TESTREPORT

Applicant Name :	INFINIX MOBILITY LIMITED
Address :	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIALCENTRE 31-35 SHAN MEI STREET FOTAN NT, Hong Kong
ReportNumber:	SZNS220215-04501E-RF-00C
FCC ID:	2AIZN-X665B

Test Standard (s)

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

Sample Description

Product Type:	Mobile Phone
Model No.:	X665B
Multiple Model(s) No.:	N/A
Trade Mark:	Infinix
Date Received:	2022/02/15
Date of Test:	2022/02/19~2022/03/24
Report Date:	2022/03/24

Test Result:	Pass*

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

Prepared and Checked By:

Fan Yang
EMC Engineer

Approved By:

Robert Li
EMC Engineer

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

Product Description for Equipment under Test (EUT)

Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 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: -1.6dBi PCS1900/WCDMA Band 2/ LTE Band 2: -0.7dBi WCDMA Band 4/ LTE Band 4: -0.7dBi LTE Band 7/Band 38/LTE Band 41: -0.4dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery, DC 5.0Vfrom adapter
Sample serial number	SZNS220215-04501E-RF-S1 for RF Conducted Test SZNS220215-04501E-RF-S2 for Conducted and Radiated Emissions (Assigned by ATC)
Sample/EUT Status	Good condition
Extreme condition*	L.V.: Low Voltage 3.45V N.V.: Normal Voltage 3.85V H.V.: High Voltage 4.4V (provided by the applicant)
Adapter information	Model:U100XSA Input: AC 100-240V~ 50/60Hz, 0.3A Output: DC 5.0V, 2.0A

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	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560

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.

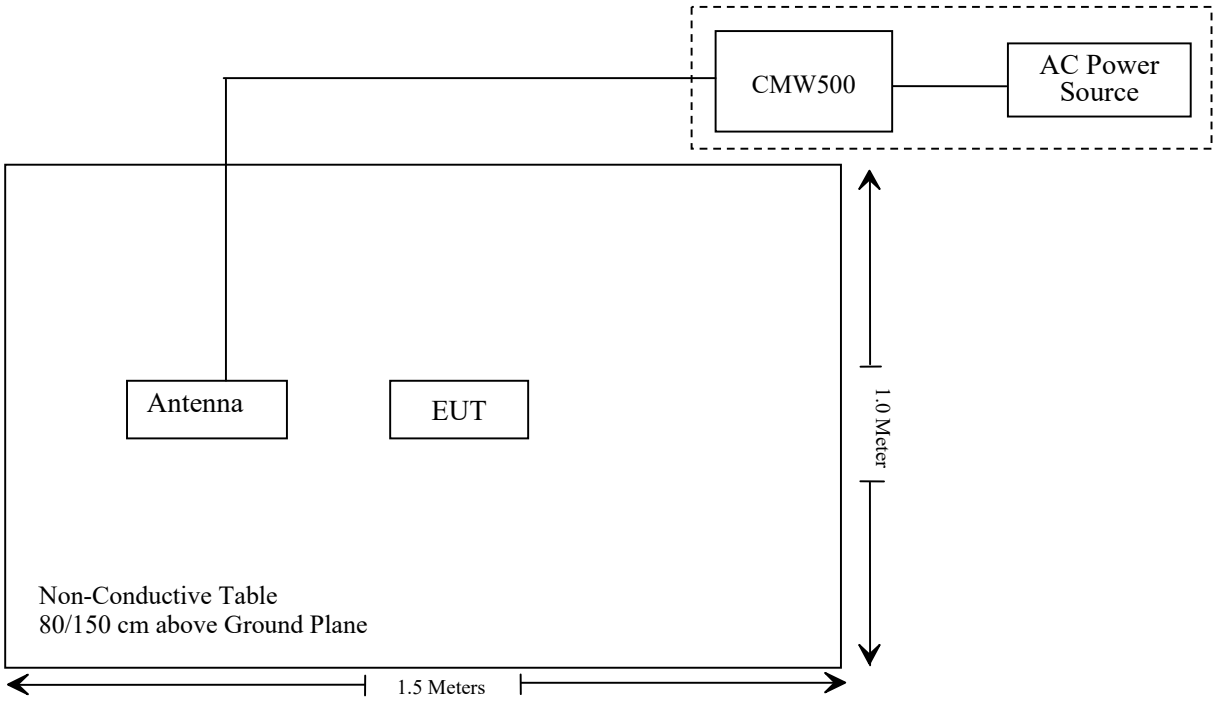
Support Equipment List and Details

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

Support Cable Description

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

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 1.1307 ,§2.1093	RF Exposure (SAR)	Compliant*
§2.1046; § 22.913 (a); § 24.232 (c); §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: SZNS220215-04501E-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-18405536-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	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120	2020/01/05	2023/01/04
Wainwright	High Pass Filter	WHKX3.6/18G-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	RFCoaxialCable	No.16	N200	2021/12/14	2022/12/13
Agilent	Signal Generator	N5183A	MY51040755	2021/12/13	2022/12/12

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSU26	200982	2021/07/06	2022/07/05
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2021/12/13	2022/12/12
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
HP	6dB Attenuator	8493B	2708A 04769	2021/12/14	2022/12/13
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.31	RF-01	Each time	/
Unknown	RF Cable	Unknown	Unknown	Each time	/
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12

* 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: SZNS220215-04501E-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)&§ 24.232(c); §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.

Accordingto 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 successfulcommunications.

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

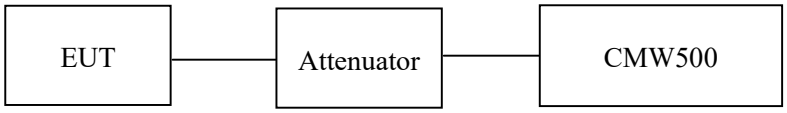
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

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

Test Procedure

Conducted method:

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



Test Data

Environmental Conditions

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

The testing was performed by Black Ding on 2022-02-19.

Conducted Power

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	33.10	29.35	38.45
	190	836.6	33.00	29.25	38.45
	251	848.8	32.80	29.05	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	33.09	32.05	29.98	28.95	29.34	28.30	26.23	25.20	38.45
	190	836.6	32.92	31.91	29.83	28.76	29.17	28.16	26.08	25.01	38.45
	251	848.8	32.72	31.77	29.74	28.58	28.97	28.02	25.99	24.83	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.2	27.01	25.57	23.12	21.77	23.26	21.82	19.37	18.02	38.45
	190	836.6	27.20	25.65	23.24	21.86	23.45	21.90	19.49	18.11	38.45
	251	848.8	27.32	25.80	23.30	21.96	23.57	22.05	19.55	18.21	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		23.58	23.55	23.50	19.83	19.80	19.75
	HSDPA	1	20.71	20.74	21.02	16.96	16.99	17.27
		2	20.66	20.72	20.88	16.91	16.97	17.13
		3	20.58	20.74	20.97	16.83	16.99	17.22
		4	20.67	20.58	20.85	16.92	16.83	17.10
	HSUPA	1	22.34	22.21	22.18	18.59	18.46	18.43
		2	22.11	22.14	22.11	18.36	18.39	18.36
		3	22.14	22.16	22.04	18.39	18.41	18.29
		4	22.12	22.34	22.13	18.37	18.59	18.38
		5	22.14	22.37	22.08	18.39	18.62	18.33
	HSPA+	1	22.16	22.23	22.09	18.41	18.48	18.34

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For GSM850 / WCDMA Band5: Antenna Gain = -1.6dBi = -3.75dBd (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	25.90	25.20	33
	661	1880.0	26.60	25.90	33
	810	1909.8	26.60	25.90	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	25.85	24.80	22.73	21.66	25.15	24.10	22.03	20.96	33
	661	1880.0	26.02	24.97	22.90	21.85	25.32	24.27	22.20	21.15	33
	810	1909.8	25.92	24.89	22.78	21.78	25.22	24.19	22.08	21.08	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	25.38	24.11	22.17	21.04	24.68	23.41	21.47	20.34	33
	661	1880.0	25.29	24.14	22.13	21.02	24.59	23.44	21.43	20.32	33
	810	1909.8	25.67	24.54	22.53	21.39	24.97	23.84	21.83	20.69	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		17.10	17.07	17.17	16.40	16.37	16.47
	HSDPA	1	15.12	15.27	15.16	14.42	14.57	14.46
		2	15.55	15.36	15.33	14.85	14.66	14.63
		3	15.43	15.46	15.28	14.73	14.76	14.58
		4	15.42	15.52	15.24	14.72	14.82	14.54
	HSUPA	1	15.90	15.77	15.92	15.20	15.07	15.22
		2	15.88	15.74	15.87	15.18	15.04	15.17
		3	15.79	15.63	15.69	15.09	14.93	14.99
		4	15.83	15.62	15.73	15.13	14.92	15.03
		5	15.67	15.64	15.74	14.97	14.94	15.04
	HSPA+	1	15.86	15.53	15.78	15.16	14.83	15.08

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For PCS1900 / WCDMA Band2: Antenna Gain = -0.7dBi
Limit: EIRP≤33dBm

AWS Band

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		17.82	17.89	17.86	17.12	17.19	17.16
	HSDPA	1	15.48	15.17	15.07	14.78	14.47	14.37
		2	15.53	15.22	15.46	14.83	14.52	14.76
		3	15.48	15.32	15.23	14.78	14.62	14.53
		4	15.62	15.34	15.26	14.92	14.64	14.56
	HSUPA	1	16.72	16.68	16.63	16.02	15.98	15.93
		2	16.65	16.72	16.64	15.95	16.02	15.94
		3	16.64	16.59	16.53	15.94	15.89	15.83
		4	16.38	16.47	16.58	15.68	15.77	15.88
		5	16.39	16.59	16.49	15.69	15.89	15.79
	HSPA+	1	16.58	16.45	16.58	15.88	15.75	15.88

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band4: Antenna Gain = -0.7dBi
Limit: EIRP≤30dBm

LTE Band 2

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	17.23	17.25	17.35	16.53	16.55	16.65
		RB1#3	17.38	17.43	17.55	16.68	16.73	16.85
		RB1#5	17.23	17.23	17.35	16.53	16.53	16.65
		RB3#0	17.37	17.39	17.43	16.67	16.69	16.73
		RB3#3	17.43	17.40	17.42	16.73	16.70	16.72
		RB6#0	16.30	16.32	16.38	15.60	15.62	15.68
	16QAM	RB1#0	16.33	16.29	16.48	15.63	15.59	15.78
		RB1#3	16.51	16.50	16.67	15.81	15.80	15.97
		RB1#5	16.34	16.30	16.49	15.64	15.60	15.79
		RB3#0	16.55	16.59	16.44	15.85	15.89	15.74
		RB3#3	16.49	16.63	16.46	15.79	15.93	15.76
		RB6#0	15.29	15.38	15.47	14.59	14.68	14.77
3.0	QPSK	RB1#0	17.30	17.33	17.35	16.60	16.63	16.65
		RB1#8	17.26	17.30	17.34	16.56	16.60	16.64
		RB1#14	17.27	17.33	17.30	16.57	16.63	16.60
		RB6#0	16.25	16.23	16.25	15.55	15.53	15.55
		RB6#9	16.26	16.19	16.29	15.56	15.49	15.59
		RB15#0	16.30	16.33	16.34	15.60	15.63	15.64
	16QAM	RB1#0	17.01	16.49	16.39	16.31	15.79	15.69
		RB1#8	16.96	16.45	16.36	16.26	15.75	15.66
		RB1#14	16.95	16.50	16.35	16.25	15.80	15.65
		RB6#0	15.38	15.32	15.31	14.68	14.62	14.61
		RB6#9	15.32	15.35	15.29	14.62	14.65	14.59
		RB15#0	15.43	15.29	15.45	14.73	14.59	14.75

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	17.15	17.20	17.20	16.45	16.50	16.50
		RB1#13	17.32	17.34	17.33	16.62	16.64	16.63
		RB1#24	17.20	17.26	17.25	16.50	16.56	16.55
		RB15#0	16.27	16.29	16.36	15.57	15.59	15.66
		RB15#10	16.23	16.29	16.34	15.53	15.59	15.64
		RB25#0	16.24	16.29	16.31	15.54	15.59	15.61
	16QAM	RB1#0	16.08	16.51	16.29	15.38	15.81	15.59
		RB1#13	16.23	16.67	16.42	15.53	15.97	15.72
		RB1#24	16.13	16.56	16.37	15.43	15.86	15.67
		RB15#0	15.34	15.28	15.46	14.64	14.58	14.76
		RB15#10	15.34	15.35	15.41	14.64	14.65	14.71
		RB25#0	15.37	15.35	15.38	14.67	14.65	14.68
10.0	QPSK	RB1#0	17.24	17.27	17.28	16.54	16.57	16.58
		RB1#25	17.42	17.42	17.41	16.72	16.72	16.71
		RB1#49	17.26	17.30	17.32	16.56	16.60	16.62
		RB25#0	16.28	16.32	16.39	15.58	15.62	15.69
		RB25#25	16.31	16.31	16.30	15.61	15.61	15.60
		RB50#0	16.34	16.33	16.36	15.64	15.63	15.66
	16QAM	RB1#0	16.91	16.47	16.28	16.21	15.77	15.58
		RB1#25	17.09	16.58	16.48	16.39	15.88	15.78
		RB1#49	16.93	16.45	16.38	16.23	15.75	15.68
		RB25#0	15.36	15.37	15.54	14.66	14.67	14.84
		RB25#25	15.42	15.42	15.43	14.72	14.72	14.73
		RB50#0	15.40	15.40	15.42	14.70	14.70	14.72

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	17.11	17.19	17.20	16.41	16.49	16.50
		RB1#38	17.29	17.30	17.33	16.59	16.60	16.63
		RB1#74	17.17	17.19	17.26	16.47	16.49	16.56
		RB36#0	16.21	16.30	16.40	15.51	15.60	15.70
		RB36#39	16.29	16.32	16.30	15.59	15.62	15.60
		RB75#0	16.24	16.30	16.32	15.54	15.60	15.62
	16QAM	RB1#0	16.82	16.38	16.65	16.12	15.68	15.95
		RB1#38	16.97	16.44	16.77	16.27	15.74	16.07
		RB1#74	16.86	16.36	16.65	16.16	15.66	15.95
		RB36#0	15.25	15.39	15.37	14.55	14.69	14.67
		RB36#39	15.35	15.37	15.31	14.65	14.67	14.61
		RB75#0	15.32	15.38	15.38	14.62	14.68	14.68
20.0	QPSK	RB1#0	17.00	17.09	17.00	16.30	16.39	16.30
		RB1#50	17.46	17.50	17.43	16.76	16.80	16.73
		RB1#99	17.08	17.09	17.07	16.38	16.39	16.37
		RB50#0	16.26	16.38	16.38	15.56	15.68	15.68
		RB50#50	16.33	16.34	16.23	15.63	15.64	15.53
		RB100#0	16.30	16.38	16.33	15.60	15.68	15.63
	16QAM	RB1#0	16.35	16.36	16.65	15.65	15.66	15.95
		RB1#50	16.83	16.72	17.05	16.13	16.02	16.35
		RB1#99	16.41	16.31	16.67	15.71	15.61	15.97
		RB50#0	15.25	15.45	15.41	14.55	14.75	14.71
		RB50#50	15.38	15.41	15.29	14.68	14.71	14.59
		RB100#0	15.36	15.44	15.41	14.66	14.74	14.71

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band2: Antenna Gain = -0.7dBi
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	16.66	16.60	16.55	15.96	15.90	15.85
		RB1#3	16.80	16.75	16.78	16.10	16.05	16.08
		RB1#5	16.63	16.65	16.55	15.93	15.95	15.85
		RB3#0	16.81	16.73	16.75	16.11	16.03	16.05
		RB3#3	16.77	16.71	16.81	16.07	16.01	16.11
		RB6#0	15.70	15.62	15.63	15.00	14.92	14.93
	16QAM	RB1#0	15.68	15.77	15.63	14.98	15.07	14.93
		RB1#3	15.86	15.94	15.82	15.16	15.24	15.12
		RB1#5	15.72	15.74	15.70	15.02	15.04	15.00
		RB3#0	16.13	15.74	15.92	15.43	15.04	15.22
		RB3#3	16.08	15.80	15.98	15.38	15.10	15.28
		RB6#0	14.79	14.73	14.65	14.09	14.03	13.95
3.0	QPSK	RB1#0	16.68	16.60	16.64	15.98	15.90	15.94
		RB1#8	16.63	16.68	16.64	15.93	15.98	15.94
		RB1#14	16.60	16.66	16.63	15.90	15.96	15.93
		RB6#0	15.64	15.58	15.64	14.94	14.88	14.94
		RB6#9	15.62	15.59	15.62	14.92	14.89	14.92
		RB15#0	15.69	15.69	15.66	14.99	14.99	14.96
	16QAM	RB1#0	16.40	15.83	15.73	15.70	15.13	15.03
		RB1#8	16.31	15.83	15.74	15.61	15.13	15.04
		RB1#14	16.30	15.85	15.69	15.60	15.15	14.99
		RB6#0	14.74	14.71	14.61	14.04	14.01	13.91
		RB6#9	14.75	14.71	14.61	14.05	14.01	13.91
		RB15#0	14.77	14.70	14.77	14.07	14.00	14.07

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	16.58	16.54	16.55	15.88	15.84	15.85
		RB1#13	16.71	16.68	16.71	16.01	15.98	16.01
		RB1#24	16.58	16.59	16.54	15.88	15.89	15.84
		RB15#0	15.71	15.59	15.74	15.01	14.89	15.04
		RB15#10	15.71	15.71	15.67	15.01	15.01	14.97
		RB25#0	15.70	15.66	15.69	15.00	14.96	14.99
	16QAM	RB1#0	15.54	15.93	15.71	14.84	15.23	15.01
		RB1#13	15.65	16.03	15.79	14.95	15.33	15.09
		RB1#24	15.54	15.92	15.73	14.84	15.22	15.03
		RB15#0	14.80	14.66	14.81	14.10	13.96	14.11
		RB15#10	14.80	14.75	14.75	14.10	14.05	14.05
		RB25#0	14.78	14.70	14.74	14.08	14.00	14.04
10.0	QPSK	RB1#0	16.67	16.67	16.59	15.97	15.97	15.89
		RB1#25	16.85	16.81	16.74	16.15	16.11	16.04
		RB1#49	16.63	16.66	16.63	15.93	15.96	15.93
		RB25#0	15.77	15.80	15.80	15.07	15.10	15.10
		RB25#25	15.81	15.75	15.67	15.11	15.05	14.97
		RB50#0	15.74	15.79	15.77	15.04	15.09	15.07
	16QAM	RB1#0	16.35	15.86	15.72	15.65	15.16	15.02
		RB1#25	16.52	16.10	15.89	15.82	15.40	15.19
		RB1#49	16.34	15.86	15.71	15.64	15.16	15.01
		RB25#0	14.89	14.88	14.96	14.19	14.18	14.26
		RB25#25	14.91	14.88	14.85	14.21	14.18	14.15
		RB50#0	14.84	14.80	14.84	14.14	14.10	14.14

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	16.59	16.66	16.64	15.89	15.96	15.94
		RB1#38	16.74	16.67	16.72	16.04	15.97	16.02
		RB1#74	16.63	16.63	16.55	15.93	15.93	15.85
		RB36#0	15.70	15.70	15.72	15.00	15.00	15.02
		RB36#39	15.71	15.73	15.64	15.01	15.03	14.94
		RB75#0	15.70	15.71	15.68	15.00	15.01	14.98
	16QAM	RB1#0	16.35	15.88	16.12	15.65	15.18	15.42
		RB1#38	16.37	15.86	16.23	15.67	15.16	15.53
		RB1#74	16.35	15.81	16.09	15.65	15.11	15.39
		RB36#0	14.70	14.77	14.68	14.00	14.07	13.98
		RB36#39	14.75	14.76	14.64	14.05	14.06	13.94
		RB75#0	14.79	14.74	14.68	14.09	14.04	13.98
20.0	QPSK	RB1#0	16.48	16.49	16.39	15.78	15.79	15.69
		RB1#50	16.79	16.79	16.72	16.09	16.09	16.02
		RB1#99	16.52	16.50	16.44	15.82	15.80	15.74
		RB50#0	15.80	15.79	15.82	15.10	15.09	15.12
		RB50#50	15.81	15.80	15.67	15.11	15.10	14.97
		RB100#0	15.81	15.77	15.72	15.11	15.07	15.02
	16QAM	RB1#0	15.83	15.77	16.07	15.13	15.07	15.37
		RB1#50	16.16	16.09	16.48	15.46	15.39	15.78
		RB1#99	15.88	15.74	16.12	15.18	15.04	15.42
		RB50#0	14.83	14.85	14.90	14.13	14.15	14.20
		RB50#50	14.83	14.84	14.72	14.13	14.14	14.02
		RB100#0	14.83	14.85	14.80	14.13	14.15	14.10

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band4: Antenna Gain = -0.7dBi
Limit: EIRP≤30dBm

LTE Band5

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.32	23.23	23.13	19.57	19.48	19.38
		RB1#3	23.47	23.38	23.38	19.72	19.63	19.63
		RB1#5	23.27	23.22	23.18	19.52	19.47	19.43
		RB3#0	23.41	23.32	23.26	19.66	19.57	19.51
		RB3#3	23.39	23.30	23.30	19.64	19.55	19.55
		RB6#0	22.42	22.32	22.25	18.67	18.57	18.50
	16QAM	RB1#0	22.30	22.38	22.18	18.55	18.63	18.43
		RB1#3	22.48	22.54	22.40	18.73	18.79	18.65
		RB1#5	22.33	22.34	22.22	18.58	18.59	18.47
		RB3#0	22.54	22.24	22.40	18.79	18.49	18.65
		RB3#3	22.54	22.28	22.33	18.79	18.53	18.58
		RB6#0	21.41	21.34	21.23	17.66	17.59	17.48
3.0	QPSK	RB1#0	23.34	23.20	23.24	19.59	19.45	19.49
		RB1#8	23.30	23.24	23.14	19.55	19.49	19.39
		RB1#14	23.29	23.21	23.17	19.54	19.46	19.42
		RB6#0	22.30	22.20	22.16	18.55	18.45	18.41
		RB6#9	22.27	22.23	22.14	18.52	18.48	18.39
		RB15#0	22.33	22.24	22.22	18.58	18.49	18.47
	16QAM	RB1#0	22.86	22.36	22.30	19.11	18.61	18.55
		RB1#8	22.80	22.39	22.23	19.05	18.64	18.48
		RB1#14	22.81	22.35	22.26	19.06	18.60	18.51
		RB6#0	21.35	21.18	21.13	17.60	17.43	17.38
		RB6#9	21.38	21.26	21.13	17.63	17.51	17.38
		RB15#0	21.33	21.19	21.25	17.58	17.44	17.50

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.18	23.15	23.11	19.43	19.40	19.36
		RB1#13	23.34	23.24	23.22	19.59	19.49	19.47
		RB1#24	23.19	23.17	23.11	19.44	19.42	19.36
		RB15#0	22.35	22.23	22.29	18.60	18.48	18.54
		RB15#10	22.29	22.26	22.21	18.54	18.51	18.46
		RB25#0	22.28	22.22	22.20	18.53	18.47	18.45
	16QAM	RB1#0	22.16	22.48	22.19	18.41	18.73	18.44
		RB1#13	22.26	22.54	22.31	18.51	18.79	18.56
		RB1#24	22.12	22.47	22.18	18.37	18.72	18.43
		RB15#0	21.37	21.23	21.28	17.62	17.48	17.53
		RB15#10	21.35	21.21	21.24	17.60	17.46	17.49
		RB25#0	21.36	21.24	21.25	17.61	17.49	17.50
10.0	QPSK	RB1#0	23.30	23.24	23.27	19.55	19.49	19.52
		RB1#25	23.39	23.37	23.40	19.64	19.62	19.65
		RB1#49	23.23	23.26	23.24	19.48	19.51	19.49
		RB25#0	22.35	22.37	22.32	18.60	18.62	18.57
		RB25#25	22.30	22.30	22.22	18.55	18.55	18.47
		RB50#0	22.31	22.34	22.28	18.56	18.59	18.53
	16QAM	RB1#0	22.83	22.43	22.29	19.08	18.68	18.54
		RB1#25	22.94	22.58	22.42	19.19	18.83	18.67
		RB1#49	22.78	22.45	22.23	19.03	18.70	18.48
		RB25#0	21.46	21.37	21.42	17.71	17.62	17.67
		RB25#25	21.36	21.32	21.33	17.61	17.57	17.58
		RB50#0	21.35	21.32	21.32	17.60	17.57	17.57

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
For Band5: Antenna Gain = -1.6dBi = -3.75dBd (0dBd=2.15dBi)
Limit: ERP≤38.45dBm

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	15.62	15.29	15.26	15.22	14.89	14.86
		RB1#13	15.66	15.38	15.36	15.26	14.98	14.96
		RB1#24	15.58	15.34	15.26	15.18	14.94	14.86
		RB15#0	14.64	14.32	14.33	14.24	13.92	13.93
		RB15#10	14.69	14.39	14.32	14.29	13.99	13.92
		RB25#0	14.65	14.34	14.31	14.25	13.94	13.91
	16QAM	RB1#0	14.53	14.58	14.35	14.13	14.18	13.95
		RB1#13	14.58	14.64	14.48	14.18	14.24	14.08
		RB1#24	14.46	14.61	14.41	14.06	14.21	14.01
		RB15#0	13.65	13.32	13.37	13.25	12.92	12.97
		RB15#10	13.72	13.36	13.33	13.32	12.96	12.93
		RB25#0	13.70	13.34	13.38	13.30	12.94	12.98
10.0	QPSK	RB1#0	15.62	15.42	15.31	15.22	15.02	14.91
		RB1#25	15.83	15.44	15.44	15.43	15.04	15.04
		RB1#49	15.59	15.38	15.33	15.19	14.98	14.93
		RB25#0	14.63	14.40	14.33	14.23	14.00	13.93
		RB25#25	14.67	14.39	14.36	14.27	13.99	13.96
		RB50#0	14.65	14.39	14.34	14.25	13.99	13.94
	16QAM	RB1#0	15.23	14.49	14.28	14.83	14.09	13.88
		RB1#25	15.36	14.59	14.48	14.96	14.19	14.08
		RB1#49	15.19	14.50	14.33	14.79	14.10	13.93
		RB25#0	13.72	13.43	13.46	13.32	13.03	13.06
		RB25#25	13.73	13.45	13.43	13.33	13.05	13.03
		RB50#0	13.64	13.40	13.36	13.24	13.00	12.96

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	15.55	15.35	15.24	15.15	14.95	14.84
		RB1#38	15.62	15.37	15.34	15.22	14.97	14.94
		RB1#74	15.40	15.28	15.23	15.00	14.88	14.83
		RB36#0	14.62	14.41	14.34	14.22	14.01	13.94
		RB36#39	14.63	14.36	14.37	14.23	13.96	13.97
		RB75#0	14.63	14.39	14.33	14.23	13.99	13.93
	16QAM	RB1#0	15.20	14.45	14.58	14.80	14.05	14.18
		RB1#38	15.22	14.48	14.72	14.82	14.08	14.32
		RB1#74	15.03	14.41	14.60	14.63	14.01	14.20
		RB36#0	13.64	13.41	13.31	13.24	13.01	12.91
		RB36#39	13.65	13.38	13.31	13.25	12.98	12.91
		RB75#0	13.64	13.38	13.34	13.24	12.98	12.94
20.0	QPSK	RB1#0	15.42	15.25	15.00	15.02	14.85	14.60
		RB1#50	15.77	15.49	15.42	15.37	15.09	15.02
		RB1#99	15.32	15.21	15.06	14.92	14.81	14.66
		RB50#0	14.55	14.37	14.32	14.15	13.97	13.92
		RB50#50	14.62	14.40	14.30	14.22	14.00	13.90
		RB100#0	14.62	14.43	14.37	14.22	14.03	13.97
	16QAM	RB1#0	14.70	14.42	14.60	14.30	14.02	14.20
		RB1#50	15.06	14.66	14.97	14.66	14.26	14.57
		RB1#99	14.60	14.37	14.67	14.20	13.97	14.27
		RB50#0	13.54	13.37	13.36	13.14	12.97	12.96
		RB50#50	13.64	13.37	13.30	13.24	12.97	12.90
		RB100#0	13.64	13.44	13.35	13.24	13.04	12.95

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band7: Antenna Gain = -0.4dBi
Limit: ERP≤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	16.95	16.96	16.98	16.55	16.56	16.58
		RB1#13	17.07	17.14	16.95	16.67	16.74	16.55
		RB1#24	16.99	16.97	16.86	16.59	16.57	16.46
		RB15#0	16.07	16.04	15.87	15.67	15.64	15.47
		RB15#10	16.05	16.03	15.90	15.65	15.63	15.50
		RB25#0	16.07	16.07	15.89	15.67	15.67	15.49
	16QAM	RB1#0	16.07	16.27	15.89	15.67	15.87	15.49
		RB1#13	16.20	16.39	16.01	15.80	15.99	15.61
		RB1#24	16.10	16.25	15.75	15.70	15.85	15.35
		RB15#0	15.09	15.12	14.79	14.69	14.72	14.39
		RB15#10	15.11	15.13	14.82	14.71	14.73	14.42
		RB25#0	15.14	15.09	14.91	14.74	14.69	14.51
10.0	QPSK	RB1#0	17.02	17.11	17.00	16.62	16.71	16.60
		RB1#25	17.34	17.41	17.23	16.94	17.01	16.83
		RB1#49	17.12	17.06	16.96	16.72	16.66	16.56
		RB25#0	16.12	16.08	15.91	15.72	15.68	15.51
		RB25#25	16.18	16.14	15.96	15.78	15.74	15.56
		RB50#0	16.18	16.10	15.95	15.78	15.70	15.55
	16QAM	RB1#0	16.30	16.01	16.11	15.90	15.61	15.71
		RB1#25	16.62	16.35	16.38	16.22	15.95	15.98
		RB1#49	16.36	16.02	16.15	15.96	15.62	15.75
		RB25#0	15.14	15.16	14.97	14.74	14.76	14.57
		RB25#25	15.19	15.22	14.98	14.79	14.82	14.58
		RB50#0	15.17	15.16	15.01	14.77	14.76	14.61

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	16.96	17.03	16.91	16.56	16.63	16.51
		RB1#38	17.09	17.07	16.97	16.69	16.67	16.57
		RB1#74	17.03	16.96	16.92	16.63	16.56	16.52
		RB36#0	16.09	16.00	15.92	15.69	15.60	15.52
		RB36#39	16.14	15.95	15.97	15.74	15.55	15.57
		RB75#0	16.11	16.04	15.95	15.71	15.64	15.55
	16QAM	RB1#0	16.20	15.95	16.16	15.80	15.55	15.76
		RB1#38	16.31	16.06	16.24	15.91	15.66	15.84
		RB1#74	16.27	15.88	16.00	15.87	15.48	15.60
		RB36#0	15.07	15.02	15.02	14.67	14.62	14.62
		RB36#39	15.10	15.09	15.02	14.70	14.69	14.62
		RB75#0	15.05	15.10	14.97	14.65	14.70	14.57
20.0	QPSK	RB1#0	16.76	16.82	16.87	16.36	16.42	16.47
		RB1#50	17.30	17.26	17.32	16.90	16.86	16.92
		RB1#99	16.85	16.76	16.74	16.45	16.36	16.34
		RB50#0	16.06	15.96	15.89	15.66	15.56	15.49
		RB50#50	16.13	16.02	16.00	15.73	15.62	15.60
		RB100#0	16.08	16.07	15.98	15.68	15.67	15.58
	16QAM	RB1#0	15.88	15.80	16.10	15.48	15.40	15.70
		RB1#50	16.39	16.30	16.55	15.99	15.90	16.15
		RB1#99	15.97	15.80	16.06	15.57	15.40	15.66
		RB50#0	15.07	15.10	14.94	14.67	14.70	14.54
		RB50#50	15.15	15.17	15.04	14.75	14.77	14.64
		RB100#0	15.13	15.09	14.96	14.73	14.69	14.56

