



TESTREPORT

Applicant Name : Sun Cupid Technology (HK) Ltd.
Address : 16/F, CEO Tower, 77 Wing Hong St, Cheung Sha Wan,
Kowloon, Hong Kong
Report Number : SZNS220527-23262E-RF-00C
FCC ID: 2ADINS6303L

Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E; FCC PART 90

Sample Description

Product Type: LTE Smart Phone
Model No.: S6303L
Multiple Model(s) No.: A9L (Please refer to DOS for Model difference)
Trade Mark: NUU
Date Received: 2022/05/27
Report Date: 2022/07/13

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

Prepared and Checked By:

Approved By:

Andy Yu
EMC Engineer

Robert Li
EMC Engineer

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

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Shenzhen Accurate Technology Co., Ltd.

1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

Tel: +86 755-26503290

Fax: +86 755-26503396

Web: www.atc-lab.com

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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 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 25: 1850-1915MHz(TX);1930-1995MHz(RX) LTE Band 26(Part 22): 824-849MHz(TX); 869-894MHz(RX) LTE Band 26(Part 90): 814-824MHz(TX); 859-869MHz(RX) LTE Band 41: 2535-2655MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX) LTE Band 71: 663-698MHz(TX); 617-652MHz(RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	GSM850/WCDMA Band5/LTE Band 5/LTE Band 26:0.74dBi PCS1900/WCDMA Band 2/ LTE Band 2/LTE Band 25:0.75dBi WCDMA Band 4/ LTE Band 4/ LTE Band 66: 0.68dBi LTE Band 7/ LTE Band 41: 0.51dBi LTE Band 12: 0.52 dBi LTE Band 71: 0.41 dBi (provided by the applicant)
Voltage Range	DC 3.8V from battery or DC 5V from adapter
Sample serial number	SZNS220527-23262E-RF-S1 for Radiated Emissions SZNS220527-23262E-RF-S2 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: HJ-0501000E1-US Input: AC 100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1000mA
Extreme condition*	L.V.: Low Voltage 3.48V N.V.: Normal Voltage 3.8V H.V.: High Voltage 4.35V (provided by the applicant)

Note: The frequency range of 824-849 MHz(TX), 869-894MHz(RX) in LTE band 26, which covered LTE band 5, The RF parameter are the same, eg: the power, bandwidths...are the same

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part24-Subpart E, Part 27, and Part 90 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
 Part 90 – Private Land Mobile Radio 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.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

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

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

Test Facility

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

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

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

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

Test was performed as below table:

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.4	848.8
DCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.4	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5& LTE B26(Part 22H)	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
	15(only for B26)	831.5	836.5	841.5
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704	707.5	711

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
LTE B25	1.4	1850.7	1882.5	1914.3
	3	1851.5	1882.5	1913.5
	5	1852.5	1882.5	1912.5
	10	1855	1882.5	1910
	15	1857.5	1882.5	1907.5
	20	1860	1882.5	1905
LTE B26(Part 90S)	1.4	814.7	819	823.3
	3	815.5	819	822.5
	5	816.5	819	821.5
	10	/	819	/
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770
LTE B71	5	665.5	680.5	695.5
	10	668	680.5	693
	15	670.5	680.5	690.5
	20	673	680.5	688

Equipment Modifications

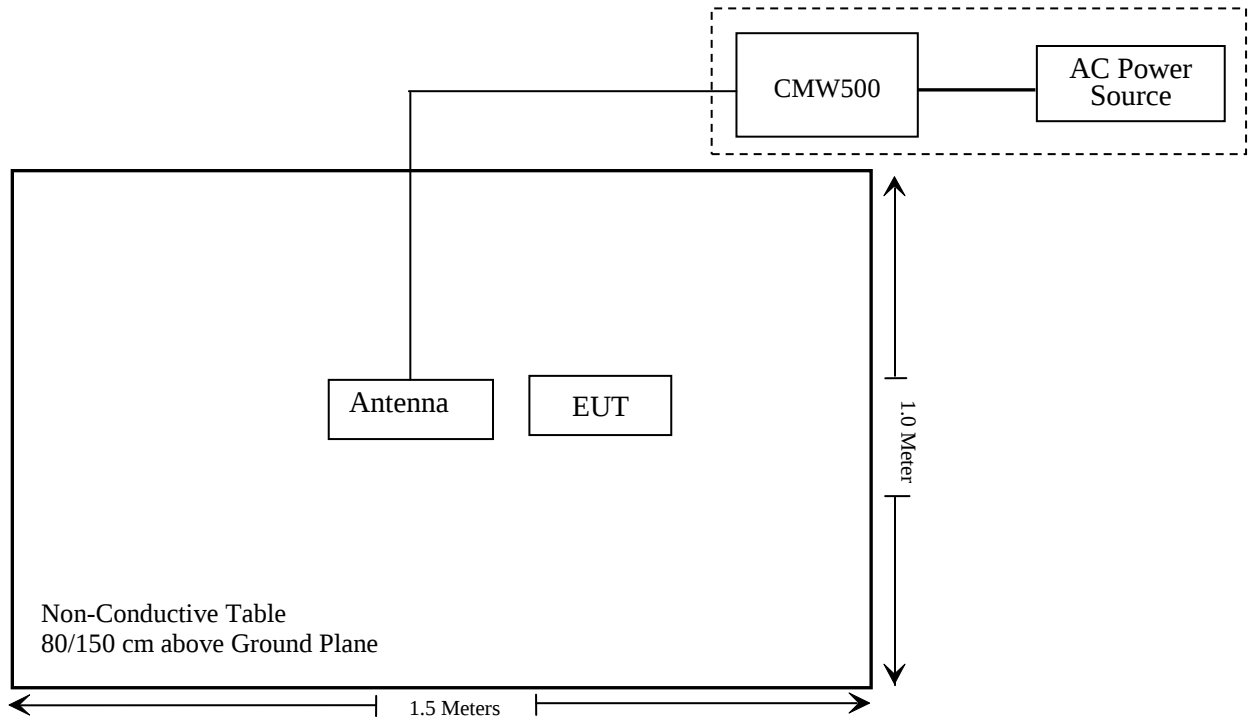
No modification was made to the EUT.

Support Equipment List and Details

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

Support Cable Description

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

Block Diagram of Test Setup

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 1.1307 , §2.1093	RF Exposure (SAR)	Compliant*
§2.1046; § 22.913 (a); § 24.232 (c); §27.50(c) (d) (h); §90.635	RF Output Power	Compliant
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53 §90.209	Occupied Bandwidth	Compliant
§ 2.1051; §22.917 (a); § 24.238 (a); §27.53; §90.691	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53 §90.691	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53(g) (h) (m) §90.691	Band Edge	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54; §90.213	Frequency stability	Compliant

Note: * Please refer to SAR report number: SZNS220527-23262E-SA.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2021/11/11	2022/11/10
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
PASTERNAK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-024-1)	2020/01/05	2023/01/04
PASTERNAK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-025-1)	2020/01/05	2023/01/04
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
Wainwright	High Pass Filter	WHKX3.6/18 G-10SS	5	2021/12/14	2022/12/13
CD	High Pass Filter	HPM-1.2/18G -60	110	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N200	2021/12/14	2022/12/13
Agilent	Signal Generator	N5183A	MY51040755	2021/12/13	2022/12/12

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2021/12/13	2022/12/12
SPECTRUM ANALYZER	Rohde & Schwarz	FSU26	200982	2021/07/06	2022/07/05
SPECTRUM ANALYZER	Rohde & Schwarz	FSU26	200982	2022/07/06	2023/07/05
Gongwen	Temp. & Humid. Chamber	HSD-500	109	2021/10/14	2022/10/13
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2021/12/13	2022/12/12
Mini-Circuits	Power Splitter	DC-18000MH z	SF10944151S	2021/12/14	2022/12/13
WEINSCHTEL	10dB Attenuator	5324	AU 3842	2021/12/14	2022/12/13
Fluke	Multi Meter	45	7664009	2021/12/14	2022/12/13
Manson	DC Power Source	KPS-6604	ATCS-205	NCR	NCR
Unknown	RF Coaxial Cable	No.31	RF-01	Each time	
Unknown	RF Cable	Unknown	1	Each time	

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

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

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: SZNS220527-23262E-SA.

FCC §2.1047 - MODULATION CHARACTERISTIC

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

FCC § 2.1046, § 22.913 (a)& § 24.232(c); §27.50(c)(d)(h); §90.635- RF OUTPUT POWER

Applicable Standard

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

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

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

According to §27.50(c), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

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

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

According to §90.635, the maximum EIRP must not exceed 1000Watts (50dBm) for 814-824MHz.

Test Procedure

Conducted method:

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



Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	60 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang on 2022-06-08.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	32.39	30.48	38.45
	189	836.4	32.63	30.72	38.45
	251	848.8	32.65	30.74	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	33.42	32.56	30.78	29.40	31.51	30.65	28.87	27.49	38.45
	189	836.6	33.54	32.88	31.16	29.78	31.63	30.97	29.25	27.87	38.45
	251	848.8	33.61	32.76	30.95	29.63	31.70	30.85	29.04	27.72	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.2	26.71	25.98	23.77	22.73	24.80	24.07	21.86	20.82	24.80
	189	836.6	26.79	25.88	23.72	22.72	24.88	23.97	21.81	20.81	24.88
	251	848.8	26.32	25.71	23.67	22.69	24.41	23.80	21.76	20.78	24.41

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA	RMC12.2k		22.61	22.71	22.82	20.7	20.80	20.91
	HSDPA	1	21.43	21.59	21.83	19.52	19.68	19.92
		2	21.31	21.30	21.82	19.4	19.39	19.91
		3	21.24	21.52	21.62	19.33	19.61	19.71
		4	21.21	21.23	21.75	19.3	19.32	19.84
	HSUPA	1	20.99	21.61	21.71	19.08	19.70	19.80
		2	20.80	21.60	21.57	18.89	19.69	19.66
		3	20.77	21.44	21.70	18.86	19.53	19.79
		4	20.74	21.43	21.55	18.83	19.52	19.64
		5	20.92	21.58	21.71	19.01	19.67	19.80
	HSPA+	1	20.63	20.52	20.68	18.72	18.61	18.77

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
 For GSM850 / WCDMA Band5: Antenna Gain = 0.74dBi = -1.41dBd (0dBd=2.15dBi)
 Cable Loss=0.5dB* (provided by the applicant)
 Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	29.39	29.34	33
	661	1880.0	29.08	29.03	33
	810	1909.8	28.81	28.76	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	29.32	28.60	26.74	25.53	29.27	28.55	26.69	25.48	33
	661	1880.0	29.00	28.25	26.34	25.06	28.95	28.2	26.29	25.01	33
	810	1909.8	28.75	27.92	25.97	24.72	28.7	27.87	25.92	24.67	33

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	512	1850.2	26.91	25.85	24.85	22.56	26.86	25.80	24.80	22.51	33
	661	1880.0	26.84	25.86	24.90	22.65	26.79	25.81	24.85	22.60	33
	810	1909.8	26.93	25.87	24.94	22.70	26.88	25.82	24.89	22.65	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA	RMC12.2k		21.38	21.42	21.38	21.33	21.37	21.33
	HSDPA	1	21.37	21.42	21.39	21.32	21.37	21.34
		2	21.38	21.43	21.39	21.33	21.38	21.34
		3	21.40	21.44	21.37	21.35	21.39	21.32
		4	21.41	21.46	21.36	21.36	21.41	21.31
	HSUPA	1	21.43	21.45	21.38	21.38	21.4	21.33
		2	21.42	21.44	21.38	21.37	21.39	21.33
		3	21.41	21.43	21.36	21.36	21.38	21.31
		4	21.40	21.45	21.34	21.35	21.40	21.29
		5	21.38	21.43	21.35	21.33	21.38	21.3
	HSPA+	1	21.36	21.43	21.36	21.31	21.38	21.31

Note: $EIRP(dBm) = \text{Conducted Power}(dBm) + \text{Antenna Gain}(dBi) - \text{Cable loss}(dB)$

For PCS1900 / WCDMA Band2: Antenna Gain = 0.75dBi

Cable Loss=0.8dB*(provided by the applicant)

Limit: $EIRP \leq 33dBm$

AWS Band (Part 27)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA	RMC12.2k		22.31	22.29	22.33	22.19	22.17	22.21
	HSDPA	1	22.08	22.19	22.09	21.96	22.07	21.97
		2	22.02	22.13	22.07	21.90	22.01	21.95
		3	21.94	22.06	21.95	21.82	21.94	21.83
		4	21.88	22.08	21.90	21.76	21.96	21.78
	HSUPA	1	21.89	22.02	21.81	21.77	21.90	21.69
		2	21.89	22.07	21.87	21.77	21.95	21.75
		3	21.94	22.11	21.94	21.82	21.99	21.82
		4	21.93	22.11	22.00	21.81	21.99	21.88
		5	21.98	22.07	21.97	21.86	21.95	21.85
	HSPA+	1	21.96	22.07	21.96	21.84	21.95	21.84

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For PCS1900 / WCDMA Band2: Antenna Gain = 0.68dBi

Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP ≤ 30dBm

LTE Band 2:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.43	22.42	22.50	22.38	22.37	22.45
		RB1#3	22.31	22.29	22.37	22.26	22.24	22.32
		RB1#5	22.18	22.13	22.20	22.13	22.08	22.15
		RB3#0	22.14	22.14	22.18	22.09	22.09	22.13
		RB3#3	22.11	22.14	22.19	22.06	22.09	22.14
		RB6#0	22.17	22.16	22.21	22.12	22.11	22.16
	16QAM	RB1#0	22.23	22.20	22.27	22.18	22.15	22.22
		RB1#3	22.28	22.19	22.35	22.23	22.14	22.30
		RB1#5	22.31	22.22	22.35	22.26	22.17	22.30
		RB3#0	22.28	22.19	22.39	22.23	22.14	22.34
		RB3#3	22.22	22.12	22.32	22.17	22.07	22.27
		RB6#0	22.20	22.10	22.32	22.15	22.05	22.27
3.0	QPSK	RB1#0	22.37	22.53	22.51	22.32	22.48	22.46
		RB1#8	22.33	22.49	22.45	22.28	22.44	22.40
		RB1#14	22.32	22.49	22.32	22.27	22.44	22.27
		RB6#0	22.30	22.52	22.31	22.25	22.47	22.26
		RB6#9	22.33	22.51	22.32	22.28	22.46	22.27
		RB15#0	22.40	22.53	22.37	22.35	22.48	22.32
	16QAM	RB1#0	22.43	22.58	22.43	22.38	22.53	22.38
		RB1#8	22.50	22.49	22.42	22.45	22.44	22.37
		RB1#14	22.47	22.45	22.47	22.42	22.40	22.42
		RB6#0	22.50	22.44	22.47	22.45	22.39	22.42
		RB6#9	22.43	22.43	22.45	22.38	22.38	22.40
		RB15#0	22.42	22.48	22.44	22.37	22.43	22.39

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	22.38	22.37	22.47	22.33	22.32	22.42
		RB1#13	22.25	22.38	22.33	22.20	22.33	22.28
		RB1#24	22.20	22.35	22.30	22.15	22.30	22.25
		RB15#0	22.19	22.30	22.24	22.14	22.25	22.19
		RB15#10	22.10	22.25	22.22	22.05	22.20	22.17
		RB25#0	22.15	22.28	22.26	22.10	22.23	22.21
	16QAM	RB1#0	22.22	22.32	22.33	22.17	22.27	22.28
		RB1#13	22.24	22.29	22.41	22.19	22.24	22.36
		RB1#24	22.30	22.34	22.44	22.25	22.29	22.39
		RB15#0	22.27	22.33	22.50	22.22	22.28	22.45
		RB15#10	22.29	22.36	22.49	22.24	22.31	22.44
		RB25#0	22.36	22.33	22.52	22.31	22.28	22.47
10.0	QPSK	RB1#0	22.47	22.35	22.41	22.42	22.30	22.36
		RB1#25	22.48	22.35	22.42	22.43	22.30	22.37
		RB1#49	22.33	22.25	22.39	22.28	22.20	22.34
		RB25#0	22.31	22.24	22.40	22.26	22.19	22.35
		RB25#25	22.24	22.27	22.39	22.19	22.22	22.34
		RB50#0	22.30	22.27	22.45	22.25	22.22	22.40
	16QAM	RB1#0	22.29	22.34	22.52	22.24	22.29	22.47
		RB1#25	22.23	22.36	22.43	22.18	22.31	22.38
		RB1#49	22.28	22.35	22.48	22.23	22.30	22.43
		RB25#0	22.27	22.33	22.51	22.22	22.28	22.46
		RB25#25	22.30	22.37	22.46	22.25	22.32	22.41
		RB50#0	22.27	22.38	22.50	22.22	22.33	22.45

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.44	22.43	22.33	22.39	22.38	22.28
		RB1#38	22.46	22.42	22.21	22.41	22.37	22.16
		RB1#74	22.42	22.25	22.21	22.37	22.20	22.16
		RB36#0	22.42	22.25	22.20	22.37	22.20	22.15
		RB36#39	22.34	22.20	22.14	22.29	22.15	22.09
		RB75#0	22.33	22.20	22.21	22.28	22.15	22.16
	16QAM	RB1#0	22.39	22.20	22.29	22.34	22.15	22.24
		RB1#38	22.41	22.15	22.25	22.36	22.10	22.20
		RB1#74	22.42	22.20	22.21	22.37	22.15	22.16
		RB36#0	22.38	22.20	22.25	22.33	22.15	22.20
		RB36#39	22.31	22.21	22.20	22.26	22.16	22.15
		RB75#0	22.37	22.22	22.25	22.32	22.17	22.20
20.0	QPSK	RB1#0	22.47	22.49	22.46	22.42	22.44	22.41
		RB1#50	22.41	22.36	22.47	22.36	22.31	22.42
		RB1#99	22.42	22.24	22.32	22.37	22.19	22.27
		RB50#0	22.44	22.26	22.33	22.39	22.21	22.28
		RB50#50	22.41	22.18	22.33	22.36	22.13	22.28
		RB100#0	22.48	22.24	22.36	22.43	22.19	22.31
	16QAM	RB1#0	22.49	22.27	22.36	22.44	22.22	22.31
		RB1#50	22.40	22.32	22.31	22.35	22.27	22.26
		RB1#99	22.38	22.38	22.28	22.33	22.33	22.23
		RB50#0	22.37	22.38	22.24	22.32	22.33	22.19
		RB50#50	22.39	22.39	22.17	22.34	22.34	22.12
		RB100#0	22.41	22.40	22.19	22.36	22.35	22.14

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

For Band2: Antenna Gain = 0.75dBi

Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP ≤ 33dBm

LTE Band 4:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.03	22.07	21.99	21.91	21.95	21.87
		RB1#3	21.92	22.04	21.85	21.80	21.92	21.73
		RB1#5	21.80	21.88	21.73	21.68	21.76	21.61
		RB3#0	21.79	21.83	21.74	21.67	21.71	21.62
		RB3#3	21.75	21.77	21.71	21.63	21.65	21.59
		RB6#0	21.76	21.79	21.75	21.64	21.67	21.63
	16QAM	RB1#0	21.79	21.84	21.76	21.67	21.72	21.64
		RB1#3	21.71	21.84	21.67	21.59	21.72	21.55
		RB1#5	21.73	21.86	21.70	21.61	21.74	21.58
		RB3#0	21.77	21.90	21.75	21.65	21.78	21.63
		RB3#3	21.79	21.83	21.78	21.67	21.71	21.66
		RB6#0	21.85	21.80	21.77	21.73	21.68	21.65
3.0	QPSK	RB1#0	22.10	22.18	22.30	21.98	22.06	22.18
		RB1#8	22.00	22.06	22.15	21.88	21.94	22.03
		RB1#14	21.89	22.03	22.02	21.77	21.91	21.90
		RB6#0	21.95	22.00	22.00	21.83	21.88	21.88
		RB6#9	21.91	21.96	21.98	21.79	21.84	21.86
		RB15#0	21.98	22.00	22.03	21.86	21.88	21.91
	16QAM	RB1#0	21.94	22.24	22.05	21.82	22.12	21.93
		RB1#8	22.09	22.15	22.00	21.97	22.03	21.88
		RB1#14	22.04	22.07	22.06	21.92	21.95	21.94
		RB6#0	22.08	22.10	22.06	21.96	21.98	21.94
		RB6#9	21.85	22.03	22.04	21.73	21.91	21.92
		RB15#0	21.84	21.99	22.09	21.72	21.87	21.97

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	22.47	22.36	22.46	22.35	22.24	22.34
		RB1#13	22.46	22.37	22.34	22.34	22.25	22.22
		RB1#24	22.32	22.29	22.23	22.20	22.17	22.11
		RB15#0	22.29	22.31	22.22	22.17	22.19	22.10
		RB15#10	22.26	22.31	22.24	22.14	22.19	22.12
		RB25#0	22.34	22.30	22.24	22.22	22.18	22.12
	16QAM	RB1#0	22.37	22.32	22.25	22.25	22.20	22.13
		RB1#13	22.28	22.23	22.33	22.16	22.11	22.21
		RB1#24	22.32	22.28	22.31	22.20	22.16	22.19
		RB15#0	22.29	22.30	22.33	22.17	22.18	22.21
		RB15#10	22.21	22.31	22.33	22.09	22.19	22.21
		RB25#0	22.18	22.38	22.28	22.06	22.26	22.16
10.0	QPSK	RB1#0	22.25	22.05	22.24	22.13	21.93	22.12
		RB1#25	22.14	21.93	22.11	22.02	21.81	21.99
		RB1#49	22.13	22.07	22.08	22.01	21.95	21.96
		RB25#0	22.09	22.15	21.99	21.97	22.03	21.87
		RB25#25	22.12	21.82	22.14	22.00	21.70	22.02
		RB50#0	22.18	22.09	22.12	22.06	21.97	22.00
	16QAM	RB1#0	22.22	22.12	22.08	22.10	22.00	21.96
		RB1#25	22.28	22.20	22.07	22.16	22.08	21.95
		RB1#49	22.34	22.11	22.08	22.22	21.99	21.96
		RB25#0	22.36	22.22	22.12	22.24	22.10	22.00
		RB25#25	22.28	22.18	22.09	22.16	22.06	21.97
		RB50#0	22.27	22.08	22.06	22.15	21.96	21.94

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	22.26	22.16	22.21	22.14	22.04	22.09
		RB1#38	22.21	22.15	22.21	22.09	22.03	22.09
		RB1#74	22.08	22.12	22.19	21.96	22.00	22.07
		RB36#0	22.10	22.09	22.17	21.98	21.97	22.05
		RB36#39	22.11	22.06	22.15	21.99	21.94	22.03
		RB75#0	22.18	22.12	22.17	22.06	22.00	22.05
	16QAM	RB1#0	22.24	22.13	22.24	22.12	22.01	22.12
		RB1#38	22.16	22.18	22.23	22.04	22.06	22.11
		RB1#74	22.14	22.16	22.27	22.02	22.04	22.15
		RB36#0	22.12	22.18	22.32	22.00	22.06	22.20
		RB36#39	22.07	22.13	22.33	21.95	22.01	22.21
		RB75#0	22.03	22.17	22.29	21.91	22.05	22.17
20.0	QPSK	RB1#0	22.54	22.53	22.40	22.42	22.41	22.28
		RB1#50	22.47	22.43	22.28	22.35	22.31	22.16
		RB1#99	22.32	22.37	22.21	22.20	22.25	22.09
		RB50#0	22.30	22.34	22.20	22.18	22.22	22.08
		RB50#50	22.30	22.26	22.21	22.18	22.14	22.09
		RB100#0	22.34	22.32	22.27	22.22	22.20	22.15
	16QAM	RB1#0	22.38	22.33	22.32	22.26	22.21	22.20
		RB1#50	22.31	22.33	22.40	22.19	22.21	22.28
		RB1#99	22.29	22.30	22.46	22.17	22.18	22.34
		RB50#0	22.33	22.33	22.46	22.21	22.21	22.34
		RB50#50	22.29	22.32	22.44	22.17	22.20	22.32
		RB100#0	22.32	22.32	22.50	22.20	22.20	22.38

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

For Band4: Antenna Gain = 0.68dBi

Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP ≤ 30dBm

LTE Band 5& LTE Band 26(Part 22H):

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	21.87	21.91	21.95	19.96	20.00	20.04
		RB1#3	21.84	21.92	21.93	19.93	20.01	20.02
		RB1#5	21.84	21.90	21.92	19.93	19.99	20.01
		RB3#0	21.82	21.90	21.93	19.91	19.99	20.02
		RB3#3	21.83	21.87	21.91	19.92	19.96	20.00
		RB6#0	21.83	21.88	21.90	19.92	19.97	19.99
	16QAM	RB1#0	21.85	21.87	21.90	19.94	19.96	19.99
		RB1#3	21.83	21.86	21.92	19.92	19.95	20.01
		RB1#5	21.81	21.87	21.90	19.90	19.96	19.99
		RB3#0	21.80	21.88	21.91	19.89	19.97	20.00
		RB3#3	21.80	21.87	21.91	19.89	19.96	20.00
		RB6#0	21.80	21.84	21.90	19.89	19.93	19.99
3.0	QPSK	RB1#0	21.75	21.92	21.90	19.84	20.01	19.99
		RB1#8	21.76	21.90	21.90	19.85	19.99	19.99
		RB1#14	21.75	21.87	21.91	19.84	19.96	20.00
		RB6#0	21.76	21.87	21.89	19.85	19.96	19.98
		RB6#9	21.73	21.86	21.85	19.82	19.95	19.94
		RB15#0	21.69	21.84	21.82	19.78	19.93	19.91
	16QAM	RB1#0	21.66	21.82	21.80	19.75	19.91	19.89
		RB1#8	21.64	21.80	21.76	19.73	19.89	19.85
		RB1#14	21.62	21.76	21.73	19.71	19.85	19.82
		RB6#0	21.60	21.72	21.69	19.69	19.81	19.78
		RB6#9	21.61	21.73	21.70	19.70	19.82	19.79
		RB15#0	21.58	21.70	21.68	19.67	19.79	19.77

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	21.87	21.95	21.96	19.96	20.04	20.05
		RB1#13	21.88	21.95	21.93	19.97	20.04	20.02
		RB1#24	21.88	21.92	21.93	19.97	20.01	20.02
		RB15#0	21.84	21.89	21.91	19.93	19.98	20.00
		RB15#10	21.85	21.85	21.91	19.94	19.94	20.00
		RB25#0	21.82	21.86	21.91	19.91	19.95	20.00
	16QAM	RB1#0	21.82	21.83	21.89	19.91	19.92	19.98
		RB1#13	21.79	21.83	21.90	19.88	19.92	19.99
		RB1#24	21.79	21.84	21.88	19.88	19.93	19.97
		RB15#0	21.80	21.84	21.86	19.89	19.93	19.95
		RB15#10	21.79	21.86	21.84	19.88	19.95	19.93
		RB25#0	21.77	21.84	21.82	19.86	19.93	19.91
10.0	QPSK	RB1#0	21.73	21.81	21.83	19.82	19.90	19.92
		RB1#25	21.71	21.78	21.85	19.80	19.87	19.94
		RB1#49	21.73	21.78	21.85	19.82	19.87	19.94
		RB25#0	21.72	21.77	21.81	19.81	19.86	19.90
		RB25#25	21.72	21.76	21.78	19.81	19.85	19.87
		RB50#0	21.72	21.74	21.77	19.81	19.83	19.86
	16QAM	RB1#0	21.74	21.73	21.75	19.83	19.82	19.84
		RB1#25	21.73	21.75	21.74	19.82	19.84	19.83
		RB1#49	21.70	21.73	21.71	19.79	19.82	19.80
		RB25#0	21.69	21.70	21.72	19.78	19.79	19.81
		RB25#25	21.66	21.72	21.71	19.75	19.81	19.80
		RB50#0	21.64	21.73	21.72	19.73	19.82	19.81

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.81	21.53	21.55	19.90	19.62	19.64
		RB1#38	21.66	21.36	21.40	19.75	19.45	19.49
		RB1#74	21.68	21.36	21.27	19.77	19.45	19.36
		RB36#0	21.63	21.38	21.30	19.72	19.47	19.39
		RB36#39	21.58	21.34	21.32	19.67	19.43	19.41
		RB75#0	21.58	21.38	21.34	19.67	19.47	19.43
	16QAM	RB1#0	21.66	21.43	21.42	19.75	19.52	19.51
		RB1#38	21.61	21.42	21.48	19.70	19.51	19.57
		RB1#74	21.65	21.45	21.50	19.74	19.54	19.59
		RB36#0	21.71	21.43	21.50	19.80	19.52	19.59
		RB36#39	21.68	21.45	21.51	19.77	19.54	19.60
		RB75#0	21.74	21.41	21.57	19.83	19.50	19.66

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)

For Band5/26: Antenna Gain = 0.74dBi = -1.41dBd (0dBd=2.15dBi)

Cable Loss=0.5dB*(provided by the applicant)

Limit: ERP≤38.45dBm

LTE Band 7:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.22	21.18	21.27	20.53	20.49	20.58
		RB1#13	21.19	21.18	21.28	20.50	20.49	20.59
		RB1#24	21.15	21.17	21.25	20.46	20.48	20.56
		RB15#0	21.16	21.14	21.20	20.47	20.45	20.51
		RB15#10	21.14	21.15	21.22	20.45	20.46	20.53
		RB25#0	21.15	21.11	21.19	20.46	20.42	20.50
	16QAM	RB1#0	21.10	21.08	21.20	20.41	20.39	20.51
		RB1#13	21.06	21.03	21.15	20.37	20.34	20.46
		RB1#24	21.00	21.04	21.15	20.31	20.35	20.46
		RB15#0	20.95	21.00	21.16	20.26	20.31	20.47
		RB15#10	20.93	21.01	21.17	20.24	20.32	20.48
		RB25#0	20.92	20.98	21.10	20.23	20.29	20.41
10.0	QPSK	RB1#0	21.20	21.17	21.18	20.51	20.48	20.49
		RB1#25	21.21	21.12	21.19	20.52	20.43	20.50
		RB1#49	21.18	21.10	21.17	20.49	20.41	20.48
		RB25#0	21.18	21.06	21.16	20.49	20.37	20.47
		RB25#25	21.15	21.07	21.16	20.46	20.38	20.47
		RB50#0	21.12	21.07	21.13	20.43	20.38	20.44
	16QAM	RB1#0	21.13	21.09	21.10	20.44	20.40	20.41
		RB1#25	21.15	21.11	21.09	20.46	20.42	20.40
		RB1#49	21.09	21.05	21.07	20.40	20.36	20.38
		RB25#0	21.02	21.00	21.03	20.33	20.31	20.34
		RB25#25	20.99	21.02	20.99	20.30	20.33	20.30
		RB50#0	20.95	21.03	20.98	20.26	20.34	20.29

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	21.09	21.13	21.18	20.40	20.44	20.49
		RB1#38	21.02	21.07	21.13	20.33	20.38	20.44
		RB1#74	21.04	21.05	21.15	20.35	20.36	20.46
		RB36#0	21.00	21.07	21.12	20.31	20.38	20.43
		RB36#39	20.97	21.00	21.13	20.28	20.31	20.44
		RB75#0	20.93	20.98	21.08	20.24	20.29	20.39
	16QAM	RB1#0	20.90	20.94	21.09	20.21	20.25	20.40
		RB1#38	20.85	20.94	21.06	20.16	20.25	20.37
		RB1#74	20.83	20.95	21.08	20.14	20.26	20.39
		RB36#0	20.79	20.93	21.03	20.10	20.24	20.34
		RB36#39	20.73	20.90	21.01	20.04	20.21	20.32
		RB75#0	20.75	20.85	20.97	20.06	20.16	20.28
20.0	QPSK	RB1#0	21.13	21.11	21.14	20.44	20.42	20.45
		RB1#50	21.12	21.11	21.09	20.43	20.42	20.40
		RB1#99	21.14	21.10	21.10	20.45	20.41	20.41
		RB50#0	21.12	21.03	21.12	20.43	20.34	20.43
		RB50#50	21.08	21.04	21.07	20.39	20.35	20.38
		RB100#0	21.09	20.98	21.06	20.40	20.29	20.37
	16QAM	RB1#0	21.03	20.93	21.01	20.34	20.24	20.32
		RB1#50	21.00	20.90	20.98	20.31	20.21	20.29
		RB1#99	20.94	20.90	20.94	20.25	20.21	20.25
		RB50#0	20.94	20.84	20.93	20.25	20.15	20.24
		RB50#50	20.92	20.79	20.88	20.23	20.10	20.19
		RB100#0	20.89	20.73	20.87	20.20	20.04	20.18

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

For Band7: Antenna Gain = 0.51dBi

Cable Loss=1.2dB* (provided by the applicant)

Limit: ERP ≤ 33dBm

LTE Band 12

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.47	23.26	22.40	21.34	21.13	20.27
		RB1#3	23.19	23.15	22.40	21.06	21.02	20.27
		RB1#5	23.35	23.21	22.36	21.22	21.08	20.23
		RB3#0	23.05	23.24	22.60	20.92	21.11	20.47
		RB3#3	23.04	23.19	22.51	20.91	21.06	20.38
		RB6#0	22.44	22.42	21.76	20.31	20.29	19.63
	16QAM	RB1#0	22.14	22.45	21.34	20.01	20.32	19.21
		RB1#3	22.22	22.44	21.51	20.09	20.31	19.38
		RB1#5	22.05	22.41	21.53	19.92	20.28	19.40
		RB3#0	22.03	22.11	21.55	19.90	19.98	19.42
		RB3#3	22.06	22.05	21.61	19.93	19.92	19.48
		RB6#0	21.13	21.27	20.65	19.00	19.14	18.52
3.0	QPSK	RB1#0	22.76	22.85	23.06	20.63	20.72	20.93
		RB1#8	22.42	22.85	22.49	20.29	20.72	20.36
		RB1#14	22.35	23.48	22.49	20.22	21.35	20.36
		RB6#0	22.31	22.40	22.27	20.18	20.27	20.14
		RB6#9	22.17	22.36	21.92	20.04	20.23	19.79
		RB15#0	22.21	22.33	22.04	20.08	20.20	19.91
	16QAM	RB1#0	22.19	22.55	22.10	20.06	20.42	19.97
		RB1#8	21.90	22.55	21.65	19.77	20.42	19.52
		RB1#14	21.81	22.44	21.66	19.68	20.31	19.53
		RB6#0	21.20	21.34	21.24	19.07	19.21	19.11
		RB6#9	21.23	21.24	20.87	19.10	19.11	18.74
		RB15#0	21.18	21.29	20.95	19.05	19.16	18.82

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	22.88	22.71	23.13	20.75	20.58	21.00
		RB1#13	22.47	22.54	22.19	20.34	20.41	20.06
		RB1#24	22.60	23.30	22.19	20.47	21.17	20.06
		RB15#0	22.31	22.38	22.02	20.18	20.25	19.89
		RB15#10	22.00	22.28	21.44	19.87	20.15	19.31
		RB25#0	22.03	22.26	21.66	19.90	20.13	19.53
	16QAM	RB1#0	21.58	22.16	22.04	19.45	20.03	19.91
		RB1#13	21.06	22.15	21.04	18.93	20.02	18.91
		RB1#24	21.28	22.05	21.15	19.15	19.92	19.02
		RB15#0	20.94	21.33	21.02	18.81	19.20	18.89
		RB15#10	20.63	21.20	20.44	18.50	19.07	18.31
		RB25#0	20.79	21.26	20.75	18.66	19.13	18.62
10.0	QPSK	RB1#0	23.04	22.66	23.63	20.91	20.53	21.50
		RB1#25	22.77	22.59	22.69	20.64	20.46	20.56
		RB1#49	22.73	21.80	21.92	20.60	19.67	19.79
		RB25#0	22.17	22.16	22.81	20.04	20.03	20.68
		RB25#25	22.15	22.03	21.51	20.02	19.90	19.38
		RB50#0	22.07	22.10	22.27	19.94	19.97	20.14
	16QAM	RB1#0	22.10	21.92	22.63	19.97	19.79	20.50
		RB1#25	21.81	21.96	21.81	19.68	19.83	19.68
		RB1#49	22.06	21.15	21.06	19.93	19.02	18.93
		RB25#0	21.15	21.25	21.77	19.02	19.12	19.64
		RB25#25	21.09	21.10	20.72	18.96	18.97	18.59
		RB50#0	21.07	21.22	21.43	18.94	19.09	19.30

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)

For Band12: Antenna Gain = 0.52dBi = -1.63dBd (0dBd=2.15dBi)

Cable Loss=0.5dB* (provided by the applicant)

Limit: ERP ≤ 34.77dBm

LTE Band 25

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	23.09	23.06	22.98	23.04	23.01	22.93
		RB1#3	23.04	22.95	22.82	22.99	22.90	22.77
		RB1#5	23.05	22.96	22.79	23.00	22.91	22.74
		RB3#0	22.97	22.90	22.81	22.92	22.85	22.76
		RB3#3	22.88	22.87	22.78	22.83	22.82	22.73
		RB6#0	22.78	22.80	22.72	22.73	22.75	22.67
	16QAM	RB1#0	22.64	22.82	22.71	22.59	22.77	22.66
		RB1#3	22.52	22.73	22.64	22.47	22.68	22.59
		RB1#5	22.54	22.69	22.51	22.49	22.64	22.46
		RB3#0	22.38	22.59	22.53	22.33	22.54	22.48
		RB3#3	22.23	22.57	22.40	22.18	22.52	22.35
		RB6#0	22.23	22.49	22.24	22.18	22.44	22.19
3.0	QPSK	RB1#0	22.93	22.98	23.07	22.88	22.93	23.02
		RB1#8	22.86	22.95	23.04	22.81	22.90	22.99
		RB1#14	22.84	22.80	23.00	22.79	22.75	22.95
		RB6#0	22.68	22.63	22.99	22.63	22.58	22.94
		RB6#9	22.64	22.47	22.86	22.59	22.42	22.81
		RB15#0	22.63	22.34	22.71	22.58	22.29	22.66
	16QAM	RB1#0	22.52	22.30	22.66	22.47	22.25	22.61
		RB1#8	22.42	22.16	22.50	22.37	22.11	22.45
		RB1#14	22.43	22.07	22.34	22.38	22.02	22.29
		RB6#0	22.33	21.99	22.19	22.28	21.94	22.14
		RB6#9	22.27	21.98	22.07	22.22	21.93	22.02
		RB15#0	22.21	21.88	21.97	22.16	21.83	21.92

