TESTREPORT

Applicant Name :	TECNO MOBILE LIMITED
Address :	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT Hong Kong
ReportNumber:	SZNS220126-03832E-RF-00C
FCC ID:	2ADYY-CI6N

Test Standard (s)

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

Sample Description

Product Type:	Mobile Phone
Model No.:	CI6n
Multiple Model(s) No.:	N/A
Trade Mark:	TECNO
Date Received:	2022/01/26
Date of Test:	2022/02/10~2022/03/29
Report Date:	2022/03/29

Test Result:	Pass*

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

Prepared and Checked By:

Ting Lü
EMC Engineer

Approved By:

Robert Li
EMC Engineer

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 17: 704-716MHz(TX); 734-746MHz(RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	GSM850/WCDMA Band5/LTE Band 5: -3.38dBi PCS1900/WCDMA Band 2/ LTE Band 2: -0.76dBi WCDMA Band 4/ LTE Band 4/ LTE Band 66: 0.32dBi LTE Band 7/ LTE Band 38/LTE Band 41: 0.46dBi LTE Band 17: -4.91dBi(provided by the applicant)
Voltage Range	DC 3.87V from battery, DC 5.0V or 7.5V from adapter
Sample serial number	SZNS220126-03832E-RF-S2 for Conducted and Radiated Emissions SZNS220126-03832E-RF-S1 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: U180TSA Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 2.4A or DC 7.5V, 2.4A, 18.0W Max
Extreme condition*	L.V.: Low Voltage 3.45V N.V.: Normal Voltage 3.87V H.V.: High Voltage 4.45V (provided by the applicant)

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H,Part24-Subpart E, and Subpart 27 of the Federal Communication Commission's rules.

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

Test Methodology

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

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous Wireless Communications Services

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

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

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±0.73dB
Unwanted Emission, conducted		±1.6dB
RF Frequency		$\pm 0.082*10^{-7}$
Emissions, Radiated	30MHz - 1GHz	±4.28dB
	1GHz - 18GHz	±4.98dB
	18GHz - 26.5GHz	±5.06dB
Temperature		±1℃
Humidity		±6%
Supply voltages		±0.4%

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

Test Facility

The Test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

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

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

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

Test was performed as below table:

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.6	848.8
DCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B17	5	706.5	710	713.5
	10	709	710	711

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

Equipment Modifications

No modification was made to the EUT.

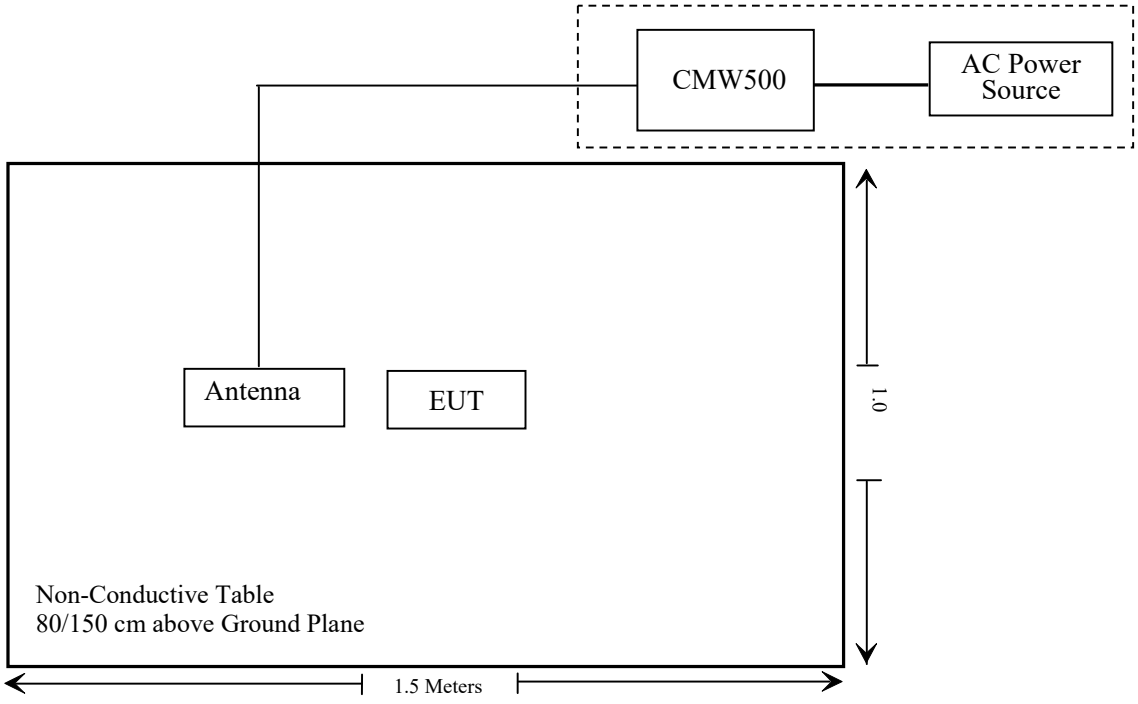
Support Equipment List and Details

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

Support Cable Description

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

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 1.1307 ,§2.1093	RF Exposure (SAR)	Compliant*
§2.1046; § 22.913 (a); § 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: SZNS220126-03832E-SA.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2021/11/11	2022/11/10
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120	2020/01/05	2023/01/04
Wainwright	High Pass Filter	WHKX3.6/18 G-10SS	5	2021/12/14	2022/12/13
CD	High Pass Filter	HPM-1.2/18G -60	110	2021/12/14	2022/12/13
Unknown	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	Spectrum Analyzer	FSV-40	101495	2021/12/13	2022/12/12
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 6dB Attenuator	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 Cable	Unknown	Unknown	Each time	

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

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

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: SZNS220126-03832E-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(c)(d)(h)- RF OUTPUT POWER

Applicable Standard

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

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

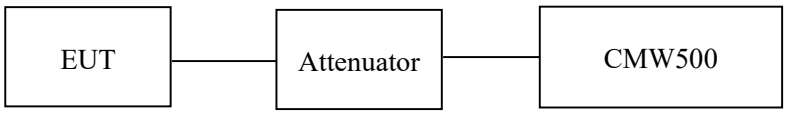
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

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

Test Procedure

Conducted method:

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



Test Data

Environmental Conditions

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

The testing was performed by Black Duan from 2022-02-10 to 2022-02-11.

Conducted Power

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	33.00	26.97	38.45
	190	836.6	33.00	26.97	38.45
	251	848.8	32.90	26.87	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	32.96	32.09	30.21	29.14	26.93	26.06	24.18	23.11	38.45
	190	836.6	32.92	32.04	30.08	29.03	26.89	26.01	24.05	23.00	38.45
	251	848.8	32.89	31.94	29.96	28.89	26.86	25.91	23.93	22.86	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	27.07	25.64	23.38	22.11	21.04	19.61	17.35	16.08	38.45
	190	836.6	26.94	25.55	23.28	21.98	20.91	19.52	17.25	15.95	38.45
	251	848.8	26.67	25.27	22.98	21.68	20.64	19.24	16.95	15.65	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		23.34	23.44	23.37	17.31	17.41	17.34
	HSDPA	1	20.38	20.51	20.99	14.35	14.48	14.96
		2	20.55	20.53	20.78	14.52	14.5	14.75
		3	20.42	20.46	20.56	14.39	14.43	14.53
		4	20.47	20.55	20.86	14.44	14.52	14.83
	HSUPA	1	21.34	20.96	21.25	15.31	14.93	15.22
		2	21.22	20.88	21.22	15.19	14.85	15.19
		3	21.35	21.10	21.17	15.32	15.07	15.14
		4	21.28	20.99	21.14	15.25	14.96	15.11
		5	21.39	21.06	21.06	15.36	15.03	15.03
	HSPA+	1	21.55	21.17	21.18	15.52	15.14	15.15

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For GSM850 / WCDMA Band5: Antenna Gain = -3.38dBi = -5.53dBd (0dBd=2.15dBi)
Cable Loss=0.5dB* (provided by the applicant)
Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	29.80	28.24	33
	661	1880.0	29.77	28.21	33
	810	1909.8	29.74	28.18	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	29.78	28.79	26.70	25.68	28.22	27.23	25.14	24.12	33
	661	1880.0	29.75	28.75	26.69	25.69	28.19	27.19	25.13	24.13	33
	810	1909.8	29.79	28.85	26.83	25.75	28.23	27.29	25.27	24.19	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	25.82	24.45	22.05	20.51	24.26	22.89	20.49	18.95	33
	661	1880.0	25.71	24.28	21.92	20.37	24.15	22.72	20.36	18.81	33
	810	1909.8	25.87	24.44	22.06	20.65	24.31	22.88	20.5	19.09	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		23.02	22.94	22.89	21.46	21.38	21.33
	HSDPA	1	20.37	20.23	20.31	18.81	18.67	18.75
		2	20.35	20.45	20.38	18.79	18.89	18.82
		3	20.42	20.36	20.36	18.86	18.80	18.80
		4	20.39	20.48	20.37	18.83	18.92	18.81
	HSUPA	1	21.77	21.76	21.66	20.21	20.20	20.10
		2	21.52	21.58	21.54	19.96	20.02	19.98
		3	21.46	21.67	21.63	19.90	20.11	20.07
		4	21.58	21.45	21.38	20.02	19.89	19.82
		5	21.33	21.53	21.33	19.77	19.97	19.77
	HSPA+	1	21.42	21.59	21.48	19.86	20.03	19.92

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For PCS1900 / WCDMA Band2: Antenna Gain = -0.76dBi
Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

AWS Band

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		22.72	22.69	22.67	22.24	22.21	22.19
	HSDPA	1	20.31	20.34	20.38	19.83	19.86	19.90
		2	20.52	20.42	20.35	20.04	19.94	19.87
		3	20.42	20.35	20.45	19.94	19.87	19.97
		4	20.46	20.46	20.41	19.98	19.98	19.93
	HSUPA	1	21.25	21.26	21.31	20.77	20.78	20.83
		2	21.22	21.22	21.28	20.74	20.74	20.80
		3	21.18	21.14	21.23	20.70	20.66	20.75
		4	21.14	21.23	21.22	20.66	20.75	20.74
		5	21.26	21.14	21.24	20.78	20.66	20.76
	HSPA+	1	21.28	21.36	21.37	20.80	20.88	20.89

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band4: Antenna Gain = 0.32dBi
Cable Loss=0.8dB* (provided by the applicant)
Limit: EIRP≤30dBm

LTE Band 2

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.88	22.88	22.70	21.32	21.32	21.14
		RB1#3	23.25	23.06	22.91	21.69	21.50	21.35
		RB1#5	23.06	22.87	22.71	21.50	21.31	21.15
		RB3#0	23.20	23.04	22.82	21.64	21.48	21.26
		RB3#3	23.25	22.98	22.82	21.69	21.42	21.26
		RB6#0	22.15	21.92	21.76	20.59	20.36	20.20
	16QAM	RB1#0	22.09	22.00	21.73	20.53	20.44	20.17
		RB1#3	22.20	22.20	21.91	20.64	20.64	20.35
		RB1#5	22.09	22.03	21.72	20.53	20.47	20.16
		RB3#0	22.33	21.96	21.85	20.77	20.40	20.29
		RB3#3	22.33	22.02	21.84	20.77	20.46	20.28
		RB6#0	21.17	21.00	20.73	19.61	19.44	19.17
3.0	QPSK	RB1#0	23.08	22.94	22.79	21.52	21.38	21.23
		RB1#8	23.06	22.94	22.79	21.50	21.38	21.23
		RB1#14	23.04	22.88	22.74	21.48	21.32	21.18
		RB6#0	22.08	21.87	21.74	20.52	20.31	20.18
		RB6#9	22.06	21.90	21.74	20.50	20.34	20.18
		RB15#0	22.07	21.93	21.78	20.51	20.37	20.22
	16QAM	RB1#0	22.66	22.11	21.77	21.10	20.55	20.21
		RB1#8	22.67	22.11	21.76	21.11	20.55	20.20
		RB1#14	22.60	22.07	21.75	21.04	20.51	20.19
		RB6#0	21.16	20.95	20.70	19.60	19.39	19.14
		RB6#9	21.10	20.94	20.66	19.54	19.38	19.10
		RB15#0	21.15	20.93	20.82	19.59	19.37	19.26

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.02	22.84	22.66	21.46	21.28	21.10
		RB1#13	23.12	22.96	22.79	21.56	21.40	21.23
		RB1#24	22.99	22.82	22.66	21.43	21.26	21.10
		RB15#0	22.11	21.95	21.80	20.55	20.39	20.24
		RB15#10	22.09	21.91	21.79	20.53	20.35	20.23
		RB25#0	22.10	21.87	21.75	20.54	20.31	20.19
	16QAM	RB1#0	21.87	22.17	21.71	20.31	20.61	20.15
		RB1#13	22.02	22.26	21.85	20.46	20.70	20.29
		RB1#24	21.89	22.14	21.75	20.33	20.58	20.19
		RB15#0	21.13	20.94	20.85	19.57	19.38	19.29
		RB15#10	21.12	20.87	20.83	19.56	19.31	19.27
		RB25#0	21.09	20.92	20.82	19.53	19.36	19.26
10.0	QPSK	RB1#0	23.03	22.93	22.82	21.47	21.37	21.26
		RB1#25	23.16	23.09	22.93	21.60	21.53	21.37
		RB1#49	23.00	22.89	22.77	21.44	21.33	21.21
		RB25#0	22.12	21.97	21.84	20.56	20.41	20.28
		RB25#25	22.11	21.89	21.81	20.55	20.33	20.25
		RB50#0	22.14	21.92	21.83	20.58	20.36	20.27
	16QAM	RB1#0	22.63	22.09	21.86	21.07	20.53	20.30
		RB1#25	22.78	22.28	21.91	21.22	20.72	20.35
		RB1#49	22.60	22.04	21.74	21.04	20.48	20.18
		RB25#0	21.19	21.01	20.92	19.63	19.45	19.36
		RB25#25	21.19	20.92	20.91	19.63	19.36	19.35
		RB50#0	21.09	20.95	20.86	19.53	19.39	19.30

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.97	22.91	22.75	21.41	21.35	21.19
		RB1#38	23.03	22.94	22.84	21.47	21.38	21.28
		RB1#74	22.96	22.76	22.66	21.40	21.20	21.10
		RB36#0	22.13	22.05	21.86	20.57	20.49	20.30
		RB36#39	22.13	21.99	21.88	20.57	20.43	20.32
		RB75#0	22.11	22.05	21.84	20.55	20.49	20.28
	16QAM	RB1#0	22.56	22.06	22.17	21.00	20.50	20.61
		RB1#38	22.64	22.11	22.26	21.08	20.55	20.70
		RB1#74	22.51	21.93	22.04	20.95	20.37	20.48
		RB36#0	21.13	21.01	20.84	19.57	19.45	19.28
		RB36#39	21.13	20.97	20.83	19.57	19.41	19.27
		RB75#0	21.14	20.99	20.84	19.58	19.43	19.28
20.0	QPSK	RB1#0	22.84	22.80	22.55	21.28	21.24	20.99
		RB1#50	23.18	23.13	22.95	21.62	21.57	21.39
		RB1#99	22.80	22.66	22.48	21.24	21.10	20.92
		RB50#0	22.08	21.99	21.91	20.52	20.43	20.35
		RB50#50	22.19	21.87	21.79	20.63	20.31	20.23
		RB100#0	22.13	21.94	21.88	20.57	20.38	20.32
	16QAM	RB1#0	22.19	22.01	22.16	20.63	20.45	20.60
		RB1#50	22.50	22.36	22.55	20.94	20.80	20.99
		RB1#99	22.12	21.87	22.05	20.56	20.31	20.49
		RB50#0	21.09	20.98	20.93	19.53	19.42	19.37
		RB50#50	21.16	20.90	20.78	19.60	19.34	19.22
		RB100#0	21.14	20.96	20.87	19.58	19.40	19.31

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band2: Antenna Gain = -0.76dBi
Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

LTE Band 4

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.63	22.04	22.47	22.15	21.56	21.99
		RB1#3	22.27	22.22	22.45	21.79	21.74	21.97
		RB1#5	22.08	22.01	22.40	21.60	21.53	21.92
		RB3#0	22.20	22.11	22.45	21.72	21.63	21.97
		RB3#3	22.24	22.13	22.65	21.76	21.65	22.17
		RB6#0	21.20	21.38	21.60	20.72	20.90	21.12
	16QAM	RB1#0	21.12	21.67	21.57	20.64	21.19	21.09
		RB1#3	21.34	21.72	21.79	20.86	21.24	21.31
		RB1#5	21.11	21.66	21.63	20.63	21.18	21.15
		RB3#0	21.30	21.44	21.81	20.82	20.96	21.33
		RB3#3	21.33	21.63	21.74	20.85	21.15	21.26
		RB6#0	20.21	20.68	20.58	19.73	20.20	20.10
3.0	QPSK	RB1#0	22.66	22.64	22.58	22.18	22.16	22.10
		RB1#8	22.62	22.61	22.58	22.14	22.13	22.10
		RB1#14	22.58	22.57	22.59	22.10	22.09	22.11
		RB6#0	21.66	21.58	21.56	21.18	21.10	21.08
		RB6#9	21.60	21.54	21.58	21.12	21.06	21.10
		RB15#0	21.64	21.60	21.61	21.16	21.12	21.13
	16QAM	RB1#0	22.19	21.76	21.66	21.71	21.28	21.18
		RB1#8	22.14	21.76	21.64	21.66	21.28	21.16
		RB1#14	22.18	21.76	21.64	21.70	21.28	21.16
		RB6#0	20.70	20.61	20.55	20.22	20.13	20.07
		RB6#9	20.63	20.62	20.54	20.15	20.14	20.06
		RB15#0	20.68	20.56	20.67	20.20	20.08	20.19

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.57	22.54	22.52	22.09	22.06	22.04
		RB1#13	22.67	22.61	22.60	22.19	22.13	22.12
		RB1#24	22.57	22.52	22.51	22.09	22.04	22.03
		RB15#0	21.62	21.56	21.63	21.14	21.08	21.15
		RB15#10	21.64	21.62	21.65	21.16	21.14	21.17
		RB25#0	21.60	21.58	21.64	21.12	21.10	21.16
	16QAM	RB1#0	21.51	21.83	21.61	21.03	21.35	21.13
		RB1#13	21.53	21.95	21.71	21.05	21.47	21.23
		RB1#24	21.46	21.81	21.61	20.98	21.33	21.13
		RB15#0	20.64	20.57	20.67	20.16	20.09	20.19
		RB15#10	20.66	20.57	20.66	20.18	20.09	20.18
		RB25#0	20.62	20.60	20.69	20.14	20.12	20.21
10.0	QPSK	RB1#0	22.65	22.62	22.55	22.17	22.14	22.07
		RB1#25	22.79	22.68	22.71	22.31	22.20	22.23
		RB1#49	22.60	22.57	22.55	22.12	22.09	22.07
		RB25#0	21.63	21.65	21.69	21.15	21.17	21.21
		RB25#25	21.76	21.63	21.64	21.28	21.15	21.16
		RB50#0	21.66	21.63	21.68	21.18	21.15	21.20
	16QAM	RB1#0	22.16	21.77	21.62	21.68	21.29	21.14
		RB1#25	22.32	21.91	21.81	21.84	21.43	21.33
		RB1#49	22.15	21.70	21.64	21.67	21.22	21.16
		RB25#0	20.68	20.69	20.84	20.20	20.21	20.36
		RB25#25	20.77	20.68	20.78	20.29	20.20	20.30
		RB50#0	20.68	20.65	20.69	20.20	20.17	20.21

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.59	22.56	22.48	22.11	22.08	22.00
		RB1#38	22.66	22.63	22.59	22.18	22.15	22.11
		RB1#74	22.49	22.47	22.50	22.01	21.99	22.02
		RB36#0	21.66	21.64	21.66	21.18	21.16	21.18
		RB36#39	21.73	21.63	21.55	21.25	21.15	21.07
		RB75#0	21.73	21.63	21.66	21.25	21.15	21.18
	16QAM	RB1#0	22.10	21.68	21.90	21.62	21.20	21.42
		RB1#38	22.22	21.80	22.05	21.74	21.32	21.57
		RB1#74	22.08	21.68	21.96	21.60	21.20	21.48
		RB36#0	20.61	20.63	20.63	20.13	20.15	20.15
		RB36#39	20.71	20.63	20.59	20.23	20.15	20.11
		RB75#0	20.72	20.61	20.59	20.24	20.13	20.11
20.0	QPSK	RB1#0	22.44	22.46	22.29	21.96	21.98	21.81
		RB1#50	22.83	22.77	22.64	22.35	22.29	22.16
		RB1#99	22.40	22.36	22.34	21.92	21.88	21.86
		RB50#0	21.56	21.57	21.68	21.08	21.09	21.20
		RB50#50	21.72	21.48	21.51	21.24	21.00	21.03
		RB100#0	21.61	21.56	21.66	21.13	21.08	21.18
	16QAM	RB1#0	21.73	21.64	21.87	21.25	21.16	21.39
		RB1#50	22.05	22.03	22.35	21.57	21.55	21.87
		RB1#99	21.69	21.61	21.98	21.21	21.13	21.50
		RB50#0	20.52	20.50	20.71	20.04	20.02	20.23
		RB50#50	20.71	20.56	20.58	20.23	20.08	20.10
		RB100#0	20.64	20.55	20.66	20.16	20.07	20.18

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band4: Antenna Gain = 0.32dBi
Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤30dBm

LTE Band 5

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.76	23.83	23.69	17.73	17.80	17.66
		RB1#3	23.88	23.97	23.85	17.85	17.94	17.82
		RB1#5	23.74	23.82	23.68	17.71	17.79	17.65
		RB3#0	24.00	23.92	23.88	17.97	17.89	17.85
		RB3#3	23.97	23.94	23.87	17.94	17.91	17.84
		RB6#0	22.83	22.94	22.76	16.80	16.91	16.73
	16QAM	RB1#0	22.95	22.99	22.81	16.92	16.96	16.78
		RB1#3	23.04	23.17	22.96	17.01	17.14	16.93
		RB1#5	22.91	22.98	22.81	16.88	16.95	16.78
		RB3#0	23.28	22.88	23.01	17.25	16.85	16.98
		RB3#3	23.27	22.86	23.01	17.24	16.83	16.98
		RB6#0	21.96	21.93	21.81	15.93	15.90	15.78
3.0	QPSK	RB1#0	23.83	23.88	23.84	17.80	17.85	17.81
		RB1#8	23.78	23.86	23.77	17.75	17.83	17.74
		RB1#14	23.79	23.87	23.77	17.76	17.84	17.74
		RB6#0	22.80	22.91	22.77	16.77	16.88	16.74
		RB6#9	22.79	22.87	22.73	16.76	16.84	16.70
		RB15#0	22.94	22.96	22.88	16.91	16.93	16.85
	16QAM	RB1#0	23.59	23.07	22.95	17.56	17.04	16.92
		RB1#8	23.55	23.03	22.91	17.52	17.00	16.88
		RB1#14	23.50	23.06	22.85	17.47	17.03	16.82
		RB6#0	21.99	21.94	21.80	15.96	15.91	15.77
		RB6#9	21.92	22.01	21.77	15.89	15.98	15.74
		RB15#0	22.10	21.94	21.97	16.07	15.91	15.94

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.76	23.80	23.75	17.73	17.77	17.72
		RB1#13	23.88	23.89	23.80	17.85	17.86	17.77
		RB1#24	23.79	23.80	23.68	17.76	17.77	17.65
		RB15#0	22.93	22.99	22.90	16.90	16.96	16.87
		RB15#10	22.95	22.94	22.83	16.92	16.91	16.80
		RB25#0	22.97	22.96	22.86	16.94	16.93	16.83
	16QAM	RB1#0	22.78	23.14	22.85	16.75	17.11	16.82
		RB1#13	22.88	23.21	22.96	16.85	17.18	16.93
		RB1#24	22.78	23.11	22.81	16.75	17.08	16.78
		RB15#0	22.11	21.96	22.01	16.08	15.93	15.98
		RB15#10	22.09	21.91	21.93	16.06	15.88	15.90
		RB25#0	22.08	21.97	21.97	16.05	15.94	15.94
10.0	QPSK	RB1#0	23.82	23.86	23.88	17.79	17.83	17.85
		RB1#25	23.95	24.01	24.03	17.92	17.98	18.00
		RB1#49	23.86	23.89	23.78	17.83	17.86	17.75
		RB25#0	22.98	23.03	23.05	16.95	17.00	17.02
		RB25#25	23.01	22.99	22.92	16.98	16.96	16.89
		RB50#0	23.02	23.00	23.03	16.99	16.97	17.00
	16QAM	RB1#0	23.54	23.14	22.91	17.51	17.11	16.88
		RB1#25	23.68	23.21	23.07	17.65	17.18	17.04
		RB1#49	23.46	23.10	22.85	17.43	17.07	16.82
		RB25#0	22.10	22.08	22.18	16.07	16.05	16.15
		RB25#25	22.16	22.06	22.09	16.13	16.03	16.06
		RB50#0	22.10	22.09	22.06	16.07	16.06	16.03

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)
For Band5: Antenna Gain = -3.38dBi = -5.53dBd (0dBd=2.15dBi)
Cable Loss=0.5dB* (provided by the applicant)
Limit: ERP≤38.45dBm

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.40	22.50	22.68	21.86	21.96	22.14
		RB1#13	22.50	22.65	22.81	21.96	22.11	22.27
		RB1#24	22.40	22.50	22.44	21.86	21.96	21.90
		RB15#0	21.40	21.52	21.61	20.86	20.98	21.07
		RB15#10	21.55	21.59	21.46	21.01	21.05	20.92
		RB25#0	21.42	21.56	21.36	20.88	21.02	20.82
	16QAM	RB1#0	21.26	21.73	21.23	20.72	21.19	20.69
		RB1#13	21.37	21.89	21.36	20.83	21.35	20.82
		RB1#24	21.22	21.69	21.23	20.68	21.15	20.69
		RB15#0	20.41	20.49	20.38	19.87	19.95	19.84
		RB15#10	20.54	20.55	20.37	20.00	20.01	19.83
		RB25#0	20.45	20.52	20.62	19.91	19.98	20.08
10.0	QPSK	RB1#0	22.23	22.60	22.76	21.69	22.06	22.22
		RB1#25	22.16	22.75	22.87	21.62	22.21	22.33
		RB1#49	22.23	22.59	22.33	21.69	22.05	21.79
		RB25#0	21.34	21.51	21.32	20.80	20.97	20.78
		RB25#25	21.51	21.62	21.35	20.97	21.08	20.81
		RB50#0	21.42	21.58	21.28	20.88	21.04	20.74
	16QAM	RB1#0	21.90	21.67	21.19	21.36	21.13	20.65
		RB1#25	22.01	21.82	21.35	21.47	21.28	20.81
		RB1#49	21.90	21.66	21.25	21.36	21.12	20.71
		RB25#0	20.32	20.53	20.36	19.78	19.99	19.82
		RB25#25	20.51	20.66	20.52	19.97	20.12	19.98
		RB50#0	20.42	20.59	20.38	19.88	20.05	19.84

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.95	22.47	22.63	21.41	21.93	22.09
		RB1#38	22.09	22.58	22.50	21.55	22.04	21.96
		RB1#74	22.11	22.52	22.21	21.57	21.98	21.67
		RB36#0	21.43	21.55	21.34	20.89	21.01	20.80
		RB36#39	21.59	21.74	21.36	21.05	21.20	20.82
		RB75#0	21.53	21.66	21.36	20.99	21.12	20.82
	16QAM	RB1#0	21.70	21.58	21.36	21.16	21.04	20.82
		RB1#38	21.72	21.68	21.56	21.18	21.14	21.02
		RB1#74	21.89	21.60	21.47	21.35	21.06	20.93
		RB36#0	20.37	20.50	20.26	19.83	19.96	19.72
		RB36#39	20.49	20.65	20.38	19.95	20.11	19.84
		RB75#0	20.49	20.61	20.46	19.95	20.07	19.92
20.0	QPSK	RB1#0	21.72	22.27	22.34	21.18	21.73	21.80
		RB1#50	22.21	22.77	22.78	21.67	22.23	22.24
		RB1#99	21.83	22.42	22.03	21.29	21.88	21.49
		RB50#0	21.08	21.37	21.26	20.54	20.83	20.72
		RB50#50	21.31	21.57	21.22	20.77	21.03	20.68
		RB100#0	21.33	21.52	21.23	20.79	20.98	20.69
	16QAM	RB1#0	20.97	21.41	21.26	20.43	20.87	20.72
		RB1#50	21.79	21.82	21.90	21.25	21.28	21.36
		RB1#99	21.38	21.51	21.53	20.84	20.97	20.99
		RB50#0	20.27	20.39	20.42	19.73	19.85	19.88
		RB50#50	20.37	20.55	20.52	19.83	20.01	19.98
		RB100#0	20.37	20.52	20.33	19.83	19.98	19.79

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band7: Antenna Gain = 0.46dBi
Cable Loss=1.0dB* (provided by the applicant)
Limit: EIRP≤33dBm

LTE Band 17

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.35	23.30	23.28	15.79	15.74	15.72
		RB1#13	23.46	23.41	23.43	15.90	15.85	15.87
		RB1#24	23.27	23.30	23.30	15.71	15.74	15.74
		RB15#0	22.31	22.35	22.45	14.75	14.79	14.89
		RB15#10	22.43	22.31	22.39	14.87	14.75	14.83
		RB25#0	22.39	22.33	22.38	14.83	14.77	14.82
	16QAM	RB1#0	22.27	22.64	22.36	14.71	15.08	14.80
		RB1#13	22.34	22.65	22.50	14.78	15.09	14.94
		RB1#24	22.19	22.56	22.38	14.63	15.00	14.82
		RB15#0	21.45	21.38	21.51	13.89	13.82	13.95
		RB15#10	21.54	21.34	21.44	13.98	13.78	13.88
		RB25#0	21.48	21.38	21.44	13.92	13.82	13.88
10.0	QPSK	RB1#0	23.31	23.39	23.35	15.75	15.83	15.79
		RB1#25	23.48	23.54	23.52	15.92	15.98	15.96
		RB1#49	23.31	23.40	23.43	15.75	15.84	15.87
		RB25#0	22.25	22.29	22.32	14.69	14.73	14.76
		RB25#25	22.34	22.31	22.32	14.78	14.75	14.76
		RB50#0	22.30	22.32	22.35	14.74	14.76	14.79
	16QAM	RB1#0	23.08	22.54	22.44	15.52	14.98	14.88
		RB1#25	23.14	22.62	22.53	15.58	15.06	14.97
		RB1#49	22.95	22.51	22.43	15.39	14.95	14.87
		RB25#0	21.39	21.37	21.47	13.83	13.81	13.91
		RB25#25	21.41	21.37	21.45	13.85	13.81	13.89
		RB50#0	21.36	21.36	21.42	13.80	13.80	13.86

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)
For Band17: Antenna Gain = -4.91dBi = -7.06dBd (0dBd=2.15dBi)
Cable Loss=0.5dB* (provided by the applicant)
Limit: ERP≤34.77dBm

LTE Band 38

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.28	22.13	22.19	21.74	21.59	21.65
		RB1#13	22.34	22.24	22.33	21.80	21.70	21.79
		RB1#24	22.15	22.11	22.21	21.61	21.57	21.67
		RB15#0	21.26	21.16	21.26	20.72	20.62	20.72
		RB15#10	21.19	21.18	21.26	20.65	20.64	20.72
		RB25#0	21.21	21.13	21.24	20.67	20.59	20.70
	16QAM	RB1#0	21.45	21.10	21.21	20.91	20.56	20.67
		RB1#13	21.52	21.20	21.33	20.98	20.66	20.79
		RB1#24	21.39	21.13	21.25	20.85	20.59	20.71
		RB15#0	20.30	20.13	20.25	19.76	19.59	19.71
		RB15#10	20.27	20.14	20.28	19.73	19.60	19.74
		RB25#0	20.21	20.19	20.30	19.67	19.65	19.76
10.0	QPSK	RB1#0	22.30	22.23	22.24	21.76	21.69	21.70
		RB1#25	22.42	22.43	22.48	21.88	21.89	21.94
		RB1#49	22.18	22.24	22.29	21.64	21.70	21.75
		RB25#0	21.23	21.20	21.15	20.69	20.66	20.61
		RB25#25	21.22	21.20	21.29	20.68	20.66	20.75
		RB50#0	21.23	21.19	21.19	20.69	20.65	20.65
	16QAM	RB1#0	21.49	21.12	21.28	20.95	20.58	20.74
		RB1#25	21.59	21.34	21.53	21.05	20.80	20.99
		RB1#49	21.35	21.10	21.35	20.81	20.56	20.81
		RB25#0	20.22	20.21	20.15	19.68	19.67	19.61
		RB25#25	20.22	20.20	20.30	19.68	19.66	19.76
		RB50#0	20.22	20.17	20.20	19.68	19.63	19.66

