TESTREPORT

Applicant Name :	Senwa Global International, S.A. de C.V.
Address :	Carretera Mexico-Toluca No. 5324 PB, Colonia El Yaqui Del. Cuajimalpa de Morelos, C.P. 05320 Ciudad de Mexico
Report Number:	SZNS211110-57928E-RF-00C
FCC ID:	2AZYA-AS10LXPRO

Test Standard (s)

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

Sample Description

Product Type:	Tablet PC
Model No.:	SOSPIRO-AS10LXPROS
Multiple Model(s) No.:	N/A
Trade Mark:	acer
Date Received:	2021/11/10
Date of Test:	2021/11/21~2021/12/25
Report Date:	2021/12/25

Test Result:	Pass*

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

Prepared and Checked By:

Fan Yang
EMC Engineer

Approved By:

Robert Li
EMC Engineer

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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 66: 1710-1780MHz(TX); 2110-2180MHz(RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	GSM850/WCDMA Band 5/LTE Band 5: -0.9dBi PCS1900/WCDMA Band 2/ LTE Band 2: 1.2dBi WCDMA Band 4/ LTE Band 4/ LTE Band 66: 1.5dBi LTE Band 7: 0.7dBi (provided by the applicant)
Voltage Range	DC 3.8V from battery or DC 5V from adapter
Sample serial number	SZNS211110-57928E-RF-S1 (Assigned by ATC)
Sample/EUT Status	Good condition
Extreme condition*	LV: Low Voltage 3.4V NV: Normal Voltage 3.8V HV: High Voltage 4.3V(provided by the applicant)
Adapter information	Model: SGCH2000A Input: AC 100-240V, 50/60Hz, 0.35A Output: DC 5.0V, 2A

Objective

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

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

Test Methodology

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

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

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

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

Measurement Uncertainty

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

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

Test Facility

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

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

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

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

Test was performed as below table:

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.6	848.8
DCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

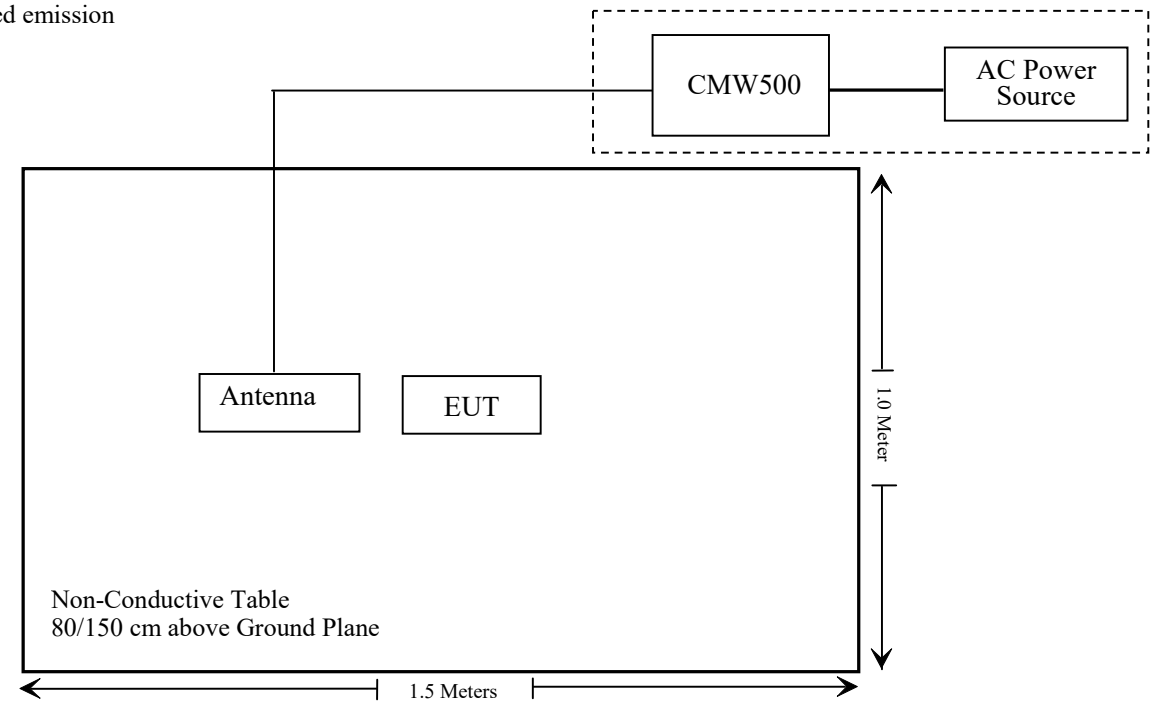
Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

Support Cable Description

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

Block Diagram of Test Setup

For radiated 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: SZ1211110-57920E-SA.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2020/12/25	2021/12/24
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/5/18	2022/5/17
SONOMA INSTRUMENT	Amplifier	310 N	186131	2020/12/25	2021/12/24
A.H. Systems, inc.	Preamplifier	PAM-0118P	531	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2021/11/11	2022/11/10
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-5m	No.3	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-1m	No.5	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-10m	No.7	2021/11/09	2022/11/08
Unknown	RF Coaxial Cable	N-2m	No.8	2021/11/09	2022/11/08
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120	2020/01/05	2023/01/04
Unknown	RF Coaxial Cable	N-1m	No.7	2020/12/25	2021/12/24
Anritsu	Signal Generator	68369B	004114	2021/7/31	2022/7/30
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24

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	2020/12/25	2021/12/24
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2020/12/25	2021/12/24
Gongwen	Temp. & Humid. Chamber	JB913R	GZ-WS004	2020/12/25	2021/12/24

* 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: SZ1211110-57920E-SA

FCC§2.1047 - MODULATION CHARACTERISTIC

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

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

Applicable Standard

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

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

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

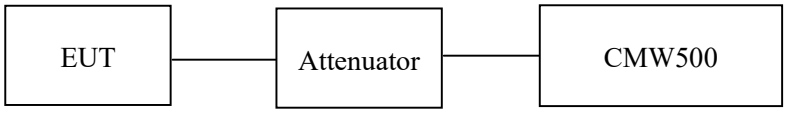
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2500-2570MHz.

Test Procedure

Conducted method:

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



Radiated method:

ANSI C63.26-2015 Section 5.5.

Test Data

Environmental Conditions

Temperature:	28.2 ℃
Relative Humidity:	56.7 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lv from 2021-11-27 to 2021-11-29.

Conducted Power

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	32.90	29.15	38.45
	190	836.6	33.00	29.25	38.45
	251	848.8	33.00	29.25	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	32.93	30.76	28.73	27.04	29.18	27.01	24.98	23.29	38.45
	190	836.6	32.85	30.76	28.79	27.08	29.10	27.01	25.04	23.33	38.45
	251	848.8	32.83	30.77	28.82	27.04	29.08	27.02	25.07	23.29	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	25.73	25.40	24.01	21.34	21.98	21.65	20.26	17.59	38.45
	190	836.6	25.79	25.36	24.06	21.54	22.04	21.61	20.31	17.79	38.45
	251	848.8	25.70	25.33	24.00	21.79	21.95	21.58	20.25	18.04	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		23.08	23.13	23.14	19.33	19.38	19.39
	HSDPA	1	21.67	21.81	22.08	17.92	18.06	18.33
		2	21.55	21.72	21.58	17.80	17.97	17.83
		3	21.48	21.66	21.66	17.73	17.91	17.91
		4	21.58	21.54	21.68	17.83	17.79	17.93
	HSUPA	1	22.24	22.41	21.81	18.49	18.66	18.06
		2	22.25	22.33	21.72	18.50	18.58	17.97
		3	22.17	22.34	21.54	18.42	18.59	17.79
		4	22.14	22.35	21.45	18.39	18.60	17.70
		5	22.16	22.24	21.33	18.41	18.49	17.58
	HSPA+	1	22.18	22.16	21.28	18.43	18.41	17.53

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For GSM850 / WCDMA Band5: Antenna Gain = -0.9dBi = -3.05dBd (0dBd=2.15dBi)
Cable Loss=0.7dB* (provided by the applicant)
Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	28.50	28.70	33
	661	1880.0	28.40	28.60	33
	810	1909.8	28.20	28.40	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	29.01	26.80	25.03	23.15	29.21	27.00	25.23	23.35	33
	661	1880.0	29.30	26.84	25.12	23.29	29.50	27.04	25.32	23.49	33
	810	1909.8	29.01	26.42	24.84	23.08	29.21	26.62	25.04	23.28	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	26.26	25.87	23.82	21.23	26.46	26.07	24.02	21.43	33
	661	1880.0	25.93	25.46	23.52	21.14	26.13	25.66	23.72	21.34	33
	810	1909.8	25.95	25.57	23.54	21.09	26.15	25.77	23.74	21.29	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		23.16	23.09	22.92	23.36	23.29	23.12
	HSDPA	1	21.27	21.24	21.06	21.47	21.44	21.26
		2	21.22	21.26	21.12	21.42	21.46	21.32
		3	21.23	21.18	21.18	21.43	21.38	21.38
		4	21.25	21.19	21.17	21.45	21.39	21.37
	HSUPA	1	22.06	21.95	21.56	22.26	22.15	21.76
		2	22.05	22.10	21.25	22.25	22.30	21.45
		3	22.05	22.12	21.26	22.25	22.32	21.46
		4	22.04	22.13	21.27	22.24	22.33	21.47
		5	22.06	22.14	21.26	22.26	22.34	21.46
	HSPA+	1	22.07	22.16	21.28	22.27	22.36	21.48

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For PCS1900 / WCDMA Band2: Antenna Gain = 1.2dBi
Cable Loss=1.0dB* (provided by the applicant)
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		22.92	22.89	22.93	23.22	23.19	23.23
	HSDPA	1	21.27	21.29	20.64	21.57	21.59	20.94
		2	21.22	21.26	21.12	21.52	21.56	21.42
		3	21.23	21.18	21.18	21.53	21.48	21.48
		4	21.25	21.19	21.17	21.55	21.49	21.47
	HSUPA	1	21.60	21.78	21.54	21.9	22.08	21.84
		2	21.05	21.10	21.25	21.35	21.4	21.55
		3	22.05	21.12	21.26	22.35	21.42	21.56
		4	21.04	21.13	21.27	21.34	21.43	21.57
		5	21.06	21.14	21.26	21.36	21.44	21.56
	HSPA+	1	21.07	21.16	21.28	21.37	21.46	21.58

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band4: Antenna Gain = 1.5dBi
Cable Loss=1.2dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit(dB)
GSM	Low	3.58	13
	Middle	3.43	13
	High	3.44	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	3.51	13
	Middle	3.47	13
	High	3.46	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.52	13
	Middle	3.44	13
	High	3.43	13
HSDPA (16QAM)	Low	3.55	13
	Middle	3.54	13
	High	3.54	13
HSUPA (BPSK)	Low	3.47	13
	Middle	3.48	13
	High	3.52	13
HSPA+	Low	3.64	13
	Middle	3.59	13
	High	3.52	13

PCS Band

Mode	Channel	PAR (dB)	Limit(dB)
GSM	Low	3.54	13
	Middle	3.57	13
	High	3.58	13

Mode	Channel	PAR (dB)	Limit(dB)
EGPRS	Low	3.52	13
	Middle	3.55	13
	High	3.48	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.46	13
	Middle	3.51	13
	High	3.44	13
HSDPA (16QAM)	Low	3.57	13
	Middle	3.51	13
	High	3.46	13
HSUPA (BPSK)	Low	3.45	13
	Middle	3.42	13
	High	3.47	13
HSPA+	Low	3.45	13
	Middle	3.53	13
	High	3.58	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.46	13
	Middle	3.63	13
	High	3.57	13
HSDPA (16QAM)	Low	3.56	13
	Middle	3.55	13
	High	3.63	13
HSUPA (BPSK)	Low	3.65	13
	Middle	3.52	13
	High	3.66	13
HSPA+	Low	3.54	13
	Middle	3.65	13
	High	3.66	13

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	22.64	22.40	22.26	22.84	22.6	22.46
		RB1#3	22.67	22.42	22.29	22.87	22.62	22.49
		RB1#5	22.67	22.41	22.33	22.87	22.61	22.53
		RB3#0	22.68	22.56	22.43	22.88	22.76	22.63
		RB3#3	22.60	22.64	22.46	22.8	22.84	22.66
		RB6#0	21.61	21.59	21.40	21.81	21.79	21.6
	16QAM	RB1#0	21.75	22.14	21.17	21.95	22.34	21.37
		RB1#3	21.80	22.16	21.20	22	22.36	21.4
		RB1#5	21.73	22.07	21.23	21.93	22.27	21.43
		RB3#0	21.58	21.54	21.59	21.78	21.74	21.79
		RB3#3	21.58	21.61	21.54	21.78	21.81	21.74
		RB6#0	20.86	20.78	20.74	21.06	20.98	20.94
3.0	QPSK	RB1#0	22.49	22.57	22.31	22.69	22.77	22.51
		RB1#8	22.55	22.49	22.34	22.75	22.69	22.54
		RB1#14	22.50	22.44	22.27	22.7	22.64	22.47
		RB6#0	21.66	21.48	21.44	21.86	21.68	21.64
		RB6#9	21.59	21.51	21.39	21.79	21.71	21.59
		RB15#0	21.56	21.54	21.33	21.76	21.74	21.53
	16QAM	RB1#0	21.85	21.83	22.06	22.05	22.03	22.26
		RB1#8	21.88	21.75	22.12	22.08	21.95	22.32
		RB1#14	21.90	21.73	22.11	22.1	21.93	22.31
		RB6#0	20.93	20.72	20.67	21.13	20.92	20.87
		RB6#9	20.99	20.76	20.65	21.19	20.96	20.85
		RB15#0	20.84	20.70	20.53	21.04	20.9	20.73

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.48	22.55	22.36	22.68	22.75	22.56
		RB1#13	22.48	22.62	22.37	22.68	22.82	22.57
		RB1#24	22.48	22.61	22.28	22.68	22.81	22.48
		RB15#0	21.67	21.46	21.37	21.87	21.66	21.57
		RB15#10	21.67	21.55	21.29	21.87	21.75	21.49
		RB25#0	21.51	21.47	21.43	21.71	21.67	21.63
	16QAM	RB1#0	20.80	21.79	21.11	21	21.99	21.31
		RB1#13	20.90	21.74	21.10	21.1	21.94	21.3
		RB1#24	20.84	21.77	21.10	21.04	21.97	21.3
		RB15#0	20.84	20.63	20.57	21.04	20.83	20.77
		RB15#10	20.82	20.62	20.51	21.02	20.82	20.71
		RB25#0	20.82	20.67	20.44	21.02	20.87	20.64
10.0	QPSK	RB1#0	22.53	22.66	22.49	22.73	22.86	22.69
		RB1#25	22.53	22.57	22.40	22.73	22.77	22.6
		RB1#49	22.49	22.56	22.40	22.69	22.76	22.6
		RB25#0	21.65	21.55	21.50	21.85	21.75	21.7
		RB25#25	21.60	21.54	21.36	21.8	21.74	21.56
		RB50#0	21.68	21.46	21.39	21.88	21.66	21.59
	16QAM	RB1#0	22.03	22.29	20.95	22.23	22.49	21.15
		RB1#25	22.09	22.21	20.93	22.29	22.41	21.13
		RB1#49	21.99	22.22	20.90	22.19	22.42	21.1
		RB25#0	20.80	20.67	20.71	21	20.87	20.91
		RB25#25	20.80	20.74	20.68	21	20.94	20.88
		RB50#0	20.77	20.76	20.59	20.97	20.96	20.79

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	22.48	22.51	22.45	22.68	22.71	22.65
		RB1#38	22.49	22.55	22.35	22.69	22.75	22.55
		RB1#74	22.47	22.46	22.32	22.67	22.66	22.52
		RB36#0	21.57	21.47	21.54	21.77	21.67	21.74
		RB36#39	21.58	21.47	21.41	21.78	21.67	21.61
		RB75#0	21.66	21.45	21.42	21.86	21.65	21.62
	16QAM	RB1#0	22.04	21.79	21.91	22.24	21.99	22.11
		RB1#38	22.05	21.76	21.84	22.25	21.96	22.04
		RB1#74	21.95	21.78	21.83	22.15	21.98	22.03
		RB36#0	20.79	20.84	20.62	20.99	21.04	20.82
		RB36#39	20.76	20.77	20.56	20.96	20.97	20.76
		RB75#0	20.75	20.74	20.63	20.95	20.94	20.83
20.0	QPSK	RB1#0	22.69	22.49	22.56	22.89	22.69	22.76
		RB1#50	22.64	22.54	22.54	22.84	22.74	22.74
		RB1#99	22.76	22.62	22.52	22.96	22.82	22.72
		RB50#0	21.61	21.62	21.53	21.81	21.82	21.73
		RB50#50	21.66	21.55	21.41	21.86	21.75	21.61
		RB100#0	21.55	21.54	21.46	21.75	21.74	21.66
	16QAM	RB1#0	21.67	21.58	22.21	21.87	21.78	22.41
		RB1#50	21.61	21.59	22.24	21.81	21.79	22.44
		RB1#99	21.62	21.66	22.17	21.82	21.86	22.37
		RB50#0	20.76	20.73	20.66	20.96	20.93	20.86
		RB50#50	20.81	20.76	20.53	21.01	20.96	20.73
		RB100#0	20.74	20.72	20.67	20.94	20.92	20.87

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band2: Antenna Gain = 1.2dBi
Cable Loss=1dB*(provided by the applicant)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	8.69	4.97	5.06	13	Pass
QPSK (100RB Size)	5.16	5.42	5.64	13	Pass
16QAM (1RB Size)	4.33	5.80	6.35	13	Pass
16QAM (100RB Size)	5.96	6.15	6.41	13	Pass

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	22.78	22.41	22.25	23.08	22.71	22.55
		RB1#3	22.69	22.38	22.31	22.99	22.68	22.61
		RB1#5	22.78	22.48	22.28	23.08	22.78	22.58
		RB3#0	22.78	22.54	22.64	23.08	22.84	22.94
		RB3#3	22.79	22.53	22.59	23.09	22.83	22.89
		RB6#0	21.82	21.60	21.55	22.12	21.9	21.85
	16QAM	RB1#0	22.54	22.30	22.15	22.84	22.6	22.45
		RB1#3	22.50	22.21	22.11	22.8	22.51	22.41
		RB1#5	22.56	22.22	22.12	22.86	22.52	22.42
		RB3#0	21.92	21.45	21.54	22.22	21.75	21.84
		RB3#3	21.94	21.46	21.57	22.24	21.76	21.87
		RB6#0	21.13	20.74	20.59	21.43	21.04	20.89
3.0	QPSK	RB1#0	22.66	22.48	22.71	22.96	22.78	23.01
		RB1#8	22.71	22.50	22.70	23.01	22.8	23
		RB1#14	22.56	22.44	22.70	22.86	22.74	23
		RB6#0	21.79	21.54	21.54	22.09	21.84	21.84
		RB6#9	21.66	21.53	21.45	21.96	21.83	21.75
		RB15#0	21.83	21.55	21.54	22.13	21.85	21.84
	16QAM	RB1#0	22.22	22.32	21.62	22.52	22.62	21.92
		RB1#8	22.24	22.25	21.62	22.54	22.55	21.92
		RB1#14	22.10	22.22	21.63	22.4	22.52	21.93
		RB6#0	20.86	20.82	20.84	21.16	21.12	21.14
		RB6#9	20.71	20.75	20.87	21.01	21.05	21.17
		RB15#0	21.03	20.64	20.69	21.33	20.94	20.99

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.75	22.56	22.40	23.05	22.86	22.7
		RB1#13	22.61	22.55	22.39	22.91	22.85	22.69
		RB1#24	22.62	22.54	22.34	22.92	22.84	22.64
		RB15#0	21.76	21.44	21.44	22.06	21.74	21.74
		RB15#10	21.64	21.52	21.52	21.94	21.82	21.82
		RB25#0	21.59	21.46	21.55	21.89	21.76	21.85
	16QAM	RB1#0	21.01	21.82	21.21	21.31	22.12	21.51
		RB1#13	20.92	21.75	21.16	21.22	22.05	21.46
		RB1#24	20.86	21.70	21.20	21.16	22	21.5
		RB15#0	21.02	20.53	20.64	21.32	20.83	20.94
		RB15#10	20.87	20.62	20.59	21.17	20.92	20.89
		RB25#0	20.95	20.65	20.48	21.25	20.95	20.78
10.0	QPSK	RB1#0	22.69	22.59	22.59	22.99	22.89	22.89
		RB1#25	22.50	22.58	22.56	22.8	22.88	22.86
		RB1#49	22.51	22.54	22.57	22.81	22.84	22.87
		RB25#0	21.72	21.55	21.54	22.02	21.85	21.84
		RB25#25	21.65	21.47	21.44	21.95	21.77	21.74
		RB50#0	21.69	21.58	21.50	21.99	21.88	21.8
	16QAM	RB1#0	22.05	21.77	21.11	22.35	22.07	21.41
		RB1#25	21.90	21.67	21.11	22.2	21.97	21.41
		RB1#49	21.84	21.70	21.11	22.14	22	21.41
		RB25#0	20.84	20.81	20.78	21.14	21.11	21.08
		RB25#25	20.70	20.76	20.73	21	21.06	21.03
		RB50#0	20.83	20.72	20.62	21.13	21.02	20.92

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	23.22	23.09	23.07	23.52	23.39	23.37
		RB1#38	22.97	23.07	23.13	23.27	23.37	23.43
		RB1#74	22.98	23.00	23.11	23.28	23.3	23.41
		RB36#0	21.61	21.51	21.42	21.91	21.81	21.72
		RB36#39	21.50	21.49	21.53	21.8	21.79	21.83
		RB75#0	21.67	21.56	21.48	21.97	21.86	21.78
	16QAM	RB1#0	22.65	22.26	22.38	22.95	22.56	22.68
		RB1#38	22.37	22.18	22.43	22.67	22.48	22.73
		RB1#74	22.31	22.20	22.39	22.61	22.5	22.69
		RB36#0	20.91	20.73	20.66	21.21	21.03	20.96
		RB36#39	20.86	20.78	20.69	21.16	21.08	20.99
		RB75#0	20.78	20.67	20.72	21.08	20.97	21.02
20.0	QPSK	RB1#0	23.44	22.96	23.03	23.74	23.26	23.33
		RB1#50	23.17	22.97	22.96	23.47	23.27	23.26
		RB1#99	23.26	22.89	23.05	23.56	23.19	23.35
		RB50#0	21.61	21.55	21.53	21.91	21.85	21.83
		RB50#50	21.59	21.52	21.61	21.89	21.82	21.91
		RB100#0	21.58	21.58	21.42	21.88	21.88	21.72
	16QAM	RB1#0	22.36	22.55	22.84	22.66	22.85	23.14
		RB1#50	22.11	22.42	22.72	22.41	22.72	23.02
		RB1#99	22.09	22.34	22.79	22.39	22.64	23.09
		RB50#0	20.82	20.79	20.61	21.12	21.09	20.91
		RB50#50	20.79	20.81	20.61	21.09	21.11	20.91
		RB100#0	20.73	20.67	20.66	21.03	20.97	20.96

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band4: Antenna Gain = 1.5dBi
Cable Loss=1.2dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.20	4.81	2.47	13	Pass
QPSK (100RB Size)	5.64	5.26	4.81	13	Pass
16QAM (1RB Size)	5.10	5.74	3.65	13	Pass
16QAM (100RB Size)	6.47	6.15	5.58	13	Pass

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	22.53	22.51	22.50	18.78	18.76	18.75
		RB1#3	22.51	22.49	22.51	18.76	18.74	18.76
		RB1#5	22.49	22.45	22.53	18.74	18.70	18.78
		RB3#0	22.50	22.60	22.52	18.75	18.85	18.77
		RB3#3	22.52	22.63	22.59	18.77	18.88	18.84
		RB6#0	21.50	21.54	21.63	17.75	17.79	17.88
	16QAM	RB1#0	21.94	22.11	22.37	18.19	18.36	18.62
		RB1#3	22.02	22.17	22.30	18.27	18.42	18.55
		RB1#5	22.04	22.10	22.26	18.29	18.35	18.51
		RB3#0	21.61	21.43	21.34	17.86	17.68	17.59
		RB3#3	21.65	21.39	21.39	17.90	17.64	17.64
		RB6#0	20.68	20.96	20.52	16.93	17.21	16.77
3.0	QPSK	RB1#0	22.40	22.45	22.54	18.65	18.70	18.79
		RB1#8	22.51	22.44	22.51	18.76	18.69	18.76
		RB1#14	22.53	22.50	22.49	18.78	18.75	18.74
		RB6#0	21.54	21.61	21.44	17.79	17.86	17.69
		RB6#9	21.54	21.54	21.51	17.79	17.79	17.76
		RB15#0	21.52	21.64	21.51	17.77	17.89	17.76
	16QAM	RB1#0	21.85	22.15	21.82	18.10	18.40	18.07
		RB1#8	21.82	22.16	21.83	18.07	18.41	18.08
		RB1#14	21.81	22.19	21.83	18.06	18.44	18.08
		RB6#0	20.54	20.53	20.57	16.79	16.78	16.82
		RB6#9	20.55	21.03	20.48	16.80	17.28	16.73
		RB15#0	20.60	20.99	20.54	16.85	17.24	16.79

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.56	22.48	22.45	18.81	18.73	18.7
		RB1#13	22.62	22.54	22.46	18.87	18.79	18.71
		RB1#24	22.47	22.55	22.41	18.72	18.80	18.66
		RB15#0	21.66	21.53	21.66	17.91	17.78	17.91
		RB15#10	21.63	21.55	21.49	17.88	17.80	17.74
		RB25#0	21.63	21.60	21.46	17.88	17.85	17.71
	16QAM	RB1#0	20.68	21.70	21.16	16.93	17.95	17.41
		RB1#13	20.75	21.65	21.20	17.00	17.90	17.45
		RB1#24	20.67	21.75	21.13	16.92	18.00	17.38
		RB15#0	20.58	20.51	20.60	16.83	16.76	16.85
		RB15#10	20.64	20.94	20.58	16.89	17.19	16.83
		RB25#0	20.67	21.00	20.50	16.92	17.25	16.75
10.0	QPSK	RB1#0	22.45	22.66	22.52	18.70	18.91	18.77
		RB1#25	22.44	22.60	22.53	18.69	18.85	18.78
		RB1#49	22.33	22.64	22.48	18.58	18.89	18.73
		RB25#0	21.61	21.66	21.49	17.86	17.91	17.74
		RB25#25	21.59	21.53	21.47	17.84	17.78	17.72
		RB50#0	21.49	21.64	21.65	17.74	17.89	17.90
	16QAM	RB1#0	21.69	21.77	21.11	17.94	18.02	17.36
		RB1#25	21.62	21.71	21.17	17.87	17.96	17.42
		RB1#49	21.56	21.73	21.17	17.81	17.98	17.42
		RB25#0	20.58	20.65	21.13	16.83	16.90	17.38
		RB25#25	20.53	21.14	20.67	16.78	17.39	16.92
		RB50#0	20.53	21.06	20.67	16.78	17.31	16.92

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)
For Band5: Antenna Gain = -0.9dBi = -3.05dBd (0dBd=2.15dBi)
Cable Loss=0.7dB* (provided by the applicant)
Limit: ERP≤38.45dBm

Peak-to-average ratio (PAR)

10MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.64	5.67	5.99	13	Pass
QPSK (50RB Size)	5.64	5.77	5.61	13	Pass
16QAM (1RB Size)	6.19	7.18	7.15	13	Pass
16QAM (50RB Size)	6.44	6.54	6.54	13	Pass

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	21.62	21.30	21.23	20.82	20.50	20.43
		RB1#13	21.54	21.33	21.23	20.74	20.53	20.43
		RB1#24	21.54	21.35	21.26	20.74	20.55	20.46
		RB15#0	20.56	20.38	20.37	19.76	19.58	19.57
		RB15#10	20.56	20.34	20.36	19.76	19.54	19.56
		RB25#0	20.51	20.38	20.31	19.71	19.58	19.51
	16QAM	RB1#0	20.81	20.45	20.57	20.01	19.65	19.77
		RB1#13	20.83	20.42	20.96	20.03	19.62	20.16
		RB1#24	20.74	20.40	20.38	19.94	19.60	19.58
		RB15#0	20.78	20.39	20.45	19.98	19.59	19.65
		RB15#10	20.71	20.44	20.53	19.91	19.64	19.73
		RB25#0	20.84	20.50	20.41	20.04	19.70	19.61
10.0	QPSK	RB1#0	21.52	21.37	21.34	20.72	20.57	20.54
		RB1#25	21.40	21.36	21.35	20.60	20.56	20.55
		RB1#49	21.38	21.30	21.43	20.58	20.50	20.63
		RB25#0	20.59	20.38	20.38	19.79	19.58	19.58
		RB25#25	20.42	20.32	20.23	19.62	19.52	19.43
		RB50#0	20.52	20.36	20.32	19.72	19.56	19.52
	16QAM	RB1#0	20.76	20.57	20.84	19.96	19.77	20.04
		RB1#25	20.76	20.54	20.85	19.96	19.74	20.05
		RB1#49	20.76	20.52	20.84	19.96	19.72	20.04
		RB25#0	20.74	20.59	20.56	19.94	19.79	19.76
		RB25#25	20.72	20.56	20.55	19.92	19.76	19.75
		RB50#0	20.78	20.58	20.45	19.98	19.78	19.65