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.13	23.13	23.16	23.08	23.08	23.11
		RB1#13	23.06	23.07	23.18	23.01	23.02	23.13
		RB1#24	23.05	23.07	23.13	23.00	23.02	23.08
		RB15#0	23.04	22.97	22.99	22.99	22.92	22.94
		RB15#10	23.03	22.90	22.88	22.98	22.85	22.83
		RB25#0	22.88	22.78	22.85	22.83	22.73	22.80
	16QAM	RB1#0	22.84	22.72	22.83	22.79	22.67	22.78
		RB1#13	22.81	22.62	22.78	22.76	22.57	22.73
		RB1#24	22.75	22.59	22.74	22.70	22.54	22.69
		RB15#0	22.70	22.49	22.71	22.65	22.44	22.66
		RB15#10	22.58	22.35	22.63	22.53	22.30	22.58
		RB25#0	22.60	22.32	22.50	22.55	22.27	22.45
10.0	QPSK	RB1#0	22.93	22.96	22.83	22.88	22.91	22.78
		RB1#25	22.88	22.95	22.84	22.83	22.90	22.79
		RB1#49	22.79	22.81	22.76	22.74	22.76	22.71
		RB25#0	22.70	22.80	22.70	22.65	22.75	22.65
		RB25#25	22.61	22.81	22.67	22.56	22.76	22.62
		RB50#0	22.62	22.68	22.50	22.57	22.63	22.45
	16QAM	RB1#0	22.57	22.51	22.36	22.52	22.46	22.31
		RB1#25	22.49	22.48	22.28	22.44	22.43	22.23
		RB1#49	22.32	22.47	22.22	22.27	22.42	22.17
		RB25#0	22.24	22.48	22.11	22.19	22.43	22.06
		RB25#25	22.14	22.40	22.01	22.09	22.35	21.96
		RB50#0	21.98	22.36	21.97	21.93	22.31	21.92

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	22.77	22.78	22.94	22.72	22.73	22.89
		RB1#38	22.67	22.62	22.82	22.62	22.57	22.77
		RB1#74	22.60	22.47	22.75	22.55	22.42	22.70
		RB36#0	22.54	22.44	22.75	22.49	22.39	22.70
		RB36#39	22.41	22.46	22.77	22.36	22.41	22.72
		RB75#0	22.36	22.39	22.60	22.31	22.34	22.55
	16QAM	RB1#0	22.30	22.30	22.59	22.25	22.25	22.54
		RB1#38	22.26	22.19	22.58	22.21	22.14	22.53
		RB1#74	22.15	22.14	22.57	22.10	22.09	22.52
		RB36#0	22.13	22.10	22.44	22.08	22.05	22.39
		RB36#39	22.12	22.06	22.41	22.07	22.01	22.36
		RB75#0	22.05	21.96	22.29	22.00	21.91	22.24
20.0	QPSK	RB1#0	22.82	22.79	22.75	22.77	22.74	22.70
		RB1#50	22.83	22.66	22.64	22.78	22.61	22.59
		RB1#99	22.84	22.67	22.53	22.79	22.62	22.48
		RB50#0	22.83	22.51	22.51	22.78	22.46	22.46
		RB50#50	22.74	22.47	22.45	22.69	22.42	22.40
		RB100#0	22.76	22.33	22.31	22.71	22.28	22.26
	16QAM	RB1#0	22.73	22.26	22.31	22.68	22.21	22.26
		RB1#50	22.60	22.22	22.22	22.55	22.17	22.17
		RB1#99	22.50	22.17	22.22	22.45	22.12	22.17
		RB50#0	22.36	22.09	22.12	22.31	22.04	22.07
		RB50#50	22.35	21.98	22.03	22.30	21.93	21.98
		RB100#0	22.36	21.99	22.00	22.31	21.94	21.95

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

For Band25: Antenna Gain = 0.75dBi

Cable Loss=0.8dB* (provided by the applicant)

Limit: EIRP ≤ 33dBm

LTE Band 26(Part 90S):

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	22.46	22.42	22.49	20.55	20.51	20.58
		RB1#3	22.32	22.27	22.42	20.41	20.36	20.51
		RB1#5	22.20	22.16	22.28	20.29	20.25	20.37
		RB3#0	22.21	22.10	22.11	20.30	20.19	20.20
		RB3#3	22.11	22.08	22.00	20.20	20.17	20.09
		RB6#0	21.94	22.06	21.84	20.03	20.15	19.93
	16QAM	RB1#0	21.93	22.06	21.76	20.02	20.15	19.85
		RB1#3	21.90	21.95	21.76	19.99	20.04	19.85
		RB1#5	21.75	21.85	21.70	19.84	19.94	19.79
		RB3#0	21.58	21.71	21.62	19.67	19.80	19.71
		RB3#3	21.60	21.64	21.54	19.69	19.73	19.63
		RB6#0	21.60	21.54	21.51	19.69	19.63	19.60
3.0	QPSK	RB1#0	22.41	22.41	22.62	20.50	20.50	20.71
		RB1#8	22.30	22.27	22.51	20.39	20.36	20.60
		RB1#14	22.17	22.10	22.36	20.26	20.19	20.45
		RB6#0	22.09	21.98	22.19	20.18	20.07	20.28
		RB6#9	21.94	21.81	22.14	20.03	19.90	20.23
		RB15#0	21.78	21.76	21.99	19.87	19.85	20.08
	16QAM	RB1#0	21.77	21.59	21.95	19.86	19.68	20.04
		RB1#8	21.71	21.55	21.91	19.80	19.64	20.00
		RB1#14	21.71	21.47	21.84	19.80	19.56	19.93
		RB6#0	21.60	21.36	21.77	19.69	19.45	19.86
		RB6#9	21.50	21.33	21.76	19.59	19.42	19.85
		RB15#0	21.40	21.29	21.61	19.49	19.38	19.70

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	22.39	22.33	22.36	20.48	20.42	20.45
		RB1#13	22.26	22.26	22.27	20.35	20.35	20.36
		RB1#24	22.14	22.27	22.28	20.23	20.36	20.37
		RB15#0	22.12	22.12	22.26	20.21	20.21	20.35
		RB15#10	22.11	22.14	22.26	20.20	20.23	20.35
		RB25#0	22.06	22.01	22.22	20.15	20.10	20.31
	16QAM	RB1#0	22.05	22.00	22.12	20.14	20.09	20.21
		RB1#13	21.91	21.97	22.04	20.00	20.06	20.13
		RB1#24	21.85	21.98	21.89	19.94	20.07	19.98
		RB15#0	21.72	21.82	21.84	19.81	19.91	19.93
		RB15#10	21.55	21.69	21.71	19.64	19.78	19.80
		RB25#0	21.46	21.56	21.64	19.55	19.65	19.73
10.0	QPSK	RB1#0	/	22.42	/	/	20.51	/
		RB1#25	/	22.32	/	/	20.41	/
		RB1#49	/	22.20	/	/	20.29	/
		RB25#0	/	22.21	/	/	20.30	/
		RB25#25	/	22.19	/	/	20.28	/
		RB50#0	/	22.15	/	/	20.24	/
	16QAM	RB1#0	/	22.08	/	/	20.17	/
		RB1#25	/	22.05	/	/	20.14	/
		RB1#49	/	22.04	/	/	20.13	/
		RB25#0	/	22.00	/	/	20.09	/
		RB25#25	/	21.92	/	/	20.01	/
		RB50#0	/	21.79	/	/	19.88	/

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)

For Band26: Antenna Gain = 0.74dB_i = -1.41dB_d (0dB_d=2.15dB_i)

Cable Loss=0.5dB*(provided by the applicant)

Limit: ERP ≤ 50dBm

LTE Band 41:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.23	21.91	21.95	21.54	21.22	21.26
		RB1#13	22.14	21.86	21.83	21.45	21.17	21.14
		RB1#24	21.99	21.77	21.76	21.30	21.08	21.07
		RB15#0	21.97	21.74	21.60	21.28	21.05	20.91
		RB15#10	21.91	21.65	21.55	21.22	20.96	20.86
		RB25#0	21.78	21.48	21.49	21.09	20.79	20.80
	16QAM	RB1#0	21.73	21.37	21.39	21.04	20.68	20.70
		RB1#13	21.74	21.22	21.34	21.05	20.53	20.65
		RB1#24	21.62	21.15	21.30	20.93	20.46	20.61
		RB15#0	21.63	21.12	21.13	20.94	20.43	20.44
		RB15#10	21.56	21.02	21.08	20.87	20.33	20.39
		RB25#0	21.54	20.89	21.00	20.85	20.20	20.31
10.0	QPSK	RB1#0	21.97	22.01	21.96	21.28	21.32	21.27
		RB1#25	21.88	21.92	21.94	21.19	21.23	21.25
		RB1#49	21.85	21.80	21.77	21.16	21.11	21.08
		RB25#0	21.71	21.64	21.72	21.02	20.95	21.03
		RB25#25	21.68	21.63	21.58	20.99	20.94	20.89
		RB50#0	21.68	21.59	21.58	20.99	20.90	20.89
	16QAM	RB1#0	21.57	21.50	21.48	20.88	20.81	20.79
		RB1#25	21.53	21.45	21.40	20.84	20.76	20.71
		RB1#49	21.54	21.35	21.27	20.85	20.66	20.58
		RB25#0	21.39	21.21	21.25	20.70	20.52	20.56
		RB25#25	21.40	21.10	21.16	20.71	20.41	20.47
		RB50#0	21.38	21.03	21.09	20.69	20.34	20.40

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.81	21.85	21.88	21.12	21.16	21.19
		RB1#38	21.75	21.80	21.88	21.06	21.11	21.19
		RB1#74	21.72	21.68	21.88	21.03	20.99	21.19
		RB36#0	21.70	21.54	21.75	21.01	20.85	21.06
		RB36#39	21.69	21.41	21.71	21.00	20.72	21.02
		RB75#0	21.64	21.29	21.57	20.95	20.60	20.88
	16QAM	RB1#0	21.64	21.13	21.43	20.95	20.44	20.74
		RB1#38	21.59	21.06	21.31	20.90	20.37	20.62
		RB1#74	21.55	21.03	21.22	20.86	20.34	20.53
		RB36#0	21.46	20.87	21.16	20.77	20.18	20.47
		RB36#39	21.35	20.77	21.16	20.66	20.08	20.47
		RB75#0	21.22	20.77	21.12	20.53	20.08	20.43
20.0	QPSK	RB1#0	21.92	21.89	22.84	21.23	21.20	22.15
		RB1#50	21.80	21.78	22.83	21.11	21.09	22.14
		RB1#99	21.77	21.74	22.84	21.08	21.05	22.15
		RB50#0	21.74	21.62	22.71	21.05	20.93	22.02
		RB50#50	21.70	21.51	22.67	21.01	20.82	21.98
		RB100#0	21.54	21.42	22.59	20.85	20.73	21.90
	16QAM	RB1#0	21.45	21.27	22.59	20.76	20.58	21.90
		RB1#50	21.42	21.20	22.49	20.73	20.51	21.80
		RB1#99	21.39	21.06	22.35	20.70	20.37	21.66
		RB50#0	21.37	21.08	22.26	20.68	20.39	21.57
		RB50#50	21.39	21.07	22.22	20.70	20.38	21.53
		RB100#0	21.32	20.97	22.10	20.63	20.28	21.41

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

For Band41: Antenna Gain = 0.51dBi

Cable Loss=1.2dB* (provided by the applicant)

Limit: ERP ≤ 33dBm

LTE Band 66:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.16	22.21	22.22	22.04	22.09	22.10
		RB1#3	22.02	22.09	22.11	21.90	21.97	21.99
		RB1#5	21.97	22.07	22.10	21.85	21.95	21.98
		RB3#0	21.88	21.98	22.11	21.76	21.86	21.99
		RB3#3	21.89	21.92	22.04	21.77	21.80	21.92
		RB6#0	21.74	21.88	22.02	21.62	21.76	21.90
	16QAM	RB1#0	21.58	21.88	21.98	21.46	21.76	21.86
		RB1#3	21.54	21.89	21.84	21.42	21.77	21.72
		RB1#5	21.45	21.76	21.85	21.33	21.64	21.73
		RB3#0	21.40	21.69	21.83	21.28	21.57	21.71
		RB3#3	21.30	21.69	21.79	21.18	21.57	21.67
		RB6#0	21.16	21.61	21.75	21.04	21.49	21.63
3.0	QPSK	RB1#0	22.19	22.30	22.14	22.07	22.18	22.02
		RB1#8	22.10	22.15	22.08	21.98	22.03	21.96
		RB1#14	22.08	22.16	22.02	21.96	22.04	21.90
		RB6#0	22.15	22.22	22.03	22.03	22.10	21.91
		RB6#9	22.17	22.25	22.08	22.05	22.13	21.96
		RB15#0	22.20	22.32	22.14	22.08	22.20	22.02
	16QAM	RB1#0	22.26	22.40	22.20	22.14	22.28	22.08
		RB1#8	22.25	22.47	22.25	22.13	22.35	22.13
		RB1#14	22.22	22.44	22.28	22.10	22.32	22.16
		RB6#0	22.22	22.44	22.33	22.10	22.32	22.21
		RB6#9	22.10	22.36	22.23	21.98	22.24	22.11
		RB15#0	22.03	22.32	22.14	21.91	22.20	22.02

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	22.44	22.22	22.36	22.32	22.10
		RB1#13	22.46	22.27	22.24	22.34	22.15	22.12
		RB1#24	22.44	22.12	22.16	22.32	22.00	22.04
		RB15#0	22.45	22.17	22.22	22.33	22.05	22.10
		RB15#10	22.45	22.22	22.23	22.33	22.10	22.11
		RB25#0	22.51	22.29	22.24	22.39	22.17	22.12
	16QAM	RB1#0	22.50	22.36	22.26	22.38	22.24	22.14
		RB1#13	22.51	22.41	22.27	22.39	22.29	22.15
		RB1#24	22.54	22.42	22.30	22.42	22.30	22.18
		RB15#0	22.54	22.39	22.30	22.42	22.27	22.18
		RB15#10	22.56	22.38	22.25	22.44	22.26	22.13
		RB25#0	22.53	22.37	22.15	22.41	22.25	22.03
10.0	QPSK	RB1#0	22.31	22.37	22.21	22.19	22.25	22.09
		RB1#25	22.17	22.32	22.07	22.05	22.20	21.95
		RB1#49	22.09	22.22	21.97	21.97	22.10	21.85
		RB25#0	22.13	22.24	21.99	22.01	22.12	21.87
		RB25#25	22.20	22.27	21.99	22.08	22.15	21.87
		RB50#0	22.25	22.32	22.03	22.13	22.20	21.91
	16QAM	RB1#0	22.33	22.33	22.07	22.21	22.21	21.95
		RB1#25	22.39	22.38	22.09	22.27	22.26	21.97
		RB1#49	22.35	22.43	22.13	22.23	22.31	22.01
		RB25#0	22.30	22.40	22.09	22.18	22.28	21.97
		RB25#25	22.30	22.32	22.06	22.18	22.20	21.94
		RB50#0	22.27	22.25	21.99	22.15	22.13	21.87

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	22.45	22.46	22.51	22.33	22.34	22.39
		RB1#38	22.29	22.35	22.51	22.17	22.23	22.39
		RB1#74	22.17	22.31	22.44	22.05	22.19	22.32
		RB36#0	22.21	22.34	22.46	22.09	22.22	22.34
		RB36#39	22.28	22.37	22.47	22.16	22.25	22.35
		RB75#0	22.35	22.44	22.48	22.23	22.32	22.36
	16QAM	RB1#0	22.34	22.43	22.50	22.22	22.31	22.38
		RB1#38	22.38	22.45	22.58	22.26	22.33	22.46
		RB1#74	22.39	22.48	22.55	22.27	22.36	22.43
		RB36#0	22.45	22.52	22.56	22.33	22.40	22.44
		RB36#39	22.30	22.39	22.41	22.18	22.27	22.29
		RB75#0	22.29	22.33	22.40	22.17	22.21	22.28
20.0	QPSK	RB1#0	22.68	22.67	22.81	22.56	22.55	22.69
		RB1#50	22.70	22.68	22.81	22.58	22.56	22.69
		RB1#99	22.69	22.56	22.68	22.57	22.44	22.56
		RB50#0	22.71	22.64	22.68	22.59	22.52	22.56
		RB50#50	22.76	22.67	22.68	22.64	22.55	22.56
		RB100#0	22.83	22.67	22.76	22.71	22.55	22.64
	16QAM	RB1#0	22.87	22.74	22.84	22.75	22.62	22.72
		RB1#50	22.89	22.75	22.85	22.77	22.63	22.73
		RB1#99	22.86	22.71	22.89	22.74	22.59	22.77
		RB50#0	22.83	22.74	22.92	22.71	22.62	22.80
		RB50#50	22.68	22.59	22.89	22.56	22.47	22.77
		RB100#0	22.52	22.60	22.78	22.40	22.48	22.66

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

For Band66: Antenna Gain = 0.68dBi

Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP ≤ 30dBm

LTE Band 71:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.28	22.41	22.59	20.04	20.17	20.35
		RB1#13	22.30	22.30	22.49	20.06	20.06	20.25
		RB1#24	22.18	22.17	22.47	19.94	19.93	20.23
		RB15#0	22.26	22.21	22.49	20.02	19.97	20.25
		RB15#10	22.30	22.26	22.55	20.06	20.02	20.31
		RB25#0	22.35	22.28	22.54	20.11	20.04	20.30
	16QAM	RB1#0	22.41	22.34	22.59	20.17	20.10	20.35
		RB1#13	22.40	22.37	22.60	20.16	20.13	20.36
		RB1#24	22.39	22.34	22.61	20.15	20.10	20.37
		RB15#0	22.42	22.36	22.65	20.18	20.12	20.41
		RB15#10	22.32	22.24	22.55	20.08	20.00	20.31
		RB25#0	22.17	22.23	22.46	19.93	19.99	20.22
10.0	QPSK	RB1#0	22.31	22.38	22.63	20.07	20.14	20.39
		RB1#25	22.19	22.38	22.59	19.95	20.14	20.35
		RB1#49	22.11	22.37	22.59	19.87	20.13	20.35
		RB25#0	22.19	22.41	22.62	19.95	20.17	20.38
		RB25#25	22.25	22.42	22.69	20.01	20.18	20.45
		RB50#0	22.33	22.41	22.70	20.09	20.17	20.46
	16QAM	RB1#0	22.34	22.42	22.73	20.10	20.18	20.49
		RB1#25	22.39	22.43	22.74	20.15	20.19	20.50
		RB1#49	22.42	22.45	22.70	20.18	20.21	20.46
		RB25#0	22.41	22.45	22.69	20.17	20.21	20.45
		RB25#25	22.25	22.36	22.69	20.01	20.12	20.45
		RB50#0	22.24	22.32	22.66	20.00	20.08	20.42

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.61	22.55	22.58	20.37	20.31	20.34
		RB1#38	22.59	22.39	22.51	20.35	20.15	20.27
		RB1#74	22.59	22.24	22.39	20.35	20.00	20.15
		RB36#0	22.67	22.30	22.39	20.43	20.06	20.15
		RB36#39	22.72	22.37	22.46	20.48	20.13	20.22
		RB75#0	22.72	22.44	22.49	20.48	20.20	20.25
	16QAM	RB1#0	22.73	22.49	22.48	20.49	20.25	20.24
		RB1#38	22.74	22.50	22.50	20.50	20.26	20.26
		RB1#74	22.79	22.51	22.48	20.55	20.27	20.24
		RB36#0	22.74	22.52	22.49	20.50	20.28	20.25
		RB36#39	22.69	22.48	22.42	20.45	20.24	20.18
		RB75#0	22.65	22.49	22.30	20.41	20.25	20.06
20.0	QPSK	RB1#0	22.35	22.40	22.75	20.11	20.16	20.51
		RB1#50	22.20	22.31	22.76	19.96	20.07	20.52
		RB1#99	22.17	22.30	22.76	19.93	20.06	20.52
		RB50#0	22.23	22.31	22.79	19.99	20.07	20.55
		RB50#50	22.29	22.35	22.80	20.05	20.11	20.56
		RB100#0	22.32	22.39	22.80	20.08	20.15	20.56
	16QAM	RB1#0	22.33	22.40	22.84	20.09	20.16	20.60
		RB1#50	22.39	22.47	22.86	20.15	20.23	20.62
		RB1#99	22.41	22.48	22.87	20.17	20.24	20.63
		RB50#0	22.46	22.45	22.85	20.22	20.21	20.61
		RB50#50	22.45	22.30	22.72	20.21	20.06	20.48
		RB100#0	22.45	22.14	22.71	20.21	19.90	20.47

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)

For Band71: Antenna Gain = 0.41dBi = -1.74dBd (0dBd=2.15dBi)

Cable Loss=0.5dB*(provided by the applicant)

Limit: ERP ≤ 34.77dBm

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

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	3.64	13
	Middle	3.80	13
	High	3.92	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.62	13
	Middle	3.75	13
	High	3.73	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	4.68	13
	Middle	4.87	13
	High	4.78	13
HSDPA (16QAM)	Low	5.71	13
	Middle	4.49	13
	High	4.28	13
HSUPA (QPSK)	Low	5.98	13
	Middle	4.17	13
	High	4.11	13
HSPA+	Low	5.87	13
	Middle	5.69	13
	High	4.05	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	3.84	13
	Middle	3.71	13
	High	4.23	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.55	13
	Middle	3.74	13
	High	3.76	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	4.74	13
	Middle	5.78	13
	High	5.42	13
HSDPA (16QAM)	Low	4.17	13
	Middle	4.52	13
	High	4.97	13
HSUPA (QPSK)	Low	4.14	13
	Middle	4.24	13
	High	4.39	13
HSPA+	Low	5.83	13
	Middle	5.77	13
	High	4.19	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	4.65	13
	Middle	5.36	13
	High	5.45	13
HSDPA (16QAM)	Low	4.39	13
	Middle	4.28	13
	High	4.91	13
HSUPA (QPSK)	Low	4.47	13
	Middle	4.29	13
	High	4.32	13
HSPA+	Low	5.63	13
	Middle	5.87	13
	High	4.39	13

LTE Band 2 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.13	4.26	4.38	13	Pass
QPSK (100RB Size)	4.43	5.04	4.93	13	Pass
16QAM (1RB Size)	4.17	5.13	5.74	13	Pass
16QAM (100RB Size)	5.45	6.00	5.94	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.06	3.94	4.29	13	Pass
QPSK (100RB Size)	5.19	5.33	5.01	13	Pass
16QAM (1RB Size)	4.96	5.04	5.19	13	Pass
16QAM (100RB Size)	6.17	6.23	5.94	13	Pass

LTE Band 5& Band 26(Part 22H) 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.05	5.67	5.81	13	Pass
QPSK (50RB Size)	5.69	5.56	5.74	13	Pass
16QAM (1RB Size)	5.92	5.64	5.51	13	Pass
16QAM (50RB Size)	5.79	5.49	5.69	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.25	3.59	3.54	13	Pass
QPSK (100RB Size)	5.62	5.68	5.74	13	Pass
16QAM (1RB Size)	3.09	3.35	3.43	13	Pass
16QAM (100RB Size)	6.75	6.72	6.61	13	Pass

LTE Band 12 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	2.41	2.61	2.99	13	Pass
QPSK (50RB Size)	4.26	4.41	4.52	13	Pass
16QAM (1RB Size)	3.77	3.59	3.94	13	Pass
16QAM (50RB Size)	5.28	5.36	5.42	13	Pass

LTE Band 25 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.14	4.17	4.32	13	Pass
QPSK (100RB Size)	5.3	5.39	5.42	13	Pass
16QAM (1RB Size)	4.25	4.11	4.15	13	Pass
16QAM (100RB Size)	6.29	6.29	6.35	13	Pass

LTE Band 26(Part 90S) 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.02	4.07	4.12	13	Pass
QPSK (50RB Size)	5.46	5.49	5.52	13	Pass
16QAM (1RB Size)	3.75	3.91	4.02	13	Pass
16QAM (50RB Size)	6.09	6.03	6.05	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.14	3.17	3.23	13	Pass
QPSK (100RB Size)	5.13	5.19	5.22	13	Pass
16QAM (1RB Size)	4.05	4.01	4.08	13	Pass
16QAM (100RB Size)	5.29	5.09	5.35	13	Pass

LTE Band 66 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	2.54	2.57	2.43	13	Pass
QPSK (100RB Size)	5.36	5.29	5.27	13	Pass
16QAM (1RB Size)	3.05	3.15	3.08	13	Pass
16QAM (100RB Size)	5.49	5.43	5.37	13	Pass

LTE Band 71 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	2.83	2.77	2.85	13	Pass
QPSK (100RB Size)	5.48	5.39	5.47	13	Pass
16QAM (1RB Size)	3.02	3.05	3.07	13	Pass
16QAM (100RB Size)	5.41	5.33	5.29	13	Pass

FCC §2.1049, §22.917, §22.905 & §24.238& §27.53 & §90.209- OCCUPIED BANDWIDTH

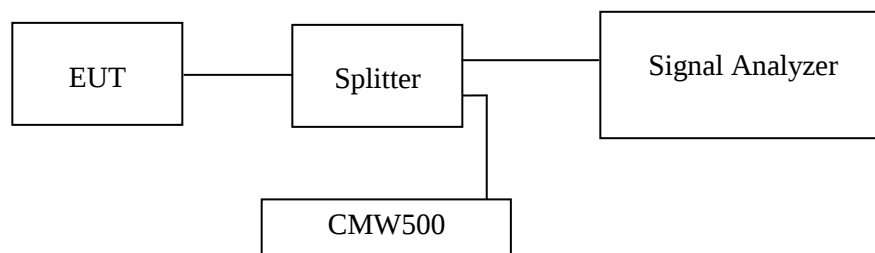
Applicable Standard

FCC 47 §2.1049, §22.917, §22.905, §24.238, §27.53 and §90.209.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.



Test Data

Environmental Conditions

Temperature:	23~25 °C
Relative Humidity:	50~60 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-06-08 to 2022-07-13.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables and plots.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	128	824.2	246.00	316
	189	836.4	247.00	317
	251	848.8	246.00	318
EGPRS(8DPSK)	128	824.2	248.00	323
	189	836.4	250.00	322
	251	848.8	249.00	325

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.17	4.74
	836.6	4.17	4.74
	846.6	4.16	4.71
HSDPA	826.4	4.17	4.74
	836.6	4.16	4.71
	846.6	4.16	4.71
HSUPA	826.4	4.17	4.74
	836.6	4.16	4.73
	846.6	4.16	4.73

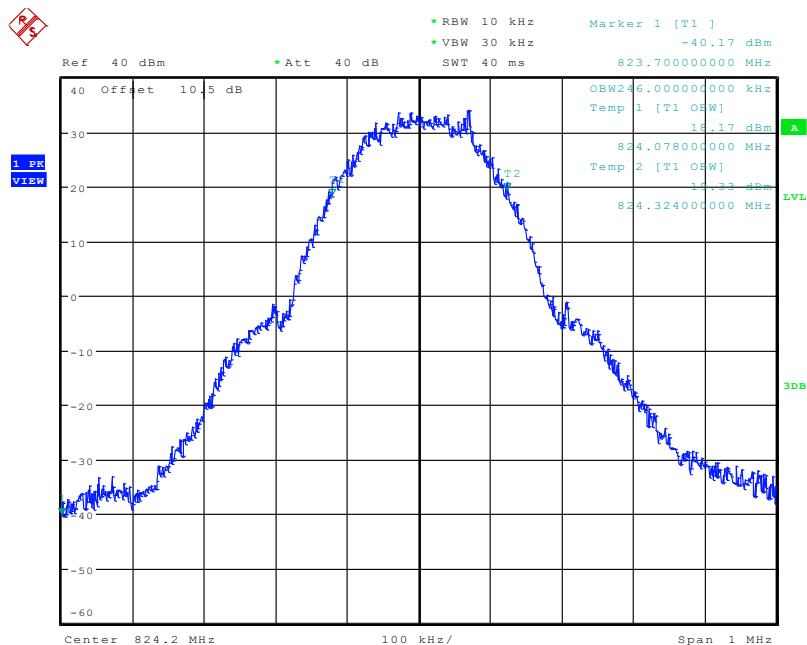
PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	251	324
	661	1880.0	251	323
	810	1909.8	251	322
EGPRS(8DPSK)	512	1850.2	252	325
	661	1880.0	251	321
	810	1909.8	252	314

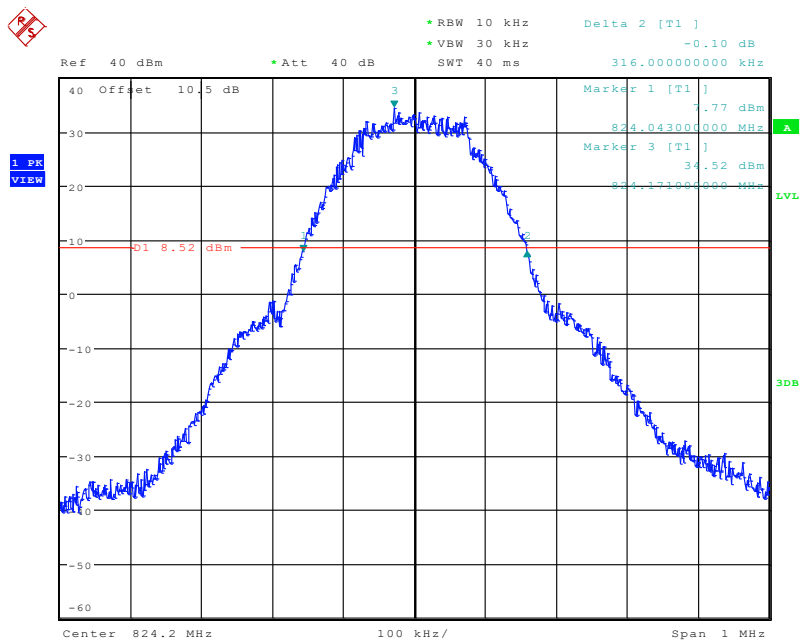
	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.19	4.76
	1880.0	4.20	4.80
	1907.6	4.19	4.74
HSDPA	1852.4	4.17	4.74
	1880.0	4.20	5.16
	1907.6	4.17	4.76
HSUPA	1852.4	4.17	4.74
	1880.0	4.19	4.92
	1907.6	4.19	4.73

AWS Band (Part 27)

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.22	4.92
	1732.6	4.19	4.77
	1752.6	4.17	4.73
HSDPA	1712.4	4.20	4.85
	1732.6	4.19	4.85
	1752.6	4.19	4.73
HSUPA	1712.4	4.20	4.74
	1732.6	4.19	4.79
	1752.6	4.17	4.74

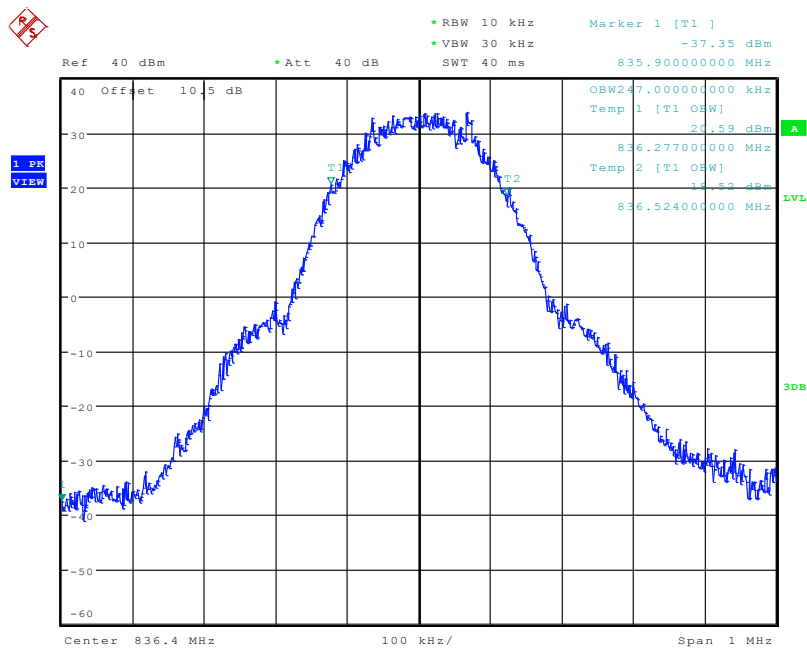
Cellular Band (Part 22H)**26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, Low channel**

Date: 8.JUN.2022 11:00:23

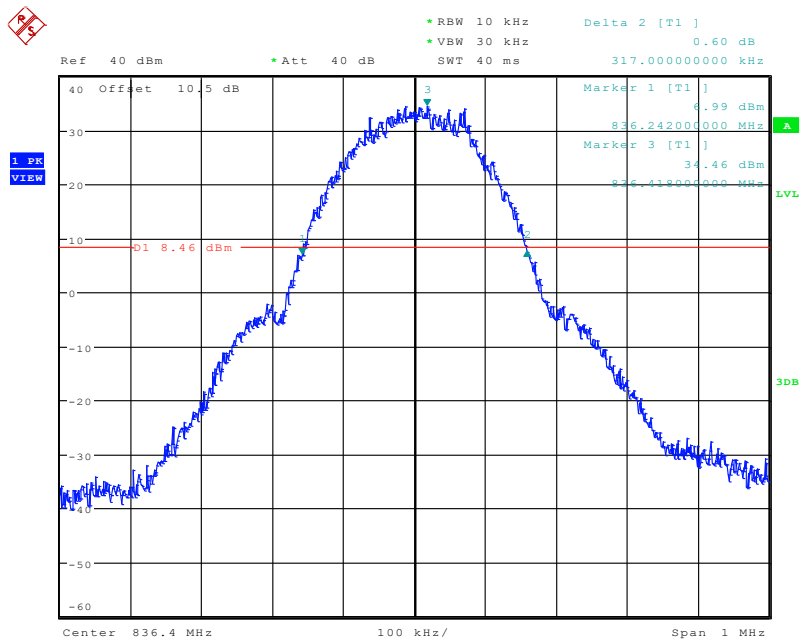


Date: 8.JUN.2022 11:00:49

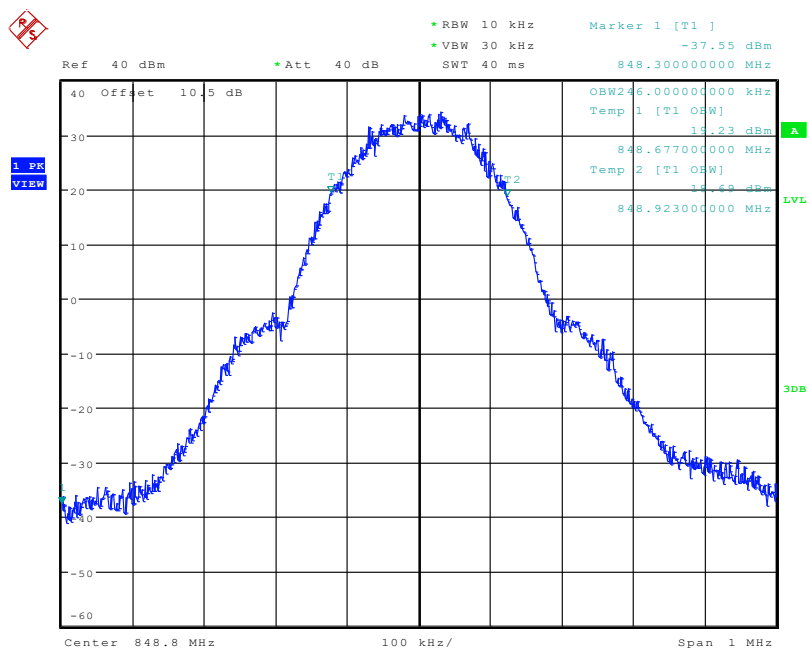
26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



