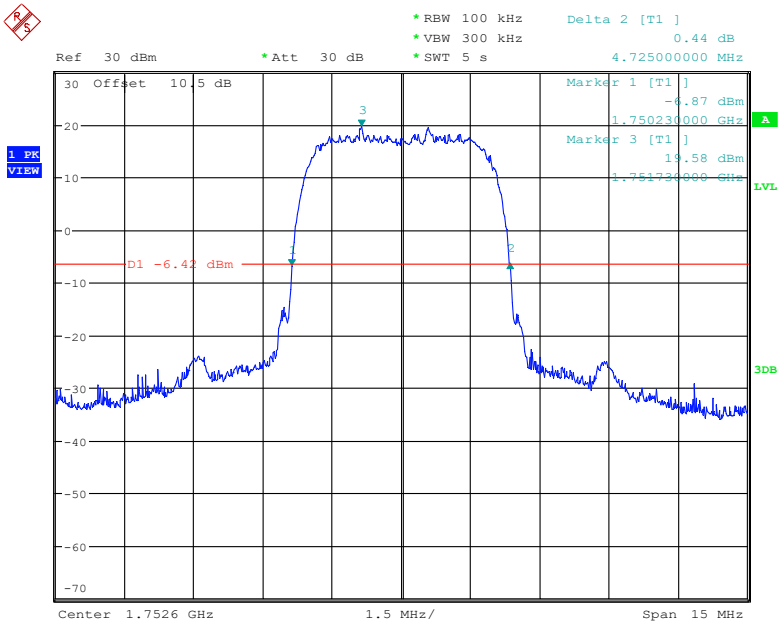


Date: 8.OCT.2022 14:04:30

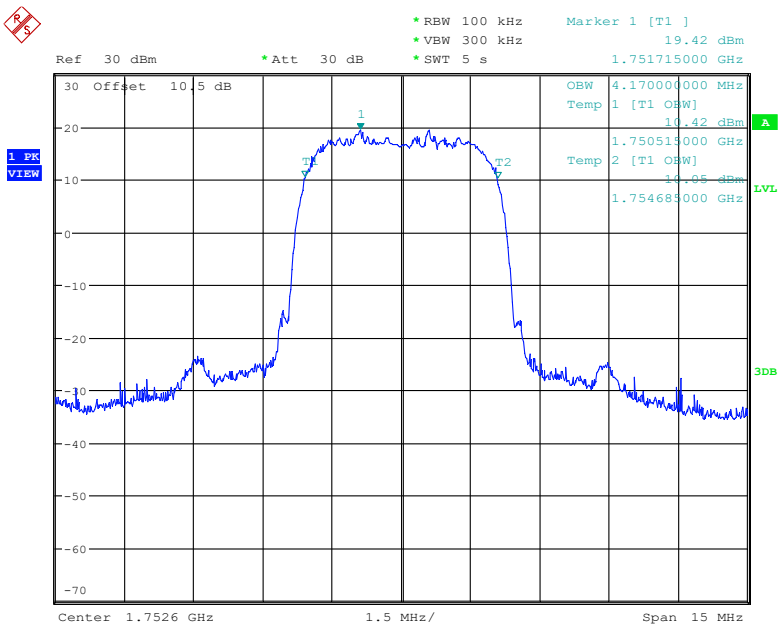


Date: 8.OCT.2022 14:03:51

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

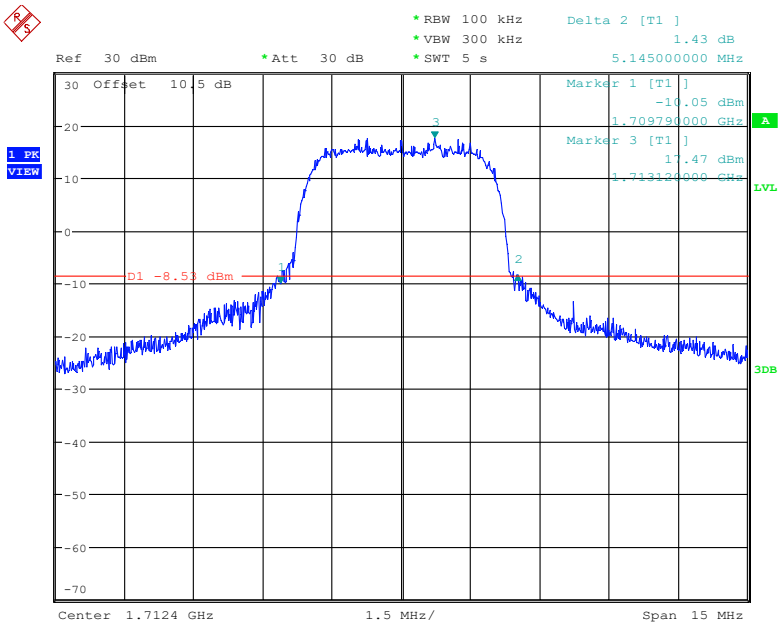


Date: 8.OCT.2022 14:07:48

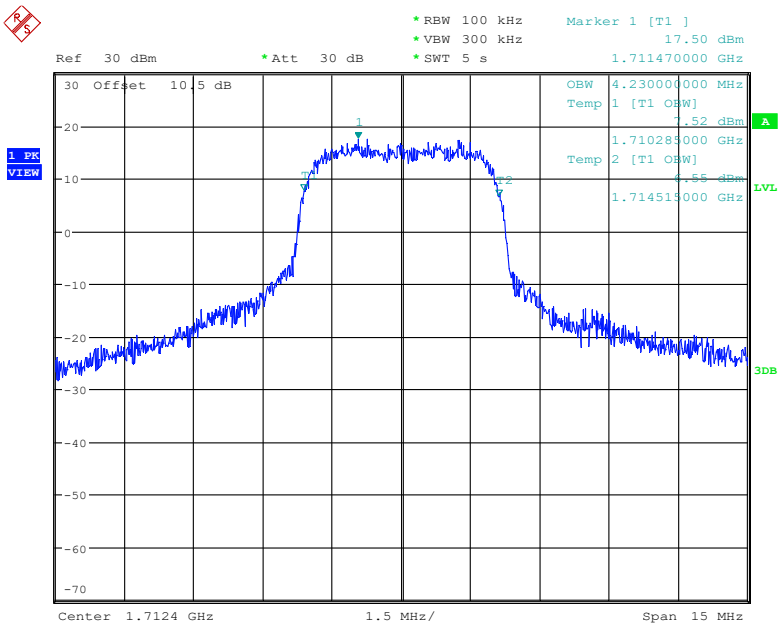


Date: 8.OCT.2022 14:07:08

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

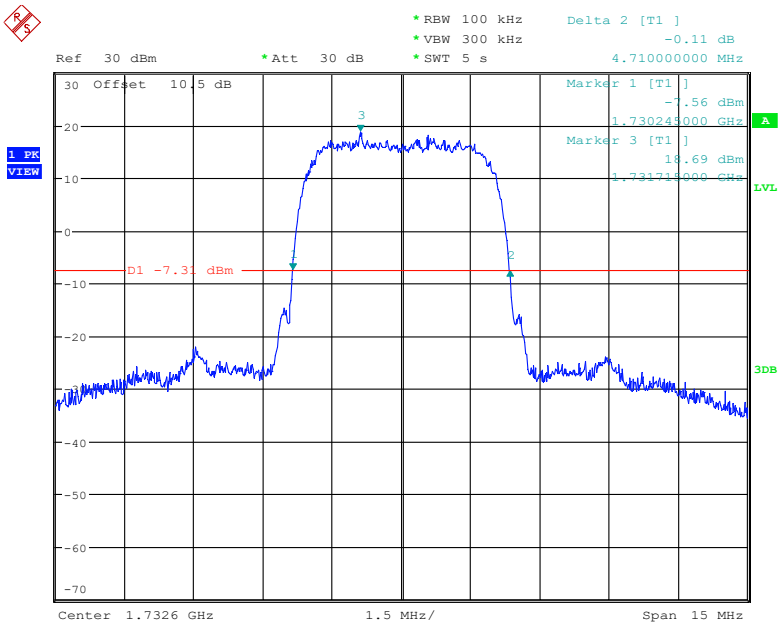


Date: 8.OCT.2022 15:24:34

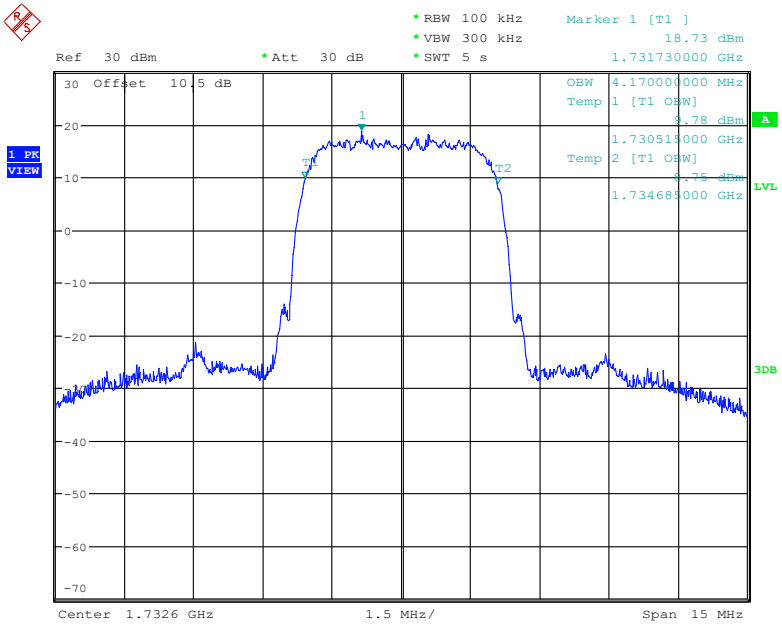


Date: 8.OCT.2022 15:23:55

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

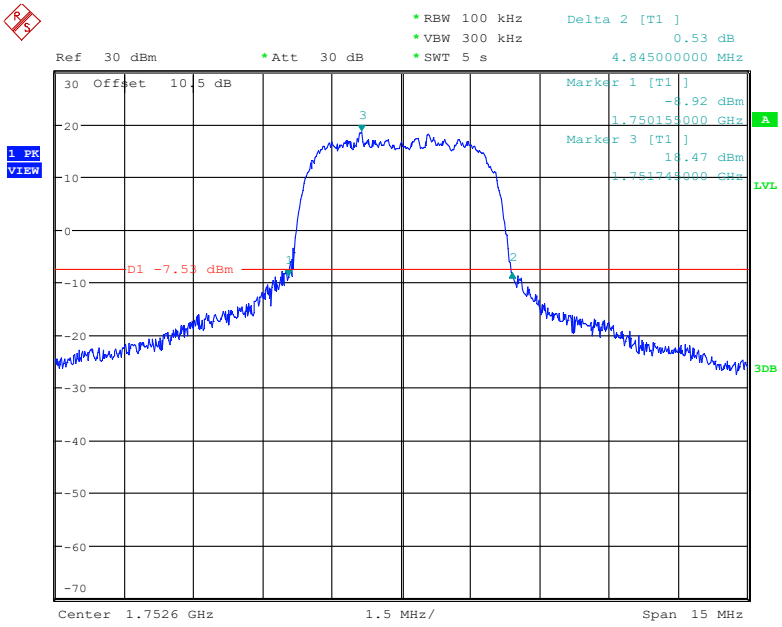


Date: 8.OCT.2022 15:31:39

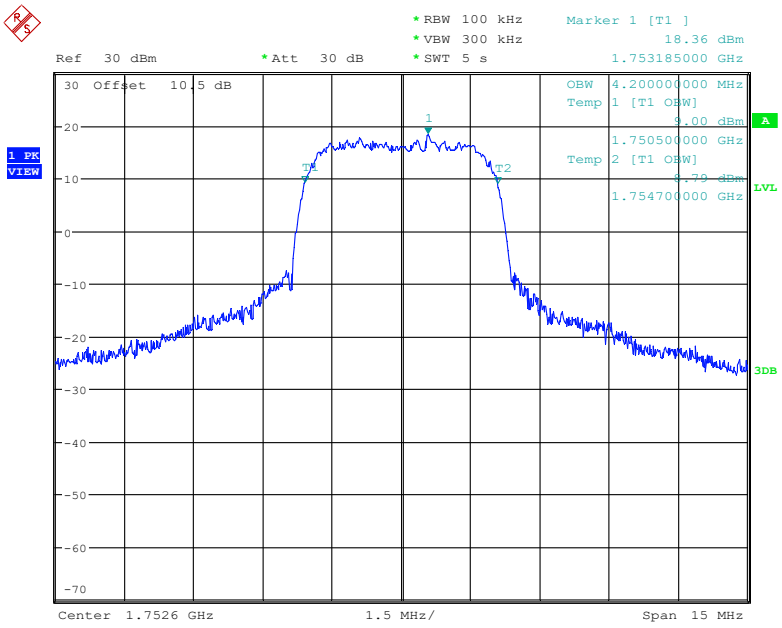


Date: 8.OCT.2022 15:31:00

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

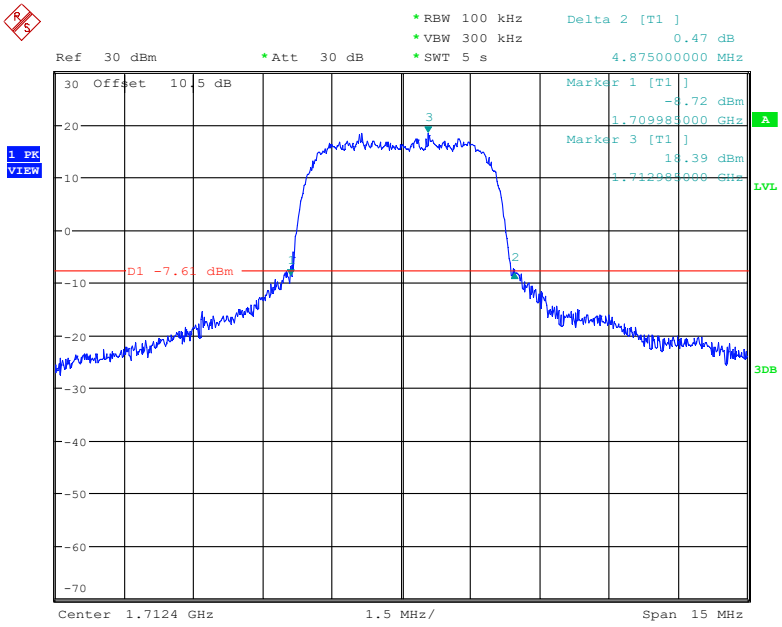


Date: 8.OCT.2022 15:35:09

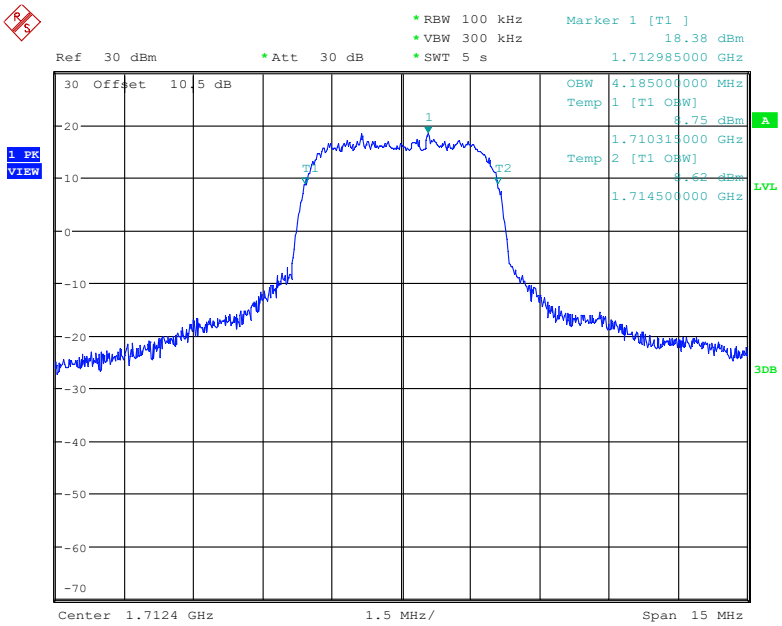


Date: 8.OCT.2022 15:34:28

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

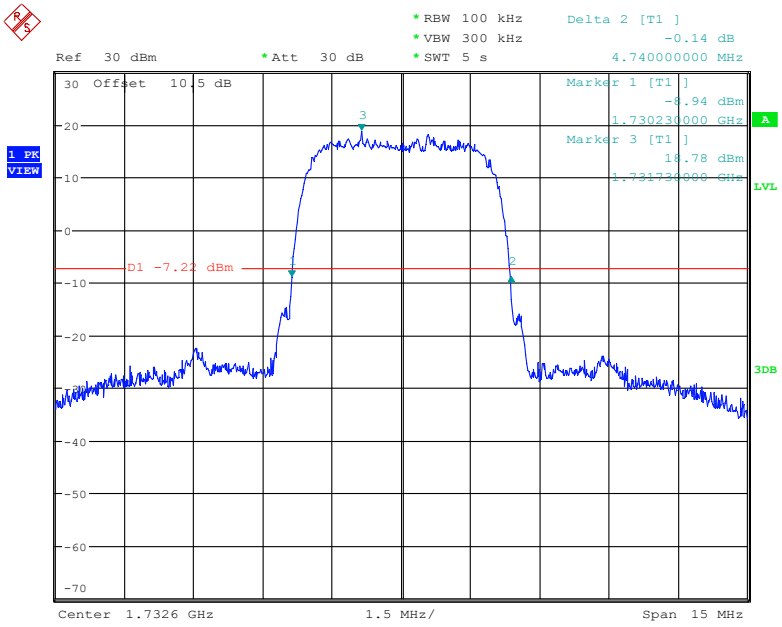


Date: 8.OCT.2022 14:38:00

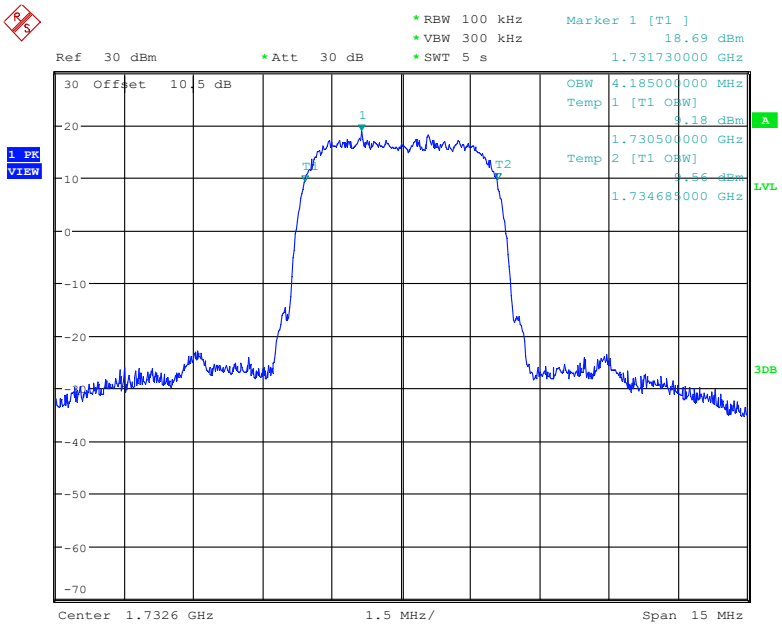


Date: 8.OCT.2022 14:37:20

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

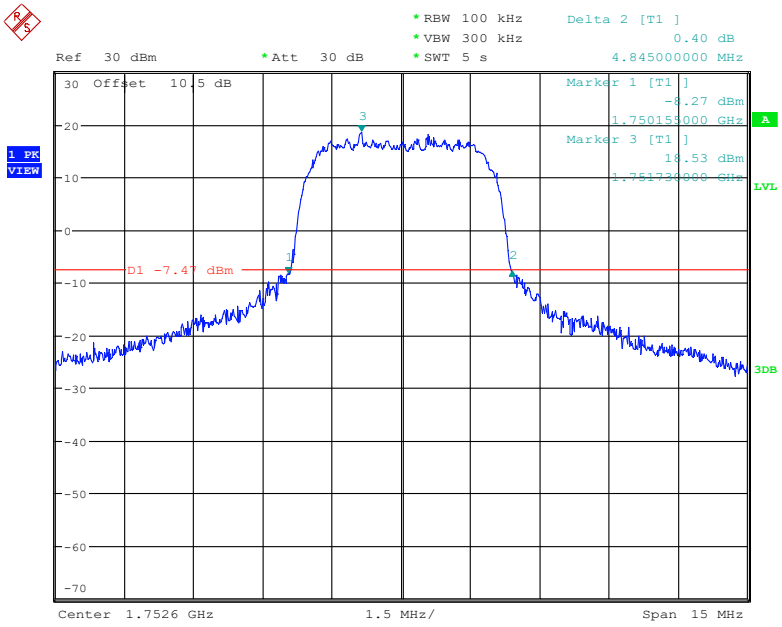


Date: 8.OCT.2022 14:42:11

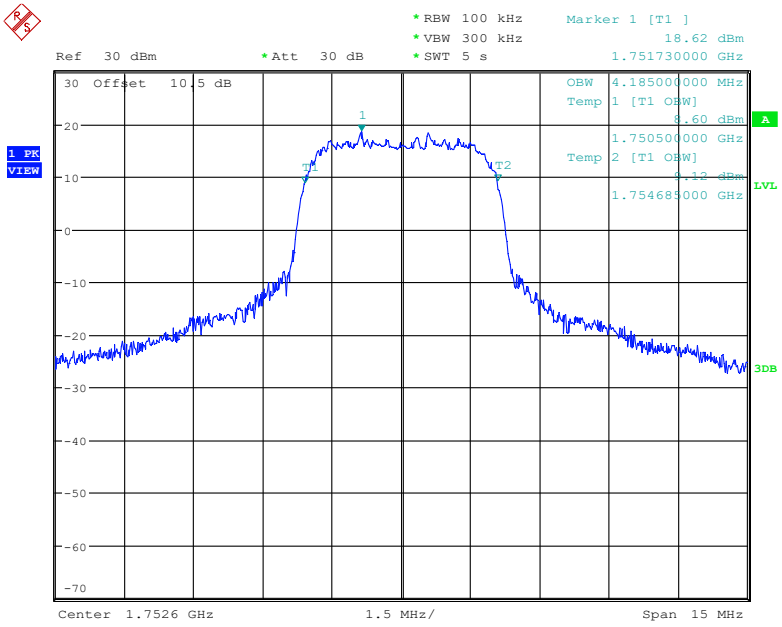


Date: 8.OCT.2022 14:41:31

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



Date: 8.OCT.2022 14:45:49



Date: 8.OCT.2022 14:45:10

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	1.092	1.314	1.104	1.284	1.098	1.302
	16QAM	1.092	1.290	1.098	1.290	1.110	1.314
3 MHz	QPSK	2.688	2.880	2.688	2.880	2.688	2.856
	16QAM	2.688	2.880	2.688	2.880	2.688	2.892
5 MHz	QPSK	4.520	4.940	4.500	4.920	4.520	4.940
	16QAM	4.520	4.940	4.500	4.980	4.520	4.940
10 MHz	QPSK	8.960	9.600	8.960	9.680	8.960	9.640
	16QAM	8.960	9.600	8.960	9.680	8.960	9.560
15 MHz	QPSK	13.560	14.760	13.500	14.880	13.500	14.760
	16QAM	13.500	14.760	13.500	14.820	13.560	14.820
20 MHz	QPSK	18.000	19.440	18.000	19.360	18.000	19.280
	16QAM	18.000	19.360	18.000	19.280	17.920	19.280

LTE Band 4:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.110	1.320	1.110	1.302	1.104	1.308
	16QAM	1.104	1.290	1.104	1.290	1.110	1.314
3 MHz	QPSK	2.688	2.880	2.688	2.880	2.688	2.892
	16QAM	2.688	2.880	2.688	2.892	2.688	2.928
5 MHz	QPSK	4.500	4.980	4.520	4.940	4.520	4.960
	16QAM	4.500	4.960	4.500	4.900	4.520	4.920
10 MHz	QPSK	8.960	9.680	8.960	9.640	8.960	9.600
	16QAM	8.960	10.000	8.960	9.560	8.960	9.600
15 MHz	QPSK	13.560	14.820	13.500	14.880	13.500	14.760
	16QAM	13.500	14.760	13.500	14.760	13.500	14.760
20 MHz	QPSK	17.920	19.280	18.000	19.360	18.000	19.360
