



TESTREPORT

Applicant Name : INFINIX MOBILITY LIMITED
Address : FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35
SHAN MEI STREET FOTAN NT, Hong Kong
Report Number : SZNS220106-00796E-RF-00C
FCC ID: 2AIZN-X6816C

Test Standard (s)

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

Sample Description

Product Type: Mobile Phone
Model No.: X6816C
Multiple Model(s) No.: N/A
Trade Mark: Infinix
Date Received: 2022/01/06
Date of Test: 2022/01/17~2022/02/08
Report Date: 2022/02/08

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

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Approved By:

Robert Li
EMC Engineer

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

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	GSM850/WCDMA Band5/LTE Band 5: -5dBi PCS1900/WCDMA Band 2/ LTE Band 2: 1dBi WCDMA Band 4/ LTE Band 4: -1dBi LTE Band 7: 1dBi LTE Band 38/LTE Band 41: 0dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5.0V from adapter
Sample serial number	SZNS220106-00796E-RF-S2 for Conducted and Radiated Emissions SZNS220106-00796E-RF-S1 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: U100XSA Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2.0A Note: There are two adapters have different manufacturer, which share the same specification.
Extreme condition*	LV: Low Voltage 3.6V NV: Normal Voltage 3.85V HV: High Voltage 4.4V (provided by the applicant)

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part 24-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		±0.082*10 ⁻⁷
Emissions, Radiated	30MHz - 1GHz	±4.28dB
	1GHz - 18GHz	±4.98dB
	18GHz - 26.5GHz	±5.06dB
Temperature		±1°C
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 (ISED), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

Test was performed as below table:

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

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

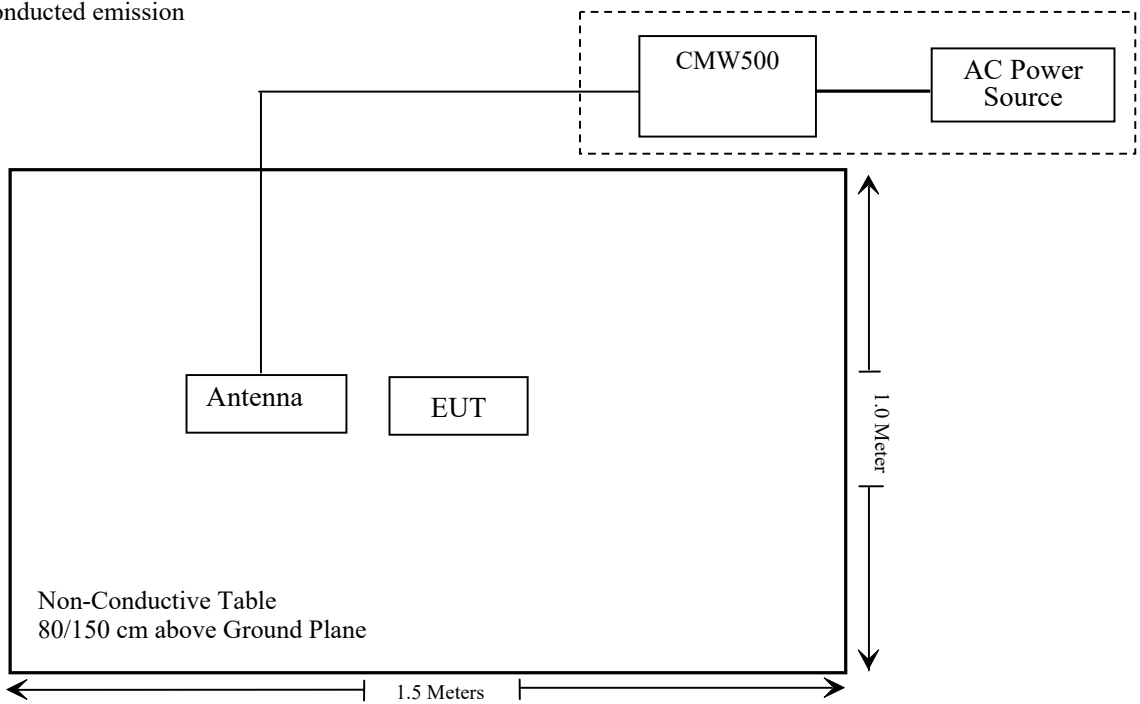
Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

Support Cable Description

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

Block Diagram of Test Setup

For conducted emission



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: SZNS220106-00796E-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
PASTERNAK	Horn Antenn	PE9852/2F-20	1120	2020/01/05	2023/01/04
PASTERNAK	Horn Antenn	PE9852/2F-20	1120	2020/01/05	2023/01/04
Unknown	RF Coaxial Cable	No.16	N200	2021/12/14	2022/12/13
Agilent	Signal Generator	N5183A	MY51040755	2021/12/13	2022/12/12

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
SPECTRUM ANALYZER	Rohde & Schwarz	FSU26	200982	2021/07/06	2022/07/05
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2021/12/13	2022/12/12
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2021/12/14	2022/12/13
Gongwen	Temp. & Humid. Chamber	HSD-500	109	2021/10/14	2022/10/13

* 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: SZNS220106-00796E-SA.

FCC§2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E& 27, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046,§ 22.913 (a)&§ 24.232(c); §27.50(d)(h)- RF OUTPUT POWER

Applicable Standard

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

According to FCC §2.1046 and §24.232 (c),mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

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

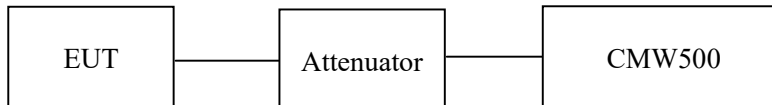
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

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

Test Procedure

Conducted method:

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



Test Data

Environmental Conditions

Temperature:	26.4~26.8 °C
Relative Humidity:	57~59 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lü from 2022-01-19 to 2022-01-22.

Conducted Power**Cellular Band (Part 22H)**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	32.70	25.55	38.45
	190	836.6	32.90	25.75	38.45
	251	848.8	33.00	25.85	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	32.70	30.28	28.15	26.80	25.55	23.13	21.00	19.65	38.45
	190	836.6	32.83	30.37	28.25	26.91	25.68	23.22	21.10	19.76	38.45
	251	848.8	32.96	30.46	28.32	27.02	25.81	23.31	21.17	19.87	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	
EGPRS	128	824.2	26.07	24.20	21.86	20.52	18.92	17.05	14.71	13.37	38.45
	190	836.6	26.40	24.59	22.27	20.58	19.25	17.44	15.12	13.43	38.45
	251	848.8	26.42	24.58	22.27	20.58	19.27	17.43	15.12	13.43	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		23.10	23.55	23.38	15.95	16.40	16.23
	HSDPA	1	22.39	22.11	22.22	15.24	14.96	15.07
		2	22.34	22.11	22.35	15.19	14.96	15.20
		3	22.20	22.33	22.27	15.05	15.18	15.12
		4	22.37	22.30	22.06	15.22	15.15	14.91
	HSUPA	1	22.49	22.49	22.42	15.34	15.34	15.27
		2	22.41	22.16	22.42	15.26	15.01	15.27
		3	22.47	22.12	22.44	15.32	14.97	15.29
		4	22.17	22.32	22.39	15.02	15.17	15.24
		5	22.33	22.30	22.20	15.18	15.15	15.05
	HSPA+	1	22.19	22.54	22.15	15.04	15.39	15.00

Note:

ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)

For GSM850 / WCDMA Band5: Antenna Gain = -5.0dBi = -7.15dBd (0dBd=2.15dBi)

Limit: ERP ≤ 38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	28.80	29.80	33
	661	1880.0	29.00	30.00	33
	810	1909.8	29.20	30.20	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	28.94	26.92	25.52	23.25	29.94	27.92	26.52	24.25	33
	661	1880.0	29.24	26.78	25.36	23.13	30.24	27.78	26.36	24.13	33
	810	1909.8	29.34	26.69	25.28	22.96	30.34	27.69	26.28	23.96	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	25.70	23.59	21.56	20.98	26.70	24.59	22.56	21.98	33
	661	1880.0	25.89	23.68	21.60	20.46	26.89	24.68	22.60	21.46	33
	810	1909.8	25.39	22.93	20.85	19.61	26.39	23.93	21.85	20.61	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		19.47	19.41	19.67	20.47	20.41	20.67
	HSDPA	1	17.99	18.01	17.84	18.99	19.01	18.84
		2	18.15	17.91	17.81	19.15	18.91	18.81
		3	17.96	17.91	17.88	18.96	18.91	18.88
		4	18.07	18.10	18.06	19.07	19.10	19.06
	HSUPA	1	18.31	18.08	18.04	19.31	19.08	19.04
		2	18.29	18.19	18.27	19.29	19.19	19.27
		3	18.26	18.20	18.37	19.26	19.20	19.37
		4	18.34	18.33	18.33	19.34	19.33	19.33
		5	18.53	18.36	18.44	19.53	19.36	19.44
HSPA+	1	18.15	18.55	18.78	19.15	19.55	19.78	

Note:

EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For PCS1900 / WCDMA Band2: Antenna Gain = 1.0dBi

Limit: EIRP ≤ 33dBm

AWS Band (Part 27)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		19.36	19.69	19.63	18.36	18.69	18.63
	HSDPA	1	18.22	18.38	18.22	17.22	17.38	17.22
		2	18.34	18.41	18.43	17.34	17.41	17.43
		3	18.52	18.28	18.48	17.52	17.28	17.48
		4	18.49	18.38	18.41	17.49	17.38	17.41
	HSUPA	1	18.73	18.76	18.91	17.73	17.76	17.91
		2	19.01	18.71	18.85	18.01	17.71	17.85
		3	18.97	18.94	18.82	17.97	17.94	17.82
		4	18.80	18.80	18.84	17.80	17.80	17.84
		5	18.98	19.04	18.95	17.98	18.04	17.95
	HSPA+	1	18.64	18.94	18.84	17.64	17.94	17.84

Note:

EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band4: Antenna Gain = -1.0dBi

Limit: EIRP ≤ 30dBm

LTE Band 2:**Maximum Output Power**

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	18.44	18.05	18.12	19.44	19.05	19.12
		RB1#3	18.69	18.21	18.16	19.69	19.21	19.16
		RB1#5	18.52	18.03	18.16	19.52	19.03	19.16
		RB3#0	18.58	18.17	18.14	19.58	19.17	19.14
		RB3#3	18.76	18.16	18.19	19.76	19.16	19.19
		RB6#0	17.66	18.17	17.78	18.66	19.17	18.78
	16QAM	RB1#0	17.51	17.06	17.82	18.51	18.06	18.82
		RB1#3	17.81	17.25	17.98	18.81	18.25	18.98
		RB1#5	17.68	17.06	17.77	18.68	18.06	18.77
		RB3#0	17.82	17.39	17.80	18.82	18.39	18.80
		RB3#3	17.86	17.38	17.78	18.86	18.38	18.78
		RB6#0	16.66	17.16	16.83	17.66	18.16	17.83
3.0	QPSK	RB1#0	18.69	18.11	18.49	19.69	19.11	19.49
		RB1#8	18.97	18.19	18.77	19.97	19.19	19.77
		RB1#14	18.94	18.07	18.57	19.94	19.07	19.57
		RB6#0	17.70	18.21	17.87	18.70	19.21	18.87
		RB6#9	17.87	18.20	17.81	18.87	19.20	18.81
		RB15#0	17.82	18.24	17.87	18.82	19.24	18.87
	16QAM	RB1#0	18.17	17.29	17.78	19.17	18.29	18.78
		RB1#8	18.46	17.35	17.86	19.46	18.35	18.86
		RB1#14	18.41	17.26	17.68	19.41	18.26	18.68
		RB6#0	16.76	17.22	16.81	17.76	18.22	17.81
		RB6#9	16.93	17.20	16.76	17.93	18.20	17.76
		RB15#0	16.88	17.15	16.92	17.88	18.15	17.92

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	18.45	18.81	18.35	19.45	19.81	19.35
		RB1#13	19.21	19.27	18.87	20.21	20.27	19.87
		RB1#24	18.87	18.77	18.25	19.87	19.77	19.25
		RB15#0	17.78	18.21	17.87	18.78	19.21	18.87
		RB15#10	17.96	18.20	17.84	18.96	19.20	18.84
		RB25#0	17.84	18.17	17.81	18.84	19.17	18.81
	16QAM	RB1#0	17.16	18.17	17.55	18.16	19.17	18.55
		RB1#13	17.93	18.61	18.03	18.93	19.61	19.03
		RB1#24	17.62	18.14	17.47	18.62	19.14	18.47
		RB15#0	16.81	17.13	16.88	17.81	18.13	17.88
		RB15#10	16.99	17.12	16.85	17.99	18.12	17.85
		RB25#0	16.86	17.12	16.83	17.86	18.12	17.83
10.0	QPSK	RB1#0	17.83	18.95	18.66	18.83	19.95	19.66
		RB1#25	18.58	19.19	18.80	19.58	20.19	19.80
		RB1#49	19.10	19.47	18.88	20.10	20.47	19.88
		RB25#0	17.43	18.28	18.00	18.43	19.28	19.00
		RB25#25	18.13	18.52	18.13	19.13	19.52	19.13
		RB50#0	17.80	18.41	18.06	18.80	19.41	19.06
	16QAM	RB1#0	17.58	18.25	17.87	18.58	19.25	18.87
		RB1#25	18.30	18.35	17.87	19.30	19.35	18.87
		RB1#49	18.85	18.79	18.11	19.85	19.79	19.11
		RB25#0	16.36	17.23	17.05	17.36	18.23	18.05
		RB25#25	17.07	17.48	17.19	18.07	18.48	18.19
		RB50#0	16.71	17.34	17.06	17.71	18.34	18.06

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	17.93	19.24	18.25	18.93	20.24	19.25
		RB1#38	18.76	19.17	18.19	19.76	20.17	19.19
		RB1#74	18.67	19.30	17.98	19.67	20.30	18.98
		RB36#0	17.61	18.39	17.32	18.61	19.39	18.32
		RB36#39	18.02	18.40	17.16	19.02	19.40	18.16
		RB75#0	17.82	18.37	17.24	18.82	19.37	18.24
	16QAM	RB1#0	17.70	18.42	17.56	18.70	19.42	18.56
		RB1#38	18.49	18.33	17.58	19.49	19.33	18.58
		RB1#74	18.42	18.50	17.30	19.42	19.50	18.30
		RB36#0	16.47	17.33	16.44	17.47	18.33	17.44
		RB36#39	16.90	17.35	16.28	17.90	18.35	17.28
		RB75#0	16.70	17.32	16.35	17.70	18.32	17.35
20.0	QPSK	RB1#0	18.61	18.08	18.59	19.61	19.08	19.59
		RB1#50	19.12	19.20	18.24	20.12	20.20	19.24
		RB1#99	19.00	19.93	18.23	20.00	20.93	19.23
		RB50#0	18.05	18.73	17.54	19.05	19.73	18.54
		RB50#50	18.23	18.72	17.34	19.23	19.72	18.34
		RB100#0	18.13	18.70	17.42	19.13	19.70	18.42
	16QAM	RB1#0	17.89	17.36	18.04	18.89	18.36	19.04
		RB1#50	18.42	18.43	17.79	19.42	19.43	18.79
		RB1#99	18.30	19.22	17.70	19.30	20.22	18.70
		RB50#0	17.04	17.64	16.68	18.04	18.64	17.68
		RB50#50	17.22	17.63	16.49	18.22	18.63	17.49
		RB100#0	17.07	17.61	16.57	18.07	18.61	17.57

Note:

$EIRP(dBm) = \text{Conducted Power}(dBm) + \text{Antenna Gain}(dBi)$

For Band 2: Antenna Gain = 1.0dBi

Limit: $EIRP \leq 33dBm$

LTE Band 4**Maximum Output Power**

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	19.91	19.93	19.84	18.91	18.93	18.84
		RB1#3	19.90	19.87	19.82	18.90	18.87	18.82
		RB1#5	20.01	19.89	19.78	19.01	18.89	18.78
		RB3#0	19.90	19.95	19.84	18.90	18.95	18.84
		RB3#3	19.99	19.99	19.80	18.99	18.99	18.80
		RB6#0	18.90	19.01	18.80	17.90	18.01	17.80
	16QAM	RB1#0	19.55	19.62	18.73	18.55	18.62	17.73
		RB1#3	19.50	19.62	18.70	18.50	18.62	17.70
		RB1#5	19.55	19.63	18.75	18.55	18.63	17.75
		RB3#0	18.91	18.81	18.88	17.91	17.81	17.88
		RB3#3	18.96	18.83	18.70	17.96	17.83	17.70
		RB6#0	18.90	18.71	18.51	17.90	17.71	17.51
3.0	QPSK	RB1#0	19.91	19.92	19.87	18.91	18.92	18.87
		RB1#8	20.00	20.10	19.98	19.00	19.10	18.98
		RB1#14	19.92	19.94	19.74	18.92	18.94	18.74
		RB6#0	18.88	18.99	18.73	17.88	17.99	17.73
		RB6#9	18.93	18.91	18.83	17.93	17.91	17.83
		RB15#0	18.90	19.01	18.75	17.90	18.01	17.75
	16QAM	RB1#0	19.38	19.62	18.74	18.38	18.62	17.74
		RB1#8	19.26	19.65	18.65	18.26	18.65	17.65
		RB1#14	19.33	19.60	18.65	18.33	18.60	17.65
		RB6#0	18.96	18.66	18.57	17.96	17.66	17.57
		RB6#9	19.09	18.80	18.36	18.09	17.80	17.36
		RB15#0	19.05	18.67	18.60	18.05	17.67	17.60

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	19.94	19.99	19.68	18.94	18.99	18.68
		RB1#13	20.01	20.02	19.63	19.01	19.02	18.63
		RB1#24	20.02	19.93	19.68	19.02	18.93	18.68
		RB15#0	18.90	18.95	18.95	17.90	17.95	17.95
		RB15#10	19.04	18.84	18.91	18.04	17.84	17.91
		RB25#0	18.94	18.91	18.78	17.94	17.91	17.78
	16QAM	RB1#0	17.99	18.98	18.32	16.99	17.98	17.32
		RB1#13	18.00	19.00	18.42	17.00	18.00	17.42
		RB1#24	17.99	18.97	18.36	16.99	17.97	17.36
		RB15#0	18.97	18.70	18.94	17.97	17.70	17.94
		RB15#10	19.01	18.86	18.72	18.01	17.86	17.72
		RB25#0	18.96	18.76	18.79	17.96	17.76	17.79
10.0	QPSK	RB1#0	19.75	20.02	19.93	18.75	19.02	18.93
		RB1#25	19.86	19.89	19.89	18.86	18.89	18.89
		RB1#49	19.86	19.87	20.04	18.86	18.87	19.04
		RB25#0	18.82	18.81	18.84	17.82	17.81	17.84
		RB25#25	19.05	18.84	18.70	18.05	17.84	17.70
		RB50#0	18.85	18.94	18.72	17.85	17.94	17.72
	16QAM	RB1#0	18.93	19.01	18.30	17.93	18.01	17.30
		RB1#25	19.00	19.02	18.25	18.00	18.02	17.25
		RB1#49	19.12	18.97	18.21	18.12	17.97	17.21
		RB25#0	19.38	18.68	19.38	18.38	17.68	18.38
		RB25#25	19.54	19.30	19.21	18.54	18.30	18.21
		RB50#0	19.42	18.99	19.25	18.42	17.99	18.25

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	19.78	20.07	19.95	18.78	19.07	18.95
		RB1#38	19.85	19.90	19.90	18.85	18.90	18.90
		RB1#74	19.86	19.75	20.00	18.86	18.75	19.00
		RB36#0	18.45	18.35	18.32	17.45	17.35	17.32
		RB36#39	18.40	18.57	18.26	17.40	17.57	17.26
		RB75#0	18.59	18.29	18.33	17.59	17.29	17.33
	16QAM	RB1#0	19.02	19.71	19.12	18.02	18.71	18.12
		RB1#38	19.03	19.60	19.18	18.03	18.60	18.18
		RB1#74	19.13	19.62	19.14	18.13	18.62	18.14
		RB36#0	18.73	18.03	18.59	17.73	17.03	17.59
		RB36#39	18.49	18.56	18.23	17.49	17.56	17.23
		RB75#0	18.61	18.30	18.42	17.61	17.30	17.42
20.0	QPSK	RB1#0	20.00	19.96	19.93	19.00	18.96	18.93
		RB1#50	20.03	19.97	19.85	19.03	18.97	18.85
		RB1#99	20.00	19.84	20.11	19.00	18.84	19.11
		RB50#0	18.46	18.47	18.32	17.46	17.47	17.32
		RB50#50	18.67	18.37	18.34	17.67	17.37	17.34
		RB100#0	18.47	18.62	18.34	17.47	17.62	17.34
	16QAM	RB1#0	18.78	19.33	19.35	17.78	18.33	18.35
		RB1#50	18.82	19.29	19.33	17.82	18.29	18.33
		RB1#99	18.91	19.21	19.49	17.91	18.21	18.49
		RB50#0	19.13	18.32	18.80	18.13	17.32	17.80
		RB50#50	18.87	18.89	18.58	17.87	17.89	17.58
		RB100#0	19.02	18.61	18.69	18.02	17.61	17.69

Note:

$EIRP(dBm) = \text{Conducted Power}(dBm) + \text{Antenna Gain}(dBi)$

For Band 4: Antenna Gain = -1.0dBi

Limit: $EIRP \leq 30dBm$

LTE Band 5:**Maximum Output Power**

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	23.69	23.79	23.94	16.54	16.64	16.79
		RB1#3	23.78	23.81	23.83	16.63	16.66	16.68
		RB1#5	23.77	23.77	23.81	16.62	16.62	16.66
		RB3#0	23.76	23.83	23.83	16.61	16.68	16.68
		RB3#3	23.84	23.90	23.68	16.69	16.75	16.53
		RB6#0	22.70	22.84	22.64	15.55	15.69	15.49
	16QAM	RB1#0	22.84	23.29	22.06	15.69	16.14	14.91
		RB1#3	22.86	23.28	22.09	15.71	16.13	14.94
		RB1#5	22.88	23.31	22.02	15.73	16.16	14.87
		RB3#0	22.50	22.84	22.39	15.35	15.69	15.24
		RB3#3	22.50	22.77	22.27	15.35	15.62	15.12
		RB6#0	21.66	21.91	21.72	14.51	14.76	14.57
3.0	QPSK	RB1#0	23.63	23.79	23.94	16.48	16.64	16.79
		RB1#8	23.65	23.89	23.97	16.50	16.74	16.82
		RB1#14	23.59	23.84	23.99	16.44	16.69	16.84
		RB6#0	22.67	22.75	22.77	15.52	15.60	15.62
		RB6#9	22.54	22.78	22.64	15.39	15.63	15.49
		RB15#0	22.72	22.81	22.73	15.57	15.66	15.58
	16QAM	RB1#0	22.72	22.98	22.19	15.57	15.83	15.04
		RB1#8	22.71	22.92	22.31	15.56	15.77	15.16
		RB1#14	22.60	22.90	22.23	15.45	15.75	15.08
		RB6#0	21.81	21.86	21.80	14.66	14.71	14.65
		RB6#9	22.02	21.93	21.88	14.87	14.78	14.73
		RB15#0	21.64	21.79	21.71	14.49	14.64	14.56

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	23.57	23.89	23.73	16.42	16.74	16.58
		RB1#13	23.57	23.87	23.73	16.42	16.72	16.58
		RB1#24	23.61	23.88	23.68	16.46	16.73	16.53
		RB15#0	22.81	22.67	22.85	15.66	15.52	15.70
		RB15#10	22.52	22.81	22.67	15.37	15.66	15.52
		RB25#0	22.52	22.86	22.72	15.37	15.71	15.57
	16QAM	RB1#0	22.04	22.79	22.68	14.89	15.64	15.53
		RB1#13	21.97	22.72	22.62	14.82	15.57	15.47
		RB1#24	21.90	22.73	22.67	14.75	15.58	15.52
		RB15#0	21.66	21.66	21.56	14.51	14.51	14.41
		RB15#10	21.98	21.72	21.66	14.83	14.57	14.51
		RB25#0	21.99	21.67	21.89	14.84	14.52	14.74
10.0	QPSK	RB1#0	23.74	23.78	23.69	16.59	16.63	16.54
		RB1#25	23.72	23.88	23.68	16.57	16.73	16.53
		RB1#49	23.74	23.93	23.61	16.59	16.78	16.46
		RB25#0	22.55	22.75	22.89	15.40	15.60	15.74
		RB25#25	22.75	22.84	22.83	15.60	15.69	15.68
		RB50#0	22.58	22.84	22.90	15.43	15.69	15.75
	16QAM	RB1#0	23.07	23.33	22.49	15.92	16.18	15.34
		RB1#25	22.95	23.53	22.48	15.80	16.38	15.33
		RB1#49	23.04	23.56	22.48	15.89	16.41	15.33
		RB25#0	21.97	21.83	22.30	14.82	14.68	15.15
		RB25#25	21.62	21.82	21.80	14.47	14.67	14.65
		RB50#0	21.55	21.91	21.79	14.40	14.76	14.64

Note:

ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)

For Band 5: Antenna Gain = -5.0dBi = -7.15dBd (0dBd=2.15dBi)

Limit: ERP ≤ 38.45dBm

LTE Band 7:**Maximum Output Power**

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	17.61	18.75	19.11	18.61	19.75	20.11
		RB1#13	17.48	18.90	18.80	18.48	19.90	19.80
		RB1#24	17.44	18.54	18.71	18.44	19.54	19.71
		RB15#0	16.60	17.71	17.85	17.60	18.71	18.85
		RB15#10	16.70	17.77	17.77	17.70	18.77	18.77
		RB25#0	16.69	17.77	17.58	17.69	18.77	18.58
	16QAM	RB1#0	16.37	17.92	17.69	17.37	18.92	18.69
		RB1#13	16.55	17.94	17.83	17.55	18.94	18.83
		RB1#24	16.64	17.89	18.01	17.64	18.89	19.01
		RB15#0	15.64	16.70	16.87	16.64	17.70	17.87
		RB15#10	15.81	16.82	16.96	16.81	17.82	17.96
		RB25#0	15.84	16.81	17.07	16.84	17.81	18.07
10.0	QPSK	RB1#0	17.10	18.21	18.72	18.10	19.21	19.72
		RB1#25	17.37	18.39	19.02	18.37	19.39	20.02
		RB1#49	17.29	18.56	18.97	18.29	19.56	19.97
		RB25#0	16.13	17.21	17.81	17.13	18.21	18.81
		RB25#25	16.44	17.36	17.57	17.44	18.36	18.57
		RB50#0	16.22	17.27	17.71	17.22	18.27	18.71
	16QAM	RB1#0	16.66	17.29	17.65	17.66	18.29	18.65
		RB1#25	16.96	17.58	17.93	17.96	18.58	18.93
		RB1#49	17.03	17.60	17.92	18.03	18.60	18.92
		RB25#0	15.02	16.43	16.77	16.02	17.43	17.77
		RB25#25	15.46	16.45	17.03	16.46	17.45	18.03
		RB50#0	15.61	16.50	16.79	16.61	17.50	17.79

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	16.89	18.03	18.48	17.89	19.03	19.48
		RB1#13	17.40	18.30	18.71	18.40	19.30	19.71
		RB1#24	17.36	18.36	18.79	18.36	19.36	19.79
		RB15#0	16.11	17.27	17.82	17.11	18.27	18.82
		RB15#10	16.48	17.55	17.70	17.48	18.55	18.70
		RB25#0	16.27	17.20	17.79	17.27	18.20	18.79
	16QAM	RB1#0	16.55	17.23	17.95	17.55	18.23	18.95
		RB1#13	16.81	17.59	18.05	17.81	18.59	19.05
		RB1#24	17.10	17.27	18.22	18.10	18.27	19.22
		RB15#0	15.13	16.29	16.66	16.13	17.29	17.66
		RB15#10	15.53	16.34	16.86	16.53	17.34	17.86
		RB25#0	15.36	16.42	16.70	16.36	17.42	17.70
20.0	QPSK	RB1#0	16.89	17.71	18.34	17.89	18.71	19.34
		RB1#25	17.56	18.67	18.79	18.56	19.67	19.79
		RB1#49	17.42	18.30	18.65	18.42	19.30	19.65
		RB25#0	16.11	17.20	17.83	17.11	18.20	18.83
		RB25#25	16.80	17.52	17.46	17.80	18.52	18.46
		RB50#0	16.44	17.29	17.64	17.44	18.29	18.64
	16QAM	RB1#0	16.14	17.11	17.93	17.14	18.11	18.93
		RB1#25	16.75	17.81	18.50	17.75	18.81	19.50
		RB1#49	16.71	17.36	18.08	17.71	18.36	19.08
		RB25#0	15.05	16.29	16.62	16.05	17.29	17.62
		RB25#25	15.79	16.48	16.76	16.79	17.48	17.76
		RB50#0	15.48	16.34	16.67	16.48	17.34	17.67

Note:
EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band 7: Antenna Gain = 1.0dBi
Limit: EIRP ≤ 33dBm

LTE Band 38:**Maximum Output Power**

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	19.72	19.65	19.67	19.72	19.65	19.67
		RB1#13	19.75	19.89	19.85	19.75	19.89	19.85
		RB1#24	19.58	19.72	19.67	19.58	19.72	19.67
		RB15#0	18.75	18.67	18.80	18.75	18.67	18.80
		RB15#10	18.66	18.70	18.79	18.66	18.70	18.79
		RB25#0	18.85	18.68	18.54	18.85	18.68	18.54
	16QAM	RB1#0	18.73	18.70	18.87	18.73	18.70	18.87
		RB1#13	18.68	18.86	18.95	18.68	18.86	18.95
		RB1#24	18.59	18.62	18.79	18.59	18.62	18.79
		RB15#0	17.54	17.64	17.57	17.54	17.64	17.57
		RB15#10	17.42	17.58	17.64	17.42	17.58	17.64
		RB25#0	17.71	17.62	17.56	17.71	17.62	17.56
10.0	QPSK	RB1#0	19.76	19.85	19.71	19.76	19.85	19.71
		RB1#25	19.90	19.98	19.95	19.90	19.98	19.95
		RB1#49	19.70	19.75	19.75	19.70	19.75	19.75
		RB25#0	18.84	18.87	18.89	18.84	18.87	18.89
		RB25#25	18.64	18.73	18.76	18.64	18.73	18.76
		RB50#0	18.65	18.66	18.76	18.65	18.66	18.76
	16QAM	RB1#0	19.21	18.79	18.93	19.21	18.79	18.93
		RB1#25	19.25	18.98	19.16	19.25	18.98	19.16
		RB1#49	18.75	18.72	18.68	18.75	18.72	18.68
		RB25#0	17.63	17.72	17.74	17.63	17.72	17.74
		RB25#25	17.85	17.85	17.73	17.85	17.85	17.73
		RB50#0	17.69	17.66	17.71	17.69	17.66	17.71