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.14	22.07	22.11	21.60	21.53	21.57
		RB1#38	22.18	22.19	22.24	21.64	21.65	21.70
		RB1#74	22.14	22.15	22.18	21.60	21.61	21.64
		RB36#0	21.22	21.23	21.20	20.68	20.69	20.66
		RB36#39	21.26	21.28	21.31	20.72	20.74	20.77
		RB75#0	21.28	21.25	21.27	20.74	20.71	20.73
	16QAM	RB1#0	21.37	21.00	21.28	20.83	20.46	20.74
		RB1#38	21.36	21.10	21.36	20.82	20.56	20.82
		RB1#74	21.25	21.05	21.36	20.71	20.51	20.82
		RB36#0	20.16	20.12	20.18	19.62	19.58	19.64
		RB36#39	20.19	20.16	20.31	19.65	19.62	19.77
		RB75#0	20.17	20.18	20.23	19.63	19.64	19.69
20.0	QPSK	RB1#0	21.95	21.84	22.01	21.41	21.30	21.47
		RB1#50	22.39	22.35	22.48	21.85	21.81	21.94
		RB1#99	21.91	21.95	22.12	21.37	21.41	21.58
		RB50#0	21.12	21.09	21.11	20.58	20.55	20.57
		RB50#50	21.11	21.14	21.19	20.57	20.60	20.65
		RB100#0	21.15	21.12	21.15	20.61	20.58	20.61
	16QAM	RB1#0	21.02	20.82	21.18	20.48	20.28	20.64
		RB1#50	21.42	21.34	21.67	20.88	20.80	21.13
		RB1#99	21.02	20.92	21.30	20.48	20.38	20.76
		RB50#0	20.13	20.13	20.10	19.59	19.59	19.56
		RB50#50	20.13	20.18	20.19	19.59	19.64	19.65
		RB100#0	20.12	20.11	20.15	19.58	19.57	19.61

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)- Cable Loss(dB)
For Band38: Antenna Gain = 0.46dBi
Cable Loss=1.0dB* (provided by the applicant)
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	21.74	21.82	21.83	21.20	21.28	21.29
		RB1#13	21.88	21.95	21.95	21.34	21.41	21.41
		RB1#24	21.79	21.85	21.81	21.25	21.31	21.27
		RB15#0	20.79	20.87	20.95	20.25	20.33	20.41
		RB15#10	20.86	20.91	20.89	20.32	20.37	20.35
		RB25#0	20.81	20.90	20.91	20.27	20.36	20.37
	16QAM	RB1#0	20.95	20.77	20.90	20.41	20.23	20.36
		RB1#13	21.09	20.94	20.98	20.55	20.40	20.44
		RB1#24	21.02	20.84	20.86	20.48	20.30	20.32
		RB15#0	19.87	19.81	19.97	19.33	19.27	19.43
		RB15#10	19.89	19.82	19.94	19.35	19.28	19.40
		RB25#0	19.81	19.94	19.98	19.27	19.40	19.44
10.0	QPSK	RB1#0	21.71	21.88	22.00	21.17	21.34	21.46
		RB1#25	22.07	22.22	22.27	21.53	21.68	21.73
		RB1#49	21.80	21.96	21.95	21.26	21.42	21.41
		RB25#0	20.78	20.93	21.02	20.24	20.39	20.48
		RB25#25	20.83	20.99	20.98	20.29	20.45	20.44
		RB50#0	20.81	20.95	20.98	20.27	20.41	20.44
	16QAM	RB1#0	20.91	20.80	21.06	20.37	20.26	20.52
		RB1#25	21.21	21.07	21.27	20.67	20.53	20.73
		RB1#49	20.99	20.86	20.99	20.45	20.32	20.45
		RB25#0	19.76	19.96	20.04	19.22	19.42	19.50
		RB25#25	19.83	20.02	20.02	19.29	19.48	19.48
		RB50#0	19.81	19.96	19.99	19.27	19.42	19.45

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.65	21.76	21.93	21.11	21.22	21.39
		RB1#38	21.77	21.91	22.00	21.23	21.37	21.46
		RB1#74	21.80	21.86	21.88	21.26	21.32	21.34
		RB36#0	20.77	20.89	21.04	20.23	20.35	20.50
		RB36#39	20.86	20.97	21.06	20.32	20.43	20.52
		RB75#0	20.86	20.94	21.07	20.32	20.40	20.53
	16QAM	RB1#0	20.84	20.69	21.07	20.30	20.15	20.53
		RB1#38	20.97	20.81	21.17	20.43	20.27	20.63
		RB1#74	20.98	20.77	21.03	20.44	20.23	20.49
		RB36#0	19.71	19.83	20.06	19.17	19.29	19.52
		RB36#39	19.83	19.88	20.05	19.29	19.34	19.51
		RB75#0	19.78	19.92	19.99	19.24	19.38	19.45
20.0	QPSK	RB1#0	21.48	21.53	21.81	20.94	20.99	21.27
		RB1#50	22.00	22.08	22.24	21.46	21.54	21.70
		RB1#99	21.66	21.71	21.73	21.12	21.17	21.19
		RB50#0	20.66	20.84	20.81	20.12	20.30	20.27
		RB50#50	20.85	20.89	20.92	20.31	20.35	20.38
		RB100#0	20.78	20.88	20.90	20.24	20.34	20.36
	16QAM	RB1#0	20.51	20.50	21.01	19.97	19.96	20.47
		RB1#50	21.05	21.05	21.46	20.51	20.51	20.92
		RB1#99	20.71	20.66	20.98	20.17	20.12	20.44
		RB50#0	19.67	19.88	19.83	19.13	19.34	19.29
		RB50#50	19.84	19.94	19.94	19.30	19.40	19.40
		RB100#0	19.80	19.87	19.91	19.26	19.33	19.37

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band41: Antenna Gain = 0.46dBi
Cable Loss=1.0dB* (provided by the applicant)
Limit: EIRP≤33dBm

LTE Band 66:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.75	22.67	22.71	22.27	22.19	22.23
		RB1#3	22.91	22.83	22.92	22.43	22.35	22.44
		RB1#5	22.73	22.66	22.68	22.25	22.18	22.20
		RB3#0	22.86	22.76	22.84	22.38	22.28	22.36
		RB3#3	22.84	22.76	22.87	22.36	22.28	22.39
		RB6#0	21.84	21.73	21.84	21.36	21.25	21.36
	16QAM	RB1#0	21.76	21.80	21.77	21.28	21.32	21.29
		RB1#3	21.92	21.97	22.00	21.44	21.49	21.52
		RB1#5	21.79	21.82	21.79	21.31	21.34	21.31
		RB3#0	21.98	21.71	21.93	21.50	21.23	21.45
		RB3#3	21.99	21.79	21.94	21.51	21.31	21.46
		RB6#0	20.86	20.78	20.81	20.38	20.30	20.33
3.0	QPSK	RB1#0	22.82	22.72	22.82	22.34	22.24	22.34
		RB1#8	22.76	22.71	22.76	22.28	22.23	22.28
		RB1#14	22.76	22.69	22.77	22.28	22.21	22.29
		RB6#0	21.78	21.72	21.77	21.30	21.24	21.29
		RB6#9	21.81	21.66	21.74	21.33	21.18	21.26
		RB15#0	21.80	21.72	21.82	21.32	21.24	21.34
	16QAM	RB1#0	22.36	21.85	21.88	21.88	21.37	21.40
		RB1#8	22.30	21.83	21.81	21.82	21.35	21.33
		RB1#14	22.30	21.84	21.78	21.82	21.36	21.30
		RB6#0	20.82	20.74	20.76	20.34	20.26	20.28
		RB6#9	20.83	20.72	20.76	20.35	20.24	20.28
		RB15#0	20.84	20.72	20.86	20.36	20.24	20.38

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.74	22.63	22.71	22.26	22.15	22.23
		RB1#13	22.80	22.75	22.82	22.32	22.27	22.34
		RB1#24	22.70	22.65	22.69	22.22	22.17	22.21
		RB15#0	21.78	21.77	21.85	21.30	21.29	21.37
		RB15#10	21.82	21.71	21.79	21.34	21.23	21.31
		RB25#0	21.78	21.72	21.81	21.30	21.24	21.33
	16QAM	RB1#0	21.64	21.93	21.78	21.16	21.45	21.30
		RB1#13	21.72	22.05	21.92	21.24	21.57	21.44
		RB1#24	21.62	21.93	21.81	21.14	21.45	21.33
		RB15#0	20.81	20.74	20.89	20.33	20.26	20.41
		RB15#10	20.82	20.73	20.84	20.34	20.25	20.36
		RB25#0	20.82	20.74	20.84	20.34	20.26	20.36
10.0	QPSK	RB1#0	22.75	22.71	22.75	22.27	22.23	22.27
		RB1#25	22.93	22.86	22.96	22.45	22.38	22.48
		RB1#49	22.75	22.72	22.78	22.27	22.24	22.30
		RB25#0	21.82	21.85	21.88	21.34	21.37	21.40
		RB25#25	21.87	21.78	21.84	21.39	21.30	21.36
		RB50#0	21.85	21.85	21.84	21.37	21.37	21.36
	16QAM	RB1#0	22.32	21.88	21.81	21.84	21.40	21.33
		RB1#25	22.49	21.99	21.99	22.01	21.51	21.51
		RB1#49	22.31	21.88	21.82	21.83	21.40	21.34
		RB25#0	20.83	20.88	20.98	20.35	20.40	20.50
		RB25#25	20.89	20.82	20.96	20.41	20.34	20.48
		RB50#0	20.84	20.86	20.88	20.36	20.38	20.40

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.69	22.66	22.67	22.21	22.18	22.19
		RB1#38	22.82	22.75	22.82	22.34	22.27	22.34
		RB1#74	22.66	22.65	22.70	22.18	22.17	22.22
		RB36#0	21.81	21.85	21.83	21.33	21.37	21.35
		RB36#39	21.90	21.77	21.83	21.42	21.29	21.35
		RB75#0	21.85	21.85	21.84	21.37	21.37	21.36
	16QAM	RB1#0	22.26	21.81	22.10	21.78	21.33	21.62
		RB1#38	22.38	21.92	22.28	21.90	21.44	21.80
		RB1#74	22.22	21.78	22.09	21.74	21.30	21.61
		RB36#0	20.80	20.84	20.81	20.32	20.36	20.33
		RB36#39	20.86	20.79	20.82	20.38	20.31	20.34
		RB75#0	20.82	20.83	20.81	20.34	20.35	20.33
20.0	QPSK	RB1#0	22.53	22.52	22.47	22.05	22.04	21.99
		RB1#50	22.94	22.88	22.90	22.46	22.40	22.42
		RB1#99	22.50	22.52	22.49	22.02	22.04	22.01
		RB50#0	21.70	21.84	21.84	21.22	21.36	21.36
		RB50#50	21.82	21.68	21.73	21.34	21.20	21.25
		RB100#0	21.77	21.76	21.80	21.29	21.28	21.32
	16QAM	RB1#0	21.83	21.68	22.11	21.35	21.20	21.63
		RB1#50	22.25	22.06	22.54	21.77	21.58	22.06
		RB1#99	21.77	21.74	22.10	21.29	21.26	21.62
		RB50#0	20.69	20.86	20.84	20.21	20.38	20.36
		RB50#50	20.80	20.70	20.73	20.32	20.22	20.25
		RB100#0	20.75	20.80	20.82	20.27	20.32	20.34

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) -Cable Loss(dB)
For Band 66: Antenna Gain = 0.32dBi
Cable Loss=0.8dB* (provided by the applicant)
Limit: EIRP≤30dBm

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 (QPSK)	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 (QPSK)	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)	10.83	4.55	4.74	13	Pass
QPSK (100RB Size)	5.61	5.54	5.61	13	Pass
16QAM (1RB Size)	6.22	5.45	5.80	13	Pass
16QAM (100RB Size)	6.51	6.44	6.38	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.52	4.87	4.62	13	Pass
QPSK (100RB Size)	5.51	5.61	5.67	13	Pass
16QAM (1RB Size)	5.48	6.06	5.45	13	Pass
16QAM (100RB Size)	6.31	6.51	6.60	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.58	4.29	4.10	13	Pass
QPSK (50RB Size)	5.58	5.45	5.51	13	Pass
16QAM (1RB Size)	5.38	5.06	4.84	13	Pass
16QAM (50RB Size)	6.44	6.25	6.47	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.53	4.33	3.59	13	Pass
QPSK (100RB Size)	5.29	5.35	5.42	13	Pass
16QAM (1RB Size)	4.71	5.16	4.46	13	Pass
16QAM (100RB Size)	6.22	6.06	6.15	13	Pass

LTE Band 17 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.51	5.90	5.74	13	Pass
QPSK (50RB Size)	5.87	5.77	5.71	13	Pass
16QAM (1RB Size)	7.02	6.99	6.51	13	Pass
16QAM (50RB Size)	6.76	6.70	6.70	13	Pass

LTE Band 38 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.33	7.66	7.56	13	Pass
QPSK (100RB Size)	5.71	7.18	7.69	13	Pass
16QAM (1RB Size)	8.95	7.98	8.28	13	Pass
16QAM (100RB Size)	7.98	9.01	8.37	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.03	10.83	7.24	13	Pass
QPSK (100RB Size)	8.08	7.18	7.28	13	Pass
16QAM (1RB Size)	7.60	8.43	7.72	13	Pass
16QAM (100RB Size)	6.63	10.90	8.21	13	Pass

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LTE Band 66 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.39	4.55	5.29	13	Pass
QPSK (100RB Size)	5.54	5.64	5.71	13	Pass
16QAM (1RB Size)	5.29	5.77	6.09	13	Pass
16QAM (100RB Size)	6.38	6.51	6.54	13	Pass

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

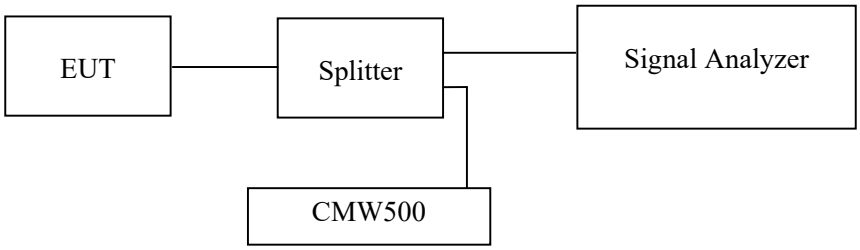
Applicable Standard

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

The testing was performed by Black Duan from 2022-02-10 to 2022-03-29.

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	315.71
	190	836.6	246.00	312.10
	251	848.8	250.00	323.71
EGPRS(8PSK)	128	824.2	250.00	317.31
	190	836.6	242.00	315.32
	251	848.8	250.00	316.91

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.16	4.73
	836.6	4.18	4.72
	846.6	4.18	4.71
HSDPA	826.4	4.22	5.06
	836.6	4.20	4.71
	846.6	4.20	4.87
HSUPA	826.4	4.20	4.72
	836.6	4.18	4.72
	846.6	4.18	4.71

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM (GMSK)	512	1850.2	244.00	315.71
	661	1880.0	246.00	316.64
	810	1909.8	246.00	317.79
EGPRS(8PSK)	512	1850.2	252.00	319.65
	661	1880.0	248.00	312.45
	810	1909.8	254.00	318.45

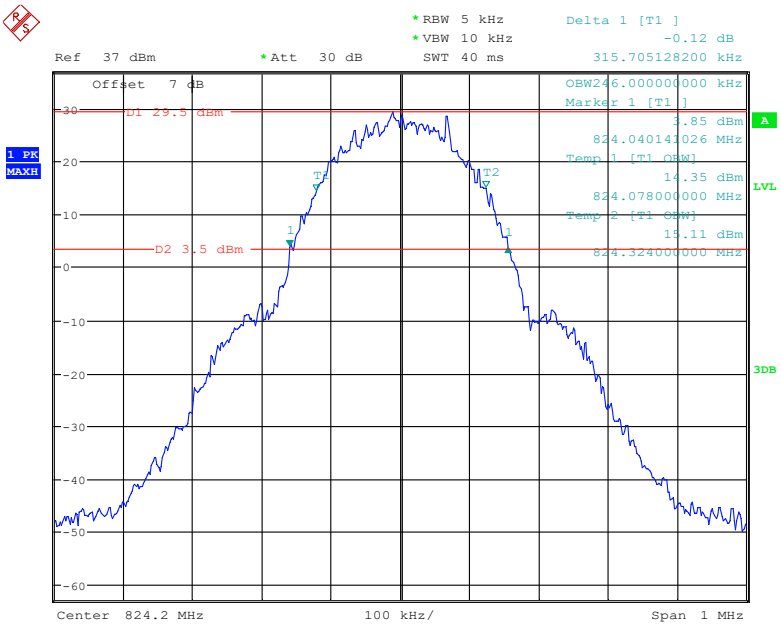
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.18	4.73
	1880.0	4.16	4.72
	1907.6	4.20	4.80
HSDPA	1852.4	4.20	4.75
	1880.0	4.18	4.73
	1907.6	4.20	4.81
HSUPA	1852.4	4.20	4.72
	1880.0	4.20	4.71
	1907.6	4.20	4.71

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.18	4.88
	1732.6	4.16	4.71
	1752.6	4.18	4.75
HSDPA	1712.4	4.15	4.67
	1732.6	4.18	4.73
	1752.6	4.24	5.98
HSUPA	1712.4	4.20	5.01
	1732.6	4.20	4.71
	1752.6	4.22	5.23

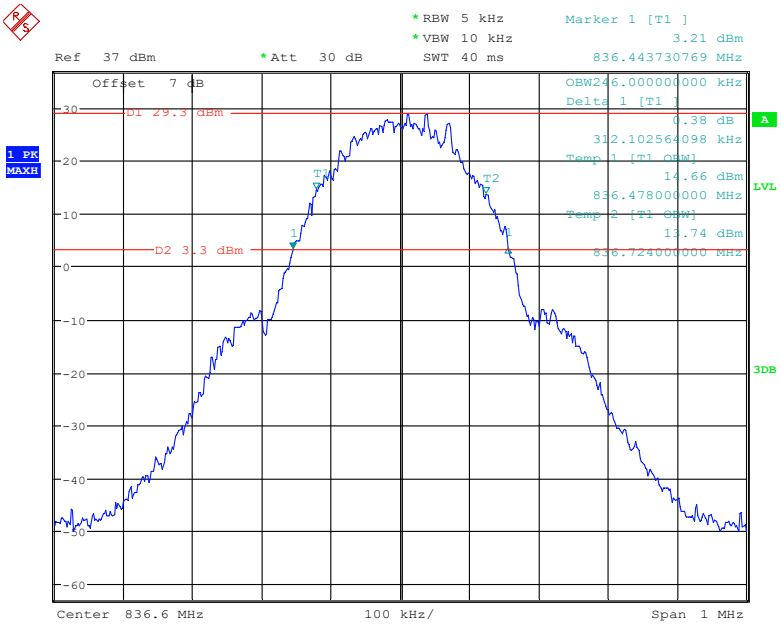
Cellular Band (Part 22H)