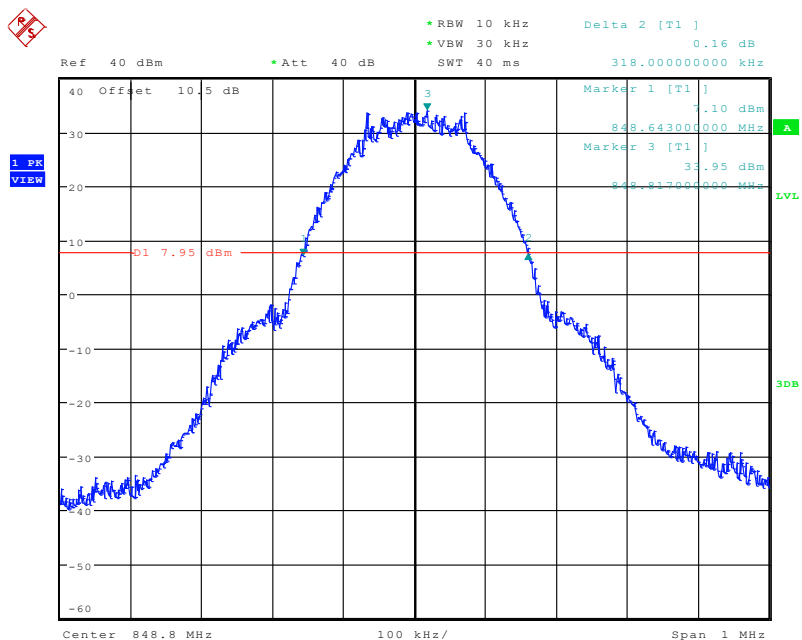
Date: 8.JUN.2022 11:11:51



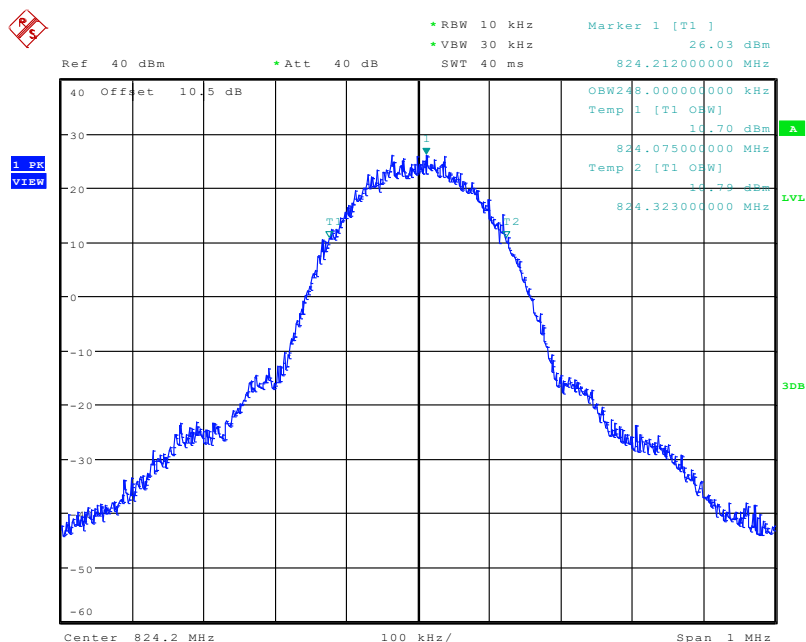
Date: 8.JUN.2022 11:12:17

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

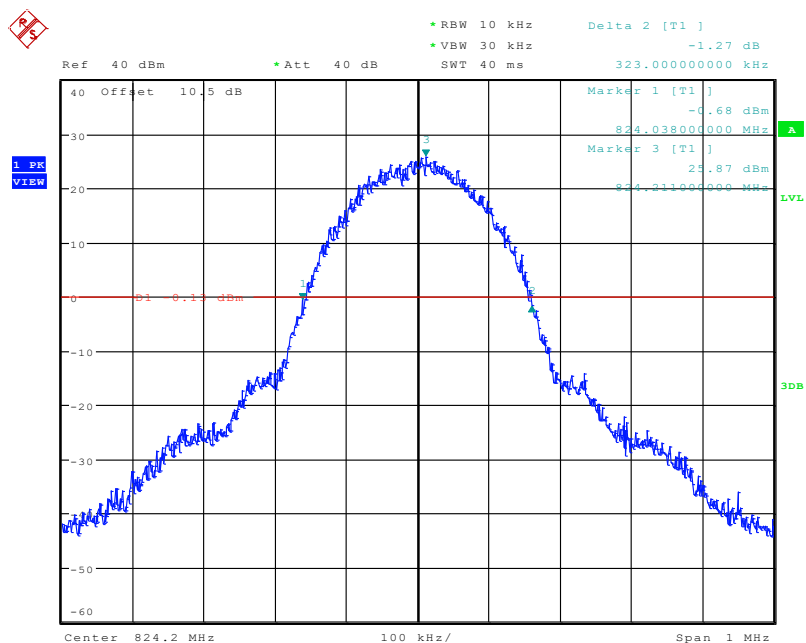
Date: 8.JUN.2022 11:14:12



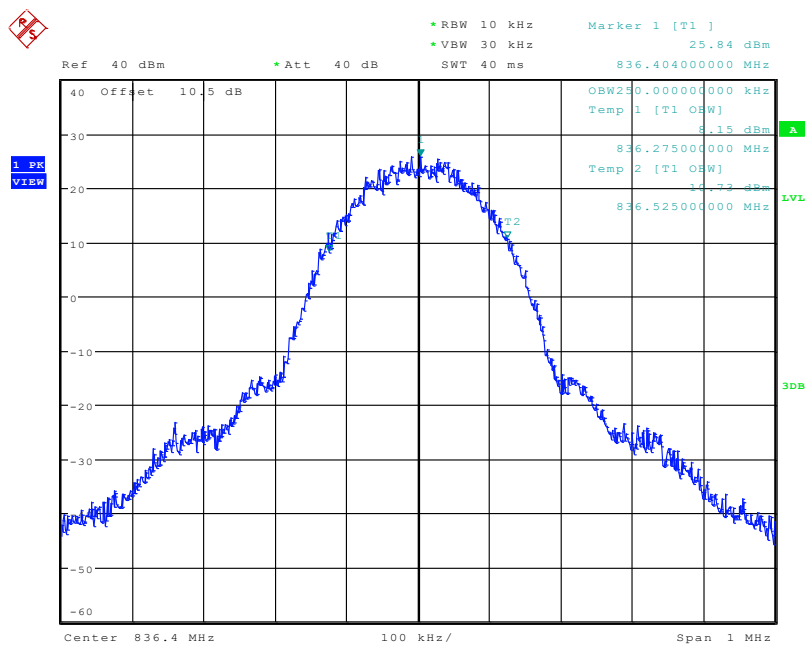
Date: 8.JUN.2022 11:14:38

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

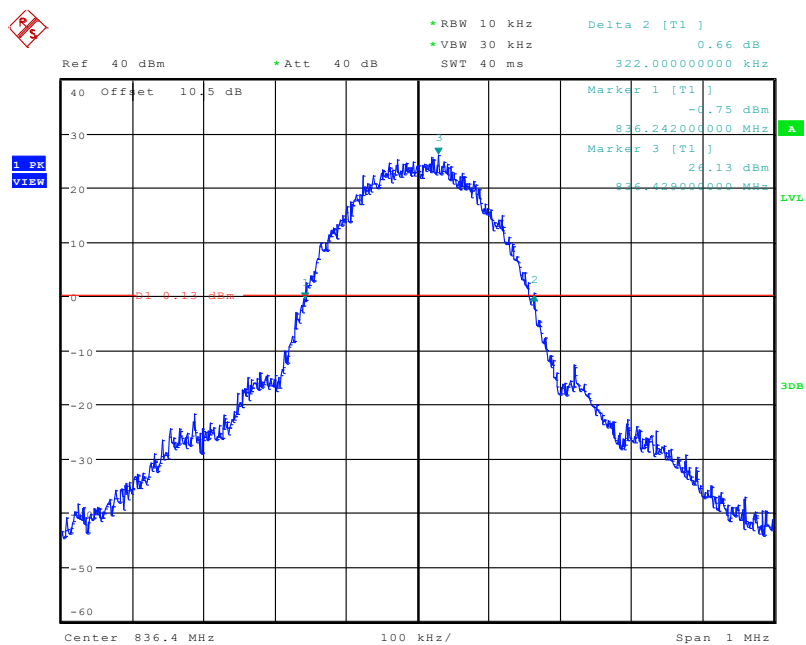
Date: 13.JUL.2022 12:03:28



Date: 13.JUL.2022 12:04:06

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

Date: 13.JUL.2022 12:08:34

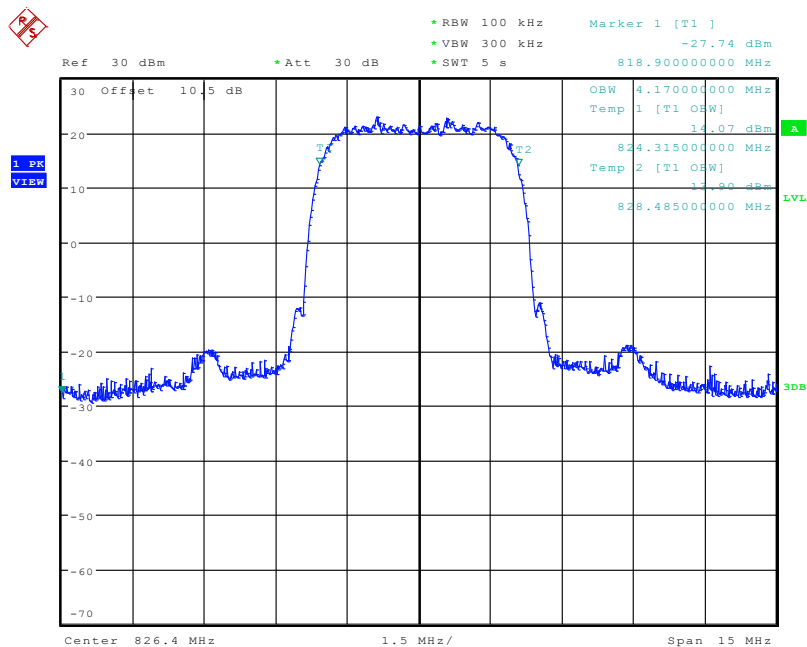


Date: 13.JUL.2022 12:09:12

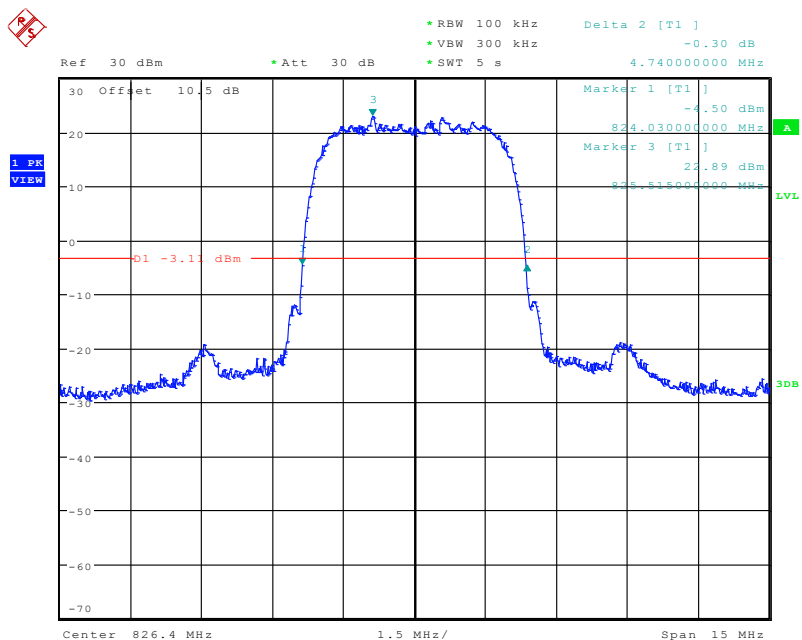


FCC -2G,3G,4G

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

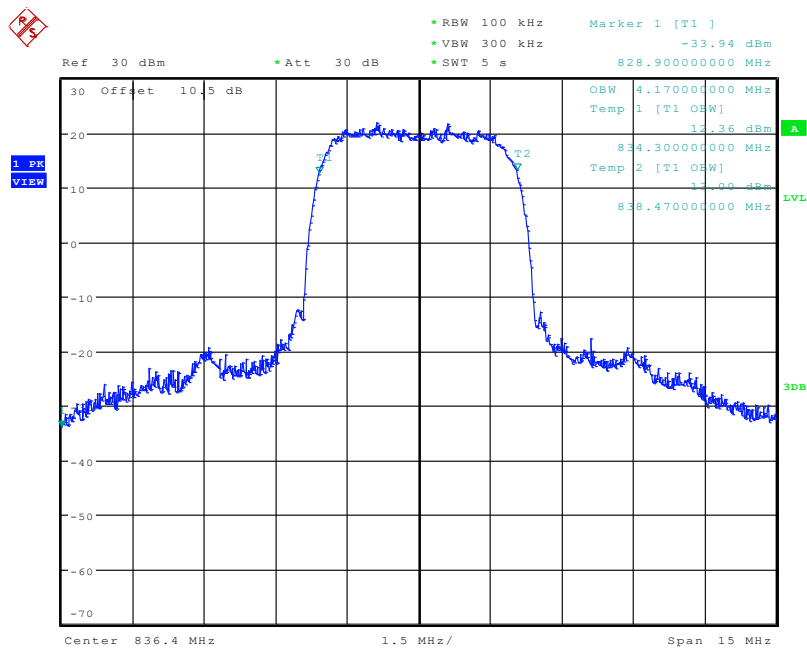


Date: 8.JUN.2022 15:29:11

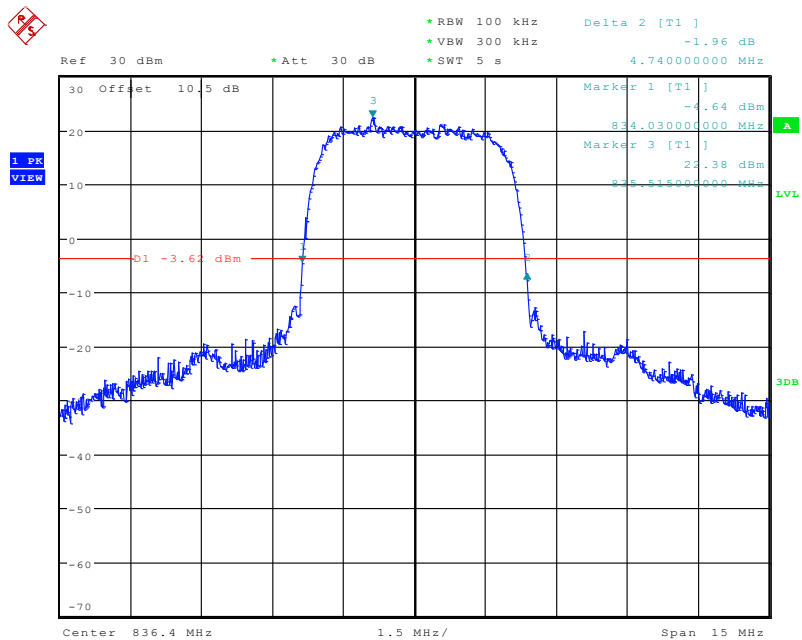


Date: 8.JUN.2022 15:29:47

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

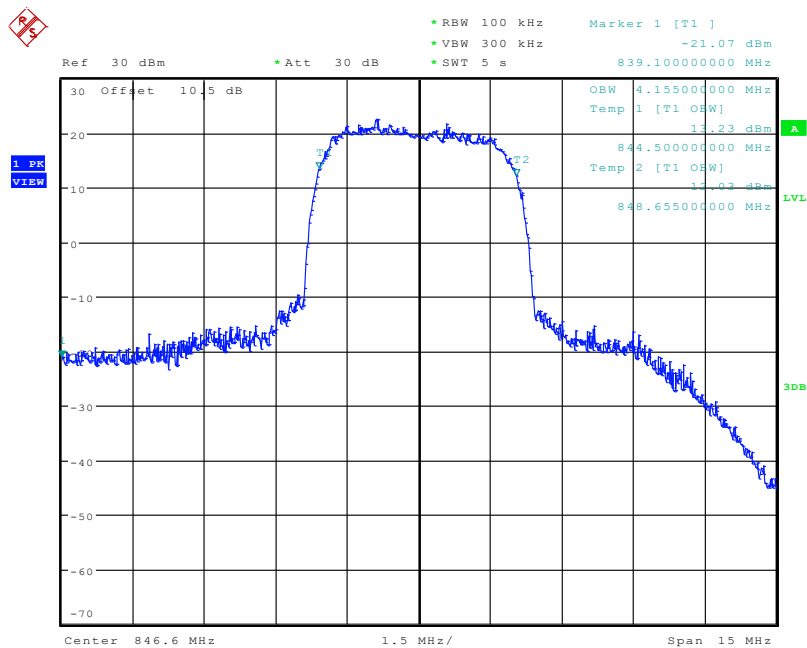


Date: 8.JUN.2022 15:41:17

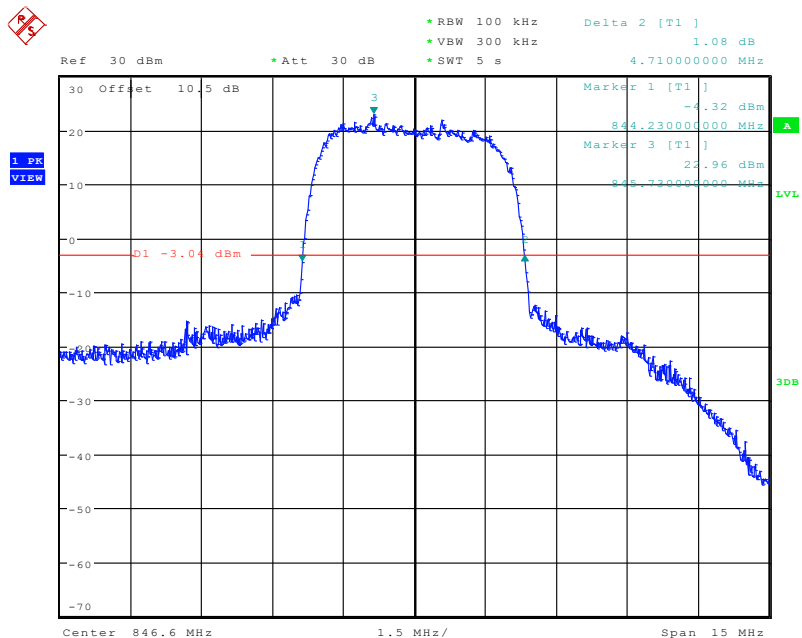


Date: 8.JUN.2022 15:41:53

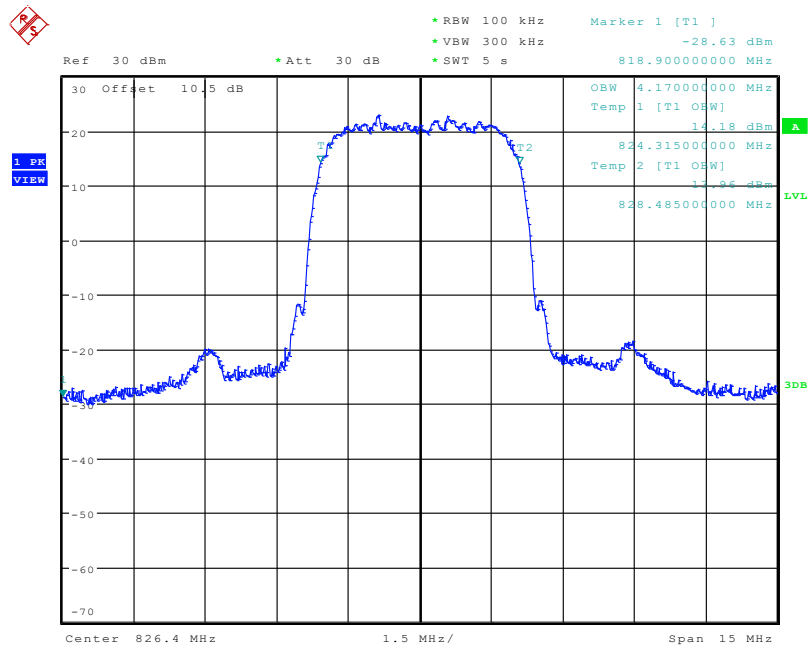
26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



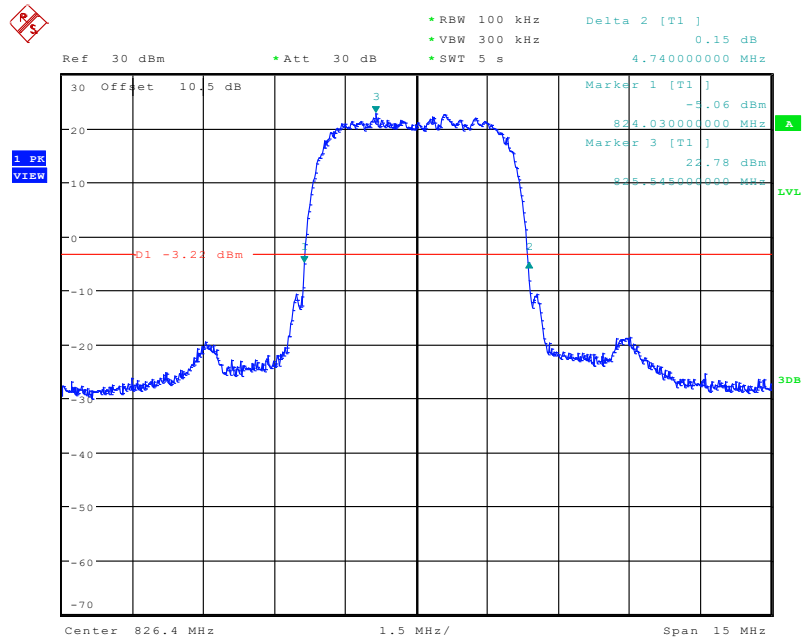
Date: 8.JUN.2022 15:52:35



Date: 8.JUN.2022 15:53:11

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

Date: 8.JUN.2022 15:32:44



Date: 8.JUN.2022 15:33:20

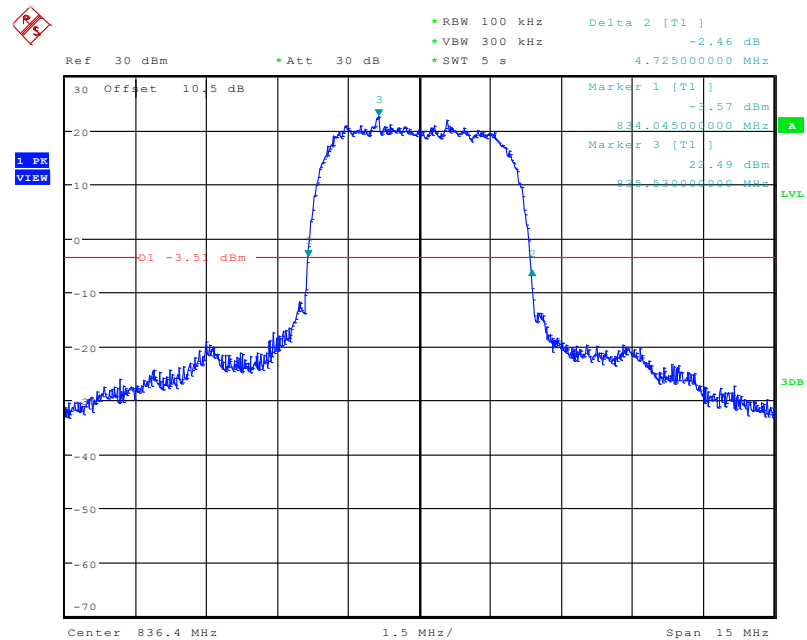
1. PK
VIZW

Ref 30 dBm * Att 30 dB • RBW 100 kHz • VBW 300 kHz • SWT 5 s Marker 1 [T1] -31.97 dBm 828.900000000 MHz

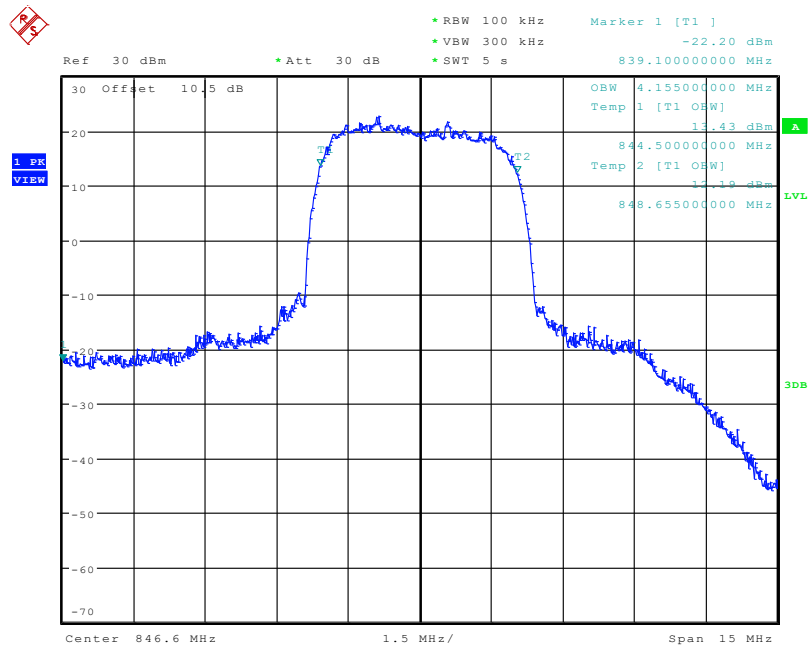
OBW 4.155000000 MHz
Temp 1 [T1 OBW] 13.17 dBm
834.315000000 MHz
Temp 2 [T1 OBW] 12.95 dBm
838.470000000 MHz

Center 836.4 MHz 1.5 MHz/ Span 15 MHz

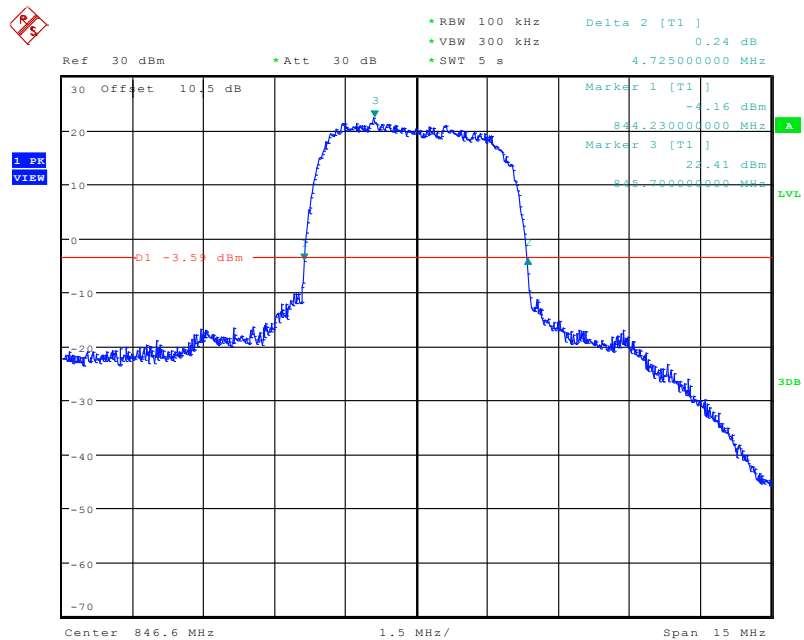
Date: 8.JUN.2022 15:44:09



Date: 8.JUN.2022 15:44:45

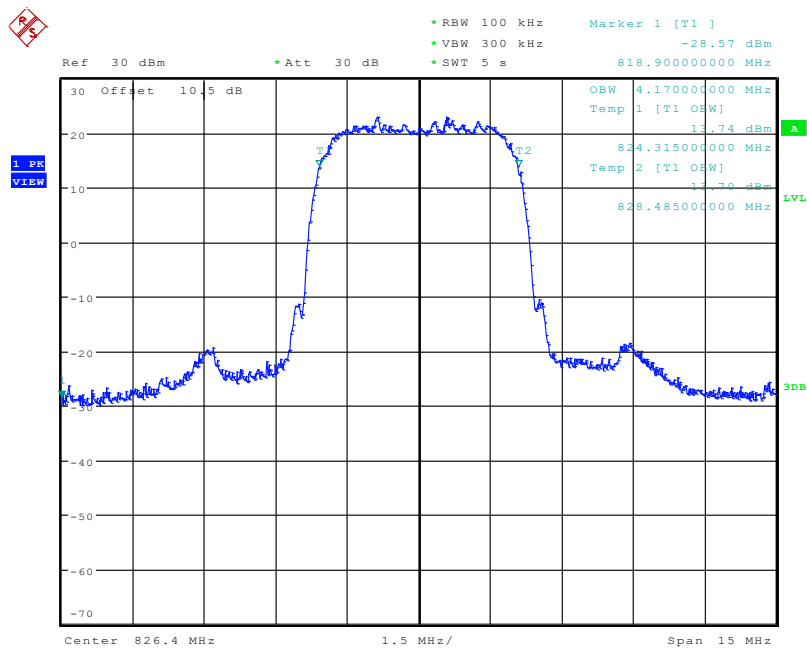
26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel

Date: 8.JUN.2022 15:56:04

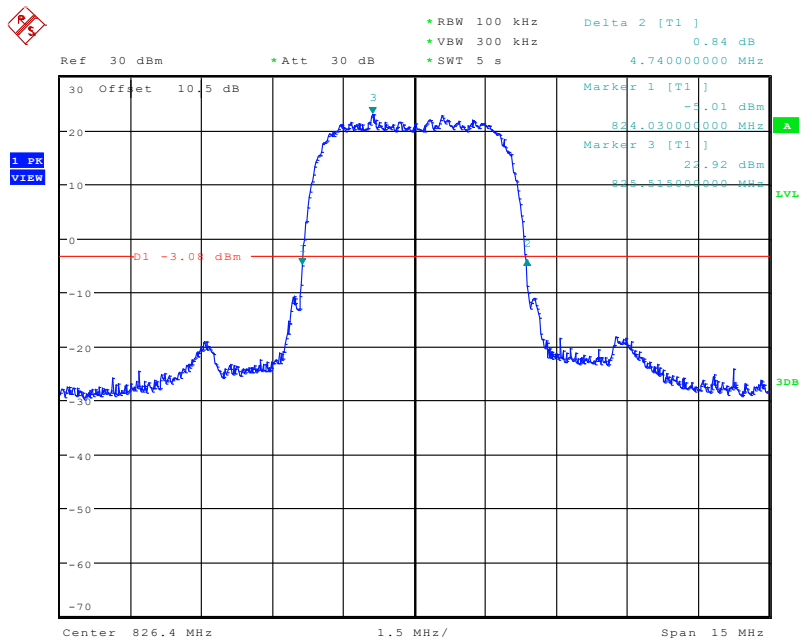


Date: 8.JUN.2022 15:56:40

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

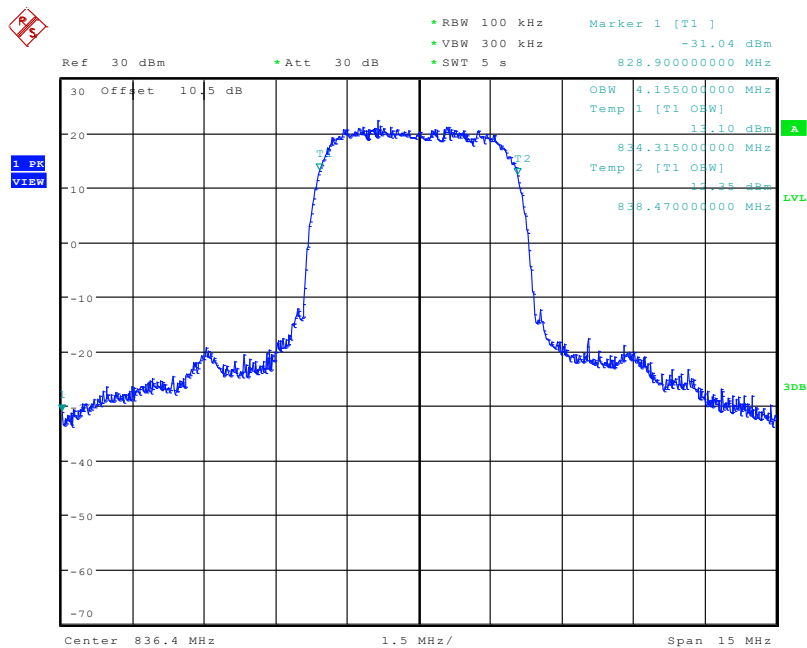


Date: 8.JUN.2022 15:36:11

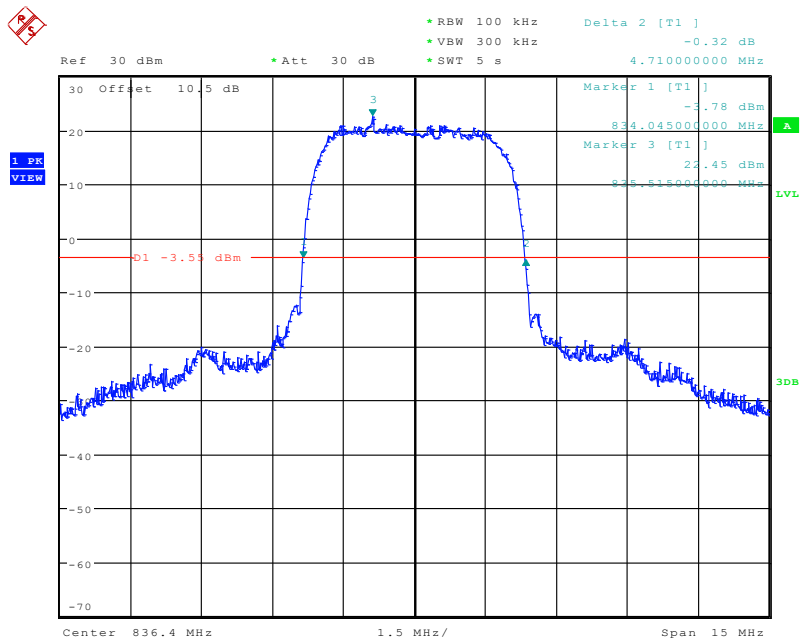


Date: 8.JUN.2022 15:36:47

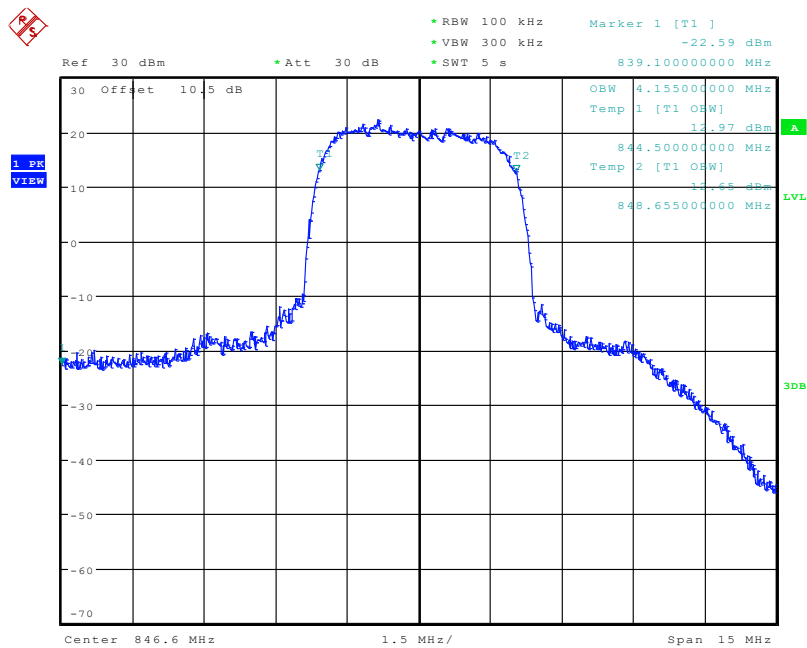
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel



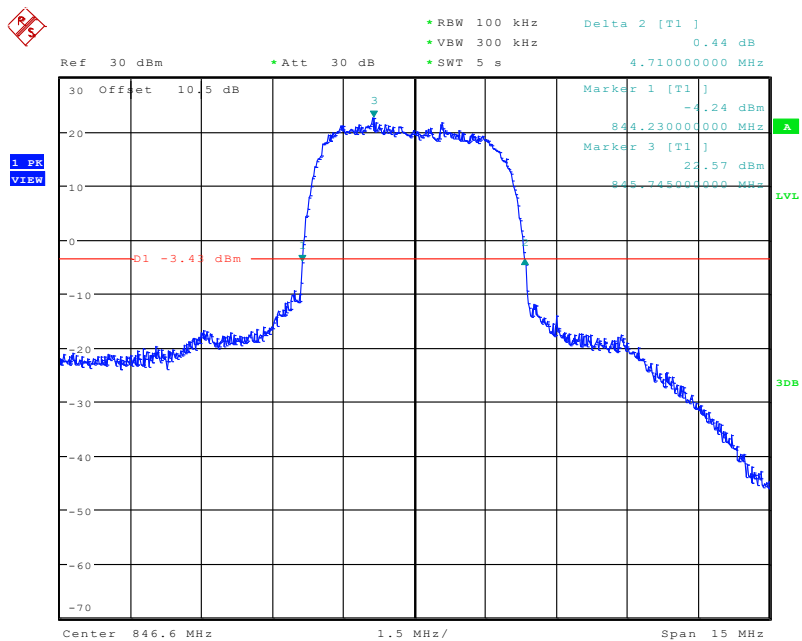
Date: 8.JUN.2022 15:47:00



Date: 8.JUN.2022 15:47:36

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

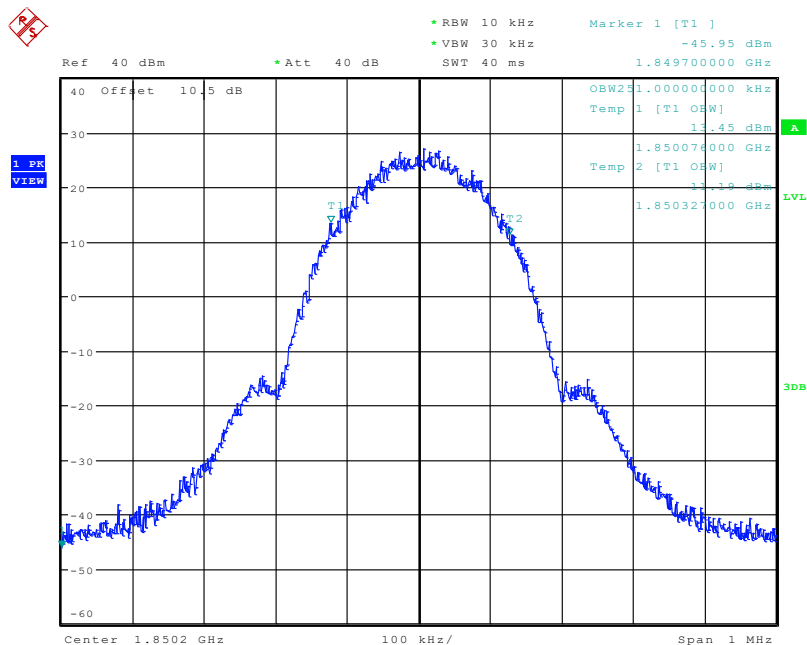
Date: 8.JUN.2022 15:59:47



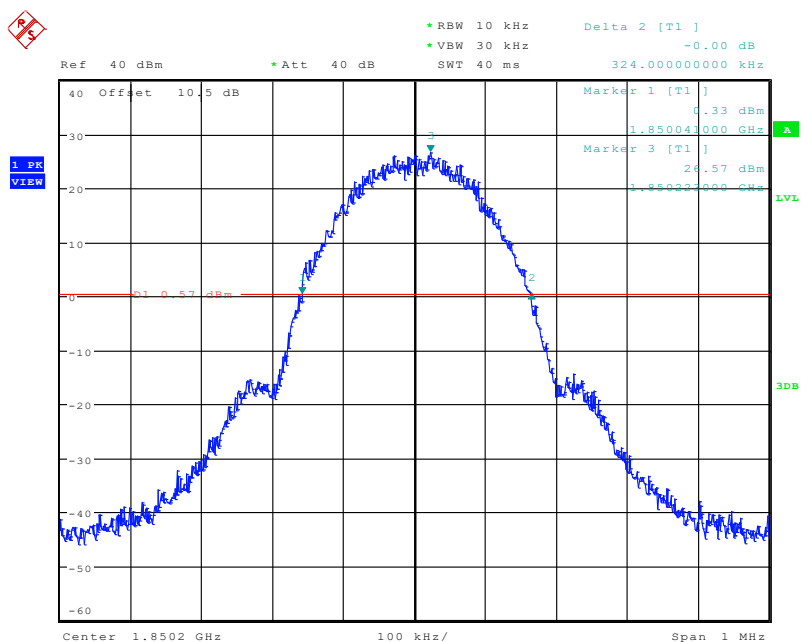
Date: 8.JUN.2022 16:00:24

PCS Band (Part 24E)

