FCC PART 27

FCC PART 22H, PART 24E

TEST REPORT

For

INFINIX MOBILITY LIMITED

FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET
FOTAN NT Hong Kong

FCC ID: 2AIZN-X6810

Report Type:	**Product Type:**
Original Report	Mobile Phone

Report Number:	SZ1210519-18191E-00A
Report Date:	2021-07-14
Reviewed By:	Jacob Kong RF Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 5F(B-West) ,6F,7F,the 3rd Phase of Wan Li Industrial Building D,Shihua Rd, FuTian Free Trade Zone, Shenzhen, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

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

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Mobile Phone
Tested Model	X6810
Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	EGSM850/WCDMA Band 5/LTE Band 5: -3.2dBi PCS1900/WCDMA Band 2/ LTE Band 2: -1.3dBi WCDMA Band 4/ LTE Band 4: -0.9dBi LTE Band 7/ Band 38/ Band 41: -0.4dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5.0V~9.0V and DC 9.0V~12.0V from adapter
Date of Test	2021-05-25 to 2021-07-14
Sample number	SZ1210519-18191E-RF-S_6LH (Assigned by BACL, Shenzhen)
Received date	2021-05-19
Sample/EUT Status	Good condition
Normal/Extreme Condition	L.V.: Low Voltage 3.45V_{DC} N.V.: Normal Voltage 3.85V_{DC} H.V.: High Voltage 4.4V_{DC} The extreme condition was declared by the applicant
Adapter information	Model: CQ-18LX Input: AC 100-240V ~ 50/60Hz, 0.6A Output: DC 5.0V~9.0V, 2.0A or DC 9.0V~12.0V, 1.5A

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H and Part 24-Subpart E and Subpart 27 of the Federal Communication Commissions rules.

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

Test Methodology

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

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 – Miscellaneous wireless communications services

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

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). 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
Emissions, Radiated	Below 1GHz	±4.75dB
	Above 1GHz	±4.88dB
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 Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) ,6F,7F,the 3rd Phase of Wan Li Industrial Building D,Shihua Rd, FuTian Free Trade Zone, Shenzhen, 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.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

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
EGSM850	0.25	824.2	836.6	848.8
DCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645

Equipment Modifications

No modification was made to the EUT.

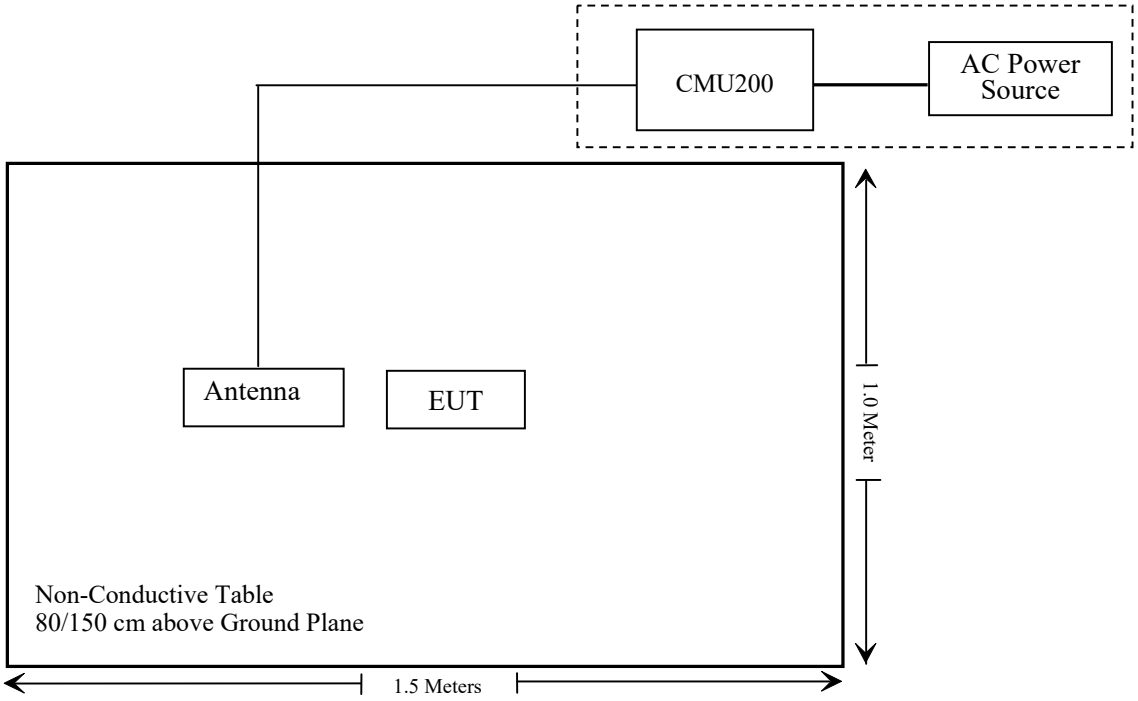
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891

Support Cable Description

Cable Description	Length (m)	From / Port	To
N/A	N/A	N/A	N/A

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

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

Note: * Please refer to SAR report released by BACL, report number: SZ1210519-18191E-SA.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
R&S	EMI Test Receiver	ESR3	102455	2020/08/04	2021/08/03
Sonoma instrument	Pre-amplifier	310 N	186238	2020/08/04	2021/08/03
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2020/12/22	2023/12/21
Unknown	Cable 2	RF Cable 2	F-03-EM197	2020/11/29	2021/11/28
Unknown	Cable	Chamber Cable 4	EC-007	2020/11/29	2021/11/28
CHIGO	Temperature & Humidity Meter	HTC-1S	T-03-EM451	2021/04/07	2022/04/06
Rohde & Schwarz	Spectrum Analyzer	FSV40-N	102259	2020/08/04	2021/08/03
COM-POWER	Pre-amplifier	PA-122	181919	2020/11/29	2021/11/28
Sunol Sciences	Horn Antenna	3115	9107-3694	2021/01/15	2024/01/14
Insulted Wire Inc.	RF Cable	SPS-2503-3150	02222010	2020/11/29	2021/11/28
Unknown	RF Cable	W1101-EQ1 OUT	F-19-EM005	2020/11/29	2021/11/28
Unknown	Signal Cable	RG-214	2	2020/11/29	2021/11/28
MICRO-TRONICS	Passband filter	HPM50111	F-19-EM006	2021/04/20	2022/04/20
Unknown	High Pass filter	1.3GHz	101120	2021/04/20	2022/04/20
RF Conducted Test					
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200120	2021/04/02	2022/04/01
Unknown	RF Cable	Unknown	0501 067	2020/11/29	2021/11/28
Weinschel	Power divider	1515	RH386	2021/04/20	2022/04/20
ESPEC	Temperature & Humidity Chamber	EL-10KA	9107726	2021/02/23	2022/02/22
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	115500	2020/07/31	2021/07/30
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-146520-wh	2020/08/04	2021/08/03

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) 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

Compliance, please refer to the SAR report: SZ1210519-18191E-SA.

FCC §2.1047 - MODULATION CHARACTERISTIC

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

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

Applicable Standard

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

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.

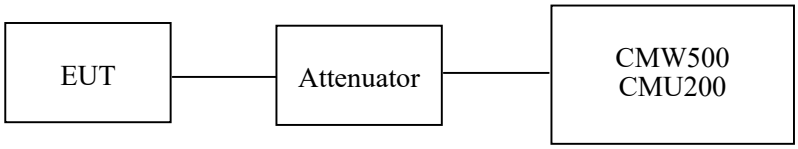
According to §27.50(d), the maximum EIRP must not exceed 1Watts (30dBm) for 1710-1780MHz.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2500-2570MHz & 2496-2690MHz.

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the CMW500/CMU200 through sufficient attenuation.



Test Data

Environmental Conditions

Temperature:	27 ℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Orlo Yang on 2021-05-25

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables and plots.

Conducted Power

Cellular Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	32.5	27.15	38.45
	190	836.6	32.6	27.25	38.45
	251	848.8	32.9	27.55	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	32.24	31.04	28.78	27.62	26.89	25.69	23.43	22.27	38.45
	190	836.6	32.43	31.19	29.08	27.72	27.08	25.84	23.73	22.37	38.45
	251	848.8	32.68	31.44	29.09	27.90	27.33	26.09	23.74	22.55	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.2	27.21	25.89	23.42	21.95	21.86	20.54	18.07	16.60	38.45
	190	836.6	26.99	25.61	23.13	21.72	21.64	20.26	17.78	16.37	38.45
	251	848.8	26.77	25.41	22.87	21.49	21.42	20.06	17.52	16.14	38.45

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		22.85	22.21	22.96	17.50	16.86	17.61
	HSDPA	1	22.02	21.27	22.17	16.67	15.92	16.82
		2	22.06	21.30	22.21	16.71	15.95	16.86
		3	22.12	21.36	22.24	16.77	16.01	16.89
		4	22.19	21.42	22.29	16.84	16.07	16.94
	HSUPA	1	21.64	20.82	21.71	16.29	15.47	16.36
		2	21.69	20.88	21.75	16.34	15.53	16.40
		3	21.76	20.95	21.78	16.41	15.60	16.43
		4	21.81	20.98	21.84	16.46	15.63	16.49
		5	21.88	21.05	21.88	16.53	15.70	16.53
	HSPA+	1	21.95	21.13	21.92	16.60	15.78	16.57

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
Antenna Gain = -3.2dBi = -5.35dBd (0dBd=2.15dBi)
Limit: ERP≤38.45dBm

PCS Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	29.8	28.5	33
	661	1880.0	29.6	28.3	33
	810	1909.8	29.1	27.8	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	29.82	28.53	26.21	25.07	28.52	27.23	24.91	23.77	33
	661	1880.0	29.61	28.36	26.05	24.91	28.31	27.06	24.75	23.61	33
	810	1909.8	29.13	27.93	25.71	24.62	27.83	26.63	24.41	23.32	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	25.29	24.31	22.34	21.29	23.99	23.01	21.04	19.99	33
	661	1880.0	24.61	23.58	21.62	20.49	23.31	22.28	20.32	19.19	33
	810	1909.8	24.45	23.45	21.48	20.32	23.15	22.15	20.18	19.02	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		22.95	22.63	22.42	21.65	21.33	21.12
	HSDPA	1	21.92	21.57	21.43	20.62	20.27	20.13
		2	22.00	21.62	21.45	20.70	20.32	20.15
		3	22.06	21.68	21.52	20.76	20.38	20.22
		4	22.09	21.73	21.57	20.79	20.43	20.27
	HSUPA	1	21.47	21.17	21.01	20.17	19.87	19.71
		2	21.51	21.23	21.04	20.21	19.93	19.74
		3	21.54	21.27	21.07	20.24	19.97	19.77
		4	21.57	21.34	21.10	20.27	20.04	19.80
		5	21.64	21.40	21.17	20.34	20.10	19.87
	HSPA+	1	21.68	21.42	21.25	20.38	20.12	19.95

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
Antenna Gain = -1.3dBi
Limit: EIRP≤33dBm

AWS Band

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		22.75	22.78	22.91	21.85	21.88	22.01
	HSDPA	1	21.67	21.69	21.84	20.77	20.79	20.94
		2	21.73	21.76	21.86	20.83	20.86	20.96
		3	21.78	21.82	21.91	20.88	20.92	21.01
		4	21.81	21.87	21.99	20.91	20.97	21.09
	HSUPA	1	21.33	21.33	21.46	20.43	20.43	20.56
		2	21.40	21.41	21.53	20.50	20.51	20.63
		3	21.47	21.44	21.57	20.57	20.54	20.67
		4	21.52	21.52	21.61	20.62	20.62	20.71
		5	21.54	21.57	21.65	20.64	20.67	20.75
	HSPA+	1	21.57	21.61	21.67	20.67	20.71	20.77

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
Antenna Gain = -0.9dBi
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.78	13
	Middle	3.53	13
	High	3.64	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.34	13
	Middle	3.46	13
	High	3.41	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.59	13
	Middle	3.28	13
	High	3.47	13
HSDPA (16QAM)	Low	3.39	13
	Middle	3.27	13
	High	3.48	13
HSUPA (BPSK)	Low	3.26	13
	Middle	3.22	13
	High	3.31	13
HSUPA+	Low	3.45	13
	Middle	3.31	13
	High	3.29	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.36	13
	Middle	3.24	13
	High	3.42	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.36	13
	Middle	3.28	13
	High	3.25	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.58	13
	Middle	3.41	13
	High	3.45	13
HSDPA (16QAM)	Low	3.52	13
	Middle	3.39	13
	High	3.41	13
HSUPA (BPSK)	Low	3.34	13
	Middle	3.69	13
	High	3.51	13
HSUPA+	Low	3.19	13
	Middle	3.32	13
	High	3.28	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (BPSK)	Low	3.19	13
	Middle	3.52	13
	High	3.26	13
HSDPA (16QAM)	Low	3.41	13
	Middle	3.29	13
	High	3.38	13
HSUPA (BPSK)	Low	3.36	13
	Middle	3.35	13
	High	3.27	13
HSUPA+	Low	3.24	13
	Middle	3.41	13
	High	3.36	13

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	21.98	21.75	21.76	20.68	20.45	20.46
		RB1#3	22.03	21.83	21.84	20.73	20.53	20.54
		RB1#5	21.94	21.73	21.77	20.64	20.43	20.47
		RB3#0	20.96	20.83	20.80	19.66	19.53	19.50
		RB3#3	20.95	20.80	20.79	19.65	19.50	19.49
		RB6#0	20.98	20.79	20.79	19.68	19.49	19.49
	16QAM	RB1#0	21.17	20.72	20.80	19.87	19.42	19.50
		RB1#3	21.20	20.83	20.89	19.90	19.53	19.59
		RB1#5	21.12	20.73	20.83	19.82	19.43	19.53
		RB3#0	19.99	19.75	19.81	18.69	18.45	18.51
		RB3#3	19.98	19.72	19.78	18.68	18.42	18.48
		RB6#0	19.97	19.82	19.83	18.67	18.52	18.53
3.0	QPSK	RB1#0	21.91	21.74	21.78	20.61	20.44	20.48
		RB1#8	21.94	21.85	21.89	20.64	20.55	20.59
		RB1#14	21.86	21.77	21.83	20.56	20.47	20.53
		RB6#0	20.98	20.77	20.84	19.68	19.47	19.54
		RB6#9	20.94	20.83	20.78	19.64	19.53	19.48
		RB15#0	20.99	20.81	20.80	19.69	19.51	19.50
	16QAM	RB1#0	21.10	20.63	20.82	19.80	19.33	19.52
		RB1#8	21.04	20.69	20.94	19.74	19.39	19.64
		RB1#14	20.96	20.68	20.88	19.66	19.38	19.58
		RB6#0	19.91	19.85	19.84	18.61	18.55	18.54
		RB6#9	19.91	19.87	19.81	18.61	18.57	18.51
		RB15#0	19.91	19.80	19.80	18.61	18.50	18.50

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	21.94	20.82	20.69	20.64	19.52	19.39
		RB1#13	21.96	20.94	20.55	20.66	19.64	19.25
		RB1#24	21.79	20.73	20.25	20.49	19.43	18.95
		RB15#0	20.93	19.82	19.58	19.63	18.52	18.28
		RB15#10	20.85	19.78	19.32	19.55	18.48	18.02
		RB25#0	20.92	19.89	19.50	19.62	18.59	18.20
	16QAM	RB1#0	20.82	19.79	19.85	19.52	18.49	18.55
		RB1#13	19.81	19.86	19.74	18.51	18.56	18.44
		RB1#24	19.86	19.68	19.44	18.56	18.38	18.14
		RB15#0	18.64	18.86	18.67	17.34	17.56	17.37
		RB15#10	18.78	18.82	18.39	17.48	17.52	17.09
		RB25#0	18.73	18.92	18.47	17.43	17.62	17.17
10.0	QPSK	RB1#0	20.76	21.03	20.98	19.46	19.73	19.68
		RB1#25	21.08	21.18	20.88	19.78	19.88	19.58
		RB1#49	21.01	20.89	20.41	19.71	19.59	19.11
		RB25#0	19.94	20.12	19.94	18.64	18.82	18.64
		RB25#25	20.08	20.06	19.57	18.78	18.76	18.27
		RB50#0	19.98	20.05	19.75	18.68	18.75	18.45
	16QAM	RB1#0	19.82	20.00	20.16	18.52	18.70	18.86
		RB1#25	20.10	20.14	20.07	18.80	18.84	18.77
		RB1#49	20.03	19.85	19.67	18.73	18.55	18.37
		RB25#0	18.97	19.18	18.92	17.67	17.88	17.62
		RB25#25	19.14	19.09	18.54	17.84	17.79	17.24
		RB50#0	19.08	19.09	18.72	17.78	17.79	17.42

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	21.19	21.31	20.84	19.89	20.01	19.54
		RB1#38	21.32	21.42	20.99	20.02	20.12	19.69
		RB1#74	21.23	21.28	20.86	19.93	19.98	19.56
		RB36#0	20.23	20.38	19.91	18.93	19.08	18.61
		RB36#39	20.34	20.37	19.91	19.04	19.07	18.61
		RB75#0	20.28	20.37	19.88	18.98	19.07	18.58
	16QAM	RB1#0	20.23	20.41	20.11	18.93	19.11	18.81
		RB1#38	20.34	20.54	20.23	19.04	19.24	18.93
		RB1#74	20.27	20.39	20.11	18.97	19.09	18.81
		RB36#0	19.17	19.39	18.95	17.87	18.09	17.65
		RB36#39	19.28	19.40	18.94	17.98	18.10	17.64
		RB75#0	19.35	19.44	18.88	18.05	18.14	17.58
20.0	QPSK	RB1#0	21.22	21.45	20.92	19.92	20.15	19.62
		RB1#50	21.34	21.47	20.97	20.04	20.17	19.67
		RB1#99	21.29	21.36	20.90	19.99	20.06	19.60
		RB50#0	20.25	20.46	19.92	18.95	19.16	18.62
		RB50#50	20.42	20.43	19.93	19.12	19.13	18.63
		RB100#0	20.37	20.44	19.97	19.07	19.14	18.67
	16QAM	RB1#0	20.42	20.38	20.06	19.12	19.08	18.76
		RB1#50	20.52	20.40	20.08	19.22	19.10	18.78
		RB1#99	20.49	20.29	20.03	19.19	18.99	18.73
		RB50#0	19.25	19.51	19.00	17.95	18.21	17.70
		RB50#50	19.40	19.50	19.01	18.10	18.20	17.71
		RB100#0	19.33	19.45	18.99	18.03	18.15	17.69

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
Antenna Gain = -1.3dBi
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	21.30	21.54	21.02	20.40	20.64	20.12
		RB1#3	21.47	21.56	21.09	20.57	20.66	20.19
		RB1#5	21.40	21.41	21.01	20.50	20.51	20.11
		RB3#0	20.30	20.48	20.05	19.40	19.58	19.15
		RB3#3	20.40	20.45	20.04	19.50	19.55	19.14
		RB6#0	20.41	20.48	20.05	19.51	19.58	19.15
	16QAM	RB1#0	20.50	20.48	20.24	19.60	19.58	19.34
		RB1#3	20.64	20.52	20.30	19.74	19.62	19.40
		RB1#5	20.59	20.31	20.20	19.69	19.41	19.30
		RB3#0	19.33	19.49	19.13	18.43	18.59	18.23
		RB3#3	19.43	19.45	19.08	18.53	18.55	18.18
		RB6#0	19.34	19.49	19.06	18.44	18.59	18.16
3.0	QPSK	RB1#0	20.27	20.43	19.87	19.37	19.53	18.97
		RB1#8	21.54	21.55	20.95	20.64	20.65	20.05
		RB1#14	21.47	21.27	21.00	20.57	20.37	20.10
		RB6#0	20.35	20.53	19.95	19.45	19.63	19.05
		RB6#9	20.57	20.48	19.80	19.67	19.58	18.90
		RB15#0	20.48	20.53	19.82	19.58	19.63	18.92
	16QAM	RB1#0	19.39	19.51	19.35	18.49	18.61	18.45
		RB1#8	20.59	20.63	20.44	19.69	19.73	19.54
		RB1#14	20.57	20.37	21.98	19.67	19.47	21.08
		RB6#0	19.33	19.65	20.96	18.43	18.75	20.06
		RB6#9	19.53	19.58	20.87	18.63	18.68	19.97
		RB15#0	19.44	19.41	20.84	18.54	18.51	19.94

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	22.50	23.08	23.56	21.60	22.18	22.66
		RB1#13	22.69	23.23	23.63	21.79	22.33	22.73
		RB1#24	22.67	23.23	23.57	21.77	22.33	22.67
		RB15#0	21.51	22.11	22.57	20.61	21.21	21.67
		RB15#10	21.67	22.20	22.56	20.77	21.30	21.66
		RB25#0	21.56	22.13	22.53	20.66	21.23	21.63
	16QAM	RB1#0	21.39	22.35	22.54	20.49	21.45	21.64
		RB1#13	21.55	22.51	22.63	20.65	21.61	21.73
		RB1#24	21.54	22.47	22.58	20.64	21.57	21.68
		RB15#0	20.61	21.13	21.65	19.71	20.23	20.75
		RB15#10	20.73	21.21	21.64	19.83	20.31	20.74
		RB25#0	20.69	21.22	21.64	19.79	20.32	20.74
10.0	QPSK	RB1#0	22.56	23.03	23.46	21.66	22.13	22.56
		RB1#25	22.74	23.22	23.66	21.84	22.32	22.76
		RB1#49	22.79	23.30	23.62	21.89	22.40	22.72
		RB25#0	21.50	22.07	22.43	20.60	21.17	21.53
		RB25#25	21.75	22.21	22.49	20.85	21.31	21.59
		RB50#0	21.67	22.18	22.47	20.77	21.28	21.57
	16QAM	RB1#0	22.05	22.16	22.37	21.15	21.26	21.47
		RB1#25	22.28	22.36	22.56	21.38	21.46	21.66
		RB1#49	22.31	22.45	22.56	21.41	21.55	21.66
		RB25#0	20.60	21.18	21.63	19.70	20.28	20.73
		RB25#25	20.92	21.32	21.66	20.02	20.42	20.76
		RB50#0	20.73	21.22	21.57	19.83	20.32	20.67

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.54	23.00	23.40	21.64	22.10	22.50
		RB1#38	22.84	23.29	23.68	21.94	22.39	22.78
		RB1#74	22.93	23.39	23.66	22.03	22.49	22.76
		RB36#0	21.63	22.10	22.38	20.73	21.20	21.48
		RB36#39	21.87	22.29	22.53	20.97	21.39	21.63
		RB75#0	21.81	22.24	22.50	20.91	21.34	21.60
	16QAM	RB1#0	22.10	22.09	22.73	21.20	21.19	21.83
		RB1#38	22.36	22.35	22.88	21.46	21.45	21.98
		RB1#74	22.48	22.49	22.94	21.58	21.59	22.04
		RB36#0	20.72	21.18	21.47	19.82	20.28	20.57
		RB36#39	21.01	21.41	21.62	20.11	20.51	20.72
		RB75#0	20.88	21.29	21.50	19.98	20.39	20.60
20.0	QPSK	RB1#0	22.54	22.90	23.17	21.64	22.00	22.27
		RB1#50	22.92	23.28	23.54	22.02	22.38	22.64
		RB1#99	23.10	23.49	23.60	22.20	22.59	22.70
		RB50#0	21.66	22.11	22.33	20.76	21.21	21.43
		RB50#50	22.03	22.40	22.54	21.13	21.50	21.64
		RB100#0	21.85	22.27	22.45	20.95	21.37	21.55
	16QAM	RB1#0	21.80	22.04	22.71	20.90	21.14	21.81
		RB1#50	22.20	22.48	23.04	21.30	21.58	22.14
		RB1#99	22.35	22.59	23.07	21.45	21.69	22.17
		RB50#0	20.71	21.15	21.38	19.81	20.25	20.48
		RB50#50	21.02	21.46	21.63	20.12	20.56	20.73
		RB100#0	20.93	21.30	21.49	20.03	20.40	20.59

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
Antenna Gain = -0.9dBi
Limit: EIRP≤30dBm

LTE Band5

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.04	22.84	22.75	17.69	17.49	17.40
		RB1#3	23.13	22.88	22.36	17.78	17.53	17.01
		RB1#5	23.16	22.82	22.42	17.81	17.47	17.07
		RB3#0	23.11	22.94	22.33	17.76	17.59	16.98
		RB3#3	23.10	22.96	22.49	17.75	17.61	17.14
		RB6#0	22.01	22.06	22.39	16.66	16.71	17.04
	16QAM	RB1#0	21.80	21.97	22.12	16.45	16.62	16.77
		RB1#3	21.87	22.05	22.28	16.52	16.70	16.93
		RB1#5	21.90	22.01	22.37	16.55	16.66	17.02
		RB3#0	22.17	21.95	22.36	16.82	16.60	17.01
		RB3#3	22.22	21.97	22.50	16.87	16.62	17.15
		RB6#0	21.49	21.14	21.36	16.14	15.79	16.01
3.0	QPSK	RB1#0	22.91	22.72	22.84	17.56	17.37	17.49
		RB1#8	23.05	22.87	23.12	17.70	17.52	17.77
		RB1#14	22.55	22.77	23.32	17.20	17.42	17.97
		RB6#0	21.95	21.89	22.04	16.60	16.54	16.69
		RB6#9	21.75	21.97	22.31	16.40	16.62	16.96
		RB15#0	21.89	21.97	22.18	16.54	16.62	16.83
	16QAM	RB1#0	22.14	21.88	21.81	16.79	16.53	16.46
		RB1#8	22.26	22.07	22.07	16.91	16.72	16.72
		RB1#14	21.83	21.95	22.26	16.48	16.60	16.91
		RB6#0	21.87	21.10	21.05	16.52	15.75	15.70
		RB6#9	21.79	21.12	21.26	16.44	15.77	15.91
		RB15#0	21.67	20.97	21.24	16.32	15.62	15.89

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.06	22.48	22.95	17.71	17.13	17.60
		RB1#13	22.83	22.64	23.23	17.48	17.29	17.88
		RB1#24	22.02	22.55	23.55	16.67	17.20	18.20
		RB15#0	21.97	21.37	22.13	16.62	16.02	16.78
		RB15#10	21.44	21.74	22.24	16.09	16.39	16.89
		RB25#0	21.68	21.53	22.17	16.33	16.18	16.82
	16QAM	RB1#0	21.77	21.78	22.00	16.42	16.43	16.65
		RB1#13	21.64	22.01	22.24	16.29	16.66	16.89
		RB1#24	20.92	21.88	22.53	15.57	16.53	17.18
		RB15#0	21.00	20.48	21.18	15.65	15.13	15.83
		RB15#10	20.54	20.73	21.26	15.19	15.38	15.91
		RB25#0	20.78	20.57	21.21	15.43	15.22	15.86
10.0	QPSK	RB1#0	23.26	22.56	22.66	17.91	17.21	17.31
		RB1#25	21.96	22.61	23.05	16.61	17.26	17.70
		RB1#49	21.36	22.81	23.54	16.01	17.46	18.19
		RB25#0	21.62	21.21	21.72	16.27	15.86	16.37
		RB25#25	20.95	21.81	22.07	15.60	16.46	16.72
		RB50#0	21.25	21.46	21.97	15.90	16.11	16.62
	16QAM	RB1#0	22.47	21.82	21.66	17.12	16.47	16.31
		RB1#25	21.51	21.79	22.04	16.16	16.44	16.69
		RB1#49	21.04	21.97	22.46	15.69	16.62	17.11
		RB25#0	20.70	20.39	20.87	15.35	15.04	15.52
		RB25#25	20.07	20.91	21.16	14.72	15.56	15.81
		RB50#0	20.27	20.51	20.97	14.92	15.16	15.62

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
Antenna Gain = -3.2dBi = -5.35dBd (0dBd=2.15dBi)
Limit: ERP≤38.45dBm

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.75	22.82	22.81	22.35	22.42	22.41
		RB1#13	22.84	22.88	22.88	22.44	22.48	22.48
		RB1#24	22.77	22.83	22.83	22.37	22.43	22.43
		RB15#0	21.79	21.87	21.93	21.39	21.47	21.53
		RB15#10	21.84	21.85	21.87	21.44	21.45	21.47
		RB25#0	21.82	21.88	21.89	21.42	21.48	21.49
	16QAM	RB1#0	21.62	22.11	21.86	21.22	21.71	21.46
		RB1#13	21.70	22.16	21.90	21.30	21.76	21.50
		RB1#24	21.69	22.09	21.84	21.29	21.69	21.44
		RB15#0	20.84	20.86	20.93	20.44	20.46	20.53
		RB15#10	20.89	20.85	20.90	20.49	20.45	20.50
		RB25#0	20.89	20.88	20.95	20.49	20.48	20.55
10.0	QPSK	RB1#0	22.76	22.77	22.79	22.36	22.37	22.39
		RB1#25	22.88	22.91	22.95	22.48	22.51	22.55
		RB1#49	22.82	22.83	22.91	22.42	22.43	22.51
		RB25#0	21.81	21.89	21.93	21.41	21.49	21.53
		RB25#25	21.90	21.88	21.92	21.50	21.48	21.52
		RB50#0	21.89	21.88	21.90	21.49	21.48	21.50
	16QAM	RB1#0	22.30	21.97	21.77	21.90	21.57	21.37
		RB1#25	22.40	22.03	21.88	22.00	21.63	21.48
		RB1#49	22.36	21.97	21.79	21.96	21.57	21.39
		RB25#0	20.84	20.90	21.00	20.44	20.50	20.60
		RB25#25	20.96	20.92	20.96	20.56	20.52	20.56
		RB50#0	20.86	20.85	20.93	20.46	20.45	20.53