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

LTE Band 41

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	16.93	16.90	16.67	16.53	16.50	16.27
		RB1#13	17.05	17.05	16.90	16.65	16.65	16.50
		RB1#24	16.96	16.90	16.82	16.56	16.50	16.42
		RB15#0	15.96	15.92	15.85	15.56	15.52	15.45
		RB15#10	16.03	15.91	15.85	15.63	15.51	15.45
		RB25#0	16.02	16.00	15.84	15.62	15.60	15.44
	16QAM	RB1#0	16.22	15.90	15.86	15.82	15.50	15.46
		RB1#13	16.28	16.04	16.09	15.88	15.64	15.69
		RB1#24	16.19	15.89	15.95	15.79	15.49	15.55
		RB15#0	15.03	14.94	14.91	14.63	14.54	14.51
		RB15#10	15.06	14.98	14.96	14.66	14.58	14.56
		RB25#0	15.01	15.06	14.97	14.61	14.66	14.57
10.0	QPSK	RB1#0	17.03	17.11	16.88	16.63	16.71	16.48
		RB1#25	17.35	17.41	17.23	16.95	17.01	16.83
		RB1#49	17.06	17.12	16.93	16.66	16.72	16.53
		RB25#0	16.00	16.12	15.86	15.60	15.72	15.46
		RB25#25	15.99	16.19	15.94	15.59	15.79	15.54
		RB50#0	15.99	16.15	15.90	15.59	15.75	15.50
	16QAM	RB1#0	16.25	16.06	15.99	15.85	15.66	15.59
		RB1#25	16.54	16.34	16.33	16.14	15.94	15.93
		RB1#49	16.24	16.04	16.03	15.84	15.64	15.63
		RB25#0	15.00	15.19	14.95	14.60	14.79	14.55
		RB25#25	15.11	15.27	15.00	14.71	14.87	14.60
		RB50#0	15.06	15.19	14.95	14.66	14.79	14.55

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	16.92	16.99	16.83	16.52	16.59	16.43
		RB1#38	16.99	17.14	16.99	16.59	16.74	16.59
		RB1#74	16.84	17.00	16.93	16.44	16.60	16.53
		RB36#0	15.98	16.08	15.86	15.58	15.68	15.46
		RB36#39	16.05	16.16	15.94	15.65	15.76	15.54
		RB75#0	16.05	16.13	15.90	15.65	15.73	15.50
	16QAM	RB1#0	16.20	15.99	16.08	15.80	15.59	15.68
		RB1#38	16.28	16.11	16.14	15.88	15.71	15.74
		RB1#74	16.37	15.96	16.03	15.97	15.56	15.63
		RB36#0	14.96	15.04	14.94	14.56	14.64	14.54
		RB36#39	15.05	15.15	15.00	14.65	14.75	14.60
		RB75#0	15.02	15.15	14.95	14.62	14.75	14.55
20.0	QPSK	RB1#0	16.74	16.80	16.75	16.34	16.40	16.35
		RB1#50	17.31	17.31	17.06	16.91	16.91	16.66
		RB1#99	16.83	16.85	16.79	16.43	16.45	16.39
		RB50#0	15.98	16.00	15.88	15.58	15.60	15.48
		RB50#50	16.05	16.18	15.94	15.65	15.78	15.54
		RB100#0	16.04	16.09	15.93	15.64	15.69	15.53
	16QAM	RB1#0	15.88	15.80	15.99	15.48	15.40	15.59
		RB1#50	16.44	16.34	16.34	16.04	15.94	15.94
		RB1#99	15.95	15.85	16.00	15.55	15.45	15.60
		RB50#0	14.96	15.12	14.96	14.56	14.72	14.56
		RB50#50	15.06	15.23	15.00	14.66	14.83	14.60
		RB100#0	15.02	15.14	14.97	14.62	14.74	14.57

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band41: Antenna Gain =-0.4dBi
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit(dB)
GSM	Low	3.56	13
	Middle	3.47	13
	High	3.59	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	3.65	13
	Middle	3.76	13
	High	3.86	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.57	13
	Middle	3.68	13
	High	3.45	13
HSDPA (16QAM)	Low	3.56	13
	Middle	3.56	13
	High	3.58	13
HSUPA (BPSK)	Low	3.42	13
	Middle	3.47	13
	High	3.56	13
HSPA+	Low	3.45	13
	Middle	3.52	13
	High	3.57	13

PCS Band

Mode	Channel	PAR (dB)	Limit(dB)
GSM	Low	3.58	13
	Middle	3.56	13
	High	3.45	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	3.56	13
	Middle	3.57	13
	High	3.52	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.47	13
	Middle	3.58	13
	High	3.57	13
HSDPA (16QAM)	Low	3.52	13
	Middle	3.56	13
	High	3.45	13
HSUPA (BPSK)	Low	3.47	13
	Middle	3.46	13
	High	3.52	13
HSPA+	Low	3.45	13
	Middle	3.59	13
	High	3.47	13

LTE Band 2 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.87	5.48	5.93	13	Pass
QPSK (100RB Size)	5.77	5.77	5.71	13	Pass
16QAM (1RB Size)	6.31	7.24	7.18	13	Pass
16QAM (100RB Size)	6.70	6.57	6.60	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.12	5.71	6.41	13	Pass
QPSK (100RB Size)	5.80	5.90	5.83	13	Pass
16QAM (1RB Size)	7.60	6.60	7.69	13	Pass
16QAM (100RB Size)	6.70	6.76	6.73	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.13	4.07	4.23	13	Pass
QPSK (50RB Size)	5.38	5.45	5.45	13	Pass
16QAM (1RB Size)	5.22	5.26	5.03	13	Pass
16QAM (50RB Size)	6.22	6.31	6.31	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.64	5.61	5.80	13	Pass
QPSK (100RB Size)	5.51	5.61	5.58	13	Pass
16QAM (1RB Size)	6.12	7.08	7.05	13	Pass
16QAM (100RB Size)	6.38	6.28	6.35	13	Pass

LTE Band 38 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.17	8.40	8.56	13	Pass
QPSK (100RB Size)	7.56	8.11	8.72	13	Pass
16QAM (1RB Size)	8.75	8.72	8.33	13	Pass
16QAM (100RB Size)	3.72	6.87	6.53	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	7.37	7.79	11.38	13	Pass
QPSK (100RB Size)	8.01	8.11	7.63	13	Pass
16QAM (1RB Size)	9.17	9.84	8.37	13	Pass
16QAM (100RB Size)	9.58	9.01	8.56	13	Pass

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

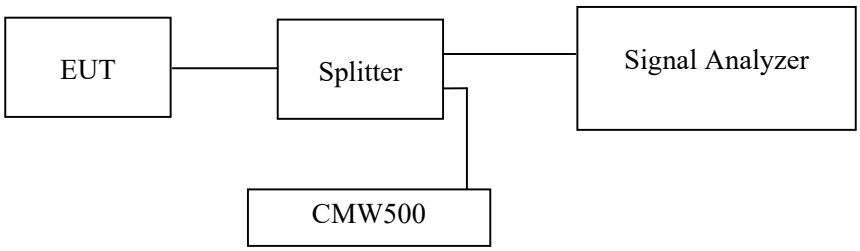
Applicable Standard

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.



Test Data

Environmental Conditions

Temperature:	23~27.6℃
Relative Humidity:	54~58 %
ATM Pressure:	101.0 kPa

The testing was performed by Black Ding from2022-02-19 to 2022-03-24.

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	246.00	320.17
	190	836.6	246.00	316.51
	251	848.8	246.00	318.13
EGPRS(8PSK)	128	824.2	248.00	318.15
	190	836.6	248.00	315.72
	251	848.8	248.00	316.18

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.17	4.74
	836.6	4.18	4.73
	846.6	4.17	4.74
HSDPA	826.4	4.18	4.71
	836.6	4.20	5.77
	846.6	4.23	5.05
HSUPA	826.4	4.17	4.73
	836.6	4.20	4.98
	846.6	4.18	4.81

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM (GMSK)	512	1850.2	243.59	315.71
	661	1880.0	246.79	314.10
	810	1909.8	243.59	317.31
EGPRS(8PSK)	512	1850.2	246.79	318.91
	661	1880.0	246.79	309.29
	810	1909.8	250.00	322.12

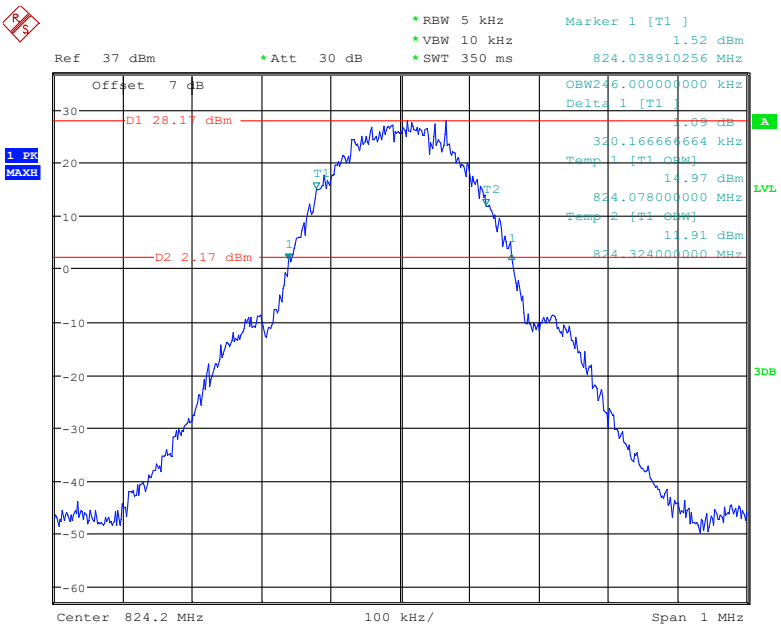
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.18	4.70
	1880.0	4.17	4.73
	1907.6	4.20	4.72
HSDPA	1852.4	4.30	6.49
	1880.0	4.30	6.75
	1907.6	4.25	7.00
HSUPA	1852.4	4.34	6.34
	1880.0	4.25	5.49
	1907.6	4.18	4.74

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.18	4.71
	1732.6	4.17	4.71
	1752.6	4.18	4.71
HSDPA	1712.4	4.20	4.73
	1732.6	4.20	4.73
	1752.6	4.18	4.73
HSUPA	1712.4	4.20	4.71
	1732.6	4.20	4.71
	1752.6	4.20	4.75

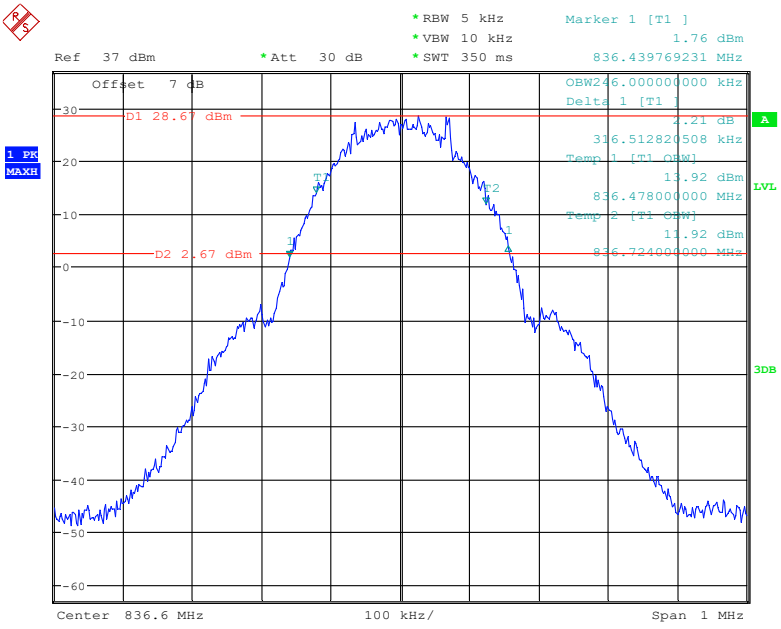
Cellular Band (Part 22H)

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



Date: 19.FEB.2022 16:39:51

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



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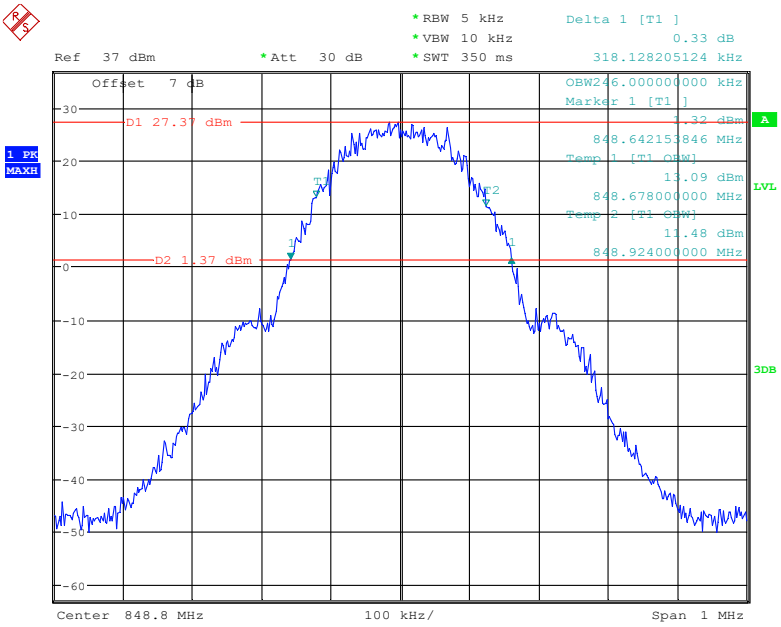
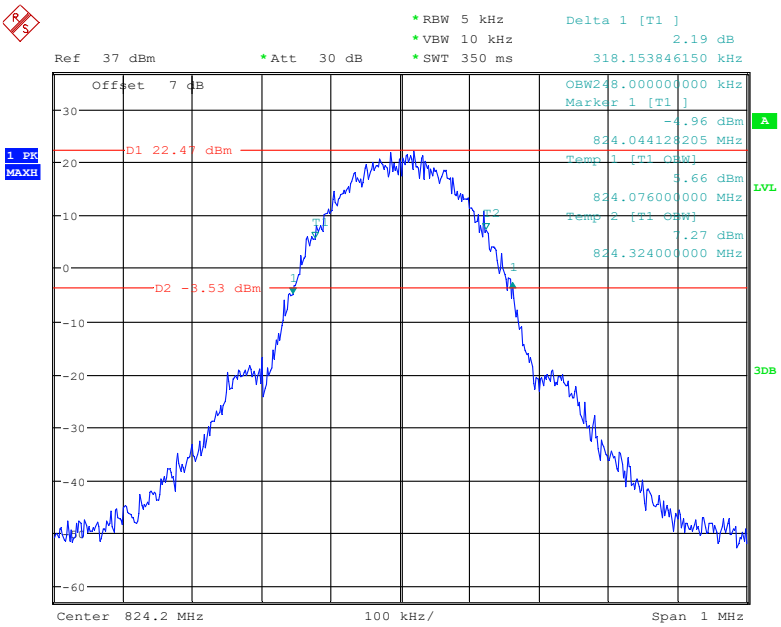
26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



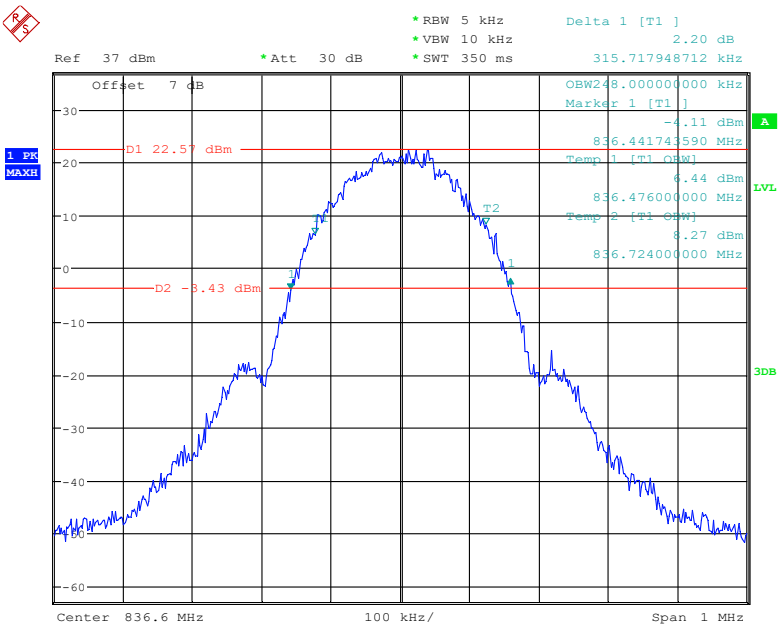
Date: 19.FEB.2022 16:37:00

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



Date: 19.FEB.2022 16:41:29

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



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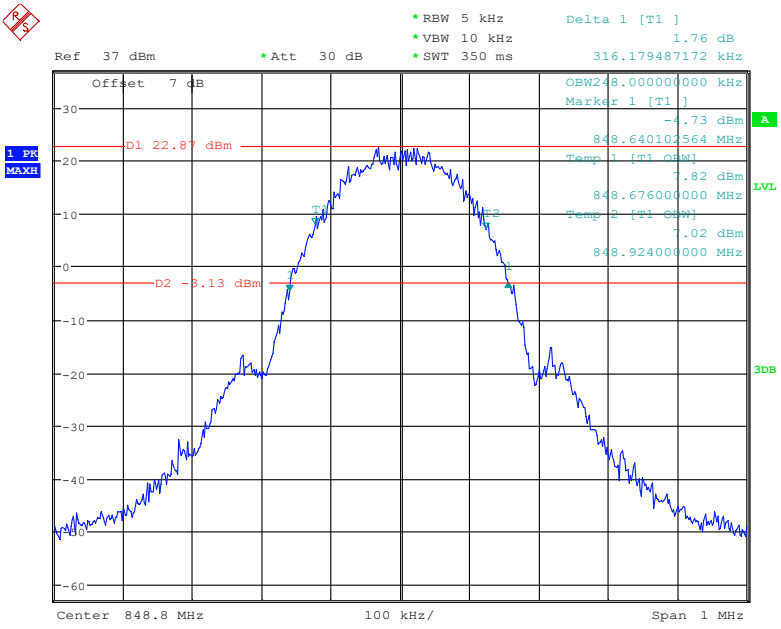
26 dB Emissions &99% Occupied Bandwidth for EGPRS (8PSK) Mode, High channel



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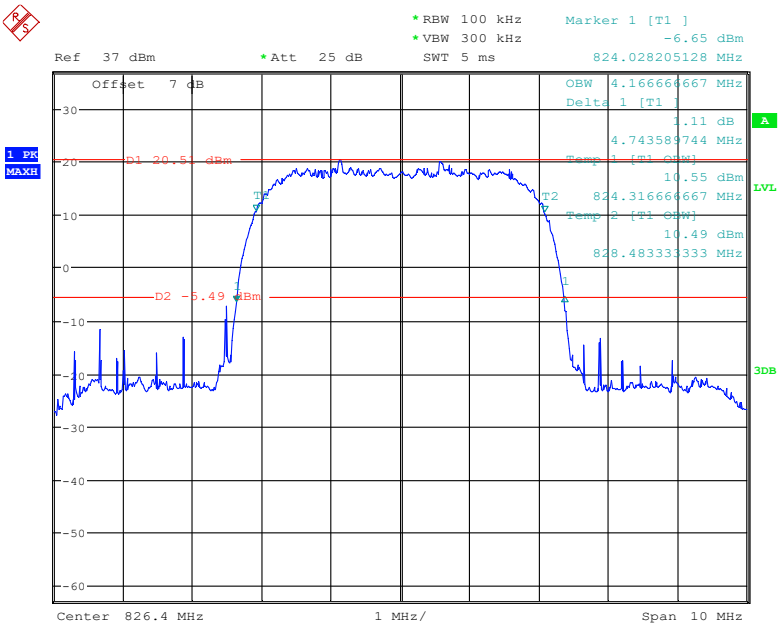
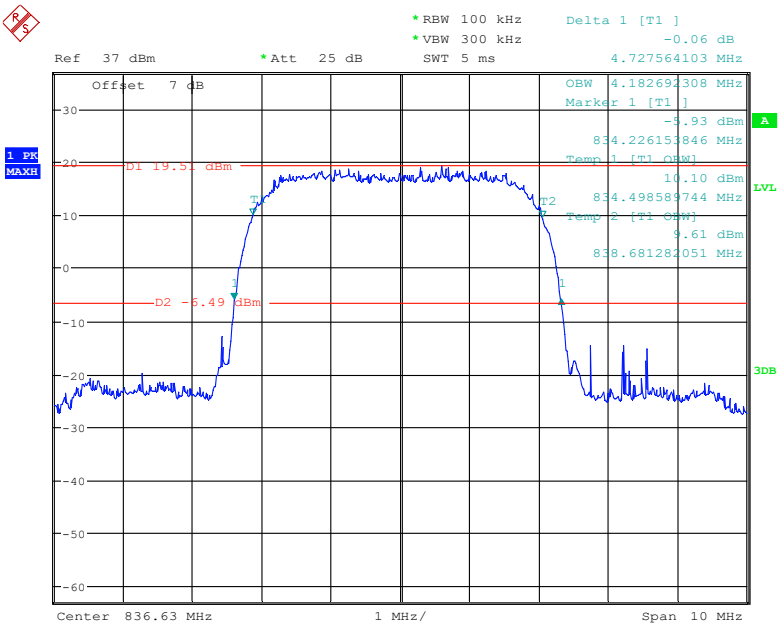
26 dB Emissions &99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



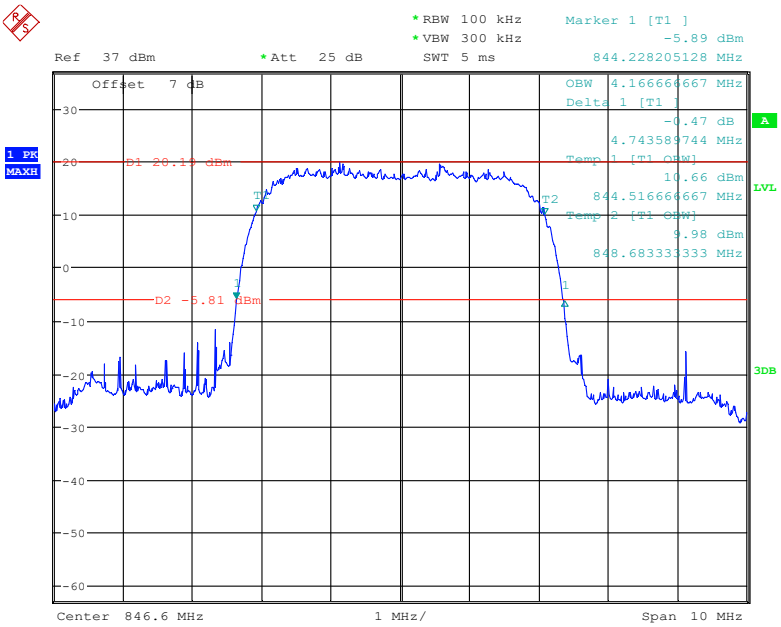
Date: 19.FEB.2022 18:52:36

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



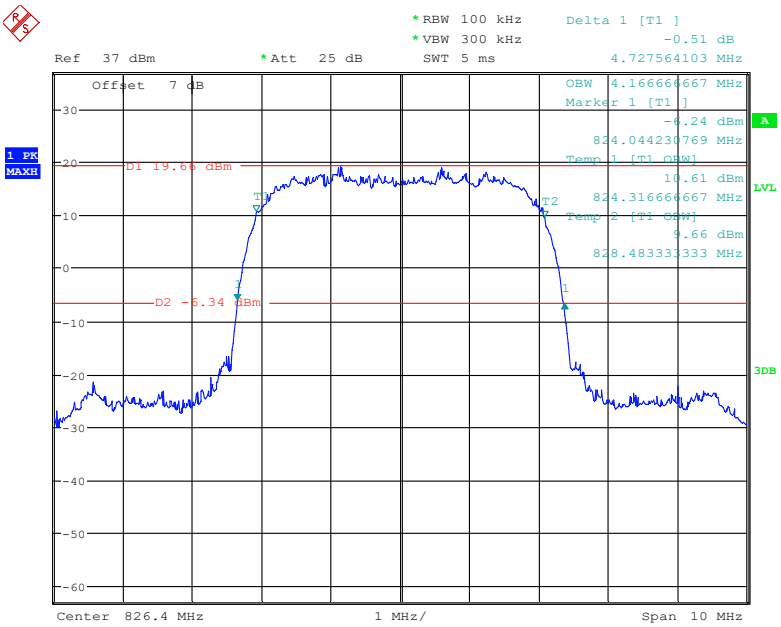
Date: 19.FEB.2022 18:53:35

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



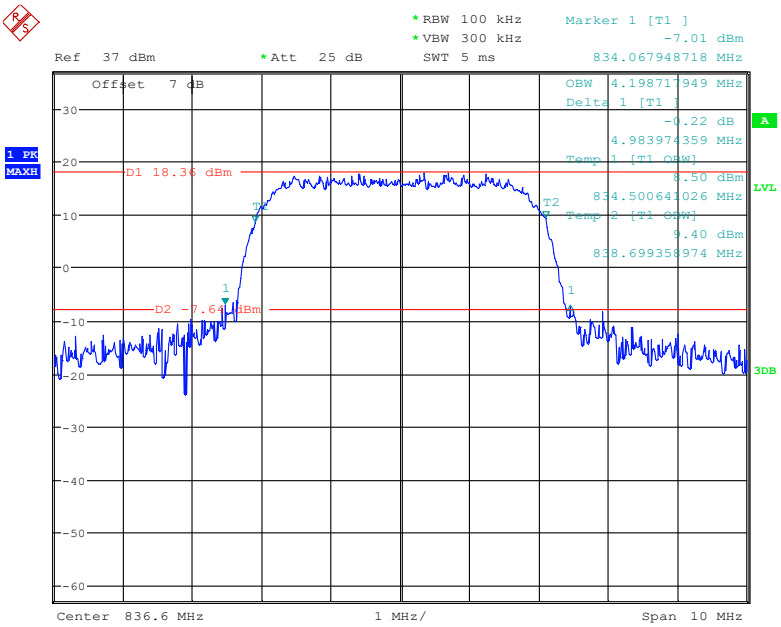
Date: 19.FEB.2022 18:54:47

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



Date: 19.FEB.2022 19:37:57

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



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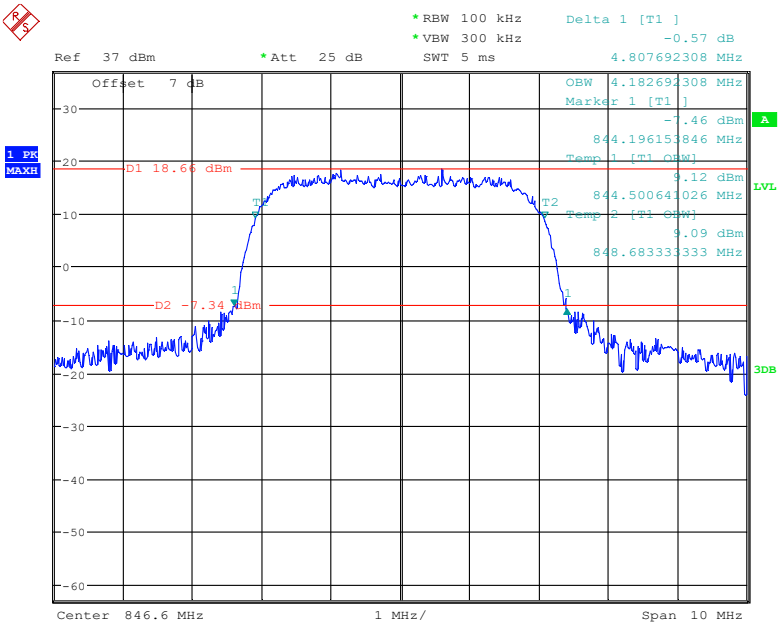
26 dB Emissions &99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel



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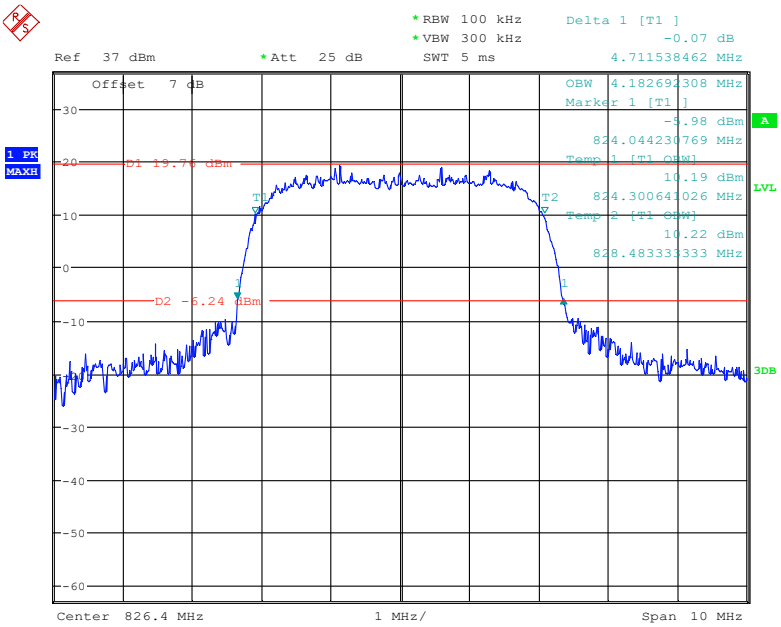
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel



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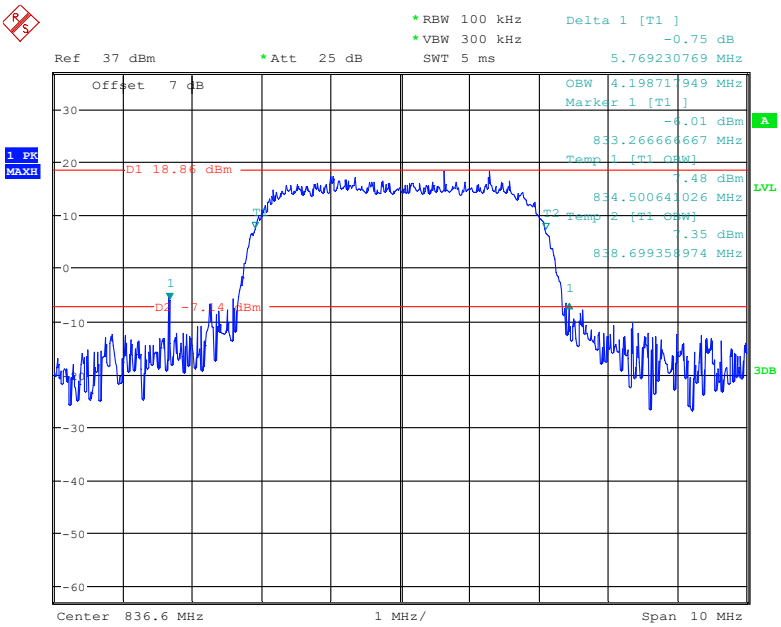
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel



