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-X695

Report Type:	Product Type:
Original Report	Mobile phone

Report Number: RSZ201228003-00E

Report Date: 2021-02-05

Reviewed By: Jacob Kong
RF Engineer

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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	X695
Frequency Range	EGSM 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 40 Lower: 2305-2315MHz (TX/RX) LTE Band 40 Upper: 2350-2360MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX)
Maximum Target Output Power	EGSM 850: 33.6dBm(GMSK), 25.5dBm(8PSK) PCS 1900: 30.0dBm(GMSK), 26.7dBm(8PSK) WCDMA Band 2: 23.7dBm; WCDMA Band 4: 22.6dBm WCDMA Band 5: 23.9dBm LTE Band 2: 22.2dBm; LTE Band 4: 22.4dBm LTE Band 5: 22.6dBm; LTE Band 7: 22.5dBm LTE Band 38: 22.1dBm; LTE Band 40: 22.0dBm LTE Band 41: 21.9dBm; LTE Band 66: 21.8dBm
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	EGSM850/ WCDMA Band 5/ LTE Band 5: -2.1dBi PCS1900/WCDMA Band 2/ LTE Band 2: 0.2dBi WCDMA Band 4/ LTE Band 4/ LTE Band 66: -1.0dBi LTE Band 7/LTE Band 38/LTE Band 41:0.5dBi LTE Band 40: 0.1 dBi (provided by the applicant)
Voltage Range	DC3.87V from battery or DC 5.0V/10.0V from adapter
Date of Test	2021-01-02 to 2021-02-05
Sample serial number	RSZ201228003-RF-S1(Assigned by BACL, Shenzhen)
Received date	2020-12-28
Sample/EUT Status	Good condition
Adapter information	Model: U330XSA Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 5.0V, 3.0A 15.0W or 10.0V, 3.3A 33.0W MAX

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.

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℃
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 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, 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
GSM850	0.25	824.2	836.6	848.8
DCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE B40 Lower	5	2307.5	2310	2312.5
	10	/	2310	/

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	MIDDLE	High
LTE B40 Upper	5	2352.5	2355	2357.5
	10	/	2355	/
LTE B41	5	2537.5	2593	2652.5
	10	2540	2593	2650
	15	2542.5	2593	2647.5
	20	2545	2593	2645
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770

Equipment Modifications

No modification was made to the EUT.

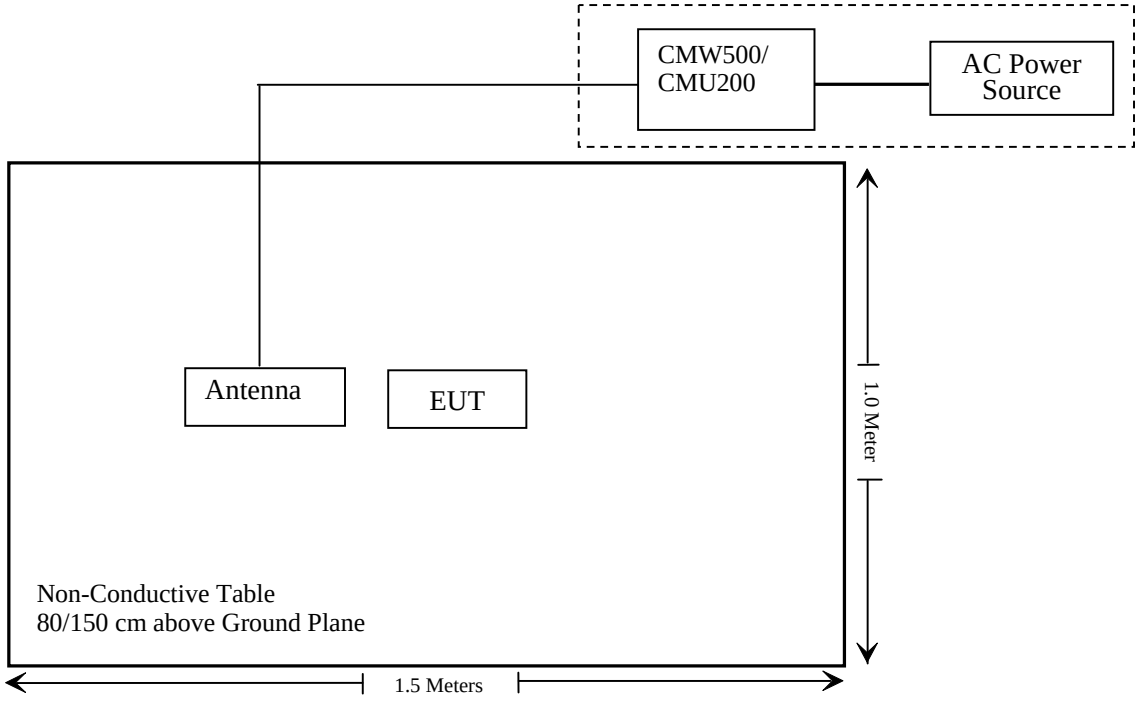
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-116218-UY
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605

Support Cable Description

Cable Description	Length (m)	From / Port	To
Unshielded Un-detachable AC cable	1.2	AC Power	CMW500/ CMU200

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 (a) (d) (h)	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliance
§ 2.1051; § 22.917 (a); § 24.238 (a); §27.53	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a); § 24.238 (a); §27.53(a)(h) (m)	Band Edge	Compliance
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliance

Note: * Please refer to SAR report released by BACL, report number: RSZ201228003-20.

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	A040904-1	2020/12/22	2023/12/21
COM-POWER	Dipole Antenna	AD-100	721027	NCR	NCR
Unknown	Cable 2	RF Cable 2	F-03-EM197	2020/11/29	2021/11/28
Unknown	Cable	Chamber Cable 1	F-03-EM236	2020/11/29	2021/11/28
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
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2020/11/29	2021/11/28
Sunol Sciences	Horn Antenna	DRH-118	A052604	2020/12/22	2023/12/21
A.H.System	Horn Antenna	SAS-200/571	135	2018/09/01	2021/08/31
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
MICRO-TRONICS	Passband filter	HPM50111	F-19-EM006	2020/04/20	2021/04/19
Unknown	High Pass filter	1.3GHz	101120	2020/04/20	2021/04/19
Ducommun Technolagies	Horn antenna	ARH-4223-02	1007726-01 1304	2020/12/06	2021/12/05
Ducommun Technolagies	Horn antenna	ARH-4223-02	1007726-02 1304	2020/12/06	2021/12/05
Agilent	Signal Generator	N5183A	MY51040755	2020/12/04	2021/12/03

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200120	2020/04/03	2021/04/02
Yijia	Temperature & Humidity Meter	10316377	T-03-EM397	2020/10/14	2021/10/13
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-146520-wh	2020/08/04	2021/08/03
Unknown	RF Cable	Unknown	2301 276	2020/11/29	2021/11/28
Unknown	RF Cable	Unknown	DLO J5/W6102	2020/11/29	2021/11/28
Weinschel	Power divider	1515	MY628	2020/11/29	2021/11/28
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	115500	2020/07/31	2021/07/30
Oulitong	Band-stop Filters	OBSF-2300-2400-S	OE01601518	2020/03/02	2021/03/01
instek	DC Power Supply	GPS-3030DD	EM832096	NCR	NCR
Fluke	Digital Multimeter	287	19000011	2020/07/23	2021/07/22

* 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: RSZ201228003-20.

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 (a) (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(a), for mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

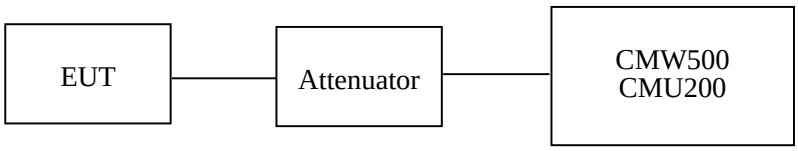
According to §27.50(d), the maximum EIRP must not exceed 1Watts (30dBm) for 1710-1780MHz.

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:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Alan He from 2021-01-30 to 2021-02-03.

Conducted Power

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	33.39	28.64	38.45
	190	836.6	33.36	28.61	38.45
	251	848.8	33.02	28.27	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	33.38	32.48	30.48	29.48	28.63	27.73	25.73	24.73	38.45
	190	836.6	33.35	32.45	30.42	29.47	28.60	27.70	25.67	24.72	38.45
	251	848.8	32.99	32.02	30.04	29.01	28.24	27.27	25.29	24.26	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.2	25.22	24.30	22.73	20.75	20.47	19.55	17.98	16.00	38.45
	190	836.6	25.14	24.24	22.38	20.49	20.39	19.49	17.63	15.74	38.45
	251	848.8	25.38	24.32	22.16	20.64	20.63	19.57	17.41	15.89	38.45

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		23.70	23.78	23.74	18.95	19.03	18.99
	HSDPA	1	22.64	22.68	22.70	17.89	17.93	17.95
		2	22.63	23.17	22.93	17.88	18.42	18.18
		3	22.61	22.99	23.02	17.86	18.24	18.27
		4	22.59	23.12	22.98	17.84	18.37	18.23
	HSUPA	1	22.37	22.46	22.38	17.62	17.71	17.63
		2	22.35	22.43	22.36	17.60	17.68	17.61
		3	22.33	22.41	22.34	17.58	17.66	17.59
		4	22.31	22.38	22.32	17.56	17.63	17.57
		5	22.29	22.37	22.29	17.54	17.62	17.54
	HSPA+	1	23.03	23.14	22.95	18.28	18.39	18.20

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For GSM850 / WCDMA Band5: Antenna Gain = -2.1dBi = -4.25dBd (0dBd=2.15dBi)
For 700-1000MHz, Cable Loss=0.5dB* (provided by the applicant)
Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	29.34	28.74	33
	661	1880.0	29.26	28.66	33
	810	1909.8	29.70	29.10	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	29.03	28.02	25.72	24.56	28.43	27.42	25.12	23.96	33
	661	1880.0	29.34	28.37	25.58	24.74	28.74	27.77	24.98	24.14	33
	810	1909.8	29.76	28.80	25.64	24.81	29.16	28.20	25.04	24.21	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	25.61	24.56	22.30	21.22	25.01	23.96	21.70	20.62	33
	661	1880.0	26.03	24.97	22.79	21.38	25.43	24.37	22.19	20.78	33
	810	1909.8	26.53	25.40	23.13	21.40	25.93	24.80	22.53	20.80	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		22.99	23.16	23.42	22.39	22.56	22.82
	HSDPA	1	21.87	22.04	22.23	21.27	21.44	21.63
		2	21.84	21.74	21.70	21.24	21.14	21.10
		3	21.62	21.62	21.69	21.02	21.02	21.09
		4	21.83	21.68	21.68	21.23	21.08	21.08
	HSUPA	1	21.60	21.72	21.97	21.00	21.12	21.37
		2	21.51	21.69	21.70	20.91	21.09	21.10
		3	21.50	21.68	21.73	20.90	21.08	21.13
		4	21.48	21.65	21.69	20.88	21.05	21.09
		5	21.43	21.64	21.67	20.83	21.04	21.07
	HSPA+	1	21.83	21.71	21.81	21.23	21.11	21.21

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For PCS1900 / WCDMA Band2: Antenna Gain = 0.2dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

AWS Band (Part 27)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		22.46	22.53	22.28	20.66	20.73	20.48
	HSDPA	1	21.44	21.48	21.26	19.64	19.68	19.46
		2	21.37	21.46	21.23	19.57	19.66	19.43
		3	21.31	21.43	21.21	19.51	19.63	19.41
		4	21.30	21.42	21.20	19.50	19.62	19.40
	HSUPA	1	21.12	21.22	21.04	19.32	19.42	19.24
		2	21.10	21.21	21.02	19.30	19.41	19.22
		3	21.08	21.17	20.99	19.28	19.37	19.19
		4	21.07	21.16	20.98	19.27	19.36	19.18
		5	21.05	21.15	20.95	19.25	19.35	19.15
	HSPA+	1	21.85	21.93	21.86	20.05	20.13	20.06

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band4: Antenna Gain =-1.0dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	4.15	13
	Middle	4.42	13
	High	3.63	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	4.26	13
	Middle	4.34	13
	High	4.14	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.86	13
	Middle	3.92	13
	High	3.64	13
HSDPA (16QAM)	Low	3.39	13
	Middle	3.80	13
	High	3.61	13
HSUPA (BPSK)	Low	3.34	13
	Middle	3.11	13
	High	3.13	13
HSPA+	Low	3.32	13
	Middle	3.46	13
	High	3.71	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.18	13
	Middle	3.24	13
	High	3.82	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.69	13
	Middle	3.32	13
	High	3.69	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.21	13
	Middle	3.47	13
	High	3.65	13
HSDPA (16QAM)	Low	3.55	13
	Middle	3.27	13
	High	3.78	13
HSUPA (BPSK)	Low	3.64	13
	Middle	3.86	13
	High	3.08	13
HSPA+	Low	3.35	13
	Middle	3.57	13
	High	3.48	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.85	13
	Middle	3.03	13
	High	3.77	13
HSDPA (16QAM)	Low	3.44	13
	Middle	3.16	13
	High	3.79	13
HSUPA (BPSK)	Low	3.84	13
	Middle	3.35	13
	High	3.41	13
HSPA+	Low	3.37	13
	Middle	3.56	13
	High	3.46	13

LTE Band 2:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.74	21.46	21.42	21.14	20.86	20.82
		RB1#2	21.78	21.46	21.44	21.18	20.86	20.84
		RB1#5	21.77	21.46	21.39	21.17	20.86	20.79
		RB3#0	21.75	21.47	21.44	21.15	20.87	20.84
		RB3#1	21.78	21.48	21.43	21.18	20.88	20.83
		RB3#2	21.77	21.46	21.41	21.17	20.86	20.81
		RB6#0	21.74	21.45	21.39	21.14	20.85	20.79
	16QAM	RB1#0	21.78	21.47	21.44	21.18	20.87	20.84
		RB1#2	21.78	21.50	21.42	21.18	20.90	20.82
		RB1#5	21.75	21.46	21.43	21.15	20.86	20.83
		RB3#0	21.77	21.45	21.43	21.17	20.85	20.83
		RB3#1	21.75	21.45	21.43	21.15	20.85	20.83
		RB3#2	21.79	21.47	21.39	21.19	20.87	20.79
		RB6#0	21.79	21.49	21.42	21.19	20.89	20.82
3.0	QPSK	RB1#0	21.96	21.91	21.85	21.36	21.31	21.25
		RB1#7	21.99	21.89	21.86	21.39	21.29	21.26
		RB1#14	21.99	21.88	21.88	21.39	21.28	21.28
		RB8#0	21.99	21.91	21.88	21.39	21.31	21.28
		RB8#4	21.98	21.93	21.87	21.38	21.33	21.27
		RB8#7	22.01	21.87	21.87	21.41	21.27	21.27
		RB15#0	21.98	21.93	21.85	21.38	21.33	21.25
	16QAM	RB1#0	21.96	21.89	21.83	21.36	21.29	21.23
		RB1#7	21.96	21.92	21.84	21.36	21.32	21.24
		RB1#14	21.99	21.89	21.84	21.39	21.29	21.24
		RB8#0	22.01	21.92	21.83	21.41	21.32	21.23
		RB8#4	21.98	21.91	21.84	21.38	21.31	21.24
		RB8#7	22.00	21.90	21.88	21.40	21.30	21.28
		RB15#0	21.97	21.88	21.83	21.37	21.28	21.23

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	21.87	21.89	21.84	21.27	21.29	21.24
		RB1#12	21.90	21.87	21.85	21.30	21.27	21.25
		RB1#24	21.88	21.89	21.85	21.28	21.29	21.25
		RB12#0	21.88	21.84	21.84	21.28	21.24	21.24
		RB12#6	21.89	21.84	21.86	21.29	21.24	21.26
		RB12#11	21.86	21.86	21.89	21.26	21.26	21.29
		RB25#0	21.87	21.86	21.84	21.27	21.26	21.24
	16QAM	RB1#0	21.90	21.88	21.85	21.30	21.28	21.25
		RB1#12	21.86	21.83	21.89	21.26	21.23	21.29
		RB1#24	21.91	21.89	21.88	21.31	21.29	21.28
		RB12#0	21.88	21.89	21.88	21.28	21.29	21.28
		RB12#6	21.86	21.88	21.84	21.26	21.28	21.24
		RB12#11	21.89	21.87	21.84	21.29	21.27	21.24
		RB25#0	21.92	21.84	21.87	21.32	21.24	21.27
10.0	QPSK	RB1#0	21.95	21.78	21.75	21.35	21.18	21.15
		RB1#24	21.91	21.82	21.75	21.31	21.22	21.15
		RB1#49	21.91	21.80	21.78	21.31	21.20	21.18
		RB25#0	21.94	21.78	21.77	21.34	21.18	21.17
		RB25#12	21.95	21.82	21.77	21.35	21.22	21.17
		RB25#24	21.93	21.79	21.79	21.33	21.19	21.19
		RB50#0	21.90	21.81	21.77	21.30	21.21	21.17
	16QAM	RB1#0	21.94	21.80	21.76	21.34	21.20	21.16
		RB1#24	21.93	21.77	21.76	21.33	21.17	21.16
		RB1#49	21.96	21.78	21.76	21.36	21.18	21.16
		RB25#0	21.95	21.79	21.76	21.35	21.19	21.16
		RB25#12	21.92	21.80	21.79	21.32	21.20	21.19
		RB25#24	21.93	21.82	21.74	21.33	21.22	21.14
		RB50#0	21.91	21.83	21.79	21.31	21.23	21.19

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	21.86	21.77	21.82	21.26	21.17	21.22
		RB1#37	21.86	21.76	21.84	21.26	21.16	21.24
		RB1#74	21.86	21.77	21.83	21.26	21.17	21.23
		RB36#0	21.86	21.79	21.83	21.26	21.19	21.23
		RB36#18	21.89	21.74	21.79	21.29	21.14	21.19
		RB36#37	21.88	21.75	21.79	21.28	21.15	21.19
		RB75#0	21.87	21.79	21.82	21.27	21.19	21.22
	16QAM	RB1#0	21.86	21.75	21.81	21.26	21.15	21.21
		RB1#37	21.87	21.77	21.78	21.27	21.17	21.18
		RB1#74	21.90	21.80	21.79	21.30	21.20	21.19
		RB36#0	21.90	21.75	21.79	21.30	21.15	21.19
		RB36#18	21.89	21.76	21.78	21.29	21.16	21.18
		RB36#37	21.87	21.76	21.81	21.27	21.16	21.21
		RB75#0	21.87	21.78	21.82	21.27	21.18	21.22
20.0	QPSK	RB1#0	21.88	21.78	21.80	21.28	21.18	21.20
		RB1#49	21.85	21.77	21.76	21.25	21.17	21.16
		RB1#99	21.83	21.73	21.80	21.23	21.13	21.20
		RB50#0	21.87	21.73	21.79	21.27	21.13	21.19
		RB50#24	21.85	21.75	21.78	21.25	21.15	21.18
		RB50#49	21.88	21.75	21.78	21.28	21.15	21.18
		RB100#0	21.83	21.78	21.76	21.23	21.18	21.16
	16QAM	RB1#0	21.88	21.77	21.77	21.28	21.17	21.17
		RB1#49	21.88	21.74	21.76	21.28	21.14	21.16
		RB1#99	21.88	21.78	21.79	21.28	21.18	21.19
		RB50#0	21.84	21.75	21.80	21.24	21.15	21.20
		RB50#24	21.83	21.77	21.77	21.23	21.17	21.17
		RB50#49	21.85	21.77	21.78	21.25	21.17	21.18
		RB100#0	21.84	21.73	21.79	21.24	21.13	21.19

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band2: Antenna Gain = 0.2dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.62	4.38	5.16	13	Pass
QPSK (100RB Size)	4.43	4.40	5.41	13	Pass
16QAM (1RB Size)	4.48	4.37	5.17	13	Pass
16QAM (100RB Size)	4.69	4.29	4.99	13	Pass

LTE Band 4

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.23	22.10	22.25	20.43	20.30	20.45
		RB1#2	22.18	22.11	22.27	20.38	20.31	20.47
		RB1#5	22.21	22.16	22.24	20.41	20.36	20.44
		RB3#0	22.24	22.11	22.28	20.44	20.31	20.48
		RB3#1	22.21	22.15	22.24	20.41	20.35	20.44
		RB3#2	22.19	22.13	22.24	20.39	20.33	20.44
		RB6#0	22.21	22.13	22.29	20.41	20.33	20.49
	16QAM	RB1#0	22.20	22.15	22.26	20.40	20.35	20.46
		RB1#2	22.21	22.11	22.28	20.41	20.31	20.48
		RB1#5	22.21	22.16	22.25	20.41	20.36	20.45
		RB3#0	22.21	22.16	22.23	20.41	20.36	20.43
		RB3#1	22.23	22.11	22.24	20.43	20.31	20.44
		RB3#2	22.21	22.11	22.24	20.41	20.31	20.44
		RB6#0	22.21	22.14	22.26	20.41	20.34	21.66
3.0	QPSK	RB1#0	22.22	22.09	22.25	20.42	20.29	20.45
		RB1#7	22.20	22.13	22.27	20.40	20.33	20.47
		RB1#14	22.18	22.09	22.25	20.38	20.29	20.45
		RB8#0	22.20	22.12	22.25	20.40	20.32	20.45
		RB8#4	22.21	22.11	22.24	20.41	20.31	20.44
		RB8#7	22.19	22.14	22.28	20.39	20.34	20.48
		RB15#0	22.21	22.12	22.26	20.41	20.32	20.46
	16QAM	RB1#0	22.18	22.13	22.24	20.38	20.33	20.44
		RB1#7	22.21	22.09	22.26	20.41	20.29	20.46
		RB1#14	22.21	22.10	22.27	20.41	20.30	20.47
		RB8#0	22.23	22.14	22.26	20.43	20.34	20.46
		RB8#4	22.22	22.12	22.23	20.42	20.32	20.43
		RB8#7	22.17	22.10	22.25	20.37	20.30	20.45
		RB15#0	22.18	22.10	22.24	20.38	20.30	21.64

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	22.18	22.10	22.13	20.38	20.30	20.33
		RB1#12	22.19	22.12	22.13	20.39	20.32	20.33
		RB1#24	22.19	22.09	22.12	20.39	20.29	20.32
		RB12#0	22.16	22.13	22.13	20.36	20.33	20.33
		RB12#6	22.19	22.08	22.13	20.39	20.28	20.33
		RB12#11	22.19	22.14	22.17	20.39	20.34	20.37
		RB25#0	22.18	22.14	22.14	20.38	20.34	20.34
	16QAM	RB1#0	22.20	22.08	22.13	20.40	20.28	20.33
		RB1#12	22.18	22.09	22.17	20.38	20.29	20.37
		RB1#24	22.19	22.12	22.15	20.39	20.32	20.35
		RB12#0	22.19	22.08	22.13	20.39	20.28	20.33
		RB12#6	22.18	22.10	22.13	20.38	20.30	20.33
		RB12#11	22.18	22.10	22.12	20.38	20.30	20.32
		RB25#0	22.17	22.13	22.13	20.37	20.33	21.53
10.0	QPSK	RB1#0	22.17	22.11	22.23	20.37	20.31	20.43
		RB1#24	22.17	22.14	22.20	20.37	20.34	20.40
		RB1#49	22.15	22.14	22.23	20.35	20.34	20.43
		RB25#0	22.17	22.16	22.23	20.37	20.36	20.43
		RB25#12	22.16	22.14	22.24	20.36	20.34	20.44
		RB25#24	22.15	22.13	22.20	20.35	20.33	20.40
		RB50#0	22.18	22.10	22.18	20.38	20.30	20.38
	16QAM	RB1#0	22.17	22.14	22.18	20.37	20.34	20.38
		RB1#24	22.20	22.16	22.20	20.40	20.36	20.40
		RB1#49	22.18	22.13	22.18	20.38	20.33	20.38
		RB25#0	22.15	22.11	22.21	20.35	20.31	20.41
		RB25#12	22.18	22.15	22.24	20.38	20.35	20.44
		RB25#24	22.18	22.14	22.23	20.38	20.34	20.43
		RB50#0	22.21	22.14	22.23	20.41	20.34	20.43

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	22.18	22.20	22.25	20.38	20.40	20.45
		RB1#37	22.16	22.18	22.23	20.36	20.38	20.43
		RB1#74	22.18	22.21	22.25	20.38	20.41	20.45
		RB36#0	22.13	22.22	22.22	20.33	20.42	20.42
		RB36#18	22.17	22.21	22.24	20.37	20.41	20.44
		RB36#37	22.14	22.22	22.21	20.34	20.42	20.41
		RB75#0	22.14	22.19	22.24	20.34	20.39	20.44
	16QAM	RB1#0	22.14	22.18	22.22	20.34	20.38	20.42
		RB1#37	22.18	22.22	22.22	20.38	20.42	20.42
		RB1#74	22.16	22.19	22.21	20.36	20.39	20.41
		RB36#0	22.14	22.22	22.24	20.34	20.42	20.44
		RB36#18	22.19	22.20	22.22	20.39	20.40	20.42
		RB36#37	22.17	22.20	22.21	20.37	20.40	20.41
		RB75#0	22.19	22.19	22.22	20.39	20.39	20.42
20.0	QPSK	RB1#0	22.19	22.24	22.23	20.39	20.44	20.43
		RB1#49	22.20	22.27	22.22	20.40	20.47	20.42
		RB1#99	22.24	22.21	22.24	20.44	20.41	20.44
		RB50#0	22.21	22.26	22.23	20.41	20.46	20.43
		RB50#24	22.22	22.26	22.23	20.42	20.46	20.43
		RB50#49	22.22	22.23	22.18	20.42	20.43	20.38
		RB100#0	22.21	22.23	22.20	20.41	20.43	20.40
	16QAM	RB1#0	22.20	22.23	22.22	20.40	20.43	20.42
		RB1#49	22.23	22.23	22.22	20.43	20.43	20.42
		RB1#99	22.19	22.21	22.19	20.39	20.41	20.39
		RB50#0	22.20	22.25	22.20	20.40	20.45	20.40
		RB50#24	22.23	22.23	22.19	20.43	20.43	20.39
		RB50#49	22.21	22.22	22.23	20.41	20.42	20.43
		RB100#0	22.24	22.25	22.22	20.44	20.45	20.42

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band4: Antenna Gain = -1.0dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.81	4.68	4.37	13	Pass
QPSK (100RB Size)	4.85	4.56	4.38	13	Pass
16QAM (1RB Size)	5.01	4.64	4.53	13	Pass
16QAM (100RB Size)	4.78	4.87	4.37	13	Pass

LTE Band 5:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.29	22.31	22.42	17.54	17.56	17.67
		RB1#2	22.26	22.29	22.42	17.51	17.54	17.67
		RB1#5	22.26	22.32	22.42	17.51	17.57	17.67
		RB3#0	22.28	22.29	22.42	17.53	17.54	17.67
		RB3#1	22.29	22.29	22.39	17.54	17.54	17.64
		RB3#2	22.29	22.29	22.41	17.54	17.54	17.66
		RB6#0	22.28	22.29	22.37	17.53	17.54	17.62
	16QAM	RB1#0	22.25	22.32	22.40	17.50	17.57	17.65
		RB1#2	22.28	22.32	22.39	17.53	17.57	17.64
		RB1#5	22.25	22.32	22.43	17.50	17.57	17.68
		RB3#0	22.26	22.33	22.43	17.51	17.58	17.68
		RB3#1	22.26	22.29	22.42	17.51	17.54	17.67
		RB3#2	22.28	22.33	22.39	17.53	17.58	17.64
		RB6#0	22.28	22.29	22.38	17.53	17.54	17.63
3.0	QPSK	RB1#0	22.30	22.24	22.39	17.55	17.49	17.64
		RB1#7	22.30	22.28	22.38	17.55	17.53	17.63
		RB1#14	22.32	22.25	22.40	17.57	17.50	17.65
		RB8#0	22.28	22.23	22.37	17.53	17.48	17.62
		RB8#4	22.29	22.27	22.40	17.54	17.52	17.65
		RB8#7	22.30	22.26	22.39	17.55	17.51	17.64
		RB15#0	22.32	22.28	22.35	17.57	17.53	17.60
	16QAM	RB1#0	22.29	22.26	22.41	17.54	17.51	17.66
		RB1#7	22.31	22.23	22.40	17.56	17.48	17.65
		RB1#14	22.30	22.29	22.38	17.55	17.54	17.63
		RB8#0	22.27	22.28	22.40	17.52	17.53	17.65
		RB8#4	22.29	22.27	22.38	17.54	17.52	17.63
		RB8#7	22.31	22.23	22.36	17.56	17.48	17.61
		RB15#0	22.27	22.24	22.39	17.52	17.49	17.64

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.27	22.26	22.40	17.52	17.51	17.65
		RB1#12	22.24	22.30	22.40	17.49	17.55	17.65
		RB1#24	22.25	22.25	22.41	17.50	17.50	17.66
		RB12#0	22.23	22.30	22.40	17.48	17.55	17.65
		RB12#6	22.27	22.30	22.39	17.52	17.55	17.64
		RB12#11	22.26	22.27	22.42	17.51	17.52	17.67
		RB25#0	22.26	22.29	22.37	17.51	17.54	17.62
	16QAM	RB1#0	22.27	22.27	22.40	17.52	17.52	17.65
		RB1#12	22.25	22.31	22.40	17.50	17.56	17.65
		RB1#24	22.25	22.27	22.41	17.50	17.52	17.66
		RB12#0	22.28	22.31	22.38	17.53	17.56	17.63
		RB12#6	22.27	22.26	22.42	17.52	17.51	17.67
		RB12#11	22.28	22.27	22.39	17.53	17.52	17.64
		RB25#0	22.26	22.26	22.37	17.51	17.51	17.62
10.0	QPSK	RB1#0	22.27	22.25	22.39	17.52	17.50	17.64
		RB1#24	22.26	22.29	22.38	17.51	17.54	17.63
		RB1#49	22.28	22.29	22.37	17.53	17.54	17.62
		RB25#0	22.25	22.29	22.37	17.50	17.54	17.62
		RB25#12	22.22	22.27	22.35	17.47	17.52	17.60
		RB25#24	22.25	22.24	22.40	17.50	17.49	17.65
		RB50#0	22.26	22.26	22.41	17.51	17.51	17.66
	16QAM	RB1#0	22.25	22.25	22.41	17.50	17.50	17.66
		RB1#24	22.24	22.24	22.36	17.49	17.49	17.61
		RB1#49	22.26	22.24	22.36	17.51	17.49	17.61
		RB25#0	22.25	22.25	22.37	17.50	17.50	17.62
		RB25#12	22.25	22.29	22.38	17.50	17.54	17.63
		RB25#24	22.27	22.25	22.36	17.52	17.50	17.61
		RB50#0	22.26	22.29	22.36	17.51	17.54	17.61

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For Band5: Antenna Gain = -2.1dBi = -4.25dBd (0dBd=2.15dBi)
For 700-1000MHz, Cable Loss= 0.5dB*(provided by the applicant)
Limit: ERP≤38.45dBm

Peak-to-average ratio (PAR)

10MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.42	4.91	5.17	13	Pass
QPSK (50RB Size)	5.31	5.14	5.40	13	Pass
16QAM (1RB Size)	5.69	4.76	5.06	13	Pass
16QAM (50RB Size)	5.48	4.80	5.04	13	Pass