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	22.76	22.79	22.80	22.36	22.39	22.40
		RB1#38	22.88	22.94	22.92	22.48	22.54	22.52
		RB1#74	22.79	22.87	22.92	22.39	22.47	22.52
		RB36#0	21.75	21.84	21.89	21.35	21.44	21.49
		RB36#39	21.84	21.89	21.86	21.44	21.49	21.46
		RB75#0	21.85	21.93	21.94	21.45	21.53	21.54
	16QAM	RB1#0	22.33	21.95	22.20	21.93	21.55	21.80
		RB1#38	22.42	22.05	22.25	22.02	21.65	21.85
		RB1#74	22.37	22.02	22.21	21.97	21.62	21.81
		RB36#0	20.79	20.87	20.89	20.39	20.47	20.49
		RB36#39	20.87	20.94	20.83	20.47	20.54	20.43
		RB75#0	20.88	20.91	20.89	20.48	20.51	20.49
20.0	QPSK	RB1#0	21.74	21.76	21.78	21.34	21.36	21.38
		RB1#50	22.95	22.99	22.94	22.55	22.59	22.54
		RB1#99	22.80	22.91	22.85	22.40	22.51	22.45
		RB50#0	21.83	21.91	21.94	21.43	21.51	21.54
		RB50#50	21.97	21.96	21.92	21.57	21.56	21.52
		RB100#0	21.90	21.92	21.93	21.50	21.52	21.53
	16QAM	RB1#0	21.11	21.05	21.41	20.71	20.65	21.01
		RB1#50	22.25	22.20	22.51	21.85	21.80	22.11
		RB1#99	22.11	22.10	22.39	21.71	21.70	21.99
		RB50#0	20.84	20.88	20.94	20.44	20.48	20.54
		RB50#50	20.95	20.95	20.90	20.55	20.55	20.50
		RB100#0	20.91	20.95	20.93	20.51	20.55	20.53

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

LTE Band 38

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB1#0	22.30	22.33	22.32	21.90	21.93	21.92
		RB1#12	22.42	22.41	22.40	22.02	22.01	22.00
		RB1#24	22.33	22.34	22.31	21.93	21.94	21.91
		RB12#0	21.32	21.41	21.34	20.92	21.01	20.94
		RB12#6	21.34	21.41	21.37	20.94	21.01	20.97
		RB12#11	21.38	21.42	21.35	20.98	21.02	20.95
		RB25#0	21.52	21.34	21.37	21.12	20.94	20.97
	16QAM	RB1#0	21.63	21.43	21.50	21.23	21.03	21.10
		RB1#12	21.58	21.38	21.39	21.18	20.98	20.99
		RB1#24	20.38	20.38	20.34	19.98	19.98	19.94
		RB12#0	20.46	20.36	20.37	20.06	19.96	19.97
		RB12#6	20.37	20.48	20.39	19.97	20.08	19.99
		RB12#11	22.30	22.33	22.32	21.90	21.93	21.92
		RB25#0	22.42	22.41	22.40	22.02	22.01	22.00
10	QPSK	RB1#0	22.37	22.45	15.70	21.97	22.05	15.30
		RB1#24	22.47	22.53	15.77	22.07	22.13	15.37
		RB1#49	22.42	22.49	15.65	22.02	22.09	15.25
		RB25#0	21.43	14.65	14.72	21.03	14.25	14.32
		RB25#12	21.54	14.74	14.67	21.14	14.34	14.27
		RB25#24	21.51	14.74	14.71	21.11	14.34	14.31
		RB50#0	21.57	14.62	14.79	21.17	14.22	14.39
	16QAM	RB1#0	21.64	14.72	14.87	21.24	14.32	14.47
		RB1#24	21.53	14.70	14.64	21.13	14.30	14.24
		RB1#49	20.42	13.83	13.67	20.02	13.43	13.27
		RB25#0	20.51	13.91	13.65	20.11	13.51	13.25
		RB25#12	20.46	13.85	13.66	20.06	13.45	13.26
		RB25#24	22.37	22.45	15.70	21.97	22.05	15.30
		RB50#0	22.47	22.53	15.77	22.07	22.13	15.37

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15	QPSK	RB1#0	18.77	18.81	18.86	18.37	18.41	18.46
		RB1#37	18.89	18.93	18.92	18.49	18.53	18.52
		RB1#74	18.83	18.83	18.79	18.43	18.43	18.39
		RB36#0	17.80	17.84	17.82	17.40	17.44	17.42
		RB36#18	17.92	17.86	17.79	17.52	17.46	17.39
		RB36#37	17.93	17.92	17.78	17.53	17.52	17.38
		RB75#0	18.02	17.81	18.11	17.62	17.41	17.71
	16QAM	RB1#0	18.12	17.91	18.17	17.72	17.51	17.77
		RB1#37	18.08	17.79	18.07	17.68	17.39	17.67
		RB1#74	16.95	16.87	17.03	16.55	16.47	16.63
		RB36#0	17.03	16.91	16.97	16.63	16.51	16.57
		RB36#18	16.74	16.98	16.96	16.34	16.58	16.56
		RB36#37	18.77	18.81	18.86	18.37	18.41	18.46
		RB75#0	18.89	18.93	18.92	18.49	18.53	18.52
20	QPSK	RB1#0	19.07	19.11	19.17	18.67	18.71	18.77
		RB1#49	19.26	19.29	19.25	18.86	18.89	18.85
		RB1#99	19.15	19.10	19.07	18.75	18.70	18.67
		RB50#0	18.15	18.24	18.17	17.75	17.84	17.77
		RB50#24	18.22	18.21	18.11	17.82	17.81	17.71
		RB50#49	18.20	18.21	18.15	17.80	17.81	17.75
		RB100#0	18.10	18.10	18.40	17.70	17.70	18.00
	16QAM	RB1#0	18.29	18.25	18.51	17.89	17.85	18.11
		RB1#49	18.19	18.12	18.36	17.79	17.72	17.96
		RB1#99	17.18	17.28	17.24	16.78	16.88	16.84
		RB50#0	17.23	17.27	17.14	16.83	16.87	16.74
		RB50#24	17.19	17.23	17.17	16.79	16.83	16.77
		RB50#49	19.07	19.11	19.17	18.67	18.71	18.77
		RB100#0	19.26	19.29	19.25	18.86	18.89	18.85

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

LTE Band 41:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB1#0	20.09	20.48	20.52	19.69	20.08	20.12
		RB1#12	20.21	20.52	20.68	19.81	20.12	20.28
		RB1#24	20.18	20.46	20.59	19.78	20.06	20.19
		RB12#0	19.15	19.57	19.58	18.75	19.17	19.18
		RB12#6	19.22	19.57	19.61	18.82	19.17	19.21
		RB12#11	19.22	19.58	19.61	18.82	19.18	19.21
		RB25#0	19.40	19.55	19.58	19.00	19.15	19.18
	16QAM	RB1#0	19.52	19.63	19.70	19.12	19.23	19.30
		RB1#12	19.50	19.54	19.59	19.10	19.14	19.19
		RB1#24	18.25	18.59	18.62	17.85	18.19	18.22
		RB12#0	18.32	18.52	18.65	17.92	18.12	18.25
		RB12#6	18.27	18.65	18.71	17.87	18.25	18.31
		RB12#11	20.09	20.48	20.52	19.69	20.08	20.12
		RB25#0	20.21	20.52	20.68	19.81	20.12	20.28
10	QPSK	RB1#0	20.35	20.75	20.66	19.95	20.35	20.26
		RB1#24	20.51	20.82	20.77	20.11	20.42	20.37
		RB1#49	20.54	20.71	20.77	20.14	20.31	20.37
		RB25#0	19.43	19.80	19.68	19.03	19.40	19.28
		RB25#12	19.58	19.79	19.73	19.18	19.39	19.33
		RB25#24	19.56	19.80	19.76	19.16	19.40	19.36
		RB50#0	19.59	19.65	19.74	19.19	19.25	19.34
	16QAM	RB1#0	19.72	19.72	19.80	19.32	19.32	19.40
		RB1#24	19.75	19.64	19.77	19.35	19.24	19.37
		RB1#49	18.46	18.84	18.75	18.06	18.44	18.35
		RB25#0	18.61	18.81	18.79	18.21	18.41	18.39
		RB25#12	18.51	18.78	18.73	18.11	18.38	18.33
		RB25#24	20.35	20.75	20.66	19.95	20.35	20.26
		RB50#0	20.51	20.82	20.77	20.11	20.42	20.37

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15	QPSK	RB1#0	20.53	20.88	20.73	20.13	20.48	20.33
		RB1#37	20.71	20.93	20.88	20.31	20.53	20.48
		RB1#74	20.70	20.84	20.86	20.30	20.44	20.46
		RB36#0	19.56	19.84	19.73	19.16	19.44	19.33
		RB36#18	19.69	19.84	19.85	19.29	19.44	19.45
		RB36#37	19.66	19.87	19.81	19.26	19.47	19.41
		RB75#0	19.72	19.81	19.91	19.32	19.41	19.51
	16QAM	RB1#0	19.93	19.85	20.07	19.53	19.45	19.67
		RB1#37	19.92	19.75	20.01	19.52	19.35	19.61
		RB1#74	18.52	18.83	18.88	18.12	18.43	18.48
		RB36#0	18.78	18.79	18.94	18.38	18.39	18.54
		RB36#18	18.62	18.86	18.81	18.22	18.46	18.41
		RB36#37	20.53	20.88	20.73	20.13	20.48	20.33
		RB75#0	20.71	20.93	20.88	20.31	20.53	20.48
20	QPSK	RB1#0	20.59	20.94	20.83	20.19	20.54	20.43
		RB1#49	20.85	21.05	21.10	20.45	20.65	20.70
		RB1#99	20.86	20.92	21.07	20.46	20.52	20.67
		RB50#0	19.64	20.01	19.97	19.24	19.61	19.57
		RB50#24	19.90	20.01	20.03	19.50	19.61	19.63
		RB50#49	19.85	20.05	19.98	19.45	19.65	19.58
		RB100#0	19.66	19.96	20.09	19.26	19.56	19.69
	16QAM	RB1#0	19.93	20.07	20.32	19.53	19.67	19.92
		RB1#49	19.91	19.92	20.27	19.51	19.52	19.87
		RB1#99	18.65	19.10	18.97	18.25	18.70	18.57
		RB50#0	18.92	19.07	19.09	18.52	18.67	18.69
		RB50#24	18.81	19.06	18.98	18.41	18.66	18.58
		RB50#49	20.59	20.94	20.83	20.19	20.54	20.43
		RB100#0	20.85	21.05	21.10	20.45	20.65	20.70

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For Band 41: Antenna Gain = -0.4dBi
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

LTE Band 2 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	2.34	3.59	4.58	13	Pass
QPSK (100RB Size)	5.32	5.61	5.61	13	Pass
16QAM (1RB Size)	3.53	4.26	5.74	13	Pass
16QAM (100RB Size)	6.25	6.47	6.38	13	Pass

LTE Band 4 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.91	3.94	3.65	13	Pass
QPSK (100RB Size)	5.58	5.51	5.51	13	Pass
16QAM (1RB Size)	4.74	4.90	4.65	13	Pass
16QAM (100RB Size)	6.41	6.47	6.41	13	Pass

LTE Band 5 10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.78	3.69	4.36	13	Pass
QPSK (50RB Size)	5.48	5.58	5.54	13	Pass
16QAM (1RB Size)	4.78	4.55	5.19	13	Pass
16QAM (50RB Size)	6.31	6.47	6.38	13	Pass

LTE Band 7 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	8.52	3.56	4.10	13	Pass
QPSK (100RB Size)	5.51	5.42	5.48	13	Pass
16QAM (1RB Size)	4.62	4.68	4.74	13	Pass
16QAM (100RB Size)	6.38	6.38	6.38	13	Pass

LTE Band 38 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.68	8.26	6.67	13	Pass
QPSK (100RB Size)	9.15	9.23	8.68	13	Pass
16QAM (1RB Size)	8.42	8.72	8.94	13	Pass
16QAM (100RB Size)	9.34	10.26	9.47	13	Pass

LTE Band 41 20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	8.56	6.09	6.76	13	Pass
QPSK (100RB Size)	7.37	8.62	11.19	13	Pass
16QAM (1RB Size)	8.01	7.44	6.54	13	Pass
16QAM (100RB Size)	6.28	8.10	8.65	13	Pass

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

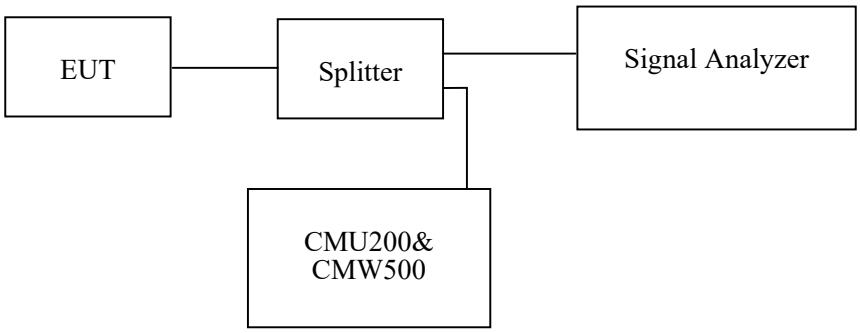
Applicable Standard

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

Test Procedure

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

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



Test Data

Environmental Conditions

Temperature:	27 ℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Orlo Yang from 2021-05-25 to 2021-07-14

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	246.795	317.628
	190	836.6	246.795	321.474
	251	848.8	243.590	313.462
EGPRS(8PSK)	128	824.2	245.192	308.013
	190	836.6	246.795	310.577
	251	848.8	246.795	309.615

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.167	4.712
	836.6	4.151	4.715
	846.6	4.167	4.721
HSDPA	826.4	4.183	4.728
	836.6	4.167	4.705
	846.6	4.183	4.705
HSUPA	826.4	4.167	4.724
	836.6	4.167	4.702
	846.6	4.183	4.702

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	245.192	316.987
	661	1880.0	245.192	318.269
	810	1909.8	245.192	313.462
EGPRS(8PSK)	512	1850.2	246.795	313.462
	661	1880.0	248.397	311.859
	810	1909.8	248.397	311.859

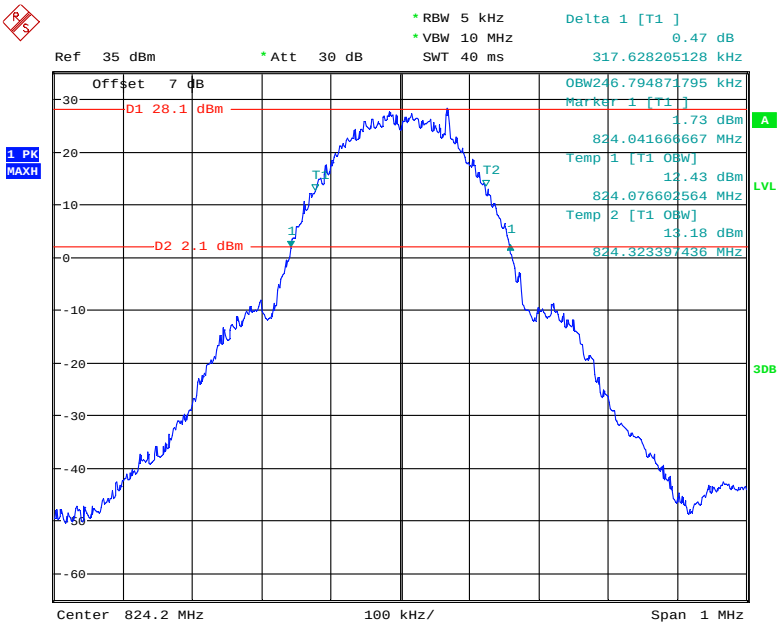
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.167	4.750
	1880.0	4.151	4.737
	1907.6	4.167	4.737
HSDPA	1852.4	4.183	4.728
	1880.0	4.183	4.740
	1907.6	4.183	4.705
HSUPA	1852.4	4.183	4.728
	1880.0	4.183	4.718
	1907.6	4.167	4.731

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.151	4.721
	1732.6	4.167	4.731
	1752.6	4.167	4.715
HSDPA	1712.4	4.183	4.712
	1732.6	4.183	4.712
	1752.6	4.167	4.728
HSUPA	1712.4	4.167	4.708
	1732.6	4.183	4.715
	1752.6	4.167	4.724

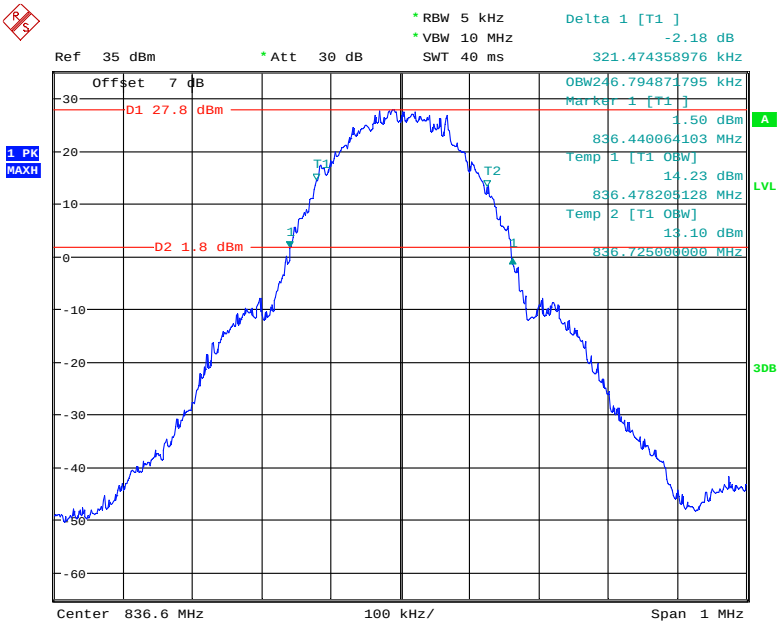
Cellular Band (Part 22H)