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.46	21.33	21.30	20.66	20.53	20.50
		RB1#38	21.32	21.36	21.39	20.52	20.56	20.59
		RB1#74	21.36	21.35	21.36	20.56	20.55	20.56
		RB36#0	20.48	20.33	20.36	19.68	19.53	19.56
		RB36#39	20.55	20.37	20.39	19.75	19.57	19.59
		RB75#0	20.50	20.38	20.25	19.70	19.58	19.45
	16QAM	RB1#0	20.87	20.81	20.79	20.07	20.01	19.99
		RB1#38	20.79	20.70	20.86	19.99	19.90	20.06
		RB1#74	20.67	20.76	20.86	19.87	19.96	20.06
		RB36#0	20.73	20.58	20.46	19.93	19.78	19.66
		RB36#39	20.81	20.53	20.47	20.01	19.73	19.67
		RB75#0	20.73	20.48	20.56	19.93	19.68	19.76
20.0	QPSK	RB1#0	21.64	21.47	21.41	20.84	20.67	20.61
		RB1#50	21.48	21.47	21.38	20.68	20.67	20.58
		RB1#99	21.54	21.47	21.54	20.74	20.67	20.74
		RB50#0	20.46	20.38	20.24	19.66	19.58	19.44
		RB50#50	20.54	20.30	20.33	19.74	19.50	19.53
		RB100#0	20.48	20.34	20.36	19.68	19.54	19.56
	16QAM	RB1#0	20.40	20.99	20.91	19.60	20.19	20.11
		RB1#50	20.32	20.98	20.88	19.52	20.18	20.08
		RB1#99	20.38	20.96	21.07	19.58	20.16	20.27
		RB50#0	20.79	20.67	20.42	19.99	19.87	19.62
		RB50#50	20.71	20.65	20.53	19.91	19.85	19.73
		RB100#0	20.59	20.55	20.55	19.79	19.75	19.75

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band7: Antenna Gain = 0.7dBi
Cable Loss=1.5dB* (provided by the applicant)
Limit: ERP≤33dBm

Peak-to-average ratio (PAR)

20MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.06	5.03	5.22	13	Pass
QPSK (100RB Size)	5.58	5.64	5.67	13	Pass
16QAM (1RB Size)	6.19	5.99	6.67	13	Pass
16QAM (100RB Size)	6.44	6.51	6.35	13	Pass

LTE Band 66:

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	22.69	22.32	22.35	22.99	22.62	22.65
		RB1#3	22.65	22.29	22.37	22.95	22.59	22.67
		RB1#5	22.69	22.32	22.41	22.99	22.62	22.71
		RB3#0	22.79	22.63	22.59	23.09	22.93	22.89
		RB3#3	22.79	22.66	22.56	23.09	22.96	22.86
		RB6#0	21.66	21.54	21.56	21.96	21.84	21.86
	16QAM	RB1#0	22.16	22.07	21.32	22.46	22.37	21.62
		RB1#3	22.39	22.15	21.36	22.69	22.45	21.66
		RB1#5	22.39	22.09	21.30	22.69	22.39	21.60
		RB3#0	21.76	21.50	21.68	22.06	21.80	21.98
		RB3#3	21.83	21.59	21.68	22.13	21.89	21.98
		RB6#0	21.05	20.64	20.90	21.35	20.94	21.20
3.0	QPSK	RB1#0	22.54	22.32	22.35	22.84	22.62	22.65
		RB1#8	22.56	22.32	22.47	22.86	22.62	22.77
		RB1#14	22.52	22.32	22.43	22.82	22.62	22.73
		RB6#0	21.72	21.54	21.46	22.02	21.84	21.76
		RB6#9	21.62	21.53	21.51	21.92	21.83	21.81
		RB15#0	21.68	21.49	21.51	21.98	21.79	21.81
	16QAM	RB1#0	22.12	22.17	21.35	22.42	22.47	21.65
		RB1#8	22.06	22.15	21.36	22.36	22.45	21.66
		RB1#14	22.01	22.10	21.31	22.31	22.40	21.61
		RB6#0	20.69	20.58	20.90	20.99	20.88	21.20
		RB6#9	20.66	20.67	20.91	20.96	20.97	21.21
		RB15#0	20.91	20.72	20.71	21.21	21.02	21.01

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.61	22.58	22.48	22.91	22.88	22.78
		RB1#13	22.54	22.51	22.46	22.84	22.81	22.76
		RB1#24	22.65	22.56	22.43	22.95	22.86	22.73
		RB15#0	21.66	21.49	21.43	21.96	21.79	21.73
		RB15#10	21.67	21.44	21.48	21.97	21.74	21.78
		RB25#0	21.63	21.45	21.42	21.93	21.75	21.72
	16QAM	RB1#0	20.98	21.71	21.32	21.28	22.01	21.62
		RB1#13	20.85	21.73	21.28	21.15	22.03	21.58
		RB1#24	20.85	21.73	21.32	21.15	22.03	21.62
		RB15#0	20.90	20.52	20.75	21.20	20.82	21.05
		RB15#10	20.87	20.55	20.69	21.17	20.85	20.99
		RB25#0	20.91	20.65	20.57	21.21	20.95	20.87
10.0	QPSK	RB1#0	22.55	22.44	22.53	22.85	22.74	22.83
		RB1#25	22.52	22.47	22.53	22.82	22.77	22.83
		RB1#49	22.45	22.48	22.54	22.75	22.78	22.84
		RB25#0	21.58	21.53	21.62	21.88	21.83	21.92
		RB25#25	21.61	21.43	21.54	21.91	21.73	21.84
		RB50#0	21.65	21.45	21.58	21.95	21.75	21.88
	16QAM	RB1#0	21.93	22.07	20.98	22.23	22.37	21.28
		RB1#25	21.90	22.05	21.04	22.20	22.35	21.34
		RB1#49	21.85	22.08	21.00	22.15	22.38	21.30
		RB25#0	20.84	20.71	20.82	21.14	21.01	21.12
		RB25#25	20.85	20.68	20.80	21.15	20.98	21.10
		RB50#0	20.80	20.70	20.72	21.10	21.00	21.02

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.54	22.49	22.48	22.84	22.79	22.78
		RB1#38	22.55	22.47	22.48	22.85	22.77	22.78
		RB1#74	22.45	22.52	22.43	22.75	22.82	22.73
		RB36#0	21.55	21.55	21.58	21.85	21.85	21.88
		RB36#39	21.54	21.48	21.52	21.84	21.78	21.82
		RB75#0	21.70	21.58	21.62	22.00	21.88	21.92
	16QAM	RB1#0	21.95	22.08	22.02	22.25	22.38	22.32
		RB1#38	21.89	22.03	22.03	22.19	22.33	22.33
		RB1#74	21.85	22.09	21.96	22.15	22.39	22.26
		RB36#0	20.87	20.66	20.72	21.17	20.96	21.02
		RB36#39	20.83	20.73	20.68	21.13	21.03	20.98
		RB75#0	20.95	20.65	20.73	21.25	20.95	21.03
20.0	QPSK	RB1#0	22.74	22.43	22.54	23.04	22.73	22.84
		RB1#50	22.68	22.41	22.54	22.98	22.71	22.84
		RB1#99	22.65	22.45	22.56	22.95	22.75	22.86
		RB50#0	21.58	21.49	21.51	21.88	21.79	21.81
		RB50#50	21.56	21.46	21.61	21.86	21.76	21.91
		RB100#0	21.55	21.39	21.48	21.85	21.69	21.78
	16QAM	RB1#0	21.75	22.06	22.29	22.05	22.36	22.59
		RB1#50	21.58	21.95	22.33	21.88	22.25	22.63
		RB1#99	21.63	22.03	22.27	21.93	22.33	22.57
		RB50#0	20.86	20.76	20.67	21.16	21.06	20.97
		RB50#50	20.84	20.77	20.68	21.14	21.07	20.98
		RB100#0	20.84	20.64	20.75	21.14	20.94	21.05

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
For Band 66: Antenna Gain = 1.5dBi
Cable Loss=1.2dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

20MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.39	2.95	4.71	13	Pass
QPSK (100RB Size)	5.64	4.78	5.48	13	Pass
16QAM (1RB Size)	5.06	3.49	5.71	13	Pass
16QAM (100RB Size)	6.41	5.58	6.31	13	Pass

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

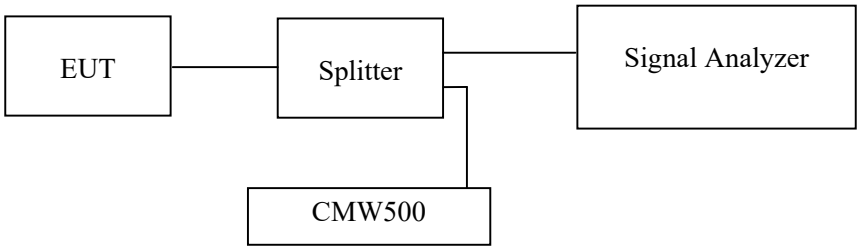
Applicable Standard

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:	28.2 ℃
Relative Humidity:	56.7 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lv on 2021-11-29 and 2021-12-25.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables and plots.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	128	824.2	244.00	318.53
	190	836.6	242.00	315.01
	251	848.8	244.00	312.23
EGPRS(8PSK)	128	824.2	246.00	314.40
	190	836.6	244.00	309.72
	251	848.8	242.00	306.47

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.15	4.71
	836.6	4.15	4.73
	846.6	4.15	4.70
HSDPA	826.4	4.17	4.68
	836.6	4.17	4.68
	846.6	4.15	4.70
HSUPA	826.4	4.15	4.69
	836.6	4.15	4.70
	846.6	4.15	4.68

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	242.00	315.64
	661	1880.0	240.00	314.79
	810	1909.8	244.00	319.64
EGPRS(8PSK)	512	1850.2	250.00	315.71
	661	1880.0	254.00	326.92
	810	1909.8	254.00	319.36

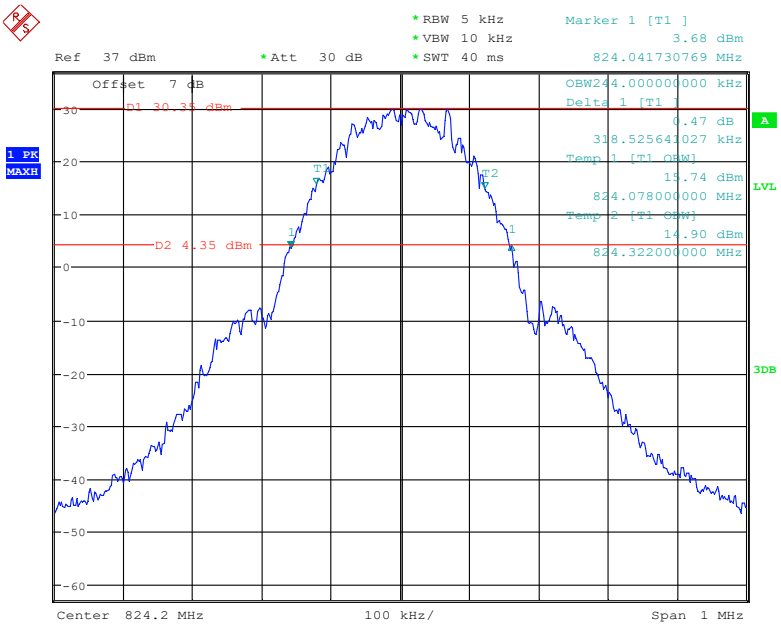
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.15	4.71
	1880.0	4.15	4.71
	1907.6	4.15	4.70
HSDPA	1852.4	4.17	4.68
	1880.0	4.17	4.70
	1907.6	4.15	4.70
HSUPA	1852.4	4.15	4.70
	1880.0	4.15	4.68
	1907.6	4.15	4.68

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.17	4.68
	1732.6	4.17	4.71
	1752.6	4.16	4.72
HSDPA	1712.4	4.17	4.68
	1732.6	4.17	4.68
	1752.6	4.17	4.70
HSUPA	1712.4	4.17	4.68
	1732.6	4.15	4.68
	1752.6	4.17	4.70

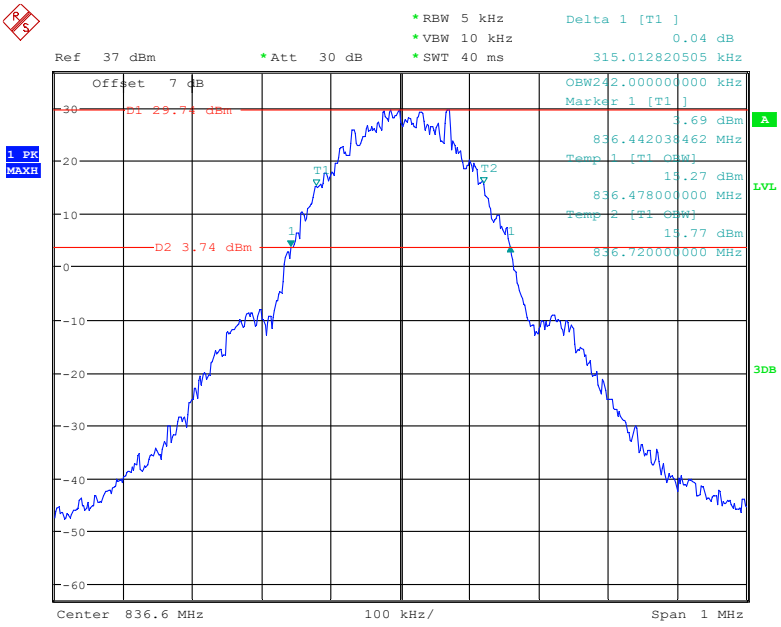
Cellular Band (Part 22H)