	16QAM	18.000	19.520	17.920	19.520	18.000	19.280

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	1.098	1.320	1.104	1.296	1.098	1.308
	16QAM	1.098	1.416	1.098	1.296	1.110	1.326
3 MHz	QPSK	2.688	2.892	2.688	2.892	2.688	2.856
	16QAM	2.688	2.964	2.688	2.880	2.688	2.880
5 MHz	QPSK	4.500	4.920	4.500	4.940	4.520	4.920
	16QAM	4.500	4.960	4.500	4.940	4.520	4.900
10 MHz	QPSK	8.960	9.520	8.960	9.520	8.960	9.640
	16QAM	8.960	9.560	8.960	9.520	8.960	9.480

LTE Band 7:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.500	4.960	4.520	4.920	4.520	4.960
	16QAM	4.500	4.940	4.520	4.940	4.500	4.880
10 MHz	QPSK	8.960	9.640	8.960	9.640	8.960	9.600
	16QAM	8.960	9.640	8.960	9.520	8.960	9.600
15 MHz	QPSK	13.500	14.760	13.500	14.760	13.500	14.760
	16QAM	13.500	14.700	13.500	14.760	13.500	14.760
20 MHz	QPSK	18.000	19.280	18.000	19.360	18.000	19.520
	16QAM	18.000	19.360	18.000	19.360	18.000	19.360

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	4.960	4.520	4.880
	16QAM	4.500	4.980	4.500	5.180	4.500	5.040
10 MHz	QPSK	8.960	9.680	9.000	9.760	8.960	9.560
	16QAM	8.960	10.160	9.000	9.520	8.960	9.520
15 MHz	QPSK	13.500	15.180	13.500	15.600	13.500	15.060
	16QAM	13.560	16.140	13.500	16.140	13.560	15.960
20 MHz	QPSK	17.920	20.000	17.920	19.920	18.000	19.280
	16QAM	17.920	19.680	17.920	19.680	18.000	20.160

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	4.960	4.520	4.980	4.520	4.980
	16QAM	4.500	5.100	4.500	5.020	4.520	5.160
10 MHz	QPSK	9.000	9.640	8.960	9.800	9.000	9.680
	16QAM	8.960	9.520	9.000	9.920	8.960	9.520
15 MHz	QPSK	13.500	15.180	13.500	15.300	13.500	15.360
	16QAM	13.560	14.940	13.560	15.900	13.560	15.720
20 MHz	QPSK	18.000	19.520	17.920	19.920	18.000	19.440
	16QAM	18.000	19.680	17.920	19.280	17.920	19.440

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

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

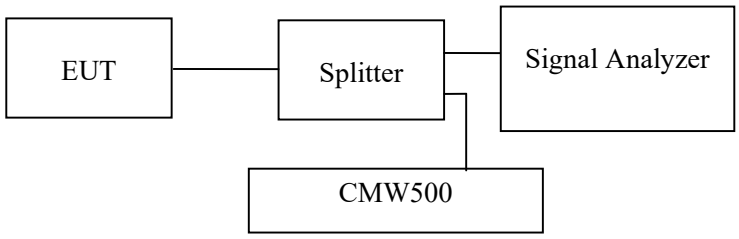
Applicable Standard

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 Andy Yu from 2022-09-30 to 2022-10-14.

EUT operation mode: Transmitting

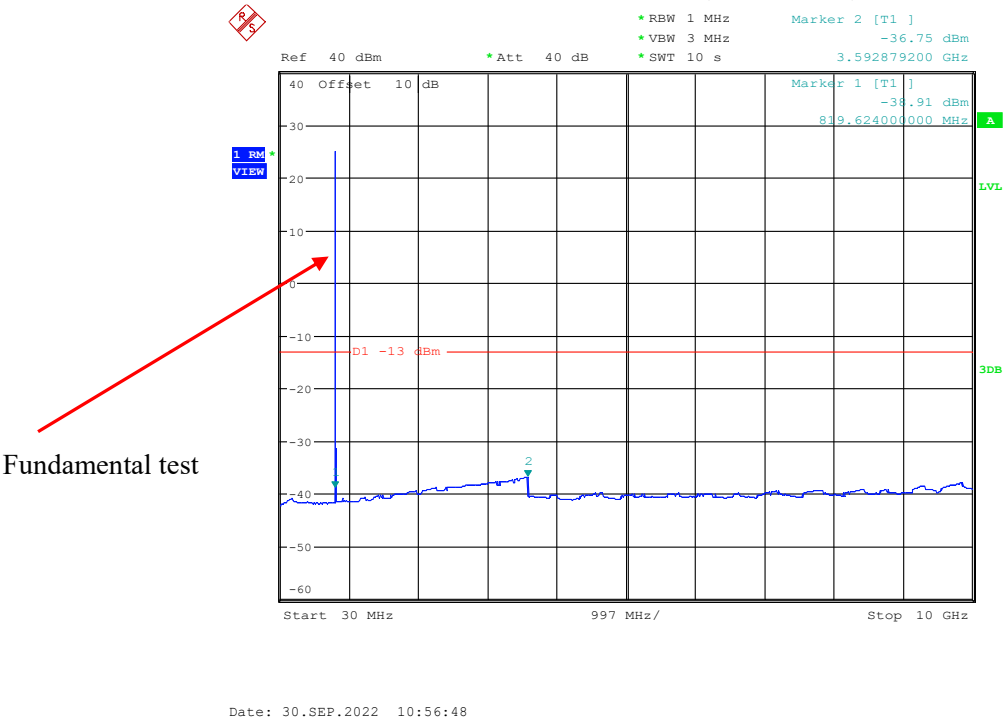
Test result: Pass

Please refer to the following plots.

Cellular Band (Part 22H)

Low Channel:

30 MHz – 10GHz (GSM Mode)

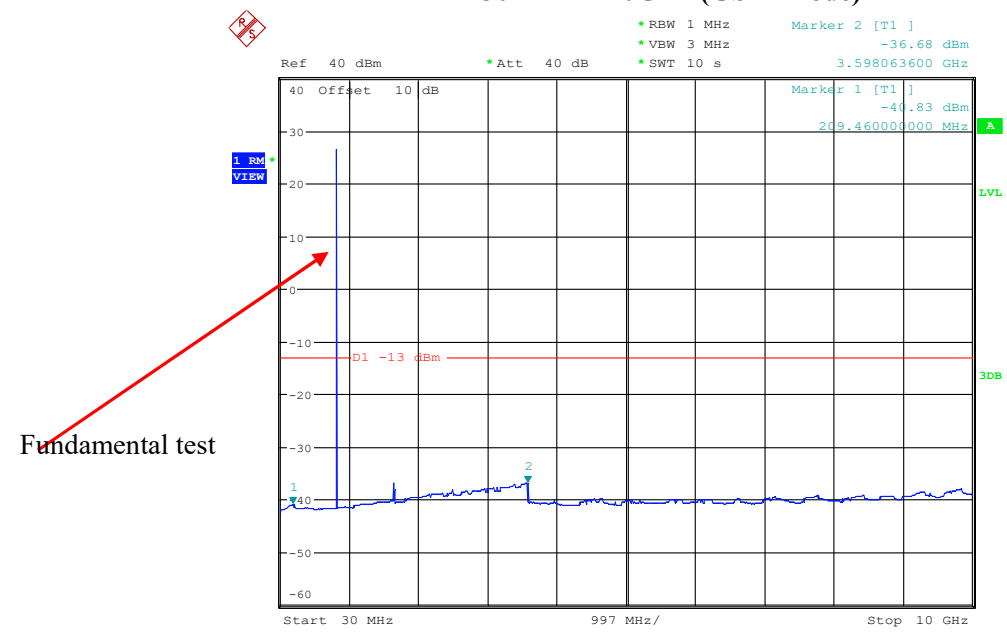


Fundamental test

Date: 30.SEP.2022 10:56:48

Middle Channel:

30 MHz – 10GHz (GSM Mode)

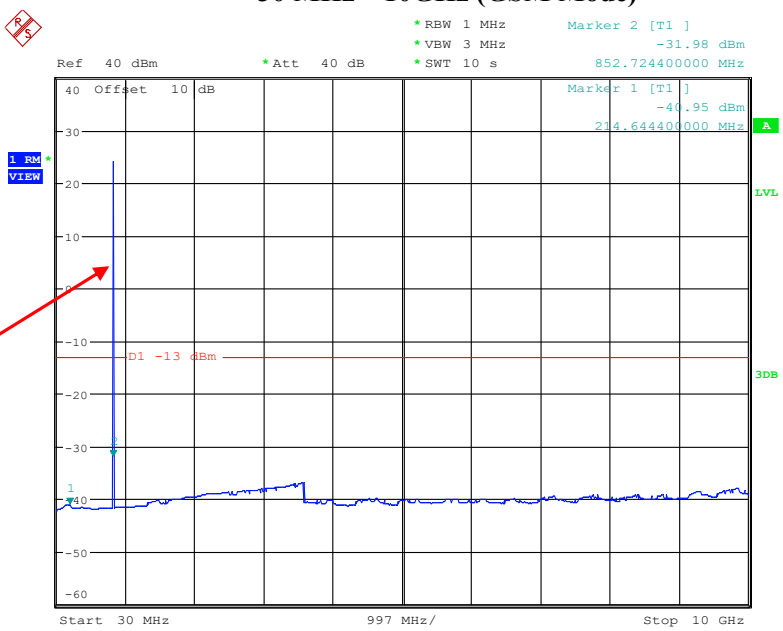


Fundamental test

Date: 30.SEP.2022 09:54:38

High Channel:

30 MHz – 10GHz (GSM Mode)

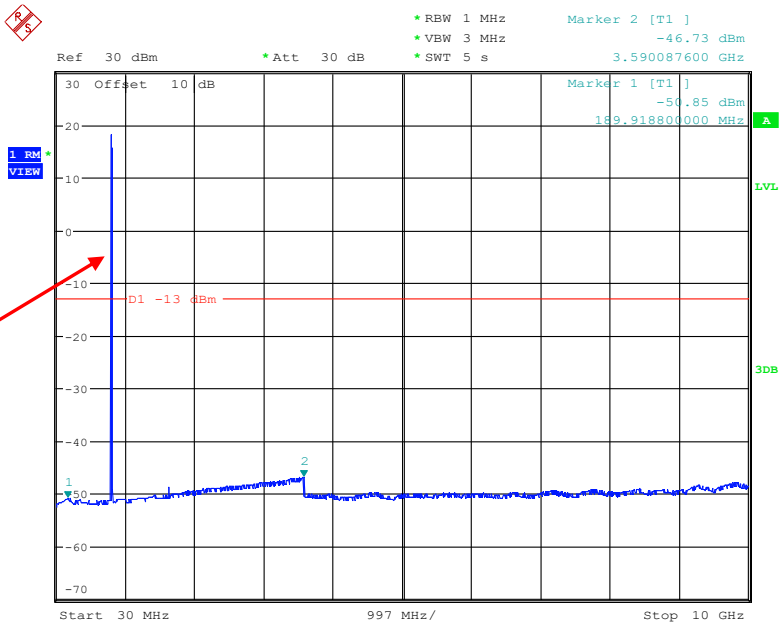


Fundamental test

Date: 30.SEP.2022 11:14:09

Low Channel:

30 MHz – 10GHz (WCDMA Mode)

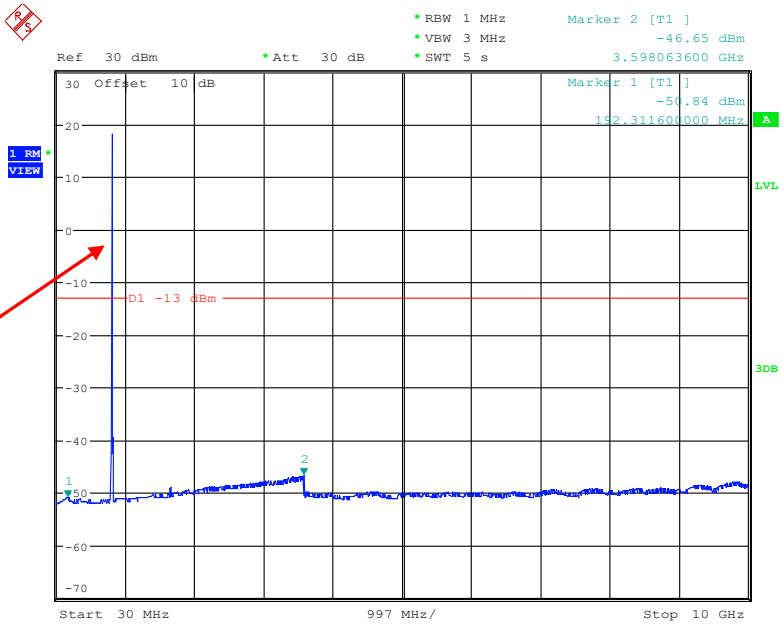


Fundamental test

Date: 8.OCT.2022 14:13:37

Middle Channel:

30 MHz – 10GHz (WCDMA Mode)

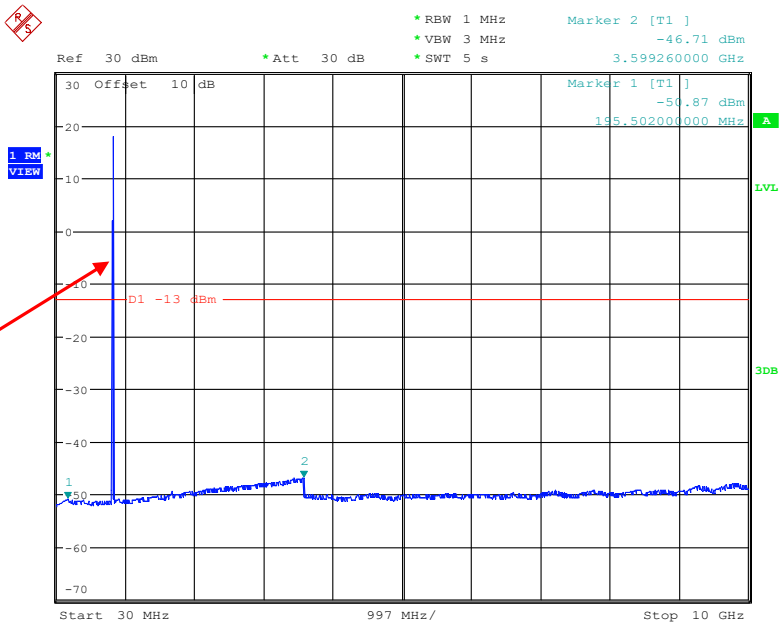


Fundamental test

Date: 8.OCT.2022 14:17:02

High Channel:

30 MHz – 10GHz (WCDMA Mode)



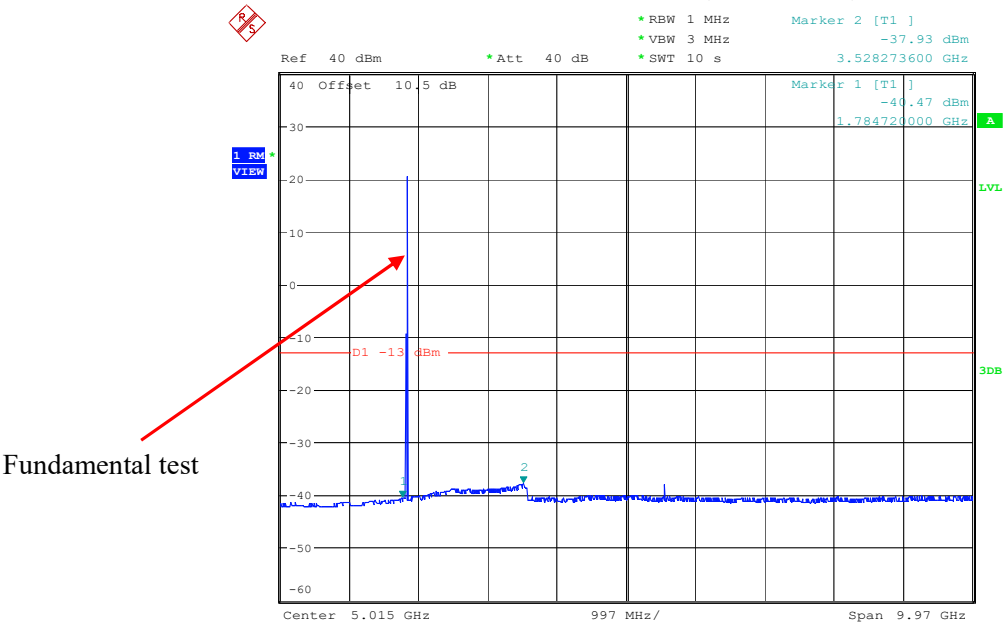
Fundamental test

Date: 8.OCT.2022 14:20:32

PCS Band (Part 24E)

Low Channel:

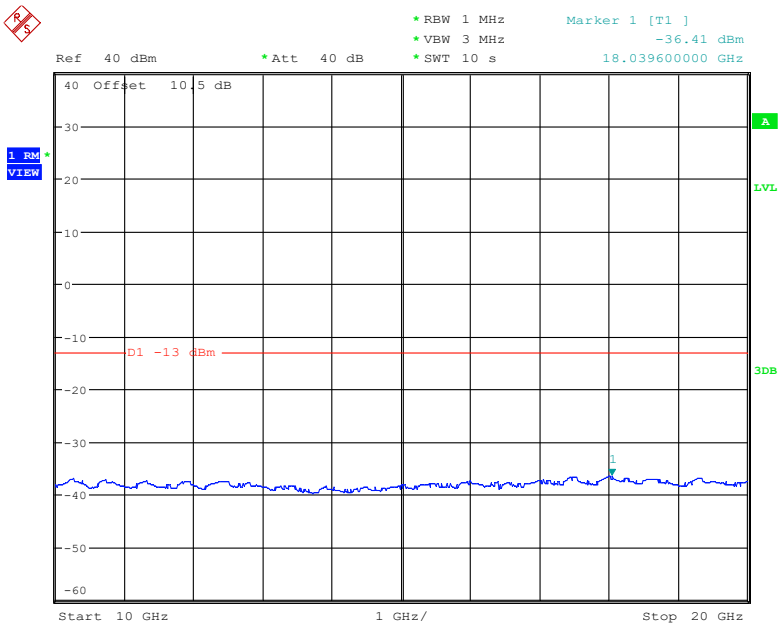
30 MHz – 10GHz (GSM Mode)



Fundamental test

Date: 14.OCT.2022 00:46:10

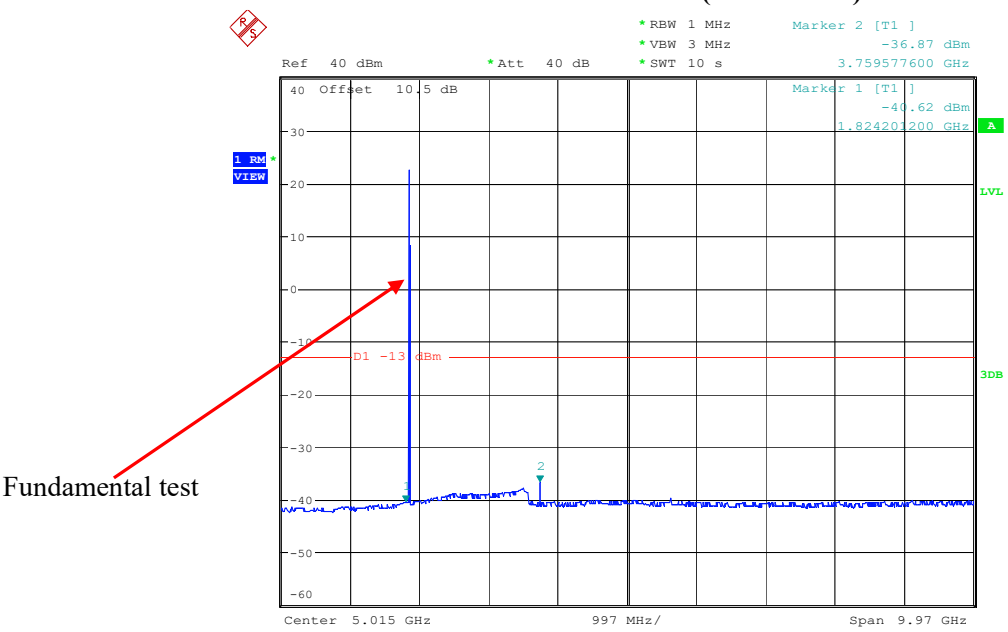
10 GHz – 20GHz (GSM Mode)



Date: 30.SEP.2022 10:49:14

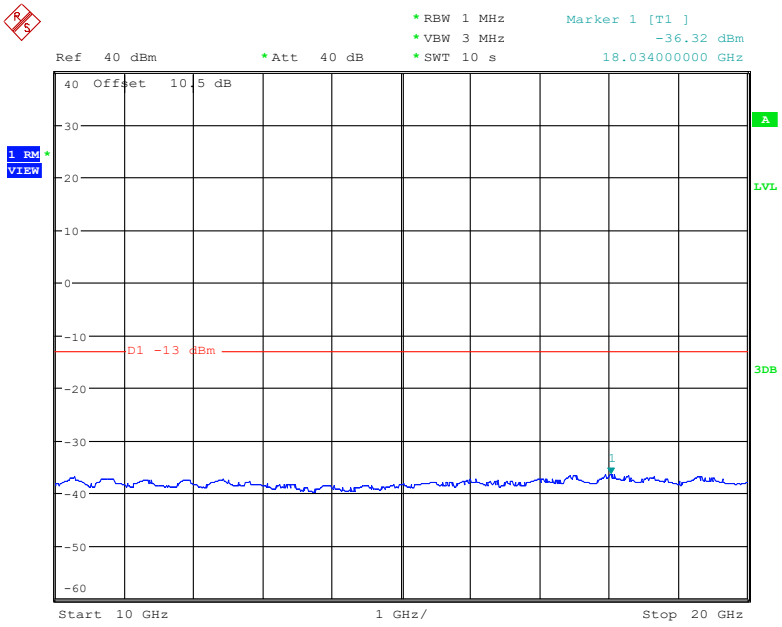
Middle Channel:

30 MHz – 10GHz (GSM Mode)



Date: 14.OCT.2022 00:45:24

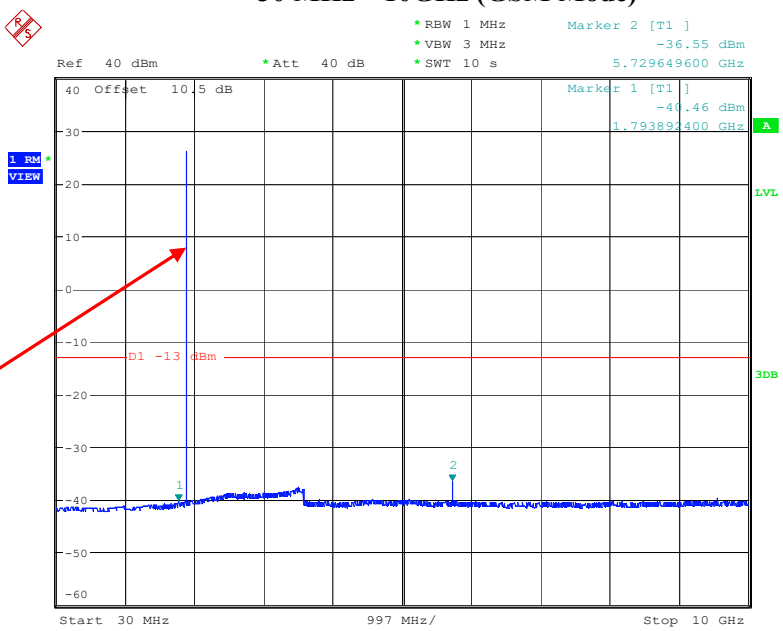
10 GHz – 20GHz (GSM Mode)



Date: 30.SEP.2022 10:10:03

High Channel:

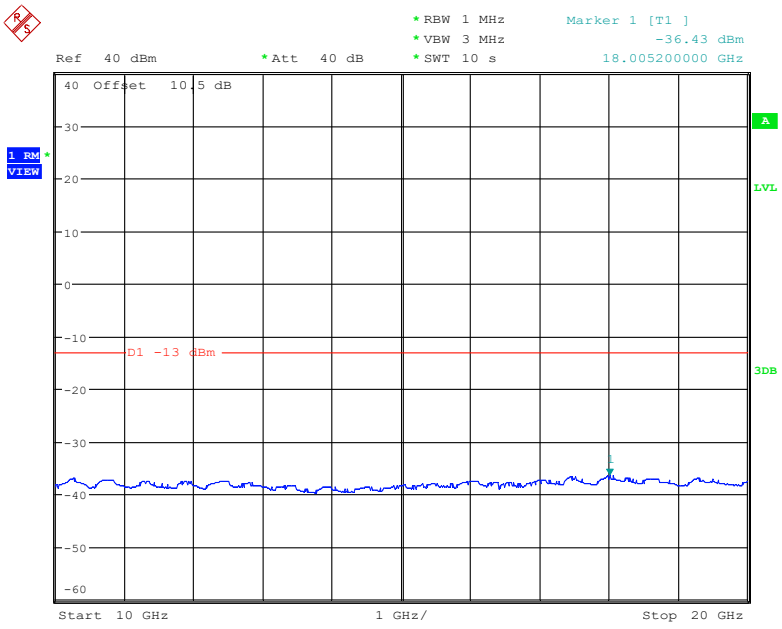
30 MHz – 10GHz (GSM Mode)



Fundamental test

Date: 14.OCT.2022 00:42:29

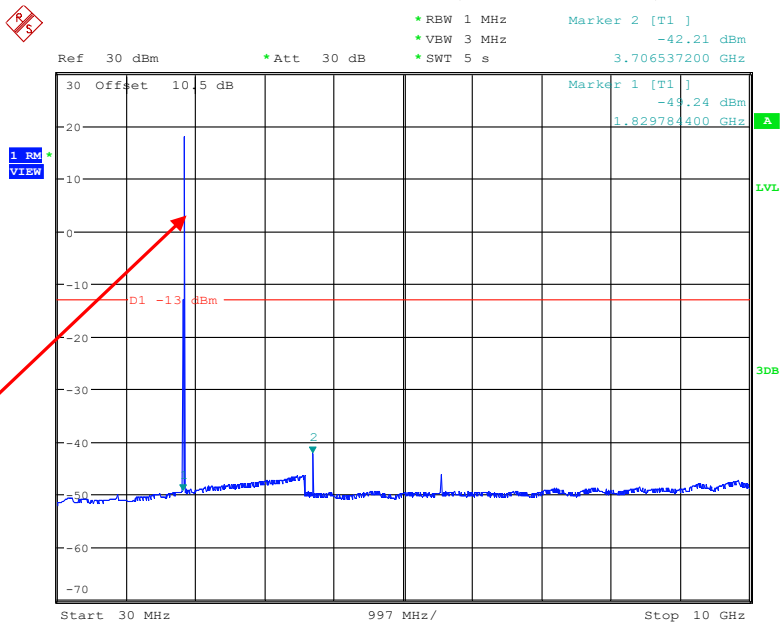
10 GHz – 20GHz (GSM Mode)



Date: 30.SEP.2022 10:14:50

Low Channel:

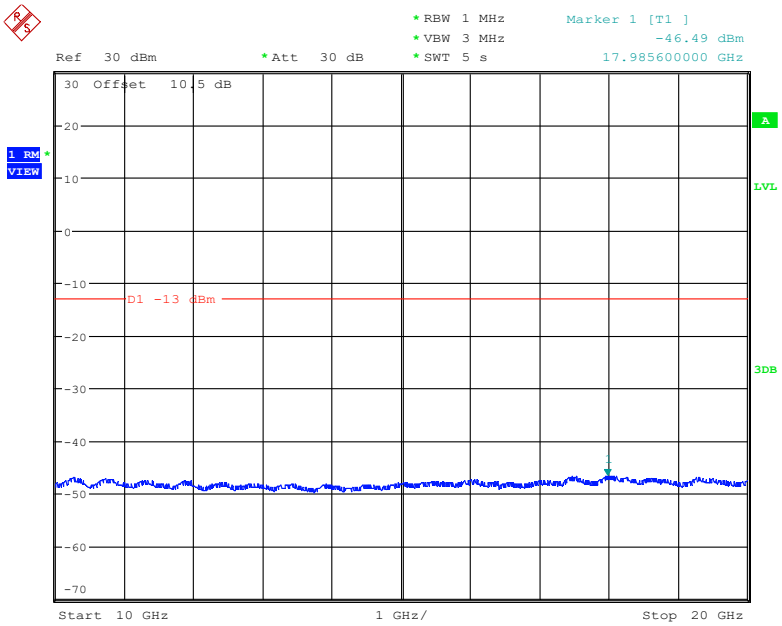
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 8.OCT.2022 13:52:18

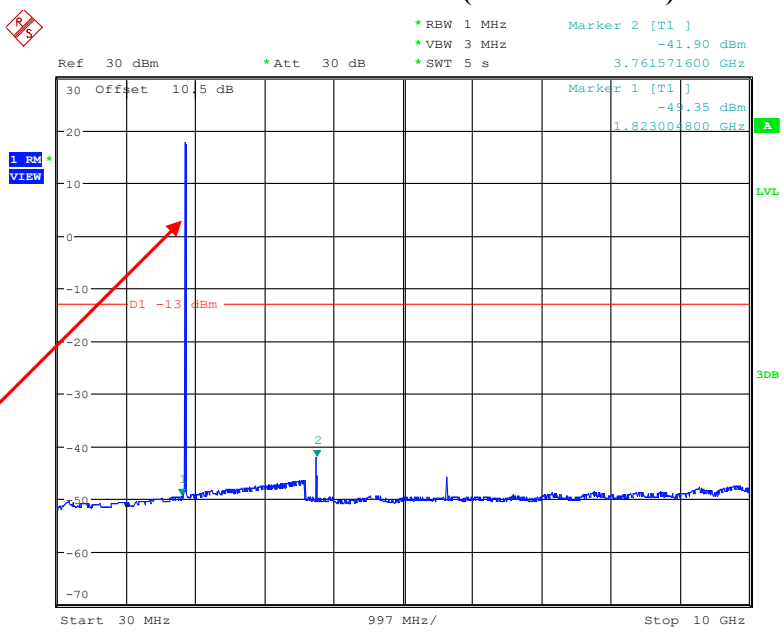
10 GHz – 20GHz (WCDMA Mode)



Date: 8.OCT.2022 13:53:00

Middle Channel:

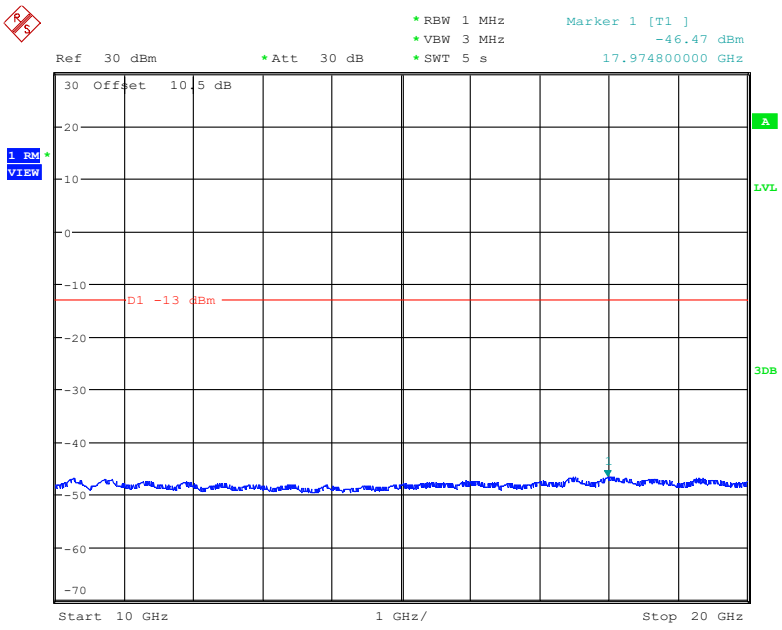
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 8.OCT.2022 13:48:11

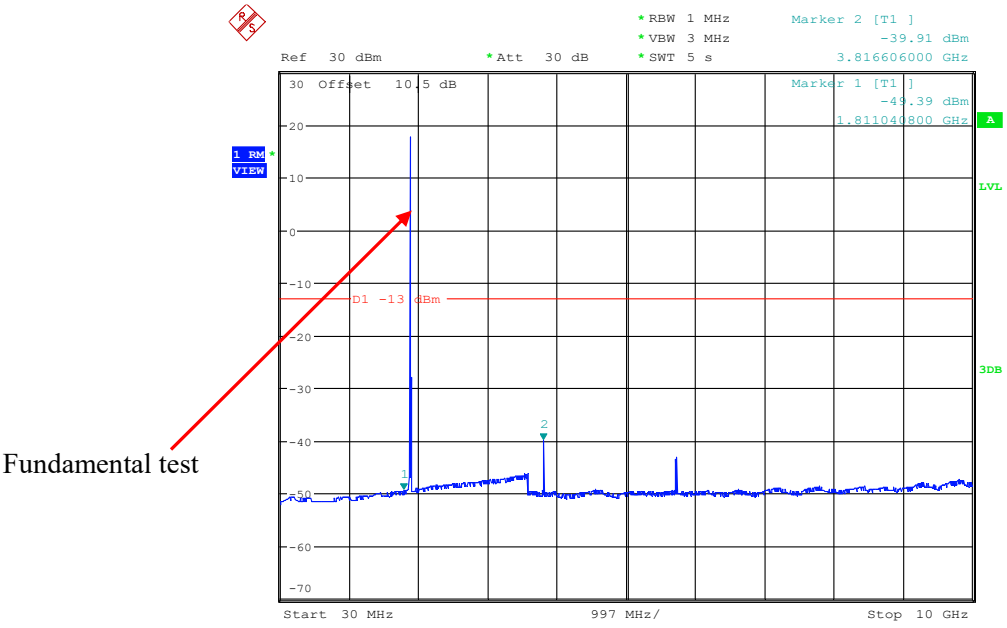
10 GHz – 20GHz (WCDMA Mode)



Date: 8.OCT.2022 13:48:53

High Channel:

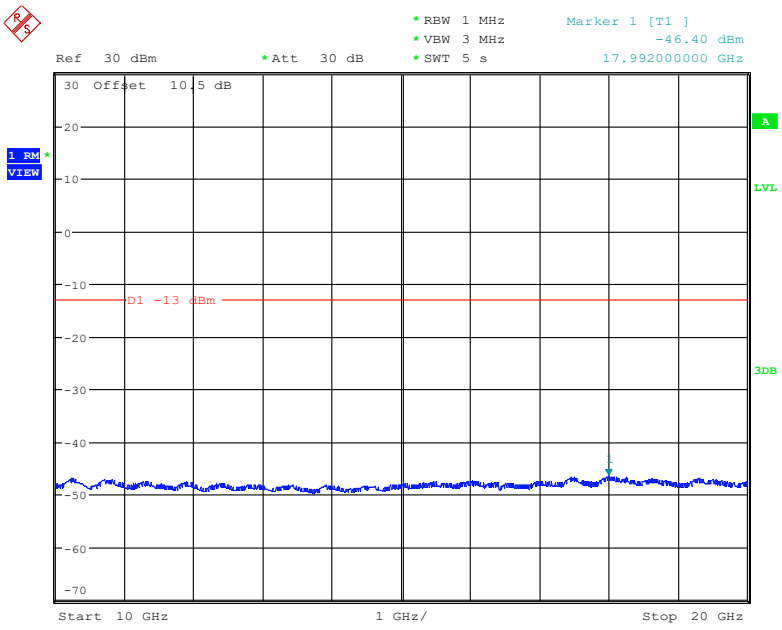
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 8.OCT.2022 13:56:21

10 GHz – 20GHz (WCDMA Mode)

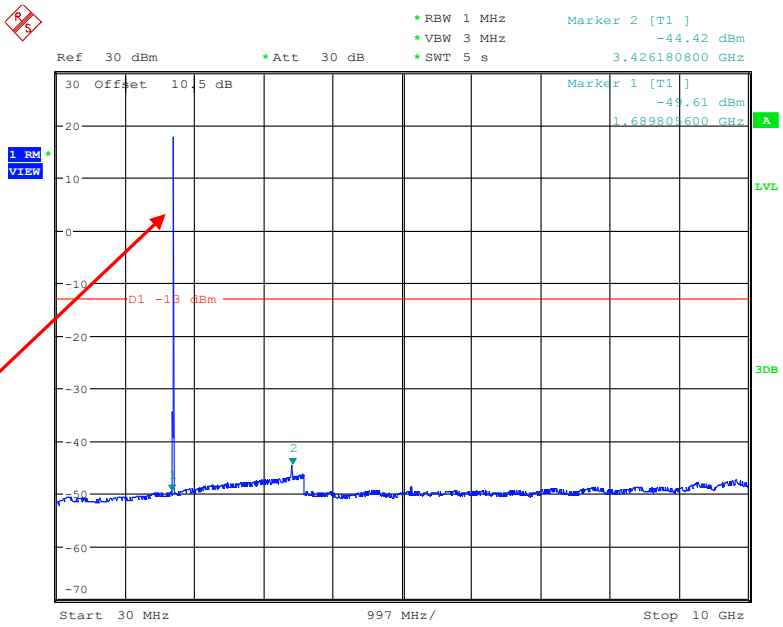


Date: 8.OCT.2022 13:57:02

AWS Band (Part 27)

Low Channel:

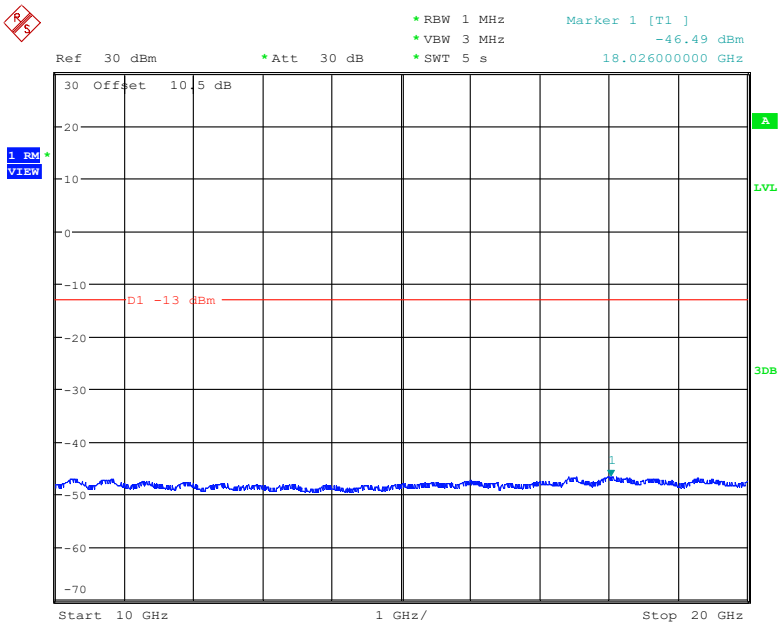
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 8.OCT.2022 14:00:41

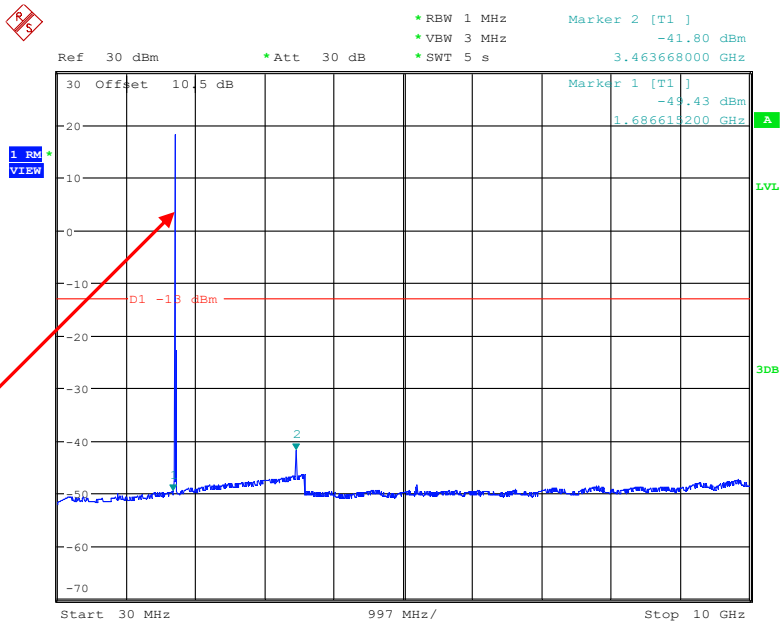
10 GHz – 20GHz (WCDMA Mode)



Date: 8.OCT.2022 14:01:22

Middle Channel:

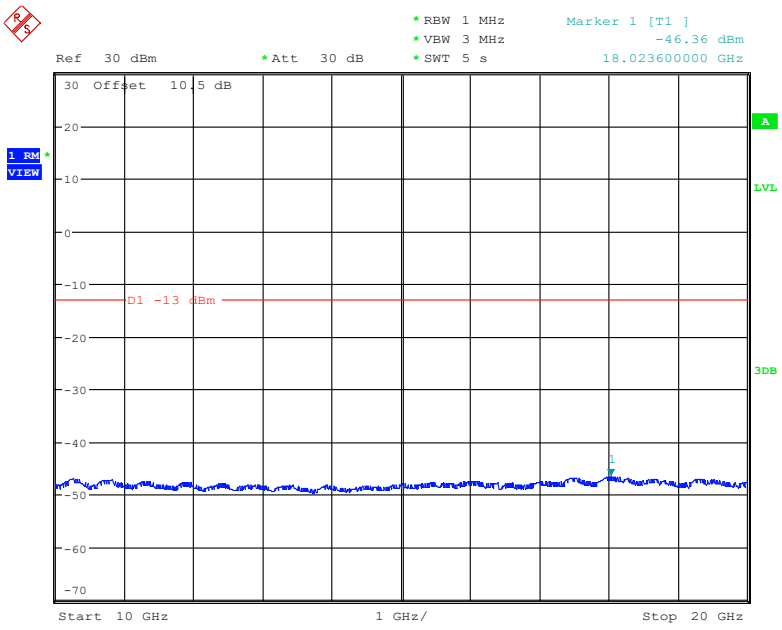
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 8.OCT.2022 14:05:11

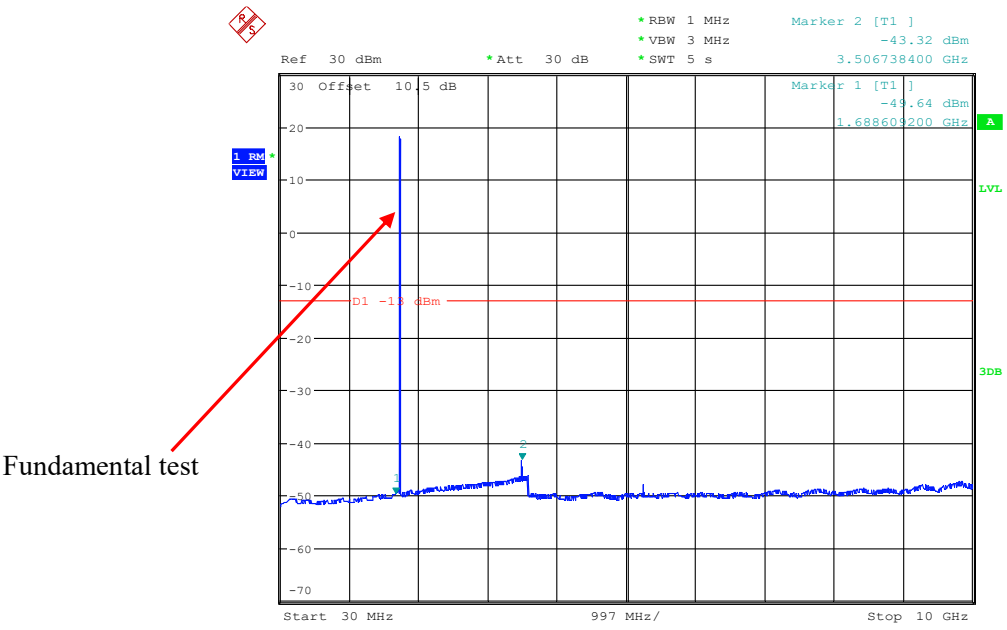
10 GHz – 20GHz (WCDMA Mode)



Date: 8.OCT.2022 14:05:52

High Channel:

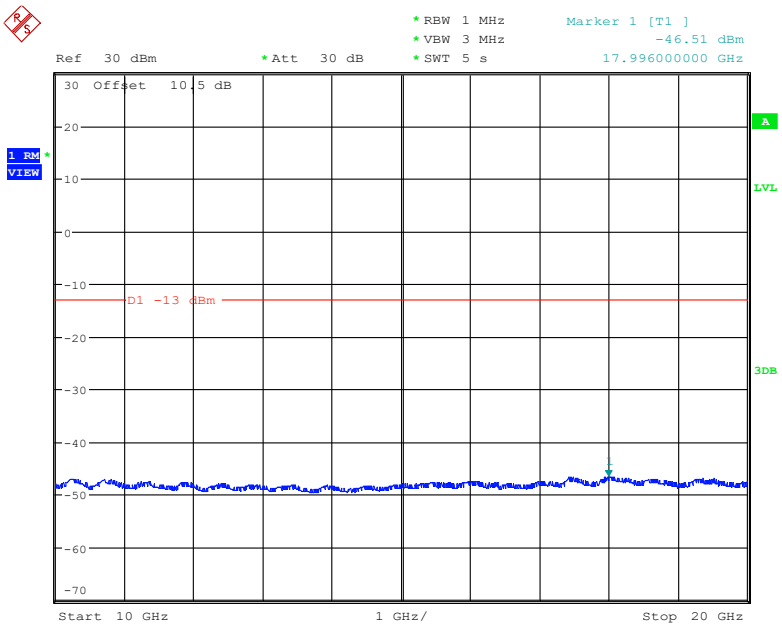
30 MHz – 10GHz (WCDMA Mode)



Fundamental test

Date: 8.OCT.2022 14:09:08

10 GHz – 20GHz (WCDMA Mode)



Date: 8.OCT.2022 14:09:50

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:	27~27.6℃
Relative Humidity:	56~62 %
ATM Pressure:	101.0kPa

The testing was performed by Jeff Jiang on 2022-10-08 for below 1GHz and 2022-10-09 for above 1GHz.