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

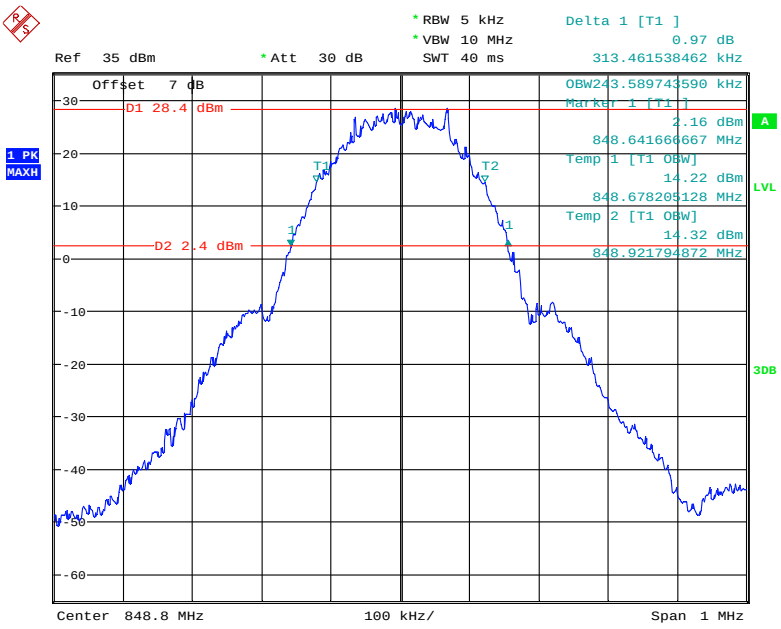


Date: 25.MAY.2021 21:55:49

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

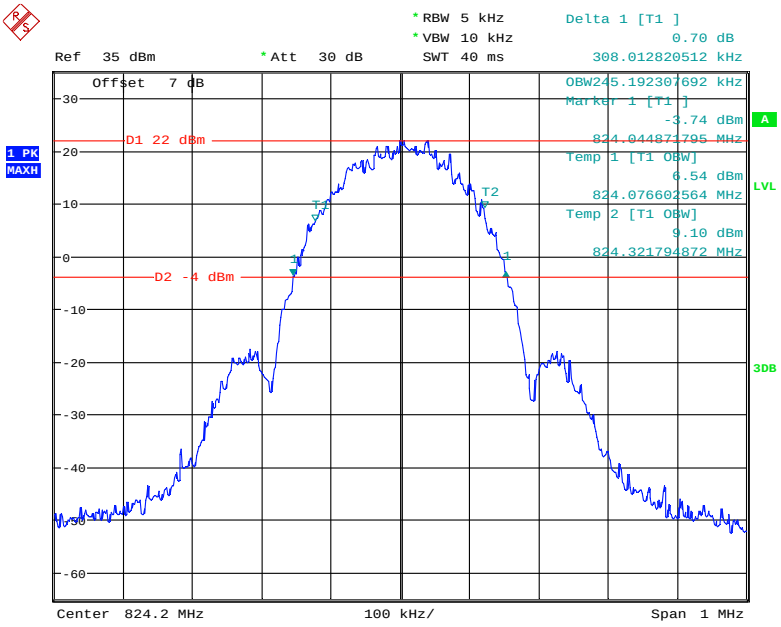


26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



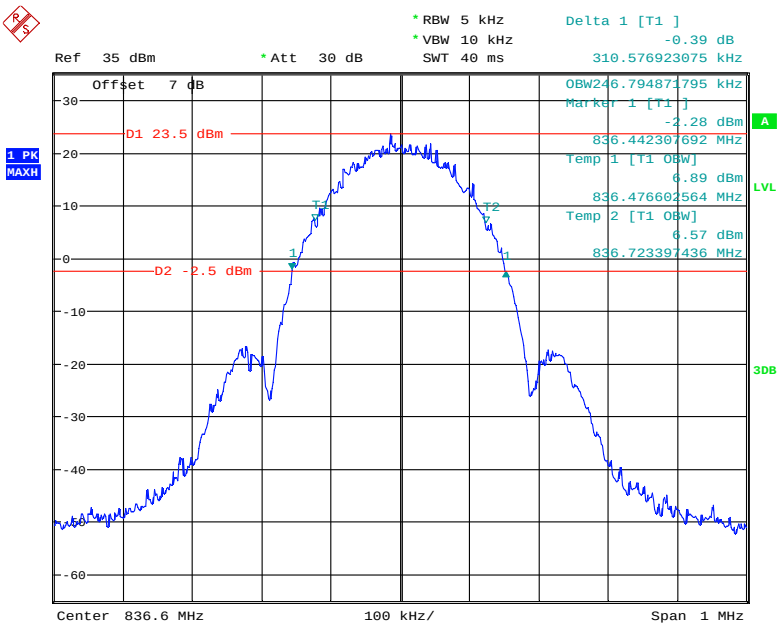
Date: 25.MAY.2021 21:59:47

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



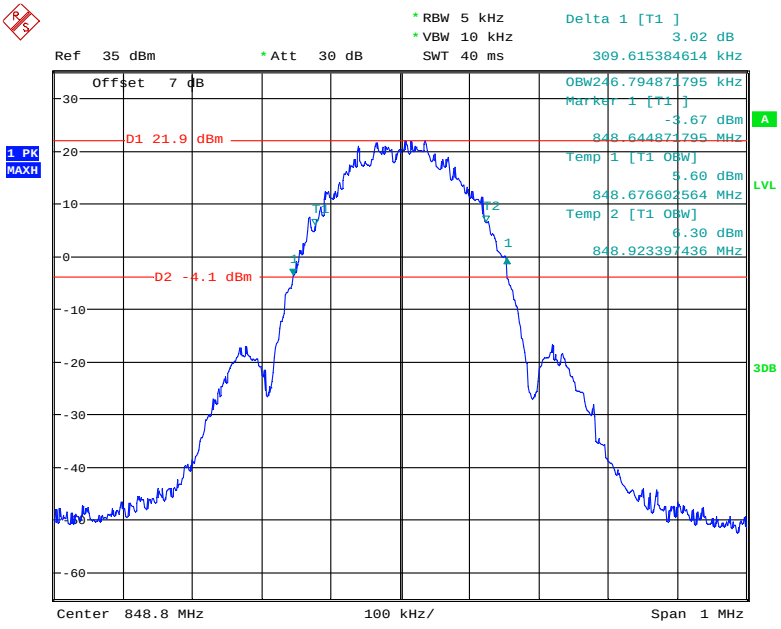
Date: 2.JUN.2021 17:17:40

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

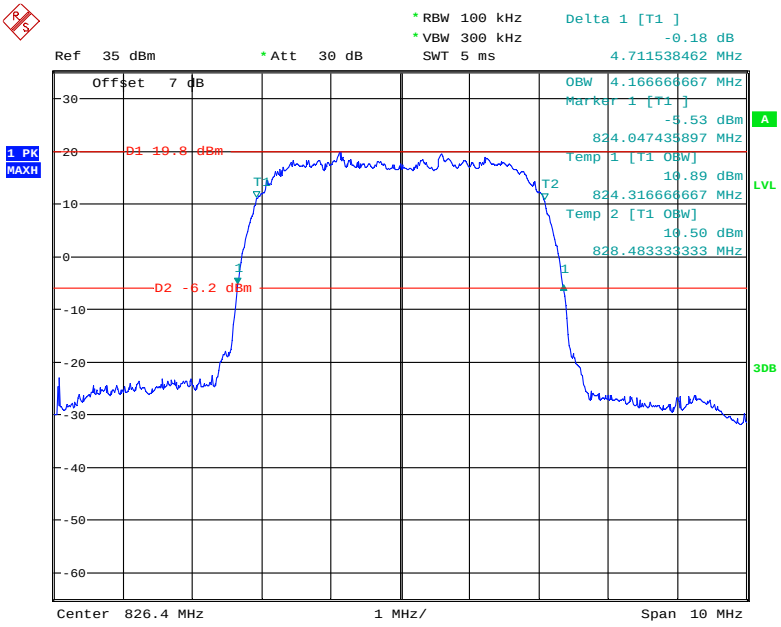


Date: 2.JUN.2021 17:19:19

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

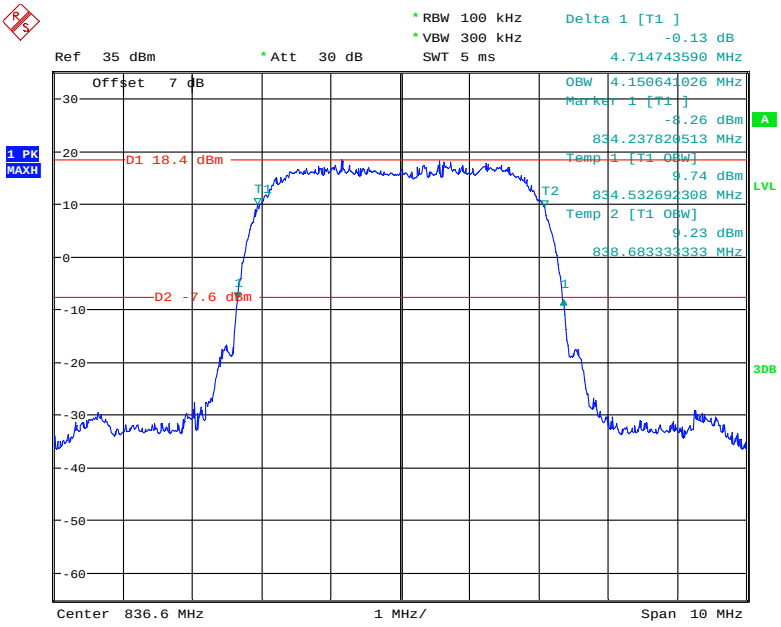


26 dB Emissions &99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



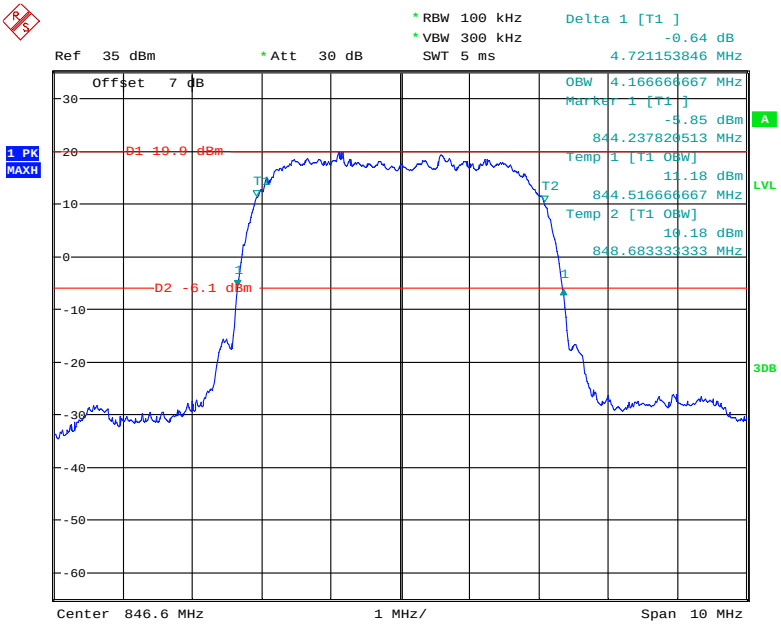
Date: 25.MAY.2021 23:06:04

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



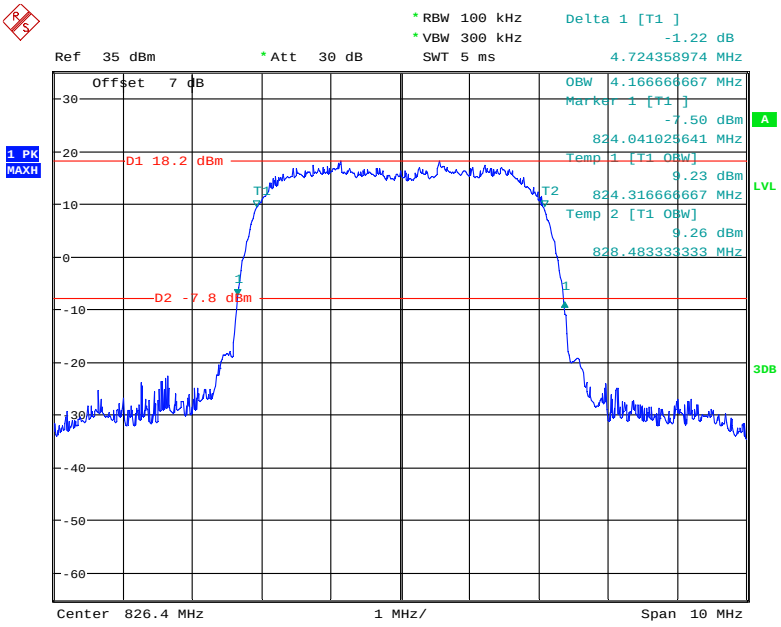
Date: 25.MAY.2021 23:04:02

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



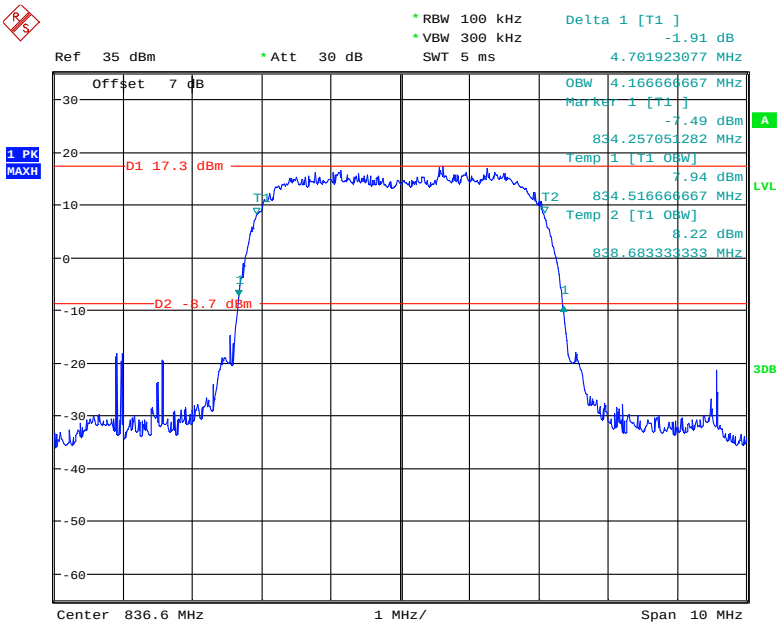
Date: 25.MAY.2021 23:02:04

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



Date: 25.MAY.2021 23:48:24

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



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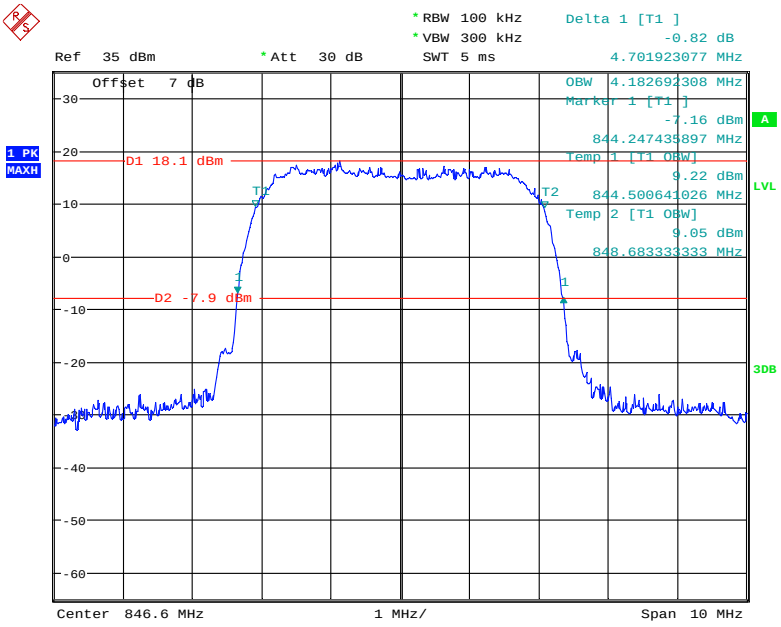
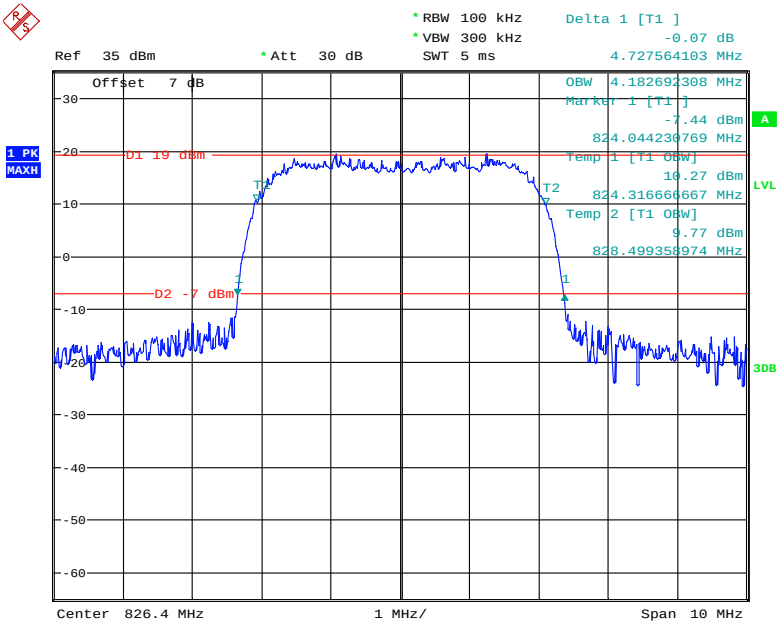
26 dB Emissions &99% Occupied Bandwidth for HSUPA (BPSK) Mode, High channel

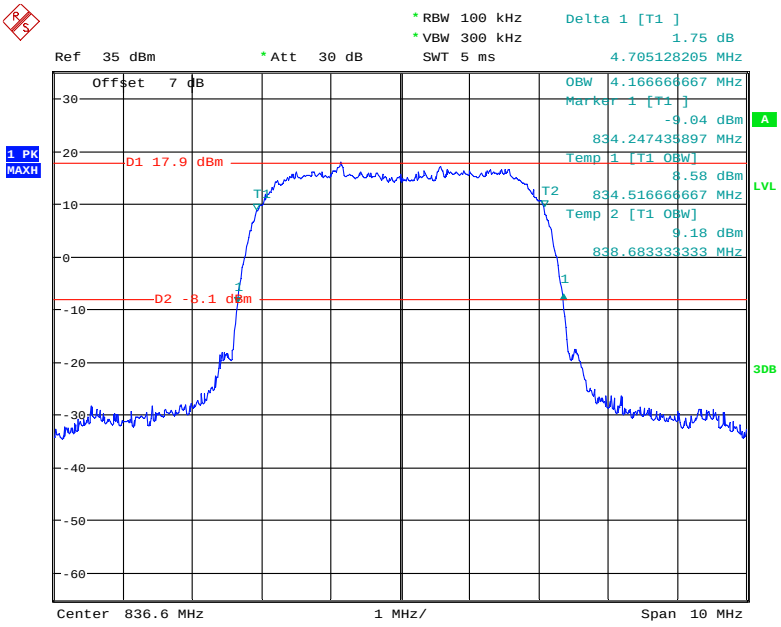


26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel



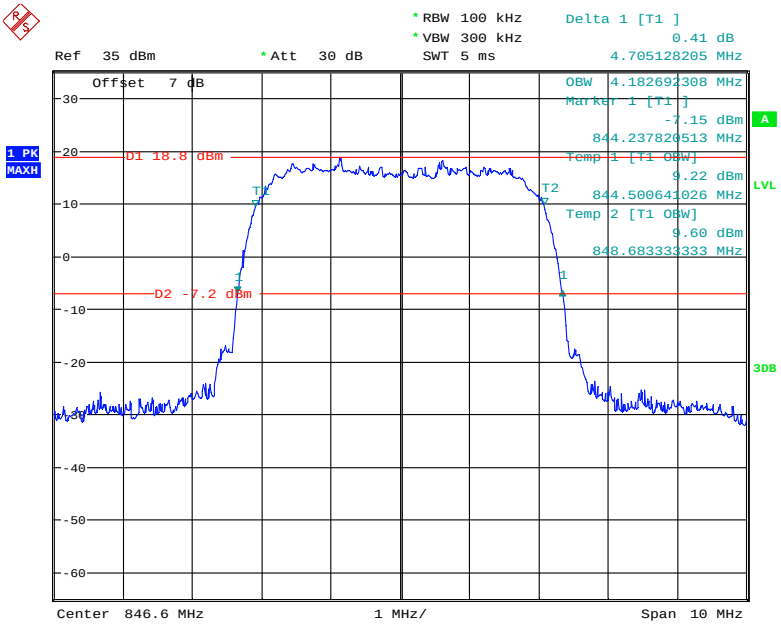
Date: 14.JUL.2021 11:37:49

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



Date: 25.MAY.2021 23:44:06

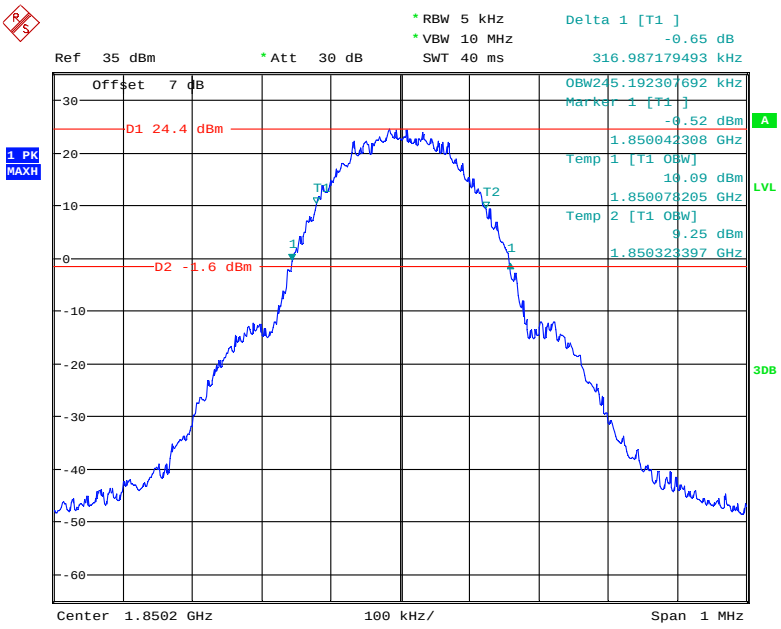
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 25.MAY.2021 23:46:14

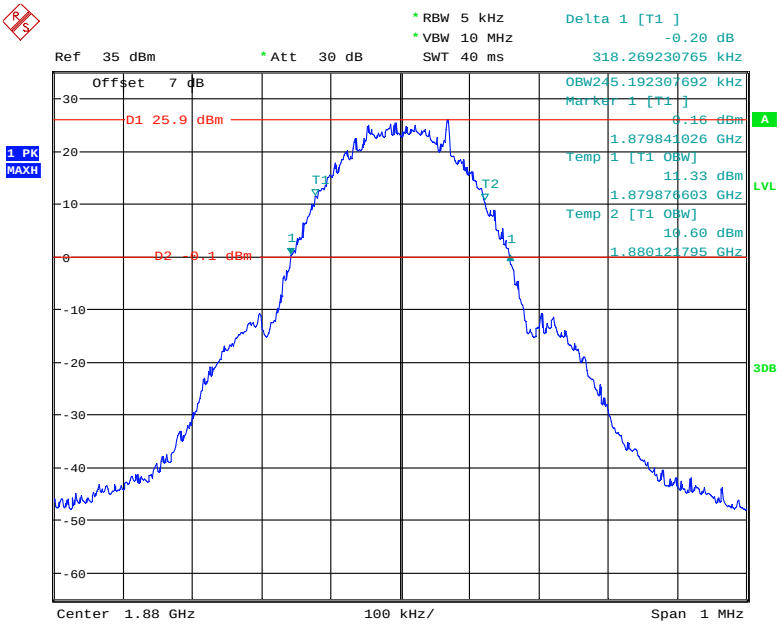
PCS Band (Part 24E)

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

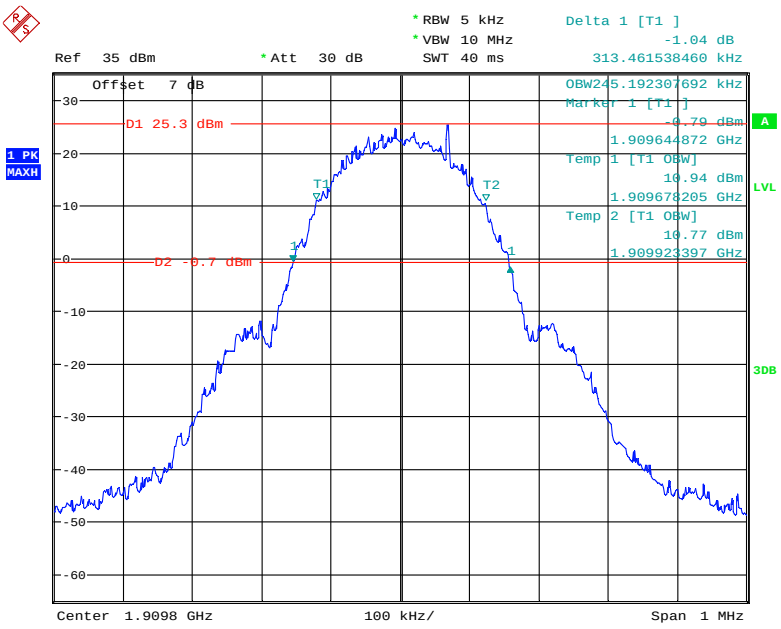


Date: 25.MAY.2021 22:03:32

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

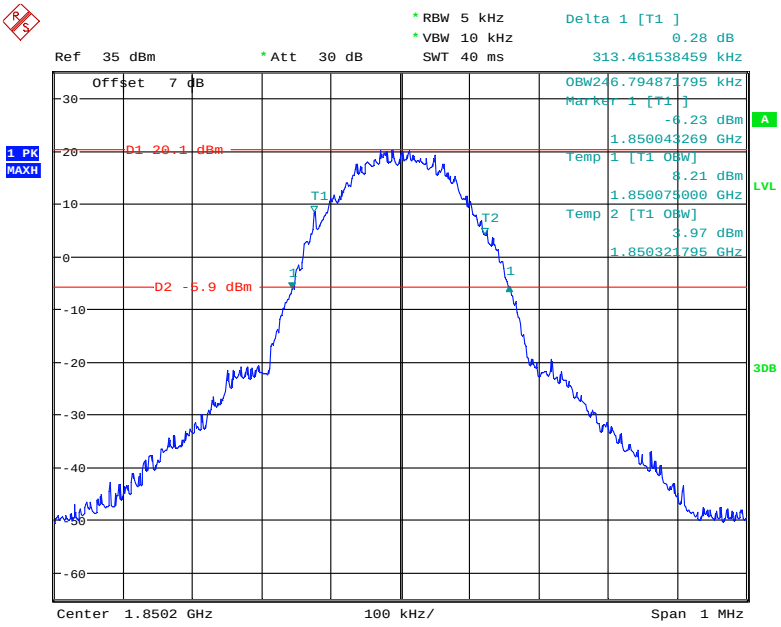


26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



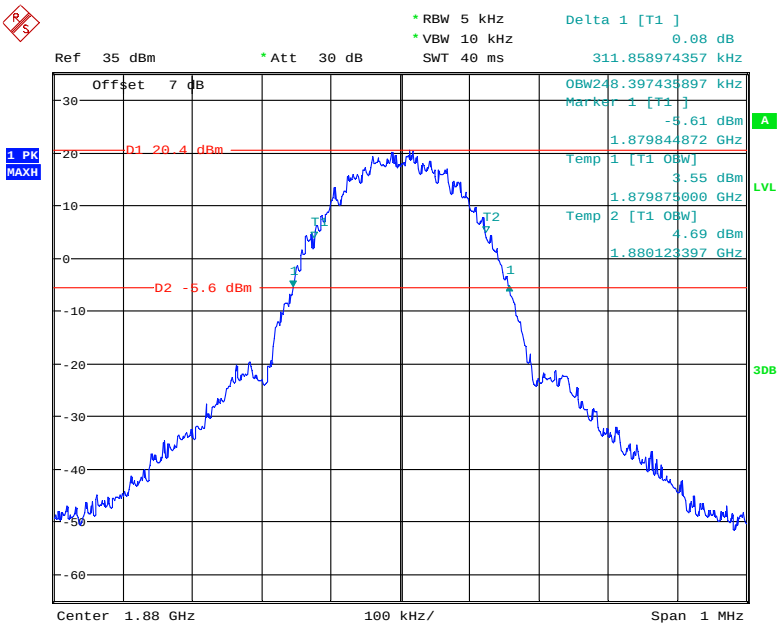
Date: 25.MAY.2021 22:08:13

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

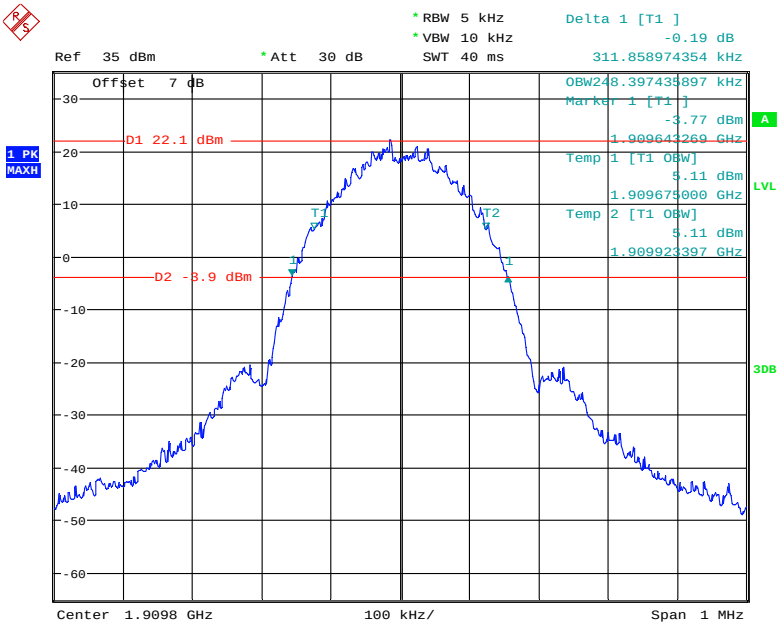


Date: 2.JUN.2021 17:14:47

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

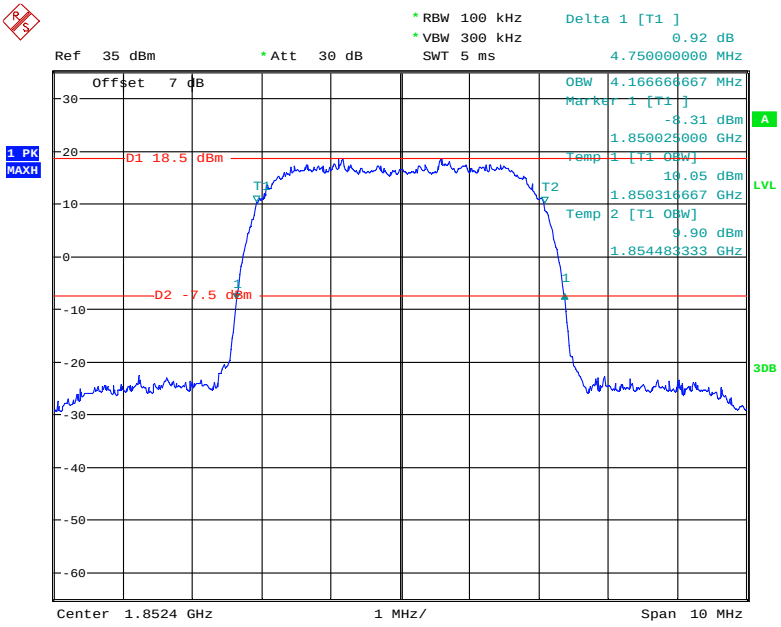


26 dB Emissions &99% Occupied Bandwidth for EGPRS (8PSK) Mode, High channel



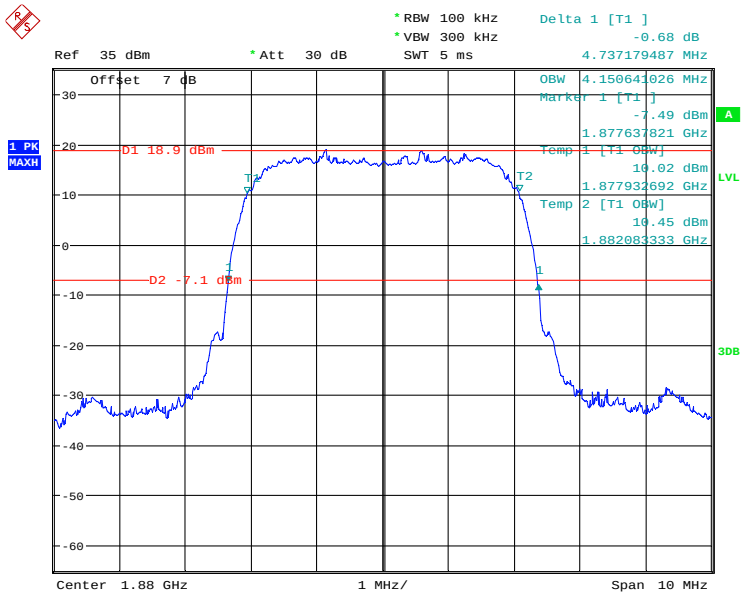
Date: 2.JUN.2021 17:11:41

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



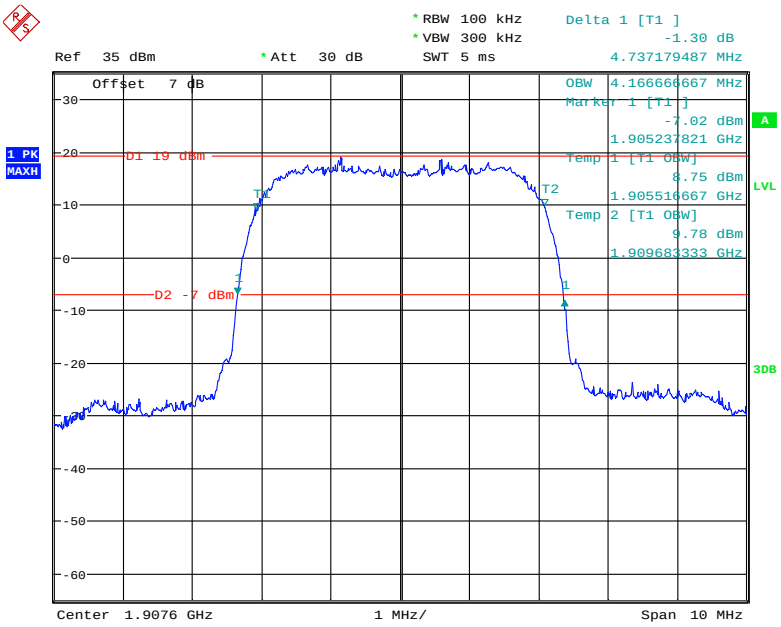
Date: 25.MAY.2021 23:08:01

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



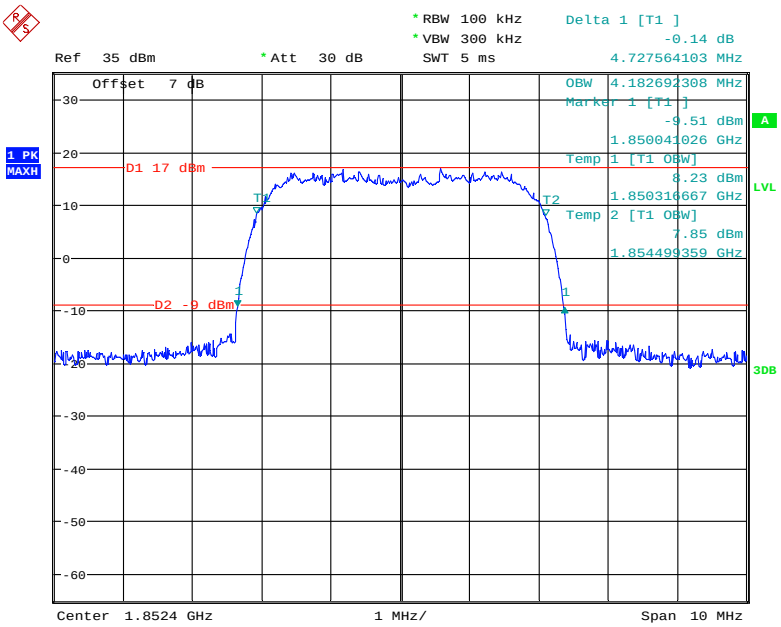
Date: 25.MAY.2021 23:11:50

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

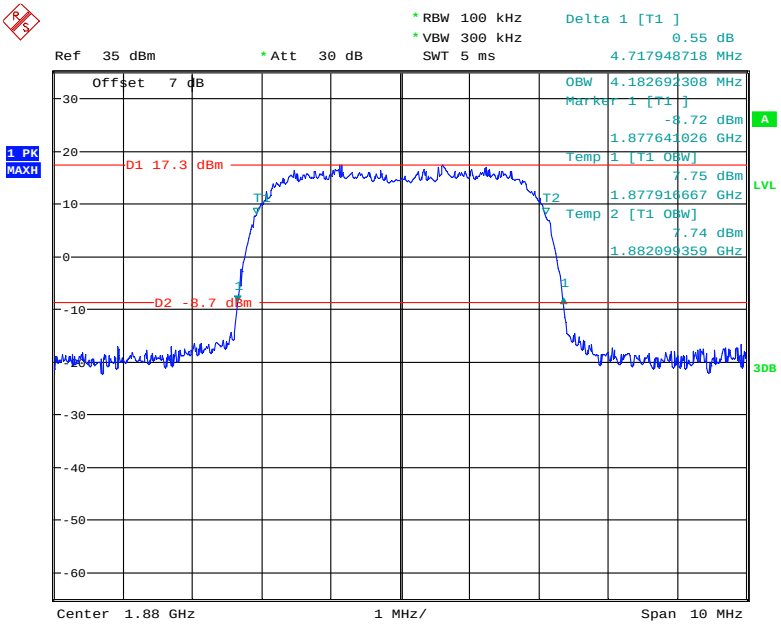


Date: 25.MAY.2021 23:13:58

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

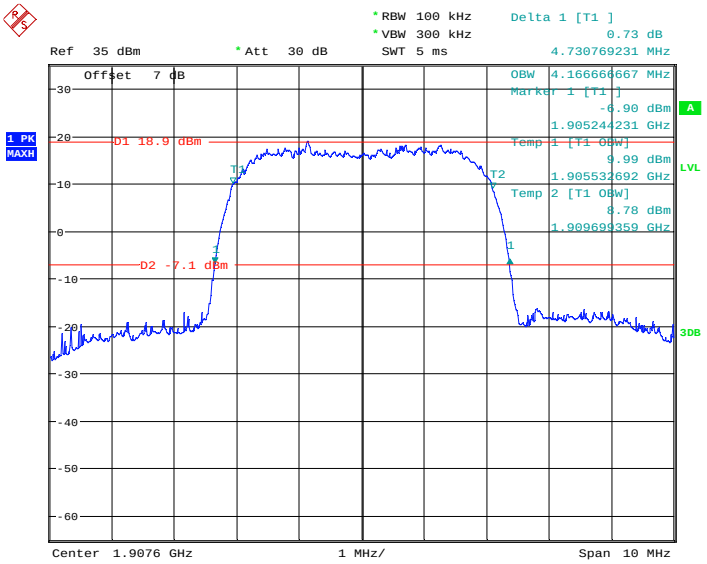


26 dB Emissions &99% Occupied Bandwidth for HSUPA (BPSK) Mode, Middle channel



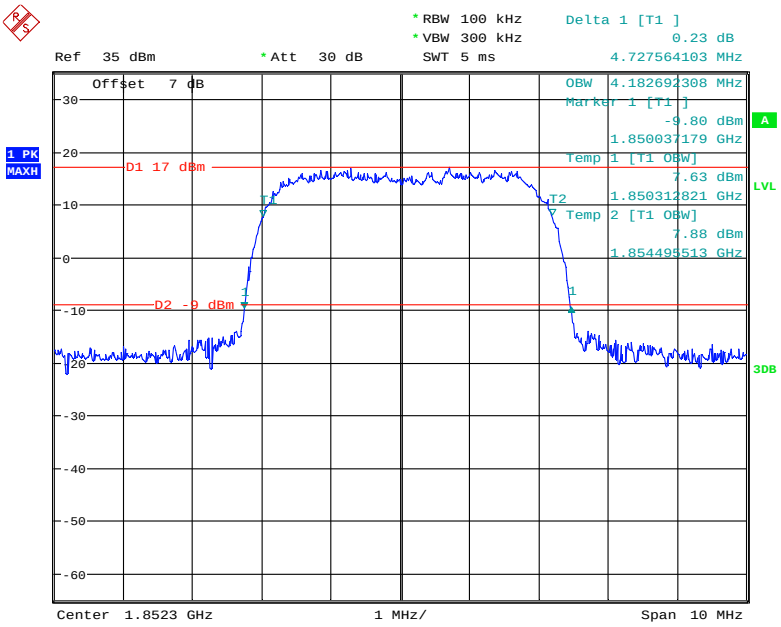
Date: 25.MAY.2021 23:57:35

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



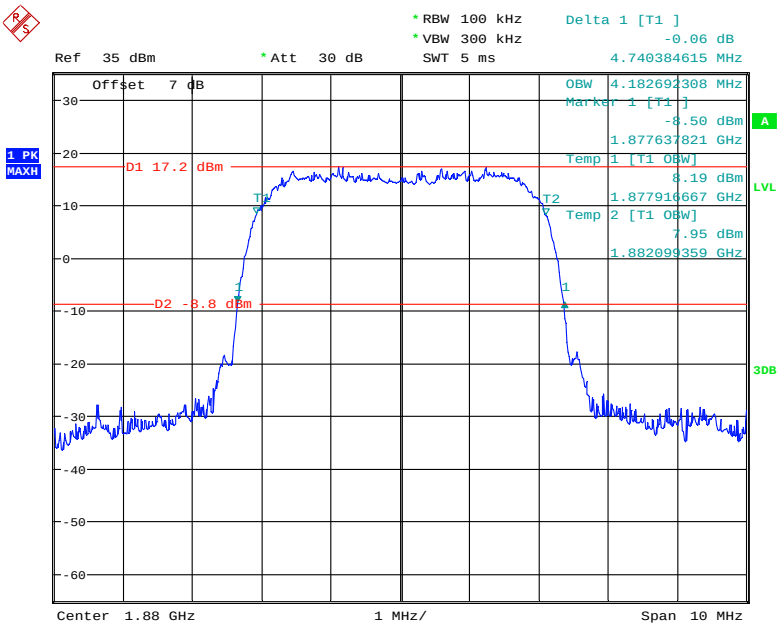
Date: 14.JUL.2021 11:46:17

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



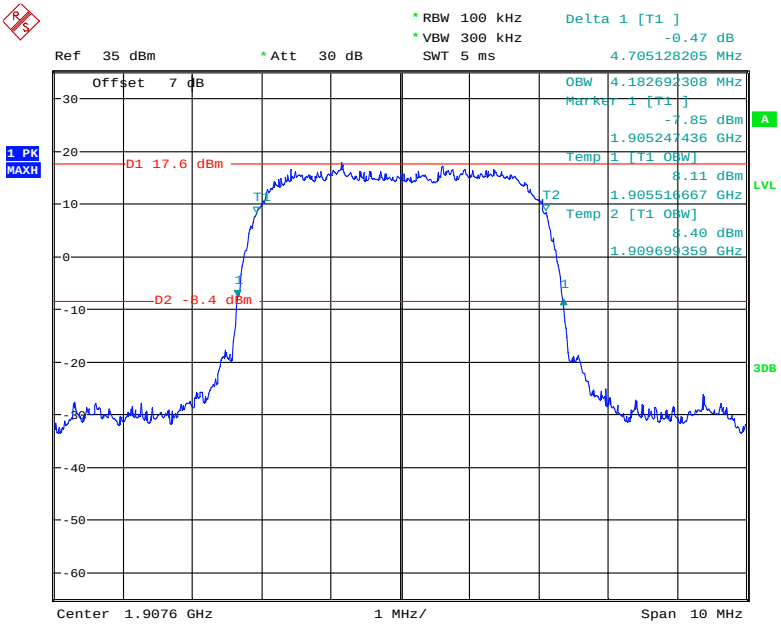
Date: 25.MAY.2021 23:36:17

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



Date: 25.MAY.2021 23:34:52

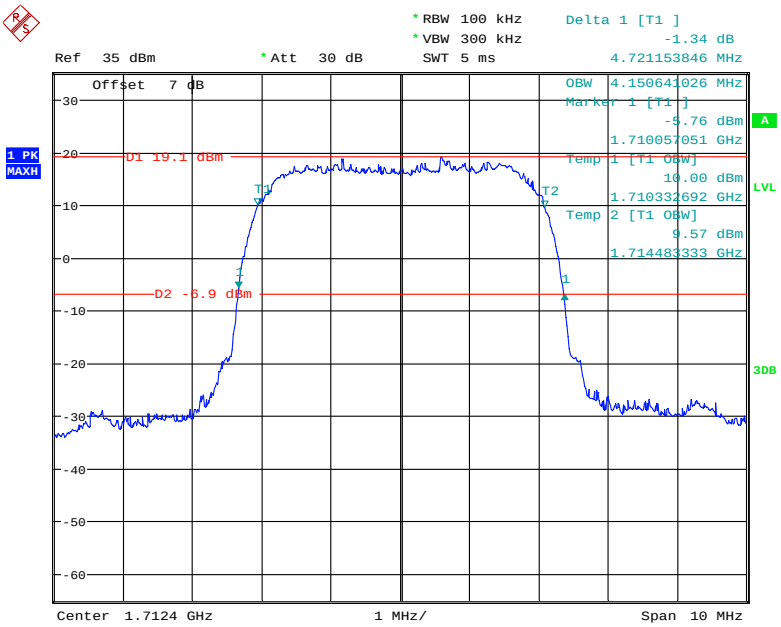
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