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



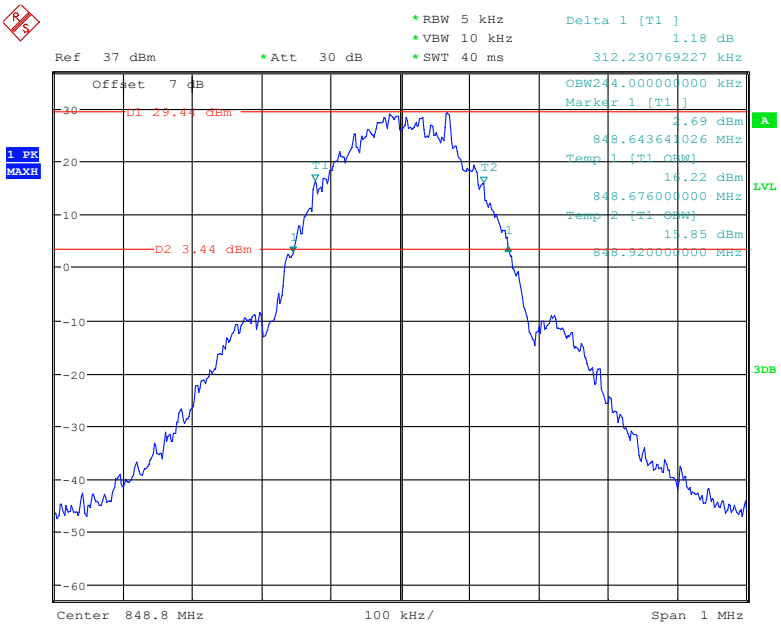
Date: 29.NOV.2021 14:33:17

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



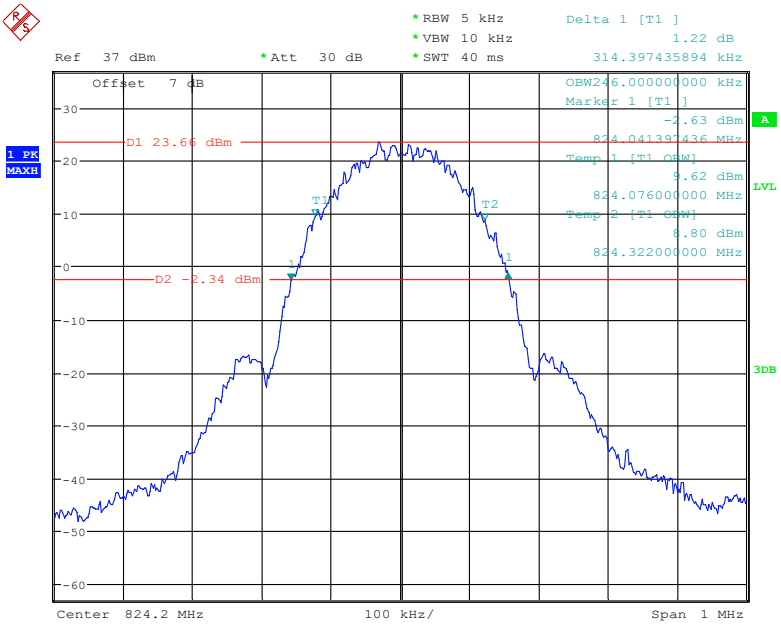
Date: 29.NOV.2021 14:34:27

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



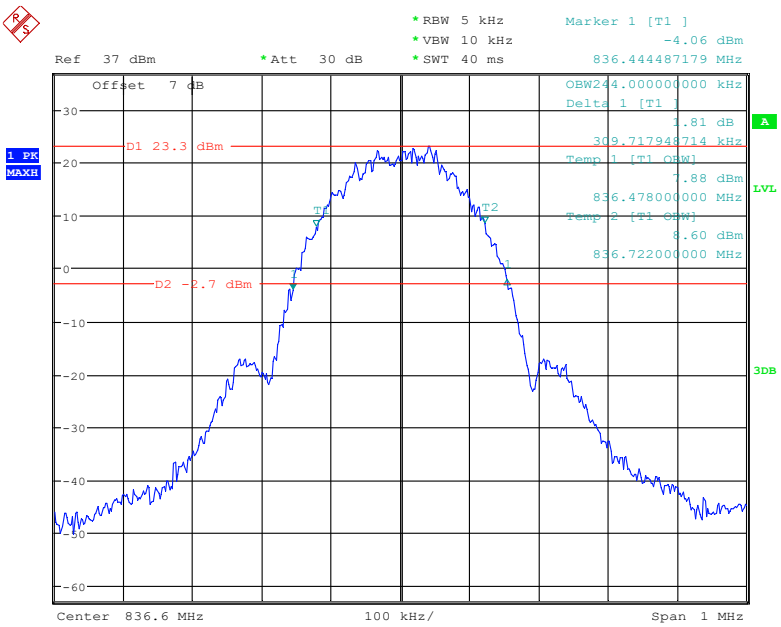
Date: 29.NOV.2021 14:35:43

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



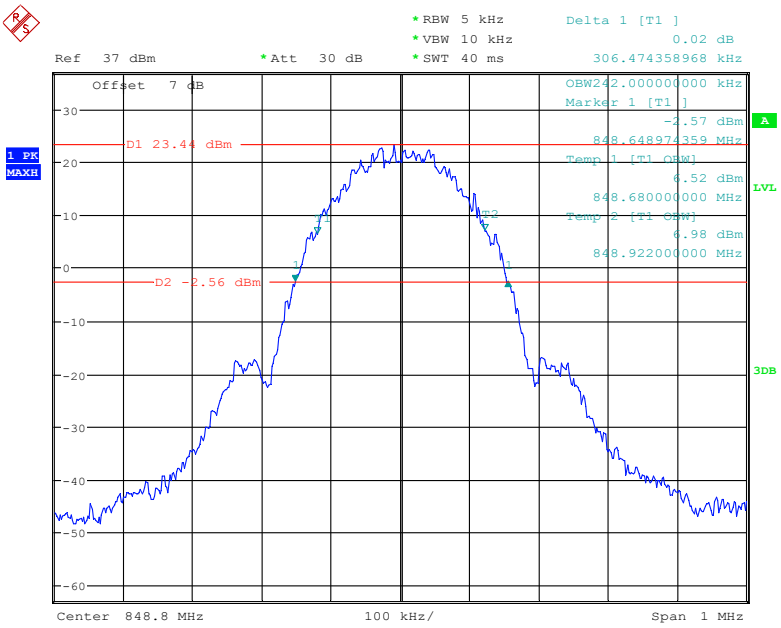
Date: 29.NOV.2021 14:39:31

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



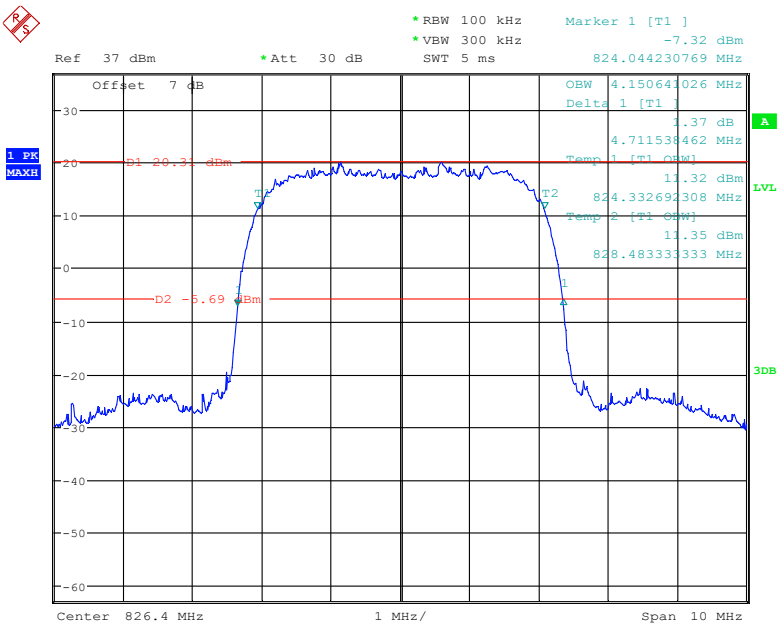
Date: 29.NOV.2021 14:40:36

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



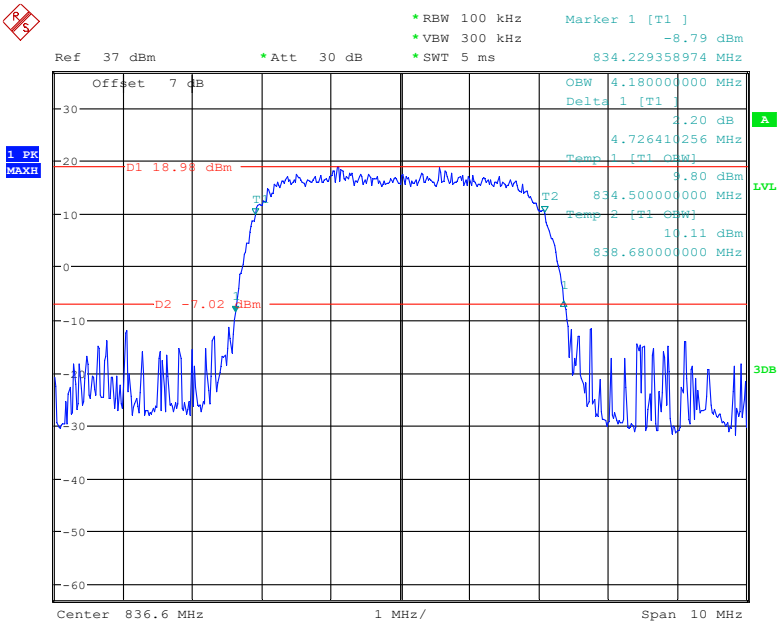
Date: 29.NOV.2021 14:41:42

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



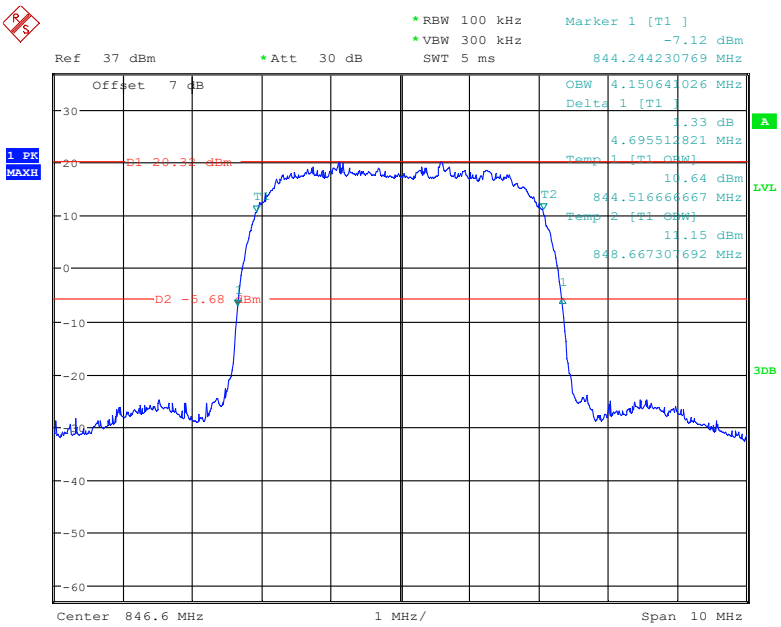
Date: 29.NOV.2021 18:04:50

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



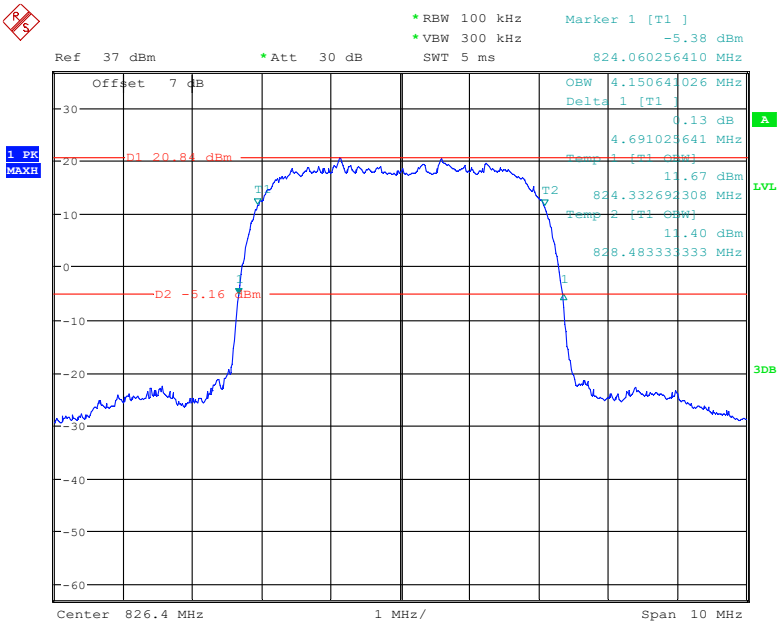
Date: 24.DEC.2021 19:04:24

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



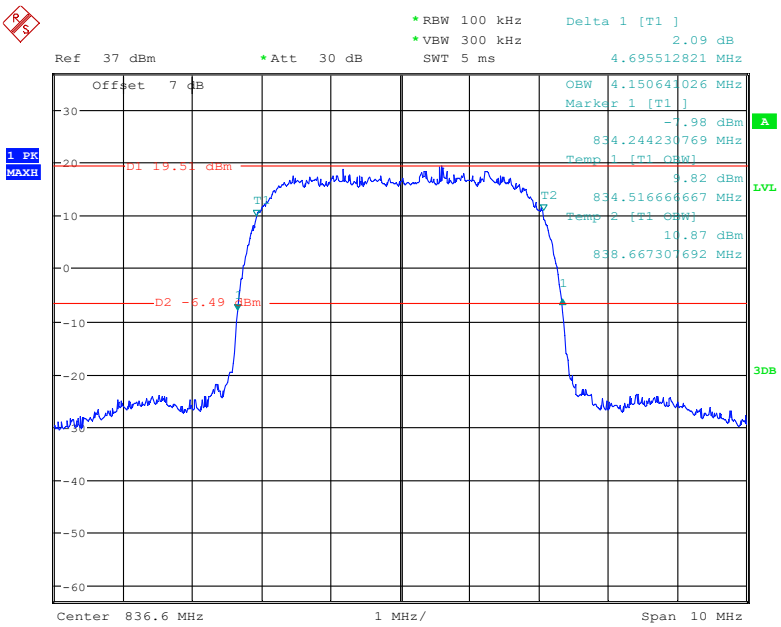
Date: 29.NOV.2021 18:07:51

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



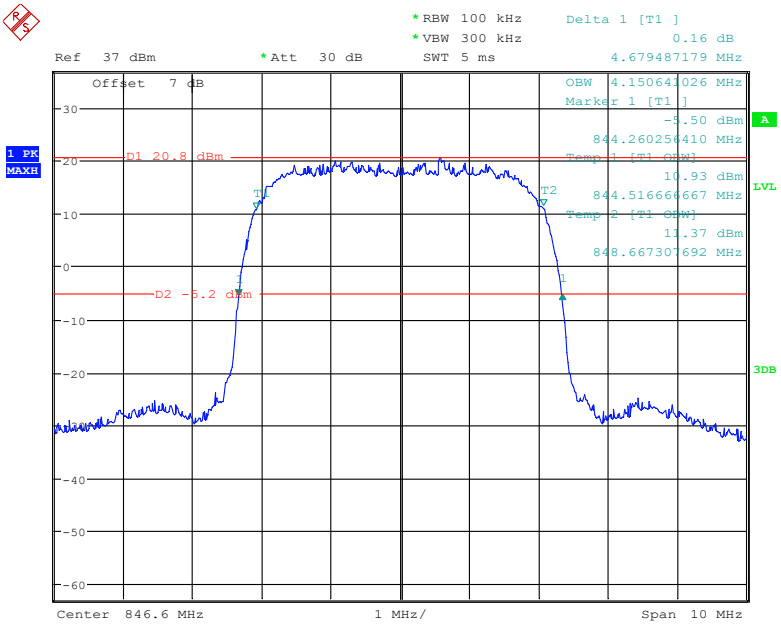
Date: 29.NOV.2021 17:22:24

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



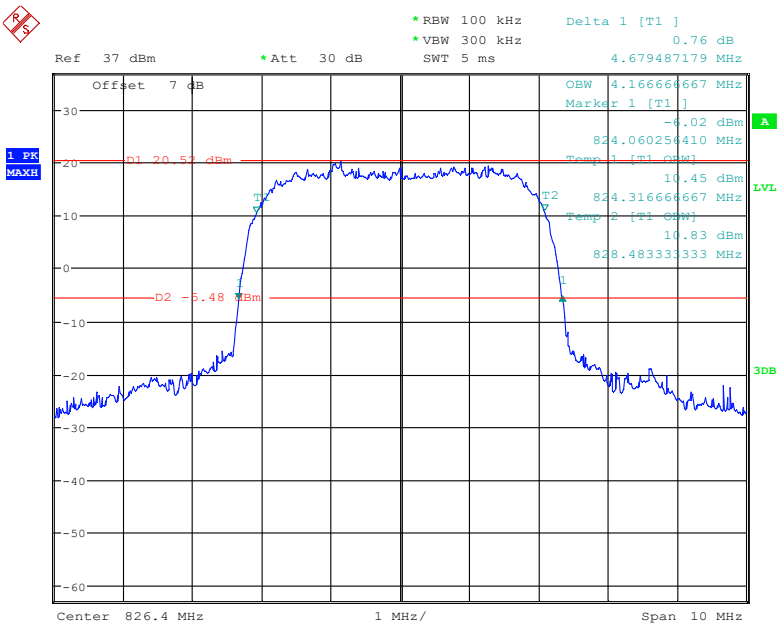
Date: 29.NOV.2021 17:23:49

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



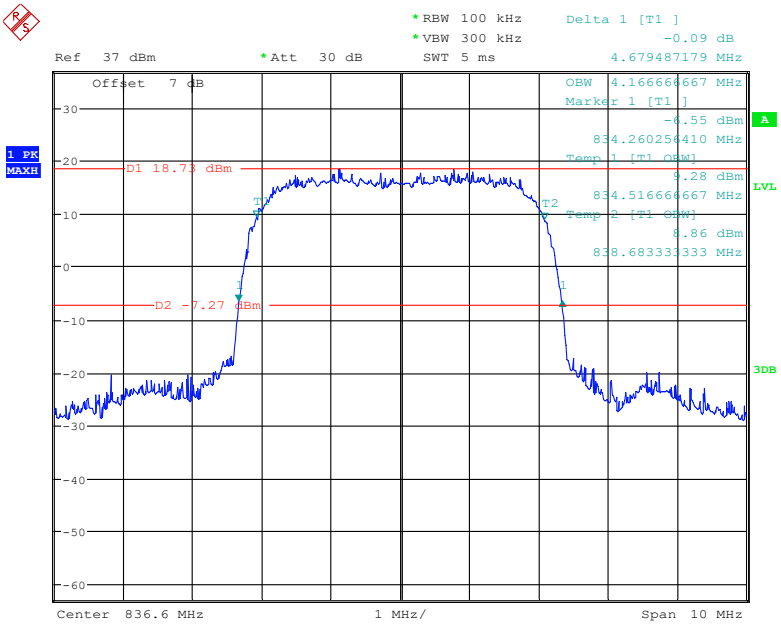
Date: 29.NOV.2021 17:24:33

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



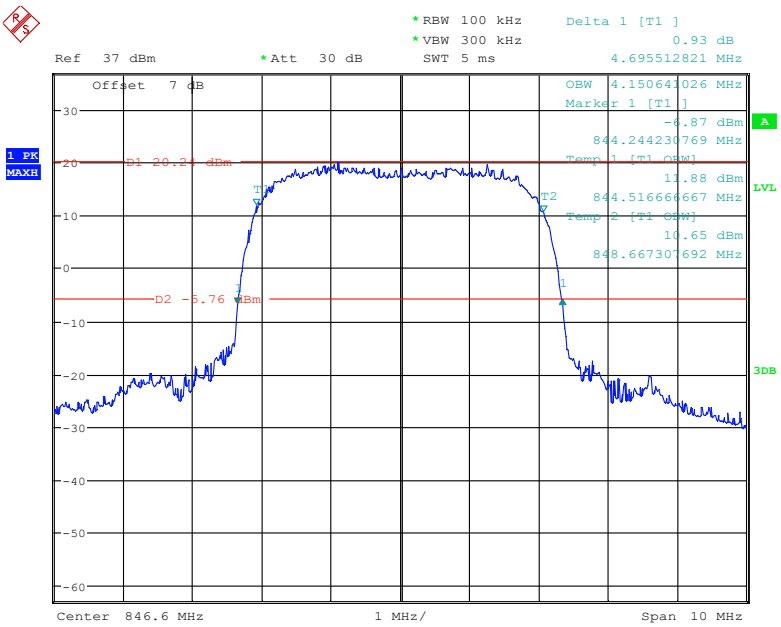
Date: 29.NOV.2021 17:37:51

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



Date: 29.NOV.2021 17:38:56

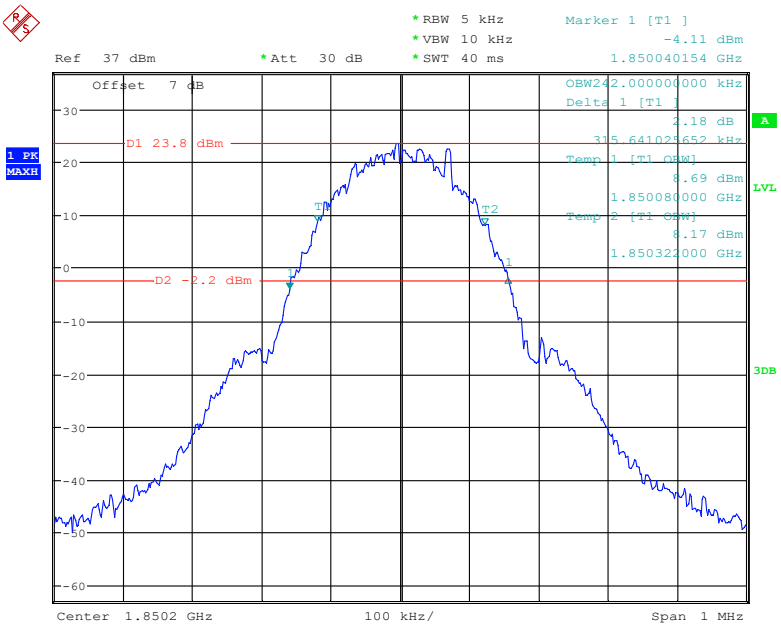
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 29.NOV.2021 17:39:57

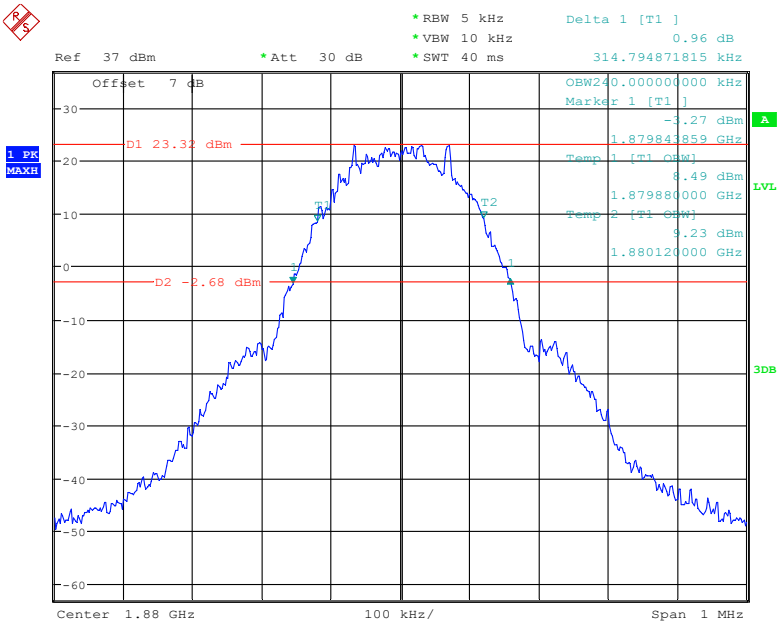
PCS Band (Part 24E)

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



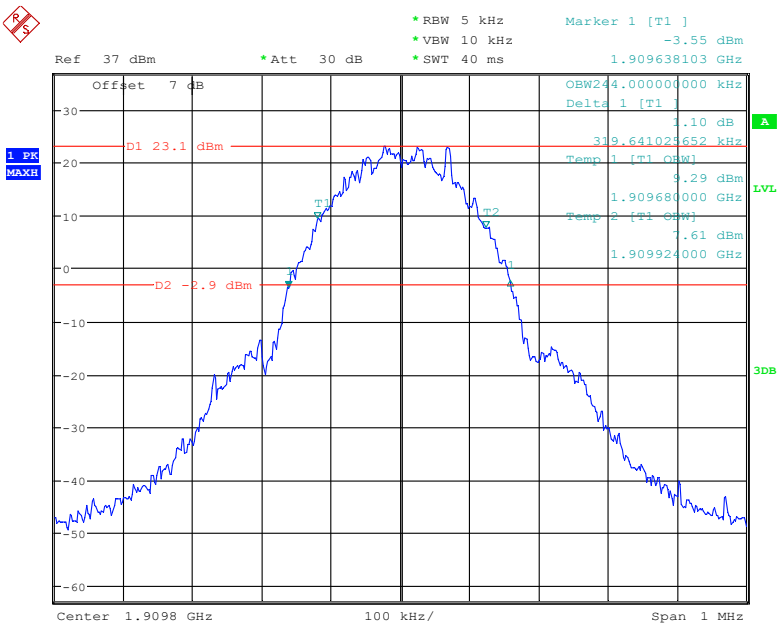
Date: 29.NOV.2021 14:27:21

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



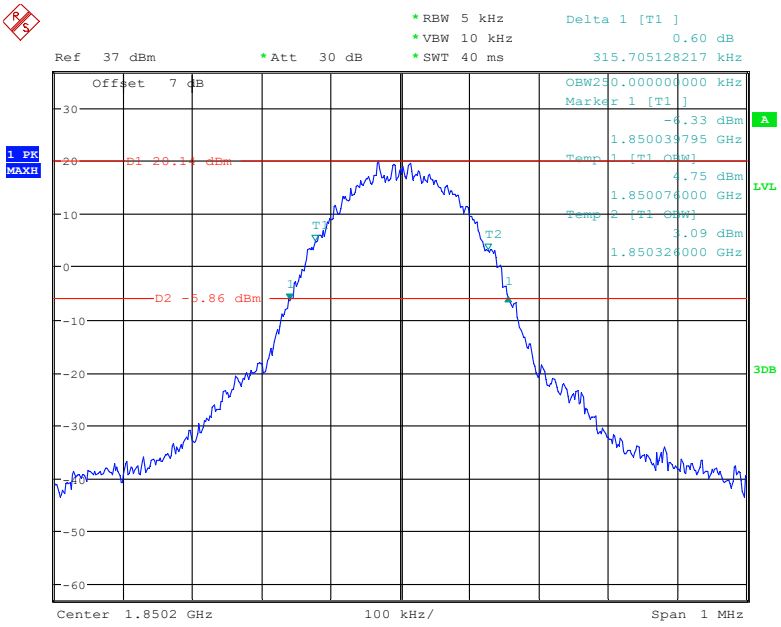
Date: 29.NOV.2021 14:28:44

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



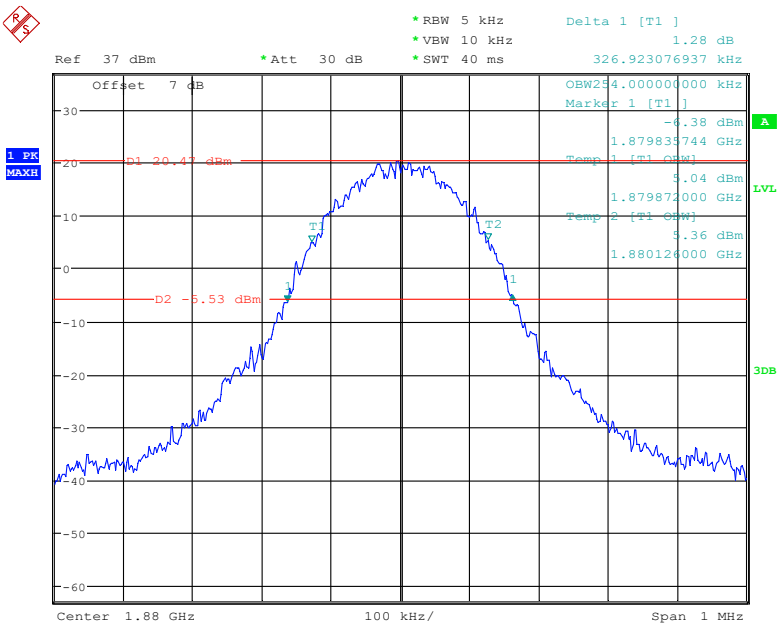
Date: 29.NOV.2021 14:30:04

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



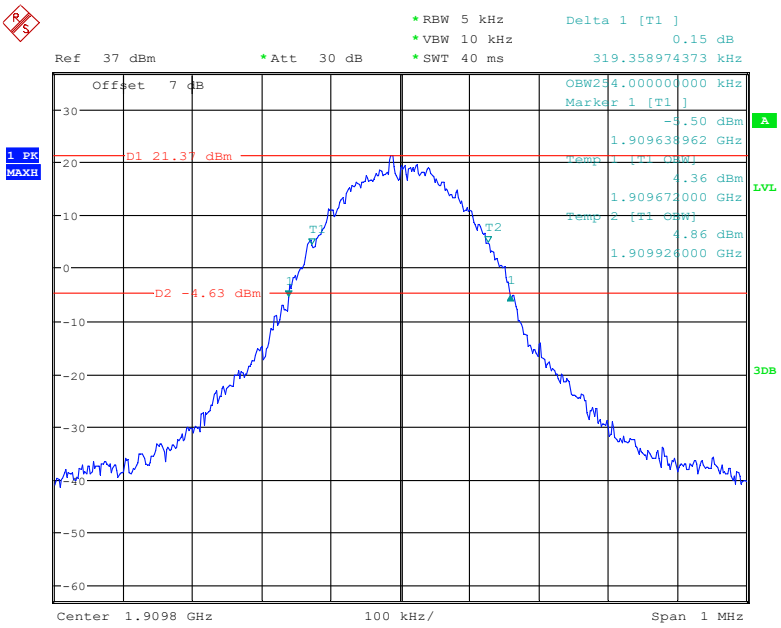
Date: 29.NOV.2021 14:19:34

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



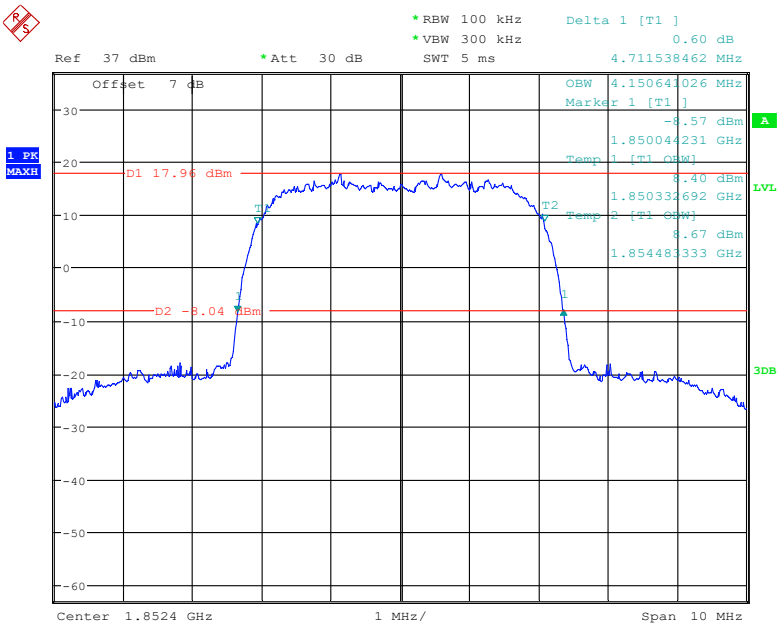
Date: 29.NOV.2021 14:21:47

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



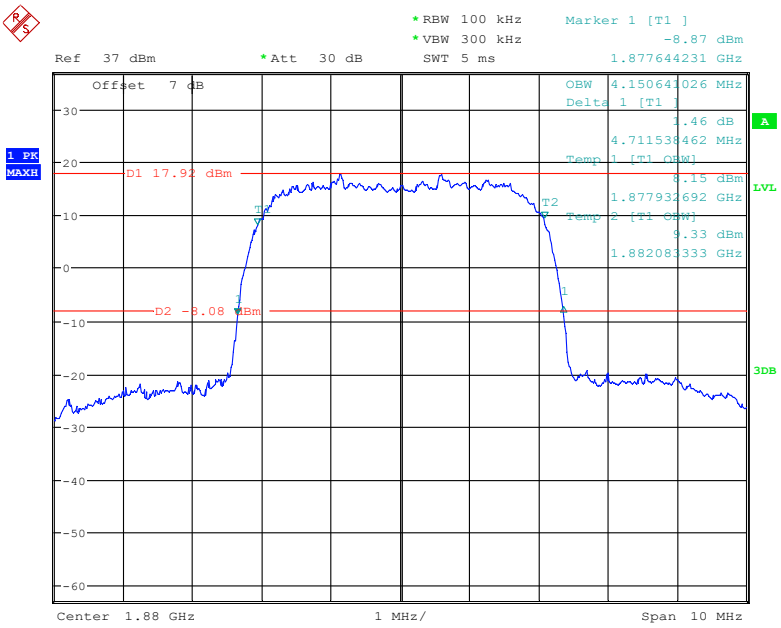
Date: 29.NOV.2021 14:24:05

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



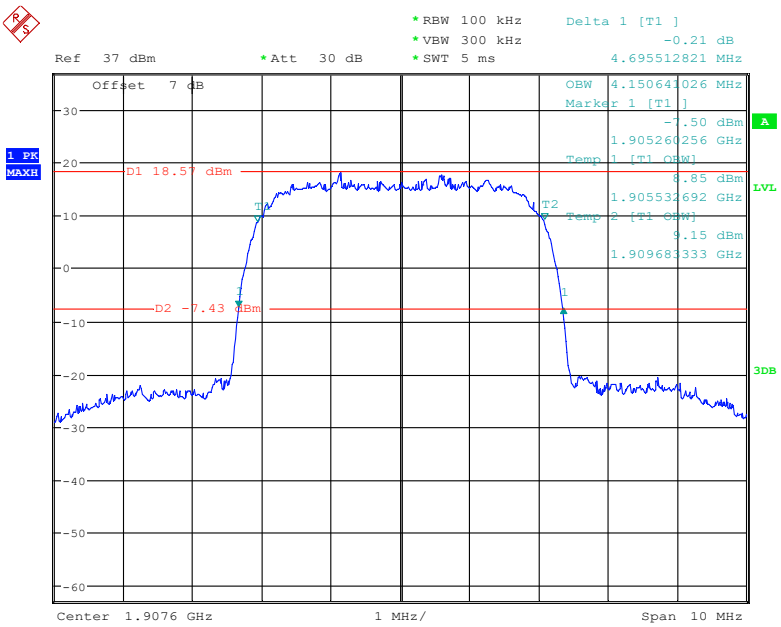
Date: 29.NOV.2021 17:55:07

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



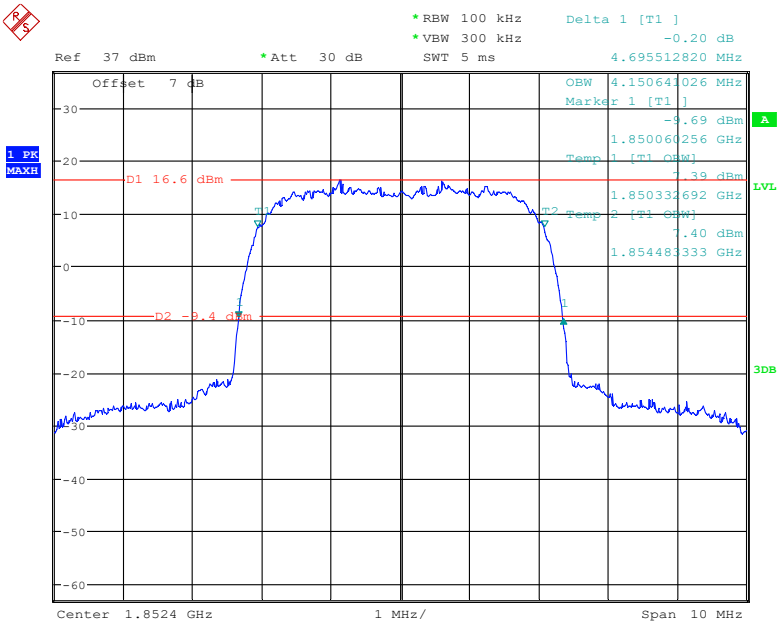
Date: 29.NOV.2021 17:58:35

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



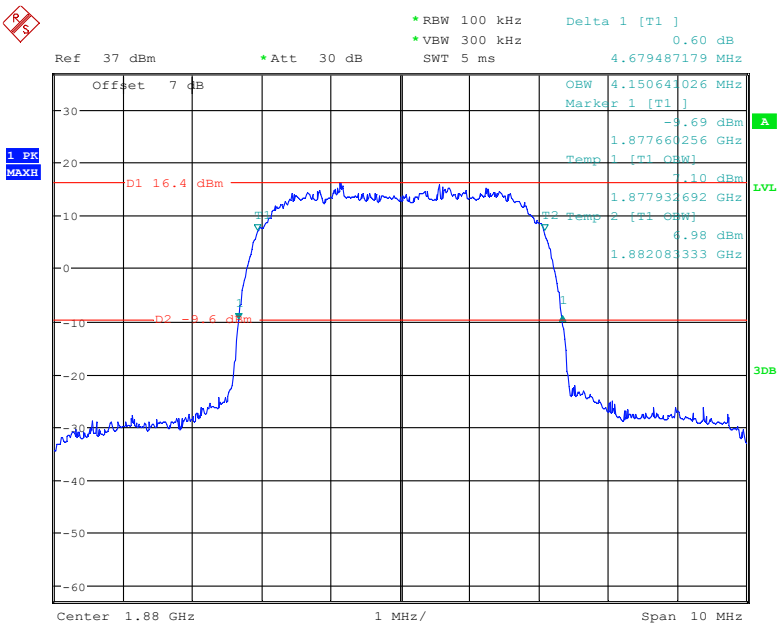
Date: 25.DEC.2021 19:03:58

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



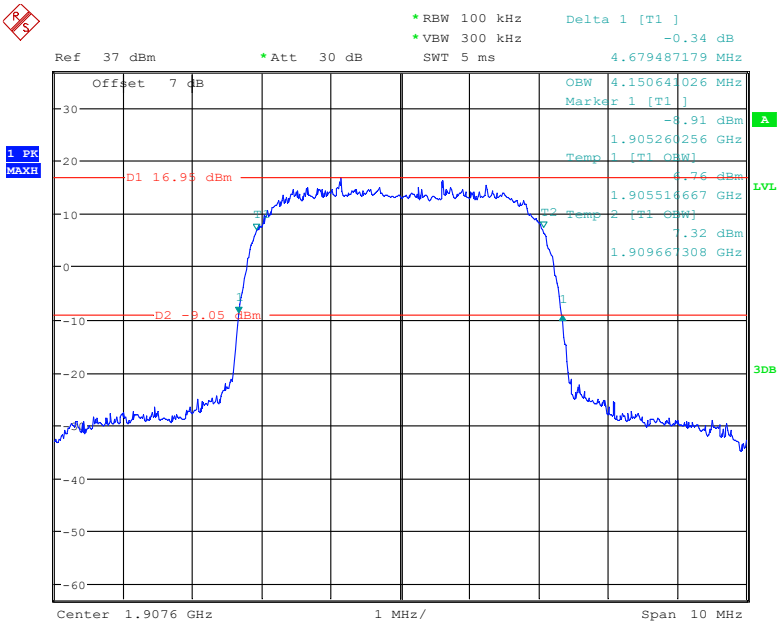
Date: 29.NOV.2021 17:12:01

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



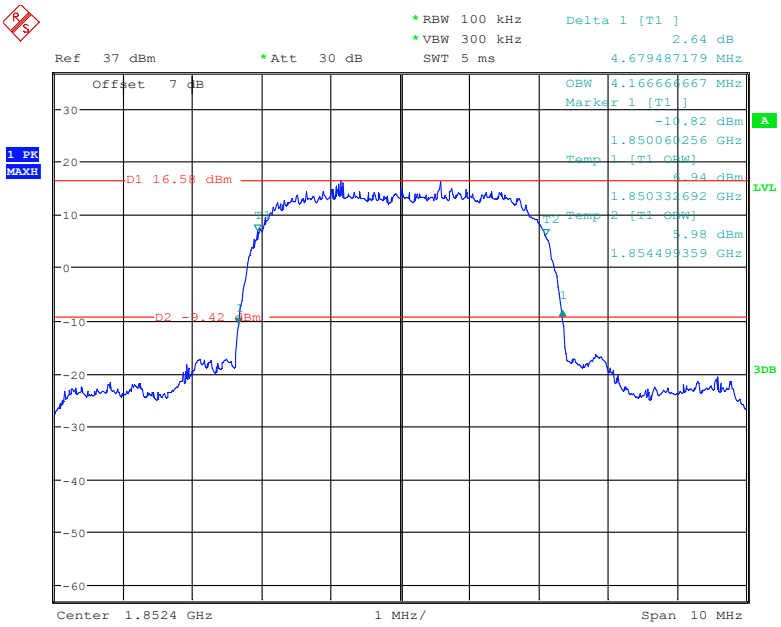
Date: 29.NOV.2021 17:13:13

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



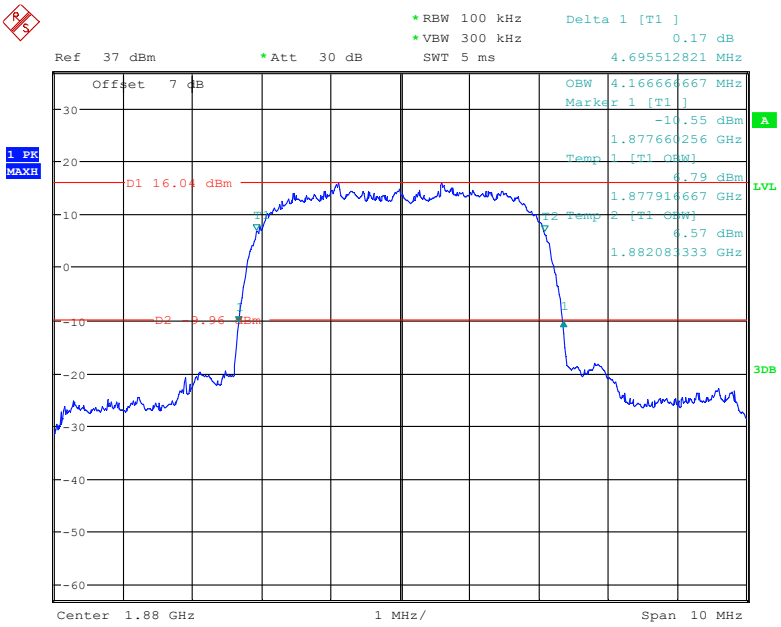
Date: 29.NOV.2021 17:14:19

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



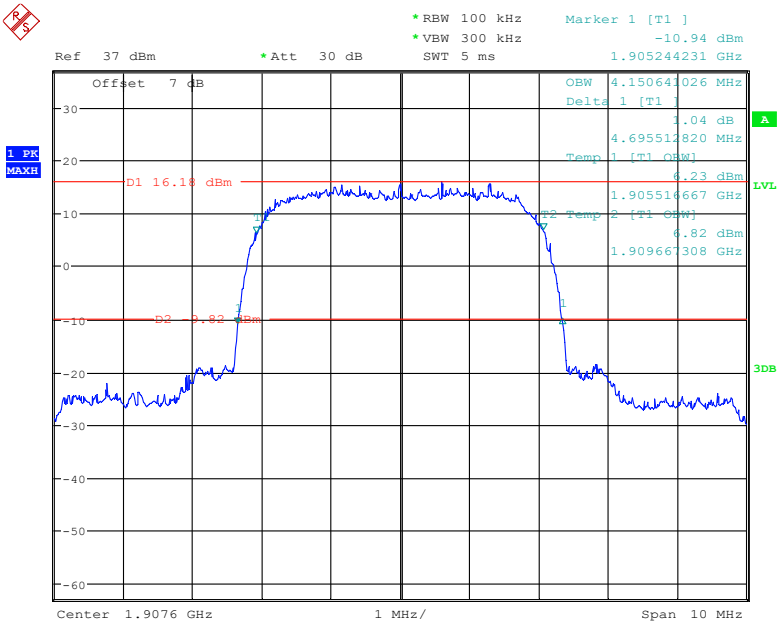
Date: 29.NOV.2021 17:29:24

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



Date: 29.NOV.2021 17:30:53

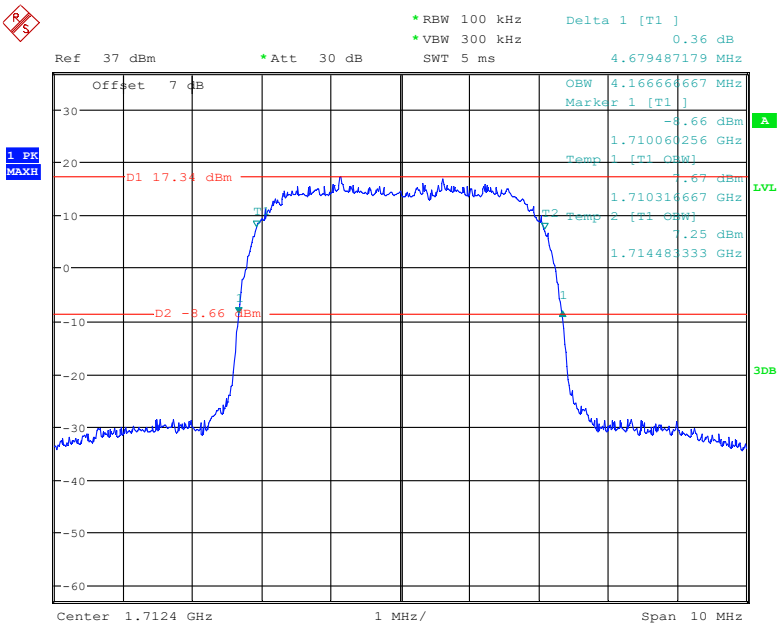
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 29.NOV.2021 17:32:06