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

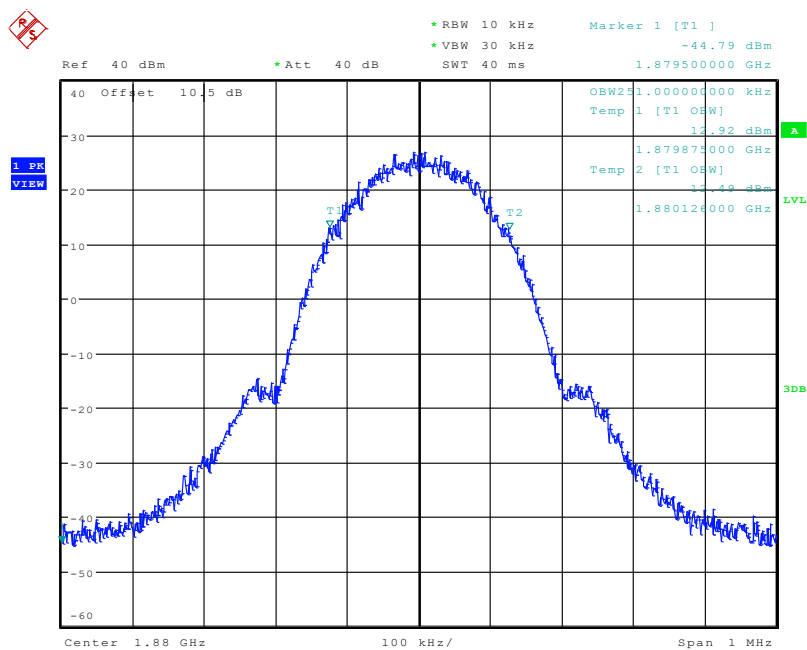


Date: 8.JUN.2022 11:31:57

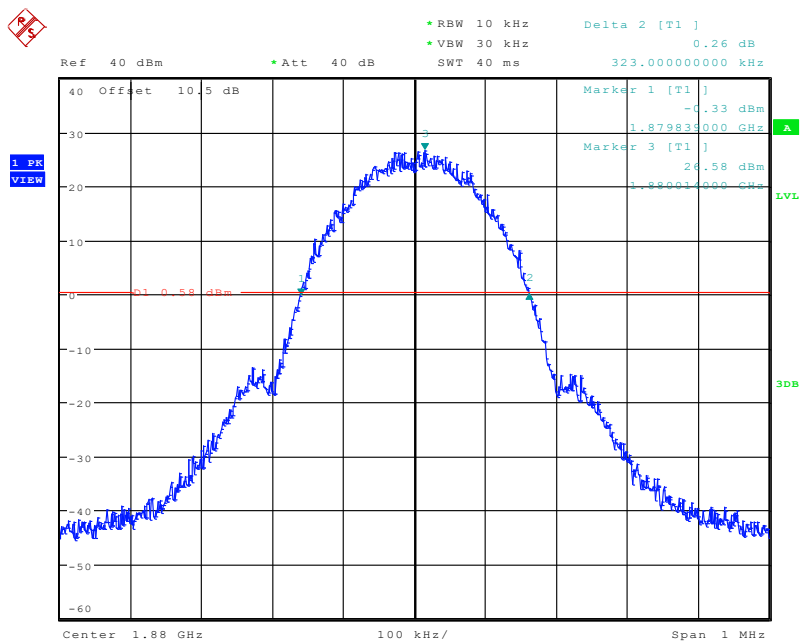


Date: 8.JUN.2022 11:32:23

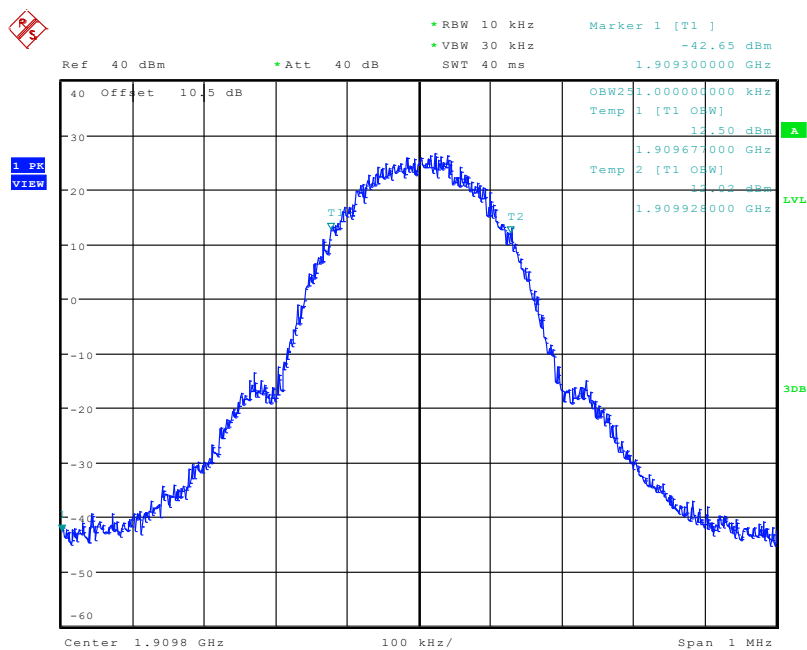
26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



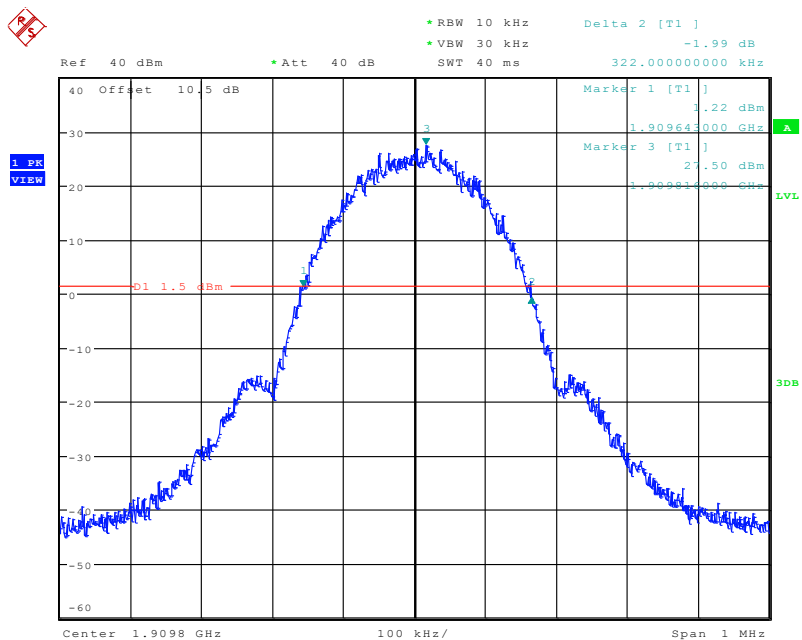
Date: 8.JUN.2022 11:40:46



Date: 8.JUN.2022 11:41:12

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

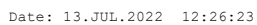
Date: 8.JUN.2022 11:44:50

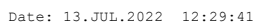


Date: 8.JUN.2022 11:45:16

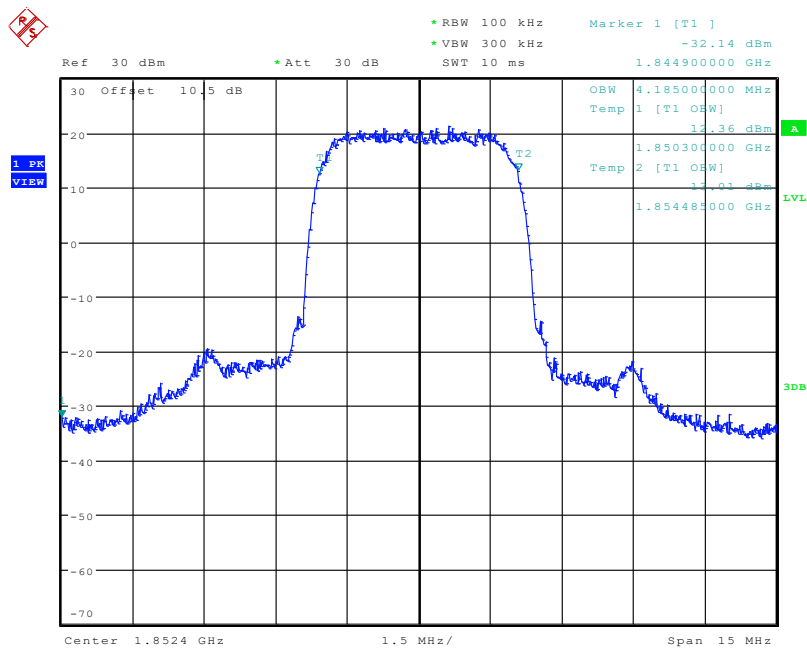


FCC -2G,3G,4G

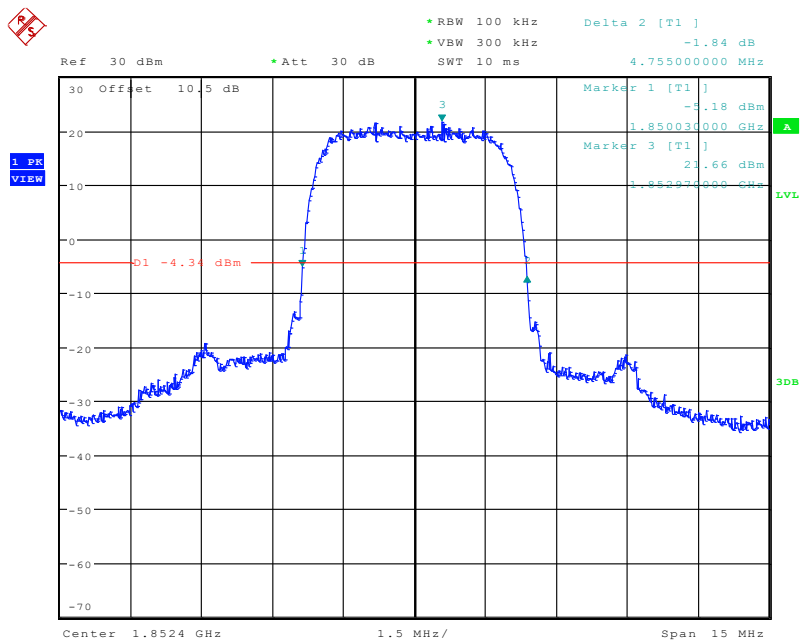




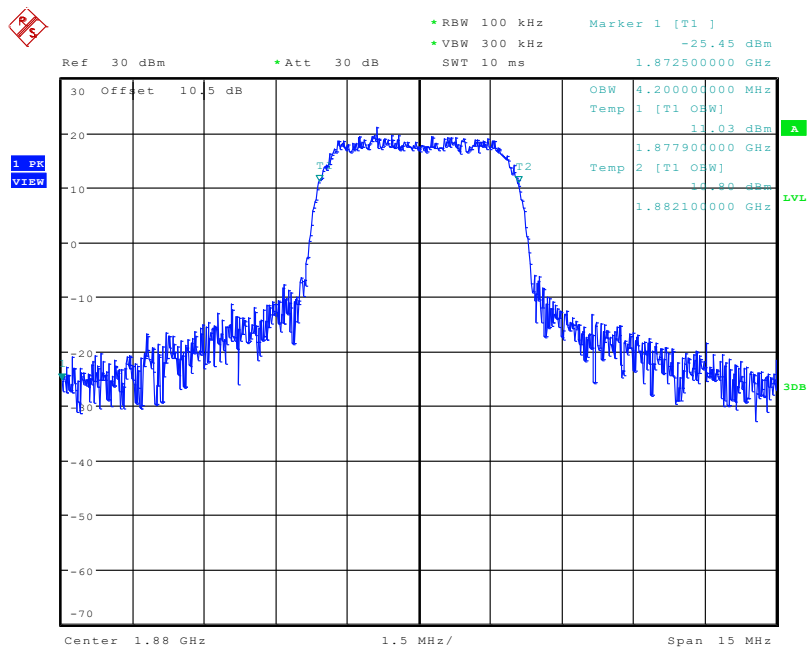
26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



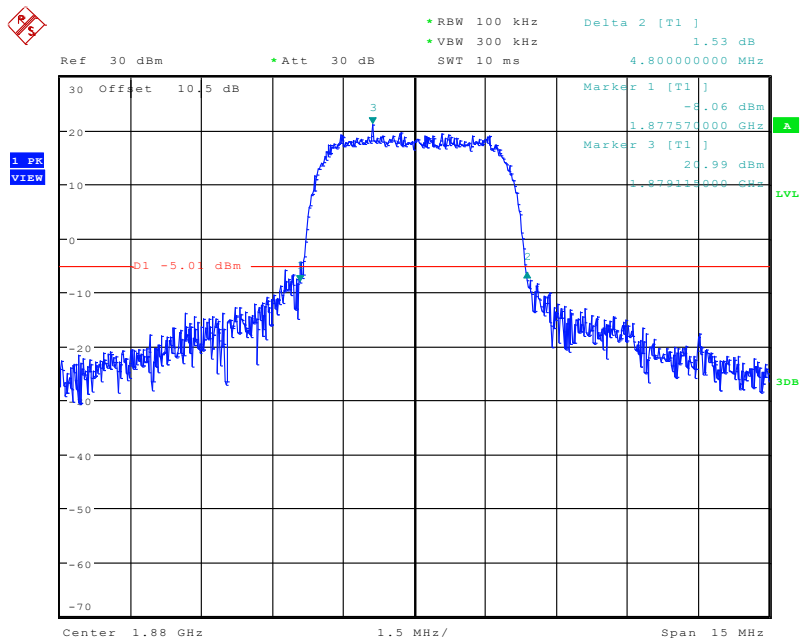
Date: 8.JUN.2022 14:28:32



Date: 8.JUN.2022 14:28:58

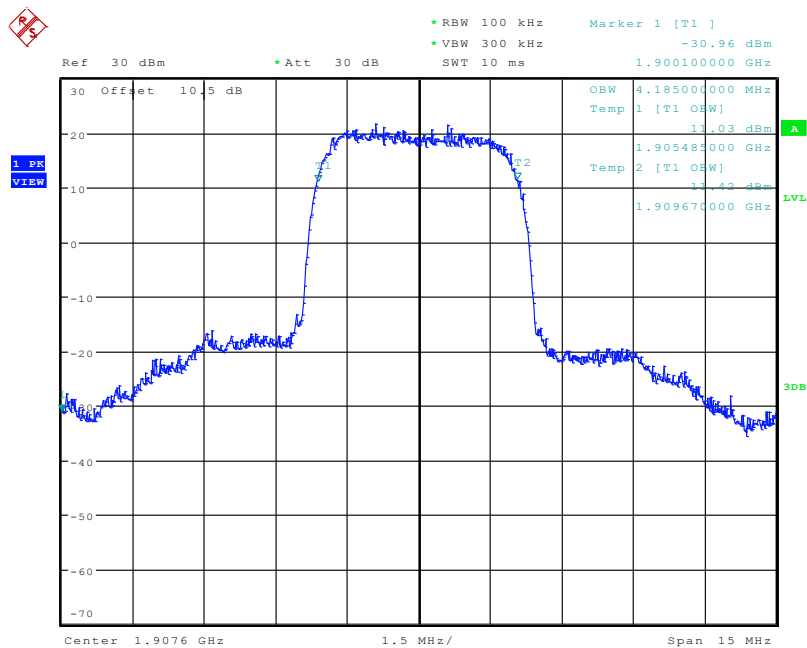
26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel

Date: 8.JUN.2022 14:48:04

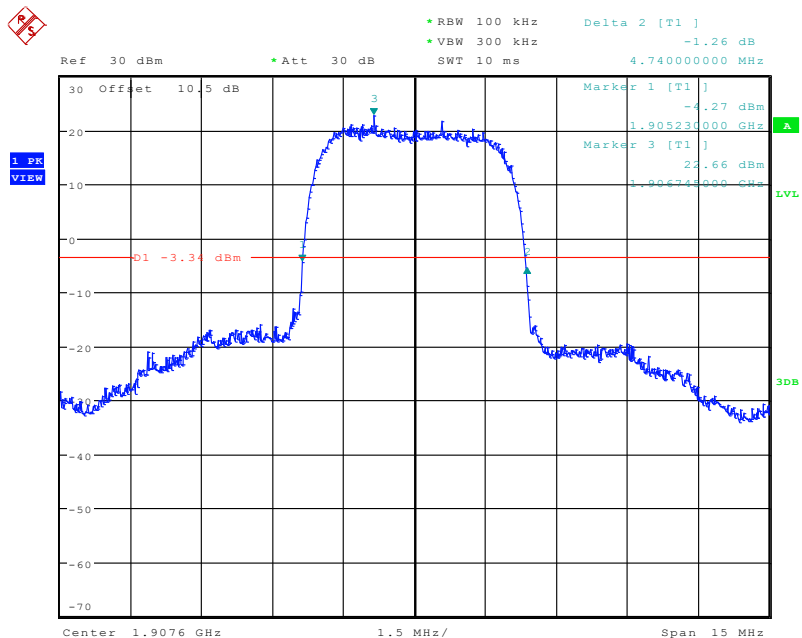


Date: 8.JUN.2022 14:48:30

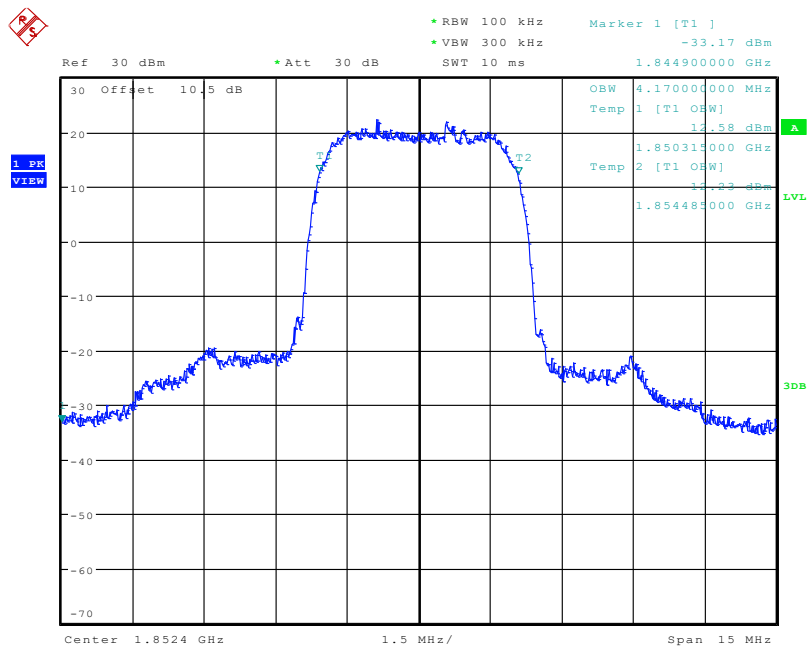
26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



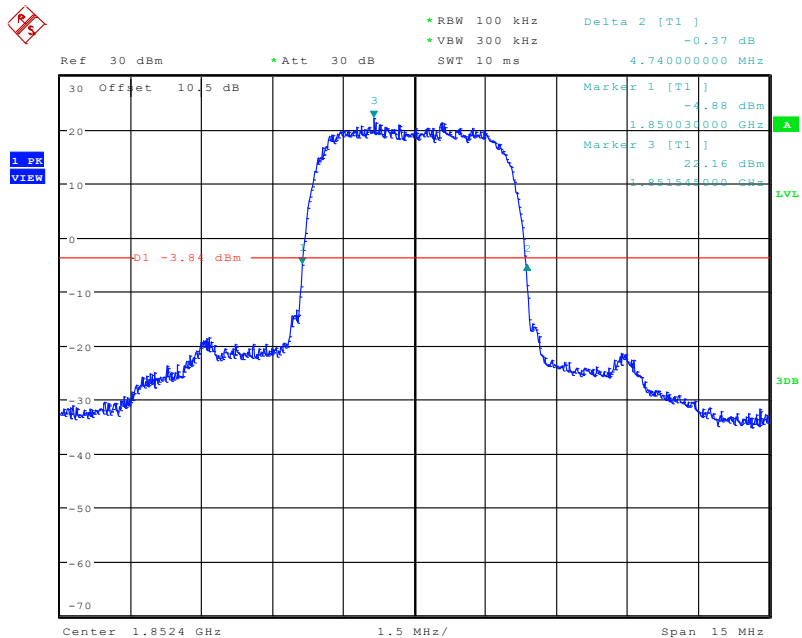
Date: 8.JUN.2022 13:29:58



Date: 8.JUN.2022 13:30:24

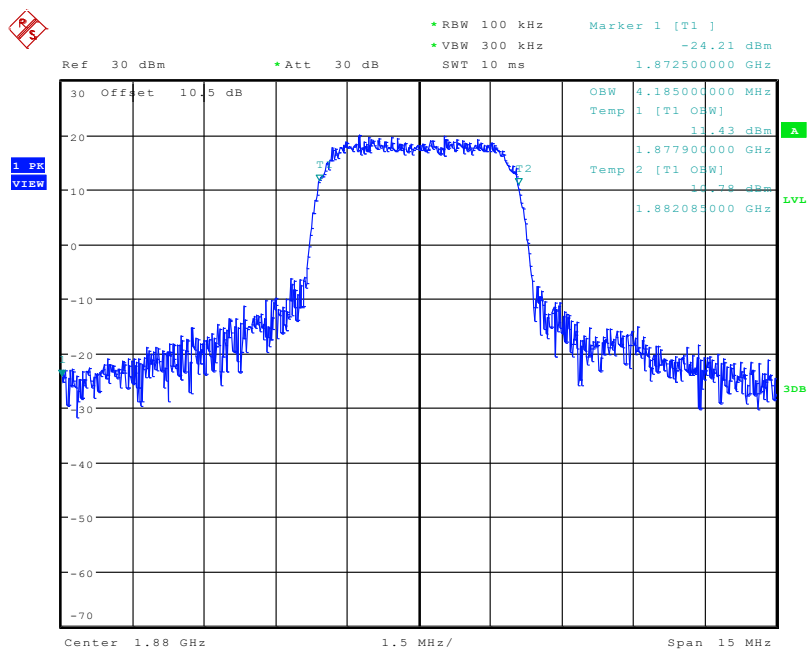
26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel

Date: 8.JUN.2022 14:40:44

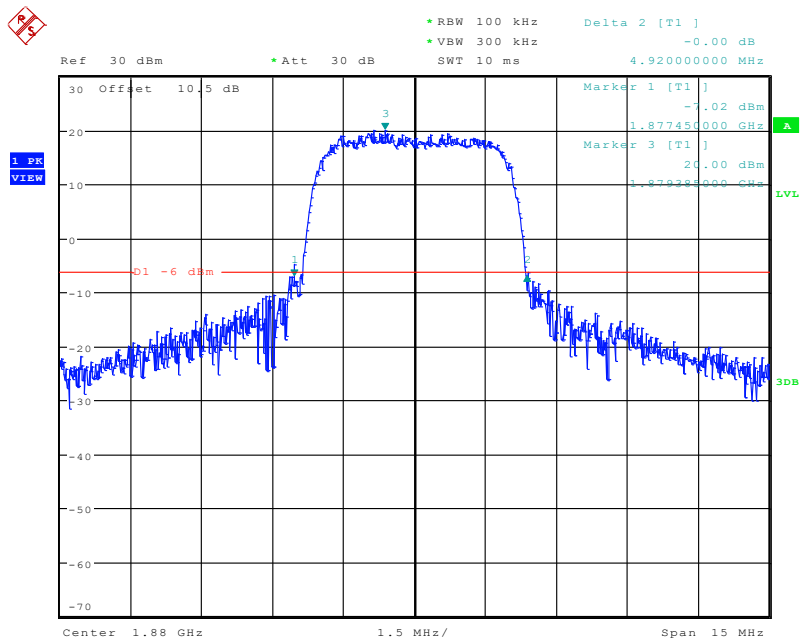


Date: 8.JUN.2022 14:41:10

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

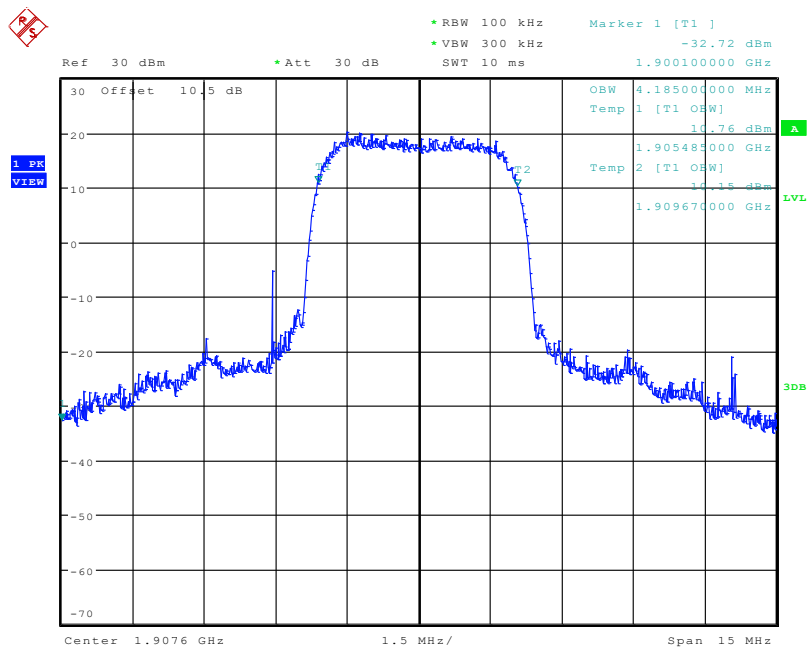


Date: 8.JUN.2022 14:55:02

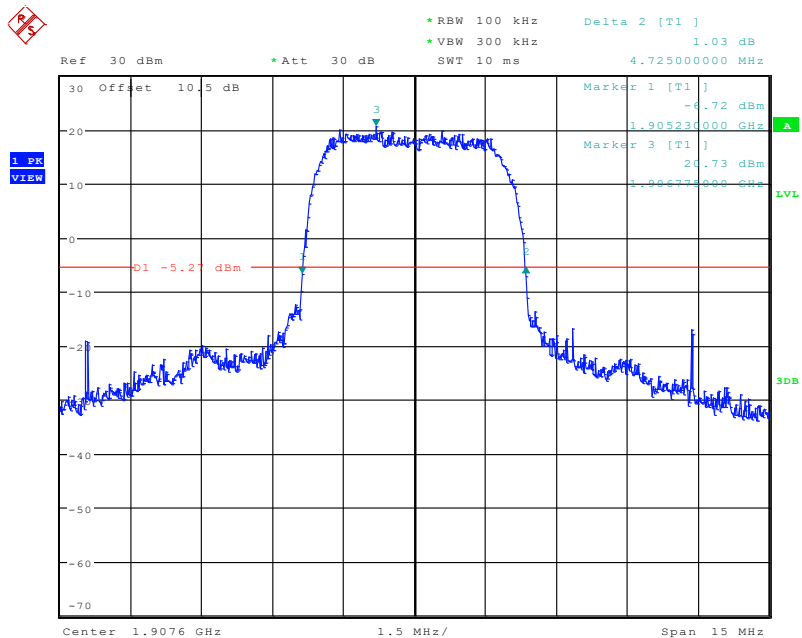


Date: 8.JUN.2022 14:55:28

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

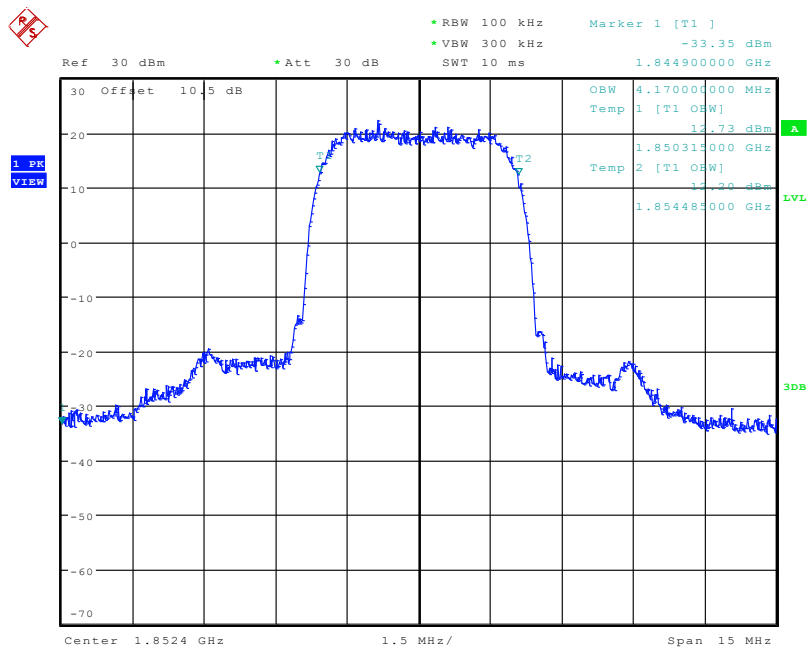


Date: 8.JUN.2022 13:53:33

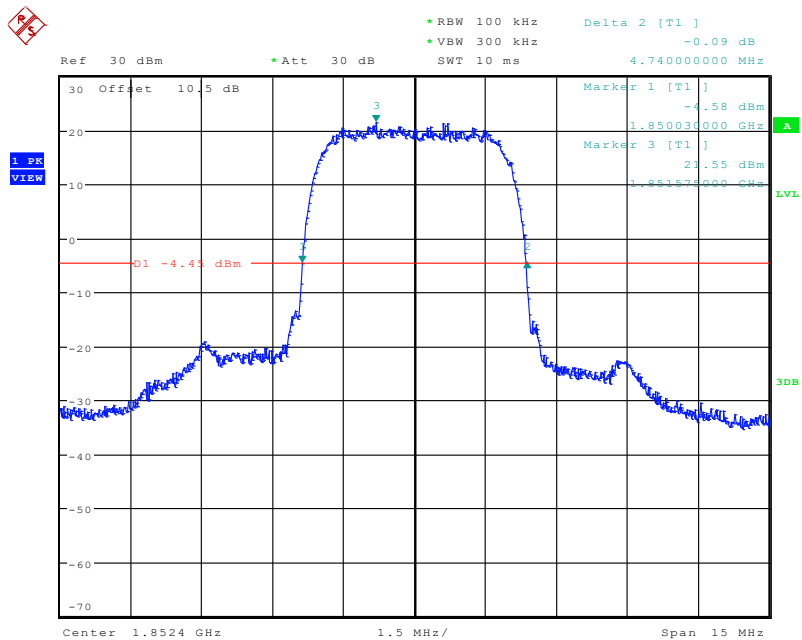


Date: 8.JUN.2022 13:53:59

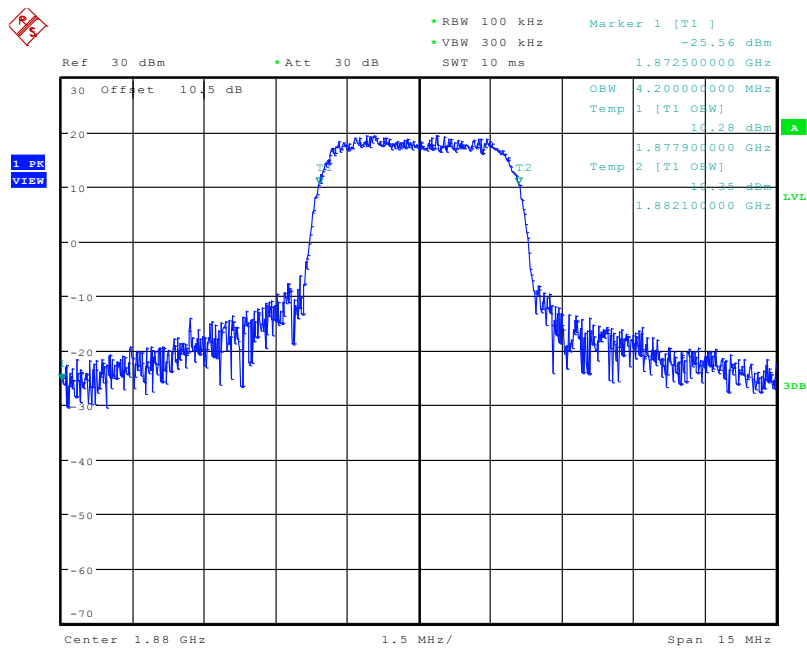
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel



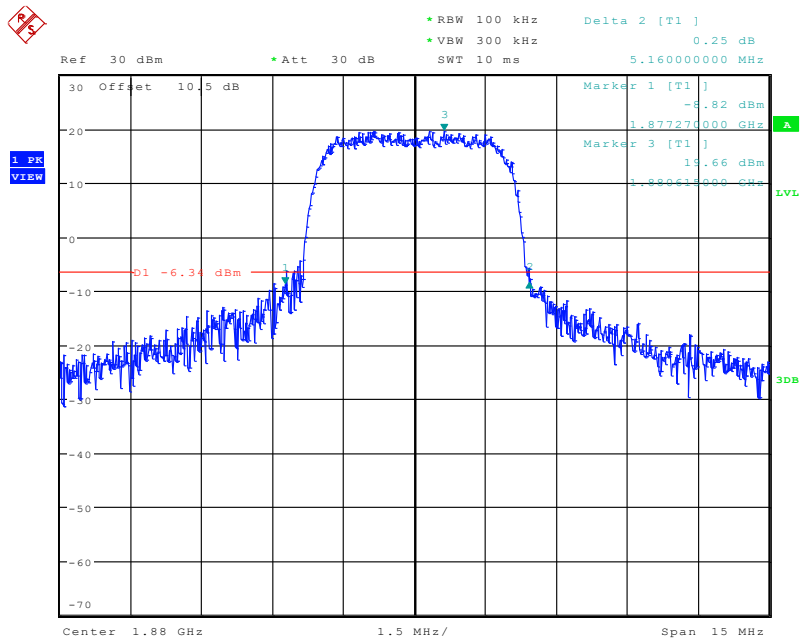
Date: 8.JUN.2022 14:35:21



Date: 8.JUN.2022 14:35:47

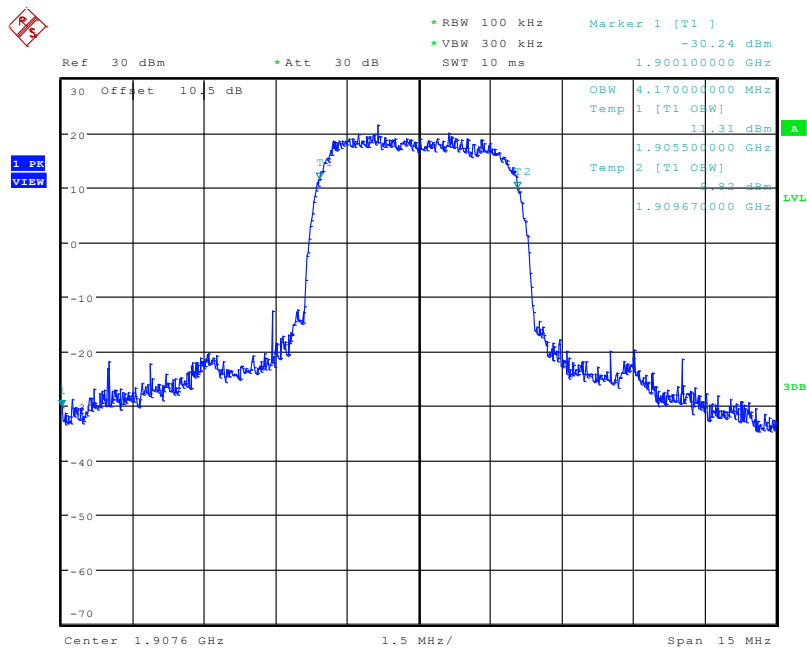
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel

Date: 8.JUN.2022 14:59:02

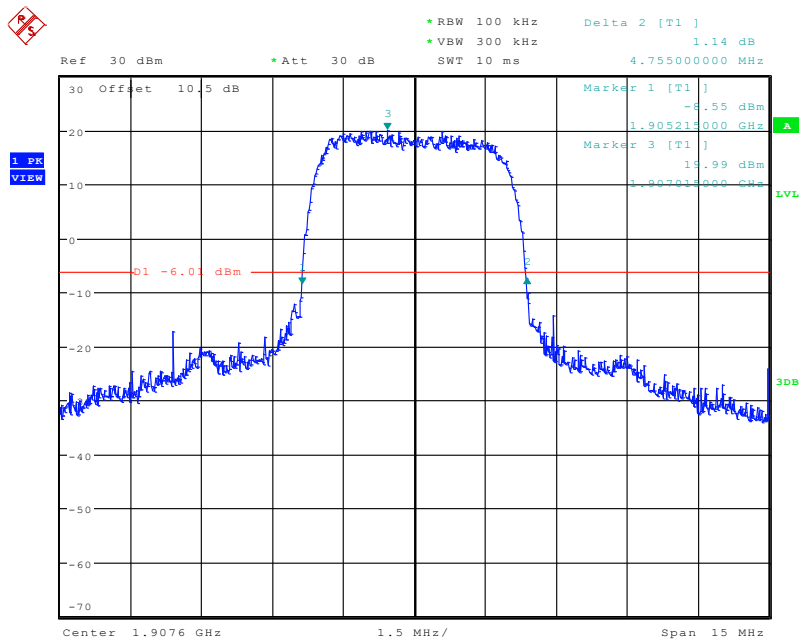


Date: 8.JUN.2022 14:59:28

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



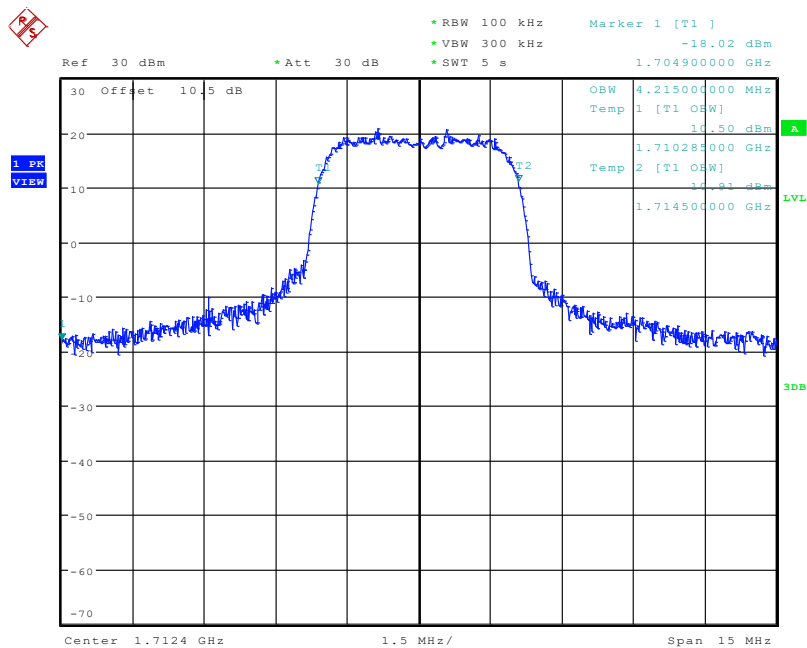
Date: 8.JUN.2022 13:48:45



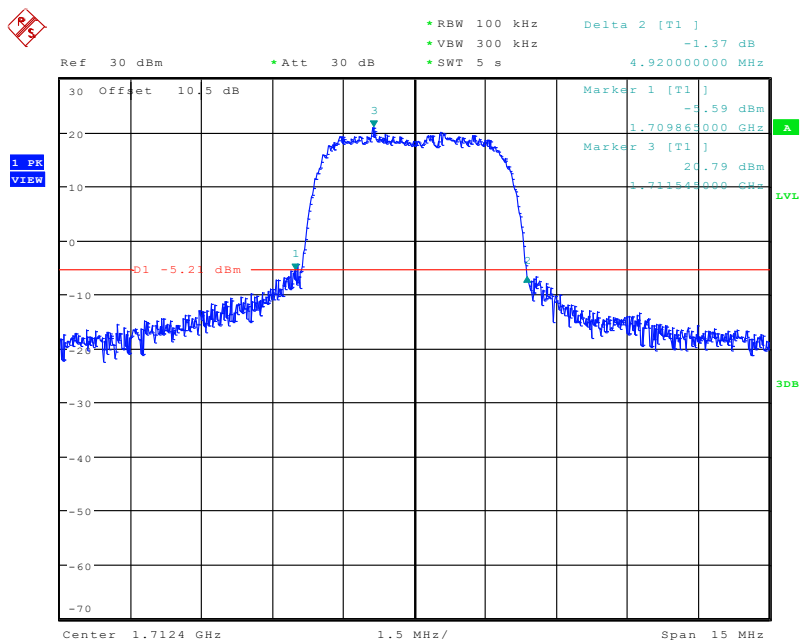
Date: 8.JUN.2022 13:49:11

AWS Band (Part 27)