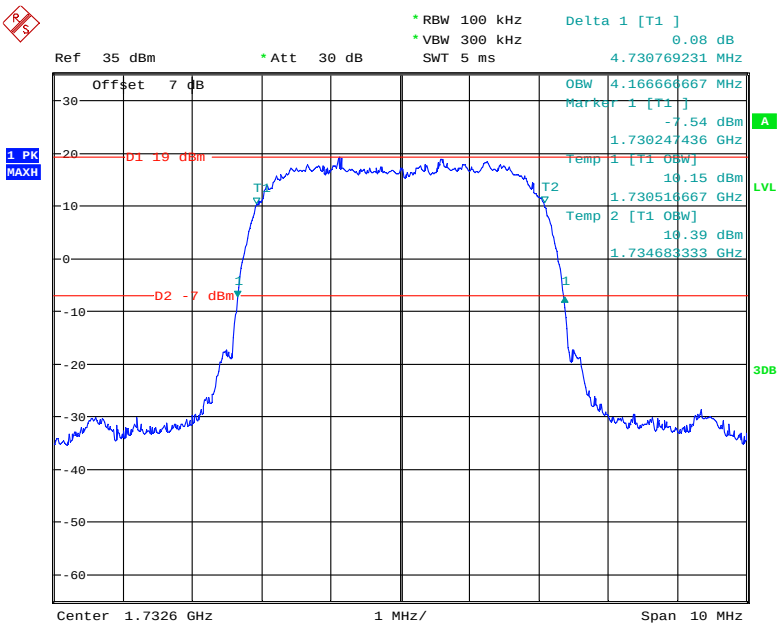
Date: 25.MAY.2021 23:37:26

AWS Band (Part 27)

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

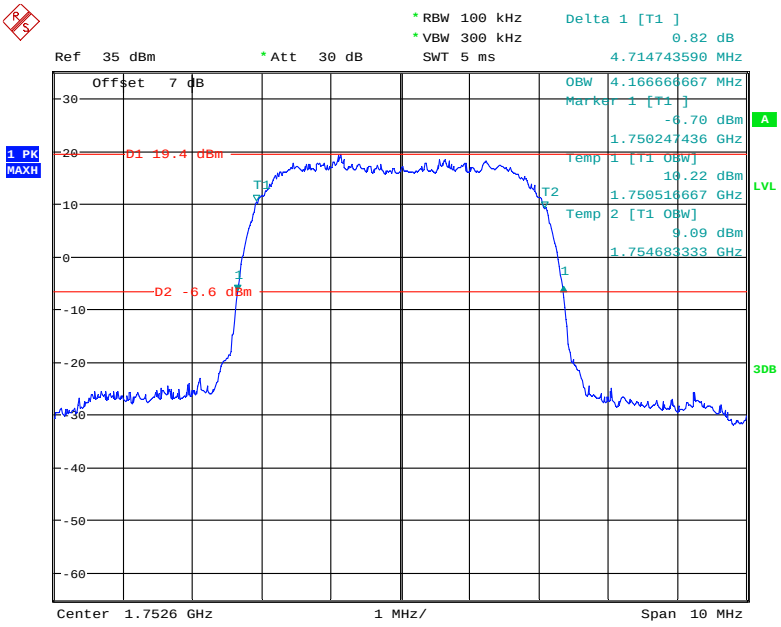


26 dB Emissions &99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel



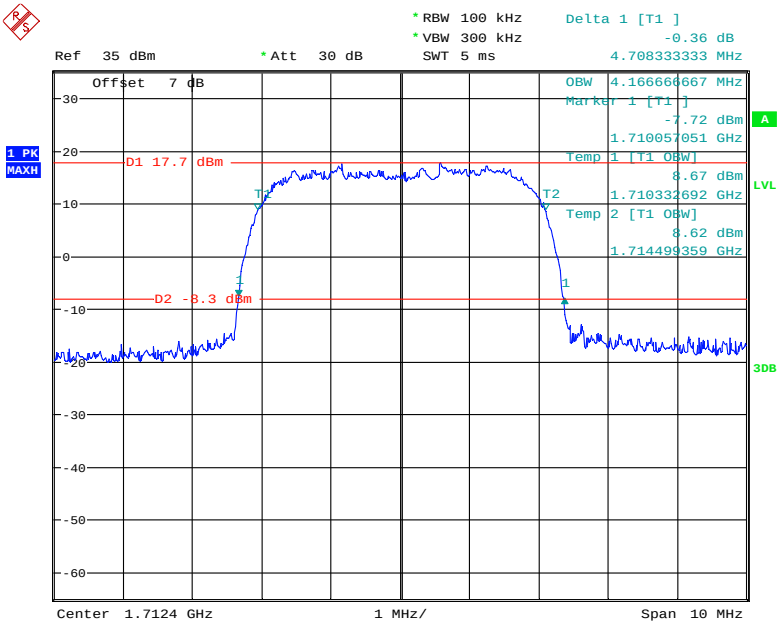
Date: 25.MAY.2021 23:17:50

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



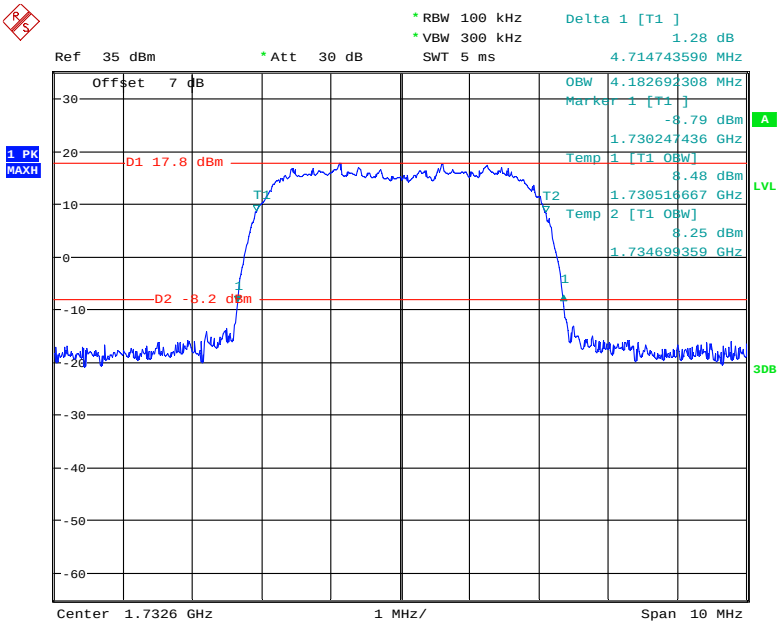
Date: 25.MAY.2021 23:19:13

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



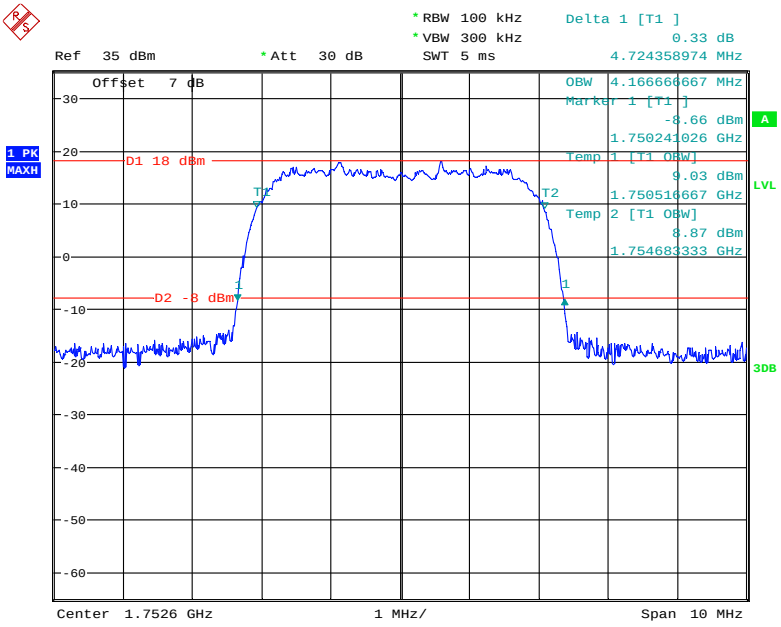
Date: 26.MAY.2021 00:01:49

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



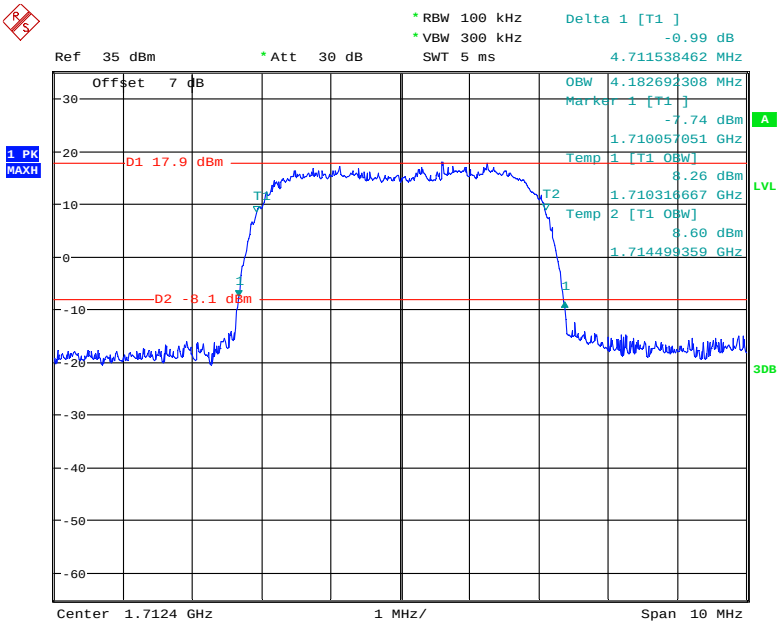
Date: 26.MAY.2021 00:09:21

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



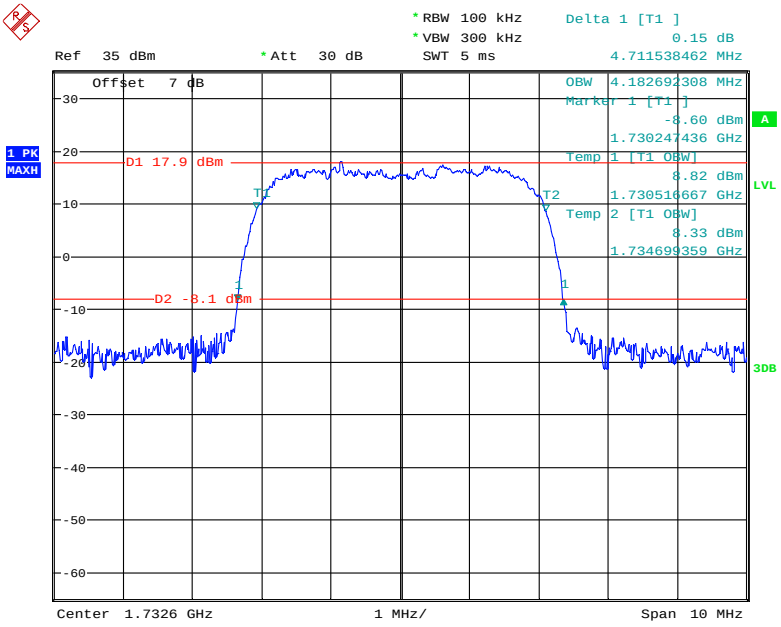
Date: 26.MAY.2021 00:07:13

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



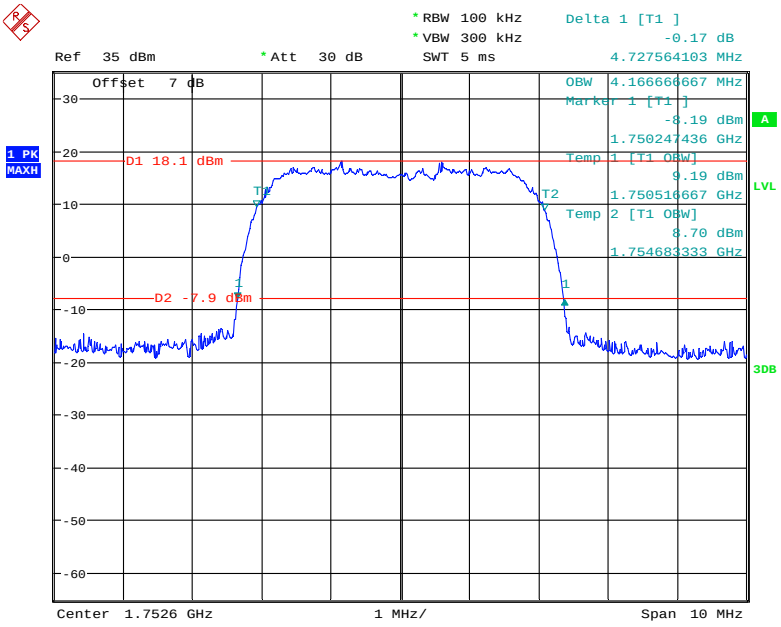
Date: 25.MAY.2021 23:26:10

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



Date: 25.MAY.2021 23:28:22

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



Date: 25.MAY.2021 23:31:31

LTE Band 2:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.110	1.278
		Middle	1.104	1.290
		High	1.104	1.296
	16QAM	Low	1.104	1.290
		Middle	1.110	1.302
		High	1.098	1.278
3	QPSK	Low	2.688	2.916
		Middle	2.688	2.928
		High	2.688	2.940
	16QAM	Low	2.688	2.952
		Middle	2.688	2.952
		High	2.688	2.940
5	QPSK	Low	4.520	4.920
		Middle	4.520	4.920
		High	4.500	4.940
	16QAM	Low	4.500	4.880
		Middle	4.520	4.940
		High	4.520	4.960
10	QPSK	Low	8.960	9.680
		Middle	8.960	9.600
		High	8.960	9.640
	16QAM	Low	8.960	9.560
		Middle	8.960	9.640
		High	8.960	9.640
15	QPSK	Low	13.560	14.820
		Middle	13.500	14.760
		High	13.560	14.820
	16QAM	Low	13.560	14.760
		Middle	13.560	14.760
		High	13.560	14.760
20	QPSK	Low	18.000	19.360
		Middle	18.000	19.360
		High	17.920	19.520
	16QAM	Low	18.000	19.440
		Middle	18.000	19.440
		High	17.920	19.280

LTE Band 4:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.104	1.290
		Middle	1.110	1.302
		High	1.110	1.284
	16QAM	Low	1.104	1.302
		Middle	1.104	1.284
		High	1.104	1.290
3	QPSK	Low	2.688	2.916
		Middle	2.700	2.928
		High	2.688	2.940
	16QAM	Low	2.676	2.940
		Middle	2.688	2.940
		High	2.688	2.940
5	QPSK	Low	4.520	4.940
		Middle	4.520	4.940
		High	4.500	4.900
	16QAM	Low	4.500	4.920
		Middle	4.520	4.940
		High	4.520	4.960
10	QPSK	Low	8.960	9.640
		Middle	8.960	9.560
		High	8.960	9.640
	16QAM	Low	8.960	9.560
		Middle	8.920	9.640
		High	8.960	9.600
15	QPSK	Low	13.500	14.880
		Middle	13.500	14.760
		High	13.560	14.820
	16QAM	Low	13.500	14.700
		Middle	13.560	14.700
		High	13.500	14.760
20	QPSK	Low	18.000	19.280
		Middle	17.920	19.360
		High	18.000	19.440
	16QAM	Low	18.080	19.440
		Middle	18.000	19.520
		High	17.920	19.280

LTE Band 5:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.104	1.290
		Middle	1.104	1.308
		High	1.104	1.284
	16QAM	Low	1.110	1.302
		Middle	1.098	1.278
		High	1.104	1.284
3	QPSK	Low	2.688	2.928
		Middle	2.688	2.940
		High	2.676	2.832
	16QAM	Low	2.676	2.844
		Middle	2.688	2.928
		High	2.688	3.108
5	QPSK	Low	4.520	4.940
		Middle	4.520	4.920
		High	4.500	4.920
	16QAM	Low	4.520	4.940
		Middle	4.520	4.940
		High	4.520	4.960
10	QPSK	Low	8.960	9.600
		Middle	8.960	9.520
		High	8.960	9.640
	16QAM	Low	8.920	9.520
		Middle	8.960	9.600
		High	8.960	9.600

LTE Band 7:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.500	4.900
		Middle	4.520	4.920
		High	4.520	4.940
	16QAM	Low	4.500	4.900
		Middle	4.520	4.940
		High	4.540	4.940
10	QPSK	Low	9.000	9.680
		Middle	8.960	9.600
		High	8.960	9.600
	16QAM	Low	8.920	9.520
		Middle	9.000	9.600
		High	8.960	9.640
15	QPSK	Low	13.560	14.820
		Middle	13.500	14.760
		High	13.560	14.820
	16QAM	Low	13.560	14.760
		Middle	13.560	14.820
		High	13.560	14.700
20	QPSK	Low	18.000	19.280
		Middle	17.920	19.280
		High	17.920	19.440
	16QAM	Low	18.000	19.360
		Middle	18.000	19.520
		High	17.920	19.200

LTE Band 38:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.500	4.960
		Middle	4.520	4.900
		High	4.520	4.960
	16QAM	Low	4.520	4.940
		Middle	4.520	5.000
		High	4.520	4.980
10	QPSK	Low	9.000	9.640
		Middle	8.960	9.680
		High	8.960	9.560
	16QAM	Low	8.960	9.600
		Middle	8.960	9.520
		High	8.960	9.920
15	QPSK	Low	13.500	15.120
		Middle	13.500	14.880
		High	13.500	14.760
	16QAM	Low	13.500	15.660
		Middle	13.560	14.880
		High	13.560	15.540
20	QPSK	Low	18.000	19.280
		Middle	18.000	19.360
		High	18.000	19.360
	16QAM	Low	18.000	19.360
		Middle	17.920	19.680
		High	17.920	19.280

LTE Band 41:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.520	4.920
		Middle	4.520	4.880
		High	4.500	5.060
	16QAM	Low	4.520	4.920
		Middle	4.500	5.000
		High	4.500	4.920
10	QPSK	Low	9.000	9.640
		Middle	8.960	9.680
		High	8.960	9.560
	16QAM	Low	8.960	9.480
		Middle	8.960	9.520
		High	8.960	10.160
15	QPSK	Low	13.560	14.880
		Middle	13.500	15.180
		High	13.500	14.820
	16QAM	Low	13.500	14.760
		Middle	13.560	14.880
		High	13.560	15.600
20	QPSK	Low	18.000	19.280
		Middle	17.920	19.280
		High	18.000	19.440
	16QAM	Low	18.000	19.360
		Middle	18.000	19.920
		High	17.920	19.200

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

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

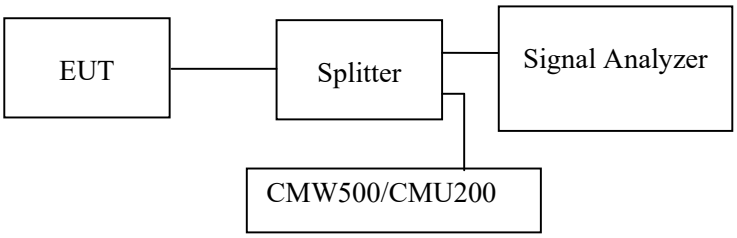
Applicable Standard

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

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

Test Procedure

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



Test Data

Environmental Conditions

Temperature:	27 °C
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Orlo Yang on 2021-05-25 to 2021-07-14.

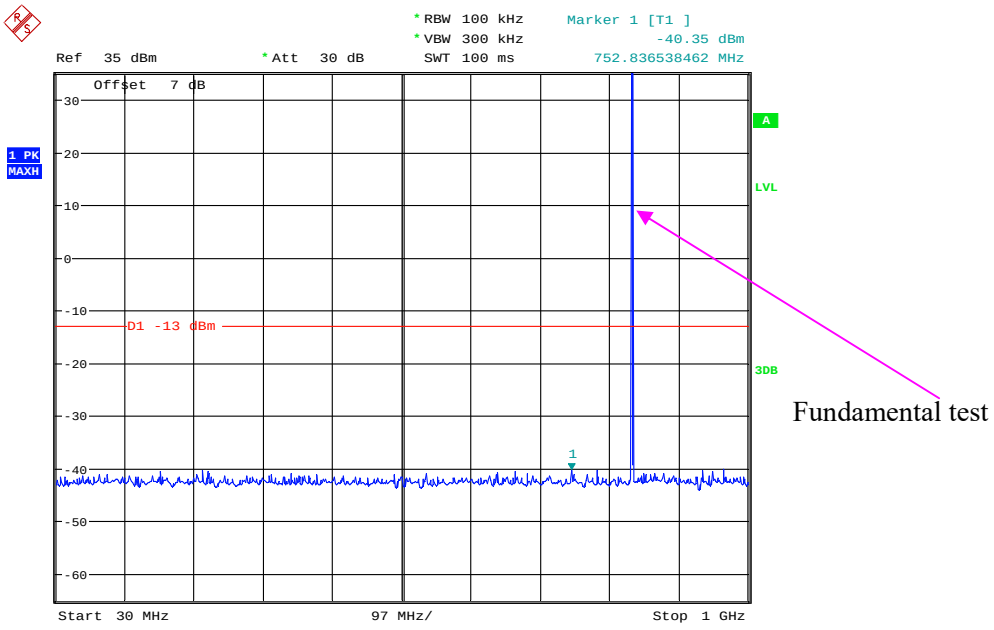
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

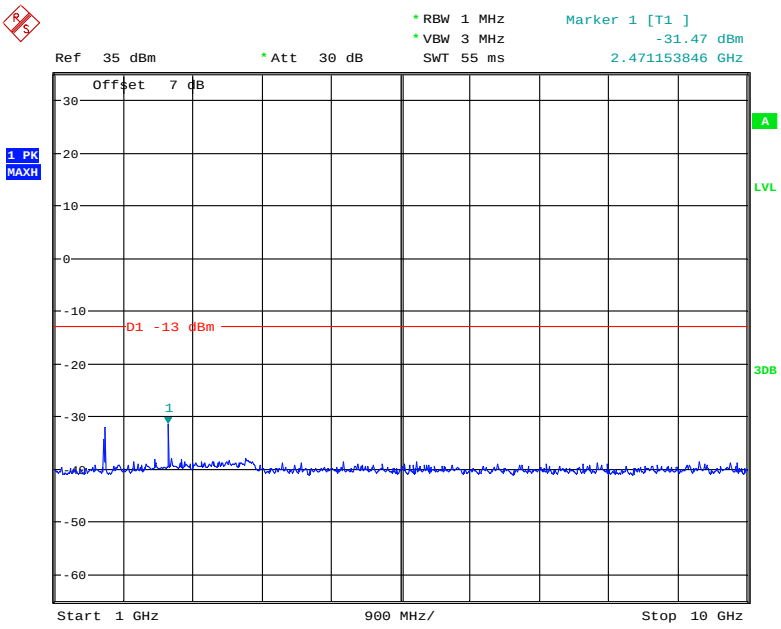
Cellular Band (Part 22H)
Low Channel:

30 MHz – 1 GHz (GSM Mode)



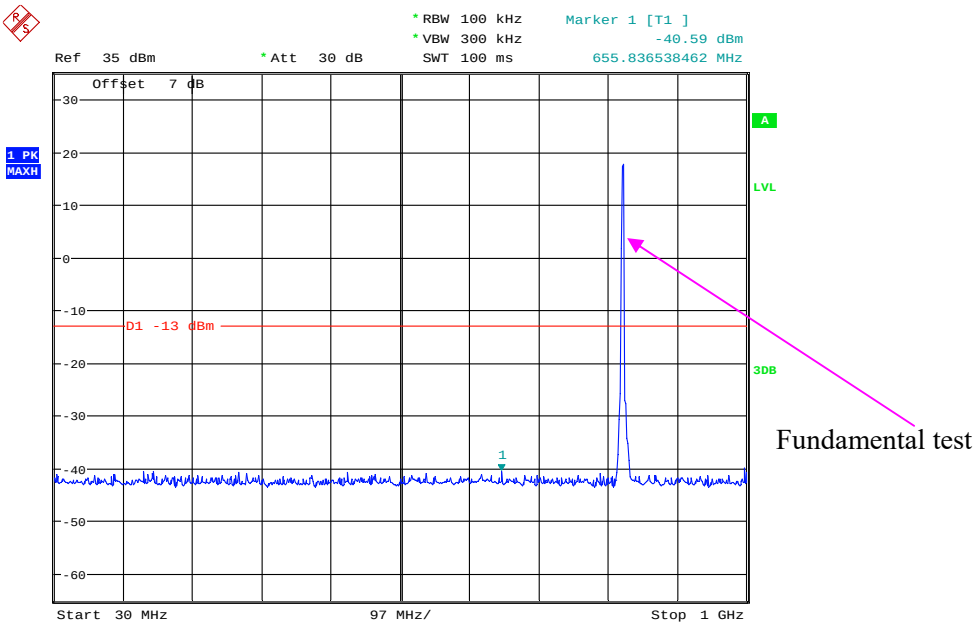
Date: 14.JUL.2021 11:51:07

1 GHz – 10 GHz (GSM Mode)



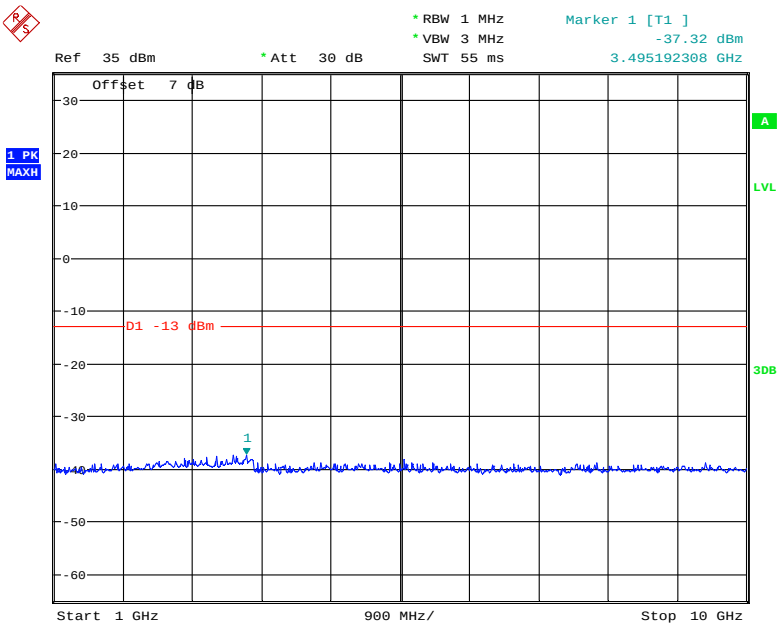
Date: 25.MAY.2021 22:21:38

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:38:15

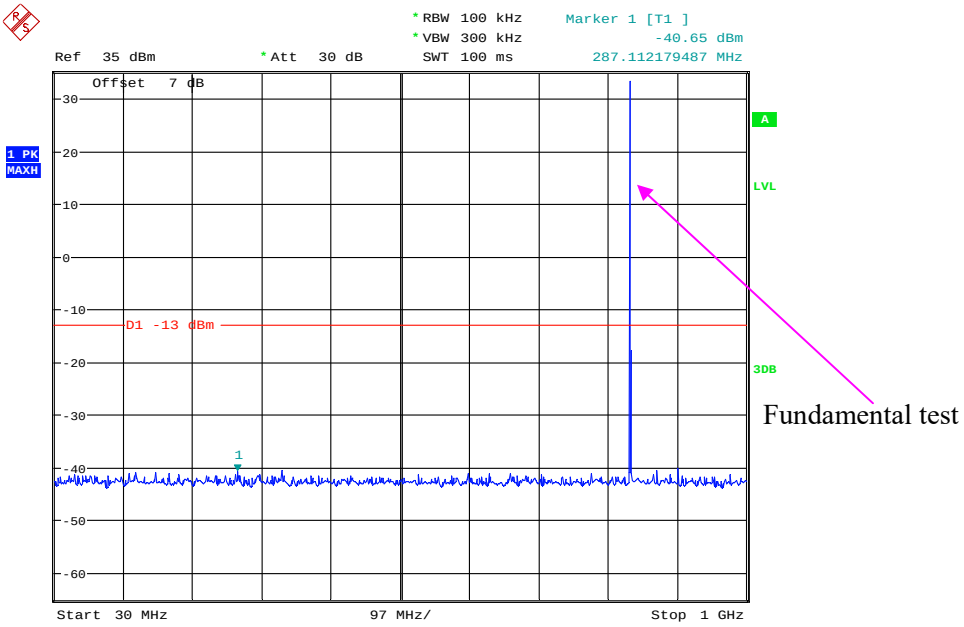
1 GHz – 10 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:54:36