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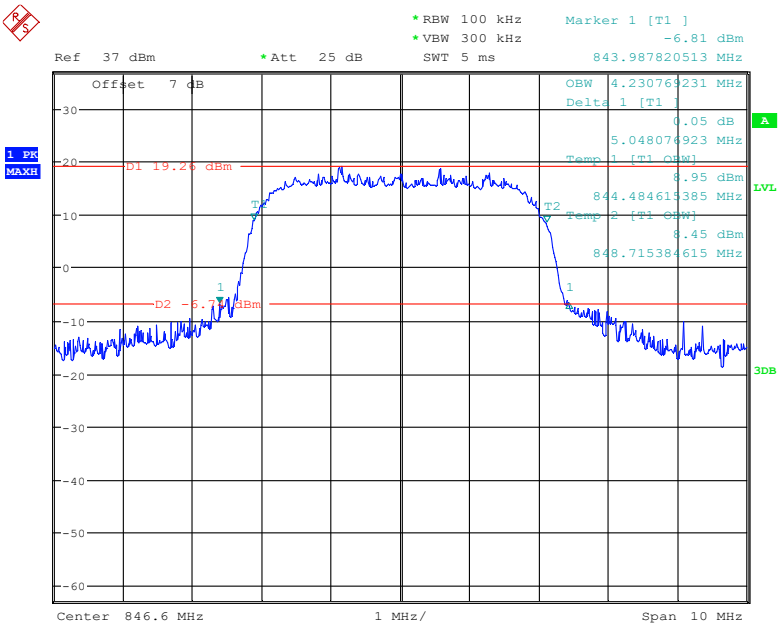
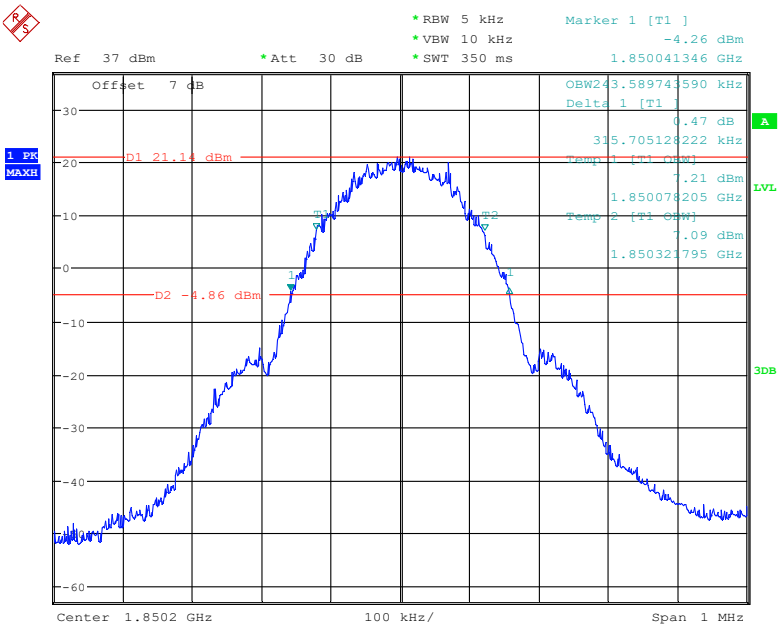
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



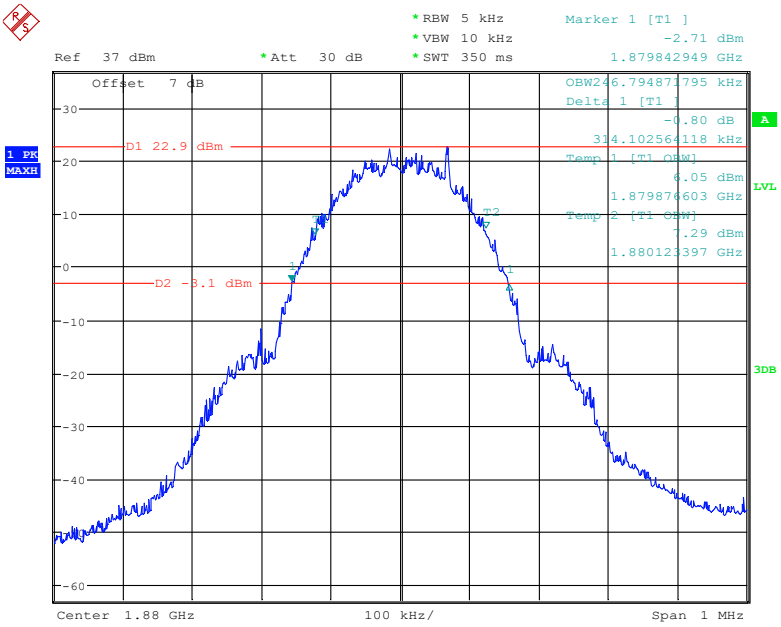
PCS Band (Part 24E)

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



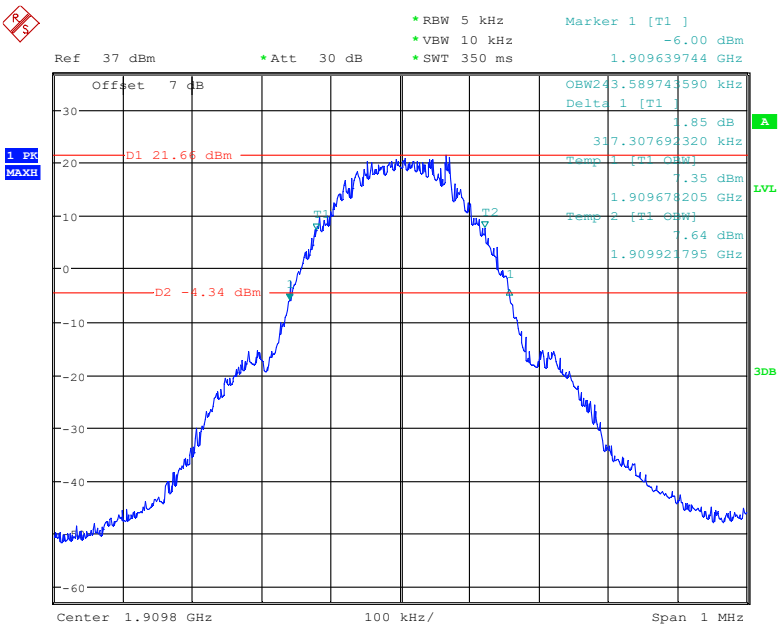
Date: 19.FEB.2022 17:03:09

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



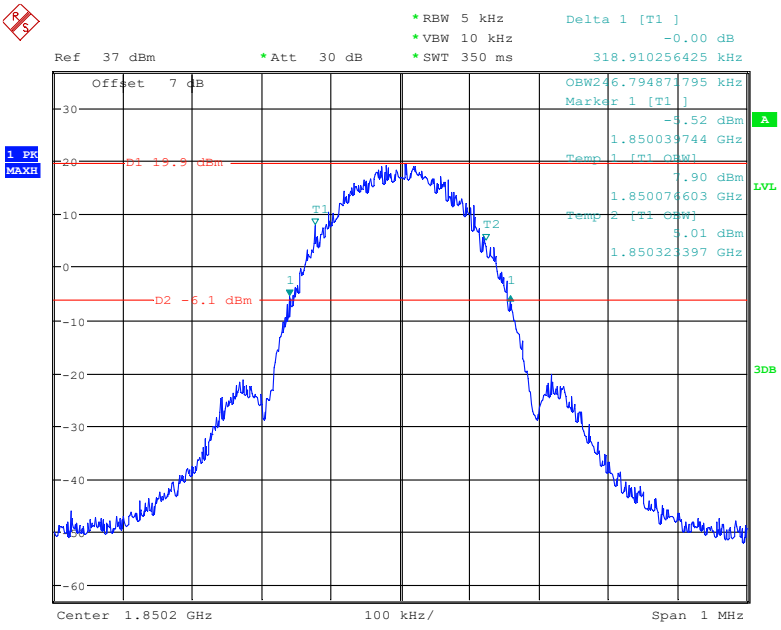
Date: 19.FEB.2022 17:04:52

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



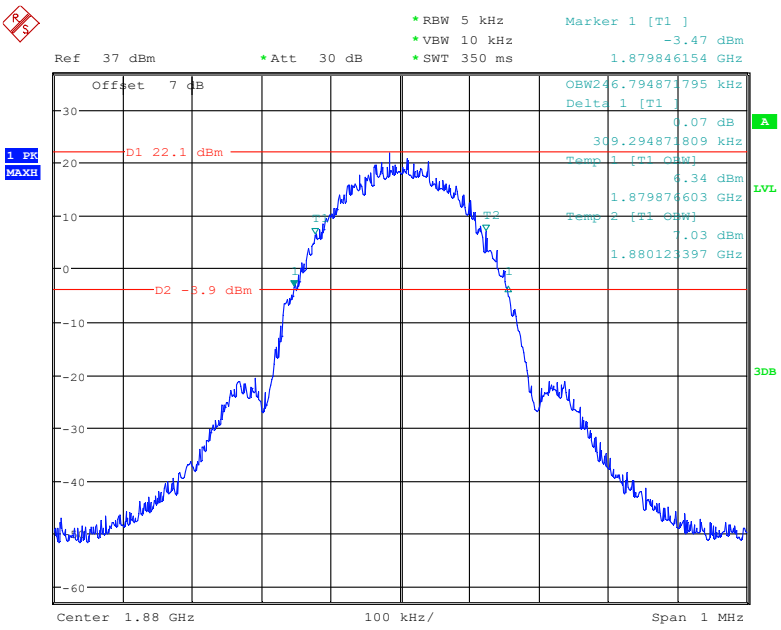
Date: 19.FEB.2022 17:06:26

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



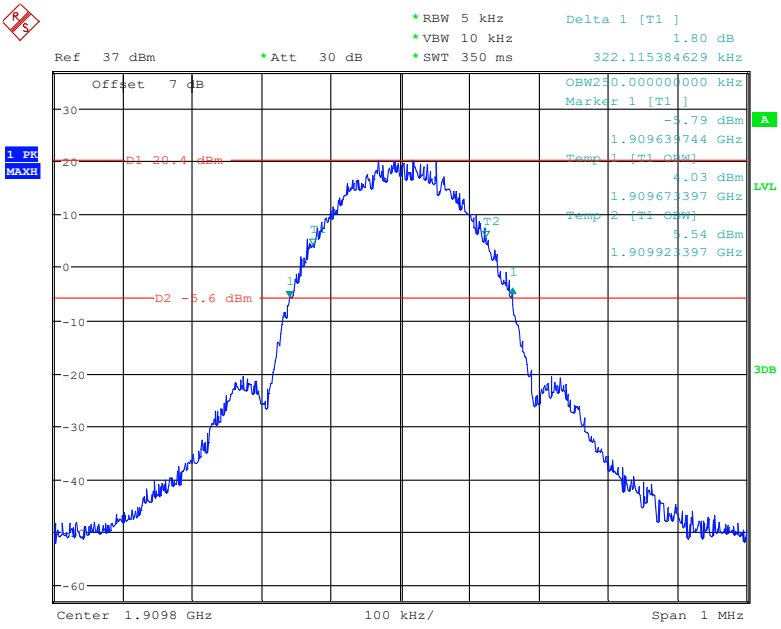
Date: 19.FEB.2022 16:56:43

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



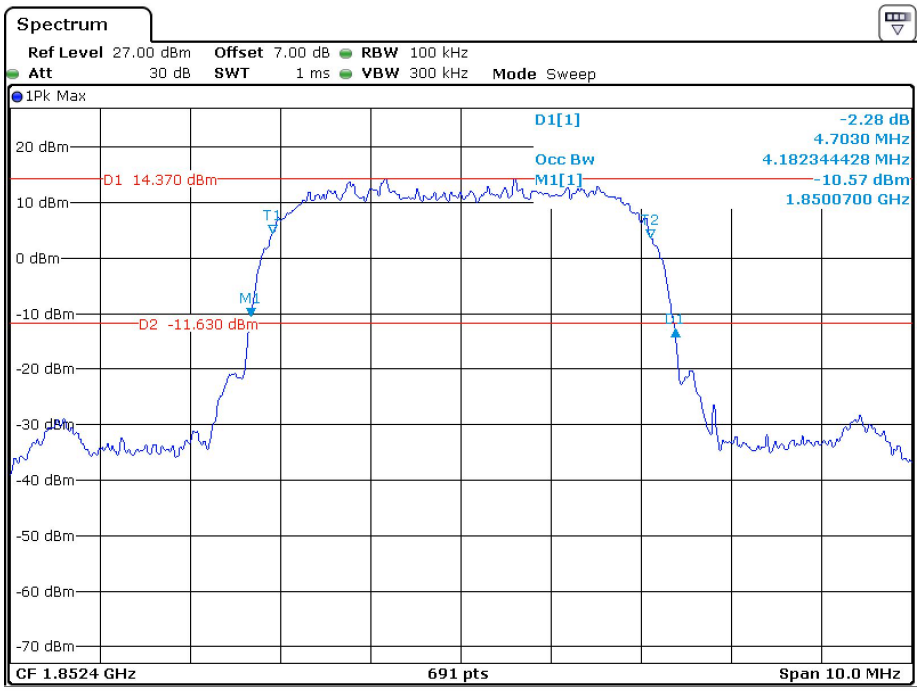
Date: 19.FEB.2022 16:54:55

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



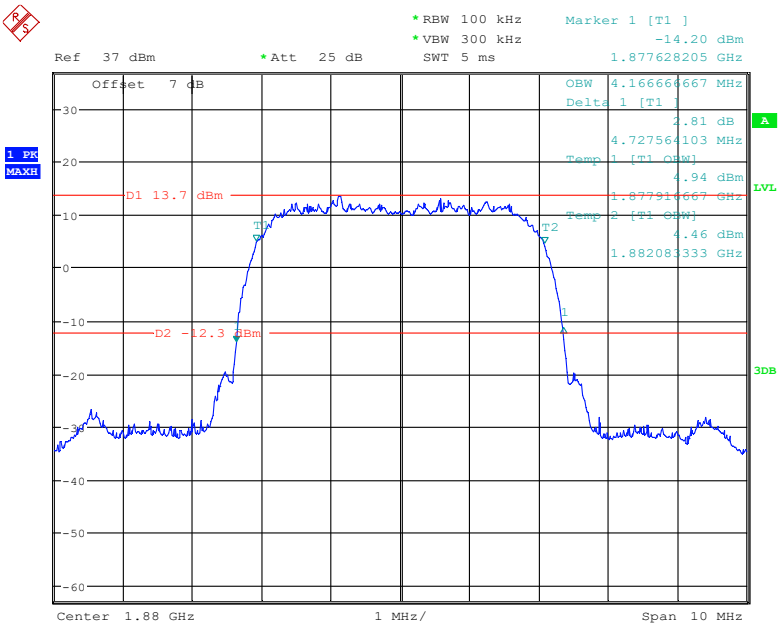
Date: 19.FEB.2022 16:53:48

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



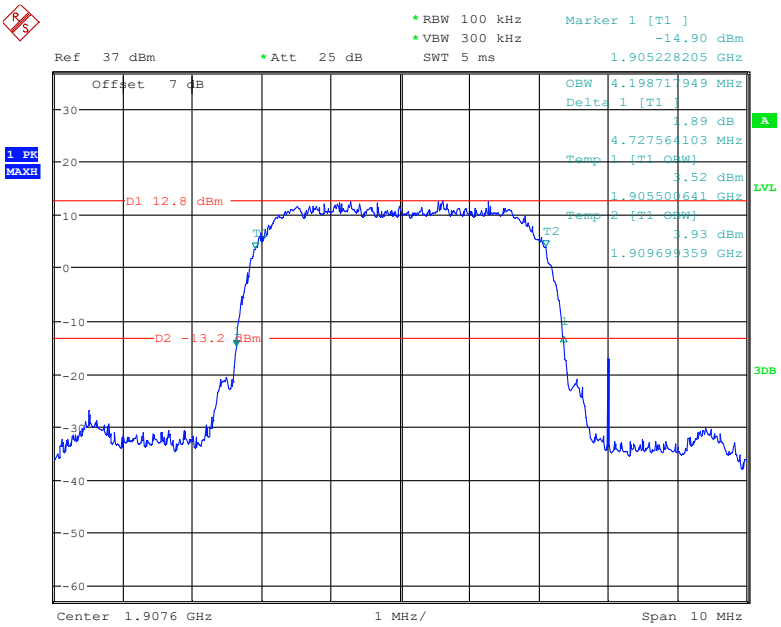
Date: 24.MAR.2022 21:23:30

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



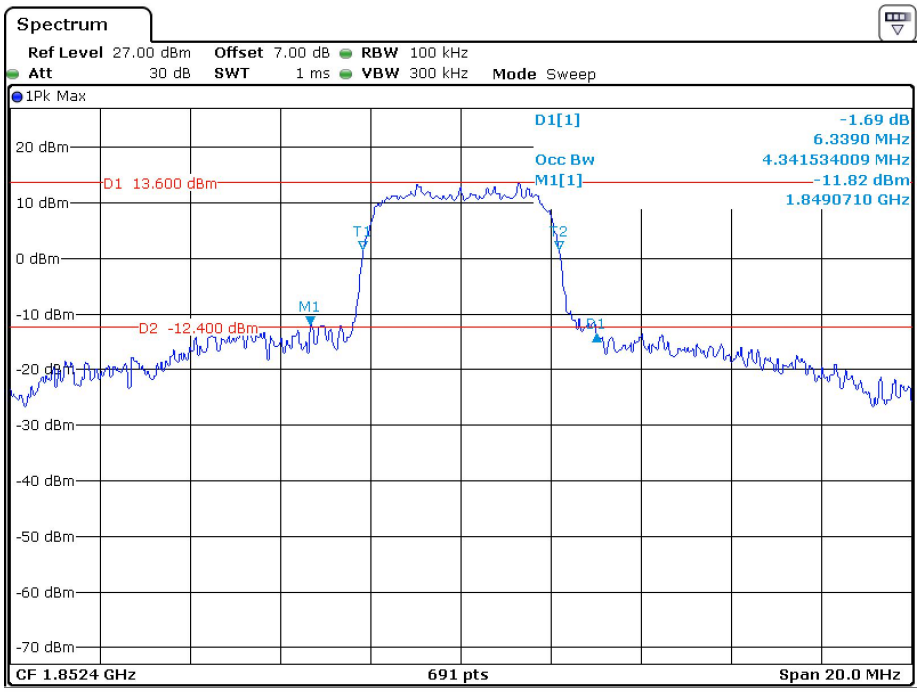
Date: 19.FEB.2022 18:38:32

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



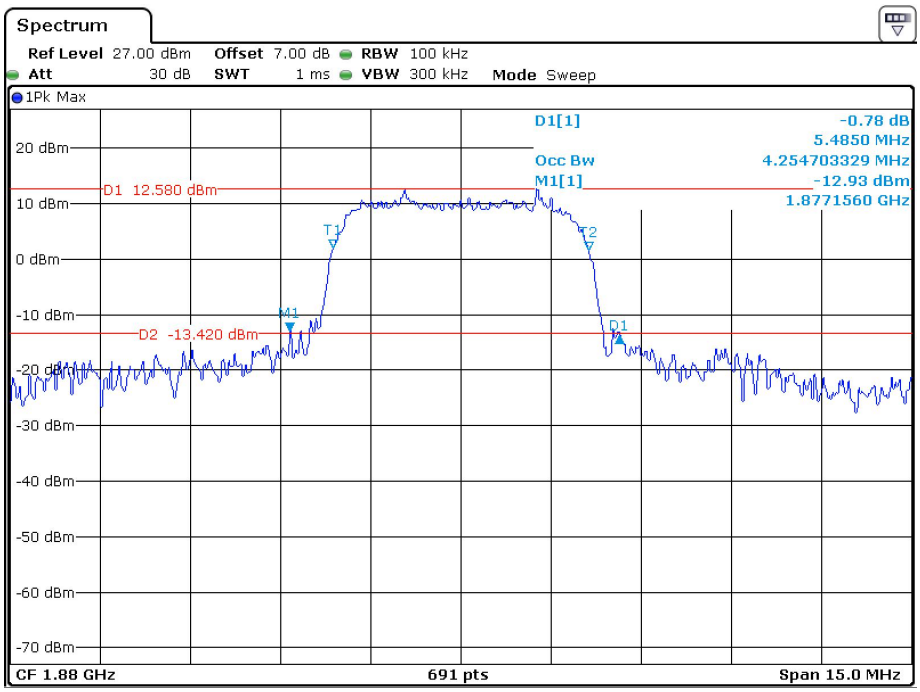
Date: 19.FEB.2022 18:39:40

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



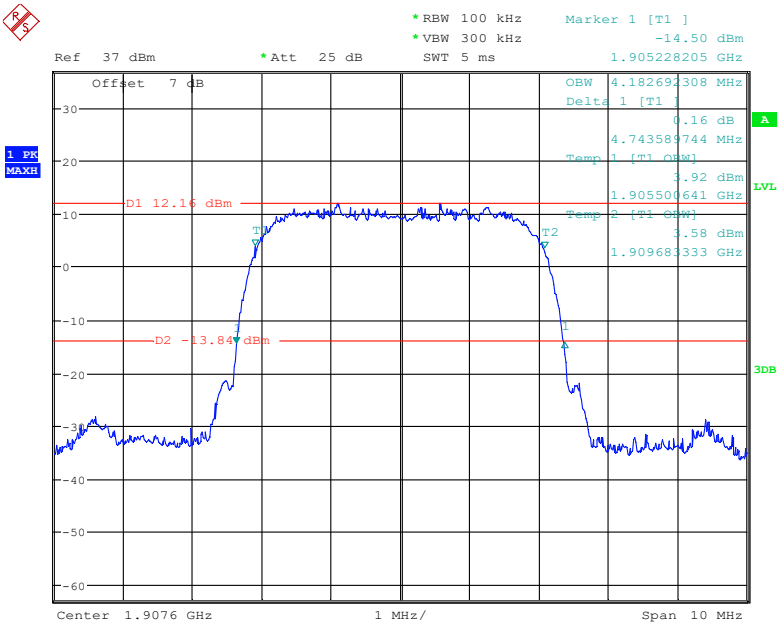
Date: 24.MAR.2022 21:00:53

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



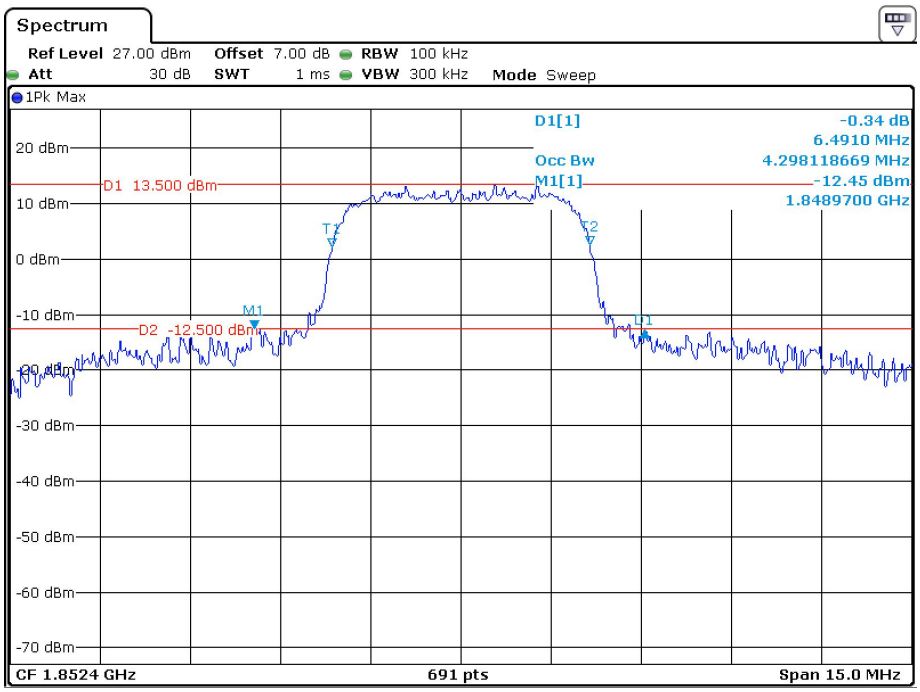
Date: 24.MAR.2022 21:04:27

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



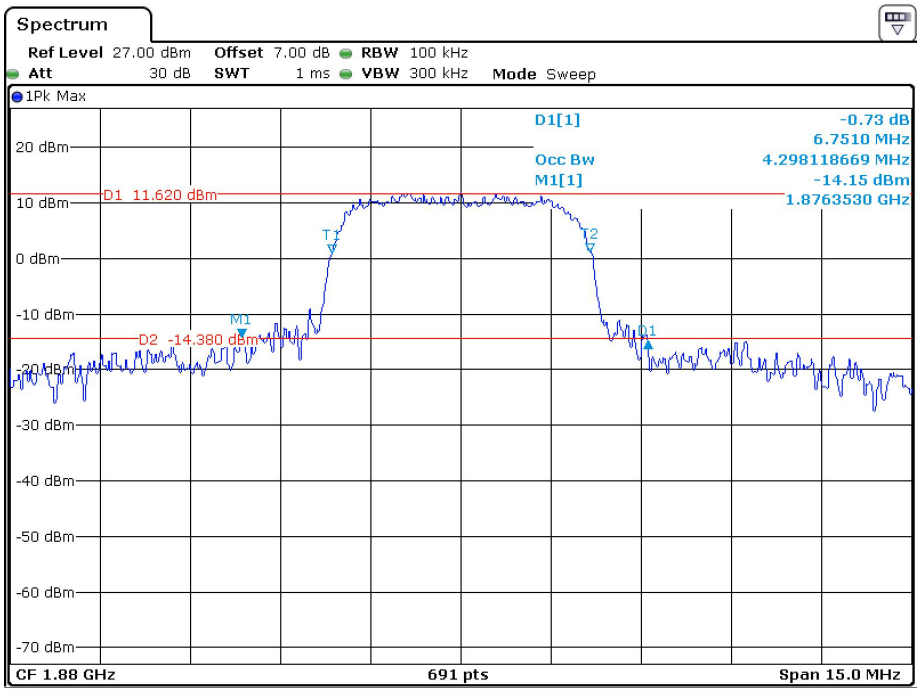
Date: 19.FEB.2022 19:34:12

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



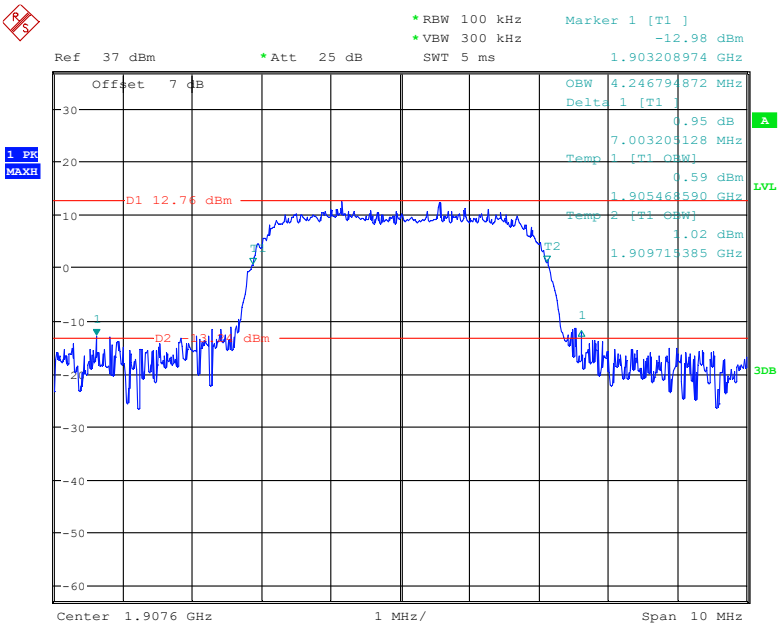
Date: 24.MAR.2022 21:16:45

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



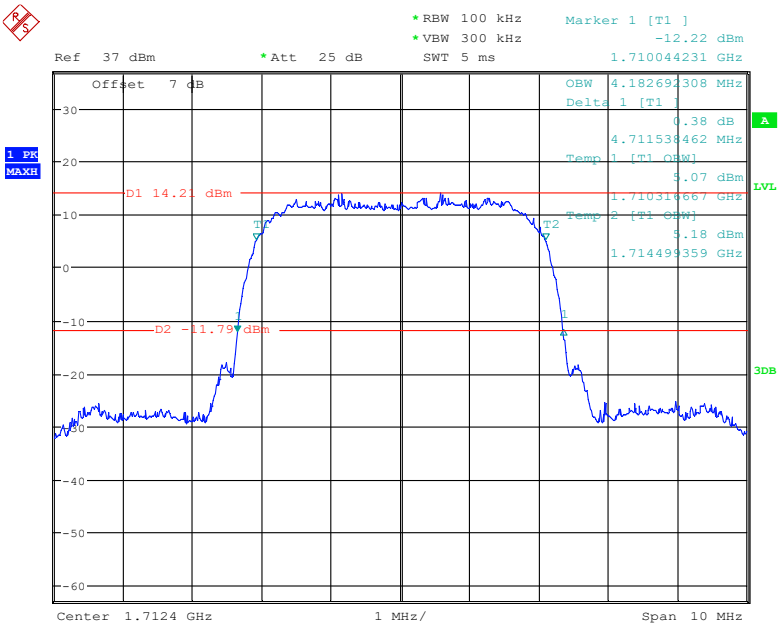
Date: 24.MAR.2022 21:07:25

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



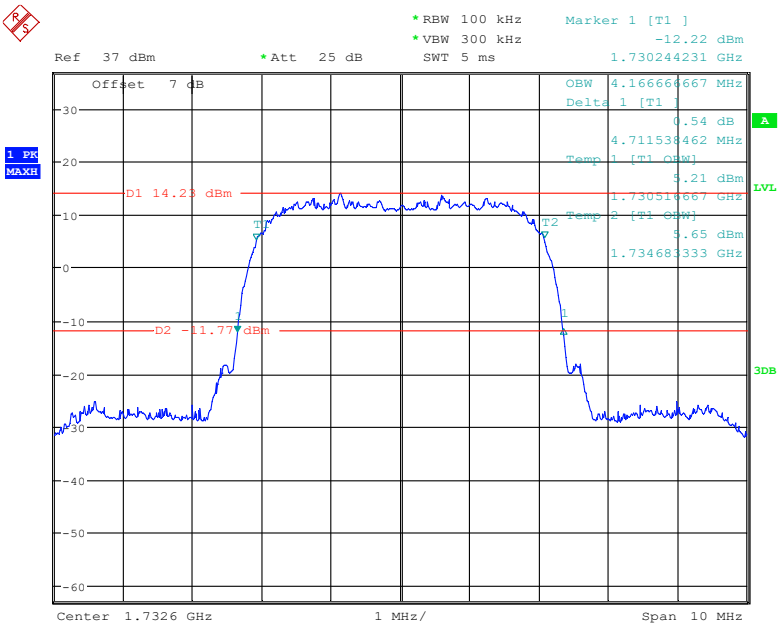
AWS Band (Part 27)