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



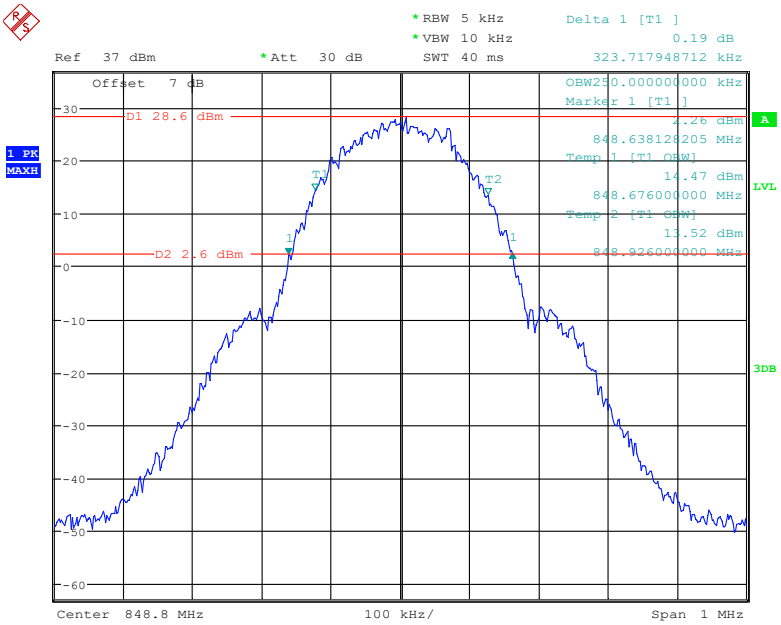
Date: 11.FEB.2022 14:39:54

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



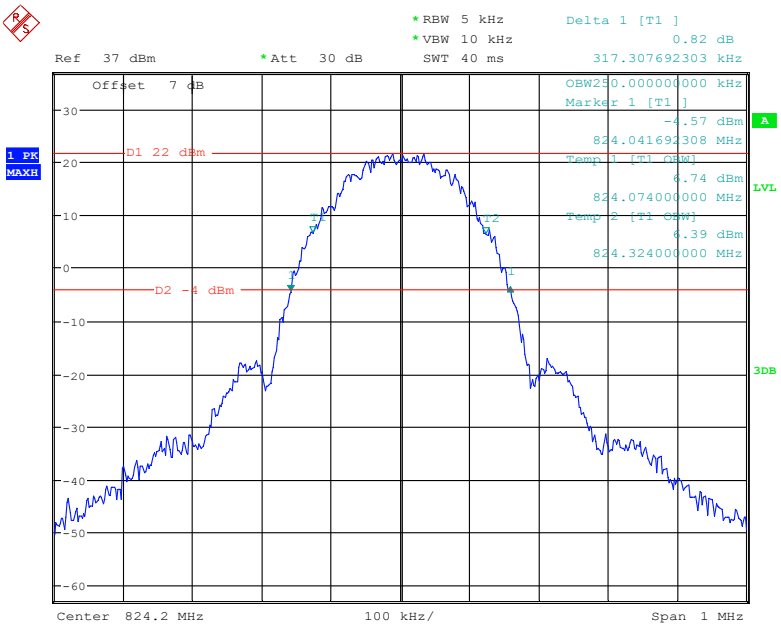
Date: 11.FEB.2022 14:40:59

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



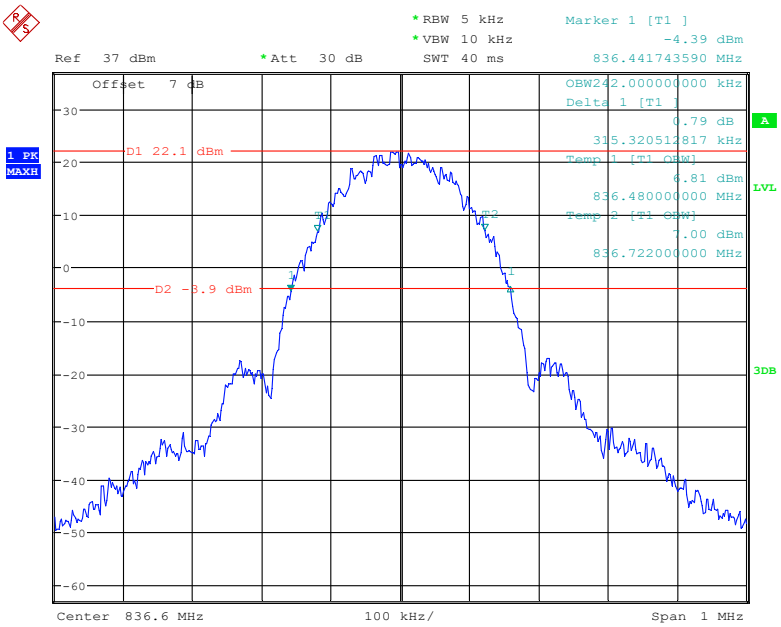
Date: 11.FEB.2022 14:41:50

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



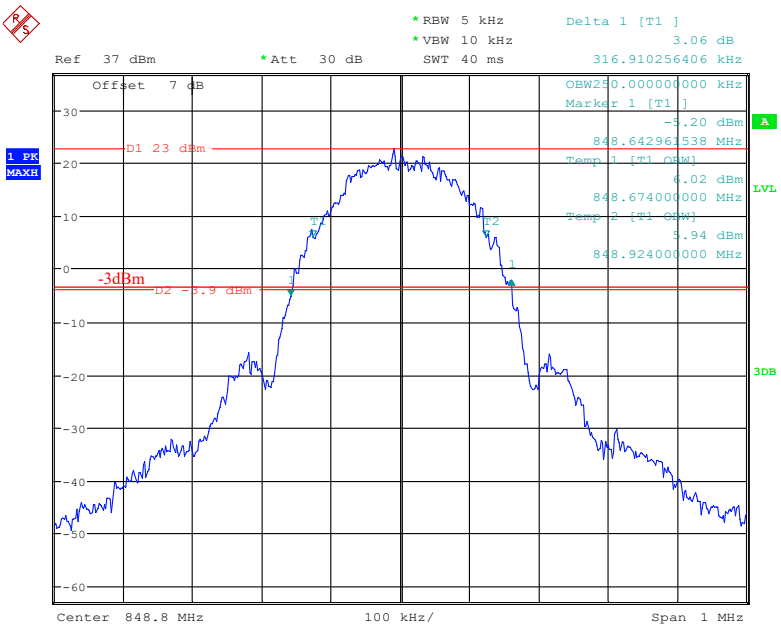
Date: 11.FEB.2022 14:44:24

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



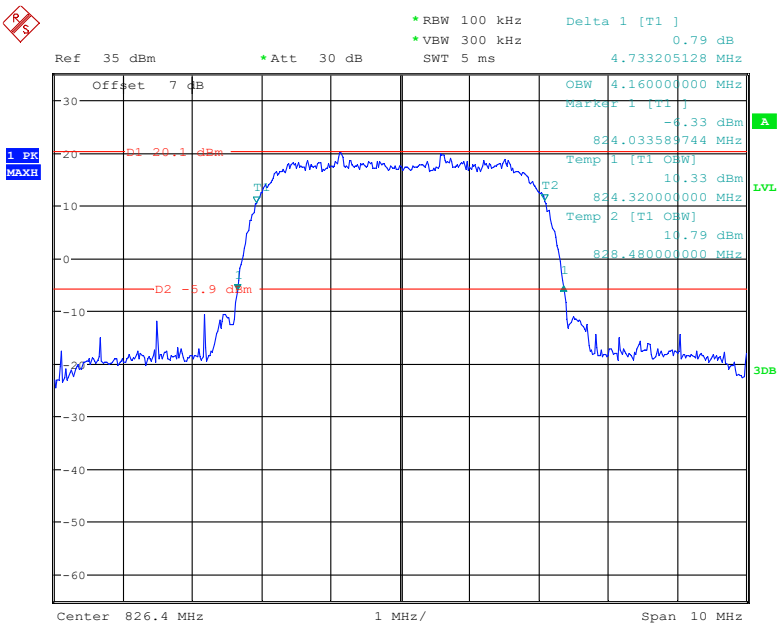
Date: 11.FEB.2022 14:45:42

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



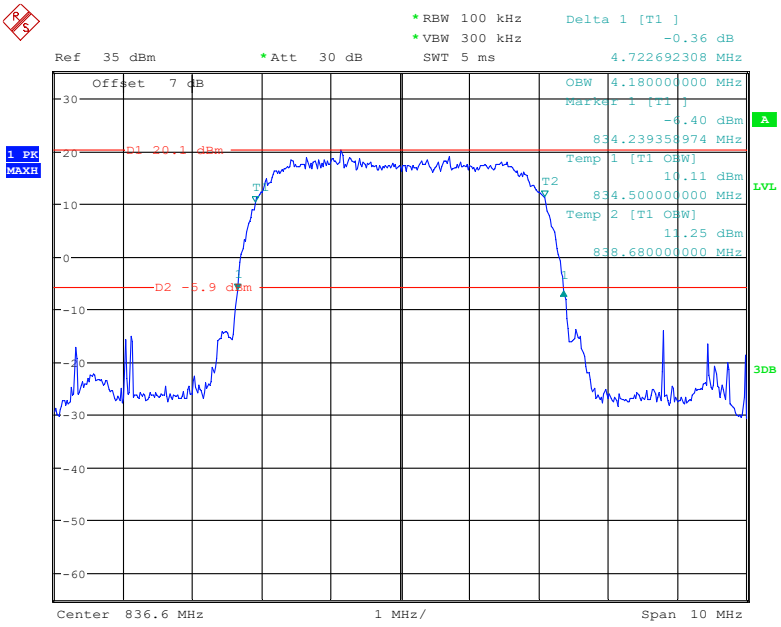
Date: 11.FEB.2022 14:46:43

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



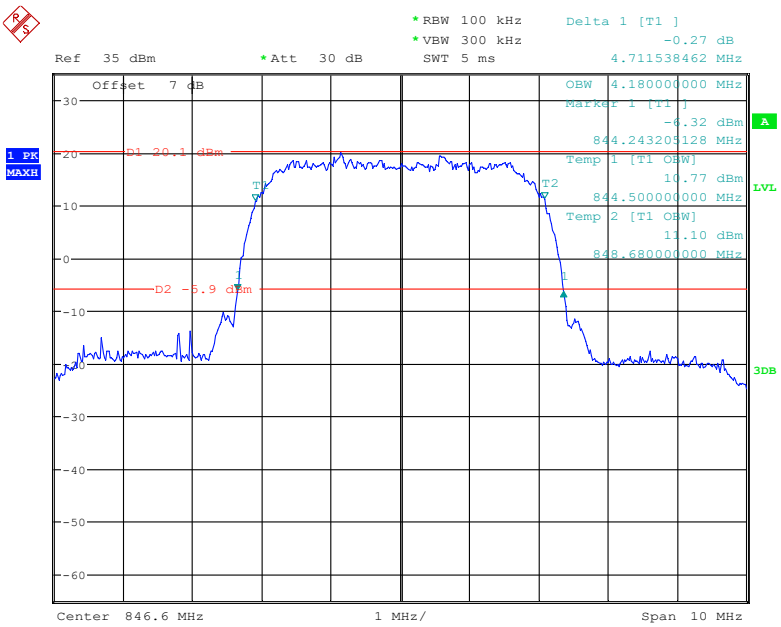
Date: 11.FEB.2022 13:25:19

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



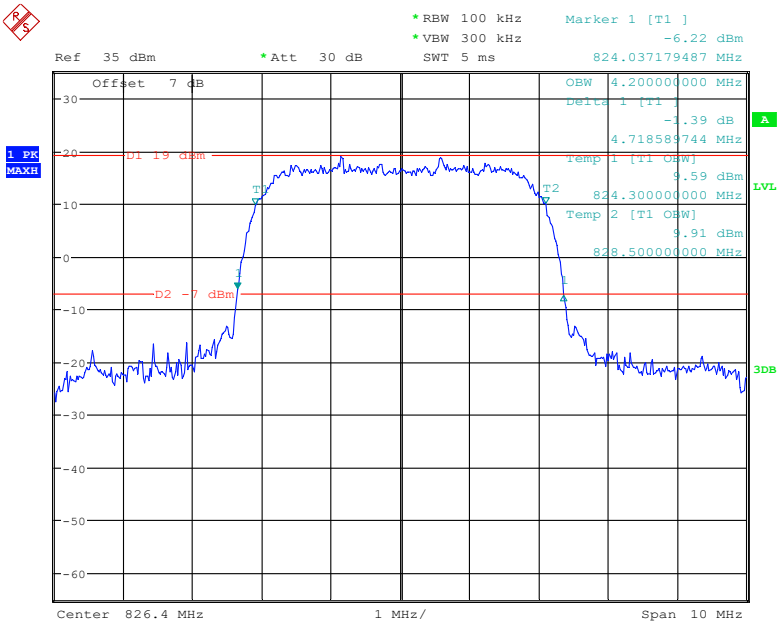
Date: 11.FEB.2022 13:26:31

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



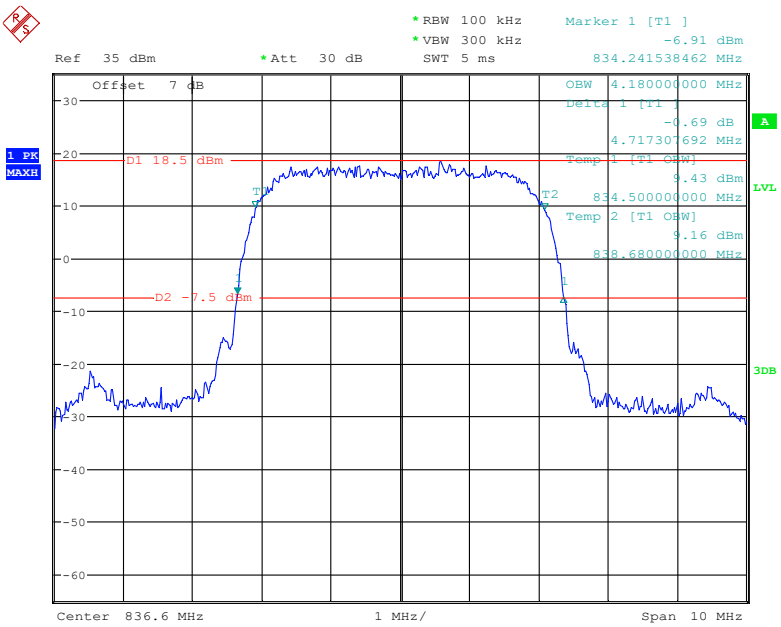
Date: 11.FEB.2022 13:27:47

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



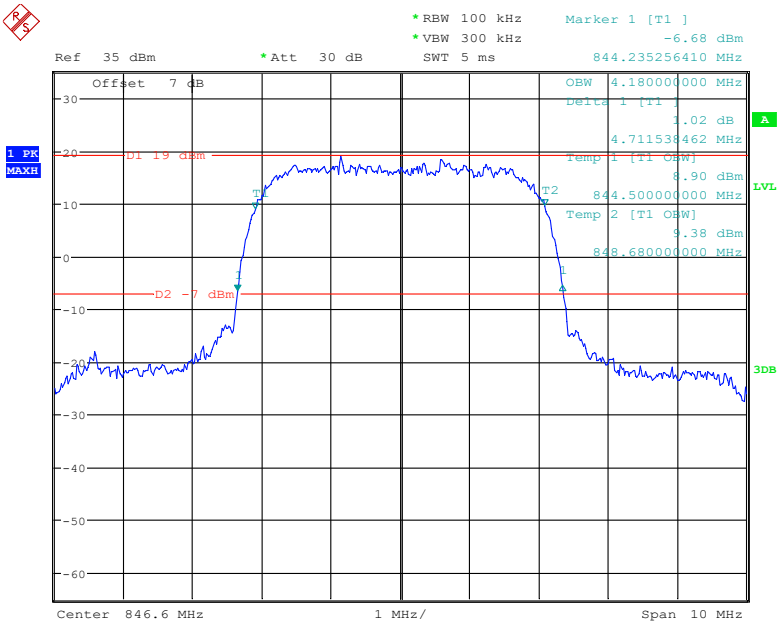
Date: 11.FEB.2022 14:03:47

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



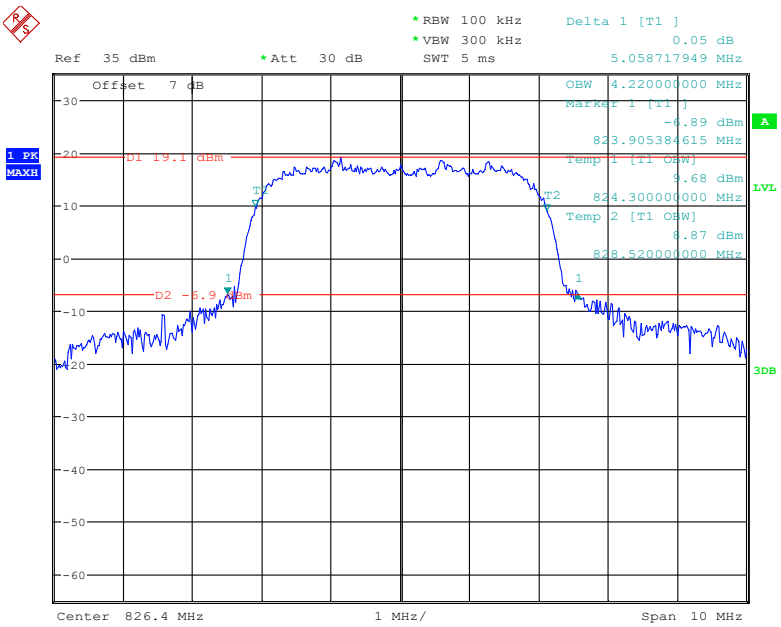
Date: 11.FEB.2022 14:04:59

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



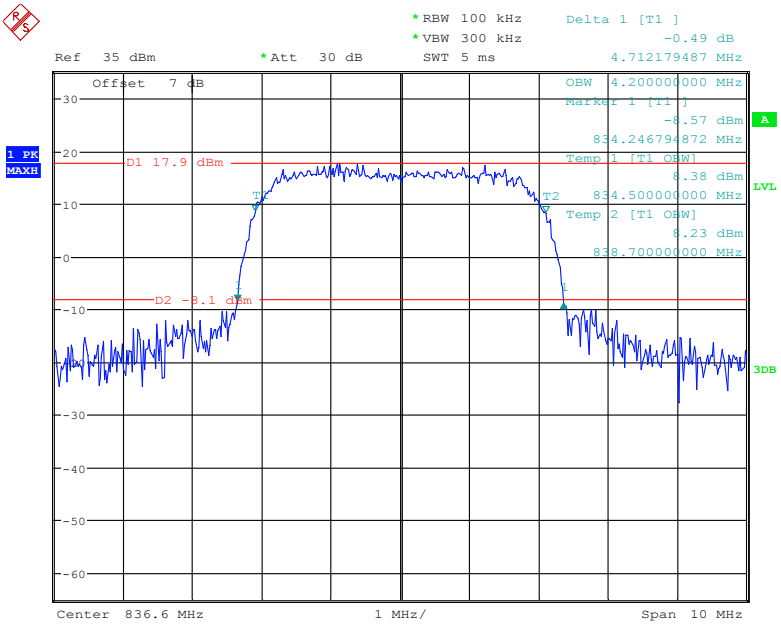
Date: 11.FEB.2022 14:05:59

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



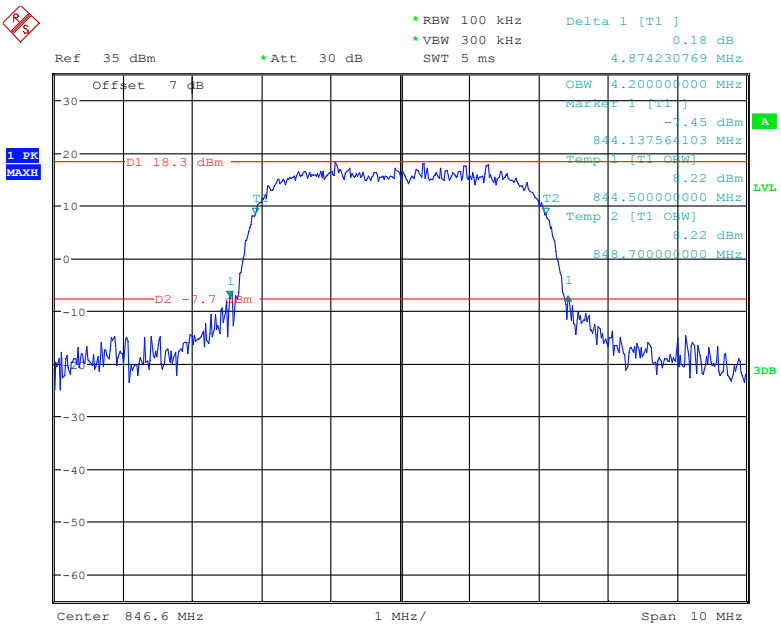
Date: 11.FEB.2022 13:51:28

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



Date: 11.FEB.2022 13:53:10

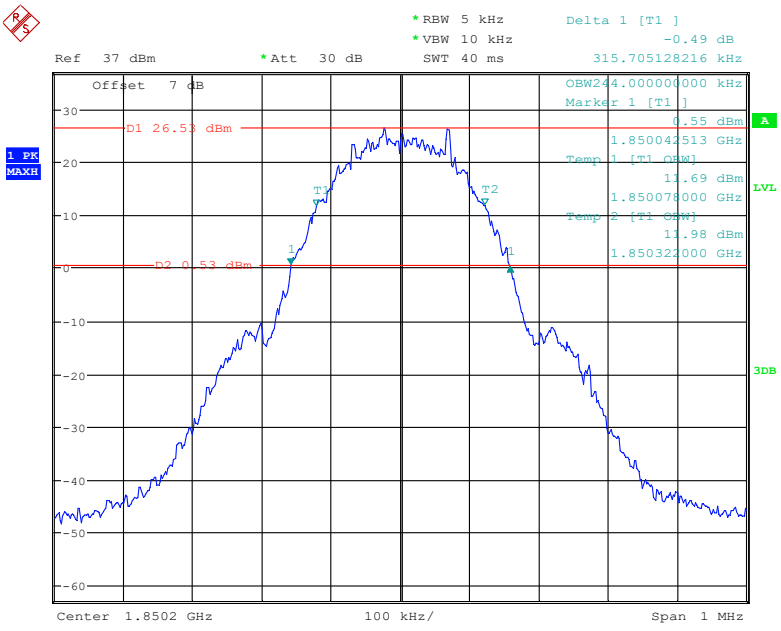
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 11.FEB.2022 13:54:02

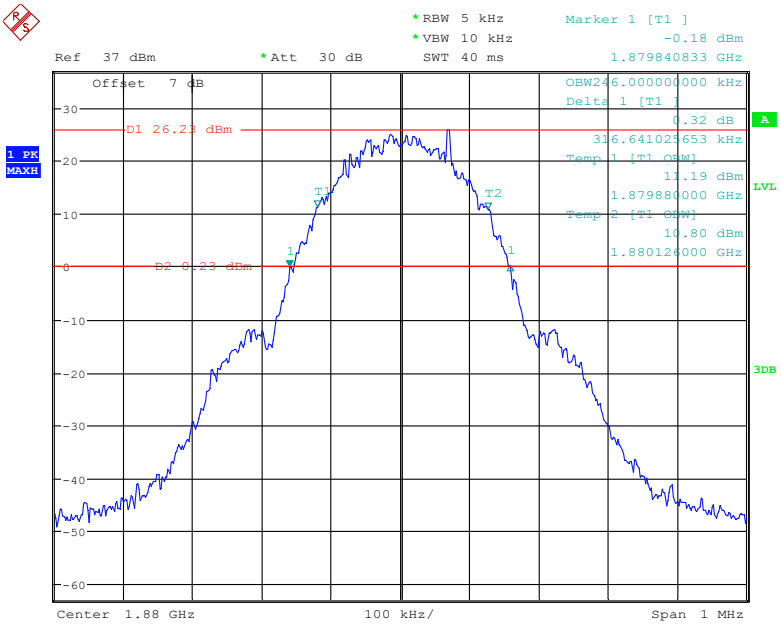
PCS Band (Part 24E)

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



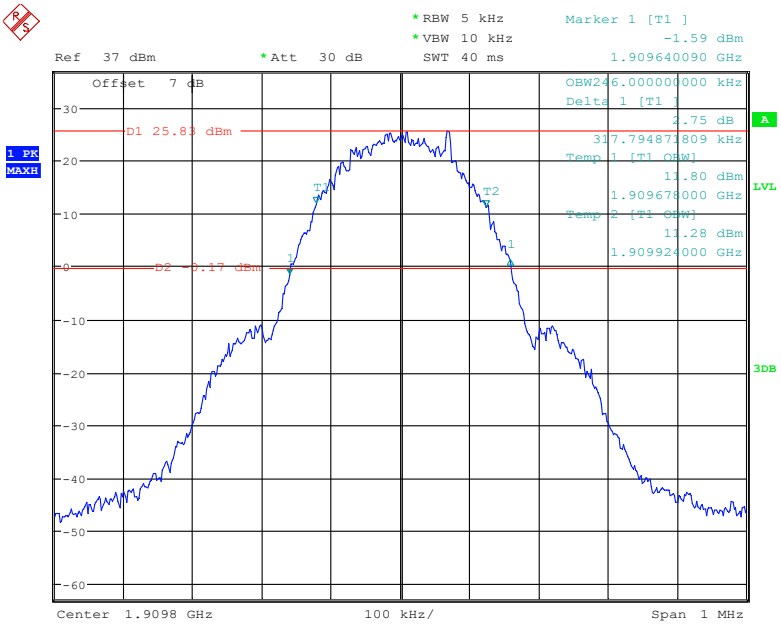
Date: 11.FEB.2022 14:58:59

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



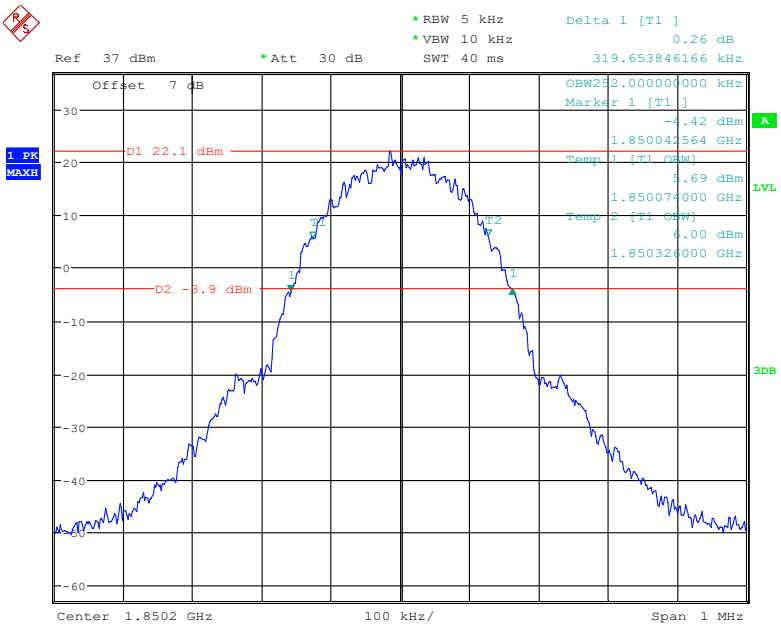
Date: 11.FEB.2022 14:59:53

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



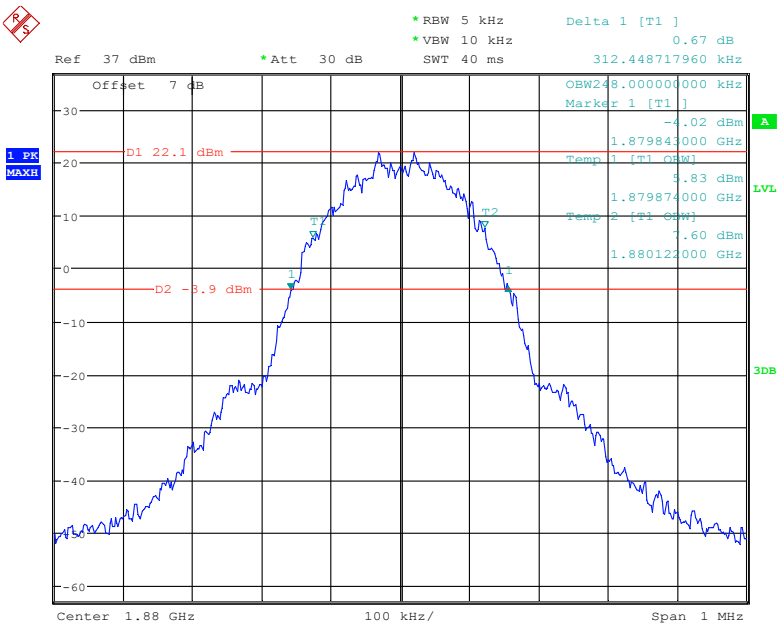
Date: 11.FEB.2022 15:01:41

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



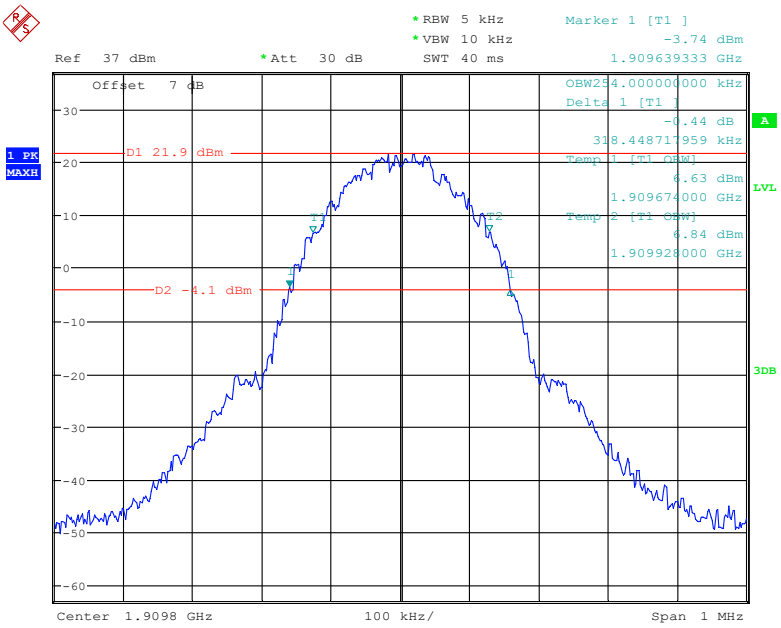
Date: 11.FEB.2022 14:53:45

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



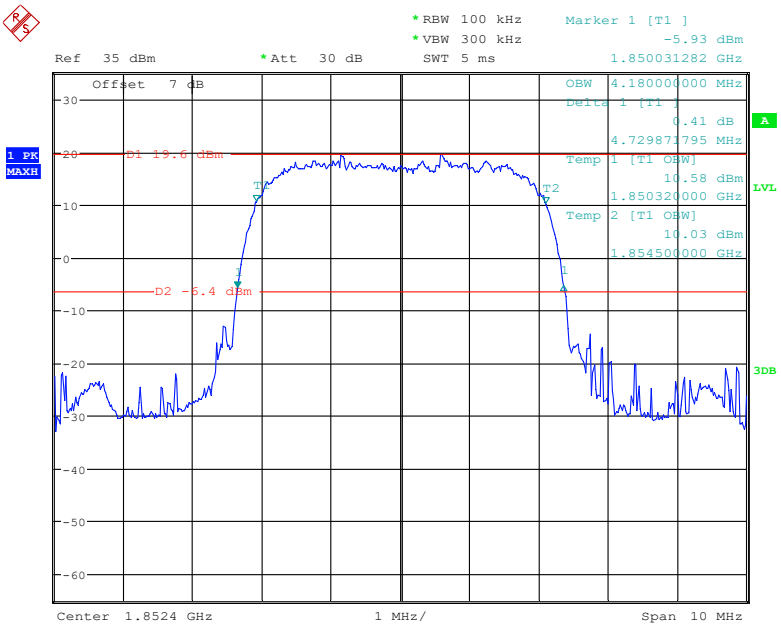
Date: 11.FEB.2022 14:54:34

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



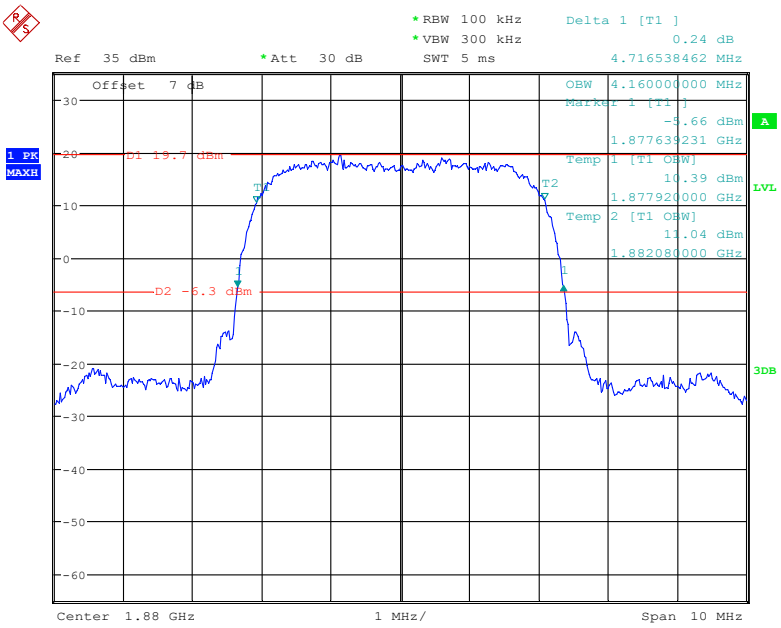
Date: 11.FEB.2022 14:55:40

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



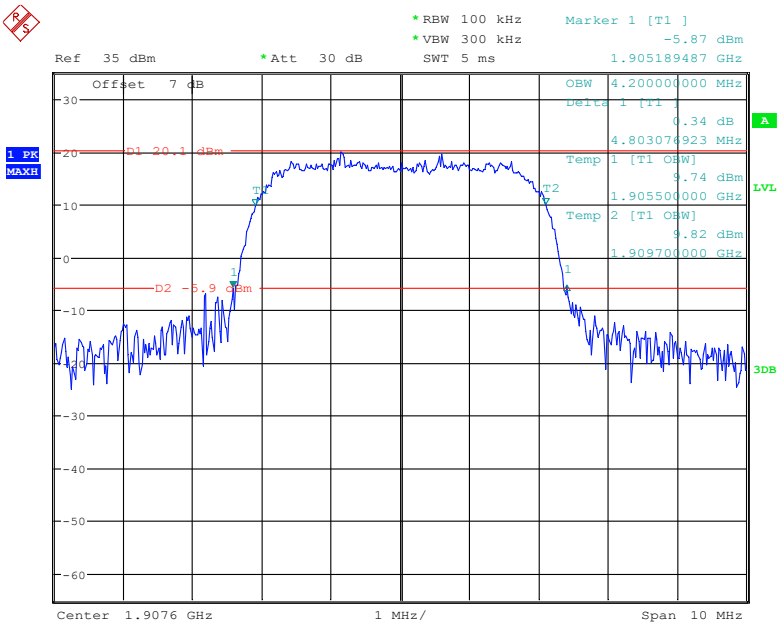
Date: 11.FEB.2022 13:17:39

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



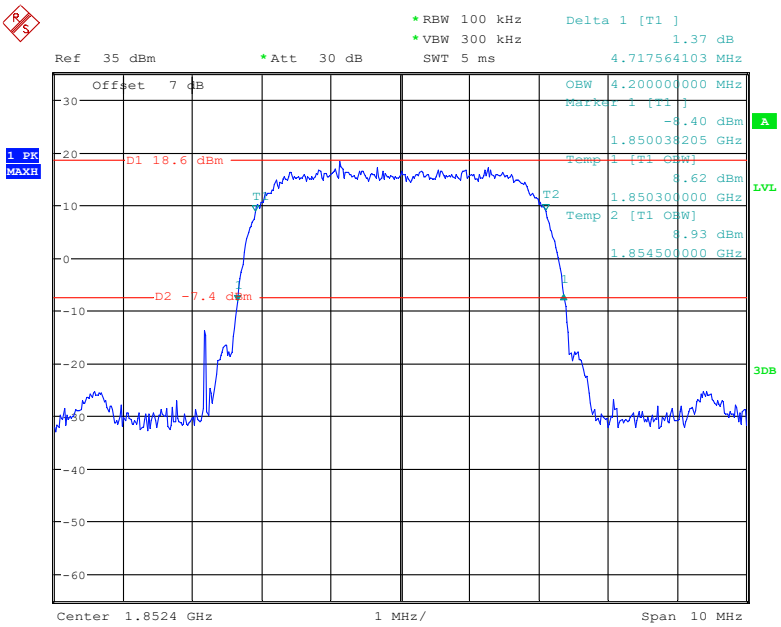
Date: 11.FEB.2022 13:19:22

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



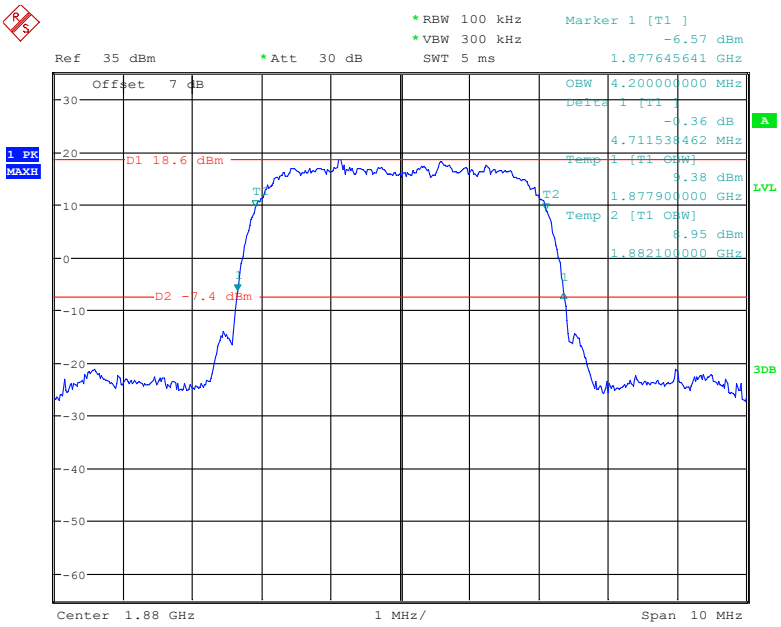
Date: 11.FEB.2022 13:21:19

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



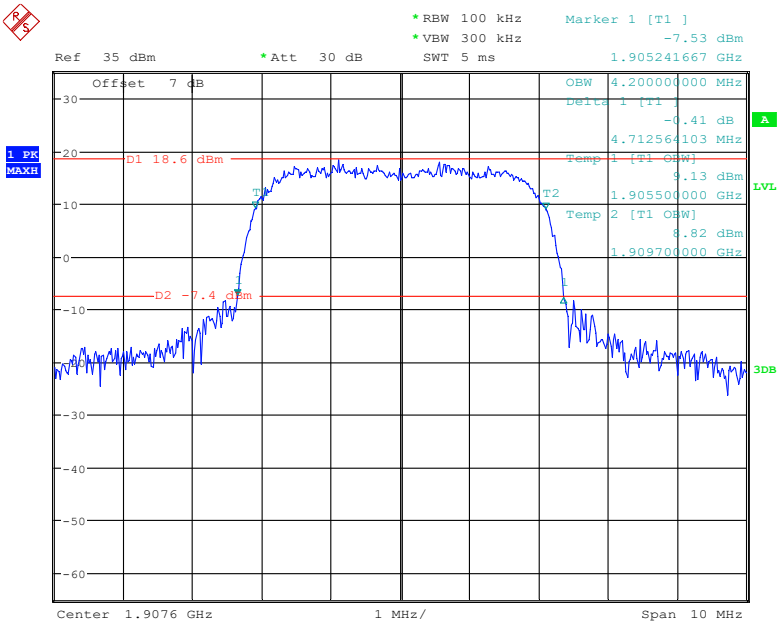
Date: 11.FEB.2022 13:58:33

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



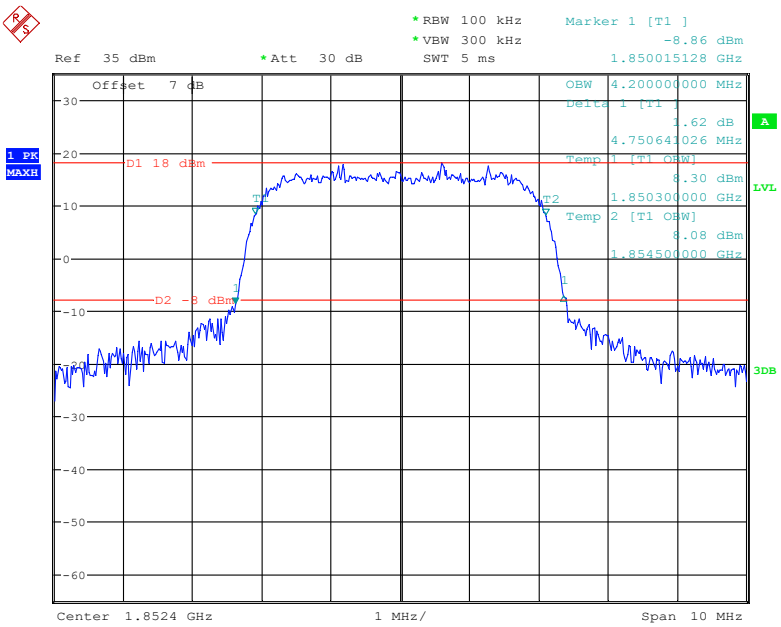
Date: 11.FEB.2022 13:57:38

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



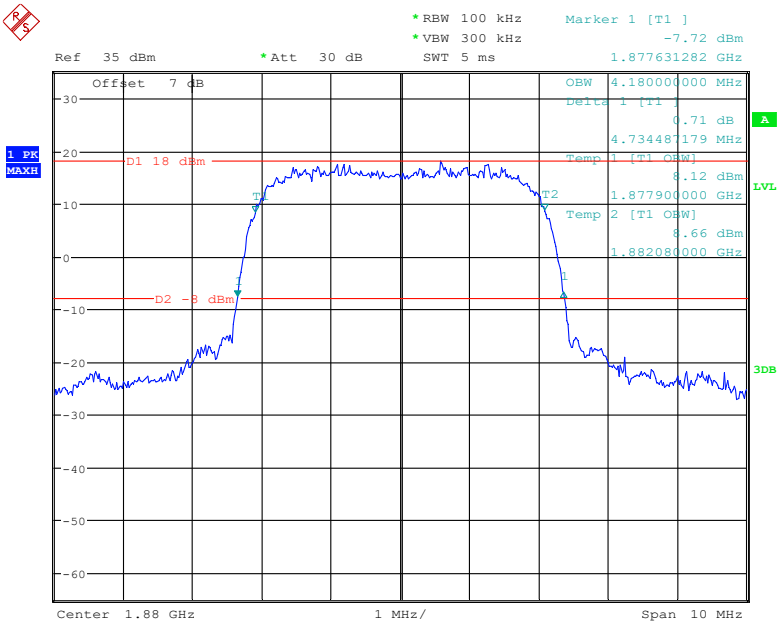
Date: 11.FEB.2022 13:59:20

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



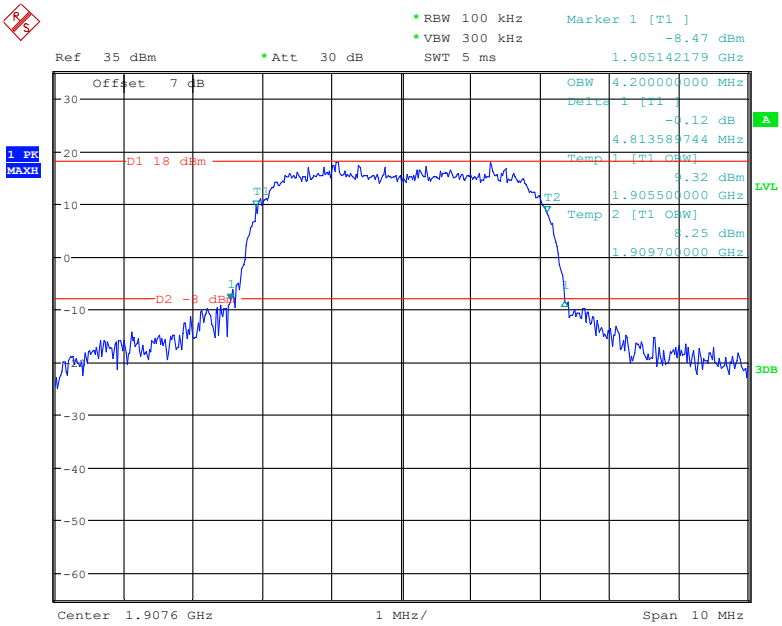
Date: 11.FEB.2022 13:38:45

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



Date: 11.FEB.2022 13:40:15

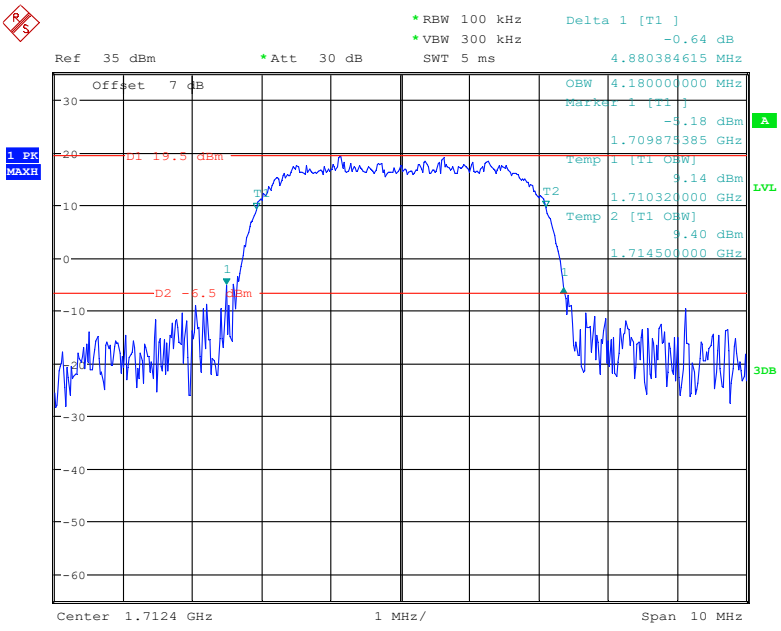
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 11.FEB.2022 13:41:32