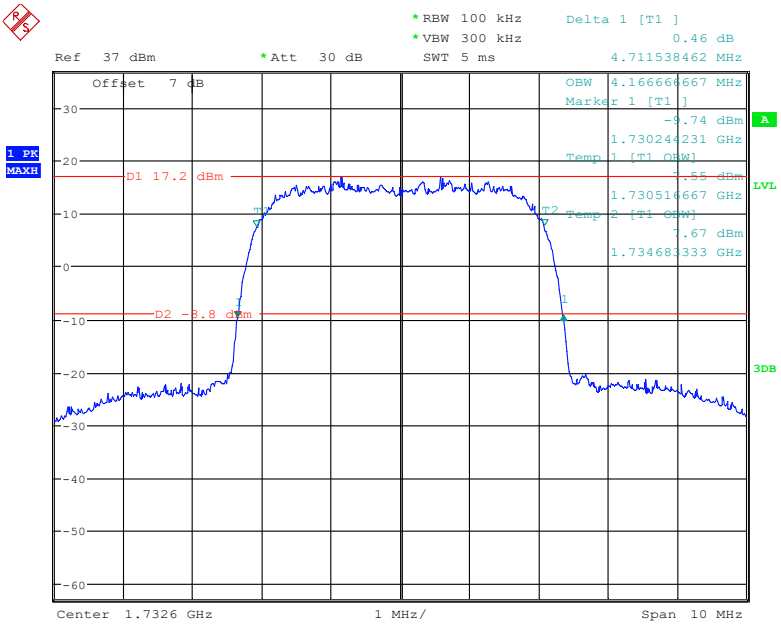
AWS Band (Part 27)

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



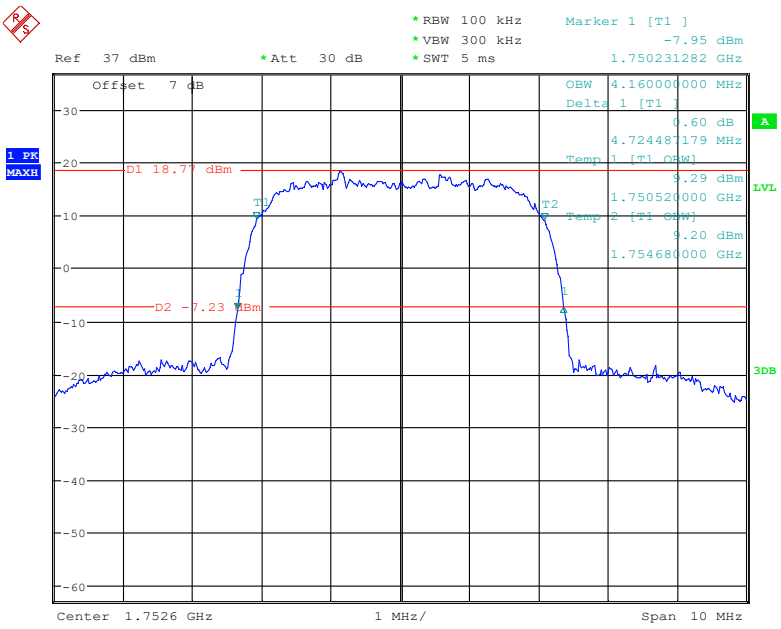
Date: 29.NOV.2021 18:00:37

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



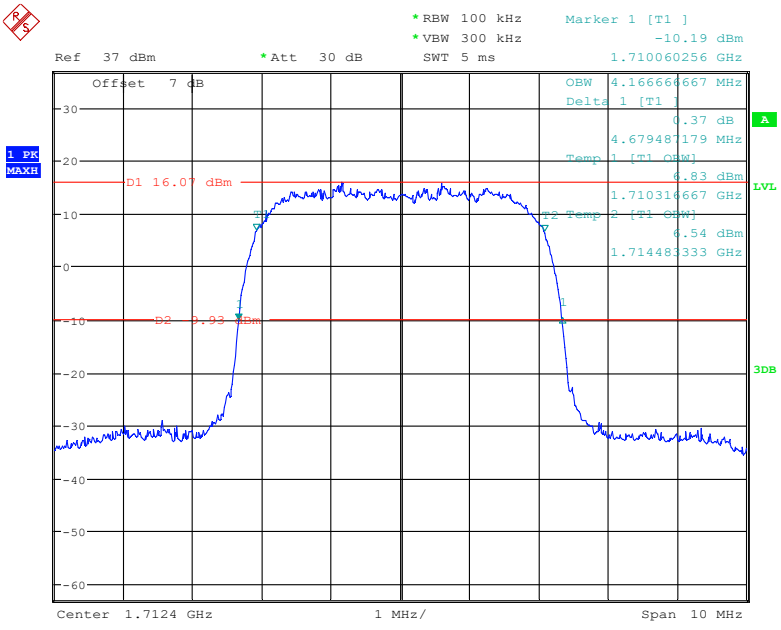
Date: 29.NOV.2021 18:01:35

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



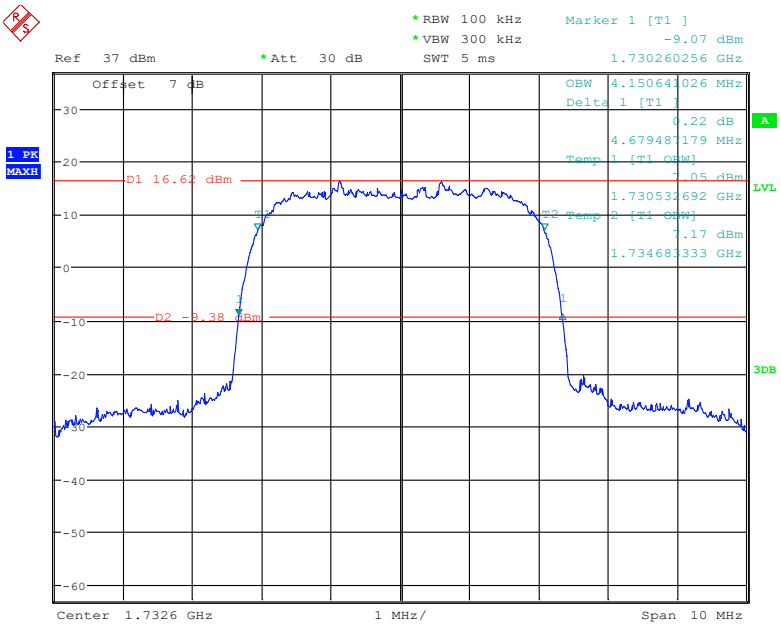
Date: 24.DEC.2021 19:32:31

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



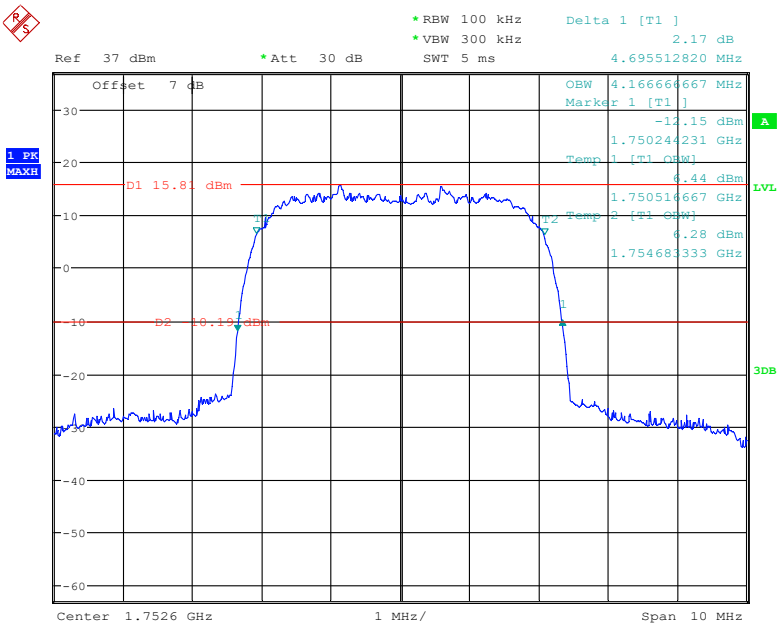
Date: 29.NOV.2021 17:16:11

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



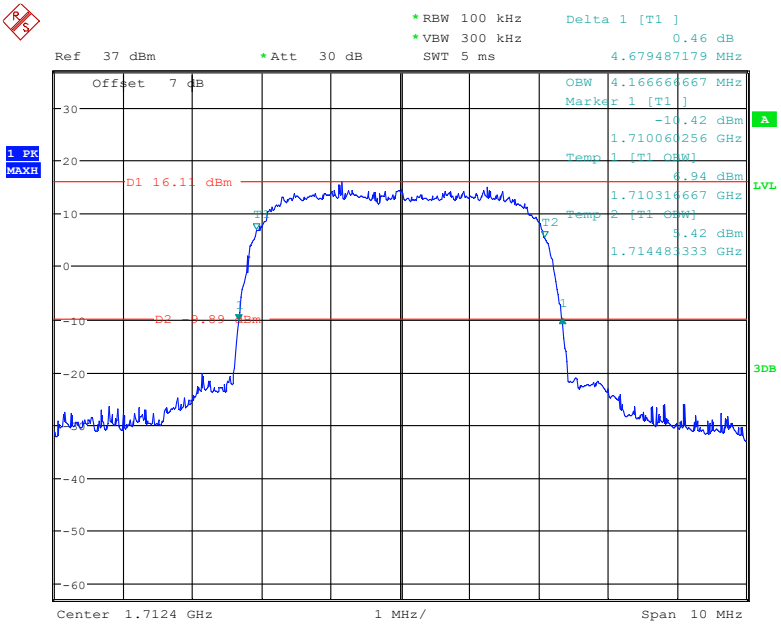
Date: 29.NOV.2021 17:17:40

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



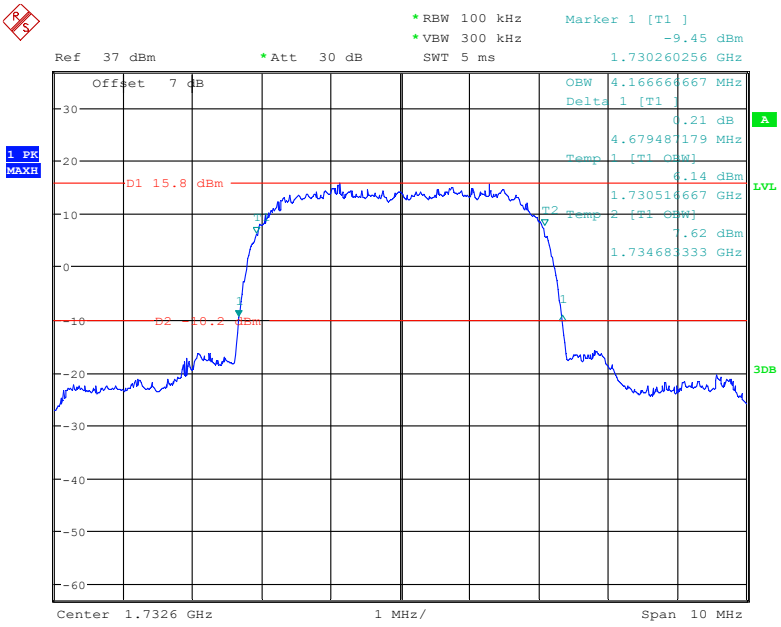
Date: 29.NOV.2021 17:19:12

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



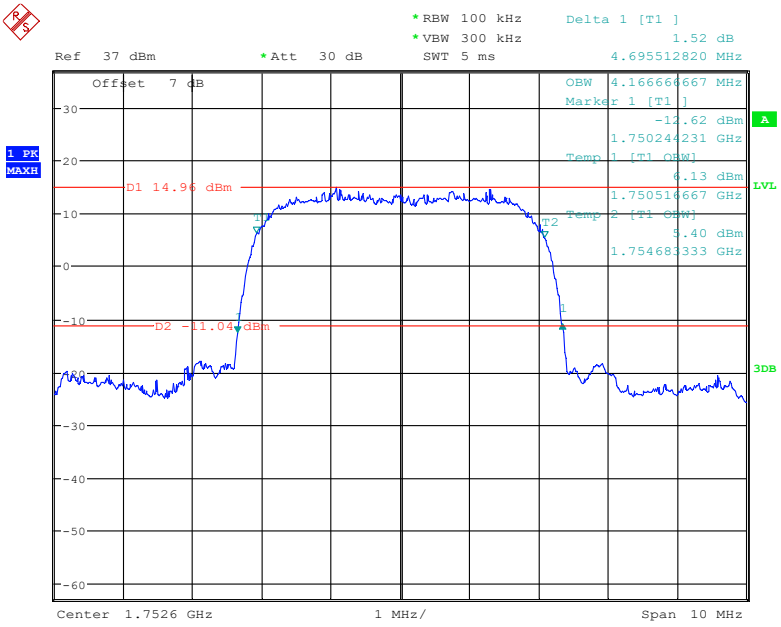
Date: 29.NOV.2021 17:33:38

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



Date: 29.NOV.2021 17:34:55

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



Date: 29.NOV.2021 17:36:14

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	1.110	1.260
	16QAM	1.110	1.266	1.110	1.254	1.110	1.266
3 MHz	QPSK	2.700	3.012	2.700	2.988	2.700	3.012
	16QAM	2.700	3.048	2.688	3.012	2.700	3.024
5 MHz	QPSK	4.540	4.980	4.540	5.000	4.520	5.000
	16QAM	4.540	5.000	4.560	5.020	4.540	5.000
10 MHz	QPSK	9.000	9.760	9.000	9.720	9.000	9.760
	16QAM	8.920	9.760	9.000	9.800	8.960	9.840
15 MHz	QPSK	13.560	14.940	13.560	15.060	13.620	15.180
	16QAM	13.500	15.120	13.560	15.120	13.620	15.120
20 MHz	QPSK	18.080	19.520	18.080	19.600	18.080	19.680
	16QAM	18.000	19.680	18.080	19.680	18.000	19.760

LTE Band 4:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.104	1.254	1.104	1.266	1.110	1.278
	16QAM	1.110	1.266	1.098	1.260	1.116	1.284
3 MHz	QPSK	2.700	3.012	2.700	3.012	2.688	3.024
	16QAM	2.700	3.012	2.700	3.000	2.700	3.048
5 MHz	QPSK	4.520	5.000	4.520	5.000	4.520	5.000
	16QAM	4.520	4.980	4.540	5.020	4.560	5.240
10 MHz	QPSK	9.000	9.760	9.000	9.760	8.960	9.880
	16QAM	8.960	9.760	9.000	9.800	9.000	9.880
15 MHz	QPSK	13.620	15.060	13.500	15.060	13.620	16.740
	16QAM	13.560	15.120	13.560	15.120	13.560	16.920
20 MHz	QPSK	18.000	19.840	18.000	19.600	18.080	21.680
	16QAM	18.080	19.840	18.000	19.760	18.080	22.080

LTE Band 5:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.104	1.260	1.098	1.254	1.104	1.260
	16QAM	1.110	1.260	1.098	1.254	1.110	1.254
3 MHz	QPSK	2.700	2.988	2.688	2.988	2.700	3.012
	16QAM	2.700	3.024	2.700	3.000	2.700	3.024
5 MHz	QPSK	4.520	5.000	4.540	4.980	4.500	4.980
	16QAM	4.520	4.980	4.520	4.960	4.540	5.000
10 MHz	QPSK	8.960	9.760	9.000	9.760	8.960	9.720
	16QAM	8.960	9.720	8.960	9.760	8.960	9.760

LTE Band 7

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.520	5.020	4.520	5.000	4.520	5.000
	16QAM	4.520	5.000	4.520	4.980	4.540	5.000
10 MHz	QPSK	8.960	9.720	8.960	9.760	8.960	9.800
	16QAM	8.960	9.760	9.000	9.760	8.960	9.840
15 MHz	QPSK	13.620	15.000	13.560	15.060	13.620	15.120
	16QAM	13.560	15.120	13.620	15.180	13.560	15.120
20 MHz	QPSK	18.000	19.600	18.000	19.680	18.080	19.920
	16QAM	18.080	19.680	18.080	19.840	18.000	19.760

LTE Band 66

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.104	1.260	1.110	1.296	1.098	1.248
	16QAM	1.116	1.260	1.104	1.278	1.116	1.266
3 MHz	QPSK	2.712	3.000	2.712	3.084	2.700	2.988
	16QAM	2.700	3.012	2.700	3.012	2.700	3.012
5 MHz	QPSK	4.520	5.000	4.540	5.040	4.520	4.980
	16QAM	4.520	5.000	4.540	5.020	4.540	5.020
10 MHz	QPSK	8.960	9.760	8.960	10.360	8.960	9.720
	16QAM	8.960	9.720	9.040	9.800	8.960	9.800
15 MHz	QPSK	13.560	15.120	13.560	15.180	13.560	15.180
	16QAM	13.620	15.120	13.620	17.040	13.500	15.000
20 MHz	QPSK	18.000	19.680	18.000	19.520	18.080	19.920
	16QAM	18.080	19.680	18.160	22.160	18.000	19.760

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

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

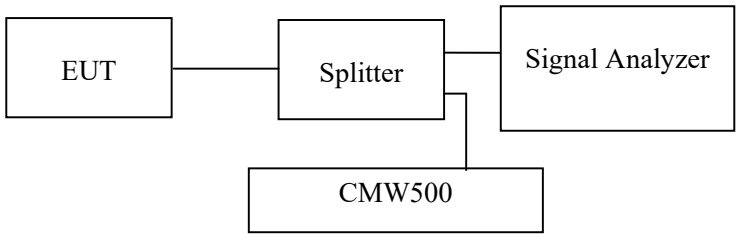
Applicable Standard

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

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

Test Procedure

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



Test Data

Environmental Conditions

Temperature:	28.2 ℃
Relative Humidity:	56.7 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lv on 2021-11-29.

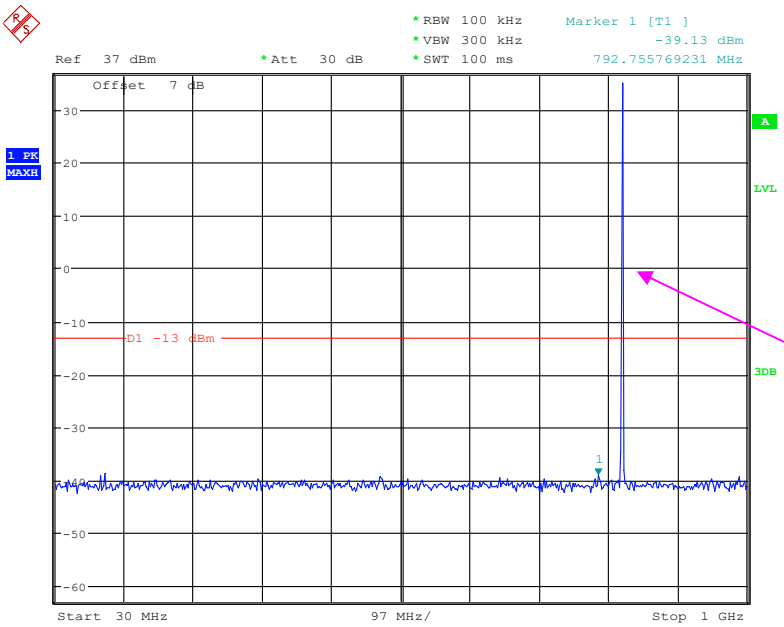
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

Cellular Band (Part 22H)
Low Channel:

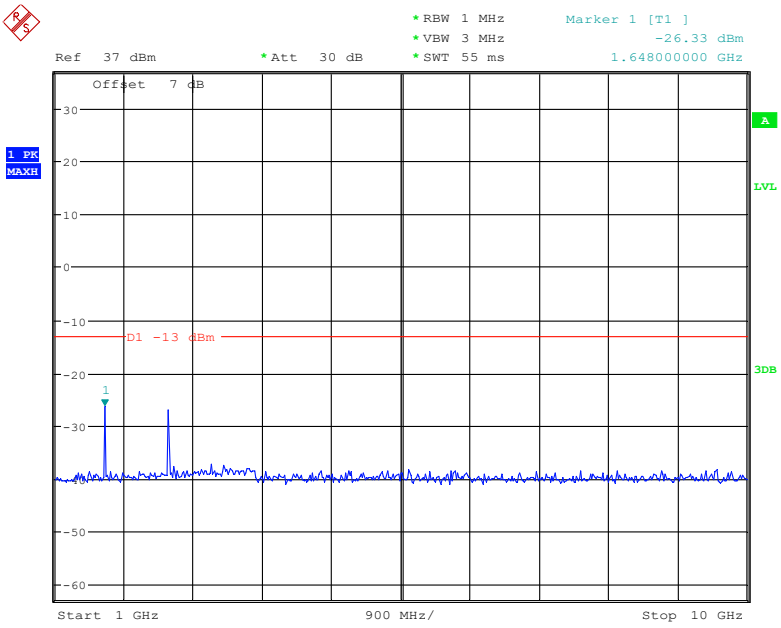
30 MHz – 1 GHz (GSM Mode)



Fundamental test

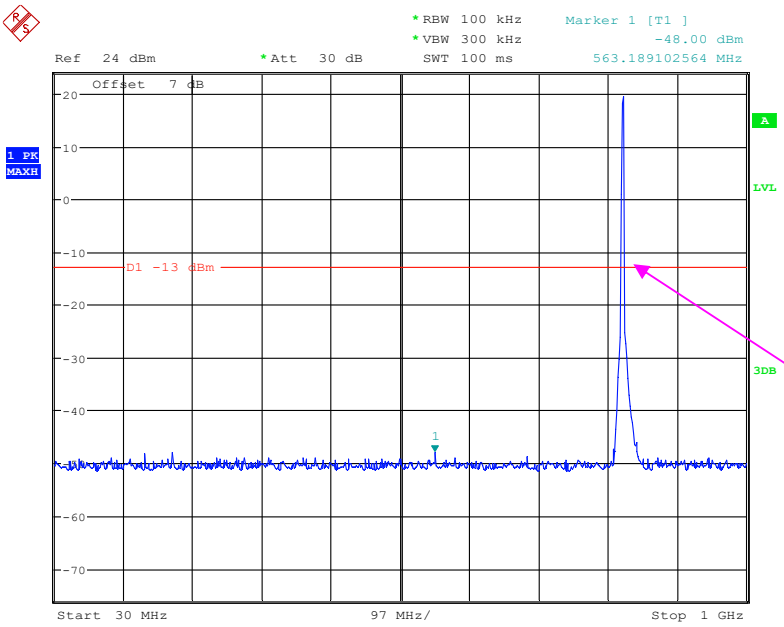
Date: 29.NOV.2021 14:47:17

1 GHz – 10 GHz (GSM Mode)



Date: 29.NOV.2021 14:49:49

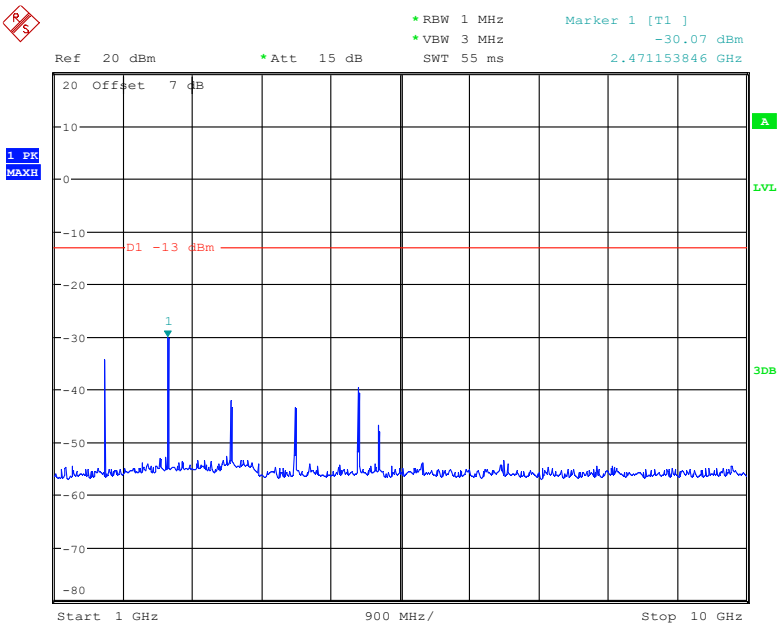
30 MHz – 1 GHz (WCDMA Mode)



Fundamental test

Date: 29.NOV.2021 17:01:16

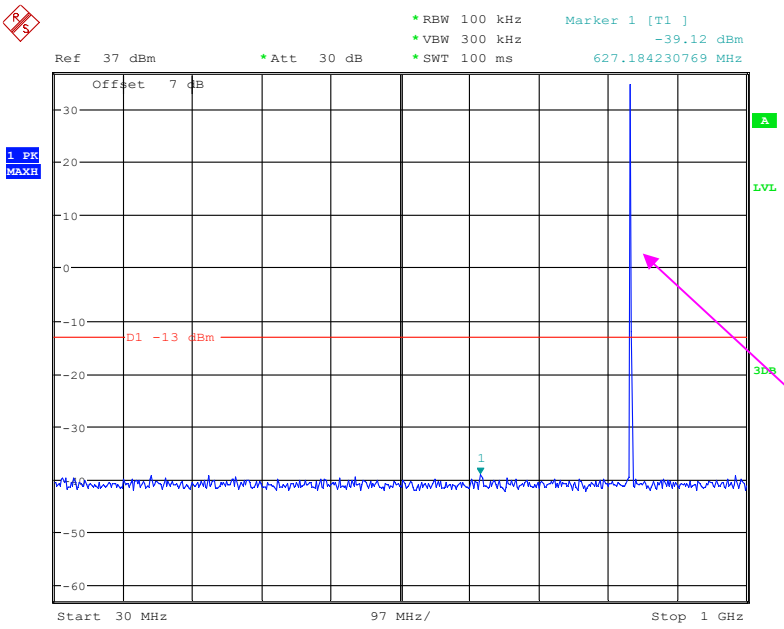
1 GHz – 10 GHz (WCDMA Mode)



Date: 29.NOV.2021 17:06:08

Middle Channel:

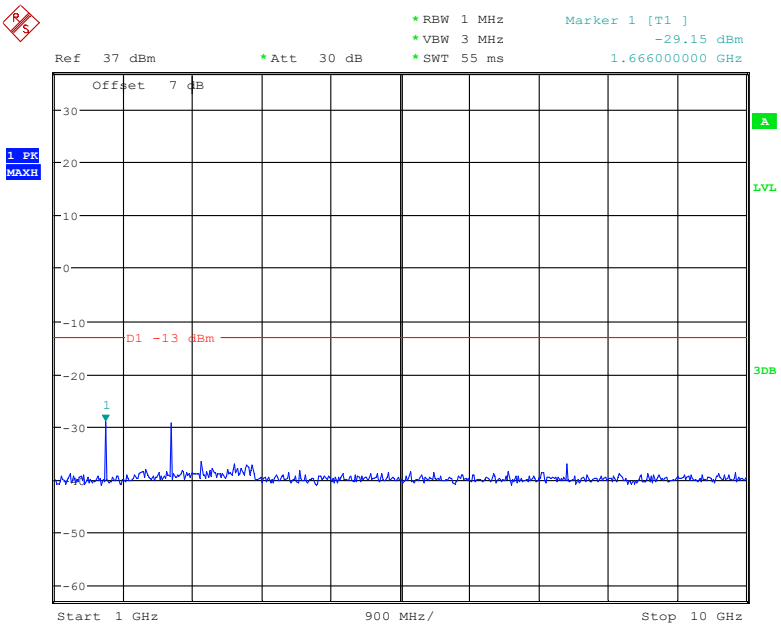
30 MHz – 1 GHz (GSM Mode)