LTE Band 7:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.09	22.18	22.27	21.79	21.88	21.97
		RB1#12	22.12	22.16	22.33	21.82	21.86	22.03
		RB1#24	22.13	22.20	22.31	21.83	21.90	22.01
		RB12#0	22.12	22.17	22.32	21.82	21.87	22.02
		RB12#6	22.08	22.15	22.29	21.78	21.85	21.99
		RB12#11	22.14	22.15	22.28	21.84	21.85	21.98
		RB25#0	22.10	22.17	22.31	21.80	21.87	22.01
	16QAM	RB1#0	22.11	22.17	22.33	21.81	21.87	22.03
		RB1#12	22.12	22.21	22.32	21.82	21.91	22.02
		RB1#24	22.12	22.18	22.27	21.82	21.88	21.97
		RB12#0	22.09	22.16	22.28	21.79	21.86	21.98
		RB12#6	22.10	22.18	22.30	21.80	21.88	22.00
		RB12#11	22.09	22.19	22.31	21.79	21.89	22.01
		RB25#0	22.13	22.15	22.30	21.83	21.85	22.00
10.0	QPSK	RB1#0	22.09	22.17	22.25	21.79	21.87	21.95
		RB1#24	22.08	22.18	22.26	21.78	21.88	21.96
		RB1#49	22.11	22.16	22.30	21.81	21.86	22.00
		RB25#0	22.10	22.16	22.28	21.80	21.86	21.98
		RB25#12	22.07	22.15	22.25	21.77	21.85	21.95
		RB25#24	22.08	22.17	22.26	21.78	21.87	21.96
		RB50#0	22.07	22.15	22.29	21.77	21.85	21.99
	16QAM	RB1#0	22.08	22.14	22.28	21.78	21.84	21.98
		RB1#24	22.09	22.15	22.26	21.79	21.85	21.96
		RB1#49	22.09	22.20	22.28	21.79	21.90	21.98
		RB25#0	22.08	22.15	22.26	21.78	21.85	21.96
		RB25#12	22.08	22.17	22.28	21.78	21.87	21.98
		RB25#24	22.07	22.19	22.28	21.77	21.89	21.98
		RB50#0	22.12	22.17	22.28	21.82	21.87	21.98

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	22.08	22.15	22.27	21.78	21.85	21.97
		RB1#37	22.10	22.18	22.26	21.80	21.88	21.96
		RB1#74	22.10	22.17	22.28	21.80	21.87	21.98
		RB36#0	22.06	22.13	22.30	21.76	21.83	22.00
		RB36#18	22.09	22.16	22.26	21.79	21.86	21.96
		RB36#37	22.09	22.15	22.26	21.79	21.85	21.96
		RB75#0	22.08	22.15	22.24	21.78	21.85	21.94
	16QAM	RB1#0	22.09	22.13	22.25	21.79	21.83	21.95
		RB1#37	22.06	22.14	22.27	21.76	21.84	21.97
		RB1#74	22.08	22.18	22.25	21.78	21.88	21.95
		RB36#0	22.10	22.14	22.28	21.80	21.84	21.98
		RB36#18	22.06	22.15	22.25	21.76	21.85	21.95
		RB36#37	22.08	22.14	22.27	21.78	21.84	21.97
		RB75#0	22.05	22.14	22.24	21.75	21.84	21.94
20.0	QPSK	RB1#0	22.07	22.15	22.22	21.77	21.85	21.92
		RB1#49	22.09	22.20	22.24	21.79	21.90	21.94
		RB1#99	22.07	22.18	22.24	21.77	21.88	21.94
		RB50#0	22.05	22.19	22.21	21.75	21.89	21.91
		RB50#24	22.04	22.16	22.24	21.74	21.86	21.94
		RB50#49	22.04	22.19	22.23	21.74	21.89	21.93
		RB100#0	22.09	22.19	22.25	21.79	21.89	21.95
	16QAM	RB1#0	22.08	22.19	22.24	21.78	21.89	21.94
		RB1#49	22.07	22.19	22.27	21.77	21.89	21.97
		RB1#99	22.06	22.19	22.25	21.76	21.89	21.95
		RB50#0	22.05	22.18	22.25	21.75	21.88	21.95
		RB50#24	22.08	22.21	22.26	21.78	21.91	21.96
		RB50#49	22.08	22.18	22.26	21.78	21.88	21.96
		RB100#0	22.05	22.19	22.22	21.75	21.89	21.92

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 7: Antenna Gain = 0.5dBi
For 2300-2700MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

20MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.37	4.85	4.93	13	Pass
QPSK (100RB Size)	5.26	4.65	4.91	13	Pass
16QAM (1RB Size)	5.41	5.04	5.08	13	Pass
16QAM (100RB Size)	5.51	4.88	5.02	13	Pass

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	21.65	21.89	21.83	21.35	21.59	21.53
		RB1#12	21.65	21.87	21.79	21.35	21.57	21.49
		RB1#24	21.65	21.92	21.80	21.35	21.62	21.50
		RB12#0	21.62	21.87	21.84	21.32	21.57	21.54
		RB12#6	21.67	21.90	21.82	21.37	21.60	21.52
		RB12#11	21.63	21.90	21.82	21.33	21.60	21.52
		RB25#0	21.63	21.88	21.80	21.33	21.58	21.50
	16QAM	RB1#0	21.62	21.89	21.80	21.32	21.59	21.50
		RB1#12	21.66	21.90	21.83	21.36	21.60	21.53
		RB1#24	21.62	21.87	21.79	21.32	21.57	21.49
		RB12#0	21.66	21.90	21.80	21.36	21.60	21.50
		RB12#6	21.62	21.91	21.83	21.32	21.61	21.53
		RB12#11	21.66	21.90	21.83	21.36	21.60	21.53
		RB25#0	21.63	21.90	21.79	21.33	21.60	21.49
10	QPSK	RB1#0	21.61	21.88	21.86	21.31	21.58	21.56
		RB1#24	21.59	21.85	21.85	21.29	21.55	21.55
		RB1#49	21.62	21.87	21.84	21.32	21.57	21.54
		RB25#0	21.61	21.87	21.83	21.31	21.57	21.53
		RB25#12	21.57	21.86	21.83	21.27	21.56	21.53
		RB25#24	21.56	21.88	21.82	21.26	21.58	21.52
		RB50#0	21.57	21.88	21.85	21.27	21.58	21.55
	16QAM	RB1#0	21.60	21.84	21.85	21.30	21.54	21.55
		RB1#24	21.57	21.88	21.83	21.27	21.58	21.53
		RB1#49	21.61	21.87	21.83	21.31	21.57	21.53
		RB25#0	21.57	21.86	21.83	21.27	21.56	21.53
		RB25#12	21.59	21.86	21.86	21.29	21.56	21.56
		RB25#24	21.56	21.87	21.81	21.26	21.57	21.51
		RB50#0	21.62	21.88	21.83	21.32	21.58	21.53

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15	QPSK	RB1#0	21.63	21.86	21.77	21.33	21.56	21.47
		RB1#37	21.63	21.86	21.79	21.33	21.56	21.49
		RB1#74	21.61	21.90	21.81	21.31	21.60	21.51
		RB36#0	21.64	21.87	21.79	21.34	21.57	21.49
		RB36#18	21.66	21.91	21.78	21.36	21.61	21.48
		RB36#37	21.62	21.87	21.81	21.32	21.57	21.51
		RB75#0	21.62	21.90	21.79	21.32	21.60	21.49
	16QAM	RB1#0	21.61	21.88	21.81	21.31	21.58	21.51
		RB1#37	21.62	21.88	21.81	21.32	21.58	21.51
		RB1#74	21.62	21.85	21.78	21.32	21.55	21.48
		RB36#0	21.65	21.87	21.79	21.35	21.57	21.49
		RB36#18	21.66	21.87	21.80	21.36	21.57	21.50
		RB36#37	21.63	21.89	21.79	21.33	21.59	21.49
		RB75#0	21.63	21.91	21.81	21.33	21.61	21.51
20	QPSK	RB1#0	21.59	21.88	21.77	21.29	21.58	21.47
		RB1#49	21.59	21.88	21.75	21.29	21.58	21.45
		RB1#99	21.60	21.88	21.77	21.30	21.58	21.47
		RB50#0	21.59	21.85	21.79	21.29	21.55	21.49
		RB50#24	21.57	21.83	21.74	21.27	21.53	21.44
		RB50#49	21.57	21.84	21.76	21.27	21.54	21.46
		RB100#0	21.58	21.83	21.77	21.28	21.53	21.47
	16QAM	RB1#0	21.56	21.89	21.78	21.26	21.59	21.48
		RB1#49	21.54	21.86	21.76	21.24	21.56	21.46
		RB1#99	21.56	21.84	21.76	21.26	21.54	21.46
		RB50#0	21.58	21.83	21.79	21.28	21.53	21.49
		RB50#24	21.55	21.84	21.76	21.25	21.54	21.46
		RB50#49	21.59	21.83	21.78	21.29	21.53	21.48
		RB100#0	21.54	21.87	21.80	21.24	21.57	21.50

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 38: Antenna Gain = 0.5dBi
For 2300-2700MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

20MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.04	5.27	5.36	13	Pass
QPSK (50RB Size)	5.91	5.25	5.65	13	Pass
16QAM (1RB Size)	6.11	5.34	5.50	13	Pass
16QAM (50RB Size)	6.33	5.20	5.43	13	Pass

LTE Band 40 Lower:

Maximum Output Power

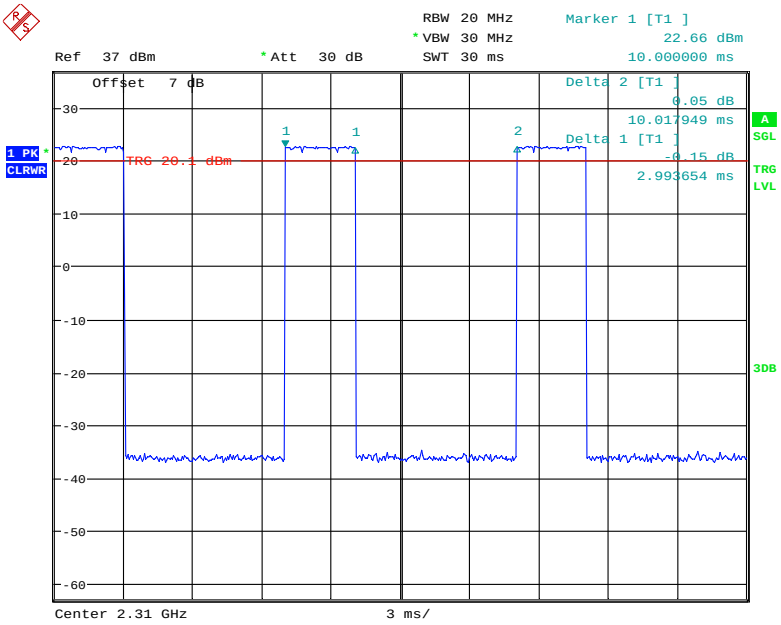
Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB 1#0	21.53	21.49	21.78	20.83	20.79	21.08
		RB 1#13	21.53	21.47	21.80	20.83	20.77	21.10
		RB 1#24	21.53	21.49	21.78	20.83	20.79	21.08
		RB 15#0	21.52	21.46	21.82	20.82	20.76	21.12
		RB 15#10	21.54	21.48	21.80	20.84	20.78	21.10
		RB 25#0	21.53	21.46	21.79	20.83	20.76	21.09
	16QAM	RB 1#0	21.50	21.46	21.78	20.80	20.76	21.08
		RB 1#13	21.49	21.50	21.81	20.79	20.80	21.11
		RB 1#24	21.54	21.48	21.81	20.84	20.78	21.11
		RB 15#0	21.49	21.46	21.79	20.79	20.76	21.09
		RB 15#10	21.54	21.46	21.78	20.84	20.76	21.08
		RB 25#0	21.52	21.49	21.77	20.82	20.79	21.07
10	QPSK	RB 1#0	/	21.55	/	/	20.85	/
		RB 1#25	/	21.54	/	/	20.84	/
		RB 1#49	/	21.55	/	/	20.85	/
		RB 25#0	/	21.55	/	/	20.85	/
		RB 25#25	/	21.52	/	/	20.82	/
		RB 50#0	/	21.53	/	/	20.83	/
	16QAM	RB 1#0	/	21.52	/	/	20.82	/
		RB 1#25	/	21.53	/	/	20.83	/
		RB 1#49	/	21.52	/	/	20.82	/
		RB 25#0	/	21.53	/	/	20.83	/
		RB 25#25	/	21.54	/	/	20.84	/
		RB 50#0	/	21.51	/	/	20.81	/

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 40: Antenna Gain = 0.1dBi
For 2300-2700MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤24dBm/5MHz
For 5MHz mode, the channel power is equal to the test result in dBm/5MHz
For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less then 24dBm, so in any 5MHz bandwidth, it will not exceed the limit

Duty cycle

Modulation	Bandwidth (MHz)	Ton (ms)	Ton+Toff (ms)	Duty cycle (%)	Limit (%)
QPSK	5	2.994	10.018	29.89	38
	10	2.946	10.114	29.13	38
16QAM	5	2.946	10.018	29.41	38
	10	2.946	10.066	29.27	38

5MHz, QPSK



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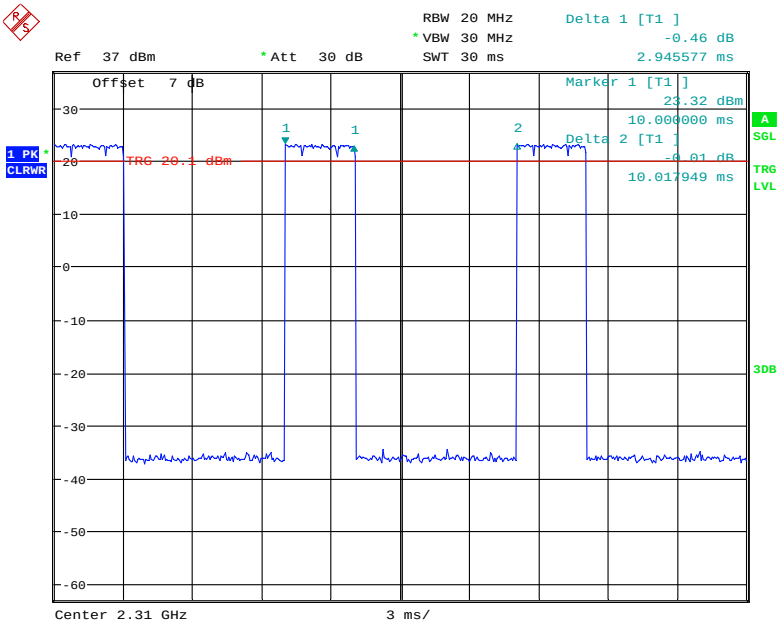
5MHz, 16QAM



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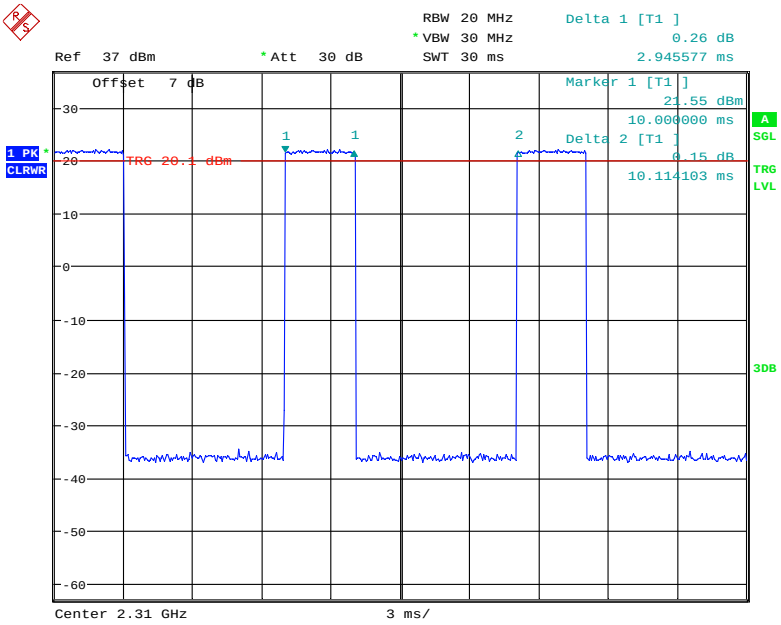
10MHz, QPSK



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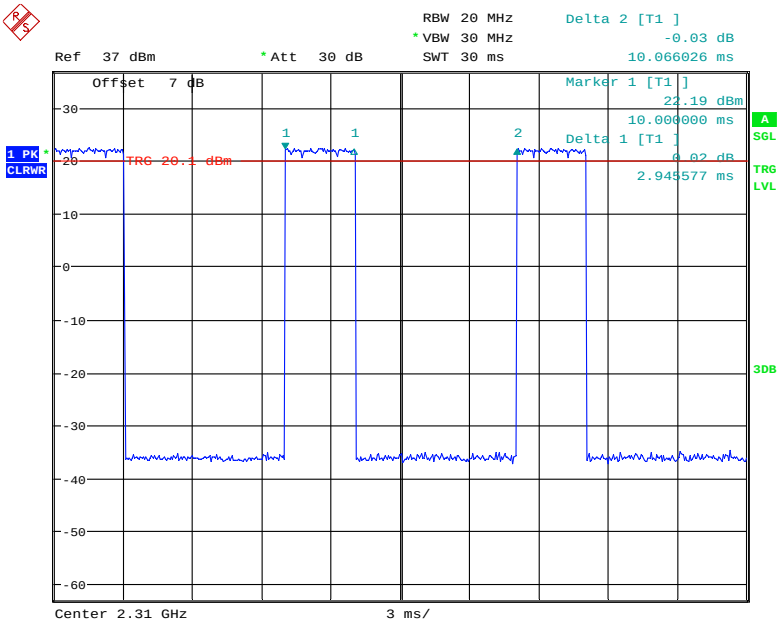
10MHz, 16QAM



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LTE Band 40 Upper:

Maximum Output Power

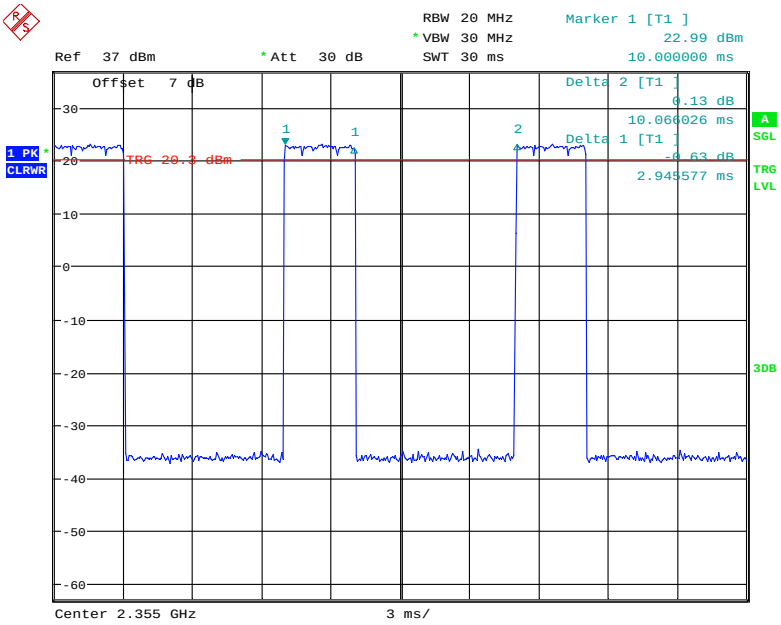
Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB 1#0	21.58	21.47	21.43	20.88	20.77	20.73
		RB 1#13	21.58	21.49	21.40	20.88	20.79	20.70
		RB 1#24	21.56	21.48	21.42	20.86	20.78	20.72
		RB 15#0	21.55	21.46	21.44	20.85	20.76	20.74
		RB 15#10	21.55	21.45	21.40	20.85	20.75	20.70
		RB 25#0	21.57	21.48	21.43	20.87	20.78	20.73
	16QAM	RB 1#0	21.59	21.49	21.44	20.89	20.79	20.74
		RB 1#13	21.56	21.46	21.40	20.86	20.76	20.70
		RB 1#24	21.59	21.48	21.43	20.89	20.78	20.73
		RB 15#0	21.57	21.50	21.40	20.87	20.80	20.70
		RB 15#10	21.58	21.46	21.43	20.88	20.76	20.73
		RB 25#0	21.54	21.45	21.43	20.84	20.75	20.73
10	QPSK	RB 1#0	/	21.92	/	/	21.22	/
		RB 1#25	/	21.91	/	/	21.21	/
		RB 1#49	/	21.91	/	/	21.21	/
		RB 25#0	/	21.89	/	/	21.19	/
		RB 25#25	/	21.88	/	/	21.18	/
		RB 50#0	/	21.91	/	/	21.21	/
	16QAM	RB 1#0	/	21.91	/	/	21.21	/
		RB 1#25	/	21.93	/	/	21.23	/
		RB 1#49	/	21.87	/	/	21.17	/
		RB 25#0	/	21.88	/	/	21.18	/
		RB 25#25	/	21.90	/	/	21.20	/
		RB 50#0	/	21.91	/	/	21.21	/

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 40: Antenna Gain = 0.1dBi
For 2300-2700MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤24dBm/5MHz
For 5MHz mode, the channel power is equal to the test result in dBm/5MHz
For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less then 24dBm, so in any 5MHz bandwidth, it will not exceed the limit

Duty cycle

Modulation	Bandwidth (MHz)	Ton (ms)	Ton+Toff (ms)	Duty cycle (%)	Limit (%)
QPSK	5	2.946	10.066	29.27	38
	10	2.946	10.066	29.27	38
16QAM	5	2.946	10.000	29.46	38
	10	2.946	10.114	29.13	38

5MHz, QPSK



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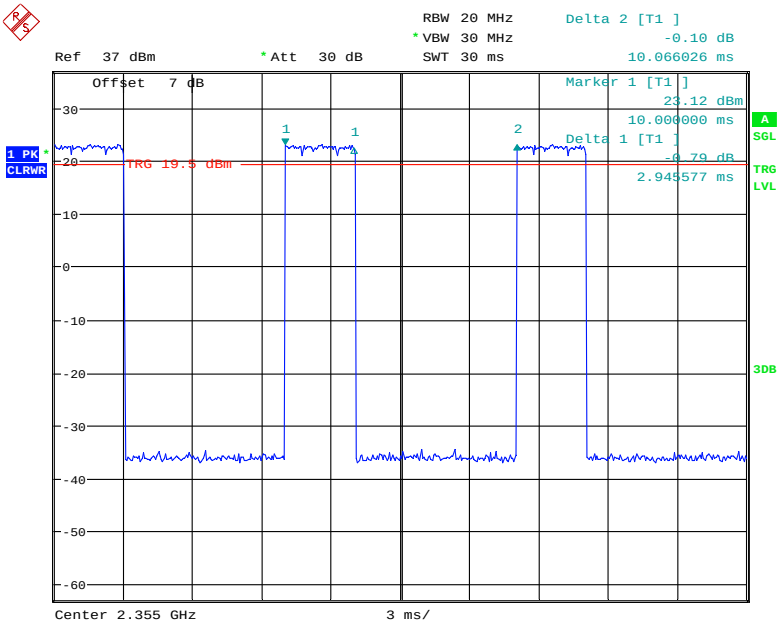
5MHz, 16QAM



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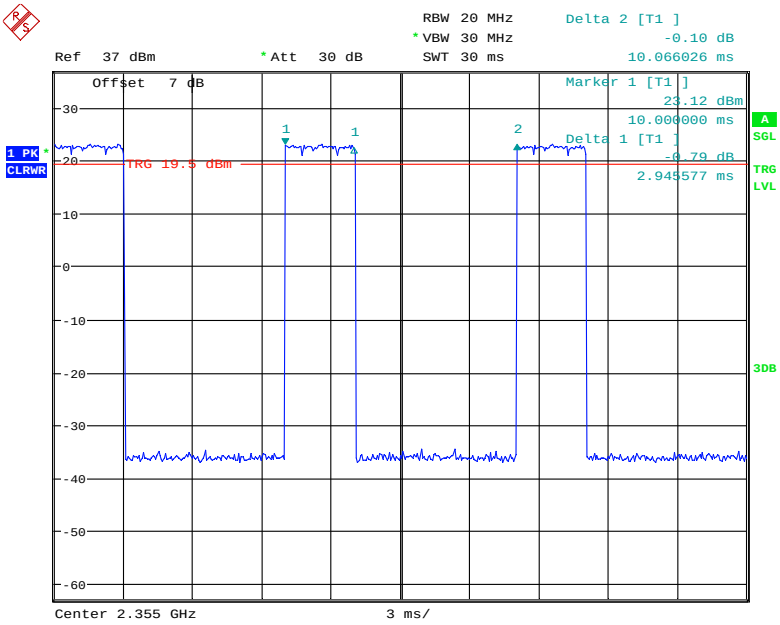
10MHz, QPSK



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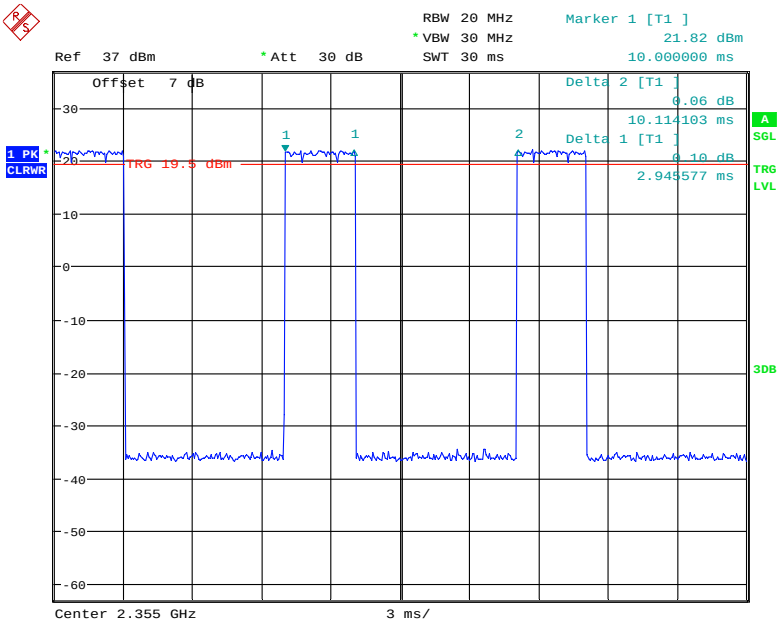
10MHz, 16QAM



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LTE Band 41:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB1#0	21.65	21.60	21.75	21.35	21.30	21.45
		RB1#12	21.67	21.63	21.72	21.37	21.33	21.42
		RB1#24	21.70	21.64	21.72	21.40	21.34	21.42
		RB12#0	21.68	21.65	21.70	21.38	21.35	21.40
		RB12#6	21.66	21.63	21.72	21.36	21.33	21.42
		RB12#11	21.69	21.59	21.70	21.39	21.29	21.40
		RB25#0	21.65	21.61	21.71	21.35	21.31	21.41
	16QAM	RB1#0	21.70	21.60	21.74	21.40	21.30	21.44
		RB1#12	21.67	21.63	21.75	21.37	21.33	21.45
		RB1#24	21.69	21.61	21.74	21.39	21.31	21.44
		RB12#0	21.68	21.60	21.74	21.38	21.30	21.44
		RB12#6	21.70	21.59	21.70	21.40	21.29	21.40
		RB12#11	21.69	21.64	21.69	21.39	21.34	21.39
		RB25#0	21.69	21.60	21.70	21.39	21.30	21.40
10	QPSK	RB1#0	21.71	21.56	21.72	21.41	21.26	21.42
		RB1#24	21.71	21.60	21.71	21.41	21.30	21.41
		RB1#49	21.73	21.58	21.73	21.43	21.28	21.43
		RB25#0	21.73	21.55	21.73	21.43	21.25	21.43
		RB25#12	21.74	21.57	21.74	21.44	21.27	21.44
		RB25#24	21.72	21.60	21.73	21.42	21.30	21.43
		RB50#0	21.70	21.60	21.71	21.40	21.30	21.41
	16QAM	RB1#0	21.70	21.58	21.71	21.40	21.28	21.41
		RB1#24	21.71	21.60	21.74	21.41	21.30	21.44
		RB1#49	21.70	21.55	21.71	21.40	21.25	21.41
		RB25#0	21.71	21.57	21.70	21.41	21.27	21.40
		RB25#12	21.72	21.55	21.71	21.42	21.25	21.41
		RB25#24	21.69	21.59	21.68	21.39	21.29	21.38
		RB50#0	21.69	21.57	21.73	21.39	21.27	21.43

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15	QPSK	RB1#0	21.68	21.55	21.71	21.38	21.25	21.41
		RB1#37	21.70	21.60	21.67	21.40	21.30	21.37
		RB1#74	21.68	21.57	21.70	21.38	21.27	21.40
		RB36#0	21.69	21.57	21.71	21.39	21.27	21.41
		RB36#18	21.68	21.56	21.68	21.38	21.26	21.38
		RB36#37	21.69	21.55	21.70	21.39	21.25	21.40
		RB75#0	21.67	21.54	21.71	21.37	21.24	21.41
	16QAM	RB1#0	21.65	21.55	21.67	21.35	21.25	21.37
		RB1#37	21.66	21.59	21.70	21.36	21.29	21.40
		RB1#74	21.68	21.60	21.67	21.38	21.30	21.37
		RB36#0	21.67	21.59	21.70	21.37	21.29	21.40
		RB36#18	21.67	21.55	21.68	21.37	21.25	21.38
		RB36#37	21.67	21.59	21.67	21.37	21.29	21.37
		RB75#0	21.65	21.56	21.71	21.35	21.26	21.41
20	QPSK	RB1#0	21.61	21.54	21.64	21.31	21.24	21.34
		RB1#49	21.64	21.55	21.65	21.34	21.25	21.35
		RB1#99	21.62	21.55	21.69	21.32	21.25	21.39
		RB50#0	21.64	21.56	21.65	21.34	21.26	21.35
		RB50#24	21.66	21.55	21.66	21.36	21.25	21.36
		RB50#49	21.65	21.55	21.70	21.35	21.25	21.40
		RB100#0	21.66	21.57	21.70	21.36	21.27	21.40
	16QAM	RB1#0	21.62	21.54	21.69	21.32	21.24	21.39
		RB1#49	21.63	21.57	21.69	21.33	21.27	21.39
		RB1#99	21.64	21.57	21.70	21.34	21.27	21.40
		RB50#0	21.63	21.55	21.65	21.33	21.25	21.35
		RB50#24	21.63	21.55	21.65	21.33	21.25	21.35
		RB50#49	21.62	21.58	21.65	21.32	21.28	21.35
		RB100#0	21.66	21.53	21.69	21.36	21.23	21.39

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 41: Antenna Gain = 0.5dBi
For 2300-2700MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

10MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.26	6.34	6.50	13	Pass
QPSK (50RB Size)	5.33	6.29	6.64	13	Pass
16QAM (1RB Size)	5.53	6.23	6.49	13	Pass
16QAM (50RB Size)	5.50	6.41	6.73	13	Pass

LTE Band 66:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.48	21.58	21.48	19.68	19.78	19.68
		RB1#2	21.47	21.57	21.49	19.67	19.77	19.69
		RB1#5	21.46	21.59	21.47	19.66	19.79	19.67
		RB3#0	21.46	21.58	21.44	19.66	19.78	19.64
		RB3#1	21.48	21.56	21.44	19.68	19.76	19.64
		RB3#2	21.50	21.56	21.48	19.70	19.76	19.68
		RB6#0	21.50	21.59	21.44	19.70	19.79	19.64
	16QAM	RB1#0	21.49	21.59	21.45	19.69	19.79	19.65
		RB1#2	21.47	21.58	21.44	19.67	19.78	19.64
		RB1#5	21.48	21.55	21.48	19.68	19.75	19.68
		RB3#0	21.45	21.56	21.45	19.65	19.76	19.65
		RB3#1	21.50	21.58	21.47	19.70	19.78	19.67
		RB3#2	21.47	21.60	21.45	19.67	19.80	19.65
		RB6#0	21.50	21.56	21.50	19.70	19.76	19.70
3.0	QPSK	RB1#0	21.52	21.54	21.48	19.72	19.74	19.68
		RB1#7	21.49	21.56	21.48	19.69	19.76	19.68
		RB1#14	21.53	21.54	21.47	19.73	19.74	19.67
		RB8#0	21.49	21.57	21.50	19.69	19.77	19.70
		RB8#4	21.53	21.55	21.51	19.73	19.75	19.71
		RB8#7	21.47	21.57	21.49	19.67	19.77	19.69
		RB15#0	21.49	21.56	21.49	19.69	19.76	19.69
	16QAM	RB1#0	21.51	21.56	21.51	19.71	19.76	19.71
		RB1#7	21.50	21.59	21.51	19.70	19.79	19.71
		RB1#14	21.53	21.58	21.49	19.73	19.78	19.69
		RB8#0	21.49	21.58	21.50	19.69	19.78	19.70
		RB8#4	21.48	21.54	21.48	19.68	19.74	19.68
		RB8#7	21.47	21.54	21.50	19.67	19.74	19.70
		RB15#0	21.51	21.55	21.45	19.71	19.75	19.65