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	19.64	19.56	19.50	19.64	19.56	19.50
		RB1#38	19.66	19.69	19.63	19.66	19.69	19.63
		RB1#74	19.66	19.48	19.65	19.66	19.48	19.65
		RB36#0	18.74	18.58	18.79	18.74	18.58	18.79
		RB36#39	18.73	18.64	18.49	18.73	18.64	18.49
		RB75#0	18.59	18.49	18.52	18.59	18.49	18.52
	16QAM	RB1#0	18.71	18.40	18.78	18.71	18.40	18.78
		RB1#38	18.70	18.60	18.87	18.70	18.60	18.87
		RB1#74	18.85	18.57	18.87	18.85	18.57	18.87
		RB36#0	17.50	17.54	17.73	17.50	17.54	17.73
		RB36#39	17.69	17.76	17.71	17.69	17.76	17.71
		RB75#0	17.41	17.62	17.67	17.41	17.62	17.67
20.0	QPSK	RB1#0	19.36	19.53	19.63	19.36	19.53	19.63
		RB1#50	20.00	19.91	19.94	20.00	19.91	19.94
		RB1#99	19.36	19.45	19.73	19.36	19.45	19.73
		RB50#0	18.73	18.67	18.76	18.73	18.67	18.76
		RB50#50	18.62	18.54	18.75	18.62	18.54	18.75
		RB100#0	18.62	18.69	18.86	18.62	18.69	18.86
	16QAM	RB1#0	18.52	18.63	18.85	18.52	18.63	18.85
		RB1#50	18.95	18.93	19.23	18.95	18.93	19.23
		RB1#99	18.58	18.54	18.70	18.58	18.54	18.70
		RB50#0	17.61	17.74	17.64	17.61	17.74	17.64
		RB50#50	17.79	17.74	17.68	17.79	17.74	17.68
		RB100#0	17.54	17.66	17.67	17.54	17.66	17.67

Note:
EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band 38: Antenna Gain =0dBi
Limit: EIRP ≤ 33dBm

LTE Band 41:**Maximum Output Power**

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	19.55	19.52	19.60	19.55	19.52	19.60
		RB1#13	19.69	19.72	19.57	19.69	19.72	19.57
		RB1#24	19.39	19.64	19.42	19.39	19.64	19.42
		RB15#0	18.52	18.60	18.55	18.52	18.60	18.55
		RB15#10	18.59	18.62	18.31	18.59	18.62	18.31
		RB25#0	18.63	18.78	18.41	18.63	18.78	18.41
	16QAM	RB1#0	18.38	18.66	18.68	18.38	18.66	18.68
		RB1#13	18.54	18.74	18.91	18.54	18.74	18.91
		RB1#24	18.37	18.63	18.58	18.37	18.63	18.58
		RB15#0	17.55	17.57	17.33	17.55	17.57	17.33
		RB15#10	17.41	17.48	17.59	17.41	17.48	17.59
		RB25#0	17.59	17.69	17.31	17.59	17.69	17.31
10.0	QPSK	RB1#0	19.58	19.58	19.56	19.58	19.58	19.56
		RB1#25	19.90	20.06	19.92	19.90	20.06	19.92
		RB1#49	19.70	19.69	19.43	19.70	19.69	19.43
		RB25#0	18.45	18.61	18.42	18.45	18.61	18.42
		RB25#25	18.55	18.54	18.48	18.55	18.54	18.48
		RB50#0	18.57	18.68	18.48	18.57	18.68	18.48
	16QAM	RB1#0	18.68	18.62	18.66	18.68	18.62	18.66
		RB1#25	19.09	18.98	18.85	19.09	18.98	18.85
		RB1#49	18.85	18.73	18.45	18.85	18.73	18.45
		RB25#0	17.53	17.88	17.47	17.53	17.88	17.47
		RB25#25	17.59	17.76	17.51	17.59	17.76	17.51
		RB50#0	17.61	17.70	17.46	17.61	17.70	17.46

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	19.50	19.74	19.45	19.50	19.74	19.45
		RB1#38	19.55	19.58	19.48	19.55	19.58	19.48
		RB1#74	19.59	19.73	19.42	19.59	19.73	19.42
		RB36#0	18.55	18.76	18.46	18.55	18.76	18.46
		RB36#39	18.56	18.62	18.56	18.56	18.62	18.56
		RB75#0	18.63	18.61	18.45	18.63	18.61	18.45
	16QAM	RB1#0	18.79	18.62	18.63	18.79	18.62	18.63
		RB1#38	18.75	18.74	18.72	18.75	18.74	18.72
		RB1#74	18.70	18.57	18.68	18.70	18.57	18.68
		RB36#0	17.60	17.61	17.41	17.60	17.61	17.41
		RB36#39	17.61	17.53	17.53	17.61	17.53	17.53
		RB75#0	17.53	17.76	17.46	17.53	17.76	17.46
20.0	QPSK	RB1#0	19.36	19.41	19.37	19.36	19.41	19.37
		RB1#50	19.84	19.95	19.95	19.84	19.95	19.95
		RB1#99	19.46	19.51	19.31	19.46	19.51	19.31
		RB50#0	18.53	18.64	18.48	18.53	18.64	18.48
		RB50#50	18.52	18.70	18.50	18.52	18.70	18.50
		RB100#0	18.52	18.56	18.51	18.52	18.56	18.51
	16QAM	RB1#0	18.43	18.36	18.59	18.43	18.36	18.59
		RB1#50	18.90	18.95	19.03	18.90	18.95	19.03
		RB1#99	18.49	18.51	18.38	18.49	18.51	18.38
		RB50#0	17.42	17.69	17.36	17.42	17.69	17.36
		RB50#50	17.54	17.66	17.63	17.54	17.66	17.63
		RB100#0	17.39	17.71	17.68	17.39	17.71	17.68

Note:

$EIRP(dBm) = \text{Conducted Power}(dBm) + \text{Antenna Gain}(dBi)$

For Band 41: Antenna Gain = 0dBi

Limit: $EIRP \leq 33dBm$

Peak-to-average ratio (PAR)**Cellular Band**

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.62	13
	Middle	3.54	13
	High	3.47	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.54	13
	Middle	3.45	13
	High	3.49	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.75	13
	Middle	3.47	13
	High	3.58	13
HSDPA (16QAM)	Low	3.97	13
	Middle	3.94	13
	High	3.72	13
HSUPA (BPSK)	Low	3.61	13
	Middle	3.69	13
	High	3.54	13
HSPA+	Low	3.47	13
	Middle	3.38	13
	High	3.59	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.53	13
	Middle	3.52	13
	High	3.58	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.54	13
	Middle	3.53	13
	High	3.42	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.62	13
	Middle	3.49	13
	High	3.64	13
HSDPA (16QAM)	Low	3.62	13
	Middle	3.79	13
	High	3.68	13
HSUPA (BPSK)	Low	3.64	13
	Middle	3.72	13
	High	3.86	13
HSPA+	Low	3.44	13
	Middle	3.32	13
	High	3.57	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.75	13
	Middle	3.92	13
	High	3.74	13
HSDPA (16QAM)	Low	3.85	13
	Middle	3.69	13
	High	3.74	13
HSUPA (BPSK)	Low	3.58	13
	Middle	3.39	13
	High	3.88	13
HSPA+	Low	3.94	13
	Middle	3.49	13
	High	3.77	13

LTE Band 2 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.87	5.38	5.29	13	Pass
QPSK (100RB Size)	5.67	5.80	5.58	13	Pass
16QAM (1RB Size)	6.12	6.86	6.31	13	Pass
16QAM (100RB Size)	6.51	6.47	6.44	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.90	5.96	5.42	13	Pass
QPSK (100RB Size)	5.74	5.80	5.87	13	Pass
16QAM (1RB Size)	7.02	6.47	6.38	13	Pass
16QAM (100RB Size)	6.19	6.51	6.12	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.03	5.51	4.94	13	Pass
QPSK (50RB Size)	5.67	5.64	5.54	13	Pass
16QAM (1RB Size)	6.63	6.47	5.64	13	Pass
16QAM (50RB Size)	6.47	6.51	6.41	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.06	5.13	5.27	13	Pass
QPSK (100RB Size)	5.64	5.71	5.69	13	Pass
16QAM (1RB Size)	6.03	6.70	6.71	13	Pass
16QAM (100RB Size)	6.47	6.44	6.54	13	Pass

LTE Band 38 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.28	7.81	7.99	13	Pass
QPSK (100RB Size)	9.32	7.76	8.36	13	Pass
16QAM (1RB Size)	8.37	8.59	8.69	13	Pass
16QAM (100RB Size)	8.10	7.21	7.96	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.63	9.77	8.24	13	Pass
QPSK (100RB Size)	8.37	8.39	7.54	13	Pass
16QAM (1RB Size)	7.69	8.47	8.84	13	Pass
16QAM (100RB Size)	6.84	8.95	9.13	13	Pass

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

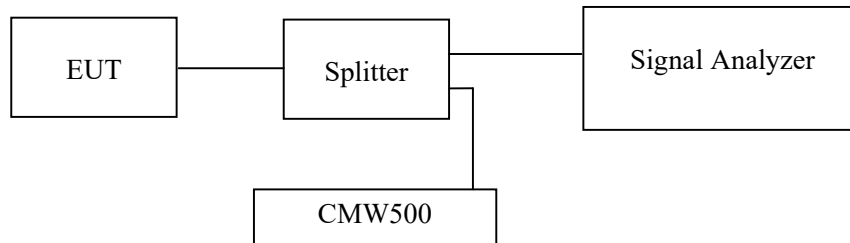
Applicable Standard

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:	26.4~26.8 °C
Relative Humidity:	57~59 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lü from 2022-01-19 to 2022-02-08.

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	242.00	306.09
	190	836.6	240.00	305.63
	251	848.8	244.00	309.29
EGPRS(8PSK)	128	824.2	246.00	315.71
	190	836.6	248.40	312.50
	251	848.8	250.00	318.91

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.14	4.68
	836.6	4.16	4.68
	846.6	4.16	4.69
HSDPA	826.4	4.16	4.70
	836.6	4.16	4.69
	846.6	4.16	4.65
HSUPA	826.4	4.16	4.70
	836.6	4.16	4.67
	846.6	4.16	4.70

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	242.00	304.03
	661	1880.0	240.00	304.88
	810	1909.8	242.00	307.00
EGPRS(8PSK)	512	1850.2	244.00	312.09
	661	1880.0	244.00	315.71
	810	1909.8	248.00	317.31

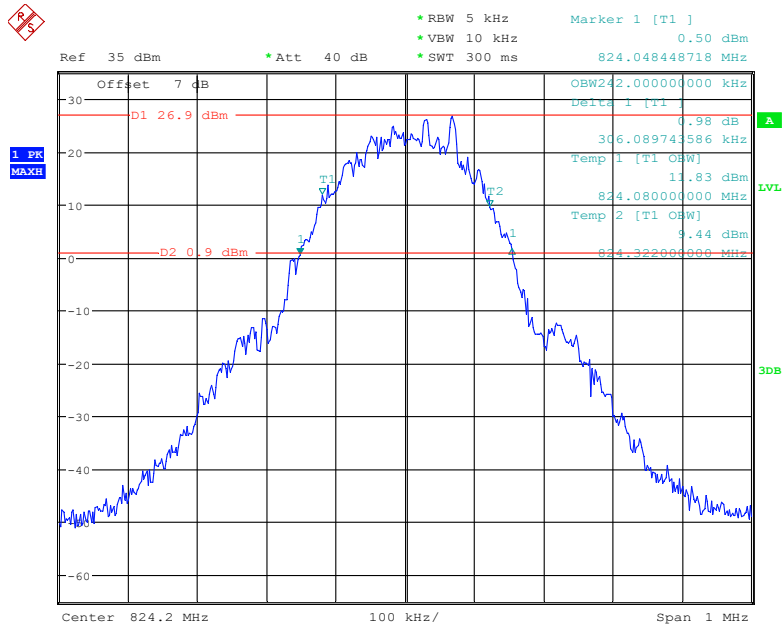
	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.14	4.70
	1880.0	4.18	4.70
	1907.6	4.16	4.70
HSDPA	1852.4	4.16	4.69
	1880.0	4.18	4.70
	1907.6	4.18	4.69
HSUPA	1852.4	4.18	4.70
	1880.0	4.16	4.71
	1907.6	4.16	4.69

AWS Band (Part 27)

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.16	4.70
	1732.6	4.16	4.70
	1752.6	4.16	4.66
HSDPA	1712.4	4.14	4.70
	1732.6	4.20	4.70
	1752.6	4.18	4.70
HSUPA	1712.4	4.16	4.67
	1732.6	4.16	4.71
	1752.6	4.16	4.69

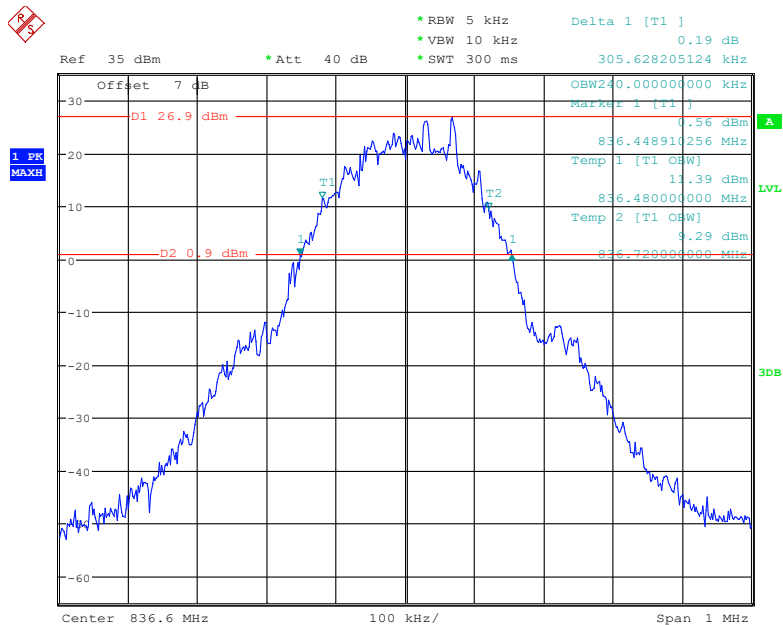
Cellular Band (Part 22H)