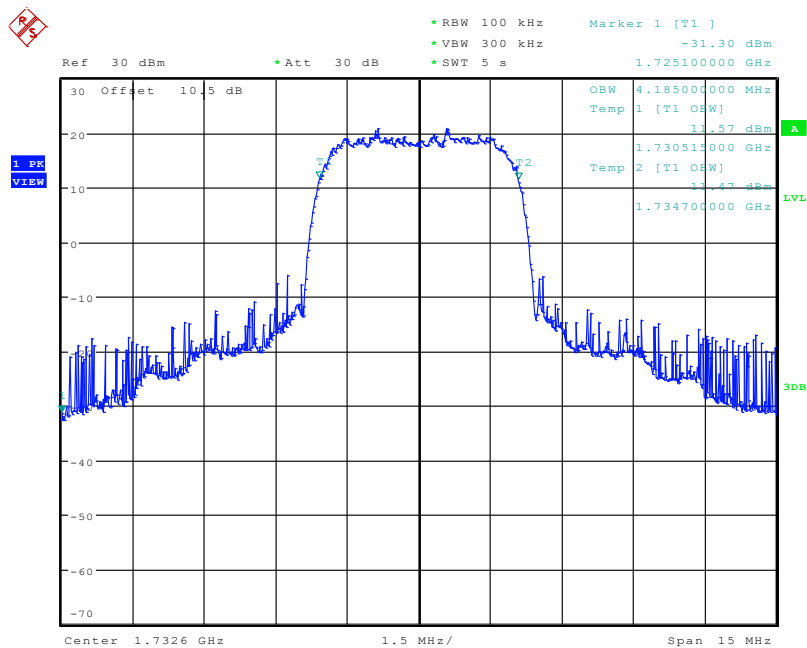
26 dB Emissions & 99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



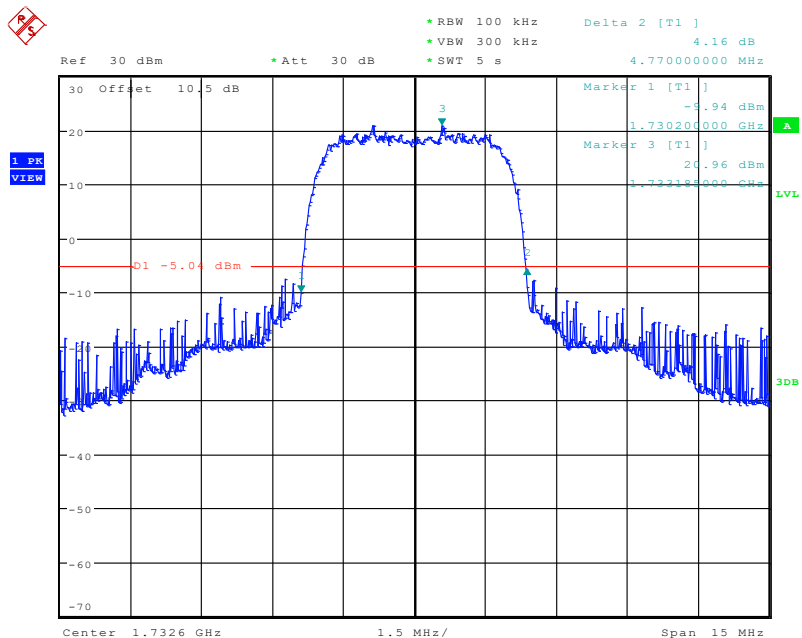
Date: 8.JUN.2022 16:04:38



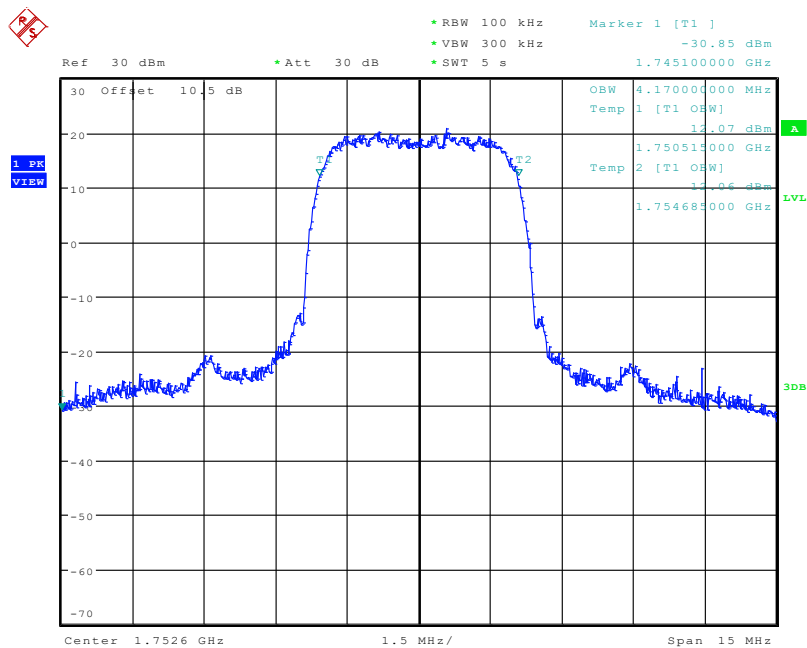
Date: 8.JUN.2022 16:05:14

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

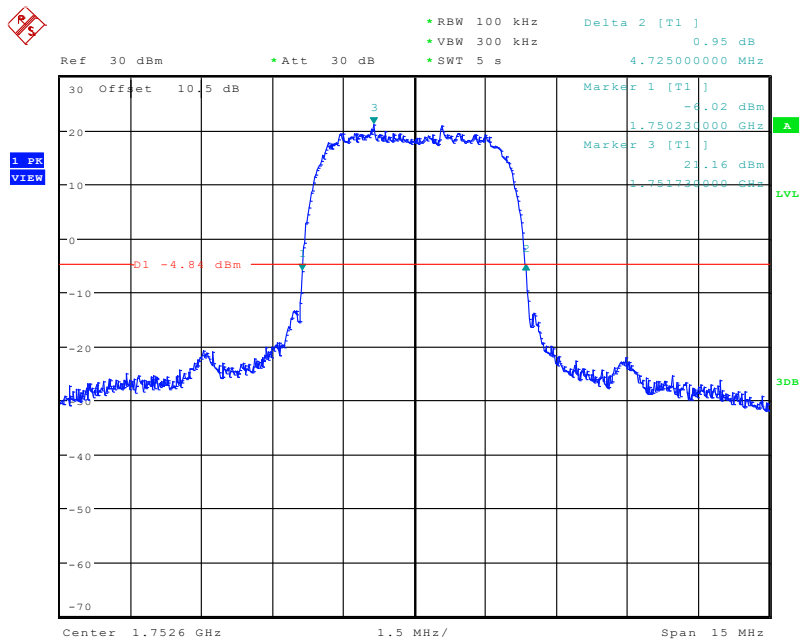
Date: 8.JUN.2022 16:23:45



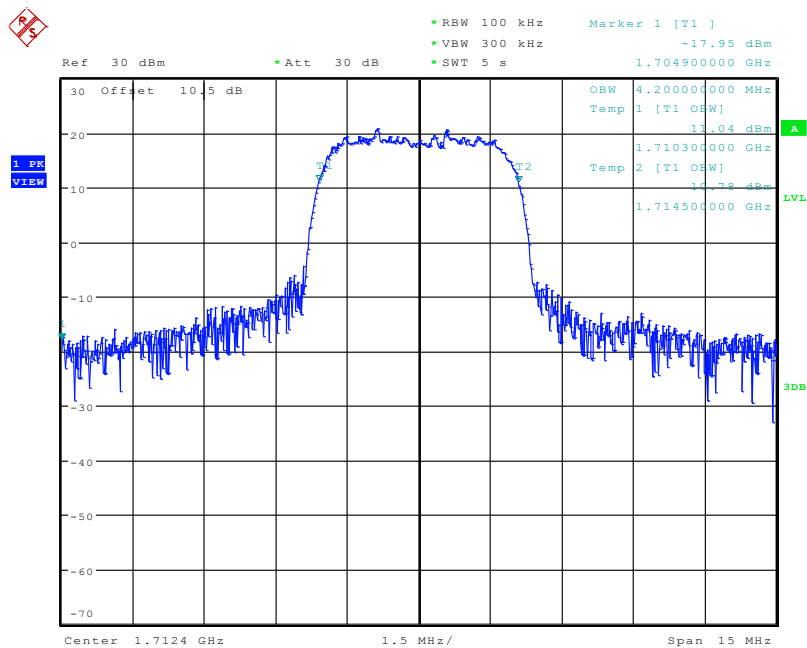
Date: 8.JUN.2022 16:24:22

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

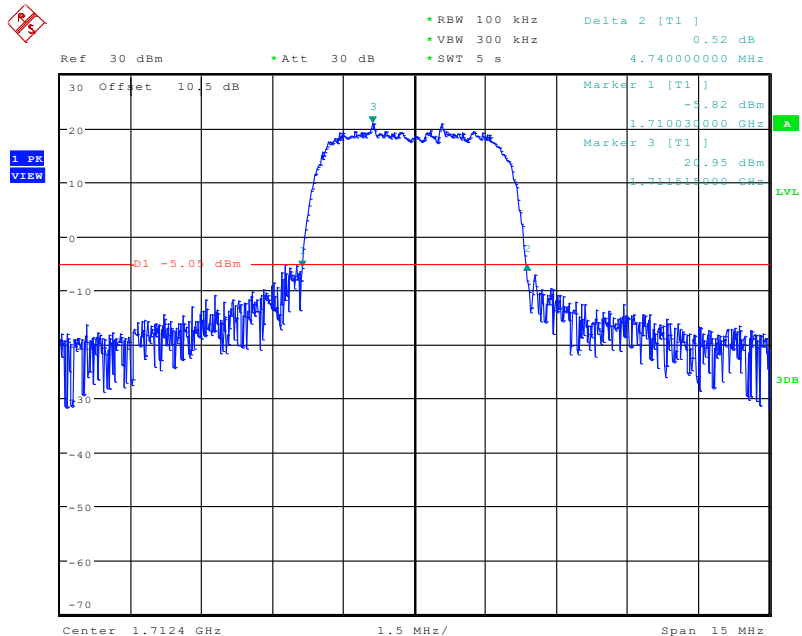
Date: 8.JUN.2022 16:40:21



Date: 8.JUN.2022 16:40:57

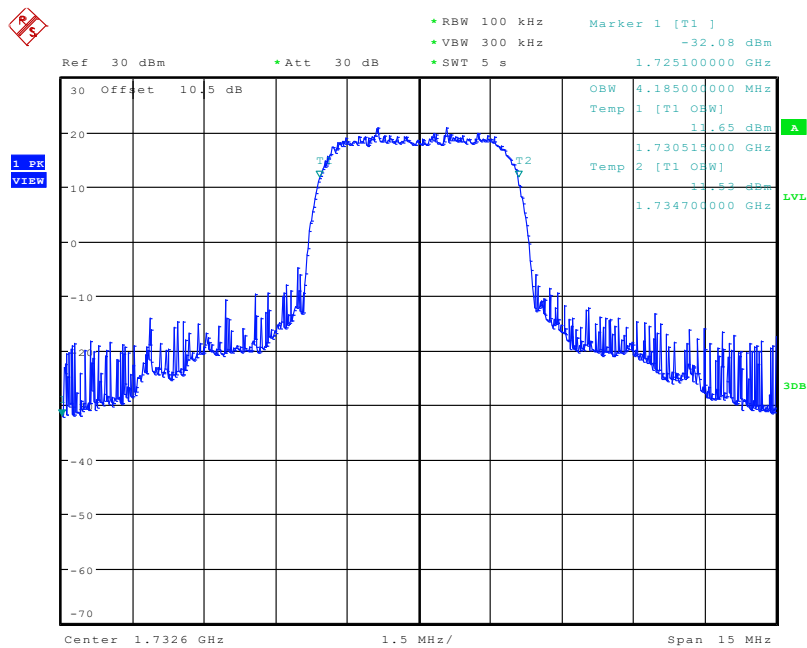
26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel

Date: 8.JUN.2022 16:13:53

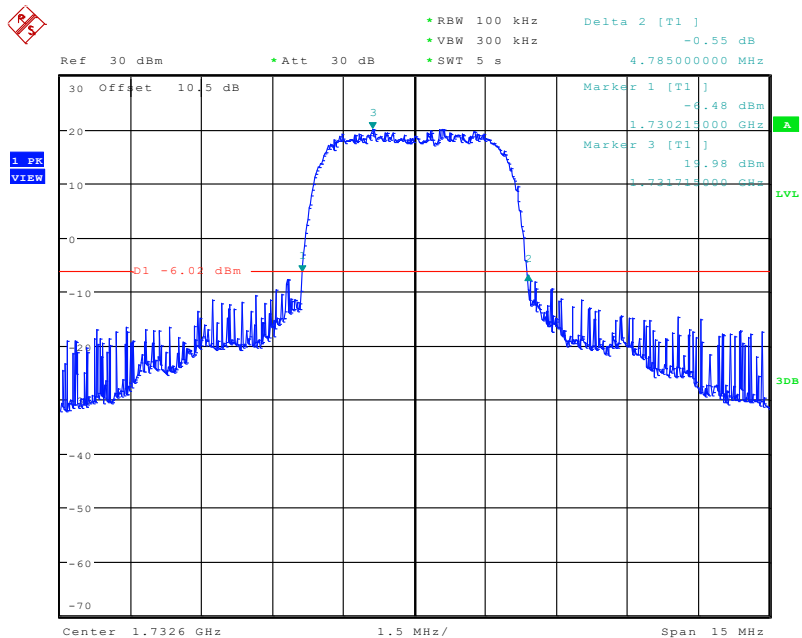


Date: 8.JUN.2022 16:14:59

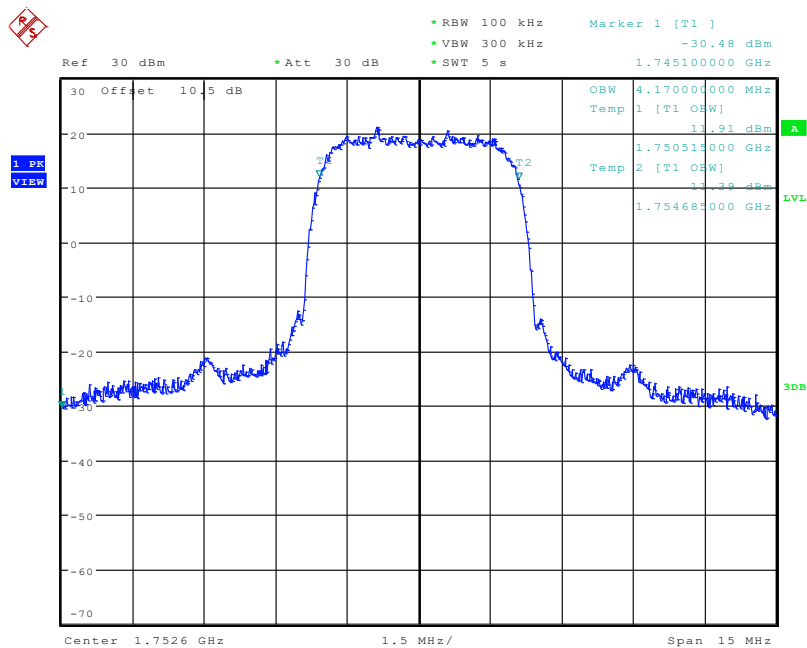
26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel



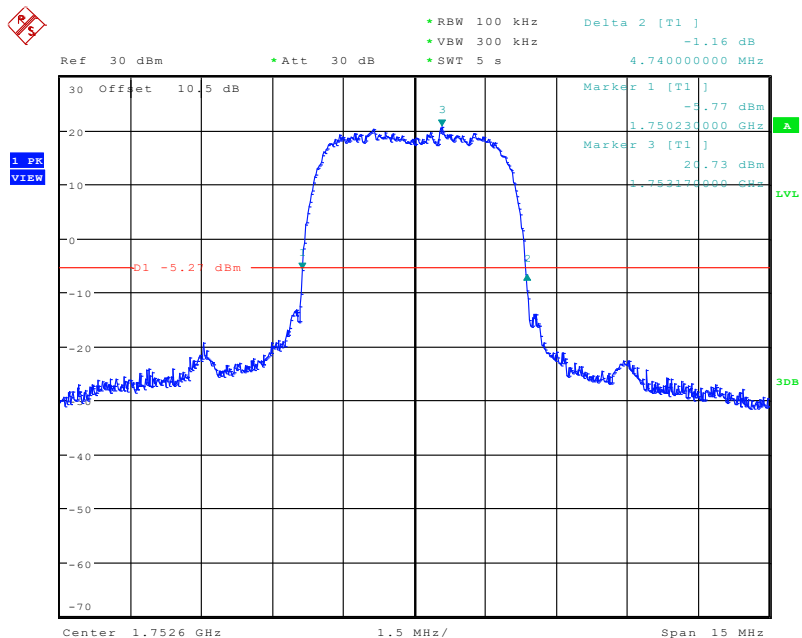
Date: 8.JUN.2022 16:26:37



Date: 8.JUN.2022 16:27:13

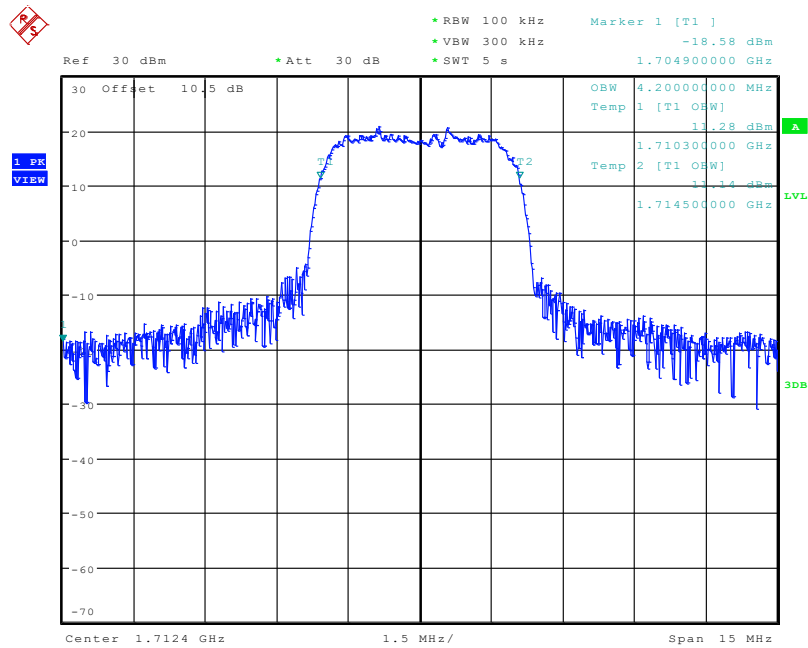
26 dB Emissions & 99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel

Date: 8.JUN.2022 16:43:48

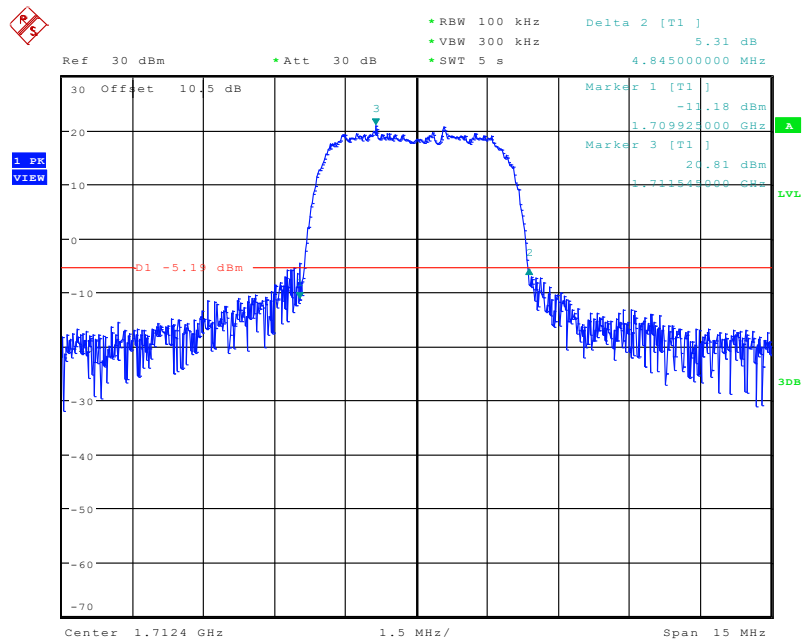


Date: 8.JUN.2022 16:44:25

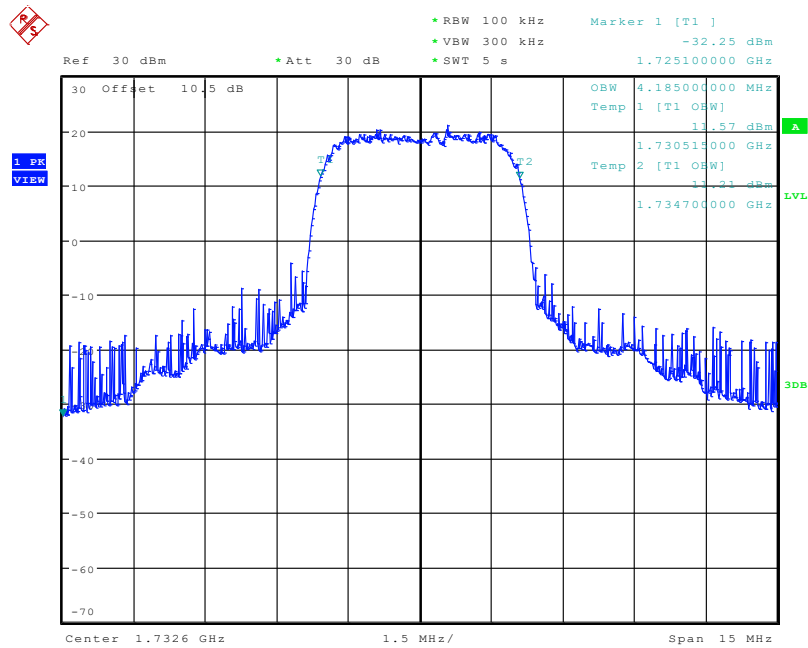
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel



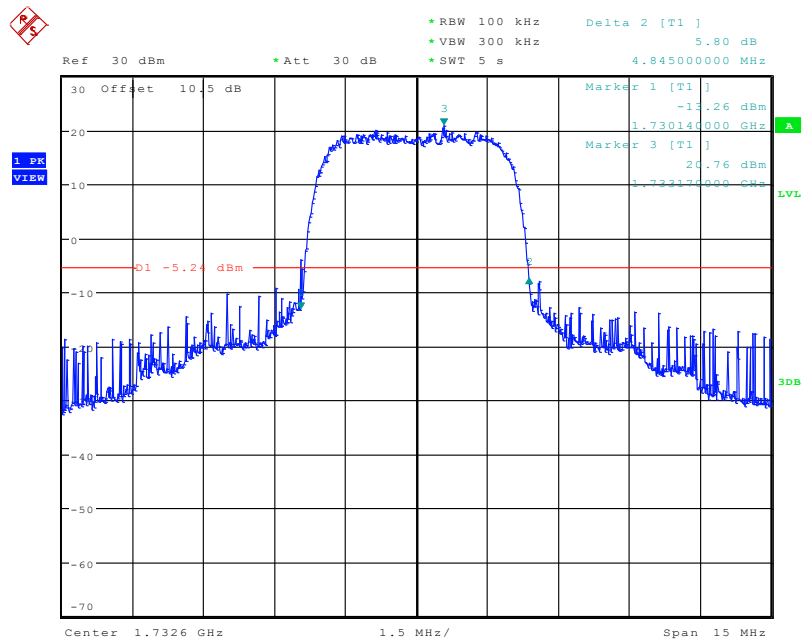
Date: 8.JUN.2022 16:18:25



Date: 8.JUN.2022 16:19:31

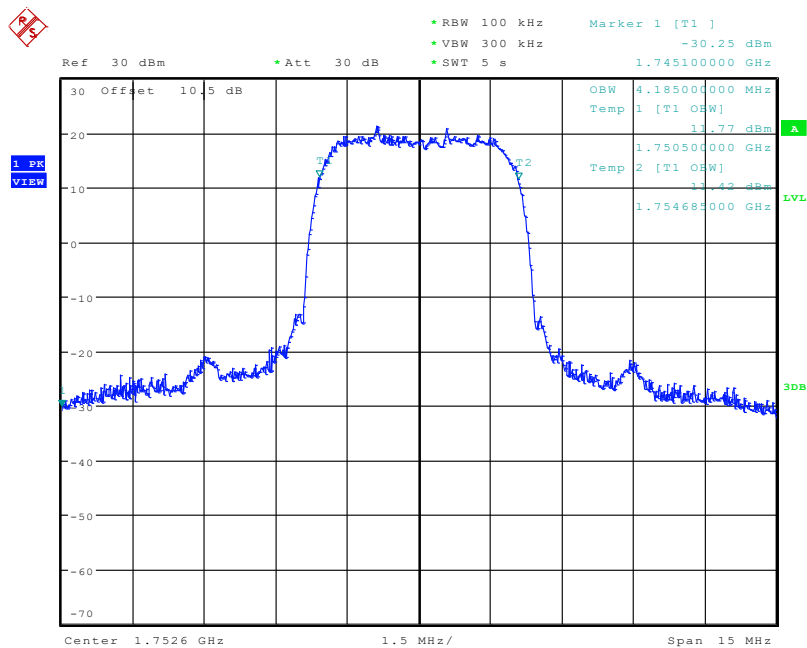
26 dB Emissions & 99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel

Date: 8.JUN.2022 16:29:27

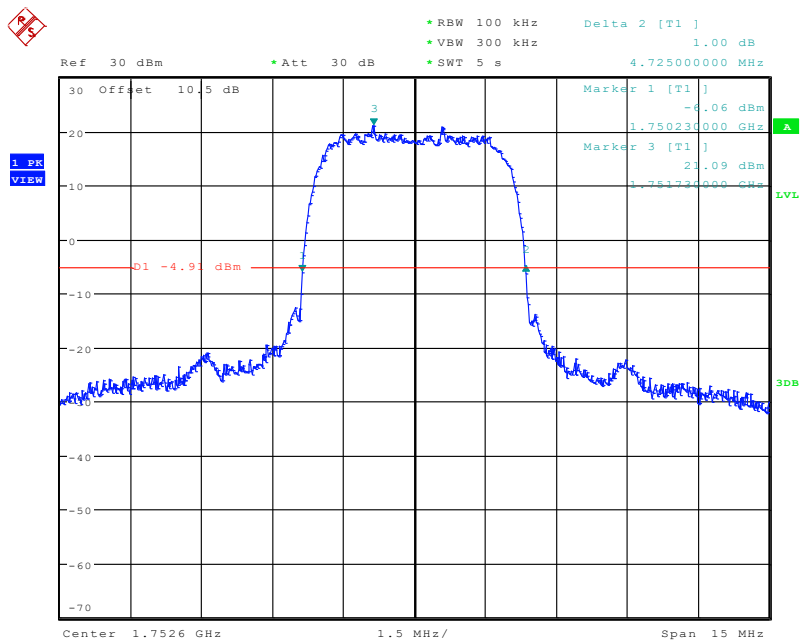


Date: 8.JUN.2022 16:30:03

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



Date: 8.JUN.2022 16:47:16



Date: 8.JUN.2022 16:47:52

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	1.098	1.308	1.104	1.314	1.104	1.296
	16QAM	1.104	1.320	1.098	1.290	1.104	1.296
3 MHz	QPSK	2.688	2.880	2.688	2.880	2.688	2.892
	16QAM	2.688	2.880	2.688	2.880	2.688	2.880
5 MHz	QPSK	4.540	5.200	4.520	5.420	4.520	5.120
	16QAM	4.520	5.160	4.560	5.160	4.540	5.240
10 MHz	QPSK	9.000	9.960	8.960	9.880	8.960	9.760
	16QAM	8.960	9.880	8.960	9.880	8.960	9.800
15 MHz	QPSK	13.620	15.240	13.500	15.060	13.500	15.060
	16QAM	13.620	15.120	13.500	15.060	13.500	15.060
20 MHz	QPSK	18.000	19.600	18.000	19.520	17.840	19.600
	16QAM	18.000	19.680	18.000	19.600	17.920	19.520

LTE Band 4:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.104	1.326	1.104	1.308	1.098	1.296
	16QAM	1.098	1.296	1.098	1.326	1.110	1.320
3 MHz	QPSK	2.688	2.880	2.700	2.880	2.688	2.892
	16QAM	2.688	2.892	2.688	2.880	2.688	2.892
5 MHz	QPSK	4.540	5.200	4.540	5.180	4.520	5.180
	16QAM	4.520	5.160	4.540	5.180	4.520	5.260
10 MHz	QPSK	8.960	9.840	9.000	9.840	8.960	9.920
	16QAM	8.960	9.720	9.000	9.880	8.960	9.840
15 MHz	QPSK	13.620	15.300	13.560	15.240	13.500	15.180
	16QAM	13.560	15.180	13.560	15.180	13.500	15.180
20 MHz	QPSK	18.000	19.680	17.920	19.680	18.000	19.680
	16QAM	18.080	19.600	18.000	19.600	18.000	19.600

LTE Band 5& Part 26(Part 22H):

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.110	1.302	1.098	1.284	1.104	1.308
	16QAM	1.104	1.296	1.104	1.326	1.098	1.284
3 MHz	QPSK	2.688	2.868	2.688	2.880	2.676	2.880
	16QAM	2.688	2.904	2.688	2.880	2.676	2.880
5 MHz	QPSK	4.540	5.160	4.520	5.160	4.500	5.140
	16QAM	4.540	5.180	4.520	5.160	4.540	5.200
10 MHz	QPSK	9.000	9.880	8.960	9.720	8.920	9.720
	16QAM	8.960	9.760	8.960	9.720	8.920	9.760
15 MHz	QPSK	13.500	15.060	13.500	14.940	13.500	15.060
	16QAM	13.560	15.120	13.500	15.000	13.560	14.880

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	5.180	4.540	5.240	4.540	5.220
	16QAM	4.560	5.160	4.560	5.260	4.540	5.200
10 MHz	QPSK	8.960	9.920	9.000	9.920	8.960	9.920
	16QAM	8.960	9.840	9.000	9.840	8.960	9.880
15 MHz	QPSK	13.620	15.180	13.560	15.120	13.560	15.360
	16QAM	13.560	15.060	13.560	16.200	13.560	15.060
20 MHz	QPSK	18.000	19.600	17.920	19.520	18.080	20.000
	16QAM	18.000	19.680	17.920	19.520	18.000	19.760

LTE Band 12:

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	1.296	1.104	1.308	1.098	1.308
	16QAM	1.098	1.296	1.104	1.320	1.092	1.290
3 MHz	QPSK	2.688	2.868	2.688	2.880	2.688	2.880
	16QAM	2.676	2.904	2.676	2.880	2.676	2.868
5 MHz	QPSK	4.520	5.100	4.540	5.140	4.500	5.120
	16QAM	4.500	5.080	4.560	5.140	4.500	5.120
10 MHz	QPSK	8.920	9.640	8.960	9.720	8.960	9.800
	16QAM	8.880	9.600	8.960	9.680	8.960	9.840

LTE Band 25:

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	1.302	1.098	1.332	1.104	1.368
	16QAM	1.104	1.296	1.098	1.314	1.098	1.308
3 MHz	QPSK	2.688	2.892	2.700	2.880	2.688	2.892
	16QAM	2.688	2.880	2.688	2.880	2.688	2.880
5 MHz	QPSK	4.540	5.180	4.540	5.200	4.540	5.180
	16QAM	4.520	5.140	4.520	5.160	4.560	5.280
10 MHz	QPSK	9.000	9.800	8.960	9.800	8.960	10.080
	16QAM	8.960	9.760	8.960	9.840	8.960	9.800
15 MHz	QPSK	13.620	15.360	13.500	15.060	13.560	15.240
	16QAM	13.620	15.240	13.500	15.120	13.560	15.120
20 MHz	QPSK	18.000	19.600	18.000	19.680	18.000	19.760
	16QAM	18.000	19.600	17.920	19.760	18.000	19.360

LTE Band 26(Part 90S):

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
1.4 MHz	QPSK	1.098	1.296	1.104	1.296	1.098	1.296
	16QAM	1.092	1.290	1.098	1.284	1.110	1.314
3 MHz	QPSK	2.676	2.856	2.688	2.880	2.688	2.892
	16QAM	2.688	2.880	2.688	2.892	2.676	2.880
5 MHz	QPSK	4.520	5.140	4.520	5.180	4.500	5.080
	16QAM	4.520	5.320	4.540	5.120	4.560	5.240
10 MHz	QPSK	/	/	9.000	9.840	/	/
	16QAM	/	/	8.920	9.760	/	/

LTE Band 41:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.520	5.120	4.520	5.360	4.520	5.140
	16QAM	4.520	5.140	4.540	5.160	4.520	5.220
10 MHz	QPSK	8.960	9.920	8.960	9.880	8.960	9.800
	16QAM	9.000	9.640	8.960	9.720	8.960	10.080
15 MHz	QPSK	13.680	17.460	13.500	15.600	13.500	15.360
	16QAM	13.560	15.840	13.560	15.720	13.620	15.840
20 MHz	QPSK	18.000	20.320	18.000	19.520	18.000	19.840
	16QAM	18.000	19.520	18.000	21.200	18.000	19.600

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	1.314	1.110	1.314	1.098	1.314
	16QAM	1.104	1.368	1.104	1.296	1.110	1.320
3 MHz	QPSK	2.688	2.880	2.688	2.880	2.688	2.892
	16QAM	2.688	2.892	2.688	2.880	2.688	2.880
5 MHz	QPSK	4.540	5.200	4.520	5.120	4.520	5.200
	16QAM	4.540	5.180	4.560	5.800	4.540	5.180
10 MHz	QPSK	8.960	9.960	8.960	9.760	8.960	9.800
	16QAM	8.960	9.800	8.960	9.840	8.960	9.920
15 MHz	QPSK	13.620	15.120	13.500	15.120	13.560	15.180
	16QAM	13.560	15.120	13.500	15.120	13.620	15.120
20 MHz	QPSK	18.000	19.680	18.000	19.760	18.000	19.840
	16QAM	18.080	19.520	17.920	19.760	18.000	19.680

LTE Band 71:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.540	5.240	4.520	5.140	4.520	5.200
	16QAM	4.540	5.160	4.540	5.200	4.540	5.200
10 MHz	QPSK	9.000	9.880	9.000	9.880	8.960	9.840
	16QAM	9.000	9.680	9.000	9.720	8.960	9.880
15 MHz	QPSK	13.560	15.120	13.560	15.120	13.560	15.120
	16QAM	13.560	15.000	13.500	15.000	13.560	15.060
20 MHz	QPSK	18.000	19.600	18.000	19.680	17.920	19.600
	16QAM	17.920	19.520	18.000	19.920	18.000	19.600

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

FCC §2.1051, §22.917(a) & §24.238(a)& §27.53& §90.691 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

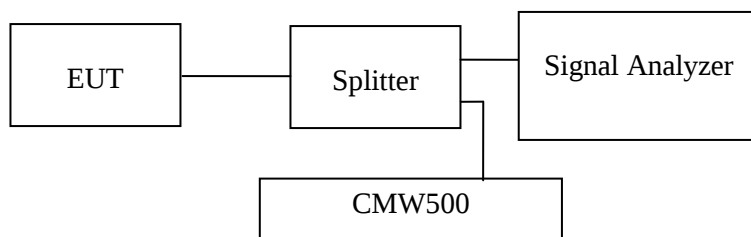
Applicable Standard

FCC §2.1051, §22.917(a) & §24.238(a), §27.53 and §90.691.

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

Test Procedure

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



Test Data

Environmental Conditions

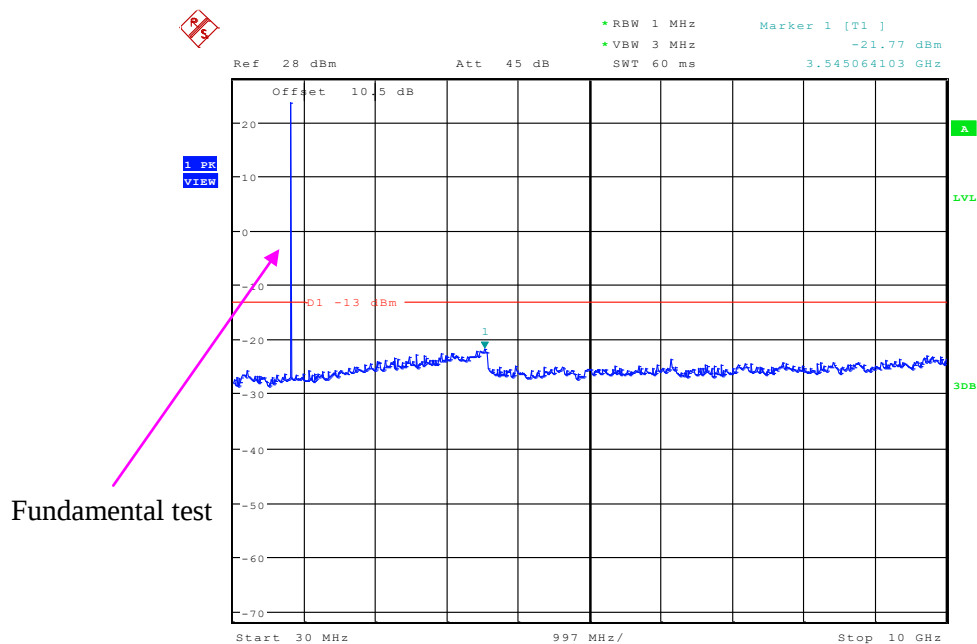
Temperature:	23~25 °C
Relative Humidity:	50~60 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang from 2022-06-08 to 2022-07-13.