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	21.49	21.48	21.45	19.69	19.68	19.65
		RB1#12	21.47	21.49	21.44	19.67	19.69	19.64
		RB1#24	21.45	21.52	21.48	19.65	19.72	19.68
		RB12#0	21.47	21.54	21.45	19.67	19.74	19.65
		RB12#6	21.43	21.53	21.49	19.63	19.73	19.69
		RB12#11	21.47	21.53	21.46	19.67	19.73	19.66
		RB25#0	21.43	21.51	21.48	19.63	19.71	19.68
	16QAM	RB1#0	21.47	21.48	21.46	19.67	19.68	19.66
		RB1#12	21.48	21.53	21.47	19.68	19.73	19.67
		RB1#24	21.45	21.54	21.46	19.65	19.74	19.66
		RB12#0	21.46	21.52	21.46	19.66	19.72	19.66
		RB12#6	21.46	21.52	21.45	19.66	19.72	19.65
		RB12#11	21.48	21.51	21.48	19.68	19.71	19.68
		RB25#0	21.46	21.50	21.49	19.66	19.70	19.69
10.0	QPSK	RB1#0	21.43	21.50	21.50	19.63	19.70	19.70
		RB1#24	21.45	21.45	21.52	19.65	19.65	19.72
		RB1#49	21.47	21.45	21.49	19.67	19.65	19.69
		RB25#0	21.46	21.47	21.49	19.66	19.67	19.69
		RB25#12	21.41	21.48	21.52	19.61	19.68	19.72
		RB25#24	21.43	21.50	21.54	19.63	19.70	19.74
		RB50#0	21.43	21.44	21.52	19.63	19.64	19.72
	16QAM	RB1#0	21.45	21.47	21.49	19.65	19.67	19.69
		RB1#24	21.42	21.47	21.48	19.62	19.67	19.68
		RB1#49	21.44	21.48	21.53	19.64	19.68	19.73
		RB25#0	21.43	21.48	21.53	19.63	19.68	19.73
		RB25#12	21.47	21.45	21.52	19.67	19.65	19.72
		RB25#24	21.42	21.49	21.52	19.62	19.69	19.72
		RB50#0	21.43	21.47	21.54	19.63	19.67	19.74

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	21.53	21.48	21.53	19.73	19.68	19.73
		RB1#37	21.52	21.50	21.53	19.72	19.70	19.73
		RB1#74	21.54	21.50	21.51	19.74	19.70	19.71
		RB36#0	21.54	21.52	21.51	19.74	19.72	19.71
		RB36#18	21.51	21.49	21.53	19.71	19.69	19.73
		RB36#37	21.50	21.48	21.54	19.70	19.68	19.74
		RB75#0	21.53	21.52	21.55	19.73	19.72	19.75
	16QAM	RB1#0	21.54	21.52	21.54	19.74	19.72	19.74
		RB1#37	21.51	21.52	21.51	19.71	19.72	19.71
		RB1#74	21.52	21.48	21.52	19.72	19.68	19.72
		RB36#0	21.51	21.50	21.54	19.71	19.70	19.74
		RB36#18	21.50	21.52	21.54	19.70	19.72	19.74
		RB36#37	21.53	21.51	21.56	19.73	19.71	19.76
		RB75#0	21.52	21.52	21.52	19.72	19.72	19.72
20.0	QPSK	RB1#0	21.49	21.46	21.52	19.69	19.66	19.72
		RB1#49	21.49	21.48	21.50	19.69	19.68	19.70
		RB1#99	21.45	21.43	21.49	19.65	19.63	19.69
		RB50#0	21.47	21.46	21.50	19.67	19.66	19.70
		RB50#24	21.48	21.48	21.49	19.68	19.68	19.69
		RB50#49	21.45	21.45	21.51	19.65	19.65	19.71
		RB100#0	21.49	21.44	21.52	19.69	19.64	19.72
	16QAM	RB1#0	21.49	21.44	21.48	19.69	19.64	19.68
		RB1#49	21.44	21.48	21.53	19.64	19.68	19.73
		RB1#99	21.45	21.46	21.47	19.65	19.66	19.67
		RB50#0	21.48	21.45	21.51	19.68	19.65	19.71
		RB50#24	21.50	21.47	21.50	19.70	19.67	19.70
		RB50#49	21.46	21.47	21.49	19.66	19.67	19.69
		RB100#0	21.48	21.46	21.50	19.68	19.66	19.70

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 41: Antenna Gain = -1.0dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

20MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.81	5.67	5.47	13	Pass
QPSK (50RB Size)	5.83	5.89	5.42	13	Pass
16QAM (1RB Size)	5.68	5.55	5.42	13	Pass
16QAM (50RB Size)	5.73	5.56	5.49	13	Pass

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

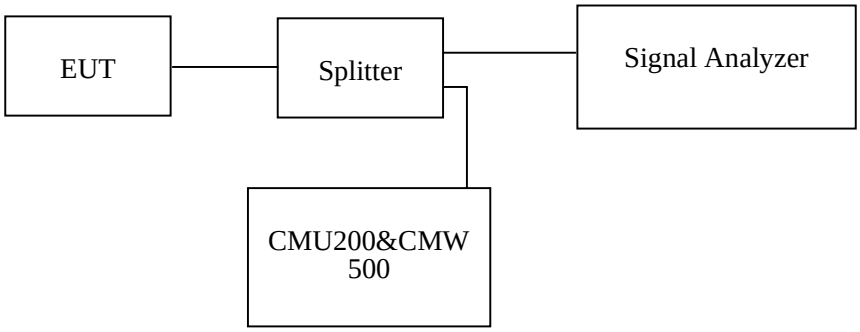
Applicable Standard

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:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Alan He from 2021-01-28 to 2021-02-02.

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	248.40	322.12
	190	836.6	246.79	317.31
	251	848.8	246.79	322.12
EGPRS(8PSK)	128	824.2	245.19	307.69
	190	836.6	246.79	307.69
	251	848.8	245.19	315.71

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.15	4.71
	836.6	4.17	4.71
	846.6	4.15	4.70
HSDPA	826.4	4.17	4.72
	836.6	4.18	4.74
	846.6	4.17	4.71
HSUPA	826.4	4.18	4.70
	836.6	4.17	4.70
	846.6	4.15	4.70

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	245.19	312.50
	661	1880.0	243.59	312.50
	810	1909.8	245.19	316.03
EGPRS(8PSK)	512	1850.2	245.19	320.51
	661	1880.0	241.91	314.10
	810	1909.8	248.40	307.69

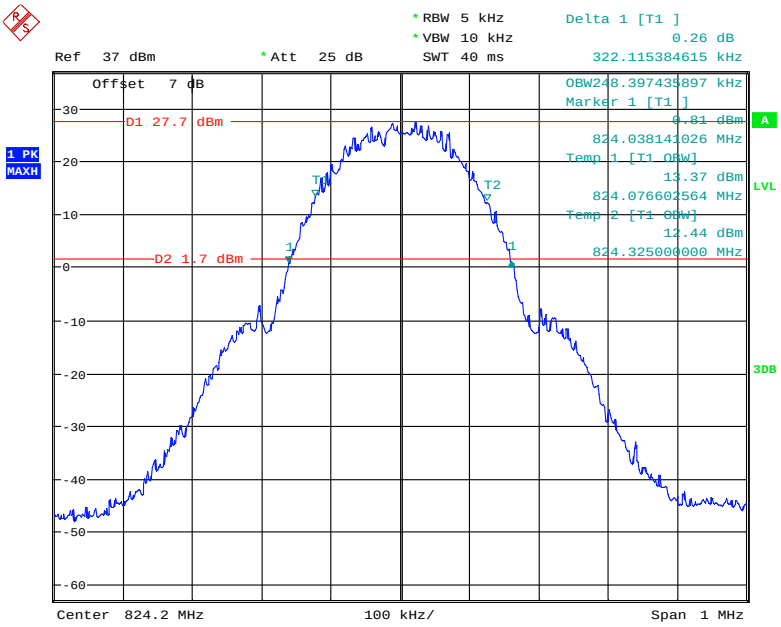
Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.17	4.73
	1880.0	4.17	4.71
	1907.6	4.17	4.71
HSDPA	1852.4	4.17	4.73
	1880.0	4.19	4.74
	1907.6	4.18	4.72
HSUPA	1852.4	4.18	4.71
	1880.0	4.18	4.73
	1907.6	4.18	4.71

AWS Band (Part 27)

Frequency (MHz)		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.18	4.71
	1732.6	4.17	4.71
	1752.6	4.17	4.71
HSDPA	1712.4	4.15	4.71
	1732.6	4.20	4.73
	1752.6	4.15	4.73
HSUPA	1712.4	4.17	4.70
	1732.6	4.17	4.70
	1752.6	4.18	4.73

Cellular Band (Part 22H)

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



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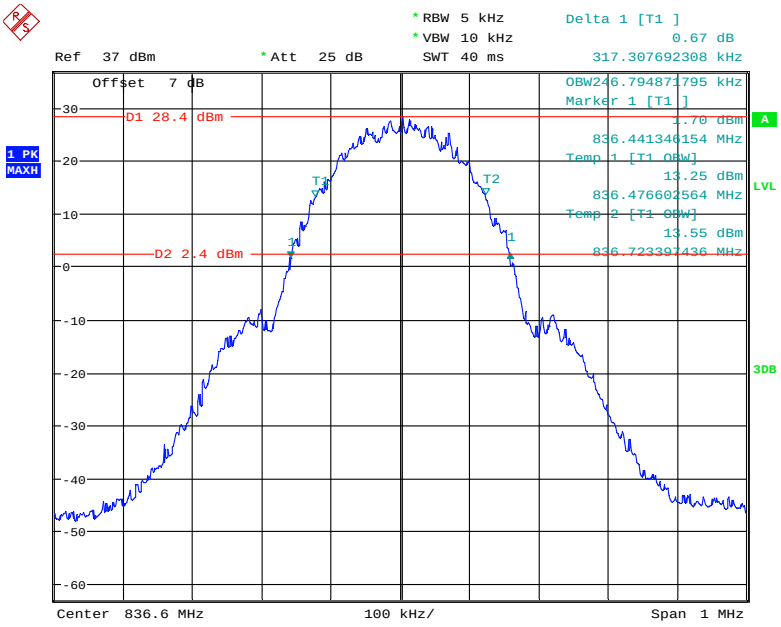
26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



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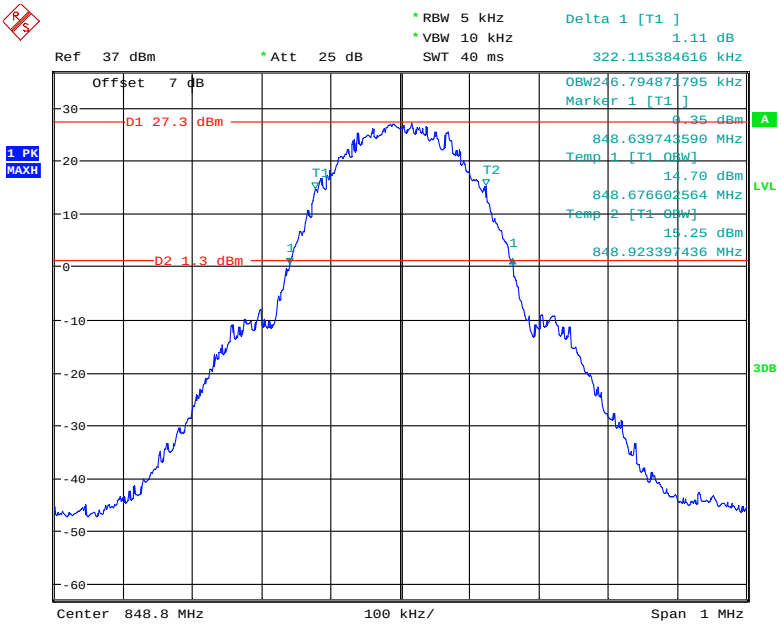
26 dB Emissions &99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



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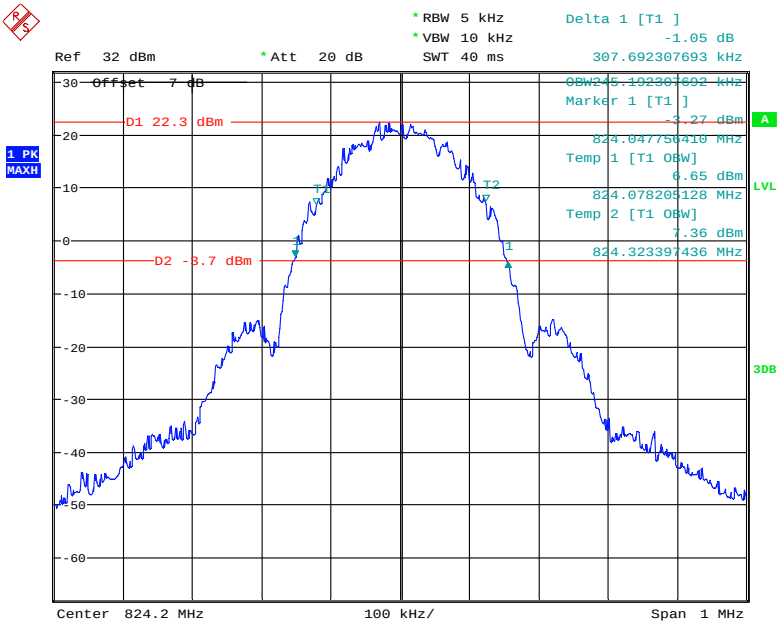
26 dB Emissions &99% Occupied Bandwidth for EGPRS (8PSK) Mode, Low channel



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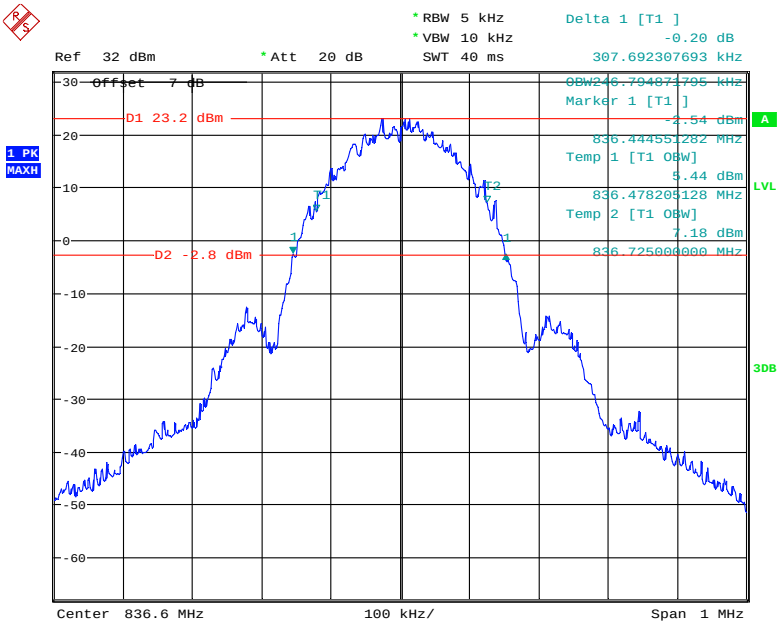
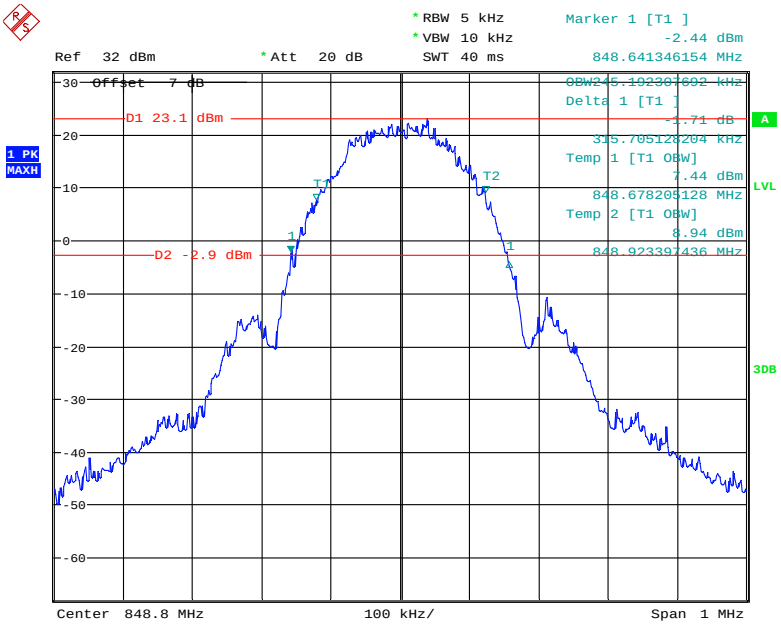
26 dB Emissions &99% Occupied Bandwidth for EGPRS (8PSK) Mode, Middle channel



Date: 1.FEB.2021 18:33:00

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



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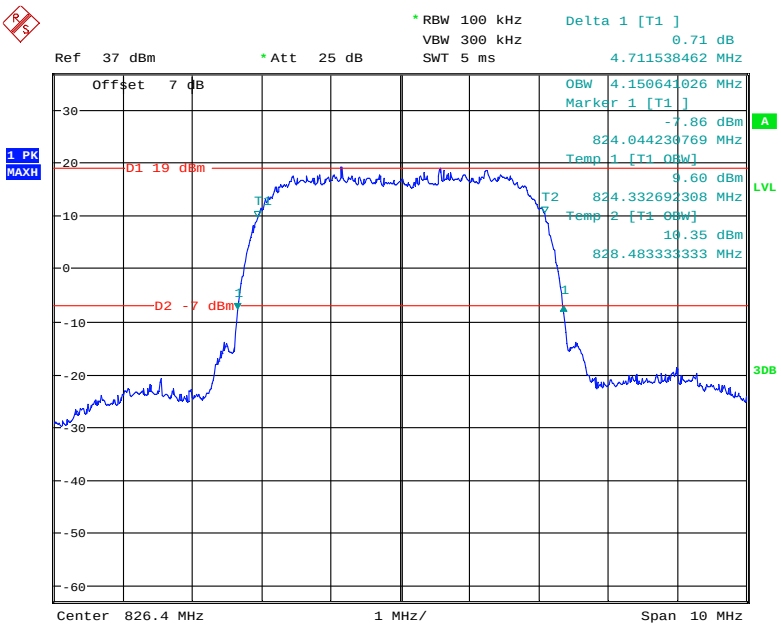
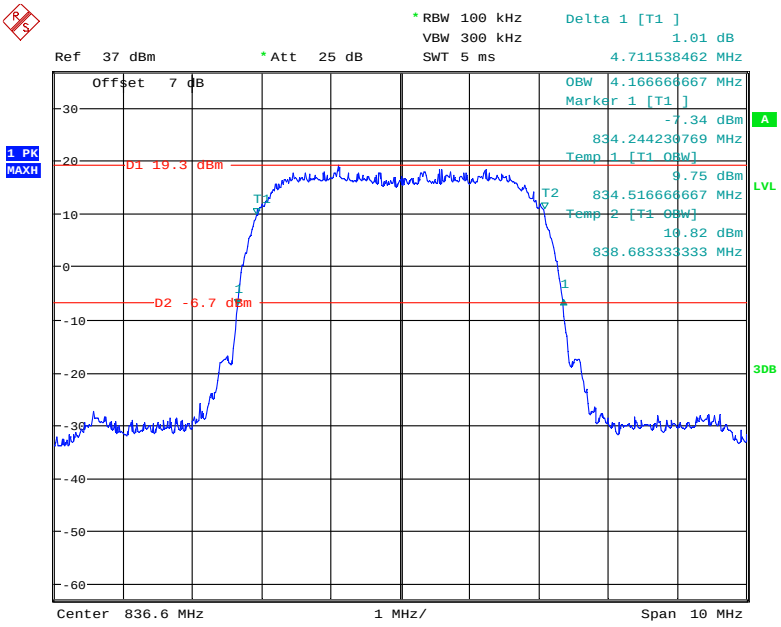
26 dB Emissions &99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



Date: 30.JAN.2021 14:18:28

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



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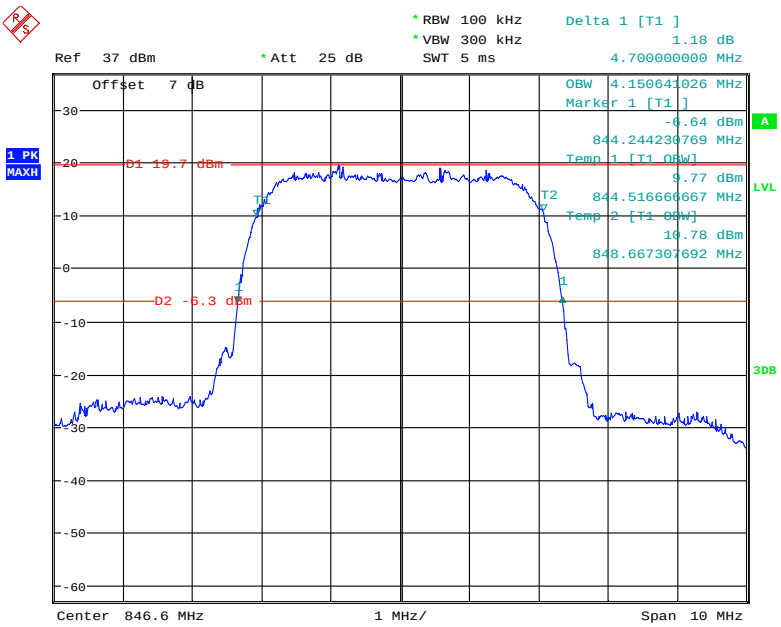
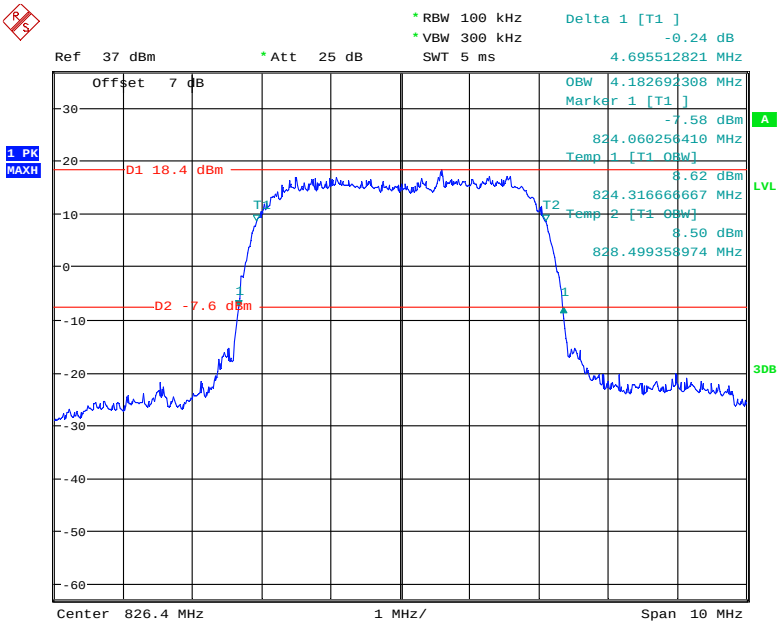
26 dB Emissions &99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



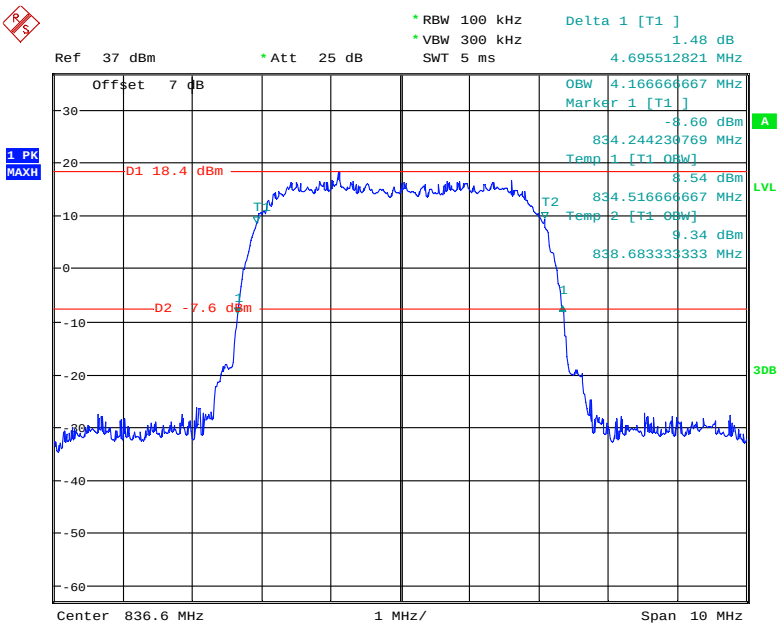
Date: 30.JAN.2021 13:18:44

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



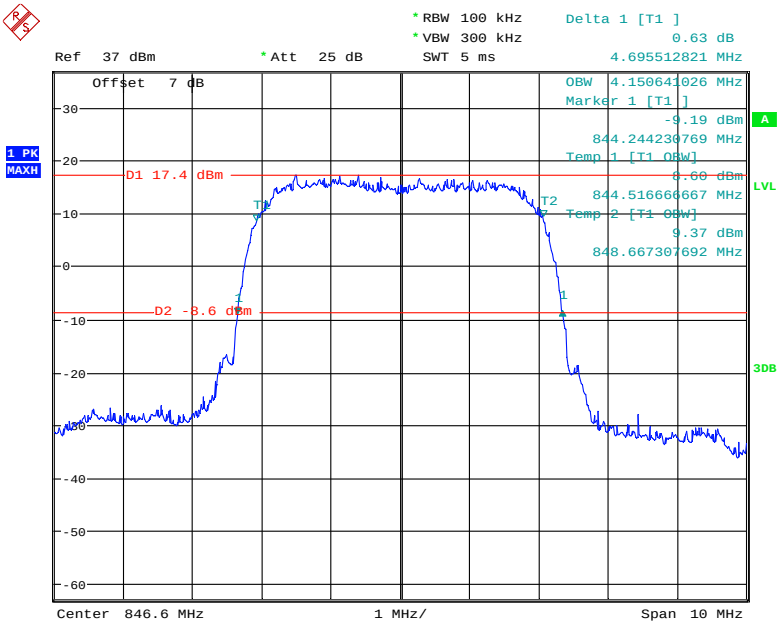
Date: 30.JAN.2021 13:08:29

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



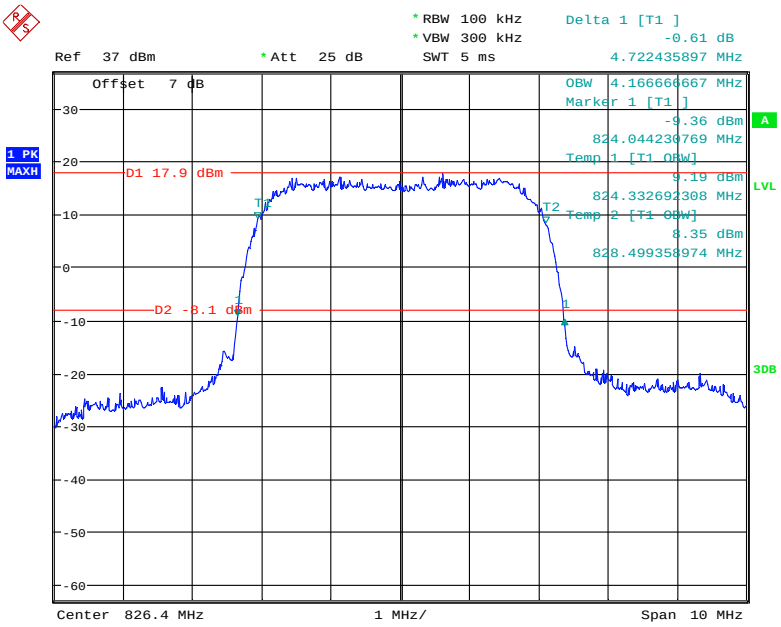
Date: 30.JAN.2021 11:58:13

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



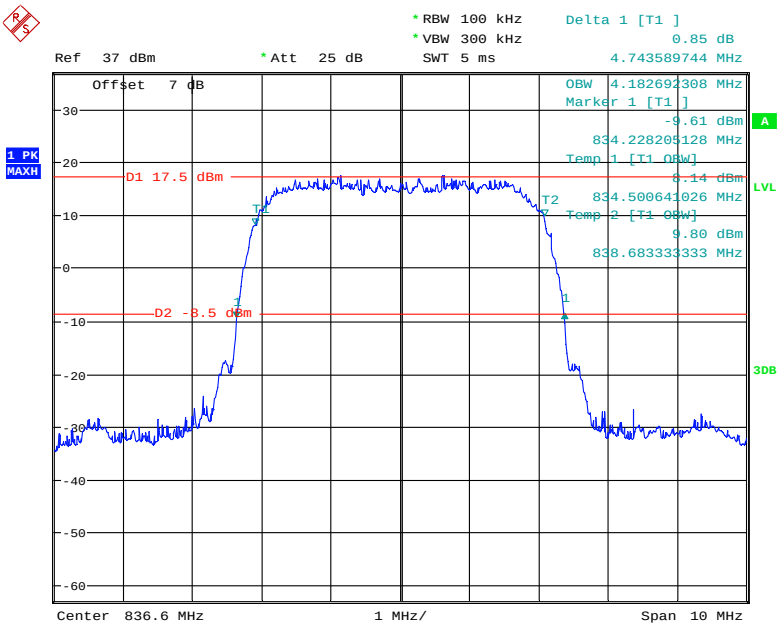
Date: 30.JAN.2021 11:57:04

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



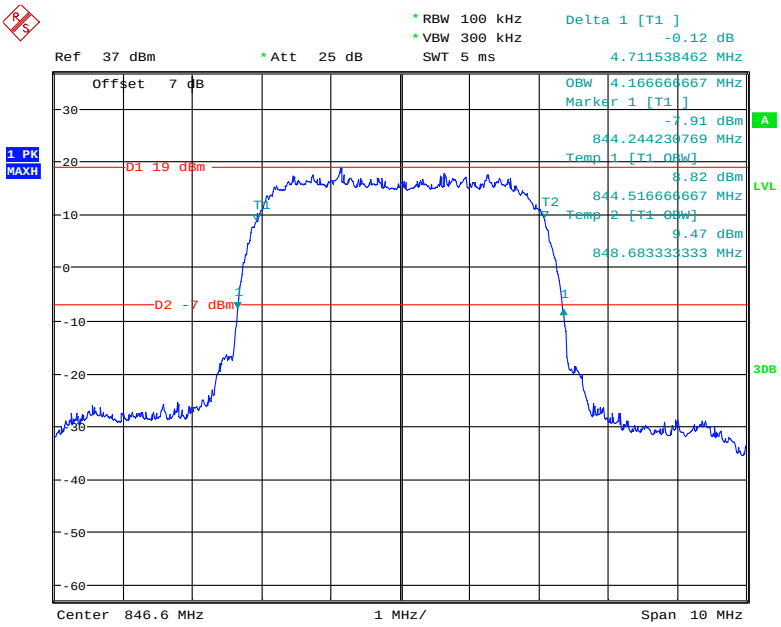
Date: 30.JAN.2021 13:13:14

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



Date: 30.JAN.2021 13:12:00

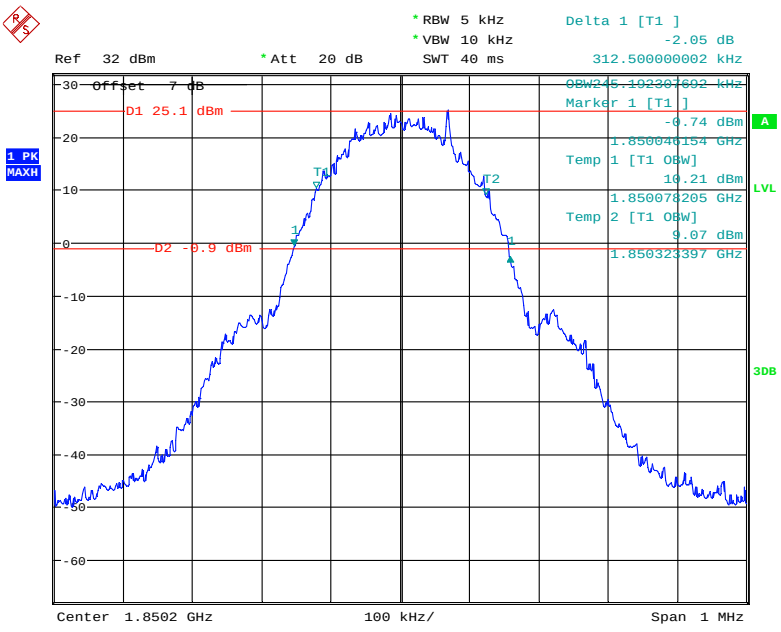
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 30.JAN.2021 13:10:51