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



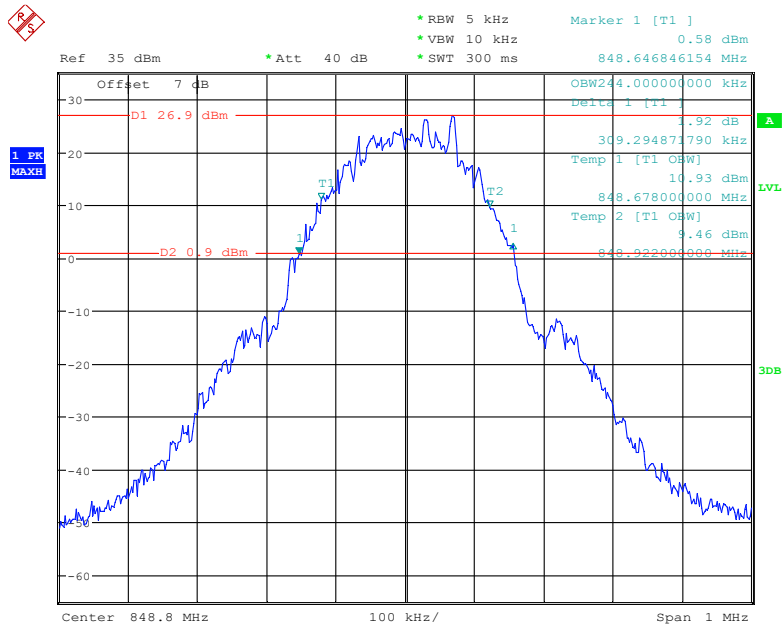
Date: 19.JAN.2022 09:24:16

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



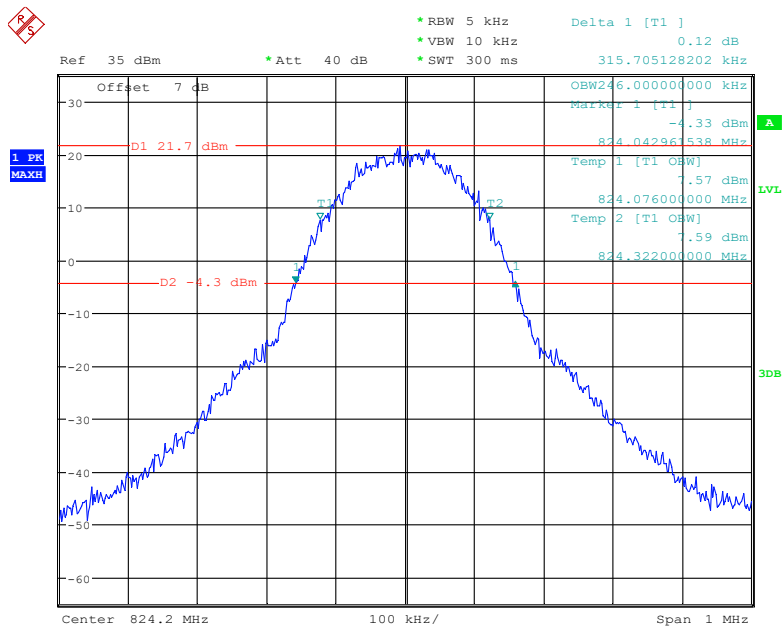
Date: 19.JAN.2022 09:22:52

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



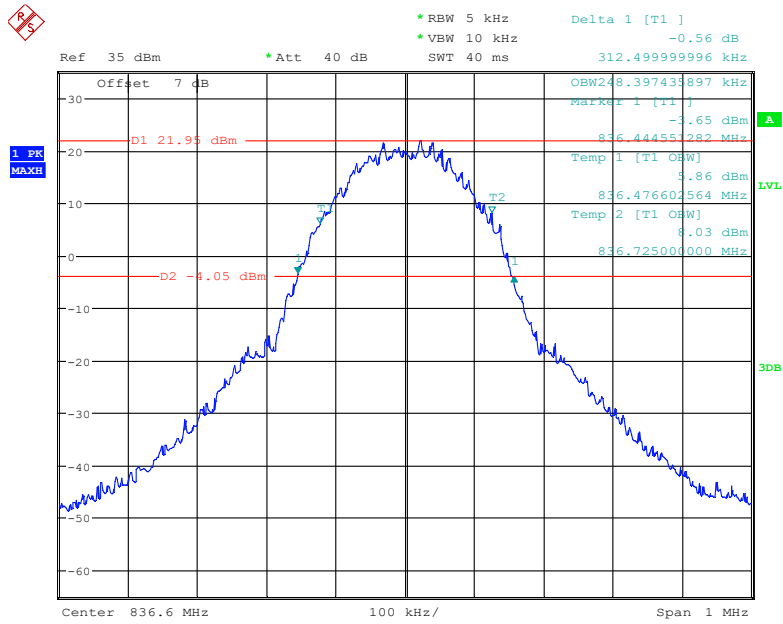
Date: 19.JAN.2022 09:20:51

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



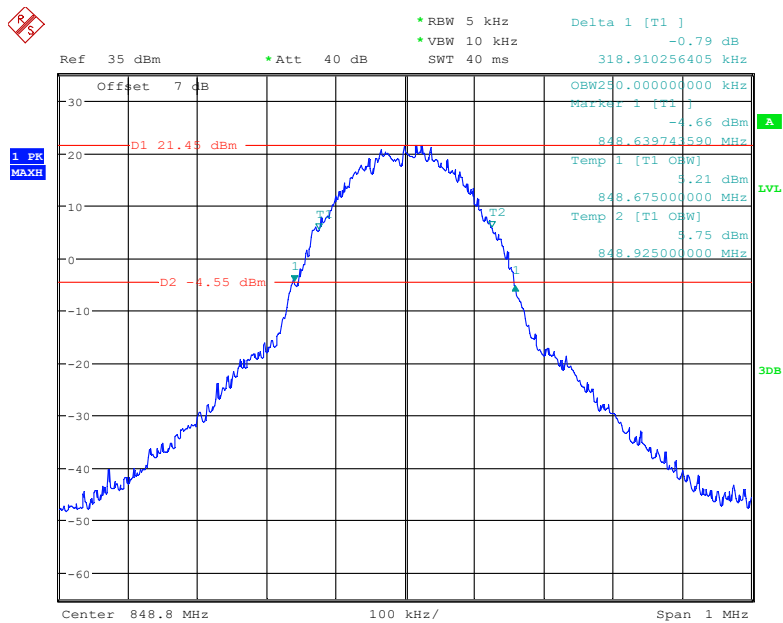
Date: 19.JAN.2022 09:41:10

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



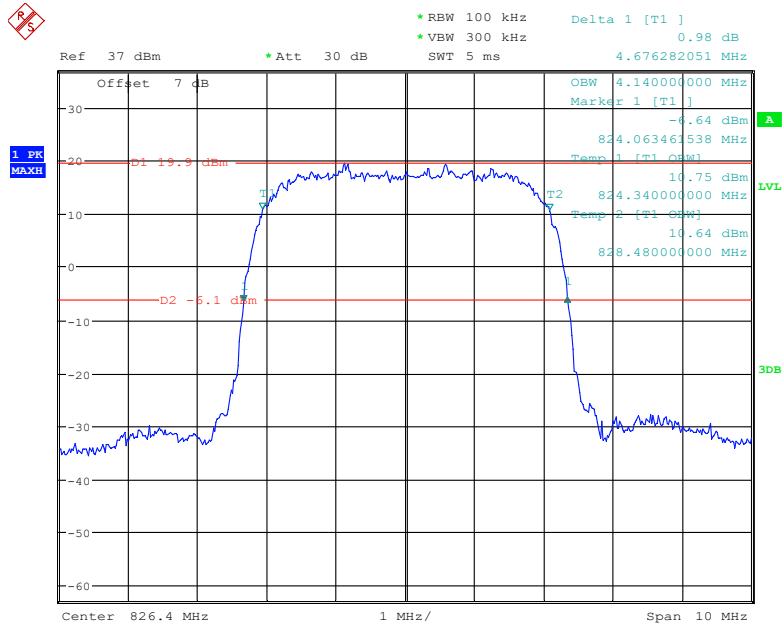
Date: 8.FEB.2022 10:47:39

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



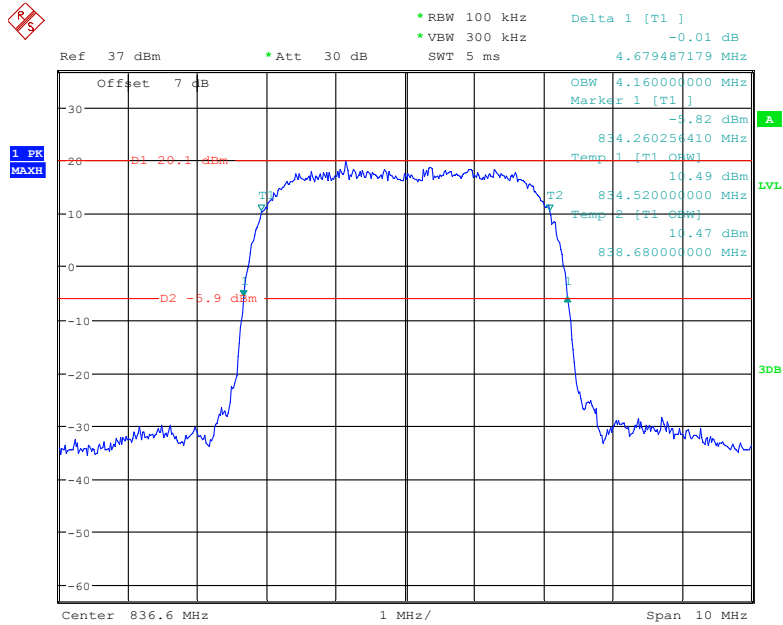
Date: 8.FEB.2022 10:49:08

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



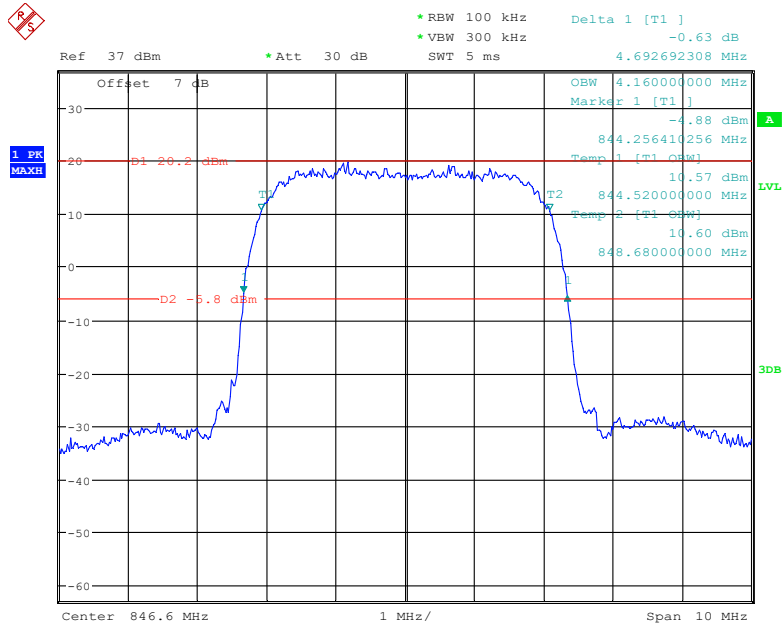
Date: 21.JAN.2022 00:14:24

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



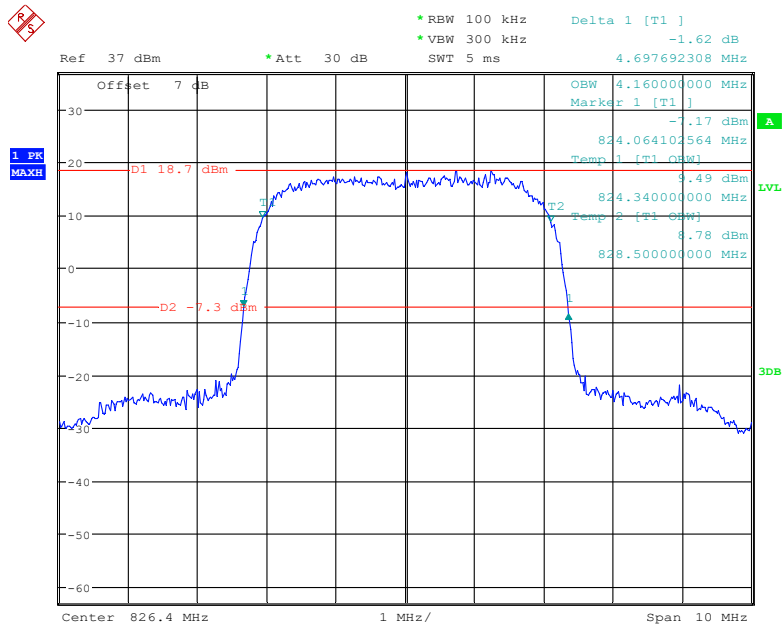
Date: 21.JAN.2022 00:13:15

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



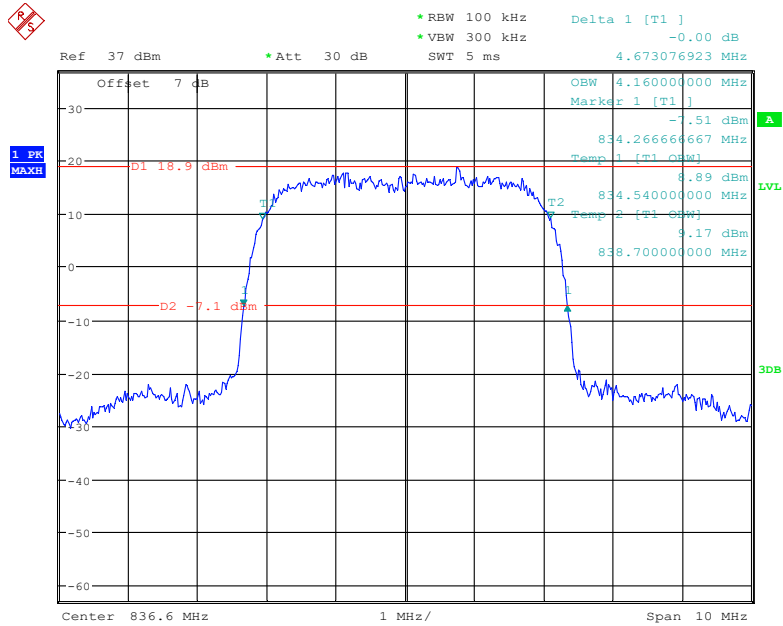
Date: 21.JAN.2022 00:11:42

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



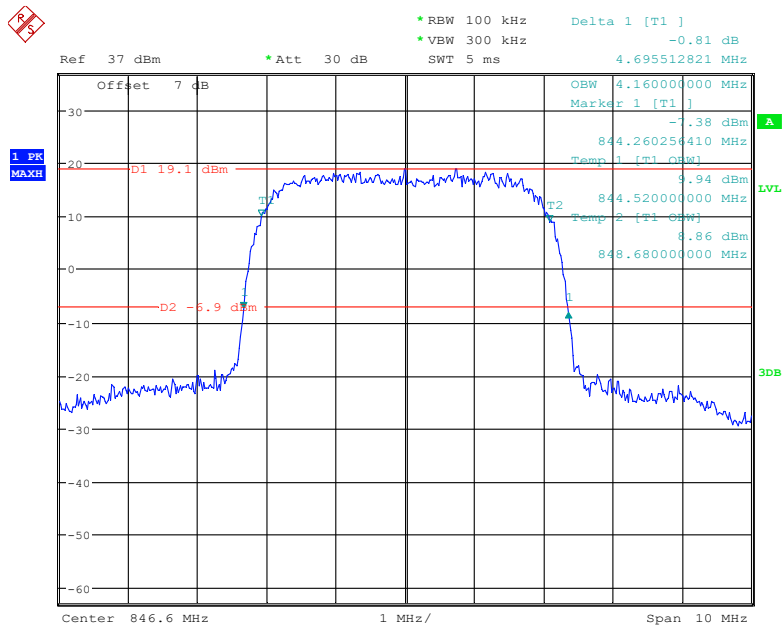
Date: 21.JAN.2022 01:01:10

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



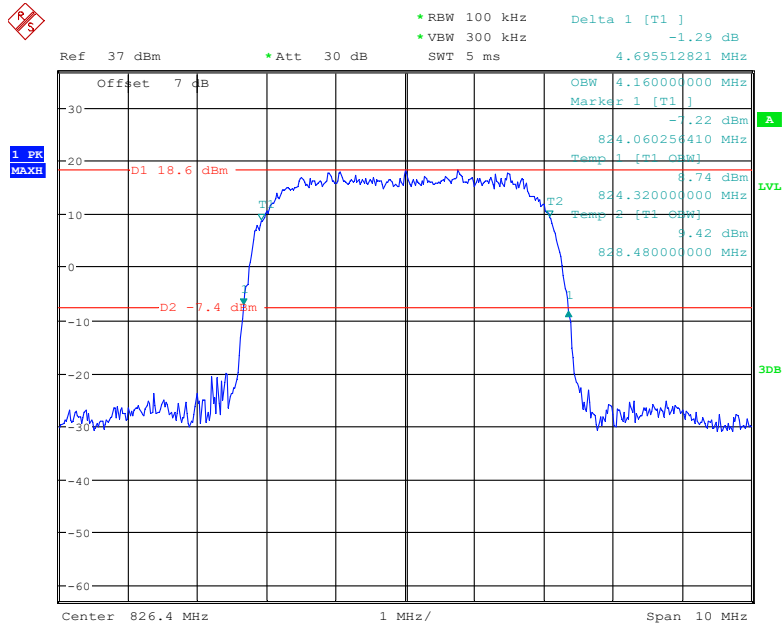
Date: 21.JAN.2022 01:03:01

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



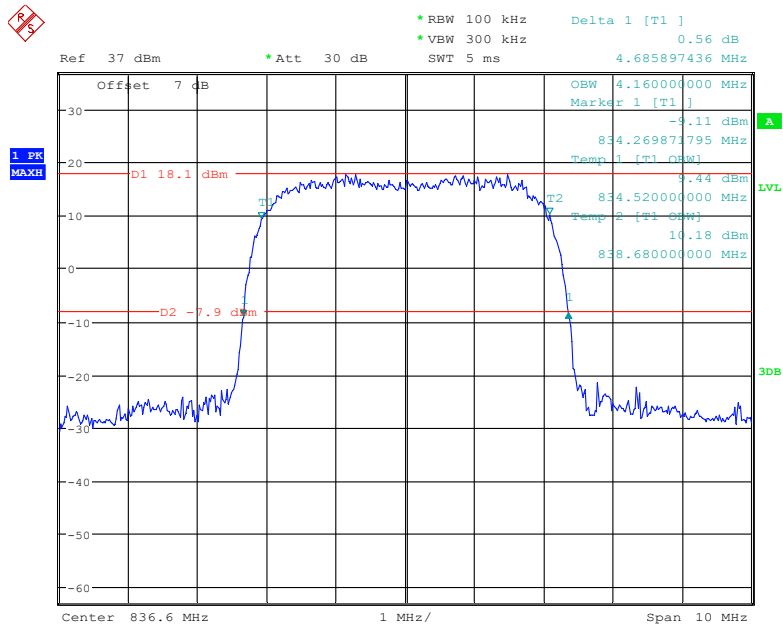
Date: 21.JAN.2022 01:02:08

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



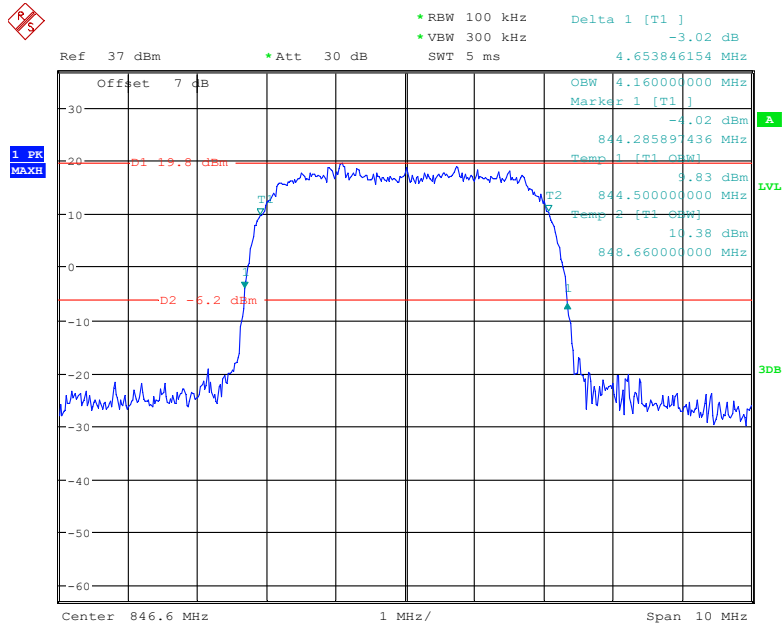
Date: 21.JAN.2022 00:49:48

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



Date: 21.JAN.2022 00:49:04

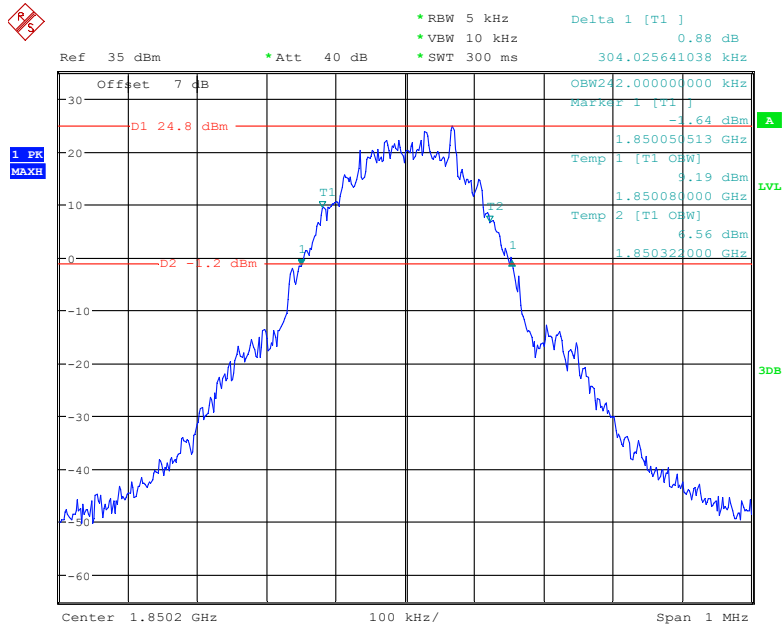
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 21.JAN.2022 00:48:10

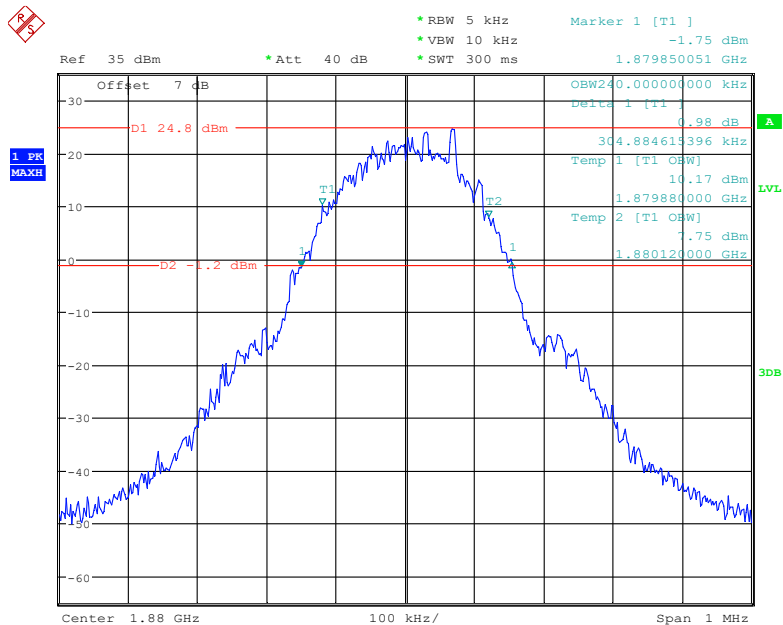
PCS Band (Part 24E)

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



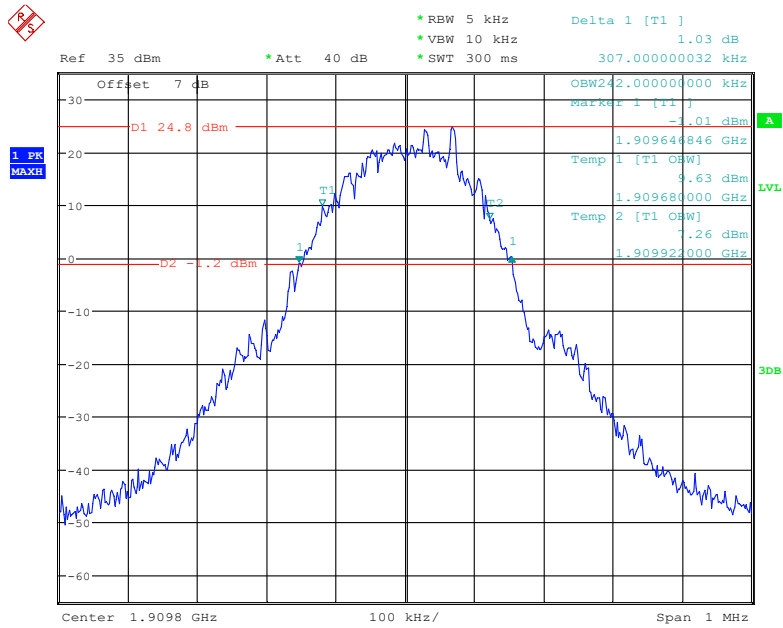
Date: 19.JAN.2022 09:25:47

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



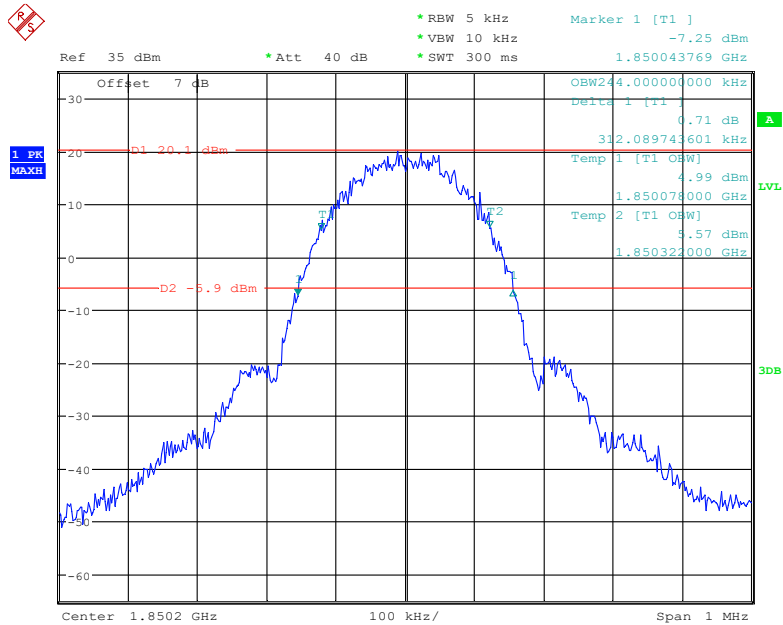
Date: 19.JAN.2022 09:26:37

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



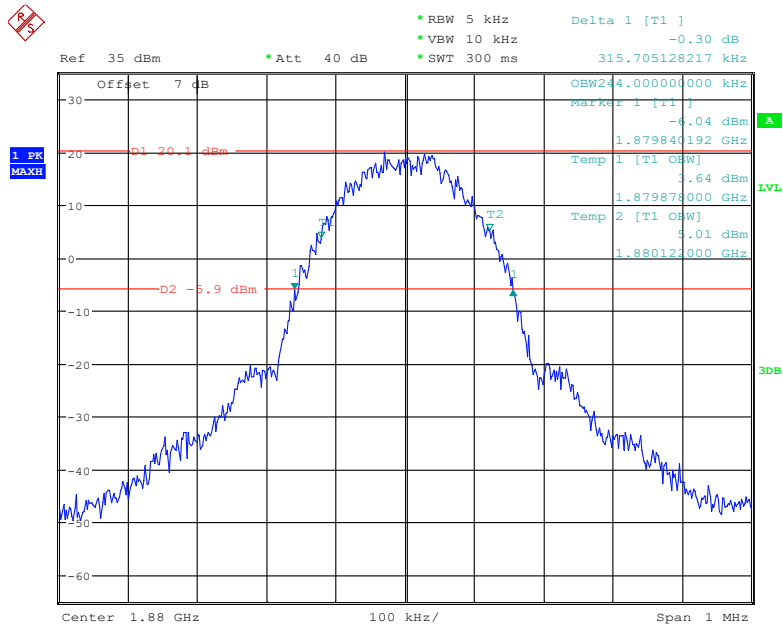
Date: 19.JAN.2022 09:27:26

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



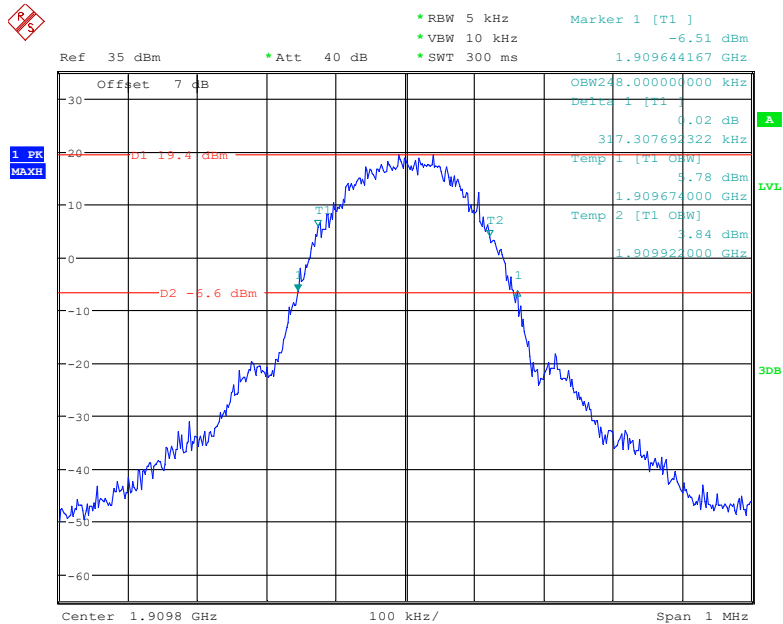
Date: 19.JAN.2022 09:35:49

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



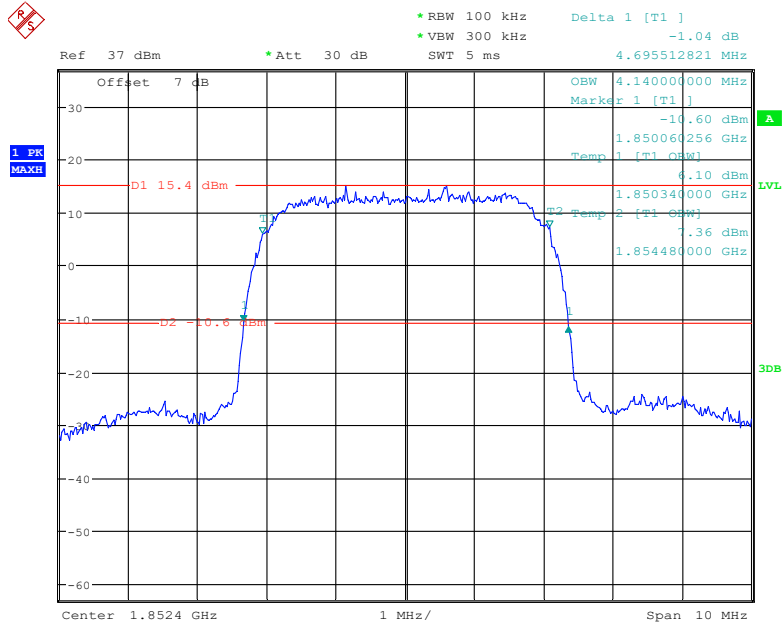
Date: 19.JAN.2022 09:34:56

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



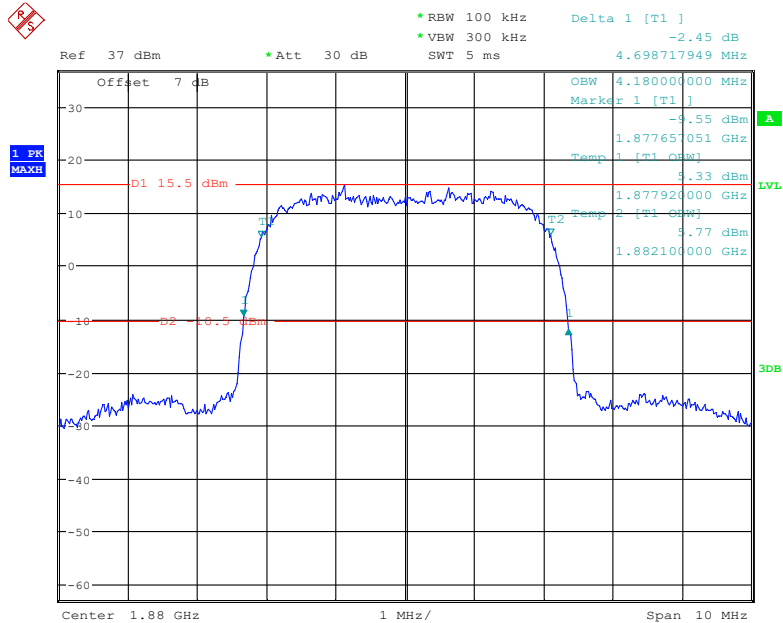
Date: 19.JAN.2022 09:34:05

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



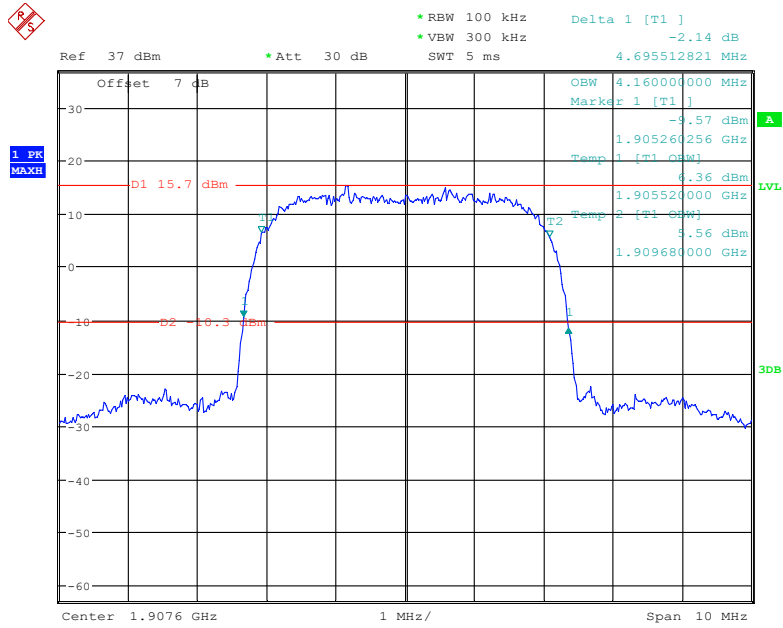
Date: 21.JAN.2022 00:21:35

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



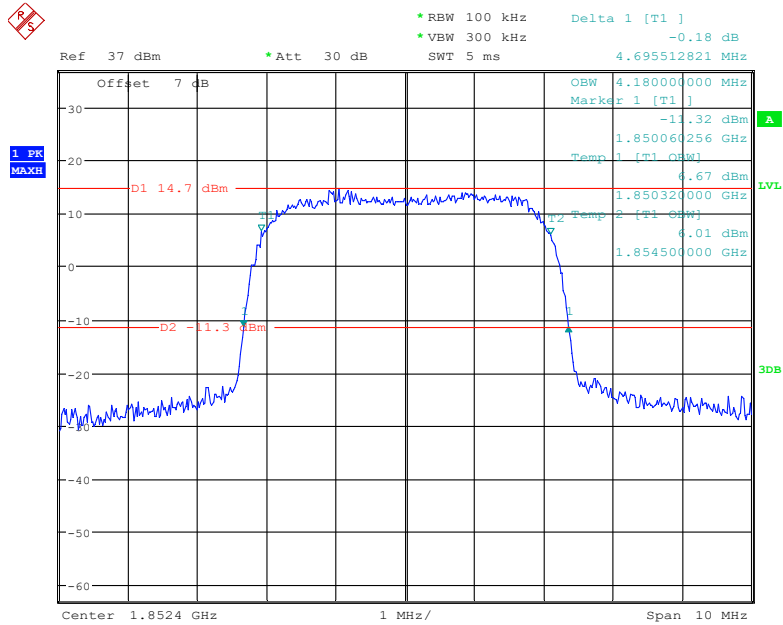
Date: 21.JAN.2022 00:20:56

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



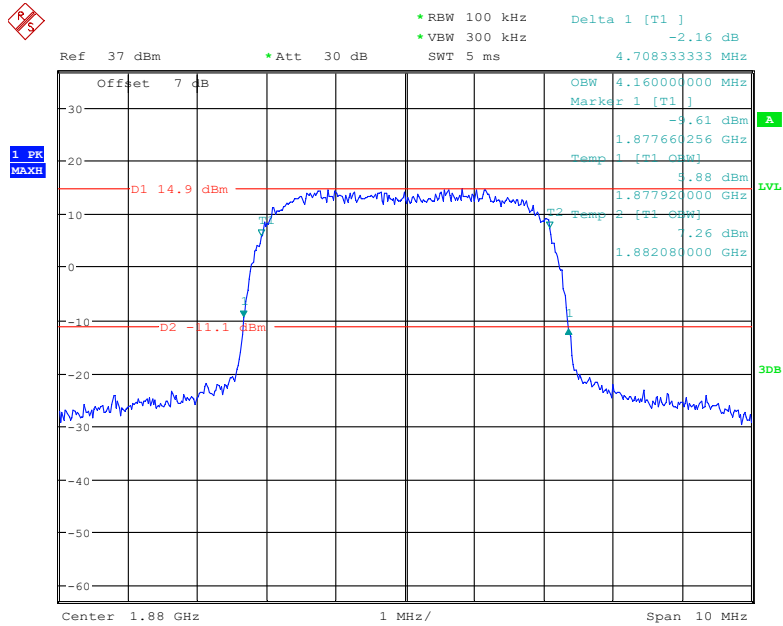
Date: 21.JAN.2022 00:20:01

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



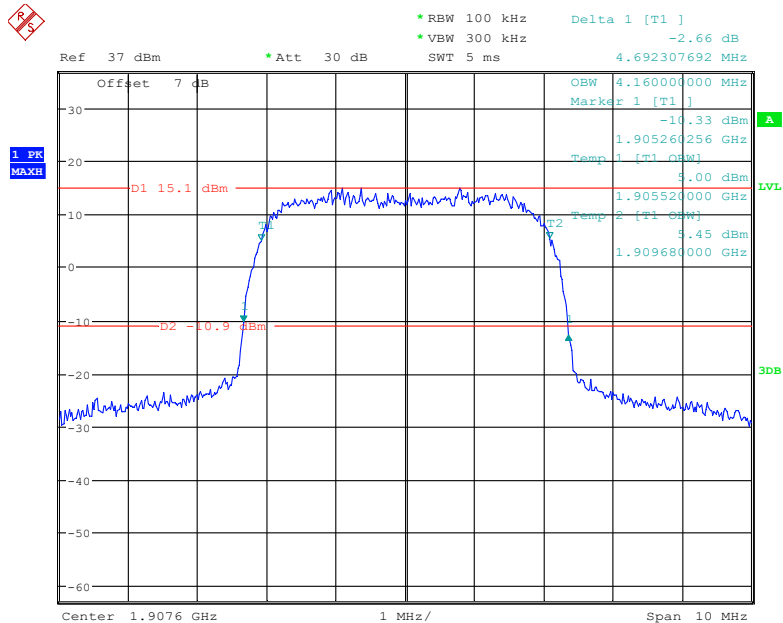
Date: 21.JAN.2022 01:07:04

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



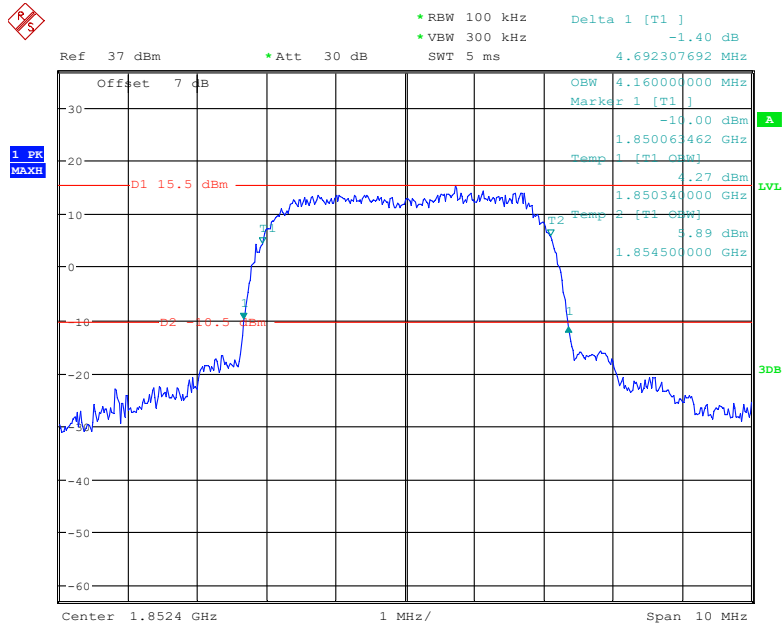
Date: 21.JAN.2022 01:08:11

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



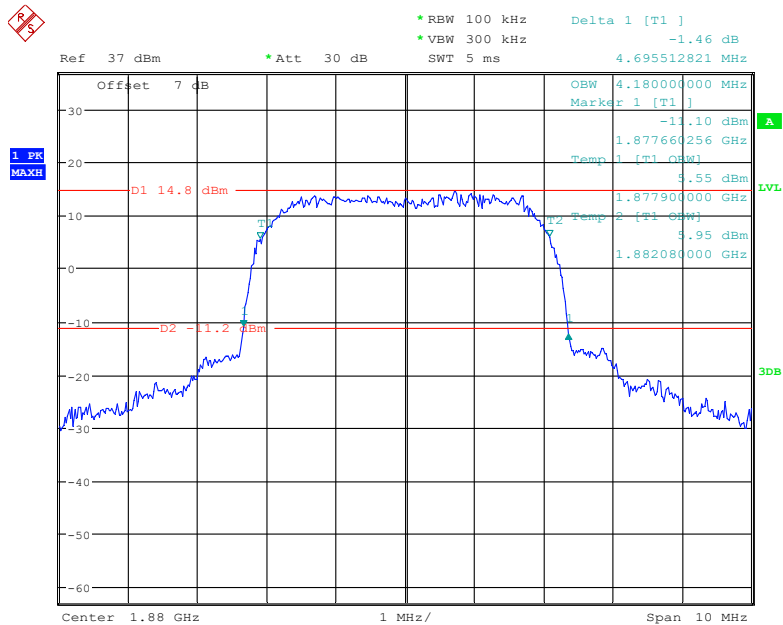
Date: 21.JAN.2022 01:08:58

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



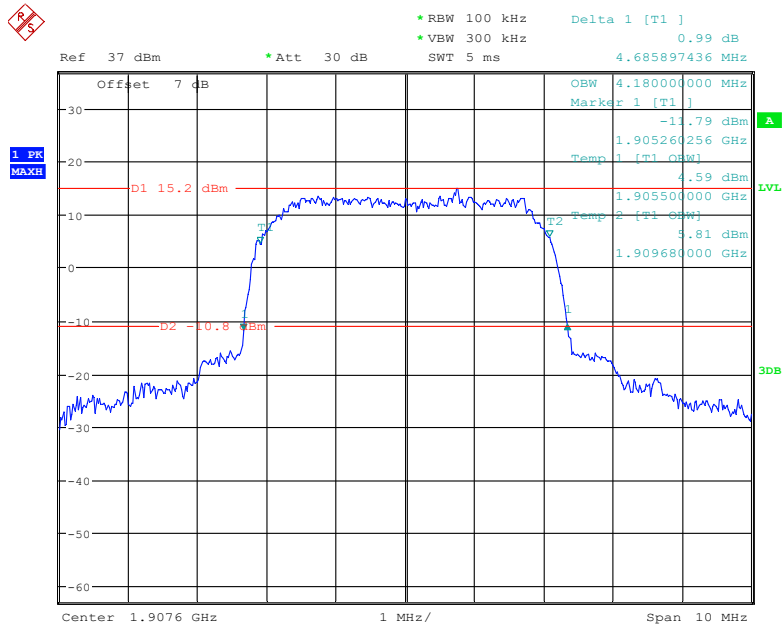
Date: 21.JAN.2022 00:40:12

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



Date: 21.JAN.2022 00:39:24

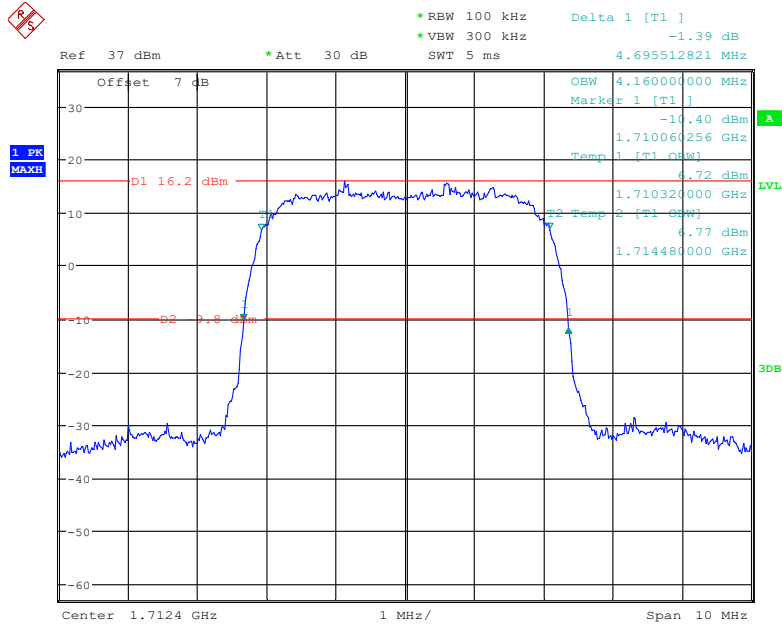
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 21.JAN.2022 00:37:42