Fundamental test

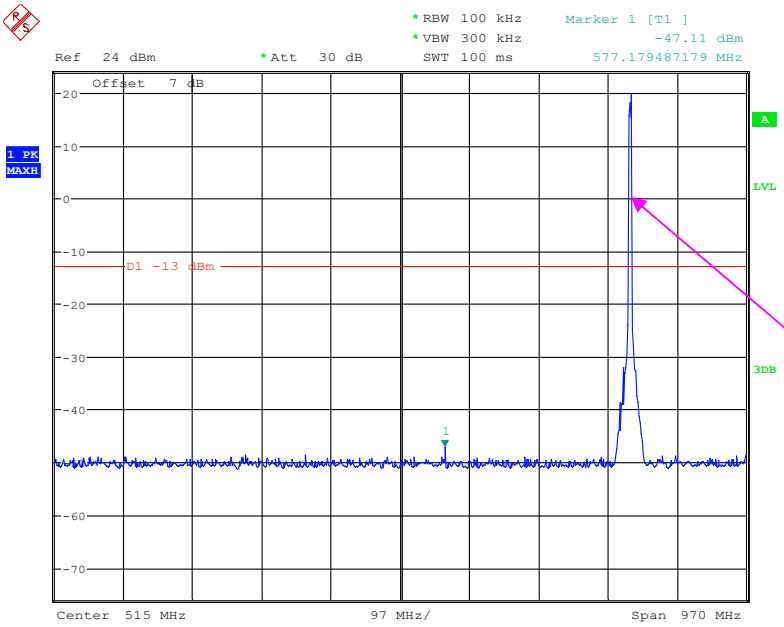
Date: 29.NOV.2021 14:47:38

1 GHz – 10 GHz (GSM Mode)



Date: 29.NOV.2021 14:49:27

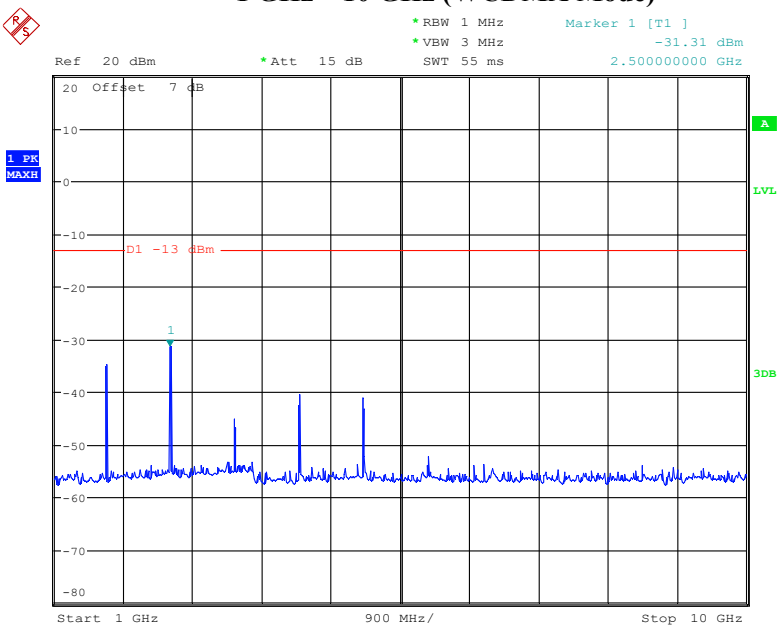
30 MHz – 1 GHz (WCDMA Mode)



Fundamental test

Date: 29.NOV.2021 17:02:19

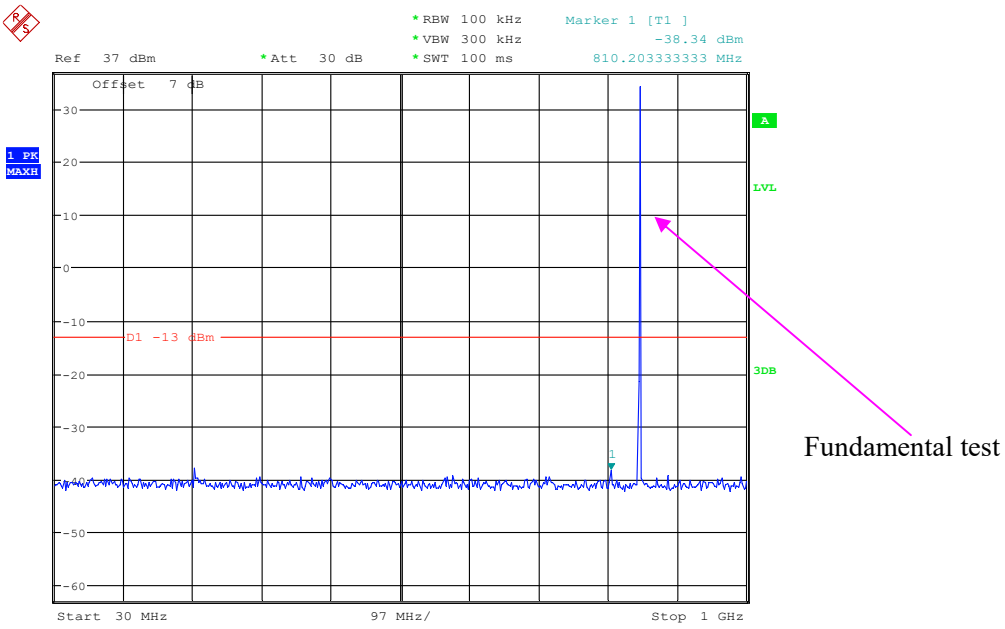
1 GHz – 10 GHz (WCDMA Mode)



Date: 29.NOV.2021 17:06:59

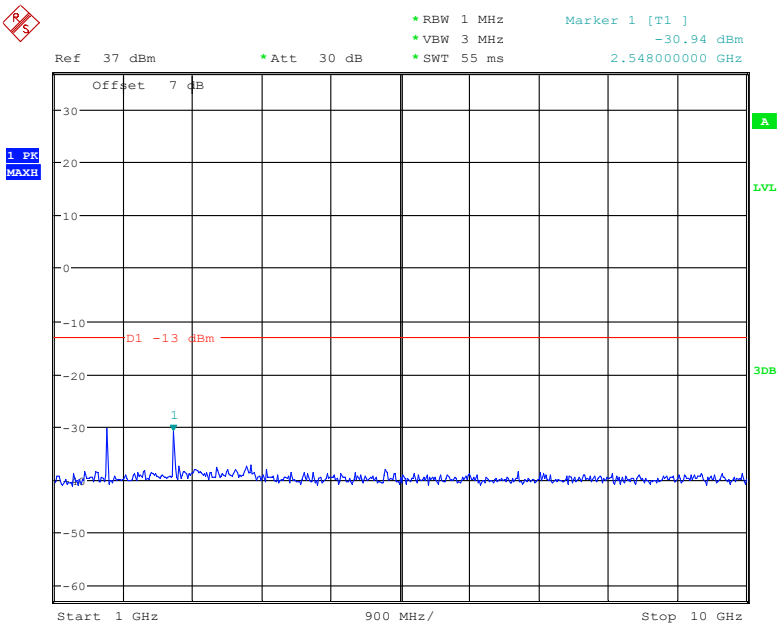
High Channel:

30 MHz – 1 GHz (GSM Mode)



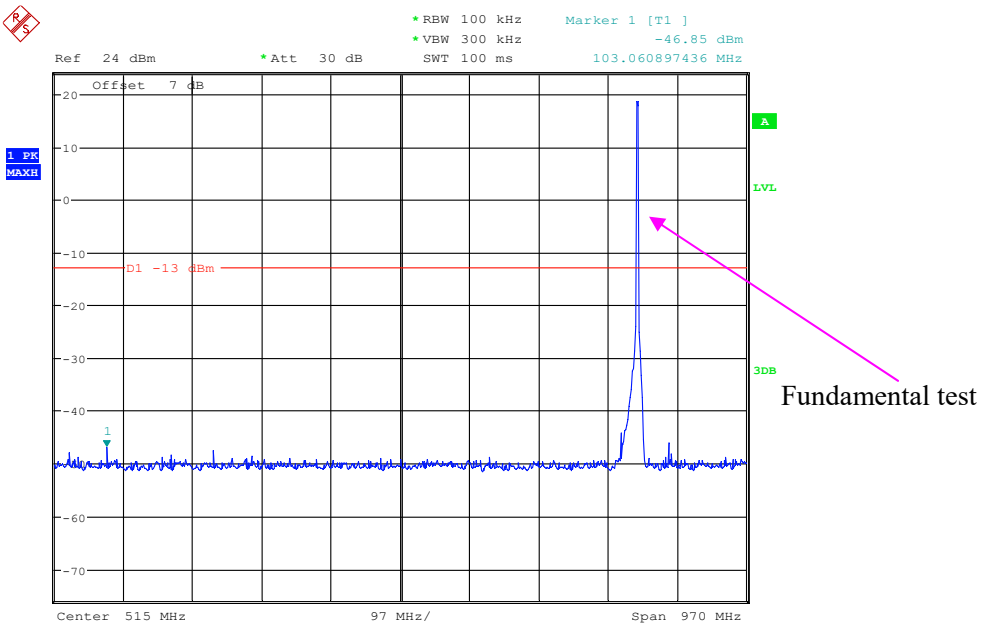
Date: 29.NOV.2021 14:48:01

1 GHz – 10 GHz (GSM Mode)



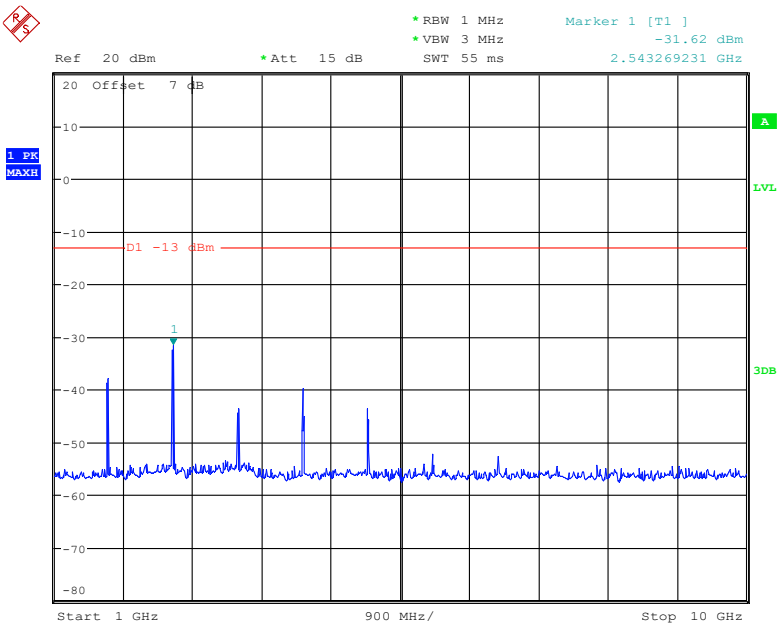
Date: 29.NOV.2021 14:48:58

30 MHz – 1 GHz (WCDMA Mode)



Date: 29.NOV.2021 17:03:04

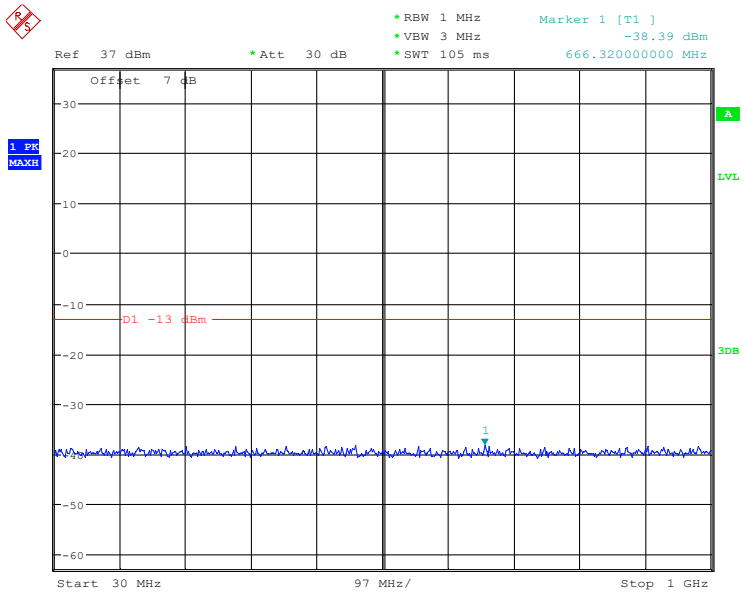
1 GHz – 10 GHz (WCDMA Mode)



Date: 29.NOV.2021 17:06:39

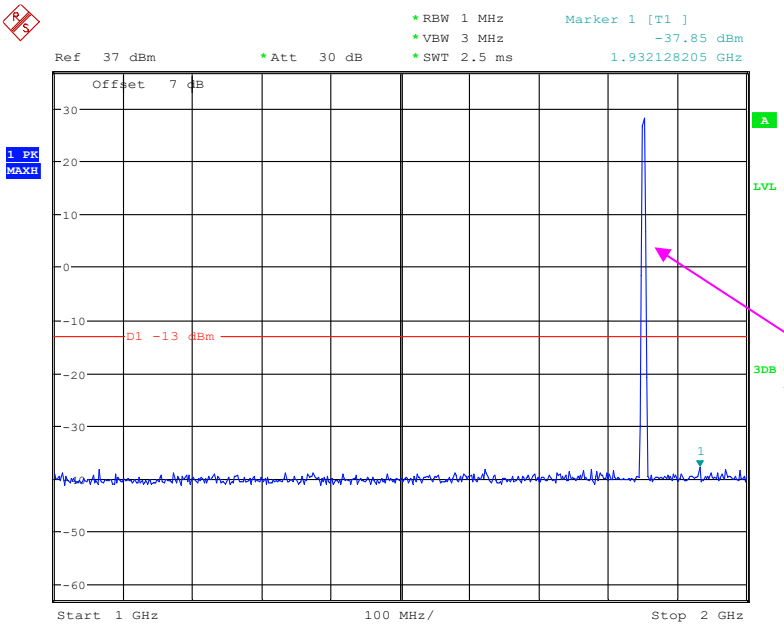
PCS Band (Part 24E)
Low Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 29.NOV.2021 14:56:21

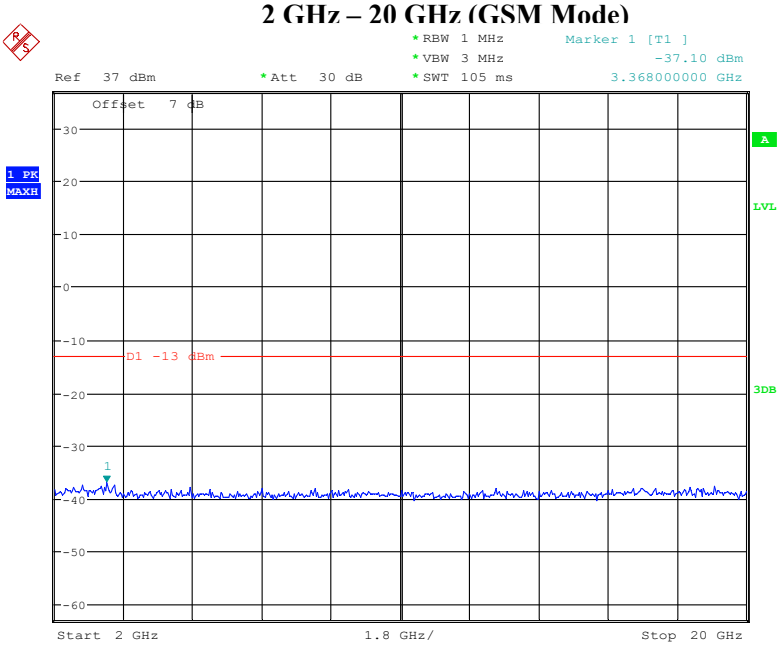
1 GHz – 2 GHz (GSM Mode)



Fundamental test

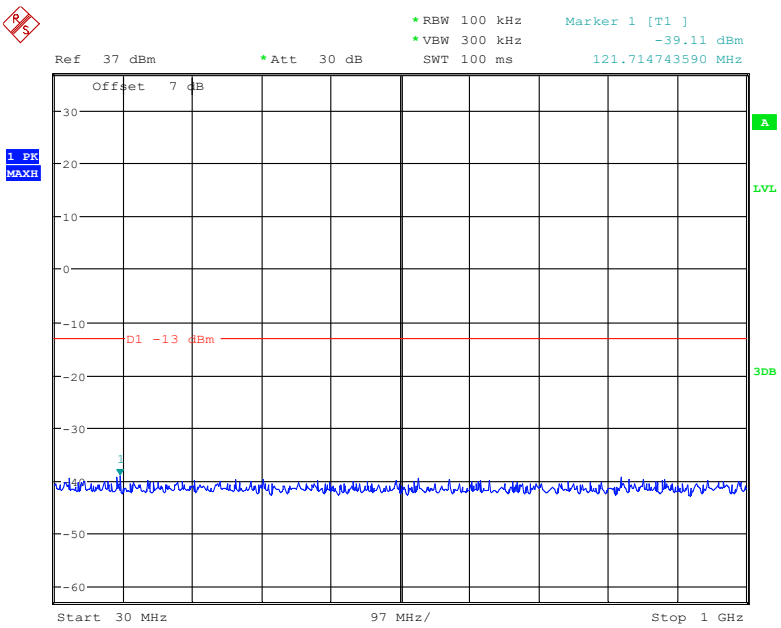
Date: 29.NOV.2021 14:52:00

2 GHz – 20 GHz (GSM Mode)



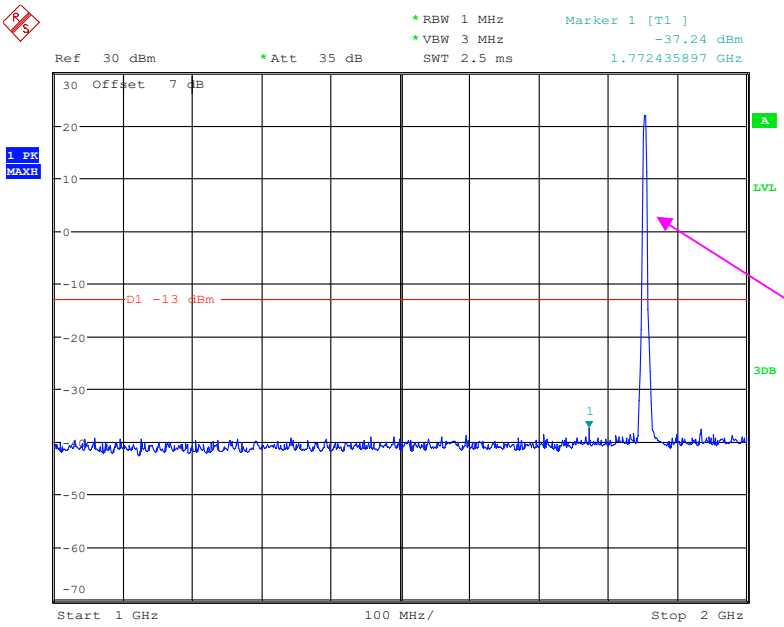
Date: 29.NOV.2021 14:54:36

30 MHz – 1 GHz (WCDMA Mode)



Date: 29.NOV.2021 18:09:07

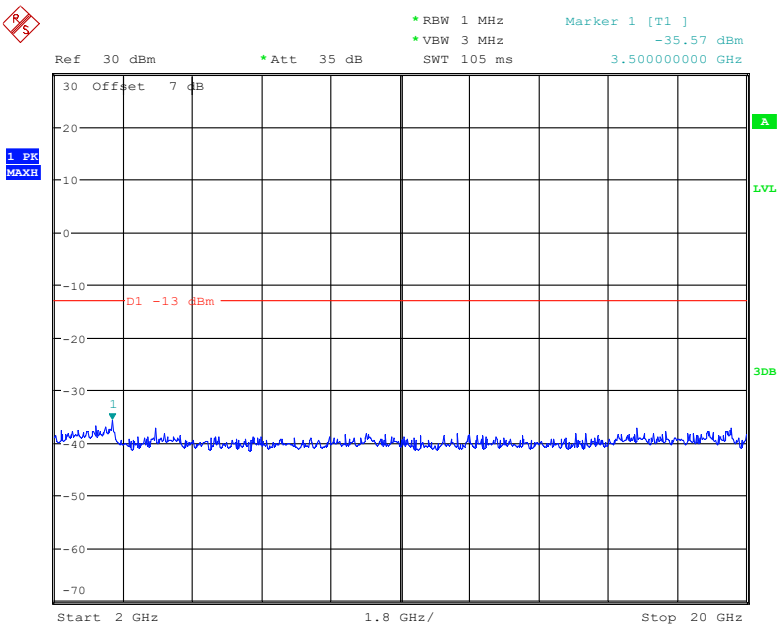
1 GHz – 2 GHz (WCDMA Mode)



Fundamental tst

Date: 29.NOV.2021 16:49:12

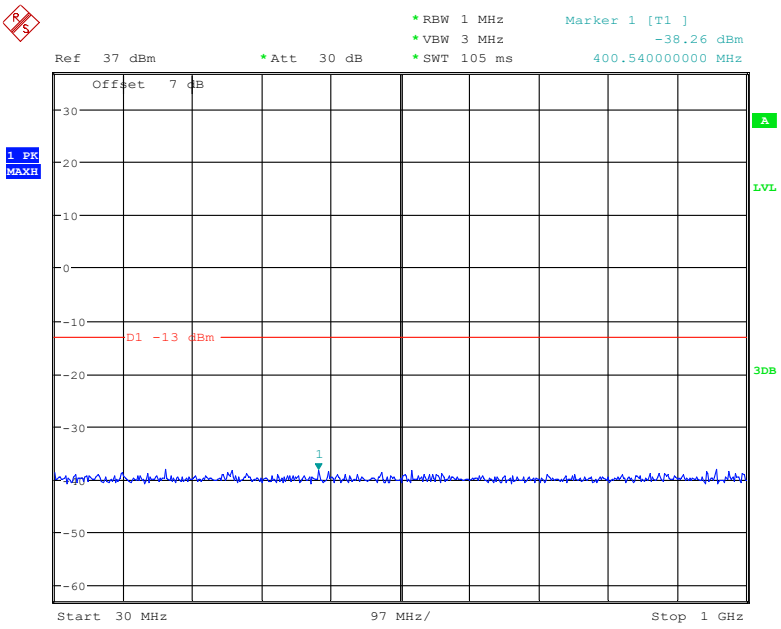
2 GHz – 20 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:51:27

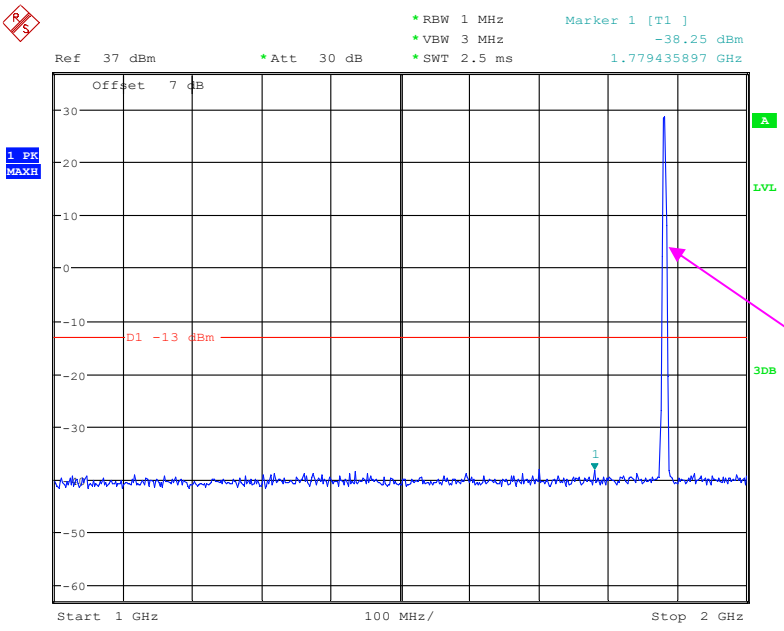
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 29.NOV.2021 14:56:05

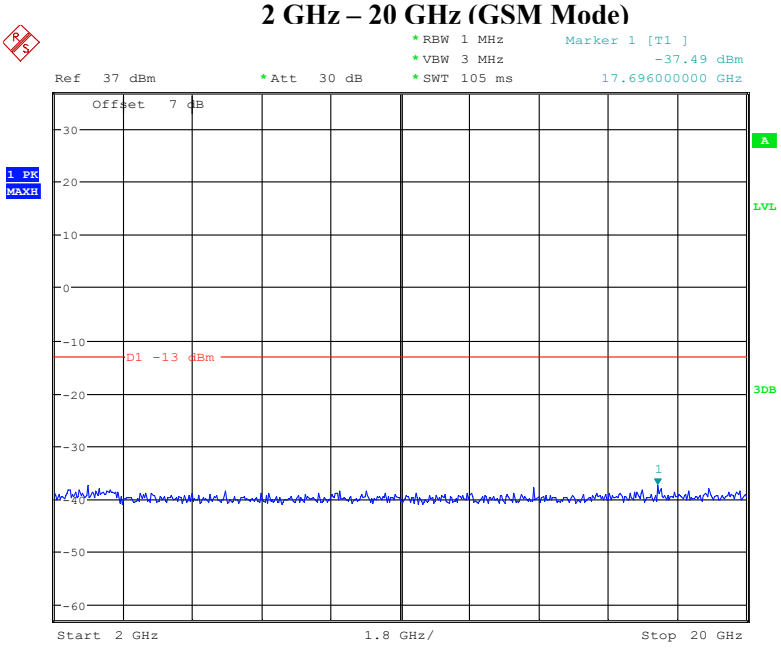
1 GHz – 2 GHz (GSM Mode)



Fundamental test

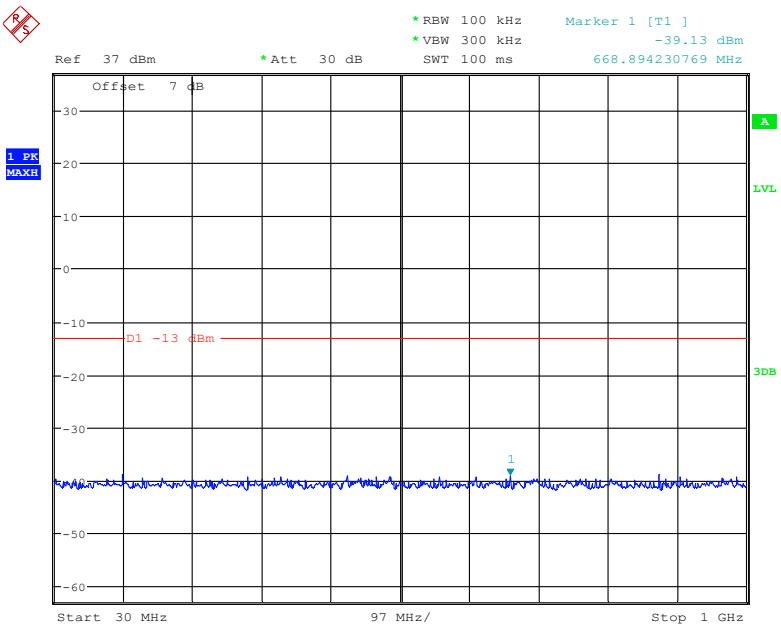
Date: 29.NOV.2021 14:52:24

2 GHz – 20 GHz (GSM Mode)



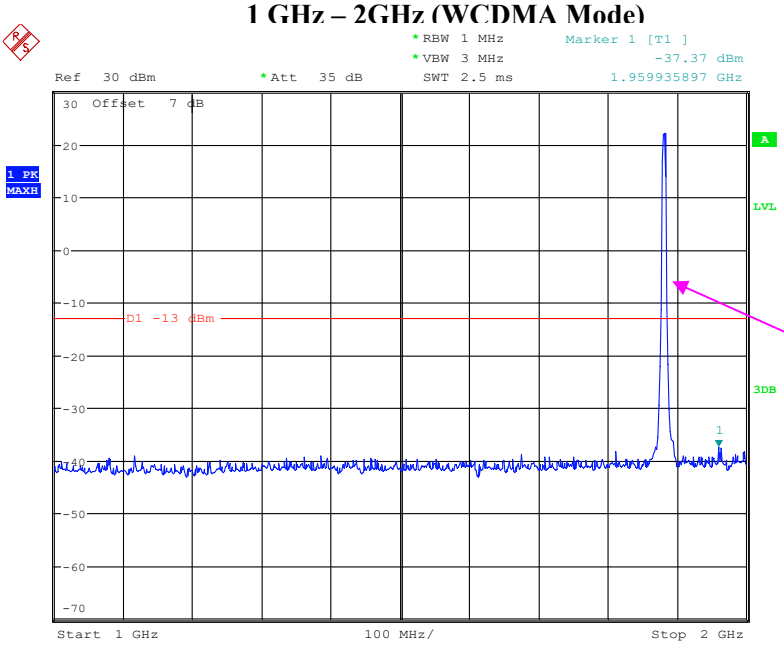
Date: 29.NOV.2021 14:54:58

30 MHz – 1 GHz (WCDMA Mode)



Date: 29.NOV.2021 18:10:22

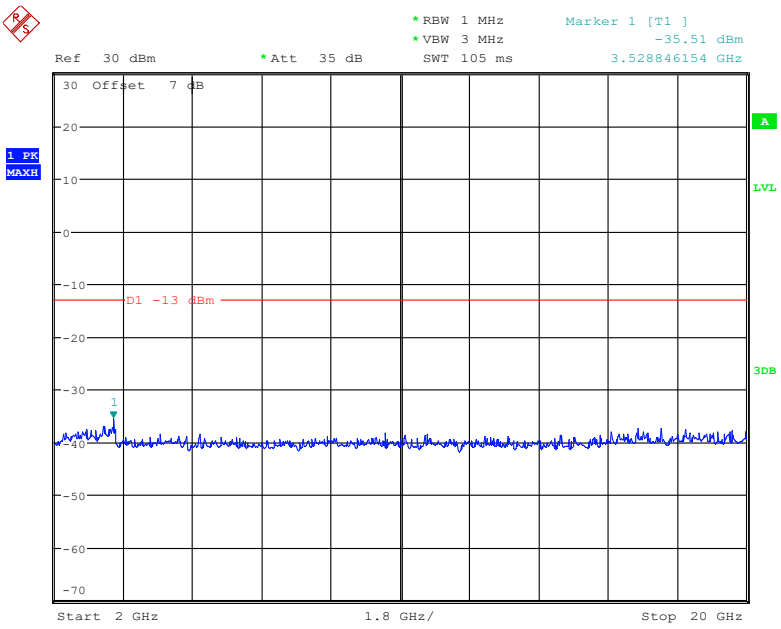
1 GHz – 2GHz (WCDMA Mode)