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



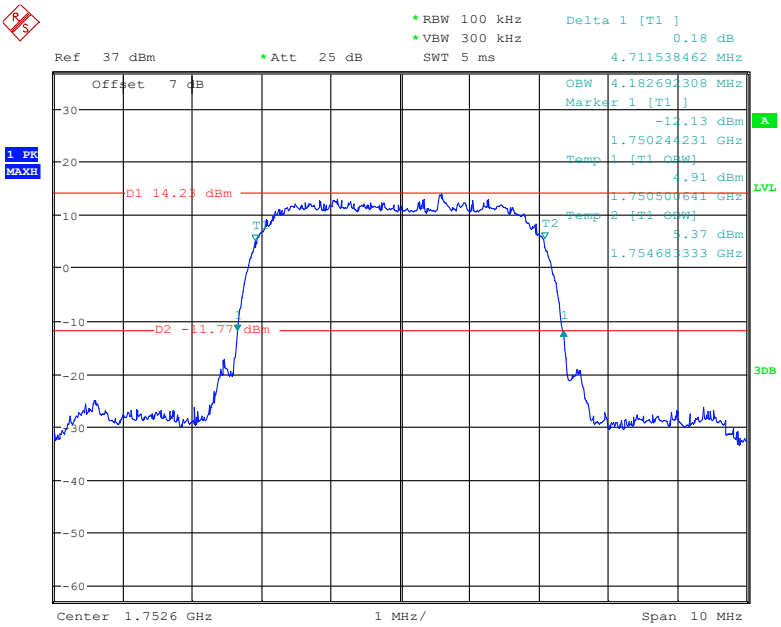
Date: 19.FEB.2022 18:48:56

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



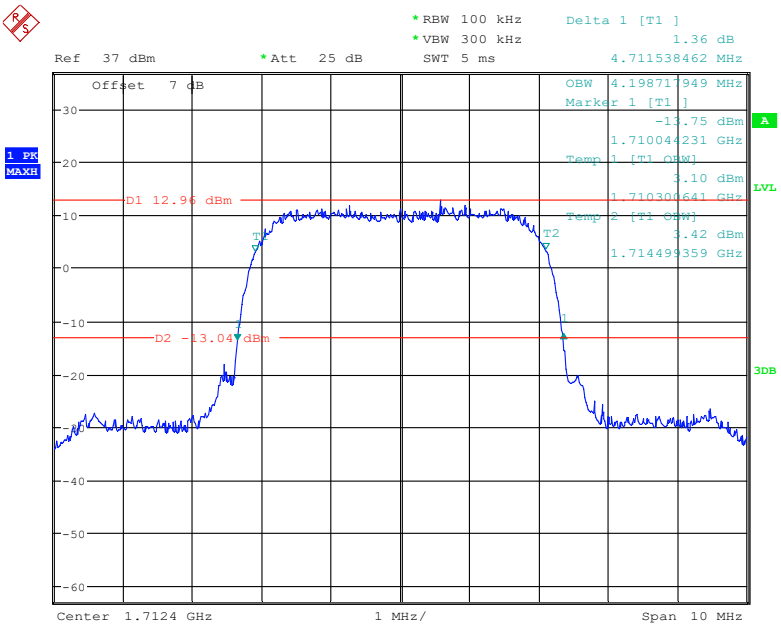
Date: 19.FEB.2022 18:50:16

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



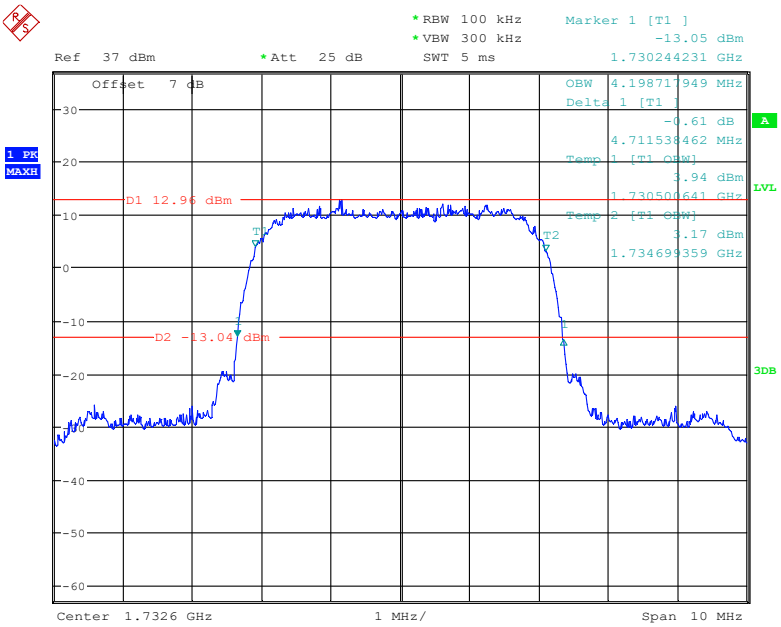
Date: 19.FEB.2022 18:50:57

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



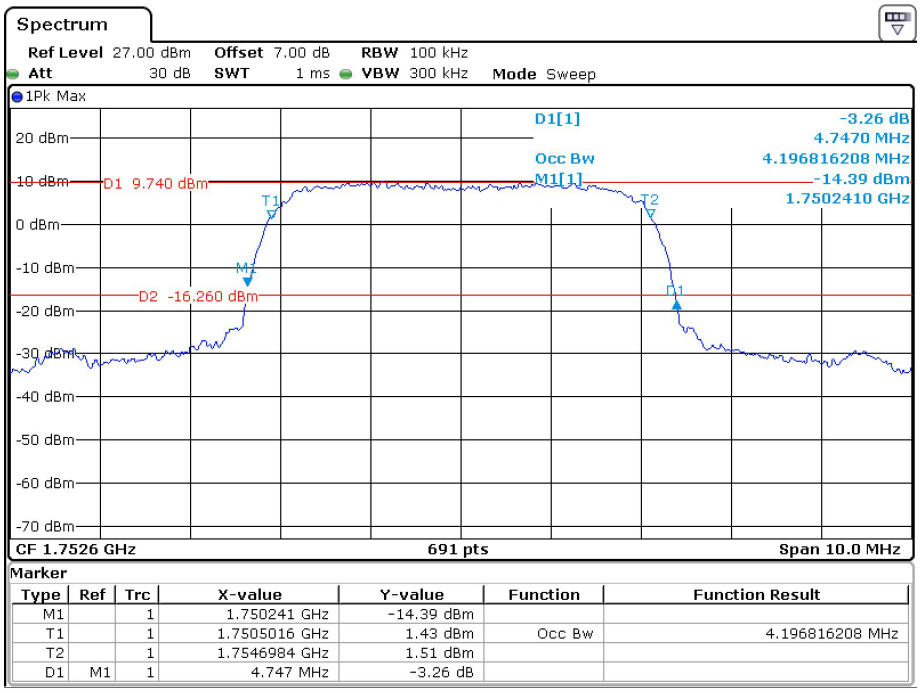
Date: 19.FEB.2022 19:35:08

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



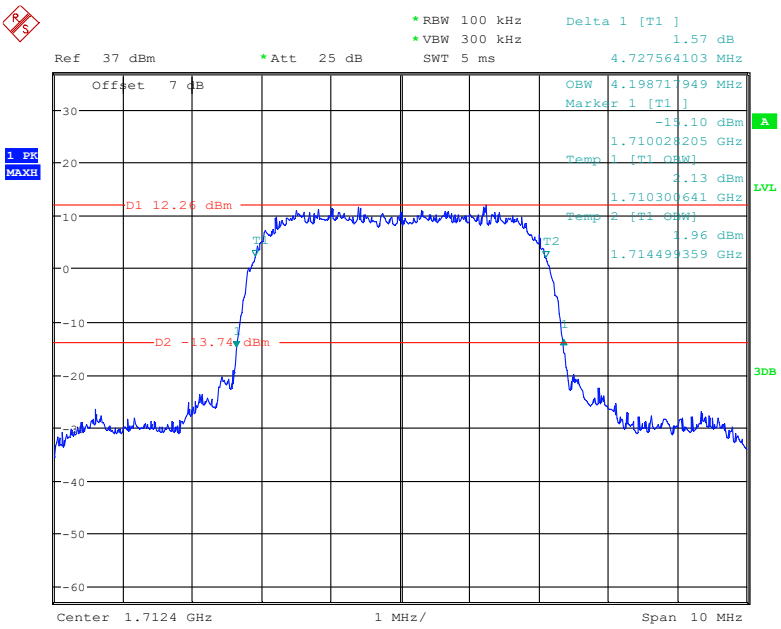
Date: 19.FEB.2022 19:35:45

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



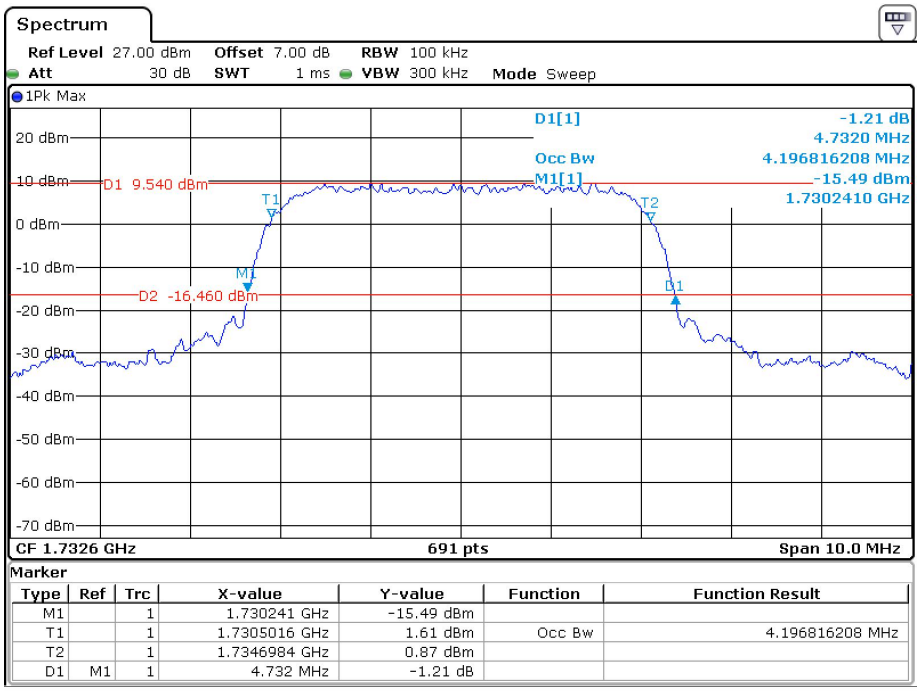
Date: 24.MAR.2022 20:33:58

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



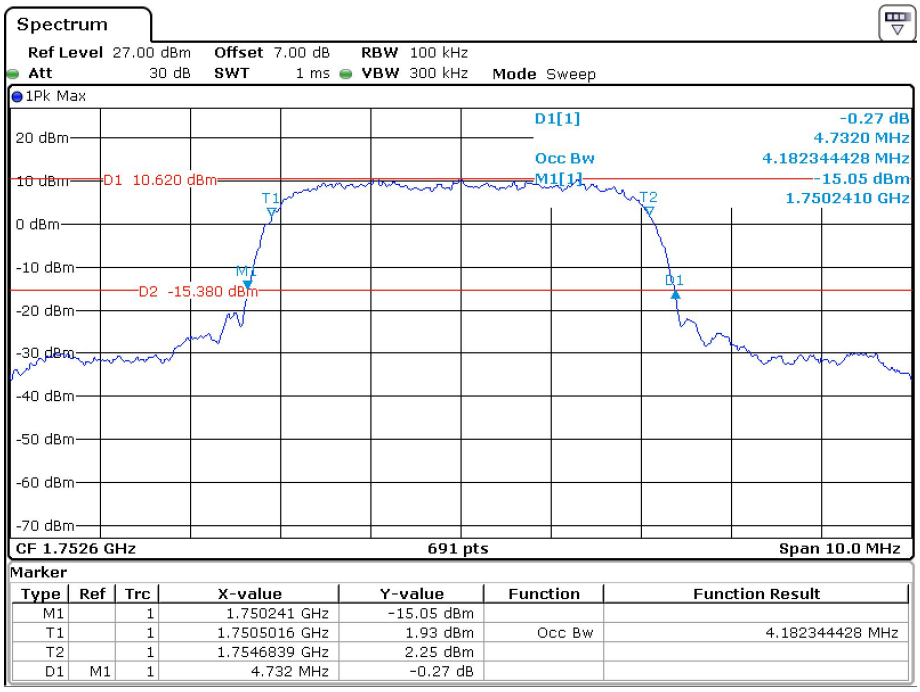
Date: 19.FEB.2022 19:21:19

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



Date: 24.MAR.2022 20:25:38

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



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	1.110	1.326	1.110	1.296	1.098	1.308
	16QAM	1.098	1.284	1.104	1.296	1.110	1.314
3 MHz	QPSK	2.688	2.868	2.688	2.880	2.688	2.892
	16QAM	2.688	2.880	2.688	2.880	2.688	2.868
5 MHz	QPSK	4.520	4.960	4.520	4.940	4.520	4.880
	16QAM	4.500	4.920	4.520	4.960	4.520	4.940
10 MHz	QPSK	8.960	9.640	8.960	9.560	8.960	9.560
	16QAM	8.960	9.480	8.960	9.640	8.960	9.640
15 MHz	QPSK	13.560	15.000	13.500	14.760	13.560	14.820
	16QAM	13.560	14.820	13.500	14.760	13.440	14.700
20 MHz	QPSK	18.000	19.280	18.000	19.280	17.920	19.600
	16QAM	18.000	19.360	18.000	19.520	17.920	19.520

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	1.092	1.302	1.104	1.332	1.110	1.296
	16QAM	1.110	1.314	1.098	1.296	1.104	1.296
3 MHz	QPSK	2.688	2.880	2.688	2.880	2.688	2.892
	16QAM	2.688	2.892	2.688	2.880	2.688	2.892
5 MHz	QPSK	4.520	4.980	4.520	4.940	4.520	4.920
	16QAM	4.500	4.920	4.520	4.920	4.520	4.980
10 MHz	QPSK	8.960	9.680	8.960	9.640	8.960	9.600
	16QAM	8.960	9.640	8.960	9.640	8.960	9.640
15 MHz	QPSK	13.500	14.880	13.500	14.760	13.500	14.820
	16QAM	13.560	14.820	13.500	14.820	13.560	14.760
20 MHz	QPSK	18.000	19.360	18.000	19.440	17.920	19.440
	16QAM	18.000	19.360	18.000	19.360	17.920	19.360

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	1.302	1.104	1.302	1.110	1.296
	16QAM	1.110	1.314	1.098	1.290	1.098	1.296
3 MHz	QPSK	2.688	2.880	2.688	2.880	2.688	2.880
	16QAM	2.688	2.892	2.676	2.880	2.688	2.868
5 MHz	QPSK	4.520	4.980	4.520	4.940	4.520	4.940
	16QAM	4.500	4.920	4.520	4.900	4.520	4.940
10 MHz	QPSK	8.960	9.680	8.960	9.600	8.960	9.520
	16QAM	8.960	9.640	8.960	9.640	8.960	9.560

LTE Band 7:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.520	4.960	4.520	4.940	4.500	4.940
	16QAM	4.500	4.940	4.520	4.940	4.520	4.960
10 MHz	QPSK	8.960	9.720	8.960	9.560	8.960	9.600
	16QAM	8.960	9.640	9.000	9.600	8.960	9.560
15 MHz	QPSK	13.560	14.820	13.500	14.700	13.500	14.940
	16QAM	13.500	14.820	13.560	14.820	13.500	14.820
20 MHz	QPSK	18.000	19.200	18.000	19.360	18.000	19.440
	16QAM	17.920	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	5.260	4.520	5.080	4.500	4.980
	16QAM	4.520	4.940	4.520	4.980	4.520	5.168
10 MHz	QPSK	8.960	9.640	8.960	9.680	8.960	9.720
	16QAM	8.960	9.520	8.960	9.520	8.960	10.054
15 MHz	QPSK	13.560	15.660	13.500	15.836	13.560	15.433
	16QAM	13.560	16.140	13.560	16.620	13.560	15.840
20 MHz	QPSK	18.000	19.520	18.000	19.520	18.000	19.520
	16QAM	18.000	19.280	18.000	20.720	18.000	19.360

LTE Band 41

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.520	5.240	4.520	5.300	4.500	4.940
	16QAM	4.500	4.960	4.500	4.960	4.520	5.160
10 MHz	QPSK	9.000	9.600	8.960	9.720	8.960	9.840
	16QAM	9.000	9.520	8.960	9.560	8.960	10.000
15 MHz	QPSK	13.560	15.540	13.560	15.360	13.500	15.540
	16QAM	13.560	16.320	13.560	16.200	13.620	16.320
20 MHz	QPSK	18.000	19.520	18.000	19.680	18.000	19.920
	16QAM	18.000	19.760	18.000	20.800	18.000	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

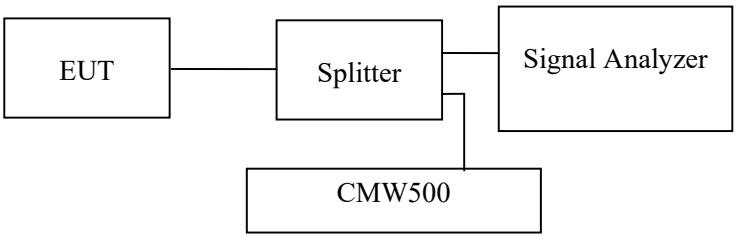
Applicable Standard

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.



Test Data

Environmental Conditions

Temperature:	23~27.6 ℃
Relative Humidity:	54~58 %
ATM Pressure:	101.0 kPa

The testing was performed by Black Ding from2022-02-19 to 2022-03-24.

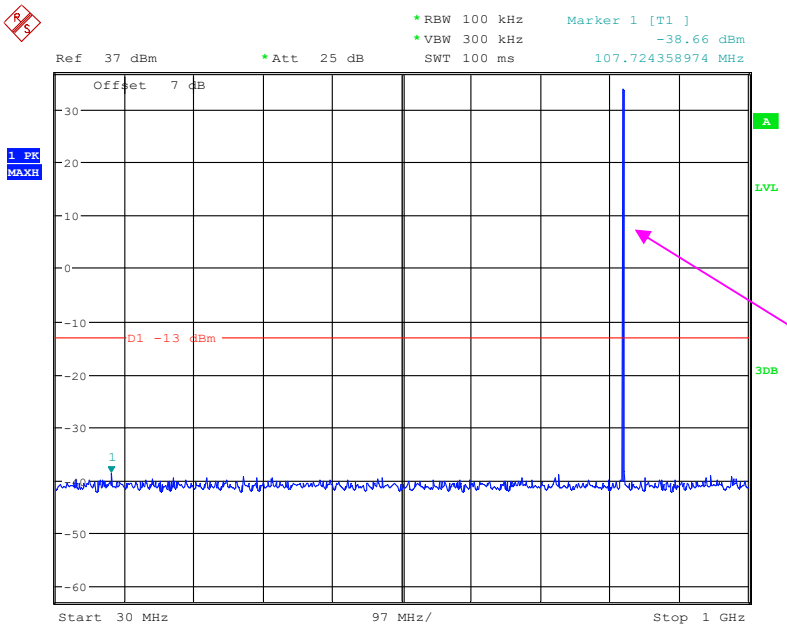
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

Cellular Band (Part 22H)
Low Channel:

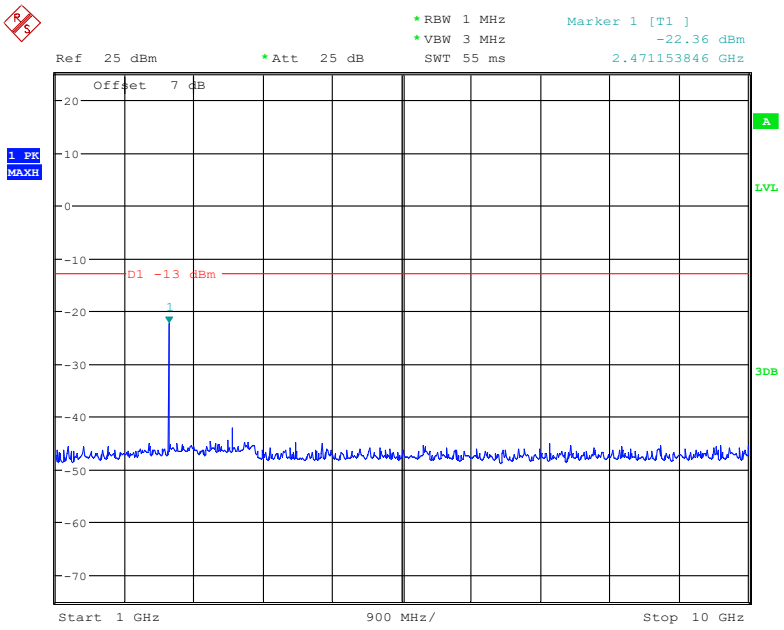
30 MHz – 1 GHz (GSM Mode)



Fundamental test

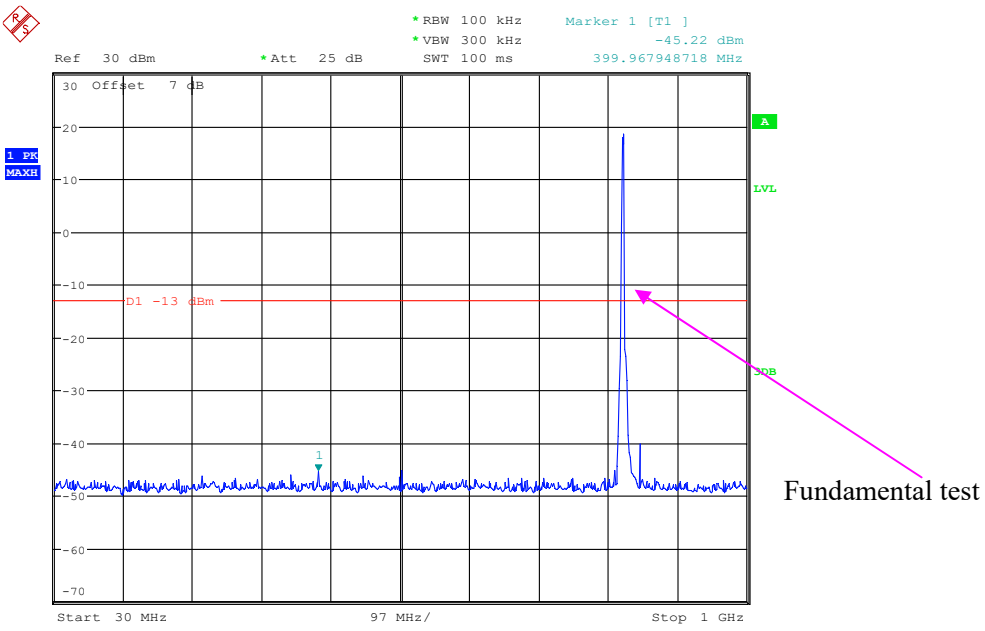
Date: 19.FEB.2022 17:17:06

1 GHz – 10 GHz (GSM Mode)



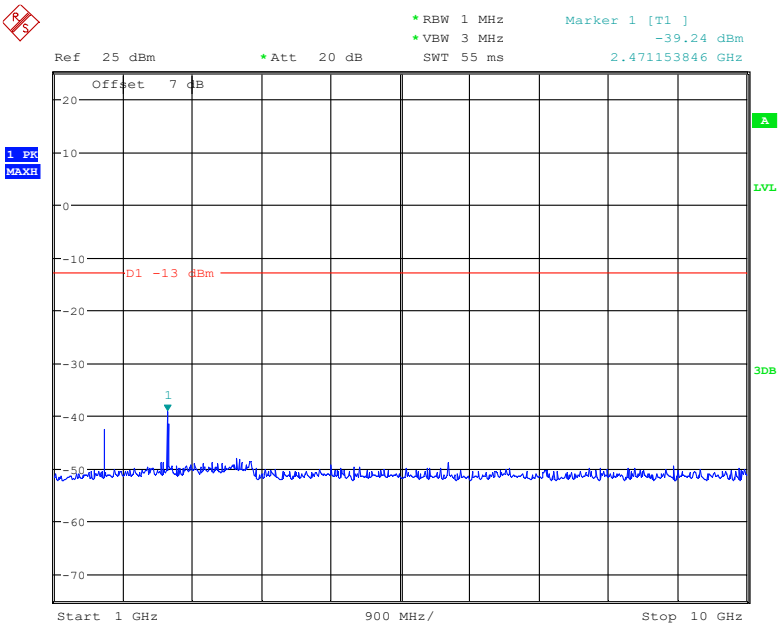
Date: 19.FEB.2022 17:15:34

30 MHz – 1 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:48:17

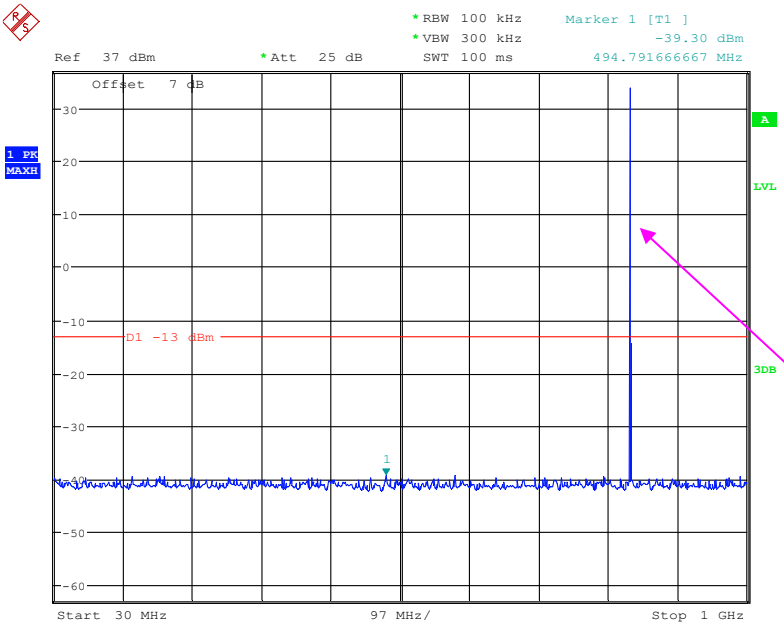
1 GHz –10 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:57:48

Middle Channel:

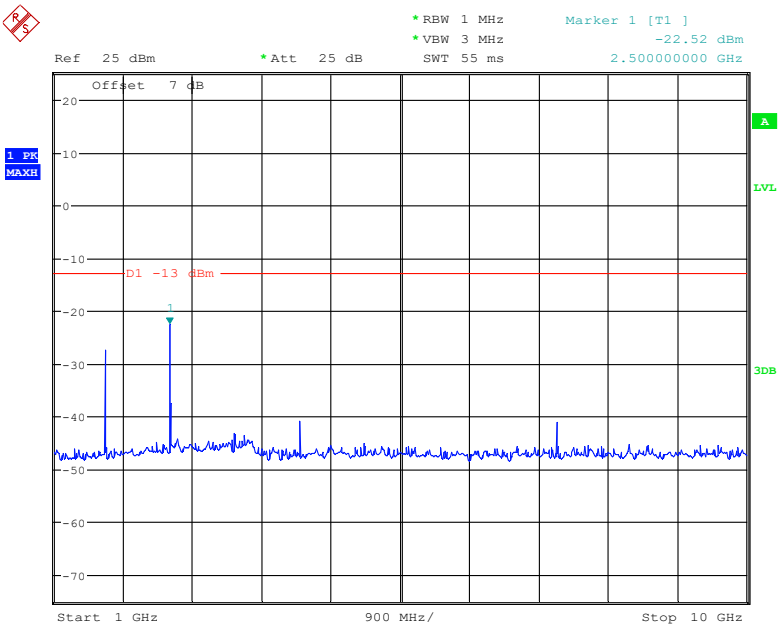
30 MHz – 1 (GHz GSM Mode)



Fundamental test

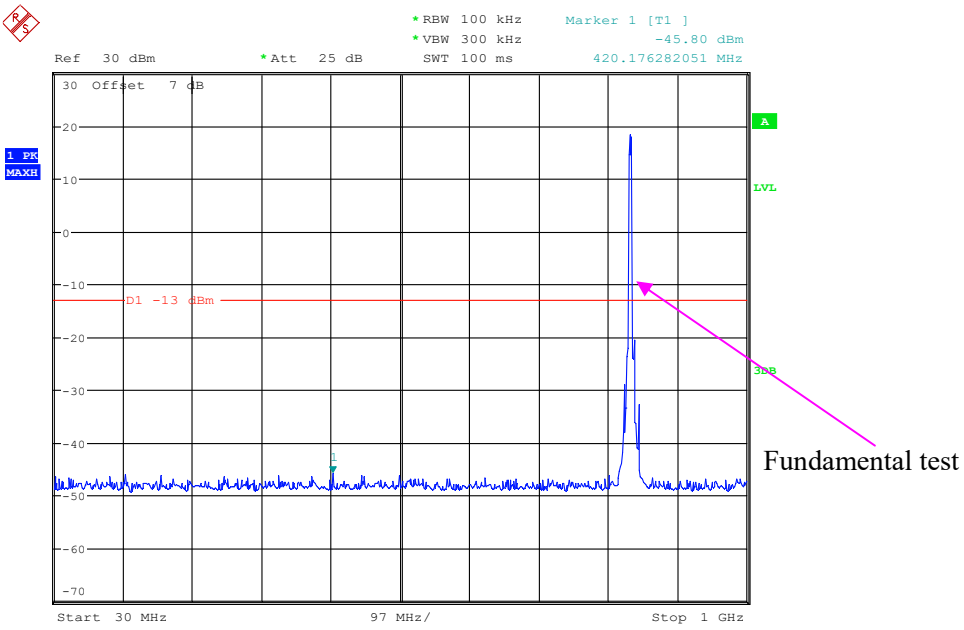
Date: 19.FEB.2022 17:17:58

1 GHz – 10 GHz (GSM Mode)



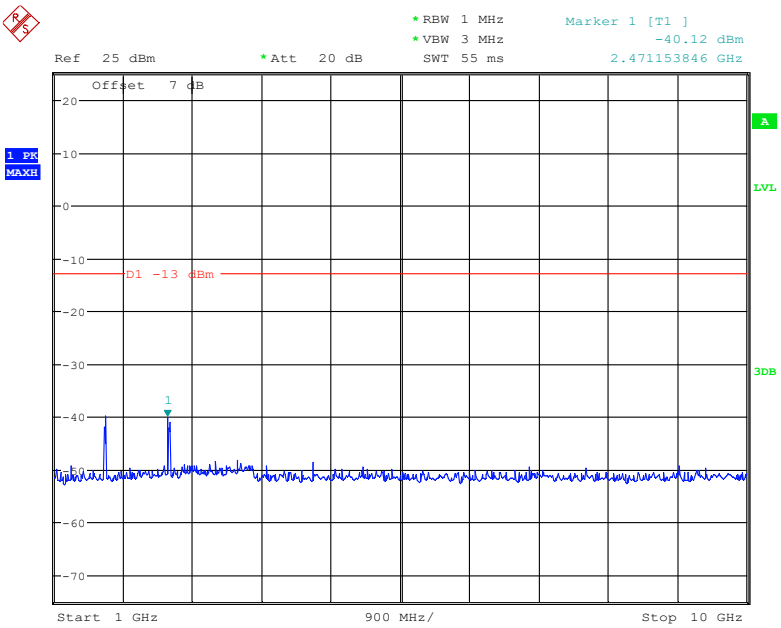
Date: 19.FEB.2022 17:15:17

30 MHz – 1 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:48:58

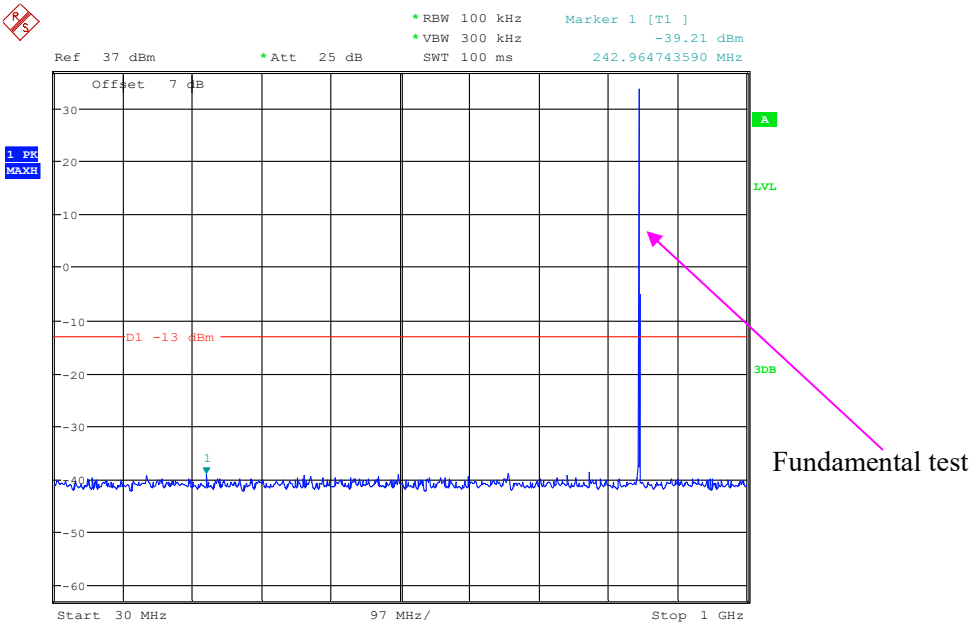
1 GHz – 10 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:58:06