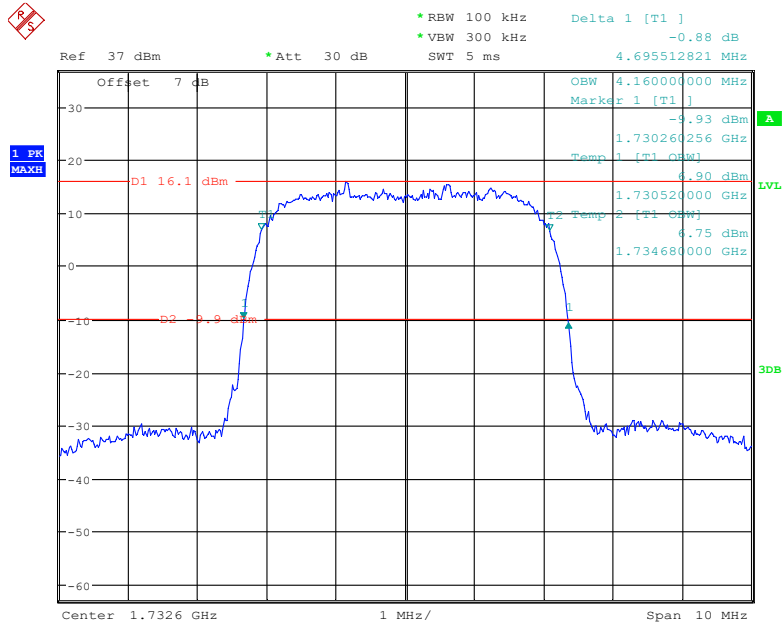
AWS Band (Part 27)

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



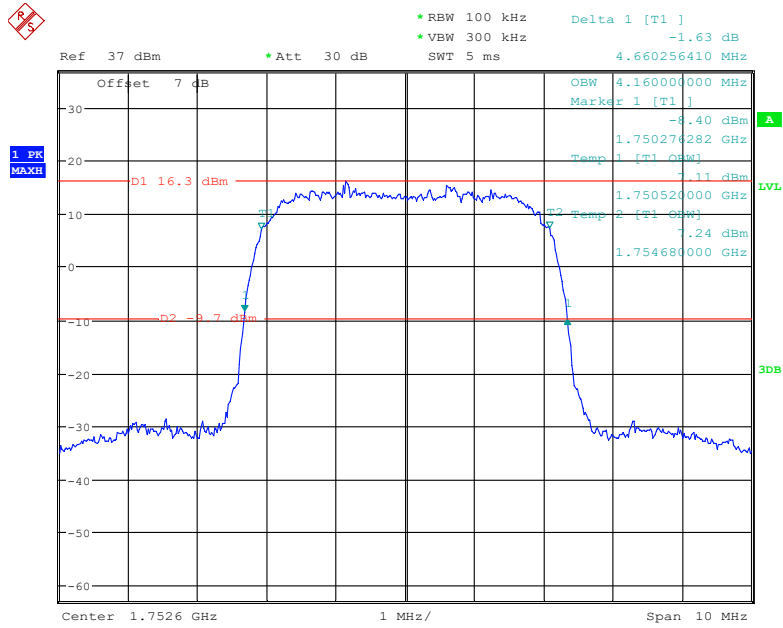
Date: 21.JAN.2022 00:18:24

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



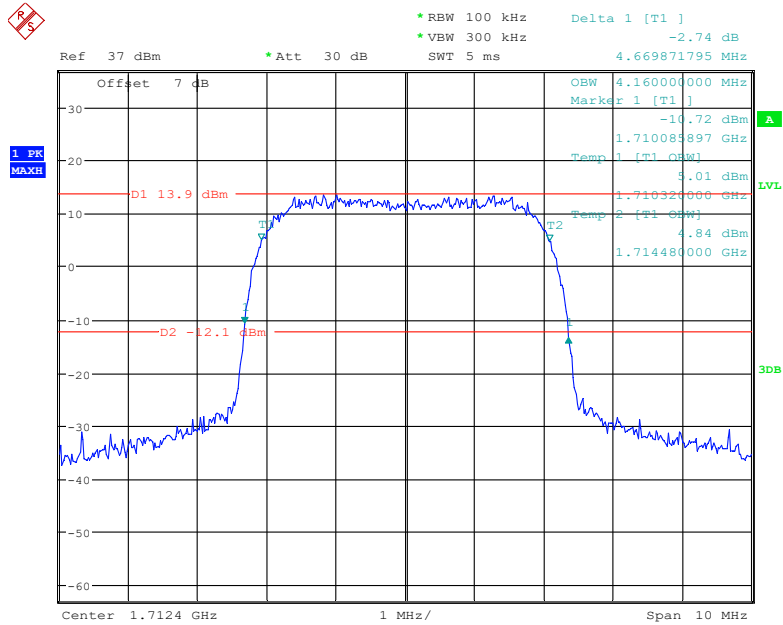
Date: 21.JAN.2022 00:17:17

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



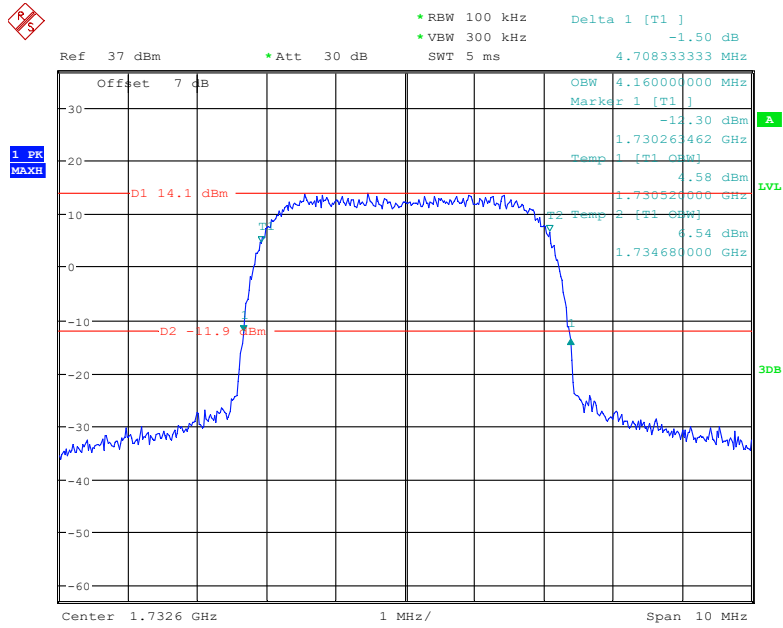
Date: 21.JAN.2022 00:16:08

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



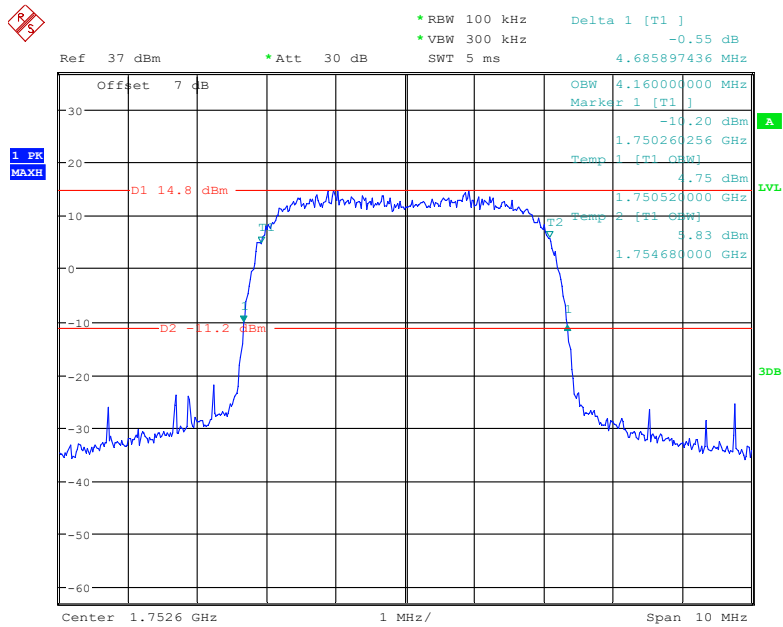
Date: 21.JAN.2022 01:06:05

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



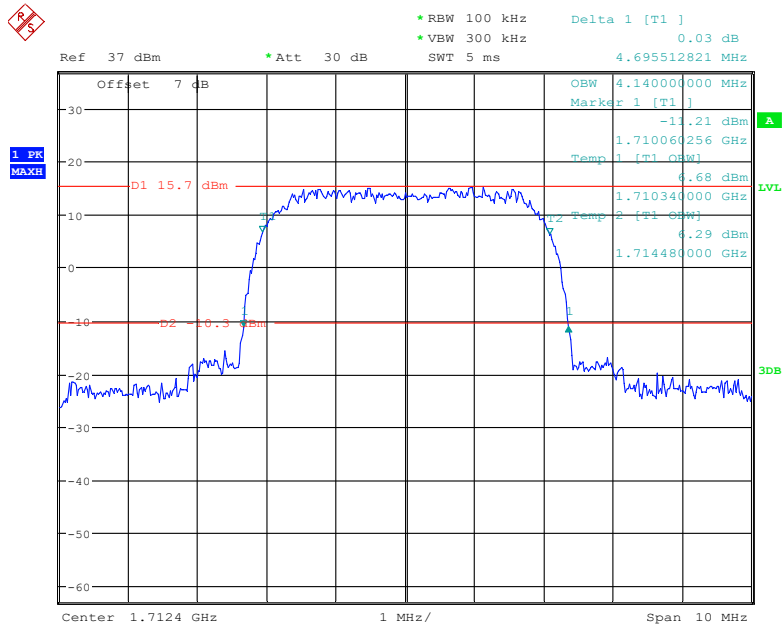
Date: 21.JAN.2022 01:05:18

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



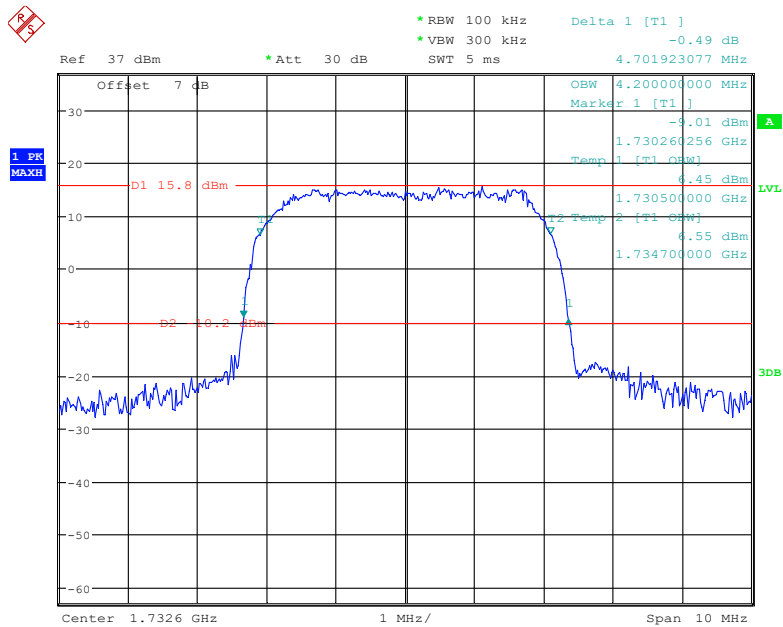
Date: 21.JAN.2022 01:04:29

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



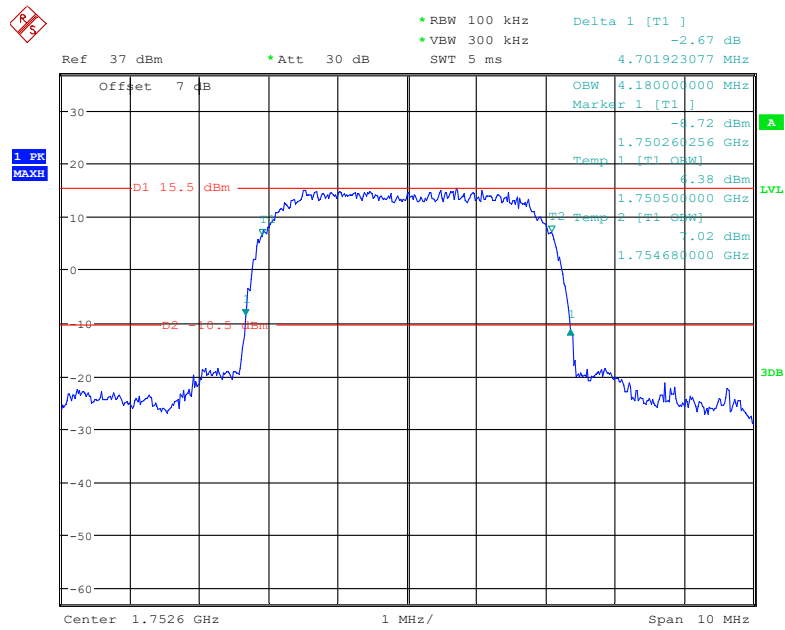
Date: 21.JAN.2022 00:45:03

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



Date: 21.JAN.2022 00:46:05

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



Date: 21.JAN.2022 00:46:50

LTE Band 2:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.104	1.260	1.104	1.254	1.104	1.260
	16QAM	1.116	1.272	1.098	1.260	1.104	1.260
3 MHz	QPSK	2.700	2.976	2.700	3.012	2.700	3.024
	16QAM	2.700	3.012	2.688	3.024	2.700	3.036
5 MHz	QPSK	4.520	5.000	4.520	5.000	4.520	4.960
	16QAM	4.520	5.000	4.520	5.000	4.520	5.000
10 MHz	QPSK	9.000	9.720	8.960	9.800	8.960	9.800
	16QAM	8.960	9.680	9.000	9.760	8.960	9.720
15 MHz	QPSK	13.560	15.000	13.500	15.060	13.500	14.940
	16QAM	13.560	15.060	13.560	15.120	13.500	14.940
20 MHz	QPSK	17.920	19.520	18.000	19.680	18.000	19.760
	16QAM	18.000	19.680	18.000	19.680	18.000	19.600

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	1.254	1.104	1.254	1.104	1.254
	16QAM	1.110	1.266	1.098	1.254	1.104	1.260
3 MHz	QPSK	2.700	2.988	2.700	3.000	2.688	3.012
	16QAM	2.688	3.000	2.700	2.988	2.700	3.012
5 MHz	QPSK	4.520	4.980	4.520	5.020	4.520	4.940
	16QAM	4.520	5.000	4.540	5.020	4.540	4.980
10 MHz	QPSK	9.000	9.800	8.960	9.720	8.960	9.760
	16QAM	8.960	9.760	8.960	9.760	8.960	9.760
15 MHz	QPSK	13.560	15.000	13.560	15.060	13.500	15.060
	16QAM	13.500	15.060	13.560	15.180	13.500	15.000
20 MHz	QPSK	18.000	19.600	18.000	19.680	18.000	19.600
	16QAM	18.000	19.680	18.000	19.840	18.000	19.520

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	1.110	1.260	1.104	1.254	1.104	1.254
	16QAM	1.116	1.260	1.098	1.254	1.104	1.254
3 MHz	QPSK	2.700	2.988	2.700	3.012	2.700	3.000
	16QAM	2.688	3.000	2.688	2.988	2.700	3.024
5 MHz	QPSK	4.520	4.960	4.520	5.040	4.500	4.940
	16QAM	4.520	4.980	4.540	5.000	4.540	5.000
10 MHz	QPSK	8.960	9.720	9.000	9.760	8.960	9.760
	16QAM	8.960	9.800	9.000	9.720	8.960	9.800

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	4.980	4.520	4.960	4.520	4.980
	16QAM	4.520	4.980	4.520	4.980	4.500	5.000
10 MHz	QPSK	9.000	9.800	9.000	9.720	8.960	9.760
	16QAM	8.960	9.680	8.960	9.760	8.960	9.800
15 MHz	QPSK	13.560	15.060	13.500	15.000	13.500	15.000
	16QAM	13.560	15.060	13.560	15.120	13.500	15.060
20 MHz	QPSK	18.000	19.600	18.000	19.600	18.000	19.680
	16QAM	18.000	19.760	18.000	19.520	18.000	19.760

LTE Band 38

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.520	5.160	4.520	5.000	4.520	4.980
	16QAM	4.500	5.020	4.520	5.000	4.520	4.980
10 MHz	QPSK	9.000	9.720	9.000	9.760	8.960	9.840
	16QAM	8.960	9.720	9.000	9.760	8.960	9.880
15 MHz	QPSK	13.560	15.120	13.500	15.060	13.500	15.540
	16QAM	13.560	16.620	13.620	16.731	13.620	16.320
20 MHz	QPSK	18.000	19.760	18.000	19.679	18.000	20.000
	16QAM	18.000	19.920	18.000	20.320	18.000	19.760

LTE Band 41

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.500	5.176	4.500	4.960	4.520	5.160
	16QAM	4.520	5.080	4.500	5.000	4.500	4.960
10 MHz	QPSK	8.960	9.720	9.000	9.840	8.960	9.840
	16QAM	8.960	9.720	8.960	9.760	8.960	9.920
15 MHz	QPSK	13.620	16.320	13.500	14.940	13.500	15.480
	16QAM	13.560	15.540	13.620	16.587	13.620	16.029
20 MHz	QPSK	17.920	19.600	17.920	19.600	18.000	20.000
	16QAM	17.920	19.520	18.000	19.920	18.000	20.000

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

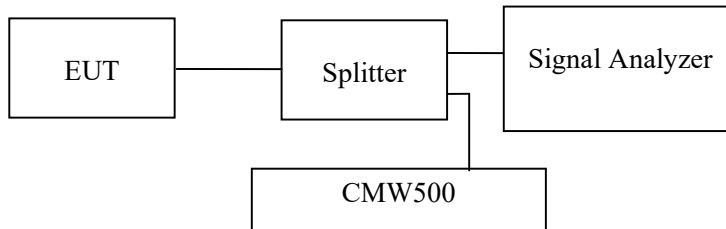
Applicable Standard

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 10th harmonic.



Test Data

Environmental Conditions

Temperature:	26.4~26.8 °C
Relative Humidity:	57~59 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lü from 2022-01-19 to 2022-02-08.

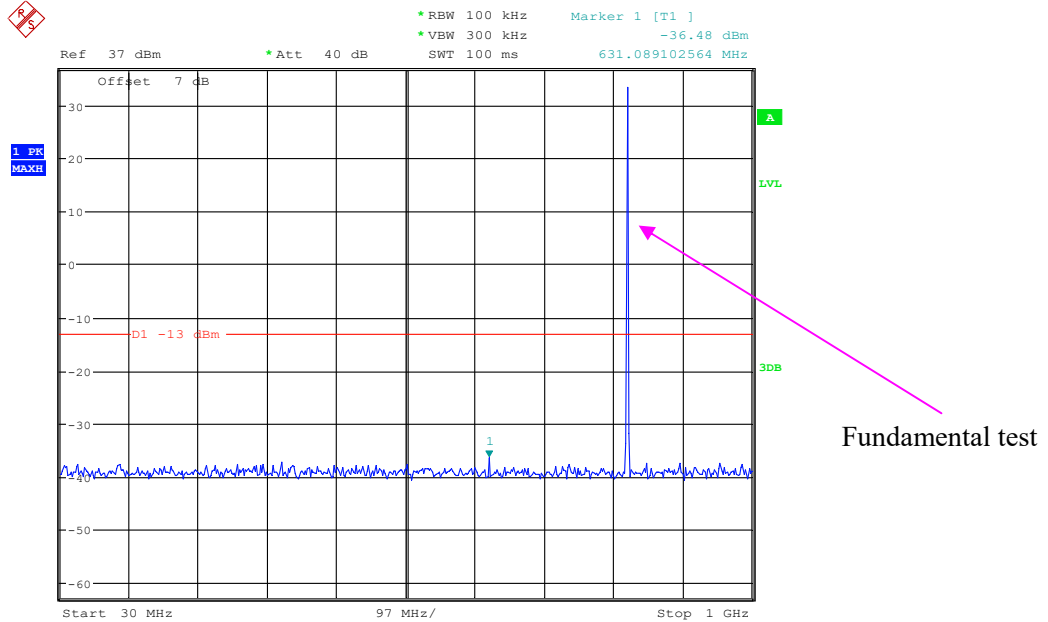
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

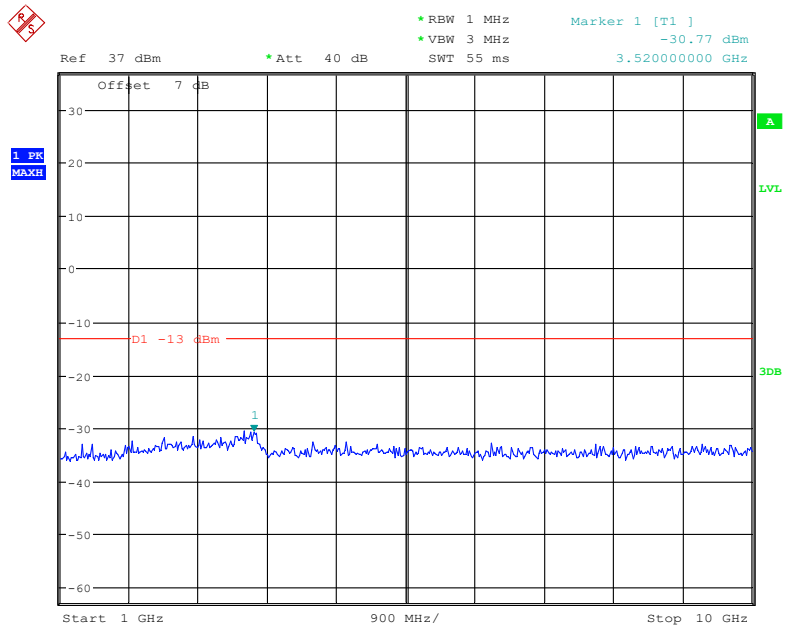
Cellular Band (Part 22H)
Low Channel:

30 MHz – 1 GHz (GSM Mode)



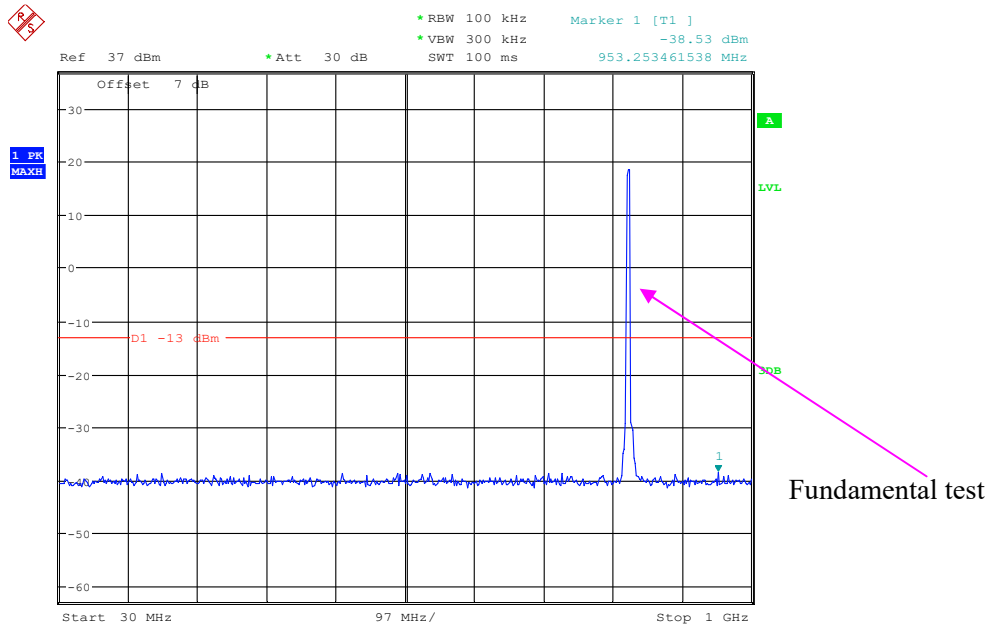
Date: 19.JAN.2022 09:51:04

1 GHz – 10 GHz (GSM Mode)



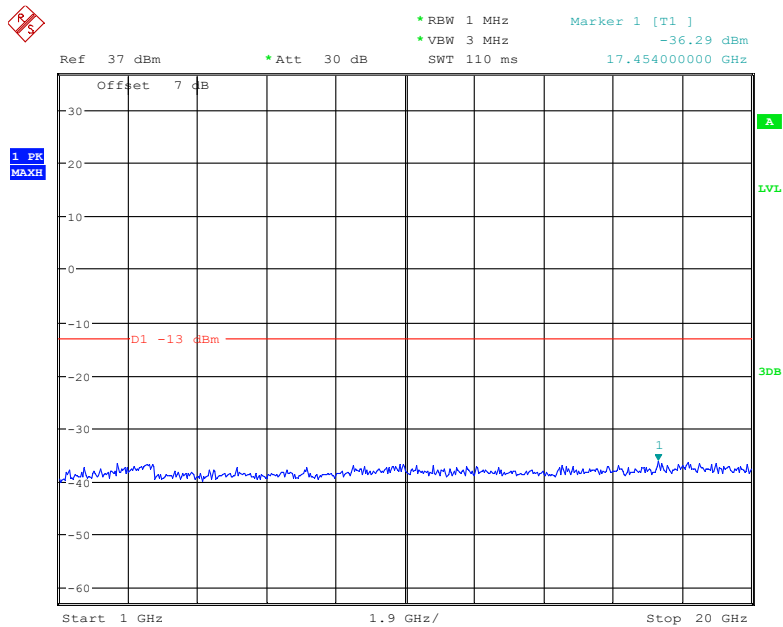
Date: 19.JAN.2022 09:52:32

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:24:48

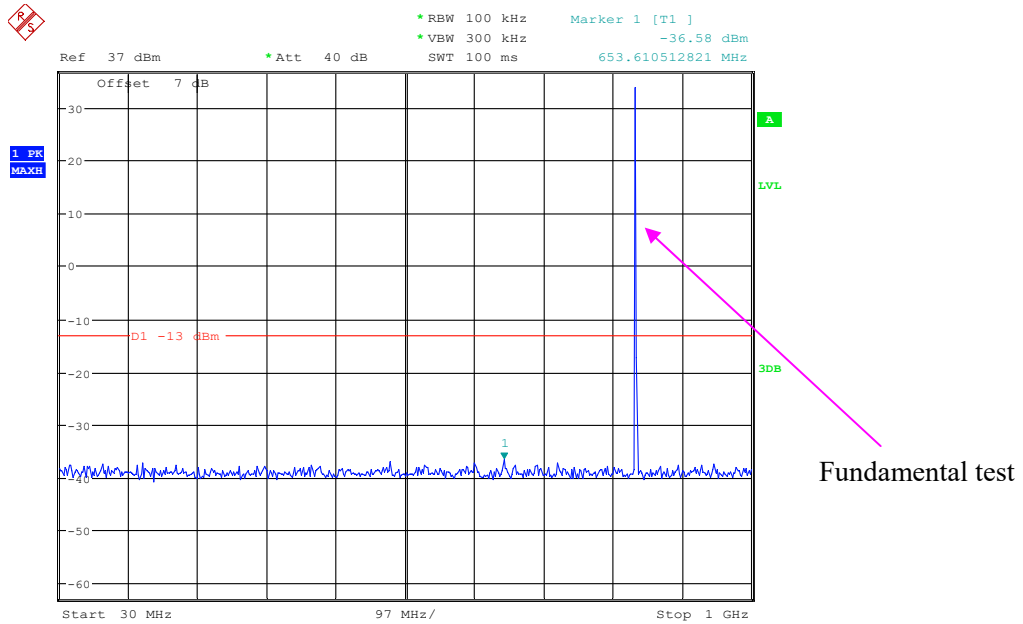
1 GHz – 20 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:26:25