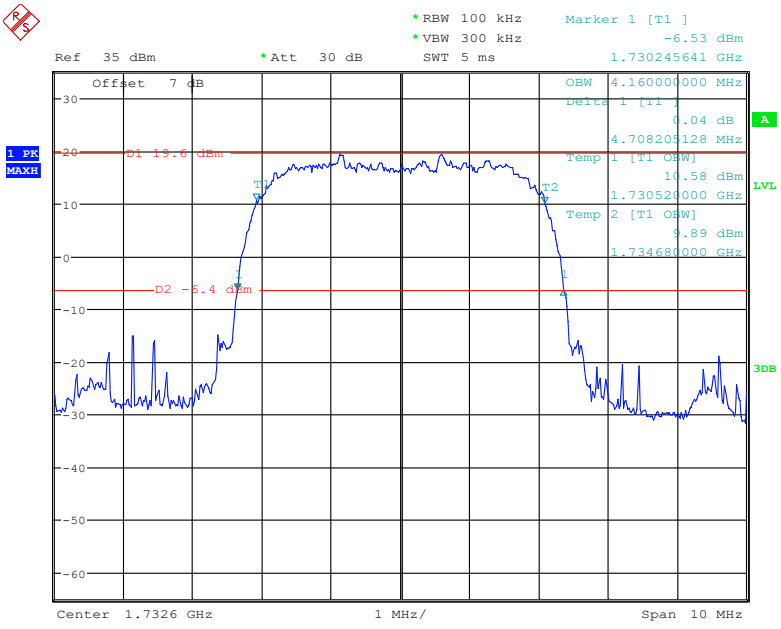
AWS Band (Part 27)

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



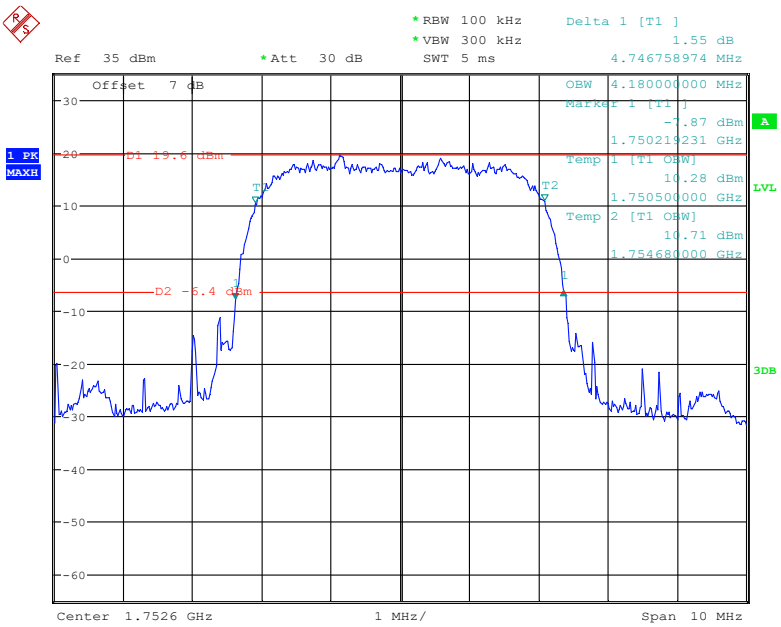
Date: 11.FEB.2022 13:22:14

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



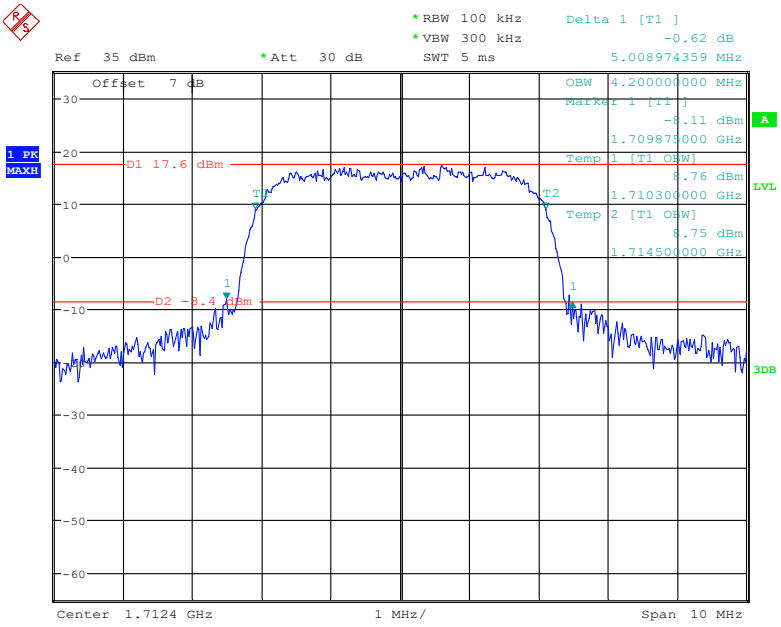
Date: 11.FEB.2022 13:23:24

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



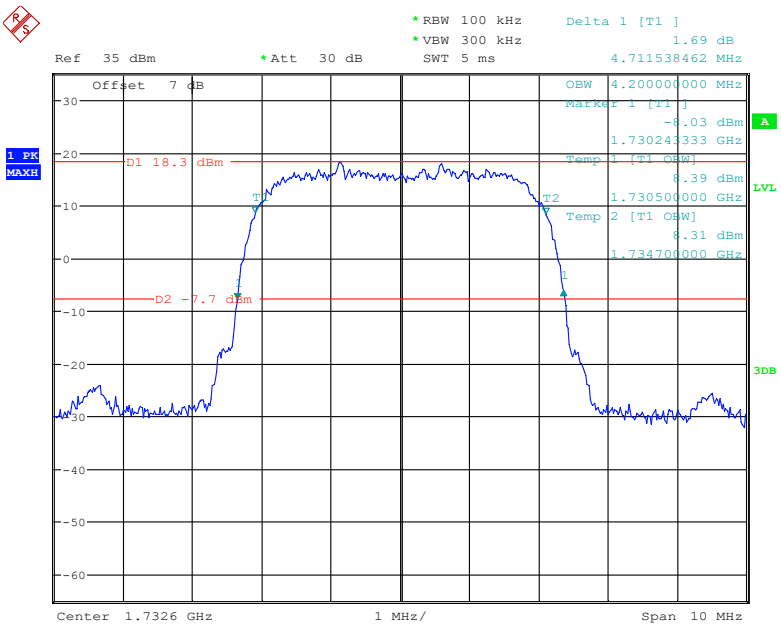
Date: 11.FEB.2022 13:24:25

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



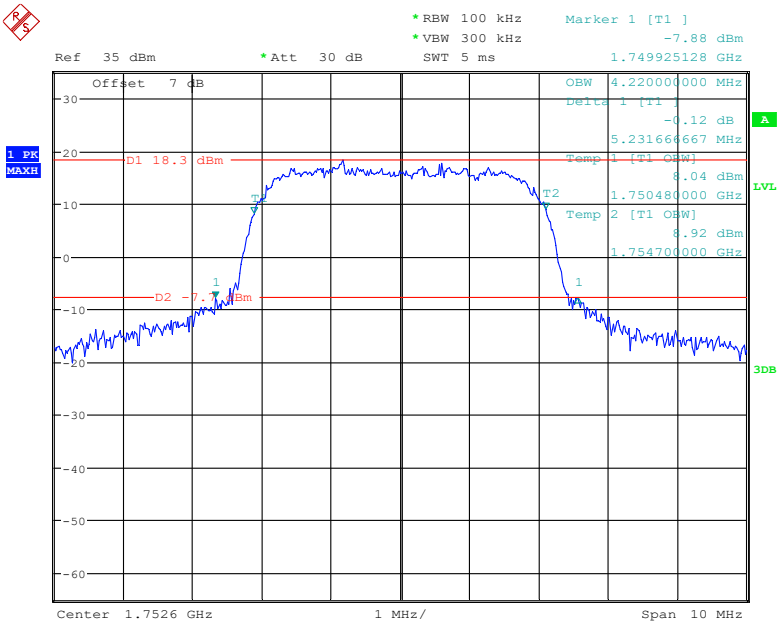
Date: 11.FEB.2022 14:00:18

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



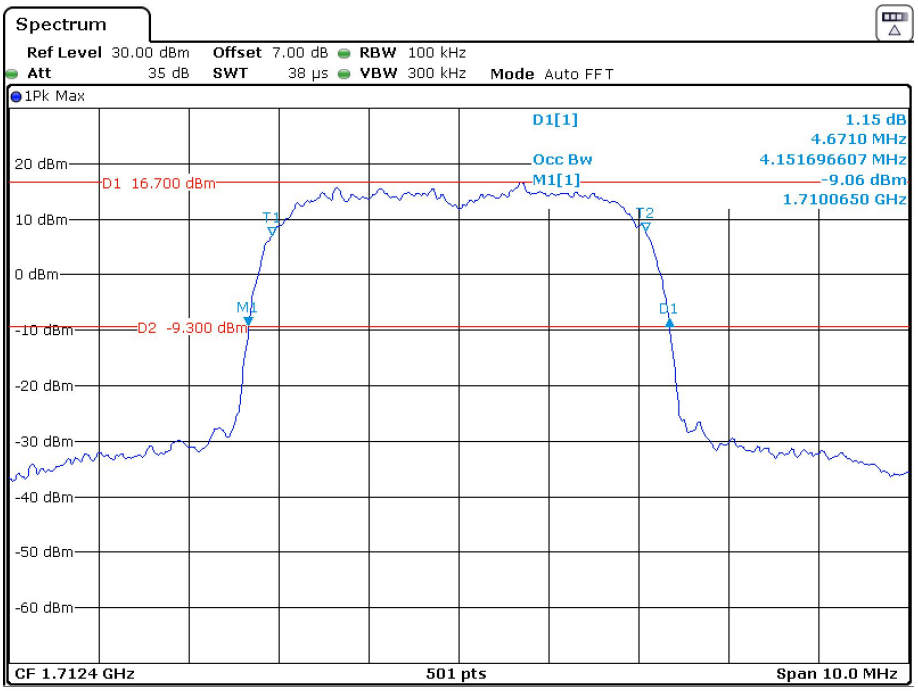
Date: 11.FEB.2022 14:01:21

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



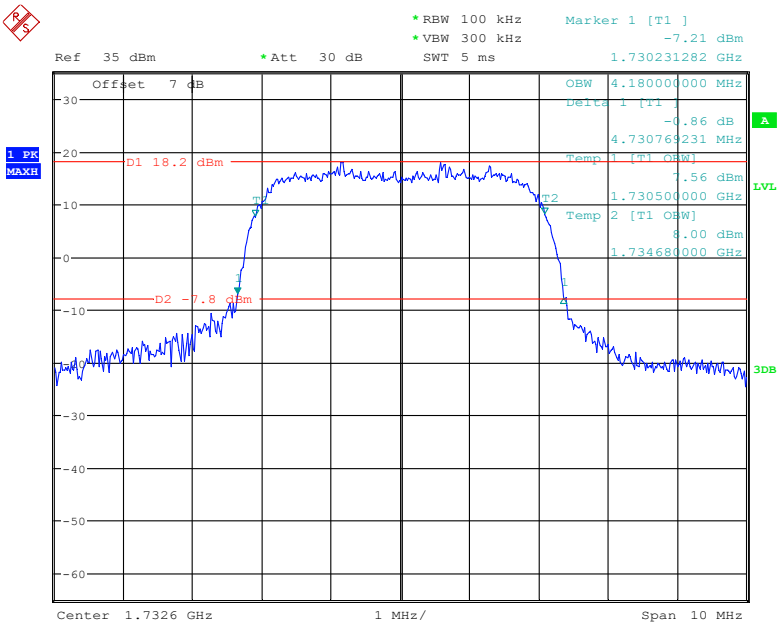
Date: 11.FEB.2022 14:02:48

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



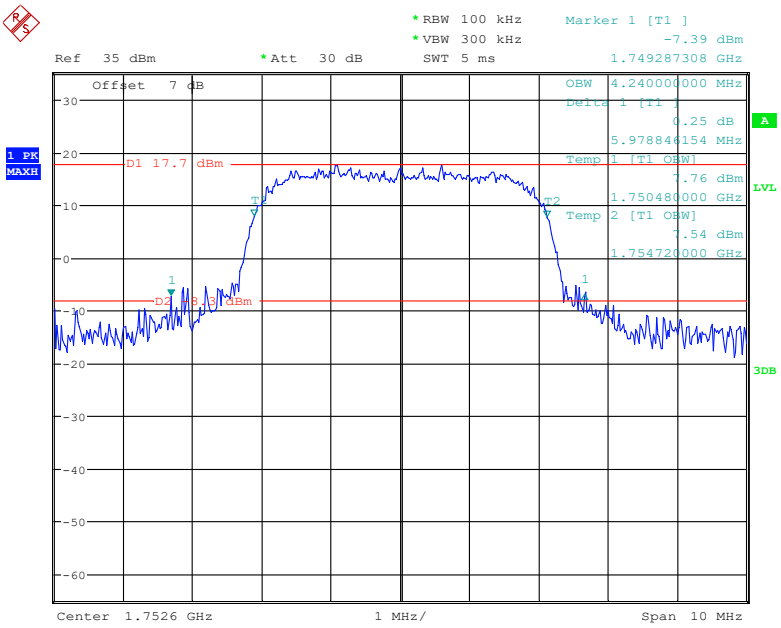
Date: 29.MAR.2022 17:19:56

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



Date: 11.FEB.2022 13:44:46

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



Date: 11.FEB.2022 13:46:56

LTE Band 2:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.104	1.326	1.098	1.308	1.104	1.308
	16QAM	1.098	1.296	1.104	1.320	1.098	1.290
3 MHz	QPSK	2.688	2.868	2.688	2.880	2.688	2.892
	16QAM	2.688	2.892	2.688	2.880	2.688	2.880
5 MHz	QPSK	4.500	4.960	4.520	4.980	4.520	4.900
	16QAM	4.500	4.920	4.520	4.940	4.500	4.960
10 MHz	QPSK	8.960	9.640	8.960	9.560	8.960	9.600
	16QAM	9.000	9.640	8.960	9.600	8.960	9.640
15 MHz	QPSK	13.560	14.880	13.500	14.700	13.500	14.760
	16QAM	13.560	14.760	13.500	14.760	13.500	14.880
20 MHz	QPSK	18.000	19.360	18.000	19.280	18.000	19.520
	16QAM	18.080	19.440	18.000	20.000	18.000	19.280

LTE Band 4:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.098	1.314	1.104	1.320	1.110	1.296
	16QAM	1.104	1.308	1.098	1.296	1.104	1.296
3 MHz	QPSK	2.688	2.880	2.700	2.880	2.688	2.892
	16QAM	2.688	2.868	2.688	2.880	2.676	2.880
5 MHz	QPSK	4.520	4.920	4.520	4.920	4.500	4.940
	16QAM	4.500	4.940	4.540	4.960	4.520	4.980
10 MHz	QPSK	9.000	9.640	8.960	9.600	8.960	9.640
	16QAM	9.000	9.560	8.960	9.600	8.960	9.600
15 MHz	QPSK	13.560	14.940	13.500	14.700	13.500	14.820
	16QAM	13.500	14.820	13.560	14.760	13.500	14.820
20 MHz	QPSK	18.000	19.280	17.920	19.440	18.000	19.520
	16QAM	18.080	19.360	17.920	19.440	18.000	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	1.308	1.104	1.302	1.110	1.296
	16QAM	1.110	1.302	1.098	1.284	1.098	1.302
3 MHz	QPSK	2.688	2.880	2.688	2.880	2.688	2.892
	16QAM	2.688	2.892	2.688	2.868	2.688	2.892
5 MHz	QPSK	4.520	5.000	4.520	4.940	4.500	4.920
	16QAM	4.500	4.900	4.520	4.960	4.520	5.020
10 MHz	QPSK	8.960	9.600	8.960	9.640	8.960	9.600
	16QAM	8.960	9.560	8.960	9.520	8.960	9.520

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	4.540	4.940	4.520	4.960	4.520	4.940
	16QAM	4.500	4.940	4.520	4.960	4.540	5.000
10 MHz	QPSK	8.960	9.760	9.000	9.600	8.960	9.640
	16QAM	8.960	9.560	8.960	9.560	8.960	9.680
15 MHz	QPSK	13.560	14.880	13.500	14.820	13.620	14.940
	16QAM	13.560	14.760	13.560	14.820	13.620	14.940
20 MHz	QPSK	17.920	19.280	17.920	19.280	18.080	19.520
	16QAM	18.080	19.360	17.920	19.360	18.000	19.440

LTE Band 17

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.540	5.180	4.520	5.220	4.520	5.140
	16QAM	4.540	5.180	4.540	5.180	4.560	5.200
10 MHz	QPSK	8.960	9.960	8.960	9.800	8.960	9.880
	16QAM	8.960	9.880	8.960	9.880	8.960	9.840

LTE Band 38

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.520	5.140	4.520	4.940	4.520	4.900
	16QAM	4.520	4.920	4.520	5.060	4.520	4.960
10 MHz	QPSK	8.960	9.600	8.960	9.600	8.960	9.520
	16QAM	8.960	9.520	8.960	9.520	8.960	9.640
15 MHz	QPSK	13.500	15.673	13.500	15.300	13.500	16.020
	16QAM	13.560	16.380	13.560	15.420	13.620	16.750
20 MHz	QPSK	18.080	19.840	17.920	19.200	18.000	19.360
	16QAM	17.920	19.520	18.000	19.920	18.000	19.440

LTE Band 41

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.520	4.900	4.520	5.260	4.520	4.960
	16QAM	4.520	5.200	4.520	5.100	4.520	4.980
10 MHz	QPSK	8.960	9.680	8.960	9.680	8.960	9.680
	16QAM	9.000	9.560	8.960	9.520	8.960	9.583
15 MHz	QPSK	13.560	15.360	13.500	16.317	13.500	15.180
	16QAM	13.560	16.740	13.560	16.260	13.560	15.469
20 MHz	QPSK	18.000	19.760	18.000	19.600	18.000	19.680
	16QAM	18.000	19.360	18.000	21.840	18.000	19.360

LTE Band 66

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.098	1.314	1.104	1.314	1.110	1.290
	16QAM	1.110	1.320	1.098	1.284	1.104	1.296
3 MHz	QPSK	2.688	2.868	2.688	2.868	2.688	2.892
	16QAM	2.688	2.892	2.688	2.892	2.676	2.868
5 MHz	QPSK	4.540	5.220	4.520	5.240	4.520	5.120
	16QAM	4.540	5.180	4.560	5.200	4.540	5.200
10 MHz	QPSK	8.960	10.000	8.960	9.960	8.960	9.840
	16QAM	8.960	9.720	8.960	9.880	8.960	9.880
15 MHz	QPSK	13.560	15.300	13.500	15.120	13.620	15.300
	16QAM	13.560	15.180	13.620	15.120	13.560	15.240
20 MHz	QPSK	18.000	19.520	18.000	19.680	18.000	19.760
	16QAM	18.080	19.840	18.000	19.760	18.000	19.760

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

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

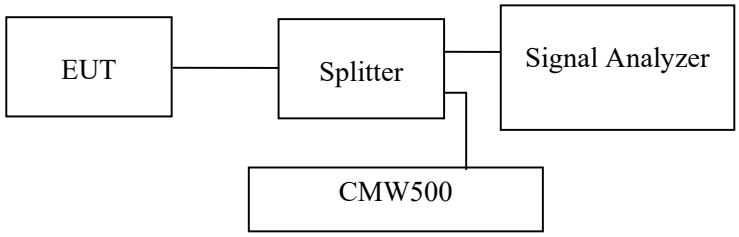
Applicable Standard

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

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

Test Procedure

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



Test Data

Environmental Conditions

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

The testing was performed by Black Duan from 2022-02-10 to 2022-02-11.

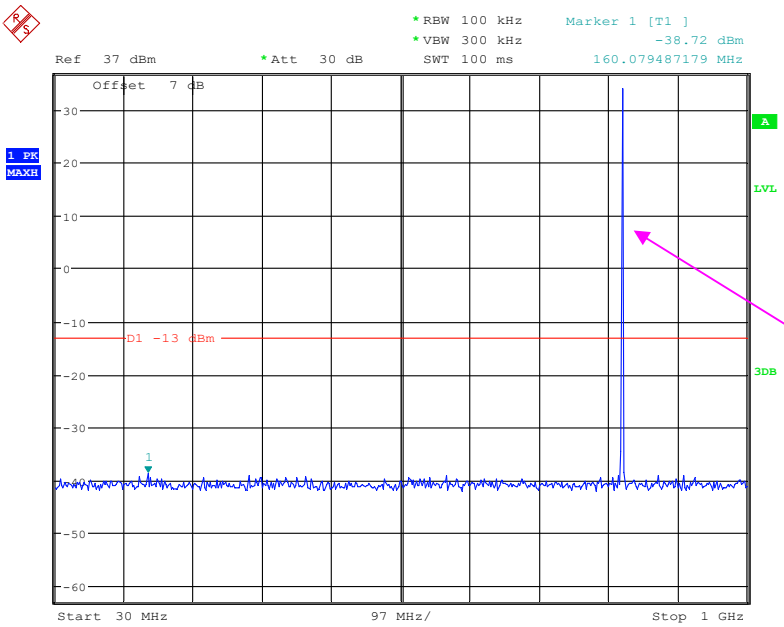
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

Cellular Band (Part 22H)
Low Channel:

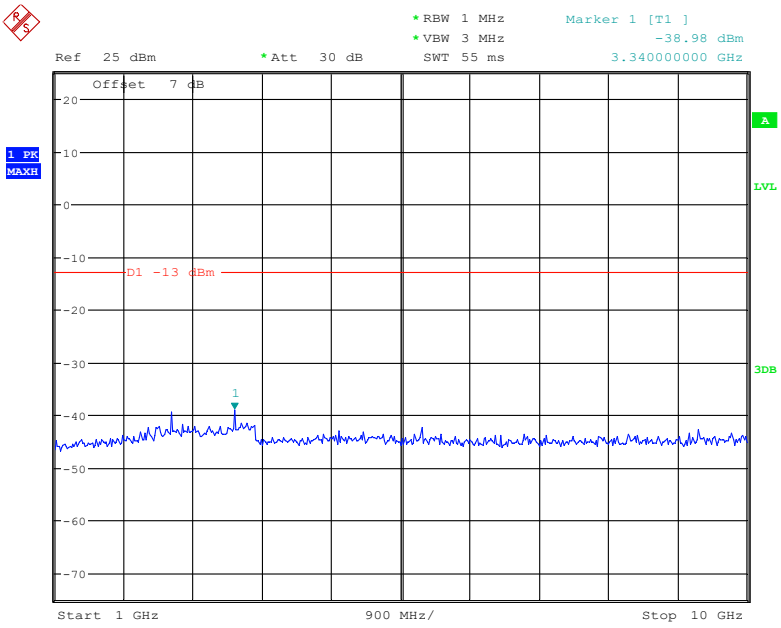
30 MHz – 1 GHz (GSM Mode)



Fundamental test

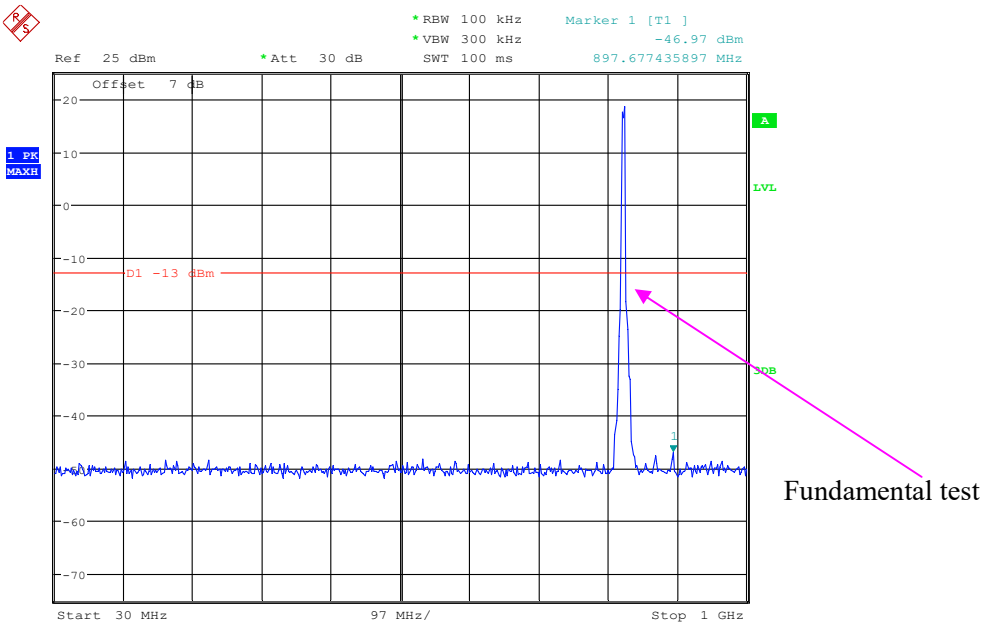
Date: 11.FEB.2022 15:17:20

1 GHz – 10 GHz (GSM Mode)



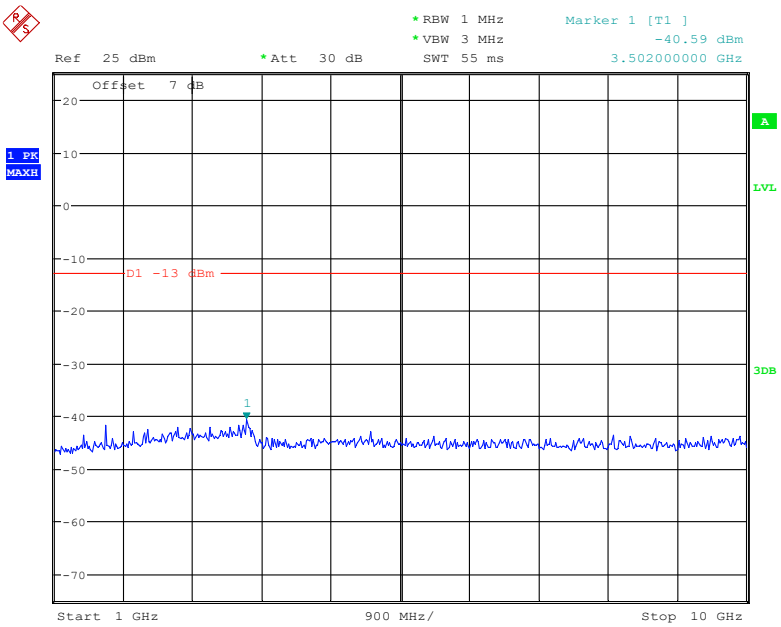
Date: 11.FEB.2022 15:15:53

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:15:47

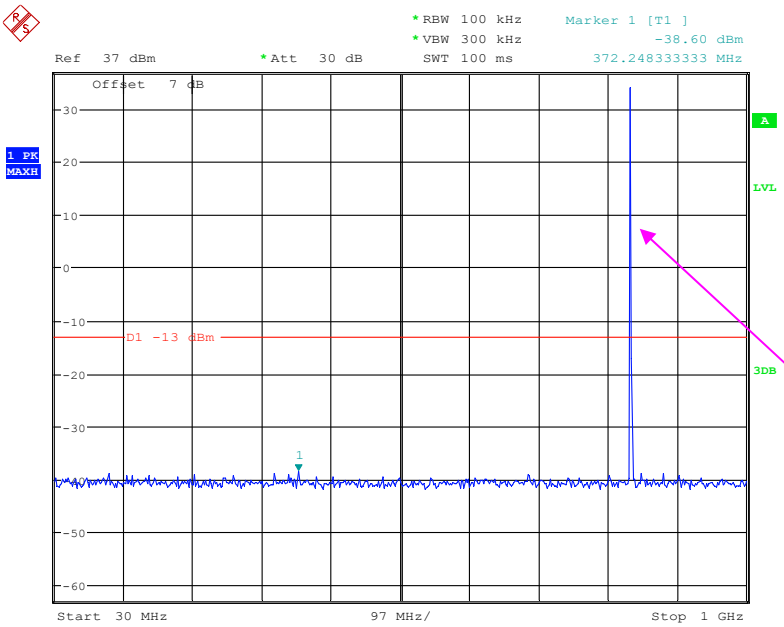
1 GHz – 10 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:18:01

Middle Channel:

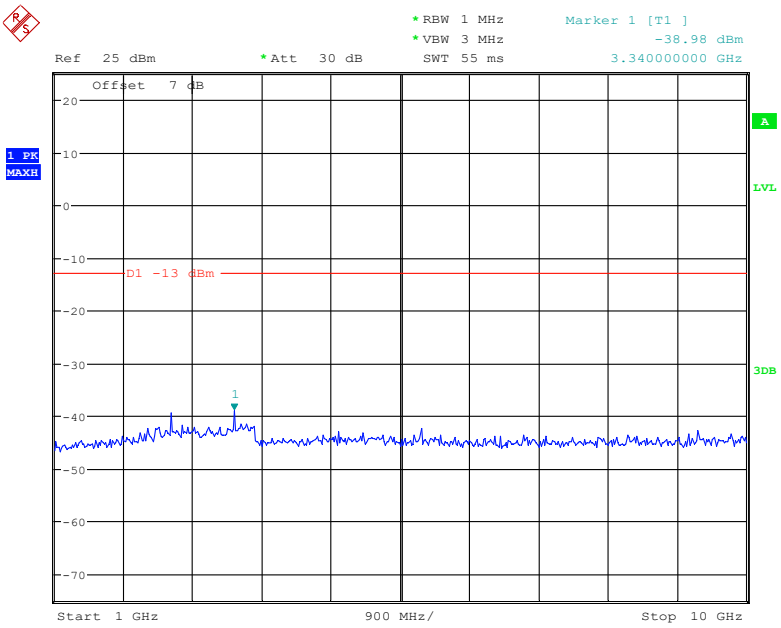
30 MHz – 1 GHz (GSM Mode)