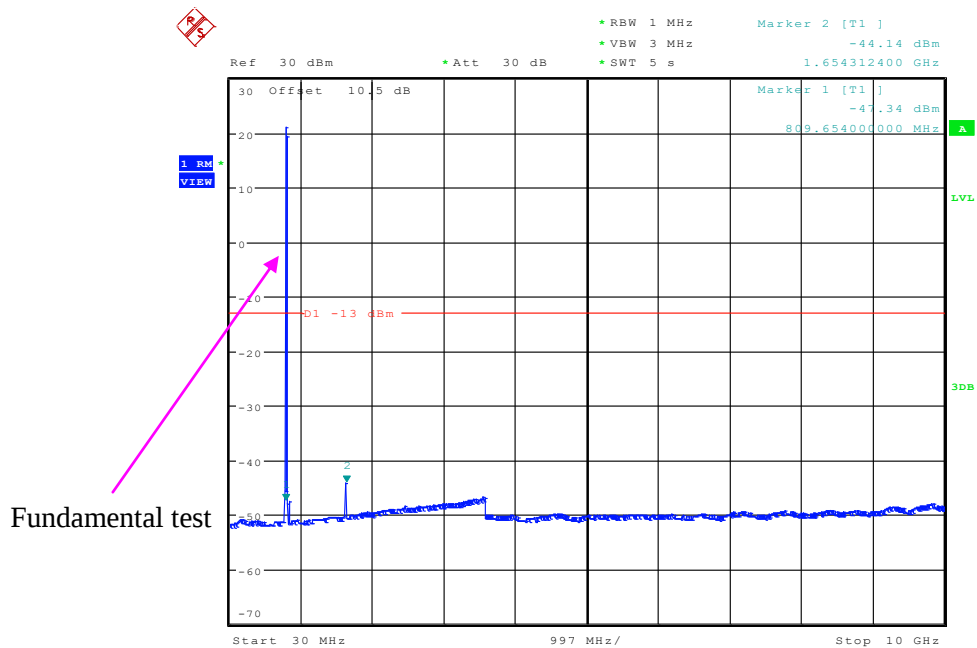
EUT operation mode: Transmitting

Test result: Pass

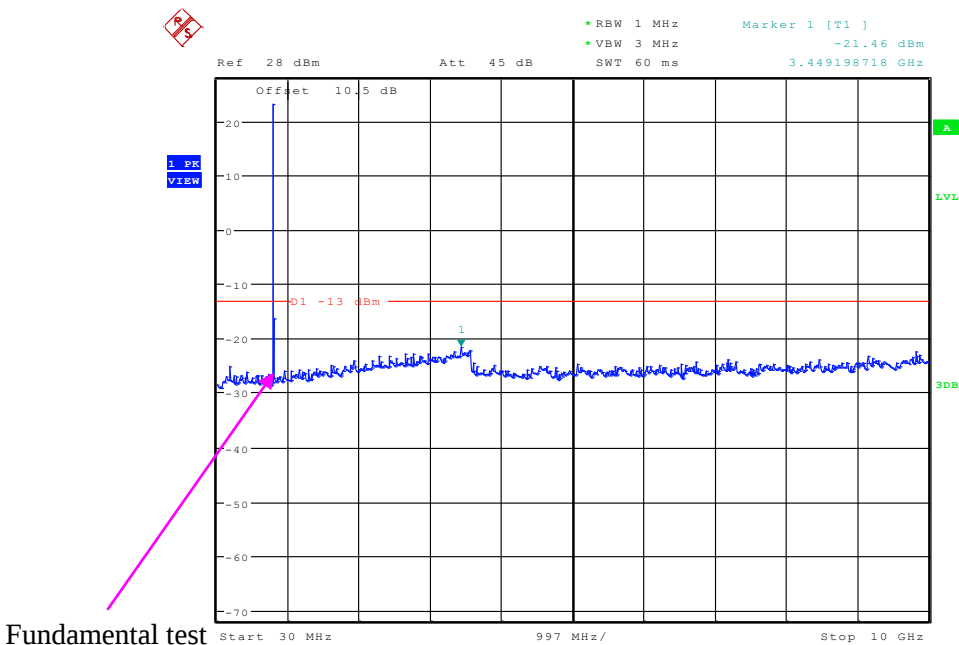
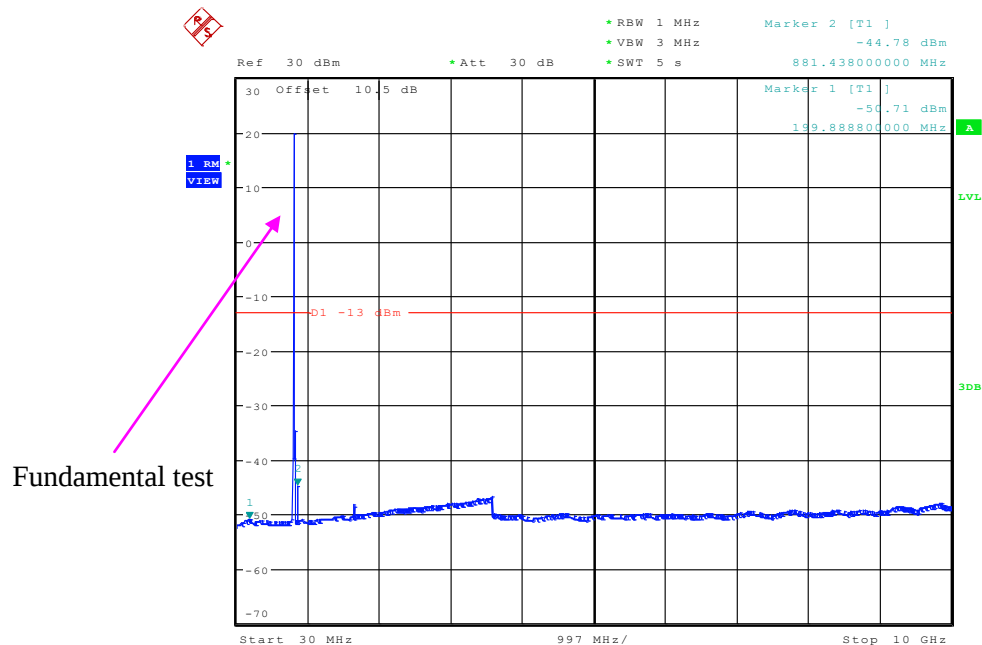
Please refer to the following plots.

Cellular Band (Part 22H)**Low Channel:****30 MHz – 10 GHz (GSM Mode)**

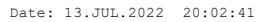
Date: 13.JUL.2022 19:59:24

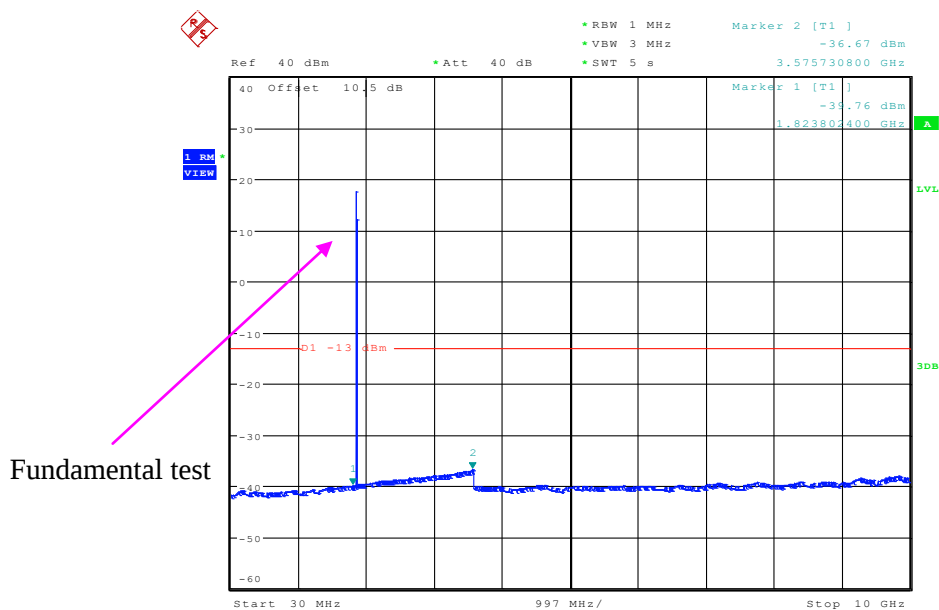
30 MHz – 10 GHz (WCDMA Mode)

Date: 8.JUN.2022 15:31:01

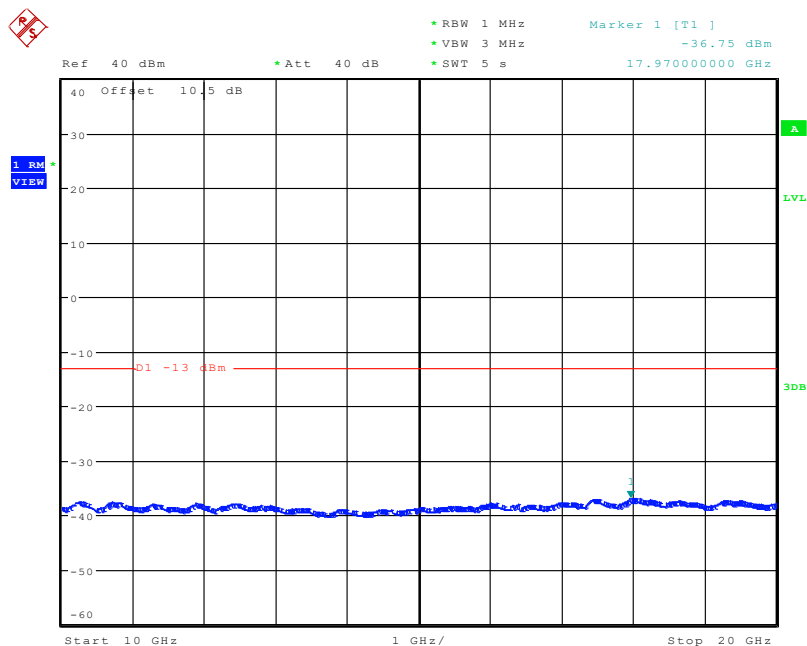
Middle Channel:**30 MHz – 10 GHz (GSM Mode)****30 MHz – 10 GHz (WCDMA Mode)**

30 MHz – 10 GHz (GSM Mode)



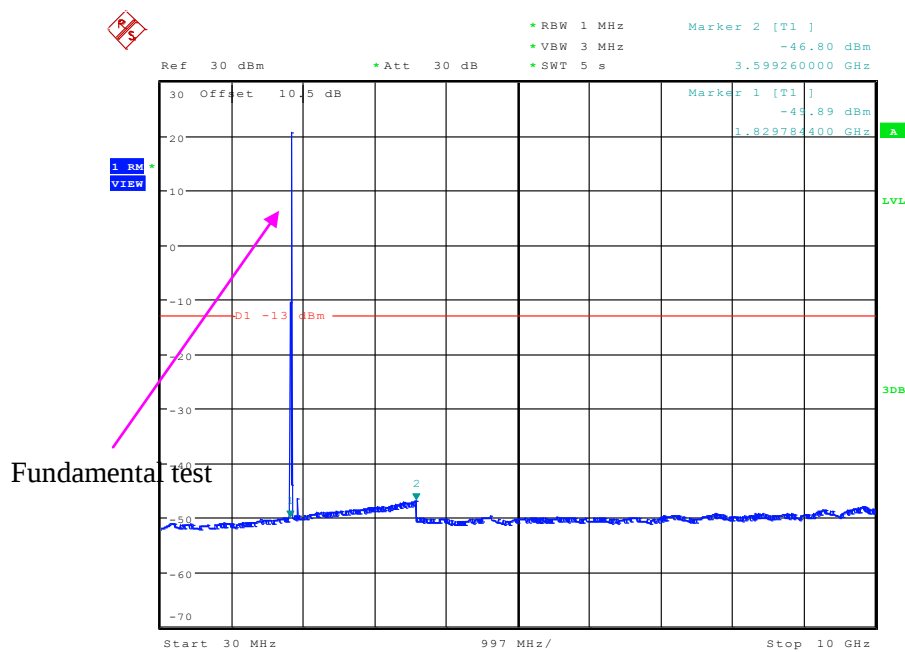
PCS Band (Part 24E)
Low Channel:**30 MHz – 10 GHz (GSM Mode)**

Date: 8.JUN.2022 11:41:50

10 GHz – 20 GHz (GSM Mode)

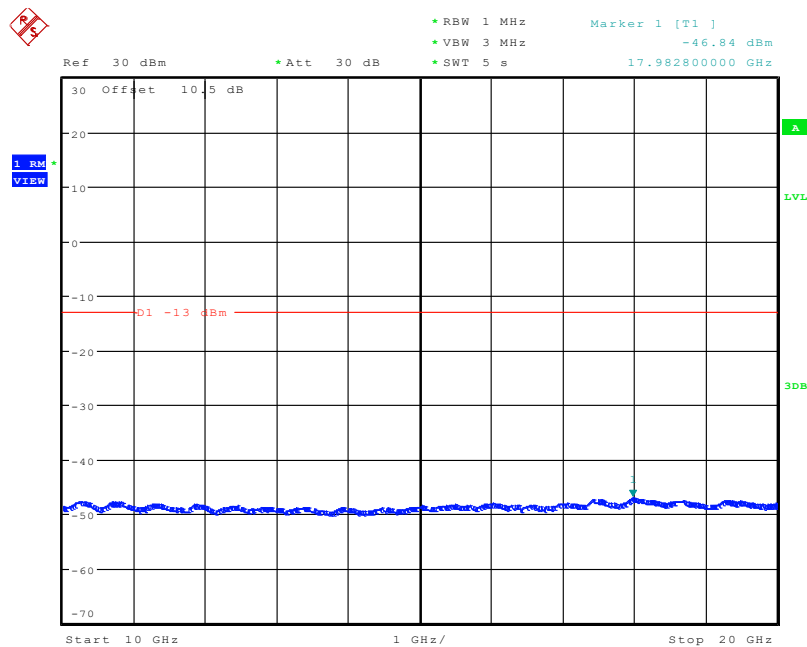
Date: 8.JUN.2022 11:34:13

30 MHz – 10 GHz (WCDMA Mode)

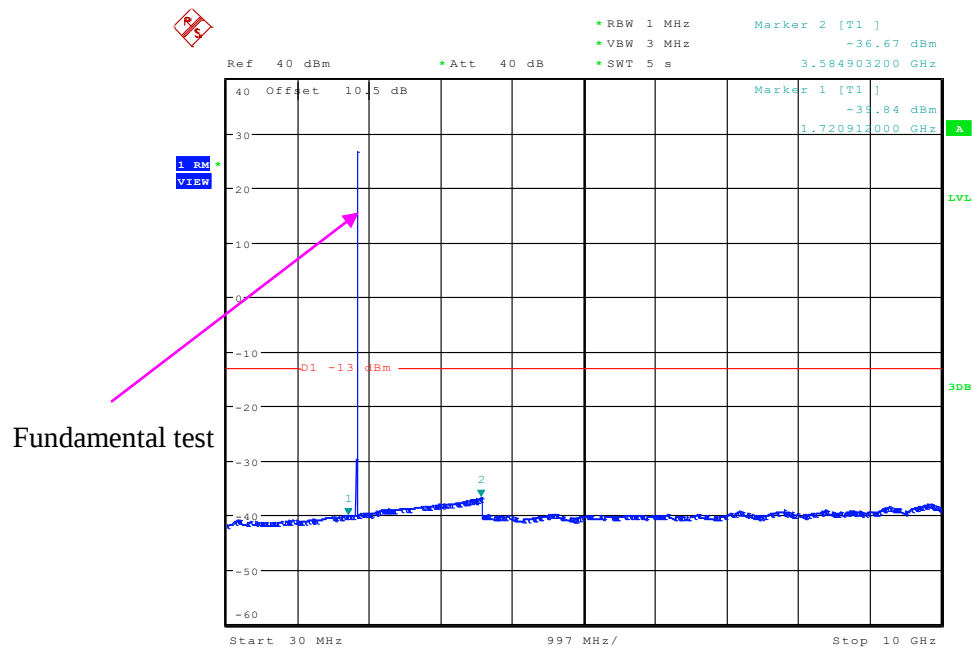


Date: 8.JUN.2022 14:30:12

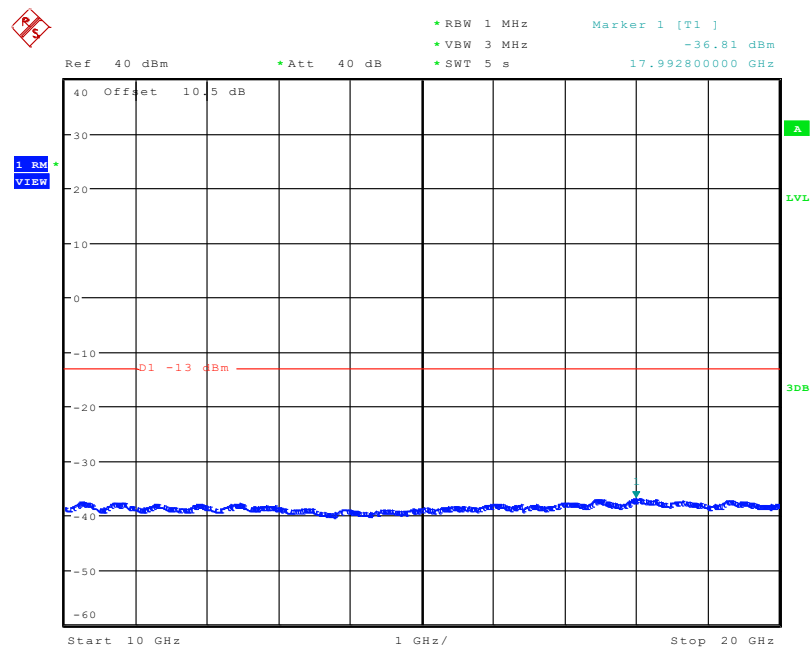
10 GHz – 20 GHz (WCDMA Mode)



Date: 8.JUN.2022 14:30:49

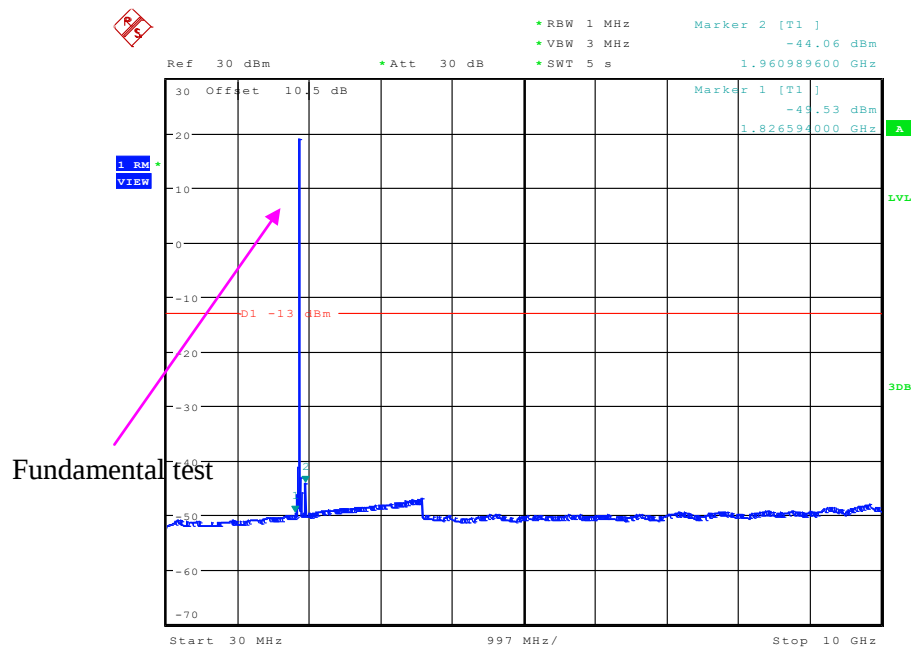
Middle Channel:**30 MHz – 10 GHz (GSM Mode)**

Date: 8.JUN.2022 11:37:15

10GHz – 20GHz (GSM Mode)

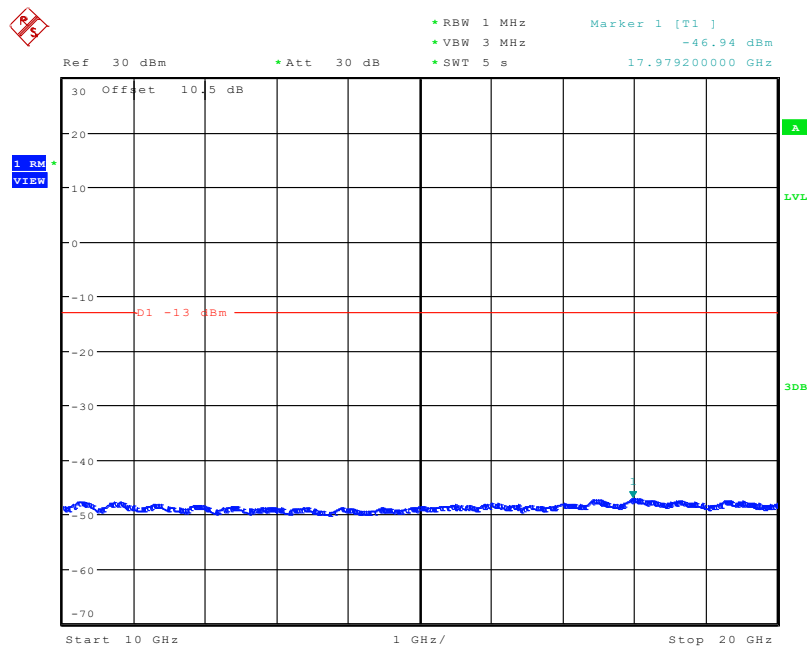
Date: 8.JUN.2022 11:42:26

30 MHz – 10 GHz (WCDMA Mode)



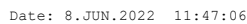
Date: 8.JUN.2022 14:49:44

10 GHz – 20GHz (WCDMA Mode)



Date: 8.JUN.2022 14:50:21

30 MHz – 10 GHz (GSM Mode)

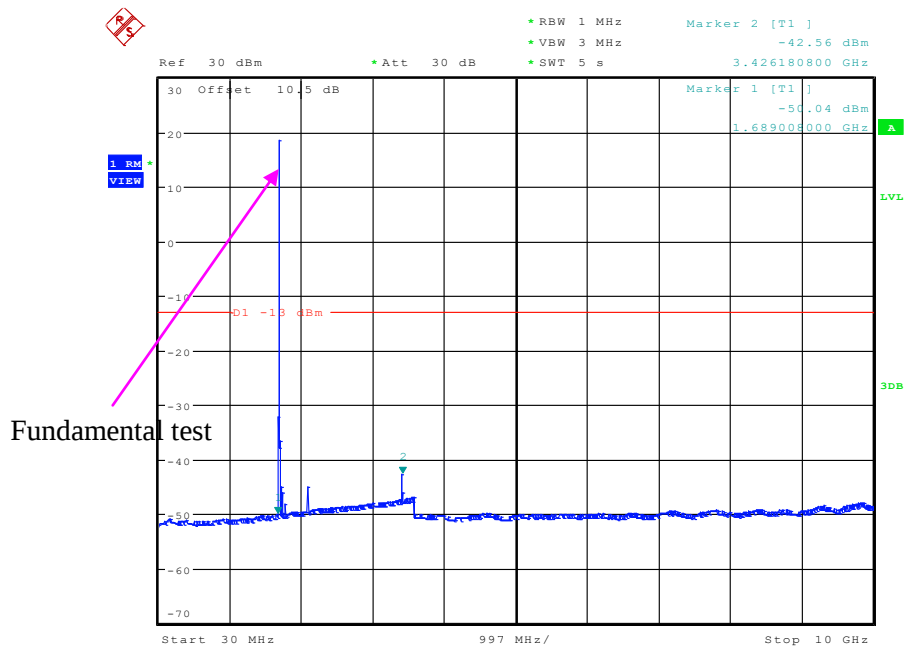




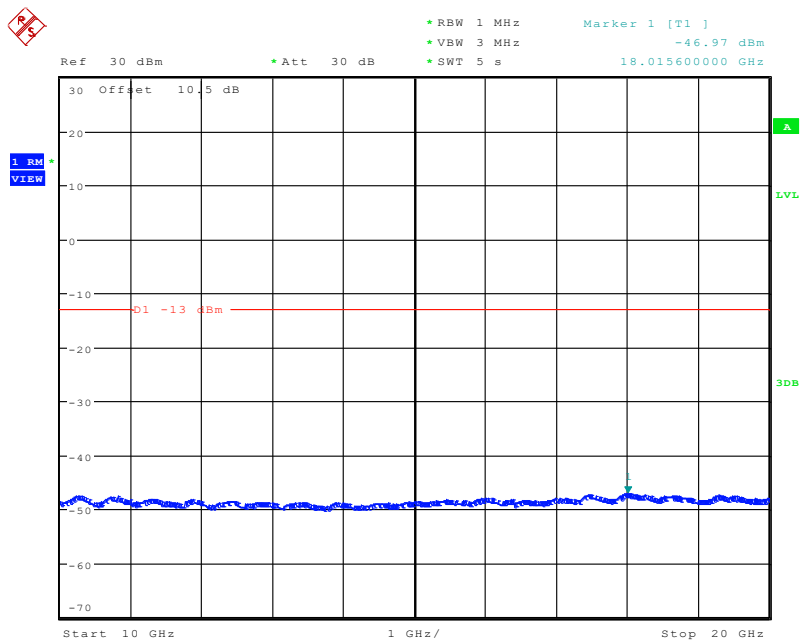
Date: 8.JUN.2022 13:31:38



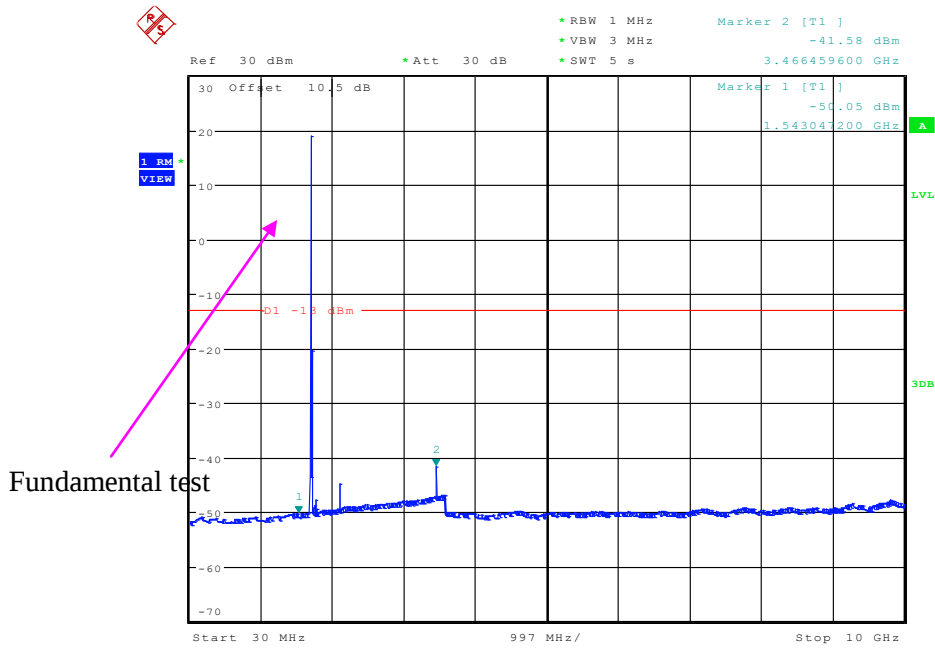
Date: 8.JUN.2022 13:32:14

AWS Band (Part 27)
Low Channel:**30 MHz – 10 GHz (WCDMA Mode)**

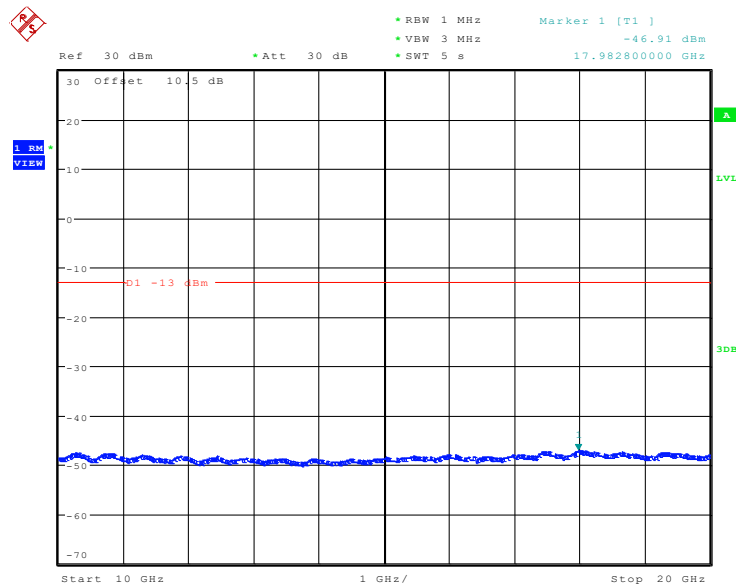
Date: 8.JUN.2022 16:06:28

10 GHz – 20 GHz (WCDMA Mode)

Date: 8.JUN.2022 16:07:05

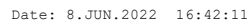
Middle Channel**30 MHz – 10 GHz (WCDMA Mode)**

Date: 8.JUN.2022 16:24:59

10 GHz – 20 GHz (WCDMA Mode)

Date: 8.JUN.2022 16:25:35

30 MHz – 10 GHz (WCDMA Mode)



Date: 8.JUN.2022 16:42:47

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

FCC § 2.1053; § 22.917 (a); § 24.238 (a); § 27.53; § 90.691- SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, § 22.917(a) & § 24.238(a) & § 27.53 & § 90.691.

Test Procedure

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

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

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

Test Data

Environmental Conditions

Temperature:	21.2~25.7 °C
Relative Humidity:	48~59 %
ATM Pressure:	101.0kPa

The testing was performed by Jeff Jiang on 2022-06-15 and 2022-07-13.

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

The worst case is as below:

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								
Test frequency range: 30MHz-10GHz								
Low channel								
952.72	-70.08	225	2.1	H	10.0	-60.08	-13	47.08
952.72	-76.90	213	2.2	V	11.7	-65.20	-13	52.20
1648.4	-42.9	225	1.1	H	3.5	-39.4	-13	26.4
1648.4	-42.1	183	2.0	V	3.1	-39	-13	26.0
2472.6	-38.9	310	2.0	H	6.6	-32.3	-13	19.3
2472.6	-38.9	357	1.8	V	5.8	-33.1	-13	20.1
3296.8	-47.2	350	2.3	H	6.4	-40.8	-13	27.8
3296.8	-47.8	263	2.5	V	5.7	-42.1	-13	29.1
Middle Channel								
952.28	-71.52	189	1.3	H	10.0	-61.52	-13	48.52
952.28	-75.55	353	1.8	V	11.7	-63.85	-13	50.85
1672.8	-44.4	152	1.4	H	3.8	-40.6	-13	27.6
1672.8	-41.7	255	2.0	V	3.1	-38.6	-13	25.6
2509.2	-38.9	96	1.2	H	6.2	-32.7	-13	19.7
2509.2	-37.5	31	1.7	V	5.5	-32	-13	19.0
3345.6	-47.1	117	1.5	H	6.6	-40.5	-13	27.5
3345.6	-45.3	102	1.1	V	5.4	-39.9	-13	26.9
High Channel								
953.28	-72.71	193	2.4	H	10.0	-62.71	-13	49.71
953.28	-76.03	277	1.7	V	11.7	-64.33	-13	51.33
1697.6	-43.0	257	2.3	H	4.1	-38.9	-13	25.9
1697.6	-41.9	341	2.4	V	3.1	-38.8	-13	25.8
2546.4	-38.2	161	1.7	H	6.1	-32.1	-13	19.1
2546.4	-38.7	322	1.6	V	5.8	-32.9	-13	19.9
3395.2	-46.4	112	2.3	H	6.2	-40.2	-13	27.2
3395.2	-45.5	179	1.9	V	5.4	-40.1	-13	27.1

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								
Test frequency range: 30MHz-10GHz								
Low Channel								
955.12	-70.45	278	1.7	H	10.0	-60.45	-13	47.45
955.12	-75.36	145	1.0	V	11.7	-63.66	-13	50.66
1652.8	-55.9	184	1.2	H	3.5	-52.4	-13	39.4
1652.8	-54.9	243	2.5	V	3.1	-51.8	-13	38.8
2479.2	-42.9	350	2.1	H	6.6	-36.3	-13	23.3
2479.2	-42.3	260	1.5	V	5.8	-36.5	-13	23.5
3305.6	-53.1	112	1.6	H	6.4	-46.7	-13	33.7
3305.6	-52.0	252	1.2	V	5.7	-46.3	-13	33.3
Middle Channel								
955.97	-72.81	31	2.1	H	10.0	-62.81	-13	49.81
955.97	-77.00	2	2.3	V	11.7	-65.30	-13	52.30
1672.8	-56.0	246	2.1	H	3.5	-52.5	-13	39.5
1672.8	-54.4	320	1.5	V	3.1	-51.3	-13	38.3
2509.2	-42.8	323	2.3	H	6.6	-36.2	-13	23.2
2509.2	-42.2	259	1.8	V	5.8	-36.4	-13	23.4
3345.6	-52.2	344	2.1	H	6.4	-45.8	-13	32.8
3345.6	-52.3	321	2.0	V	5.7	-46.6	-13	33.6
High Channel								
952.03	-72.55	280	1.4	H	10.0	-62.55	-13	49.55
952.03	-77.59	344	1.9	V	11.7	-65.89	-13	52.89
1693.2	-56.6	144	1.1	H	4.1	-52.5	-13	39.5
1693.2	-54.4	35	1.5	V	3.1	-51.3	-13	38.3
2539.8	-43.8	152	1.3	H	6.1	-37.7	-13	24.7
2539.8	-41.2	271	2.0	V	5.8	-35.4	-13	22.4
3386.4	-52.1	231	1.6	H	6.2	-45.9	-13	32.9
3386.4	-51.4	20	1.6	V	5.4	-46	-13	33.0

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								
Test frequency range: 30MHz-20GHz								
Low Channel								
954.34	-70.97	113	2.3	H	10.0	-60.97	-13	47.97
954.34	-76.11	49	1.4	V	11.7	-64.41	-13	51.41
3700.4	-55.3	167	1.6	H	8.1	-47.2	-13	34.2
3700.4	-53.7	275	2.3	V	7.6	-46.1	-13	33.1
5550.6	-48.7	225	1.8	H	9.6	-39.1	-13	26.1
5550.6	-45.0	78	1.9	V	9.1	-35.9	-13	22.9
Middle Channel								
953.48	-71.89	18	2.0	H	10.0	-61.89	-13	48.89
953.48	-77.14	47	2.4	V	11.7	-65.44	-13	52.44
3760	-54.7	90	1.2	H	8.8	-45.9	-13	32.9
3760	-54.1	316	1.2	V	8	-46.1	-13	33.1
5640	-49.5	300	1.1	H	10.2	-39.3	-13	26.3
5640	-47.1	105	2.3	V	9.5	-37.6	-13	24.6
High Channel								
956.26	-70.55	170	2.1	H	10.0	-60.55	-13	47.55
956.26	-75.84	55	1.0	V	11.7	-64.14	-13	51.14
3819.6	-55.1	295	1.4	H	8.7	-46.4	-13	33.4
3819.6	-54.6	209	2.2	V	8	-46.6	-13	33.6
5729.4	-50.9	40	1.8	H	10.8	-40.1	-13	27.1
5729.4	-47.6	297	1.6	V	10.4	-37.2	-13	24.2

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Test frequency range: 30MHz-20GHz								
Low Channel								
953.30	-70.16	257	2.1	H	10.0	-60.16	-13	47.16
953.30	-75.82	181	2.2	V	11.7	-64.12	-13	51.12
3701.4	-56.3	348	2.3	H	8.1	-48.2	-13	35.2
3701.4	-54.9	130	2.0	V	7.6	-47.3	-13	34.3
5552.1	-53.2	235	1.9	H	9.6	-43.6	-13	30.6
5552.1	-51.0	109	1.3	V	9.1	-41.9	-13	28.9
Middle Channel								
953.15	-72.73	241	1.8	H	10.0	-62.73	-13	49.73
953.15	-75.77	270	2.0	V	11.7	-64.07	-13	51.07
3760	-57.3	179	1.7	H	8.8	-48.5	-13	35.5
3760	-55.4	13	1.7	V	8	-47.4	-13	34.4
5640	-53.5	40	1.4	H	10.2	-43.3	-13	30.3
5640	-52.1	252	1.8	V	9.5	-42.6	-13	29.6
High Channel								
950.04	-71.33	242	1.6	H	10.0	-61.33	-13	48.33
950.04	-77.06	7	2.2	V	11.7	-65.36	-13	52.36
3818.6	-56.6	316	1.7	H	8.7	-47.9	-13	34.9
3818.6	-55.3	287	1.9	V	8	-47.3	-13	34.3
5727.9	-53.7	145	1.2	H	10.6	-43.1	-13	30.1
5727.9	-52.0	151	2.2	V	10.2	-41.8	-13	28.8

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								
Test frequency range: 30MHz-20GHz								
Low Channel								
952.17	-72.45	143	2.3	H	10.0	-62.45	-13	49.45
952.17	-77.48	338	1.2	V	11.7	-65.78	-13	52.78
3424.8	-52.0	268	1.4	H	6.4	-45.6	-13	32.6
3424.8	-50.9	63	2.0	V	5.7	-45.2	-13	32.2
Middle Channel								
953.84	-72.99	32	2.2	H	10.0	-62.99	-13	49.99
953.84	-75.95	255	2.4	V	11.7	-64.25	-13	51.25
3465.2	-53.0	269	2.2	H	7	-46	-13	33.0
3465.2	-53.1	6	1.7	V	6.2	-46.9	-13	33.9
High Channel								
954.42	-72.99	127	1.0	H	10.0	-62.99	-13	49.99
954.42	-76.23	29	1.2	V	11.7	-64.53	-13	51.53
3505.2	-53.7	228	2.2	H	7.8	-45.9	-13	32.9
3505.2	-53.5	311	1.2	V	6.6	-46.9	-13	33.9

LTE Band: (Pre-scan with all the bandwidth and modulation, 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)				
LTE Band2								
Test frequency range: 30MHz-20GHz								
QPSK, 1.4MHz, Low Channel								
953.30	-70.16	257	2.1	H	10.0	-60.16	-13	47.16
953.30	-75.82	181	2.2	V	11.7	-64.12	-13	51.12
3701.4	-56.3	348	2.3	H	8.1	-48.2	-13	35.2
3701.4	-54.9	130	2.0	V	7.6	-47.3	-13	34.3
5552.1	-53.2	235	1.9	H	9.6	-43.6	-13	30.6
5552.1	-51.0	109	1.3	V	9.1	-41.9	-13	28.9
QPSK, 1.4MHz, Middle Channel								
953.15	-72.73	241	1.8	H	10.0	-62.73	-13	49.73
953.15	-75.77	270	2.0	V	11.7	-64.07	-13	51.07
3760	-57.3	179	1.7	H	8.8	-48.5	-13	35.5
3760	-55.4	13	1.7	V	8	-47.4	-13	34.4
5640	-53.5	40	1.4	H	10.2	-43.3	-13	30.3
5640	-52.1	252	1.8	V	9.5	-42.6	-13	29.6
QPSK, 1.4MHz, High Channel								
950.04	-71.33	242	1.6	H	10.0	-61.33	-13	48.33
950.04	-77.06	7	2.2	V	11.7	-65.36	-13	52.36
3818.6	-56.6	316	1.7	H	8.7	-47.9	-13	34.9
3818.6	-55.3	287	1.9	V	8	-47.3	-13	34.3
5727.9	-53.7	145	1.2	H	10.6	-43.1	-13	30.1
5727.9	-52.0	151	2.2	V	10.2	-41.8	-13	28.8