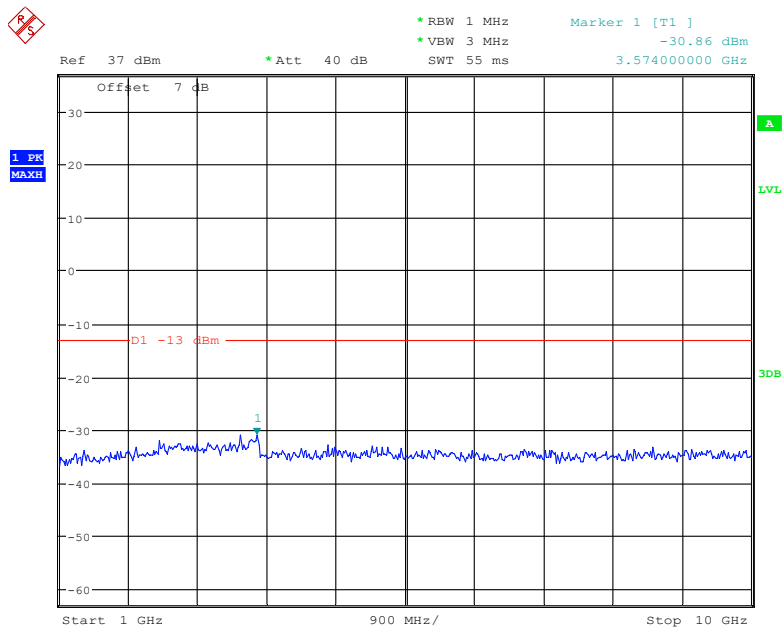
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



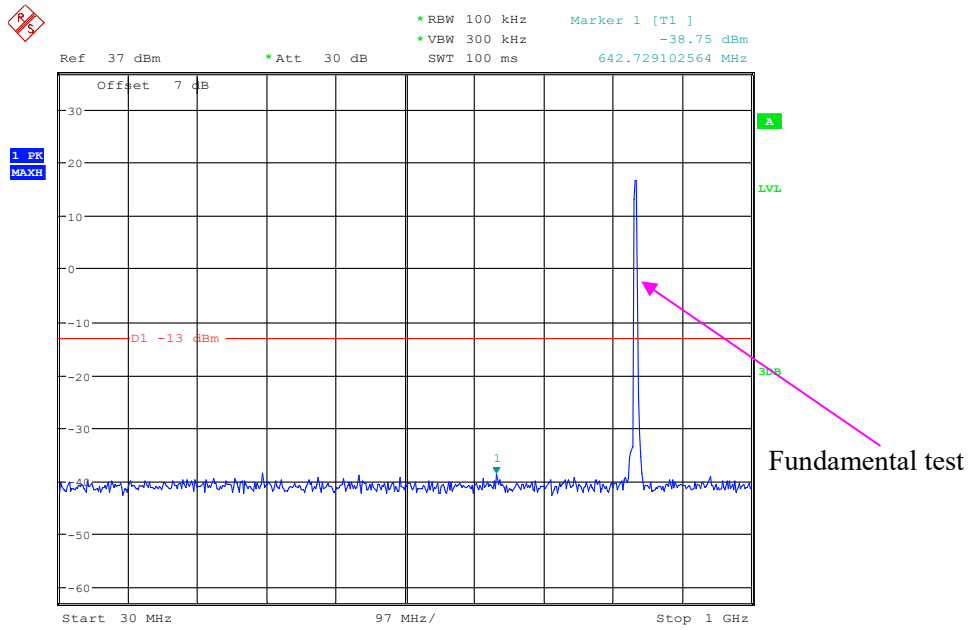
Date: 8.FEB.2022 17:18:48

1 GHz – 10 GHz (GSM Mode)



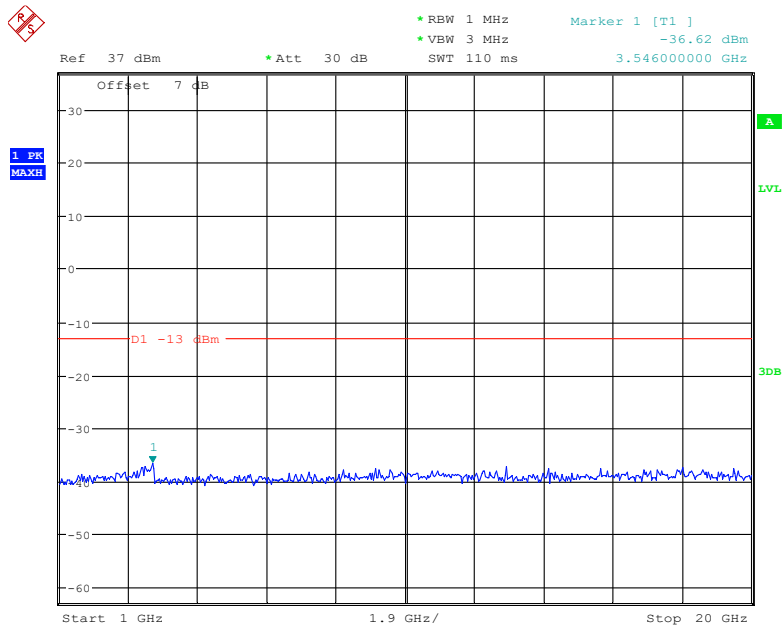
Date: 19.JAN.2022 09:51:58

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:25:05

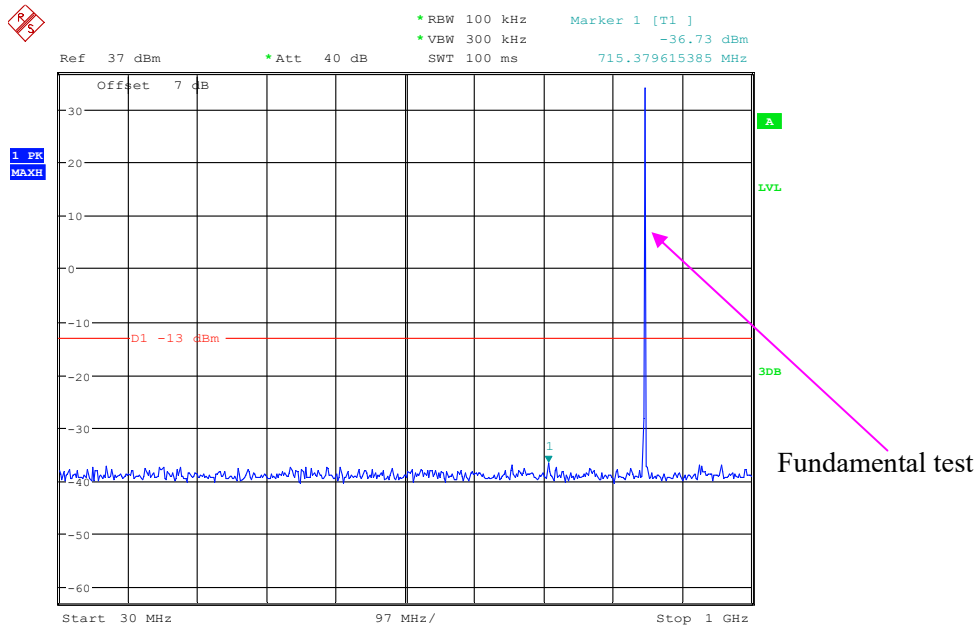
1 GHz – 20 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:26:36

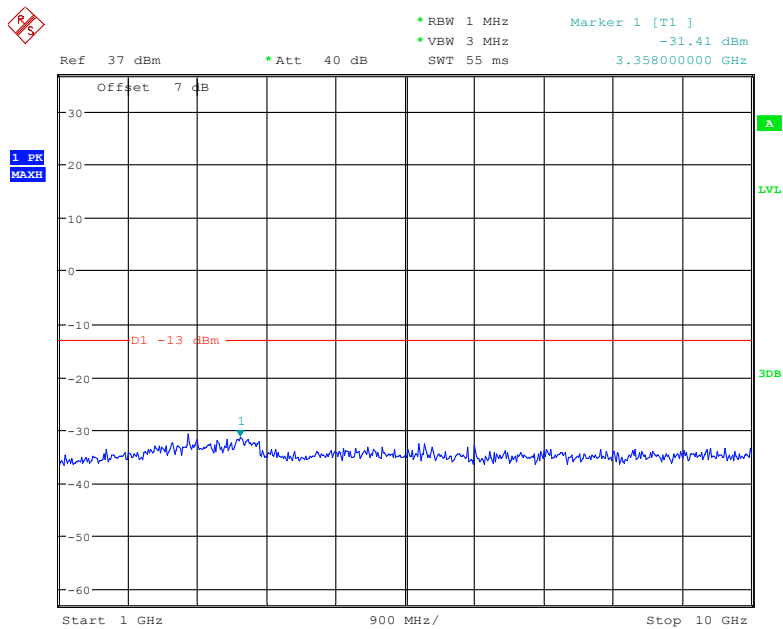
High Channel:

30 MHz – 1 GHz (GSM Mode)



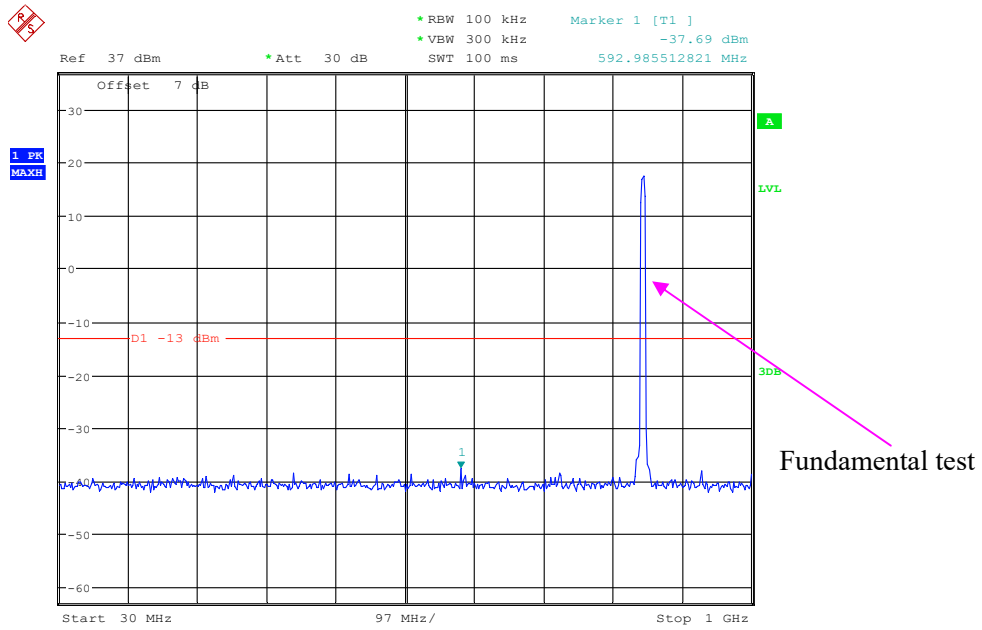
Date: 19.JAN.2022 09:50:42

1 GHz – 10 GHz (GSM Mode)



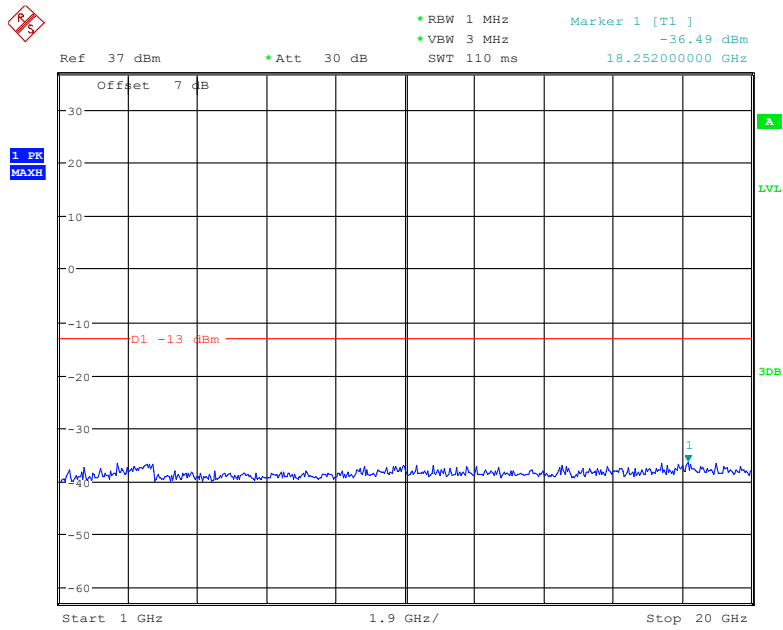
Date: 19.JAN.2022 09:52:19

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:25:28

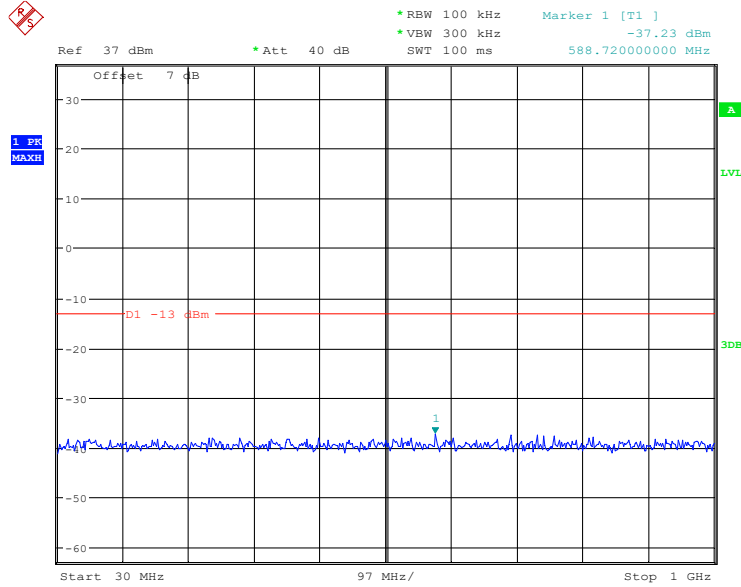
1 GHz – 20 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:26:10

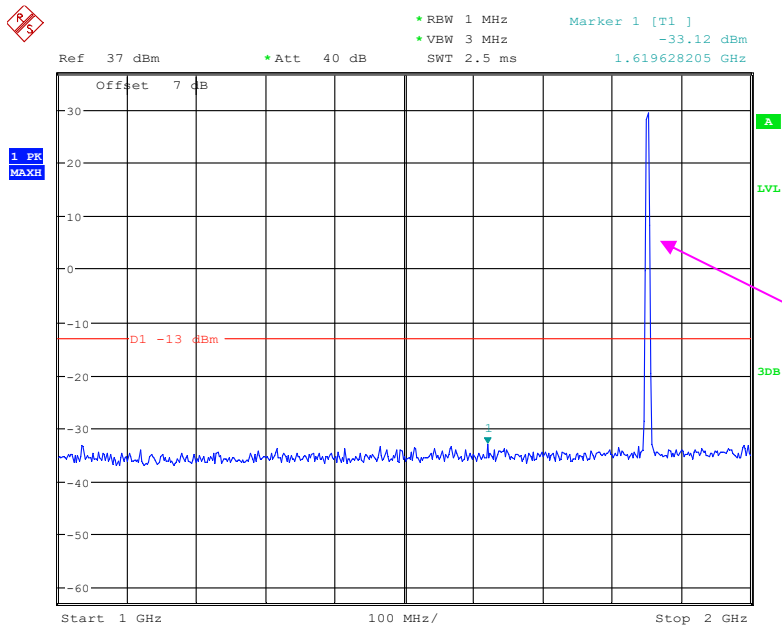
**PCS Band (Part 24E)
Low Channel:**

30 MHz – 1 GHz (GSM Mode)



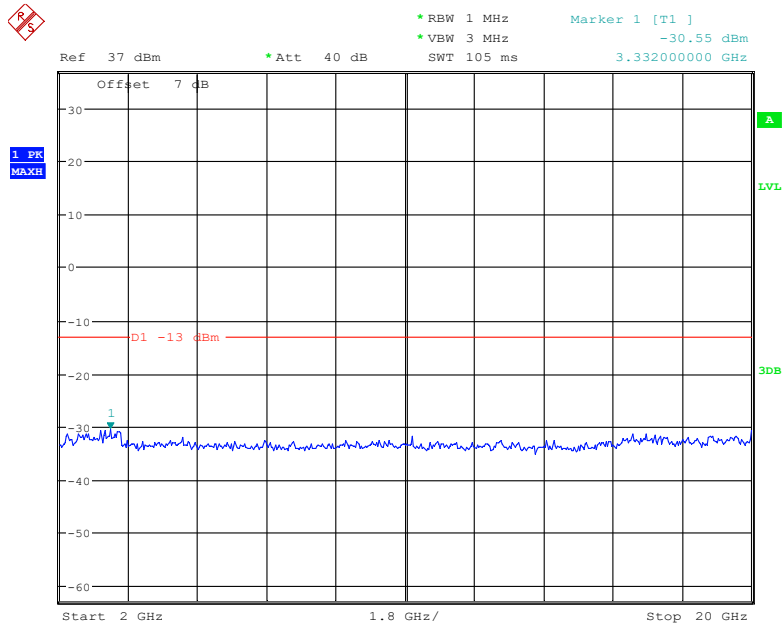
Date: 19.JAN.2022 10:05:44

1 GHz – 2 GHz (GSM Mode)



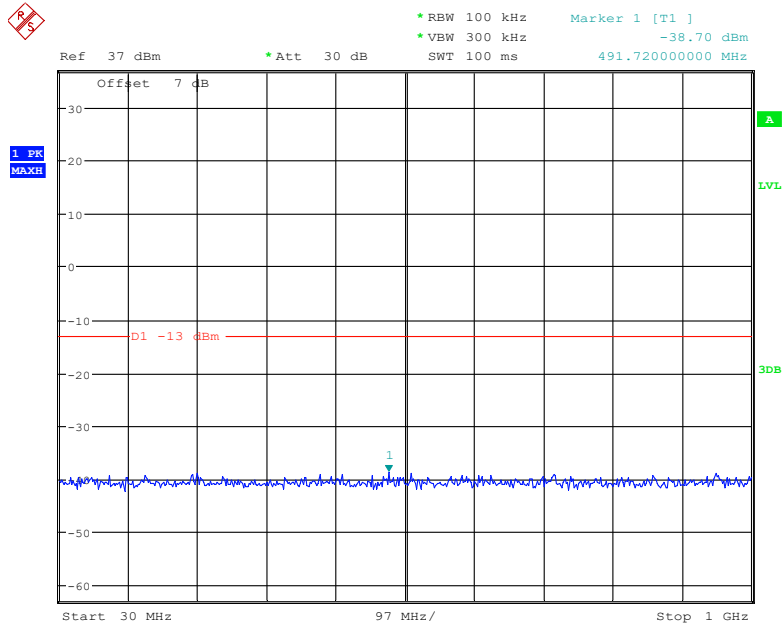
Date: 19.JAN.2022 10:07:44

2 GHz – 20 GHz (GSM Mode)



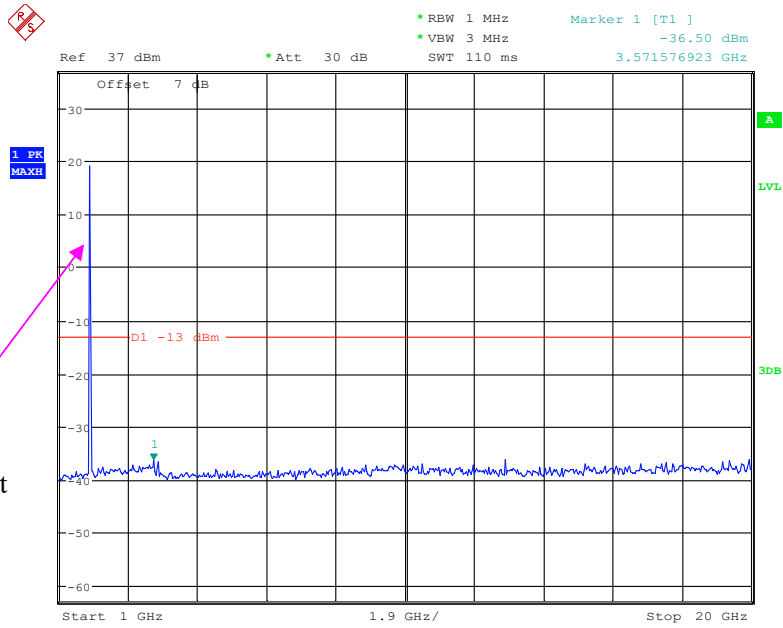
Date: 19.JAN.2022 10:08:35

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:22:43

1 GHz – 20 GHz (WCDMA Mode)

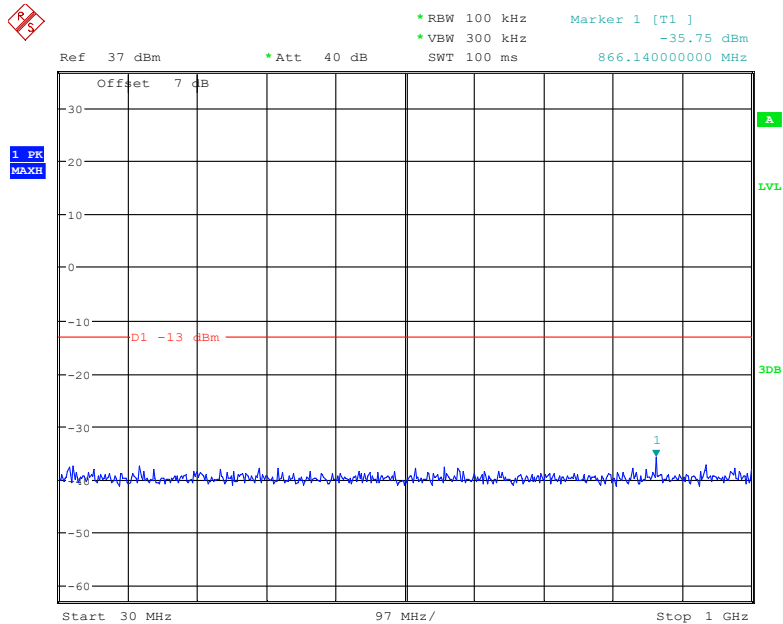


Fundamental test

Date: 21.JAN.2022 00:28:54

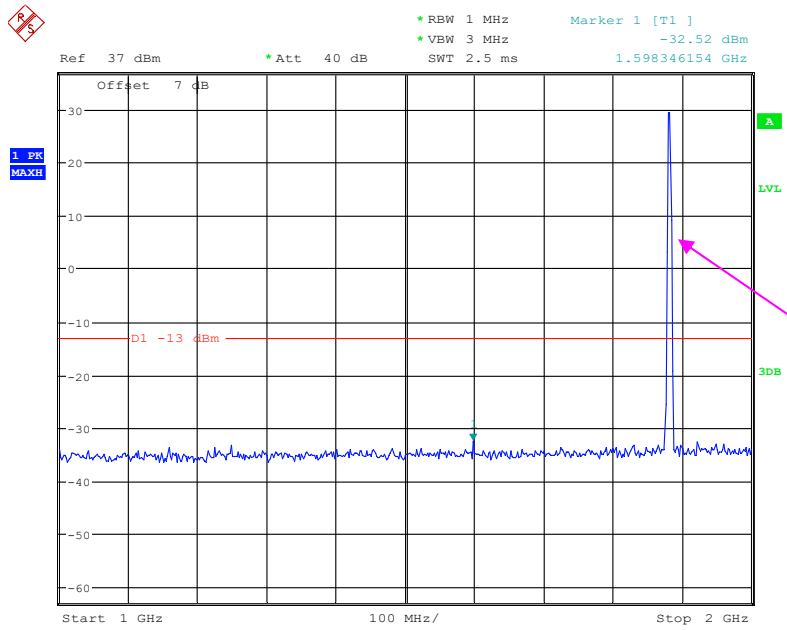
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 19.JAN.2022 10:06:12

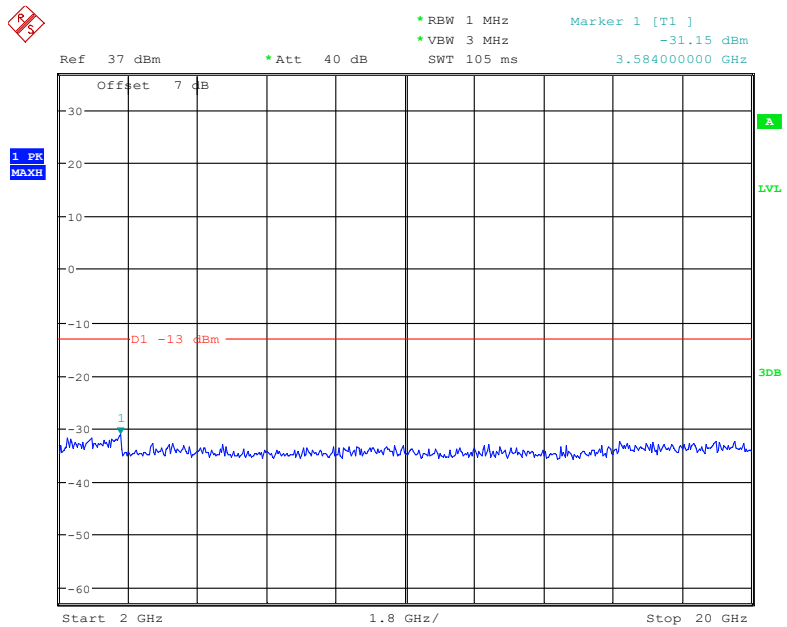
1 GHz – 2 GHz (GSM Mode)



Fundamental test

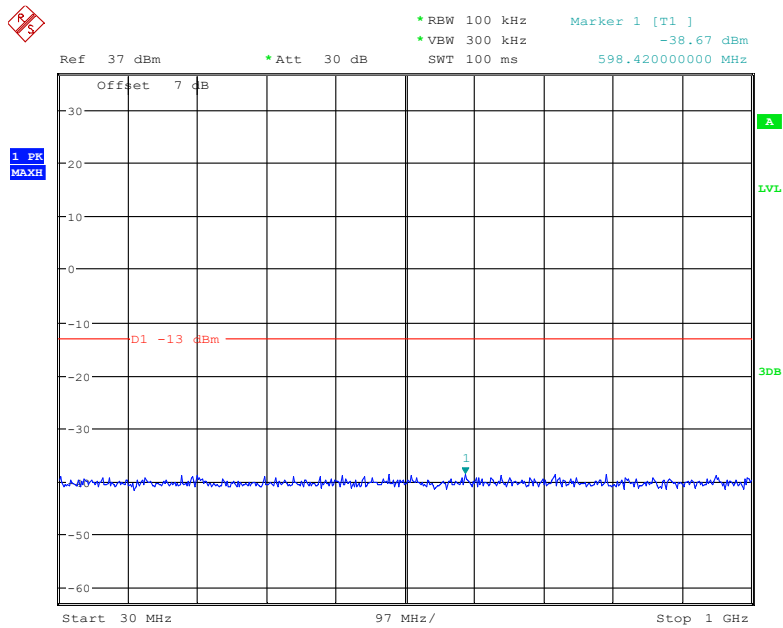
Date: 19.JAN.2022 10:07:23

2 GHz – 20 GHz (GSM Mode)



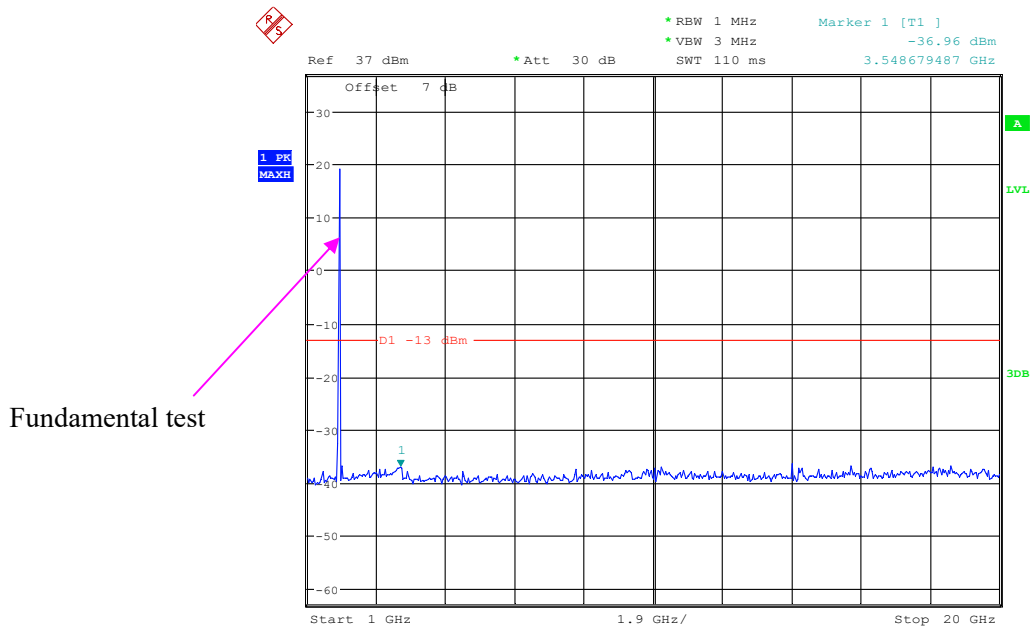
Date: 19.JAN.2022 10:08:51

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:22:58

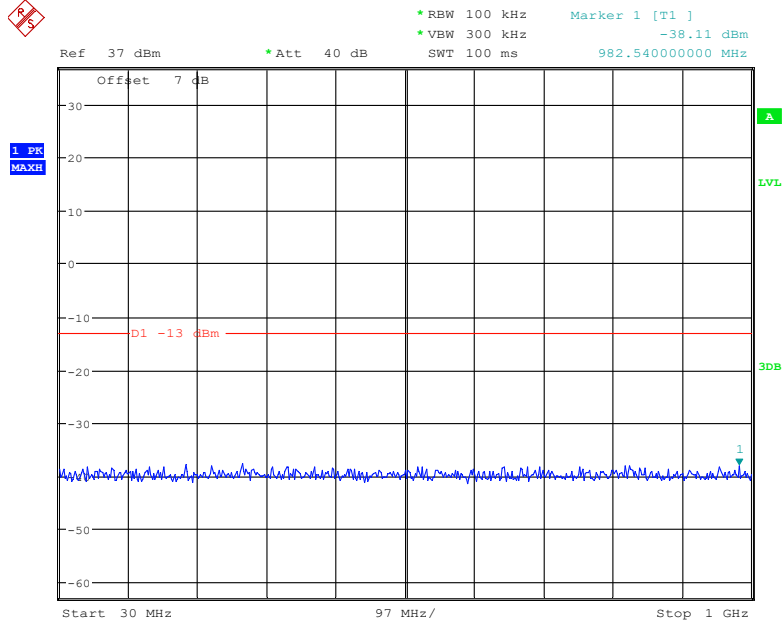
1 GHz – 20GHz (WCDMA Mode)