Fundamental test

Date: 29.NOV.2021 16:49:45

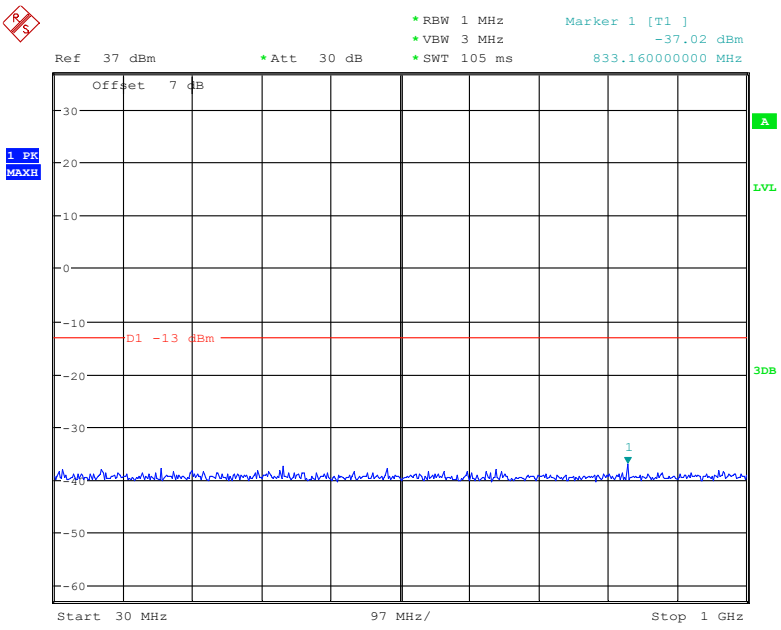
2 GHz – 20 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:51:10

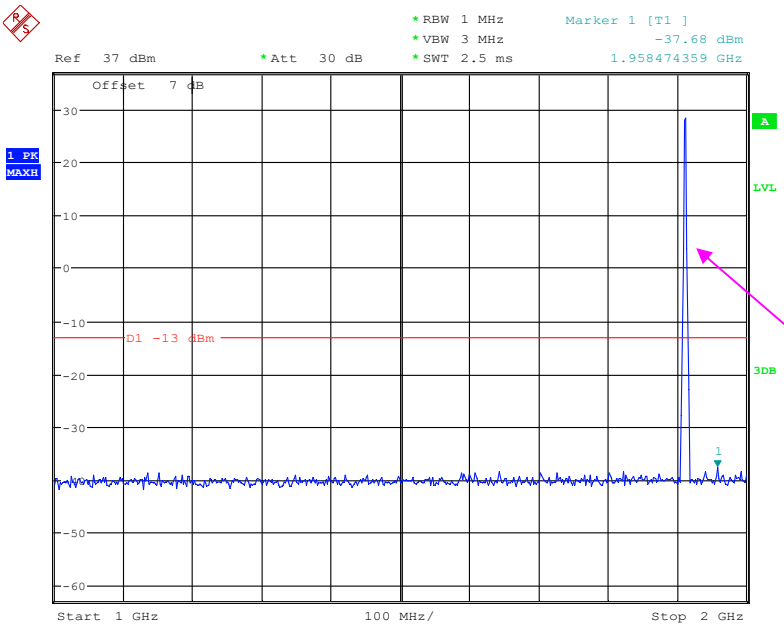
High Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 29.NOV.2021 14:55:44

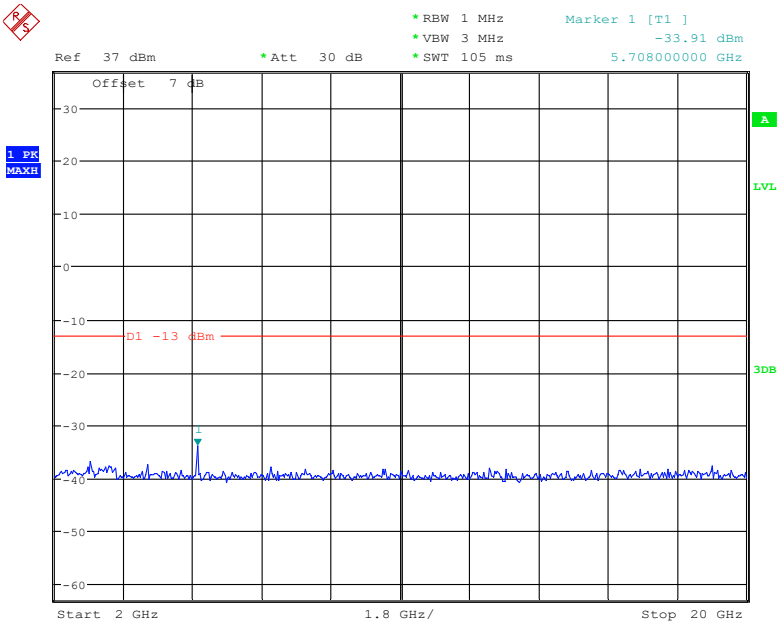
1 GHz – 2 GHz (GSM Mode)



Fundamental test

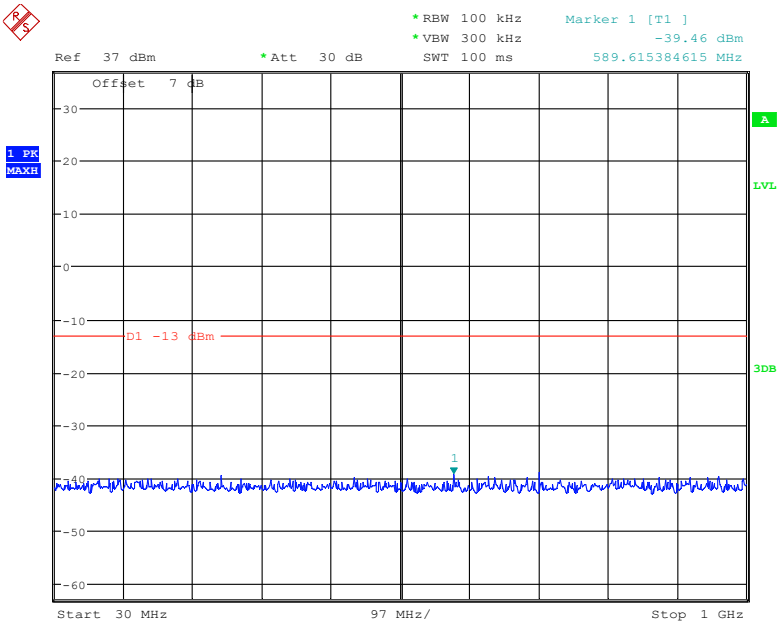
Date: 29.NOV.2021 14:52:44

2 GHz – 20 GHz (GSM Mode)



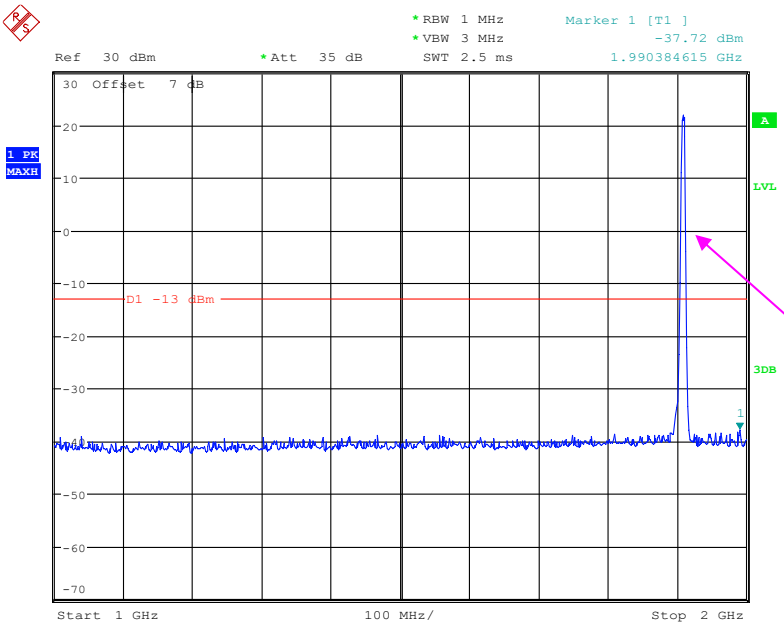
Date: 29.NOV.2021 14:55:15

30 MHz – 1 GHz (WCDMA Mode)



Date: 29.NOV.2021 18:10:41

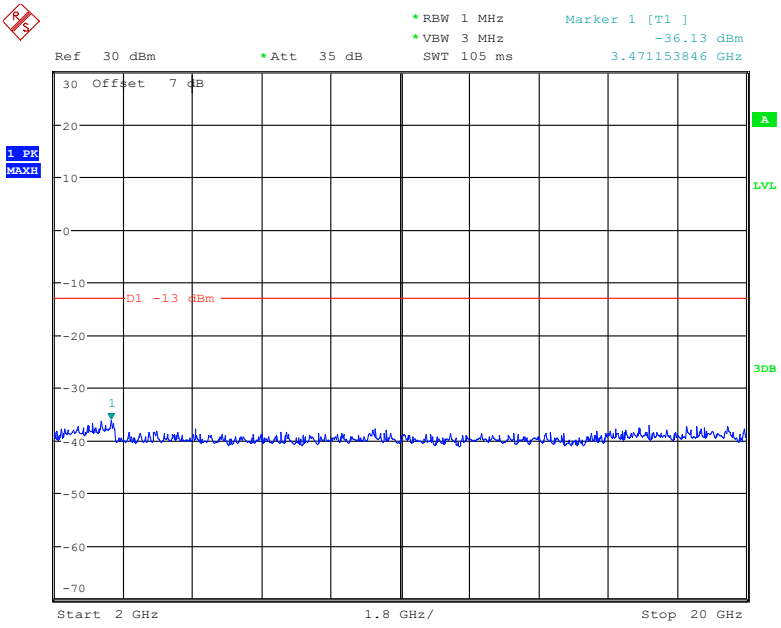
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 29.NOV.2021 16:50:16

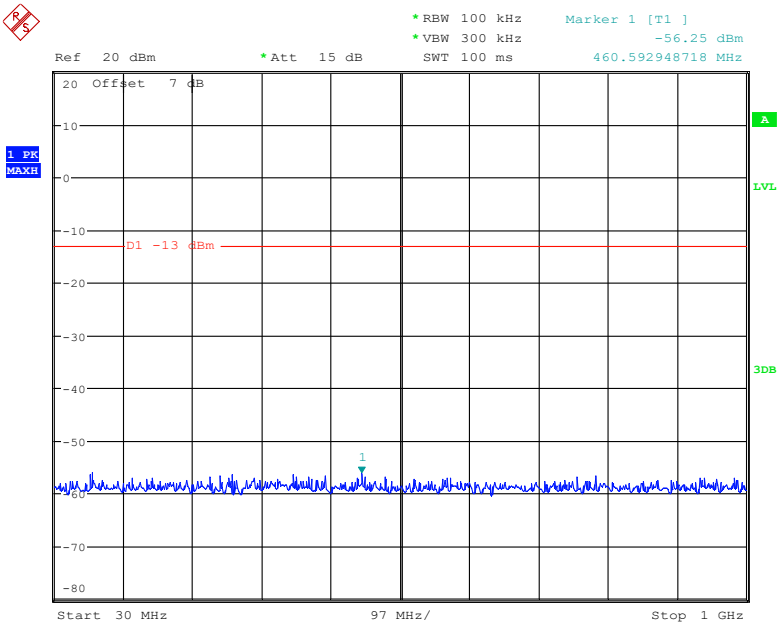
2 GHz – 20 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:50:46

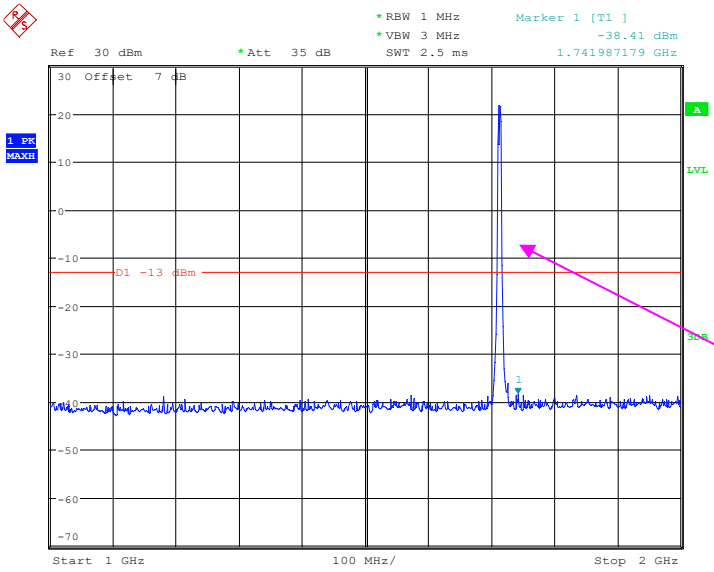
AWS Band (Part 27)
Low Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:57:13

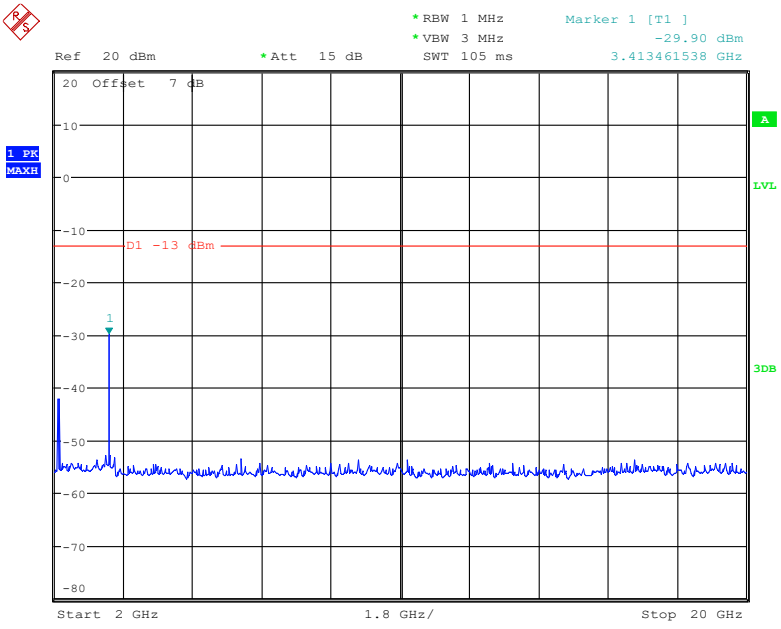
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 29.NOV.2021 16:52:09

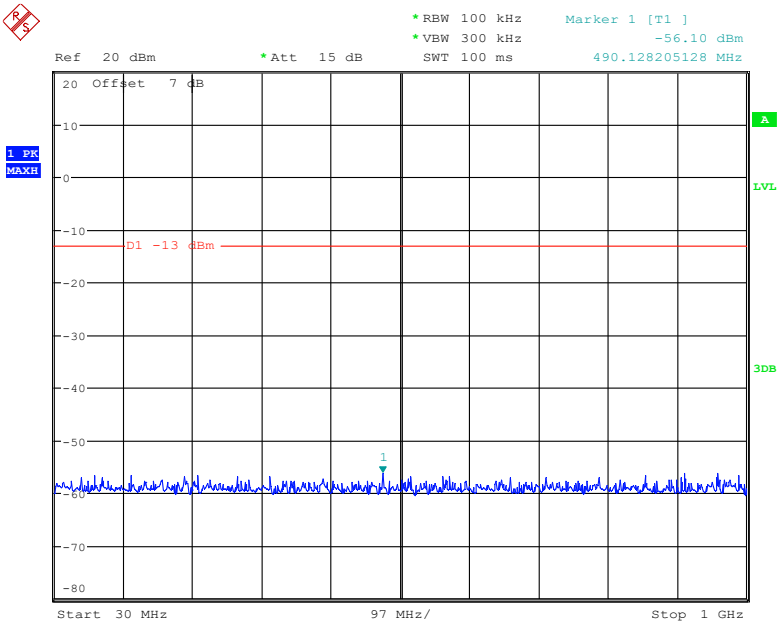
2 GHz – 20 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:55:38

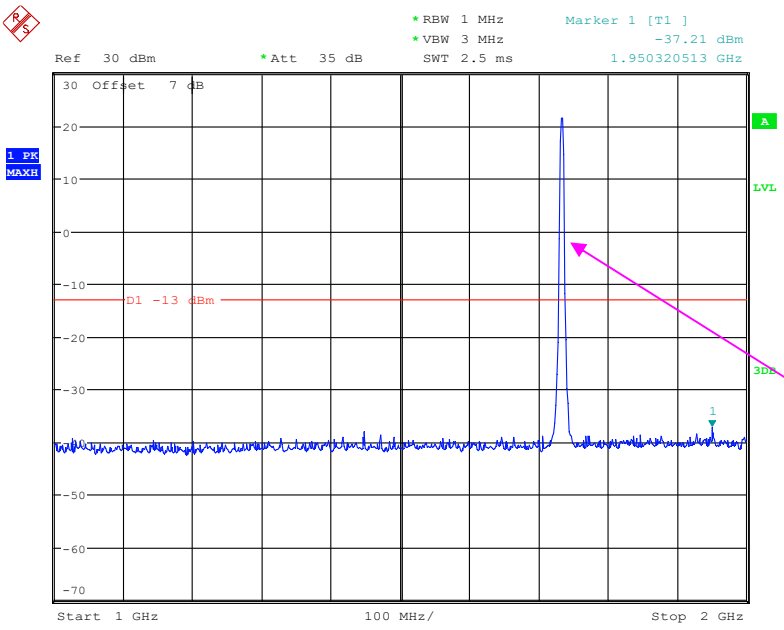
Middle Channel

30 MHz – 1 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:57:37

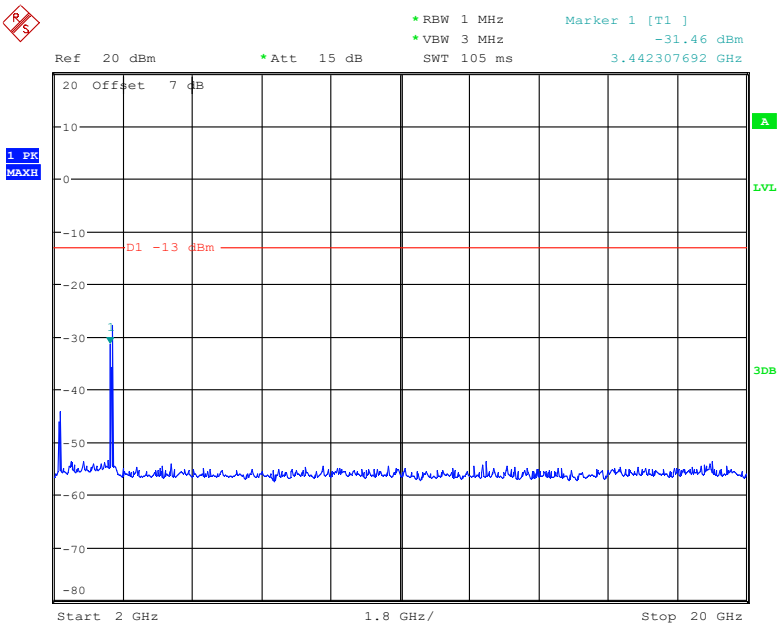
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 29.NOV.2021 16:53:04

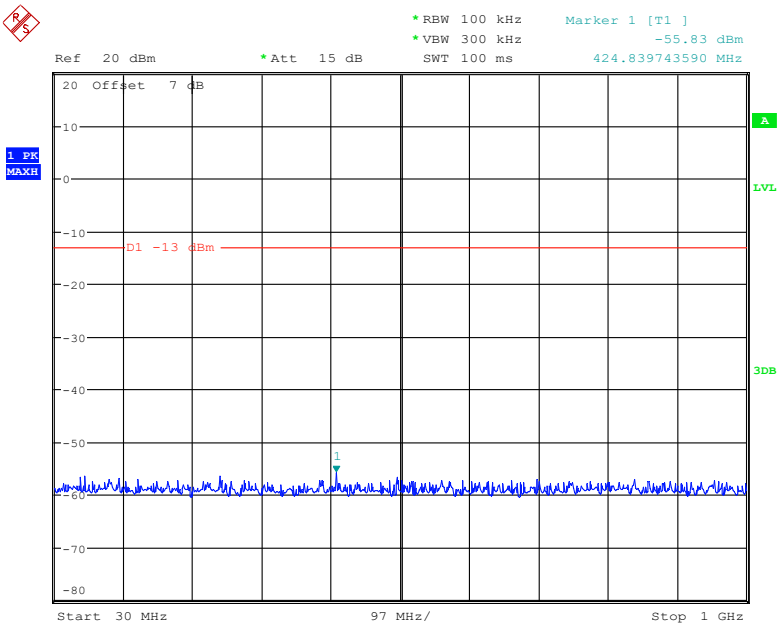
2 GHz – 20 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:56:15

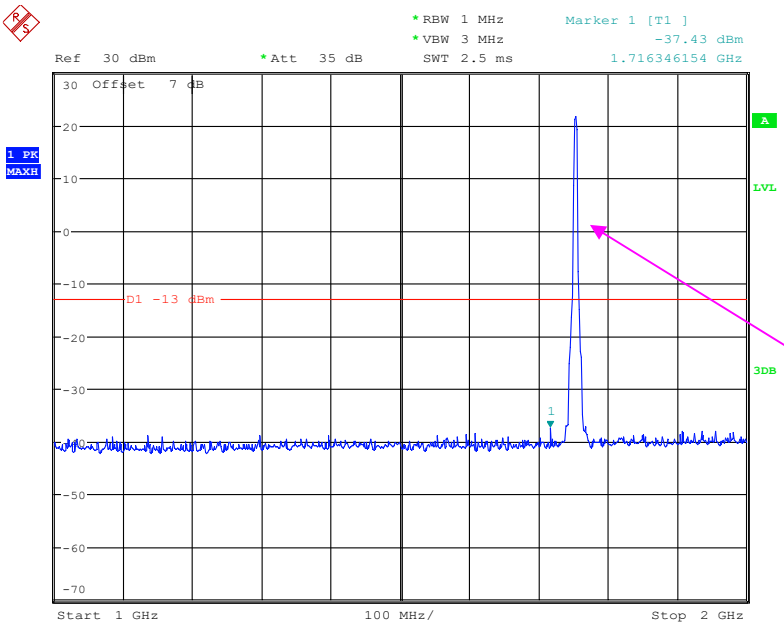
High Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 29.NOV.2021 16:57:52

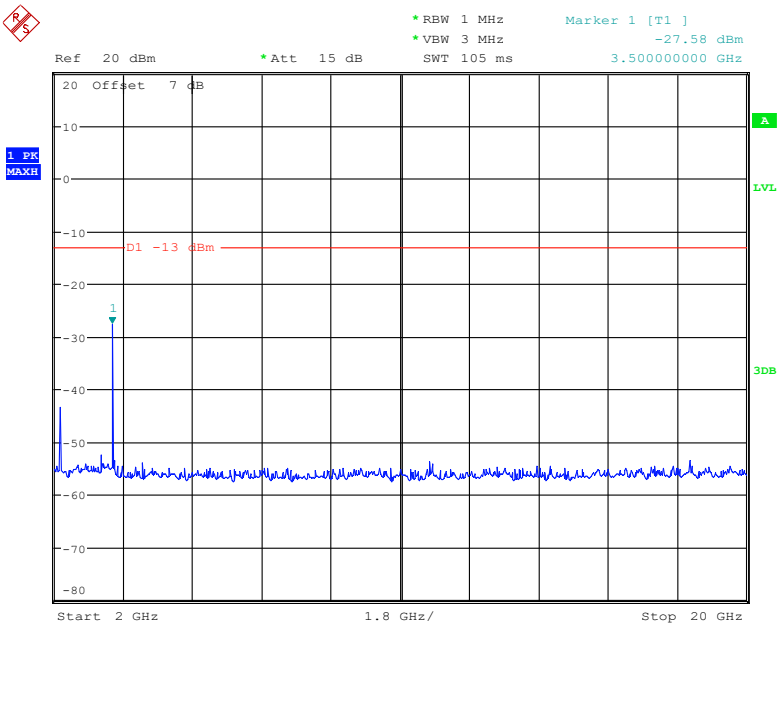
1 GHz – 2 GHz (WCDMA Mode)



Fundamental test

Date: 29.NOV.2021 16:53:34

2 GHz – 20 GHz (WCDMA Mode)



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

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

Applicable Standard

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

Test Procedure

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

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

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

Test Data

Environmental Conditions

Temperature:	25.5 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0kPa

The testing was performed by Caro hu on 2021-11-21.