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

The worst case is as below:

30MHz-10GHz:

Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM850								
Low Channel								
961.3	-59.11	320	1.6	H	10.0	-49.11	-13	-36.11
961.3	-57.87	303	1.3	V	11.7	-46.17	-13	-33.17
1648.4	-60.50	340	2.3	H	3.5	-57.00	-13	-44.00
1648.4	-60.40	111	2.4	V	3.1	-57.30	-13	-44.30
2472.6	-55.20	340	1.2	H	6.6	-48.60	-13	-35.60
2472.6	-52.00	343	2.3	V	5.8	-46.20	-13	-33.20
3296.8	-51.50	9	2.2	H	6.4	-45.10	-13	-32.10
3296.8	-50.70	252	2.4	V	5.7	-45.00	-13	-32.00
Middle Channel								
960.61	-60.28	124	2	H	10.0	-50.28	-13	-37.28
960.61	-59.00	345	2.1	V	11.7	-47.30	-13	-34.30
1673.2	-60.20	190	2	H	3.8	-56.40	-13	-43.40
1673.2	-58.60	130	2.1	V	3.1	-55.50	-13	-42.50
2509.8	-55.20	60	1.9	H	6.2	-49.00	-13	-36.00
2509.8	-51.60	66	2.4	V	5.6	-46.00	-13	-33.00
3346.4	-51.50	127	2.5	H	6.6	-44.90	-13	-31.90
3346.4	-51.20	173	1.3	V	5.4	-45.80	-13	-32.80
High Channel								
959.87	-61.56	271	1.6	H	10.0	-51.56	-13	-38.56
959.87	-60.01	11	1.2	V	11.7	-48.31	-13	-35.31
1697.6	-59.70	133	1.2	H	4.1	-55.60	-13	-42.60
1697.6	-57.80	284	1.8	V	3.1	-54.70	-13	-41.70
2546.4	-54.70	271	1.3	H	6.1	-48.60	-13	-35.60
2546.4	-51.10	169	2.2	V	5.8	-45.30	-13	-32.30
3395.2	-52.60	140	1.1	H	6.2	-46.40	-13	-33.40
3395.2	-50.90	202	2.3	V	5.4	-45.50	-13	-32.50

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 5								
Low Channel								
961.44	-59.97	83	1.7	H	10.0	-49.97	-13	-36.97
961.44	-58.45	98	2	V	11.7	-46.75	-13	-33.75
1652.8	-57.10	74	1.5	H	3.5	-53.60	-13	-40.60
1652.8	-56.80	352	2	V	3.1	-53.70	-13	-40.70
2479.2	-56.40	37	2.2	H	6.6	-49.80	-13	-36.80
2479.2	-55.70	73	1.3	V	5.8	-49.90	-13	-36.90
3305.6	-51.20	240	1.5	H	6.4	-44.80	-13	-31.80
3305.6	-52.10	6	2.3	V	5.7	-46.40	-13	-33.40
Middle Channel								
960.2	-60.30	241	1.3	H	10.0	-50.300	-13	-37.30
960.2	-58.90	5	2.3	V	11.7	-47.2	-13	-34.20
1672.8	-58.40	204	1	H	3.8	-54.60	-13	-41.60
1672.8	-56.80	210	1.4	V	3.1	-53.70	-13	-40.70
2509.2	-56.80	82	1.9	H	6.2	-50.60	-13	-37.60
2509.2	-55.60	227	1.6	V	5.6	-50.00	-13	-37.00
3345.6	-52.30	192	2.3	H	6.6	-45.70	-13	-32.70
3345.6	-51.50	189	1.9	V	5.4	-46.10	-13	-33.10
High Channel								
959.83	-61.15	117	1.9	H	10.0	-51.15	-13	-38.15
959.83	-60.17	183	1.5	V	11.7	-48.47	-13	-35.47
1693.2	-57.30	163	2.3	H	4.1	-53.20	-13	-40.20
1693.2	-56.60	319	2.2	V	3.1	-53.50	-13	-40.50
2539.8	-56.40	183	2.5	H	6.1	-50.30	-13	-37.30
2539.8	-55.50	20	2.1	V	5.8	-49.70	-13	-36.70
3386.4	-51.00	240	2.5	H	6.2	-44.80	-13	-31.80
3386.4	-51.90	266	1.3	V	5.4	-46.50	-13	-33.50

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								
961.22	-59.89	237	2	H	10.0	-49.89	-13	-36.89
961.22	-58.00	305	2.5	V	11.7	-46.30	-13	-33.30
3700.4	-52.60	55	2.3	H	8.1	-44.50	-13	-31.50
3700.4	-51.90	281	2.0	V	7.6	-44.30	-13	-31.30
Middle Channel								
960.2	-59.62	53	1.9	H	10.0	-49.62	-13	-36.62
960.2	-58.99	169	1.7	V	11.7	-47.29	-13	-34.29
3760	-53.20	90	1.6	H	8.8	-44.40	-13	-31.40
3760	-53.00	87	2.4	V	8.0	-45.00	-13	-32.00
High Channel								
959.42	-61.56	243	1.9	H	10.0	-51.56	-13	-38.56
959.42	-60.42	76	2.4	V	11.7	-48.72	-13	-35.72
3819.6	-51.70	313	1.1	H	8.7	-43.00	-13	-30.00
3819.6	-51.70	112	1.3	V	7.9	-43.80	-13	-30.80

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Low Channel								
961.11	-60.00	44	2.3	H	10.0	-50.00	-13	-37.00
961.11	-57.82	275	1.1	V	11.7	-46.12	-13	-33.12
3704.8	-54.50	189	2.0	H	8.1	-46.40	-13	-33.40
3704.8	-53.80	237	1.8	V	7.6	-46.20	-13	-33.20
Middle Channel								
960.69	-60.10	235	1.8	H	10.0	-50.10	-13	-37.10
960.69	-58.70	214	1.8	V	11.7	-47.00	-13	-34.00
3760	-55.20	43	1.2	H	8.8	-46.40	-13	-33.40
3760	-54.50	292	1.3	V	8.0	-46.50	-13	-33.50
High Channel								
959.5	-61.55	272	1.6	H	10.0	-51.55	-13	-38.55
959.5	-60.35	125	1.4	V	11.7	-48.65	-13	-35.65
3815.2	-54.10	288	1.6	H	8.7	-45.40	-13	-32.40
3815.2	-54.70	257	2.3	V	7.9	-46.80	-13	-33.80

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								
961.25	-59.12	128	1.8	H	10.0	-49.12	-13	-36.12
961.25	-58.66	168	2.1	V	11.7	-46.96	-13	-33.96
3424.8	-51.00	142	1.3	H	6.4	-44.60	-13	-31.60
3424.8	-50.60	132	1.5	V	5.8	-44.80	-13	-31.80
Middle Channel								
960.14	-59.72	30	1.6	H	10.0	-49.72	-13	-36.72
960.14	-58.44	229	2.4	V	11.7	-46.74	-13	-33.74
3465.2	-52.60	61	1.6	H	7.0	-45.60	-13	-32.60
3465.2	-53.00	129	1.5	V	6.2	-46.80	-13	-33.80
High Channel								
959.14	-60.63	27	1.8	H	10.0	-50.63	-13	-37.63
959.14	-60.53	303	1.9	V	11.7	-48.83	-13	-35.83
3505.2	-53.10	325	1.4	H	7.8	-45.30	-13	-32.30
3505.2	-52.60	218	1.3	V	6.5	-46.10	-13	-33.10

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

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 2								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, Low Channel								
961.5	-59.19	143	1.5	H	10.0	-49.19	-13	-36.19
961.5	-58.46	98	1.5	V	11.7	-46.76	-13	-33.76
3701.4	-49.90	1	1.7	H	8.1	-41.80	-13	-28.80
3701.4	-49.20	173	1.3	V	7.6	-41.60	-13	-28.60
1.4MHz bandwidth, Middle Channel								
960.75	-59.59	309	1.4	H	10.0	-49.59	-13	-36.59
960.75	-58.51	12	1.3	V	11.7	-46.81	-13	-33.81
3760.0	-50.60	162	1.6	H	8.8	-41.80	-13	-28.80
3760.0	-49.30	35	1.3	V	8.0	-41.30	-13	-28.30
1.4MHz bandwidth, High Channel								
960.06	-60.67	3	1.6	H	10.0	-50.67	-13	-37.67
960.06	-60.58	16	2.4	V	11.7	-48.88	-13	-35.88
3818.6	-51.10	50	2.3	H	8.7	-42.40	-13	-29.40
3818.6	-49.80	185	1.6	V	7.9	-41.90	-13	-28.90

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 4								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, Low Channel								
961.6	-59.86	203	1.8	H	10.0	-49.86	-13	-36.86
961.6	-58.80	288	2.1	V	11.7	-47.10	-13	-34.10
3421.4	-51.00	119	1.3	H	6.4	-44.60	-13	-31.60
3421.4	-50.20	240	1.9	V	5.8	-44.40	-13	-31.40
1.4MHz bandwidth, Middle Channel								
960.17	-59.94	179	1.8	H	10.0	-49.94	-13	-36.94
960.17	-58.80	141	2	V	11.7	-47.1	-13	-34.10
3465.0	-51.60	316	1.7	H	7.0	-44.60	-13	-31.60
3465.0	-51.40	242	2.3	V	6.2	-45.20	-13	-32.20
1.4MHz bandwidth, High Channel								
959.31	-60.64	252	1.3	H	10.0	-50.64	-13	-37.64
959.31	-60.29	99	2.3	V	11.7	-48.59	-13	-35.59
3508.6	-52.90	339	1.1	H	7.8	-45.10	-13	-32.10
3508.6	-51.80	305	2	V	6.5	-45.30	-13	-32.30

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 5								
Test frequency range: 30MHz-10GHz								
1.4MHz bandwidth, Low Channel								
961.2	-59.13	304	2.2	H	10.0	-49.13	-13	-36.13
961.2	-58.57	39	2.1	V	11.7	-46.87	-13	-33.87
1649.4	-58.50	107	1.7	H	3.5	-55.00	-13	-42.00
1649.4	-59.10	289	1.5	V	3.1	-56.00	-13	-43.00
2474.1	-56.90	44	2	H	6.6	-50.30	-13	-37.30
2474.1	-55.80	162	2.2	V	5.8	-50.00	-13	-37.00
3298.8	-52.40	253	2.3	H	6.4	-46.00	-13	-33.00
3298.8	-51.70	274	1.7	V	5.7	-46.00	-13	-33.00
1.4MHz bandwidth, Middle Channel								
961.09	-59.52	44	2.3	H	10.0	-49.52	-13	-36.52
961.09	-58.11	206	1.8	V	11.7	-46.41	-13	-33.41
1673.0	-57.80	269	2.2	H	3.8	-54.00	-13	-41.00
1673.0	-55.20	80	2.4	V	3.1	-52.10	-13	-39.10
2509.5	-56.20	301	2.4	H	6.2	-50.00	-13	-37.00
2509.5	-55.20	123	1.2	V	5.6	-49.60	-13	-36.60
3346.0	-52.00	58	2.3	H	6.6	-45.40	-13	-32.40
3346.0	-52.00	97	1.4	V	5.4	-46.60	-13	-33.60
1.4MHz bandwidth, High Channel								
959.16	-61.20	6	1.6	H	10.0	-51.20	-13	-38.20
959.16	-60.38	317	2.3	V	11.7	-48.68	-13	-35.68
1696.6	-57.80	218	2.4	H	4.1	-53.70	-13	-40.70
1696.6	-55.50	26	1.1	V	3.1	-52.40	-13	-39.40
2544.9	-56.60	358	2.2	H	6.1	-50.50	-13	-37.50
2544.9	-55.60	110	1.1	V	5.8	-49.80	-13	-36.80
3393.2	-51.80	184	1.1	H	6.2	-45.60	-13	-32.60
3393.2	-51.10	325	2.0	V	5.4	-45.70	-13	-32.70

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 7								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, Low Channel								
961.12	-59.95	169	1.1	H	10.0	-49.95	-25	-24.95
961.12	-58.61	11	1.1	V	11.7	-46.91	-25	-21.91
5005	-56.60	271	1.6	H	10.8	-45.80	-25	-20.80
5005	-55.10	351	1.8	V	10.2	-44.90	-25	-19.90
5MHz bandwidth, Middle Channel								
960.76	-59.57	32	1.9	H	10.0	-49.57	-25	-24.57
960.76	-58.76	207	2.4	V	11.7	-47.06	-25	-22.06
5070	-56.50	175	1	H	11.1	-45.40	-25	-20.40
5070	-56.00	176	1.8	V	10.8	-45.20	-25	-20.20
5MHz bandwidth, High Channel								
961.26	-59.62	207	1.1	H	10.0	-49.62	-25	-24.62
961.26	-58.33	136	2.2	V	11.7	-46.63	-25	-21.63
5135	-56.70	350	1.2	H	11.3	-45.40	-25	-20.40
5135	-55.70	359	1.4	V	10.8	-44.90	-25	-19.90

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 38								
Test frequency range: 30MHz-26.5GHz								
5MHz, Low Channel								
961.01	-60.16	151	1.6	H	10.0	-50.16	-25	-25.16
961.01	-58.15	310	1.5	V	11.7	-46.45	-25	-21.45
5145	-56.20	48	2	H	11.4	-44.80	-25	-19.80
5145	-55.50	132	2.2	V	10.7	-44.80	-25	-19.80
5MHz, Middle Channel								
960.98	-59.54	33	1.9	H	10.0	-49.54	-25	-24.54
960.98	-57.84	199	1.1	V	11.7	-46.14	-25	-21.14
5190	-55.40	31	1.1	H	10.5	-44.90	-25	-19.90
5190	-54.70	165	1.9	V	10.0	-44.70	-25	-19.70
5MHz, High Channel								
960.12	-60.23	223	2.2	H	10.0	-50.23	-25	-25.23
960.12	-59.00	70	1.3	V	11.7	-47.30	-25	-22.30
5235	-54.4	165	1.5	H	9.7	-44.70	-25	-19.70
5235	-54.2	266	1.9	V	9.2	-45.00	-25	-20.00

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 41								
Test frequency range: 30MHz-26.5GHz								
5MHz, Low Channel								
961.54	-59.84	318	2.4	H	10.0	-49.84	-25	-24.84
961.54	-58.62	199	1.4	V	11.7	-46.92	-25	-21.92
5075	-54.1	93	1.3	H	11.2	-42.90	-25	-17.90
5075	-55.10	293	2.4	V	10.8	-44.30	-25	-19.30
5MHz bandwidth, Middle Channel								
961.57	-59.96	63	2.4	H	10.0	-49.96	-25	-24.96
961.57	-57.86	201	2.5	V	11.7	-46.16	-25	-21.16
5190	-53.30	47	1.9	H	10.5	-42.80	-25	-17.80
5190	-54.10	334	2.1	V	10	-44.10	-25	-19.10
5MHz bandwidth, High Channel								
960.21	-59.63	120	1.4	H	10.0	-49.63	-25	-24.63
960.21	-58.54	194	1.4	V	11.7	-46.84	-25	-21.84
5305	-52.30	94	1.5	H	9.6	-42.70	-25	-17.70
5305	-51.40	178	1	V	8.8	-42.60	-25	-17.60

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

FCC§ 22.917 (a); § 24.238 (a); §27.53 (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.