Date: 21.JAN.2022 00:29:20

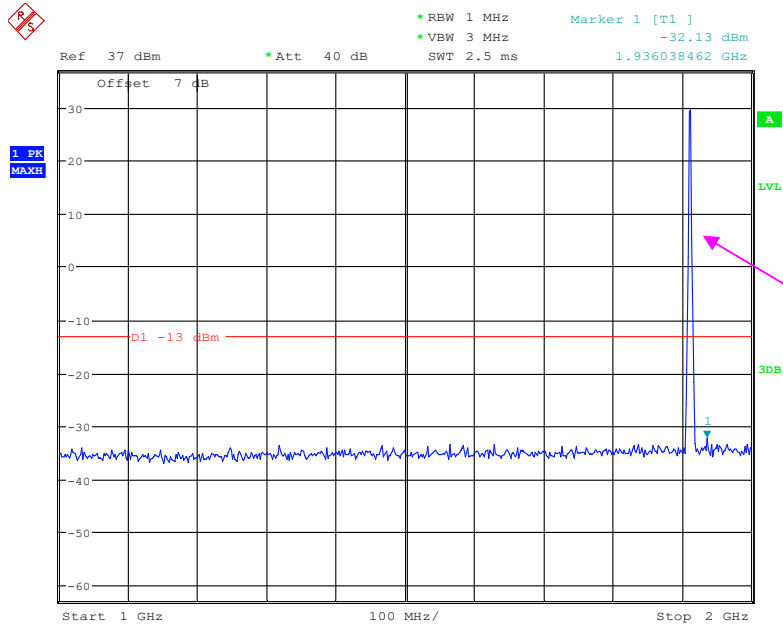
High Channel:

30 MHz – 1 GHz (GSM Mode)



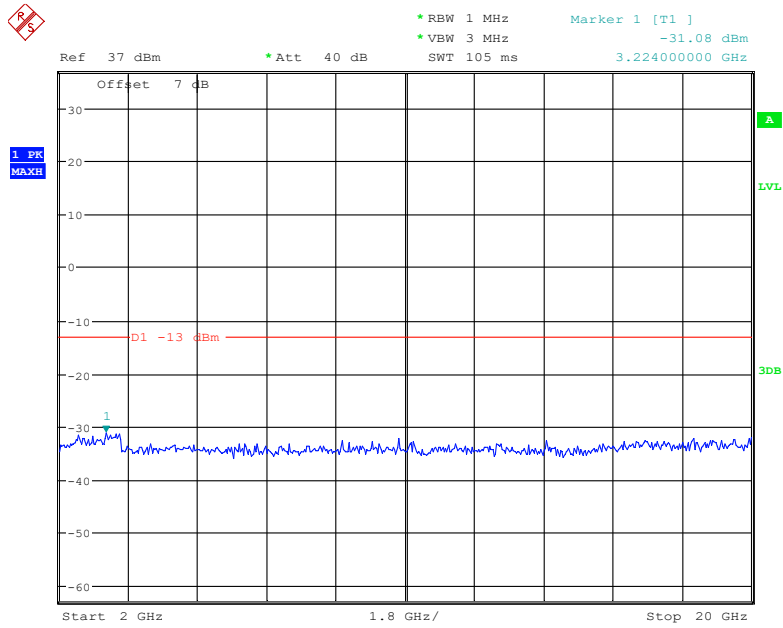
Date: 19.JAN.2022 10:06:23

1 GHz – 2 GHz (GSM Mode)



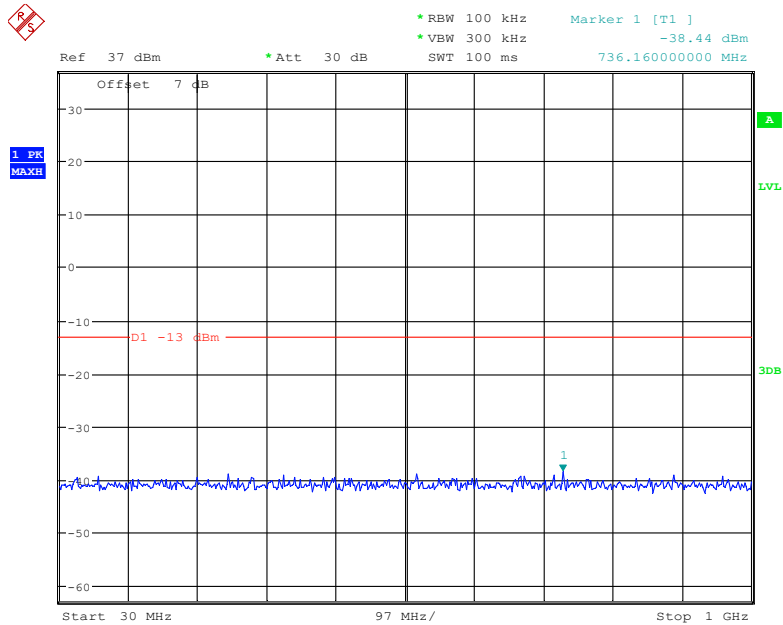
Date: 19.JAN.2022 10:06:52

2 GHz– 20 GHz (GSM Mode)



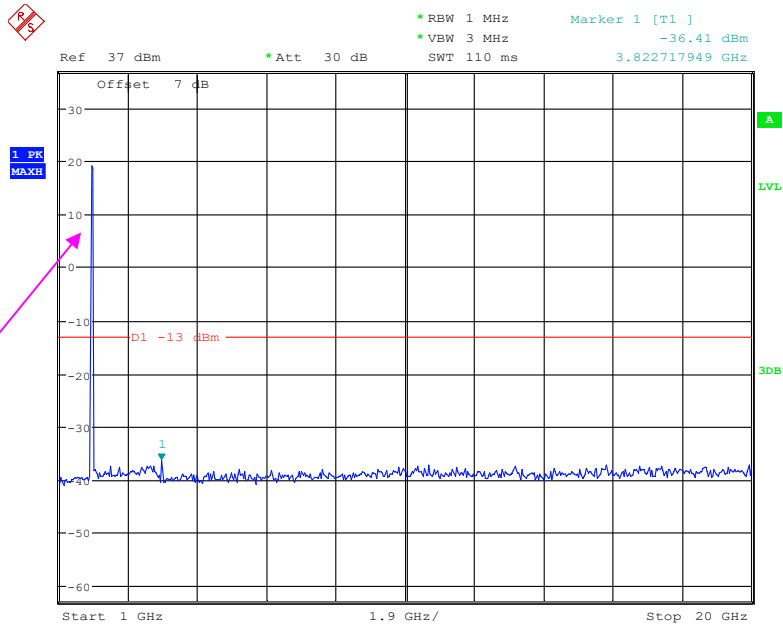
Date: 19.JAN.2022 10:09:06

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:23:12

1 GHz – 20 GHz (WCDMA Mode)

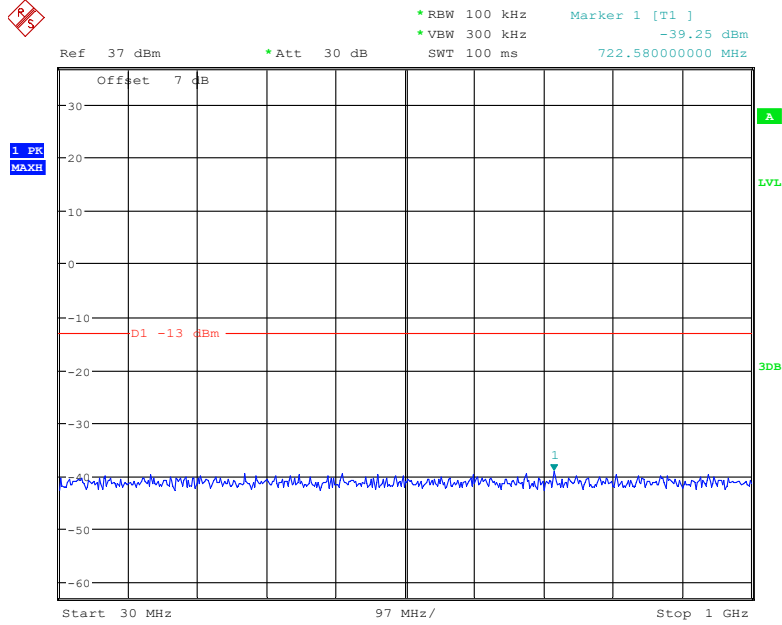


Fundamental test

Date: 21.JAN.2022 00:29:48

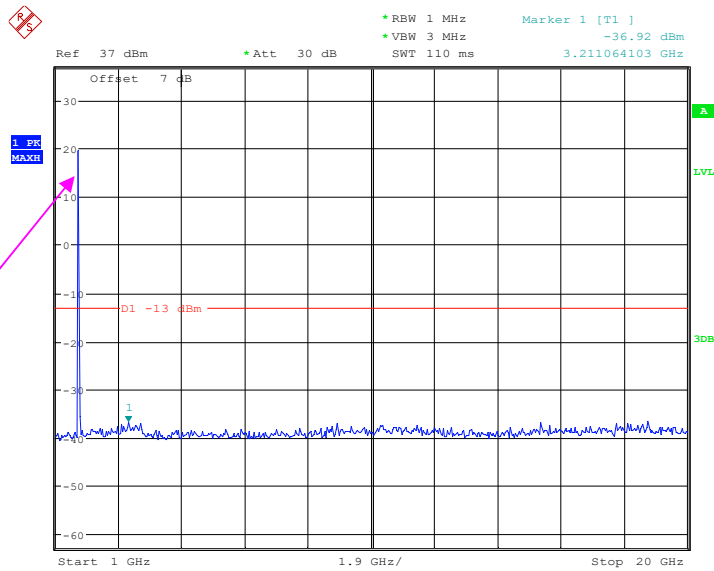
**AWS Band (Part 27)
Low Channel:**

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:23:39

1 GHz – 20 GHz (WCDMA Mode)

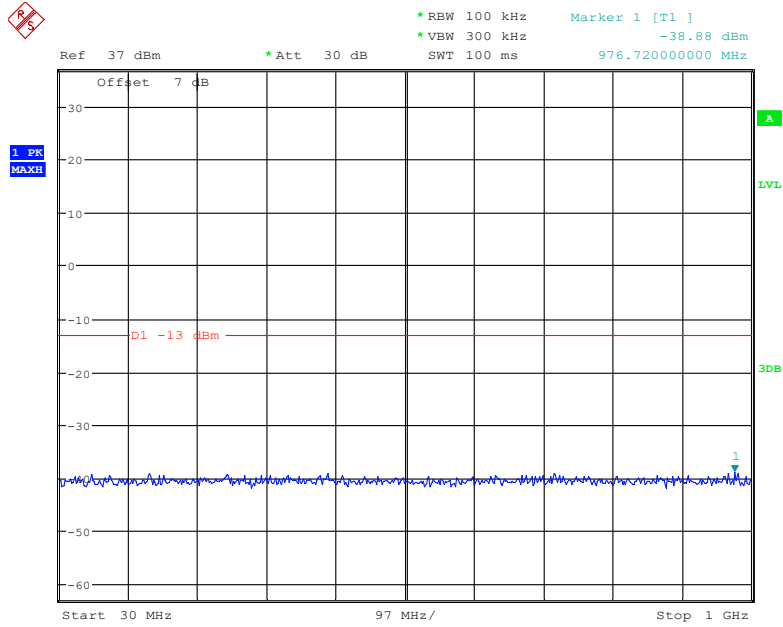


Fundamental test

Date: 21.JAN.2022 00:27:11

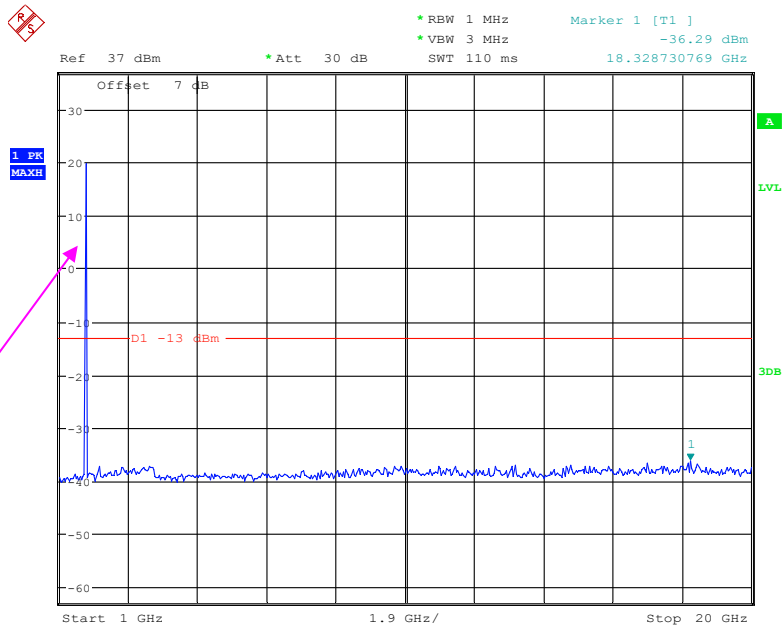
Middle Channel

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:23:48

1 GHz – 20 GHz (WCDMA Mode)

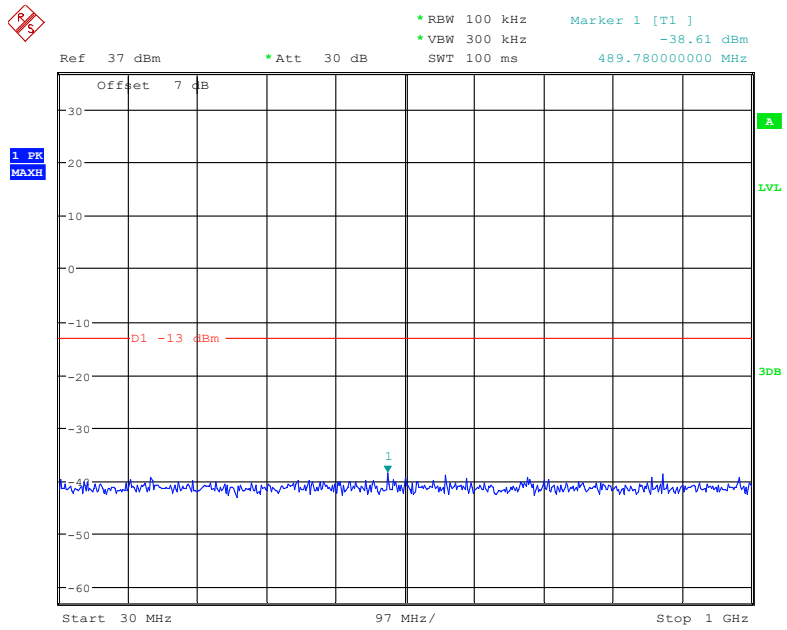


Fundamental test

Date: 21.JAN.2022 00:27:49

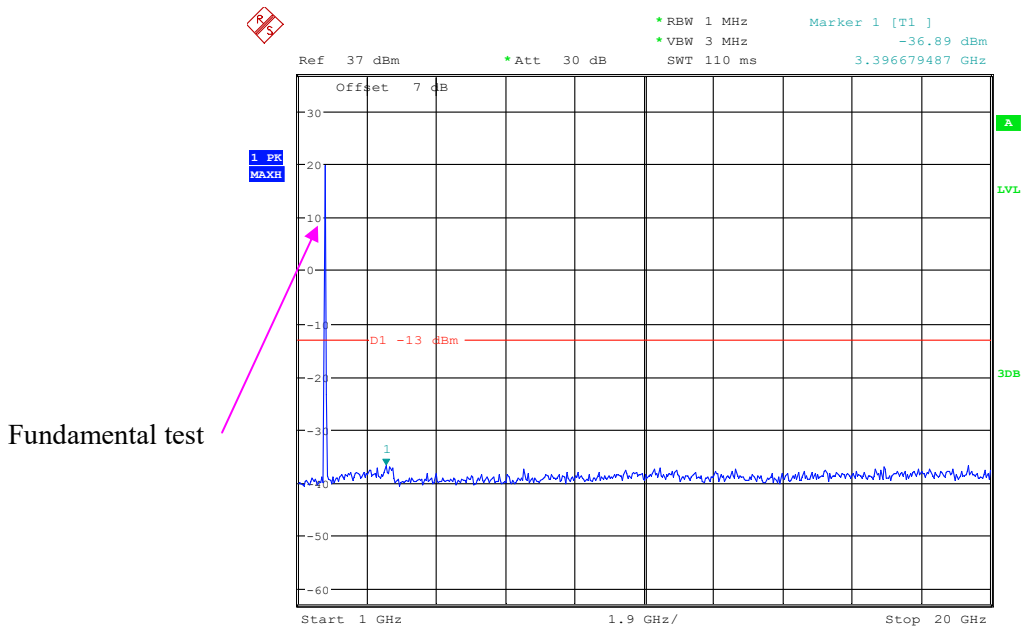
High Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:23:25

1 GHz – 20 GHz (WCDMA Mode)



Date: 21.JAN.2022 00:28:14

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:	26.5 °C
Relative Humidity:	56 %
ATM Pressure:	101.0kPa

The testing was performed by Bin Deng on 2022-01-17.

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								
960.2	-74.32	239	1.2	H	10.0	-64.32	-13	51.32
960.2	-75.11	259	2.0	V	11.7	-63.41	-13	50.41
1648.4	-47.70	100	2.2	H	3.5	-44.20	-13	31.20
1648.4	-50.70	116	2.4	V	3.1	-47.60	-13	34.60
2472.6	-39.60	248	1.2	H	6.6	-33.00	-13	20.00
2472.6	-42.80	186	2.3	V	5.8	-37.00	-13	24.00
3296.8	-51.40	117	1.3	H	6.4	-45.00	-13	32.00
3296.8	-50.00	209	2.3	V	5.7	-44.30	-13	31.30
Middle Channel								
959.4	-75.42	292	1.5	H	10.0	-65.42	-13	52.42
959.4	-76.33	124	2.1	V	11.7	-64.63	-13	51.63
1673.2	-47.90	156	2.5	H	3.8	-44.10	-13	31.10
1673.2	-50.00	155	1.9	V	3.1	-46.90	-13	33.90
2509.8	-40.10	358	1.8	H	6.2	-33.90	-13	20.90
2509.8	-43.30	226	1.7	V	5.5	-37.80	-13	24.80
3346.4	-51.50	166	1.0	H	6.6	-44.90	-13	31.90
3346.4	-48.80	221	1.9	V	5.4	-43.40	-13	30.40
High Channel								
958.8	-74.45	86	1.5	H	10.0	-64.45	-13	51.45
958.8	-75.56	83	2.0	V	11.7	-63.86	-13	50.86
1697.6	-47.10	306	2.1	H	4.1	-43.00	-13	30.00
1697.6	-47.70	69	1.1	V	3.1	-44.60	-13	31.60
2546.4	-38.50	305	1.4	H	6.1	-32.40	-13	19.40
2546.4	-42.10	187	1.9	V	5.8	-36.30	-13	23.30
3395.2	-50.20	257	2.2	H	6.2	-44.00	-13	31.00
3395.2	-48.60	148	2.1	V	5.4	-43.20	-13	30.20

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 5								
Low Channel ((826.4MHz)								
958.5	-75.48	196	1.5	H	10.0	-65.48	-13	52.48
958.5	-76.02	179	1.7	V	11.7	-64.32	-13	51.32
1652.8	-53.90	152	2.1	H	3.5	-50.40	-13	37.40
1652.8	-54.00	103	1.9	V	3.1	-50.90	-13	37.90
2479.2	-51.30	344	1.9	H	6.6	-44.70	-13	31.70
2479.2	-55.50	174	2.3	V	5.8	-49.70	-13	36.70
3305.6	-51.90	88	2.5	H	6.4	-45.50	-13	32.50
3305.6	-50.90	245	2.2	V	5.7	-45.20	-13	32.20
Middle Channel (836.6MHz)								
957.3	-75.65	90	2.1	H	10.0	-65.65	-13	52.65
957.3	-76.14	92	1.6	V	11.7	-64.44	-13	51.44
1673.2	-52.70	113	2.4	H	3.8	-48.90	-13	35.90
1673.2	-52.90	128	2.3	V	3.1	-49.80	-13	36.80
2509.8	-45.40	311	1.9	H	6.2	-39.20	-13	26.20
2509.8	-51.00	228	1.4	V	5.5	-45.50	-13	32.50
3346.4	-51.60	28	2.1	H	6.6	-45.00	-13	32.00
3346.4	-50.20	291	2.2	V	5.4	-44.80	-13	31.80
High Channel (846.6MHz)								
960.7	-76.18	123	1.9	H	10.0	-66.18	-13	53.18
960.7	-76.76	70	1.1	V	11.7	-65.06	-13	52.06
1693.2	-54.10	30	1.3	H	4.1	-50.00	-13	37.00
1693.2	-54.10	28	2.3	V	3.1	-51.00	-13	38.00
2539.8	-54.00	188	2.1	H	6.1	-47.90	-13	34.90
2539.8	-54.50	238	1.9	V	5.8	-48.70	-13	35.70
3386.4	-51.80	151	1.9	H	6.2	-45.60	-13	32.60
3386.4	-50.40	240	1.1	V	5.4	-45.00	-13	32.00

30MHz-20GHz:**PCS Band (Part 24E)**

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM 1900								
Low Channel								
958.8	-75.67	43	2.2	H	10.0	-65.67	-13	52.67
958.8	-76.29	117	1.6	V	11.7	-64.59	-13	51.59
3700.4	-50.30	213	2.2	H	8.1	-42.20	-13	29.20
3700.4	-50.70	187	1.1	V	7.6	-43.10	-13	30.10
5550.6	-39.70	308	1.3	H	9.6	-30.10	-13	17.10
5550.6	-45.70	274	2.0	V	9.1	-36.60	-13	23.60
7400.8	-53.20	344	1.2	H	19.7	-33.50	-13	20.50
7400.8	-55.90	26	2.4	V	19.0	-36.90	-13	23.90
Middle Channel								
959.4	-75.40	354	1.1	H	10.0	-65.40	-13	52.40
959.4	-76.05	357	1.6	V	11.7	-64.35	-13	51.35
3760.0	-49.20	232	1.7	H	8.8	-40.40	-13	27.40
3760.0	-50.70	35	1.4	V	8.0	-42.70	-13	29.70
5640.0	-37.10	56	2.3	H	10.2	-26.90	-13	13.90
5640.0	-43.70	312	1.9	V	9.5	-34.20	-13	21.20
7520.0	-46.00	30	2.5	H	20.3	-25.70	-13	12.70
7520.0	-47.40	143	1.5	V	19.9	-27.50	-13	14.50
High Channel								
959.4	-75.85	102	2.4	H	10.0	-65.85	-13	52.85
959.4	-76.17	153	2.0	V	11.7	-64.47	-13	51.47
3819.6	-46.20	14	1.0	H	8.7	-37.50	-13	24.50
3819.6	-48.50	49	2.1	V	8.0	-40.50	-13	27.50
5729.4	-35.00	340	1.4	H	10.8	-24.20	-13	11.20
5729.4	-39.90	251	1.4	V	10.4	-29.50	-13	16.50
7639.2	-46.90	178	1.9	H	21.2	-25.70	-13	12.70
7639.2	-48.80	148	1.8	V	20.7	-28.10	-13	15.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Low Channel (1852.4MHz)								
958.3	-76.24	209	2.0	H	10.0	-66.24	-13	53.24
958.3	-76.39	12	1.6	V	11.7	-64.69	-13	51.69
3704.8	-51.50	311	1.8	H	8.1	-43.40	-13	30.40
3704.8	-51.00	274	1.9	V	7.6	-43.40	-13	30.40
5557.2	-53.60	12	2.0	H	9.6	-44.00	-13	31.00
5557.2	-50.90	240	2.2	V	9.1	-41.80	-13	28.80
Middle Channel (1880MHz)								
959.8	-75.89	50	1.2	H	10.0	-65.89	-13	52.89
959.8	-76.07	176	2.0	V	11.7	-64.37	-13	51.37
3760.0	-50.10	37	1.6	H	8.8	-41.30	-13	28.30
3760.0	-49.50	231	1.5	V	8.0	-41.50	-13	28.50
5640.0	-54.70	83	1.4	H	10.2	-44.50	-13	31.50
5640.0	-53.00	179	2.3	V	9.5	-43.50	-13	30.50
High Channel (1907.6MHz)								
961.1	-76.38	273	2.1	H	10.0	-66.38	-13	53.38
961.1	-76.77	163	1.0	V	11.7	-65.07	-13	52.07
3815.2	-47.10	257	2.3	H	8.7	-38.40	-13	25.40
3815.2	-48.30	124	2.2	V	8.0	-40.30	-13	27.30
5722.8	-55.00	293	2.0	H	10.4	-44.60	-13	31.60
5722.8	-53.40	283	1.1	V	9.9	-43.50	-13	30.50

30MHz-20GHz:**AWS Band (Part 27E)**

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 4								
Low Channel (1712.4MHz)								
961.1	-75.69	230	2.2	H	10.0	-65.69	-13	52.69
961.1	-76.02	297	2.0	V	11.7	-64.32	-13	51.32
3424.8	-50.80	293	2.4	H	6.4	-44.40	-13	31.40
3424.8	-49.70	16	2.4	V	5.7	-44.00	-13	31.00
5137.2	-56.00	2	2.1	H	11.4	-44.60	-13	31.60
5137.2	-54.70	57	1.7	V	10.7	-44.00	-13	31.00
Middle Channel (1732.6MHz)								
960.5	-76.27	134	2.5	H	10.0	-66.27	-13	53.27
960.5	-76.54	126	2.1	V	11.7	-64.84	-13	51.84
3465.2	-50.80	78	2.4	H	6.9	-43.90	-13	30.90
3465.2	-50.50	36	1.5	V	6.2	-44.30	-13	31.30
5197.8	-54.80	323	1.9	H	10.3	-44.50	-13	31.50
5197.8	-53.00	72	2.2	V	9.8	-43.20	-13	30.20
High Channel (1752.6MHz)								
960.8	-76.31	304	1.7	H	10.0	-66.31	-13	53.31
960.8	-77.04	105	1.7	V	11.7	-65.34	-13	52.34
3505.2	-51.50	311	2.5	H	7.8	-43.70	-13	30.70
3505.2	-50.40	207	1.2	V	6.5	-43.90	-13	30.90
5257.8	-53.50	123	2.0	H	9.4	-44.10	-13	31.10
5257.8	-51.70	270	1.6	V	9.0	-42.70	-13	29.70

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								
959.9	-75.85	211	2.1	H	10.0	-65.85	-13	52.85
959.9	-76.04	138	1.3	V	11.7	-64.34	-13	51.34
3701.4	-51.70	216	1.7	H	8.1	-43.60	-13	30.60
3701.4	-51.50	359	1.1	V	7.6	-43.90	-13	30.90
5552.1	-44.30	274	2.3	H	9.6	-34.70	-13	21.70
5552.1	-43.90	13	1.9	V	9.1	-34.80	-13	21.80
1.4MHz bandwidth, Middle Channel								
958.2	-75.85	266	2.4	H	10.0	-65.85	-13	52.85
958.2	-76.16	16	1.4	V	11.7	-64.46	-13	51.46
3760.0	-50.80	344	1.6	H	8.8	-42.00	-13	29.00
3760.0	-51.00	169	2.1	V	8.0	-43.00	-13	30.00
5640.0	-48.20	33	2.3	H	10.2	-38.00	-13	25.00
5640.0	-48.30	304	1.7	V	9.5	-38.80	-13	25.80
1.4MHz bandwidth, High Channel								
958.2	-76.21	297	2.4	H	10.0	-66.21	-13	53.21
958.2	-77.26	172	2.1	V	11.7	-65.56	-13	52.56
3818.6	-46.10	311	2.4	H	8.7	-37.40	-13	24.40
3818.6	-49.30	307	1.4	V	8.0	-41.30	-13	28.30
5727.9	-49.10	48	1.5	H	10.6	-38.50	-13	25.50
5727.9	-49.50	170	1.8	V	10.2	-39.30	-13	26.30