Fundamental test

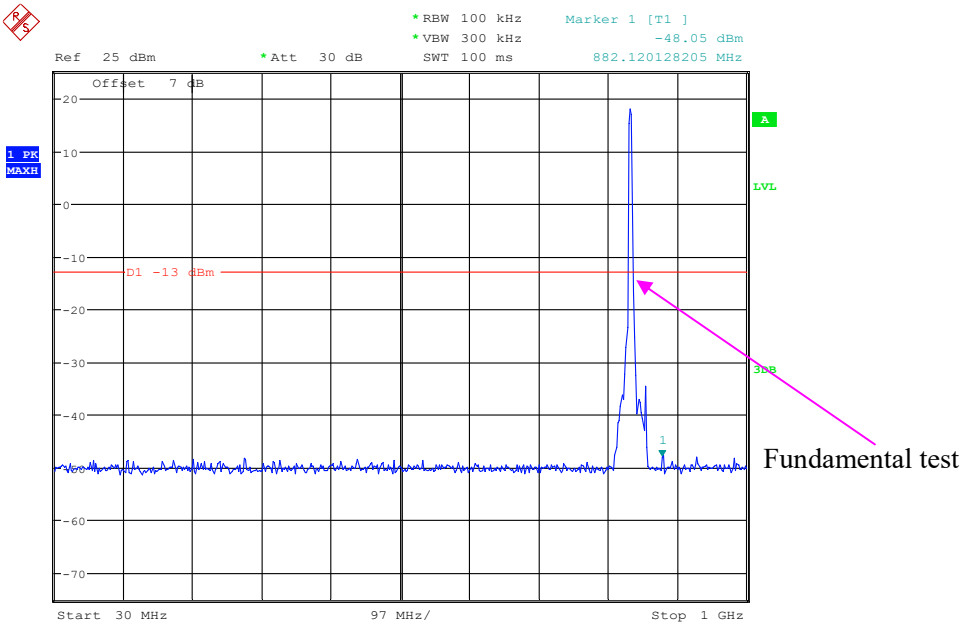
Date: 11.FEB.2022 15:18:22

1 GHz – 10 GHz (GSM Mode)



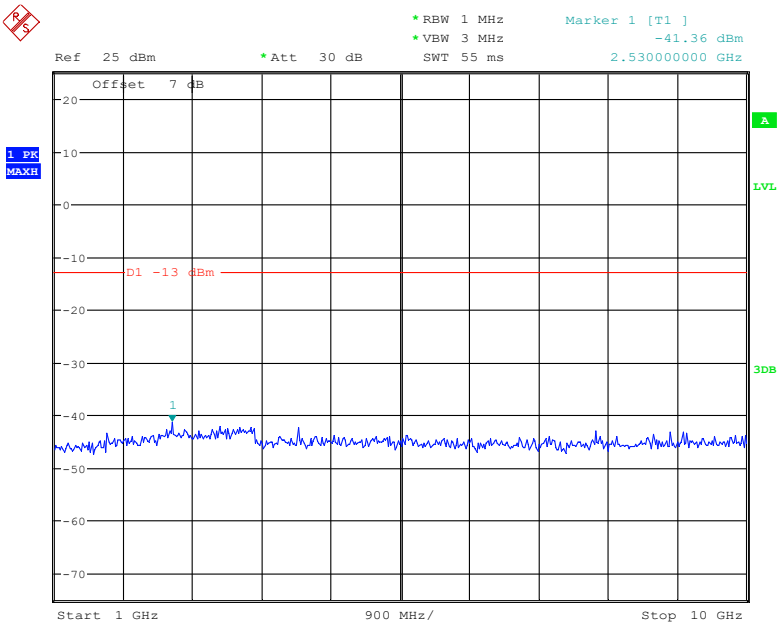
Date: 11.FEB.2022 15:15:53

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:16:25

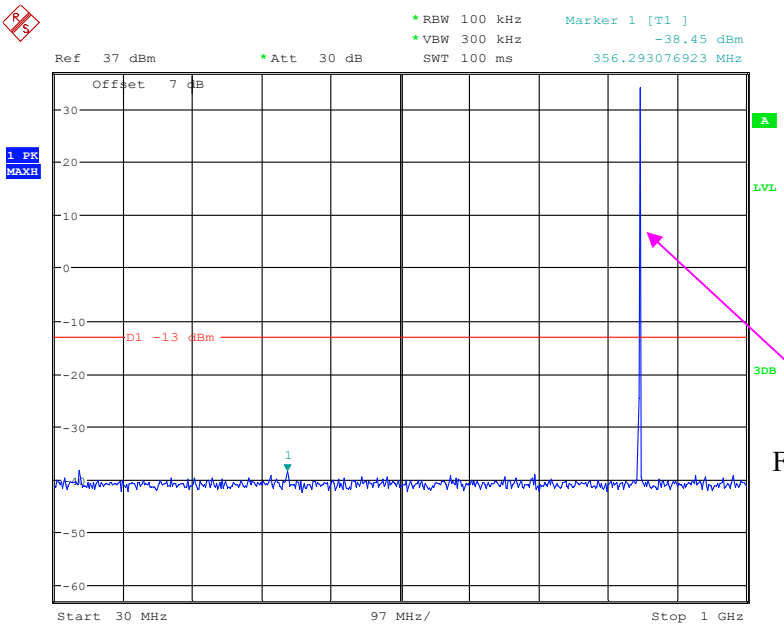
1 GHz – 10 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:17:50

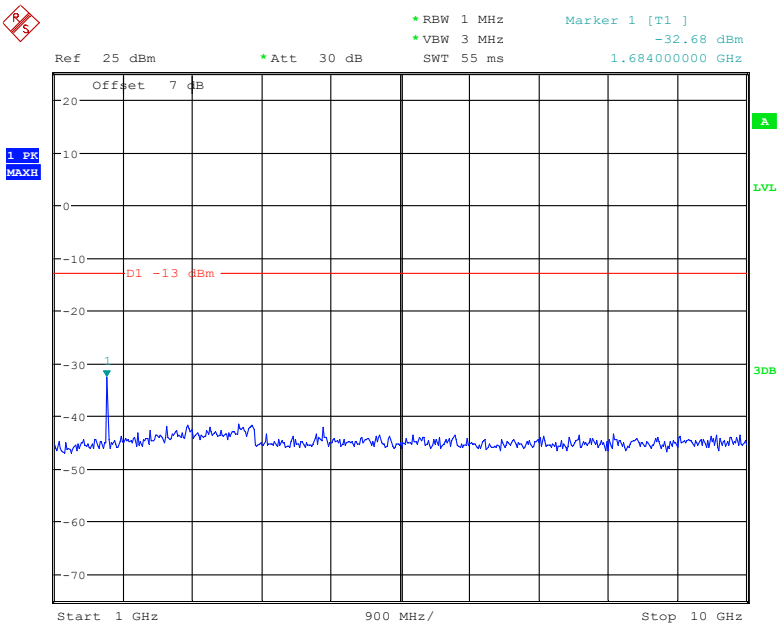
High Channel:

30 MHz – 1 GHz (GSM Mode)



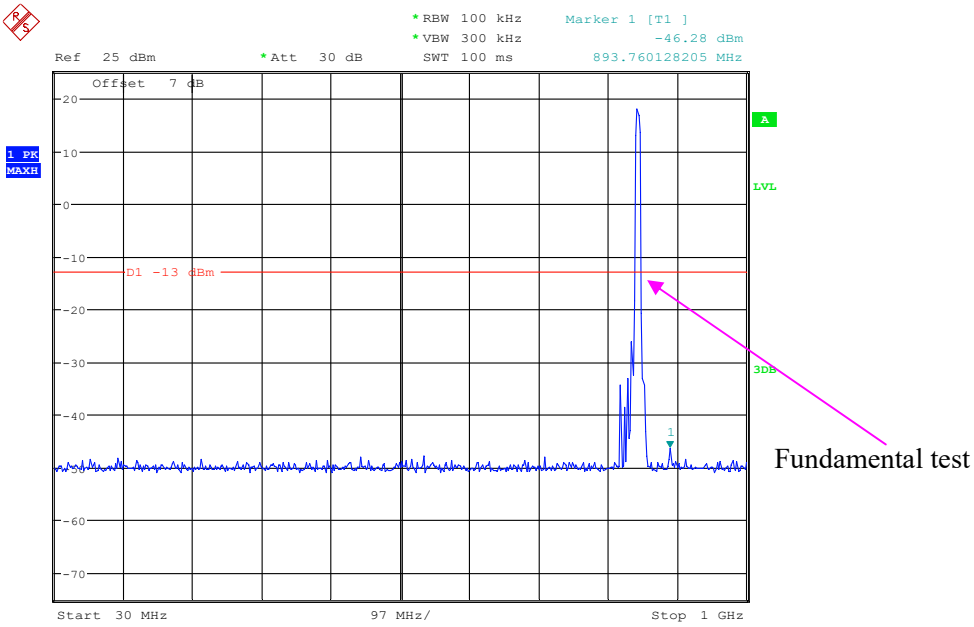
Date: 11.FEB.2022 15:18:55

1 GHz – 10 GHz (GSM Mode)



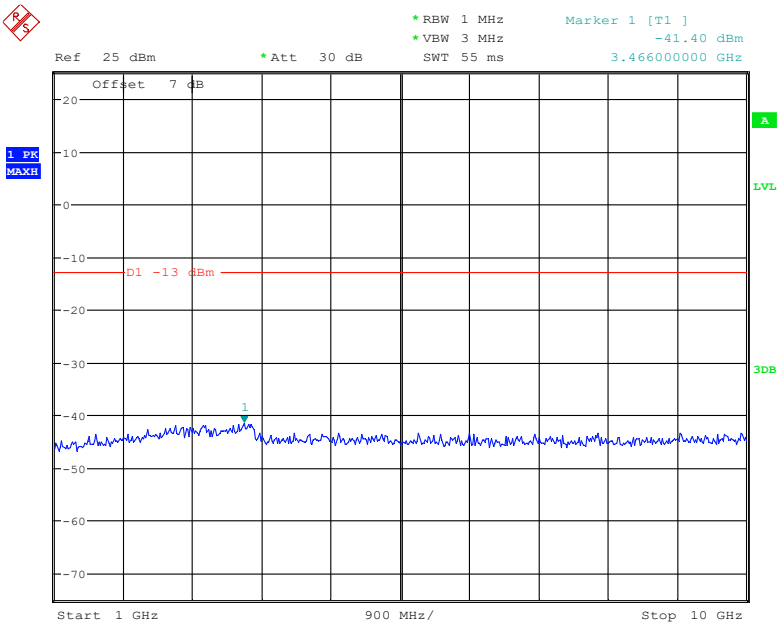
Date: 11.FEB.2022 15:16:07

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:17:08

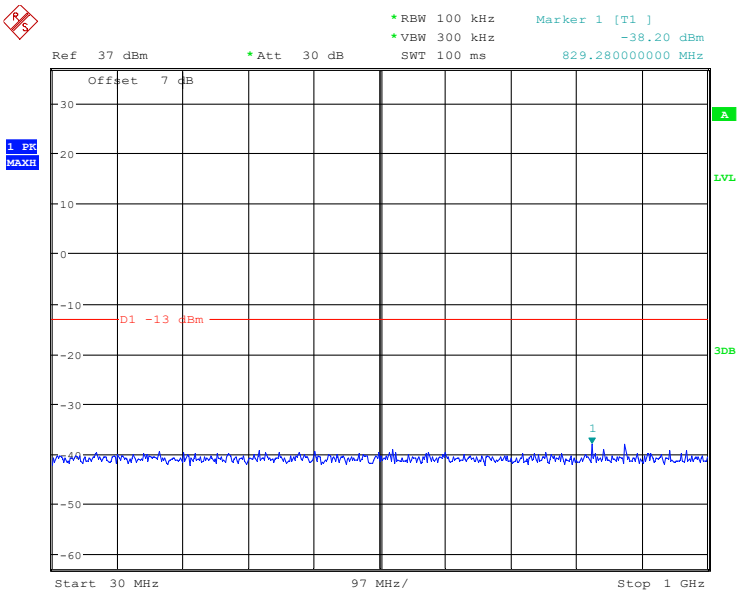
1 GHz – 10 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:17:35

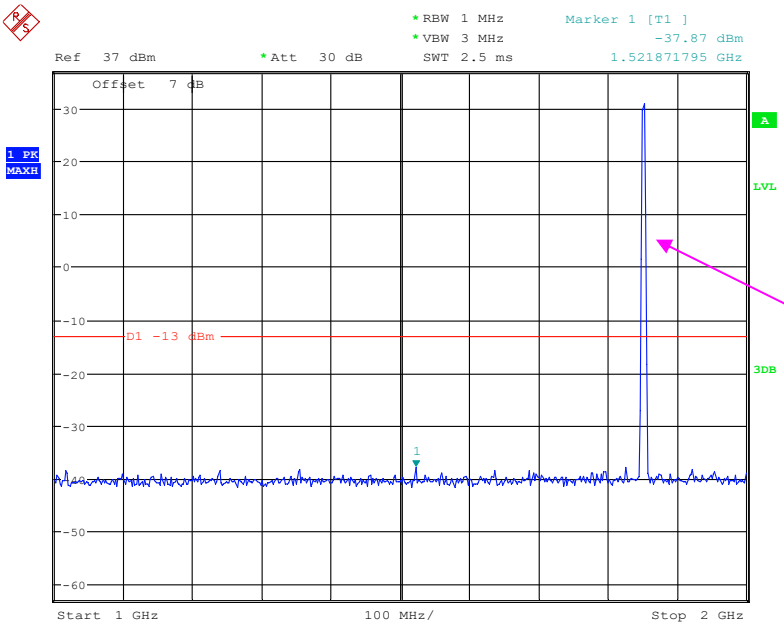
PCS Band (Part 24E)
Low Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 11.FEB.2022 15:08:56

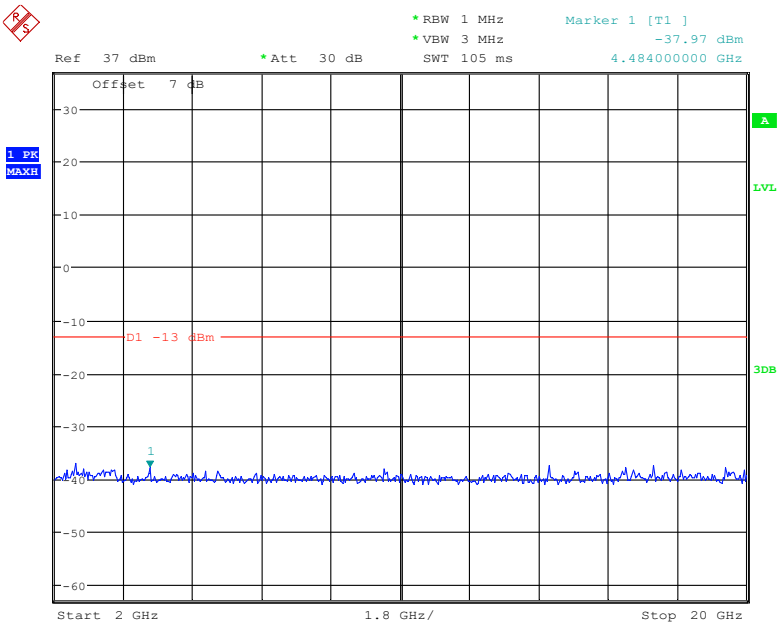
1 GHz – 2 GHz (GSM Mode)



Fundamental test

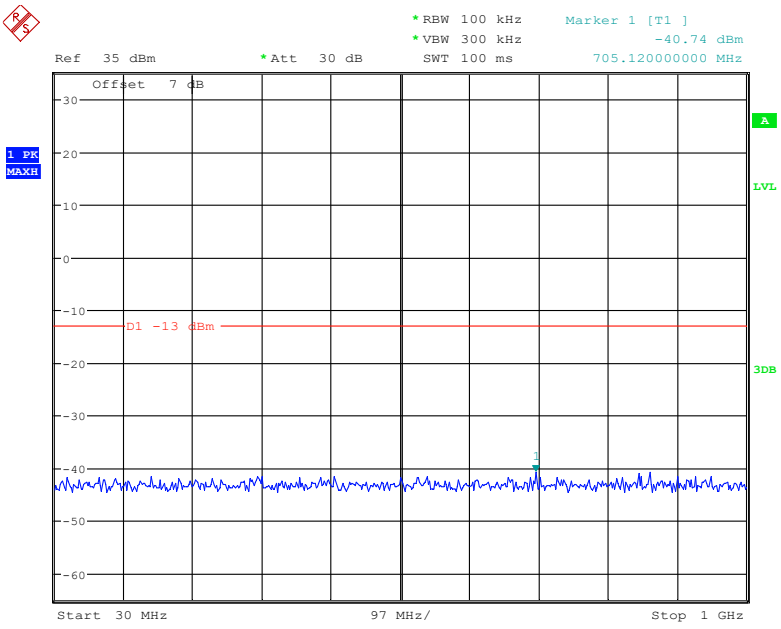
Date: 11.FEB.2022 15:10:41

2 GHz – 20 GHz (GSM Mode)



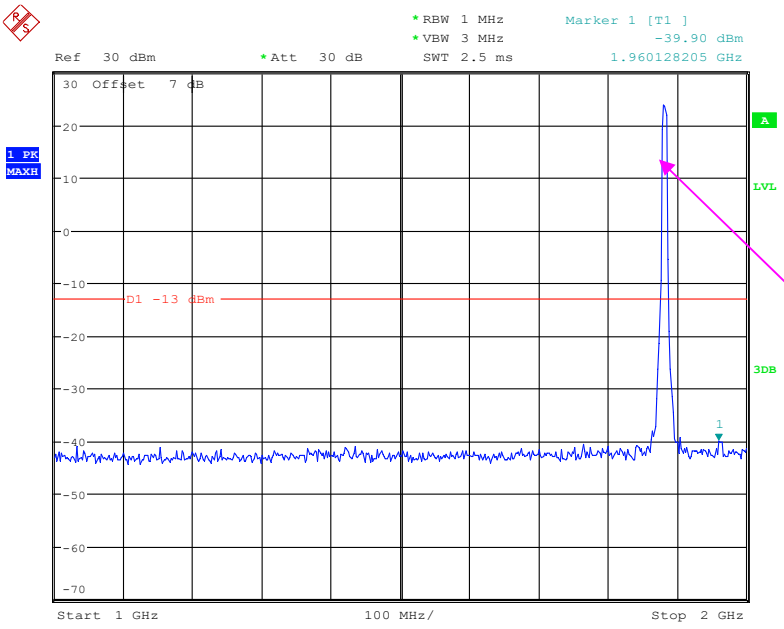
Date: 11.FEB.2022 15:13:37

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:13:47

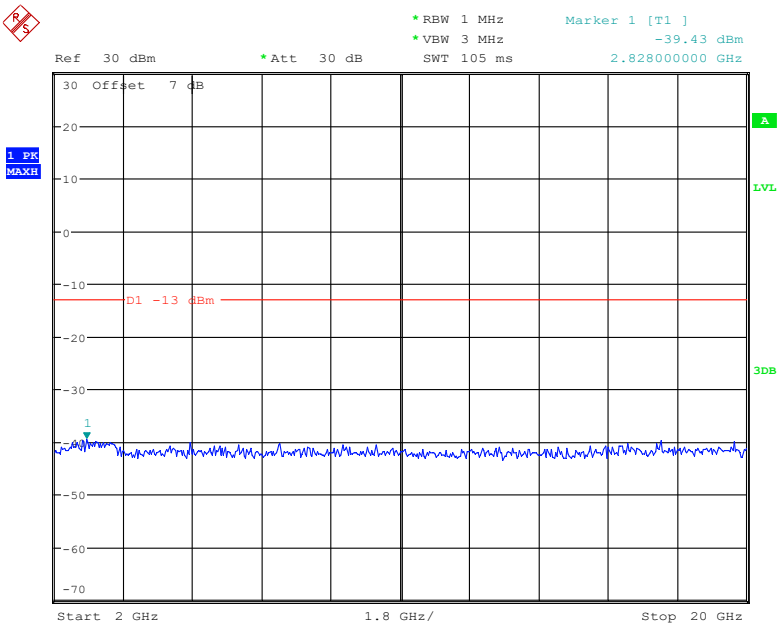
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 11.FEB.2022 14:19:37

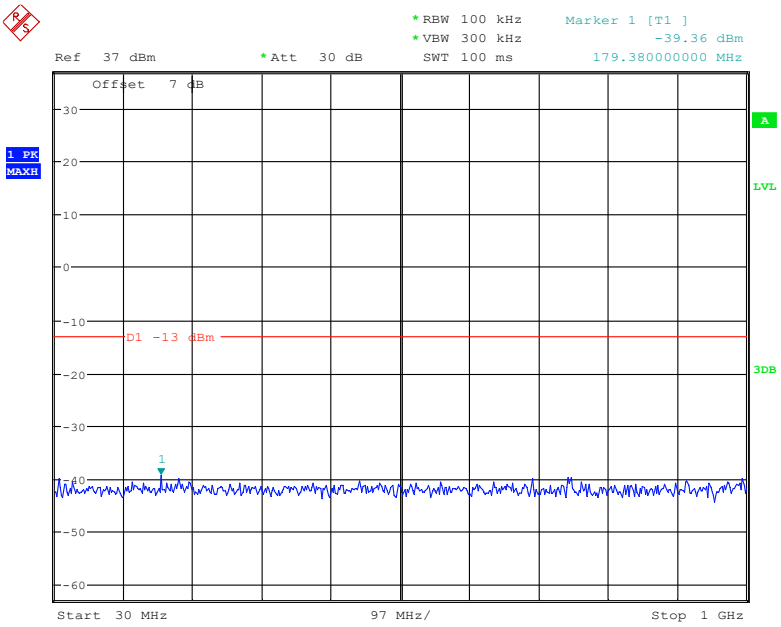
2 GHz – 20 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:22:52

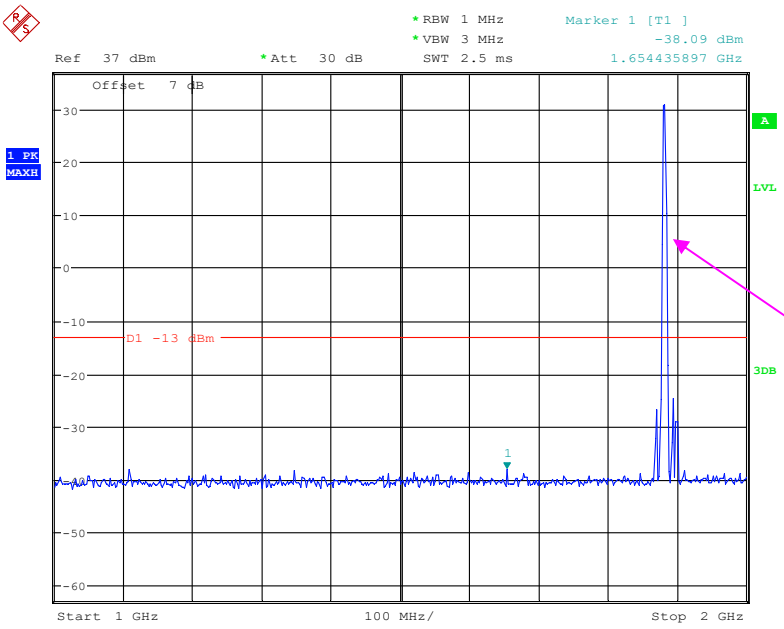
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 11.FEB.2022 15:09:14

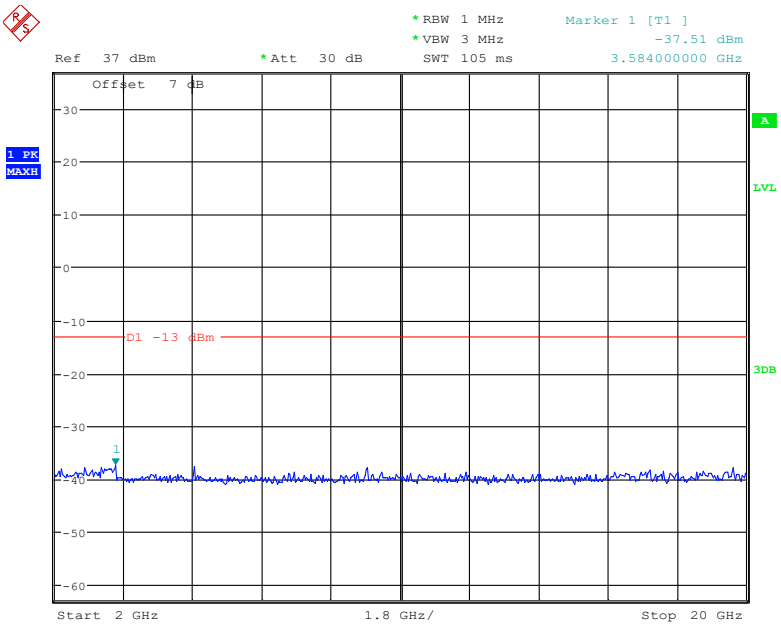
1 GHz – 2 GHz (GSM Mode)



Fundamental test

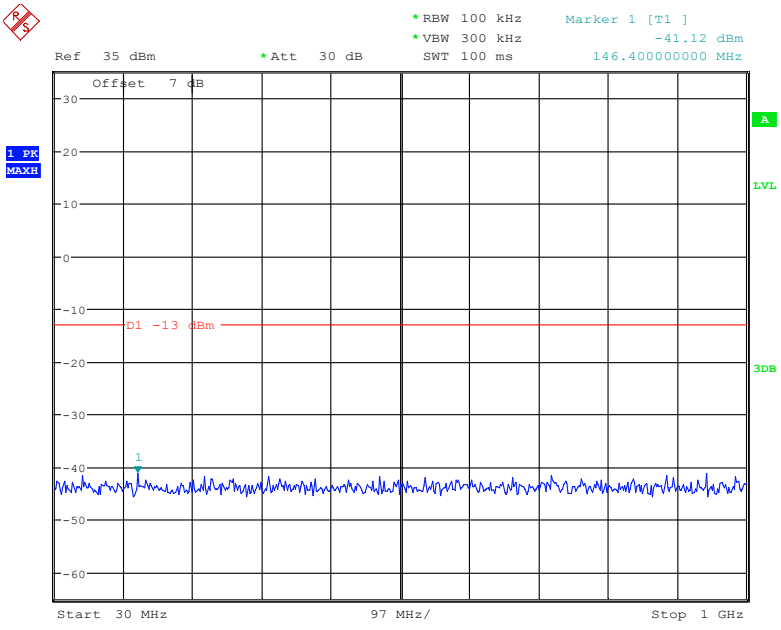
Date: 11.FEB.2022 15:11:54

2 GHz – 20 GHz (GSM Mode)



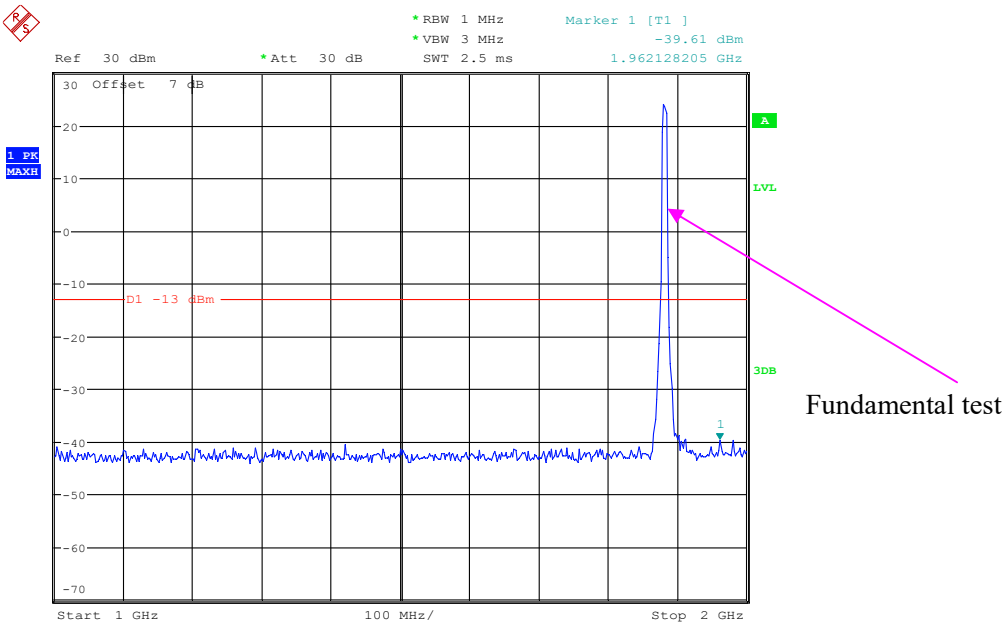
Date: 11.FEB.2022 15:13:22

30 MHz – 1 GHz (WCDMA Mode)



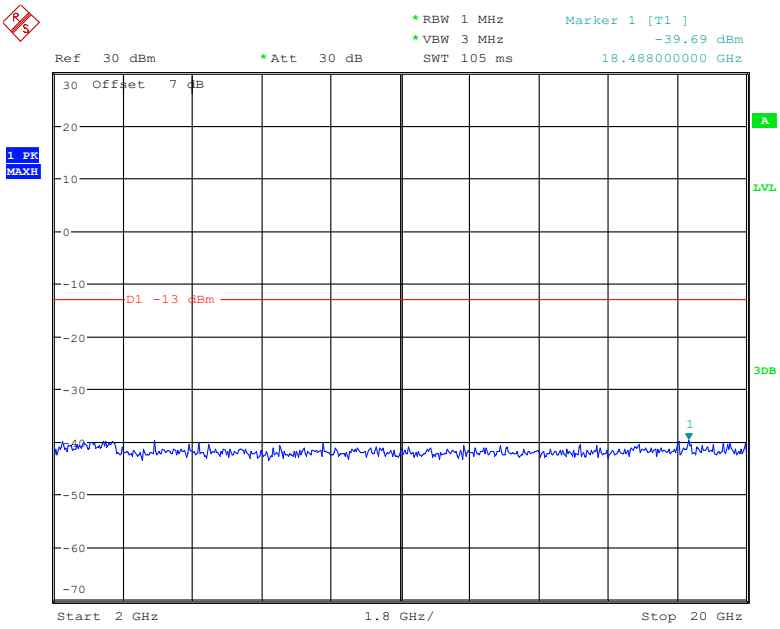
Date: 11.FEB.2022 14:14:06

1 GHz – 2GHz (WCDMA Mode)



Date: 11.FEB.2022 14:19:51

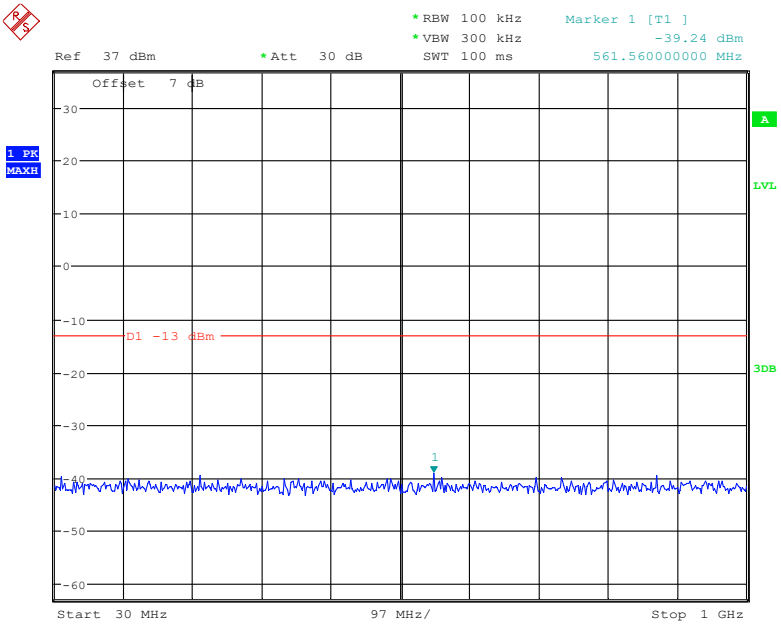
2 GHz – 20GHz (WCDMA Mode)