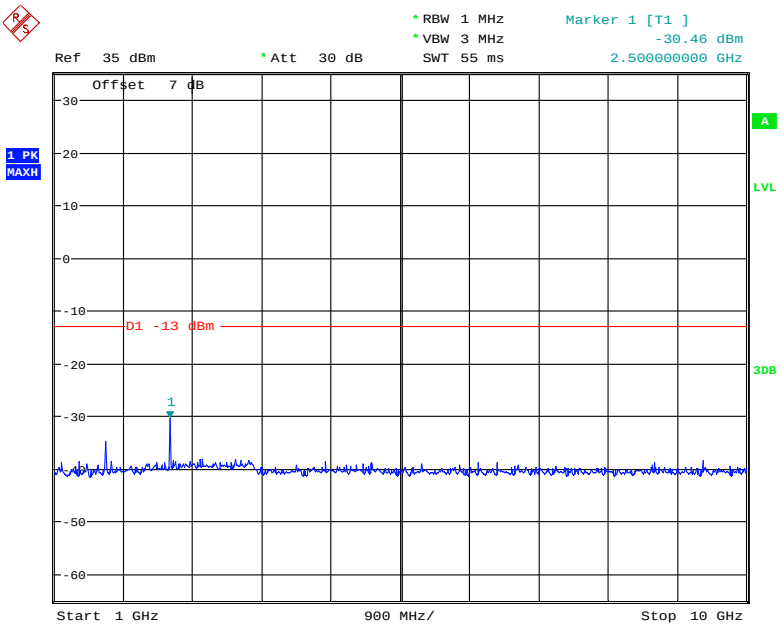
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



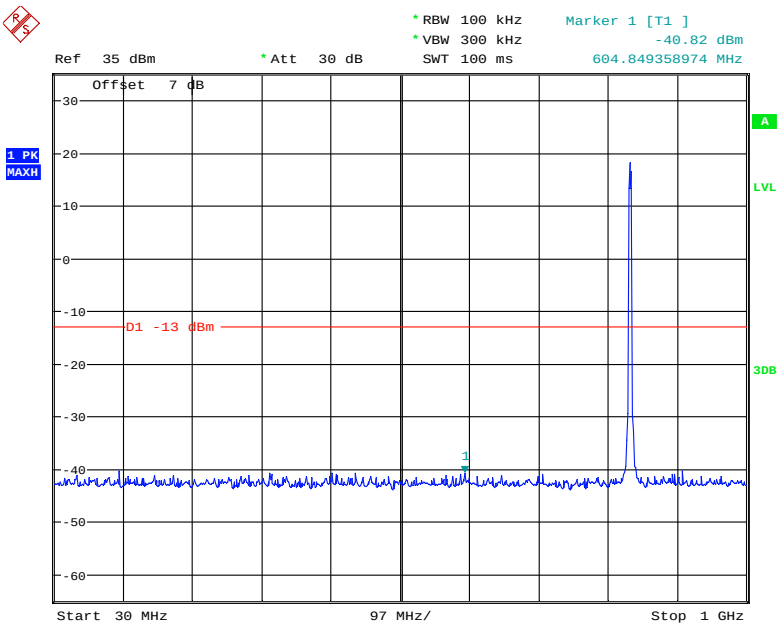
Date: 25.MAY.2021 22:25:52

1 GHz – 10 GHz (GSM Mode)



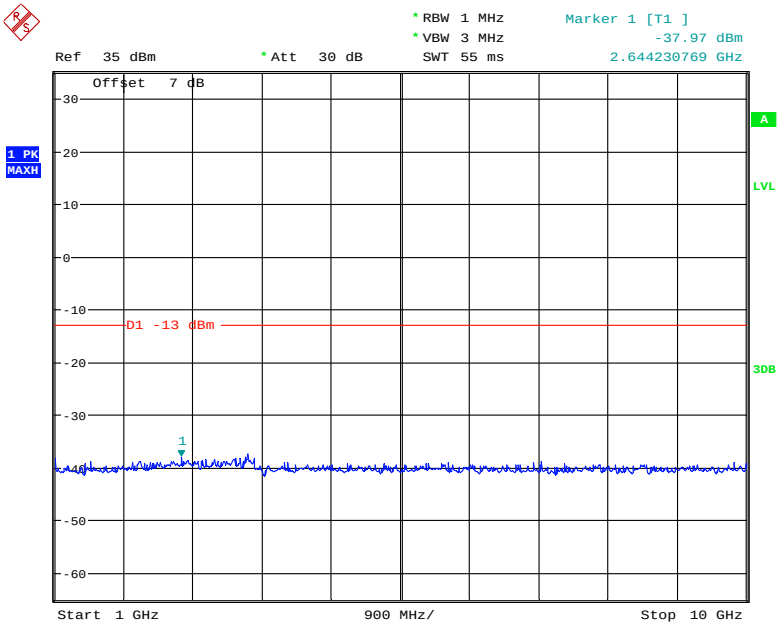
Date: 25.MAY.2021 22:22:30

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:39:07

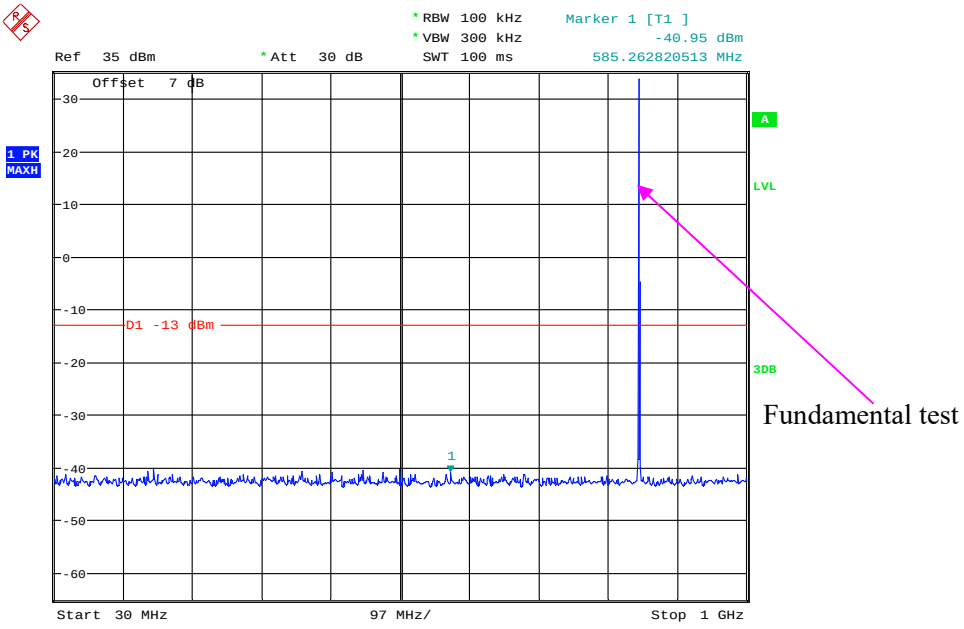
1 GHz – 10 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:55:29

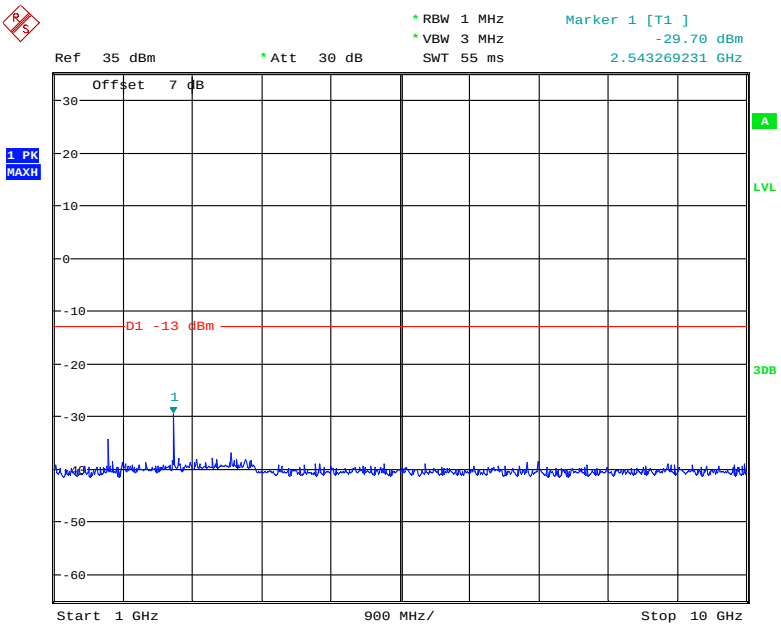
High Channel:

30 MHz – 1 GHz (GSM Mode)



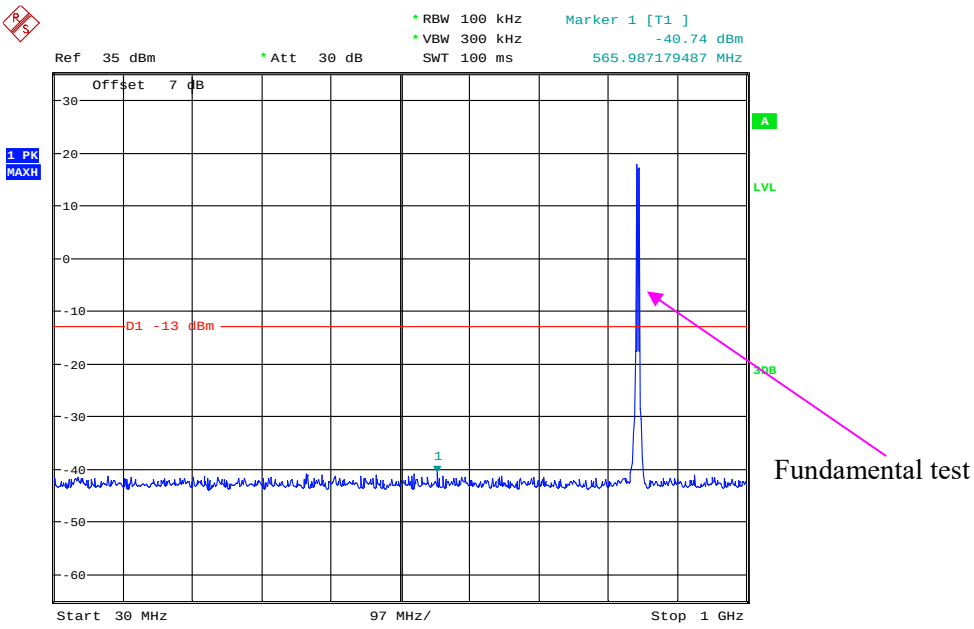
Date: 25.MAY.2021 22:24:40

1 GHz – 10 GHz (GSM Mode)



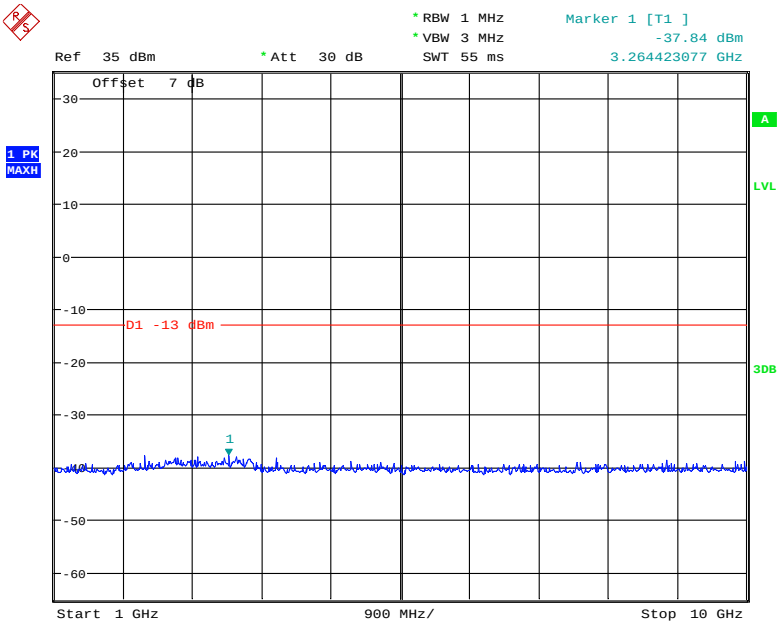
Date: 25.MAY.2021 22:22:58

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:39:44

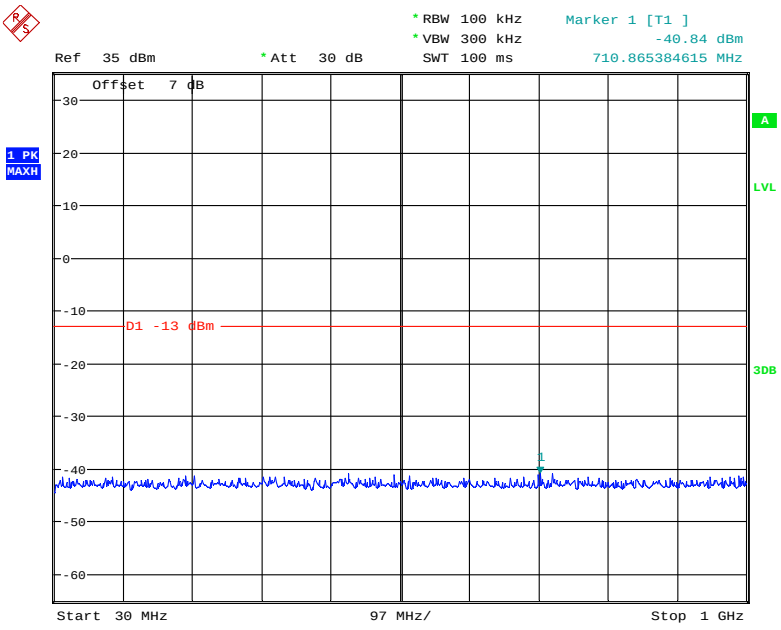
1 GHz – 10 GHz (WCDMA Mode)



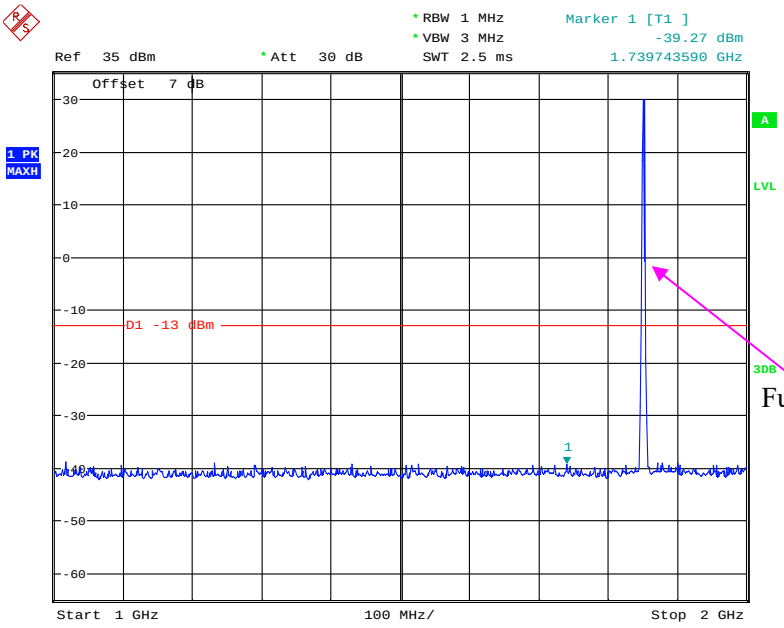
Date: 25.MAY.2021 22:56:01

PCS Band (Part 24E)
Low Channel:

30 MHz – 1 GHz (GSM Mode)



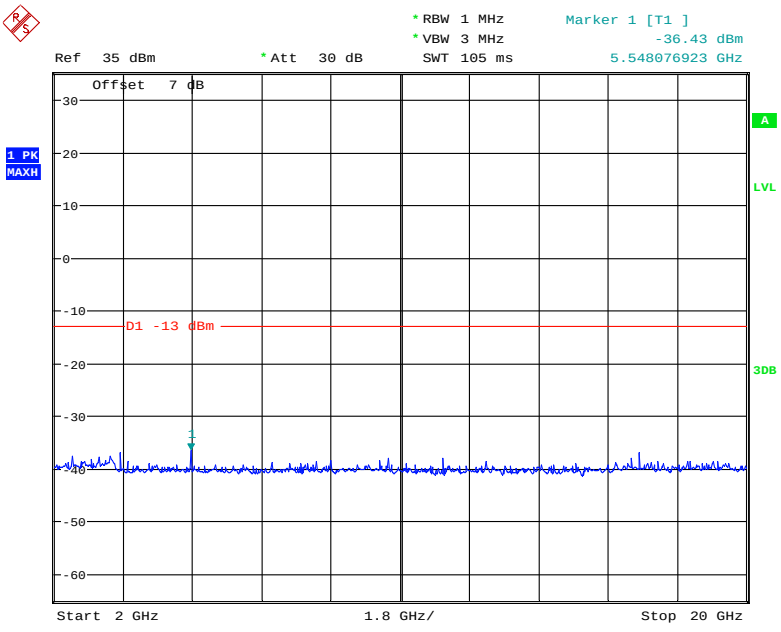
1 GHz – 2 GHz (GSM Mode)



Fundamental test

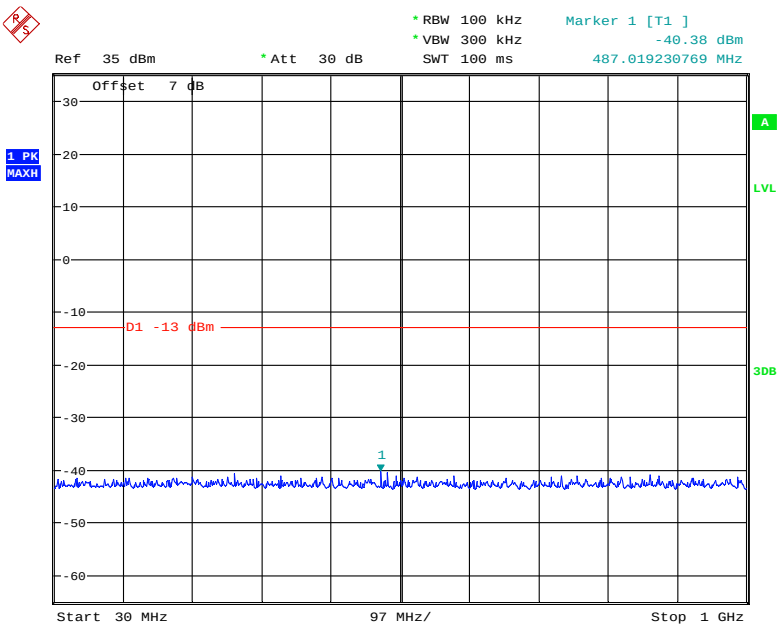
Date: 25.MAY.2021 22:16:44

2 GHz – 20 GHz (GSM Mode)



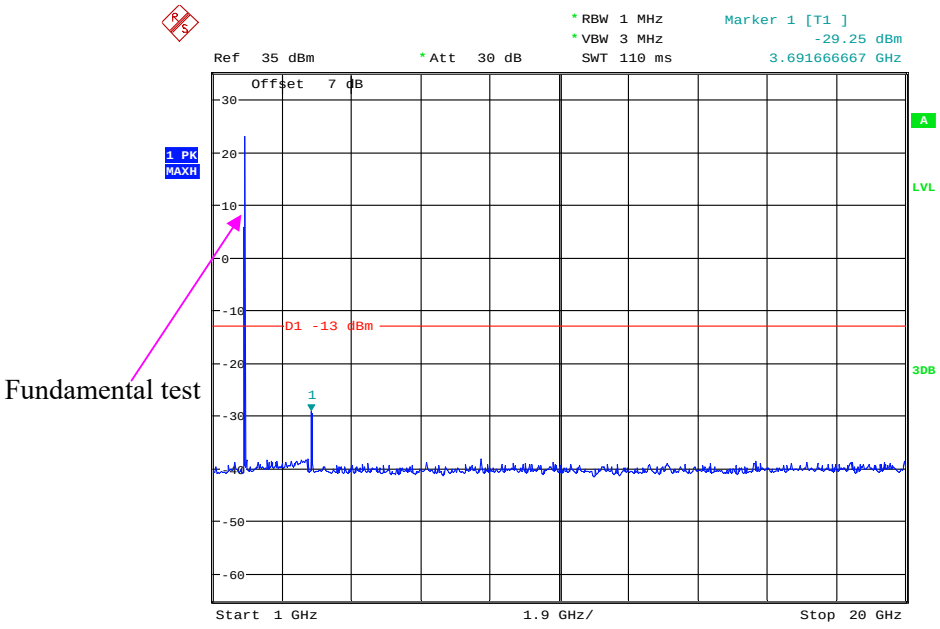
Date: 25.MAY.2021 22:18:10

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:42:34

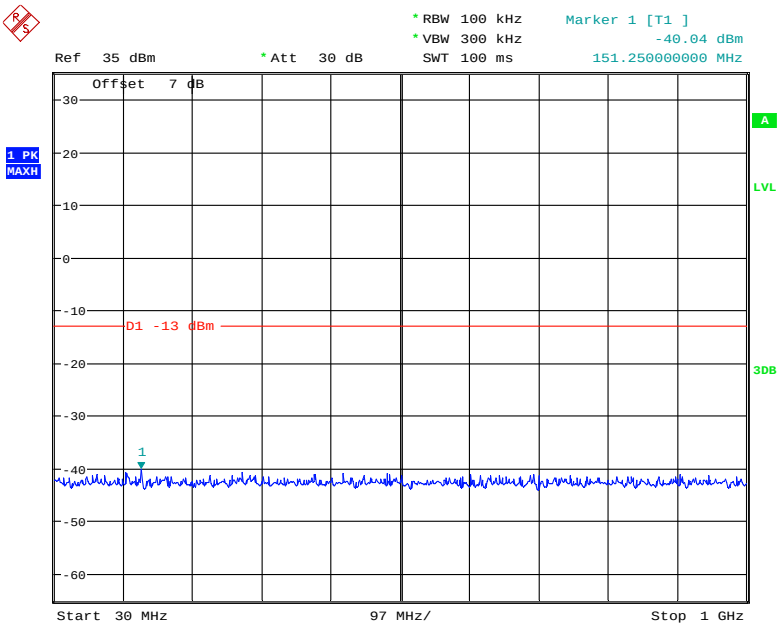
1 GHz – 20 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:47:15

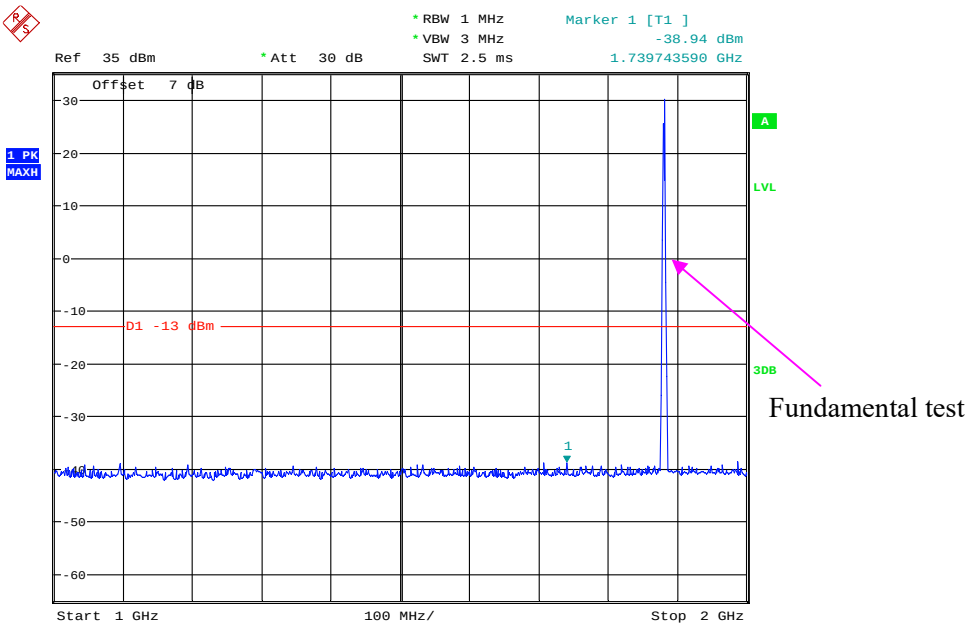
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



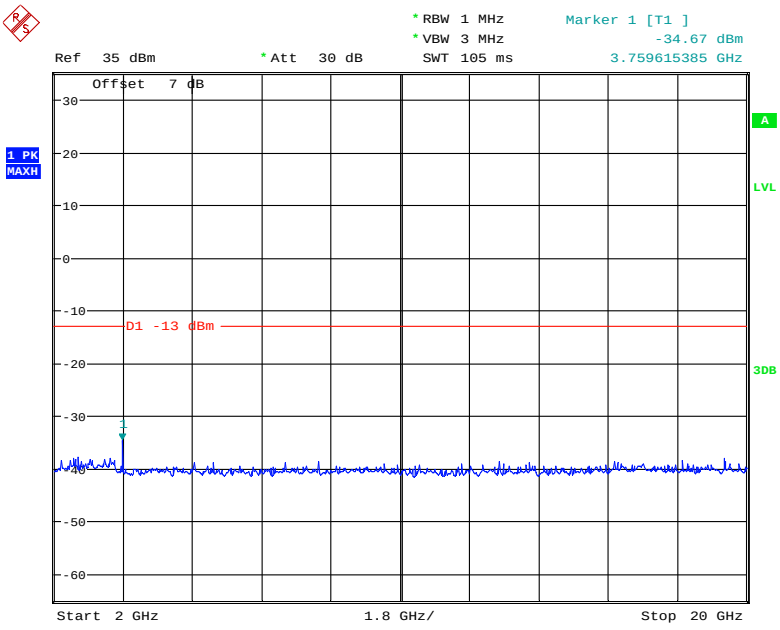
Date: 25.MAY.2021 22:12:07

1 GHz – 2 GHz (GSM Mode)



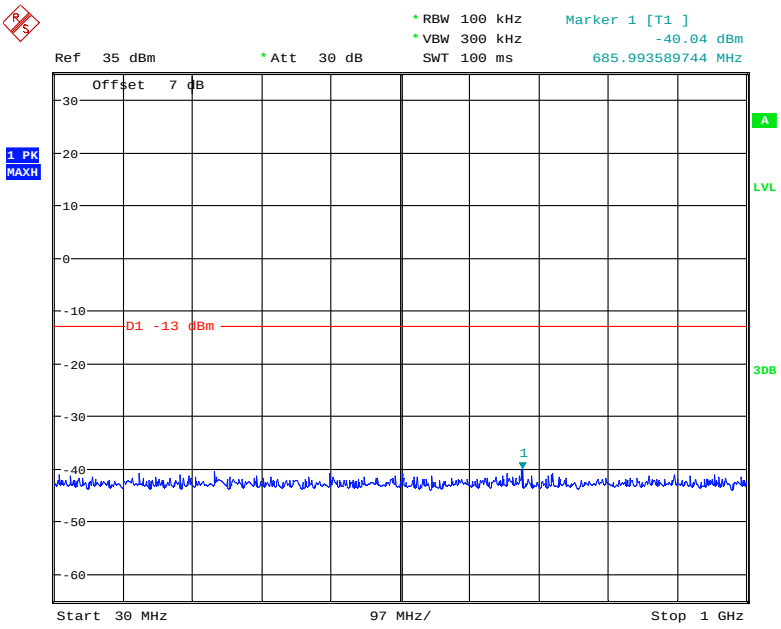
Date: 25.MAY.2021 22:16:14

2 GHz – 20 GHz (GSM Mode)



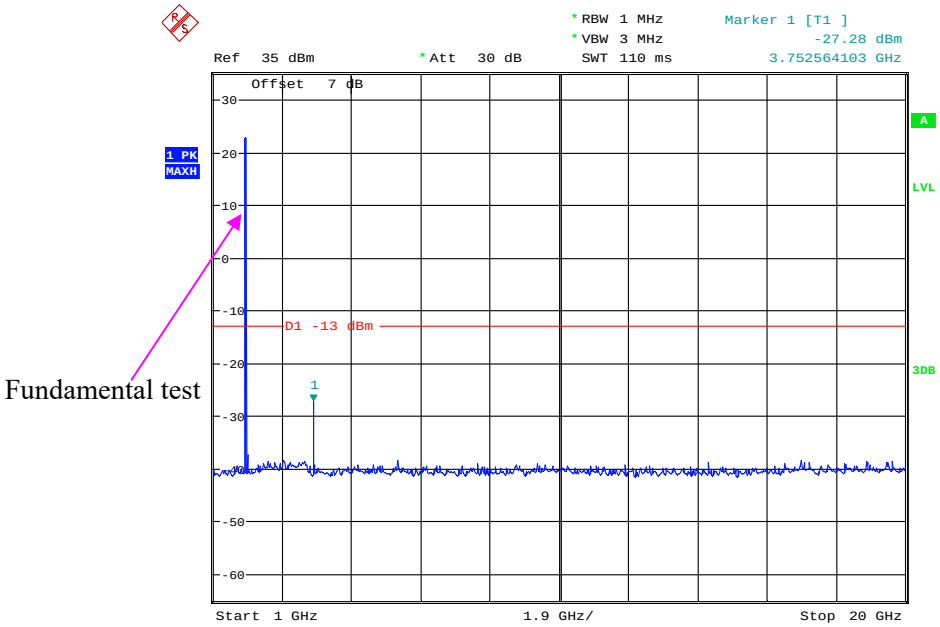
Date: 25.MAY.2021 22:18:57

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:43:18

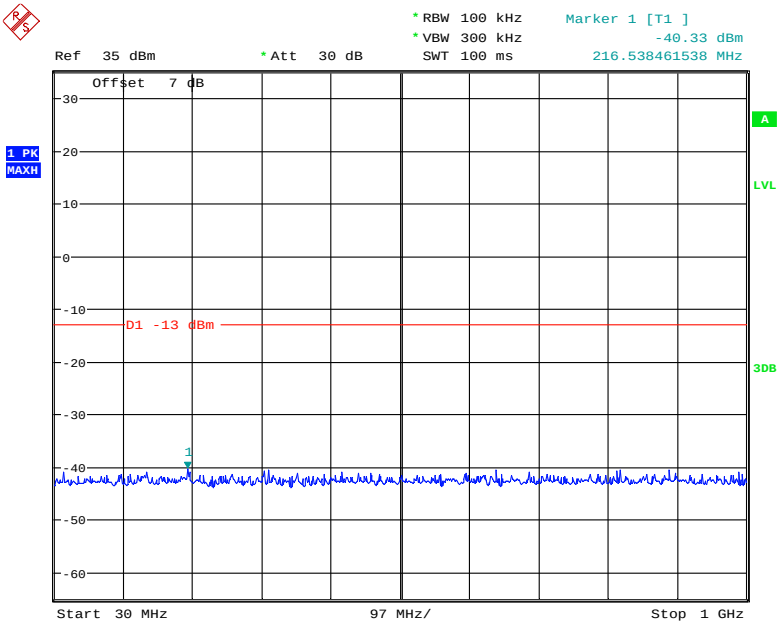
1 GHz – 20 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:46:36