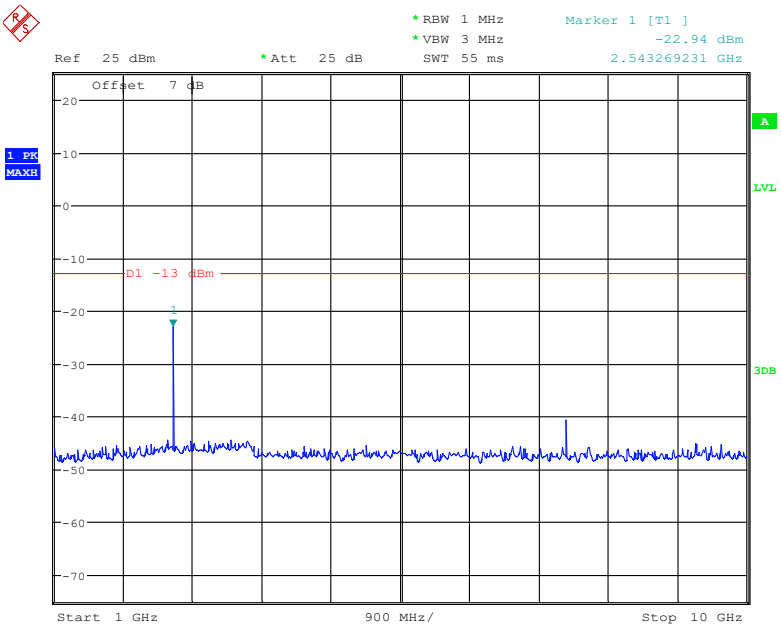
High Channel:

30 MHz – 1 GHz (GSM Mode)



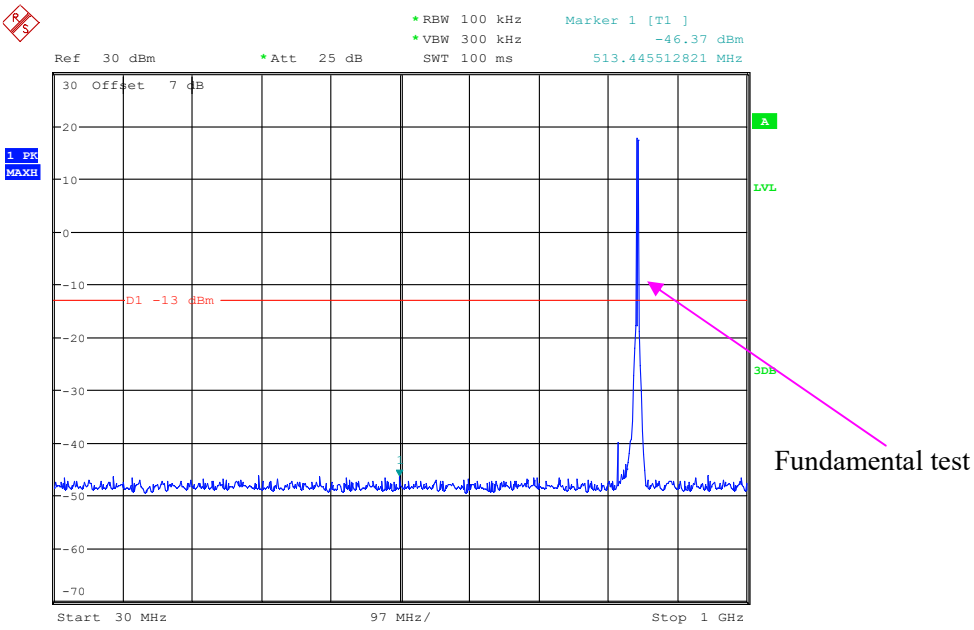
Date: 19.FEB.2022 17:18:28

1 GHz – 10 GHz (GSM Mode)



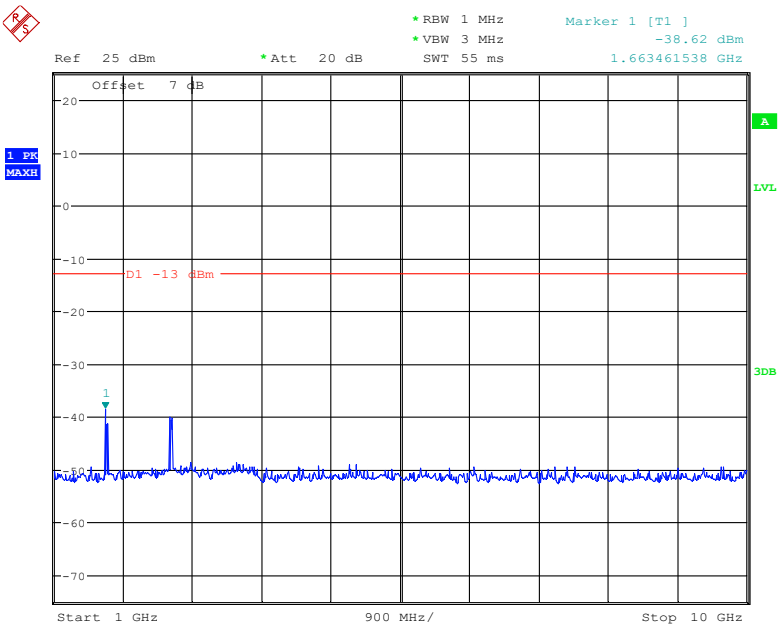
Date: 19.FEB.2022 17:15:57

30 MHz – 1 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:49:21

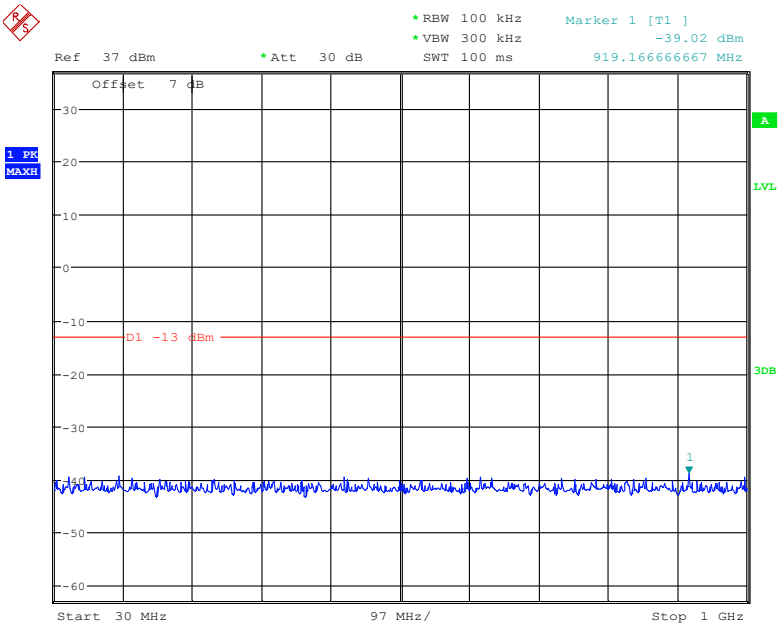
1 GHz – 10 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:58:16

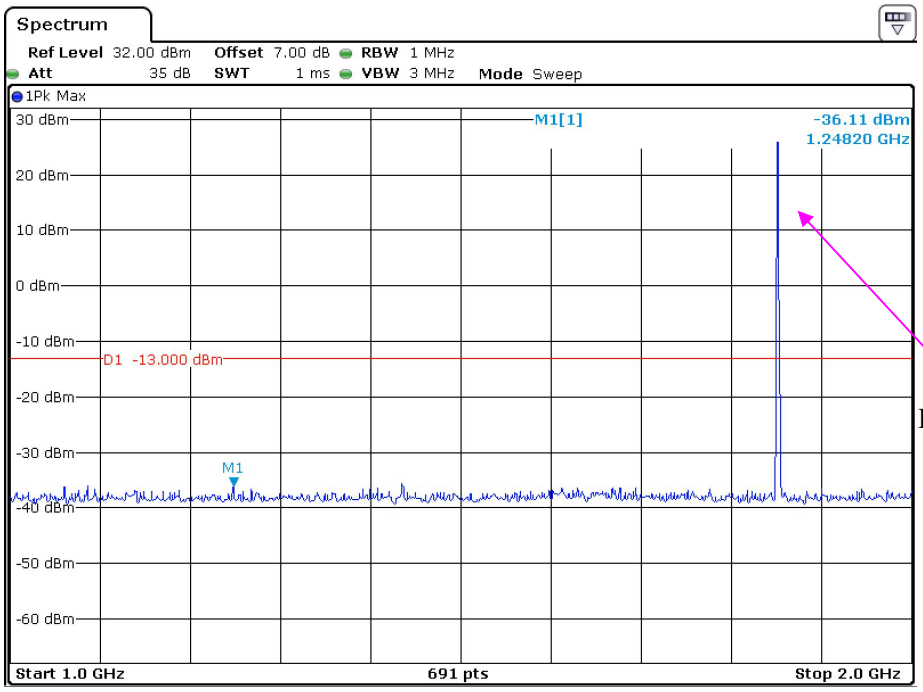
PCS Band (Part 24E)
Low Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 19.FEB.2022 17:09:26

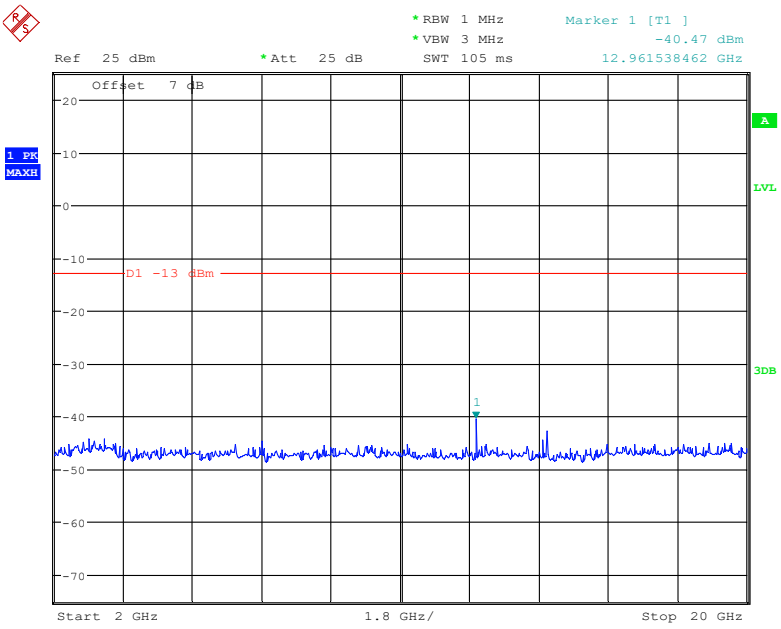
1 GHz – 2 GHz (GSM Mode)



Fundamental test

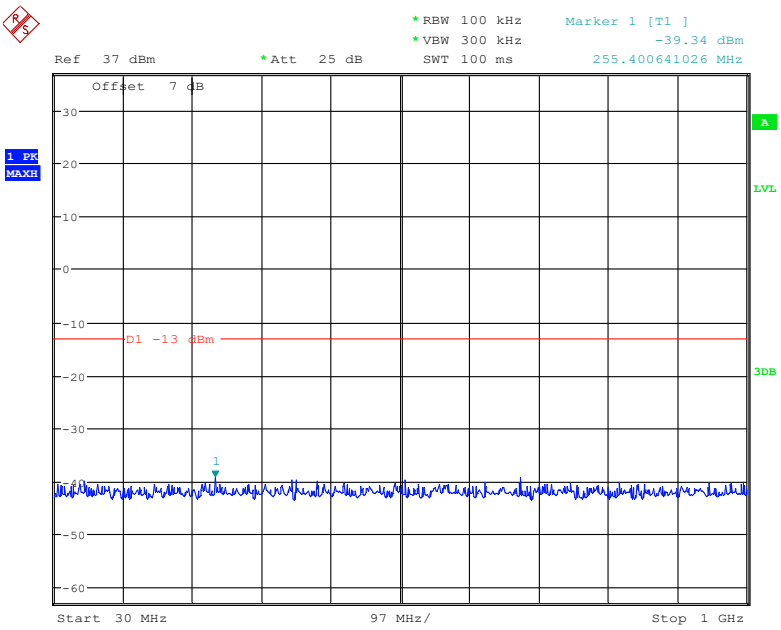
Date: 24.MAR.2022 21:33:32

2 GHz – 20 GHz (GSM Mode)



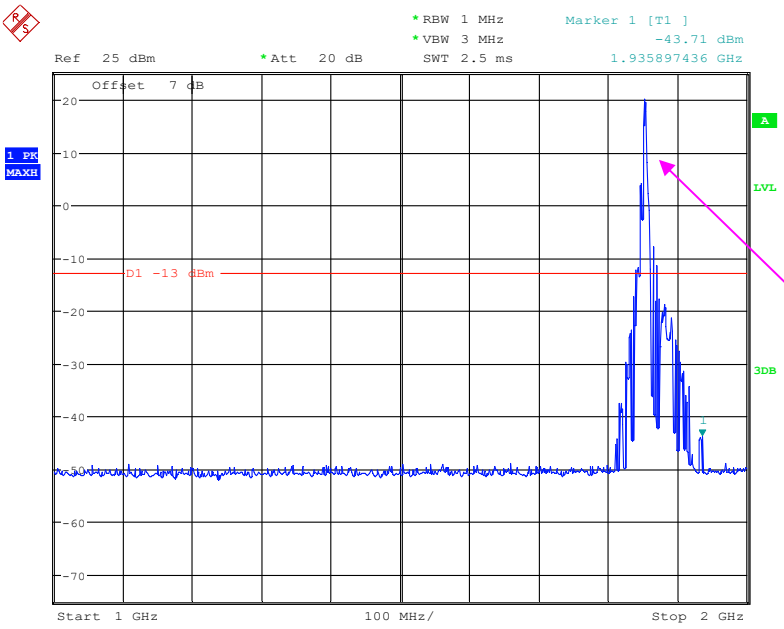
Date: 19.FEB.2022 17:12:12

30 MHz – 1 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:46:17

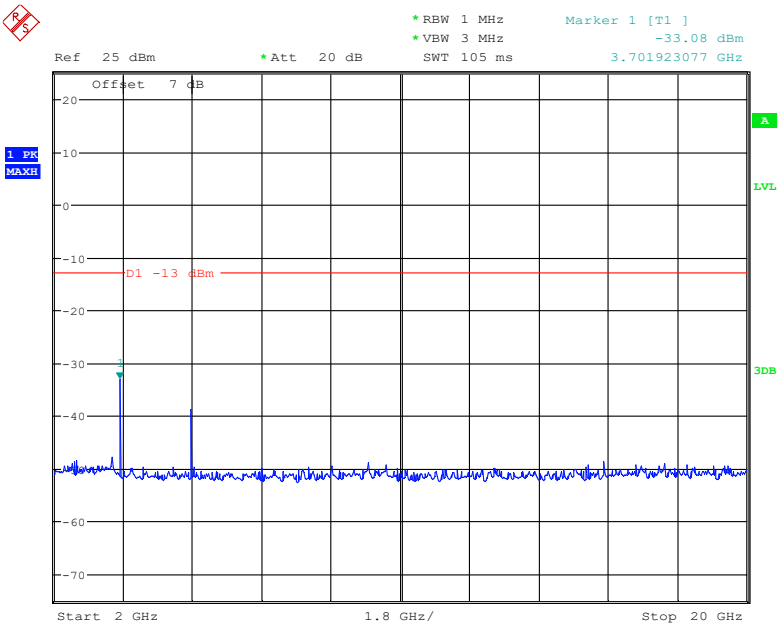
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 19.FEB.2022 19:55:14

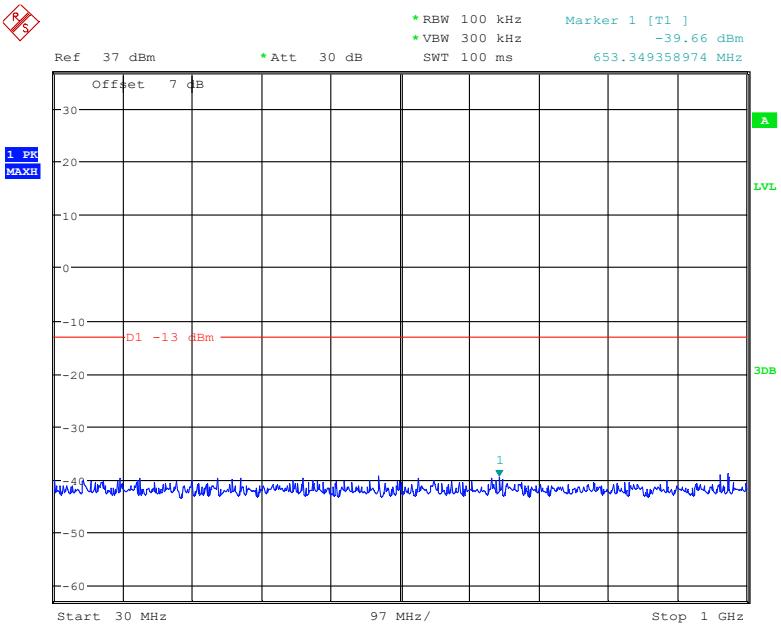
2 GHz – 20 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:59:17

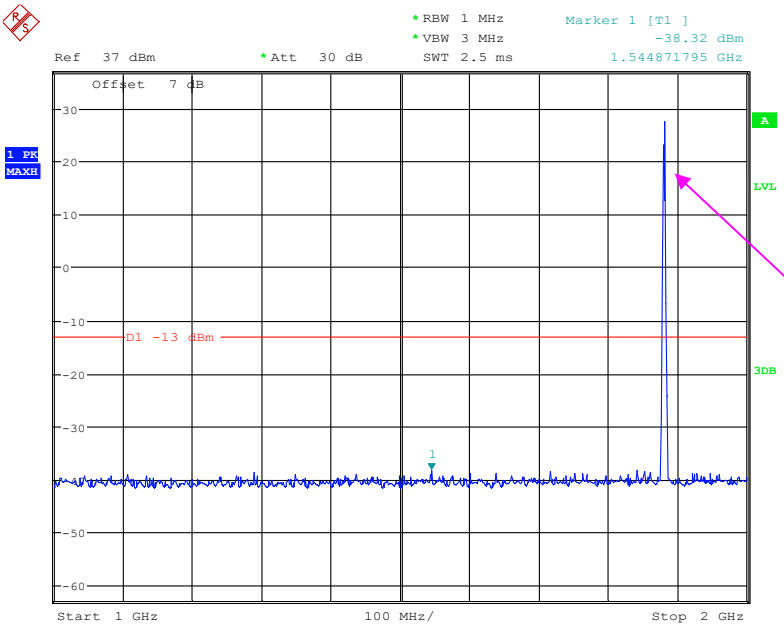
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 19.FEB.2022 17:09:48

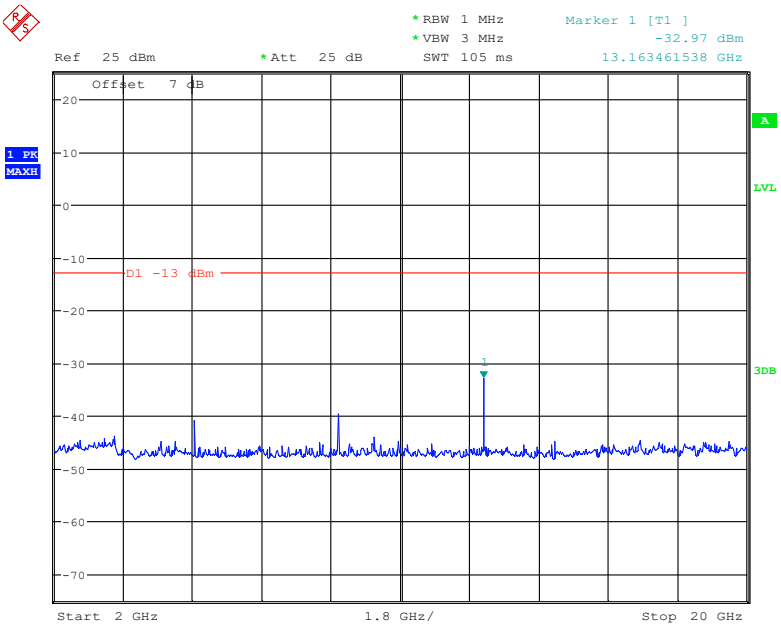
1 GHz – 2 GHz (GSM Mode)



Fundamental test

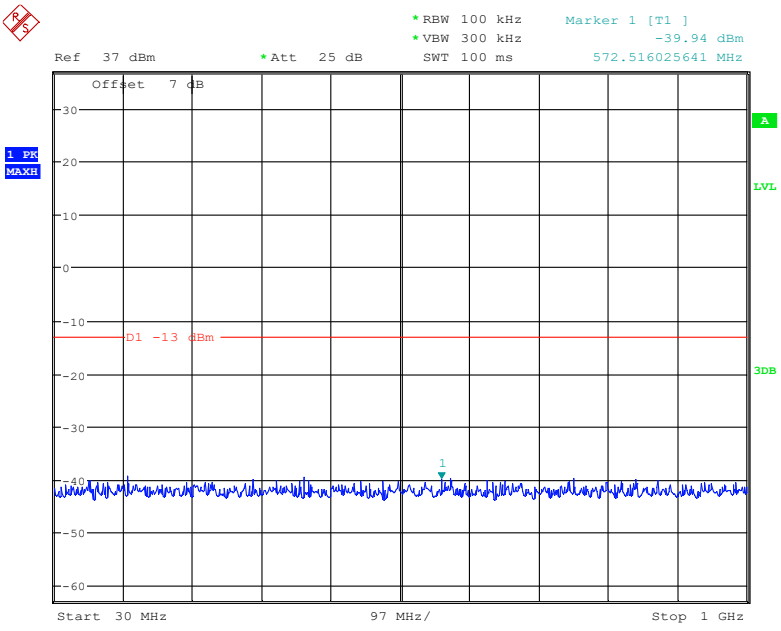
Date: 19.FEB.2022 17:11:00

2 GHz – 20 GHz (GSM Mode)



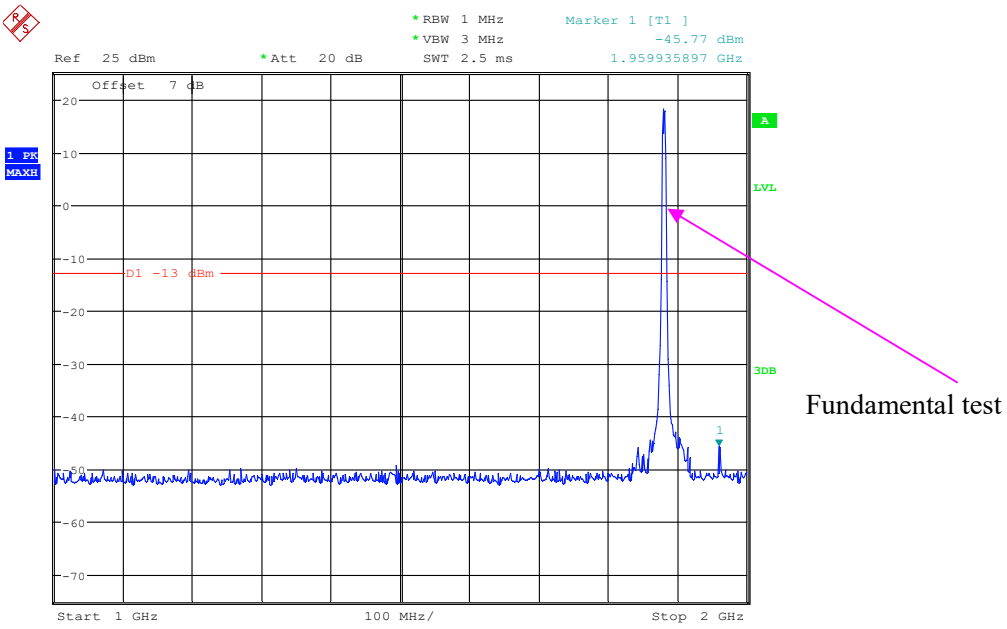
Date: 19.FEB.2022 17:12:29

30 MHz – 1 GHz (WCDMA Mode)



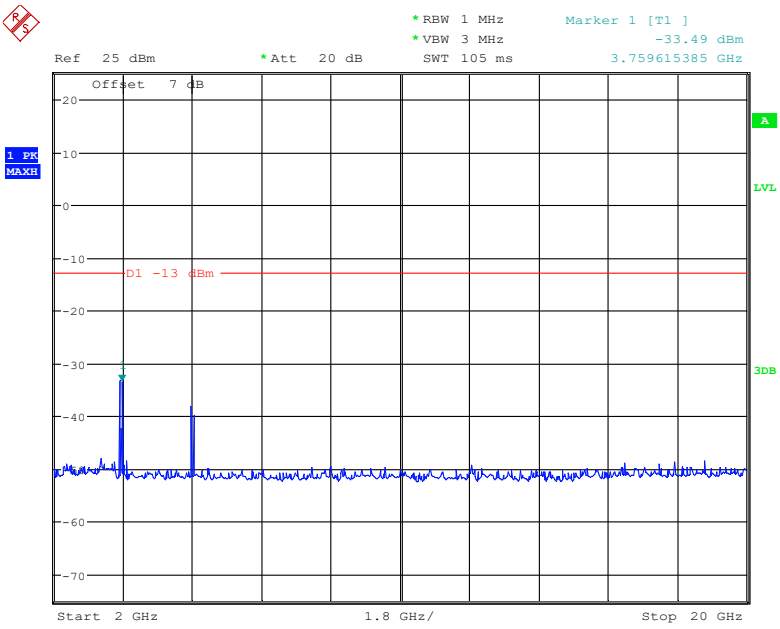
Date: 19.FEB.2022 19:46:35

1 GHz – 2GHz (WCDMA Mode)



Date: 19.FEB.2022 19:55:44

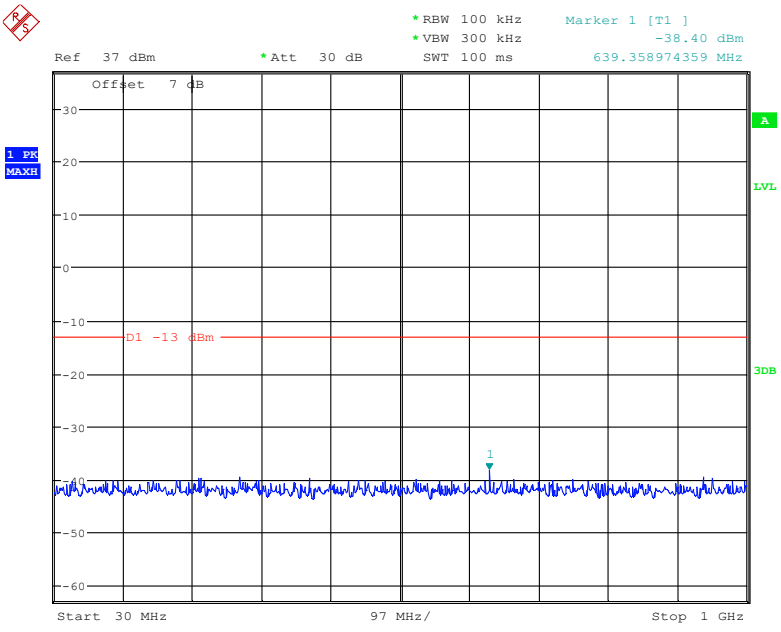
2 GHz – 20GHz (WCDMA Mode)



Date: 19.FEB.2022 19:59:11

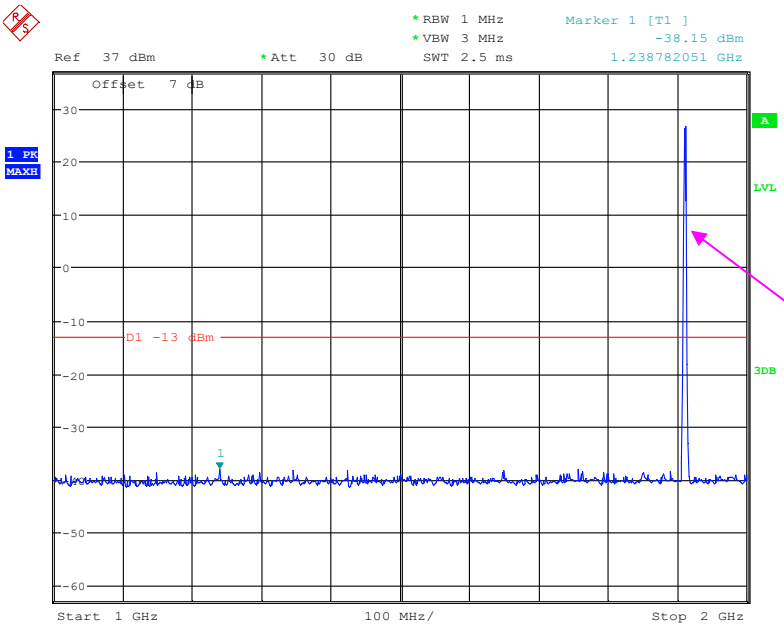
High Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 19.FEB.2022 17:10:00

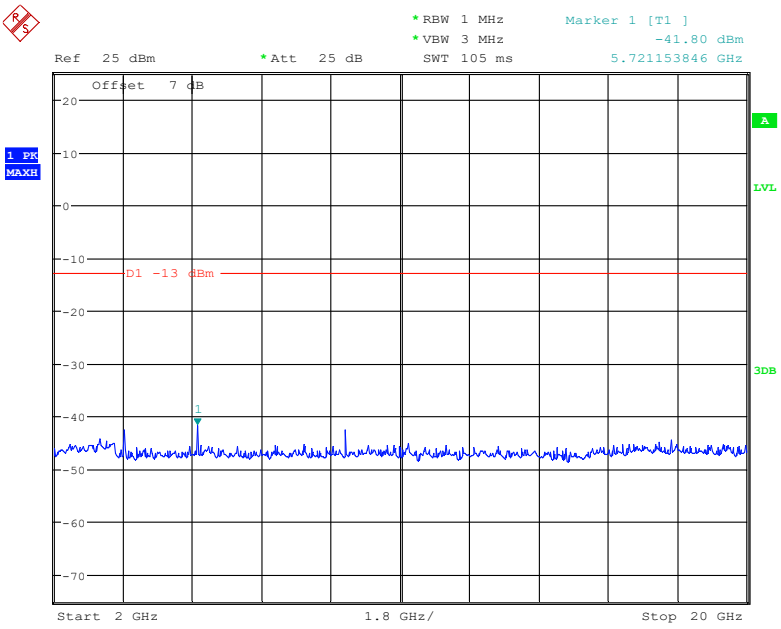
1 GHz – 2 GHz (GSM Mode)