Test mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case 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								
952.62	-70.3	5	1.4	H	9.2	-61.1	-13	48.1
952.62	-73.7	5	1.4	V	11.7	-62.0	-13	49.0
1648.4	-45	294	1	H	3.5	-41.5	-13	28.5
1648.4	-43.2	135	1.1	V	3.1	-40.1	-13	27.1
2472.6	-28	82	1.6	H	6.6	-21.4	-13	8.4
2472.6	-28.6	241	2.2	V	5.8	-22.8	-13	9.8
3296.8	-41.9	153	1.2	H	6.4	-35.5	-13	22.5
3296.8	-43.7	135	1.5	V	5.7	-38	-13	25
Middle Channel								
952.48	-72.6	156	1.8	H	9.2	-63.4	-13	50.4
952.48	-73.2	264	1.1	V	11.7	-61.5	-13	48.5
1673.2	-46.3	187	1.3	H	3.8	-42.5	-13	29.5
1673.2	-43.9	132	1.7	V	3.1	-40.8	-13	27.8
2509.8	-27.7	352	1.1	H	6.2	-21.5	-13	8.5
2509.8	-27.2	282	1.6	V	5.5	-21.7	-13	8.7
3346.4	-41.7	202	2	H	6.6	-35.1	-13	22.1
3346.4	-42.3	2	1.4	V	5.4	-36.9	-13	23.9
High Channel								
950.36	-71.3	307	1.8	H	9.2	-62.1	-13	49.1
950.36	-75.3	266	1.9	V	11.7	-63.6	-13	50.6
1697.6	-45.8	168	1.7	H	4.1	-41.7	-13	28.7
1697.6	-42.6	10	1.8	V	3.1	-39.5	-13	26.5
2546.4	-27.1	90	1.2	H	6.1	-21	-13	8
2546.4	-25.8	261	1.1	V	5.8	-20	-13	7
3395.2	-42	341	1.1	H	6.2	-35.8	-13	22.8
3395.2	-42.8	338	1.7	V	5.4	-37.4	-13	24.4

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								
950.90	-72.3	117	1.4	H	9.2	-63.1	-13	50.1
950.90	-73.5	122	1.6	V	11.7	-61.8	-13	48.8
1652.8	-52.6	194	1.8	H	3.5	-49.1	-13	36.1
1652.8	-49.5	119	1.1	V	3.1	-46.4	-13	33.4
Middle Channel								
946.45	-70.2	307	1.8	H	9.2	-61.0	-13	48.0
946.45	-74.9	54	1.9	V	11.7	-63.2	-13	50.2
1673.2	-52.8	12	1.9	H	3.8	-49	-13	36
1673.2	-49.9	327	1.8	V	3.1	-46.8	-13	33.8
High Channel								
955.97	-71.0	234	1.6	H	9.2	-61.8	-13	48.8
955.97	-73.8	33	1.1	V	11.7	-62.1	-13	49.1
1693.2	-51.5	123	1.1	H	4.1	-47.4	-13	34.4
1693.2	-48	18	1.2	V	3.1	-44.9	-13	31.9

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								
948.36	-72.4	315	1.8	H	9.2	-63.2	-13	50.2
948.36	-72.9	339	2.2	V	11.7	-61.2	-13	48.2
3700.4	-47.2	110	1.8	H	8.1	-39.1	-13	26.1
3700.4	-41.8	152	2.1	V	7.6	-34.2	-13	21.2
Middle Channel								
953.93	-72.6	212	1.1	H	9.2	-63.4	-13	50.4
953.93	-74.2	43	1.2	V	11.7	-62.5	-13	49.5
3760	-48.1	96	1.2	H	8.8	-39.3	-13	26.3
3760	-44	247	1.4	V	8	-36	-13	23
High Channel								
949.09	-71.9	182	1.8	H	9.2	-62.7	-13	49.7
949.09	-73.7	297	1.7	V	11.7	-62.0	-13	49.0
3819.6	-46.7	296	2.1	H	8.7	-38	-13	25
3819.6	-41.1	103	1.1	V	8	-33.1	-13	20.1
WCDMA Band 2								
Low Channel								
956.69	-72.6	354	1.9	H	9.2	-63.4	-13	50.4
956.69	-73.4	193	1.8	V	11.7	-61.7	-13	48.7
3704.8	-51.6	266	1.6	H	8.10	-43.5	-13	30.5
3704.8	-49.1	352	2	V	7.60	-41.5	-13	28.5
Middle Channel								
948.48	-70.7	130	1.9	H	9.2	-61.5	-13	48.5
948.48	-74.8	282	2.1	V	11.7	-63.1	-13	50.1
3760	-50.8	146	1.7	H	8.80	-42	-13	29
3760	-48.8	59	1.6	V	8.00	-40.8	-13	27.8
High Channel								
952.89	-72.7	333	1.6	H	9.2	-63.5	-13	50.5
952.89	-73.4	25	1.9	V	11.7	-61.7	-13	48.7
3815.2	-51.5	203	1.7	H	8.70	-42.8	-13	29.8
3815.2	-49.1	4	1.3	V	8.00	-41.1	-13	28.1

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								
948.19	-72.1	15	1.5	H	9.2	-62.9	-13	49.9
948.19	-73.0	201	1.8	V	11.7	-61.3	-13	48.3
3424.8	-45	219	2.2	H	6.4	-38.6	-13	25.6
3424.8	-42.8	122	1.2	V	5.7	-37.1	-13	24.1
Middle Channel								
952.00	-71.6	281	1.3	H	9.2	-62.4	-13	49.4
952.00	-75.4	140	1.1	V	11.7	-63.7	-13	50.7
3465.2	-46.3	63	1.4	H	6.9	-39.4	-13	26.4
3465.2	-43.5	155	2.2	V	6.2	-37.3	-13	24.3
High Channel								
949.09	-71.5	289	1.8	H	9.2	-62.3	-13	49.3
949.09	-75.1	276	2	V	11.7	-63.4	-13	50.4
3505.2	-46.5	57	2	H	7.8	-38.7	-13	25.7
3505.2	-43.3	250	1.7	V	6.5	-36.8	-13	23.8

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								
950.09	-72.5	342	1.7	H	9.2	-63.3	-13	50.3
950.09	-75.7	40	1.2	V	11.7	-64.0	-13	51.0
3701.40	-51.6	319	2.1	H	8.1	-43.5	-13	30.5
3701.40	-49.8	194	2	V	7.6	-42.2	-13	29.2
1.4MHz bandwidth, Middle Channel								
950.22	-71.4	293	1.2	H	9.2	-62.2	-13	49.2
950.22	-74.6	66	1.9	V	11.7	-62.9	-13	49.9
3760.00	-49.4	123	1.7	H	8.8	-40.6	-13	27.6
3760.00	-48.8	52	1	V	8	-40.8	-13	27.8
1.4MHz bandwidth, High Channel								
953.45	-70.4	325	1.1	H	9.2	-61.2	-13	48.2
953.45	-75.0	178	1.9	V	11.7	-63.3	-13	50.3
3818.60	-50.1	198	2.2	H	8.7	-41.4	-13	28.4
3818.60	-50	351	1.5	V	8	-42	-13	29
Band 4								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, Low Channel								
945.25	-72.5	205	1.1	H	9.2	-63.3	-13	50.3
945.25	-73.8	228	1.2	V	11.7	-62.1	-13	49.1
3421.4	-46.4	357	1	H	6.4	-40	-13	27
3421.4	-46.2	143	2.1	V	5.7	-40.5	-13	27.5
1.4MHz bandwidth, Middle Channel								
952.36	-72.1	65	1.7	H	9.2	-62.9	-13	49.9
952.36	-74.2	166	1.1	V	11.7	-62.5	-13	49.5
3465	-46.9	330	1.4	H	6.9	-40	-13	27
3465	-47.5	77	1.5	V	6.2	-41.3	-13	28.3
1.4MHz bandwidth, High Channel								
956.20	-72.2	335	1.7	H	9.2	-63.0	-13	50.0
956.20	-75.4	244	2.2	V	11.7	-63.7	-13	50.7
3508.6	-50.3	4	2.1	H	7.8	-42.5	-13	29.5
3508.6	-49.9	133	1.5	V	6.5	-43.4	-13	30.4

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								
945.07	-73.2	304	1.9	H	9.2	-64.0	-13	51.0
945.07	-72.9	312	1.1	V	11.7	-61.2	-13	48.2
1649.40	-40.2	331	1.9	H	3.5	-36.7	-13	23.7
1649.40	-40	205	2.1	V	3.1	-36.9	-13	23.9
1.4MHz bandwidth, Middle Channel								
949.35	-72.6	302	1.1	H	9.2	-63.4	-13	50.4
949.35	-74.1	346	2	V	11.7	-62.4	-13	49.4
1673.00	-36.6	85	1.5	H	3.8	-32.8	-13	19.8
1673.00	-32.1	55	2	V	3.1	-29	-13	16
1.4MHz bandwidth, High Channel								
951.29	-71.7	13	1.5	H	9.2	-62.5	-13	49.5
951.29	-74.5	310	1.7	V	11.7	-62.8	-13	49.8
1696.6	-31.6	253	1.1	H	4.1	-27.5	-13	14.5
1696.6	-30.5	302	2	V	3.1	-27.4	-13	14.4
Band 7								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, Low Channel								
955.85	-73.0	123	1.9	H	9.2	-63.8	-25	38.8
955.85	-74.2	286	1.5	V	11.7	-62.5	-25	37.5
5005	-54.6	31	1.6	H	10.8	-43.8	-25	18.8
5005	-50.2	29	1.2	V	10.1	-40.1	-25	15.1
7507.5	-51.4	193	1.9	H	20.3	-31.1	-25	6.1
7507.5	-46.6	123	1.7	V	19.9	-26.7	-25	1.7
5MHz bandwidth, Middle Channel								
953.88	-70.4	197	2.2	H	9.2	-61.2	-25	36.2
953.88	-75.0	161	1.9	V	11.7	-63.3	-25	38.3
5070	-54.8	112	1.3	H	11.1	-43.7	-25	18.7
5070	-51.8	322	1.2	V	10.7	-41.1	-25	16.1
5MHz bandwidth, High Channel								
946.50	-72.1	106	1.7	H	9.2	-62.9	-25	37.9
946.50	-74.8	229	1.6	V	11.7	-63.1	-25	38.1
5135	-53.4	314	2.1	H	11.3	-42.1	-25	17.1
5135	-51.3	26	2.1	V	10.8	-40.5	-25	15.5

Frequency (MHz)	Receiver Reading (dBm)	Turntable Angle Degree	Rx Antenna Height (m)	Rx Antenna Polar (H/V)	Substituted Factor (dB/m)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
LTE BAND66								
Test frequency range: 30MHz-20GHz								
1.4MHz,, Low Channel								
947.19	-70.6	13	2.1	H	9.2	-61.4	-13	48.4
947.19	-74.9	163	2	V	11.7	-63.2	-13	50.2
3421.4	-44.5	94	2	H	6.4	-38.1	-13	25.1
3421.4	-45.8	126	1.8	V	5.7	-40.1	-13	27.1
1.4MHz,,Middle Channel								
955.64	-71.6	317	1.2	H	9.2	-62.4	-13	49.4
955.64	-74.1	315	1.3	V	11.7	-62.4	-13	49.4
3490	-44.5	155	1.1	H	7.6	-36.9	-13	23.9
3490	-44.2	29	1.3	V	6.4	-37.8	-13	24.8
1.4MHz,,High Channel								
957.01	-70.7	34	2	H	9.2	-61.5	-13	48.5
957.01	-74.7	93	1.4	V	11.7	-63.0	-13	50.0
3558.6	-44.3	98	1.7	H	7.7	-36.6	-13	23.6
3558.6	-42.1	151	1.2	V	6.9	-35.2	-13	22.2

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.

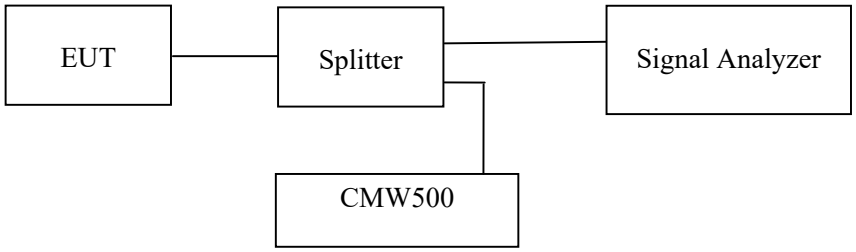
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

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:	28.2 ℃
Relative Humidity:	56.7 %
ATM Pressure:	101.0 kPa

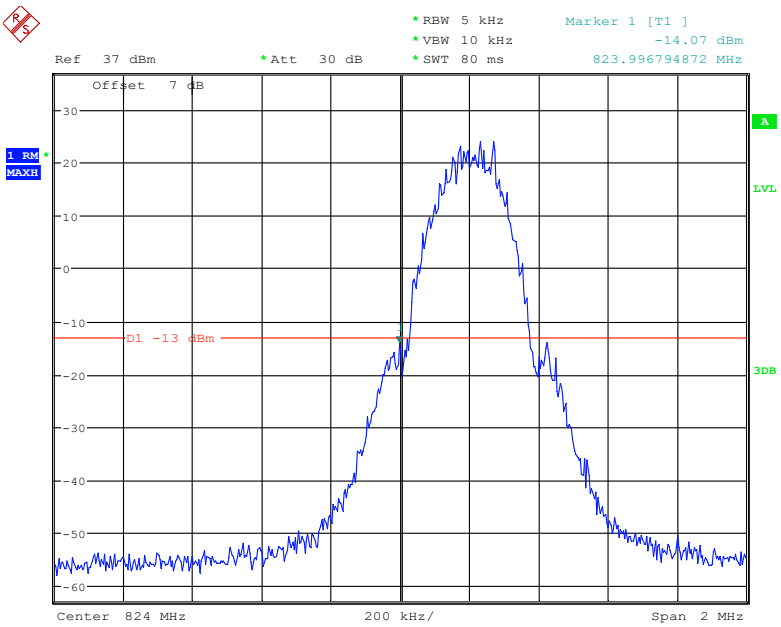
The testing was performed by Ting Lv on 2021-11-29 and 2021-12-24.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

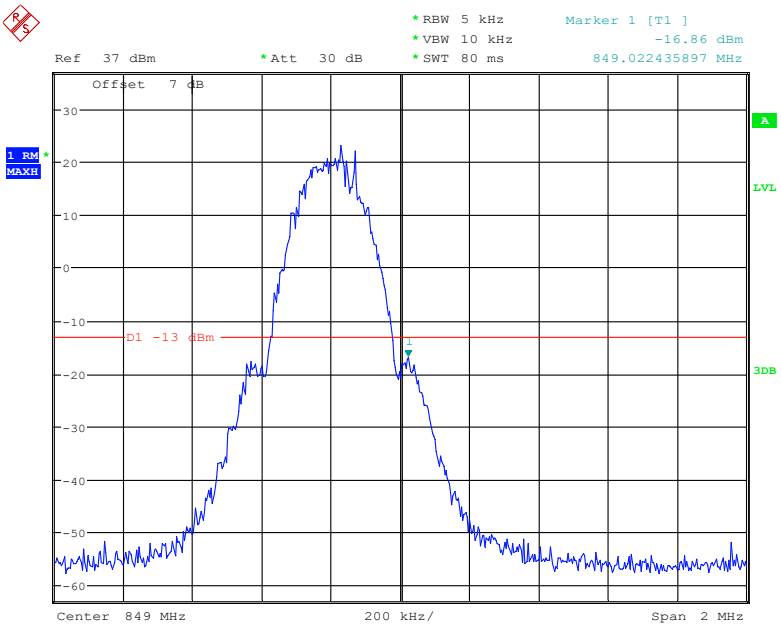
Please refer to the following plots.