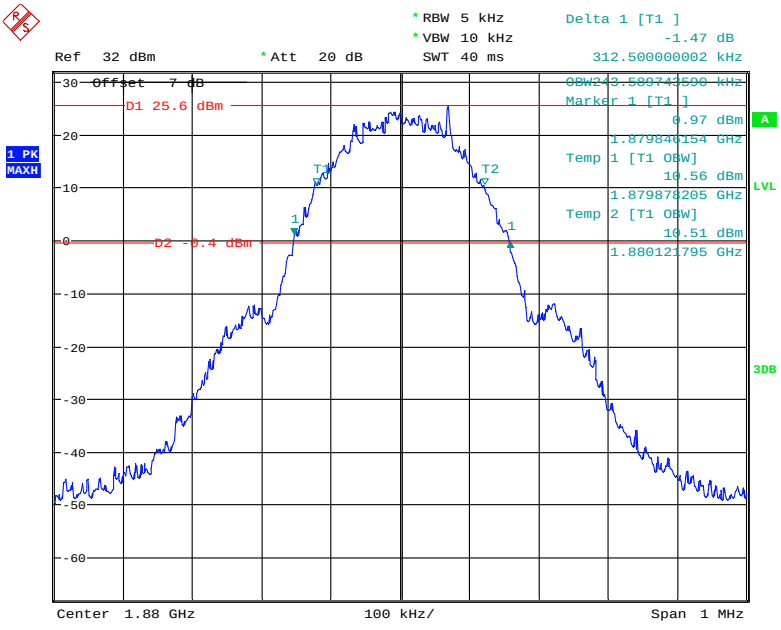
PCS Band (Part 24E)

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



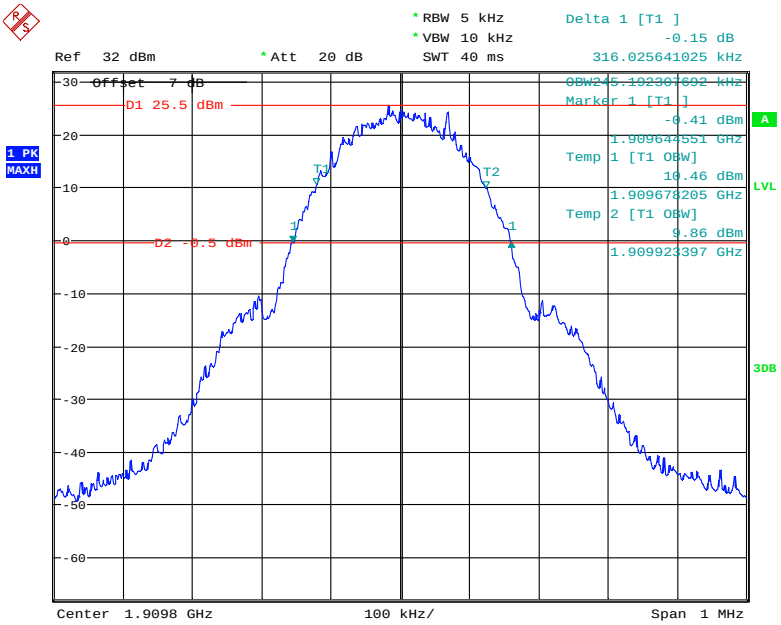
Date: 1.FEB.2021 16:12:45

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



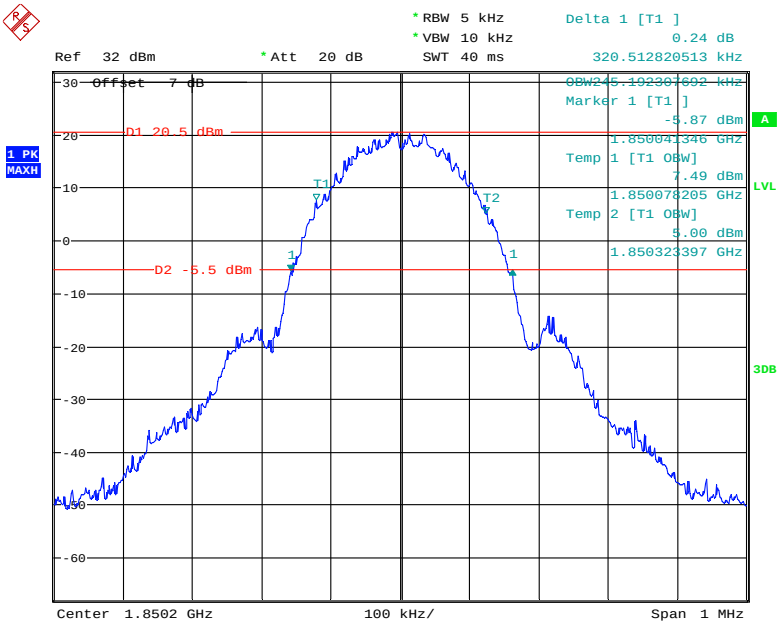
Date: 1.FEB.2021 16:15:33

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



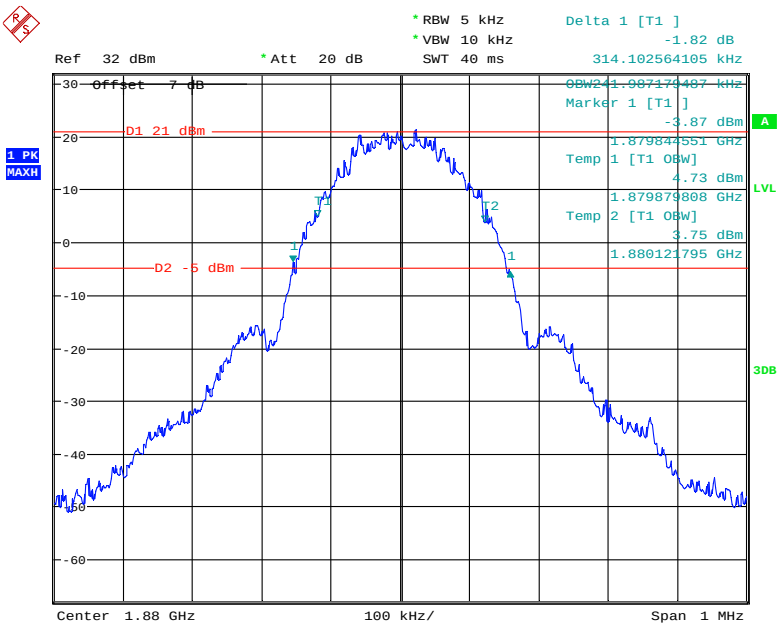
Date: 1.FEB.2021 16:17:24

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



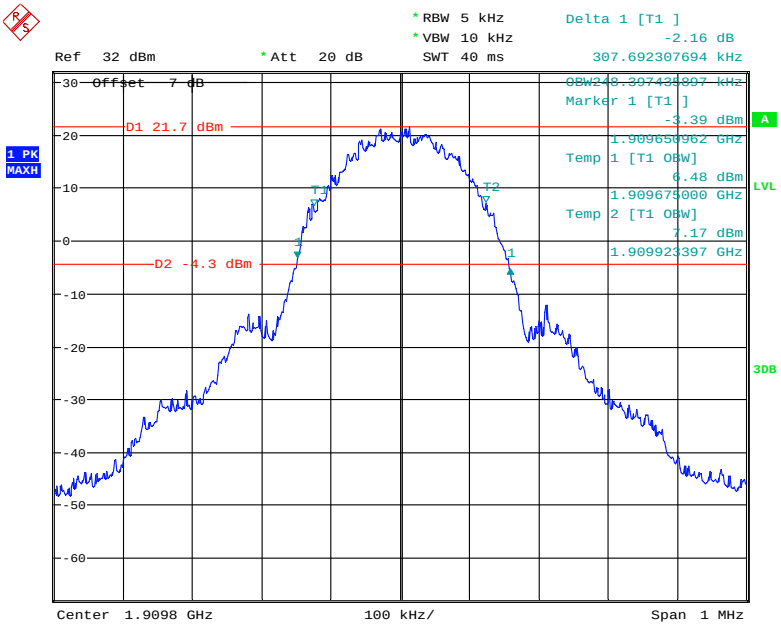
Date: 1.FEB.2021 16:30:43

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



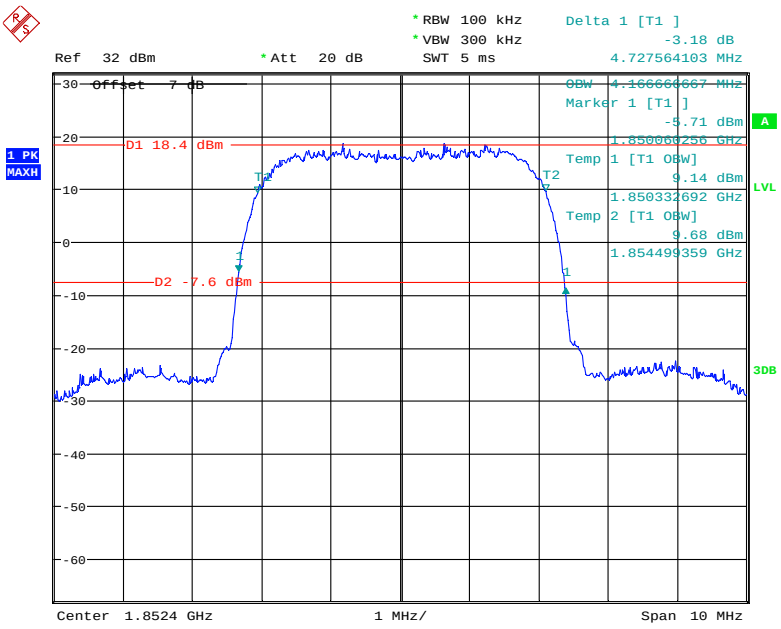
Date: 1.FEB.2021 16:31:53

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



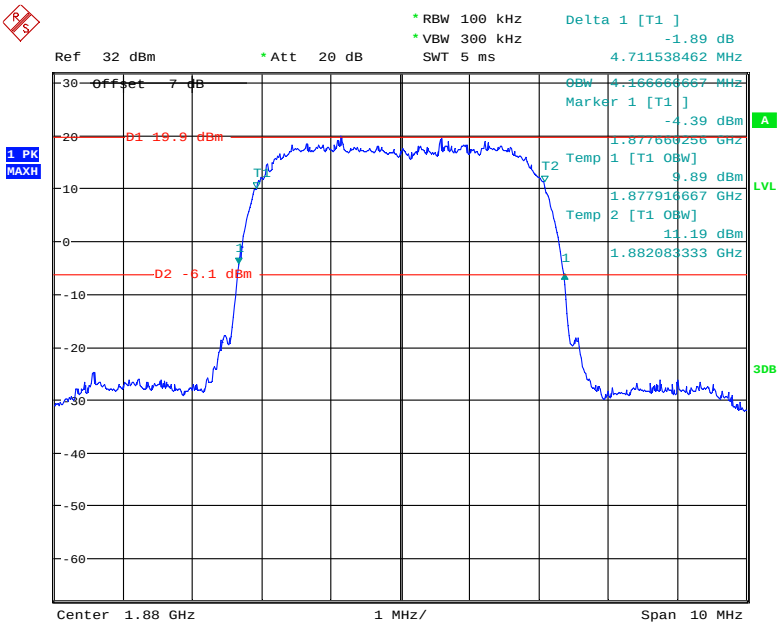
Date: 1.FEB.2021 16:33:24

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



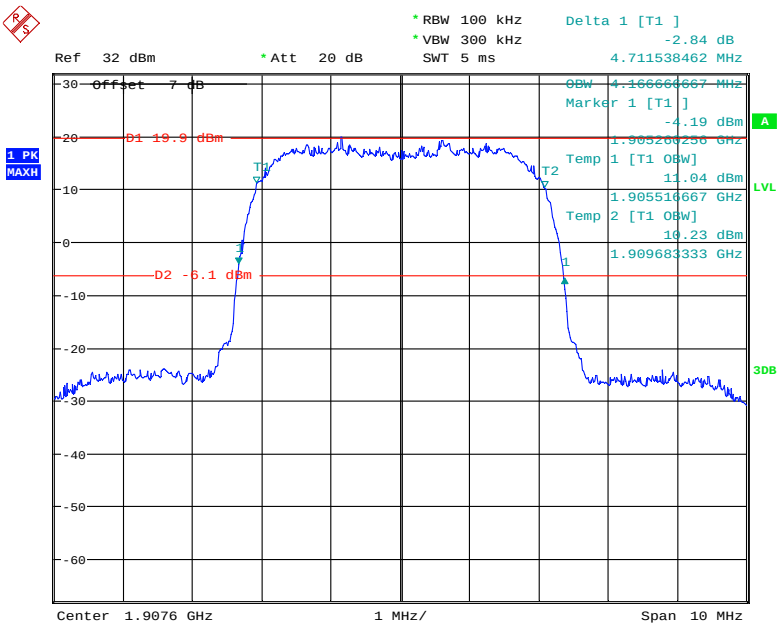
Date: 1.FEB.2021 14:34:39

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



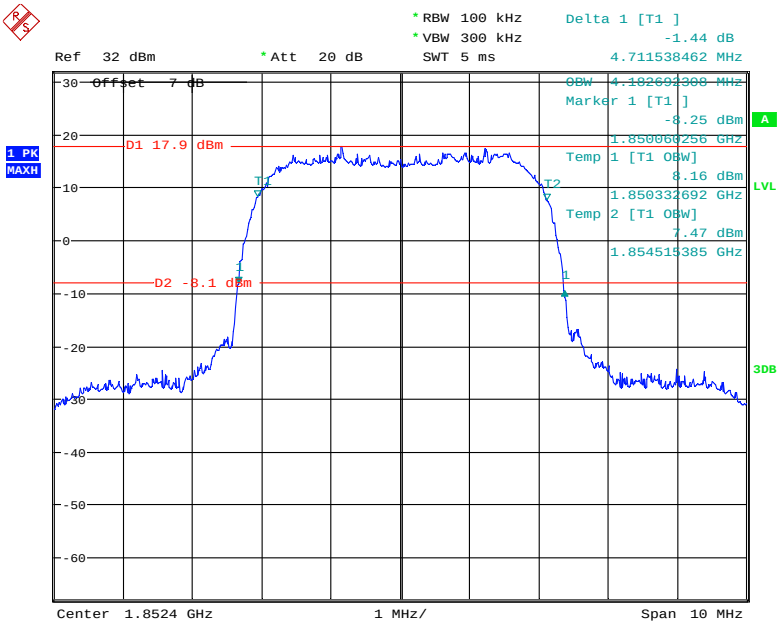
Date: 1.FEB.2021 14:32:54

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



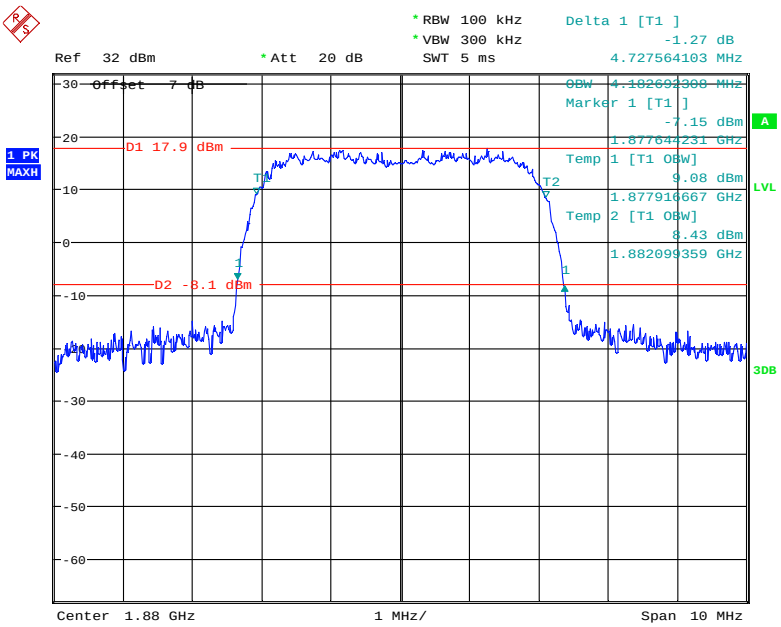
Date: 1.FEB.2021 14:30:54

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



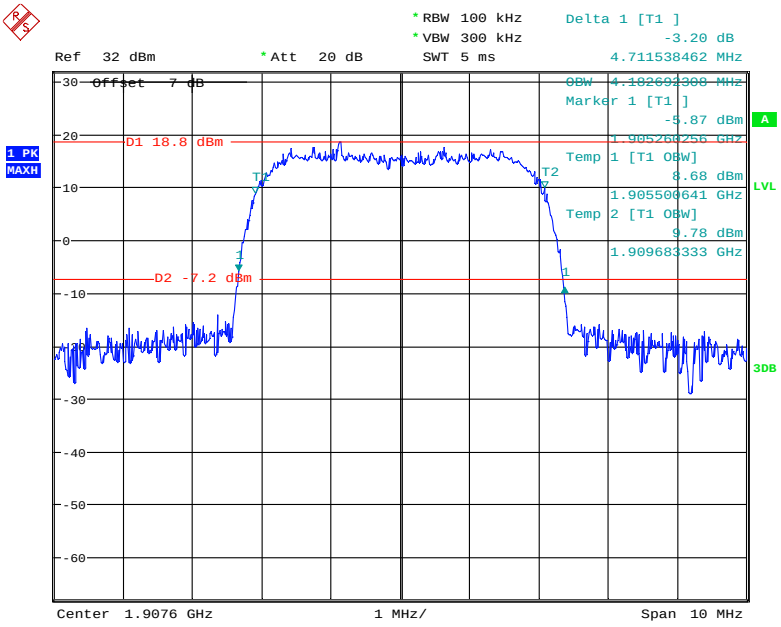
Date: 1.FEB.2021 15:03:13

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



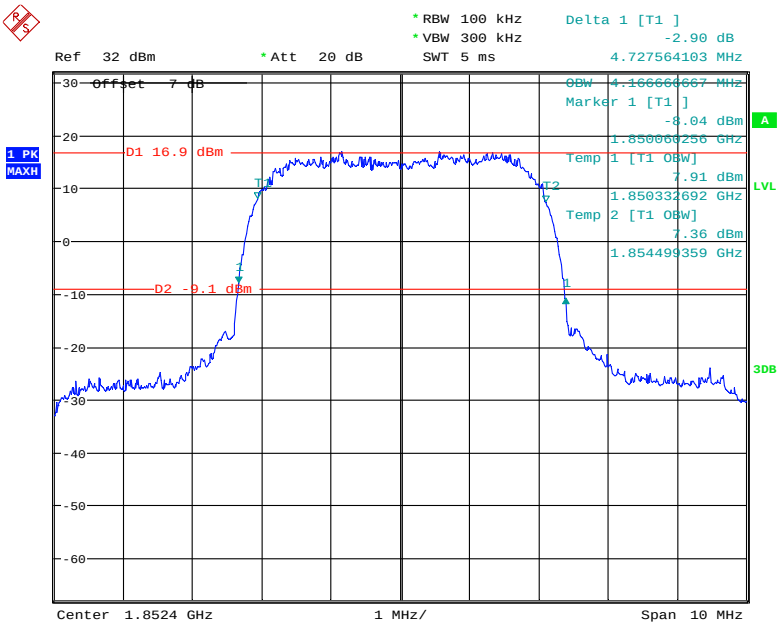
Date: 1.FEB.2021 15:01:50

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



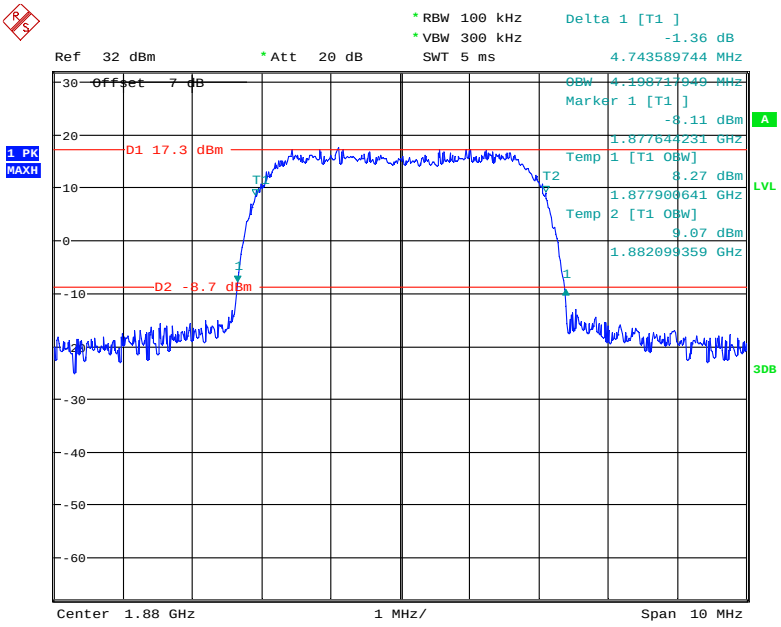
Date: 1.FEB.2021 15:00:32

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



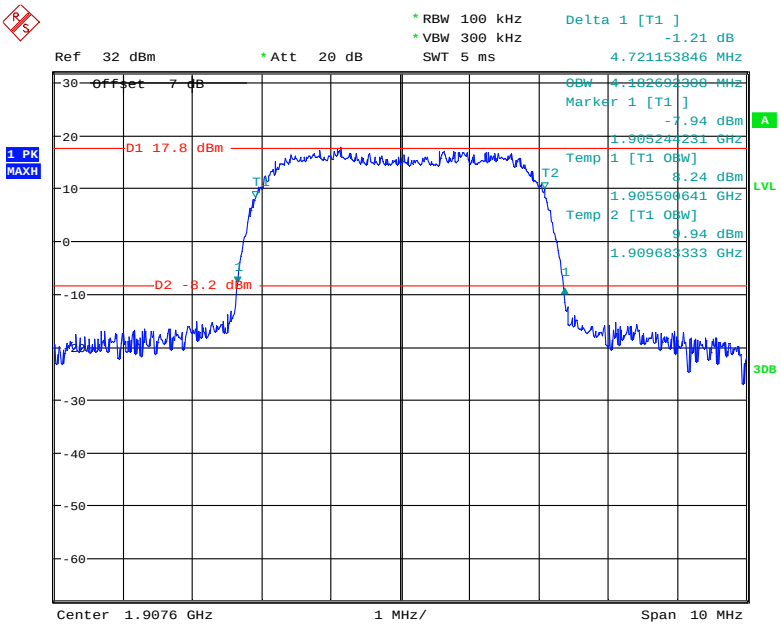
Date: 1.FEB.2021 15:04:58

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



Date: 1.FEB.2021 15:05:56

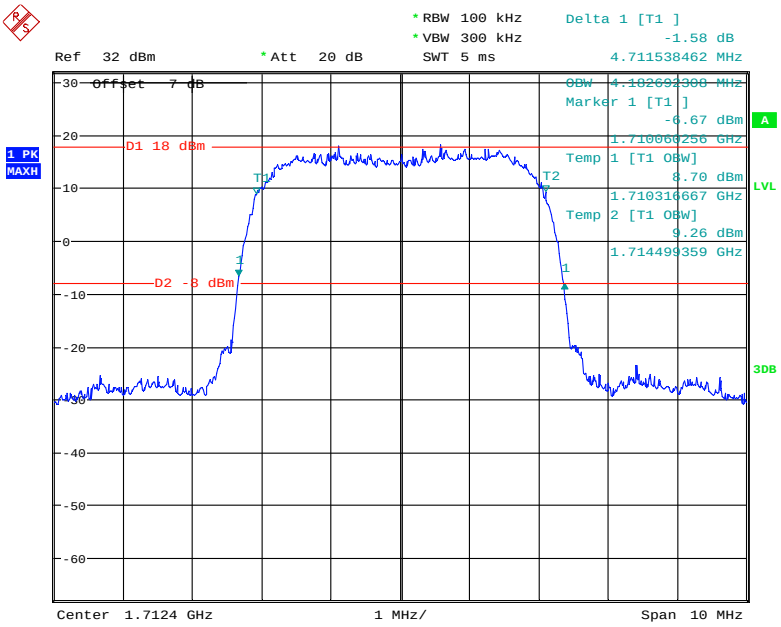
26 dB Emissions &99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 1.FEB.2021 15:07:12

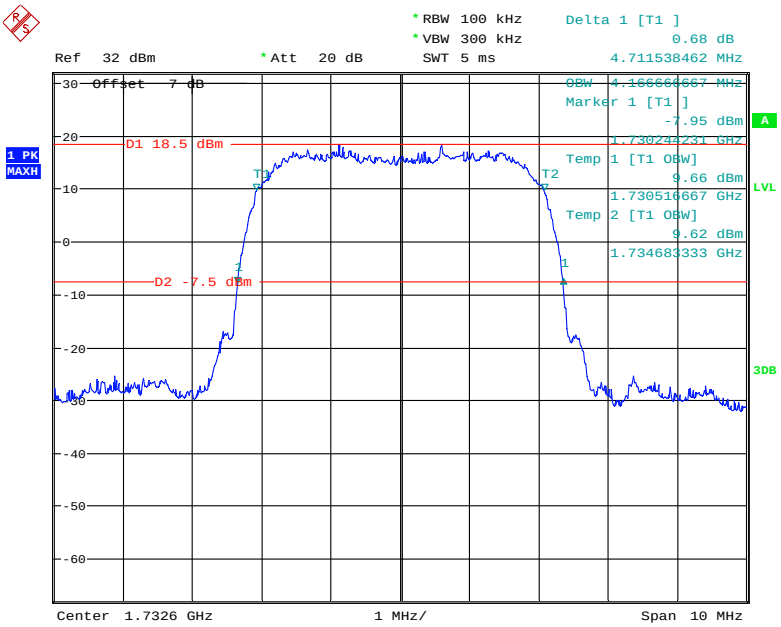
AWS Band (Part 27)