Fundamental test

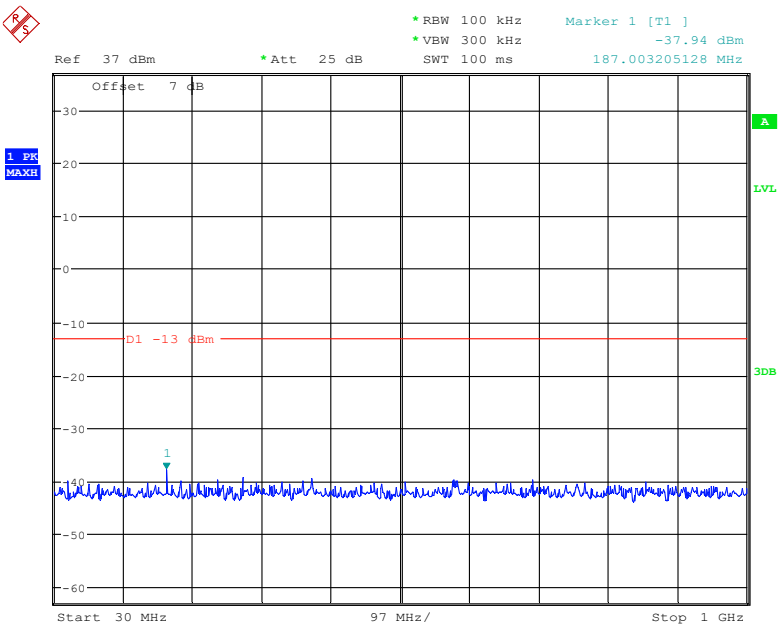
Date: 19.FEB.2022 17:10:31

2 GHz– 20 GHz (GSM Mode)



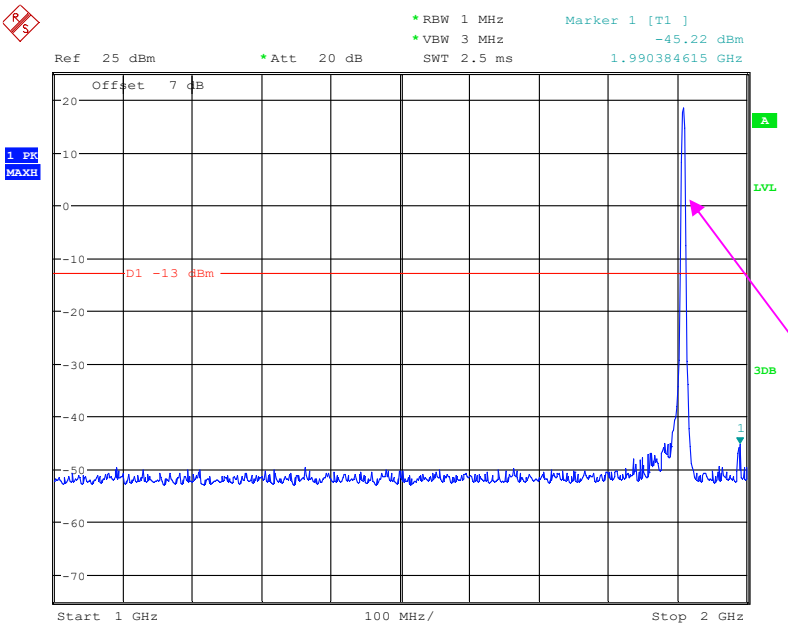
Date: 19.FEB.2022 17:12:41

30 MHz – 1 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:46:48

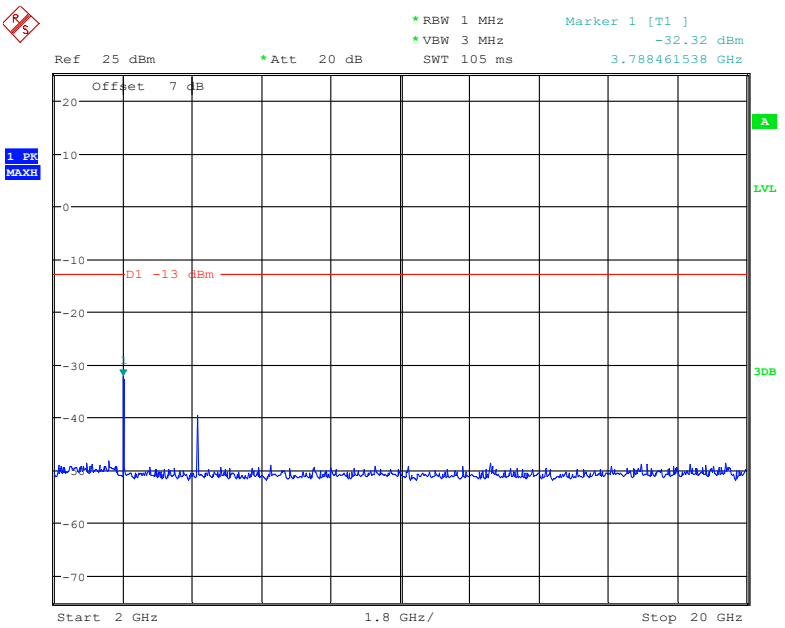
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 19.FEB.2022 19:56:02

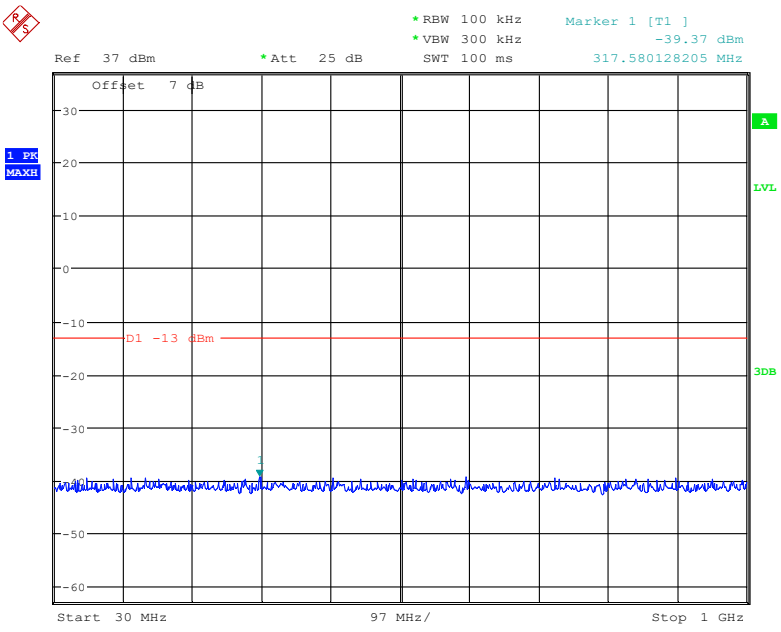
2GHz – 20 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:58:37

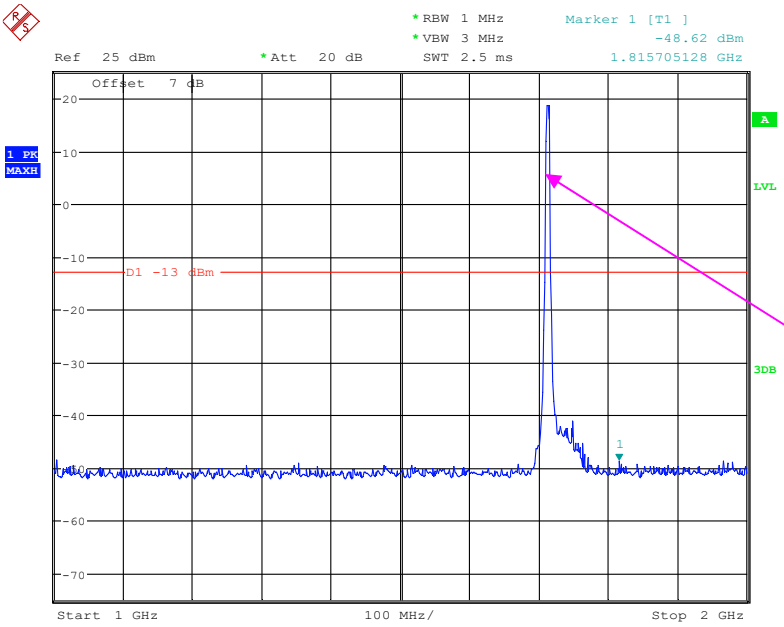
AWS Band (Part 27)
Low Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:47:21

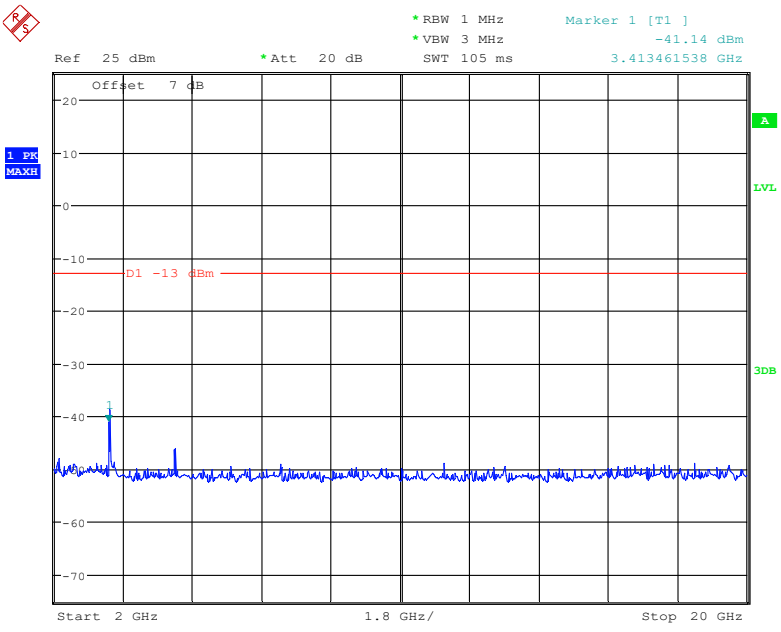
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 19.FEB.2022 19:57:25

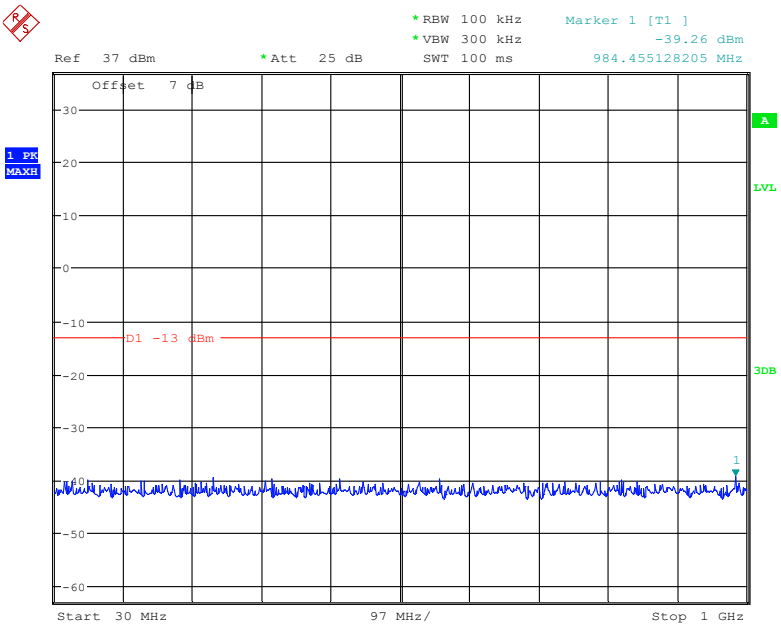
2 GHz – 20 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:59:48

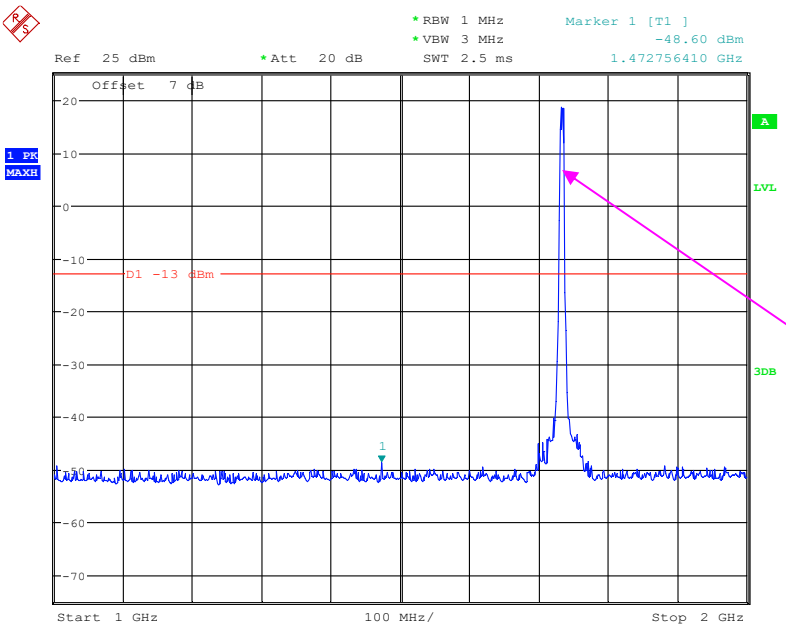
Middle Channel

30 MHz – 1 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:47:36

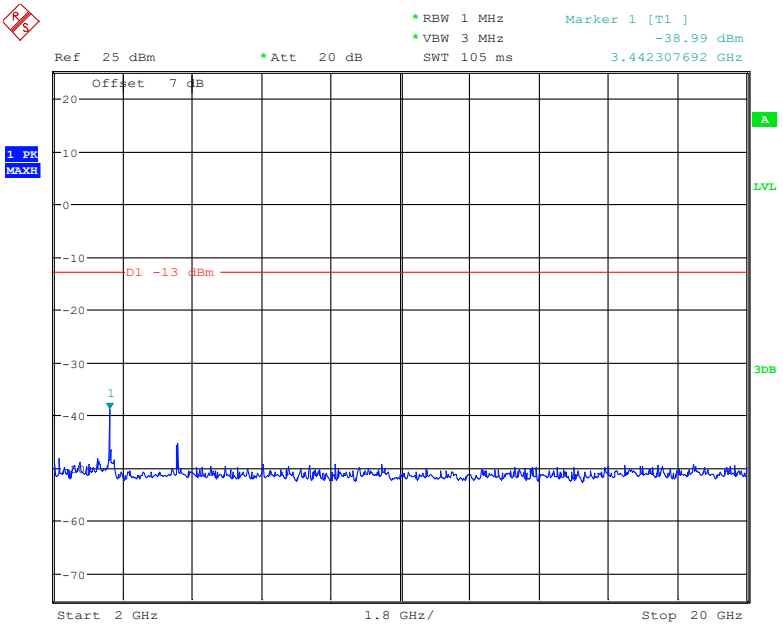
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 19.FEB.2022 19:56:50

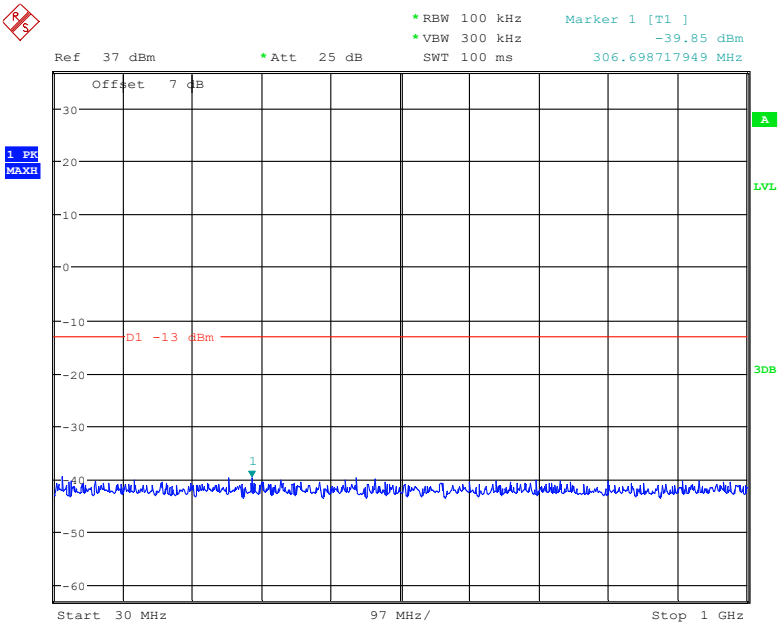
2 GHz – 20 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:59:53

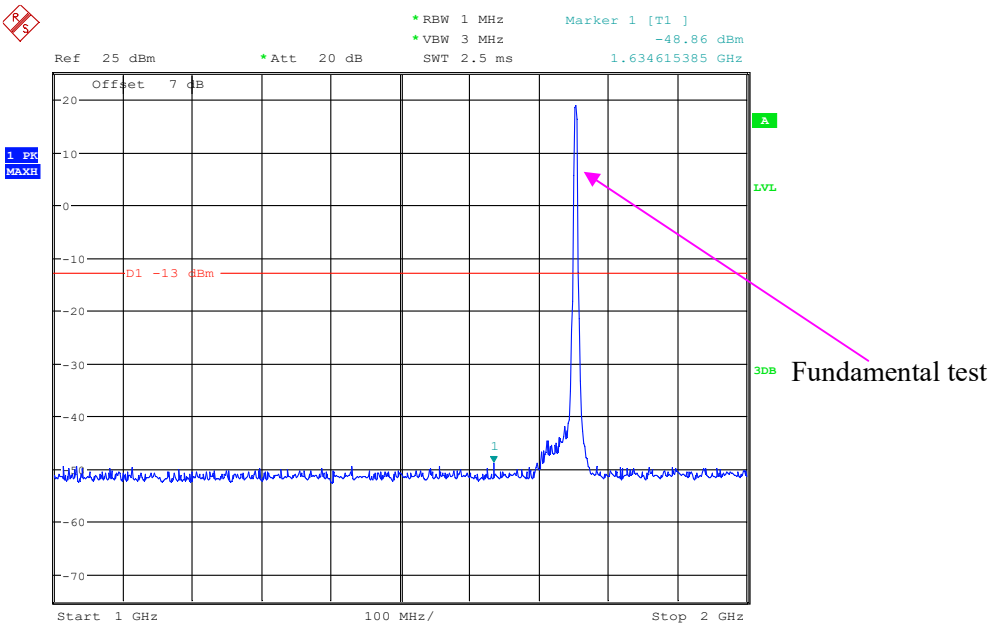
High Channel:

30 MHz – 1 GHz (WCDMA Mode)



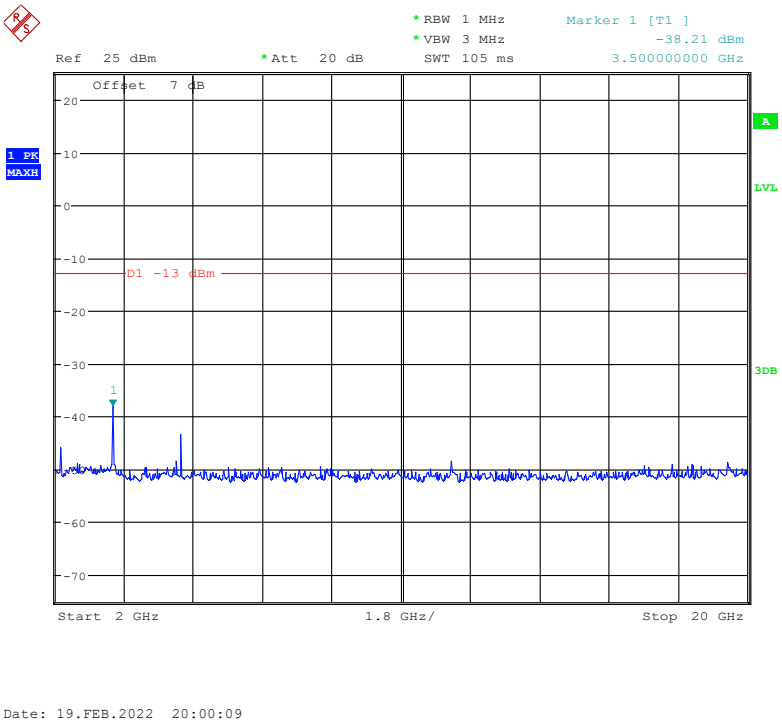
Date: 19.FEB.2022 19:47:48

1 GHz – 2 GHz (WCDMA Mode)



Date: 19.FEB.2022 19:56:26

2 GHz – 20 GHz (WCDMA Mode)



The test plots of LTE band please refer to theAppendix B.

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

Applicable Standard

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

Test Procedure

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

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

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

Test Data

Environmental Conditions

Temperature:	21~25℃
Relative Humidity:	47~52 %
ATM Pressure:	100.3~101.0kPa

The testing was performed by Chao Mo from 2022-02-23 to 2022-02-26.

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								
385.37	-71.69	87	1.4	H	2.8	-68.87	-13	-55.87
385.37	-71.65	160	1.0	V	5.2	-66.45	-13	-53.45
1648.4	-42.90	255	1.9	H	3.5	-39.40	-13	-26.40
1648.4	-46.40	72	1.9	V	3.1	-43.30	-13	-30.30
2472.6	-36.90	22	1.4	H	6.6	-30.30	-13	-17.30
2472.6	-40.90	67	1.1	V	5.8	-35.10	-13	-22.10
3296.8	-47.40	78	1.7	H	6.4	-41.00	-13	-28.00
3296.8	-47.80	239	1.5	V	5.7	-42.10	-13	-29.10
Middle Channel								
385.37	-70.02	23	1.6	H	2.8	-67.20	-13	-54.20
385.37	-71.39	301	1.4	V	5.2	-66.19	-13	-53.19
1673.2	-33.90	317	1.2	H	3.8	-30.10	-13	-17.10
1673.2	-38.50	107	1.3	V	3.1	-35.40	-13	-22.40
2509.8	-24.70	356	1.5	H	6.2	-18.50	-13	-5.50
2509.8	-31.50	315	1.9	V	5.5	-26.00	-13	-13.00
3346.4	-50.10	57	2.1	H	6.6	-43.50	-13	-30.50
3346.4	-48.90	96	2.0	V	5.4	-43.50	-13	-30.50
High Channel								
385.37	-69.90	106	1.6	H	2.8	-67.08	-13	-54.08
385.37	-70.90	95	2.1	V	5.2	-65.70	-13	-52.70
1697.6	-34.20	106	2.0	H	4.1	-30.10	-13	-17.10
1697.6	-38.50	111	2.2	V	3.1	-35.40	-13	-22.40
2546.4	-24.60	235	2.0	H	6.1	-18.50	-13	-5.50
2546.4	-31.80	68	2.2	V	5.8	-26.00	-13	-13.00
3395.2	-49.90	338	1.9	H	6.2	-43.70	-13	-30.70
3395.2	-48.80	0	1.9	V	5.4	-43.40	-13	-30.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 5								
Low Channel								
385.37	-69.97	129	1.7	H	2.8	-67.15	-13	-54.15
385.37	-71.83	107	1.5	V	5.2	-66.63	-13	-53.63
1652.8	-56.40	7	1.7	H	3.5	-52.90	-13	-39.90
1652.8	-57.20	209	1.8	V	3.1	-54.10	-13	-41.10
2479.2	-58.10	283	1.5	H	6.5	-51.60	-13	-38.60
2479.2	-56.40	257	1.3	V	5.7	-50.70	-13	-37.70
3305.6	-52.60	192	2.1	H	6.4	-46.20	-13	-33.20
3305.6	-51.60	336	1.8	V	5.7	-45.90	-13	-32.90
Middle Channel								
385.37	-70.38	246	1.9	H	2.8	-67.56	-13	-54.56
385.37	-70.46	198	1.5	V	5.2	-65.26	-13	-52.26
1673.2	-57.10	14	1.3	H	3.8	-53.30	-13	-40.30
1673.2	-56.50	211	1.9	V	3.1	-53.40	-13	-40.40
2509.8	-57.10	186	1.3	H	6.2	-50.90	-13	-37.90
2509.8	-55.90	188	1.7	V	5.6	-50.30	-13	-37.30
3346.4	-53.20	159	1.5	H	6.6	-46.60	-13	-33.60
3346.4	-51.40	134	1.3	V	5.4	-46.00	-13	-33.00
High Channel								
385.37	-70.74	339	1.5	H	2.8	-67.92	-13	-54.92
385.37	-70.47	269	1.5	V	5.2	-65.27	-13	-52.27
1693.2	-58.40	204	1.5	H	4.0	-54.40	-13	-41.40
1693.2	-57.10	235	2.1	V	3.1	-54.00	-13	-41.00
2539.8	-57.70	109	1.8	H	6.1	-51.60	-13	-38.60
2539.8	-55.90	222	1.5	V	5.7	-50.20	-13	-37.20
3386.4	-52.50	265	2.1	H	6.3	-46.20	-13	-33.20
3386.4	-51.80	225	1.6	V	5.4	-46.40	-13	-33.40

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								
385.37	-71.75	313	1.5	H	2.8	-68.93	-13	-55.93
385.37	-70.24	282	1.9	V	5.2	-65.04	-13	-52.04
3700.4	-55.00	227	1.8	H	8.1	-46.90	-13	-33.90
3700.4	-54.00	249	2.0	V	7.6	-46.40	-13	-33.40
5550.6	-47.70	95	1.6	H	9.6	-38.10	-13	-25.10
5550.6	-45.00	311	1.2	V	9.1	-35.90	-13	-22.90
Middle Channel								
385.37	-70.30	200	2.1	H	2.8	-67.48	-13	-54.48
385.37	-70.43	33	2.2	V	5.2	-65.23	-13	-52.23
3760.0	-55.80	162	1.5	H	8.8	-47.00	-13	-34.00
3760.0	-55.20	98	1.3	V	8.0	-47.20	-13	-34.20
5640.0	-48.40	340	2.2	H	10.1	-38.30	-13	-25.30
5640.0	-45.50	130	2.1	V	9.4	-36.10	-13	-23.10
High Channel								
385.37	-70.63	68	1.5	H	2.8	-67.81	-13	-54.81
385.37	-70.58	174	1.3	V	5.2	-65.38	-13	-52.38
3819.6	-56.30	355	1.1	H	8.7	-47.60	-13	-34.60
3819.6	-55.10	61	1.7	V	8.0	-47.10	-13	-34.10
5729.4	-49.70	100	1.4	H	10.6	-39.10	-13	-26.10
5729.4	-46.60	319	1.4	V	10.2	-36.40	-13	-23.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Low Channel								
385.37	-70.45	283	1.6	H	2.8	-67.63	-13	-54.63
385.37	-72.19	325	1.9	V	5.2	-66.99	-13	-53.99
3704.8	-52.10	159	1.2	H	8.2	-43.90	-13	-30.90
3704.8	-52.70	299	2.0	V	7.6	-45.10	-13	-32.10
5557.2	-48.10	162	2.1	H	9.7	-38.40	-13	-25.40
5557.2	-46.10	14	2.1	V	9.1	-37.00	-13	-24.00
Middle Channel								
385.37	-69.88	254	2.0	H	2.8	-67.06	-13	-54.06
385.37	-71.72	132	1.0	V	5.2	-66.52	-13	-53.52
3760.0	-52.80	313	1.9	H	8.8	-44.00	-13	-31.00
3760.0	-53.50	147	1.3	V	8.0	-45.50	-13	-32.50
5640.0	-48.80	229	1.1	H	10.1	-38.70	-13	-25.70
5640.0	-45.90	5	2.1	V	9.4	-36.50	-13	-23.50
High Channel								
385.37	-70.16	146	1.6	H	2.8	-67.34	-13	-54.34
385.37	-71.35	167	1.8	V	5.2	-66.15	-13	-53.15
3815.2	-53.30	25	1.8	H	8.7	-44.60	-13	-31.60
3815.2	-54.00	129	1.6	V	7.9	-46.10	-13	-33.10
5722.8	-53.60	10	1.9	H	10.6	-43.00	-13	-30.00
5722.8	-49.80	65	1.2	V	10.1	-39.70	-13	-26.70

30MHz-20GHz:

AWS Band (Part 27E)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 4								
Low Channel								
385.37	-69.94	133	1.2	H	2.8	-67.12	-13	-54.12
385.37	-71.21	284	2.2	V	5.2	-66.01	-13	-53.01
3465.2	-52.40	334	1.4	H	7.0	-45.40	-13	-32.40
3465.2	-52.20	132	1.3	V	6.2	-46.00	-13	-33.00
5197.8	-55.70	121	1.4	H	10.3	-45.40	-13	-32.40
5197.8	-54.50	209	1.1	V	9.8	-44.70	-13	-31.70
Middle Channel								
385.37	-69.94	133	1.2	H	2.8	-67.12	-13	-54.12
385.37	-71.21	284	2.2	V	5.2	-66.01	-13	-53.01
3465.2	-52.40	334	1.4	H	7.0	-45.40	-13	-32.40
3465.2	-52.20	132	1.3	V	6.2	-46.00	-13	-33.00
5197.8	-55.70	121	1.4	H	10.3	-45.40	-13	-32.40
5197.8	-54.50	209	1.1	V	9.8	-44.70	-13	-31.70
High Channel								
385.37	-70.81	82	1.4	H	2.8	-67.99	-13	-54.99
385.37	-72.18	135	1.8	V	5.2	-66.98	-13	-53.98
3505.2	-53.20	256	1.9	H	7.8	-45.40	-13	-32.40
3505.2	-53.00	279	2.1	V	6.5	-46.50	-13	-33.50
5257.8	-54.20	260	2.2	H	9.4	-44.80	-13	-31.80
5257.8	-53.00	108	1.3	V	9.0	-44.00	-13	-31.00

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								
385.37	-70.18	105	2.2	H	2.8	-67.36	-13	-54.36
385.37	-70.80	37	2.2	V	5.2	-65.60	-13	-52.60
3701.4	-49.40	187	1.9	H	8.1	-41.30	-13	-28.30
3701.4	-48.00	298	1.9	V	7.6	-40.40	-13	-27.40
5552.1	-43.50	83	1.5	H	9.6	-33.90	-13	-20.90
5552.1	-39.90	29	1.3	V	9.1	-30.80	-13	-17.80
1.4MHz bandwidth, Middle Channel								
385.37	-71.42	97	1.6	H	2.8	-68.60	-13	-55.60
385.37	-70.92	206	1.1	V	5.2	-65.72	-13	-52.72
3760.0	-48.70	138	1.4	H	8.8	-39.90	-13	-26.90
3760.0	-47.10	79	1.3	V	8.0	-39.10	-13	-26.10
5640.0	-39.80	73	1.6	H	10.1	-29.70	-13	-16.70
5640.0	-35.00	28	1.1	V	9.4	-25.60	-13	-12.60
1.4MHz bandwidth, High Channel								
385.37	-70.77	125	1.0	H	2.8	-67.95	-13	-54.95
385.37	-71.63	207	1.4	V	5.2	-66.43	-13	-53.43
3818.6	-48.30	162	1.0	H	8.7	-39.60	-13	-26.60
3818.6	-46.70	125	1.9	V	7.9	-38.80	-13	-25.80
5727.9	-39.40	212	1.9	H	10.6	-28.80	-13	-15.80
5727.9	-33.90	253	1.8	V	10.2	-23.70	-13	-10.70