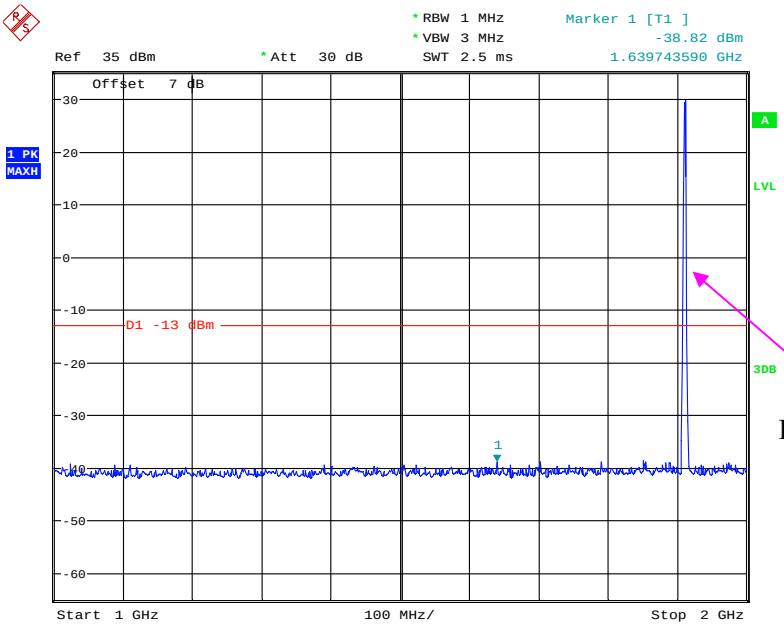
High Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 14.JUL.2021 11:53:38

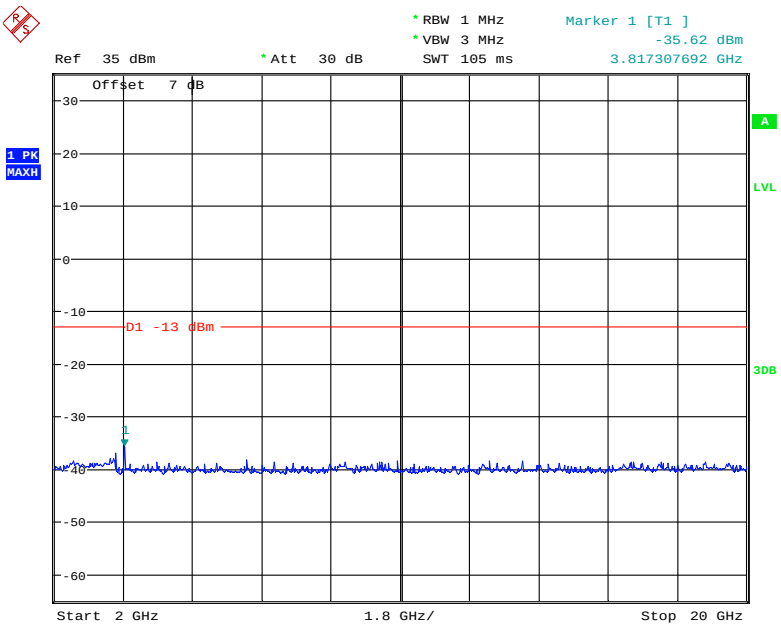
1 GHz – 2 GHz (GSM Mode)



Fundamental test

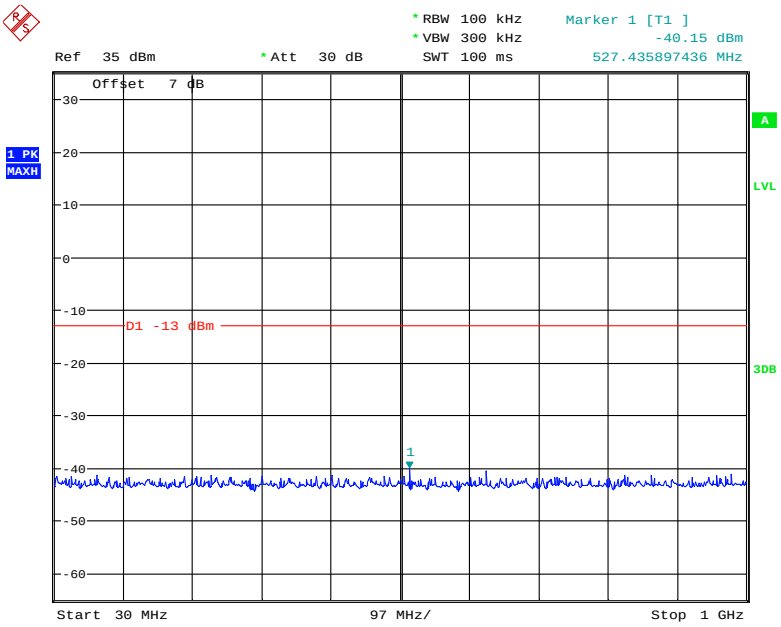
Date: 25.MAY.2021 22:15:21

2 GHz – 20 GHz (GSM Mode)



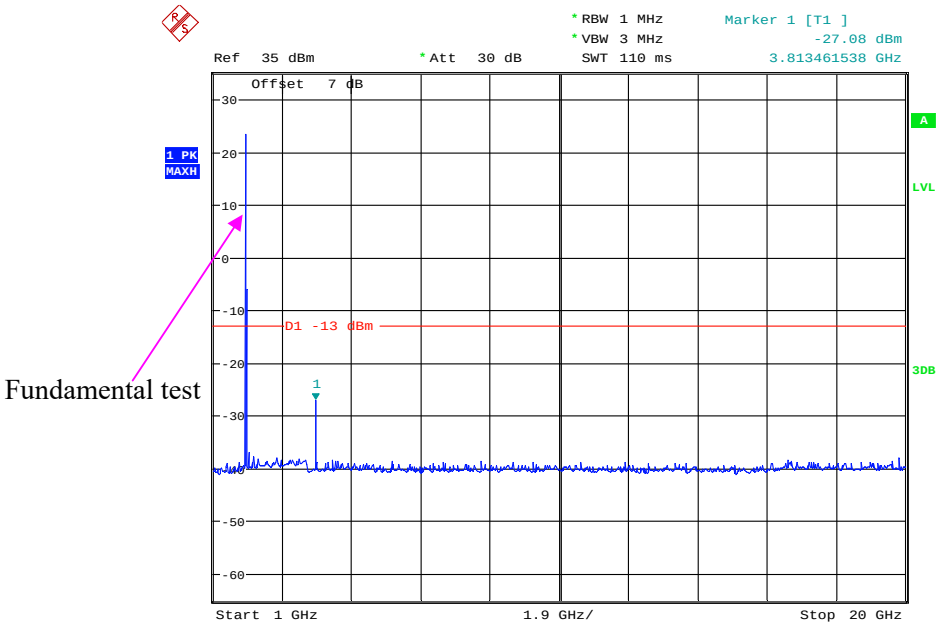
Date: 25.MAY.2021 22:19:35

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:43:55

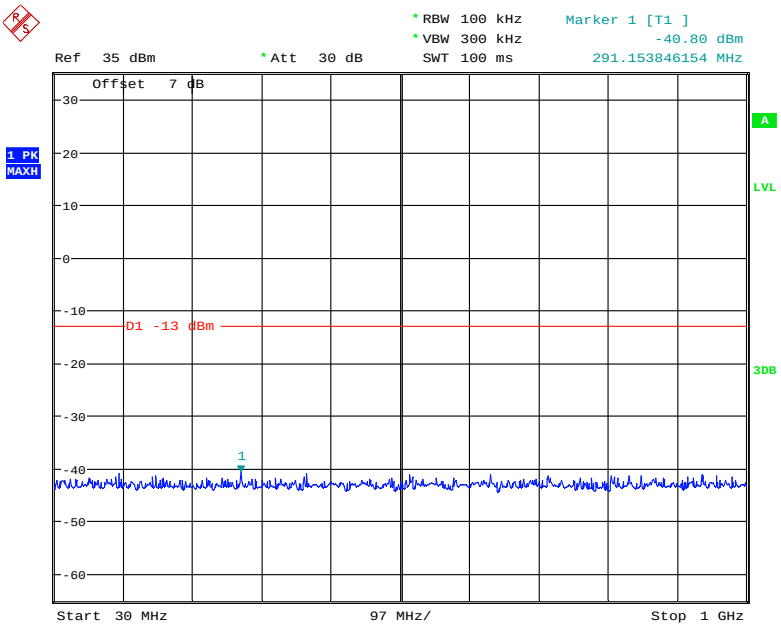
1 GHz – 20 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:45:44

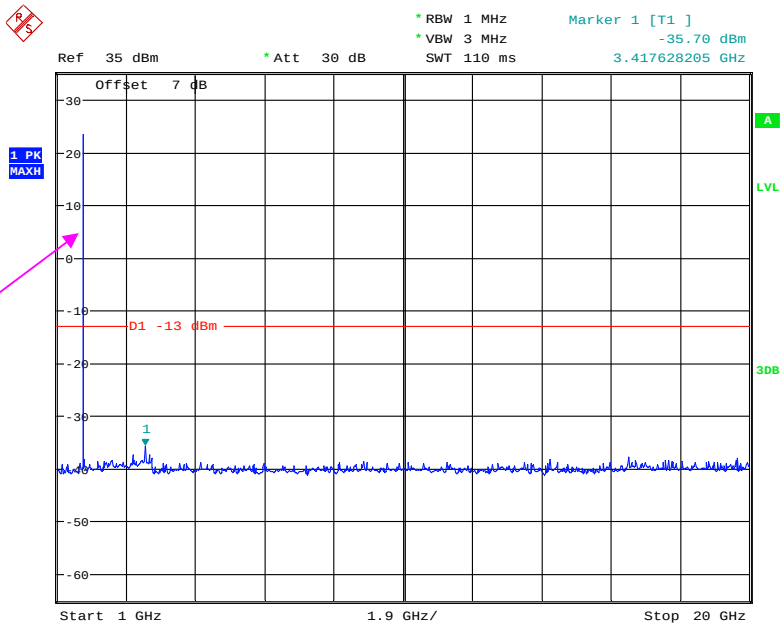
AWS Band (Part 27)
Low Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:40:19

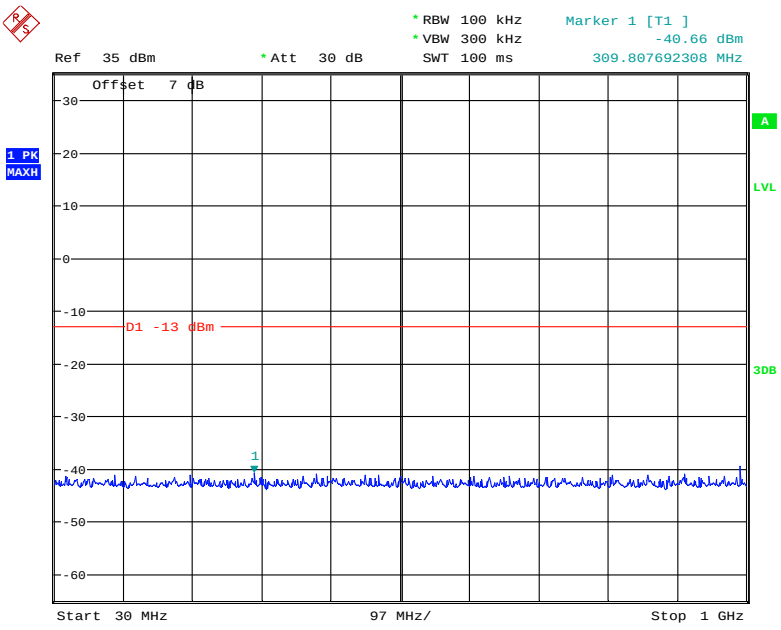
1 GHz – 20 GHz (WCDMA Mode)



Fundamental test

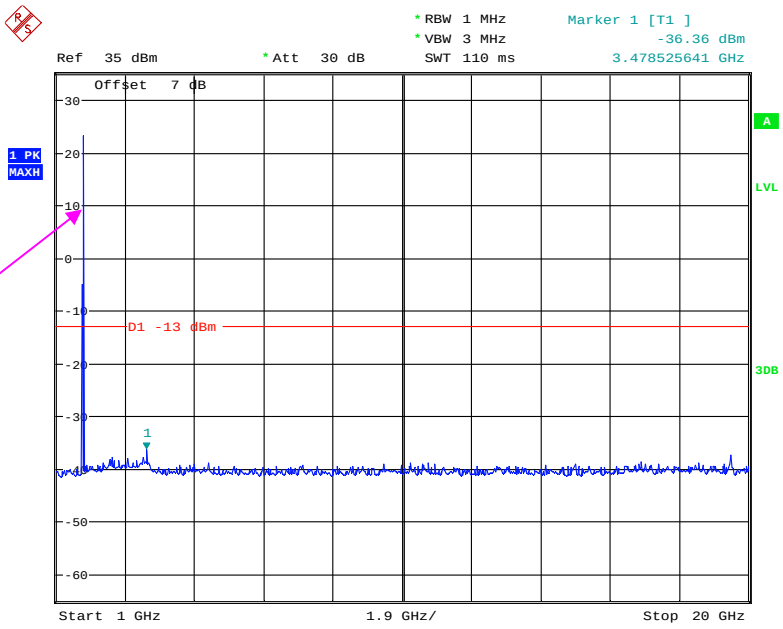
Middle Channel

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:41:04

1 GHz – 20 GHz (WCDMA Mode)

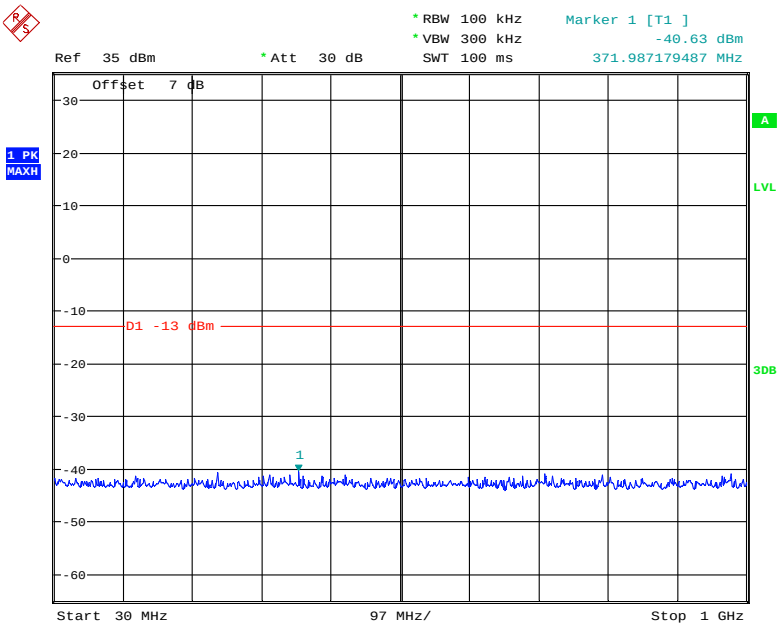


Fundamental test

Date: 25.MAY.2021 22:49:34

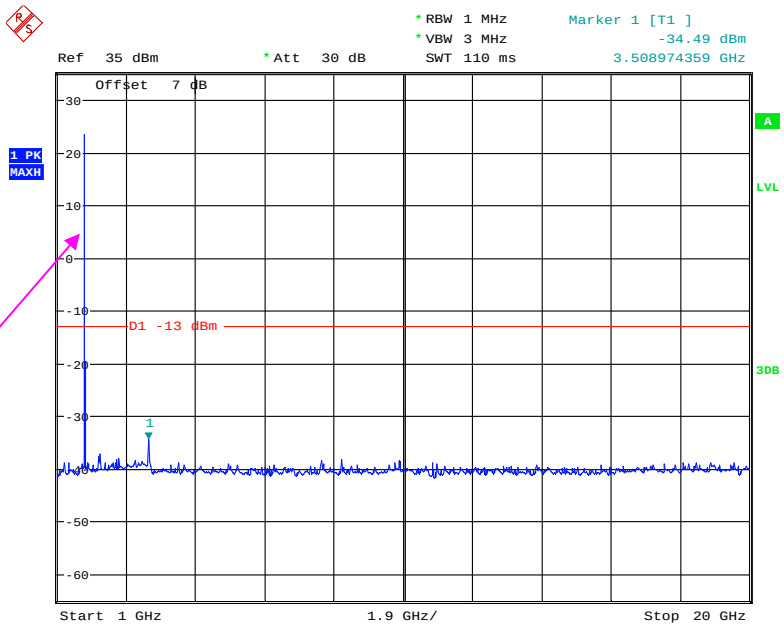
High Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 25.MAY.2021 22:41:37

1 GHz – 20 GHz (WCDMA Mode)



Fundamental test

Date: 25.MAY.2021 22:50:07

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

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

Applicable Standard

FCC § 2.1053, §22.917(a) and § 24.238(a) and § 27.53

Test Procedure

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

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

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

Test Data

Environmental Conditions

Temperature:	26.3~28 ℃
Relative Humidity:	46~58 %
ATM Pressure:	101.0~101.1 kPa

The testing was performed by Zero Yan 2021-05-27 for below 1GHz and Hanic Pan on 2021-05-28 for above 1GHz.

EUT operation mode: Transmitting

30 MHz ~ 10 GHz:

Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)		Limit (dBm)	Margin (dB)
GSM Mode										
Low channel										
965.3	30.43	229	1.9	H	-66.1	1.36	0.0	-67.46	-13	54.46
965.3	31.75	269	1.2	V	-62.3	1.36	0.0	-63.66	-13	50.66
1648.40	50.46	232	1.6	H	-57.6	1.40	8.70	-50.30	-13	37.30
1648.40	48.97	31	2.3	V	-58.9	1.40	8.70	-51.60	-13	38.60
2472.60	45.26	65	1.5	H	-58.1	2.60	10.20	-50.50	-13	37.50
2472.60	46.13	159	1.6	V	-56.6	2.60	10.20	-49.00	-13	36.00
3296.80	43.22	247	1.2	H	-57.7	1.50	11.70	-47.50	-13	34.50
3296.80	43.34	313	2.2	V	-57.6	1.50	11.70	-47.40	-13	34.40
Middle channel										
960.6	30.48	122	2.5	H	-66.0	1.36	0.0	-67.36	-13	54.36
960.6	31.72	145	1.0	V	-62.3	1.36	0.0	-63.66	-13	50.66
1673.20	51.52	44	2.3	H	-54.8	1.30	8.90	-47.20	-13	34.20
1673.20	49.55	45	1.4	V	-56.2	1.30	8.90	-48.60	-13	35.60
2509.80	45.51	38	1.8	H	-57.8	2.60	10.20	-50.20	-13	37.20
2509.80	46.39	283	1.2	V	-56.4	2.60	10.20	-48.80	-13	35.80
3346.40	43.15	116	2.3	H	-57.7	1.50	11.70	-47.50	-13	34.50
3346.40	43.47	92	1.8	V	-57.5	1.50	11.70	-47.30	-13	34.30
High channel										
965.8	30.39	29	2.3	H	-66.1	1.36	0.0	-67.46	-13	54.46
965.8	31.77	273	1.3	V	-62.3	1.36	0.0	-63.66	-13	50.66
1697.60	51.24	205	2.3	H	-55.1	1.30	8.90	-47.50	-13	34.50
1697.60	49.32	81	2.2	V	-56.4	1.30	8.90	-48.80	-13	35.80
2546.40	45.28	119	1.8	H	-58.1	2.60	10.20	-50.50	-13	37.50
2546.40	46.35	111	1.3	V	-56.4	2.60	10.20	-48.80	-13	35.80
3395.20	43.45	23	1.1	H	-57.8	1.40	11.80	-47.40	-13	34.40
3395.20	43.52	100	1.3	V	-57.5	1.40	11.80	-47.10	-13	34.10

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)		Limit (dBm)	Margin (dB)
WCDMA Mode										
Low channel										
962.1	30.36	149	1.2	H	-66.1	1.36	0.0	-67.46	-13	54.46
962.1	31.71	21	1.5	V	-62.3	1.36	0.0	-63.66	-13	50.66
1652.80	45.08	320	1.7	H	-61.3	1.30	8.90	-53.70	-13	40.70
1652.80	43.69	124	2.2	V	-62.0	1.30	8.90	-54.40	-13	41.40
2479.20	50.41	93	1.5	H	-52.9	2.60	10.20	-45.30	-13	32.30
2479.20	49.29	177	2.3	V	-53.5	2.60	10.20	-45.90	-13	32.90
3305.60	43.36	335	2.2	H	-57.5	1.50	11.70	-47.30	-13	34.30
3305.60	43.30	131	1.5	V	-57.6	1.50	11.70	-47.40	-13	34.40
Middle channel										
963.2	30.39	162	2.0	H	-66.1	1.36	0.0	-67.46	-13	54.46
963.2	31.76	250	2.2	V	-62.3	1.36	0.0	-63.66	-13	50.66
1673.20	45.26	327	2.3	H	-61.1	1.30	8.90	-53.50	-13	40.50
1673.20	44.03	209	2.0	V	-61.7	1.30	8.90	-54.10	-13	41.10
2509.80	50.66	107	2.2	H	-52.7	2.60	10.20	-45.10	-13	32.10
2509.80	49.45	211	1.7	V	-53.3	2.60	10.20	-45.70	-13	32.70
3346.40	43.51	49	1.0	H	-57.4	1.50	11.70	-47.20	-13	34.20
3346.40	43.46	196	1.2	V	-57.5	1.50	11.70	-47.30	-13	34.30
High channel										
962.5	30.44	348	2.3	H	-66.1	1.36	0.0	-67.46	-13	54.46
962.5	31.78	284	2.1	V	-62.3	1.36	0.0	-63.66	-13	50.66
1693.20	45.33	306	1.5	H	-61.0	1.30	8.90	-53.40	-13	40.40
1693.20	43.95	142	1.4	V	-61.8	1.30	8.90	-54.20	-13	41.20
2539.80	50.12	239	1.5	H	-53.2	2.60	10.20	-45.60	-13	32.60
2539.80	48.99	119	2.1	V	-53.8	2.60	10.20	-46.20	-13	33.20
3386.40	43.75	275	1.7	H	-57.5	1.40	11.80	-47.10	-13	34.10
3386.40	43.68	284	1.8	V	-57.4	1.40	11.80	-47.00	-13	34.00

30 MHz ~ 20 GHz:

PCS Band (Part 24E)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)		Limit (dBm)	Margin (dB)
GSM Mode										
Low channel										
966.8	30.41	125	1.1	H	-66.1	1.36	0.0	-67.46	-13	54.46
966.8	31.79	192	2.3	V	-62.3	1.36	0.0	-63.66	-13	50.66
3700.40	44.56	55	1.3	H	-57.2	1.60	11.90	-46.90	-13	33.90
3700.40	44.32	351	2.3	V	-56.9	1.60	11.90	-46.60	-13	33.60
Middle channel										
964.7	30.33	195	2.4	H	-66.2	1.36	0.0	-67.56	-13	54.56
964.7	31.71	23	2.3	V	-62.3	1.36	0.0	-63.66	-13	50.66
3760.00	44.33	50	1.2	H	-57.7	1.50	11.80	-47.40	-13	34.40
3760.00	44.01	226	1.1	V	-57.6	1.50	11.80	-47.30	-13	34.30
High channel										
961.2	30.39	166	2.2	H	-66.1	1.36	0.0	-67.46	-13	54.46
961.2	31.74	83	2.0	V	-62.3	1.36	0.0	-63.66	-13	50.66
3819.60	44.42	311	1.0	H	-57.6	1.50	11.80	-47.30	-13	34.30
3819.60	44.23	192	1.4	V	-57.4	1.50	11.80	-47.10	-13	34.10
WCDMA Mode										
Low channel										
962.3	30.41	312	2.1	H	-66.1	1.36	0.0	-67.46	-13	54.46
962.3	31.66	102	1.4	V	-62.4	1.36	0.0	-63.76	-13	50.76
3704.80	57.44	29	1.8	H	-44.4	1.60	11.90	-34.10	-13	21.10
3704.80	52.35	72	1.9	V	-48.9	1.60	11.90	-38.60	-13	25.60
Middle channel										
961.6	30.45	336	2.1	H	-66.1	1.36	0.0	-67.46	-13	54.46
961.6	31.69	231	2.0	V	-62.4	1.36	0.0	-63.76	-13	50.76
3760.00	43.17	291	2.0	H	-58.9	1.50	11.80	-48.60	-13	35.60
3760.00	42.96	272	2.5	V	-58.6	1.50	11.80	-48.30	-13	35.30
High channel										
964.8	30.42	104	1.5	H	-66.1	1.36	0.0	-67.46	-13	54.46
964.8	31.77	303	1.8	V	-62.3	1.36	0.0	-63.66	-13	50.66
3815.20	56.38	359	2.5	H	-45.7	1.50	11.80	-35.40	-13	22.40
3815.20	54.21	330	2.3	V	-47.4	1.50	11.80	-37.10	-13	24.10

30 MHz ~ 20 GHz:

AWS Band

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 27	
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)		Limit (dBm)	Margin (dB)
WCDMA Mode										
Low channel										
963.3	30.35	239	1.2	H	-66.2	1.36	0.0	-67.56	-13	54.56
963.3	31.73	170	2.0	V	-62.3	1.36	0.0	-63.66	-13	50.66
3424.80	54.12	199	1.6	H	-46.7	1.40	11.80	-36.30	-13	23.30
3424.80	52.19	252	1.1	V	-48.4	1.40	11.80	-38.00	-13	25.00
Middle channel										
961.8	30.44	216	1.4	H	-66.1	1.36	0.0	-67.46	-13	54.46
961.8	31.68	48	1.9	V	-62.4	1.36	0.0	-63.76	-13	50.76
3465.20	53.89	45	1.5	H	-46.9	1.50	12.00	-36.40	-13	23.40
3465.20	52.01	335	1.4	V	-49.5	1.50	12.00	-39.00	-13	26.00
High channel										
966.1	30.37	88	1.3	H	-66.1	1.36	0.0	-67.46	-13	54.46
966.1	31.75	346	1.2	V	-62.3	1.36	0.0	-63.66	-13	50.66
3505.20	54.11	340	2.2	H	-46.6	1.50	12.00	-36.10	-13	23.10
3505.20	52.16	47	2.3	V	-49.3	1.50	12.00	-38.80	-13	25.80

LTE Band: *(Pre-scan with all the bandwidth, and worst case as below)*

Frequency	Receiver	Turntable	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
(MHz)	Reading (dBμV)	Angle Degree	Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
Band 2										
Test frequency range: 30 MHz ~ 20 GHz										
1.4MHz, Low channel										
961.6	30.37	124	2.4	H	-66.1	1.36	0.0	-67.46	-13	54.46
961.6	31.72	237	2.0	V	-62.3	1.36	0.0	-63.66	-13	50.66
3701.40	43.36	183	1.5	H	-58.4	1.60	11.90	-48.10	-13	35.10
3701.40	43.05	58	2.0	V	-58.2	1.60	11.90	-47.90	-13	34.90
1.4MHz, Middle channel										
961.3	30.46	181	2.2	H	-66.0	1.36	0.0	-67.36	-13	54.36
961.3	31.79	173	2.3	V	-62.3	1.36	0.0	-63.66	-13	50.66
3760.00	43.17	291	2.0	H	-58.9	1.50	11.80	-48.60	-13	35.60
3760.00	42.96	272	2.5	V	-58.6	1.50	11.80	-48.30	-13	35.30
1.4MHz, High channel										
969.4	30.43	258	1.9	H	-66.1	1.36	0.0	-67.46	-13	54.46
969.4	31.77	91	1.6	V	-62.3	1.36	0.0	-63.66	-13	50.66
3818.60	43.52	151	2.3	H	-58.5	1.50	11.80	-48.20	-13	35.20
3818.60	43.23	145	2.0	V	-58.4	1.50	11.80	-48.10	-13	35.10
Band 4										
Test frequency range:30 MHz ~ 20 GHz										
1.4MHz, Low channel										
963.9	30.34	317	1.1	H	-66.2	1.36	0.0	-67.56	-13	54.56
963.9	31.71	93	1.9	V	-62.3	1.36	0.0	-63.66	-13	50.66
3421.40	50.43	239	2.2	H	-50.4	1.40	11.80	-40.00	-13	27.00
3421.40	54.23	129	2.0	V	-46.4	1.40	11.80	-36.00	-13	23.00
1.4MHz, Middle channel										
968.6	30.39	177	1.3	H	-66.1	1.36	0.0	-67.46	-13	54.46
968.6	31.68	307	1.4	V	-62.4	1.36	0.0	-63.76	-13	50.76
3465.00	50.04	108	1.6	H	-50.7	1.50	12.00	-40.20	-13	27.20
3465.00	54.16	106	1.3	V	-47.3	1.50	12.00	-36.80	-13	23.80
1.4MHz, High channel										
969.7	30.44	31	2.0	H	-66.1	1.36	0.0	-67.46	-13	54.46
969.7	31.72	56	1.1	V	-62.3	1.36	0.0	-63.66	-13	50.66
3508.60	51.22	35	1.4	H	-49.5	1.50	12.00	-39.00	-13	26.00
3508.60	54.68	281	1.2	V	-46.8	1.50	12.00	-36.30	-13	23.30