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



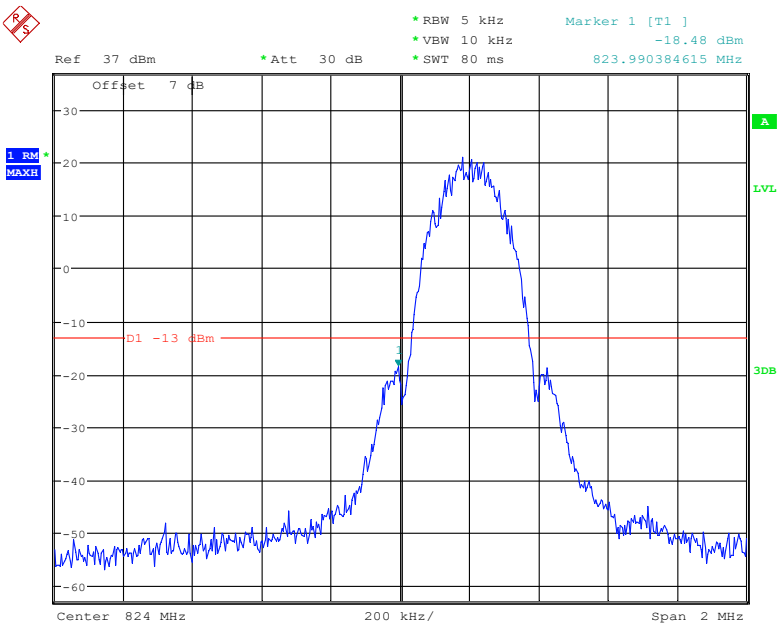
Date: 24.DEC.2021 19:59:17

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



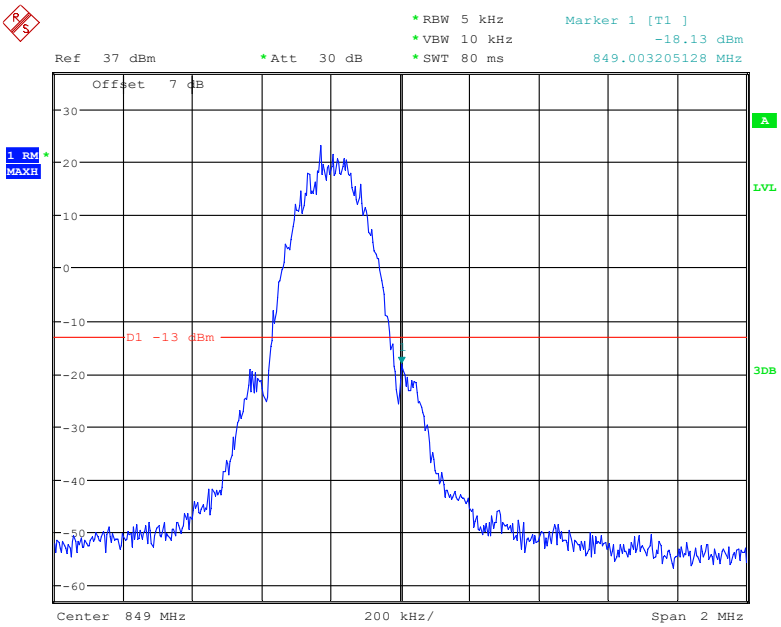
Date: 24.DEC.2021 20:00:58

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



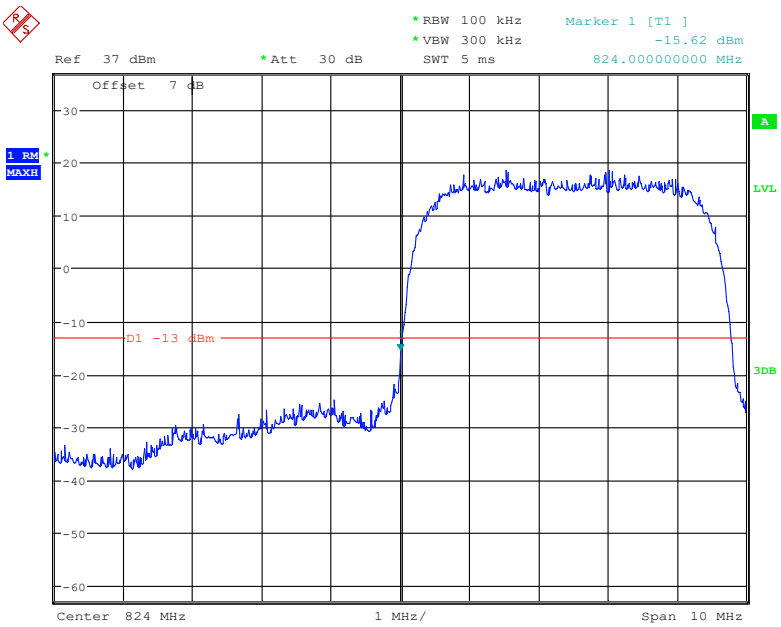
Date: 29.NOV.2021 14:08:14

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



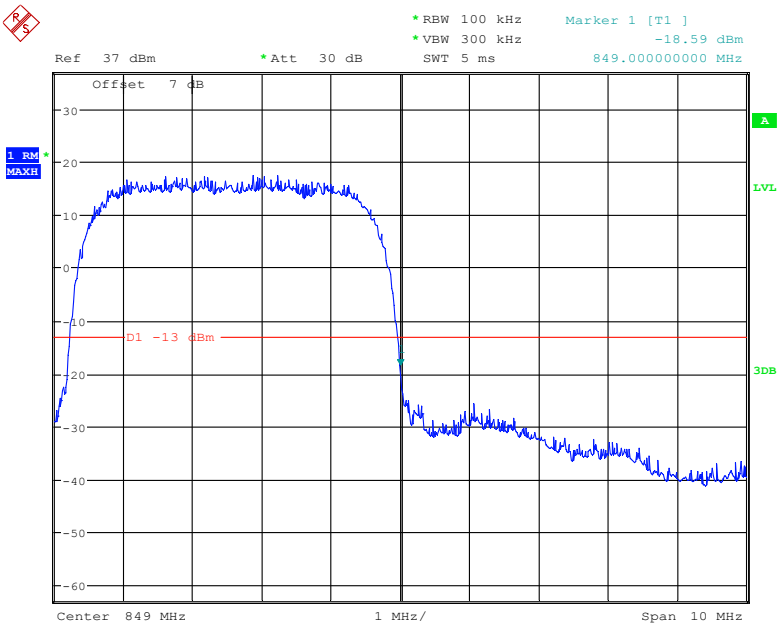
Date: 29.NOV.2021 14:08:59

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



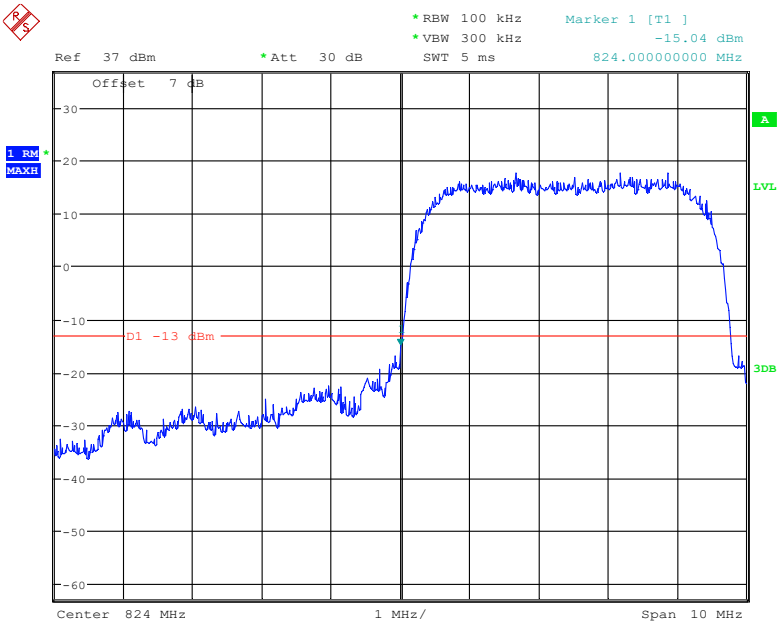
Date: 29.NOV.2021 17:52:03

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



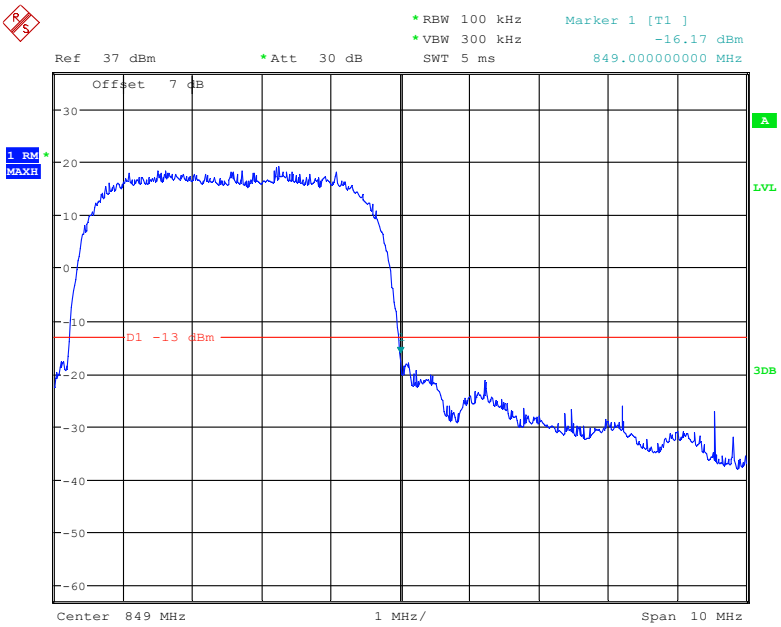
Date: 29.NOV.2021 17:52:40

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



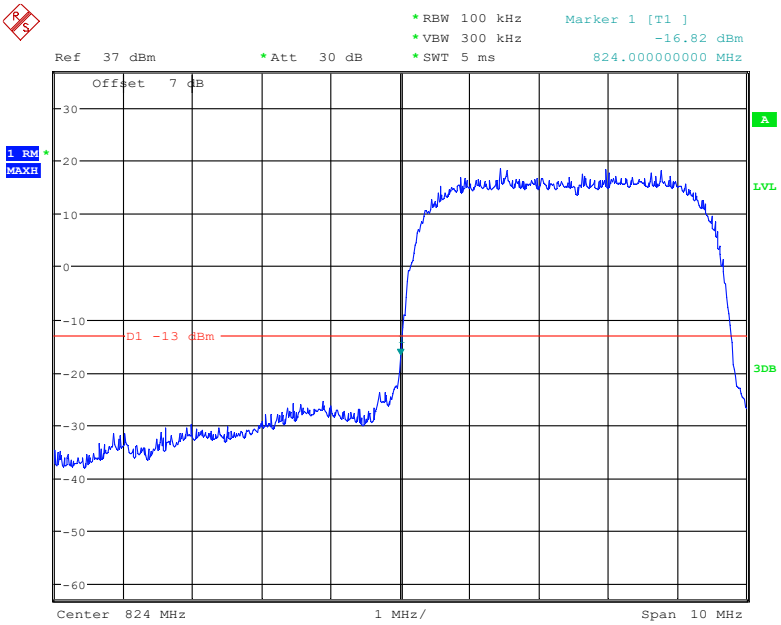
Date: 29.NOV.2021 17:43:01

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



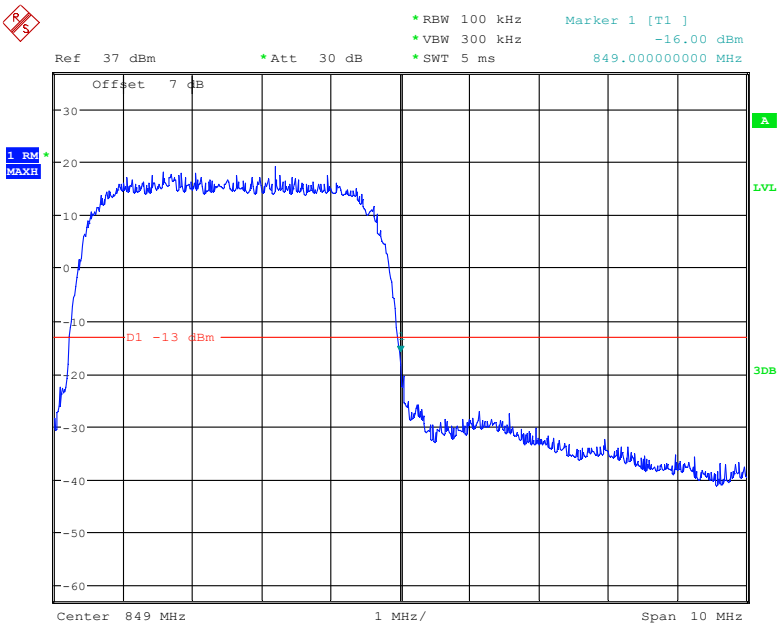
Date: 29.NOV.2021 17:42:27

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



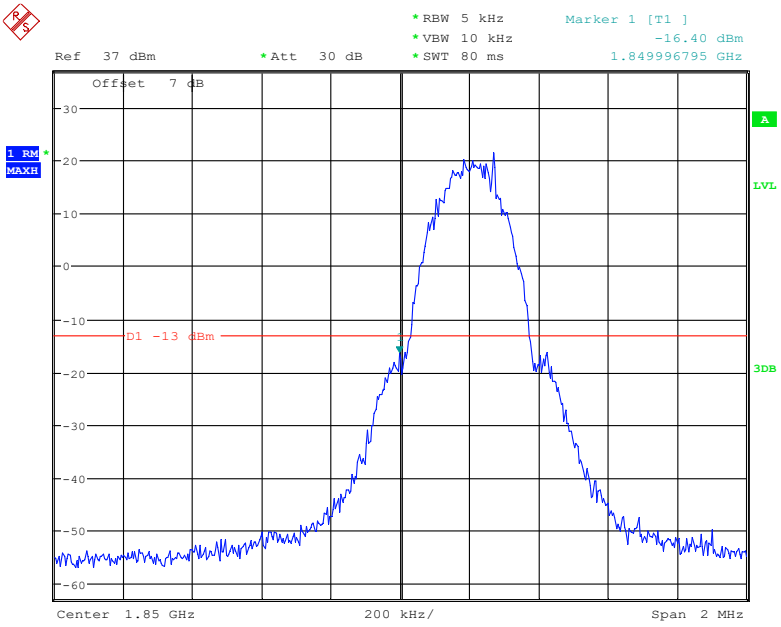
Date: 29.NOV.2021 17:07:34

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



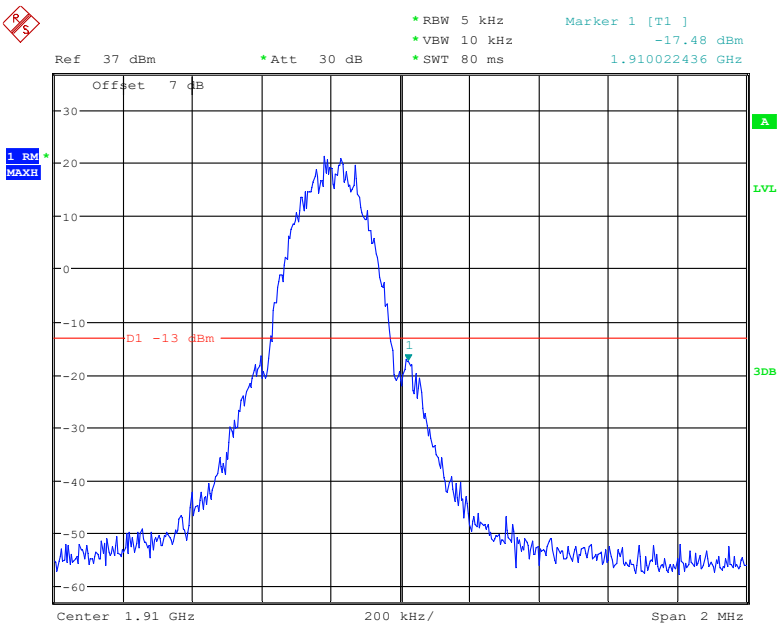
Date: 29.NOV.2021 17:08:03

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



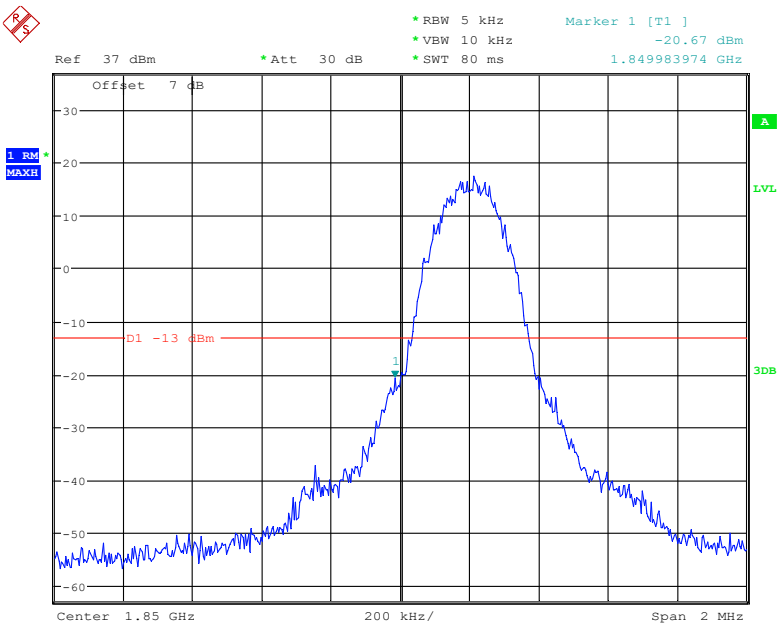
Date: 29.NOV.2021 14:11:03

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



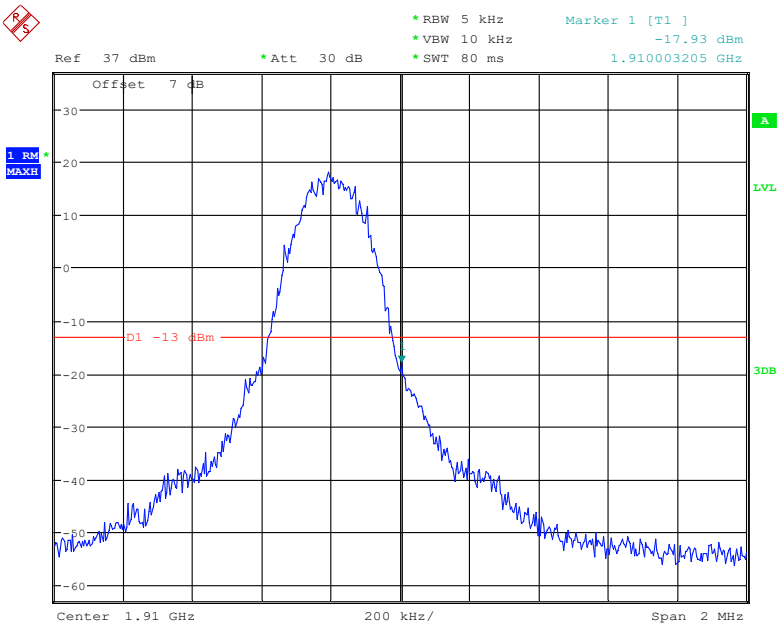
Date: 29.NOV.2021 14:12:00

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



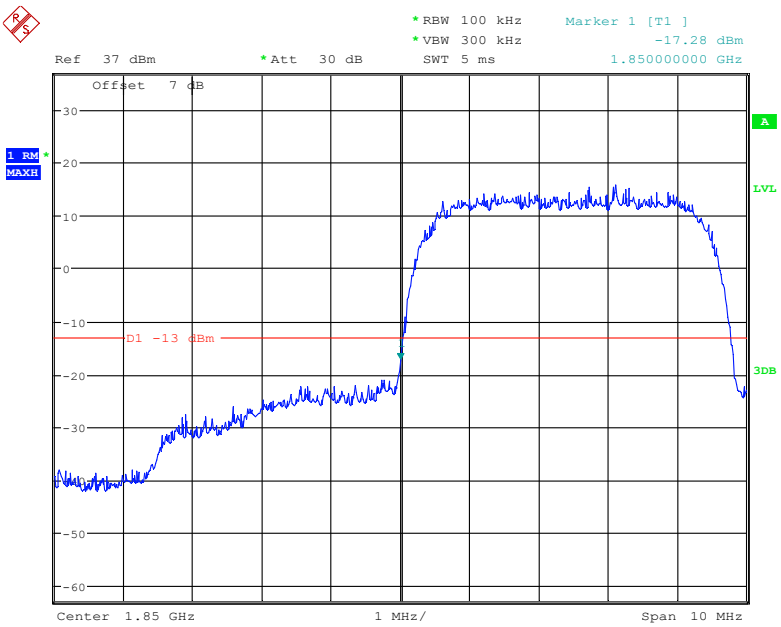
Date: 29.NOV.2021 14:14:24

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



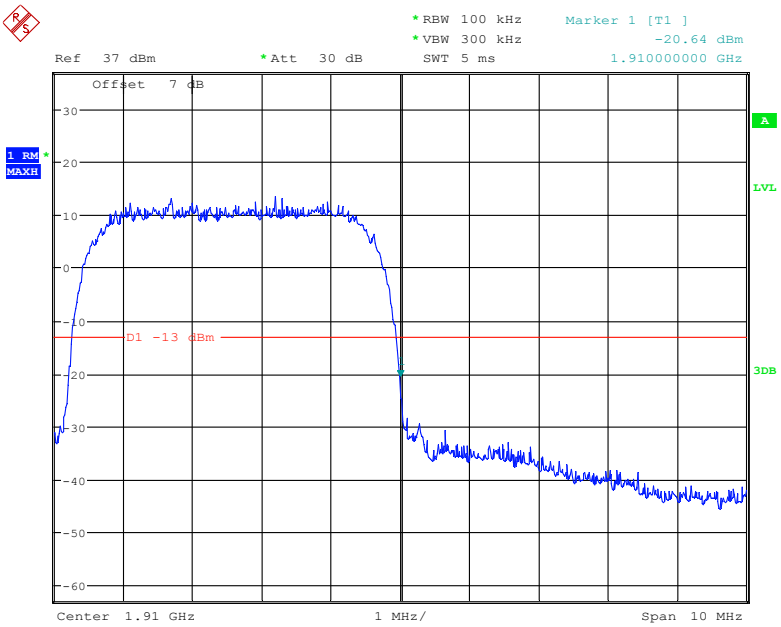
Date: 29.NOV.2021 14:15:24

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



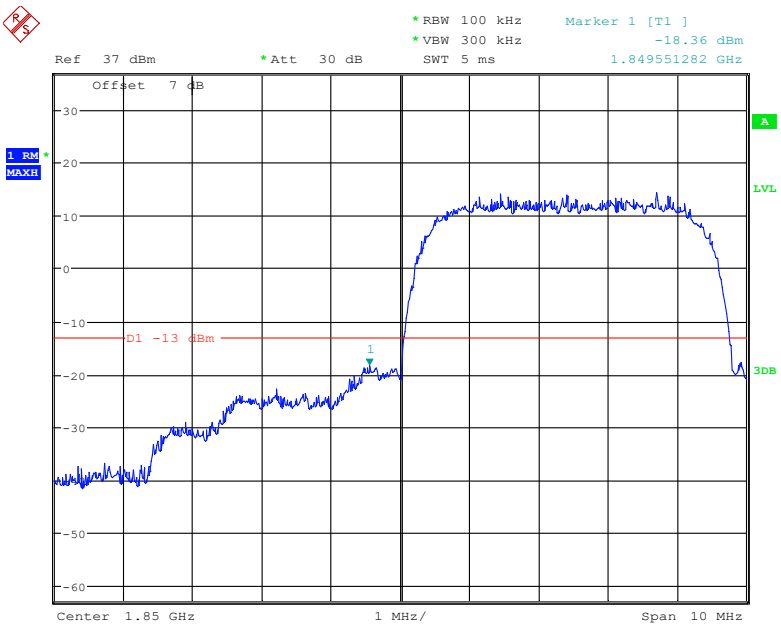
Date: 29.NOV.2021 17:50:40

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



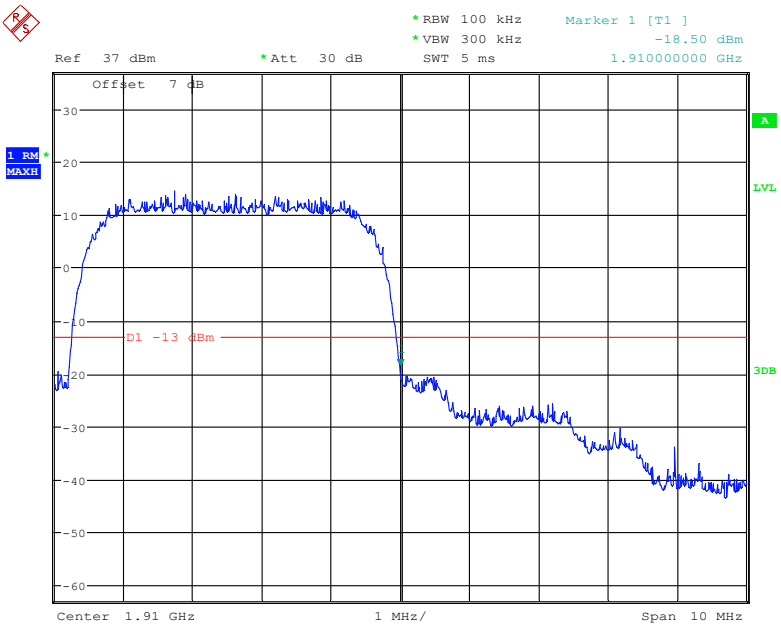
Date: 29.NOV.2021 17:50:13

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



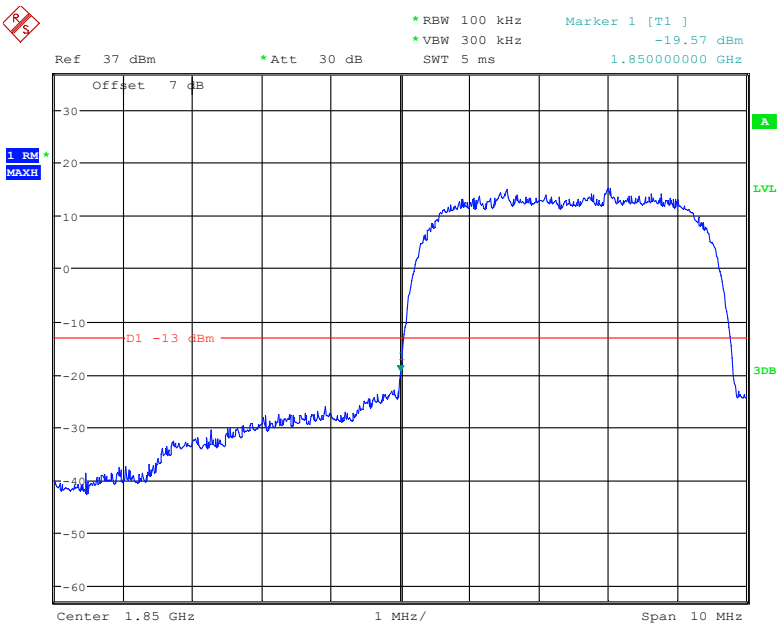
Date: 29.NOV.2021 17:47:51

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



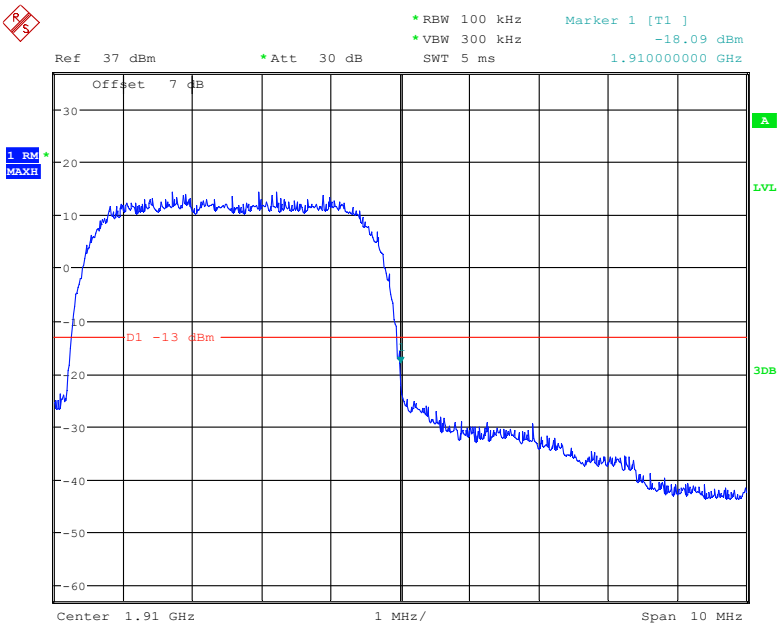
Date: 29.NOV.2021 17:48:37

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



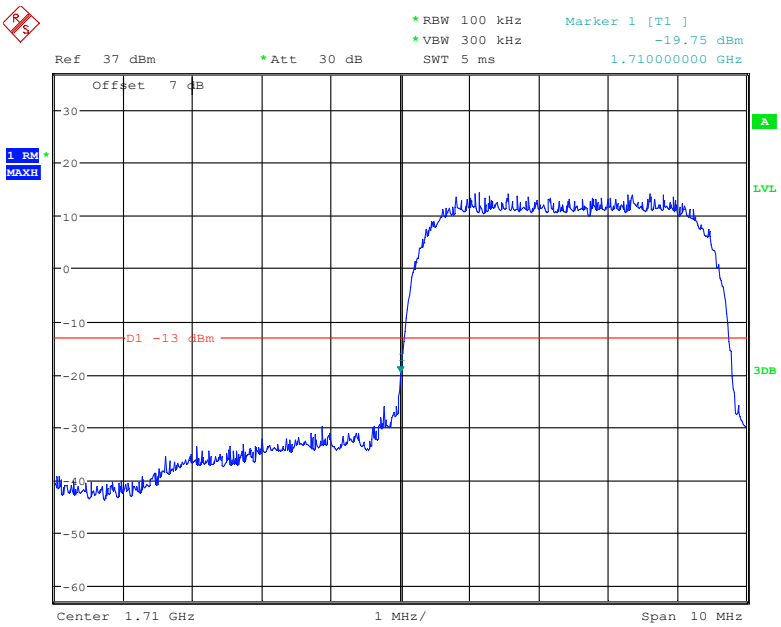
Date: 29.NOV.2021 17:04:18

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



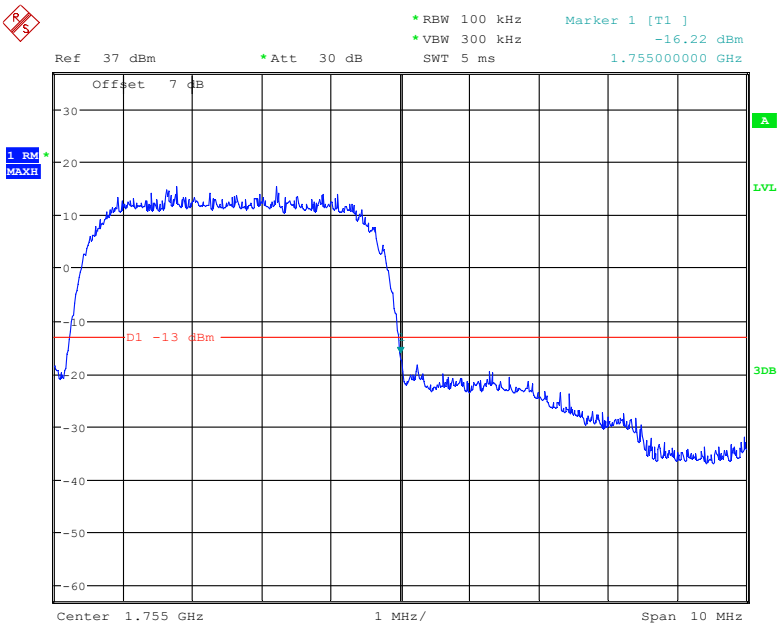
Date: 29.NOV.2021 17:05:39

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



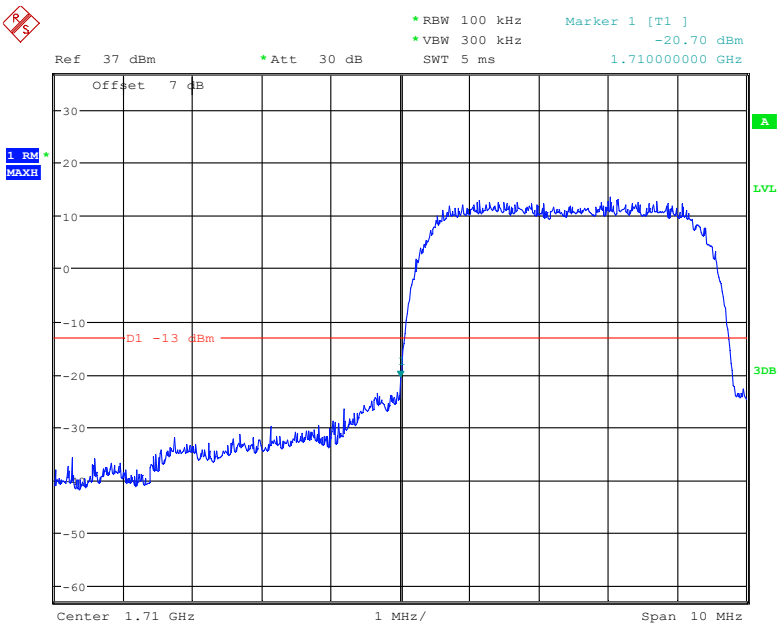
Date: 29.NOV.2021 17:51:01

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



Date: 29.NOV.2021 17:51:30

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



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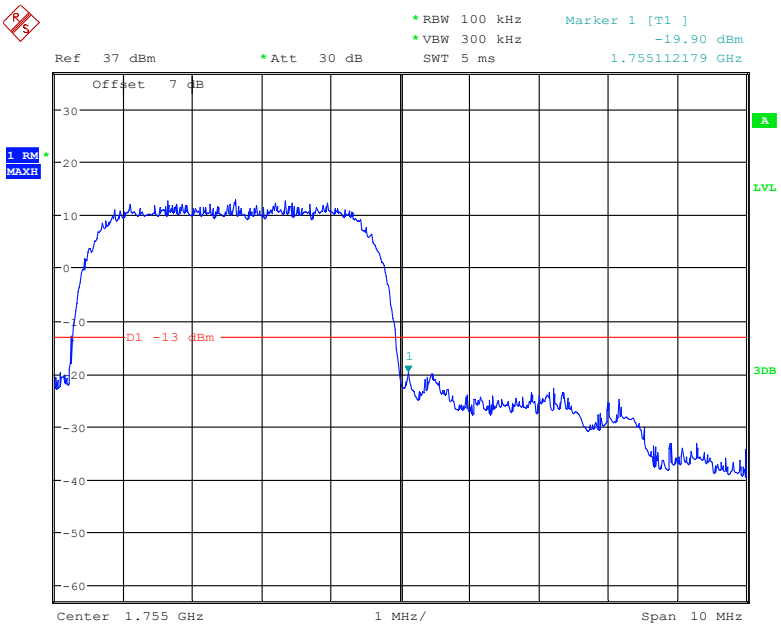
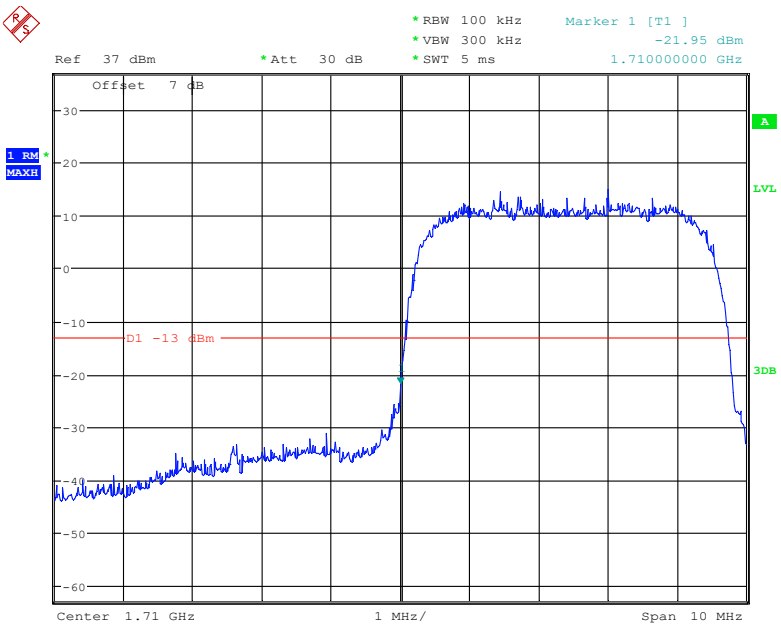
AWS Band, Right Band Edge for HSDPA (16QAM) Mode

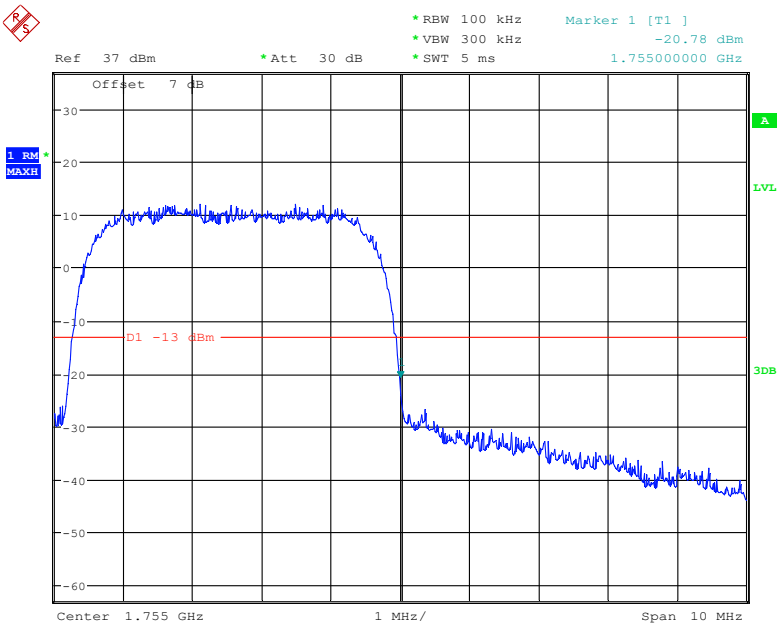


Date: 29.NOV.2021 17:45:37

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



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



The test plots of LTE bands please refer to 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

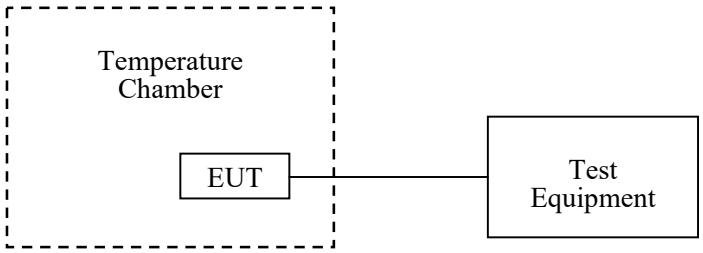
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

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:	28.2 ℃
Relative Humidity:	56.7 %
ATM Pressure:	101.0 kPa

The testing was performed by Ting Lv from 2021-11-27 to 2021-11-29.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)

GSM Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	3	0.0036	2.5
-20		4	0.0048	2.5
-10		2	0.0024	2.5
0		5	0.0060	2.5
10		9	0.0108	2.5
20		15	0.0179	2.5
30		6	0.0072	2.5
40		7	0.0084	2.5
50		4	0.0048	2.5
20	L.V.	2	0.0024	2.5
	H.V.	3	0.0036	2.5

EGPRS Mode

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

WCDMA Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	0.72	0.0009	2.5
-20		0.88	0.0011	2.5
-10		0.69	0.0008	2.5
0		0.92	0.0011	2.5
10		0.88	0.0011	2.5
20		0.69	0.0008	2.5
30		0.84	0.0010	2.5
40		0.76	0.0009	2.5
50		0.89	0.0011	2.5
20	L.V.	0.92	0.0011	2.5
	H.V.	0.94	0.0011	2.5

PCS Band (Part 24E)

GSM Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	6	0.0032	pass
-20		4	0.0021	pass
-10		3	0.0016	pass
0		8	0.0043	pass
10		2	0.0011	pass
20		10	0.0053	pass
30		3	0.0016	pass
40		7	0.0037	pass
50		5	0.0027	pass
20	L.V.	-3	-0.0016	pass
	H.V.	3	0.0016	pass

EDGE Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	4	0.0021	pass
-20		8	0.0043	pass
-10		5	0.0027	pass
0		10	0.0053	pass
10		-4	-0.0021	pass
20		-1	-0.0005	pass
30		-3	-0.0016	pass
40		-8	-0.0043	pass
50		7	0.0037	pass
20	L.V.	3	0.0016	pass
	H.V.	6	0.0032	pass

WCDMA Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	-3.15	-0.0017	pass
-20		-3.66	-0.0019	pass
-10		-3.28	-0.0017	pass
0		-3.25	-0.0017	pass
10		-3.17	-0.0017	pass
20		-3.15	-0.0017	pass
30		-3.23	-0.0017	pass
40		-3.14	-0.0017	pass
50		-3.12	-0.0017	pass
20	L.V.	-3.16	-0.0017	pass
	H.V.	-3.13	-0.0017	pass

AWS Band (Part 27)

Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.0123	1754.9755	1710	1755
-20		1710.0126	1754.9768	1710	1755
-10		1710.0128	1754.9751	1710	1755
0		1710.0132	1754.9742	1710	1755
10		1710.0117	1754.9739	1710	1755
20		1710.0116	1754.9725	1710	1755
30		1710.0128	1754.9721	1710	1755
40		1710.0122	1754.9736	1710	1755
50		1710.0121	1754.9737	1710	1755
20	L.V.	1710.0119	1754.9722	1710	1755
	H.V.	1710.0118	1754.9725	1710	1755

LTE:
QPSK:
Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	NV	7	0.0037	pass
-20		2	0.0011	pass
-10		-6	-0.0032	pass
0		12	0.0064	pass
10		8	0.0043	pass
20		10	0.0053	pass
30		-7	-0.0037	pass
40		7	0.0037	pass
50		5	0.0027	pass
20	LV	-8	-0.0043	pass
	HV	-4	-0.0021	pass

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.1148	1754.8733	1710	1755
-20		1710.1145	1754.8731	1710	1755
-10		1710.1138	1754.8728	1710	1755
0		1710.1129	1754.8733	1710	1755
10		1710.1137	1754.8739	1710	1755
20		1710.1125	1754.8726	1710	1755
30		1710.1131	1754.8739	1710	1755
40		1710.1126	1754.8745	1710	1755
50		1710.1152	1754.8743	1710	1755
20	L.V.	1710.1151	1754.8768	1710	1755
	H.V.	1710.1041	1754.8755	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-3	-0.0036	2.5
-20		6	0.0072	2.5
-10		8	0.0096	2.5
0		-6	-0.0072	2.5
10		-5	-0.0060	2.5
20		-3	-0.0036	2.5
30		-7	-0.0084	2.5
40		5	0.0060	2.5
50		4	0.0048	2.5
20	L.V.	10	0.0120	2.5
	H.V.	-8	-0.0096	2.5

Band 7:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2500.8789	2569.9845	2500	2570
-20		2500.8786	2569.9946	2500	2570
-10		2500.8754	2569.9847	2500	2570
0		2500.8755	2569.9728	2500	2570
10		2500.7956	2569.9825	2500	2570
20		2500.7838	2569.9429	2500	2570
30		2500.7726	2569.9336	2500	2570
40		2500.7622	2569.9924	2500	2570
50		2500.7526	2569.9925	2500	2570
20	L.V.	2500.7524	2569.9837	2500	2570
	H.V.	2500.7431	2569.9745	2500	2570

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.0222	1779.9727	1710	1780
-20		1710.0219	1779.9729	1710	1780
-10		1710.0235	1779.9833	1710	1780
0		1710.0234	1779.9755	1710	1780
10		1710.0238	1779.9759	1710	1780
20		1710.0229	1779.9746	1710	1780
30		1710.0258	1779.9747	1710	1780
40		1710.0259	1779.9752	1710	1780
50		1710.0226	1779.9825	1710	1780
20	L.V.	1710.0221	1779.9728	1710	1780
	H.V.	1710.0222	1779.9776	1710	1780

16QAM:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	N.V.	3	0.0016	pass
-20		-7	-0.0037	pass
-10		10	0.0053	pass
0		-8	-0.0043	pass
10		4	0.0021	pass
20		10	0.0053	pass
30		-7	-0.0037	pass
40		3	0.0016	pass
50		5	0.0027	pass
20	L.V.	6	0.0032	pass
	H.V.	4	0.0021	pass

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.2966	1754.7675	1710	1755
-20		1710.2959	1754.7562	1710	1755
-10		1710.2755	1754.7681	1710	1755
0		1710.2652	1754.7455	1710	1755
10		1710.2627	1754.7438	1710	1755
20		1710.2641	1754.7622	1710	1755
30		1710.2551	1754.7628	1710	1755
40		1710.2639	1754.7657	1710	1755
50		1710.2638	1754.7752	1710	1755
20	L.V.	1710.2625	1754.7535	1710	1755
	H.V.	1710.2722	1754.7524	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o =836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	N.V.	-4	-0.0048	2.5
-20		-3	-0.0036	2.5
-10		6	0.0072	2.5
0		-9	-0.0108	2.5
10		7	0.0084	2.5
20		2	0.0024	2.5
30		4	0.0048	2.5
40		2	0.0024	2.5
50		5	0.0060	2.5
20	L.V.	3	0.0036	2.5
	H.V.	7	0.0084	2.5

Band 7:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	2500.8387	2569.8365	2500	2570
-20		2500.8455	2569.8548	2500	2570
-10		2500.7646	2569.8424	2500	2570
0		2500.7254	2569.8532	2500	2570
10		2500.6328	2569.8236	2500	2570
20		2500.6239	2569.7827	2500	2570
30		2500.6353	2569.7835	2500	2570
40		2500.6328	2569.8426	2500	2570
50		2500.6225	2569.8453	2500	2570
20	L.V.	2500.6236	2569.8352	2500	2570
	H.V.	2500.6141	2569.8238	2500	2570

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	N.V.	1710.0282	1779.8381	1710	1780
-20		1710.0245	1779.8436	1710	1780
-10		1710.0252	1779.8372	1710	1780
0		1710.0274	1779.8348	1710	1780
10		1710.0245	1779.8361	1710	1780
20		1710.0233	1779.8342	1710	1780
30		1710.0228	1779.8332	1710	1780
40		1710.0257	1779.8365	1710	1780
50		1710.0216	1779.8372	1710	1780
20	L.V.	1710.0273	1779.8355	1710	1780
	H.V.	1710.0251	1779.8357	1710	1780

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