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 4								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, Low Channel								
385.37	-70.06	202	2.0	H	2.8	-67.24	-13	-54.24
385.37	-71.40	31	2.1	V	5.2	-66.20	-13	-53.20
3421.4	-49.70	354	1.5	H	6.4	-43.30	-13	-30.30
3421.4	-50.20	144	1.2	V	5.7	-44.50	-13	-31.50
5132.1	-50.00	152	2.1	H	11.3	-38.70	-13	-25.70
5132.1	-39.40	67	1.8	V	10.8	-28.60	-13	-15.60
1.4MHz bandwidth, Middle Channel								
385.37	-70.56	308	2.2	H	2.8	-67.74	-13	-54.74
385.37	-70.98	51	1.5	V	5.2	-65.78	-13	-52.78
3465.0	-47.50	239	1.3	H	7.0	-40.50	-13	-27.50
3465.0	-50.30	280	1.4	V	6.2	-44.10	-13	-31.10
5197.5	-44.00	224	1.8	H	10.4	-33.60	-13	-20.60
5197.5	-37.00	20	1.6	V	9.8	-27.20	-13	-14.20
1.4MHz bandwidth, High Channel								
385.37	-70.10	35	1.1	H	2.8	-67.28	-13	-54.28
385.37	-70.82	74	1.2	V	5.2	-65.62	-13	-52.62
3508.6	-46.70	86	1.0	H	7.8	-38.90	-13	-25.90
3508.6	-50.00	127	1.0	V	6.6	-43.40	-13	-30.40
5262.9	-42.40	217	2.2	H	9.5	-32.90	-13	-19.90
5262.9	-40.20	224	1.7	V	8.9	-31.30	-13	-18.30

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 5								
Test frequency range: 30MHz-10GHz								
1.4MHz bandwidth, Low Channel								
385.37	-70.59	179	1.6	H	2.8	-67.77	-13	-54.77
385.37	-70.50	99	2.1	V	5.2	-65.30	-13	-52.30
1649.4	-56.60	323	2.2	H	3.5	-53.10	-13	-40.10
1649.4	-56.10	306	1.2	V	3.1	-53.00	-13	-40.00
2474.1	-52.10	110	2.0	H	6.6	-45.50	-13	-32.50
2474.1	-52.30	55	1.5	V	5.8	-46.50	-13	-33.50
3298.8	-47.50	262	1.2	H	6.4	-41.10	-13	-28.10
3298.8	-46.60	327	1.2	V	5.7	-40.90	-13	-27.90
1.4MHz bandwidth, Middle Channel								
385.37	-69.86	50	1.3	H	2.8	-67.04	-13	-54.04
385.37	-70.53	39	1.4	V	5.2	-65.33	-13	-52.33
1673.0	-51.00	118	1.6	H	3.8	-47.20	-13	-34.20
1673.0	-50.50	225	2.1	V	3.1	-47.40	-13	-34.40
2509.5	-48.70	280	1.9	H	6.2	-42.50	-13	-29.50
2509.5	-51.20	52	1.8	V	5.6	-45.60	-13	-32.60
3346.0	-48.90	284	2.2	H	6.6	-42.30	-13	-29.30
3346.0	-45.90	312	1.6	V	5.4	-40.50	-13	-27.50
1.4MHz bandwidth, High Channel								
385.37	-69.92	31	1.4	H	2.8	-67.10	-13	-54.10
385.37	-70.71	99	2.1	V	5.2	-65.51	-13	-52.51
1696.6	-50.60	33	1.8	H	4.1	-46.50	-13	-33.50
1696.6	-51.30	214	1.1	V	3.1	-48.20	-13	-35.20
2544.9	-54.50	151	1.3	H	6.1	-48.40	-13	-35.40
2544.9	-54.30	158	2.0	V	5.8	-48.50	-13	-35.50
3393.2	-50.20	287	2.1	H	6.3	-43.90	-13	-30.90
3393.2	-48.20	263	1.0	V	5.4	-42.80	-13	-29.80

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 7								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, Low Channel								
385.37	-69.90	100	1.1	H	2.8	-67.08	-25	-42.08
385.37	-70.45	302	1.1	V	5.2	-65.25	-25	-40.25
5005.0	-51.10	342	1.5	H	10.8	-40.30	-25	-15.30
5005.0	-46.90	238	1.0	V	10.2	-36.70	-25	-11.70
7507.5	-52.80	212	1.8	H	20.3	-32.50	-25	-7.50
7507.5	-50.20	104	1.5	V	20.1	-30.10	-25	-5.10
5MHz bandwidth, Middle Channel								
385.37	-70.23	167	1.9	H	2.8	-67.41	-25	-42.41
385.37	-70.57	165	1.8	V	5.2	-65.37	-25	-40.37
5070.0	-51.80	229	1.4	H	11.1	-40.70	-25	-15.70
5070.0	-48.50	97	1.4	V	10.8	-37.70	-25	-12.70
7605.0	-56.40	335	1.6	H	21.2	-35.20	-25	-10.20
7605.0	-52.20	183	1.6	V	20.1	-32.10	-25	-7.10
5MHz bandwidth, High Channel								
385.37	-70.73	110	1.5	H	2.8	-67.91	-25	-42.91
385.37	-71.35	94	2.1	V	5.2	-66.15	-25	-41.15
5135.0	-53.20	264	1.7	H	11.3	-41.90	-25	-16.90
5135.0	-48.60	220	1.2	V	10.8	-37.80	-25	-12.80
7702.5	-55.50	48	1.6	H	21.2	-34.30	-25	-9.30
7702.5	-54.40	332	2.0	V	21.0	-33.40	-25	-8.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 38								
Test frequency range: 30MHz-26.5GHz								
5MHz, Low Channel								
385.37	-70.00	253	1.5	H	2.8	-67.18	-25	-42.18
385.37	-72.04	135	1.9	V	5.2	-66.84	-25	-41.84
5145.0	-51.90	19	2.1	H	11.4	-40.50	-25	-15.50
5145.0	-50.80	234	2.2	V	10.7	-40.10	-25	-15.10
7717.5	-55.40	140	2.0	H	20.5	-34.90	-25	-9.90
7717.5	-55.30	285	1.2	V	20.3	-35.00	-25	-10.00
5MHz, Middle Channel								
385.37	-69.92	1	2.2	H	2.8	-67.10	-25	-42.10
385.37	-71.62	44	2.1	V	5.2	-66.42	-25	-41.42
5190.0	-51.30	328	1.4	H	10.5	-40.80	-25	-15.80
5190.0	-50.00	79	1.6	V	10.0	-40.00	-25	-15.00
7785.0	-49.80	236	2.1	H	18.3	-31.50	-25	-6.50
7785.0	-50.40	262	2.0	V	18.0	-32.40	-25	-7.40
5MHz, High Channel								
385.37	-71.07	90	1.1	H	2.8	-68.25	-25	-43.25
385.37	-72.05	354	1.3	V	5.2	-66.85	-25	-41.85
5235.0	-48.80	337	1.2	H	9.7	-39.10	-25	-14.10
5235.0	-47.60	270	2.0	V	9.2	-38.40	-25	-13.40
7852.5	-51.20	66	1.8	H	18.2	-33.00	-25	-8.00
7852.5	-49.40	129	1.7	V	17.6	-31.80	-25	-6.80

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 41								
Test frequency range: 1-26.5GHz								
5MHz, Low Channel								
385.37	-71.18	117	1.6	H	2.8	-68.36	-25	-43.36
385.37	-70.33	284	1.9	V	5.2	-65.13	-25	-40.13
5075.0	-51.40	142	2.0	H	11.2	-40.20	-25	-15.20
5075.0	-47.40	238	1.3	V	10.8	-36.60	-25	-11.60
7612.5	-56.80	115	1.1	H	21.2	-35.60	-25	-10.60
7612.5	-53.40	118	1.2	V	20.2	-33.20	-25	-8.20
5MHz bandwidth, Middle Channel								
385.37	-70.43	220	2.0	H	2.8	-67.61	-25	-42.61
385.37	-71.13	271	2.1	V	5.2	-65.93	-25	-40.93
5190.0	-51.40	196	1.1	H	10.5	-40.90	-25	-15.90
5190.0	-50.00	21	1.7	V	10.0	-40.00	-25	-15.00
7785.0	-49.50	139	2.1	H	18.3	-31.20	-25	-6.20
7785.0	-50.60	24	1.7	V	18.0	-32.60	-25	-7.60
5MHz bandwidth, High Channel								
385.37	-70.13	351	1.5	H	2.8	-67.31	-25	-42.31
385.37	-70.81	33	1.7	V	5.2	-65.61	-25	-40.61
5305.0	-41.50	35	2.1	H	9.6	-31.90	-25	-6.90
5305.0	-42.80	56	2.0	V	8.8	-34.00	-25	-9.00
7957.5	-53.70	323	1.8	H	18.9	-34.80	-25	-9.80
7957.5	-52.80	62	1.3	V	18.5	-34.30	-25	-9.30

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

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.

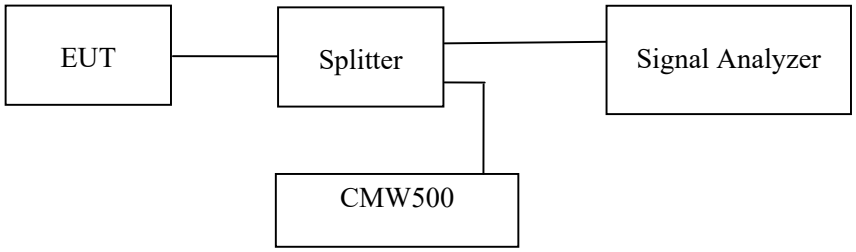
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

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



Test Data

Environmental Conditions

Temperature:	23~27.6℃
Relative Humidity:	46~58 %
ATM Pressure:	101.0 kPa

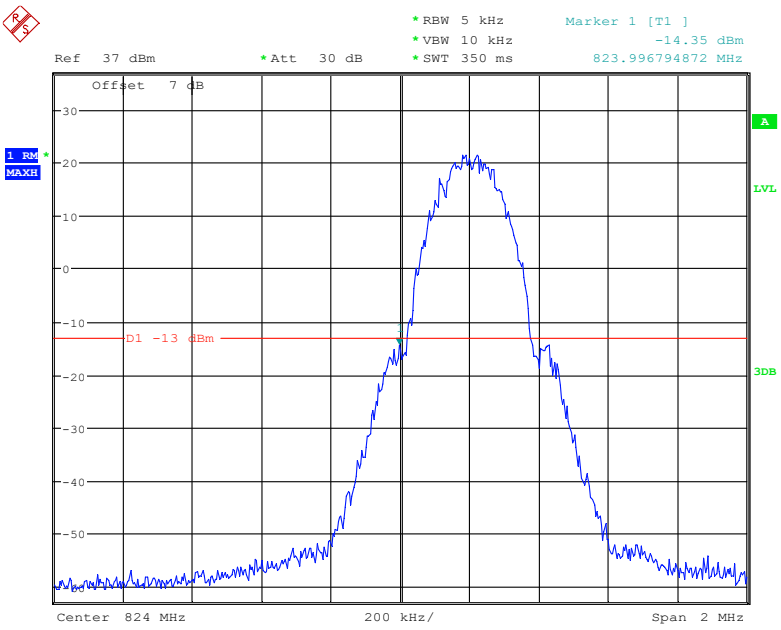
The testing was performed by Black Ding from 2022-02-19 to 2022-03-24.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

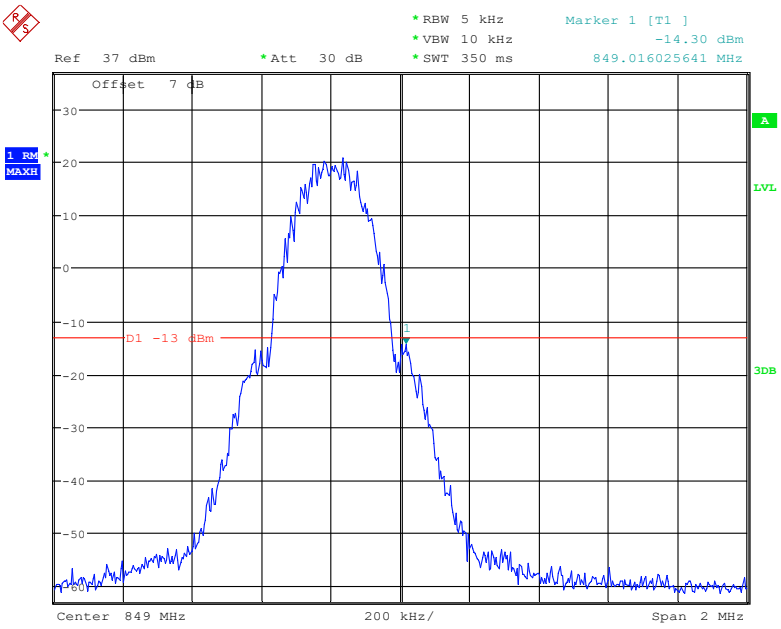
Please refer to the following plots.