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



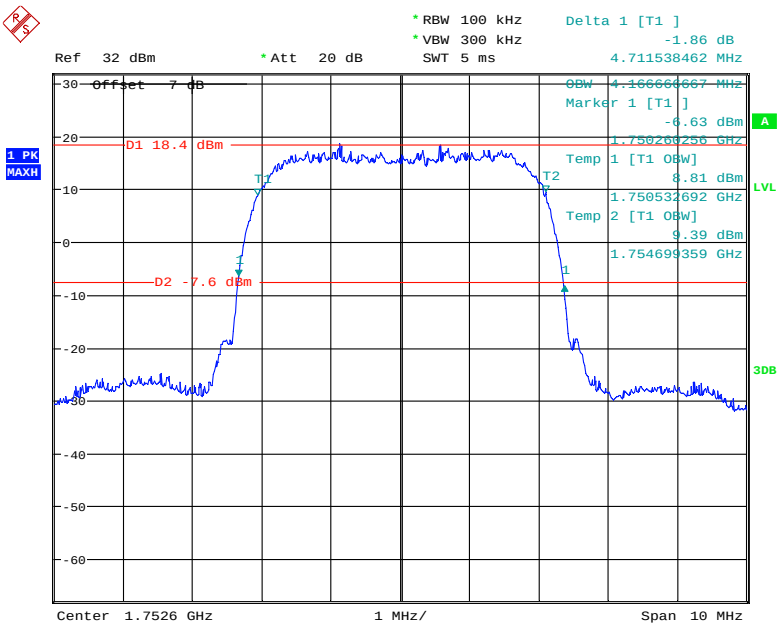
Date: 1.FEB.2021 15:23:12

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



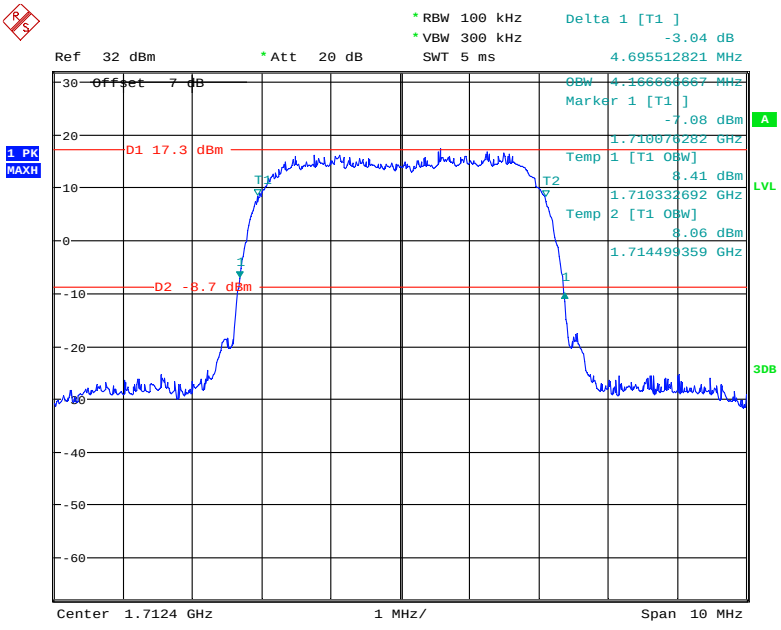
Date: 1.FEB.2021 15:22:19

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



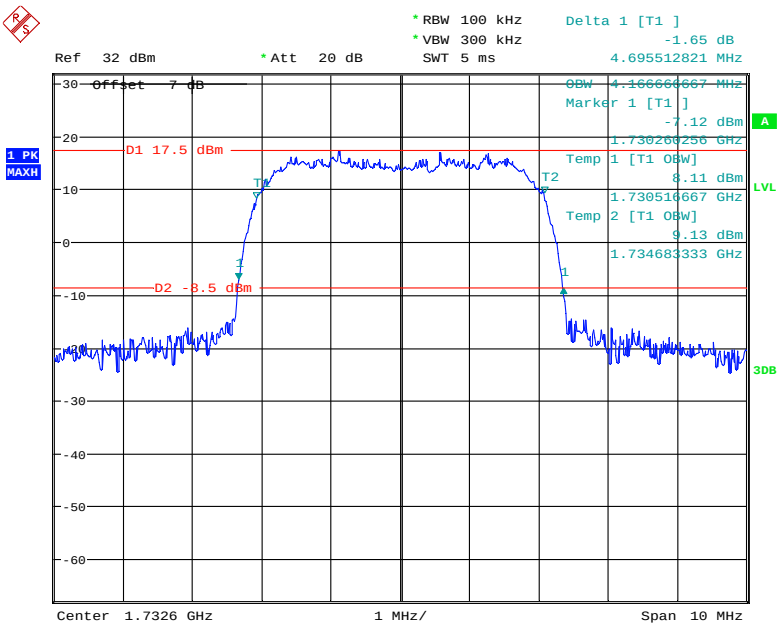
Date: 1.FEB.2021 15:21:14

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



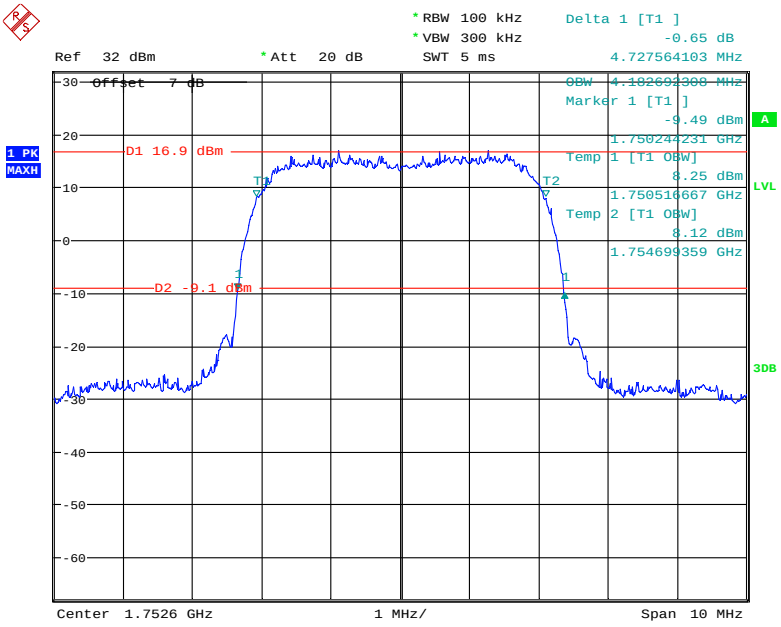
Date: 1.FEB.2021 15:33:37

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



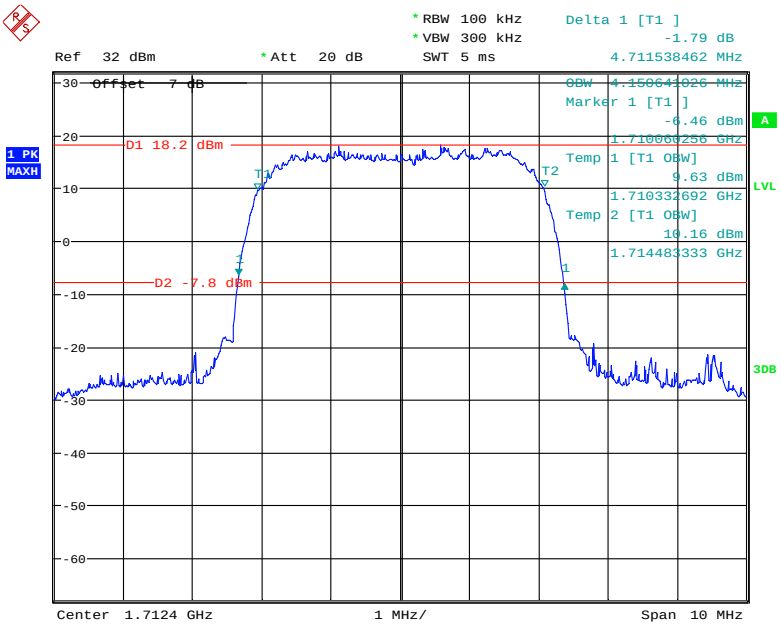
Date: 1.FEB.2021 15:35:06

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



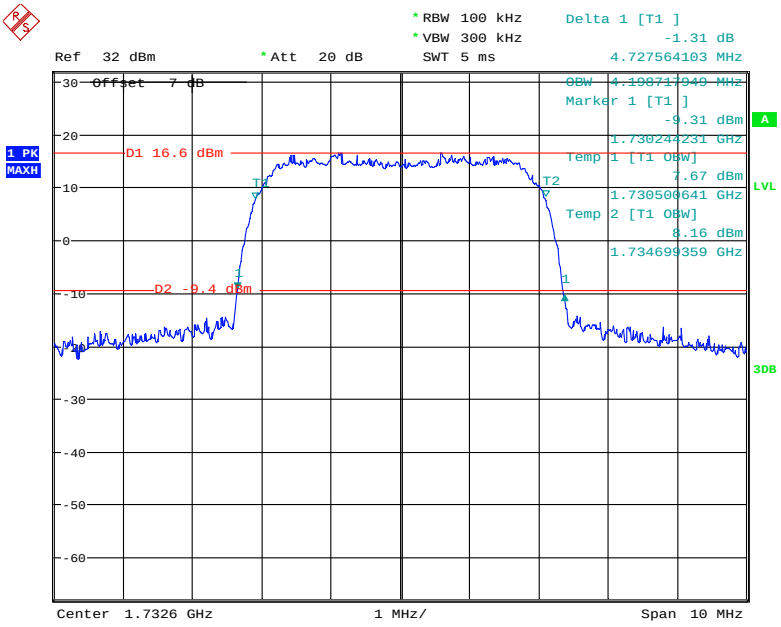
Date: 1.FEB.2021 15:36:24

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



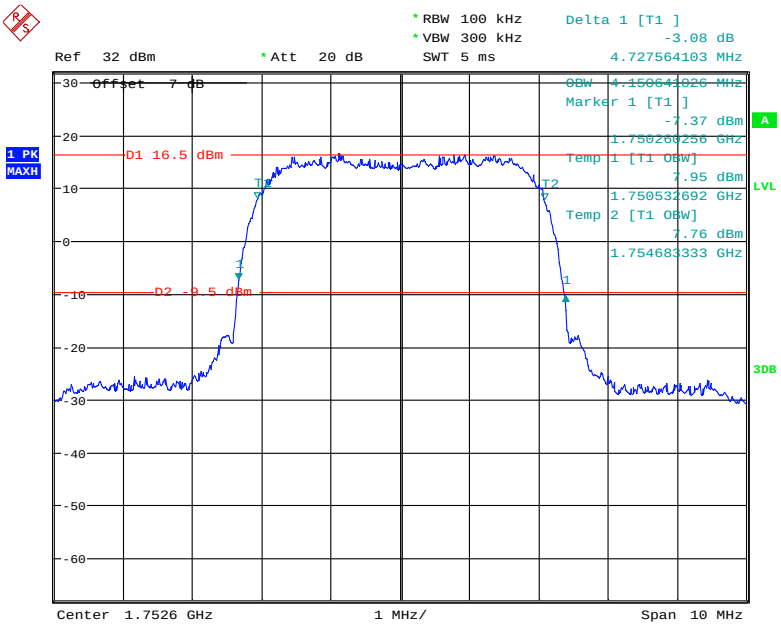
Date: 1.FEB.2021 15:25:57

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



Date: 1.FEB.2021 15:28:16

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



Date: 1.FEB.2021 15:29:42

LTE Band 2:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.110	1.290
		Middle	1.110	1.302
		High	1.104	1.302
	16QAM	Low	1.098	1.284
		Middle	1.098	1.284
		High	1.098	1.290
3	QPSK	Low	2.688	2.940
		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	4.500	4.940
		Middle	4.520	4.960
		High	4.520	4.900
	16QAM	Low	4.520	4.920
		Middle	4.520	4.960
		High	4.540	4.920
10	QPSK	Low	8.960	9.640
		Middle	8.960	9.600
		High	8.960	9.640
	16QAM	Low	8.960	9.680
		Middle	8.960	9.560
		High	8.960	9.600
15	QPSK	Low	13.500	14.760
		Middle	13.500	14.760
		High	13.500	14.820
	16QAM	Low	13.560	14.880
		Middle	13.560	14.760
		High	13.560	14.820
20	QPSK	Low	18.000	19.440
		Middle	18.000	19.440
		High	18.000	19.520
	16QAM	Low	17.920	19.280
		Middle	18.000	19.440
		High	18.000	19.440

Band 4:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.110	1.284
		Middle	1.104	1.284
		High	1.110	1.308
	16QAM	Low	1.098	1.278
		Middle	1.098	1.278
		High	1.098	1.278
3	QPSK	Low	2.688	2.928
		Middle	2.688	2.940
		High	2.688	2.928
	16QAM	Low	2.688	2.940
		Middle	2.688	2.952
		High	2.688	2.952
5	QPSK	Low	4.520	4.900
		Middle	4.520	4.920
		High	4.520	4.940
	16QAM	Low	4.520	4.940
		Middle	4.520	4.960
		High	4.520	4.960
10	QPSK	Low	8.960	9.560
		Middle	8.960	9.600
		High	8.960	9.600
	16QAM	Low	8.960	9.640
		Middle	8.960	9.640
		High	8.920	9.600
15	QPSK	Low	13.500	15.300
		Middle	13.500	14.700
		High	13.500	14.700
	16QAM	Low	13.560	15.360
		Middle	13.560	14.700
		High	13.560	14.640
20	QPSK	Low	18.000	19.360
		Middle	18.000	19.440
		High	17.920	19.360
	16QAM	Low	18.000	19.600
		Middle	17.920	19.360
		High	17.920	19.360

Band 5:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.110	1.284
		Middle	1.110	1.284
		High	1.104	1.278
	16QAM	Low	1.104	1.284
		Middle	1.104	1.272
		High	1.098	1.278
3	QPSK	Low	2.688	2.940
		Middle	2.688	2.940
		High	2.688	2.940
	16QAM	Low	2.688	2.952
		Middle	2.688	2.952
		High	2.688	2.940
5	QPSK	Low	4.500	4.920
		Middle	4.520	4.960
		High	4.500	4.900
	16QAM	Low	4.520	4.960
		Middle	4.520	4.920
		High	4.520	4.940
10	QPSK	Low	8.960	9.560
		Middle	8.960	9.600
		High	8.960	9.640
	16QAM	Low	8.960	9.560
		Middle	8.960	9.640
		High	8.960	9.560

Band 7

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.520	4.920
		Middle	4.520	4.920
		High	4.520	4.920
	16QAM	Low	4.540	4.960
		Middle	4.520	4.940
		High	4.520	4.940
10	QPSK	Low	8.960	9.680
		Middle	8.960	9.600
		High	8.960	9.600
	16QAM	Low	9.000	9.520
		Middle	8.960	9.680
		High	8.960	9.640
15	QPSK	Low	13.560	14.760
		Middle	13.560	14.760
		High	13.560	14.820
	16QAM	Low	13.500	14.760
		Middle	13.560	14.700
		High	13.560	14.700
20	QPSK	Low	18.000	19.600
		Middle	18.000	19.360
		High	18.000	19.280
	16QAM	Low	17.920	19.440
		Middle	18.080	19.520
		High	17.920	19.440

LTE Band 38:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.500	5.000
		Middle	4.520	5.040
		High	4.520	5.060
	16QAM	Low	4.520	4.920
		Middle	4.500	4.920
		High	4.520	4.920
10	QPSK	Low	8.960	9.560
		Middle	8.960	9.720
		High	8.960	9.480
	16QAM	Low	8.960	9.520
		Middle	8.960	9.520
		High	8.960	9.520
15	QPSK	Low	13.500	15.180
		Middle	13.500	14.940
		High	13.500	15.060
	16QAM	Low	13.560	15.660
		Middle	13.500	15.000
		High	13.560	14.880
20	QPSK	Low	18.000	19.520
		Middle	18.000	19.360
		High	17.920	19.360
	16QAM	Low	18.000	19.520
		Middle	18.000	19.280
		High	18.000	20.000

LTE Band 40 Lower

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.500	4.920
		Middle	4.500	4.860
		High	4.520	5.040
	16QAM	Low	4.520	4.920
		Middle	4.500	4.920
		High	4.520	4.940
10	QPSK	Low	/	/
		Middle	8.960	9.560
		High	/	/
	16QAM	Low	/	/
		Middle	8.960	9.440
		High	/	/

LTE Band 40 Upper

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.520	5.040
		Middle	4.520	4.900
		High	4.520	4.900
	16QAM	Low	4.500	4.920
		Middle	4.520	5.000
		High	4.520	5.000
10	QPSK	Low	/	/
		Middle	9.000	9.640
		High	/	/
	16QAM	Low	/	/
		Middle	8.960	9.560
		High	/	/

LTE Band 41:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.519	4.942
		Middle	4.503	5.090
		High	4.519	5.215
	16QAM	Low	4.519	5.067
		Middle	4.503	4.949
		High	4.519	5.013
10	QPSK	Low	8.974	9.673
		Middle	8.942	9.660
		High	8.942	9.679
	16QAM	Low	8.910	9.577
		Middle	8.942	9.577
		High	8.974	9.538
15	QPSK	Low	13.558	15.150
		Middle	13.558	15.375
		High	13.558	15.731
	16QAM	Low	13.558	15.265
		Middle	13.558	16.337
		High	13.606	15.827
20	QPSK	Low	17.885	19.218
		Middle	17.949	19.782
		High	18.013	20.038
	16QAM	Low	17.821	19.564
		Middle	18.013	19.731
		High	17.949	19.372

LTE Band 66

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.110	1.284
		Middle	1.104	1.302
		High	1.104	1.308
	16QAM	Low	1.092	1.278
		Middle	1.098	1.284
		High	1.098	1.284
3	QPSK	Low	2.688	2.940
		Middle	2.688	2.928
		High	2.688	2.916
	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	4.940
		High	4.520	4.920
	16QAM	Low	4.520	4.960
		Middle	4.540	4.960
		High	4.520	4.920
10	QPSK	Low	8.960	9.640
		Middle	8.960	9.560
		High	8.960	9.600
	16QAM	Low	8.960	9.600
		Middle	8.960	9.640
		High	8.960	9.560
15	QPSK	Low	13.500	14.760
		Middle	13.500	14.820
		High	13.500	14.760
	16QAM	Low	13.500	14.760
		Middle	13.500	14.760
		High	13.500	14.760
20	QPSK	Low	17.920	19.200
		Middle	17.920	19.360
		High	18.000	19.200
	16QAM	Low	17.920	19.440
		Middle	18.000	19.280
		High	17.920	19.360

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

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

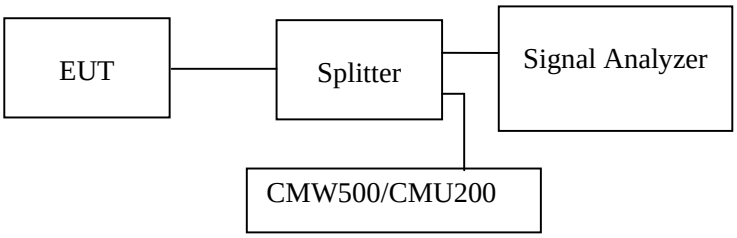
Applicable Standard

FCC §2.1051, §22.917(a) 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:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Alan He from 2021-01-27 to 2021-02-05.

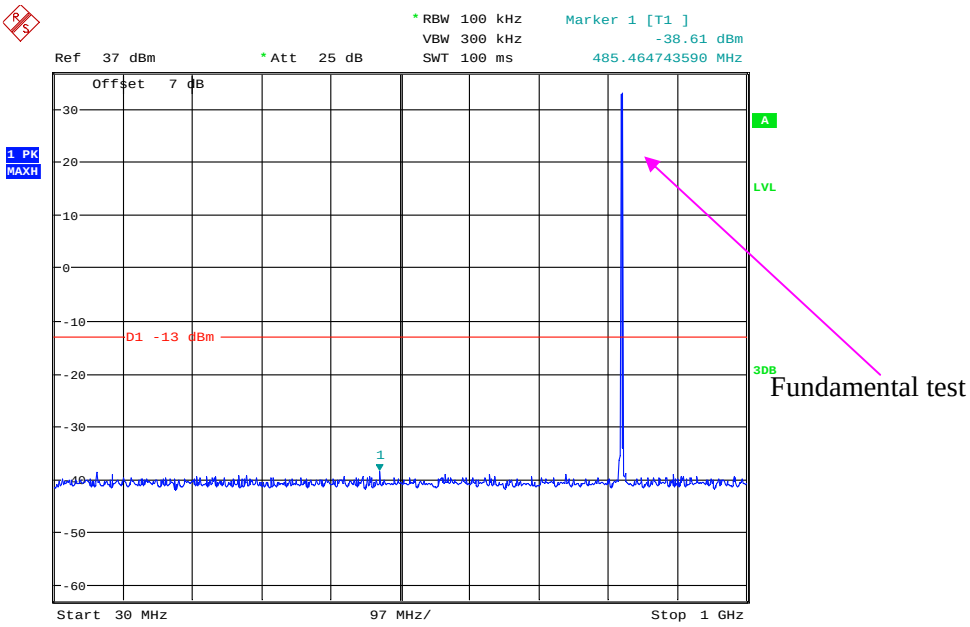
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

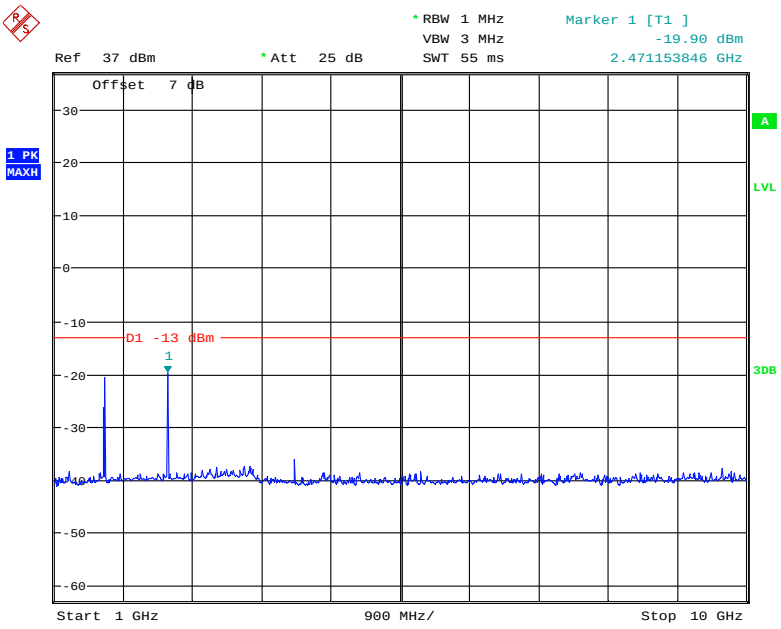
Cellular Band (Part 22H)
Low Channel:

30 MHz – 1 GHz (GSM Mode)



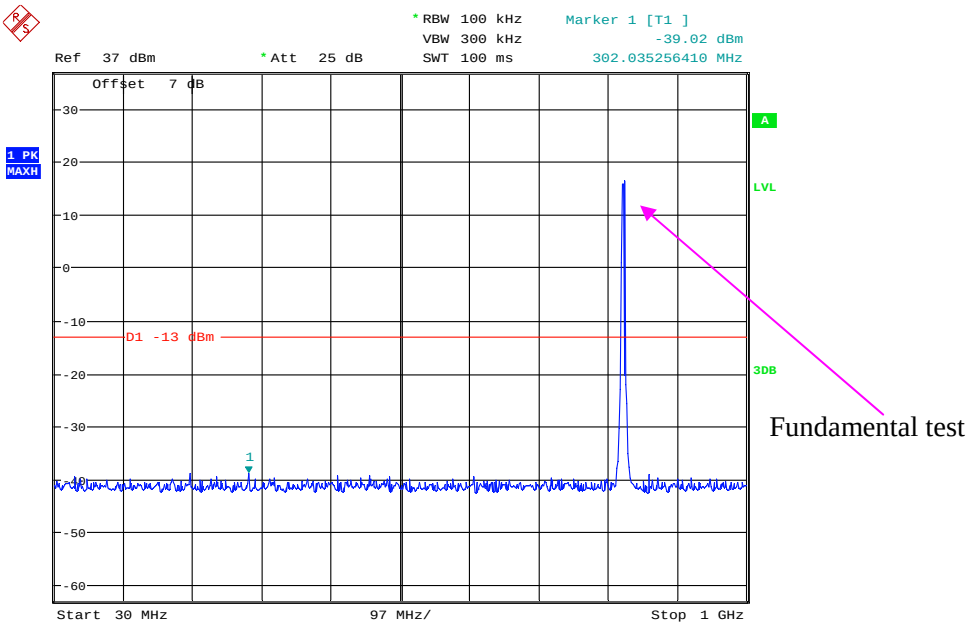
Date: 30.JAN.2021 11:44:53

1 GHz – 10 GHz (GSM Mode)



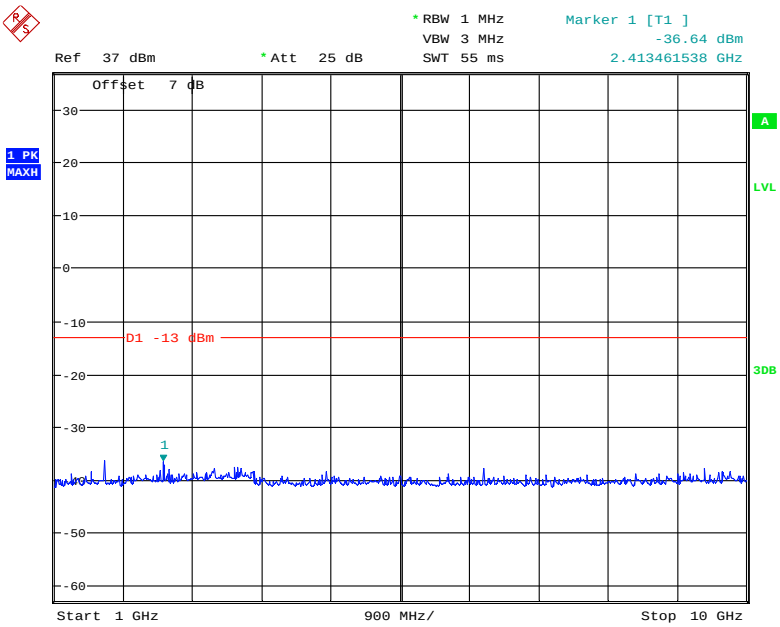
Date: 30.JAN.2021 11:47:10

30 MHz – 1 GHz (WCDMA Mode)



Date: 30.JAN.2021 11:51:35

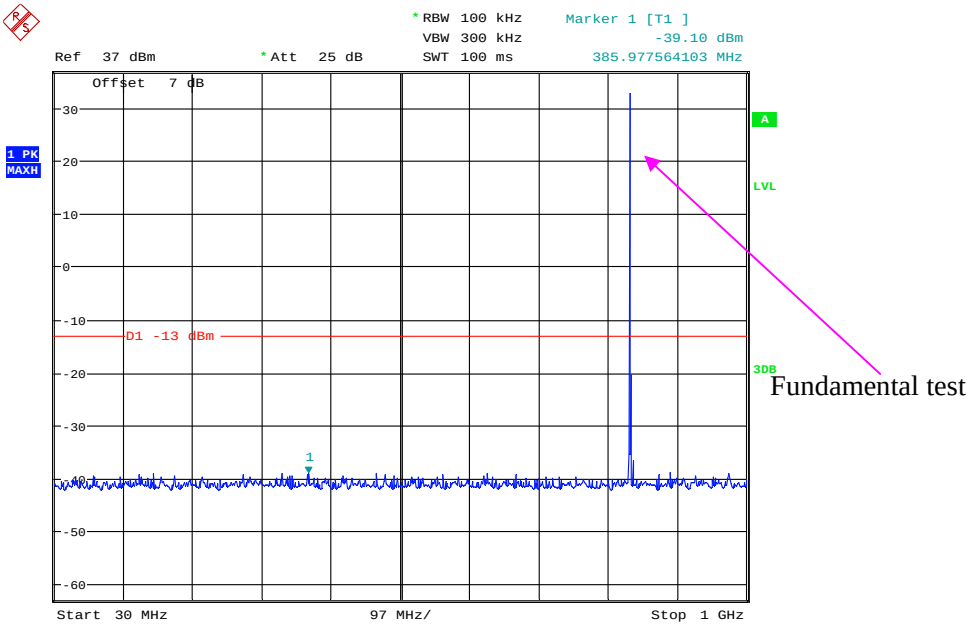
1 GHz – 10 GHz (WCDMA Mode)



Date: 30.JAN.2021 11:49:38

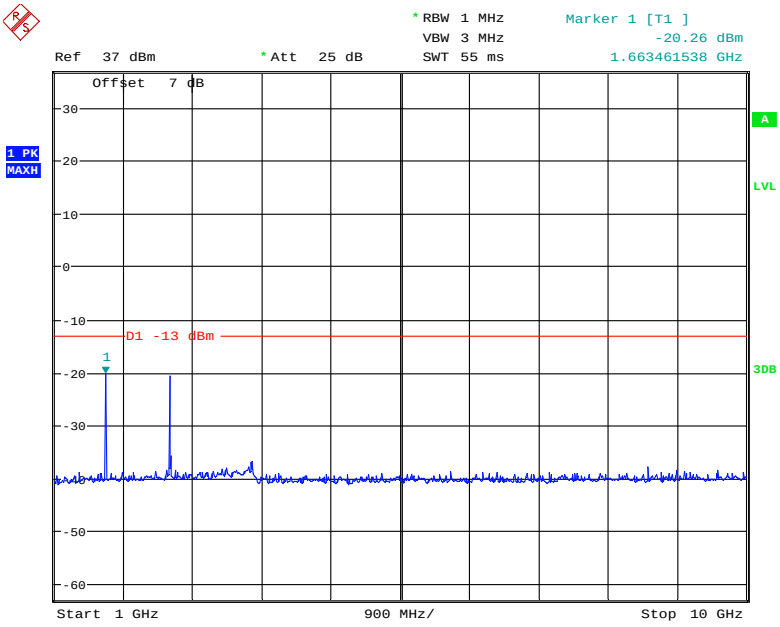
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



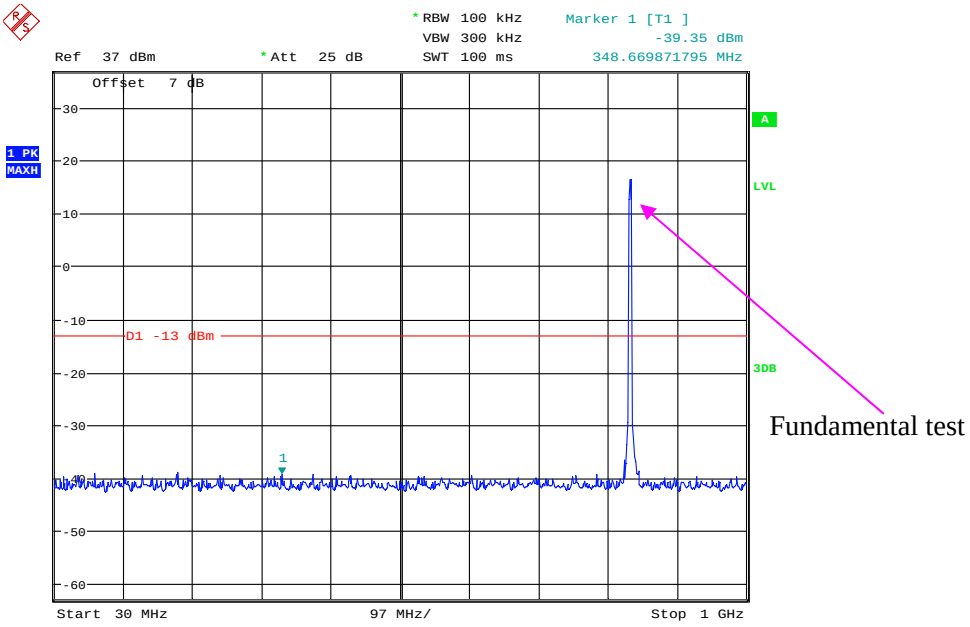
Date: 30.JAN.2021 11:45:42

1 GHz – 10 GHz (GSM Mode)



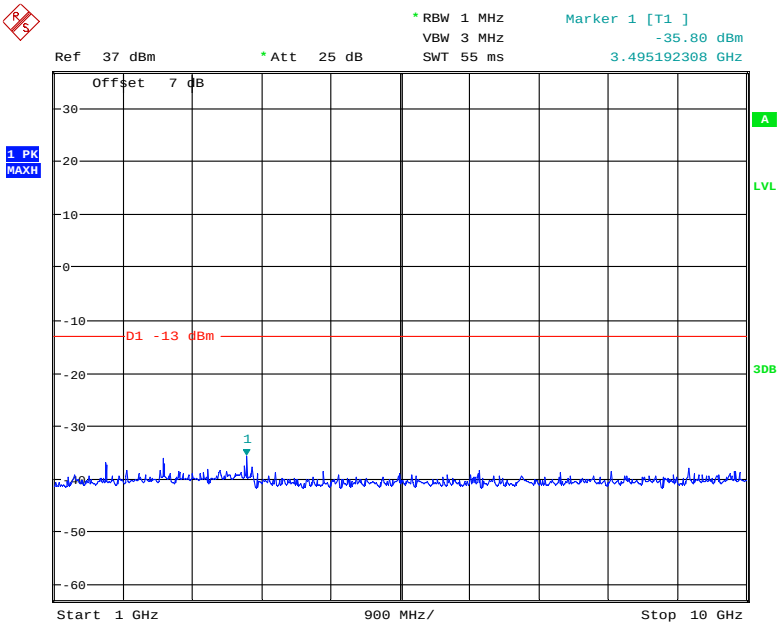
Date: 30.JAN.2021 11:46:49

30 MHz – 1 GHz (WCDMA Mode)



Date: 30.JAN.2021 11:51:15

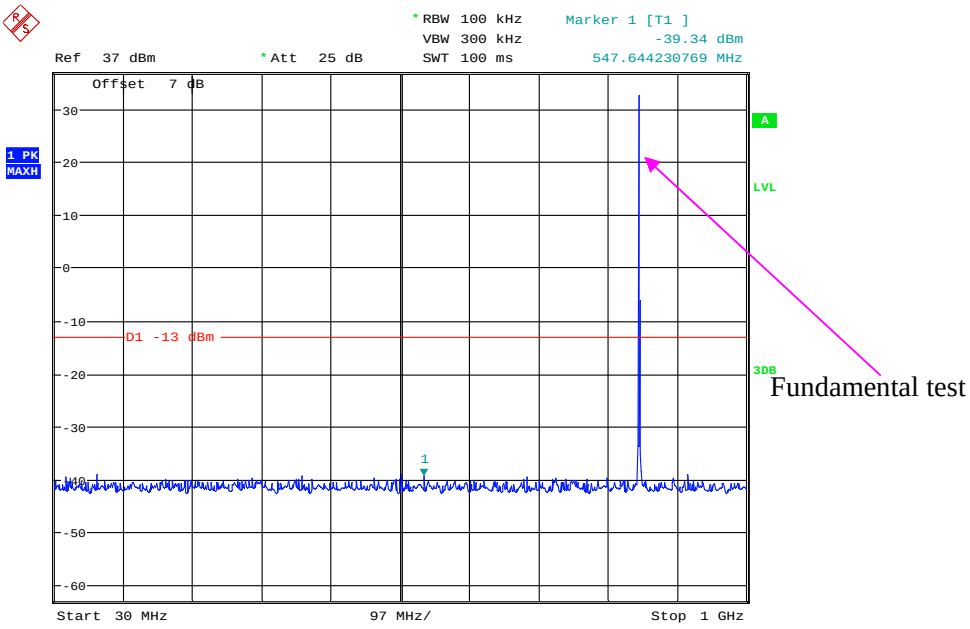
1 GHz – 10 GHz (WCDMA Mode)