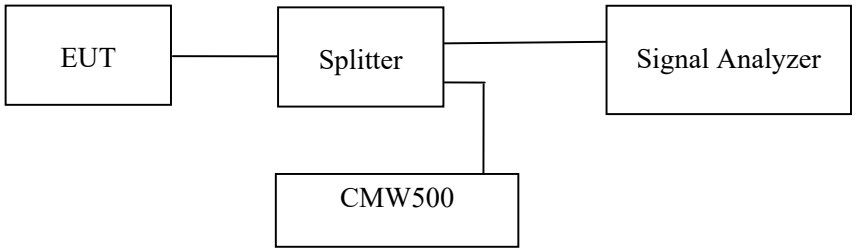
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to FCC §27.53 (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:	27.4 ℃
Relative Humidity:	58%
ATM Pressure:	101.0 kPa

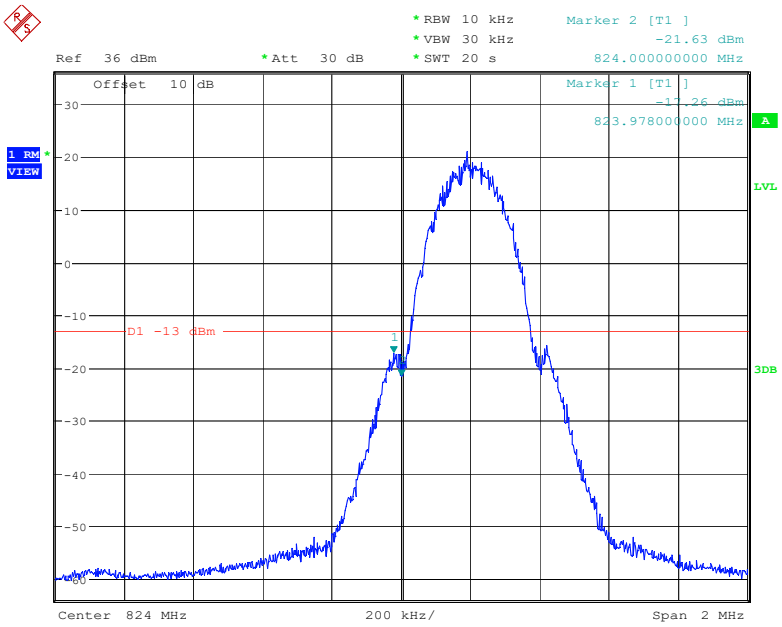
The testing was performed by Andy Yu from 2022-09-30 to 2022-10-14.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

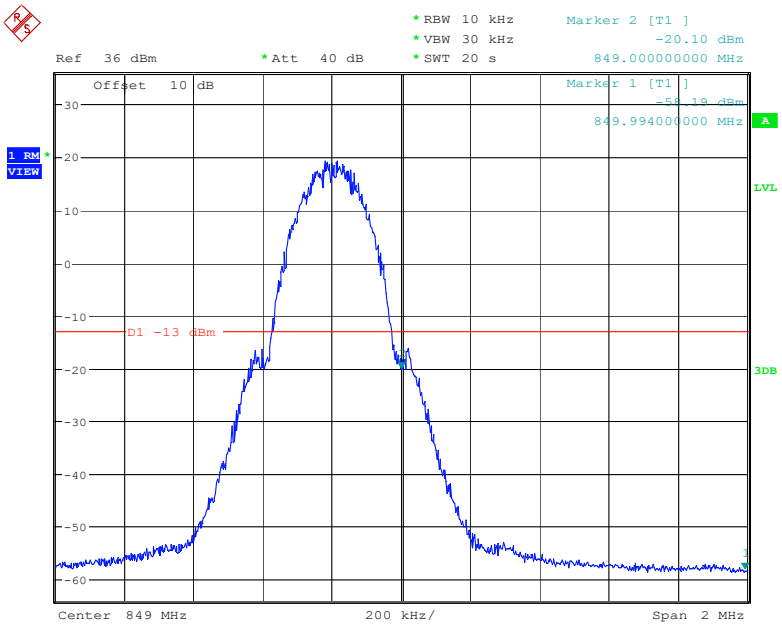
Please refer to the following plots.