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 4								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, Low Channel								
960.4	-75.67	191	1.5	H	10.0	-65.67	-13	52.67
960.4	-76.03	313	1.5	V	11.7	-64.33	-13	51.33
3421.4	-51.10	352	1.1	H	6.4	-44.70	-13	31.70
3421.4	-49.60	64	1.3	V	5.7	-43.90	-13	30.90
5132.1	-43.90	23	1.9	H	11.3	-32.60	-13	19.60
5132.1	-43.80	340	1.3	V	10.8	-33.00	-13	20.00
1.4MHz bandwidth, Middle Channel								
961.3	-76.16	208	1.9	H	10.0	-66.16	-13	53.16
961.3	-76.38	118	2.0	V	11.7	-64.68	-13	51.68
3465.0	-50.50	135	2.0	H	6.9	-43.60	-13	30.60
3465.0	-50.80	256	1.9	V	6.2	-44.60	-13	31.60
5197.5	-41.90	116	1.9	H	10.3	-31.60	-13	18.60
5197.5	-40.70	129	1.9	V	9.8	-30.90	-13	17.90
1.4MHz bandwidth, High Channel								
958.6	-75.77	308	2.0	H	10.0	-65.77	-13	52.77
958.6	-75.94	237	2.4	V	11.7	-64.24	-13	51.24
3508.6	-50.70	36	1.1	H	7.8	-42.90	-13	29.90
3508.6	-50.70	155	2.0	V	6.5	-44.20	-13	31.20
5262.9	-40.70	201	2.3	H	9.5	-31.20	-13	18.20
5262.9	-42.00	79	2.1	V	8.9	-33.10	-13	20.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 5								
Test frequency range: 30MHz-10GHz								
1.4MHz bandwidth, Low Channel								
959.8	-76.14	173	2.0	H	10.0	-66.14	-13	53.14
959.8	-76.79	165	2.3	V	11.7	-65.09	-13	52.09
1649.4	-55.00	27	1.7	H	3.5	-51.50	-13	38.50
1649.4	-55.40	133	1.5	V	3.1	-52.30	-13	39.30
2474.1	-54.00	97	1.1	H	6.6	-47.40	-13	34.40
2474.1	-54.60	120	2.3	V	5.8	-48.80	-13	35.80
3298.8	-51.50	236	1.2	H	6.4	-45.10	-13	32.10
3298.8	-50.00	208	2.0	V	5.7	-44.30	-13	31.30
1.4MHz bandwidth, Middle Channel								
958.2	-75.84	157	1.8	H	10.0	-65.84	-13	52.84
958.2	-75.93	309	1.9	V	11.7	-64.23	-13	51.23
1673.0	-48.90	12	2.4	H	3.8	-45.10	-13	32.10
1673.0	-49.70	301	1.5	V	3.1	-46.60	-13	33.60
2509.5	-53.10	286	1.1	H	6.2	-46.90	-13	33.90
2509.5	-54.40	104	2.4	V	5.5	-48.90	-13	35.90
3346.0	-51.30	48	1.4	H	6.6	-44.70	-13	31.70
3346.0	-49.70	126	1.6	V	5.4	-44.30	-13	31.30
1.4MHz bandwidth, High Channel								
958.6	-75.49	238	1.5	H	10.0	-65.49	-13	52.49
958.6	-75.75	134	1.6	V	11.7	-64.05	-13	51.05
1696.6	-53.10	139	2.2	H	4.1	-49.00	-13	36.00
1696.6	-52.90	208	2.4	V	3.1	-49.80	-13	36.80
2544.9	-53.20	320	1.6	H	6.1	-47.10	-13	34.10
2544.9	-54.00	332	1.8	V	5.8	-48.20	-13	35.20
3393.2	-51.70	307	1.0	H	6.2	-45.50	-13	32.50
3393.2	-50.40	27	2.3	V	5.4	-45.00	-13	32.00

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 7								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, Low Channel								
958.6	-76.42	230	2.2	H	10.0	-66.42	-25	41.42
958.6	-76.56	340	1.1	V	11.7	-64.86	-25	39.86
5005.0	-51.70	245	2.0	H	10.8	-40.90	-25	15.90
5005.0	-53.20	126	1.7	V	10.1	-43.10	-25	18.10
7507.5	-59.30	38	1.4	H	20.3	-39.00	-25	14.00
7507.5	-60.70	277	1.3	V	19.9	-40.80	-25	15.80
5MHz bandwidth, Middle Channel								
959.1	-75.67	158	1.6	H	10.0	-65.67	-25	40.67
959.1	-75.92	63	1.3	V	11.7	-64.22	-25	39.22
5070.0	-52.30	232	1.7	H	11.1	-41.20	-25	16.20
5070.0	-54.30	167	1.4	V	10.7	-43.60	-25	18.60
7605.0	-64.00	18	1.8	H	21.2	-42.80	-25	17.80
7605.0	-63.60	357	2.3	V	20.0	-43.60	-25	18.60
5MHz bandwidth, High Channel								
959.5	-76.14	147	1.5	H	10.0	-66.14	-25	41.14
959.5	-77.37	97	1.8	V	11.7	-65.67	-25	40.67
5135.0	-52.30	63	1.2	H	11.3	-41.00	-25	16.00
5135.0	-54.30	220	1.6	V	10.8	-43.50	-25	18.50
7702.5	-65.00	246	2.1	H	21.3	-43.70	-25	18.70
7702.5	-65.60	65	1.1	V	21.1	-44.50	-25	19.50

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 38								
Test frequency range: 30MHz-26.5GHz								
5MHz, Low Channel								
959.5	-75.93	30	1.7	H	10.0	-65.93	-25	40.93
959.5	-76.17	329	2.2	V	11.7	-64.47	-25	39.47
5145.0	-53.20	203	2.5	H	11.4	-41.80	-25	16.80
5145.0	-51.90	94	1.9	V	10.7	-41.20	-25	16.20
7717.5	-64.00	90	1.2	H	20.6	-43.40	-25	18.40
7717.5	-65.20	261	2.4	V	20.4	-44.80	-25	19.80
5MHz, Middle Channel								
960.3	-76.09	16	2.4	H	10.0	-66.09	-25	41.09
960.3	-76.38	227	1.2	V	11.7	-64.68	-25	39.68
5190.0	-51.80	328	1.4	H	10.5	-41.30	-25	16.30
5190.0	-50.30	140	1.1	V	10.0	-40.30	-25	15.30
7785.0	-60.50	335	2.0	H	18.3	-42.20	-25	17.20
7785.0	-60.50	165	1.3	V	18.0	-42.50	-25	17.50
5MHz, High Channel								
958.3	-75.95	284	2.4	H	10.0	-65.95	-25	40.95
958.3	-76.09	324	1.7	V	11.7	-64.39	-25	39.39
5235.0	-51.40	179	1.0	H	9.7	-41.70	-25	16.70
5235.0	-50.20	1	1.7	V	9.3	-40.90	-25	15.90
7852.5	-61.60	25	1.5	H	18.2	-43.40	-25	18.40
7852.5	-61.70	257	1.8	V	17.6	-44.10	-25	19.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
Band 41								
Test frequency range: 1-26.5GHz								
5MHz, Low Channel								
959.2	-75.46	130	1.3	H	10.0	-65.46	-25	40.46
959.2	-75.98	97	1.7	V	11.7	-64.28	-25	39.28
5075.0	-52.60	312	1.5	H	11.1	-41.50	-25	16.50
5075.0	-51.70	336	1.6	V	10.7	-41.00	-25	16.00
7612.5	-60.80	280	1.4	H	21.2	-39.60	-25	14.60
7612.5	-62.90	262	1.7	V	20.2	-42.70	-25	17.70
5MHz bandwidth, Middle Channel								
959.8	-76.69	72	2.0	H	10.0	-66.69	-25	41.69
959.8	-76.17	151	1.3	V	11.7	-64.47	-25	39.47
5190.0	-51.60	2	2.0	H	10.5	-41.10	-25	16.10
5190.0	-50.00	76	2.1	V	10.0	-40.00	-25	15.00
7785.0	-59.80	264	2.0	H	18.3	-41.50	-25	16.50
7785.0	-60.90	319	1.5	V	18.0	-42.90	-25	17.90
5MHz bandwidth, High Channel								
961.4	-76.28	285	1.3	H	10.0	-66.28	-25	41.28
961.4	-77.33	245	2.1	V	11.7	-65.63	-25	40.63
5305.0	-50.50	106	2.1	H	9.6	-40.90	-25	15.90
5305.0	-47.40	337	1.1	V	8.8	-38.60	-25	13.60
7957.5	-60.90	264	2.3	H	18.9	-42.00	-25	17.00
7957.5	-62.40	210	1.8	V	18.5	-43.90	-25	18.90

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.

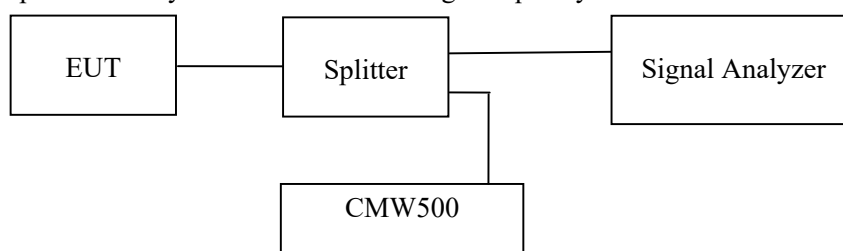
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

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:	26.4~26.8 °C
Relative Humidity:	57~59 %
ATM Pressure:	101.0 kPa

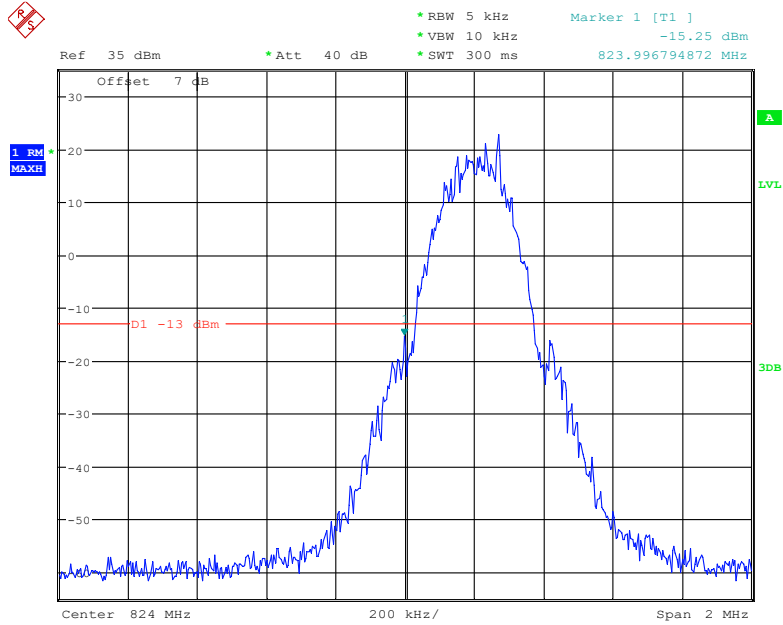
The testing was performed by Ting Lü from 2022-01-19 to 2022-01-21.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

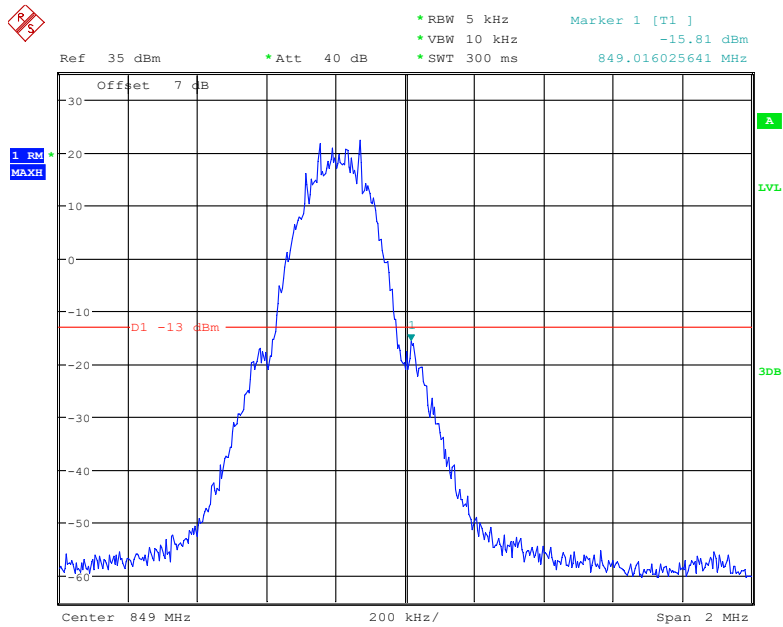
Please refer to the following plots.