Date: 30.JAN.2021 11:50:00

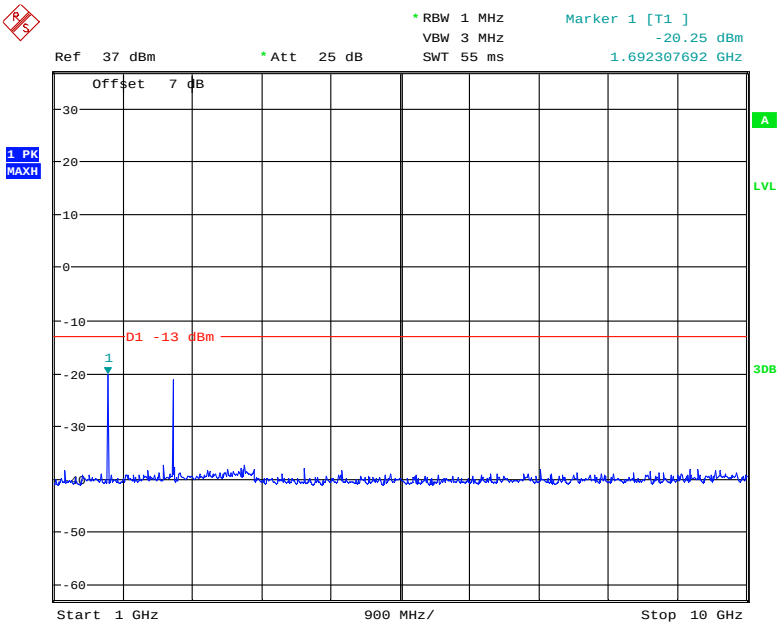
High Channel:

30 MHz – 1 GHz (GSM Mode)



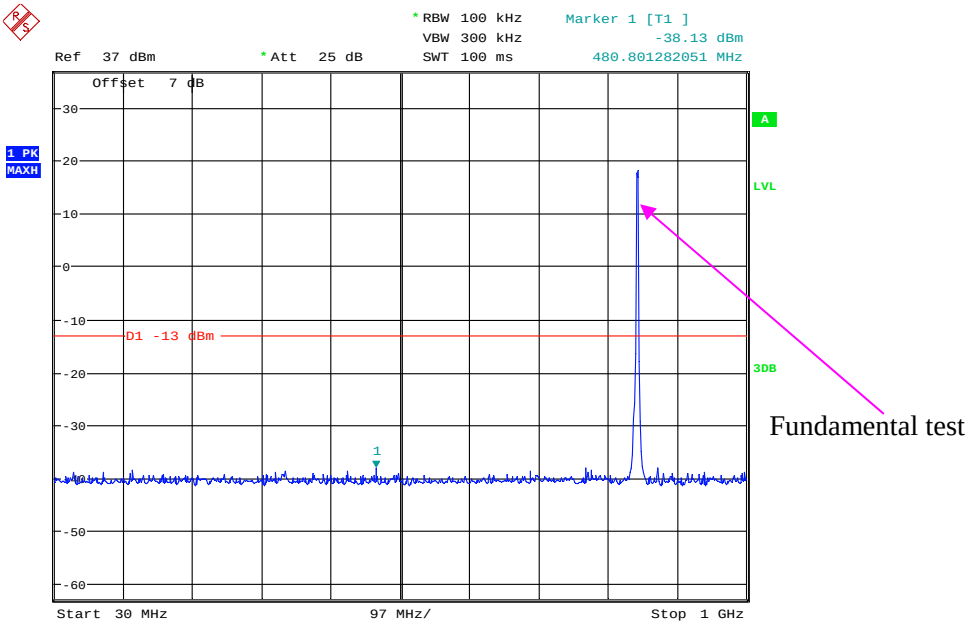
Date: 30.JAN.2021 11:45:59

1 GHz – 10 GHz (GSM Mode)



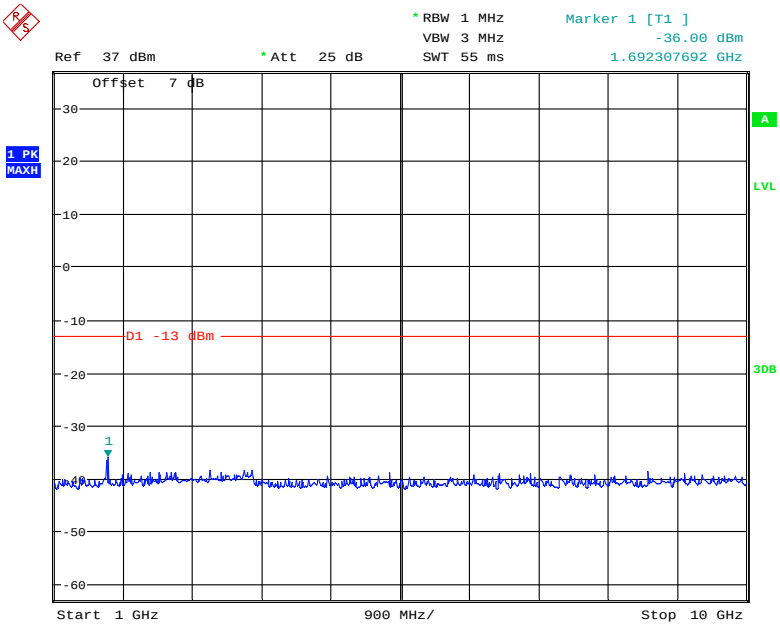
Date: 30.JAN.2021 11:46:22

30 MHz – 1 GHz (WCDMA Mode)



Date: 30.JAN.2021 11:50:52

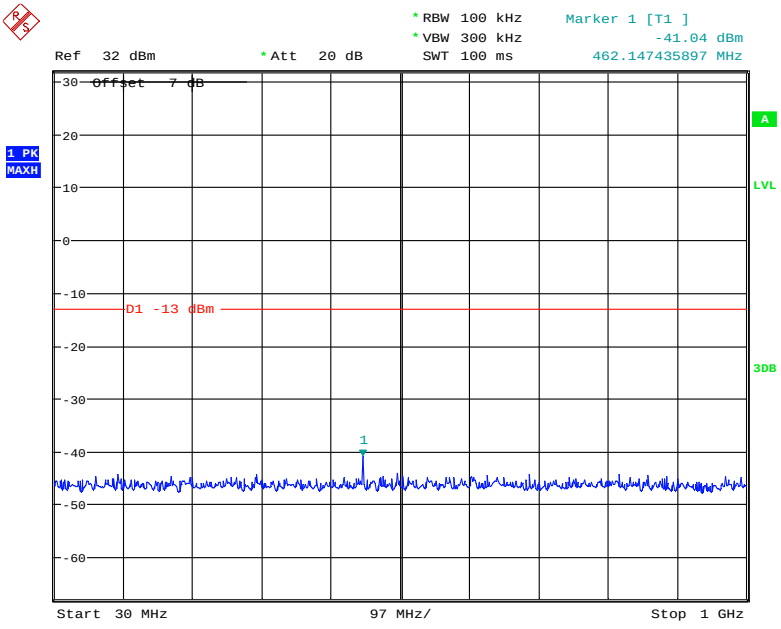
1 GHz – 10 GHz (WCDMA Mode)



Date: 30.JAN.2021 11:50:12

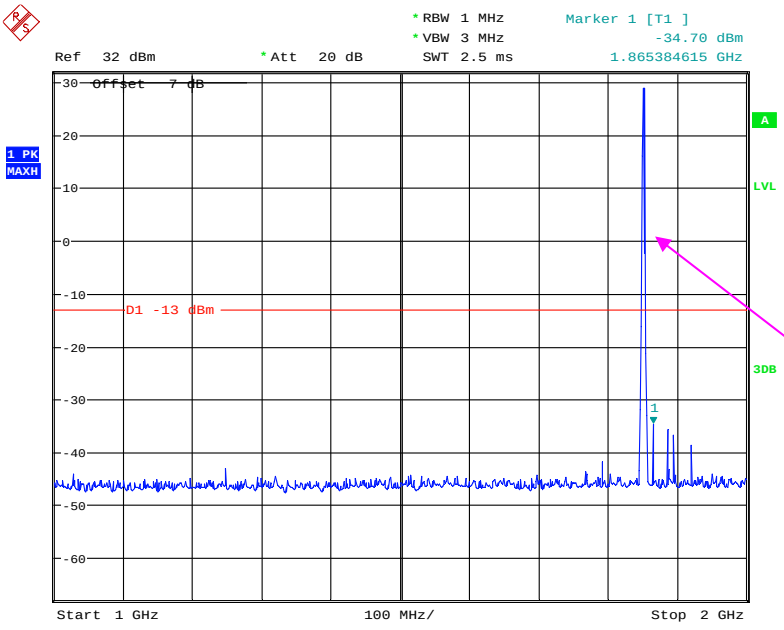
PCS Band (Part 24E) Low Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 1.FEB.2021 16:21:00

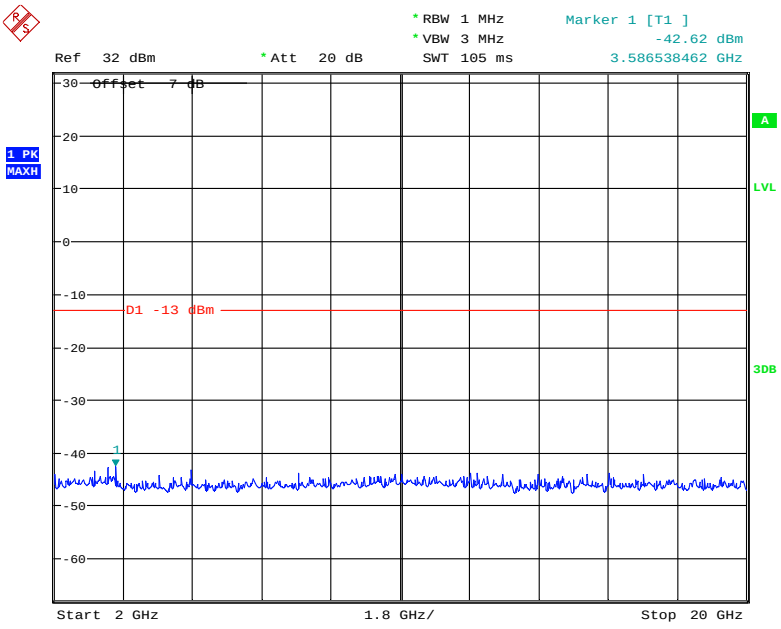
1 GHz – 2 GHz (GSM Mode)



Fundamental test

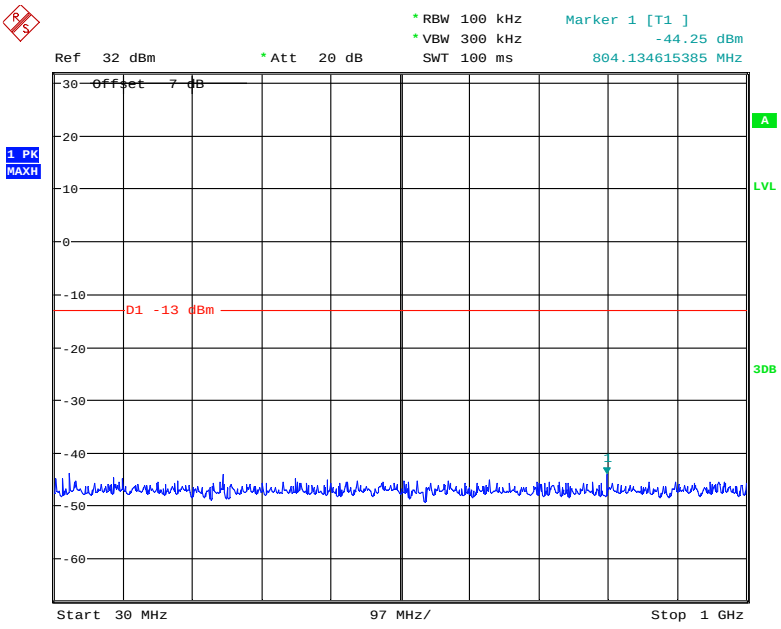
Date: 1.FEB.2021 16:21:53

2 GHz – 2 0GHz (GSM Mode)



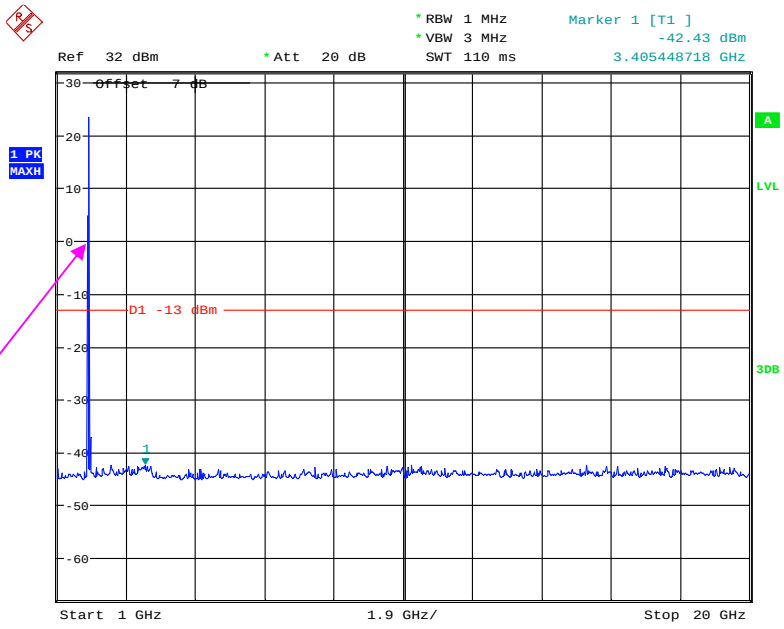
Date: 1.FEB.2021 16:22:24

30 MHz – 1 GHz (WCDMA Mode)



Date: 1.FEB.2021 14:42:56

1 GHz – 20 GHz (WCDMA Mode)

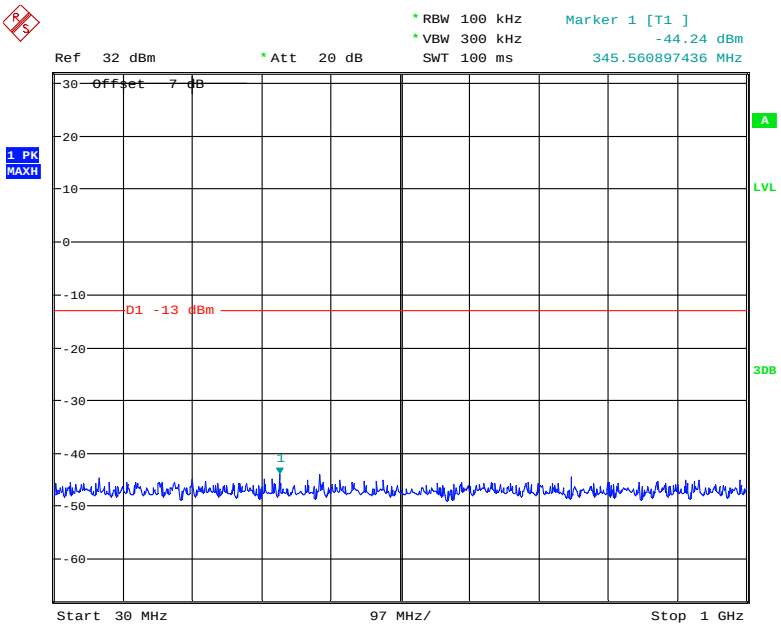


Fundamental test

Date: 1.FEB.2021 14:42:36

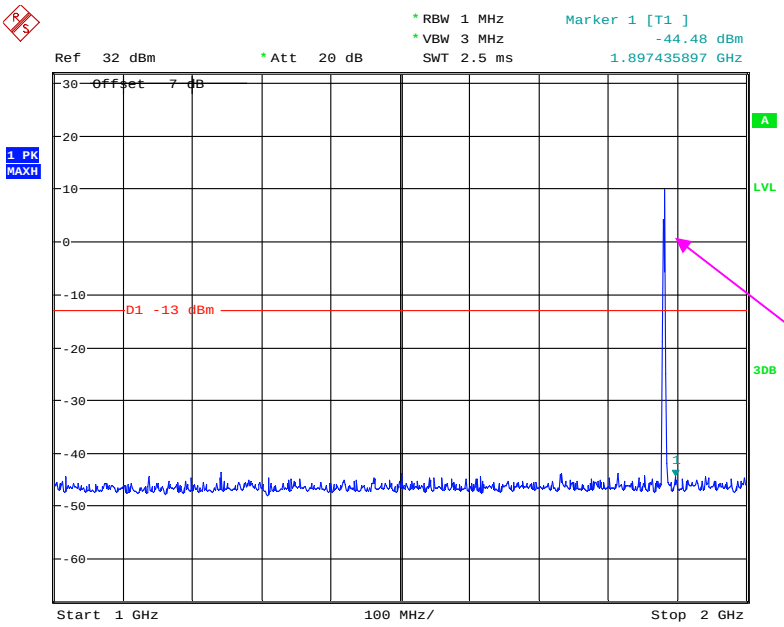
Middle Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 1.FEB.2021 16:25:18

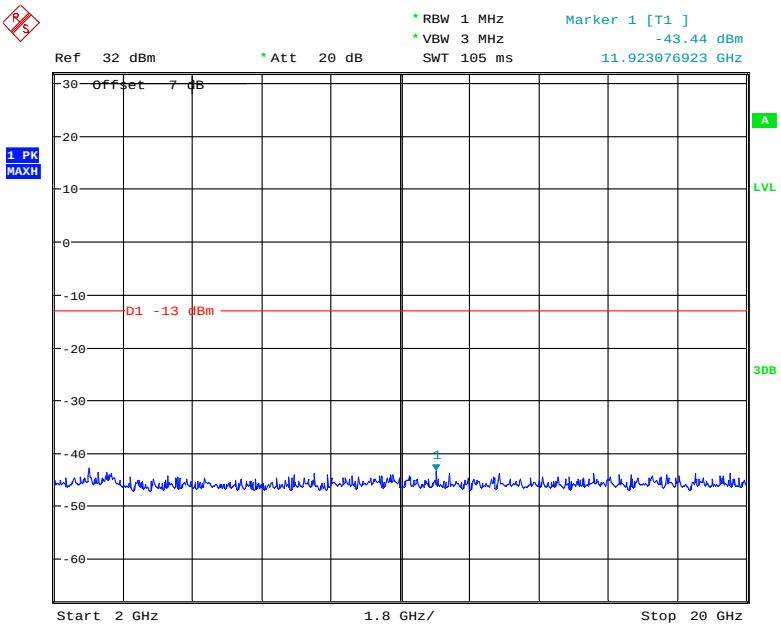
1 GHz – 2 GHz (GSM Mode)



Fundamental test

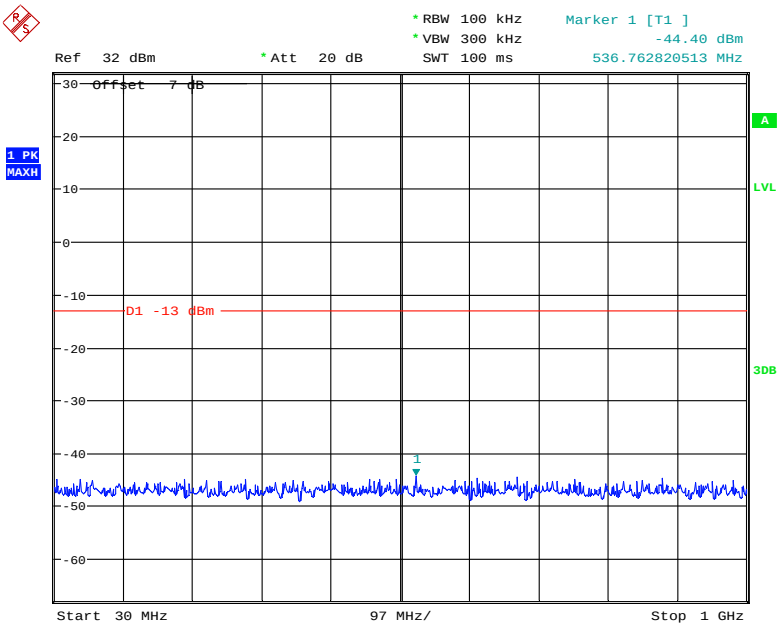
Date: 1.FEB.2021 16:24:59

2 GHz – 20GHz (GSM Mode)



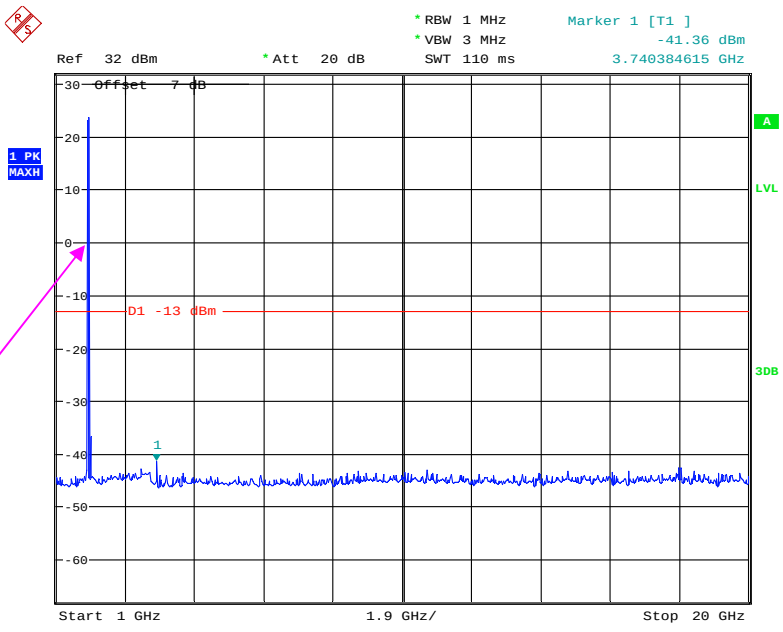
Date: 1.FEB.2021 16:24:45

30 MHz – 1 GHz (WCDMA Mode)



Date: 1.FEB.2021 14:39:48

1 GHz – 20 GHz (WCDMA Mode)

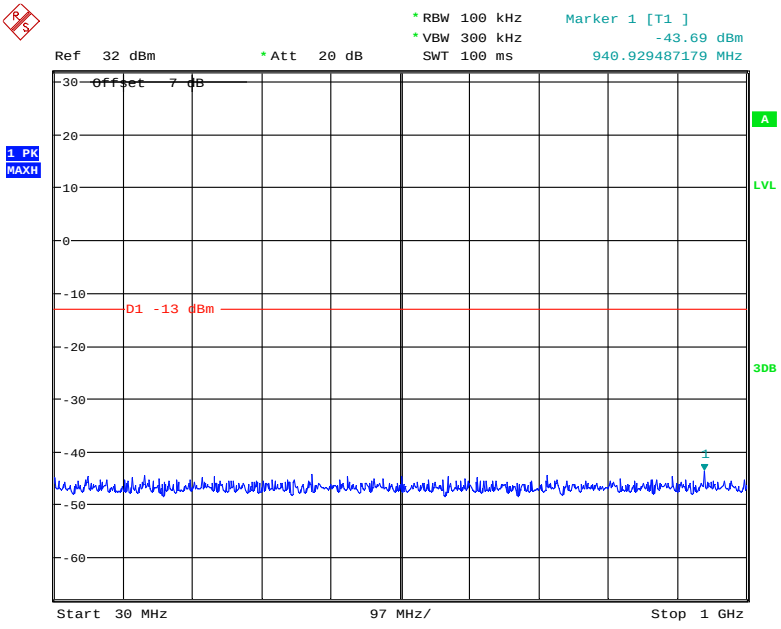


Fundamental test

Date: 1.FEB.2021 14:40:11

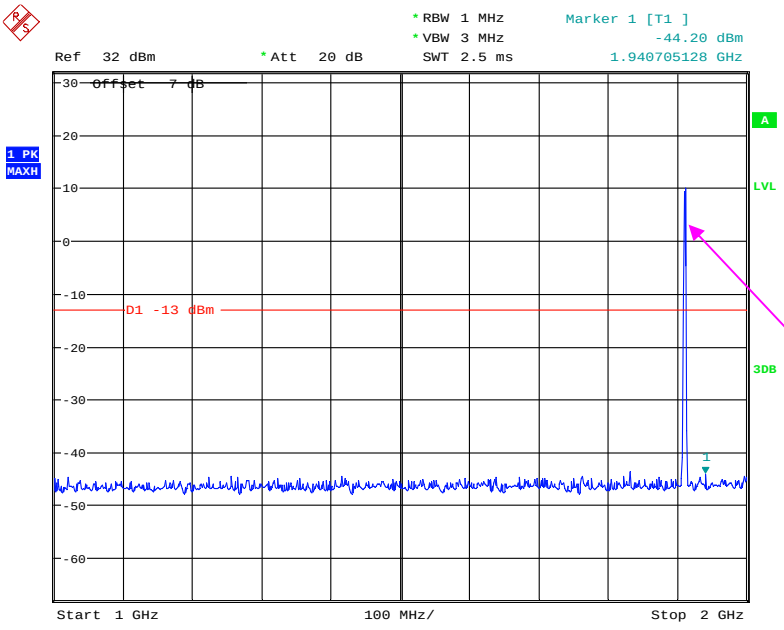
High Channel:

30 MHz – 1 GHz (GSM Mode)



Date: 1.FEB.2021 16:25:54

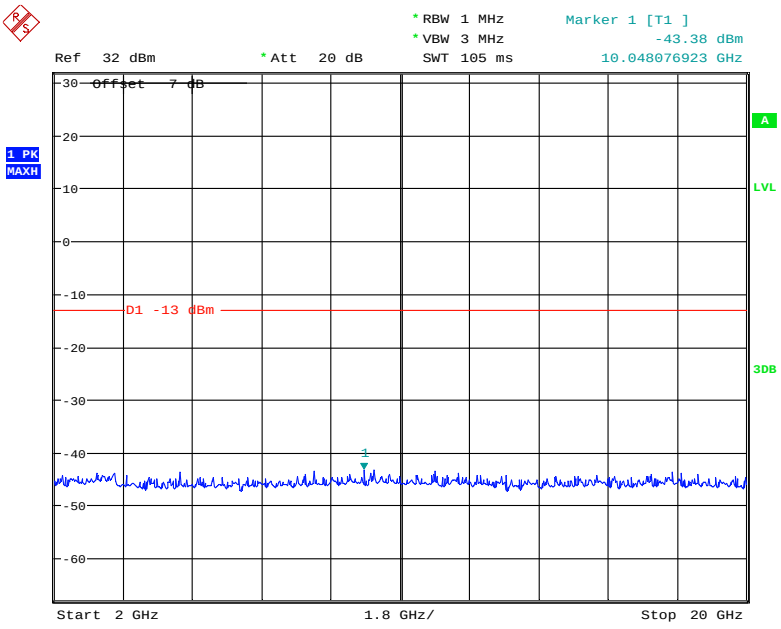
1 GHz – 2 GHz (GSM Mode)



Fundamental test

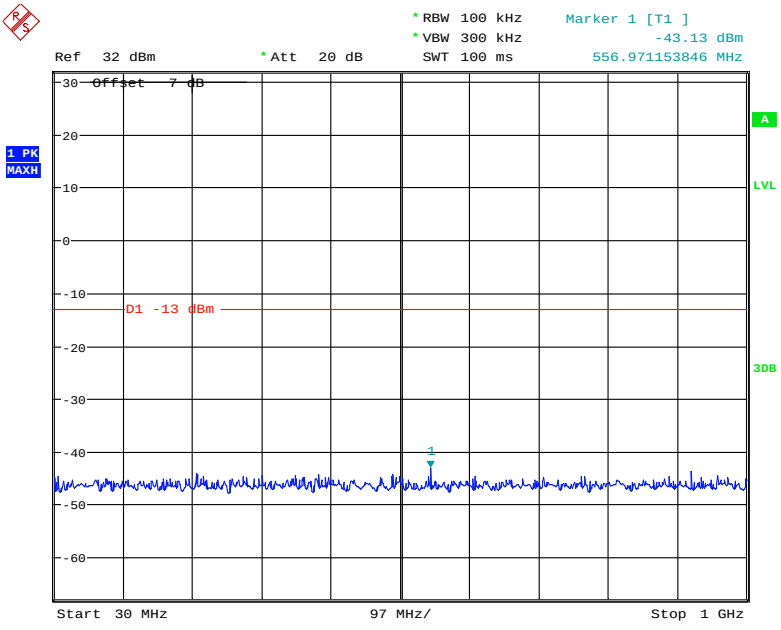
Date: 1.FEB.2021 16:26:13

2 GHz – 20GHz (GSM Mode)



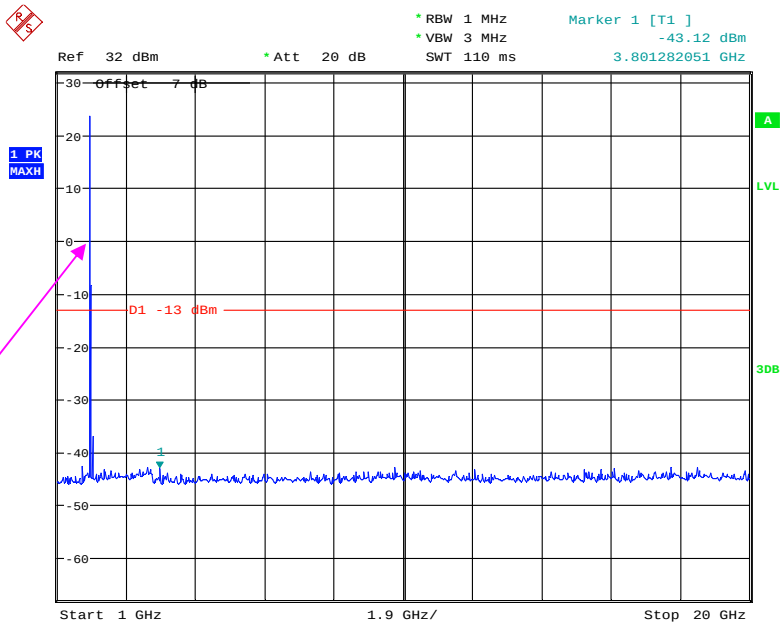
Date: 1.FEB.2021 16:26:32

30 MHz – 1 GHz (WCDMA Mode)



Date: 1.FEB.2021 14:39:29

1 GHz – 20 GHz (WCDMA Mode)

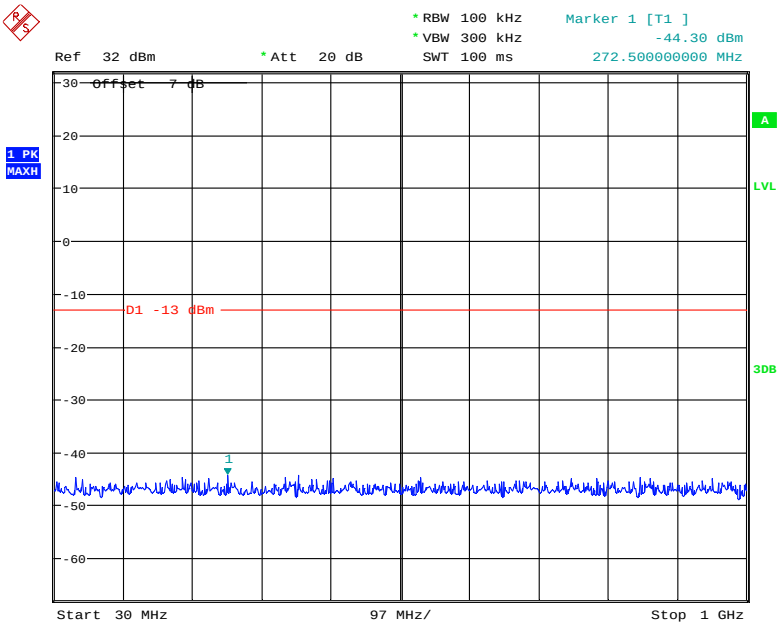


Fundamental test

Date: 1.FEB.2021 14:39:05

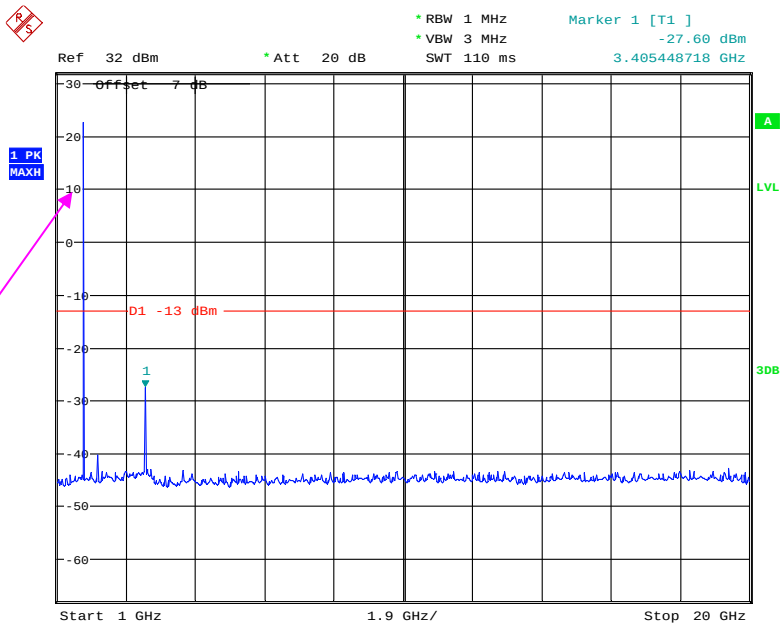
AWS Band (Part 27)
Low Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 1.FEB.2021 15:15:56