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



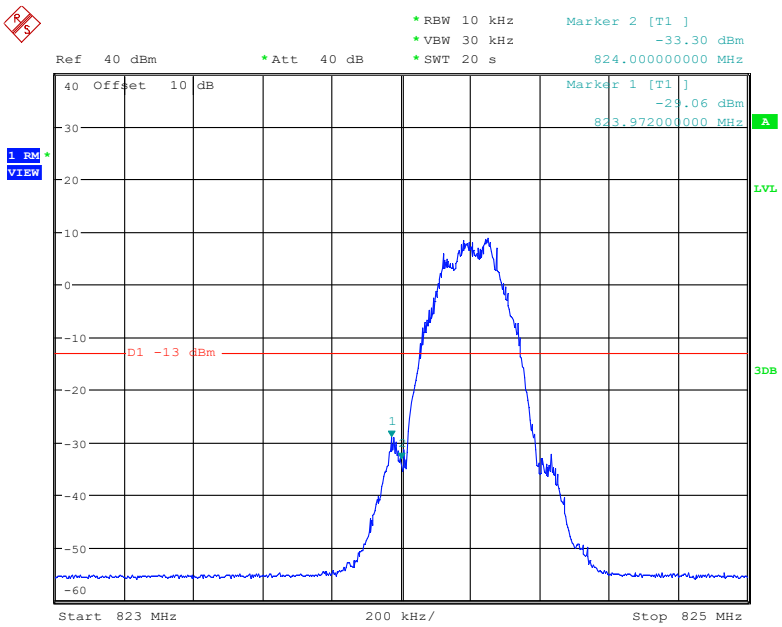
Date: 14.OCT.2022 00:35:52

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



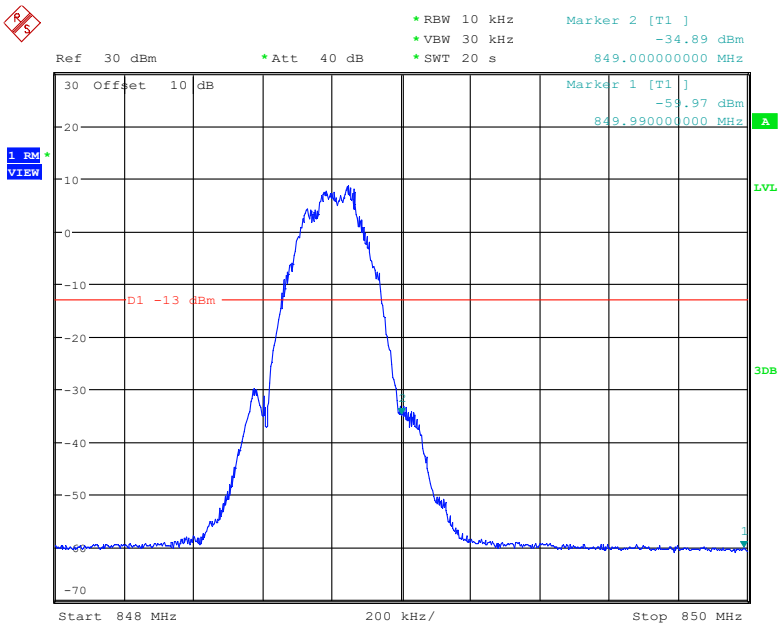
Date: 14.OCT.2022 00:33:52

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



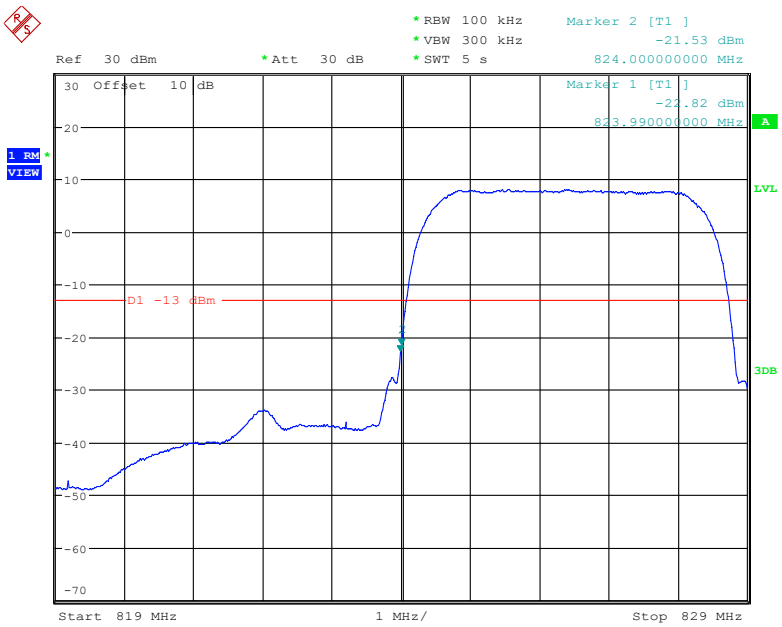
Date: 30.SEP.2022 10:55:36

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



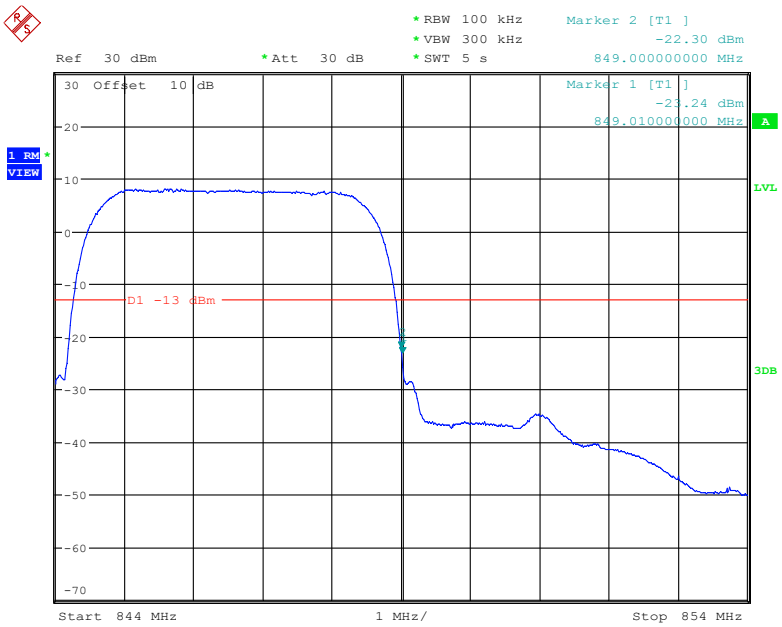
Date: 30.SEP.2022 11:12:58

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



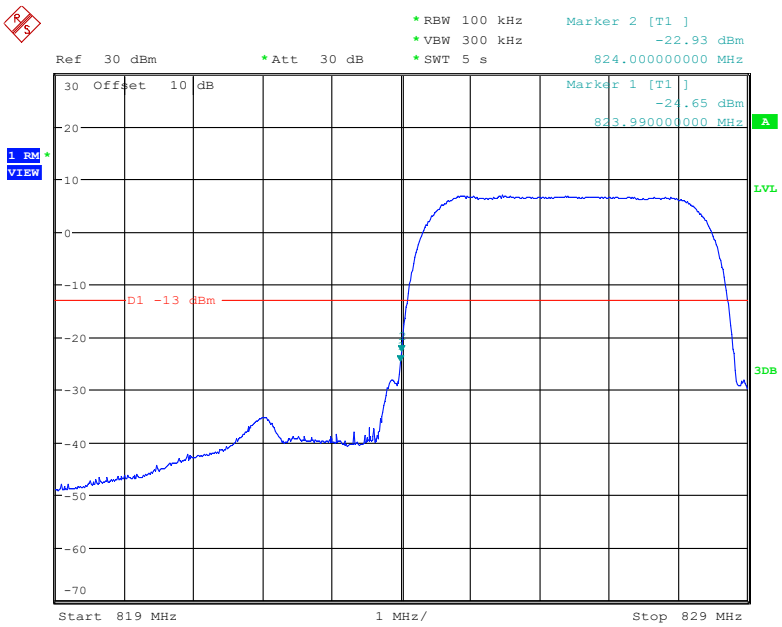
Date: 8.OCT.2022 14:12:57

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



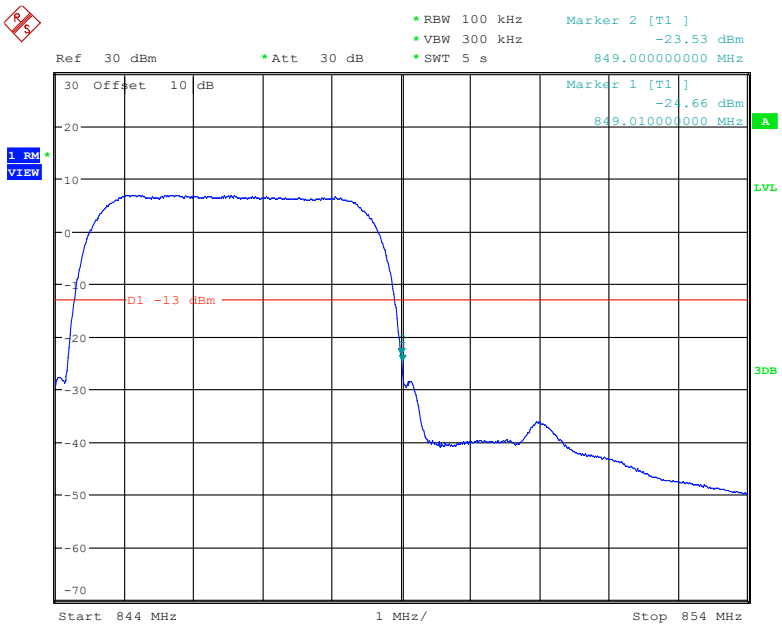
Date: 8.OCT.2022 14:19:52

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



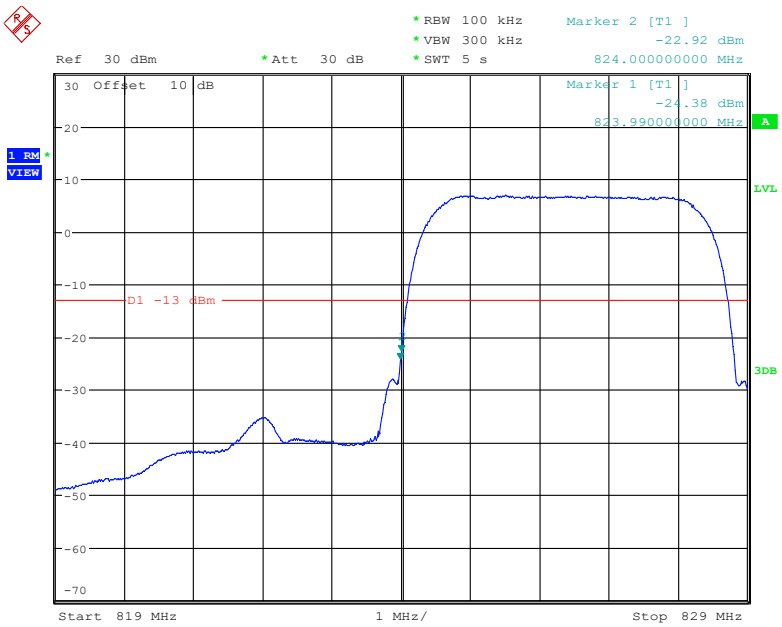
Date: 8.OCT.2022 14:50:59

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



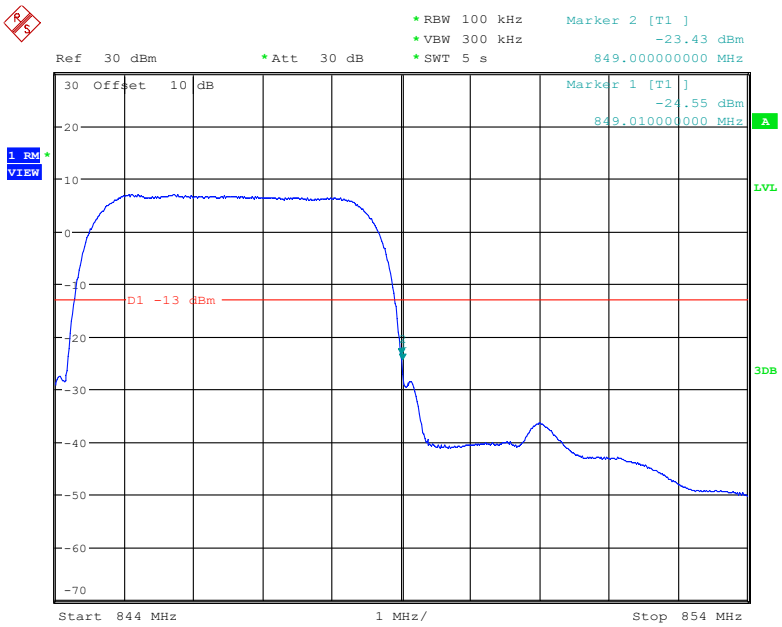
Date: 8.OCT.2022 14:57:55

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



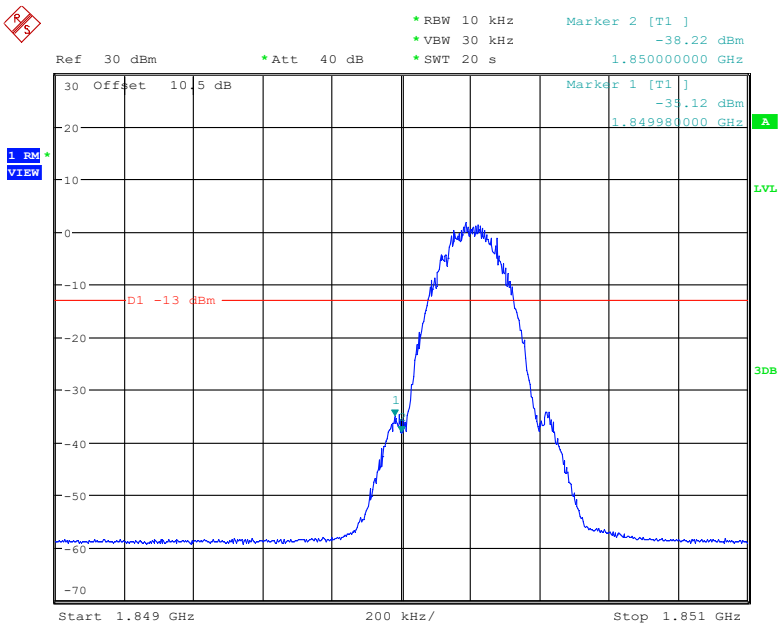
Date: 8.OCT.2022 15:41:08

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



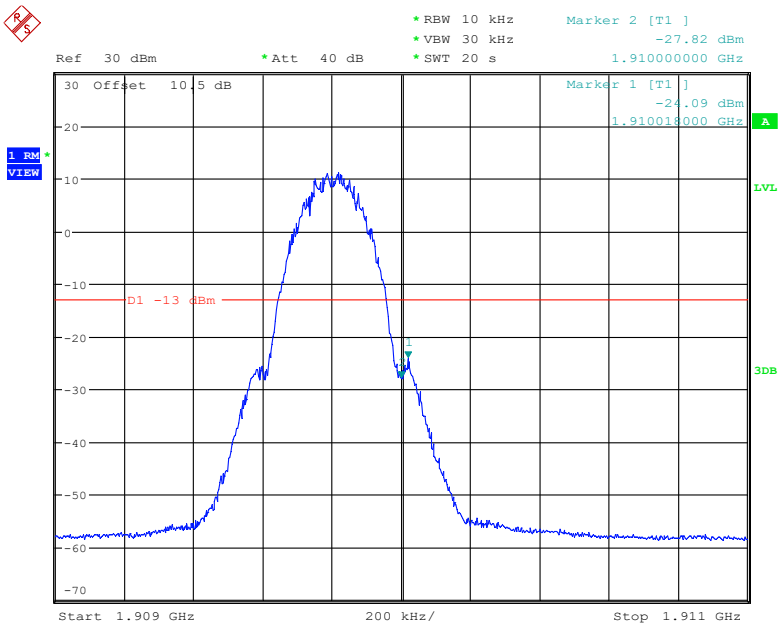
Date: 8.OCT.2022 15:47:15

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



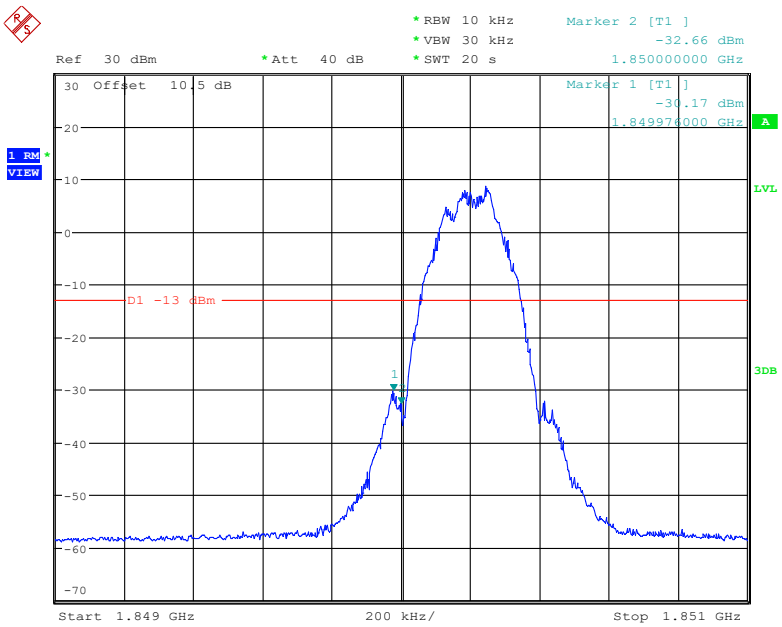
Date: 30.SEP.2022 10:46:50

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



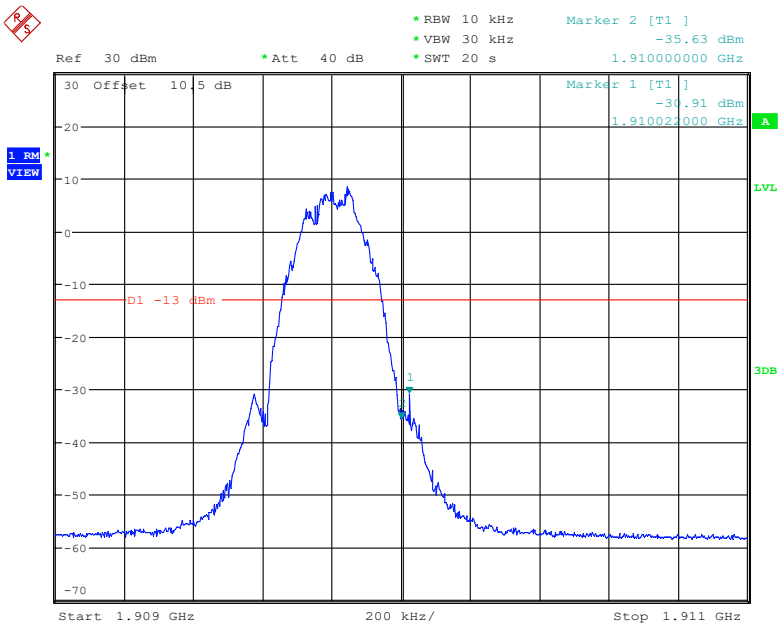
Date: 30.SEP.2022 10:18:39

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



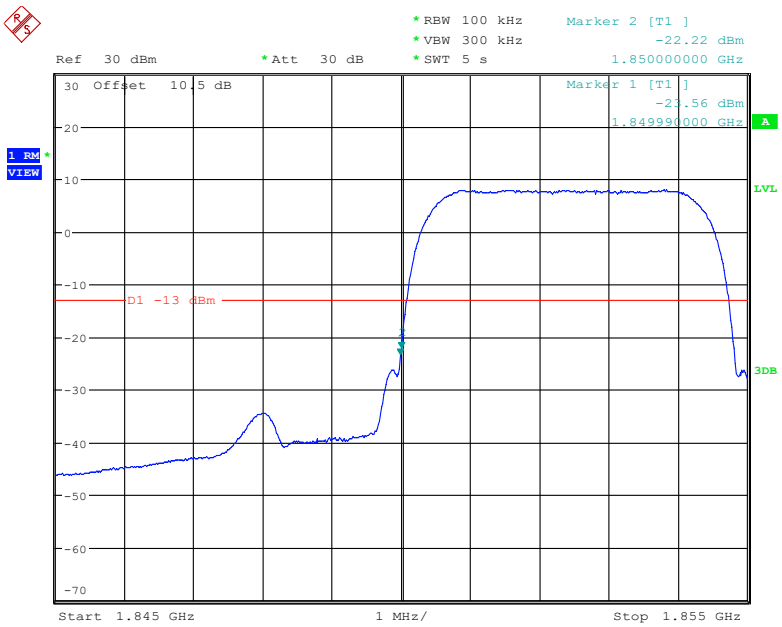
Date: 30.SEP.2022 10:27:34

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



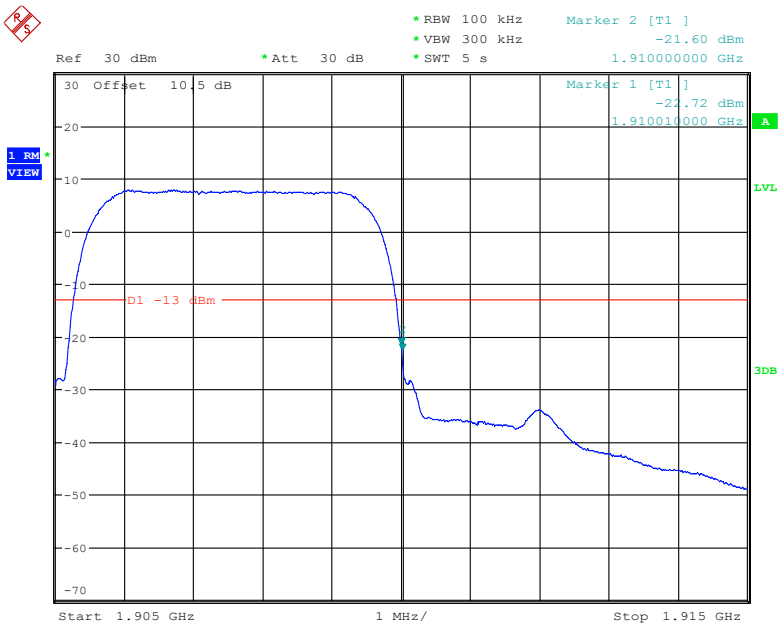
Date: 30.SEP.2022 10:38:38

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



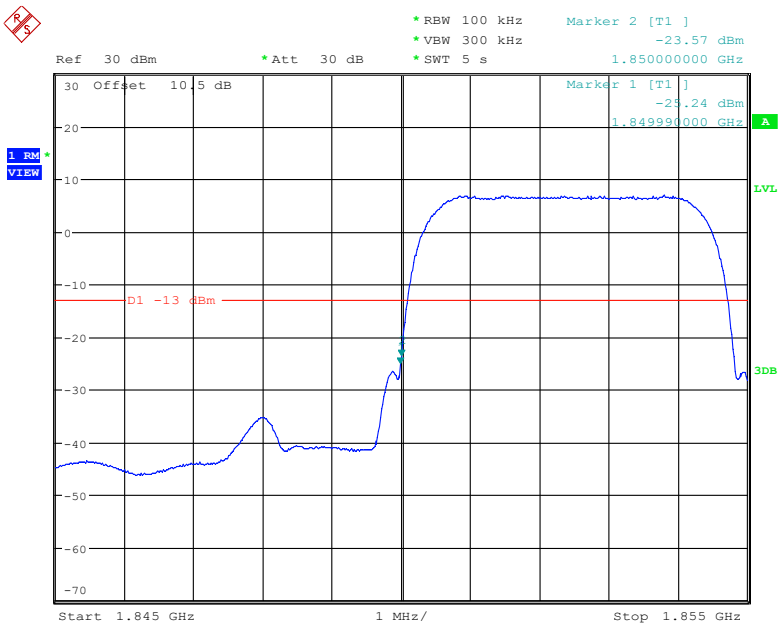
Date: 8.OCT.2022 13:51:38

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



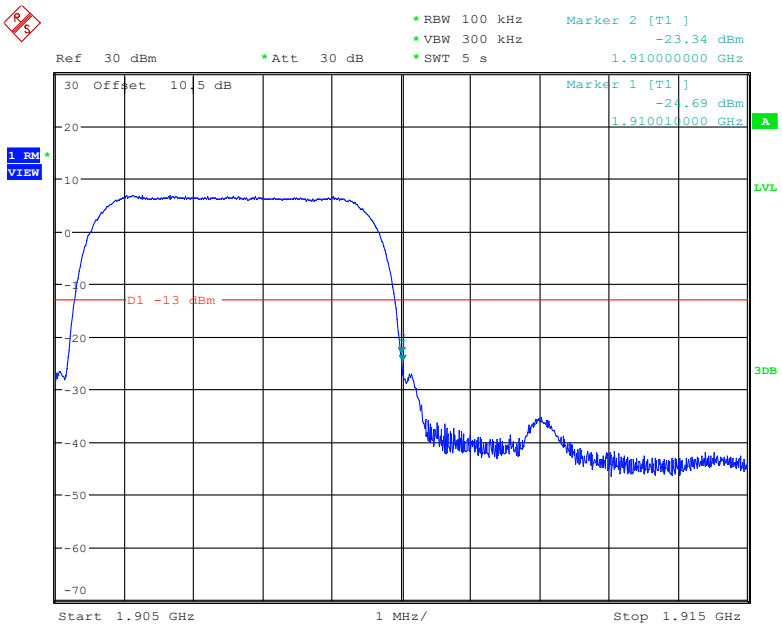
Date: 8.OCT.2022 13:55:40

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



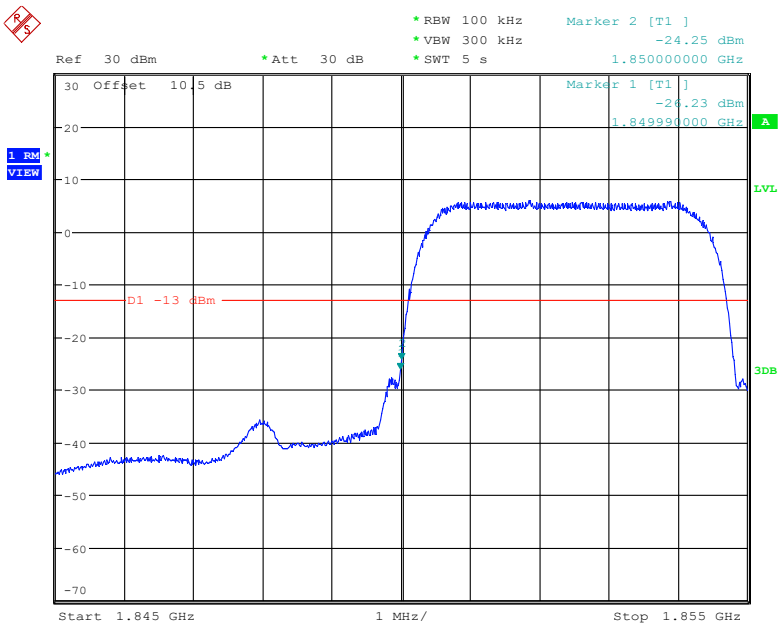
Date: 8.OCT.2022 14:25:00

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



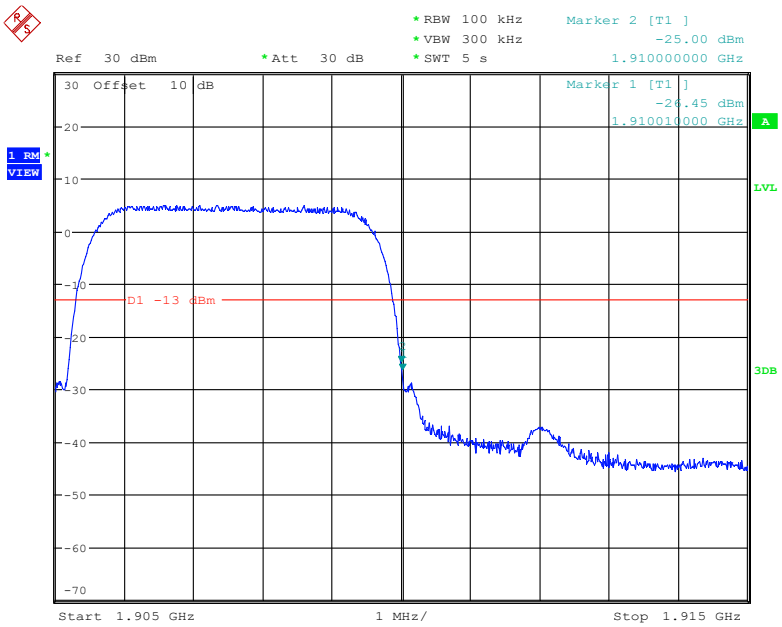
Date: 8.OCT.2022 14:33:54

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



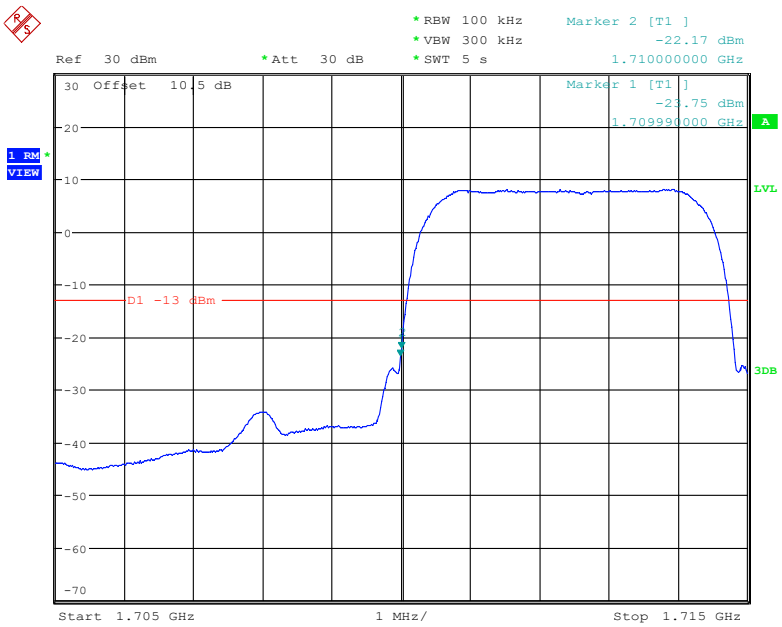
Date: 8.OCT.2022 15:06:47

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



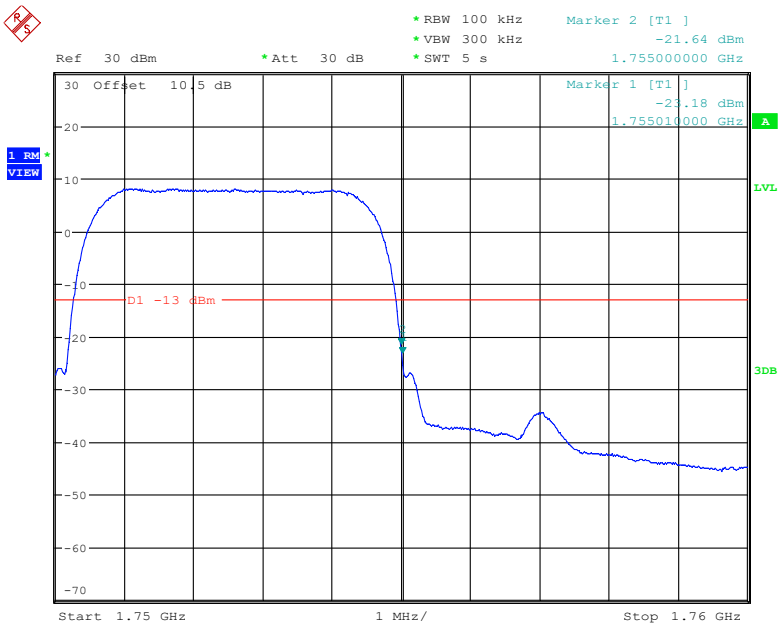
Date: 8.OCT.2022 15:17:22

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



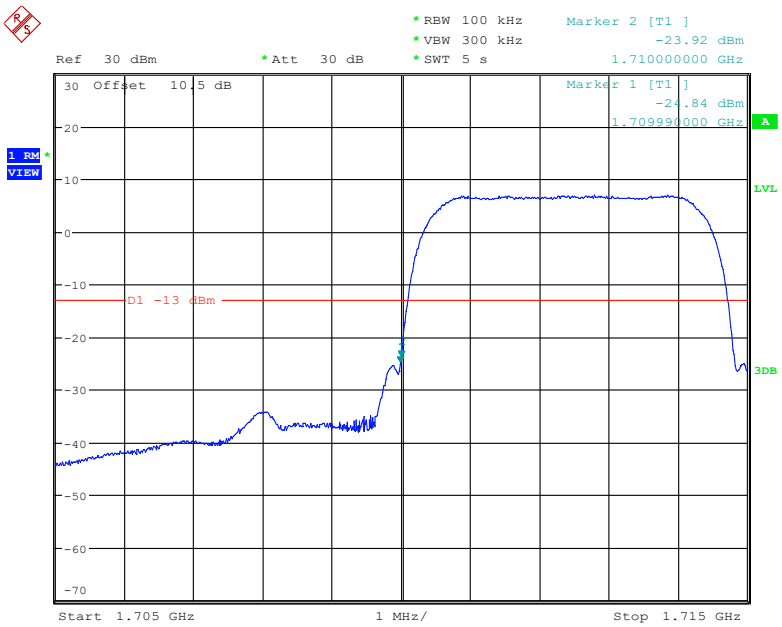
Date: 8.OCT.2022 14:00:01

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



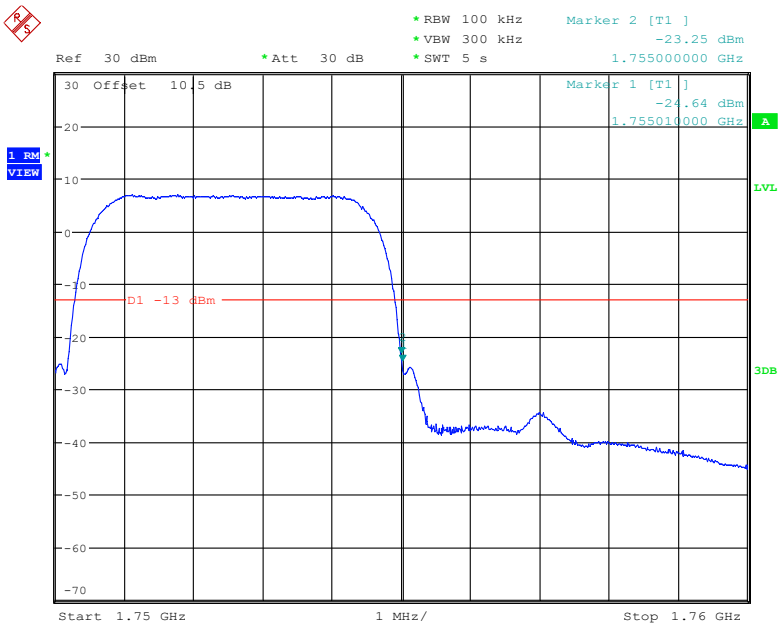
Date: 8.OCT.2022 14:08:28

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



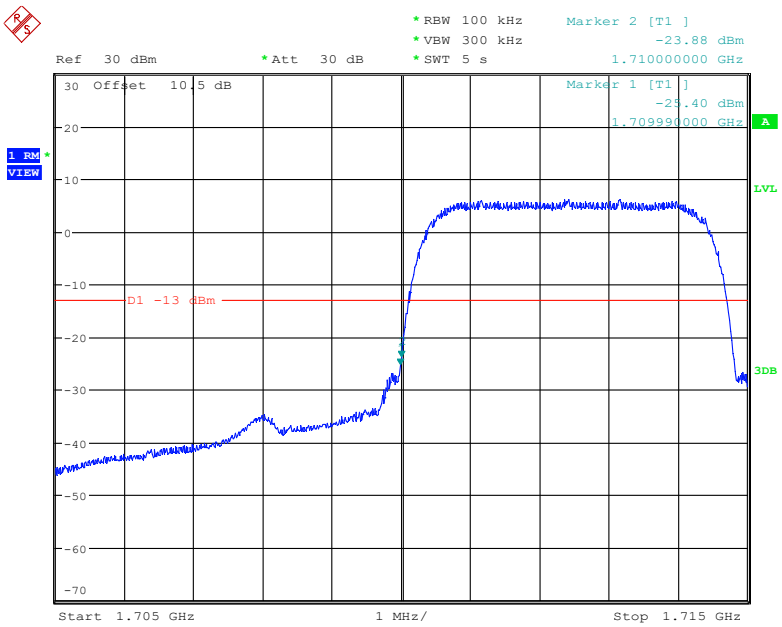
Date: 8.OCT.2022 14:38:41

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



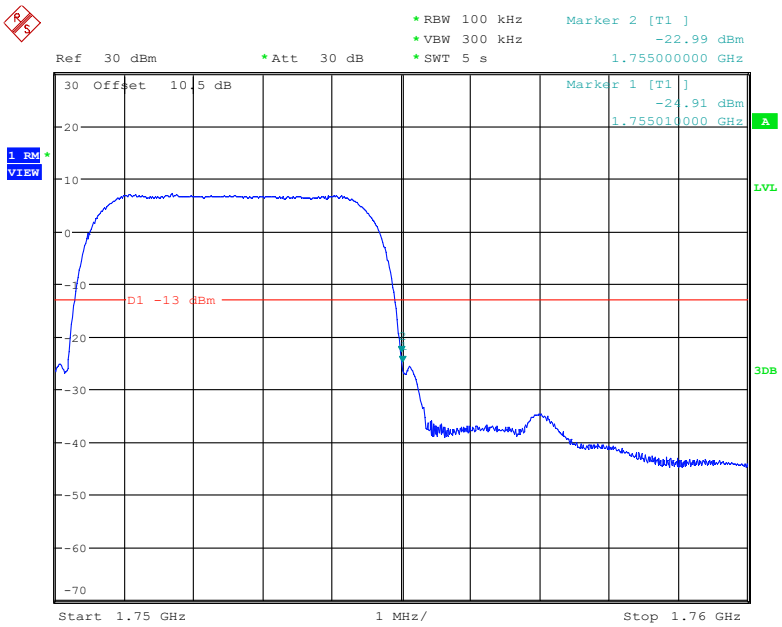
Date: 8.OCT.2022 14:46:30

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



Date: 8.OCT.2022 15:25:15

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



Date: 8.OCT.2022 15:35:49

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

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

Applicable Standard

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

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

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

Frequency Tolerance for Transmitters in the Public Mobile Services

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

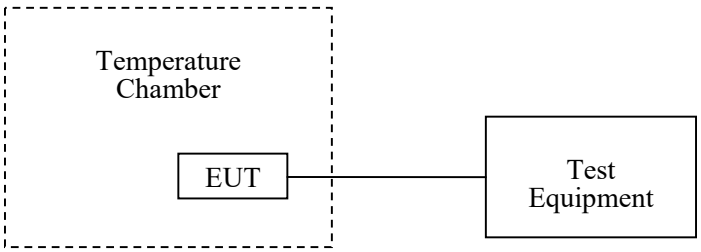
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

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

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

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



Test Data

Environmental Conditions

Temperature:	27.4 ℃
Relative Humidity:	58%
ATM Pressure:	101.0 kPa

The testing was performed by Andy Yu from 2022-09-30 to 2022-10-09.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)

GSM Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	7	0.0084	2.5
-20		-4	-0.0048	2.5
-10		3	0.0036	2.5
0		6	0.0072	2.5
10		-3	-0.0036	2.5
20		-3	-0.0036	2.5
30		6	0.0072	2.5
40		7	0.0084	2.5
50		-2	-0.0024	2.5
20	L.V.	4	0.0048	2.5
	H.V.	5	0.0060	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.	2	0.0024	2.5
-20		3	0.0036	2.5
-10		-7	-0.0084	2.5
0		-8	-0.0096	2.5
10		9	0.0108	2.5
20		0	0.0000	2.5
30		7	0.0084	2.5
40		-6	-0.0072	2.5
50		5	0.0060	2.5
20	L.V.	4	0.0048	2.5
	H.V.	8	0.0096	2.5

WCDMA Mode

Middle Channel, f_o =836.4MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	2.02	0.0024	2.5
-20		3.54	0.0042	2.5
-10		1.03	0.0012	2.5
0		2.41	0.0029	2.5
10		1.02	0.0012	2.5
20		1.04	0.0012	2.5
30		0.86	0.0010	2.5
40		1.22	0.0015	2.5
50		2.12	0.0025	2.5
20	L.V.	3.38	0.0040	2.5
	H.V.	2.55	0.0030	2.5

PCS Band (Part 24E)
GSM Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	9	0.0048	pass
-20		7	0.0037	pass
-10		10	0.0053	pass
0		12	0.0064	pass
10		8	0.0043	pass
20		31	0.0165	pass
30		5	0.0027	pass
40		13	0.0069	pass
50		14	0.0074	pass
20	L.V.	11	0.0059	pass
	H.V.	16	0.0085	pass

EDGE Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	11	0.0059	pass
-20		7	0.0037	pass
-10		8	0.0043	pass
0		14	0.0074	pass
10		15	0.0080	pass
20		28	0.0149	pass
30		13	0.0069	pass
40		15	0.0080	pass
50		12	0.0064	pass
20	L.V.	16	0.0085	pass
	H.V.	13	0.0069	pass