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band4								
Test frequency range: 30MHz-20GHz								
QPSK, 1.4MHz, Low Channel								
954.68	-72.82	266	2.2	H	10.0	-62.82	-13	49.82
954.68	-75.83	352	1.1	V	11.7	-64.13	-13	51.13
3421.4	-51.7	84	1.5	H	6.4	-45.3	-13	32.3
3421.4	-51.1	245	1.4	V	5.7	-45.4	-13	32.4
5132.1	-56.2	306	2.2	H	11.3	-44.9	-13	31.9
5132.1	-56.0	6	1.6	V	10.8	-45.2	-13	32.2
QPSK, 1.4MHz, Middle Channel								
952.46	-71.56	3	1.5	H	10.0	-61.56	-13	48.56
952.46	-76.01	119	2.1	V	11.7	-64.31	-13	51.31
3465	-52.2	175	1.7	H	7	-45.2	-13	32.2
3465	-52.5	265	1.0	V	6.2	-46.3	-13	33.3
5197.5	-55.9	78	1.2	H	10.4	-45.5	-13	32.5
5197.5	-54.0	42	2.1	V	9.8	-44.2	-13	31.2
QPSK, 1.4MHz, High Channel								
953.97	-72.49	164	2.1	H	10.0	-62.49	-13	49.49
953.97	-76.70	249	1.1	V	11.7	-65.00	-13	52.00
3508.6	-53.3	173	2.1	H	7.8	-45.5	-13	32.5
3508.6	-53.4	171	1.8	V	6.6	-46.8	-13	33.8
5262.9	-53.0	66	1.1	H	9.5	-43.5	-13	30.5
5262.9	-51.7	137	2.2	V	8.9	-42.8	-13	29.8

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band5<E Band 26(Part 22H)								
Test frequency range: 30MHz-10GHz								
QPSK, 1.4MHz, Low Channel								
953.36	-72.48	298	1.1	H	10.0	-62.48	-13	49.48
953.36	-77.65	175	2.3	V	11.7	-65.95	-13	52.95
1649.4	-58.0	81	2.4	H	3.5	-54.5	-13	41.5
1649.4	-58.1	349	1.9	V	3.1	-55	-13	42.0
2474.1	-48.1	23	2.5	H	6.6	-41.5	-13	28.5
2474.1	-46.2	101	2.4	V	5.8	-40.4	-13	27.4
3298.8	-52.7	352	1.8	H	6.4	-46.3	-13	33.3
3298.8	-51.6	16	2.1	V	5.7	-45.9	-13	32.9
QPSK, 1.4MHz, Middle Channel								
952.33	-70.10	261	2.0	H	10.0	-60.10	-13	47.10
952.33	-75.66	282	1.7	V	11.7	-63.96	-13	50.96
1673	-56.4	282	2.4	H	3.8	-52.6	-13	39.6
1673	-56.0	232	1.1	V	3.1	-52.9	-13	39.9
2509.5	-46.7	311	1.5	H	6.2	-40.5	-13	27.5
2509.5	-45.2	142	1.9	V	5.5	-39.7	-13	26.7
3346	-53.3	180	1.8	H	6.6	-46.7	-13	33.7
3346	-51.3	77	1.7	V	5.4	-45.9	-13	32.9
QPSK, 1.4MHz, High Channel								
953.64	-72.58	62	1.3	H	10.0	-62.58	-13	49.58
953.64	-76.75	213	1.7	V	11.7	-65.05	-13	52.05
1696.6	-56.7	147	1.7	H	4.1	-52.6	-13	39.6
1696.6	-55.4	258	2.5	V	3.1	-52.3	-13	39.3
2544.9	-46.2	208	2.2	H	6.1	-40.1	-13	27.1
2544.9	-44.5	82	2.5	V	5.8	-38.7	-13	25.7
3393.2	-52.7	173	1.1	H	6.2	-46.5	-13	33.5
3393.2	-51.8	108	1.4	V	5.4	-46.4	-13	33.4

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band7								
Test frequency range: 30MHz-26.5GHz								
QPSK, 5MHz, Low Channel								
955.26	-70.54	300	1.3	H	10.0	-60.54	-25	35.54
955.26	-76.26	280	1.5	V	11.7	-64.56	-25	39.56
5005	-56.6	302	1.6	H	10.8	-45.8	-25	20.8
5005	-53.9	27	1.5	V	10.2	-43.7	-25	18.7
QPSK, 5MHz, Middle Channel								
952.97	-72.40	11	2.2	H	9.8	-62.60	-25	37.60
952.97	-77.03	259	2.5	V	11.7	-65.33	-25	40.33
5070	-56.1	235	2.0	H	11.1	-45	-25	20.0
5070	-53.3	222	1.8	V	10.8	-42.5	-25	17.5
QPSK, 5MHz, High Channel								
956.19	-72.59	291	2.1	H	10.0	-62.59	-25	37.59
956.19	-76.45	41	1.1	V	11.7	-64.75	-25	39.75
5135	-55.8	219	1.3	H	11.3	-44.5	-25	19.5
5135	-53.8	115	2.1	V	10.8	-43	-25	18.0

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 12								
Test frequency range: 30MHz-10GHz								
QPSK, 1.4MHz, Low Channel								
953.20	-61.81	110	1.6	H	-0.2	-62.01	-13	49.01
953.20	-67.96	203	2.4	V	3.1	-64.86	-13	51.86
1399.4	-62.8	159	2.5	H	5.9	-56.9	-13	43.9
1399.4	-60.7	313	1.5	V	5.9	-54.8	-13	41.8
2099.1	-50.3	155	1.9	H	6.3	-44	-13	31.0
2099.1	-49.6	128	1.7	V	5.1	-44.5	-13	31.5
2798.8	-55.7	58	2.1	H	6.7	-49	-13	36.0
2798.8	-54.2	248	1.8	V	6.7	-47.5	-13	34.5
QPSK, 1.4MHz, Middle Channel								
953.14	-61.84	145	1.1	H	-0.2	-62.04	-13	49.04
953.14	-67.78	253	1.6	V	3.1	-64.68	-13	51.68
1415	-63.6	334	1.8	H	5.9	-57.7	-13	44.7
1415	-61.5	21	2.1	V	5.9	-55.6	-13	42.6
2122.5	-49.5	59	2.1	H	6.3	-43.2	-13	30.2
2122.5	-49.4	35	1.9	V	5.1	-44.3	-13	31.3
2830	-56.4	294	1.9	H	7.4	-49	-13	36.0
2830	-53.7	291	1.3	V	6.7	-47	-13	34.0
QPSK, 1.4MHz, High Channel								
954.43	-61.82	293	2.2	H	-0.2	-62.02	-13	49.02
954.43	-67.77	80	1.1	V	3.1	-64.67	-13	51.67
1430.6	-61.3	138	1.6	H	5.4	-55.4	-13	42.4
1430.6	-60.2	125	2.0	V	4.1	-54.3	-13	41.3
2145.9	-50.9	38	1.8	H	7.1	-43.8	-13	30.8
2145.9	-51.5	290	1.1	V	6.7	-44.8	-13	31.8
2861.2	-56.7	180	2.5	H	7.4	-49.3	-13	36.3
2861.2	-54.7	59	1.0	V	6.7	-48	-13	35.0

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 25								
Test frequency range: 30MHz-20GHz								
QPSK, 1.4MHz, Low Channel								
953.51	-72.36	103	2.5	H	10.0	-62.36	-13	49.36
953.51	-75.21	183	1.0	V	11.7	-63.51	-13	50.51
3701.4	-55.3	309	1.3	H	8.1	-47.2	-13	34.2
3701.4	-54.4	145	2.0	V	7.6	-46.8	-13	33.8
QPSK, 1.4MHz, Middle Channel								
951.75	-71.60	326	1.1	H	10.0	-61.60	-13	48.60
951.75	-75.75	107	1.5	V	11.7	-64.05	-13	51.05
3765	-56.5	97	1.8	H	8.9	-47.6	-13	34.6
3765	-54.6	121	1.5	V	8	-46.6	-13	33.6
QPSK, 1.4MHz, High Channel								
953.99	-72.63	169	2.3	H	10.0	-62.63	-13	49.63
953.99	-76.61	126	2.2	V	11.7	-64.91	-13	51.91
3828.6	-56.5	206	1.8	H	8.8	-47.7	-13	34.7
3828.6	-54.5	268	1.4	V	8.2	-46.3	-13	33.3

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 26(Part 90S)								
Test frequency range: 30MHz-10GHz								
QPSK, 1.4MHz, Low Channel								
953.70	-70.77	272	1.2	H	10.0	-60.77	-13	47.77
953.70	-77.69	70	1.3	V	11.7	-65.99	-13	52.99
1629.4	-52.7	213	2.3	H	3.5	-49.2	-13	36.2
1629.4	-51.8	56	2.1	V	3.1	-48.7	-13	35.7
2444.1	-45.8	309	2.3	H	7	-38.8	-13	25.8
2444.1	-43.7	222	1.4	V	6	-37.7	-13	24.7
3258.8	-53.1	53	1.8	H	7	-46.1	-13	33.1
3258.8	-52.1	314	1.9	V	6.1	-46	-13	33.0
QPSK, 1.4MHz, Middle Channel								
950.41	-72.13	262	1.9	H	10.0	-62.13	-13	49.13
950.41	-76.03	256	1.8	V	11.7	-64.33	-13	51.33
1638	-51.6	21	2.5	H	3.5	-48.1	-13	35.1
1638	-52.6	227	1.4	V	3.1	-49.5	-13	36.5
2457	-45.1	118	1.6	H	6.2	-38.9	-13	25.9
2457	-41.1	97	1.2	V	5.5	-35.6	-13	22.6
3276	-52.7	39	1.5	H	6.6	-46.1	-13	33.1
3276	-51.9	245	2.5	V	5.4	-46.5	-13	33.5
QPSK, 1.4MHz, High Channel								
952.28	-72.31	92	2.2	H	10.0	-62.31	-13	49.31
952.28	-77.07	112	1.7	V	11.7	-65.37	-13	52.37
1646.6	-50.4	277	1.3	H	4.1	-46.3	-13	33.3
1646.6	-49.1	207	1.6	V	3.1	-46	-13	33.0
2469.9	-45.3	247	2.3	H	6.1	-39.2	-13	26.2
2469.9	-43.8	243	1.9	V	5.8	-38	-13	25.0
3293.2	-52.7	139	1.9	H	6.2	-46.5	-13	33.5
3293.2	-51.3	165	1.8	V	5.4	-45.9	-13	32.9

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 41								
Test frequency range: 30MHz-26.5GHz								
QPSK, 5MHz, Low Channel								
955.49	-70.30	279	1.1	H	10.0	-60.30	-25	35.30
955.49	-77.21	53	2.1	V	11.7	-65.51	-25	40.51
5075	-56.2	311	2.0	H	10.8	-45.4	-25	20.4
5075	-54.7	108	1.5	V	10.1	-44.6	-25	19.6
7612.5	-62.1	271	2.2	H	20.3	-41.8	-25	16.8
7612.5	-61.7	337	1.6	V	19.9	-41.8	-25	16.8
QPSK, 5MHz, Middle Channel								
955.45	-70.96	183	1.6	H	10.0	-60.96	-25	35.96
955.45	-76.78	32	2.4	V	11.7	-65.08	-25	40.08
5190	-55.6	118	2.1	H	10.3	-45.3	-25	20.3
5190	-54.3	354	2.2	V	9.8	-44.5	-25	19.5
7785	-59.3	70	1.3	H	17.9	-41.4	-25	16.4
7785	-58.2	29	1.8	V	17.6	-40.6	-25	15.6
QPSK, 5MHz, High Channel								
953.71	-70.19	126	1.5	H	10.0	-60.19	-25	35.19
953.71	-77.09	55	1.0	V	11.7	-65.39	-25	40.39
5125	-53.9	16	2.4	H	9.7	-44.2	-25	19.2
5125	-53.1	170	1.5	V	9	-44.1	-25	19.1
7687.5	-62.8	62	1.3	H	19.7	-43.1	-25	18.1
7687.5	-61.3	234	1.8	V	19	-42.3	-25	17.3

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 66								
Test frequency range: 30MHz-20GHz								
QPSK, 1.4MHz, Low Channel								
950.08	-71.27	65	2.4	H	10.0	-61.27	-13	48.27
950.08	-76.09	132	1.8	V	11.7	-64.39	-13	51.39
3421.4	-52.3	117	1.6	H	6.4	-45.9	-13	32.9
3421.4	-51.4	151	2.3	V	5.7	-45.7	-13	32.7
5132.1	-56.0	221	1.8	H	11.7	-44.3	-13	31.3
5132.1	-54.7	142	2.4	V	10.8	-43.9	-13	30.9
QPSK, 1.4MHz, Middle Channel								
956.59	-70.05	66	1.1	H	10.0	-60.05	-13	47.05
956.59	-77.03	166	1.5	V	11.7	-65.33	-13	52.33
3510	-54.1	89	1.3	H	7.8	-46.3	-13	33.3
3510	-53.7	23	2.5	V	6.6	-47.1	-13	34.1
5265	-49.0	133	2.4	H	9.5	-39.5	-13	26.5
5265	-48.4	147	1.9	V	8.9	-39.5	-13	26.5
QPSK, 1.4MHz, High Channel								
950.95	-70.63	217	2.0	H	10.0	-60.63	-13	47.63
950.95	-76.12	117	1.2	V	11.7	-64.42	-13	51.42
3558.6	-54.3	213	1.9	H	7.8	-46.5	-13	33.5
3558.6	-52.4	237	1.1	V	7	-45.4	-13	32.4
5337.9	-52.7	296	1.0	H	9.4	-43.3	-13	30.3
5337.9	-50.8	233	1.1	V	8.7	-42.1	-13	29.1

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 71								
Test frequency range: 30MHz-10GHz								
QPSK, 5MHz, Low Channel								
953.64	-59.29	206	2.3	H	10.0	-49.29	-13	36.29
953.64	-63.54	78	2.2	V	11.7	-51.84	-13	38.84
1326	-63.0	115	1.7	H	6.4	-56.6	-13	43.6
1326	-60.5	120	1.9	V	5.6	-54.9	-13	41.9
1989	-40.7	349	1.9	H	4.3	-36.4	-13	23.4
1989	-40.5	96	1.0	V	3.3	-37.2	-13	24.2
QPSK, 5MHz, Middle Channel								
951.15	-60.10	107	2.0	H	10.0	-50.10	-13	37.10
951.15	-63.62	5	2.0	V	11.7	-51.92	-13	38.92
1361	-60.7	28	2.0	H	6.4	-54.3	-13	41.3
1361	-60.4	184	1.4	V	5.6	-54.8	-13	41.8
2041.5	-43.0	220	2.4	H	4.9	-38.1	-13	25.1
2041.5	-41.3	21	1.2	V	3.9	-37.4	-13	24.4
QPSK, 5MHz, High Channel								
950.54	-60.81	106	2.1	H	10.0	-50.81	-13	37.81
950.54	-63.25	249	1.1	V	11.7	-51.55	-13	38.55
1396	-61.4	162	1.9	H	5.9	-55.5	-13	42.5
1396	-60.6	39	1.7	V	5.9	-54.7	-13	41.7
2094	-43.6	4	1.3	H	6.3	-37.3	-13	24.3
2094	-43.3	257	1.7	V	5.1	-38.2	-13	25.2

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(g) (h)(m); §90.691 - 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 (g)(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.

According to § 90.691, (a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

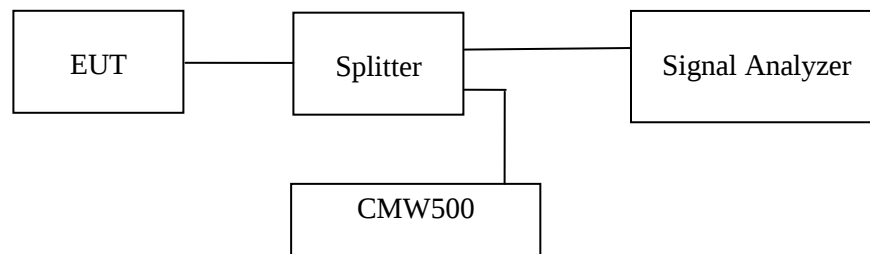
(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Test Data**Environmental Conditions**

Temperature:	23~25 °C
Relative Humidity:	50~60 %
ATM Pressure:	101.0 kPa

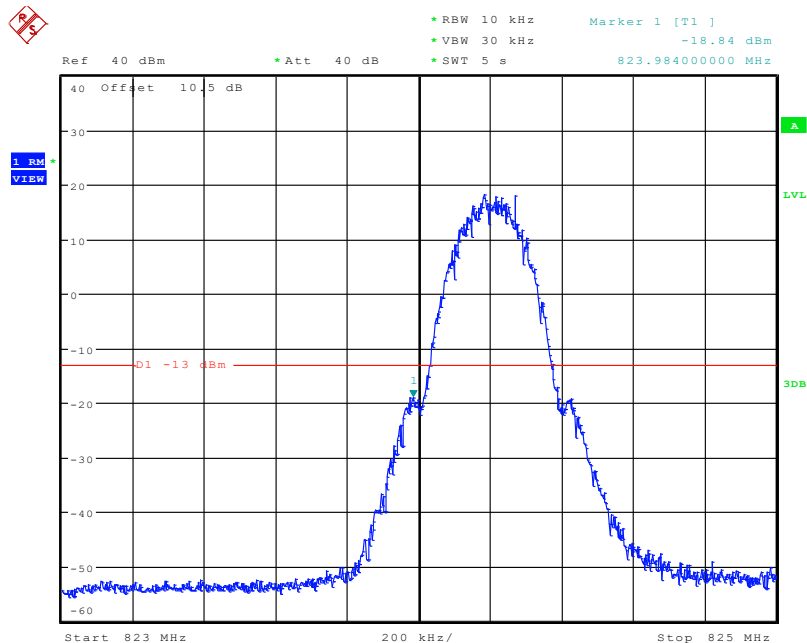
The testing was performed by Cat Kang from 2022-06-08 to 2022-07-13.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

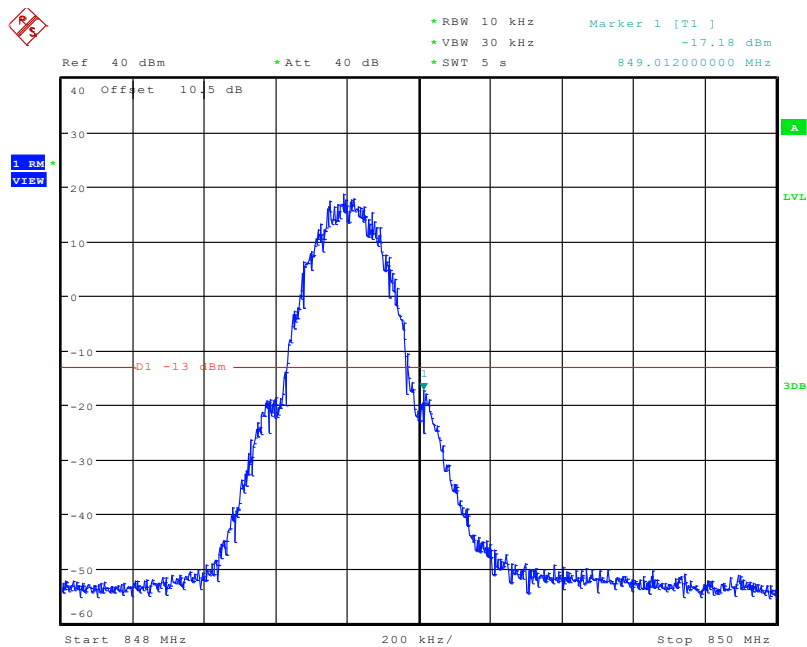
Please refer to the following plots.

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

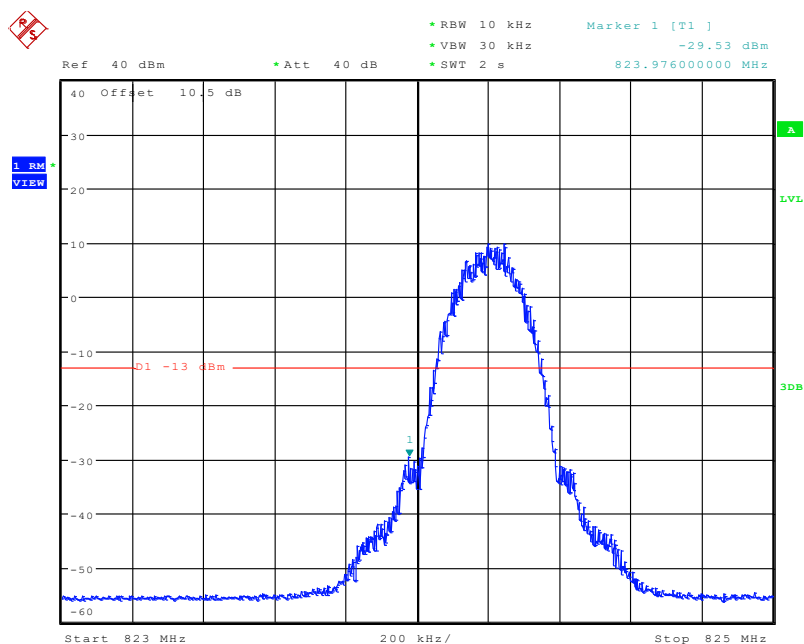


Date: 8.JUN.2022 11:04:21

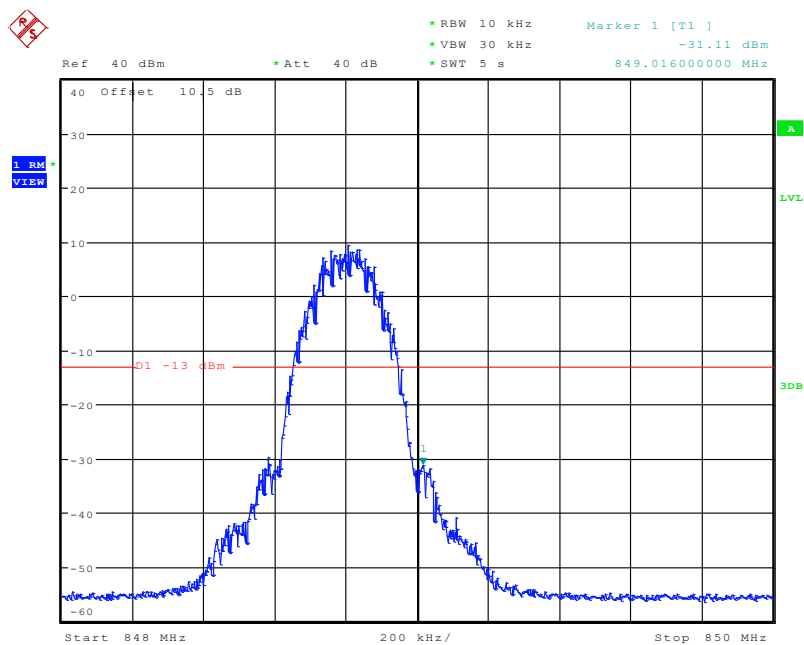
Cellular Band, Right Band Edge for GSM (GMSK) Mode



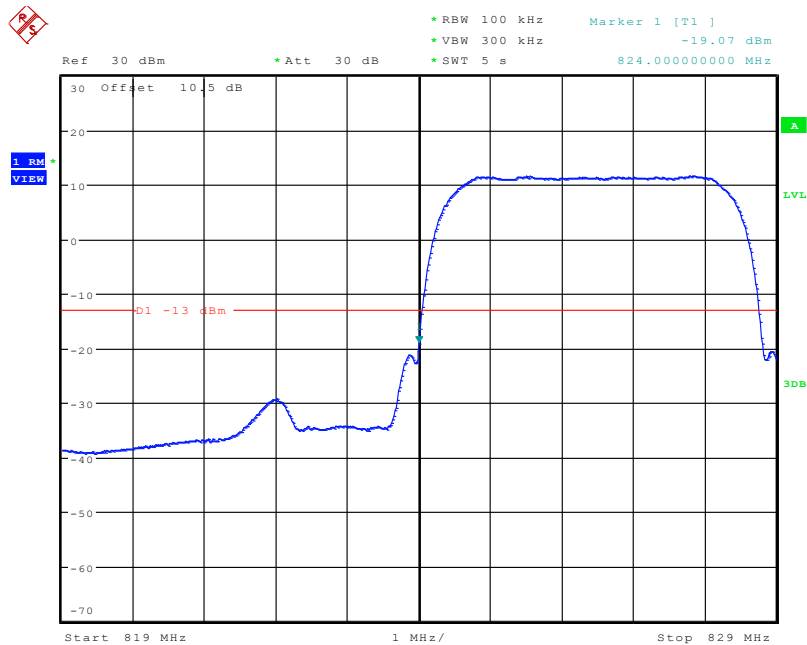
Date: 8.JUN.2022 11:15:05

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

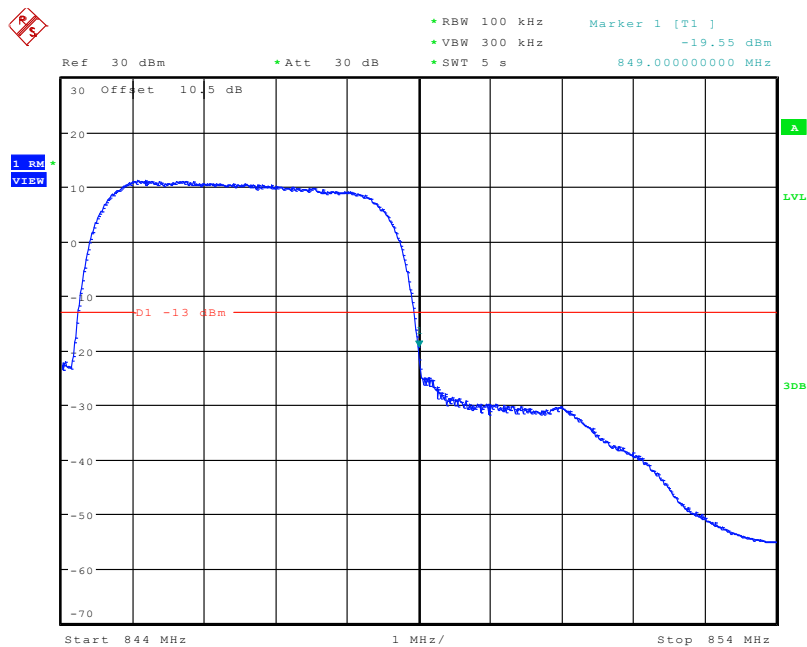
Date: 13.JUL.2022 12:04:44

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

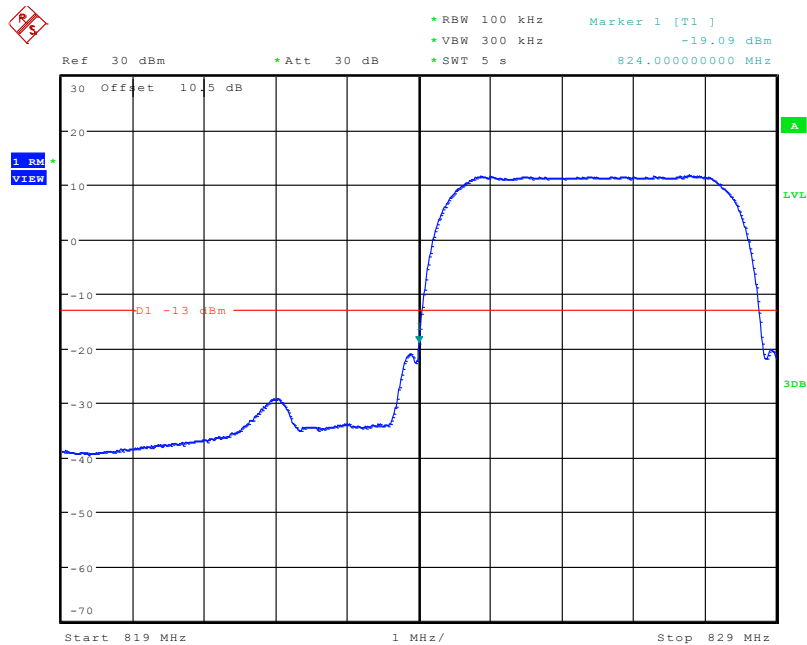
Date: 13.JUL.2022 12:12:57

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

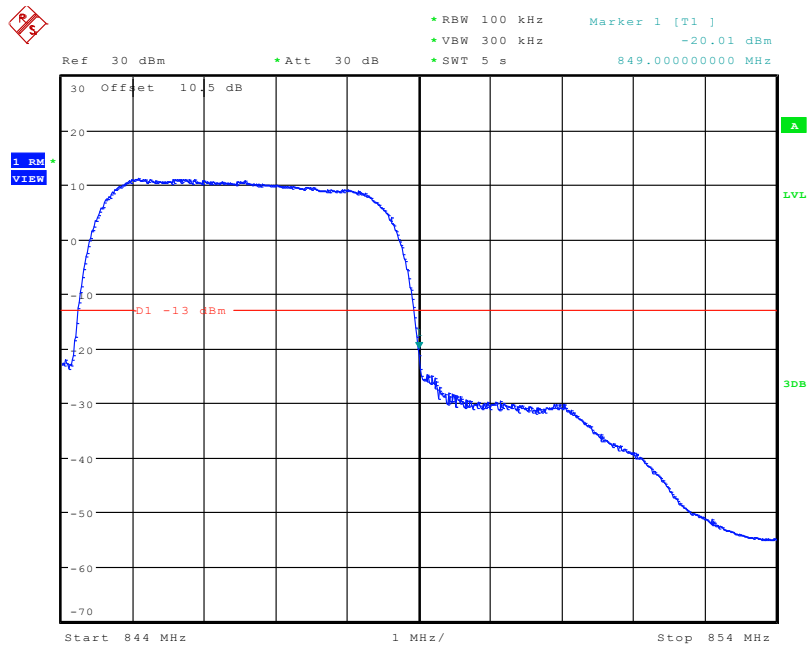
Date: 8.JUN.2022 15:30:23

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

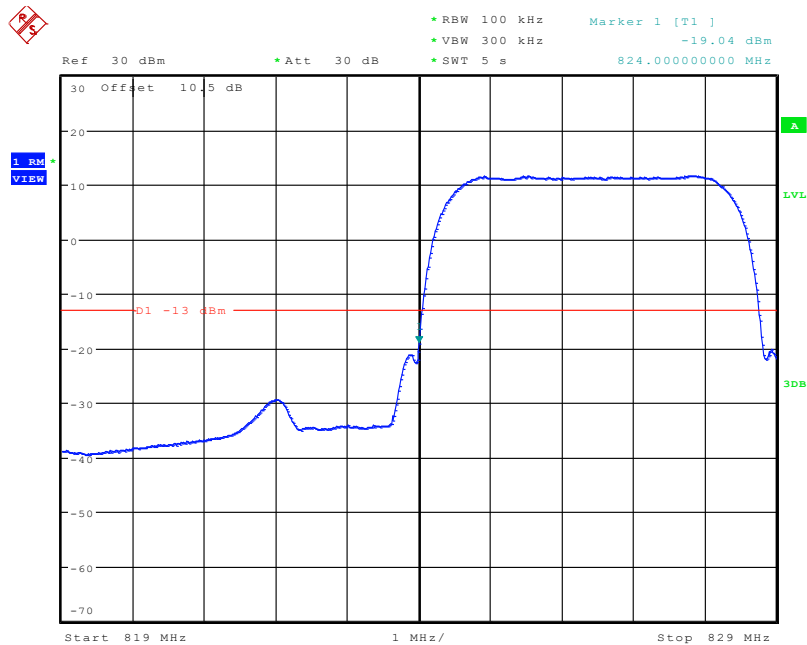
Date: 8.JUN.2022 15:53:48

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

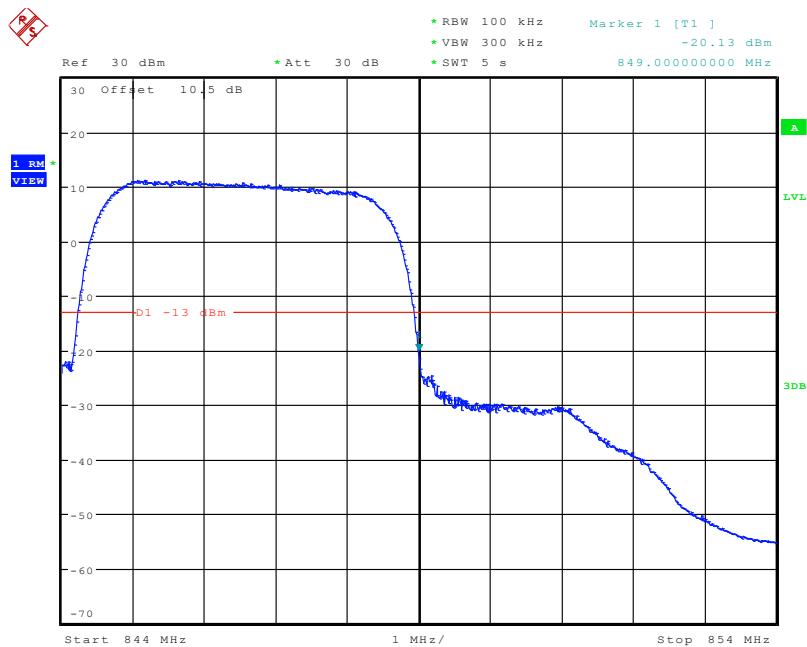
Date: 8.JUN.2022 15:37:24

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

Date: 8.JUN.2022 16:01:00

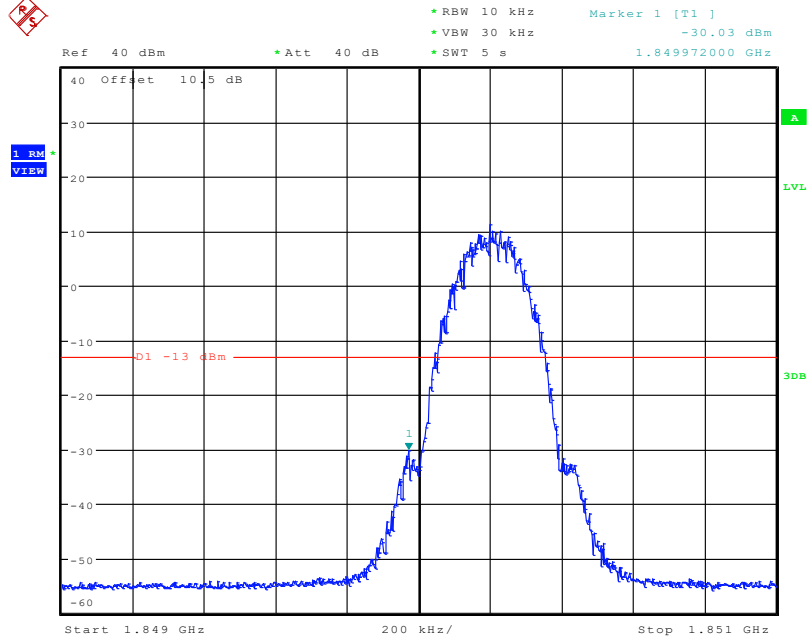
Cellular Band, Left Band Edge for HSUPA (BPSK) Mode

Date: 8.JUN.2022 15:33:57

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

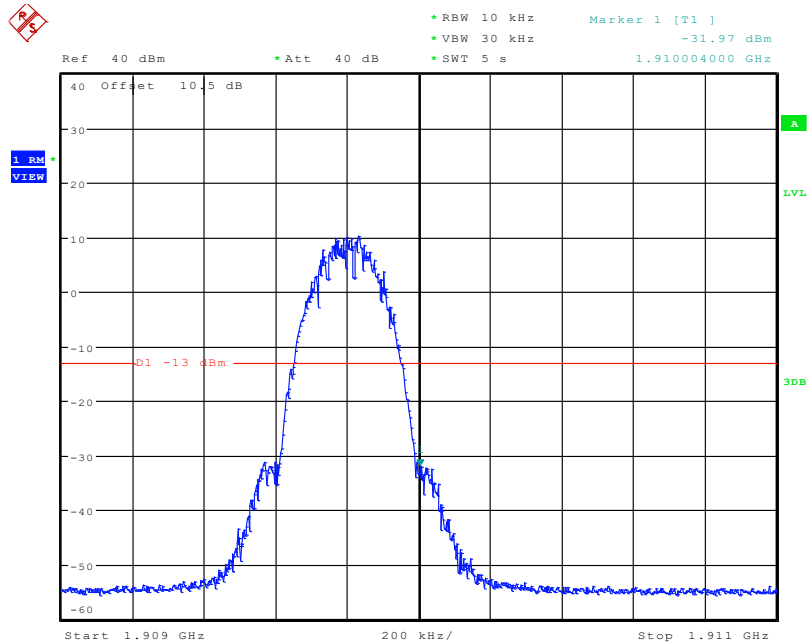
Date: 8.JUN.2022 15:57:17

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

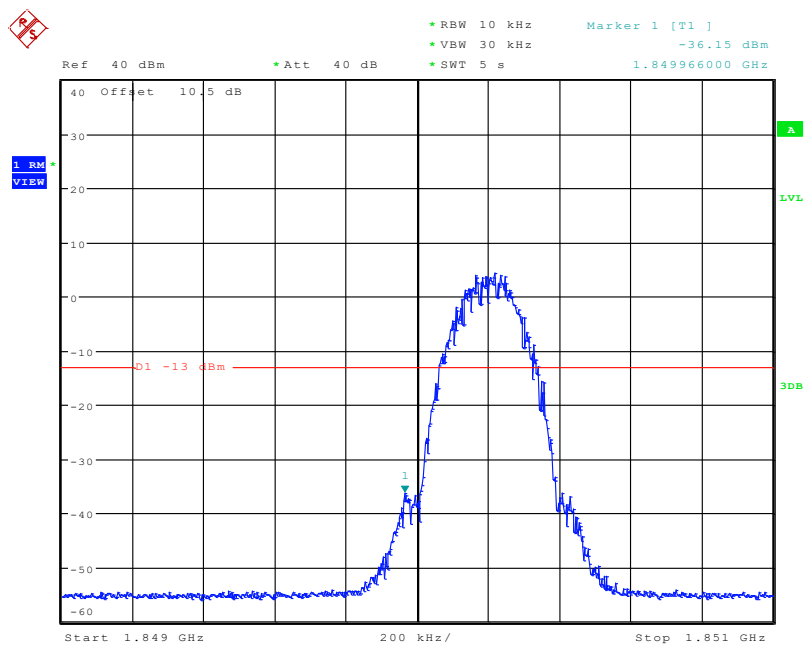


Date: 8.JUN.2022 11:32:59

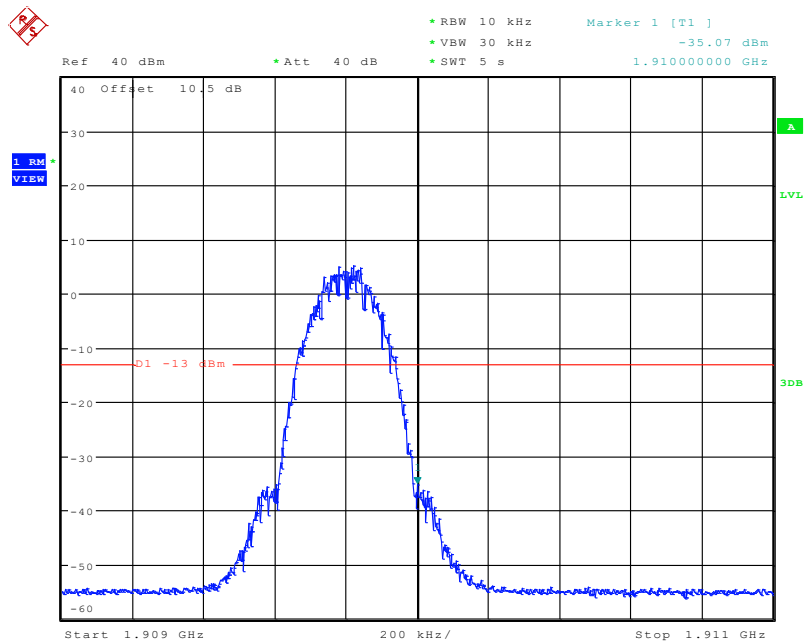
PCS Band, Right Band Edge for GSM (GMSK) Mode