1 GHz – 20 GHz (WCDMA Mode)

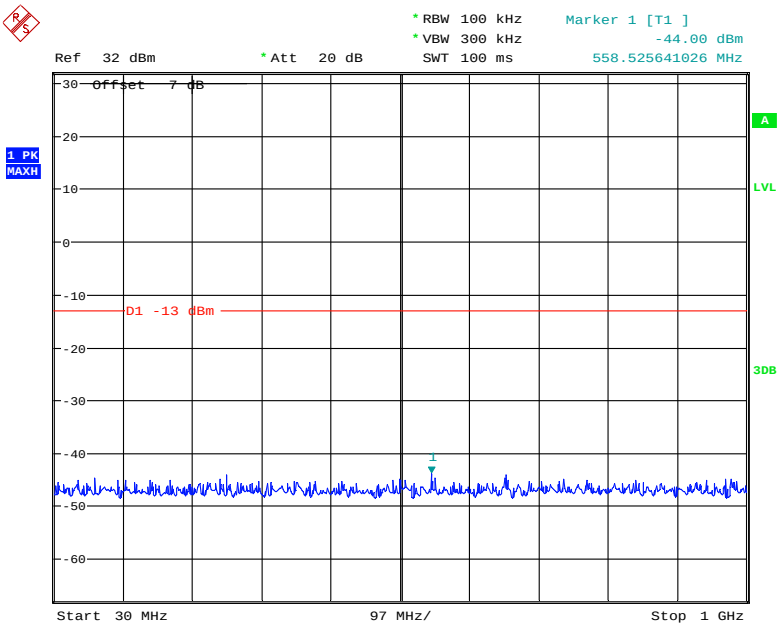


Fundamental test

Date: 1.FEB.2021 15:16:41

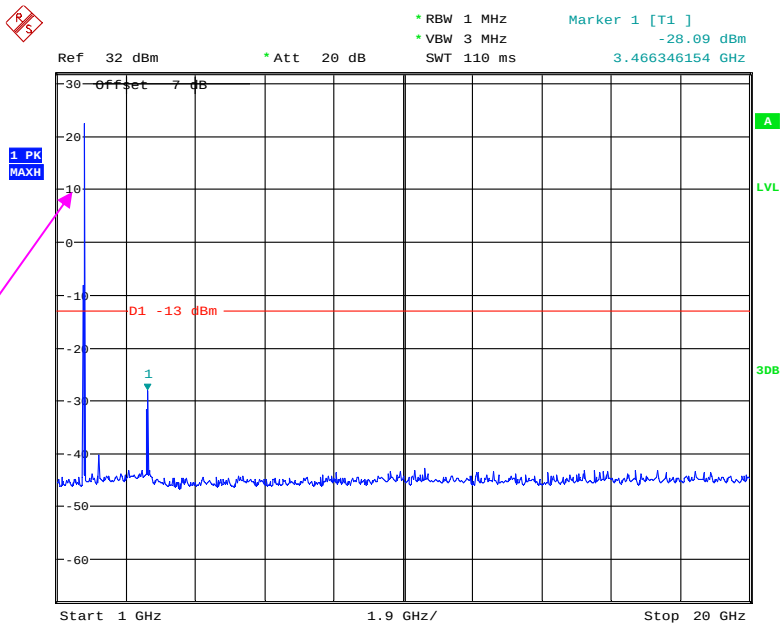
Middle Channel

30 MHz – 1 GHz (WCDMA Mode)



Date: 1.FEB.2021 15:18:05

1 GHz – 20 GHz (WCDMA Mode)

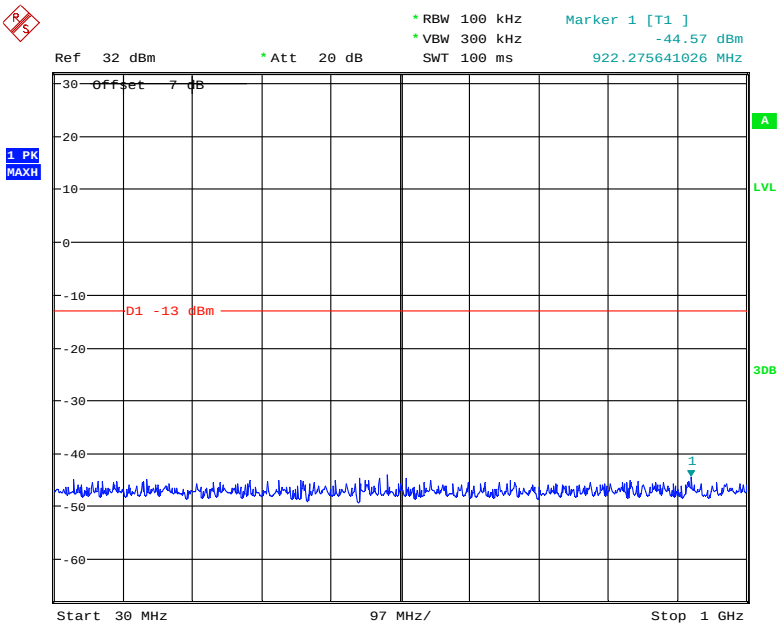


Fundamental test

Date: 1.FEB.2021 15:17:41

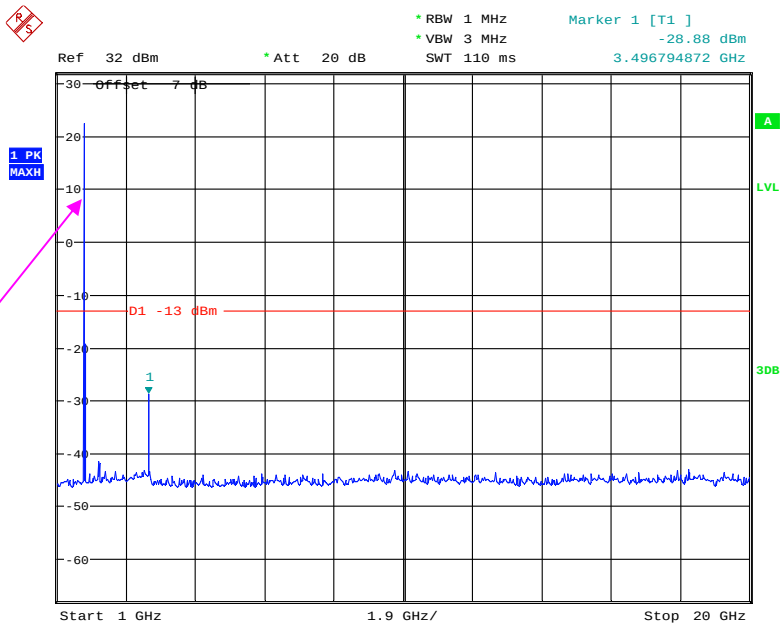
High Channel:

30 MHz – 1 GHz (WCDMA Mode)



Date: 1.FEB.2021 15:18:30

1 GHz – 20 GHz (WCDMA Mode)



Fundamental test

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:	25~25.2 ℃
Relative Humidity:	50~52 %
ATM Pressure:	101.0~101.1 kPa

The testing was performed by Holland Yang on21-01-05 for below 1GHz and Leven Gan from 2021-01-02 to 2021-01-03for 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										
961.6	32.54	229	2.4	H	-64.0	1.36	0.0	-65.36	-13	52.36
961.6	33.47	128	2.5	V	-60.6	1.36	0.0	-61.96	-13	48.96
1648.40	43.73	247	1.8	H	-64.3	1.40	8.70	-57.00	-13	44.00
1648.40	43.25	207	1.3	V	-64.6	1.40	8.70	-57.30	-13	44.30
Middle channel										
960.2	32.61	338	1.9	H	-63.9	1.36	0.0	-65.26	-13	52.26
960.2	33.52	244	1.1	V	-60.5	1.36	0.0	-61.86	-13	48.86
1673.20	43.85	107	1.3	H	-62.5	1.30	8.90	-54.90	-13	41.90
1673.20	43.26	334	1.9	V	-62.5	1.30	8.90	-54.90	-13	41.90
High channel										
962.8	32.67	35	2.0	H	-63.8	1.36	0.0	-65.16	-13	52.16
962.8	33.54	296	1.3	V	-60.5	1.36	0.0	-61.86	-13	48.86
1697.60	44.05	9	2.4	H	-62.3	1.30	8.90	-54.70	-13	41.70
1697.60	43.87	202	2.1	V	-61.9	1.30	8.90	-54.30	-13	41.30

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										
952.3	32.69	226	1.6	H	-63.8	1.36	0.0	-65.16	-13	52.16
952.3	33.54	254	1.1	V	-60.5	1.36	0.0	-61.86	-13	48.86
1652.80	46.99	90	1.0	H	-59.3	1.30	8.90	-51.70	-13	38.70
1652.80	46.37	324	1.1	V	-59.4	1.30	8.90	-51.80	-13	38.80
2479.20	45.58	348	1.7	H	-57.8	2.60	10.20	-50.20	-13	37.20
2479.20	45.16	307	1.3	V	-57.6	2.60	10.20	-50.00	-13	37.00
3305.60	44.27	321	2.0	H	-56.6	1.50	11.70	-46.40	-13	33.40
3305.60	43.86	221	2.3	V	-57.1	1.50	11.70	-46.90	-13	33.90
Middle channel										
951.6	32.67	62	1.9	H	-63.8	1.36	0.0	-65.16	-13	52.16
951.6	33.72	244	1.7	V	-60.3	1.36	0.0	-61.66	-13	48.66
1673.20	47.24	82	1.8	H	-59.1	1.30	8.90	-51.50	-13	38.50
1673.20	46.41	210	2.3	V	-59.3	1.30	8.90	-51.70	-13	38.70
2509.80	45.61	107	1.6	H	-57.7	2.60	10.20	-50.10	-13	37.10
2509.80	45.08	180	1.4	V	-57.7	2.60	10.20	-50.10	-13	37.10
3346.40	44.16	171	2.0	H	-56.7	1.50	11.70	-46.50	-13	33.50
3346.40	43.92	197	2.0	V	-57.0	1.50	11.70	-46.80	-13	33.80
High channel										
966.8	32.72	329	2.2	H	-63.8	1.36	0.0	-65.16	-13	52.16
966.8	33.58	205	1.6	V	-60.5	1.36	0.0	-61.86	-13	48.86
1693.20	46.95	46	2.3	H	-59.4	1.30	8.90	-51.80	-13	38.80
1693.20	46.51	188	1.4	V	-59.2	1.30	8.90	-51.60	-13	38.60
2539.80	45.43	266	1.8	H	-57.9	2.60	10.20	-50.30	-13	37.30
2539.80	44.99	244	1.7	V	-57.8	2.60	10.20	-50.20	-13	37.20
3386.40	44.03	110	1.2	H	-57.2	1.40	11.80	-46.80	-13	33.80
3386.40	43.78	291	1.6	V	-57.3	1.40	11.80	-46.90	-13	33.90

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										
958.2	32.58	225	1.5	H	-63.9	1.36	0.0	-65.26	-13	52.26
958.2	33.63	293	1.1	V	-60.4	1.36	0.0	-61.76	-13	48.76
3700.40	49.39	162	1.9	H	-52.4	1.60	11.90	-42.10	-13	29.10
3700.40	48.32	136	1.9	V	-52.9	1.60	11.90	-42.60	-13	29.60
5550.60	45.96	323	2.5	H	-53.7	1.70	12.40	-43.00	-13	30.00
5550.60	45.17	292	1.0	V	-54.2	1.70	12.40	-43.50	-13	30.50
Middle channel										
963.6	32.54	263	1.3	H	-64.0	1.36	0.0	-65.36	-13	52.36
963.6	33.67	180	2.2	V	-60.4	1.36	0.0	-61.76	-13	48.76
3760.00	48.62	348	1.2	H	-53.4	1.50	11.80	-43.10	-13	30.10
3760.00	47.09	157	1.0	V	-54.5	1.50	11.80	-44.20	-13	31.20
5640.00	46.37	325	1.5	H	-53.3	1.70	12.40	-42.60	-13	29.60
5640.00	45.86	246	2.4	V	-53.5	1.70	12.40	-42.80	-13	29.80
High channel										
957.4	32.56	31	1.1	H	-63.9	1.36	0.0	-65.26	-13	52.26
957.4	33.62	81	1.0	V	-60.4	1.36	0.0	-61.76	-13	48.76
3819.60	46.72	275	2.0	H	-55.3	1.50	11.80	-45.00	-13	32.00
3819.60	45.85	72	2.5	V	-55.7	1.50	11.80	-45.40	-13	32.40
5729.40	45.46	121	1.5	H	-54.4	1.60	12.10	-43.90	-13	30.90
5729.40	45.18	200	1.3	V	-54.1	1.60	12.10	-43.60	-13	30.60

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)
WCDMA Mode										
Low channel										
962.7	32.58	108	2.2	H	-63.9	1.36	0.0	-65.26	-13	52.26
962.7	33.71	161	1.8	V	-60.3	1.36	0.0	-61.66	-13	48.66
3704.80	46.65	57	2.1	H	-55.2	1.60	11.90	-44.90	-13	31.90
3704.80	47.68	309	2.4	V	-53.5	1.60	11.90	-43.20	-13	30.20
Middle channel										
961.8	32.44	220	1.5	H	-64.1	1.36	0.0	-65.46	-13	52.46
961.8	33.65	354	1.0	V	-60.4	1.36	0.0	-61.76	-13	48.76
3760.00	46.75	193	1.8	H	-55.3	1.50	11.80	-45.00	-13	32.00
3760.00	47.73	258	1.9	V	-53.9	1.50	11.80	-43.60	-13	30.60
High channel										
961.2	32.64	17	2.2	H	-63.9	1.36	0.0	-65.26	-13	52.26
961.2	33.58	109	1.5	V	-60.5	1.36	0.0	-61.86	-13	48.86
3815.20	45.97	39	1.9	H	-56.1	1.50	11.80	-45.80	-13	32.80
3815.20	47.38	91	1.5	V	-54.2	1.50	11.80	-43.90	-13	30.90

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										
961.4	32.47	246	2.3	H	-64.0	1.36	0.0	-65.36	-13	52.36
961.4	33.62	147	2.5	V	-60.4	1.36	0.0	-61.76	-13	48.76
3424.80	49.96	199	1.7	H	-50.8	1.40	11.80	-40.40	-13	27.40
3424.80	49.92	358	2.1	V	-50.7	1.40	11.80	-40.30	-13	27.30
Middle channel										
951.6	32.66	170	1.1	H	-63.8	1.36	0.0	-65.16	-13	52.16
951.6	33.49	322	2.0	V	-60.6	1.36	0.0	-61.96	-13	48.96
3465.20	49.75	241	1.7	H	-51.0	1.50	12.00	-40.50	-13	27.50
3465.20	50.13	274	2.4	V	-51.4	1.50	12.00	-40.90	-13	27.90
High channel										
964.8	32.52	25	1.1	H	-64.0	1.36	0.0	-65.36	-13	52.36
964.8	33.73	167	2.3	V	-60.3	1.36	0.0	-61.66	-13	48.66
3505.20	50.01	151	2.0	H	-50.7	1.50	12.00	-40.20	-13	27.20
3505.20	50.37	165	1.1	V	-51.1	1.50	12.00	-40.60	-13	27.60

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										
1.4 MHz, Low channel										
961.6	32.56	171	1.9	H	-63.9	1.36	0.0	-65.26	-13	52.26
961.6	33.47	144	1.1	V	-60.6	1.36	0.0	-61.96	-13	48.96
3701.40	51.71	82	1.9	H	-50.1	1.60	11.90	-39.80	-13	26.80
3701.40	50.85	52	1.7	V	-50.4	1.60	11.90	-40.10	-13	27.10
5552.10	48.26	231	1.7	H	-51.4	1.70	12.40	-40.70	-13	27.70
5552.10	46.83	270	1.8	V	-52.5	1.70	12.40	-41.80	-13	28.80
7402.80	52.01	291	2.2	H	-44.5	2.10	10.60	-36.00	-13	23.00
7402.80	50.28	296	1.1	V	-46.7	2.10	10.60	-38.20	-13	25.20
1.4 MHz, Middle channel										
961.3	32.64	20	1.0	H	-63.9	1.36	0.0	-65.26	-13	52.26
961.3	33.51	255	1.4	V	-60.5	1.36	0.0	-61.86	-13	48.86
3760.00	52.36	215	2.3	H	-49.7	1.50	11.80	-39.40	-13	26.40
3760.00	52.28	240	2.3	V	-49.3	1.50	11.80	-39.00	-13	26.00
5640.00	46.38	28	2.5	H	-53.3	1.70	12.40	-42.60	-13	29.60
5640.00	46.26	78	2.5	V	-53.1	1.70	12.40	-42.40	-13	29.40
7520.00	50.25	326	2.4	H	-45.7	1.90	10.70	-36.90	-13	23.90
7520.00	54.96	4	1.5	V	-40.6	1.90	10.70	-31.80	-13	18.80
1.4 MHz, High channel										
959.4	32.71	298	1.4	H	-63.8	1.36	0.0	-65.16	-13	52.16
959.4	33.57	213	1.3	V	-60.5	1.36	0.0	-61.86	-13	48.86
3800.00	50.67	251	1.8	H	-51.4	1.50	11.80	-41.10	-13	28.10
3800.00	49.63	267	1.7	V	-52.0	1.50	11.80	-41.70	-13	28.70
5700.00	53.47	93	1.1	H	-46.4	1.60	12.10	-35.90	-13	22.90
5700.00	56.68	211	1.5	V	-42.6	1.60	12.10	-32.10	-13	19.10
7600.00	52.47	10	2.2	H	-45.0	2.10	10.50	-36.60	-13	23.60
7600.00	54.96	209	1.2	V	-42.3	2.10	10.50	-33.90	-13	20.90

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 4										
Test frequency range:30 MHz ~ 20 GHz										
1.4 MHz, Low channel										
963.9	32.74	192	1.7	H	-63.8	1.36	0.0	-65.16	-13	52.16
963.9	33.49	308	2.0	V	-60.6	1.36	0.0	-61.96	-13	48.96
3421.40	50.24	125	1.6	H	-50.6	1.40	11.80	-40.20	-13	27.20
3421.40	51.29	169	1.8	V	-49.3	1.40	11.80	-38.90	-13	25.90
1.4 MHz, Middle channel										
958.6	32.55	92	2.5	H	-64.0	1.36	0.0	-65.36	-13	52.36
958.6	33.43	1	1.6	V	-60.6	1.36	0.0	-61.96	-13	48.96
3465.00	50.07	358	1.1	H	-50.7	1.50	12.00	-40.20	-13	27.20
3465.00	51.37	75	1.3	V	-50.1	1.50	12.00	-39.60	-13	26.60
1.4 MHz, High channel										
959.7	32.59	186	2.0	H	-63.9	1.36	0.0	-65.26	-13	52.26
959.7	33.53	21	1.1	V	-60.5	1.36	0.0	-61.86	-13	48.86
3508.60	49.86	124	1.0	H	-50.9	1.50	12.00	-40.40	-13	27.40
3508.60	51.37	273	1.4	V	-50.1	1.50	12.00	-39.60	-13	26.60

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										
1.4 MHz, Low channel										
956.8	32.73	74	1.7	H	-63.8	1.36	0.0	-65.16	-13	52.16
956.8	33.59	161	2.4	V	-60.5	1.36	0.0	-61.86	-13	48.86
1649.40	49.26	228	2.5	H	-58.8	1.40	8.70	-51.50	-13	38.50
1649.40	48.77	131	2.3	V	-59.1	1.40	8.70	-51.80	-13	38.80
2474.10	45.26	199	2.3	H	-58.1	2.60	10.20	-50.50	-13	37.50
2474.10	44.87	277	1.4	V	-57.9	2.60	10.20	-50.30	-13	37.30
3298.80	43.69	108	2.1	H	-57.2	1.50	11.70	-47.00	-13	34.00
3298.80	43.44	108	1.1	V	-57.5	1.50	11.70	-47.30	-13	34.30
1.4 MHz, Middle channel										
964.7	32.77	300	1.2	H	-63.7	1.36	0.0	-65.06	-13	52.06
964.7	33.62	55	1.9	V	-60.4	1.36	0.0	-61.76	-13	48.76
1673.00	48.30	185	2.5	H	-58.0	1.30	8.90	-50.40	-13	37.40
1673.00	48.04	337	1.1	V	-57.7	1.30	8.90	-50.10	-13	37.10
2509.50	45.46	203	1.2	H	-57.9	2.60	10.20	-50.30	-13	37.30
2509.50	44.98	307	1.6	V	-57.8	2.60	10.20	-50.20	-13	37.20
3346.00	43.89	172	2.4	H	-57.0	1.50	11.70	-46.80	-13	33.80
3346.00	43.56	134	1.9	V	-57.4	1.50	11.70	-47.20	-13	34.20
1.4 MHz, High channel										
961.2	32.75	326	1.2	H	-63.8	1.36	0.0	-65.16	-13	52.16
961.2	33.61	155	1.1	V	-60.4	1.36	0.0	-61.76	-13	48.76
1696.60	49.12	92	1.9	H	-57.2	1.30	8.90	-49.60	-13	36.60
1696.60	48.23	156	2.2	V	-57.5	1.30	8.90	-49.90	-13	36.90
2544.90	45.58	38	2.5	H	-57.8	2.60	10.20	-50.20	-13	37.20
2544.90	45.07	342	1.8	V	-57.7	2.60	10.20	-50.10	-13	37.10
3393.20	43.75	74	2.3	H	-57.5	1.40	11.80	-47.10	-13	34.10
3393.20	43.39	331	1.1	V	-57.7	1.40	11.80	-47.30	-13	34.30
Band 7										
Test frequency range: 30 MHz ~ 26.5 GHz										
5 MHz, Low channel										
957.3	32.86	229	2.0	H	-63.6	1.36	0.0	-64.96	-25	39.96
957.3	33.66	79	1.6	V	-60.4	1.36	0.0	-61.76	-25	36.76
5005.00	48.88	28	1.2	H	-51.7	1.70	12.00	-41.40	-25	16.40
5005.00	48.17	23	2.4	V	-51.9	1.70	12.00	-41.60	-25	16.60
5 MHz, Middle channel										
957.6	32.62	133	2.4	H	-63.9	1.36	0.0	-65.26	-25	40.26
951.6	33.73	41	2.1	V	-60.3	1.36	0.0	-61.66	-25	36.66
5070.00	49.05	308	2.4	H	-51.0	1.60	12.10	-40.50	-25	15.50
5070.00	48.12	136	2.0	V	-51.9	1.60	12.10	-41.40	-25	16.40
5 MHz, High channel										
966.8	32.85	109	1.3	H	-63.7	1.36	0.0	-65.06	-25	40.06
966.8	33.71	304	2.5	V	-60.3	1.36	0.0	-61.66	-25	36.66
5135.00	48.81	314	1.3	H	-51.2	1.60	12.10	-40.70	-25	15.70
5135.00	48.04	58	2.4	V	-52.0	1.60	12.10	-41.50	-25	16.50

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 ~26.5GHz										
5 MHz, Low channel										
962.5	32.49	354	1.2	H	-64.0	1.36	0.0	-65.36	-25	40.36
962.5	33.56	210	1.6	V	-60.5	1.36	0.0	-61.86	-25	36.86
5145.00	49.27	310	1.6	H	-50.7	1.60	12.10	-40.20	-25	15.20
5145.00	49.19	296	1.6	V	-50.8	1.60	12.10	-40.30	-25	15.30
5 MHz, Middle channel										
961.7	32.59	157	2.4	H	-63.9	1.36	0.0	-65.26	-25	40.26
961.7	33.71	301	1.6	V	-60.3	1.36	0.0	-61.66	-25	36.66
5190.00	49.43	100	1.5	H	-50.7	1.60	12.10	-40.20	-25	15.20
5190.00	49.20	69	1.8	V	-50.4	1.60	12.10	-39.90	-25	14.90
5 MHz, High channel										
963.6	32.46	200	2.1	H	-64.0	1.36	0.0	-65.36	-25	40.36
963.6	33.63	77	2.1	V	-60.4	1.36	0.0	-61.76	-25	36.76
5235.00	49.27	352	1.6	H	-50.8	1.60	12.10	-40.30	-25	15.30
5235.00	49.25	295	1.2	V	-50.4	1.60	12.10	-39.90	-25	14.90
Band 40 Lower										
Test frequency range: 30 MHz ~ 26.5GHz										
5 MHz, Low channel										
962.3	32.58	313	1.2	H	-63.9	1.36	0.0	-65.26	-40	25.26
962.3	33.67	42	2.0	V	-60.4	1.36	0.0	-61.76	-40	21.76
4615.00	50.55	145	2.5	H	-51.3	1.60	12.00	-40.90	-40	0.90
4615.00	49.82	104	1.7	V	-50.8	1.60	12.00	-40.40	-40	0.40
5 MHz, Middle channel										
959.3	32.53	129	1.3	H	-64.0	1.36	0.0	-65.36	-40	25.36
959.3	33.61	146	1.8	V	-60.4	1.36	0.0	-61.76	-40	21.76
4620.00	50.79	250	2.3	H	-51.0	1.60	12.00	-40.60	-40	0.60
4620.00	49.88	297	1.7	V	-50.8	1.60	12.00	-40.40	-40	0.40
5 MHz, High channel										
960.1	32.64	251	2.4	H	-63.9	1.36	0.0	-65.26	-40	25.26
960.1	33.77	172	2.2	V	-60.3	1.36	0.0	-61.66	-40	21.66
4630.00	50.94	18	1.8	H	-50.9	1.60	12.00	-40.50	-40	0.50
4630.00	49.64	324	1.4	V	-51.0	1.60	12.00	-40.60	-40	0.60

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 40 Upper										
Test frequency range: 30 MHz ~ 26.5GHz										
5 MHz, Low channel										
962.19	32.59	263	2.5	H	-63.9	1.36	0.0	-65.26	-40	25.26
962.19	33.13	212	2.2	V	-60.9	1.36	0.0	-62.26	-40	22.26
4705.00	51.81	322	2.2	H	-50.8	1.70	12.00	-40.50	-40	0.50
4705.00	50.03	88	1.2	V	-51.0	1.70	12.00	-40.70	-40	0.70
5 MHz, Middle channel										
958.63	33.24	12	1.2	H	-63.3	1.36	0.0	-64.66	-40	24.66
958.63	32.89	280	1.1	V	-61.2	1.36	0.0	-62.56	-40	22.56
4710.00	50.89	108	1.5	H	-51.7	1.70	12.00	-41.40	-40	1.40
4710.00	50.16	168	2.4	V	-50.8	1.70	12.00	-40.50	-40	0.50
5 MHz, High channel										
961.49	32.87	241	1.6	H	-63.6	1.36	0.0	-64.96	-40	24.96
961.49	33.22	25	1.9	V	-60.8	1.36	0.0	-62.16	-40	22.16
4715.00	51.49	254	1.8	H	-51.1	1.70	12.00	-40.80	-40	0.80
4715.00	50.12	25	1.8	V	-50.9	1.70	12.00	-40.60	-40	0.60
Band 41										
Test frequency range: 30 MHz ~26.5GHz										
5 MHz, Low channel										
965.3	32.69	43	2.0	H	-63.8	1.36	0.0	-65.16	-25	40.16
965.3	33.81	53	1.4	V	-60.2	1.36	0.0	-61.56	-25	36.56
4997.00	50.74	345	1.1	H	-49.9	1.70	12.00	-39.60	-25	14.60
4997.00	48.90	46	2.3	V	-51.1	1.70	12.00	-40.80	-25	15.80
5 MHz, Middle channel										
960.6	32.57	61	1.6	H	-63.9	1.36	0.0	-65.26	-25	40.26
960.6	33.69	198	1.7	V	-60.4	1.36	0.0	-61.76	-25	36.76
5186.00	50.24	205	2.3	H	-49.9	1.60	12.10	-39.40	-25	14.40
5186.00	47.56	167	2.5	V	-52.1	1.60	12.10	-41.60	-25	16.60
5 MHz, High channel										
965.8	32.38	37	2.0	H	-64.1	1.36	0.0	-65.46	-25	40.46
965.8	33.61	329	1.8	V	-60.4	1.36	0.0	-61.76	-25	36.76
5375.00	51.01	315	1.1	H	-49.0	1.60	12.30	-38.30	-25	13.30
5375.00	48.26	231	2.1	V	-51.0	1.60	12.30	-40.30	-25	15.30

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 66										
Test frequency range: 30 MHz ~ 26.5GHz										
5 MHz, Low channel										
963.2	32.44	329	2.4	H	-64.1	1.36	0.0	-65.46	-13	52.46
963.2	33.66	97	2.3	V	-60.4	1.36	0.0	-61.76	-13	48.76
3421.40	48.76	225	1.7	H	-52.0	1.40	11.80	-41.60	-13	28.60
3421.40	49.55	272	2.2	V	-51.1	1.40	11.80	-40.70	-13	27.70
5 MHz, Middle channel										
962.1	32.57	216	1.1	H	-63.9	1.36	0.0	-65.26	-13	52.26
962.1	33.64	226	2.4	V	-60.4	1.36	0.0	-61.76	-13	48.76
3490.00	49.38	306	1.9	H	-51.4	1.50	12.00	-40.90	-13	27.90
3490.00	49.63	122	2.0	V	-51.9	1.50	12.00	-41.40	-13	28.40
5 MHz, High channel										
962.7	32.58	108	2.2	H	-63.9	1.36	0.0	-65.26	-13	52.26
962.7	33.71	161	1.8	V	-60.3	1.36	0.0	-61.66	-13	48.66
3558.60	49.41	327	1.5	H	-52.1	1.50	12.10	-41.50	-13	28.50
3558.60	49.59	43	1.2	V	-51.4	1.50	12.10	-40.80	-13	27.80

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(a) (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 (a), for mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

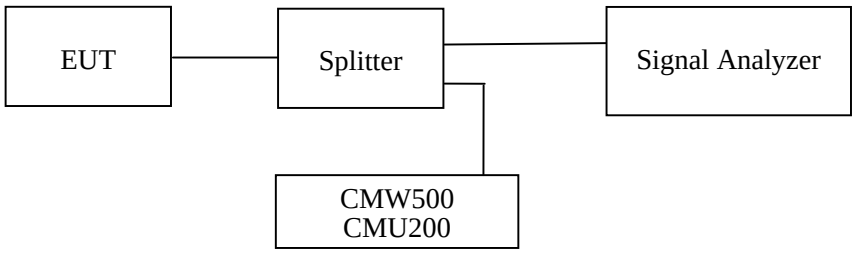
(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

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

Test Procedure

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

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



Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

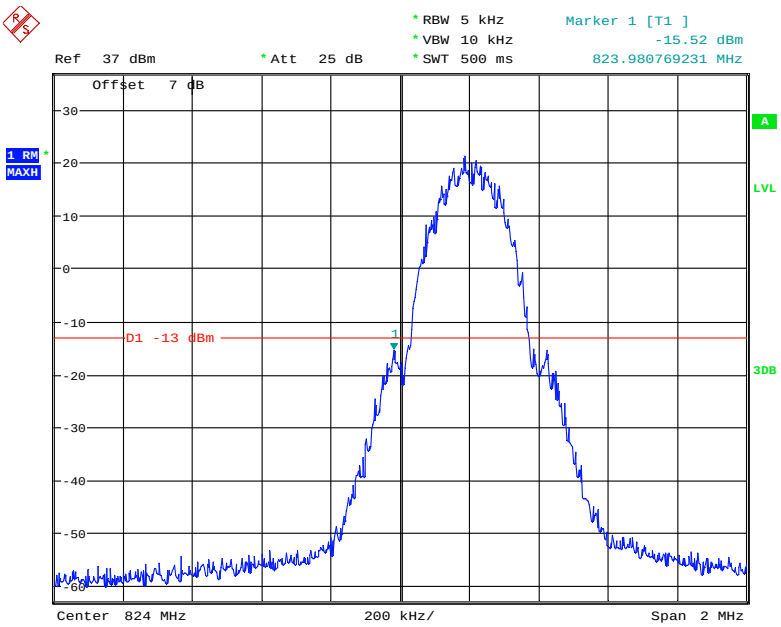
The testing was performed by Alen He from 2020-01-28 to 2021-02-05.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

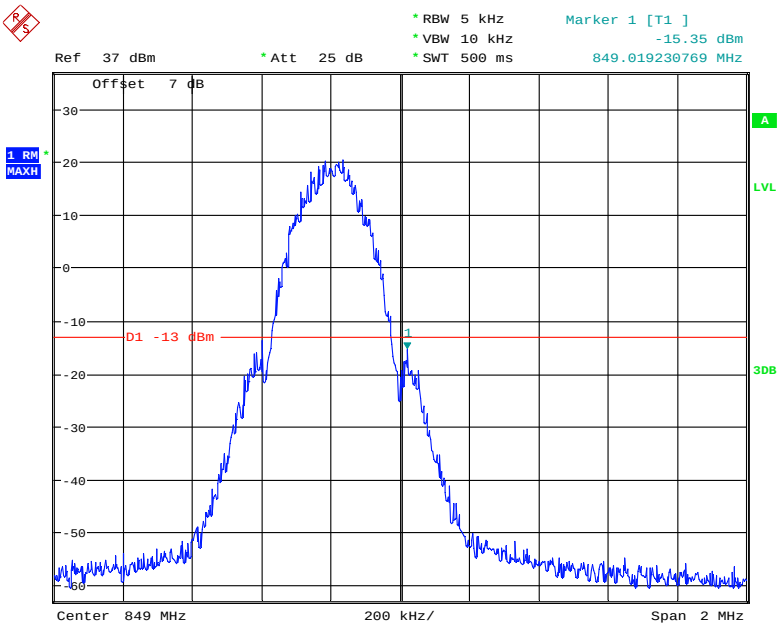
Please refer to the following plots.