WCDMA Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	2.52	0.0013	pass
-20		3.24	0.0017	pass
-10		2.36	0.0013	pass
0		2.11	0.0011	pass
10		1.23	0.0007	pass
20		1.05	0.0006	pass
30		1.36	0.0007	pass
40		2.34	0.0012	pass
50		2.22	0.0012	pass
20	L.V.	1.86	0.0010	pass
	H.V.	1.77	0.0009	pass

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.	1710.0578	1754.9777	1710	1755
-20		1710.0465	1754.9756	1710	1755
-10		1710.0244	1754.9748	1710	1755
0		1710.0232	1754.9765	1710	1755
10		1710.0151	1754.9787	1710	1755
20		1710.0145	1754.9772	1710	1755
30		1710.0144	1754.9786	1710	1755
40		1710.0159	1754.9752	1710	1755
50		1710.0145	1754.9788	1710	1755
20	L.V.	1710.0136	1754.9764	1710	1755
	H.V.	1710.0122	1754.9736	1710	1755

LTE:
QPSK:
Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	-7.64	-0.0041	pass
-20		5.65	0.0030	pass
-10		8.96	0.0048	pass
0		5.79	0.0031	pass
10		9.46	0.0050	pass
20		9.68	0.0051	pass
30		7.72	0.0041	pass
40		8.87	0.0047	pass
50		-5.25	-0.0028	pass
20	L.V.	-6.29	-0.0033	pass
	H.V.	-5.56	-0.0030	pass

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.	1710.4546	1754.5321	1710	1755
-20		1710.4582	1754.5365	1710	1755
-10		1710.4595	1754.5366	1710	1755
0		1710.4587	1754.5385	1710	1755
10		1710.4555	1754.5339	1710	1755
20		1710.4526	1754.5355	1710	1755
30		1710.4590	1754.5373	1710	1755
40		1710.4564	1754.5328	1710	1755
50		1710.4600	1754.5345	1710	1755
20	L.V.	1710.4539	1754.5377	1710	1755
	H.V.	1710.4532	1754.5364	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-5.79	-0.0069	2.5
-20		7.14	0.0085	2.5
-10		-7.65	-0.0091	2.5
0		-9.40	-0.0112	2.5
10		-6.09	-0.0073	2.5
20		7.40	0.0088	2.5
30		6.55	0.0078	2.5
40		-5.32	-0.0064	2.5
50		-5.70	-0.0068	2.5
20	L.V.	-6.72	-0.0080	2.5
	H.V.	-6.78	-0.0081	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.	2500.5379	2569.4614	2500	2570
-20		2500.5393	2569.4595	2500	2570
-10		2500.5376	2569.4658	2500	2570
0		2500.5385	2569.4659	2500	2570
10		2500.5379	2569.4623	2500	2570
20		2500.5418	2569.4650	2500	2570
30		2500.5355	2569.4650	2500	2570
40		2500.5374	2569.4659	2500	2570
50		2500.5409	2569.4666	2500	2570
20	L.V.	2500.5368	2569.4664	2500	2570
	H.V.	2500.5351	2569.4641	2500	2570

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.	2570.5195	2619.4822	2570	2620
-20		2570.5171	2619.4811	2570	2620
-10		2570.5184	2619.4845	2570	2620
0		2570.5120	2619.4847	2570	2620
10		2570.5145	2619.4839	2570	2620
20		2570.5189	2619.4872	2570	2620
30		2570.5167	2619.4862	2570	2620
40		2570.5176	2619.4877	2570	2620
50		2570.5138	2619.4812	2570	2620
20	L.V.	2570.5152	2619.4830	2570	2620
	H.V.	2570.5124	2619.4862	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.	2535.5152	2654.4822	2535	2655
-20		2535.5122	2654.4855	2535	2655
-10		2535.5141	2654.4841	2535	2655
0		2535.5182	2654.4834	2535	2655
10		2535.5147	2654.4852	2535	2655
20		2535.5147	2654.4845	2535	2655
30		2535.5173	2654.4838	2535	2655
40		2535.5137	2654.4886	2535	2655
50		2535.5126	2654.4847	2535	2655
20	L.V.	2535.5122	2654.4837	2535	2655
	H.V.	2535.5133	2654.4840	2535	2655

16QAM:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	-6.04	-0.0032	pass
-20		-6.96	-0.0037	pass
-10		-6.55	-0.0035	pass
0		9.53	0.0051	pass
10		8.58	0.0046	pass
20		-9.91	-0.0053	pass
30		-8.05	-0.0043	pass
40		-7.11	-0.0038	pass
50		-5.10	-0.0027	pass
20	L.V.	7.54	0.0040	pass
	H.V.	9.57	0.0051	pass

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.	1710.4527	1754.5387	1710	1755
-20		1710.4518	1754.5381	1710	1755
-10		1710.4525	1754.5382	1710	1755
0		1710.4512	1754.5407	1710	1755
10		1710.4529	1754.5384	1710	1755
20		1710.4573	1754.5360	1710	1755
30		1710.4500	1754.5390	1710	1755
40		1710.4549	1754.5420	1710	1755
50		1710.4516	1754.5396	1710	1755
20	L.V.	1710.4502	1754.5411	1710	1755
	H.V.	1710.4563	1754.5409	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-5.44	-0.0065	2.5
-20		-6.99	-0.0084	2.5
-10		8.91	0.0107	2.5
0		-5.11	-0.0061	2.5
10		-5.42	-0.0065	2.5
20		-5.19	-0.0062	2.5
30		8.18	0.0098	2.5
40		-9.99	-0.0119	2.5
50		8.20	0.0098	2.5
20	L.V.	-7.77	-0.0093	2.5
	H.V.	7.10	0.0085	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.	2500.5388	2569.4661	2500	2570
-20		2500.5417	2569.4612	2500	2570
-10		2500.5369	2569.4661	2500	2570
0		2500.5409	2569.4610	2500	2570
10		2500.5386	2569.4612	2500	2570
20		2500.5436	2569.4662	2500	2570
30		2500.5358	2569.4645	2500	2570
40		2500.5416	2569.4629	2500	2570
50		2500.5375	2569.4596	2500	2570
20	L.V.	2500.5413	2569.4584	2500	2570
	H.V.	2500.5365	2569.4614	2500	2570

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.	2570.5182	2619.4862	2570	2620
-20		2570.5195	2619.4852	2570	2620
-10		2570.5177	2619.4866	2570	2620
0		2570.5141	2619.4868	2570	2620
10		2570.5169	2619.4834	2570	2620
20		2570.5143	2619.4809	2570	2620
30		2570.5193	2619.4827	2570	2620
40		2570.5170	2619.4878	2570	2620
50		2570.5145	2619.4869	2570	2620
20	L.V.	2570.5176	2619.4861	2570	2620
	H.V.	2570.5161	2619.4861	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.	2535.5202	2654.4827	2535	2655
-20		2535.5205	2654.4821	2535	2655
-10		2535.5197	2654.4821	2535	2655
0		2535.5152	2654.4840	2535	2655
10		2535.5168	2654.4831	2535	2655
20		2535.5166	2654.4808	2535	2655
30		2535.5202	2654.4854	2535	2655
40		2535.5161	2654.4806	2535	2655
50		2535.5145	2654.4880	2535	2655
20	L.V.	2535.5149	2654.4801	2535	2655
	H.V.	2535.5190	2654.4865	2535	2655

Note: the applicant declared the frequency range is 2535-2655MHz.

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