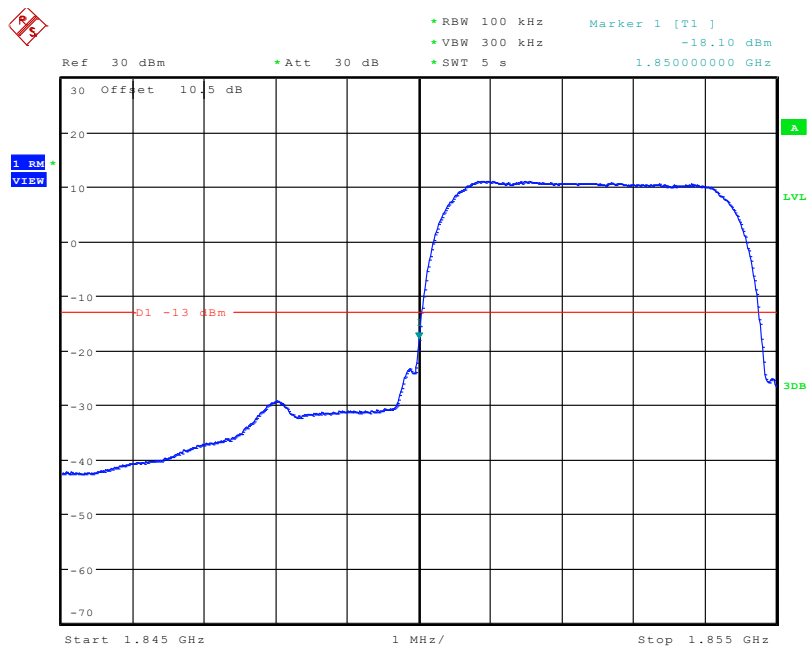
Date: 8.JUN.2022 11:45:52

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

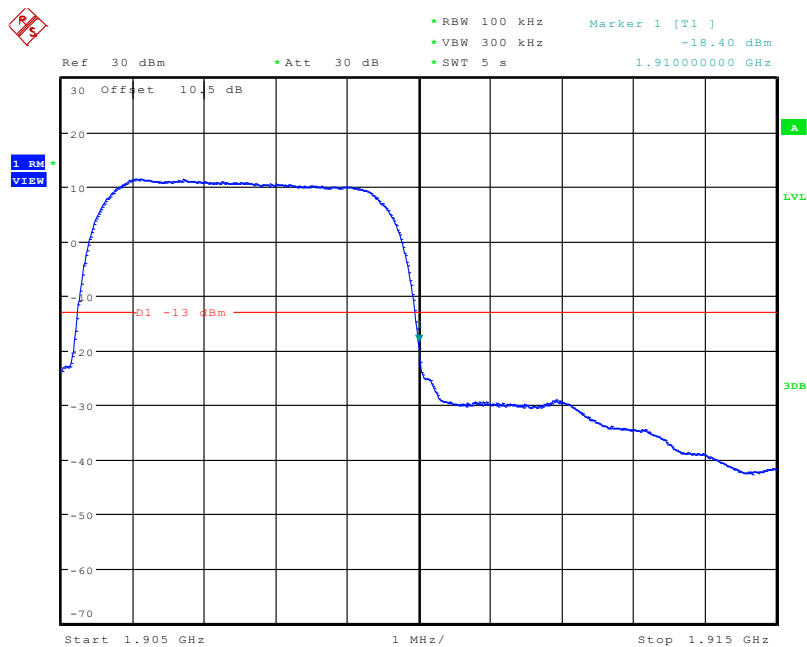
Date: 13.JUL.2022 12:18:25

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

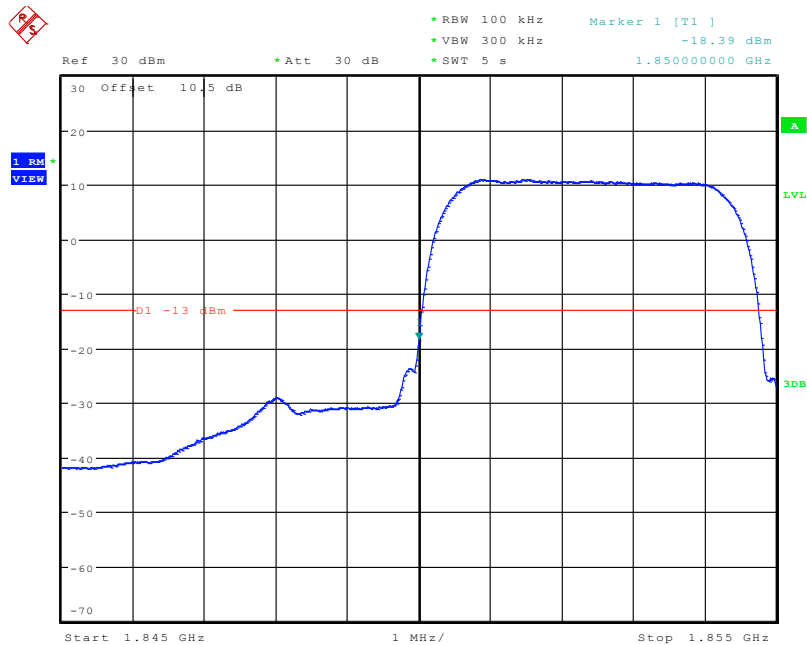
Date: 13.JUL.2022 12:30:19

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

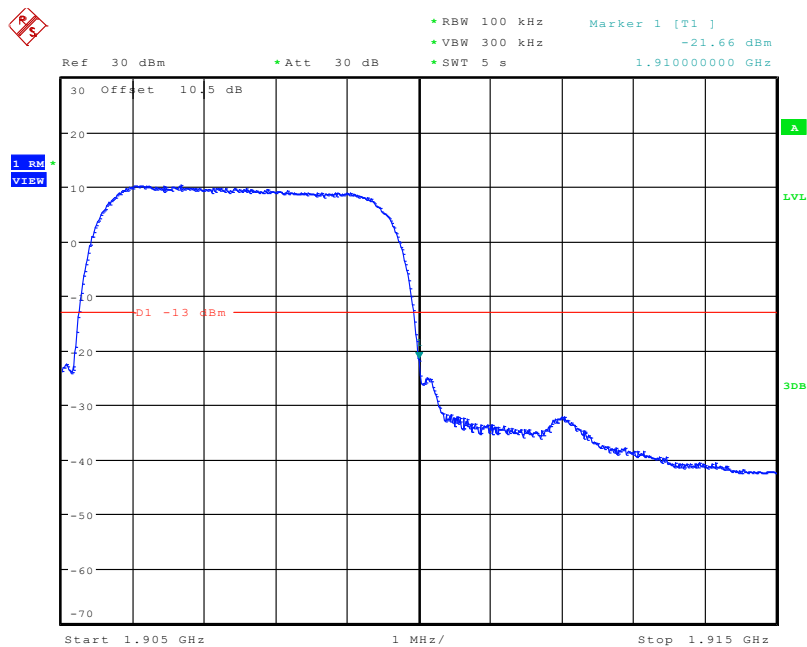
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PCS Band, Right Band Edge for RMC (BPSK) Mode

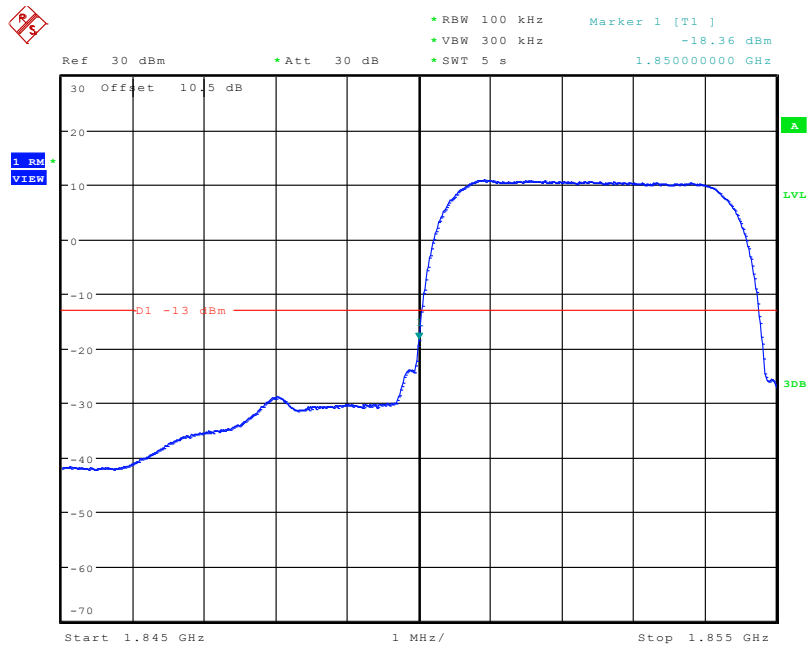
Date: 8.JUN.2022 13:31:00

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

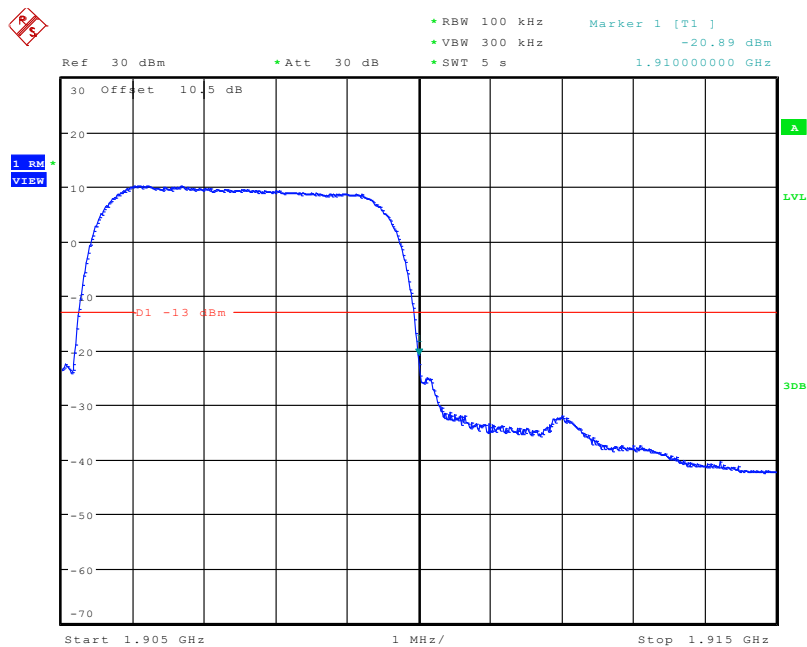
Date: 8.JUN.2022 14:36:23

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

Date: 8.JUN.2022 13:49:48

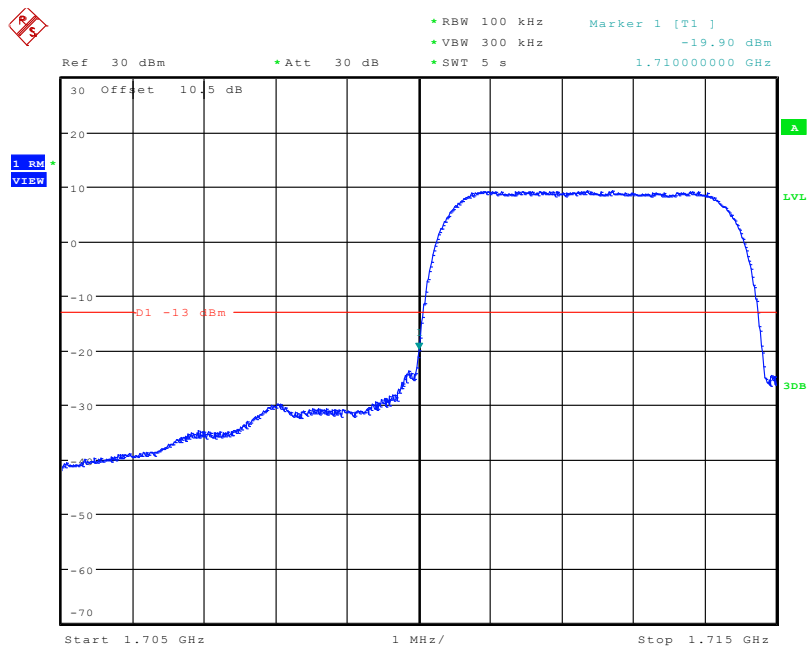
PCS Band, Left Band Edge for HSUPA (QPSK) Mode

Date: 8.JUN.2022 14:41:46

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

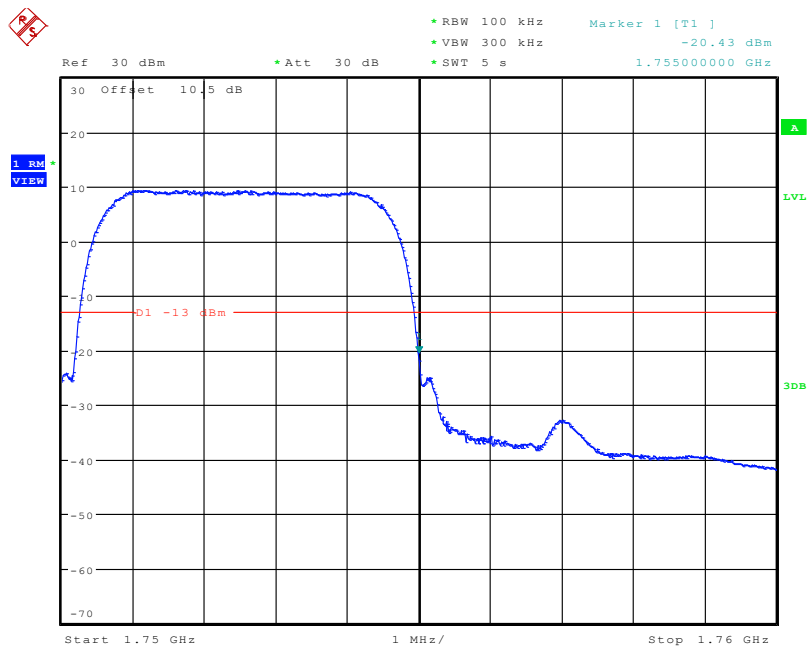
Date: 8.JUN.2022 13:54:35

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

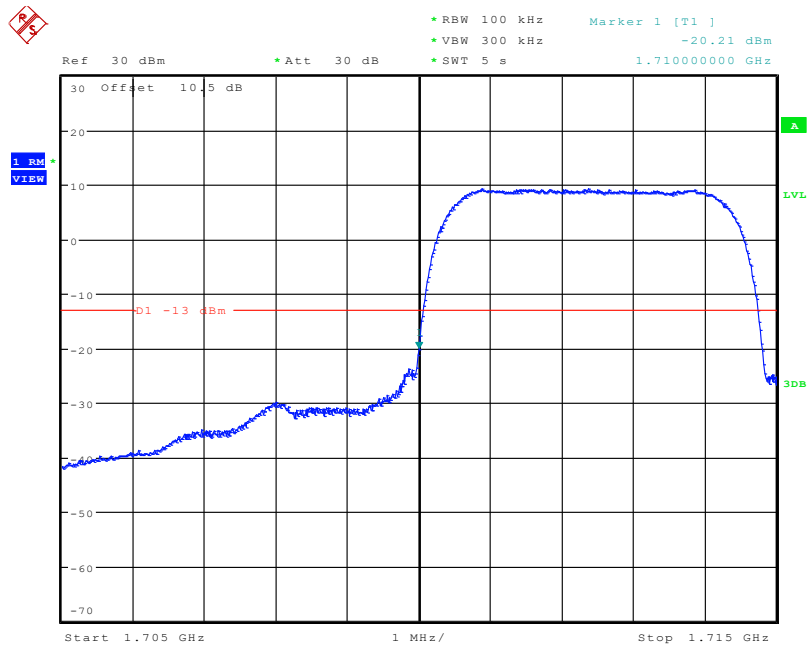


Date: 8.JUN.2022 16:05:51

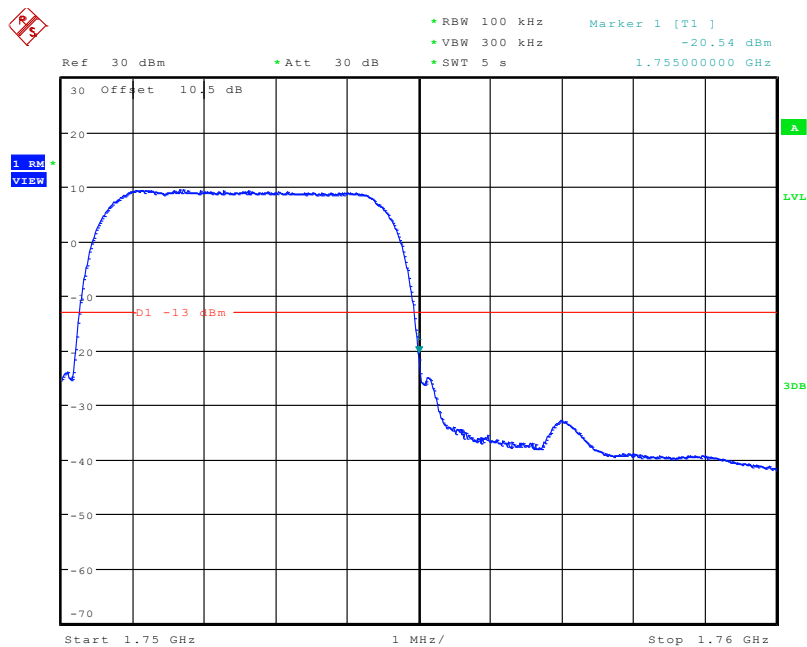
AWS Band, Right Band Edge for RMC (BPSK) Mode



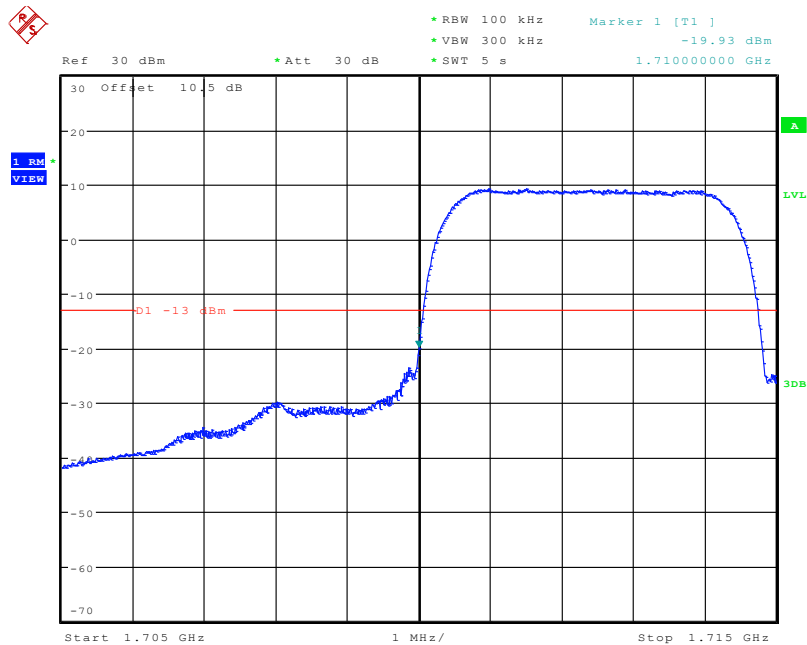
Date: 8.JUN.2022 16:41:33

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

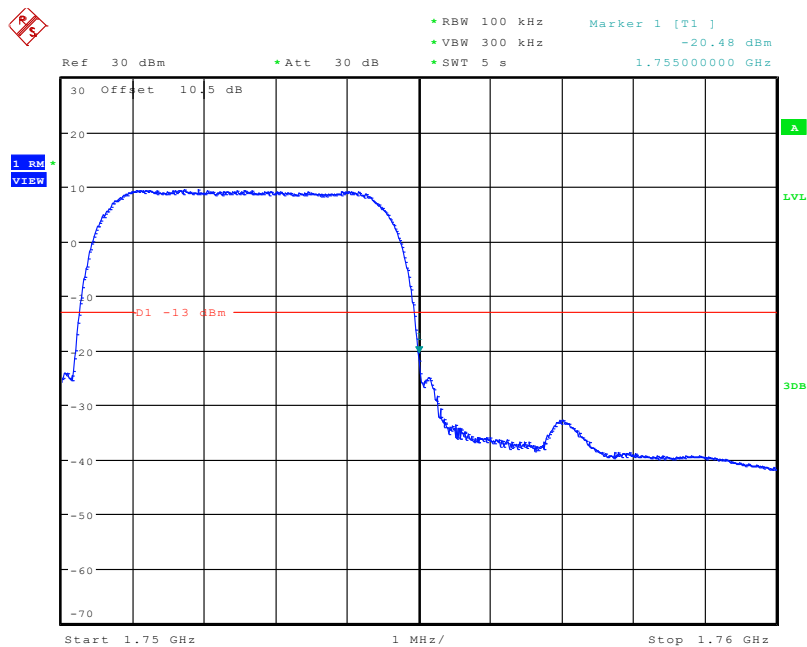
Date: 8.JUN.2022 16:20:08

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

Date: 8.JUN.2022 16:48:28

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

Date: 8.JUN.2022 16:15:36

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

Date: 8.JUN.2022 16:45:01

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

FCC § 2.1055; § 22.355; § 24.235; § 27.54; § 90.213- FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, § 22.355, § 24.235& § 27.54& § 90.213.

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.

According to § 90.213, unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table:

TABLE 1 TO § 90.213(a)—MINIMUM FREQUENCY STABILITY

[Parts per million (ppm)]

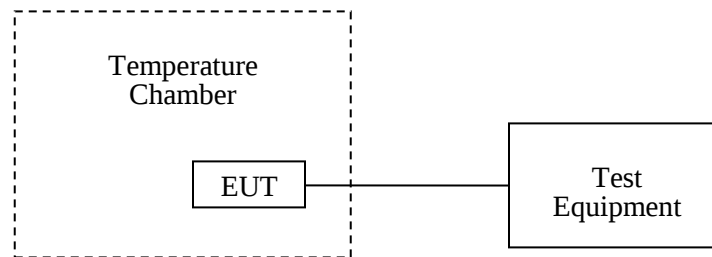
Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	1 2 3 100	100	200
25-50	20	20	50
72-76	5		50
150-174	5 11 5	6 5	4 6 50
216-220	1.0		1.0
220-222 ¹²	0.1	1.5	1.5
421-512	7 11 14 2.5	8 5	8 5
806-809	14 1.0	1.5	1.5
809-824	14 1.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	14 0.1	1.5	1.5
902-928	2.5	2.5	2.5
902-928 ¹³	2.5	2.5	2.5
929-930	1.5		
935-940	0.1	1.5	1.5
1427-1435	9 300	300	300
Above 2450 ¹⁰			

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:	25 °C
Relative Humidity:	60 %
ATM Pressure:	101.0 kPa

The testing was performed by Cat Kang on 2022-06-08.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

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

Middle Channel, $f_0 = 836.4\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	-1.97	-0.0024	2.5
-20		-2.29	-0.0027	2.5
-10		4.78	0.0057	2.5
0		6.13	0.0073	2.5
10		-3.56	-0.0043	2.5
20		3.67	0.0044	2.5
30		-1.53	-0.0018	2.5
40		-3.79	-0.0045	2.5
50		-3.06	-0.0037	2.5
20	L.V.	-2.26	-0.0027	2.5
	H.V.	-1.97	-0.0024	2.5

EGPRS Mode

Middle Channel, $f_0 = 836.4\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	-5.32	-0.0064	2.5
-20		-4.18	-0.0050	2.5
-10		2.58	0.0031	2.5
0		4.37	0.0052	2.5
10		-1.89	-0.0023	2.5
20		1.67	0.0020	2.5
30		1.09	0.0013	2.5
40		-2.56	-0.0031	2.5
50		-3.95	-0.0047	2.5
20	L.V.	-2.58	-0.0031	2.5
	H.V.	0.87	0.0010	2.5

WCDMA Mode

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	8.75	0.0105	2.5
-20		3.71	0.0044	2.5
-10		-1.97	-0.0024	2.5
0		-4.86	-0.0058	2.5
10		-1.82	-0.0022	2.5
20		-5.69	-0.0068	2.5
30		-1.75	-0.0021	2.5
40		-4.34	-0.0052	2.5
50		0.47	0.0006	2.5
20	L.V.	1.08	0.0013	2.5
	H.V.	1.39	0.0017	2.5

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

Middle Channel, $f_0 = 1880.0\text{ MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	2.95	0.0016	pass
-20		2.95	0.0016	pass
-10		1.34	0.0007	pass
0		-3.72	-0.0020	pass
10		2.04	0.0011	pass
20		-5.36	-0.0029	pass
30		3.79	0.0020	pass
40		0.21	0.0001	pass
50		0.29	0.0002	pass
20	L.V.	0.67	0.0004	pass
	H.V.	1.38	0.0007	pass

EGPRS Mode

Middle Channel, $f_0 = 1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	3.56	0.0019	pass
-20		1.52	0.0008	pass
-10		4.18	0.0022	pass
0		2.21	0.0012	pass
10		-1.26	-0.0007	pass
20		-4.05	-0.0022	pass
30		1.72	0.0009	pass
40		2.87	0.0015	pass
50		-2.98	-0.0016	pass
20	L.V.	0.73	0.0004	pass
	H.V.	3.54	0.0019	pass

WCDMA Mode

Middle Channel, $f_0 = 1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	5.08	0.0027	pass
-20		5.07	0.0027	pass
-10		-1.42	-0.0008	pass
0		1.77	0.0009	pass
10		1.92	0.0010	pass
20		-4.23	-0.0023	pass
30		-1.62	-0.0009	pass
40		4.39	0.0023	pass
50		-1.15	-0.0006	pass
20	L.V.	-0.68	-0.0004	pass
	H.V.	0.05	0.00003	pass

AWS Band (Part 27)

Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.5152	1754.4938	1710	1755
-20		1710.5157	1754.4941	1710	1755
-10		1710.5152	1754.4942	1710	1755
0		1710.5149	1754.4933	1710	1755
10		1710.5158	1754.4961	1710	1755
20		1710.5153	1754.4969	1710	1755
30		1710.5136	1754.4970	1710	1755
40		1710.5136	1754.4952	1710	1755
50		1710.5151	1754.4954	1710	1755
20	L.V.	1710.5148	1754.4947	1710	1755
	H.V.	1710.5137	1754.4946	1710	1755

LTE:
QPSK:
Band 2:

10.0 MHz Middle Channel, $f_0=1880\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	-0.79	-0.0004	pass
-20		-0.79	-0.0004	pass
-10		-4.87	-0.0026	pass
0		1.40	0.0007	pass
10		-3.09	-0.0016	pass
20		-5.22	-0.0028	pass
30		0.80	0.0004	pass
40		1.02	0.0005	pass
50		0.10	0.0001	pass
20	L.V.	0.80	0.0004	pass
	H.V.	0.86	0.0005	pass

Band 4:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1710.5141	1754.4817	1710	1755
-20		1710.5159	1754.4826	1710	1755
-10		1710.5196	1754.4823	1710	1755
0		1710.5193	1754.4860	1710	1755
10		1710.5163	1754.4836	1710	1755
20		1710.5189	1754.4844	1710	1755
30		1710.5152	1754.4807	1710	1755
40		1710.5172	1754.4846	1710	1755
50		1710.5154	1754.4856	1710	1755
20	L.V.	1710.5141	1754.4877	1710	1755
	H.V.	1710.5139	1754.4876	1710	1755

Band 5& Band 26(Part 22H):

Middle Channel, $f_0 = 836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	-11	-0.0132	2.5
-20		-8	-0.0096	2.5
-10		-7	-0.0084	2.5
0		-13	-0.0155	2.5
10		-14	-0.0167	2.5
20		-17	-0.0203	2.5
30		-12	-0.0143	2.5
40		3	0.0036	2.5
50		-2	-0.0024	2.5
20	L.V.	5	0.0060	2.5
	H.V.	9	0.0108	2.5

Band 7:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2500.3469	2569.7491	2500	2570
-20		2500.3497	2569.7601	2500	2570
-10		2500.3376	2569.7459	2500	2570
0		2500.3359	2569.7363	2500	2570
10		2500.3461	2569.7508	2500	2570
20		2500.3358	2569.7082	2500	2570
30		2500.3286	2569.7167	2500	2570
40		2500.3087	2569.7457	2500	2570
50		2500.3070	2569.7467	2500	2570
20	L.V.	2500.3969	2569.7369	2500	2570
	H.V.	2500.3091	2569.7288	2500	2570

Band 12:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	699.0375	715.9630	699	716
-20		699.0369	715.9620	699	716
-10		699.0365	715.9679	699	716
0		699.0318	715.9664	699	716
10		699.0347	715.9647	699	716
20		699.0384	715.9675	699	716
30		699.0378	715.9665	699	716
40		699.0379	715.9693	699	716
50		699.0368	715.9654	699	716
20	L.V.	699.0338	715.9676	699	716
	H.V.	699.0374	715.9640	699	716

Band 25:

10.0 MHz Middle Channel, f ₀ = 1882.5MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	-0.95	-0.0005	pass
-20		-0.63	-0.0003	pass
-10		-4.61	-0.0024	pass
0		1.8	0.0010	pass
10		-3.46	-0.0018	pass
20		-5.53	-0.0029	pass
30		1.5	0.0008	pass
40		1.69	0.0009	pass
50		1.3	0.0007	pass
20	L.V.	2.1	0.0011	pass
	H.V.	0.52	0.0003	pass

Band 26(Part 90S):

10.0 MHz Middle Channel, $f_0 = 819\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	-3.56	-0.0043	2.5
-20		-1.35	-0.0016	2.5
-10		2.53	0.0031	2.5
0		4.11	0.0050	2.5
10		2.71	0.0033	2.5
20		1.46	0.0018	2.5
30		-3.52	-0.0043	2.5
40		4.32	0.0053	2.5
50		-2.69	-0.0033	2.5
20	L.V.	-3.17	-0.0039	2.5
	H.V.	-2.05	-0.0025	2.5

Band 41:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2535.6116	2654.3810	2535	2655
-20		2535.6110	2654.3786	2535	2655
-10		2535.6114	2654.3790	2535	2655
0		2535.6096	2654.3790	2535	2655
10		2535.6123	2654.3815	2535	2655
20		2535.6119	2654.3791	2535	2655
30		2535.6101	2654.3796	2535	2655
40		2535.6115	2654.3805	2535	2655
50		2535.6123	2654.3791	2535	2655
20	L.V.	2535.6099	2654.3821	2535	2655
	H.V.	2535.6127	2654.3793	2535	2655

Band 66:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.5112	1779.6023	1710	1780
-20		1710.5101	1779.6023	1710	1780
-10		1710.5096	1779.6041	1710	1780
0		1710.5125	1779.6049	1710	1780
10		1710.5125	1779.6051	1710	1780
20		1710.5099	1779.6029	1710	1780
30		1710.5105	1779.6042	1710	1780
40		1710.5113	1779.6032	1710	1780
50		1710.5102	1779.6038	1710	1780
20	L.V.	1710.5121	1779.6049	1710	1780
	H.V.	1710.5109	1779.6042	1710	1780

Band 71:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	663.4626	697.3596	663	698
-20		663.4636	697.3609	663	698
-10		663.4625	697.3602	663	698
0		663.4634	697.3596	663	698
10		663.4651	697.3625	663	698
20		663.4642	697.3624	663	698
30		663.4636	697.3607	663	698
40		663.4645	697.3602	663	698
50		663.4647	697.3622	663	698
20	L.V.	663.4645	697.3616	663	698
	H.V.	663.4642	697.3633	663	698

16QAM:**Band 2:**

10.0 MHz Middle Channel, $f_0=1880\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	3.67	0.0020	pass
-20		3.67	0.0020	pass
-10		-2.39	-0.0013	pass
0		-0.23	-0.0001	pass
10		6.83	0.0036	pass
20		-2.33	-0.0012	pass
30		4.54	0.0024	pass
40		3.40	0.0018	pass
50		3.36	0.0018	pass
20	L.V.	3.84	0.0020	pass
	H.V.	3.99	0.0021	pass

Band 4:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.5366	1754.6211	1710	1755
-20		1710.5395	1754.6227	1710	1755
-10		1710.5341	1754.6251	1710	1755
0		1710.5394	1754.6244	1710	1755
10		1710.5366	1754.6232	1710	1755
20		1710.5410	1754.6273	1710	1755
30		1710.5394	1754.6223	1710	1755
40		1710.5339	1754.6214	1710	1755
50		1710.5377	1754.6261	1710	1755
20	L.V.	1710.5411	1754.6237	1710	1755
	H.V.	1710.5369	1754.6208	1710	1755

Band 5& Band 26(Part 22H):

Middle Channel, $f_0 = 836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	-14	-0.0167	2.5
-20		-5	-0.0060	2.5
-10		-7	-0.0084	2.5
0		-11	-0.0131	2.5
10		-12	-0.0143	2.5
20		-9	-0.0108	2.5
30		-12	-0.0143	2.5
40		2	0.0024	2.5
50		-3	-0.0036	2.5
20	L.V.	6	0.0072	2.5
	H.V.	4	0.0048	2.5

Band 7:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2500.5098	2569.4167	2500	2570
-20		2500.5981	2569.4193	2500	2570
-10		2500.5970	2569.4074	2500	2570
0		2500.5879	2569.4172	2500	2570
10		2500.5998	2569.4885	2500	2570
20		2500.5871	2569.4526	2500	2570
30		2500.5980	2569.4512	2500	2570
40		2500.5968	2569.4084	2500	2570
50		2500.5969	2569.4105	2500	2570
20	L.V.	2500.5876	2569.4992	2500	2570
	H.V.	2500.5070	2569.4915	2500	2570

Band 12:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	699.2389	715.9475	699	716
-20		699.2395	715.9441	699	716
-10		699.2401	715.9444	699	716
0		699.2397	715.9436	699	716
10		699.2380	715.9456	699	716
20		699.2373	715.9437	699	716
30		699.2415	715.9461	699	716
40		699.2361	715.9437	699	716
50		699.2417	715.9429	699	716
20	L.V.	699.2403	715.9441	699	716
	H.V.	699.2416	715.9456	699	716

Band 25:

10.0 MHz Middle Channel, f ₀ =1882.5MHz				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	N.V.	-1.52	-0.0008	pass
-20		0.67	0.0004	pass
-10		-2.16	-0.0011	pass
0		3.21	0.0017	pass
10		-1.98	-0.0011	pass
20		-4.33	-0.0023	pass
30		3.15	0.0017	pass
40		-2.16	-0.0011	pass
50		-8.91	-0.0047	pass
20	L.V.	4.76	0.0025	pass
	H.V.	-3.23	-0.0017	pass

Band 26(Part 90S):

10.0 MHz Middle Channel, $f_0 = 819\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	1.09	0.0013	2.5
-20		-2.57	-0.0031	2.5
-10		5.01	0.0061	2.5
0		2.71	0.0033	2.5
10		3.42	0.0042	2.5
20		-2.41	-0.0029	2.5
30		-0.59	-0.0007	2.5
40		5.12	0.0063	2.5
50		2.69	0.0033	2.5
20	L.V.	4.12	0.0050	2.5
	H.V.	-1.84	-0.0022	2.5

Band 41:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	2535.3924	2654.6833	2535	2655
-20		2535.3936	2654.6845	2535	2655
-10		2535.3920	2654.6836	2535	2655
0		2535.3921	2654.6827	2535	2655
10		2535.3942	2654.6849	2535	2655
20		2535.3928	2654.6845	2535	2655
30		2535.3918	2654.6827	2535	2655
40		2535.3921	2654.6835	2535	2655
50		2535.3934	2654.6825	2535	2655
20	L.V.	2535.3917	2654.6847	2535	2655
	H.V.	2535.3921	2654.6853	2535	2655

Band 66:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1710.4093	1779.7021	1710	1780
-20		1710.4107	1779.7018	1710	1780
-10		1710.4104	1779.7004	1710	1780
0		1710.4112	1779.7024	1710	1780
10		1710.4121	1779.7024	1710	1780
20		1710.4102	1779.7022	1710	1780
30		1710.4100	1779.7011	1710	1780
40		1710.4107	1779.7021	1710	1780
50		1710.4121	1779.7010	1710	1780
20	L.V.	1710.4107	1779.7024	1710	1780
	H.V.	1710.4102	1779.7021	1710	1780

Band 71:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	663.5214	697.5871	663	698
-20		663.5217	697.5879	663	698
-10		663.5231	697.5864	663	698
0		663.5209	697.5877	663	698
10		663.5234	697.5891	663	698
20		663.5211	697.5877	663	698
30		663.5204	697.5874	663	698
40		663.5224	697.5875	663	698
50		663.5210	697.5876	663	698
20	L.V.	663.5214	697.5864	663	698
	H.V.	663.5221	697.5894	663	698

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