Date: 11.FEB.2022 14:23:09

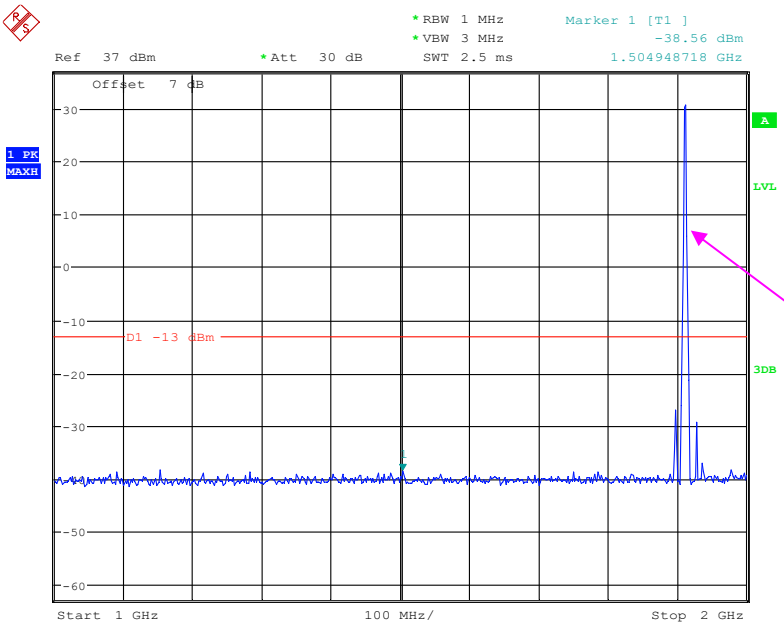
High Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 11.FEB.2022 15:09:26

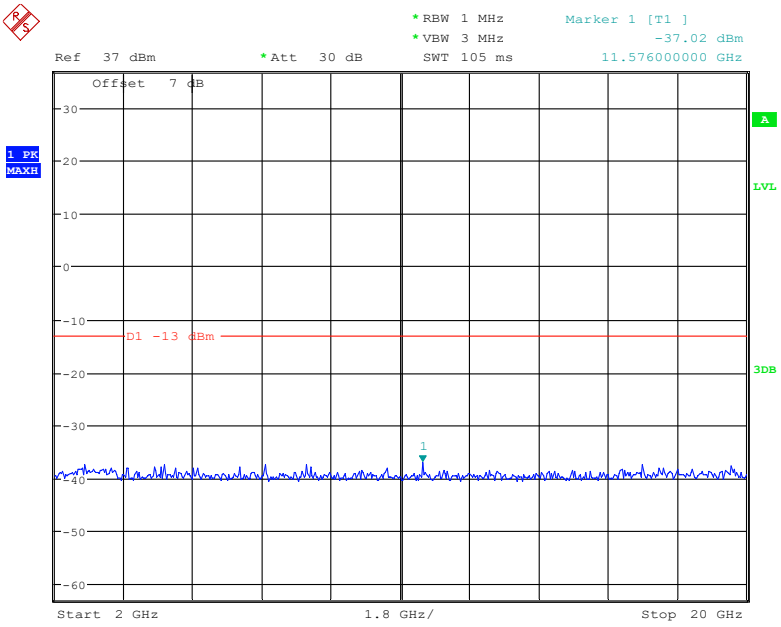
1 GHz – 2 GHz (GSM Mode)



Fundamental test

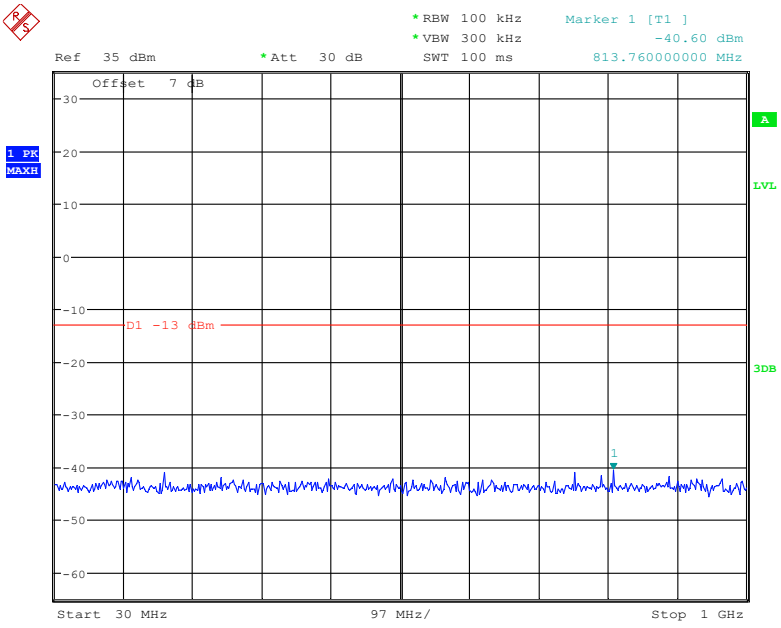
Date: 11.FEB.2022 15:12:36

2 GHz– 20 GHz (GSM Mode)



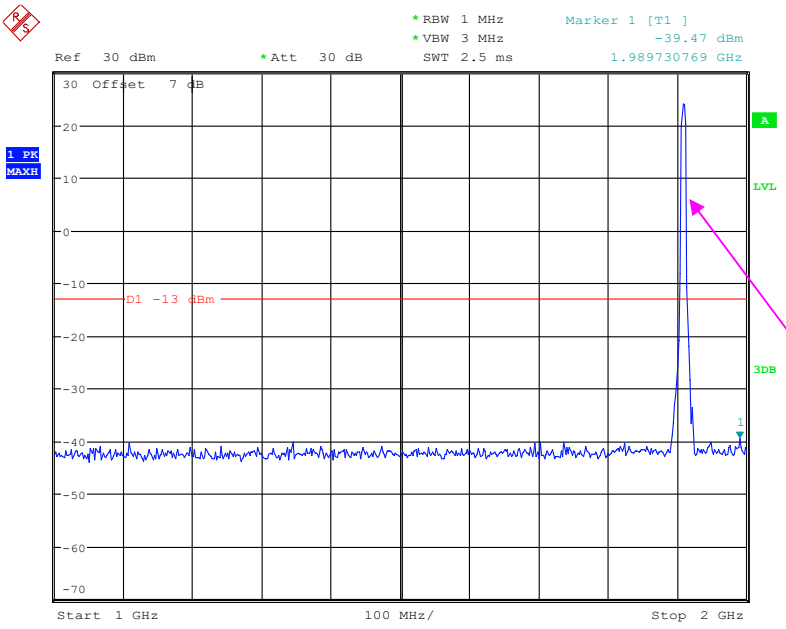
Date: 11.FEB.2022 15:13:06

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:14:17

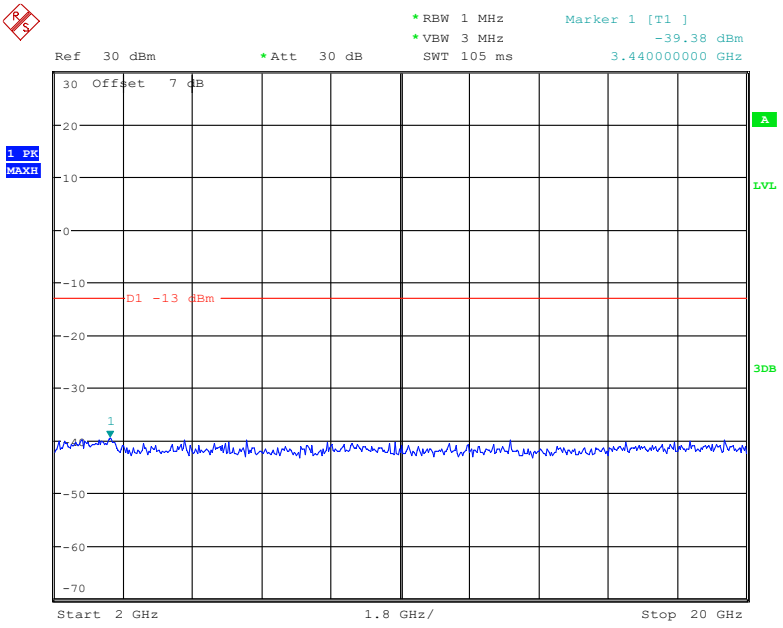
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 11.FEB.2022 14:20:14

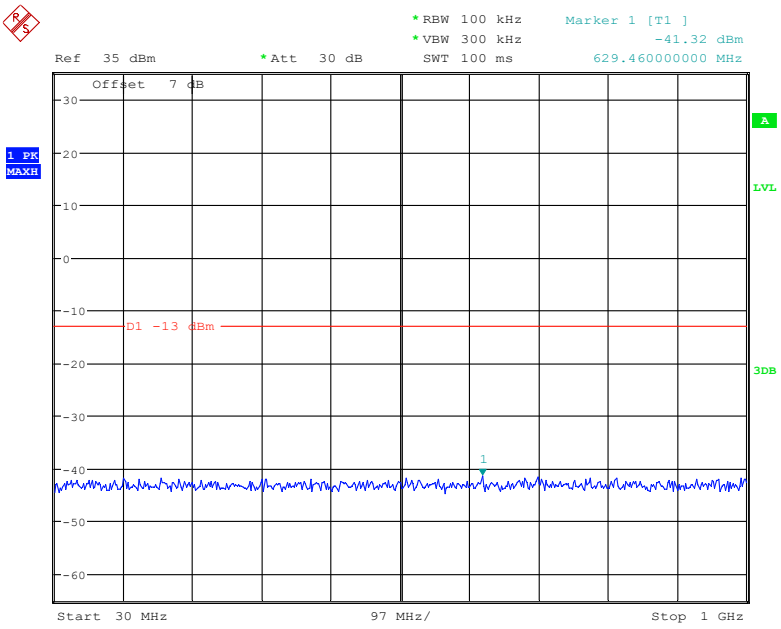
2GHz – 20 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:23:22

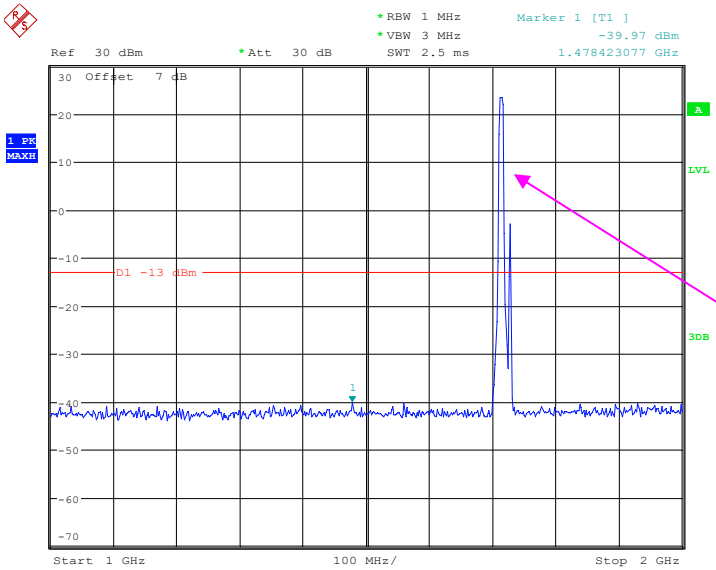
AWS Band (Part 27)
Low Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:14:35

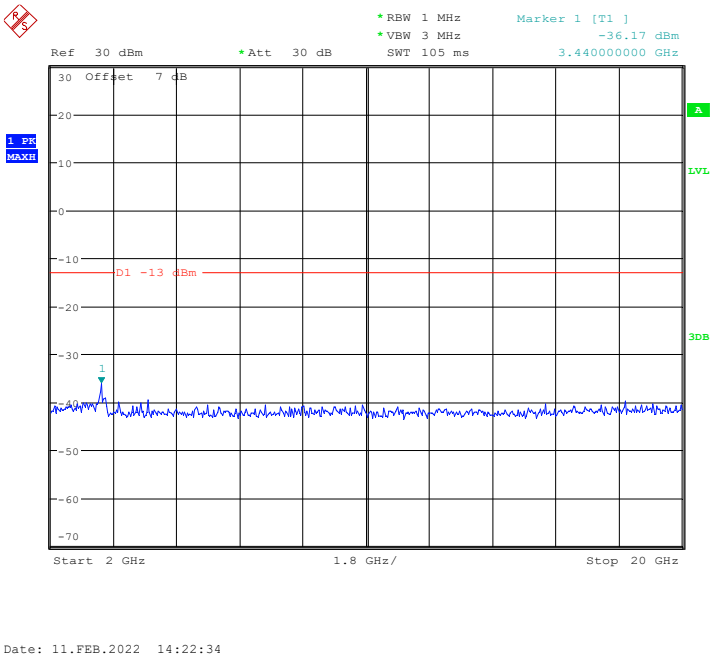
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 11.FEB.2022 14:20:55

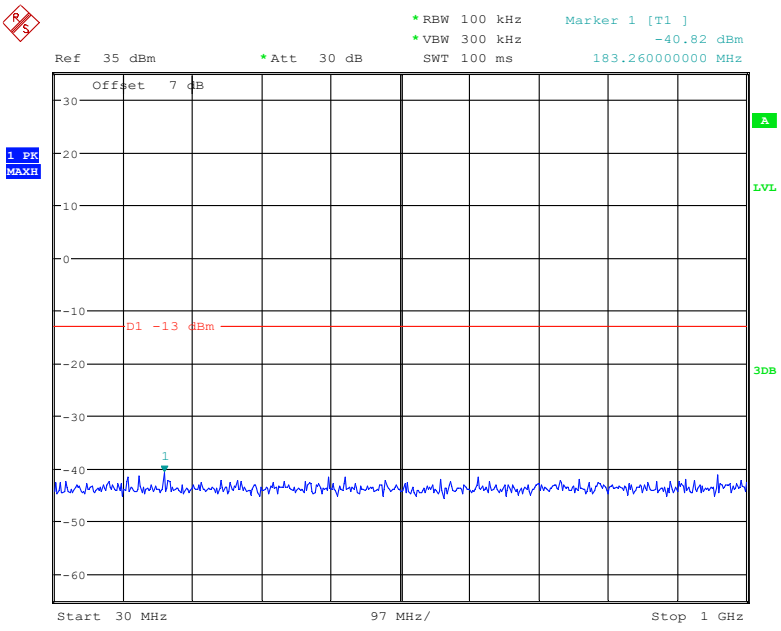
2 GHz – 20 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:22:34

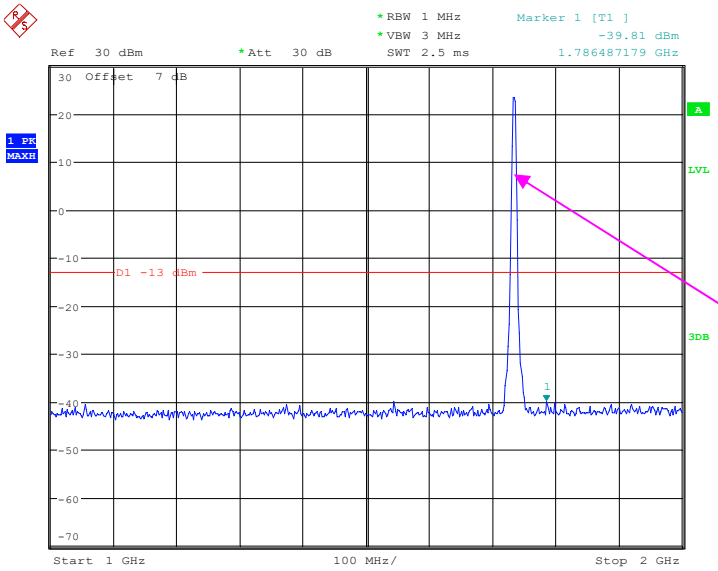
Middle Channel

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:14:50

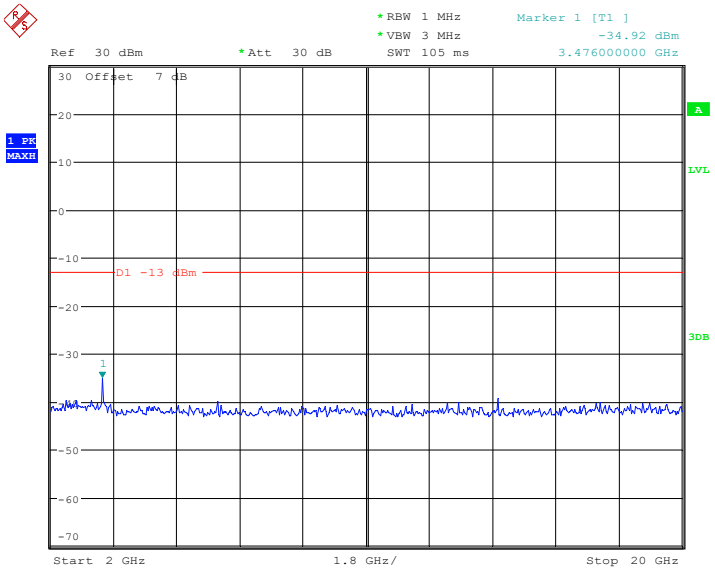
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 11.FEB.2022 14:21:24

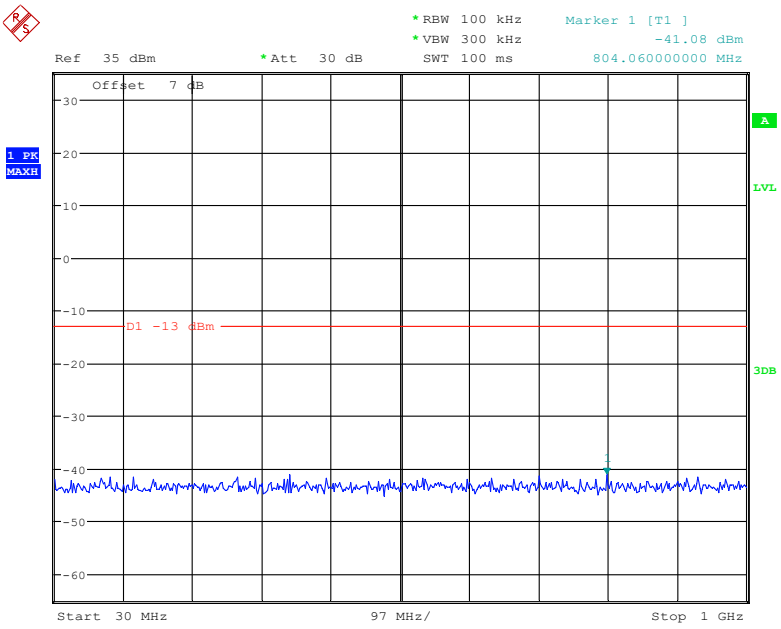
2 GHz – 20 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:22:22

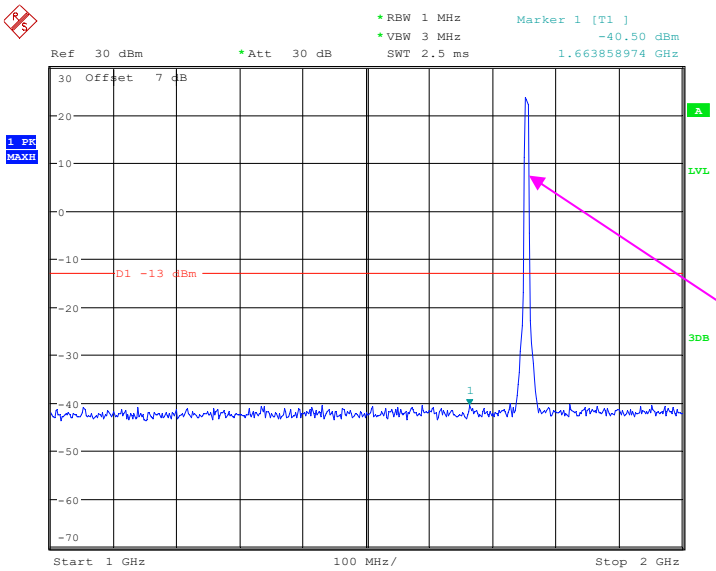
High Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 11.FEB.2022 14:15:03

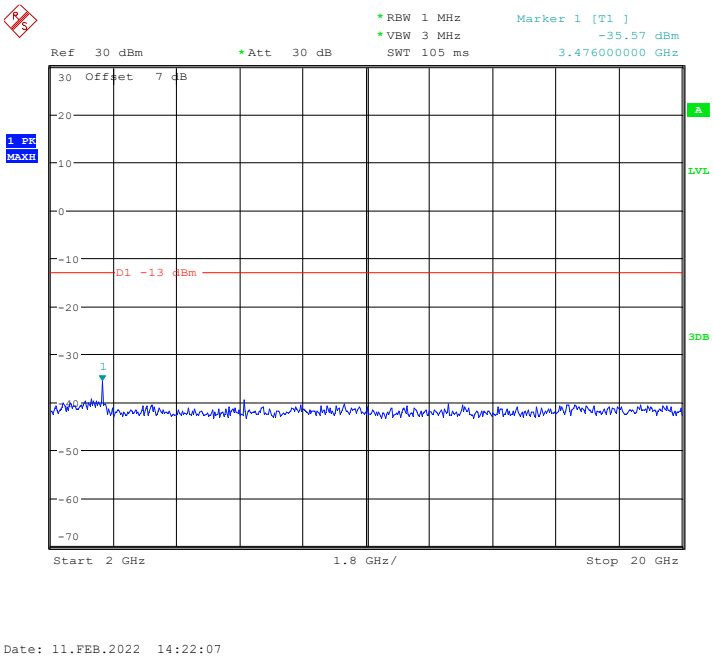
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 11.FEB.2022 14:21:46

2 GHz – 20 GHz (WCDMA Mode)



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

FCC § 2.1053; § 22.917 (a);§ 24.238 (a); §27.53- 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:	21~26 ℃
Relative Humidity:	45~52 %
ATM Pressure:	100.2~101.0kPa

The testing was performed by Paul Liu from 2022-02-13 to 2022-02-16.

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								
180.05	-64.44	244	2.1	H	-1.7	-66.14	-13	-53.14
259.94	-63.94	168	1.8	V	-0.7	-64.64	-13	-51.64
1648.4	-57.9	304	2.1	H	3.5	-54.40	-13	-41.4
1648.4	-57.1	177	1.5	V	3.1	-54.0	-13	-41.0
2472.6	-44.2	77	1.7	H	6.6	-37.6	-13	-24.6
2472.6	-41.3	78	2.0	V	5.8	-35.5	-13	-22.5
3296.8	-51.6	53	2.0	H	6.4	-45.2	-13	-32.2
3296.8	-48.8	284	1.8	V	5.7	-43.1	-13	-30.1
Middle Channel								
180.05	-66.08	143	1.9	H	-1.7	-67.78	-13	-53.04
259.94	-63.25	236	1.7	V	-0.7	-63.95	-13	-50.11
1673.2	-56.6	181	1.6	H	3.8	-52.8	-13	-39.8
1673.2	-54.7	142	1.8	V	3.1	-51.6	-13	-38.6
2509.8	-45.8	76	1.8	H	6.2	-39.6	-13	-26.6
2509.8	-41.5	306	1.6	V	5.6	-35.9	-13	-22.9
3346.4	-51.3	305	1.6	H	6.6	-44.7	-13	-31.7
3346.4	-48.3	241	2.1	V	5.4	-42.9	-13	-29.9
High Channel								
180.05	-64.31	172	1.5	H	-1.7	-66.01	-13	-53.01
259.94	-62.37	274	2.0	V	-0.7	-63.07	-13	-50.07
1697.6	-54.7	49	1.5	H	4.1	-50.60	-13	-37.60
1697.6	-53.9	315	2.0	V	3.1	-50.80	-13	-37.80
2546.4	-42	259	1.5	H	6.1	-35.90	-13	-22.90
2546.4	-45	88	1.9	V	5.8	-39.20	-13	-26.20
3395.2	-49.3	174	1.7	H	6.2	-43.10	-13	-30.10
3395.2	-47.2	87	1.9	V	5.4	-41.80	-13	-28.80

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 5								
Low Channel								
180.05	-64.55	334	1.7	H	-1.7	-66.25	-13	-53.25
259.94	-63.47	46	2.0	V	-0.7	-64.17	-13	-51.17
1652.8	-57.1	225	1.5	H	3.5	-53.6	-13	-40.6
1652.8	-53.3	136	1.6	V	3.1	-50.2	-13	-37.2
2479.2	-54.9	88	1.7	H	6.5	-48.4	-13	-35.4
2479.2	-54.8	276	1.7	V	5.7	-49.1	-13	-36.1
3305.6	-52.1	321	1.5	H	6.4	-45.7	-13	-32.7
3305.6	-50.8	156	1.6	V	5.7	-45.1	-13	-32.1
Middle Channel								
180.05	-65.03	41	1.9	H	-1.7	-66.73	-13	-53.73
259.94	-63.57	143	1.9	V	-0.7	-64.27	-13	-51.27
1673.2	-52.7	87	1.7	H	3.8	-48.9	-13	-35.9
1673.2	-50.3	261	1.8	V	3.1	-47.2	-13	-34.2
2509.8	-54.2	177	1.8	H	6.2	-48	-13	-35
2509.8	-54.7	319	1.9	V	5.7	-49	-13	-36
3346.4	-51.9	185	1.7	H	6.6	-45.3	-13	-32.3
3346.4	-50.6	68	1.8	V	5.4	-45.2	-13	-32.2
High Channel								
180.05	-65.02	144	1.6	H	-1.7	-66.72	-13	-53.72
259.94	-64.01	119	1.6	V	-0.7	-64.71	-13	-51.71
1693.2	-55.3	248	1.6	H	4	-51.3	-13	-38.3
1693.2	-52.5	350	1.5	V	3.1	-49.4	-13	-36.4
2539.8	-54.7	143	1.6	H	6.1	-48.6	-13	-35.6
2539.8	-54.6	287	1.7	V	5.7	-48.9	-13	-35.9
3386.4	-51.9	77	1.8	H	6.3	-45.6	-13	-32.6
3386.4	-50.5	199	2.0	V	5.4	-45.1	-13	-32.1

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								
180.05	-64.68	229	1.9	H	-1.7	-66.38	-13	-53.38
259.94	-63.11	41	1.6	V	-0.7	-63.81	-13	-50.81
3700.4	-54.8	282	1.9	H	8.1	-46.70	-13	-33.70
3700.4	-54.0	280	1.5	V	7.6	-46.40	-13	-33.40
5550.6	-53.4	306	1.6	H	9.6	-43.80	-13	-30.80
5550.6	-52.4	32	2.0	V	9.1	-43.30	-13	-30.30
Middle Channel								
180.05	-64.94	182	1.6	H	-1.7	-66.64	-13	-53.64
259.94	-63.56	7	1.5	V	-0.7	-64.26	-13	-51.26
3760	-55.9	140	1.7	H	8.8	-47.10	-13	-34.10
3760	-54.9	277	1.9	V	8	-46.90	-13	-33.90
5640	-54.5	156	2.0	H	10.2	-44.30	-13	-31.30
5640	-53.0	285	1.8	V	9.4	-43.60	-13	-30.60
High Channel								
180.05	-64.65	261	1.6	H	-1.7	-66.35	-13	-53.35
259.94	-64.06	272	1.7	V	-0.7	-64.76	-13	-51.76
3819.6	-55.7	245	2.0	H	8.7	-47.00	-13	-34.00
3819.6	-54.9	19	1.8	V	8.0	-46.90	-13	-33.90
5729.4	-55.6	316	2.0	H	10.6	-45.00	-13	-32.00
5729.4	-53.3	353	1.8	V	10.2	-43.10	-13	-30.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Low Channel								
180.05	-64.87	301	1.8	H	-1.7	-66.57	-13	-53.57
259.94	-63.56	104	2.0	V	-0.7	-64.26	-13	-51.26
3704.8	-55.1	273	1.7	H	8.2	-46.9	-13	-33.9
3704.8	-53.7	139	2.1	V	7.6	-46.1	-13	-33.1
5557.2	-53.6	273	1.8	H	9.7	-43.9	-13	-30.9
5557.2	-53	111	1.9	V	9.1	-43.9	-13	-30.9
Middle Channel								
180.05	-64.62	281	1.7	H	-1.7	-66.32	-13	-53.32
259.94	-64.03	87	1.8	V	-0.7	-64.73	-13	-51.73
3760	-56.2	235	2.0	H	8.8	-47.4	-13	-34.4
3760	-54.5	336	1.8	V	8	-46.5	-13	-33.5
5640	-54.6	14	1.9	H	10.2	-44.4	-13	-31.4
5640	-53.8	285	1.9	V	9.4	-44.4	-13	-31.4
High Channel								
180.05	-64.89	219	1.5	H	-1.7	-66.59	-13	-53.59
259.94	-63.36	187	1.8	V	-0.7	-64.06	-13	-51.06
3815.2	-56	237	2.0	H	8.7	-47.3	-13	-34.3
3815.2	-54.2	215	1.8	V	7.9	-46.3	-13	-33.3
5722.8	-55.2	169	1.8	H	10.6	-44.6	-13	-31.6
5722.8	-54.6	173	1.6	V	10.1	-44.5	-13	-31.5

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								
180.05	-65.52	24	1.6	H	-1.7	-67.22	-13	-54.22
259.94	-63.79	188	1.7	V	-0.7	-64.49	-13	-51.49
3424.8	-50.3	115	2.0	H	6.4	-43.9	-13	-30.9
3424.8	-49.8	48	1.9	V	5.8	-44	-13	-31
5137.2	-56.5	330	2.0	H	11.4	-45.1	-13	-32.1
5137.2	-55.8	46	1.8	V	10.8	-45	-13	-32
Middle Channel								
180.05	-65.79	207	2.1	H	-1.7	-67.49	-13	-54.49
259.94	-63.94	181	1.9	V	-0.7	-64.64	-13	-51.64
3465.2	-51.2	339	1.6	H	7	-44.2	-13	-31.2
3465.2	-50.4	288	1.8	V	6.2	-44.2	-13	-31.2
5197.8	-55.3	137	1.8	H	10.4	-44.9	-13	-31.9
5197.8	-53.5	214	1.6	V	9.8	-43.7	-13	-30.7
High Channel								
180.05	-64.84	289	1.8	H	-1.7	-66.54	-13	-53.54
259.94	-62.56	14	1.7	V	-0.7	-63.26	-13	-50.26
3505.2	-51.4	235	2.1	H	7.8	-43.6	-13	-30.6
3505.2	-51.1	360	2.0	V	6.5	-44.6	-13	-31.6
5257.8	-53.3	129	1.9	H	9.4	-43.9	-13	-30.9
5257.8	-52.7	323	1.5	V	9	-43.7	-13	-30.7

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								
180.05	-64.45	201	2.0	H	-1.7	-66.15	-13	-53.15
259.94	-62.91	187	1.9	V	-0.7	-63.61	-13	-50.61
3701.4	-55.5	154	1.9	H	8.1	-47.4	-13	-34.4
3701.4	-54.6	193	1.8	V	7.6	-47.0	-13	-34.0
5552.1	-53.9	152	1.7	H	9.6	-44.3	-13	-31.3
5552.1	-53.1	327	2.0	V	9.1	-44.0	-13	-31.0
1.4MHz bandwidth, Middle Channel								
180.05	-64.77	265	1.5	H	-1.7	-66.47	-13	-53.47
259.94	-62.47	16	1.5	V	-0.7	-63.17	-13	-50.17
3760	-57.2	95	1.9	H	8.8	-48.4	-13	-35.4
3760	-55.7	1	1.7	V	8	-47.7	-13	-34.7
5640	-54.3	294	2.0	H	10.2	-44.1	-13	-31.1
5640	-53.4	147	1.9	V	9.4	-44.0	-13	-31.0
1.4MHz bandwidth, High Channel								
180.05	-66.06	333	1.6	H	-1.7	-67.76	-13	-54.76
259.94	-63.02	337	1.7	V	-0.7	-63.72	-13	-50.72
3818.6	-57.1	348	1.9	H	8.7	-48.4	-13	-35.4
3818.6	-55.3	151	1.8	V	8	-47.3	-13	-34.3
5727.9	-55.8	308	1.6	H	10.6	-45.2	-13	-32.2
5727.9	-55	261	1.8	V	10.2	-44.8	-13	-31.8