Frequency	Receiver	Turntable	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
(MHz)	Reading (dBμV)	Angle Degree	Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
Band 5										
Test frequency range:30 MHz ~ 10 GHz										
1.4MHz, Low channel										
966.8	30.35	56	1.1	H	-66.2	1.36	0.0	-67.56	-13	54.56
966.8	31.76	32	2.5	V	-62.3	1.36	0.0	-63.66	-13	50.66
1649.40	51.33	4	1.3	H	-56.7	1.40	8.70	-49.40	-13	36.40
1649.40	50.11	311	1.9	V	-57.7	1.40	8.70	-50.40	-13	37.40
2474.10	47.55	54	1.9	H	-55.8	2.60	10.20	-48.20	-13	35.20
2474.10	48.92	168	1.4	V	-53.8	2.60	10.20	-46.20	-13	33.20
3298.80	43.24	74	2.4	H	-57.7	1.50	11.70	-47.50	-13	34.50
3298.80	43.89	139	1.3	V	-57.0	1.50	11.70	-46.80	-13	33.80
1.4MHz, Middle channel										
964.7	30.48	310	1.7	H	-66.0	1.36	0.0	-67.36	-13	54.36
964.7	31.79	171	1.8	V	-62.3	1.36	0.0	-63.66	-13	50.66
1673.00	51.42	19	2.4	H	-54.9	1.30	8.90	-47.30	-13	34.30
1673.00	50.33	221	1.2	V	-55.4	1.30	8.90	-47.80	-13	34.80
2509.50	47.54	77	1.3	H	-55.8	2.60	10.20	-48.20	-13	35.20
2509.50	49.01	212	1.6	V	-53.7	2.60	10.20	-46.10	-13	33.10
3346.00	43.11	159	1.7	H	-57.8	1.50	11.70	-47.60	-13	34.60
3346.00	43.88	209	1.3	V	-57.0	1.50	11.70	-46.80	-13	33.80
1.4MHz, High channel										
961.2	30.42	108	2.4	H	-66.1	1.36	0.0	-67.46	-13	54.46
961.2	31.73	186	2.4	V	-62.3	1.36	0.0	-63.66	-13	50.66
1696.60	52.45	282	2.4	H	-53.9	1.30	8.90	-46.30	-13	33.30
1696.60	50.39	96	1.7	V	-55.3	1.30	8.90	-47.70	-13	34.70
Band 7										
Test frequency range: 30 MHz ~ 26.5 GHz										
10MHz, Low channel										
967.3	30.36	233	1.8	H	-66.1	1.36	0.0	-67.46	-25	42.46
967.3	31.66	224	1.5	V	-62.4	1.36	0.0	-63.76	-25	38.76
5010.00	61.25	123	1.7	H	-39.3	1.70	12.00	-29.00	-25	4.00
5010.00	62.74	67	1.3	V	-37.3	1.70	12.00	-27.00	-25	2.00
10MHz, Middle channel										
967.6	30.39	283	1.3	H	-66.1	1.36	0.0	-67.46	-25	42.46
967.6	31.64	292	2.1	V	-62.4	1.36	0.0	-63.76	-25	38.76
5070.00	61.76	333	1.2	H	-38.2	1.60	12.10	-27.70	-25	2.70
5070.00	62.9	251	1.8	V	-37.1	1.60	12.10	-26.60	-25	1.60
10MHz, High channel										
964.8	30.41	111	2.4	H	-66.1	1.36	0.0	-67.46	-25	42.46
964.8	31.69	344	1.1	V	-62.4	1.36	0.0	-63.76	-25	38.76
5130.00	61.32	46	2.4	H	-38.7	1.60	12.10	-28.20	-25	3.20
5130.00	62.77	189	2.4	V	-37.2	1.60	12.10	-26.70	-25	1.70

Frequency	Receiver	Turntable	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
(MHz)	Reading (dBμV)	Angle Degree	Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
Band 38										
Test frequency range: 30 MHz ~26.5 GHz										
10MHz, Low channel										
962.5	30.47	42	1.8	H	-66.0	1.36	0.0	-67.36	-25	42.36
962.5	31.76	323	1.9	V	-62.3	1.36	0.0	-63.66	-25	38.66
5150.00	60.47	304	2.2	H	-40.5	1.60	12.10	-30.00	-25	5.00
5150.00	61.96	79	2.0	V	-38.5	1.60	12.10	-28.00	-25	3.00
10MHz, Middle channel										
961.7	30.39	289	2.2	H	-66.1	1.36	0.0	-67.46	-25	42.46
961.7	31.71	298	1.8	V	-62.3	1.36	0.0	-63.66	-25	38.66
5190.00	61.36	118	1.4	H	-39.6	1.60	12.10	-29.10	-25	4.10
5190.00	62.58	302	2.2	V	-37.9	1.60	12.10	-27.40	-25	2.40
10MHz, High channel										
963.6	30.46	300	2.3	H	-66.0	1.36	0.0	-67.36	-25	42.36
963.6	31.78	332	1.6	V	-62.3	1.36	0.0	-63.66	-25	38.66
5230.00	61.21	226	1.3	H	-39.7	1.60	12.10	-29.20	-25	4.20
5230.00	62.43	57	1.8	V	-38.0	1.60	12.10	-27.50	-25	2.50
Band 41										
Test frequency range: 30 MHz ~ 26.5GHz										
10MHz, Low channel										
962.3	30.42	41	2.2	H	-66.1	1.36	0.0	-67.46	-25	42.46
962.3	31.74	122	1.3	V	-62.3	1.36	0.0	-63.66	-25	38.66
5080.00	61.54	279	2.4	H	-39.4	1.60	12.10	-28.90	-25	3.90
5080.00	62.78	128	1.7	V	-38.1	1.60	12.10	-27.60	-25	2.60
10MHz, Middle channel										
968.3	30.33	206	1.7	H	-66.2	1.36	0.0	-67.56	-25	42.56
968.3	31.71	74	1.6	V	-62.3	1.36	0.0	-63.66	-25	38.66
5186.00	61.62	340	2.2	H	-39.3	1.60	12.10	-28.80	-25	3.80
5186.00	62.97	338	1.2	V	-37.5	1.60	12.10	-27.00	-25	2.00
10MHz, High channel										
963.1	30.36	143	1.8	H	-66.1	1.36	0.0	-67.46	-25	42.46
963.1	31.75	296	1.9	V	-62.3	1.36	0.0	-63.66	-25	38.66
5300.00	61.24	321	2.2	H	-39.5	1.60	12.20	-28.90	-25	3.90
5300.00	62.38	317	1.7	V	-37.8	1.60	12.20	-27.20	-25	2.20

Note:
Absolute Level = Substituted Level - Cable loss + Antenna Gain
Margin = Limit- Absolute Level
dBd is for the ERP, dBi is for EIRP.

FCC § 22.917 (a);§ 24.238 (a); §27.53(c) (h)(m) - BAND EDGES

Applicable Standard

According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

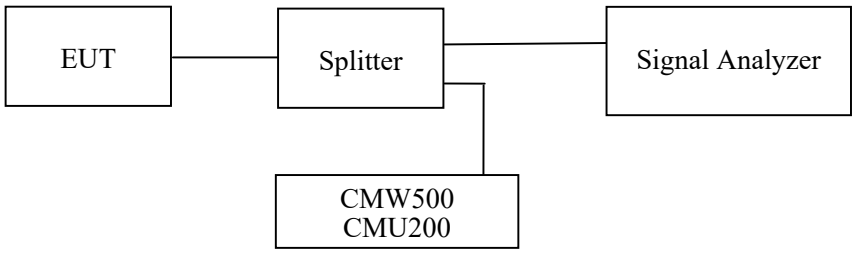
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to FCC §27.53 (c)(h)(m), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Test Procedure

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

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



Test Data

Environmental Conditions

Temperature:	27 ℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

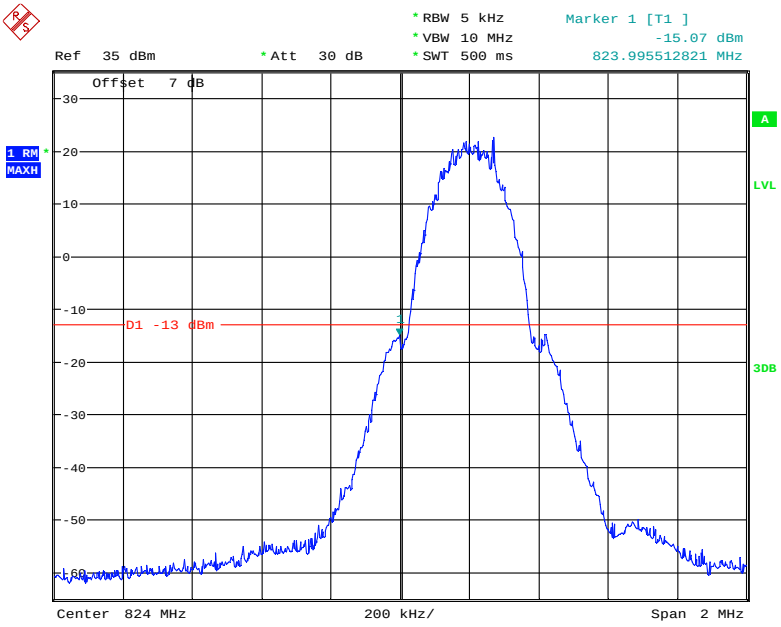
The testing was performed by Orlo Yang from 2021-05-25 to 2021-07-14.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

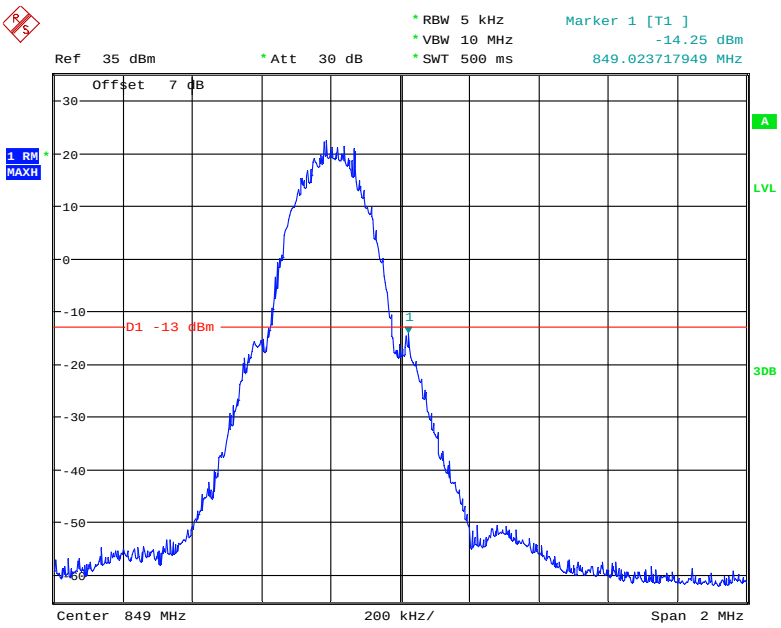
Please refer to the following plots.