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



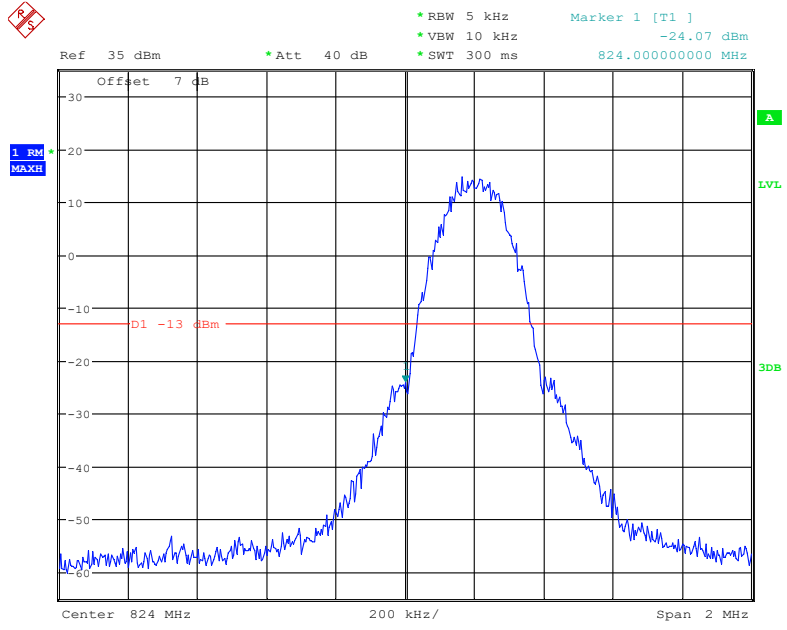
Date: 19.JAN.2022 09:18:09

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



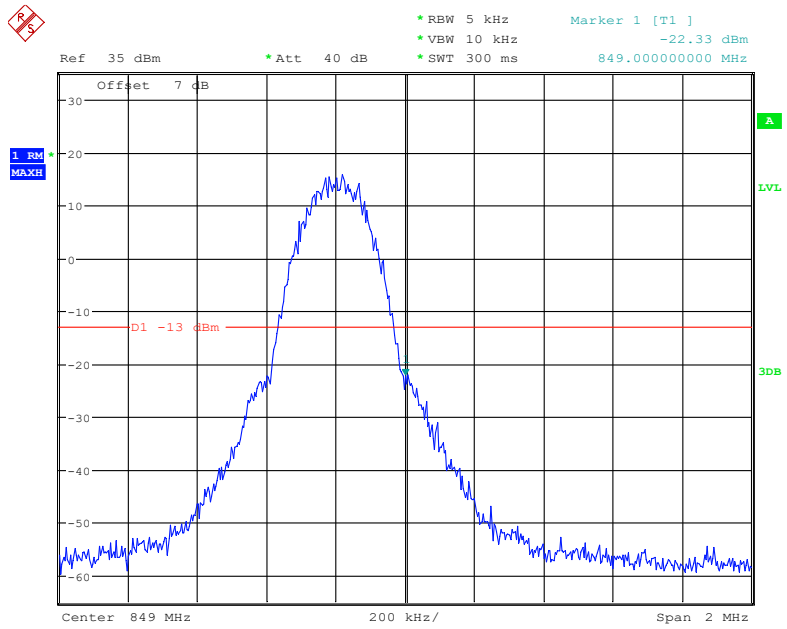
Date: 19.JAN.2022 09:19:20

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



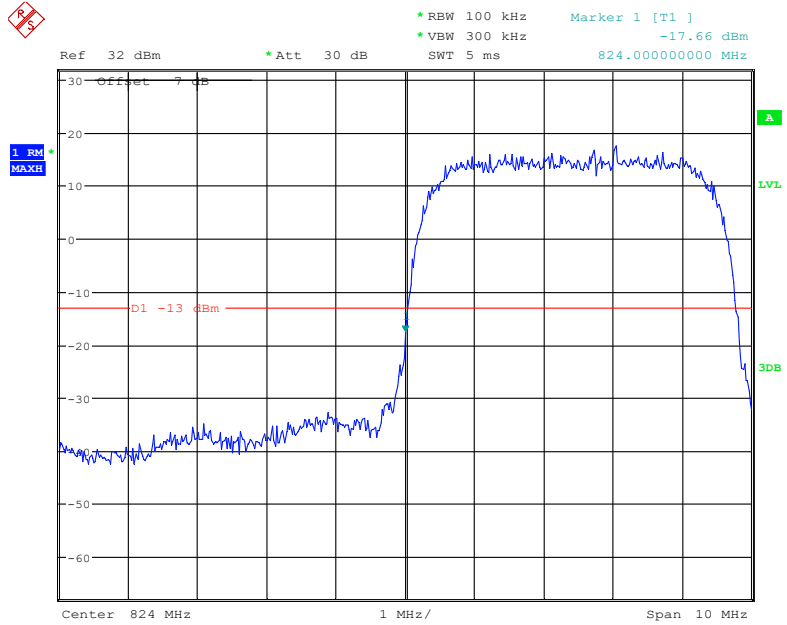
Date: 19.JAN.2022 09:46:39

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



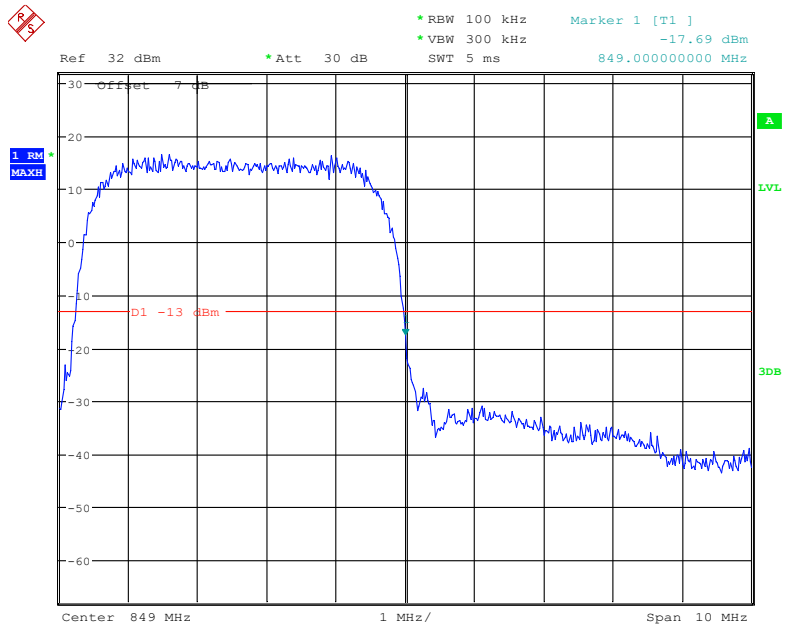
Date: 19.JAN.2022 09:45:52

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



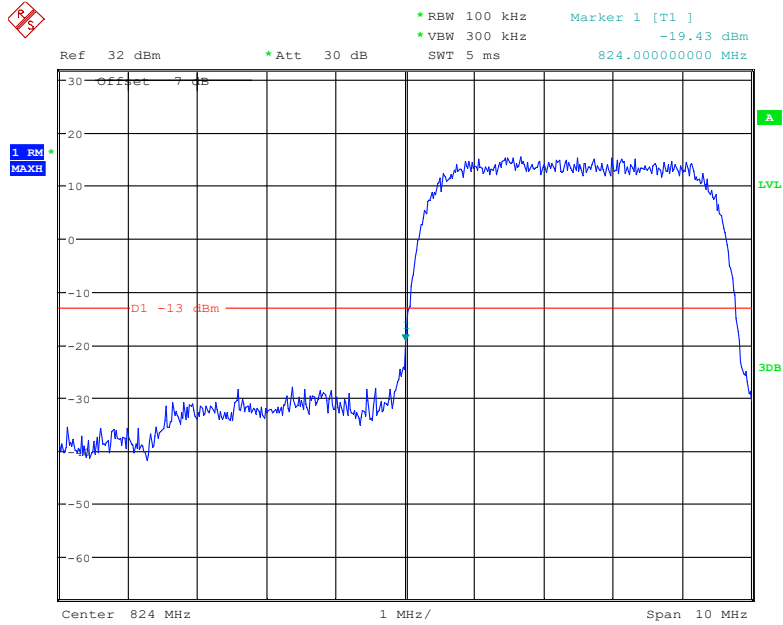
Date: 21.JAN.2022 00:09:48

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



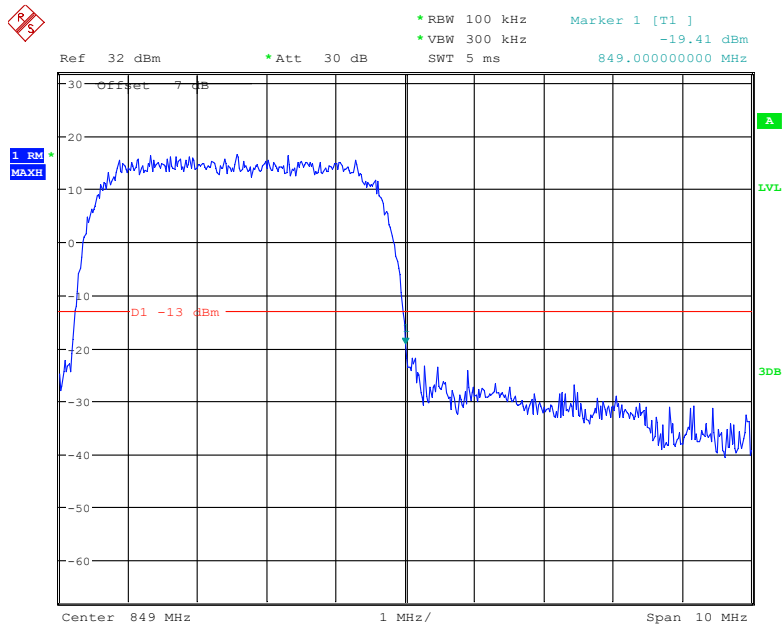
Date: 21.JAN.2022 00:10:16

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



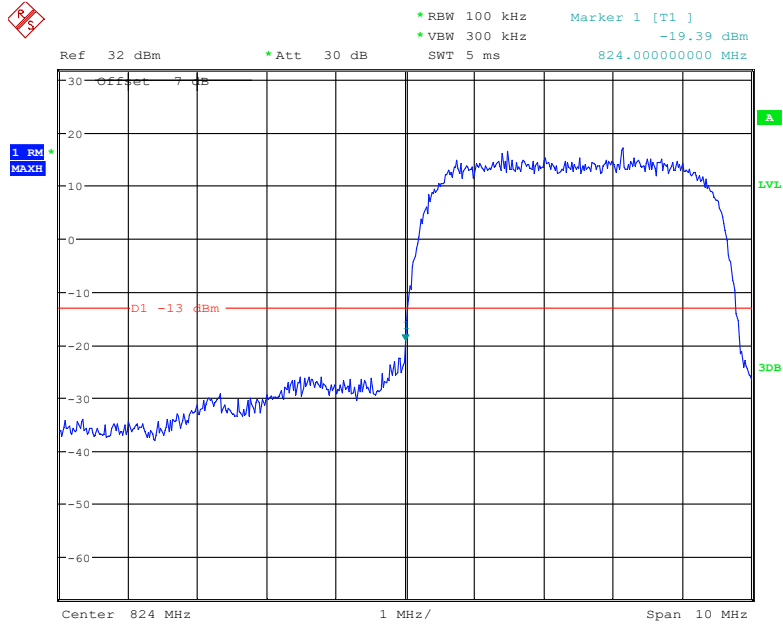
Date: 21.JAN.2022 00:50:46

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



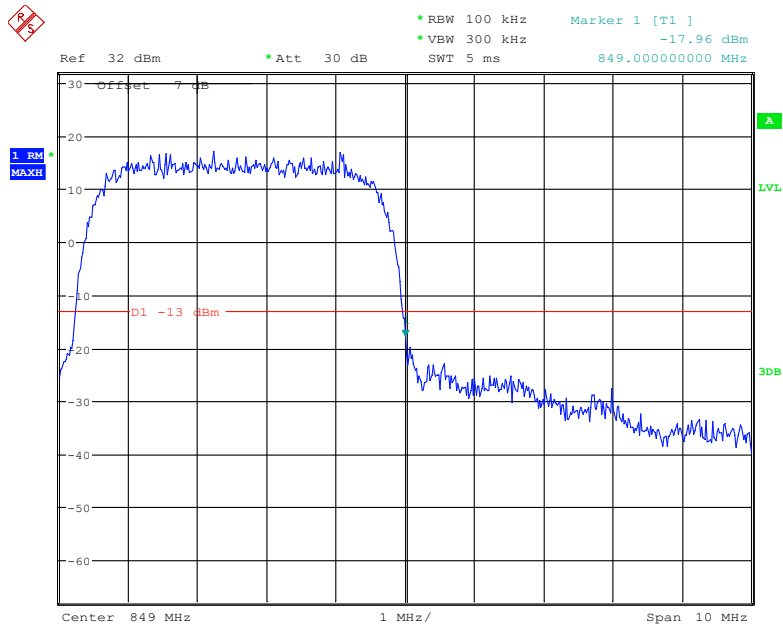
Date: 21.JAN.2022 00:51:11

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



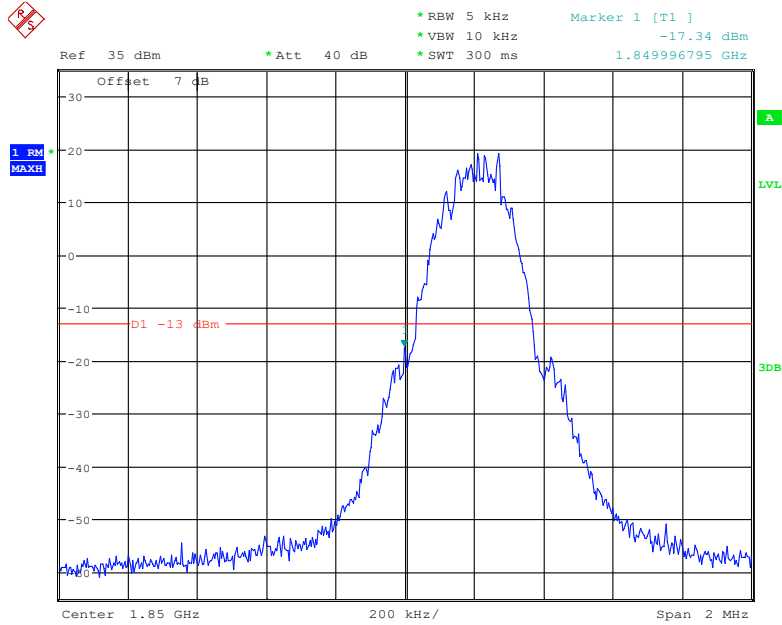
Date: 21.JAN.2022 00:59:12

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



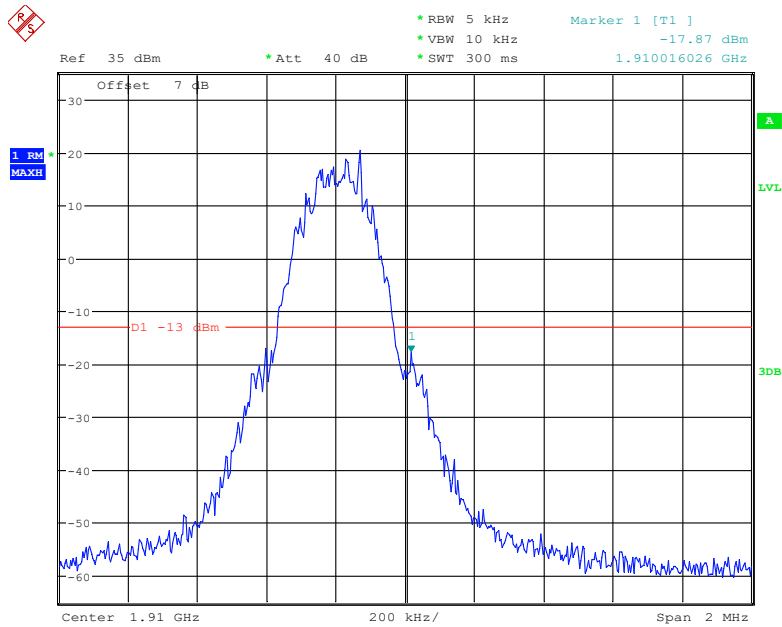
Date: 21.JAN.2022 00:58:47

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



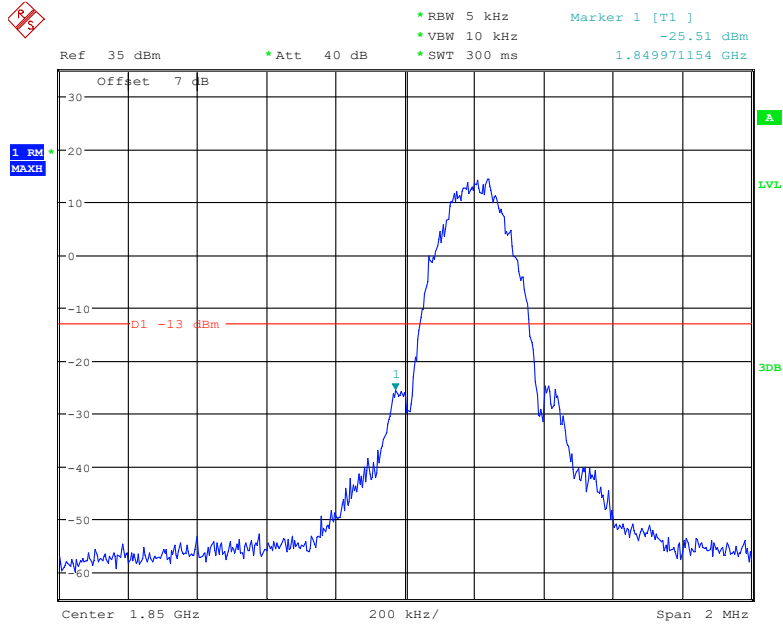
Date: 19.JAN.2022 09:28:58

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



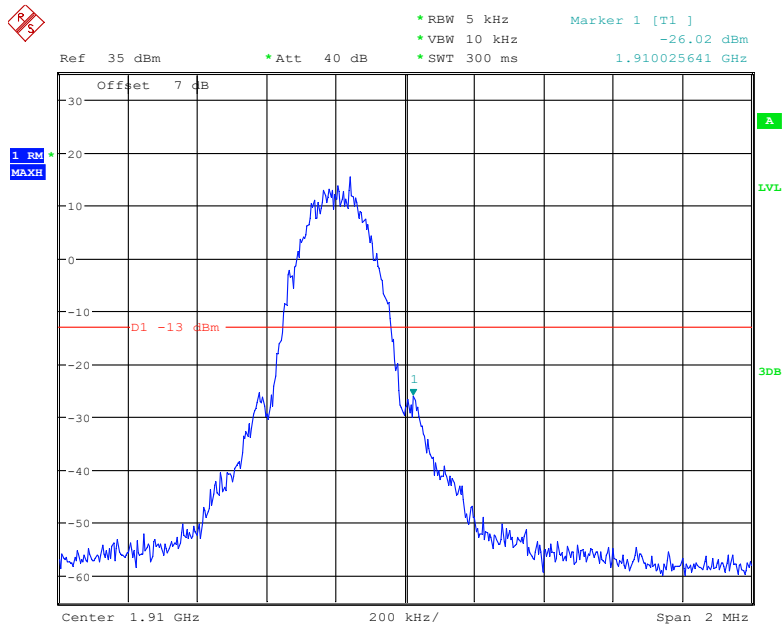
Date: 19.JAN.2022 09:28:15

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



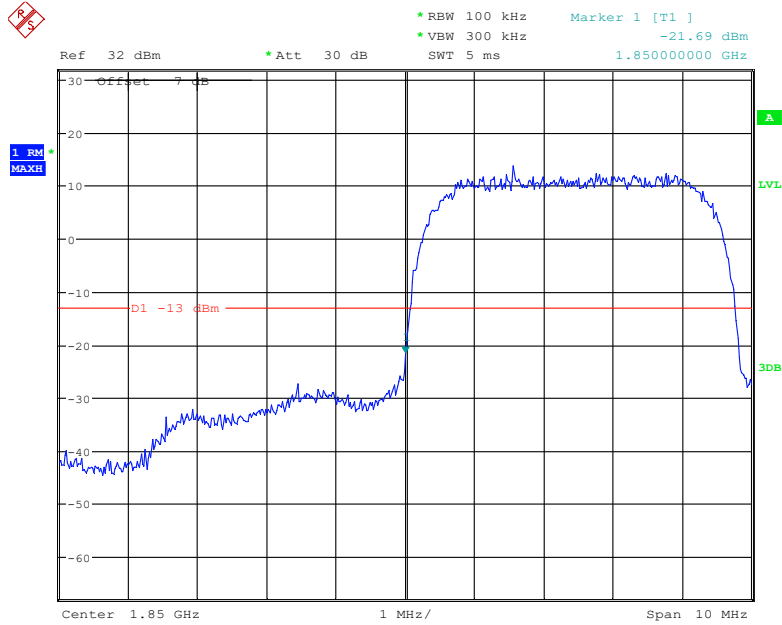
Date: 19.JAN.2022 09:32:00

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



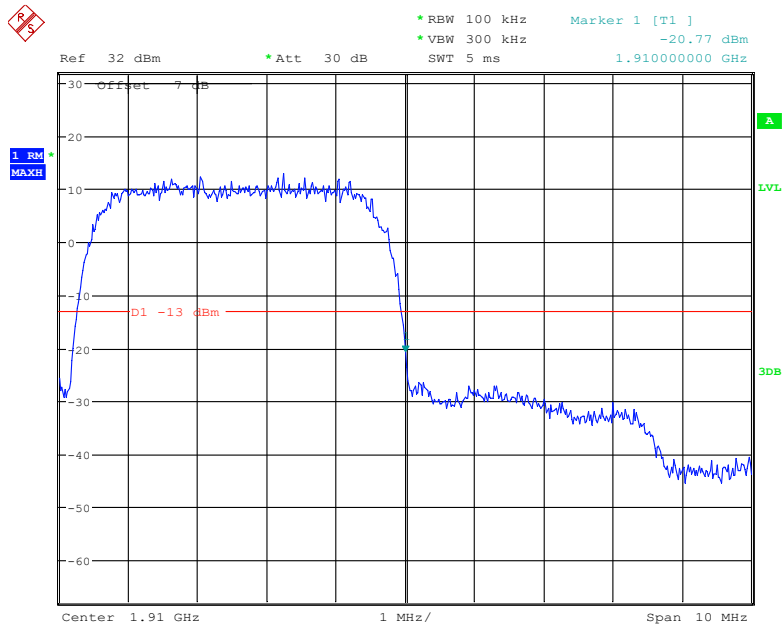
Date: 19.JAN.2022 09:32:48

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



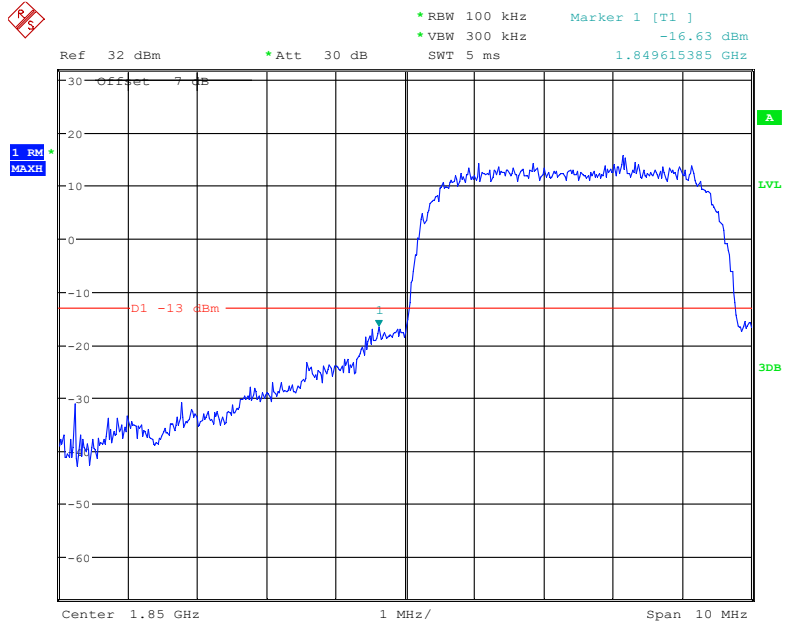
Date: 21.JAN.2022 00:07:19

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



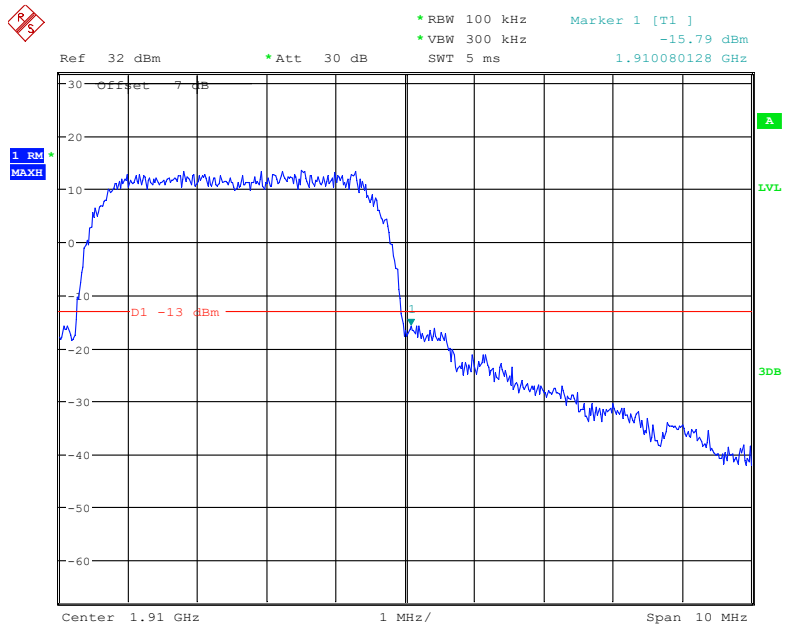
Date: 21.JAN.2022 00:08:00

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



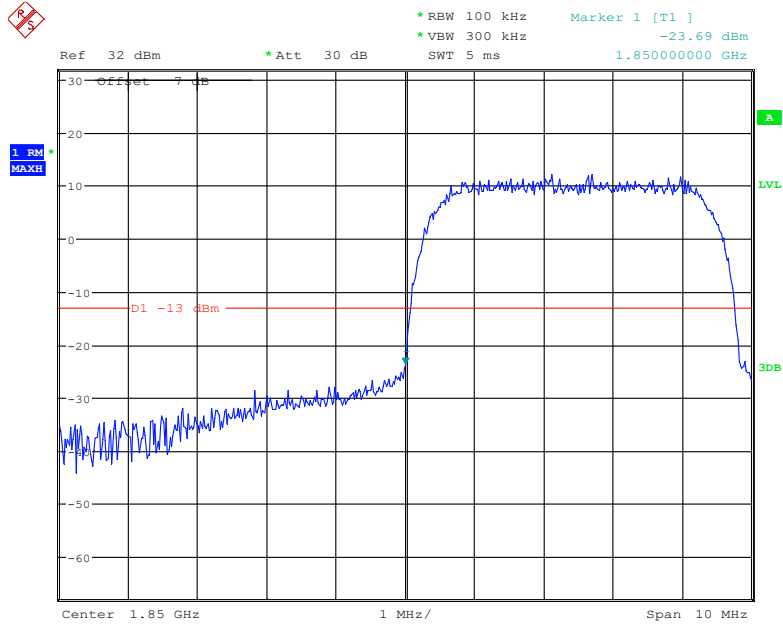
Date: 21.JAN.2022 00:54:15

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



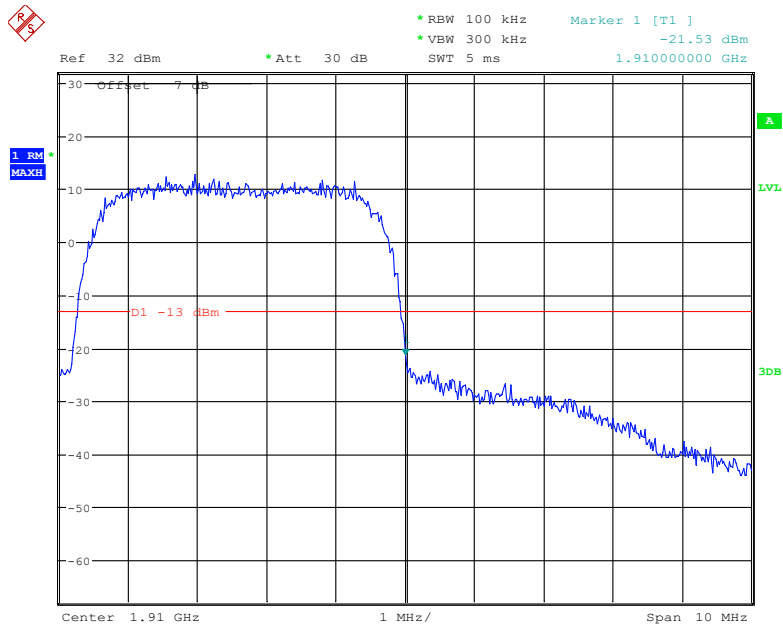
Date: 21.JAN.2022 00:54:58

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



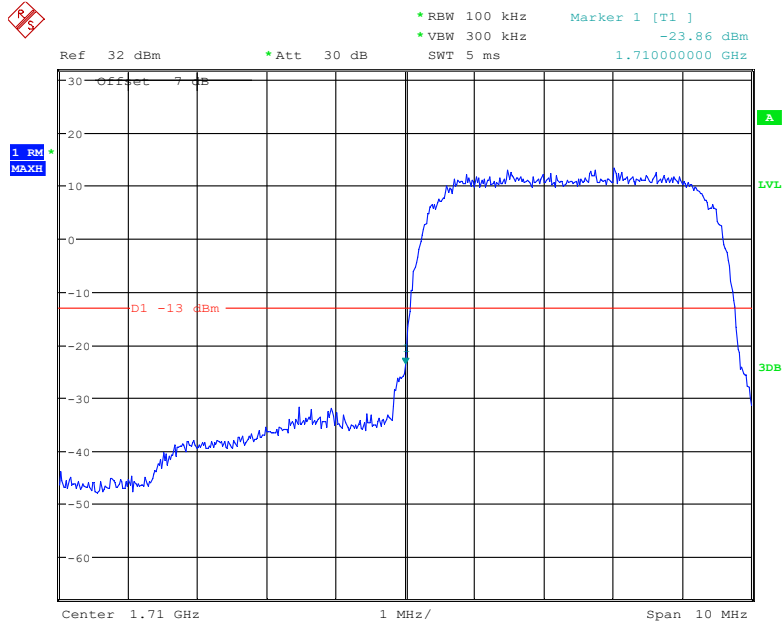
Date: 21.JAN.2022 00:57:18

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



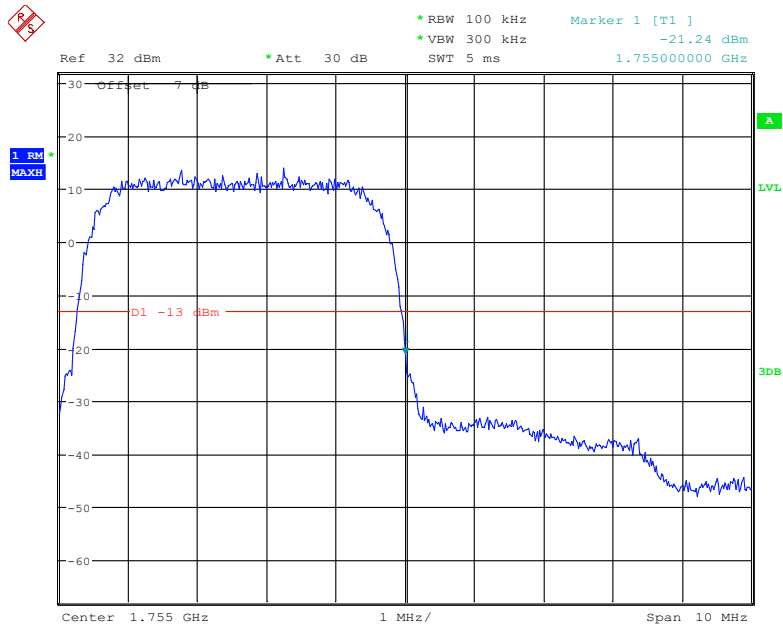
Date: 21.JAN.2022 00:56:54

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



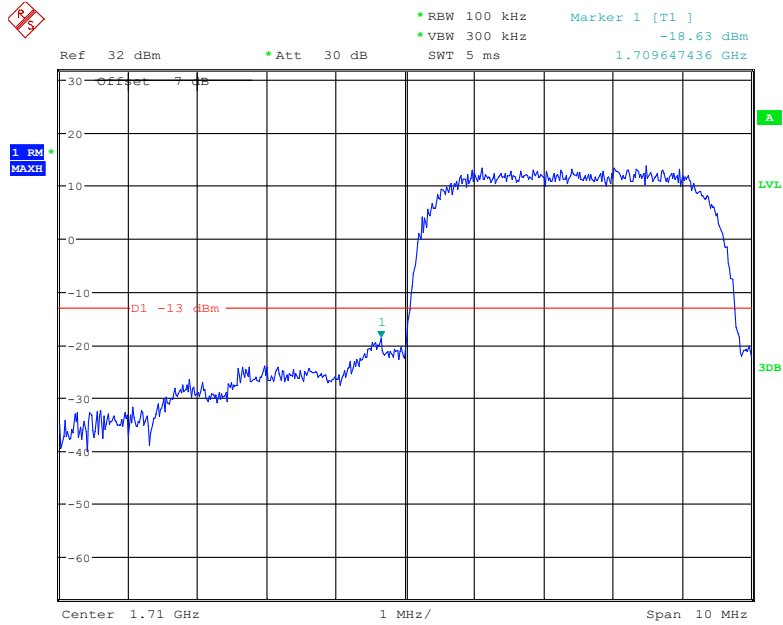
Date: 21.JAN.2022 00:08:43

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



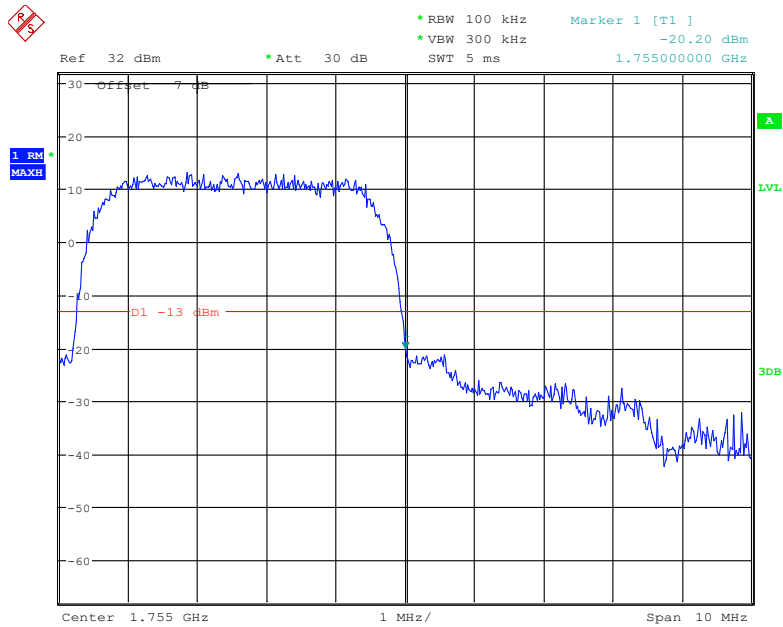
Date: 21.JAN.2022 00:09:23

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



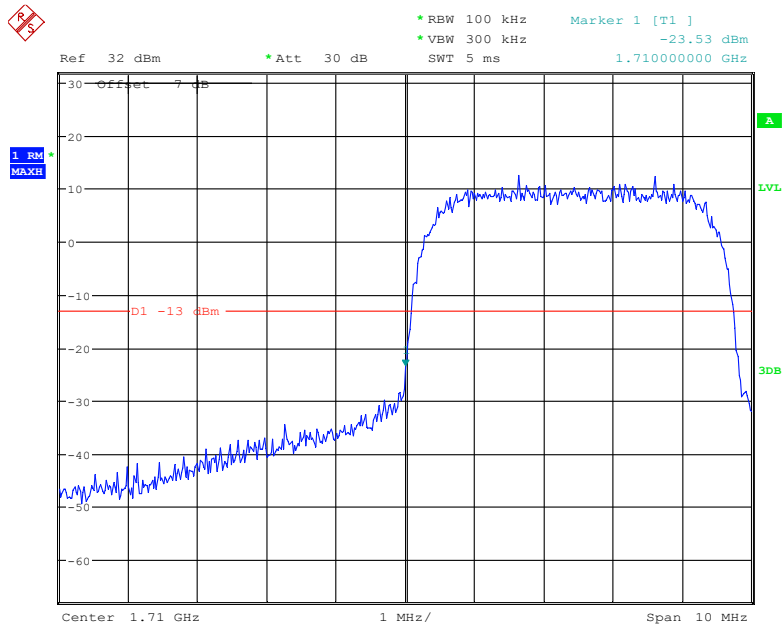
Date: 21.JAN.2022 00:52:54

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



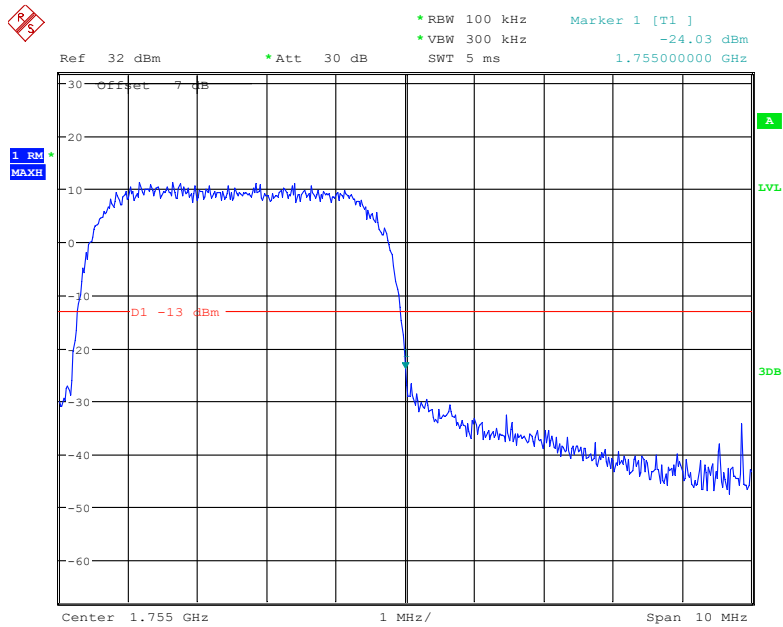
Date: 21.JAN.2022 00:51:49

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



Date: 21.JAN.2022 00:57:42

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



Date: 21.JAN.2022 00:58:07

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

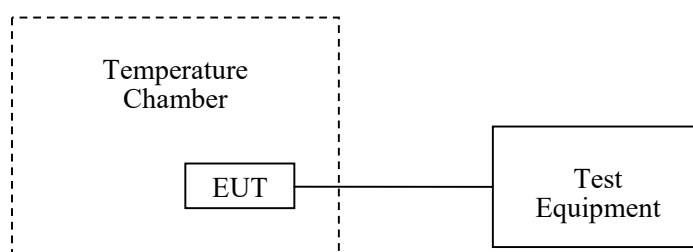
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

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:	26.4~26.8 °C
Relative Humidity:	57~59 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lü from 2022-01-19 to 2022-01-22.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)**GSM Mode**

Middle Channel, $f_0=836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	6.85	0.0082	2.5
-20		8.21	0.0098	2.5
-10		4.32	0.0052	2.5
0		6.52	0.0078	2.5
10		3.41	0.0041	2.5
20		1.32	0.0016	2.5
30		6.12	0.0073	2.5
40		3.57	0.0043	2.5
50		7.42	0.0089	2.5
20	L.V.	2.33	0.0028	2.5
	H.V.	3.16	0.0038	2.5

EGPRS Mode

Middle Channel, $f_0=836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	7.56	0.0090	2.5
-20		6.32	0.0076	2.5
-10		-3.41	-0.0041	2.5
0		4.26	0.0051	2.5
10		6.25	0.0075	2.5
20		-10.2	-0.0122	2.5
30		7.22	0.0086	2.5
40		3.04	0.0036	2.5
50		-2.47	-0.0030	2.5
20	L.V.	4.23	0.0051	2.5
	H.V.	3.52	0.0042	2.5

WCDMA Mode

Middle Channel, $f_0=836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	6.37	0.0076	2.5
-20		6.45	0.0077	2.5
-10		8.47	0.0101	2.5
0		9.60	0.0115	2.5
10		8.75	0.0105	2.5
20		7.70	0.0092	2.5
30		6.69	0.0080	2.5
40		5.58	0.0067	2.5
50		4.96	0.0059	2.5
20		L.V.	5.89	0.0070
	H.V.	5.71	0.0068	2.5

PCS Band (Part 24E)**GSM Mode**

Middle Channel, $f_0 = 1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	2.86	0.0015	pass
-20		4.27	0.0023	pass
-10		6.59	0.0035	pass
0		5.78	0.0031	pass
10		2.16	0.0011	pass
20		3.24	0.0017	pass
30		6.38	0.0034	pass
40		4.53	0.0024	pass
50		2.37	0.0013	pass
20		L.V.	6.36	0.0034
	H.V.	1.08	0.0006	pass

EDGE Mode

Middle Channel, $f_0 = 1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	3.31	0.0018	pass
-20		5.69	0.0030	pass
-10		7.62	0.0041	pass
0		10.23	0.0054	pass
10		4.22	0.0022	pass
20		-2.16	-0.0011	pass
30		3.65	0.0019	pass
40		5.48	0.0029	pass
50		-6.53	-0.0035	pass
20		L.V.	3.17	0.0017
	H.V.	4.68	0.0025	pass

WCDMA Mode

Middle Channel, $f_0=1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	1.21	0.0006	pass
-20		-3.14	-0.0017	pass
-10		-2.45	-0.0013	pass
0		-1.58	-0.0008	pass
10		-1.05	-0.0006	pass
20		-1.49	-0.0008	pass
30		1.35	0.0007	pass
40		2.14	0.0011	pass
50		0.89	0.0005	pass
20		L.V.	-1.11	-0.0006
	H.V.	-2.14	-0.0011	pass

AWS Band (Part 27)

Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1710.0958	1754.9885	1710	1755
-20		1710.0596	1754.9775	1710	1755
-10		1710.0447	1754.9747	1710	1755
0		1710.0152	1754.9668	1710	1755
10		1710.0758	1754.9527	1710	1755
20		1710.0651	1754.9458	1710	1755
30		1710.0665	1754.9449	1710	1755
40		1710.0547	1754.9347	1710	1755
50		1710.0484	1754.9367	1710	1755
20		L.V.	1710.0968	1754.9259	1710
	H.V.	1710.0875	1754.9252	1710	1755

LTE:
QPSK:
Band 2:

10.0 MHz Middle Channel, $f_0 = 1880\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	0.14	0.0001	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
	H.V.	-7.05	-0.0038	pass

Band 4:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.0027	1754.7317	1710	1755
-20		1710.0469	1754.8933	1710	1755
-10		1710.0835	1754.9501	1710	1755
0		1710.0122	1754.7733	1710	1755
10		1710.0828	1754.7232	1710	1755
20		1710.0060	1754.8270	1710	1755
30		1710.0895	1754.8727	1710	1755
40		1710.0554	1754.9209	1710	1755
50		1710.0764	1754.9830	1710	1755
20		L.V.	1710.0394	1754.9659	1710
	H.V.	1710.0208	1754.9453	1710	1755

Band 5:

10.0 MHz Middle Channel, $f_0 = 836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	-3.36	-0.0040	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	0.006	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 (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2500.0634	2569.9434	2500	2570
-20		2500.1071	2569.8064	2500	2570
-10		2500.0252	2569.8235	2500	2570
0		2500.0254	2569.7628	2500	2570
10		2500.0504	2569.7424	2500	2570
20		2500.0200	2569.9900	2500	2570
30		2500.0257	2569.8050	2500	2570
40		2500.1016	2569.7101	2500	2570
50		2500.0708	2569.9380	2500	2570
20	L.V.	2500.0497	2569.7835	2500	2570
	H.V.	2500.0586	2569.7906	2500	2570

Band 38:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2570.0878	2619.9319	2570	2620
-20		2570.0396	2619.8256	2570	2620
-10		2570.0525	2619.7290	2570	2620
0		2570.0246	2619.7246	2570	2620
10		2570.0271	2619.8179	2570	2620
20		2570.0996	2619.7428	2570	2620
30		2570.0900	2619.8532	2570	2620
40		2570.0880	2619.9580	2570	2620
50		2570.0677	2619.8261	2570	2620
20		L.V.	2570.0862	2619.9986	2570
	H.V.	2570.0982	2619.9258	2570	2620

Band 41:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2535.0587	2654.9902	2535	2655
-20		2535.0258	2654.8993	2535	2655
-10		2535.0455	2654.7096	2535	2655
0		2535.0644	2654.9643	2535	2655
10		2535.0676	2654.8462	2535	2655
20		2535.0663	2654.7675	2535	2655
30		2535.0604	2654.8833	2535	2655
40		2535.0279	2654.8955	2535	2655
50		2535.0296	2654.9903	2535	2655
20		L.V.	2535.0798	2654.9632	2535
	H.V.	2535.0838	2654.6697	2535	2655

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

16QAM:**Band 2:**

10.0 MHz Middle Channel, $f_0=1880\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	-4.82	-0.0026	pass
-20		-6.68	-0.0036	pass
-10		9.77	0.0052	pass
0		-7.62	-0.0041	pass
10		-9.91	-0.0053	pass
20		-9.82	-0.0052	pass
30		-6.68	-0.0036	pass
40		-8.85	-0.0047	pass
50		5.67	0.003	pass
20	L.V.	6.05	0.0032	pass
	H.V.	7.52	0.004	pass

Band 4:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.2043	1754.9847	1710	1755
-20		1710.0153	1754.9402	1710	1755
-10		1710.0944	1754.7440	1710	1755
0		1710.0712	1754.8725	1710	1755
10		1710.0293	1754.7197	1710	1755
20		1710.0830	1754.8690	1710	1755
30		1710.0309	1754.9801	1710	1755
40		1710.0158	1754.7431	1710	1755
50		1710.2059	1754.6153	1710	1755
20	L.V.	1710.0634	1754.8221	1710	1755
	H.V.	1710.0918	1754.7784	1710	1755

Band 5:

10.0 MHz Middle Channel, $f_0=836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	-6.98	-0.0083	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	0.009	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
	H.V.	-6.89	-0.0082	2.5

Band 7:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	2500.0512	2569.7112	2500	2570
-20		2500.0113	2569.7706	2500	2570
-10		2500.0142	2569.8666	2500	2570
0		2500.0337	2569.9954	2500	2570
10		2500.0738	2569.8920	2500	2570
20		2500.0940	2569.7200	2500	2570
30		2500.0429	2569.8597	2500	2570
40		2500.0351	2569.9804	2500	2570
50		2500.0575	2569.7624	2500	2570
20		L.V.	2500.0320	2569.8490	2500
	H.V.	2500.0968	2569.9586	2500	2570

Band 38:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2570.0714	2619.9514	2570	2620
-20		2570.0757	2619.8021	2570	2620
-10		2570.0231	2619.6943	2570	2620
0		2570.0542	2619.8335	2570	2620
10		2570.0182	2619.7432	2570	2620
20		2570.0135	2619.6416	2570	2620
30		2570.0874	2619.9118	2570	2620
40		2570.0734	2619.8024	2570	2620
50		2570.0499	2619.7264	2570	2620
20		L.V.	2570.0959	2619.6141	2570
	H.V.	2570.0309	2619.7043	2570	2620

Band 41:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2535.0312	2654.7201	2535	2655
-20		2535.0993	2654.8067	2535	2655
-10		2535.0392	2654.8204	2535	2655
0		2535.0122	2654.9214	2535	2655
10		2535.0563	2654.7278	2535	2655
20		2535.0861	2654.4234	2535	2655
30		2535.2027	2654.8958	2535	2655
40		2535.0854	2654.7476	2535	2655
50		2535.2009	2654.6451	2535	2655
20		L.V.	2535.0266	2654.7634	2535
	H.V.	2535.0687	2654.6148	2535	2655

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

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