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 4								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, Low Channel								
180.05	-65.46	175	2.0	H	-1.7	-67.16	-13	-54.16
259.94	-63.93	73	1.9	V	-0.7	-64.63	-13	-51.63
3421.4	-52.07	101	2.1	H	6.37	-45.7	-13	-32.7
3421.4	-51.3	161	1.5	V	5.7	-45.6	-13	-32.6
5132.1	-57.03	111	1.9	H	11.33	-45.7	-13	-32.7
5132.1	-56.57	241	2.0	V	10.77	-45.8	-13	-32.8
1.4MHz bandwidth, Middle Channel								
180.05	-64.78	177	2.0	H	-1.7	-66.48	-13	-53.48
259.94	-62.62	310	1.5	V	-0.7	-63.32	-13	-50.32
3465	-51.46	214	1.5	H	6.96	-44.5	-13	-31.5
3465	-51.42	271	2.0	V	6.22	-45.2	-13	-32.2
5197.5	-55.46	281	1.7	H	10.36	-45.1	-13	-32.1
5197.5	-54.75	304	2.0	V	9.85	-44.9	-13	-31.9
1.4MHz bandwidth, High Channel								
180.05	-64.78	177	2.0	H	-1.7	-66.48	-13	-53.48
259.94	-62.62	310	1.5	V	-0.7	-63.32	-13	-50.32
3508.6	-51.68	302	2.0	H	7.78	-43.9	-13	-30.9
3508.6	-51.07	261	2.0	V	6.57	-44.5	-13	-31.5
5262.9	-53.35	60	1.8	H	9.45	-43.9	-13	-30.9
5262.9	-52.45	338	1.6	V	8.95	-43.5	-13	-30.5

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								
180.05	-65.65	133	2.0	H	-1.7	-67.35	-13	-54.35
259.94	-62.46	350	1.8	V	-0.7	-63.16	-13	-50.16
1649.4	-57.9	227	1.7	H	3.2	-54.7	-13	-41.7
1649.4	-55.6	264	1.8	V	3.1	-52.5	-13	-39.5
2474.1	-50.1	84	1.7	H	6.6	-43.5	-13	-30.5
2474.1	-50.9	48	1.9	V	5.8	-45.1	-13	-32.1
3298.8	-52	142	1.9	H	6.4	-45.6	-13	-32.6
3298.8	-51.4	193	2.0	V	5.7	-45.7	-13	-32.7
1.4MHz bandwidth, Middle Channel								
180.05	-66.27	42	1.9	H	-1.7	-67.97	-13	-54.97
259.94	-63.98	210	1.7	V	-0.7	-64.68	-13	-51.68
1673	-48.7	314	1.6	H	3.8	-44.9	-13	-31.9
1673	-51.1	173	1.8	V	3.1	-48.0	-13	-35.0
2509.5	-50.4	266	1.8	H	6.2	-44.2	-13	-31.2
2509.5	-51.3	264	1.7	V	5.6	-45.7	-13	-32.7
3346	-52	290	1.6	H	6.6	-45.4	-13	-32.4
3346	-50.7	82	1.6	V	5.4	-45.3	-13	-32.3
1.4MHz bandwidth, High Channel								
180.05	-65.38	8	1.7	H	-1.7	-67.08	-13	-54.08
259.94	-63.09	213	1.6	V	-0.7	-63.79	-13	-50.79
1696.6	-55.1	225	1.9	H	4.1	-51.0	-13	-38.0
1696.6	-53.7	179	1.7	V	3.1	-50.6	-13	-37.6
2544.9	-51.3	141	2.0	H	6.1	-45.2	-13	-32.2
2544.9	-52.8	274	1.8	V	5.8	-47.0	-13	-34.0
3393.2	-52	76	1.9	H	6.3	-45.7	-13	-32.7
3393.2	-51	165	1.6	V	5.4	-45.6	-13	-32.6

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								
180.05	-65.89	231	1.5	H	-1.7	-67.59	-25	-42.59
259.94	-64.02	114	1.8	V	-0.7	-64.72	-25	-39.72
5005	-56.63	98	1.7	H	10.83	-45.8	-25	-20.8
5005	-55.46	17	1.9	V	10.16	-45.3	-25	-20.3
7507.5	-62.35	47	1.8	H	20.35	-42.0	-25	-17.0
7507.5	-61.95	87	1.9	V	20.05	-41.9	-25	-16.9
5MHz bandwidth, Middle Channel								
180.05	-65.69	331	1.5	H	-1.7	-67.39	-25	-42.39
259.94	-64.02	40	1.8	V	-0.7	-64.72	-25	-39.72
5070	-57.04	327	1.8	H	11.14	-45.9	-25	-20.9
5070	-56.78	309	1.9	V	10.78	-46.0	-25	-21.0
7605	-65.5	313	1.7	H	21.2	-44.3	-25	-19.3
7605	-64.47	10	1.7	V	20.07	-44.4	-25	-19.4
5MHz bandwidth, High Channel								
180.05	-66.12	71	1.8	H	-1.7	-67.82	-25	-42.82
259.94	-62.52	230	1.8	V	-0.7	-63.22	-25	-38.22
5135	-56.84	72	1.8	H	11.34	-45.5	-25	-20.5
5135	-55.66	136	1.7	V	10.76	-44.9	-25	-19.9
7702.5	-66.29	161	1.9	H	21.19	-45.1	-25	-20.1
7702.5	-65.99	18	2.0	V	20.99	-45.0	-25	-20.0

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 17								
Test frequency range: 30MHz-8GHz								
5MHz bandwidth, Low Channel								
180.05	-65.77	29	1.8	H	-1.7	-67.47	-13	-54.47
259.94	-63.41	156	1.7	V	-0.7	-64.11	-13	-51.11
1413	-59.6	134	1.7	H	5.7	-53.9	-13	-40.9
1413	-58.3	189	1.7	V	5.4	-52.9	-13	-39.9
2119.5	-43.3	47	1.9	H	6.6	-36.7	-13	-23.7
2119.5	-46.5	155	2.0	V	5.7	-40.8	-13	-27.8
2826	-56.2	327	1.6	H	7.1	-49.1	-13	-36.1
2826	-55.4	266	1.6	V	6.5	-48.9	-13	-35.9
5MHz bandwidth, Middle Channel								
180.05	-64.90	101	2.0	H	-1.7	-66.60	-13	-53.60
259.94	-62.63	320	1.9	V	-0.7	-63.33	-13	-50.33
1420	-57.8	87	1.9	H	5.6	-52.2	-13	-39.2
1420	-57	241	1.6	V	5.2	-51.8	-13	-38.8
2130	-39.6	286	1.7	H	6.8	-32.8	-13	-19.8
2130	-41.8	265	1.7	V	6.1	-35.7	-13	-22.7
2840	-56.5	63	2.0	H	7	-49.5	-13	-36.5
2840	-55.9	89	1.8	V	6.6	-49.3	-13	-36.3
5MHz bandwidth, High Channel								
180.05	-66.13	122	2.0	H	-1.7	-67.83	-13	-54.83
259.94	-62.74	233	1.8	V	-0.7	-63.44	-13	-50.44
1427	-59.7	169	1.7	H	5.5	-54.2	-13	-41.2
1427	-59.8	230	2.1	V	4.9	-54.9	-13	-41.9
2140.5	-41.1	131	1.5	H	7	-34.1	-13	-21.1
2140.5	-45.4	57	1.9	V	6.4	-39.0	-13	-26.0
2854	-57.6	350	1.6	H	7.4	-50.2	-13	-37.2
2854	-55.7	324	1.8	V	6.4	-49.3	-13	-36.3

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								
180.05	-66.04	75	1.9	H	-1.7	-67.74	-25	-42.74
259.94	-63.03	151	1.9	V	-0.7	-63.73	-25	-38.73
5145	-54.58	210	2.0	H	11.38	-43.2	-25	-18.2
5145	-55.62	204	2.0	V	10.72	-44.9	-25	-19.9
7717.5	-65.3	127	1.6	H	21.2	-44.1	-25	-19.1
7717.5	-64.4	158	2.0	V	20.2	-44.2	-25	-19.2
5MHz, Middle Channel								
180.05	-66.09	290	1.9	H	-1.7	-67.79	-25	-42.79
259.94	-63.21	341	1.7	V	-0.7	-63.91	-25	-38.91
5190	-55.22	351	2.0	H	10.52	-44.7	-25	-19.7
5190	-53.98	23	2.1	V	9.98	-44.0	-25	-19.0
7785	-62.66	150	1.8	H	18.26	-44.4	-25	-19.4
7785	-62.09	31	1.8	V	17.99	-44.1	-25	-19.1
5MHz, High Channel								
180.05	-65.21	350	1.8	H	-1.7	-66.91	-25	-41.91
259.94	-63.52	183	1.8	V	-0.7	-64.22	-25	-39.22
5235	-54.27	167	1.7	H	9.67	-44.6	-25	-19.6
5235	-52.34	29	1.8	V	9.24	-43.1	-25	-18.1
7852.5	-61.33	136	1.5	H	18.23	-43.1	-25	-18.1
7852.5	-61.52	251	1.9	V	17.62	-43.9	-25	-18.9

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								
180.05	-64.66	175	1.5	H	-1.7	-66.36	-25	-41.36
259.94	-63.81	66	1.9	V	-0.7	-64.51	-25	-39.51
5075	-56.9	68	2.0	H	11.2	-45.7	-25	-20.7
5075	-56.2	253	1.8	V	10.8	-45.4	-25	-20.4
7612.5	-66.1	1	1.9	H	21.2	-44.9	-25	-19.9
7612.5	-64.5	154	1.6	V	20.2	-44.3	-25	-19.3
5MHz bandwidth, Middle Channel								
180.05	-66.19	105	2.0	H	-1.7	-67.89	-25	-42.89
259.94	-62.65	316	2.0	V	-0.7	-63.35	-25	-38.35
5190	-54.72	242	1.8	H	10.52	-44.2	-25	-19.2
5190	-53.8	255	1.8	V	10	-43.8	-25	-18.8
7785	-62.3	185	1.9	H	18.3	-44.0	-25	-19.0
7785	-62.1	217	1.9	V	18	-44.1	-25	-19.1
5MHz bandwidth, High Channel								
180.05	-65.62	310	1.9	H	-1.7	-67.32	-25	-42.32
259.94	-62.53	116	2.0	V	-0.7	-63.23	-25	-38.23
5305	-52	155	1.8	H	9.6	-42.4	-25	-17.4
5305	-50.2	209	1.6	V	8.8	-41.4	-25	-16.4
7957.5	-64.5	141	1.8	H	18.9	-45.6	-25	-20.6
7957.5	-64.4	74	1.5	V	18.5	-45.9	-25	-20.9

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 66								
Test frequency range: 1-20GHz								
1.4MHz, Low Channel								
180.05	-65.89	165	1.8	H	-1.7	-67.59	-13	-54.59
259.94	-63.90	115	1.7	V	-0.7	-64.60	-13	-51.60
3421.4	-51.3	330	1.6	H	6.4	-44.9	-13	-31.9
3421.4	-50.5	295	2.0	V	5.7	-44.8	-13	-31.8
5132.1	-57.1	342	1.8	H	11.7	-45.4	-13	-32.4
5132.1	-56	183	1.6	V	10.8	-45.2	-13	-32.2
1.4MHz bandwidth, Middle Channel								
180.05	-66.21	240	1.5	H	-1.7	-67.91	-13	-54.91
259.94	-64.12	76	2.0	V	-0.7	-64.82	-13	-51.82
3510	-51.5	46	1.5	H	7.8	-43.7	-13	-30.7
3510	-51.2	304	1.6	V	6.6	-44.6	-13	-31.6
5265	-52.7	62	1.8	H	9.5	-43.2	-13	-30.2
5265	-52.4	279	2.1	V	8.9	-43.5	-13	-30.5
1.4MHz bandwidth, High Channel								
180.05	-64.51	339	1.5	H	-1.7	-66.21	-13	-53.21
259.94	-64.07	231	1.7	V	-0.7	-64.77	-13	-51.77
3558.6	-52.4	173	1.6	H	7.8	-44.6	-13	-31.6
3558.6	-51.2	71	1.8	V	7	-44.2	-13	-31.2
5337.9	-52.8	269	1.6	H	9.4	-43.4	-13	-30.4
5337.9	-51.4	200	2.1	V	8.7	-42.7	-13	-29.7

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.

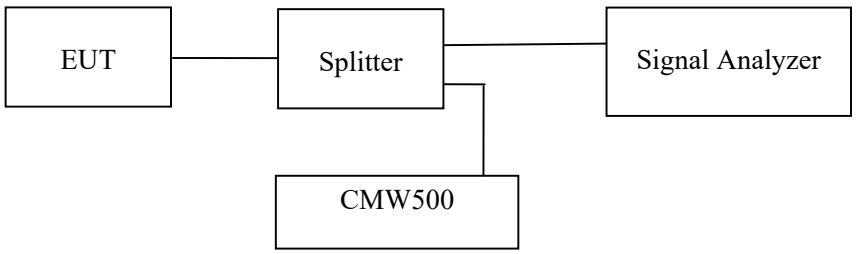
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

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

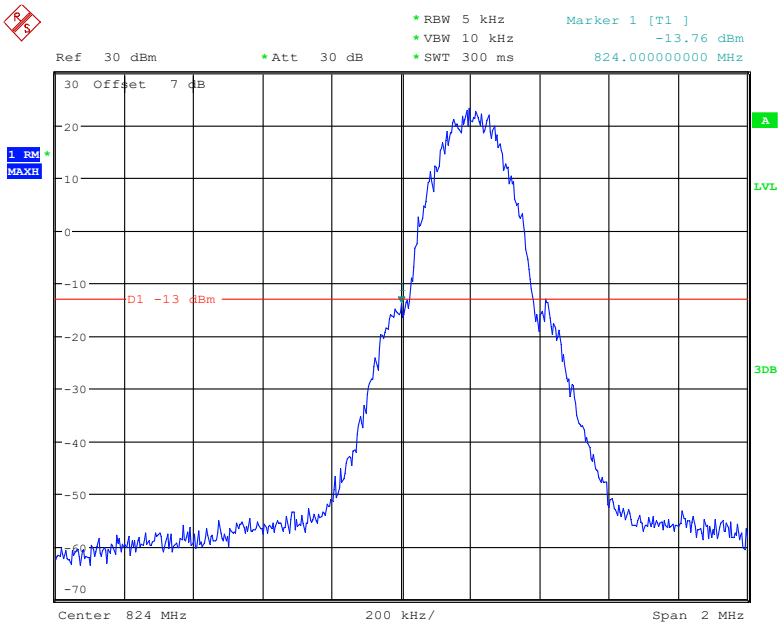
The testing was performed by Black Duan from 2022-02-10 to 2022-03-29.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

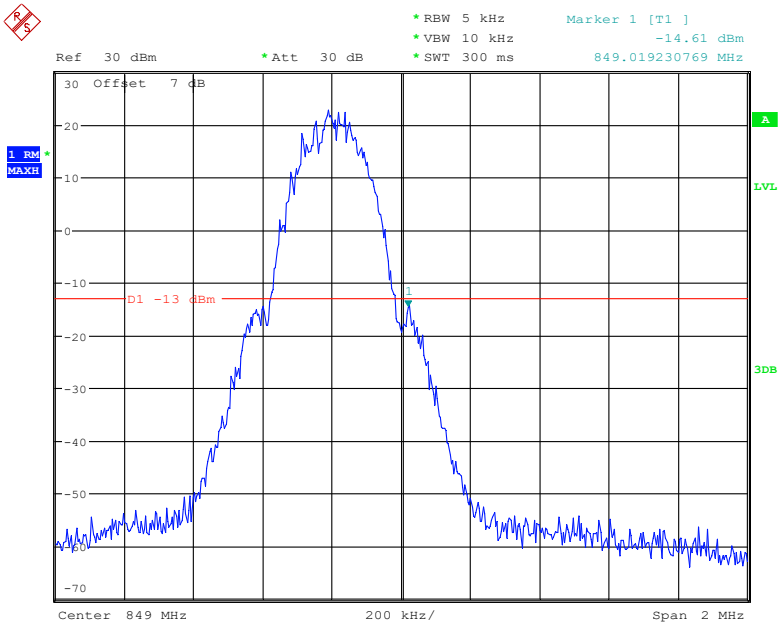
Please refer to the following plots.