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



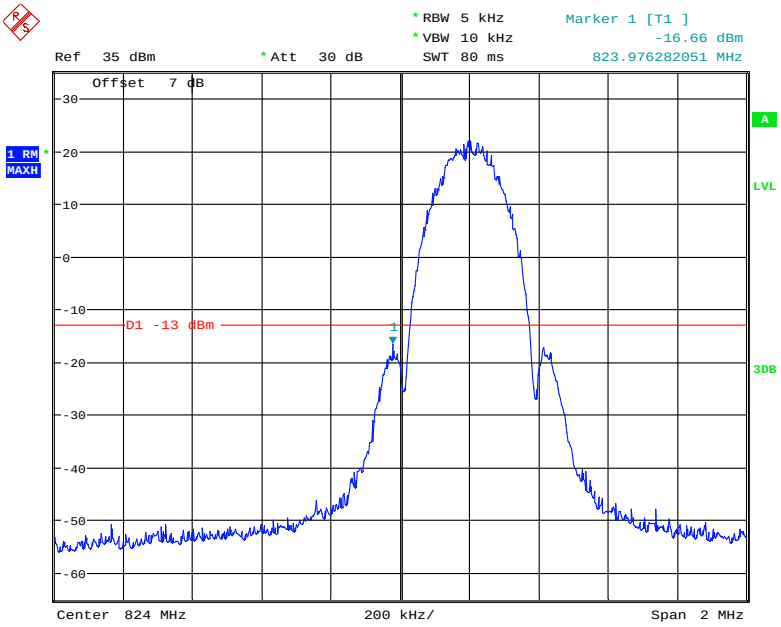
Date: 25.MAY.2021 21:39:13

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



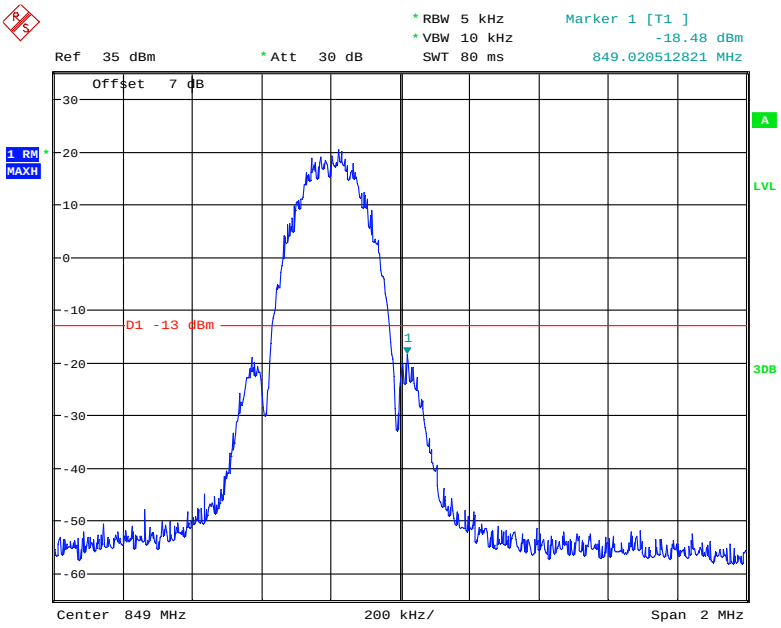
Date: 25.MAY.2021 21:41:43

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



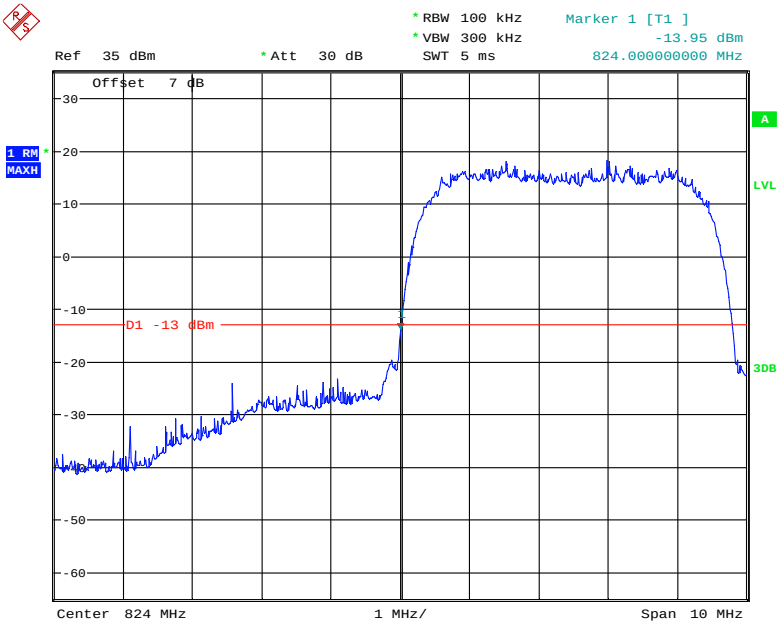
Date: 2.JUN.2021 16:55:36

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



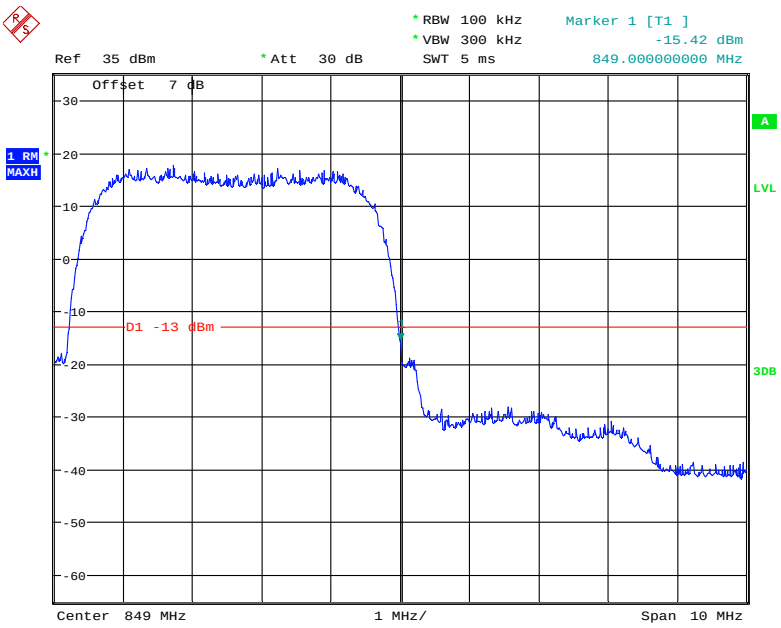
Date: 2.JUN.2021 16:56:54

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



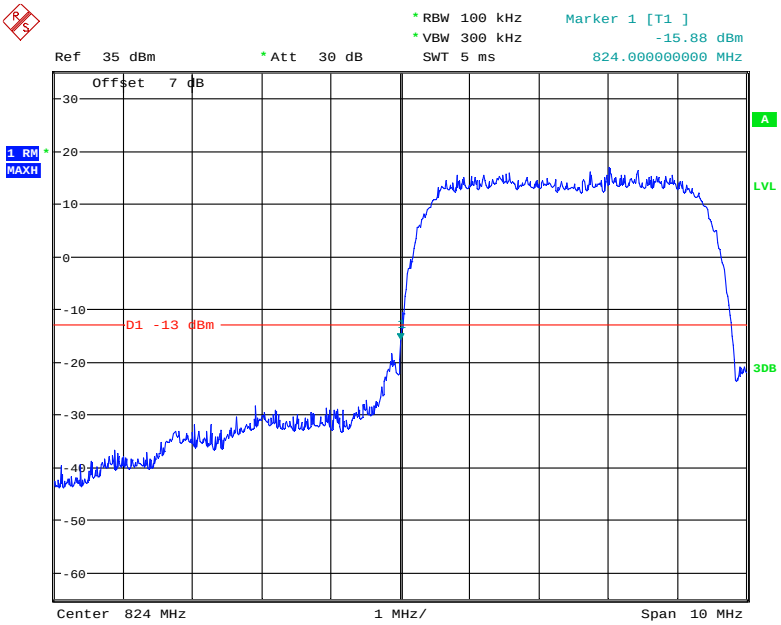
Date: 26.MAY.2021 00:23:58

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



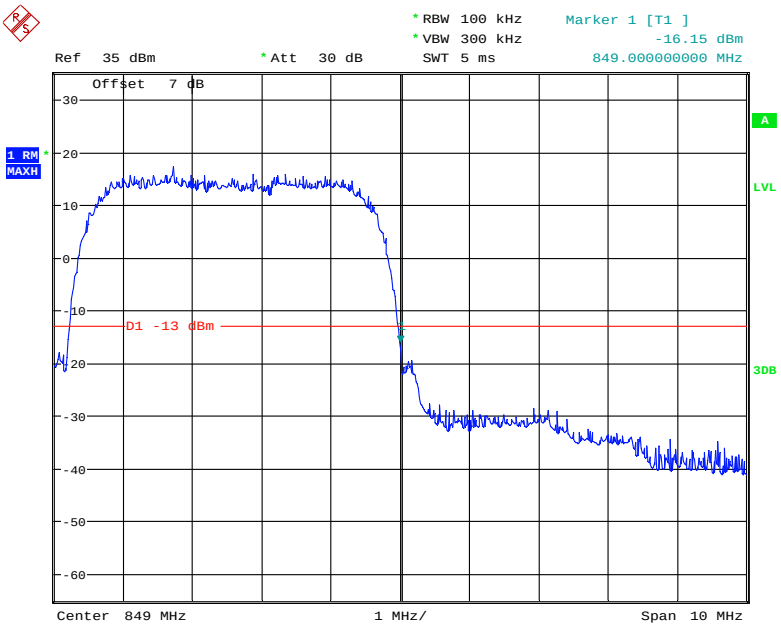
Date: 26.MAY.2021 00:24:52

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



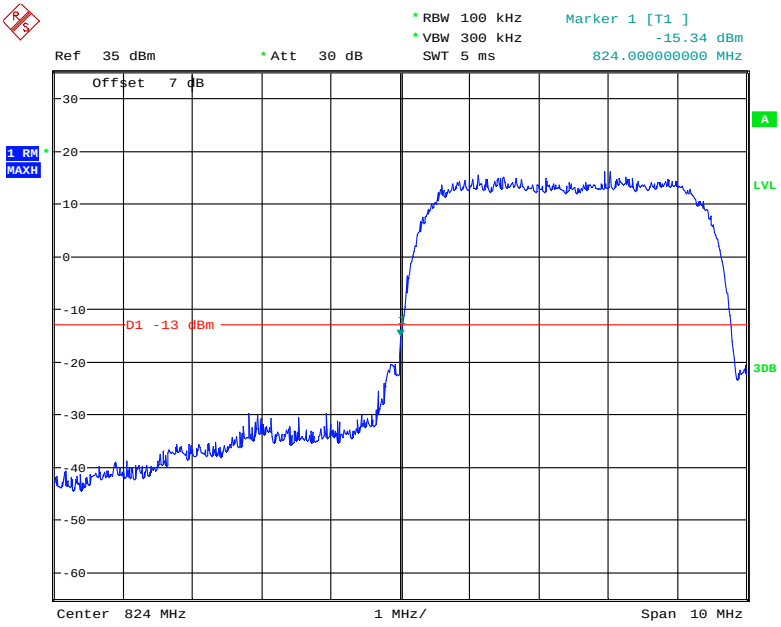
Date: 26.MAY.2021 00:46:11

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



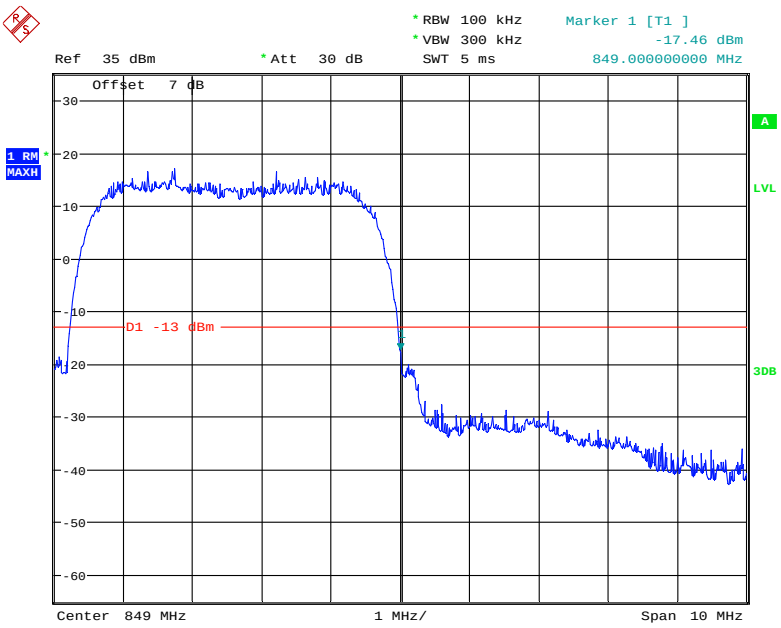
Date: 26.MAY.2021 00:43:05

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



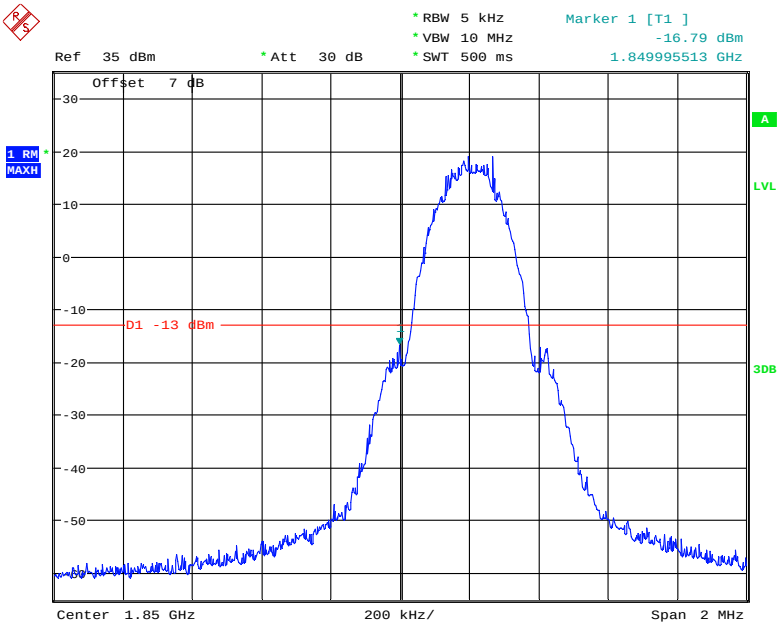
Date: 26.MAY.2021 01:11:23

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



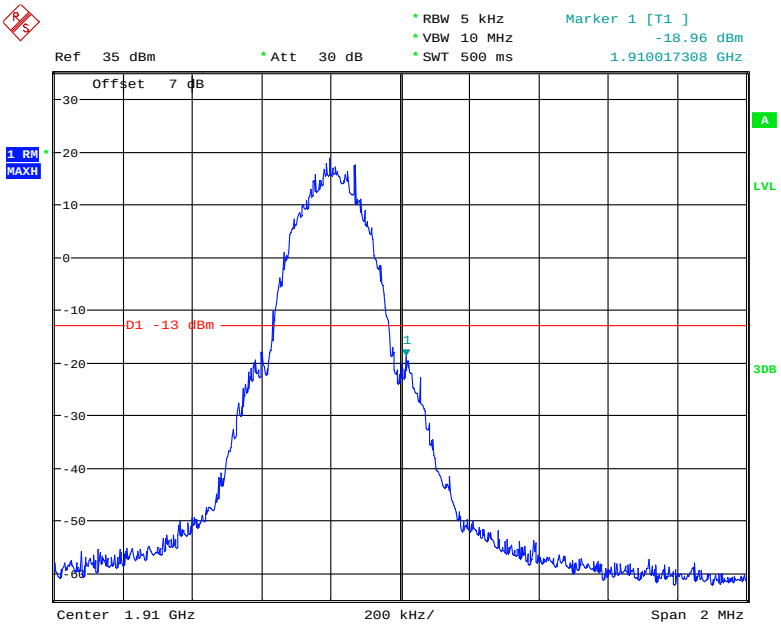
Date: 26.MAY.2021 01:10:46

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



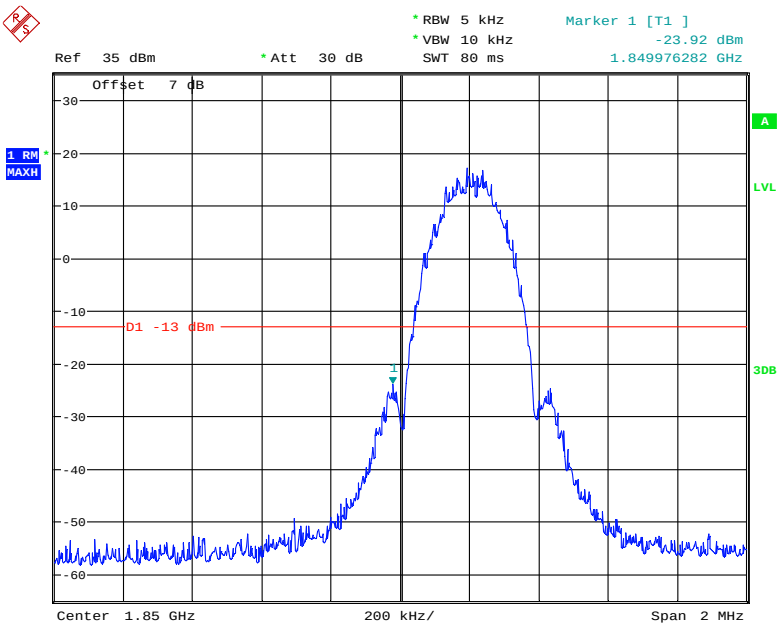
Date: 25.MAY.2021 21:46:00

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



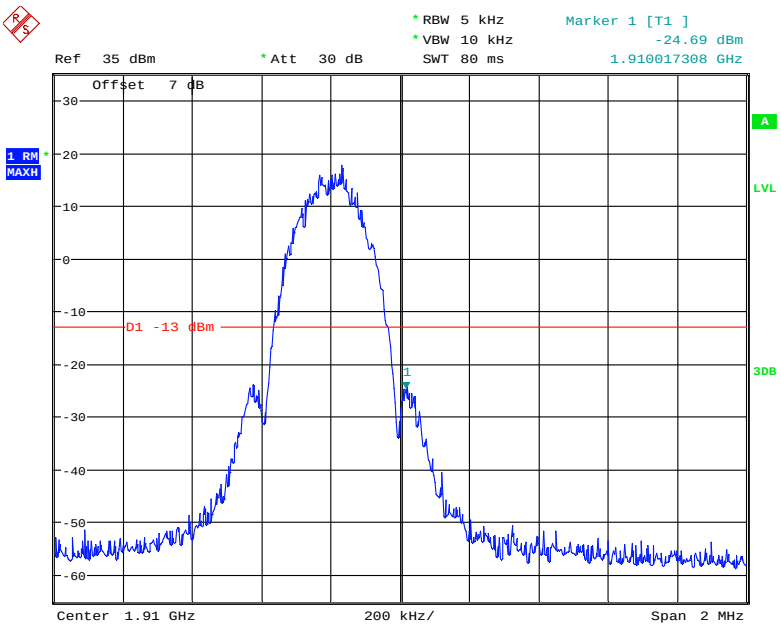
Date: 25.MAY.2021 21:47:15

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



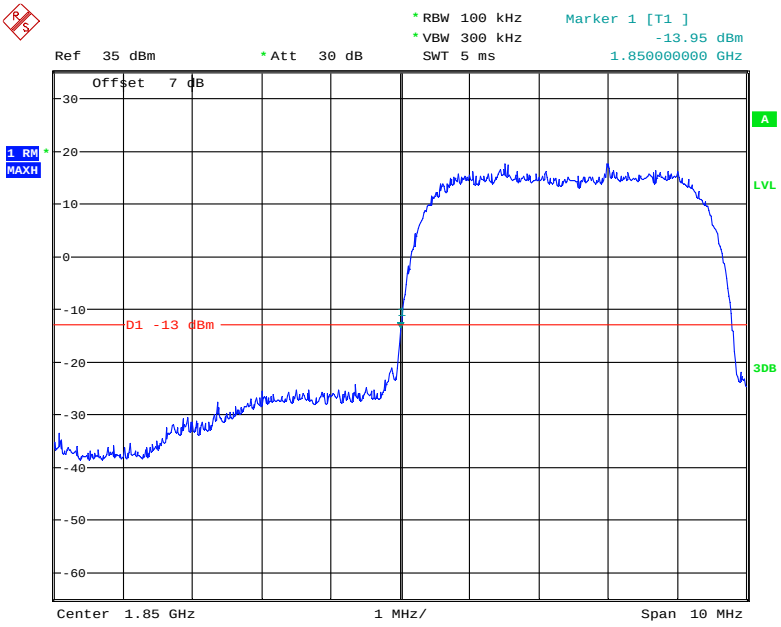
Date: 2.JUN.2021 17:05:41

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



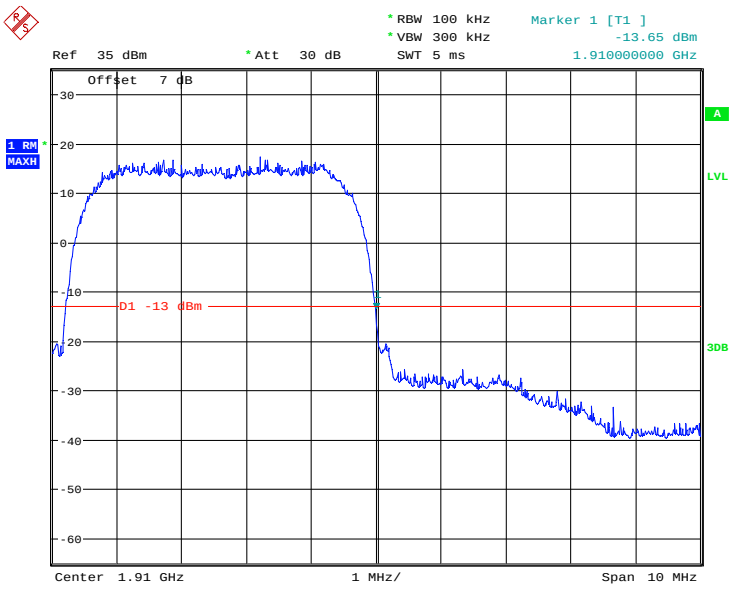
Date: 2.JUN.2021 17:07:11

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



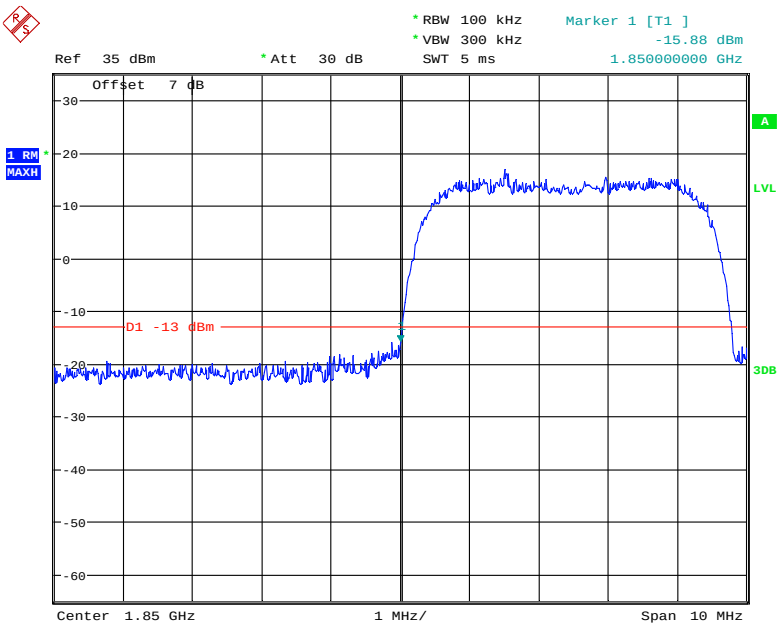
Date: 26.MAY.2021 00:20:40

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



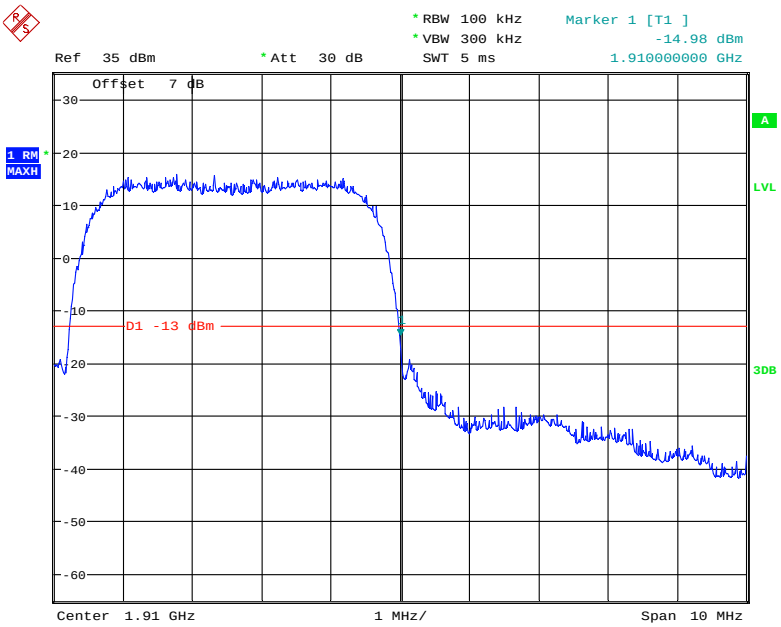
Date: 26.MAY.2021 00:19:00

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



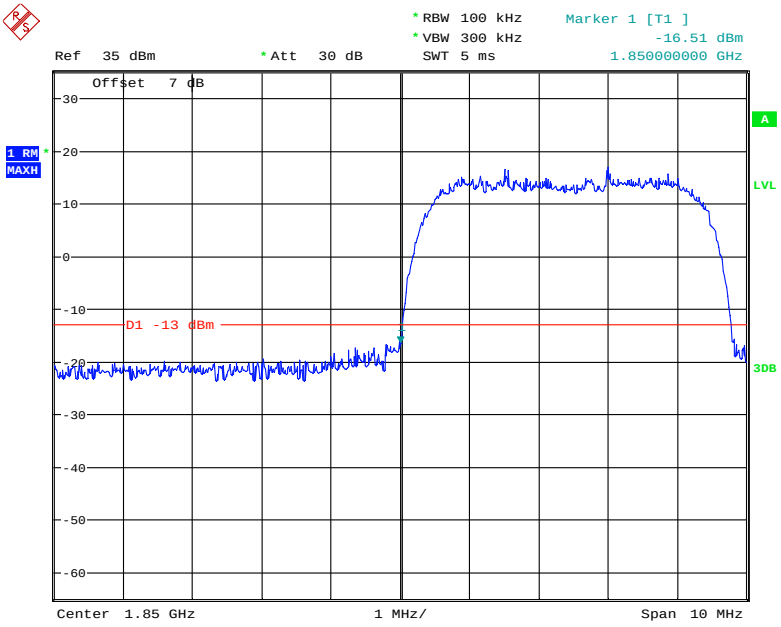
Date: 26.MAY.2021 00:38:21

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



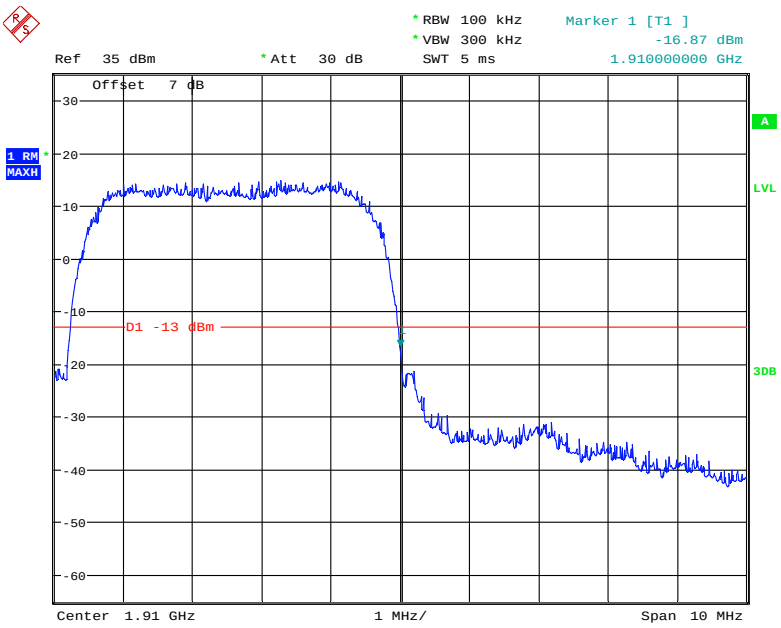
Date: 26.MAY.2021 00:40:10

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



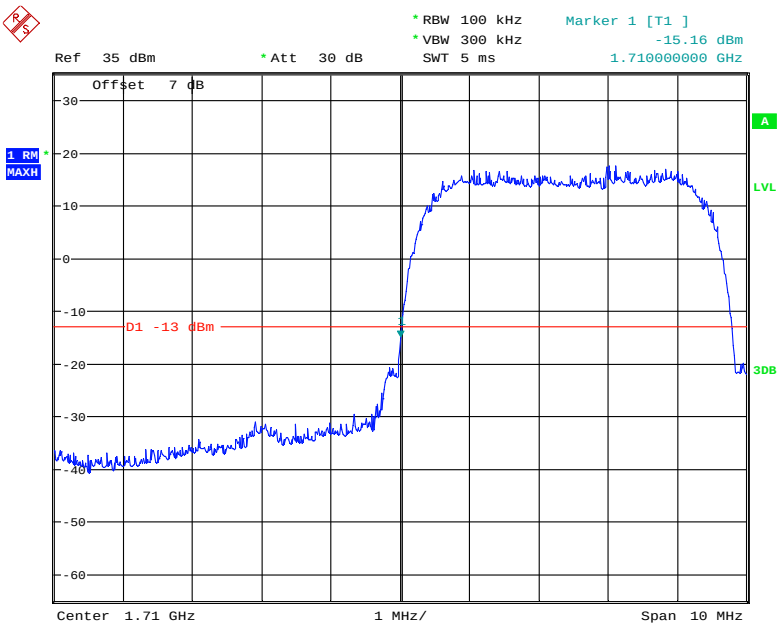
Date: 26.MAY.2021 00:34:58

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



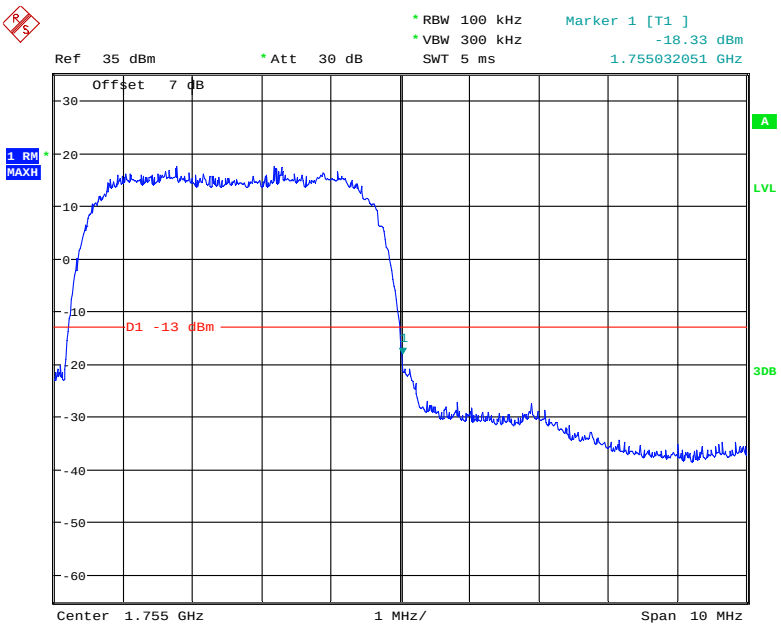
Date: 26.MAY.2021 00:36:03

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



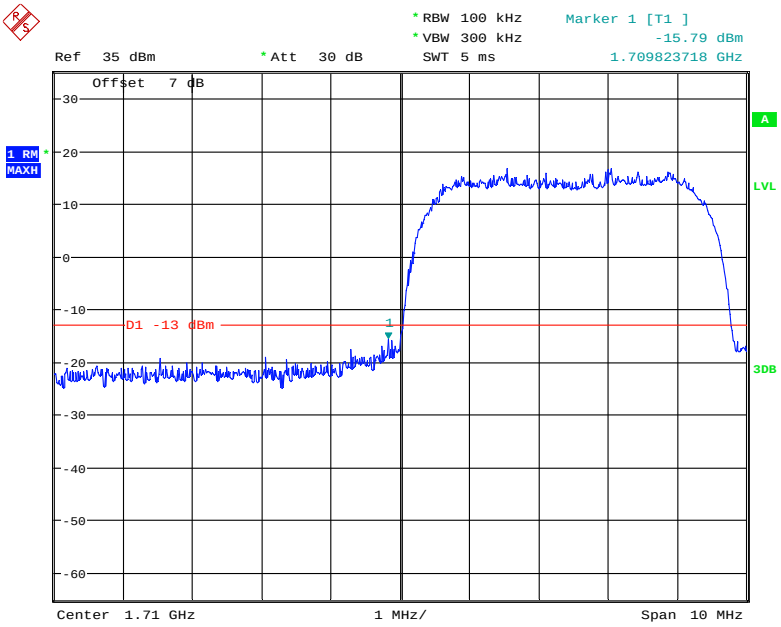
Date: 26.MAY.2021 00:17:16

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



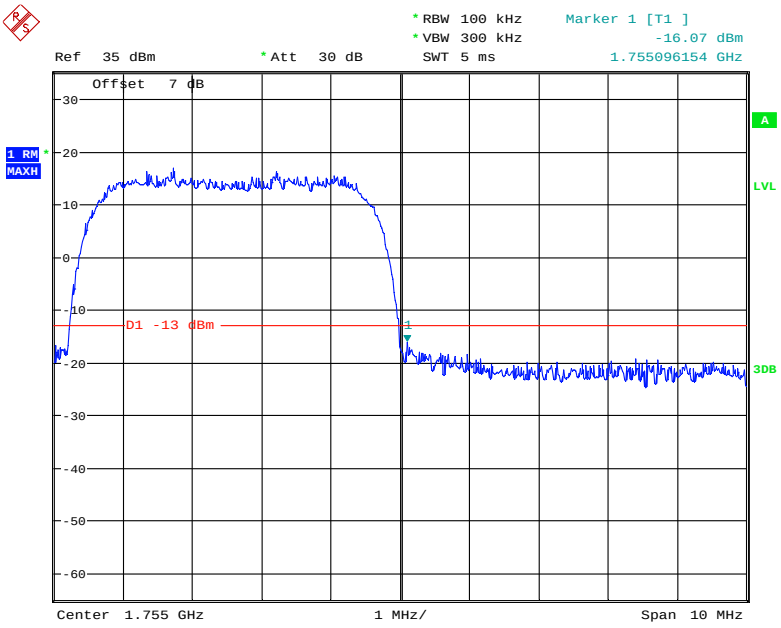
Date: 26.MAY.2021 00:16:28

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



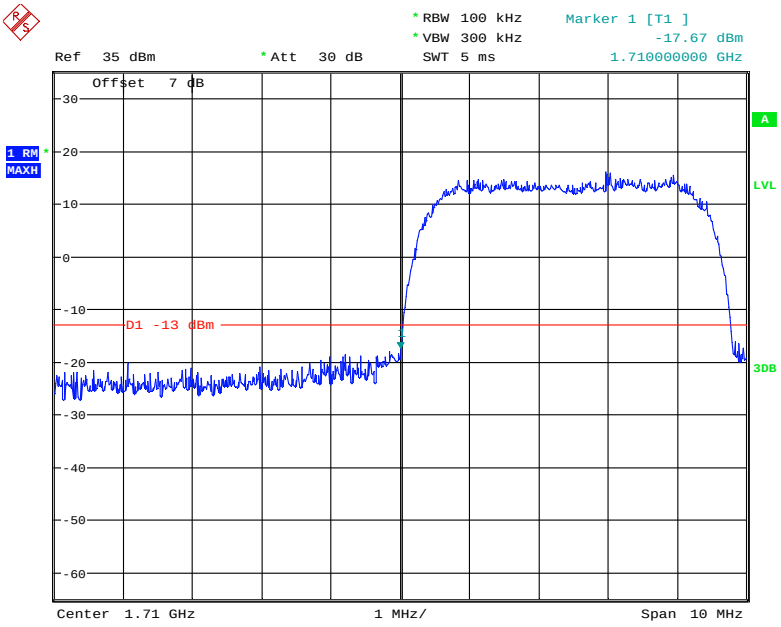
Date: 26.MAY.2021 00:48:44

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

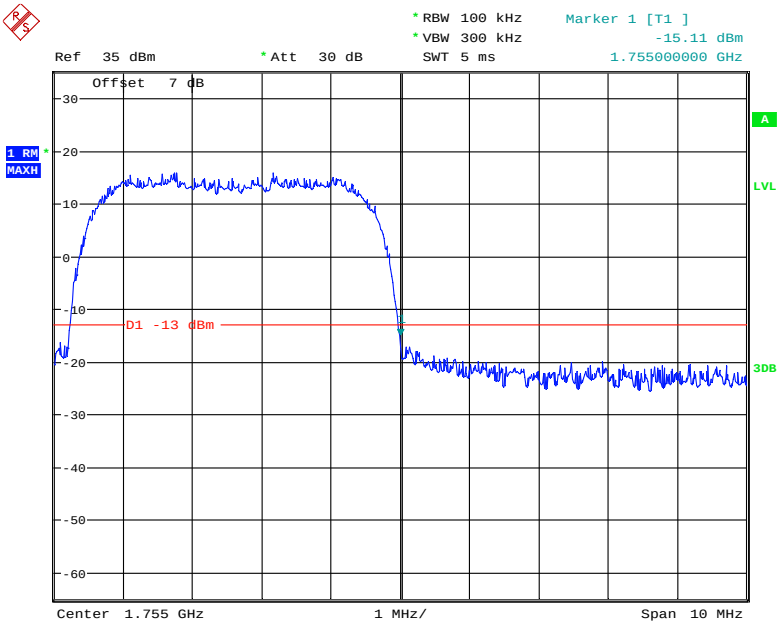


Date: 26.MAY.2021 00:50:31

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



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



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

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

Applicable Standard

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

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

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

Frequency Tolerance for Transmitters in the Public Mobile Services

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

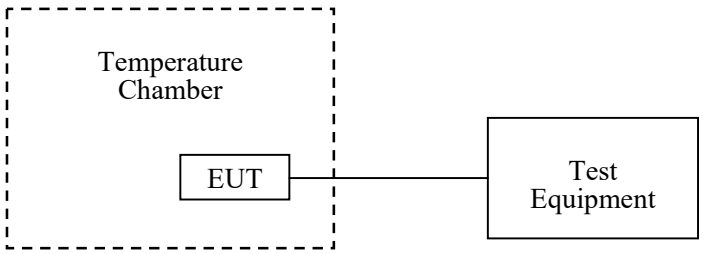
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC 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 DC leads and RF output cable exited the chamber through an opening made for the purpose.

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

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



Test Data

Environmental Conditions

Temperature:	27 ℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Orlo Yang on 2021-05-25

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)

GSM Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	NV	6	0.0072	2.5
-20		-7	-0.0084	2.5
-10		-5	-0.0060	2.5
0		8	0.0096	2.5
10		4	0.0048	2.5
20		7	0.0084	2.5
30		9	0.0108	2.5
40		-12	-0.0143	2.5
50		-3	-0.0036	2.5
20	LV	6	0.0072	2.5
	HV	13	0.0155	2.5

EDGE Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	NV	5	0.0060	2.5
-20		2	0.0024	2.5
-10		4	0.0048	2.5
0		9	0.0108	2.5
10		-3	-0.0036	2.5
20		-4	-0.0048	2.5
30		-8	-0.0096	2.5
40		4	0.0048	2.5
50		6	0.0072	2.5
20	LV	9	0.0108	2.5
	HV	-3	-0.0036	2.5

WCDMA Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	NV	7	0.0084	2.5
-20		-5	-0.0060	2.5
-10		6	0.0072	2.5
0		9	0.0108	2.5
10		-7	-0.0084	2.5
20		8	0.0096	2.5
30		6	0.0072	2.5
40		7	0.0084	2.5
50		5	0.0060	2.5
20	LV	6	0.0072	2.5
	HV	-9	-0.0108	2.5

PCS Band (Part 24E)

GSM Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (°C)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	NV	7	0.0037	pass
-20		8	0.0043	pass
-10		6	0.0032	pass
0		-4	-0.0021	pass
10		6	0.0032	pass
20		3	0.0016	pass
30		5	0.0027	pass
40		4	0.0021	pass
50		-3	-0.0016	pass
20	LV	7	0.0037	pass
	HV	9	0.0048	pass

EDGE Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (°C)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	NV	7	0.0037	pass
-20		6	0.0032	pass
-10		3	0.0016	pass
0		4	0.0021	pass
10		-7	-0.0037	pass
20		6	0.0032	pass
30		-2	-0.0011	pass
40		3	0.0016	pass
50		4	0.0021	pass
20	LV	6	0.0032	pass
	HV	5	0.0027	pass

WCDMA Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (°C)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	NV	-2	-0.0011	pass
-20		5	0.0027	pass
-10		3	0.0016	pass
0		8	0.0043	pass
10		9	0.0048	pass
20		3	0.0016	pass
30		8	0.0043	pass
40		4	0.0021	pass
50		7	0.0037	pass
20	LV	-5	-0.0027	pass
	HV	6	0.0032	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	NV	1710.3616	1754.6827	1710	1755
-20		1710.3548	1754.6858	1710	1755
-10		1710.3588	1754.6882	1710	1755
0		1710.3558	1754.6886	1710	1755
10		1710.3569	1754.6857	1710	1755
20		1710.3585	1754.6832	1710	1755
30		1710.3591	1754.6874	1710	1755
40		1710.3553	1754.6884	1710	1755
50		1710.3568	1754.6835	1710	1755
20	LV	1710.3572	1754.6868	1710	1755
	HV	1710.3549	1754.6852	1710	1755

LTE:
QPSK:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (°C)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	NV	7	0.0037	pass
-20		8	0.0043	pass
-10		-6	-0.0032	pass
0		5	0.0027	pass
10		-5	-0.0027	pass
20		8	0.0043	pass
30		1	0.0005	pass
40		5	0.0027	pass
50		5	0.0027	pass
20	LV	-8	-0.0043	pass
	HV	7	0.0037	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	NV	1710.5673	1754.4836	1710	1755
-20		1710.5480	1754.7556	1710	1755
-10		1710.7908	1754.5688	1710	1755
0		1710.5111	1754.5809	1710	1755
10		1710.6022	1754.7197	1710	1755
20		1710.8929	1754.6473	1710	1755
30		1710.6720	1754.4857	1710	1755
40		1710.5808	1754.6227	1710	1755
50		1710.6440	1754.7181	1710	1755
20	LV	1710.5932	1754.7870	1710	1755
	HV	1710.7335	1754.5761	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (°C)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	NV	8	0.0096	2.5
-20		11	0.0131	2.5
-10		7	0.0084	2.5
0		-3	-0.0036	2.5
10		6	0.0072	2.5
20		9	0.0108	2.5
30		2	0.0024	2.5
40		6	0.0072	2.5
50		5	0.0060	2.5
20	LV	7	0.0084	2.5
	HV	5	0.0060	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	NV	2500.7246	2569.4506	2500	2570
-20		2500.4654	2569.5379	2500	2570
-10		2500.3660	2569.7399	2500	2570
0		2500.4045	2569.8978	2500	2570
10		2500.7350	2569.2646	2500	2570
20		2500.6922	2569.8622	2500	2570
30		2500.5402	2569.9136	2500	2570
40		2500.5188	2569.7567	2500	2570
50		2500.5981	2569.7747	2500	2570
20	LV	2500.5648	2569.3207	2500	2570
	HV	2500.6510	2569.4895	2500	2570

Band 38:

10 MHz Bandwidth					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	NV	2570.5149	2619.8333	2570	2620
-20		2570.5211	2619.8362	2570	2620
-10		2570.5146	2619.8304	2570	2620
0		2570.5162	2619.8365	2570	2620
10		2570.5163	2619.8321	2570	2620
20		2570.5209	2619.8307	2570	2620
30		2570.5176	2619.8370	2570	2620
40		2570.5200	2619.8364	2570	2620
50		2570.5177	2619.8334	2570	2620
20	LV	2570.5203	2619.8322	2570	2620
	HV	2570.5141	2619.8302	2570	2620

Band 41:

10 MHz Bandwidth					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	NV	2535.6403	2654.7141	2535	2655
-20		2535.6428	2654.7182	2535	2655
-10		2535.6441	2654.7126	2535	2655
0		2535.6469	2654.7187	2535	2655
10		2535.6426	2654.7154	2535	2655
20		2535.6440	2654.7128	2535	2655
30		2535.6450	2654.7196	2535	2655
40		2535.6434	2654.7200	2535	2655
50		2535.6409	2654.7129	2535	2655
20	LV	2535.6427	2654.7134	2535	2655
	HV	2535.6468	2654.7169	2535	2655

Note: the frequency range 2535-2655MHz was declared by applicant.

16QAM:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (°C)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	NV	-6	-0.0032	pass
-20		5	0.0027	pass
-10		8	0.0043	pass
0		-4	-0.0021	pass
10		7	0.0037	pass
20		-9	-0.0048	pass
30		-5	-0.0027	pass
40		7	0.0037	pass
50		11	0.0059	pass
20	LV	8	0.0043	pass
	HV	9	0.0048	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	NV	1710.5459	1754.8905	1710	1755
-20		1710.5758	1754.8208	1710	1755
-10		1710.5740	1754.8719	1710	1755
0		1710.5874	1754.7637	1710	1755
10		1710.5288	1754.7827	1710	1755
20		1710.7052	1754.8619	1710	1755
30		1710.5634	1754.7152	1710	1755
40		1710.6728	1754.8050	1710	1755
50		1710.5147	1754.7733	1710	1755
20	LV	1710.5315	1754.7488	1710	1755
	HV	1710.5256	1754.7754	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (°C)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	NV	6	0.0072	2.5
-20		5	0.0060	2.5
-10		-8	-0.0096	2.5
0		-5	-0.0060	2.5
10		8	0.0096	2.5
20		7	0.0084	2.5
30		-3	-0.0036	2.5
40		6	0.0072	2.5
50		4	0.0048	2.5
20	LV	9	0.0108	2.5
	HV	-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	NV	2500.6719	2569.4869	2500	2570
-20		2500.5816	2569.4428	2500	2570
-10		2500.6305	2569.5023	2500	2570
0		2500.6425	2569.5167	2500	2570
10		2500.5395	2569.4200	2500	2570
20		2500.5317	2569.4970	2500	2570
30		2500.5624	2569.4835	2500	2570
40		2500.5306	2569.4446	2500	2570
50		2500.5724	2569.4827	2500	2570
20	LV	2500.4022	2569.4621	2500	2570
	HV	2500.5684	2569.5256	2500	2570

Band 38:

10 MHz Bandwidth					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	NV	2570.6387	2619.4943	2570	2620
-20		2570.6345	2619.4996	2570	2620
-10		2570.6354	2619.4956	2570	2620
0		2570.6338	2619.4942	2570	2620
10		2570.6354	2619.4968	2570	2620
20		2570.6404	2619.4948	2570	2620
30		2570.6324	2619.4973	2570	2620
40		2570.6350	2619.5009	2570	2620
50		2570.6394	2619.5016	2570	2620
20	LV	2570.6352	2619.5008	2570	2620
	HV	2570.6382	2619.5014	2570	2620

Band 41:

10 MHz Bandwidth					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	NV	2535.6380	2654.5959	2535	2655
-20		2535.6410	2654.5964	2535	2655
-10		2535.6377	2654.6033	2535	2655
0		2535.6363	2654.6036	2535	2655
10		2535.6372	2654.5986	2535	2655
20		2535.6381	2654.6020	2535	2655
30		2535.6374	2654.5966	2535	2655
40		2535.6399	2654.5975	2535	2655
50		2535.6352	2654.5958	2535	2655
20	LV	2535.6354	2654.6025	2535	2655
	HV	2535.6420	2654.6024	2535	2655

Note: the frequency range 2535-2655MHz was declared by applicant.

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