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



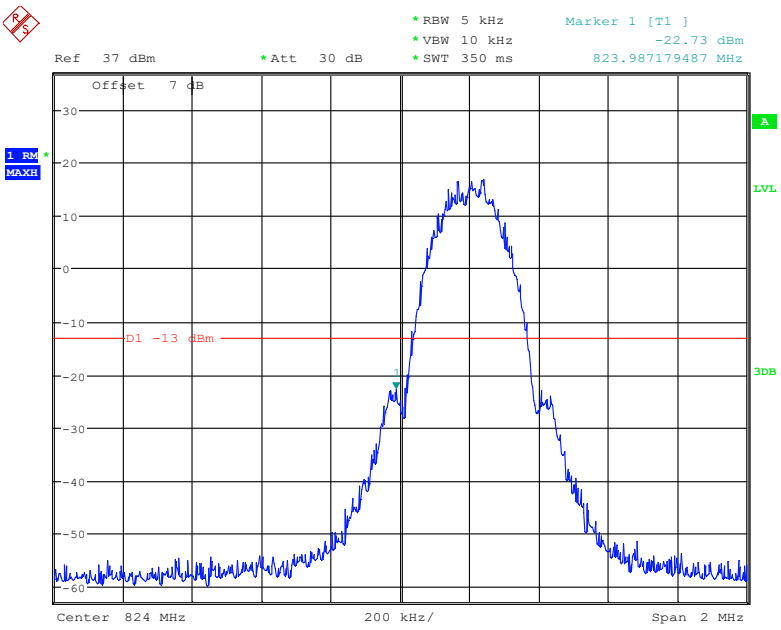
Date: 19.FEB.2022 16:34:56

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



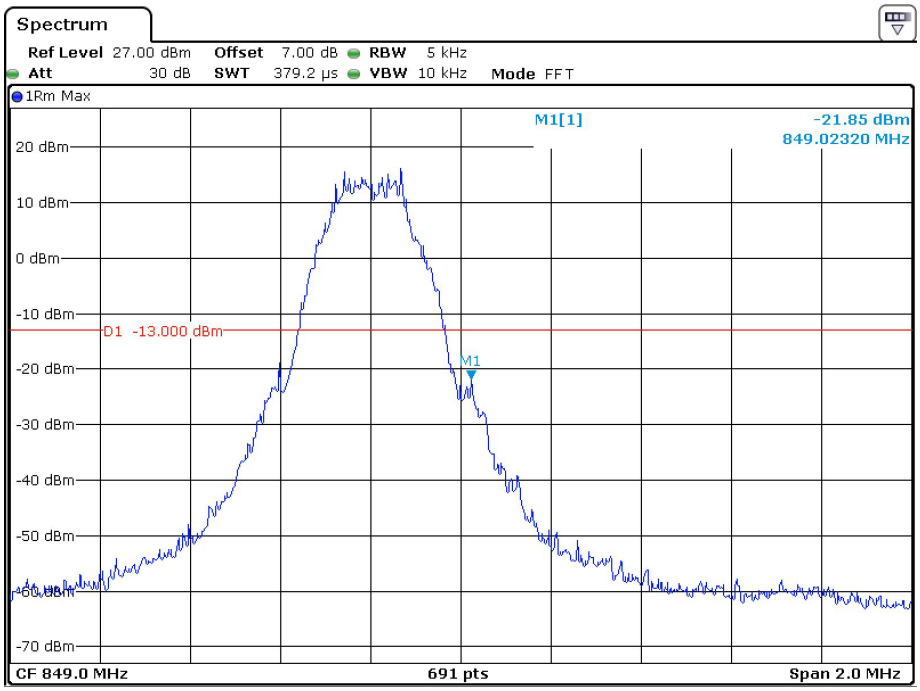
Date: 19.FEB.2022 16:35:52

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



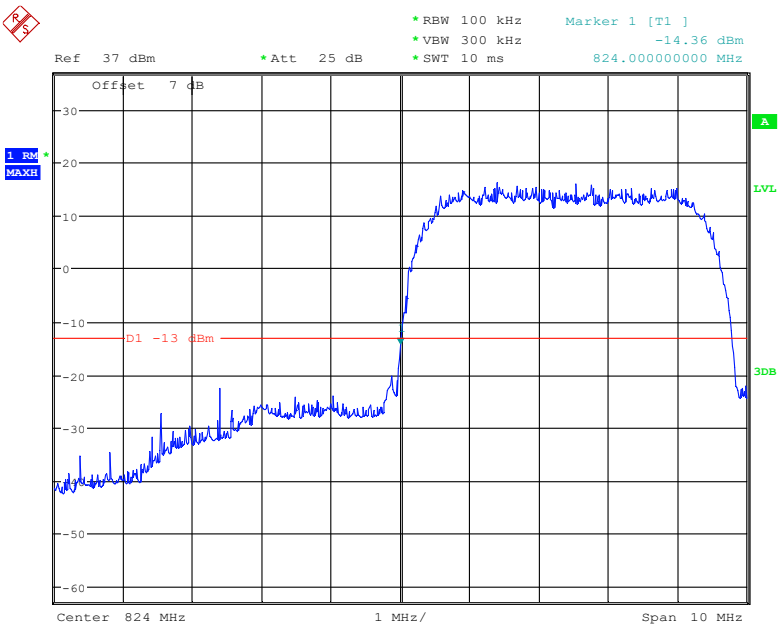
Date: 19.FEB.2022 16:50:09

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



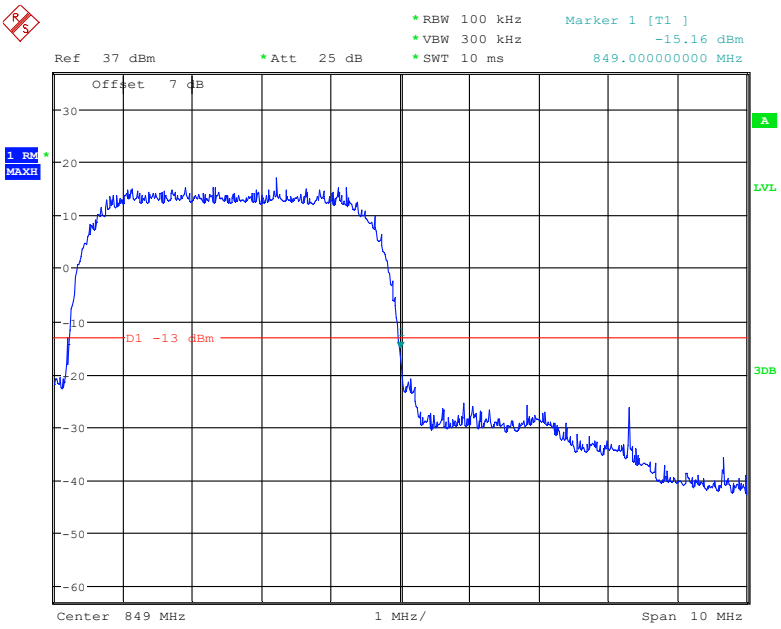
Date: 24.MAR.2022 19:57:40

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



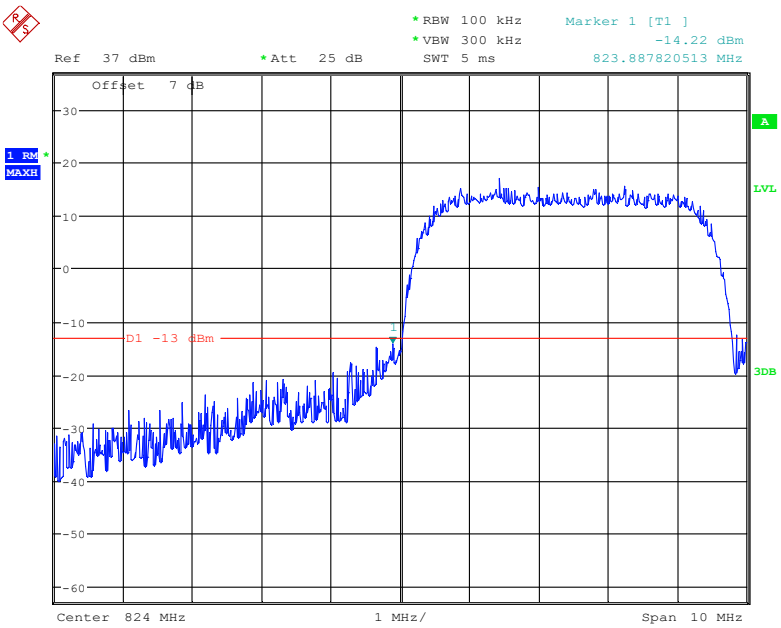
Date: 19.FEB.2022 18:56:33

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



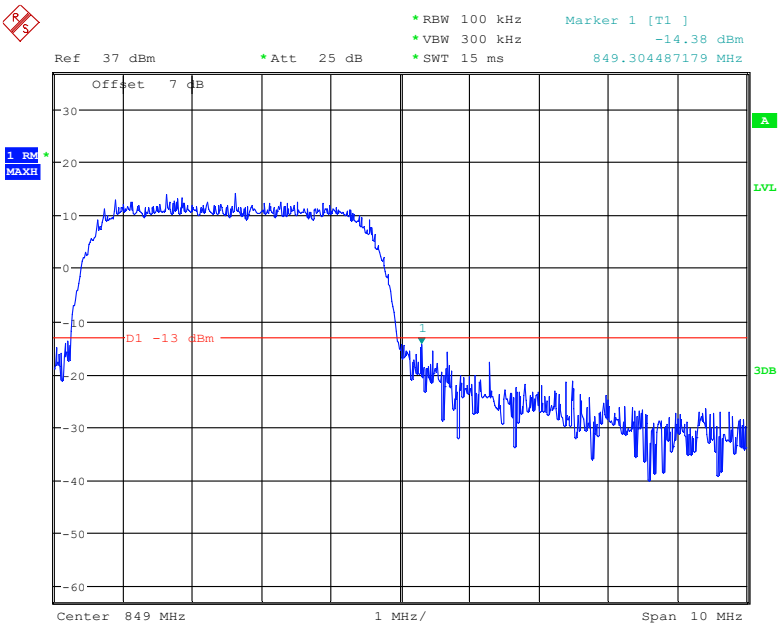
Date: 19.FEB.2022 18:56:05

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



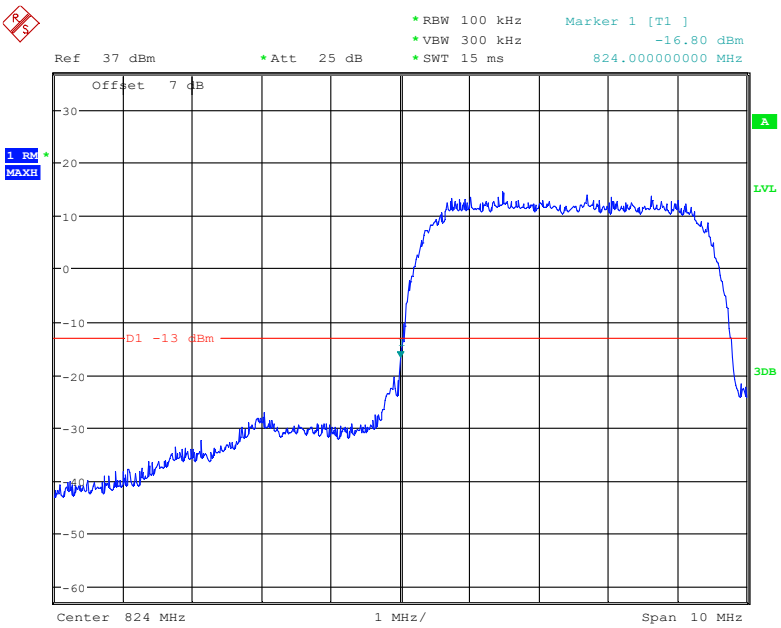
Date: 19.FEB.2022 19:02:16

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



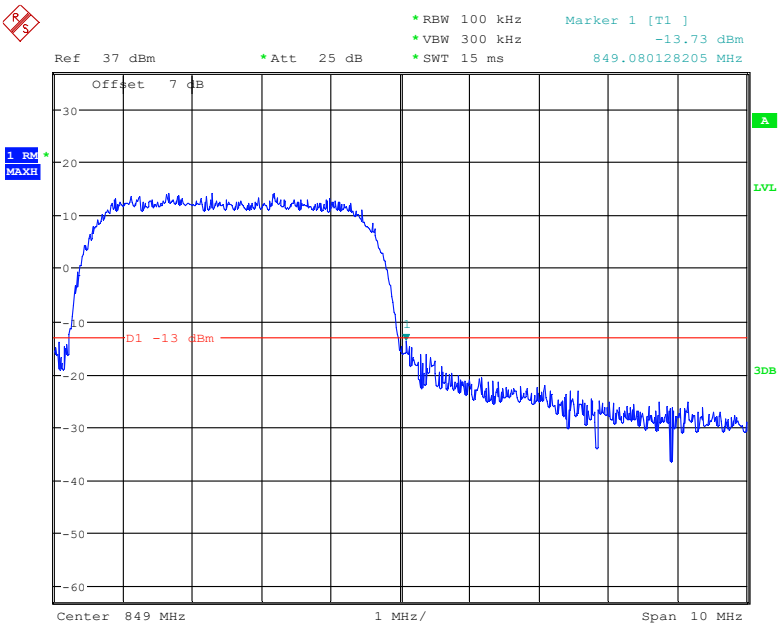
Date: 19.FEB.2022 19:03:06

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



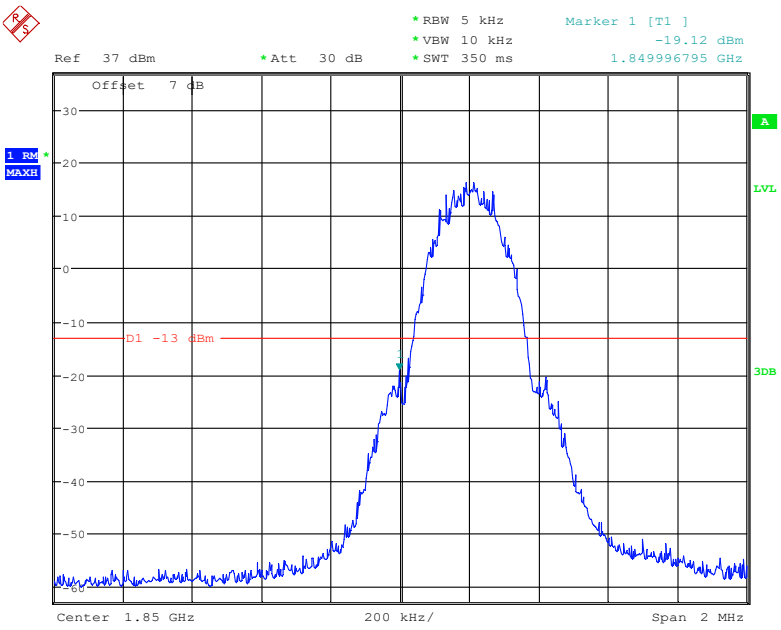
Date: 19.FEB.2022 19:41:32

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



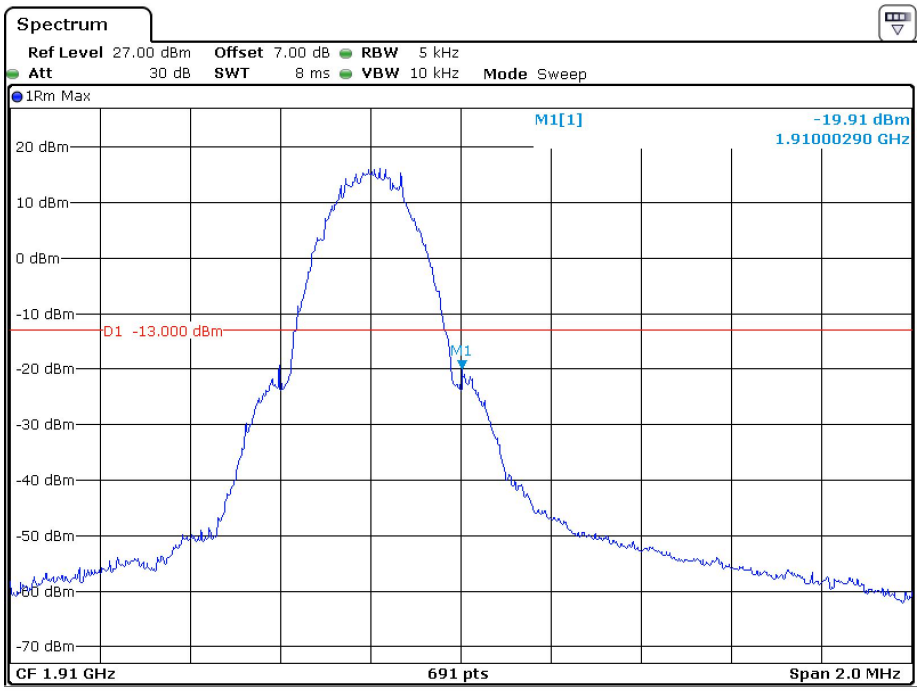
Date: 19.FEB.2022 19:41:10

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



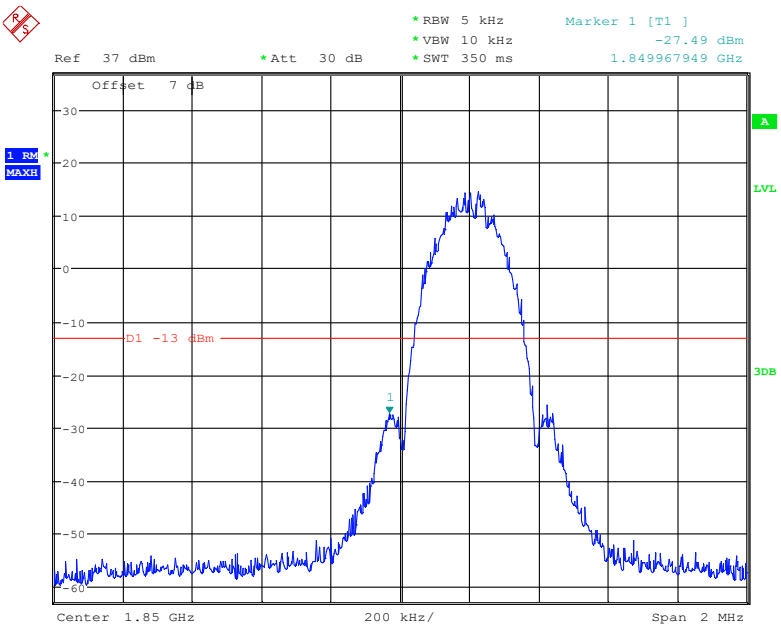
Date: 19.FEB.2022 17:08:33

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



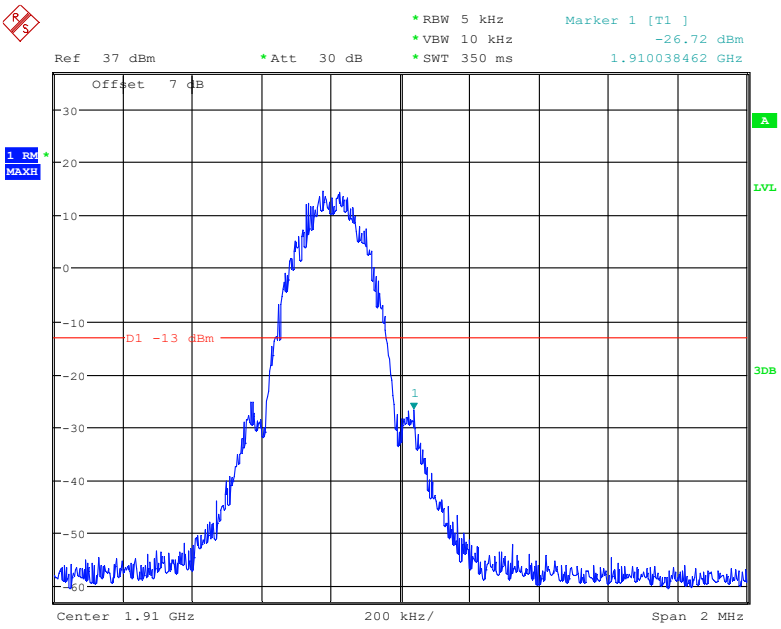
Date: 24.MAR.2022 20:07:05

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



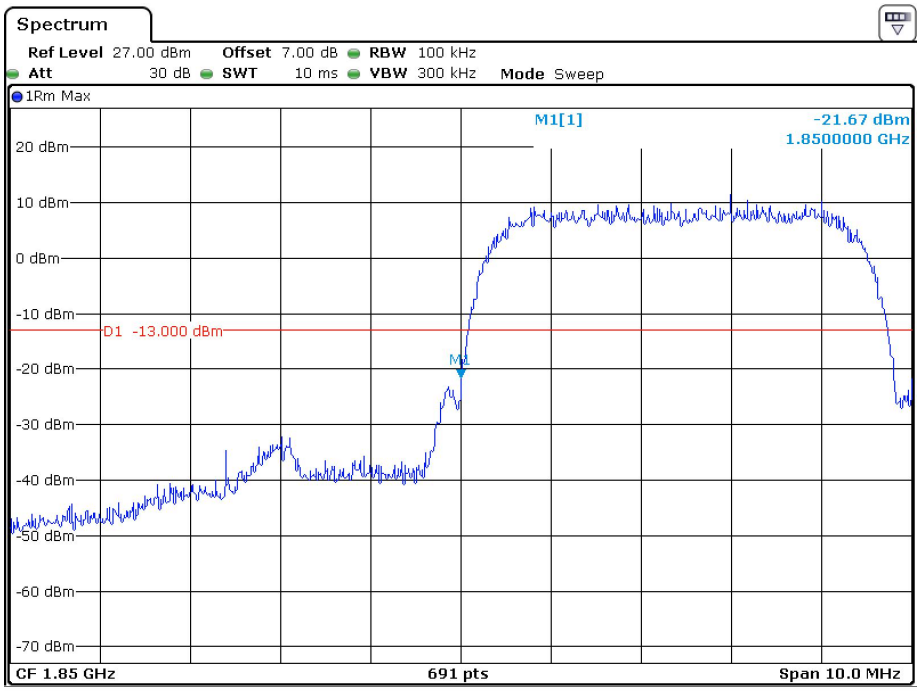
Date: 19.FEB.2022 16:51:57

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



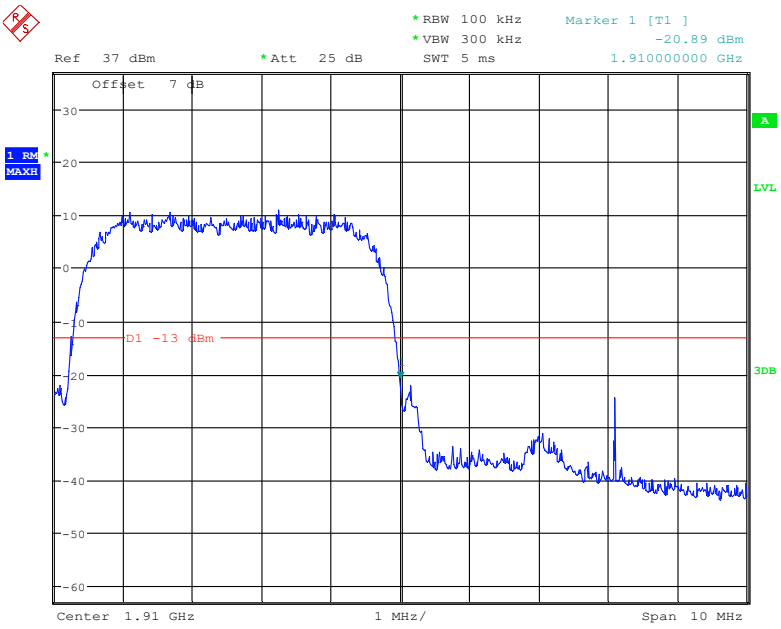
Date: 19.FEB.2022 16:52:33

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



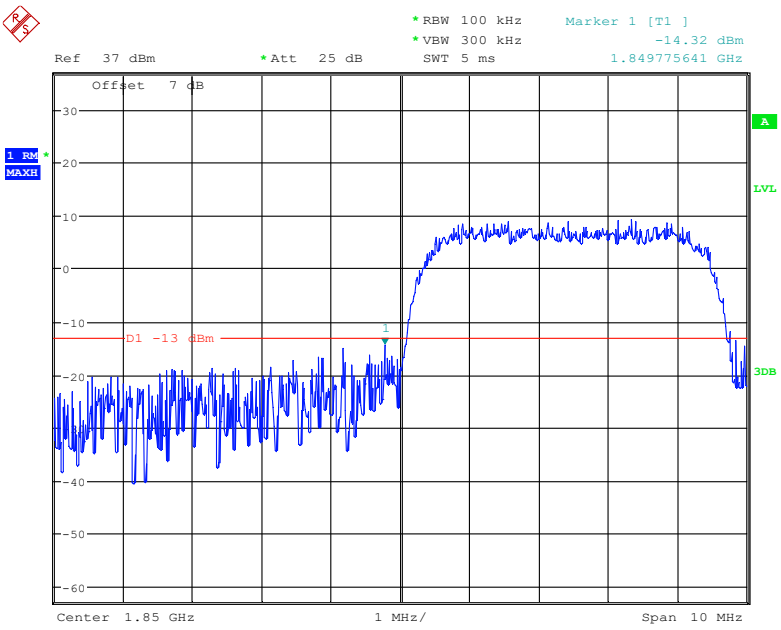
Date: 24.MAR.2022 21:28:31

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



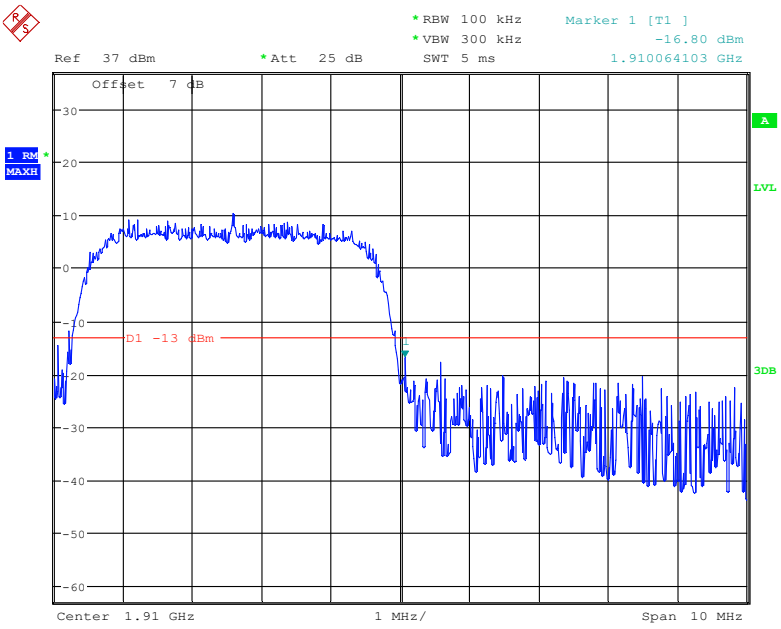
Date: 19.FEB.2022 18:58:54

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



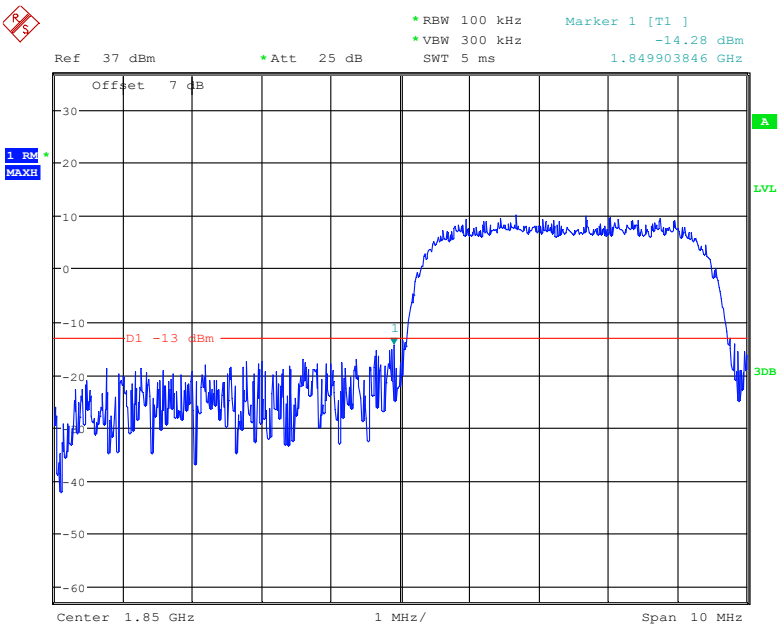
Date: 19.FEB.2022 19:00:28

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



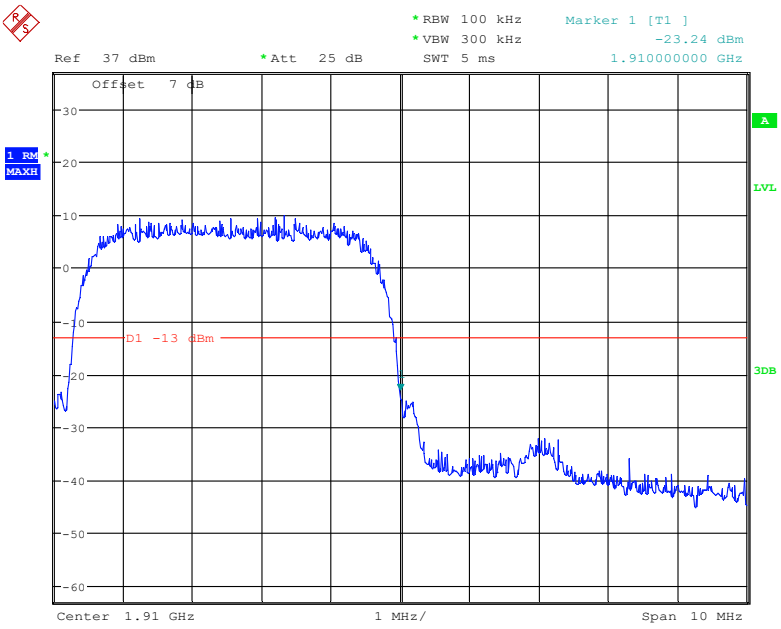
Date: 19.FEB.2022 19:00:02

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



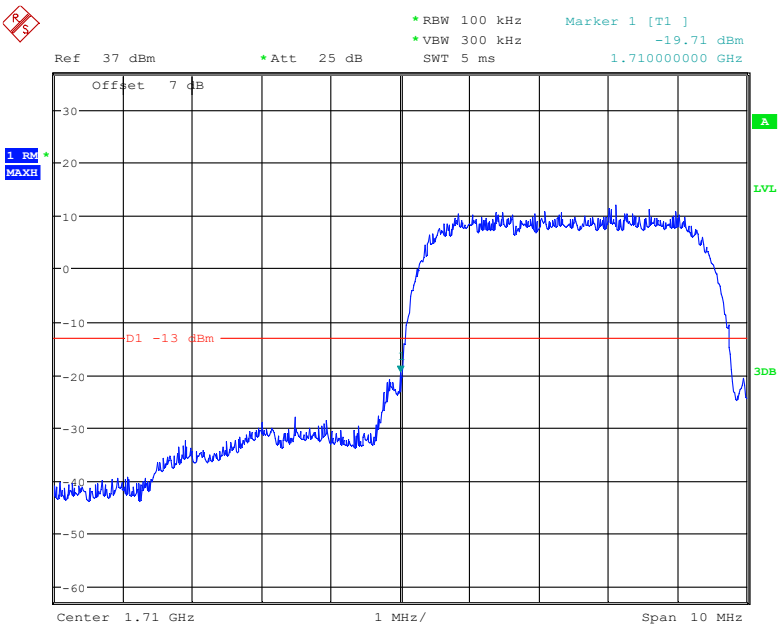
Date: 19.FEB.2022 19:43:45

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



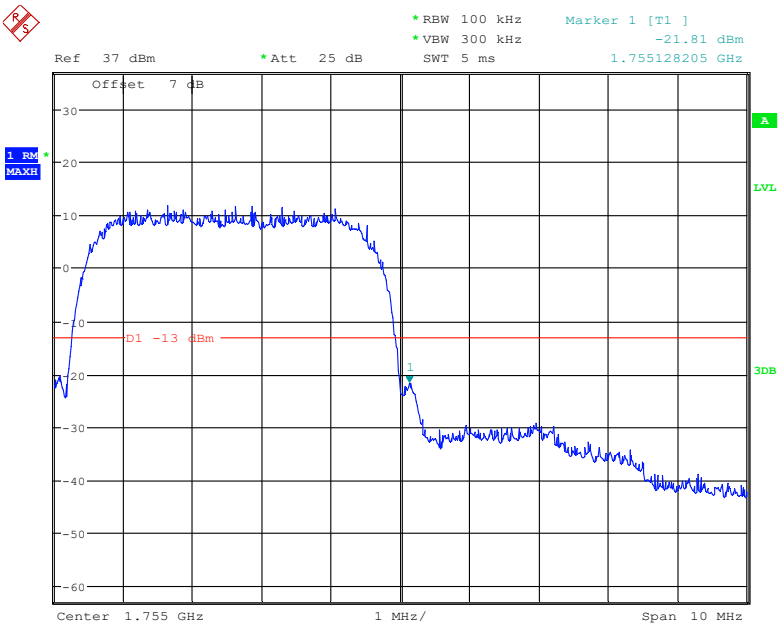
Date: 19.FEB.2022 19:44:03

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



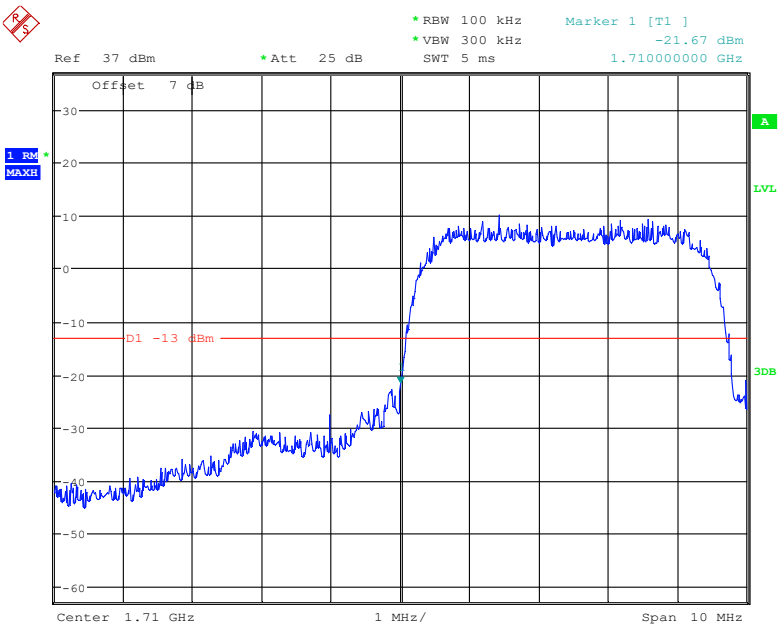
Date: 19.FEB.2022 18:57:36

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



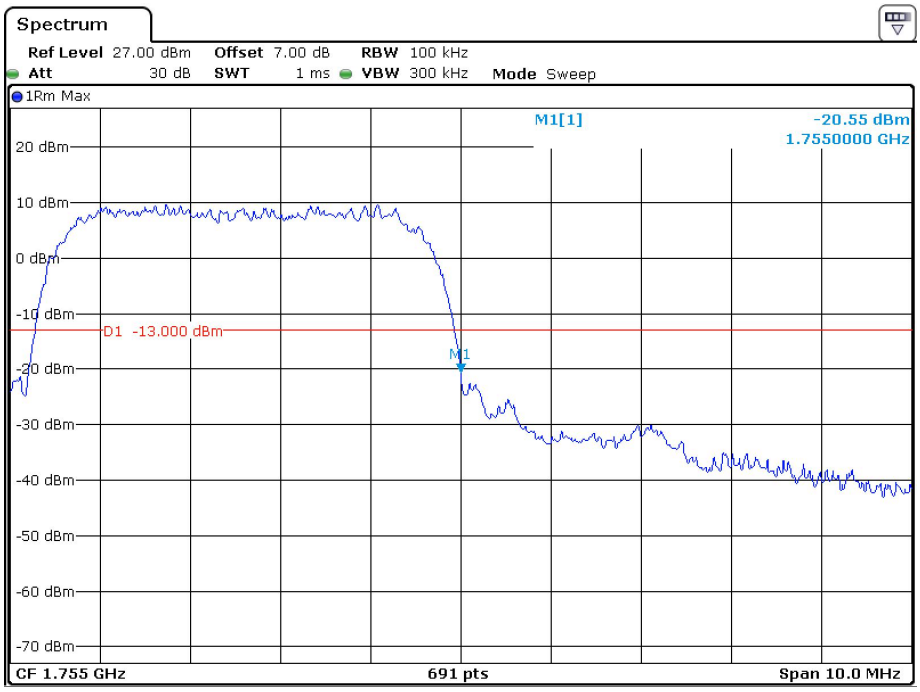
Date: 19.FEB.2022 18:57:12

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



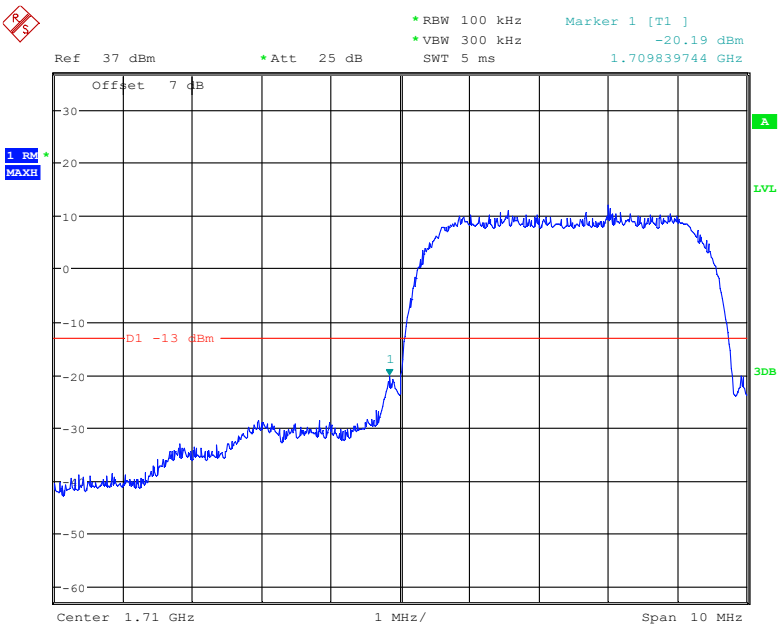
Date: 19.FEB.2022 19:00:47

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

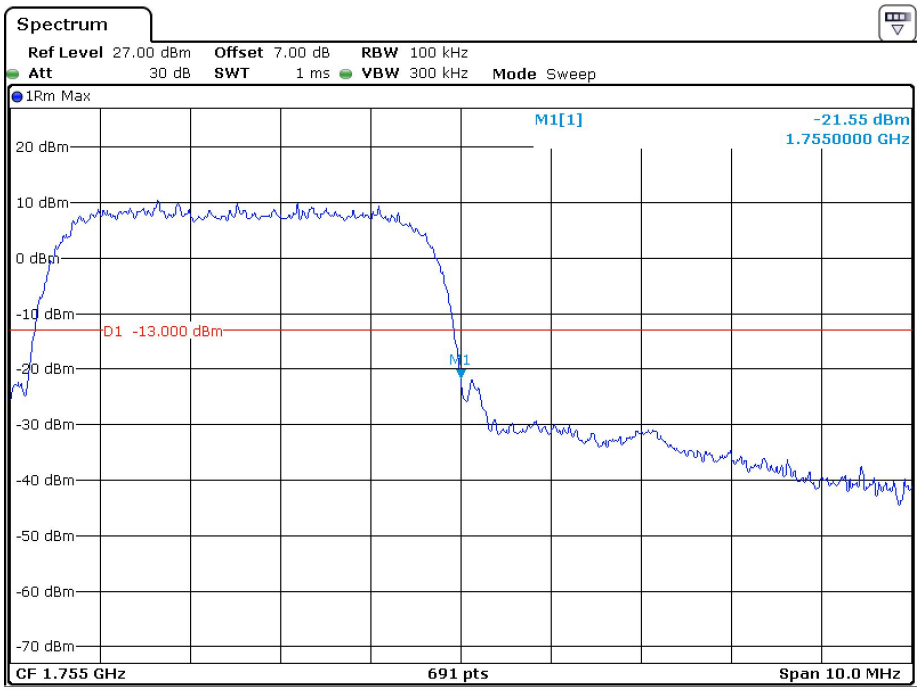


Date: 24.MAR.2022 20:18:27

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



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



The test plots of LTE bands please refer to theAppendix 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

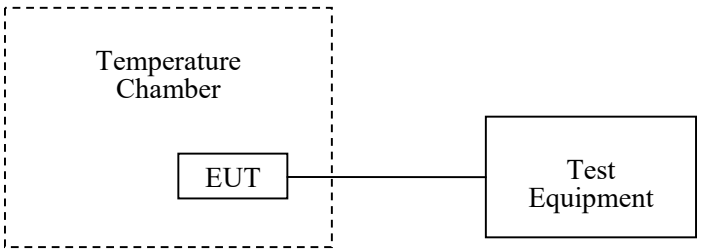
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

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

The testing was performed by Black Ding on 2022-02-19.

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.	-5	-0.0060	2.5
-20		-4	-0.0048	2.5
-10		2	0.0024	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		8	0.0096	2.5
20	L.V.	4	0.0048	2.5
	H.V.	-2	-0.0024	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.	-4	-0.0048	2.5
-20		3	0.0036	2.5
-10		-7	-0.0084	2.5
0		-8	-0.0096	2.5
10		6	0.0072	2.5
20		-4	-0.0048	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.	6	0.0072	2.5

WCDMA Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-11.02	-0.0132	2.5
-20		-9.54	-0.0114	2.5
-10		-11.03	-0.0132	2.5
0		-10.41	-0.0124	2.5
10		-9.02	-0.0108	2.5
20		-12.06	-0.0144	2.5
30		-7.86	-0.0094	2.5
40		-9.22	-0.0110	2.5
50		-10.12	-0.0121	2.5
20	L.V.	-9.38	-0.0112	2.5
	H.V.	-10.55	-0.0126	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.	-6	-0.0032	pass
-20		8	0.0043	pass
-10		7	0.0037	pass
0		8	0.0043	pass
10		-4	-0.0021	pass
20		33	0.0176	pass
30		-6	-0.0032	pass
40		-7	-0.0037	pass
50		8	0.0043	pass
20	L.V.	10	0.0053	pass
	H.V.	8	0.0043	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.	-5	-0.0027	pass
-20		-7	-0.0037	pass
-10		5	0.0027	pass
0		3	0.0016	pass
10		-4	-0.0021	pass
20		27	0.0144	pass
30		-3	-0.0016	pass
40		8	0.0043	pass
50		9	0.0048	pass
20	L.V.	3	0.0016	pass
	H.V.	6	0.0032	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.	-11.25	-0.0060	pass
-20		-13.22	-0.0070	pass
-10		-10.25	-0.0055	pass
0		-8.22	-0.0044	pass
10		-9.17	-0.0049	pass
20		-8.74	-0.0046	pass
30		-5.36	-0.0029	pass
40		-6.68	-0.0036	pass
50		-7.35	-0.0039	pass
20	L.V.	-11.22	-0.0060	pass
	H.V.	-10.21	-0.0054	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.	1710.0558	1754.9768	1710	1755
-20		1710.0436	1754.9789	1710	1755
-10		1710.0227	1754.9754	1710	1755
0		1710.0215	1754.9767	1710	1755
10		1710.0172	1754.9786	1710	1755
20		1710.0149	1754.9778	1710	1755
30		1710.0136	1754.9787	1710	1755
40		1710.0124	1754.9776	1710	1755
50		1710.0127	1754.9789	1710	1755
20	L.V.	1710.0139	1754.9765	1710	1755
	H.V.	1710.0145	1754.9757	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.	-8.40	-0.0045	pass
-20		-9.97	-0.0053	pass
-10		-6.13	-0.0033	pass
0		6.17	0.0033	pass
10		7.92	0.0042	pass
20		6.46	0.0034	pass
30		-6.52	-0.0035	pass
40		7.18	0.0038	pass
50		-9.69	-0.0052	pass
20	L.V.	-8.17	-0.0043	pass
	H.V.	-7.05	-0.0038	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.	1710.3367	1754.8782	1710	1755
-20		1710.3272	1754.8767	1710	1755
-10		1710.2345	1754.8752	1710	1755
0		1710.2247	1754.8749	1710	1755
10		1710.2568	1754.8737	1710	1755
20		1710.3346	1754.8759	1710	1755
30		1710.3467	1754.8746	1710	1755
40		1710.3152	1754.8729	1710	1755
50		1710.2265	1754.8756	1710	1755
20	L.V.	1710.2249	1754.8757	1710	1755
	H.V.	1710.2256	1754.8759	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-7.40	-0.0088	2.5
-20		-6.97	-0.0083	2.5
-10		-5.50	-0.0066	2.5
0		6.06	0.0072	2.5
10		9.80	0.0117	2.5
20		5.03	0.0060	2.5
30		-6.62	-0.0079	2.5
40		-8.73	-0.0104	2.5
50		-7.05	-0.0084	2.5
20	L.V.	8.99	0.0107	2.5
	H.V.	-7.17	-0.0086	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.	2500.1967	2569.9876	2500	2570
-20		2500.1956	2569.9867	2500	2570
-10		2500.1839	2569.9855	2500	2570
0		2500.1862	2569.9787	2500	2570
10		2500.1929	2569.9862	2500	2570
20		2500.1844	2569.9676	2500	2570
30		2500.1766	2569.9582	2500	2570
40		2500.1658	2569.9835	2500	2570
50		2500.1562	2569.9827	2500	2570
20	L.V.	2500.1445	2569.9729	2500	2570
	H.V.	2500.1568	2569.9663	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.	2570.8354	2619.9852	2570	2620
-20		2570.8172	2619.8767	2570	2620
-10		2570.7246	2619.7653	2570	2620
0		2570.6158	2619.6568	2570	2620
10		2570.5144	2619.5447	2570	2620
20		2570.3959	2619.4357	2570	2620
30		2570.2872	2619.3247	2570	2620
40		2570.1746	2619.2159	2570	2620
50		2570.1655	2619.1368	2570	2620
20	L.V.	2570.1549	2619.1254	2570	2620
	H.V.	2570.1356	2619.1159	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.	2535.9758	2654.9866	2535	2655
-20		2535.8689	2654.8857	2535	2655
-10		2535.7566	2654.7746	2535	2655
0		2535.6448	2654.6659	2535	2655
10		2535.5352	2654.5553	2535	2655
20		2535.4267	2654.4464	2535	2655
30		2535.3145	2654.3343	2535	2655
40		2535.2159	2654.2256	2535	2655
50		2535.2937	2654.1769	2535	2655
20	L.V.	2535.8655	2654.0159	2535	2655
	H.V.	2535.8537	2654.0254	2535	2655

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

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.	-4.69	-0.0025	pass
-20		-6.68	-0.0036	pass
-10		9.77	0.0052	pass
0		-7.62	-0.0041	pass
10		-9.91	-0.0053	pass
20		-9.82	-0.0052	pass
30		-6.68	-0.0036	pass
40		-8.85	-0.0047	pass
50		5.67	0.0030	pass
20	L.V.	6.05	0.0032	pass
	H.V.	7.52	0.0040	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.	1710.2767	1754.7659	1710	1755
-20		1710.2766	1754.7567	1710	1755
-10		1710.2758	1754.7658	1710	1755
0		1710.2646	1754.7456	1710	1755
10		1710.2646	1754.7434	1710	1755
20		1710.2657	1754.7875	1710	1755
30		1710.2545	1754.7657	1710	1755
40		1710.2572	1754.7648	1710	1755
50		1710.2666	1754.7754	1710	1755
20	L.V.	1710.2648	1754.7564	1710	1755
	H.V.	1710.2658	1754.7567	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.	-6.05	-0.0072	2.5
-20		8.10	0.0097	2.5
-10		-8.59	-0.0103	2.5
0		9.33	0.0112	2.5
10		-6.94	-0.0083	2.5
20		7.54	0.0090	2.5
30		6.43	0.0077	2.5
40		-6.17	-0.0074	2.5
50		-6.44	-0.0077	2.5
20	L.V.	6.34	0.0076	2.5
	H.V.	-6.89	-0.0082	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.	2500.7487	2569.8568	2500	2570
-20		2500.7375	2569.8537	2500	2570
-10		2500.7366	2569.8424	2500	2570
0		2500.7243	2569.8529	2500	2570
10		2500.6384	2569.8256	2500	2570
20		2500.6252	2569.7876	2500	2570
30		2500.6339	2569.7855	2500	2570
40		2500.6345	2569.8471	2500	2570
50		2500.6329	2569.8458	2500	2570
20	L.V.	2500.6237	2569.8356	2500	2570
	H.V.	2500.5426	2569.8287	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.	2570.9867	2619.9828	2570	2620
-20		2570.8952	2619.8737	2570	2620
-10		2570.7825	2619.7666	2570	2620
0		2570.6744	2619.6549	2570	2620
10		2570.5637	2619.5487	2570	2620
20		2570.4565	2619.4356	2570	2620
30		2570.3455	2619.3295	2570	2620
40		2570.2376	2619.2157	2570	2620
50		2570.1282	2619.1156	2570	2620
20	L.V.	2570.2175	2619.8766	2570	2620
	H.V.	2570.2137	2619.7657	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.	2535.9459	2654.9662	2535	2655
-20		2535.8442	2654.8574	2535	2655
-10		2535.7364	2654.7484	2535	2655
0		2535.6267	2654.6375	2535	2655
10		2535.5168	2654.5264	2535	2655
20		2535.4174	2654.4557	2535	2655
30		2535.2969	2654.3566	2535	2655
40		2535.1874	2654.1872	2535	2655
50		2535.1832	2654.1875	2535	2655
20	L.V.	2535.1647	2654.0766	2535	2655
	H.V.	2535.0566	2654.0347	2535	2655

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

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