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



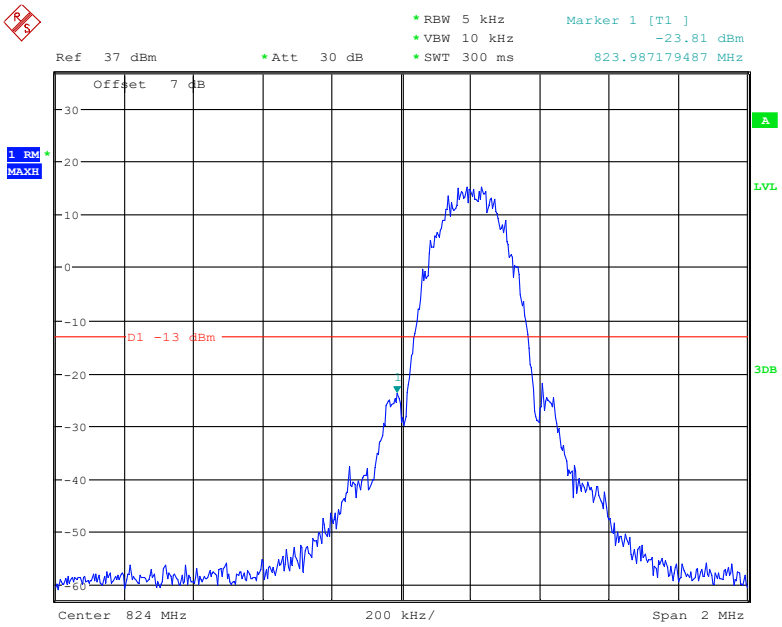
Date: 11.FEB.2022 14:36:29

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



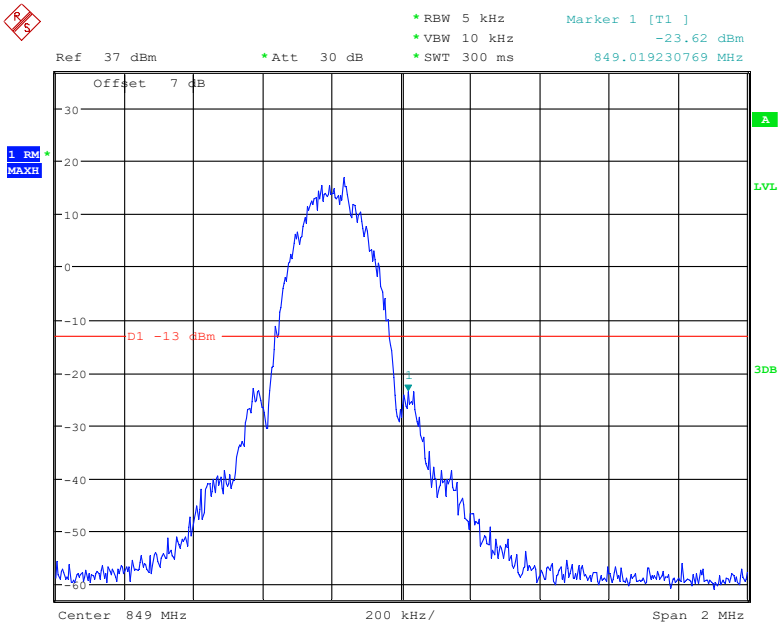
Date: 11.FEB.2022 14:37:09

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



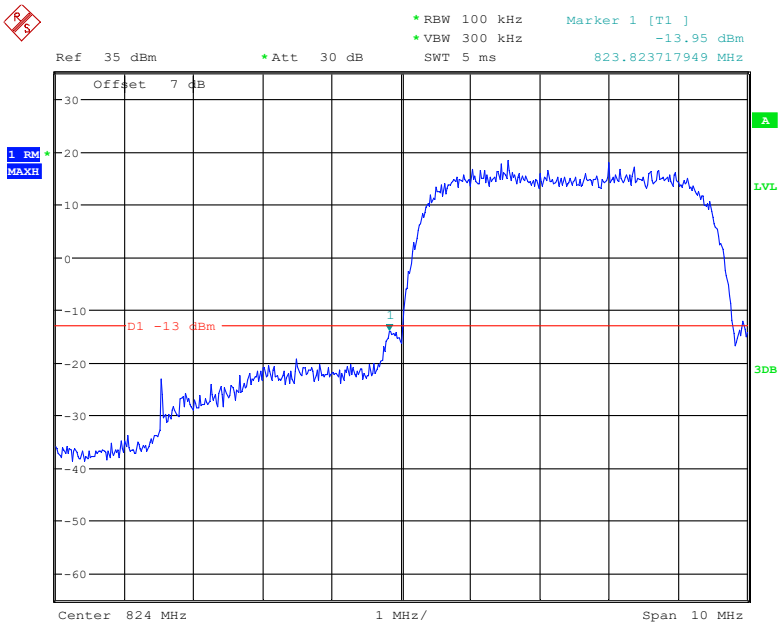
Date: 11.FEB.2022 14:48:24

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



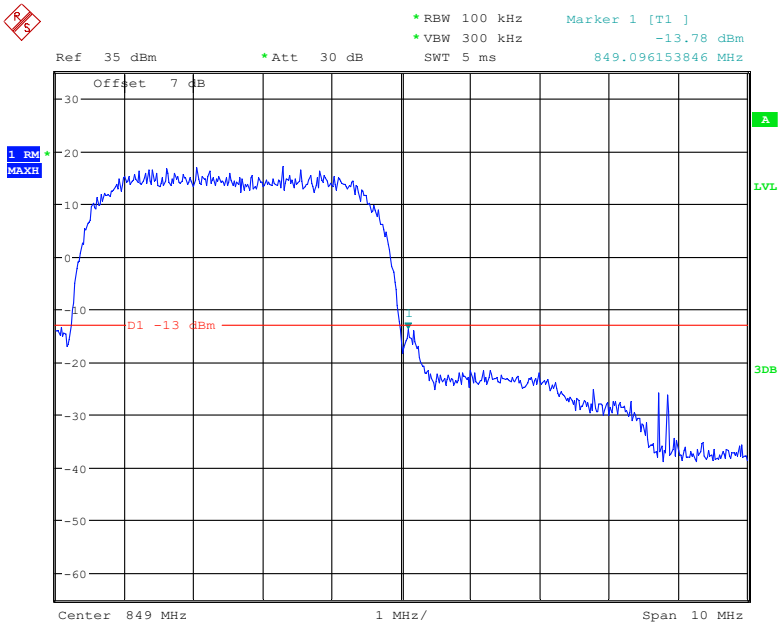
Date: 11.FEB.2022 14:49:00

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



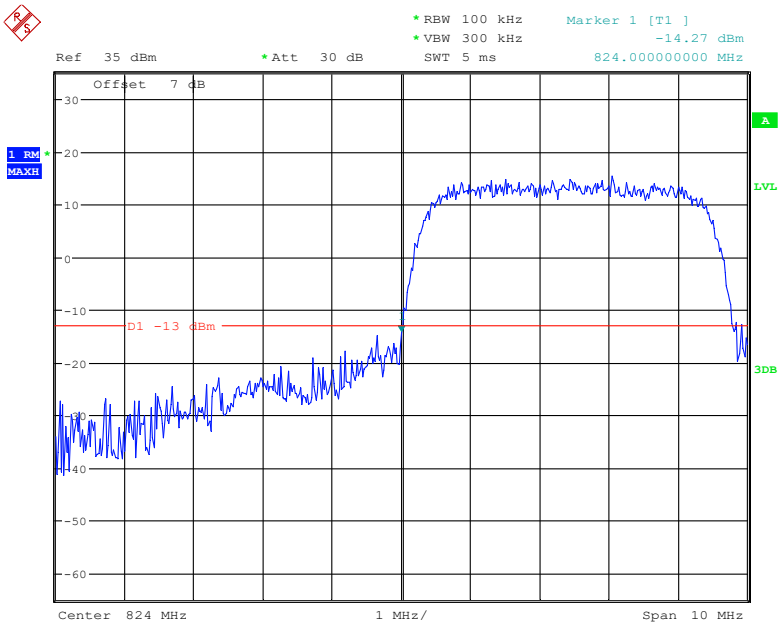
Date: 11.FEB.2022 13:30:50

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



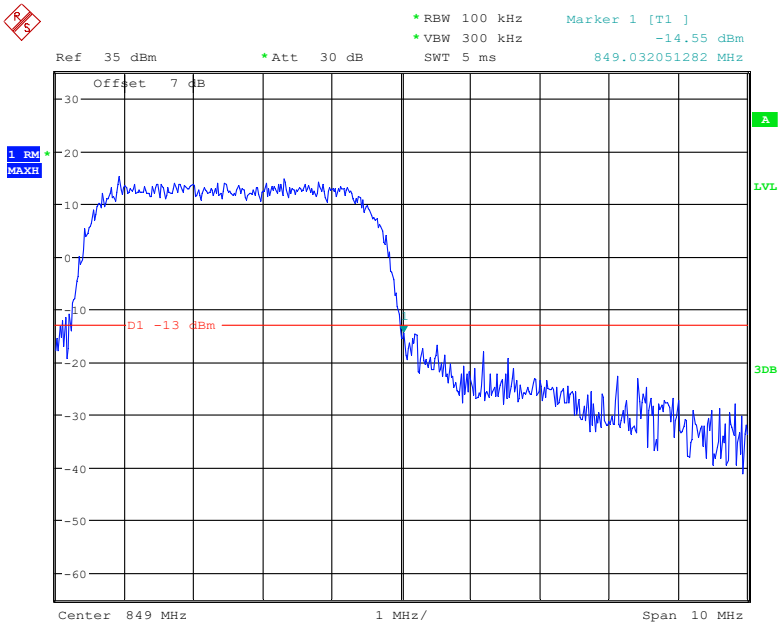
Date: 11.FEB.2022 13:31:17

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



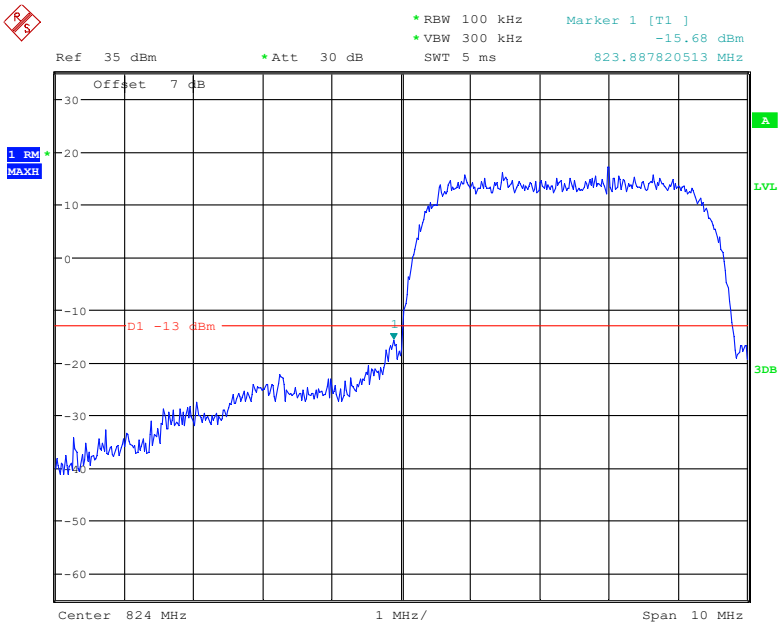
Date: 11.FEB.2022 13:36:33

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



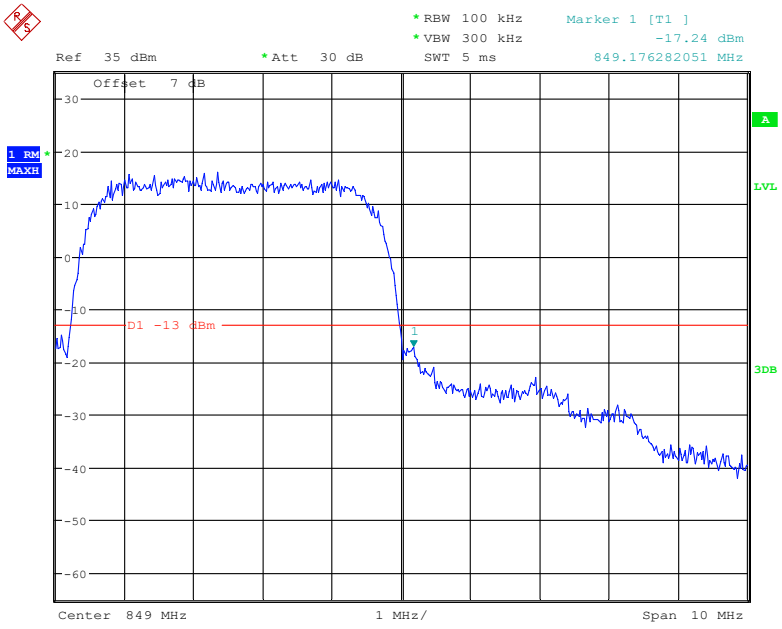
Date: 11.FEB.2022 13:36:59

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



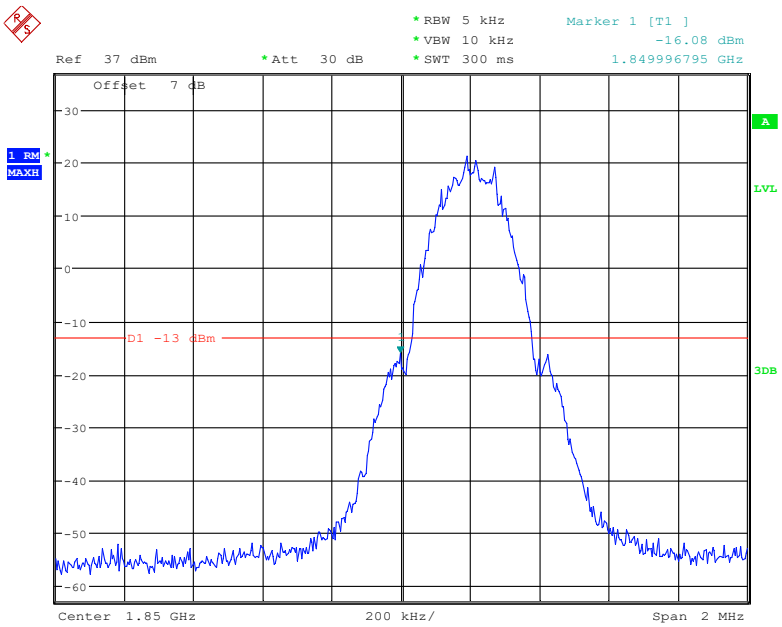
Date: 11.FEB.2022 14:11:01

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



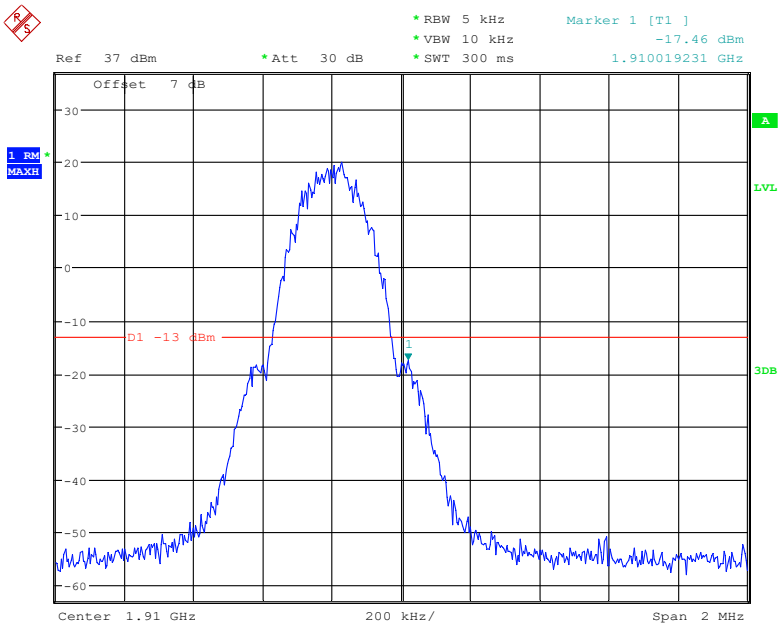
Date: 11.FEB.2022 14:11:25

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



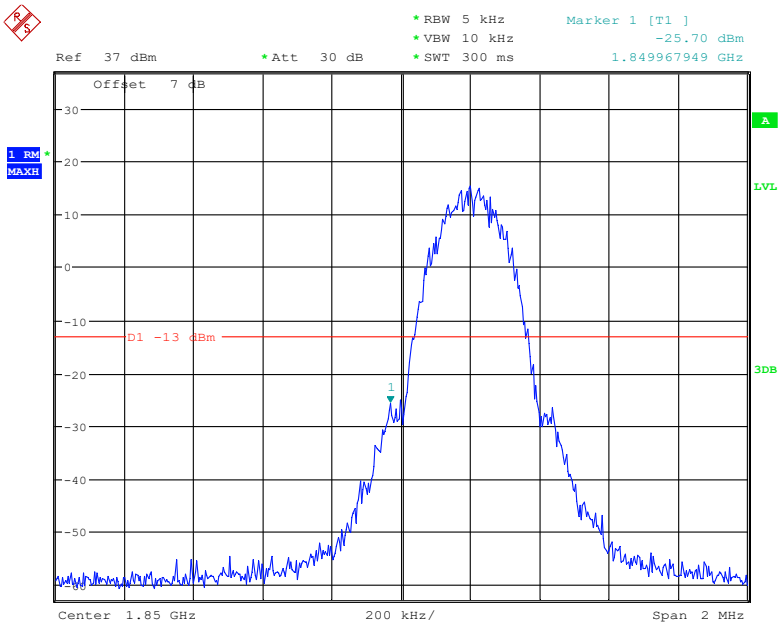
Date: 11.FEB.2022 15:04:30

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



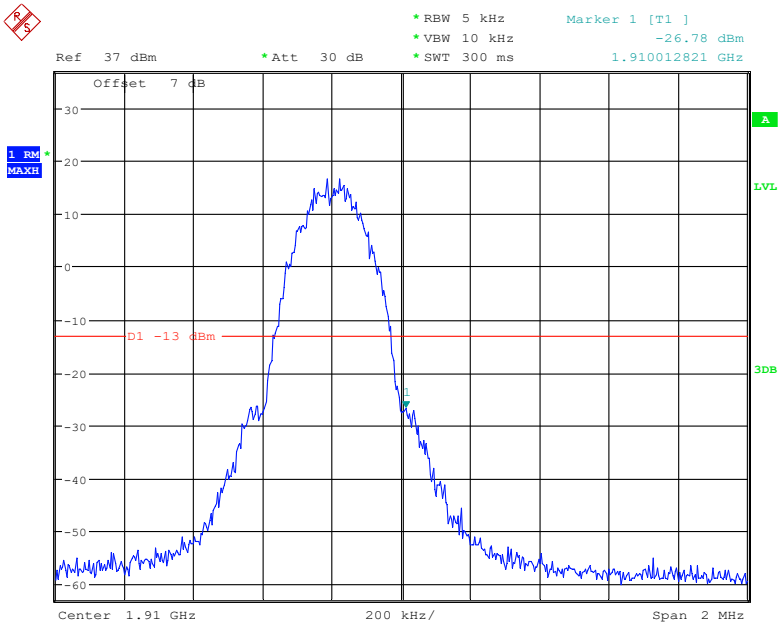
Date: 11.FEB.2022 15:03:31

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



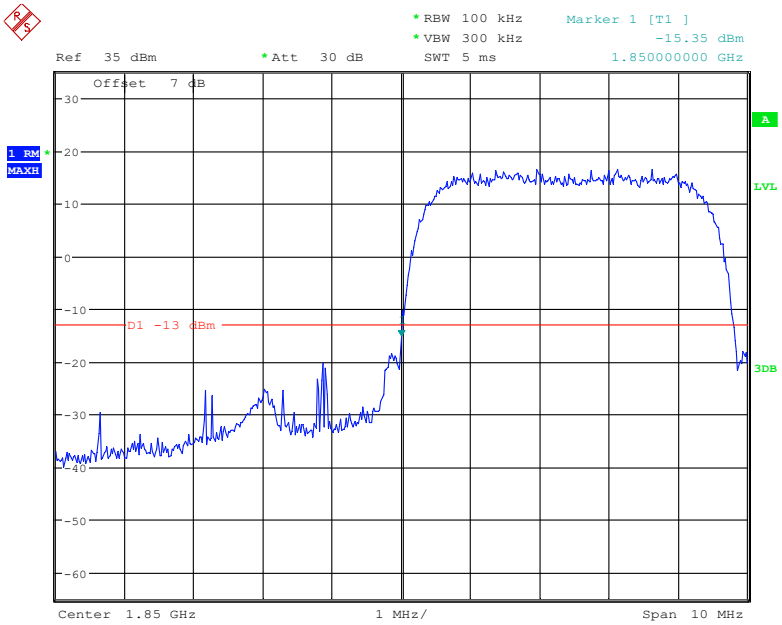
Date: 11.FEB.2022 14:50:59

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



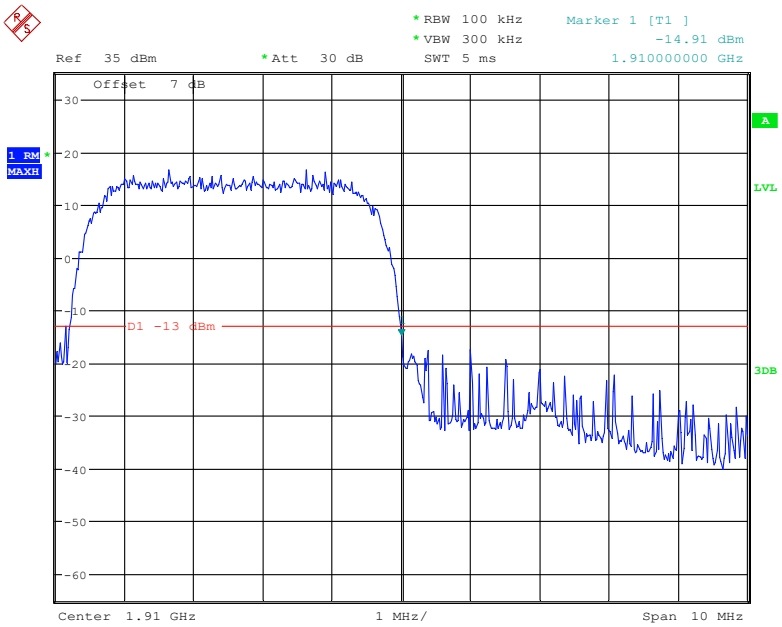
Date: 11.FEB.2022 14:51:55

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



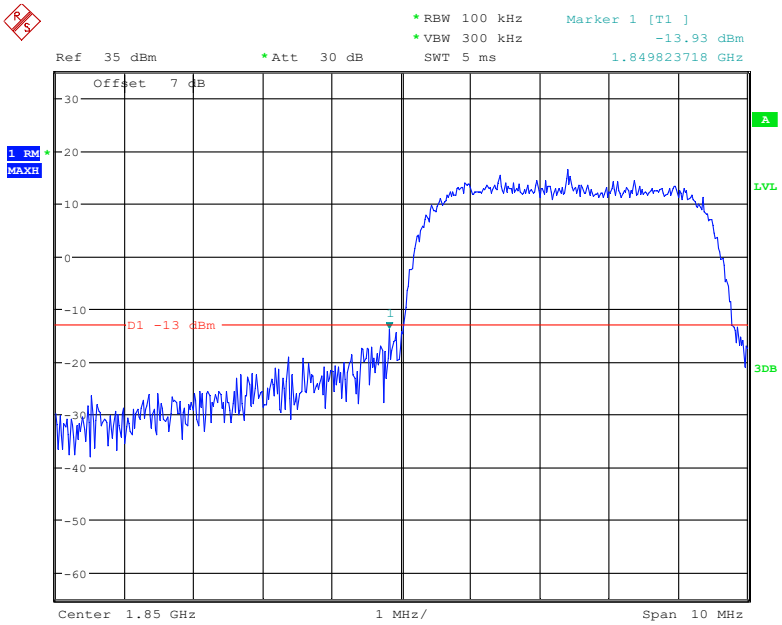
Date: 11.FEB.2022 13:28:44

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



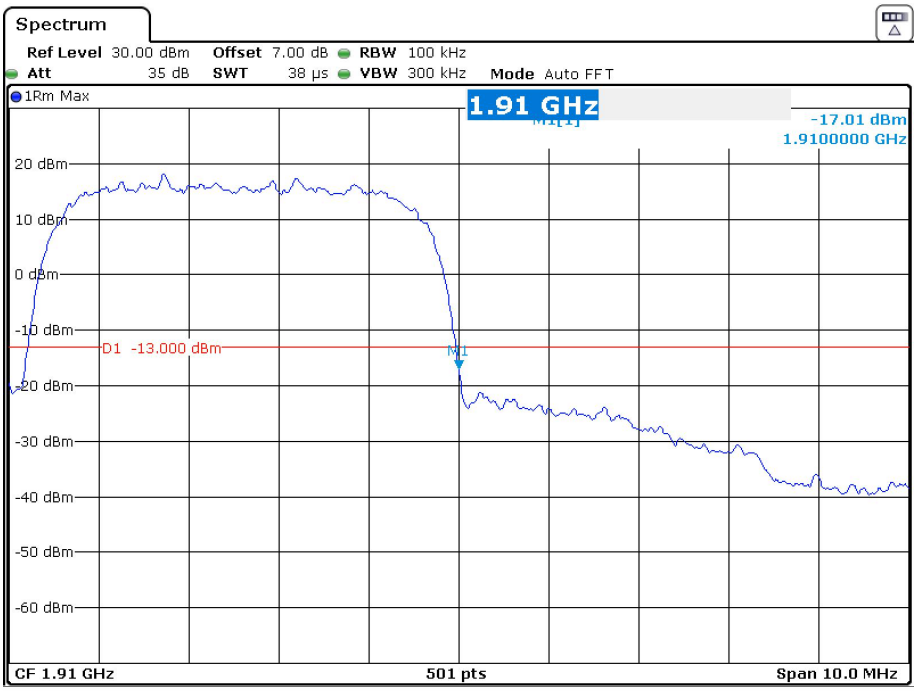
Date: 11.FEB.2022 13:29:19

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



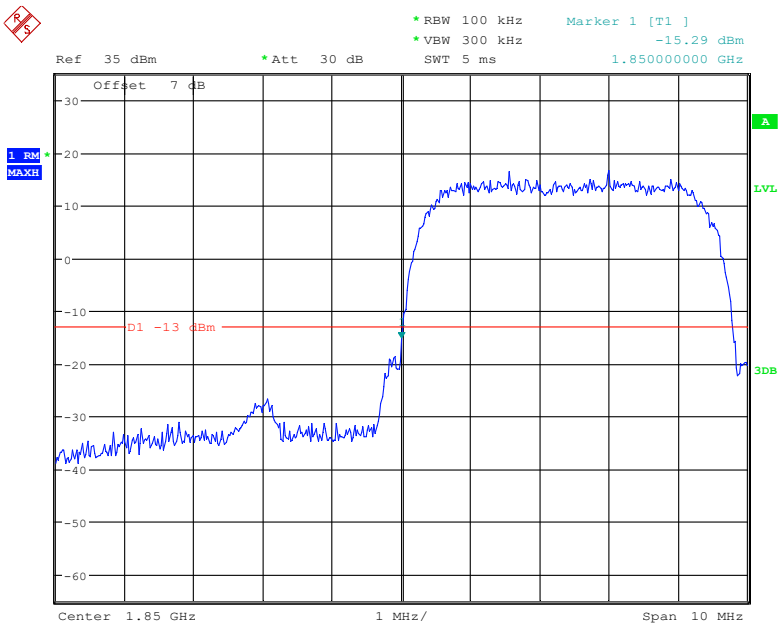
Date: 11.FEB.2022 13:34:32

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



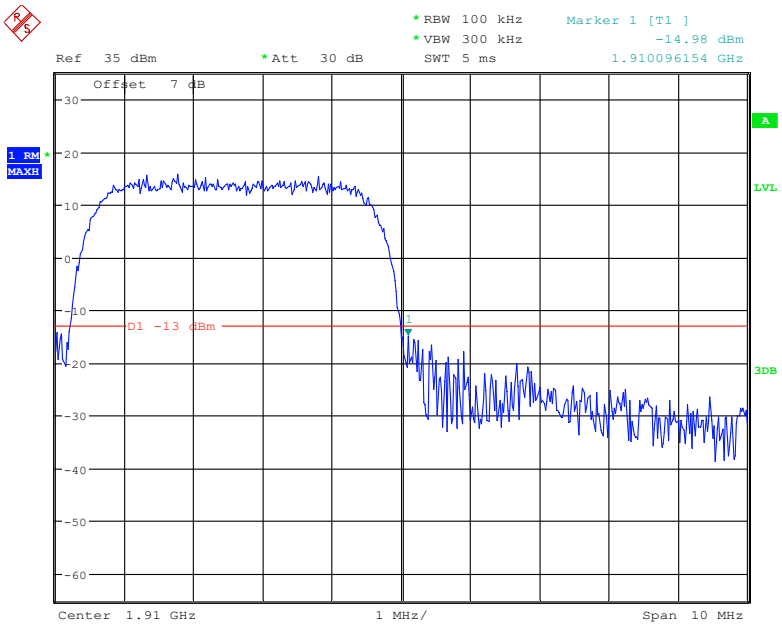
Date: 29.MAR.2022 17:21:12

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



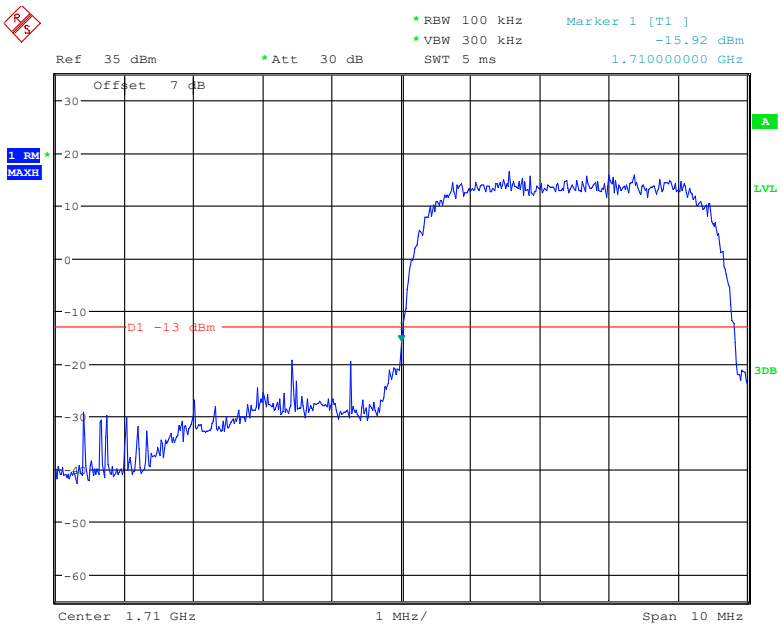
Date: 11.FEB.2022 14:07:21

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



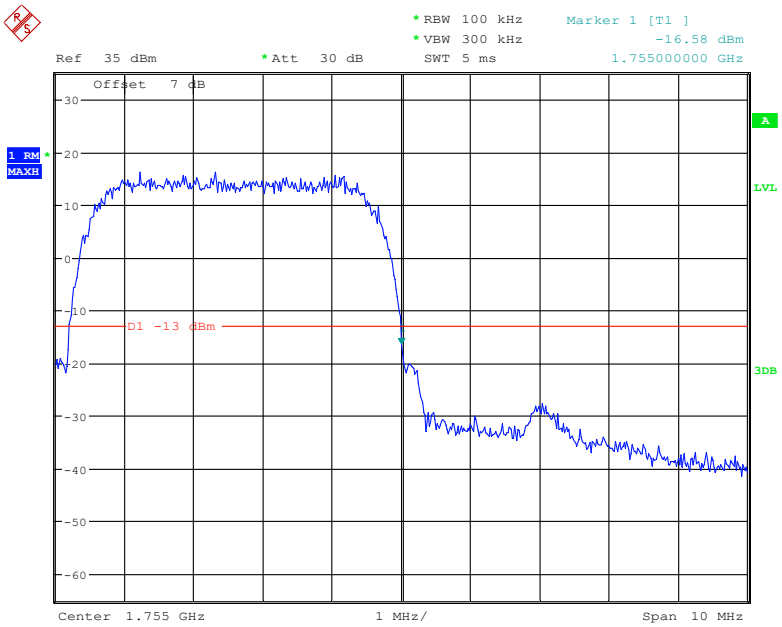
Date: 11.FEB.2022 14:08:12

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



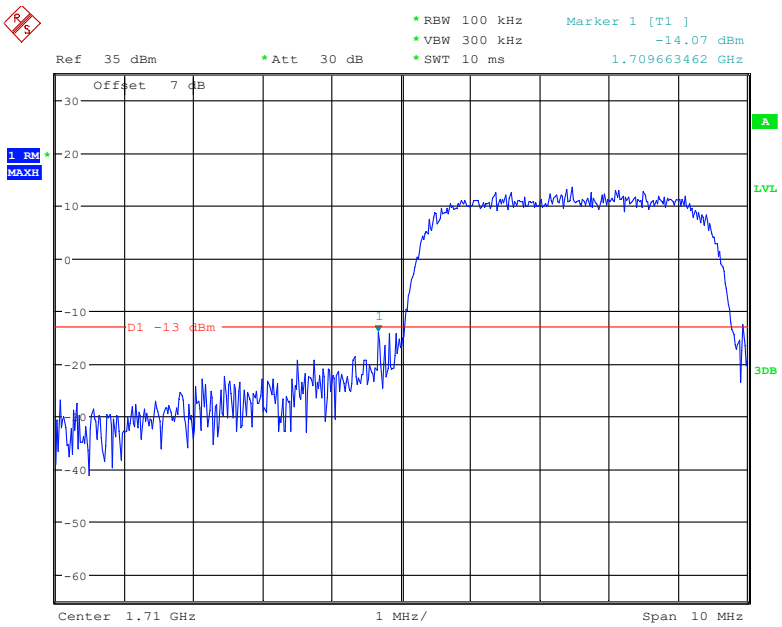
Date: 11.FEB.2022 13:29:56

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



Date: 11.FEB.2022 13:30:18

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



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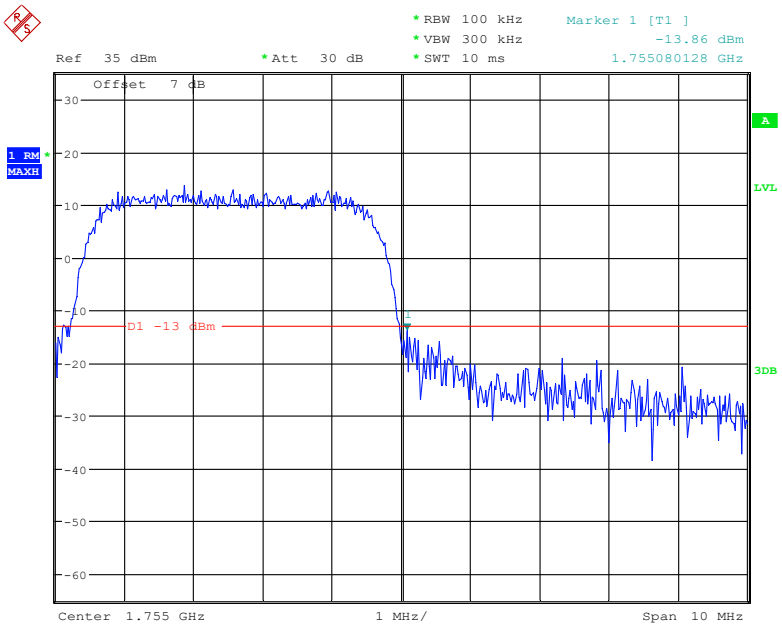
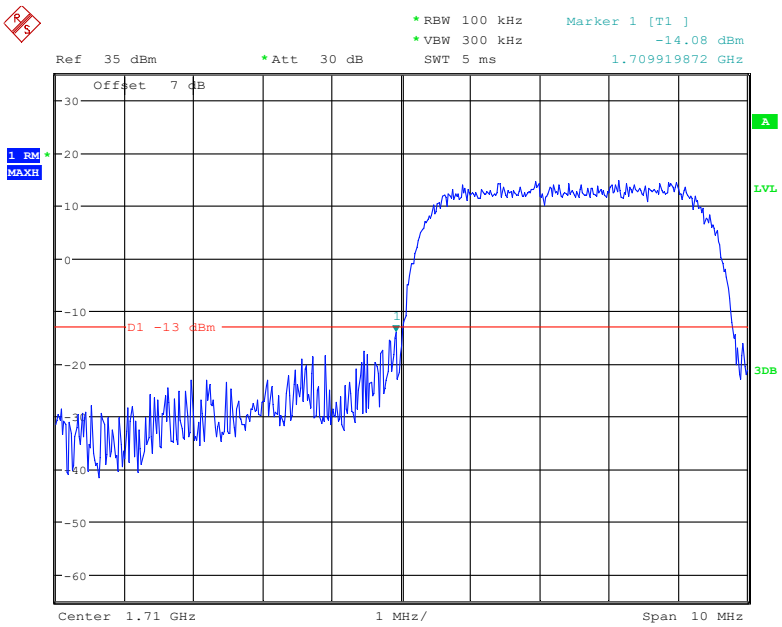
AWS Band, Right Band Edge for HSDPA (16QAM) Mode

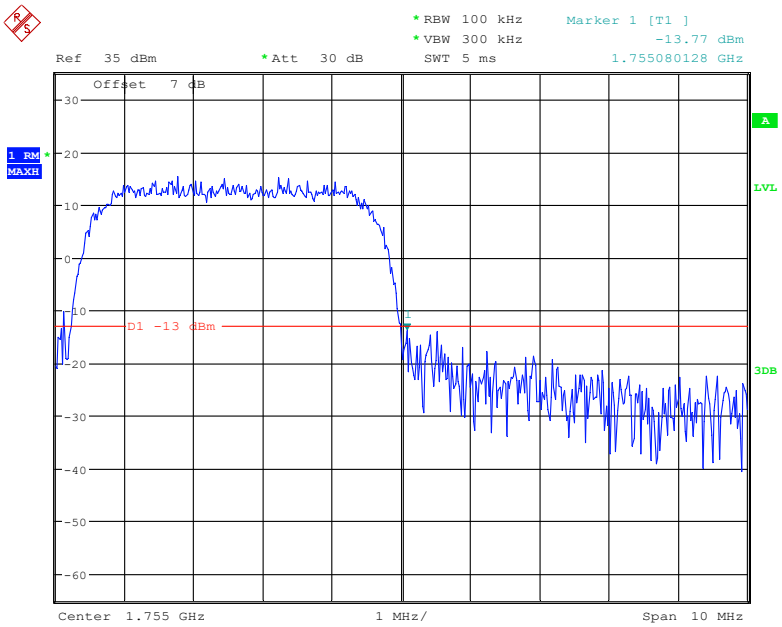


Date: 11.FEB.2022 13:36:00

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



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



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

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

Applicable Standard

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

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

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

Frequency Tolerance for Transmitters in the Public Mobile Services

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

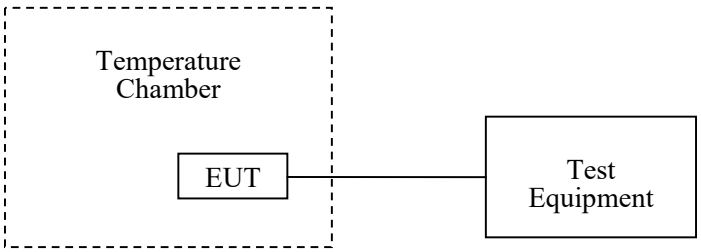
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

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

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

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



Test Data

Environmental Conditions

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

The testing was performed by Black Duan from 2022-02-10 to 2022-02-11.

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		-12	-0.0143	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		-2	-0.0024	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.	-1.02	-0.0012	2.5
-20		9.04	0.0108	2.5
-10		8.03	0.0096	2.5
0		5.01	0.0060	2.5
10		3.02	0.0036	2.5
20		-8.85	-0.0106	2.5
30		4.05	0.0048	2.5
40		5.02	0.0060	2.5
50		8.01	0.0096	2.5
20	L.V.	5.02	0.0060	2.5
	H.V.	6.01	0.0072	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		23	0.0122	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		12	0.0064	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		-7.99	-0.0043	pass
30		-5.36	-0.0029	pass
40		10.68	0.0057	pass
50		12.3	0.0065	pass
20	L.V.	14.22	0.0076	pass
	H.V.	13.21	0.0070	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.	1710.0553	1754.9767	1710	1755
-20		1710.0432	1754.9782	1710	1755
-10		1710.0223	1754.9758	1710	1755
0		1710.0214	1754.9766	1710	1755
10		1710.0175	1754.9784	1710	1755
20		1710.0146	1754.9775	1710	1755
30		1710.0135	1754.9788	1710	1755
40		1710.0122	1754.9772	1710	1755
50		1710.0128	1754.9781	1710	1755
20	L.V.	1710.0132	1754.9767	1710	1755
	H.V.	1710.0141	1754.9755	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	7.6	0.06	0.0000	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.	1710.3362	1754.8789	1710	1755
-20		1710.3277	1754.8764	1710	1755
-10		1710.2346	1754.8755	1710	1755
0		1710.2246	1754.8746	1710	1755
10		1710.2538	1754.8738	1710	1755
20		1710.3345	1754.8755	1710	1755
30		1710.3462	1754.8748	1710	1755
40		1710.3155	1754.8727	1710	1755
50		1710.2264	1754.8754	1710	1755
20	L.V.	1710.2241	1754.8753	1710	1755
	H.V.	1710.2251	1754.8726	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.	-2.83	-0.0034	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.	2500.1966	2569.9878	2500	2570
-20		2500.1957	2569.9862	2500	2570
-10		2500.1836	2569.9855	2500	2570
0		2500.1864	2569.9789	2500	2570
10		2500.1925	2569.9861	2500	2570
20		2500.1836	2569.9678	2500	2570
30		2500.1762	2569.9588	2500	2570
40		2500.1642	2569.9836	2500	2570
50		2500.1566	2569.9821	2500	2570
20	L.V.	2500.1437	2569.9729	2500	2570
	H.V.	2500.1564	2569.9657	2500	2570

Band 17:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	704.1288	715.8455	704	716
-20		704.1278	715.8462	704	716
-10		704.1276	715.8435	704	716
0		704.1252	715.8472	704	716
10		704.1257	715.8466	704	716
20		704.1291	715.8445	704	716
30		704.1256	715.8433	704	716
40		704.1261	715.8458	704	716
50		704.1252	715.8443	704	716
20	L.V.	704.1213	715.8467	704	716
	H.V.	704.1265	715.8442	704	716

Band 38:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2570.8382	2619.9833	2570	2620
-20		2570.8177	2619.8745	2570	2620
-10		2570.7245	2619.7632	2570	2620
0		2570.6159	2619.6554	2570	2620
10		2570.5126	2619.5436	2570	2620
20		2570.3933	2619.4325	2570	2620
30		2570.2837	2619.3226	2570	2620
40		2570.1733	2619.2128	2570	2620
50		2570.1625	2619.1352	2570	2620
20	L.V.	2570.1521	2619.1224	2570	2620
	H.V.	2570.1322	2619.1136	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.	2535.9756	2654.9858	2535	2655
-20		2535.8678	2654.8854	2535	2655
-10		2535.7563	2654.7752	2535	2655
0		2535.6428	2654.6653	2535	2655
10		2535.5326	2654.5547	2535	2655
20		2535.4245	2654.4432	2535	2655
30		2535.3176	2654.3353	2535	2655
40		2535.2156	2654.2264	2535	2655
50		2535.2934	2654.1765	2535	2655
20	L.V.	2535.8626	2654.0123	2535	2655
	H.V.	2535.8533	2654.0088	2535	2655

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

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.0267	1779.9752	1710	1780
-20		1710.0245	1779.9753	1710	1780
-10		1710.0268	1779.9835	1710	1780
0		1710.0252	1779.9742	1710	1780
10		1710.0248	1779.9753	1710	1780
20		1710.0252	1779.9745	1710	1780
30		1710.0246	1779.9752	1710	1780
40		1710.0258	1779.9748	1710	1780
50		1710.0246	1779.9833	1710	1780
20	L.V.	1710.0258	1779.9756	1710	1780
	H.V.	1710.0247	1779.9748	1710	1780

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.	-5.36	-0.0029	pass
-20		6.80	0.0036	pass
-10		-9.52	-0.0051	pass
0		-8.15	-0.0043	pass
10		-8.88	-0.0047	pass
20		-9.82	-0.0052	pass
30		8.38	0.0045	pass
40		6.75	0.0036	pass
50		-5.89	-0.0031	pass
20	L.V.	8.98	0.0048	pass
	H.V.	-7.83	-0.0042	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.	1710.2768	1754.7657	1710	1755
-20		1710.2758	1754.7563	1710	1755
-10		1710.2756	1754.7657	1710	1755
0		1710.2638	1754.7453	1710	1755
10		1710.2659	1754.7432	1710	1755
20		1710.2658	1754.7865	1710	1755
30		1710.2549	1754.7658	1710	1755
40		1710.2556	1754.7656	1710	1755
50		1710.2658	1754.7757	1710	1755
20	L.V.	1710.2649	1754.7559	1710	1755
	H.V.	1710.2656	1754.7563	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.	-4.38	-0.0052	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.	2500.7489	2569.8519	2500	2570
-20		2500.7375	2569.8533	2500	2570
-10		2500.7366	2569.8422	2500	2570
0		2500.7243	2569.8527	2500	2570
10		2500.6384	2569.8256	2500	2570
20		2500.6252	2569.7876	2500	2570
30		2500.6339	2569.7858	2500	2570
40		2500.6345	2569.8446	2500	2570
50		2500.6329	2569.8456	2500	2570
20	L.V.	2500.6237	2569.8352	2500	2570
	H.V.	2500.5426	2569.8286	2500	2570

Band 17:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	704.1275	715.8487	704	716
-20		704.1268	715.8462	704	716
-10		704.1253	715.8456	704	716
0		704.1245	715.8429	704	716
10		704.1241	715.8427	704	716
20		704.1236	715.8446	704	716
30		704.1256	715.8437	704	716
40		704.1238	715.8433	704	716
50		704.1229	715.8452	704	716
20	L.V.	704.1233	715.8456	704	716
	H.V.	704.1256	715.8463	704	716

Band 38:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2570.9868	2619.9822	2570	2620
-20		2570.8959	2619.8738	2570	2620
-10		2570.7826	2619.7667	2570	2620
0		2570.6735	2619.6556	2570	2620
10		2570.5639	2619.5485	2570	2620
20		2570.4535	2619.4353	2570	2620
30		2570.3446	2619.3299	2570	2620
40		2570.2378	2619.2155	2570	2620
50		2570.1286	2619.1138	2570	2620
20	L.V.	2570.2179	2619.8763	2570	2620
	H.V.	2570.2138	2619.7654	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.	2535.9455	2654.9668	2535	2655
-20		2535.8441	2654.8579	2535	2655
-10		2535.7365	2654.7483	2535	2655
0		2535.6268	2654.6377	2535	2655
10		2535.5137	2654.5269	2535	2655
20		2535.4175	2654.4538	2535	2655
30		2535.2989	2654.3587	2535	2655
40		2535.1886	2654.1889	2535	2655
50		2535.1835	2654.1872	2535	2655
20	L.V.	2535.1626	2654.0767	2535	2655
	H.V.	2535.0558	2654.0342	2535	2655

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

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.0256	1779.8356	1710	1780
-20		1710.0258	1779.8453	1710	1780
-10		1710.0247	1779.8367	1710	1780
0		1710.0276	1779.8357	1710	1780
10		1710.0258	1779.8362	1710	1780
20		1710.0237	1779.8335	1710	1780
30		1710.0229	1779.8347	1710	1780
40		1710.0245	1779.8369	1710	1780
50		1710.0236	1779.8375	1710	1780
20	L.V.	1710.0259	1779.8357	1710	1780
	H.V.	1710.0257	1779.8359	1710	1780

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