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



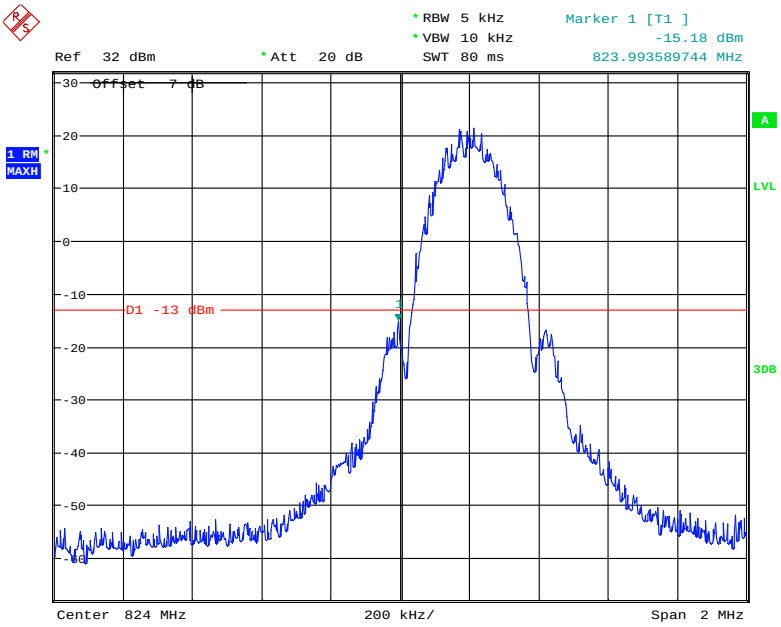
Date: 30.JAN.2021 11:43:21

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



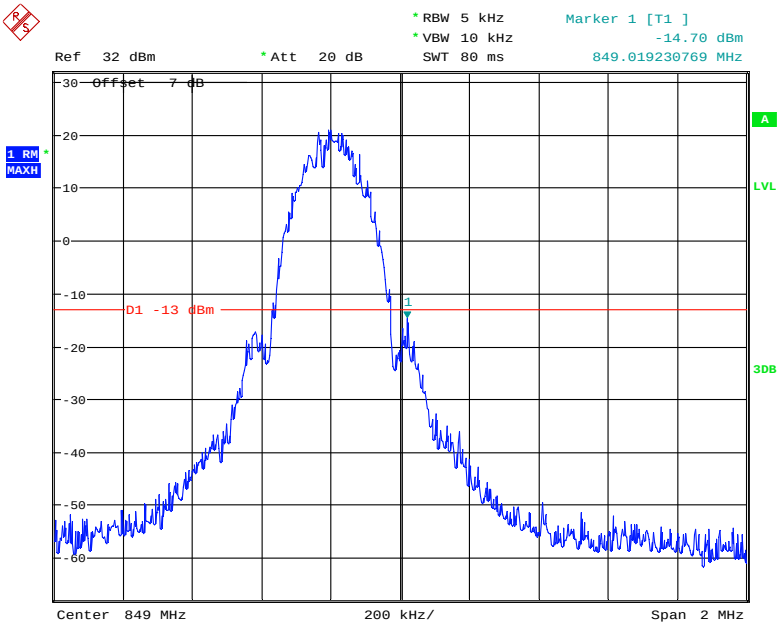
Date: 30.JAN.2021 11:42:40

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



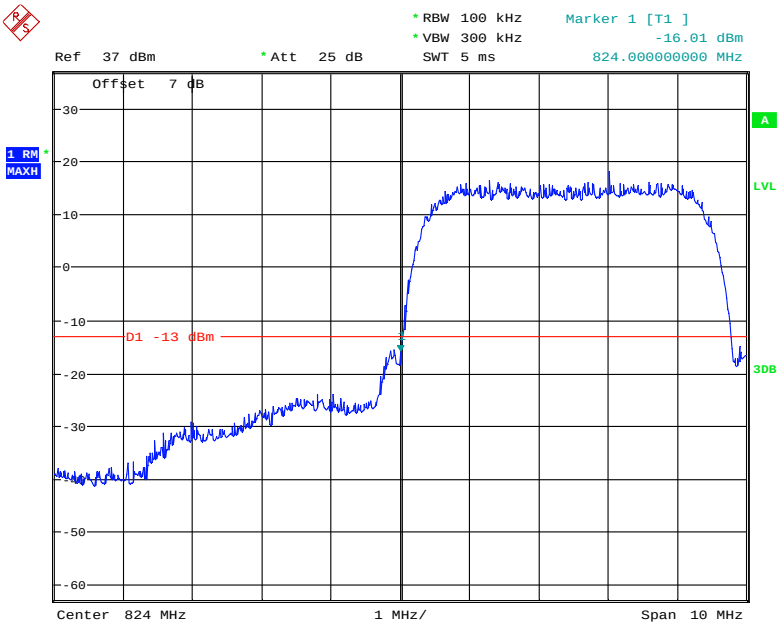
Date: 1.FEB.2021 18:27:28

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



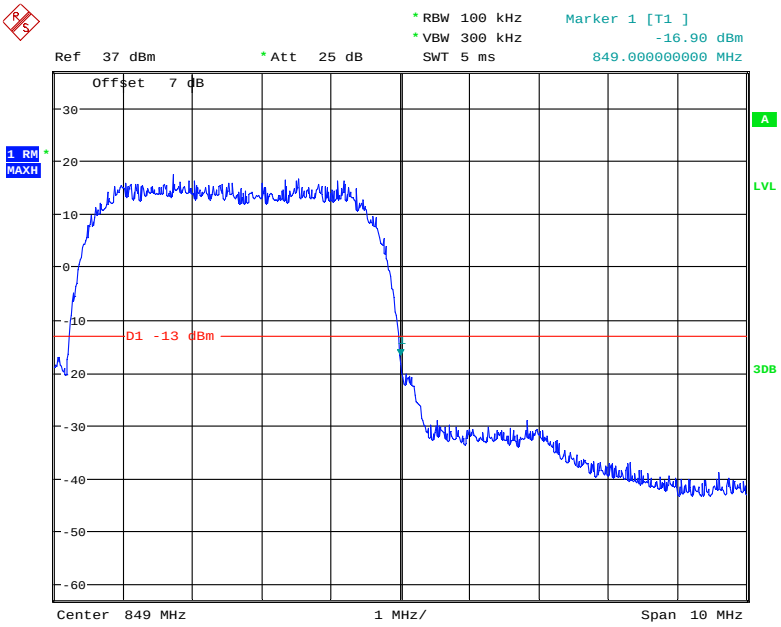
Date: 1.FEB.2021 18:28:14

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



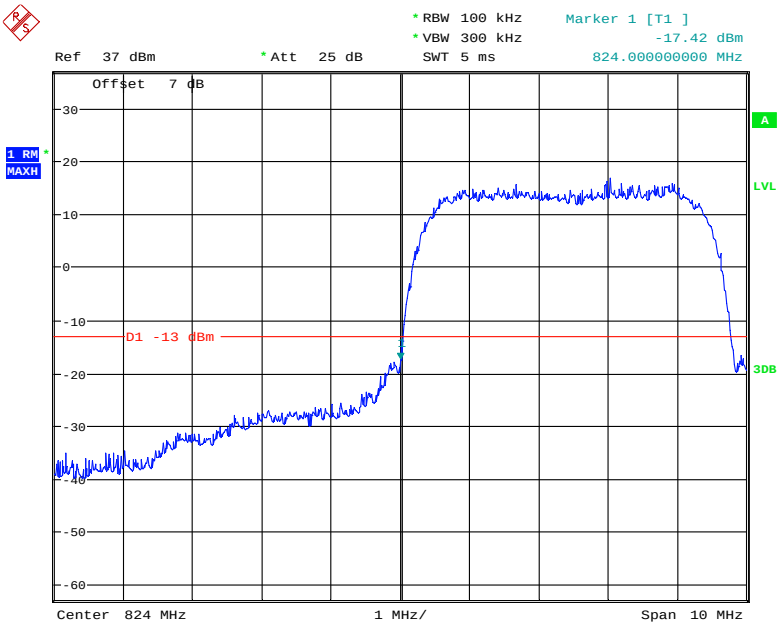
Date: 30.JAN.2021 11:53:03

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



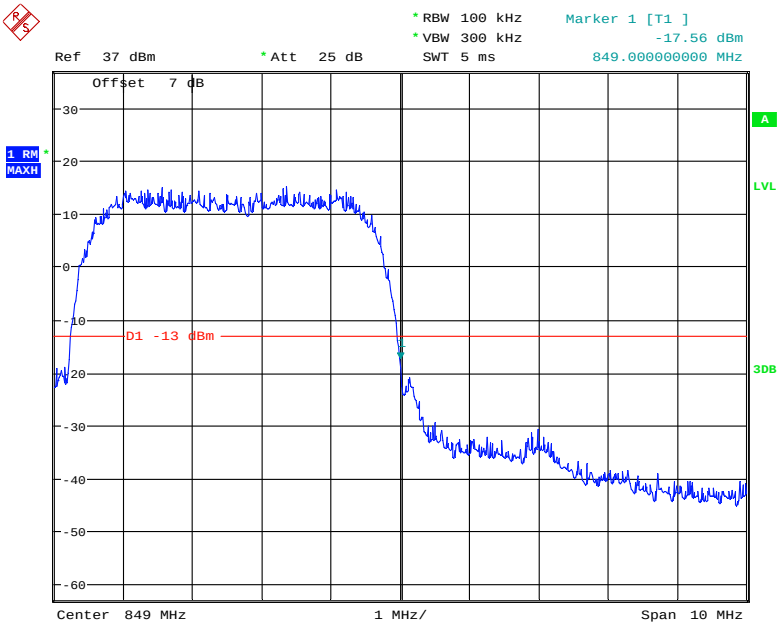
Date: 30.JAN.2021 11:53:45

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



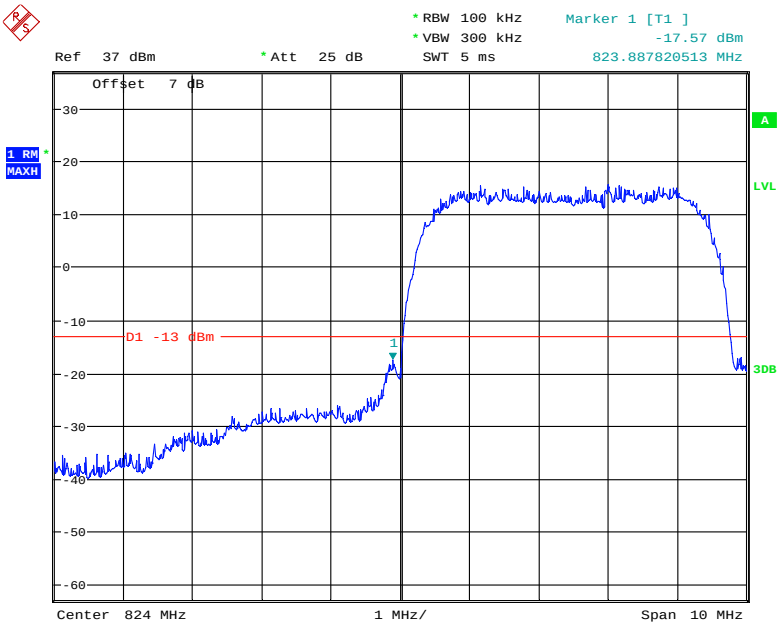
Date: 30.JAN.2021 11:54:46

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



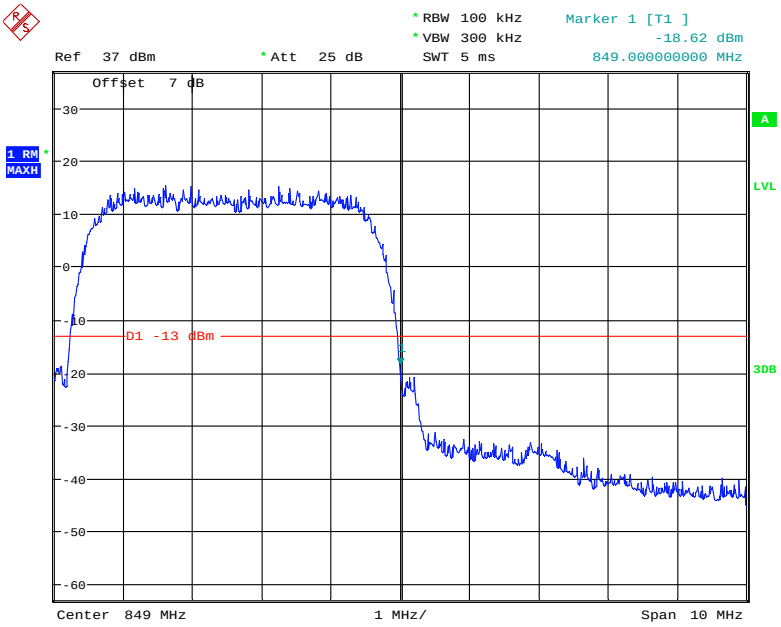
Date: 30.JAN.2021 11:54:09

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



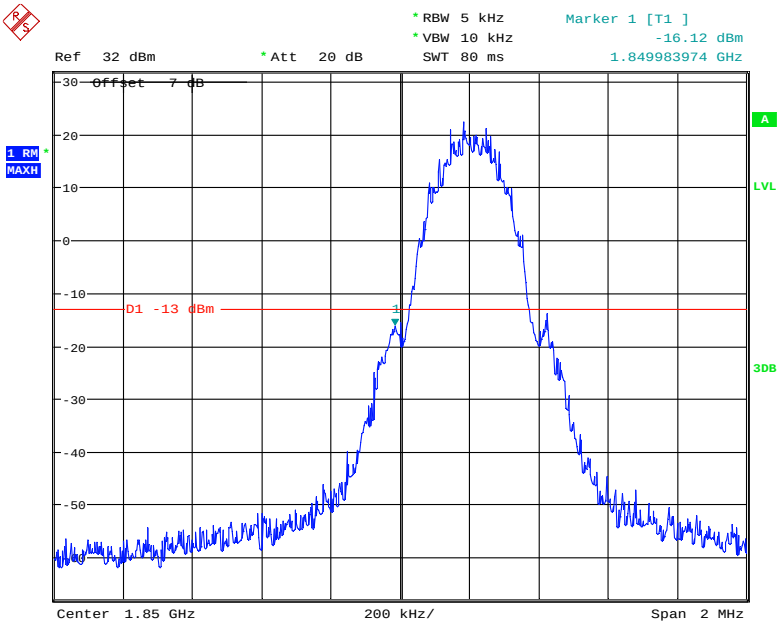
Date: 30.JAN.2021 11:55:37

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



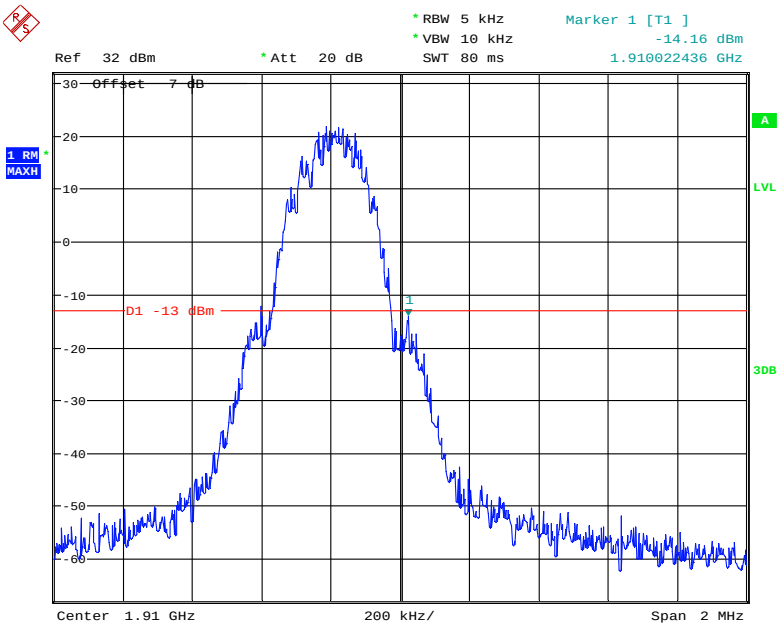
Date: 30.JAN.2021 11:55:53

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



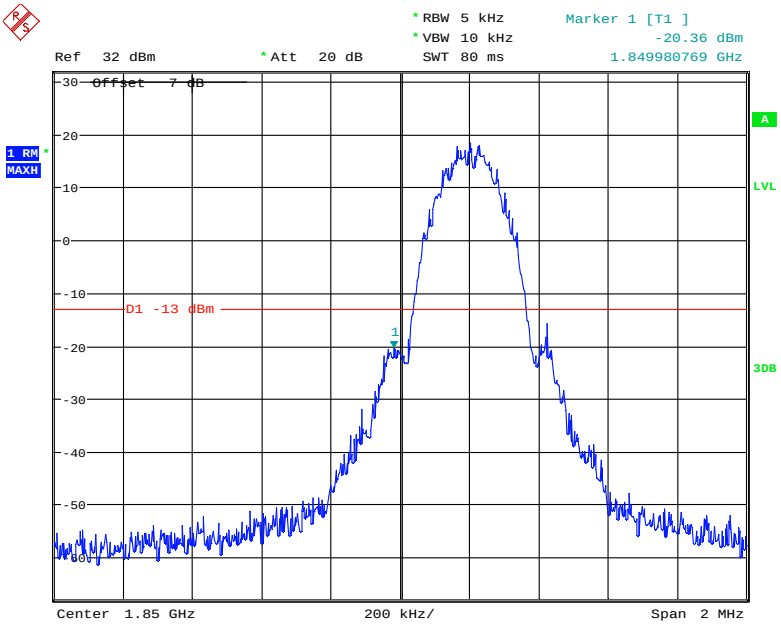
Date: 1.FEB.2021 16:20:08

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



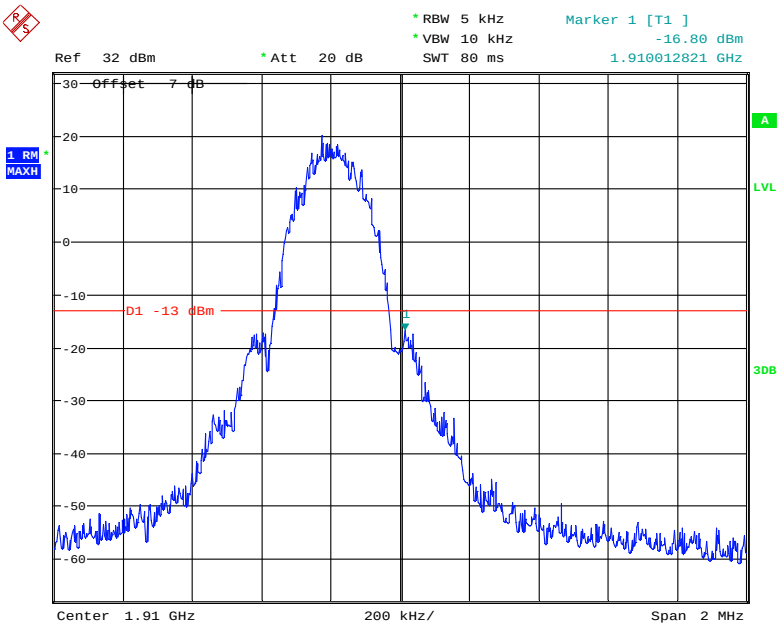
Date: 1.FEB.2021 16:19:20

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



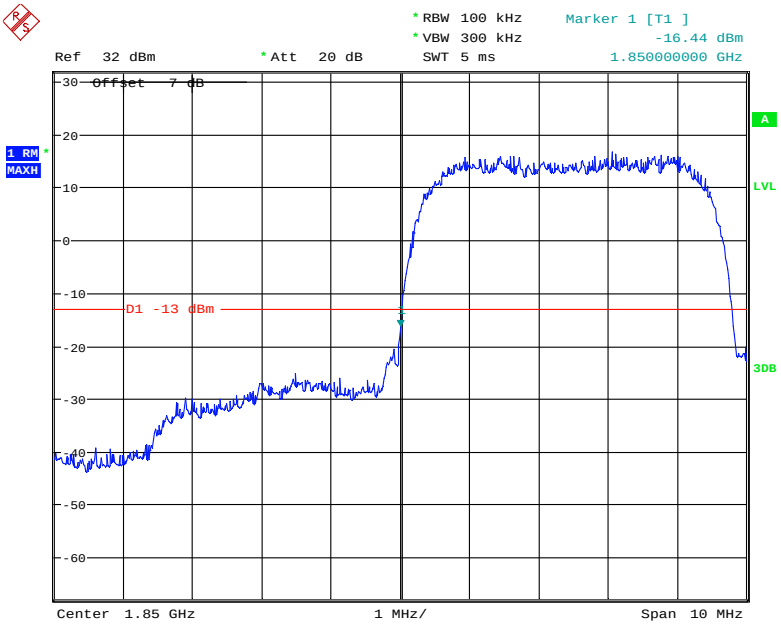
Date: 1.FEB.2021 16:35:18

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



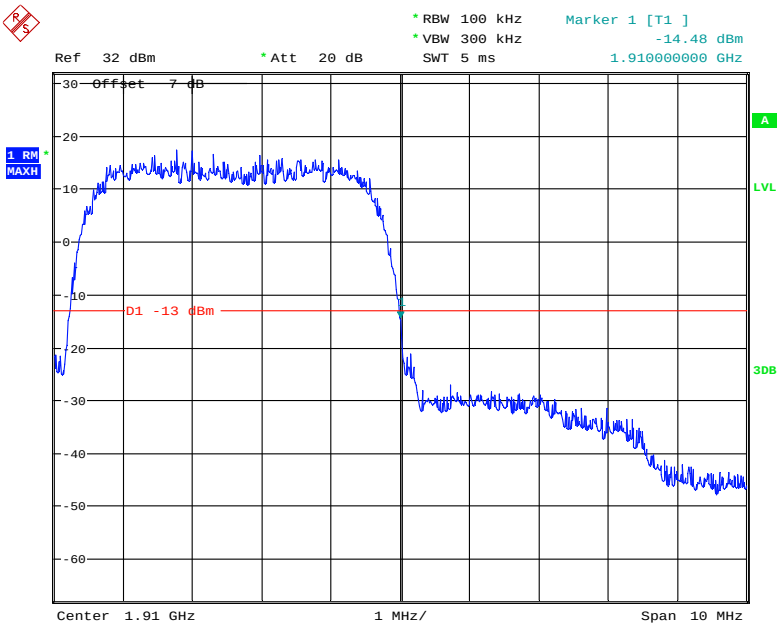
Date: 1.FEB.2021 16:34:35

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



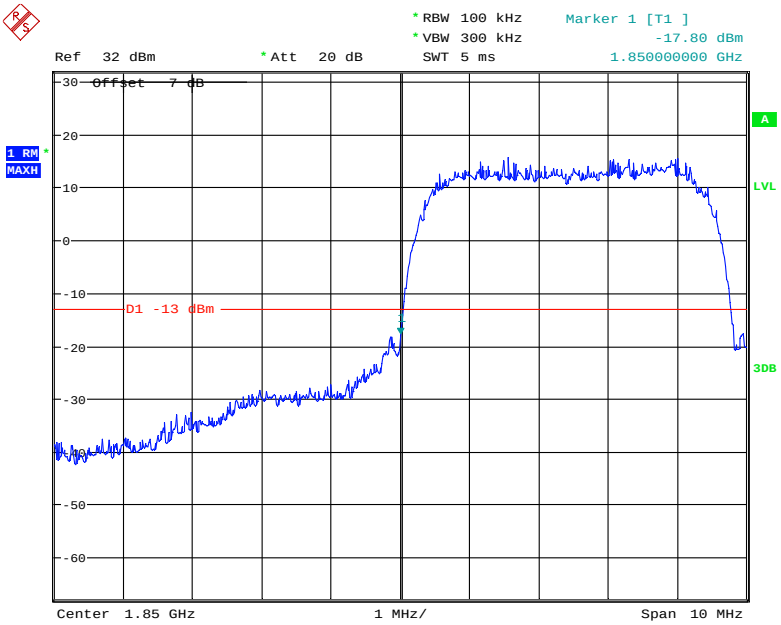
Date: 1.FEB.2021 14:35:53

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



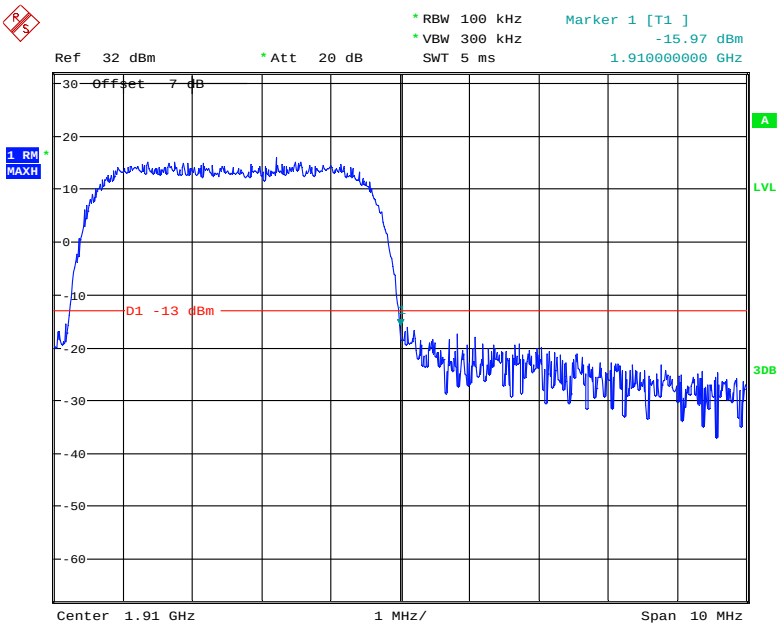
Date: 1.FEB.2021 14:36:55

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



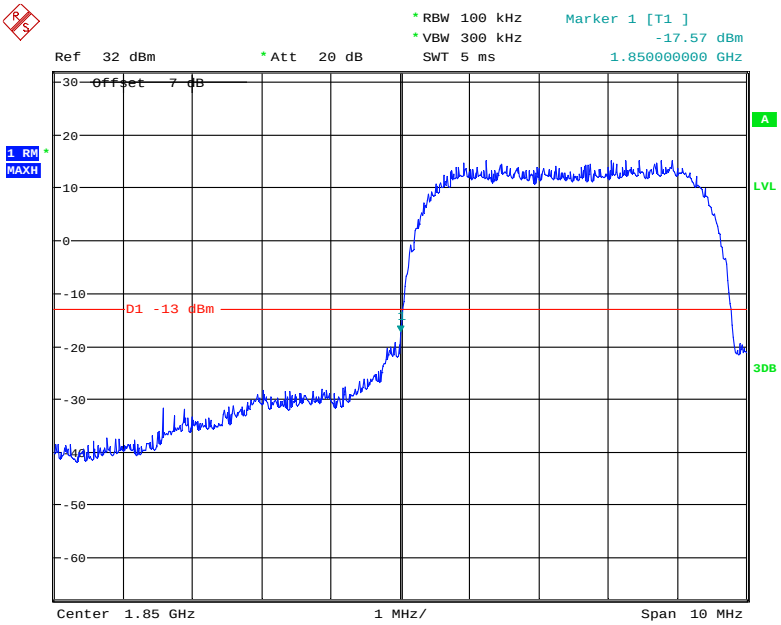
Date: 1.FEB.2021 15:08:34

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



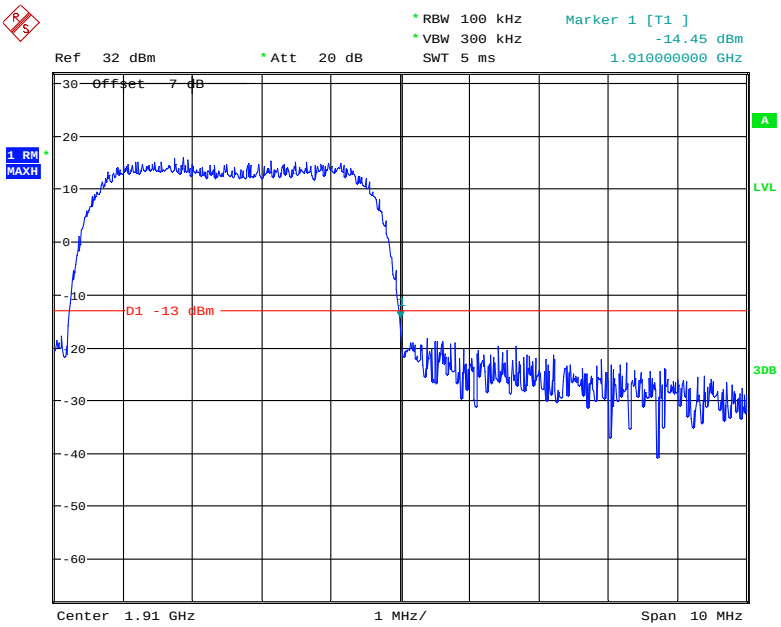
Date: 1.FEB.2021 15:08:06

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



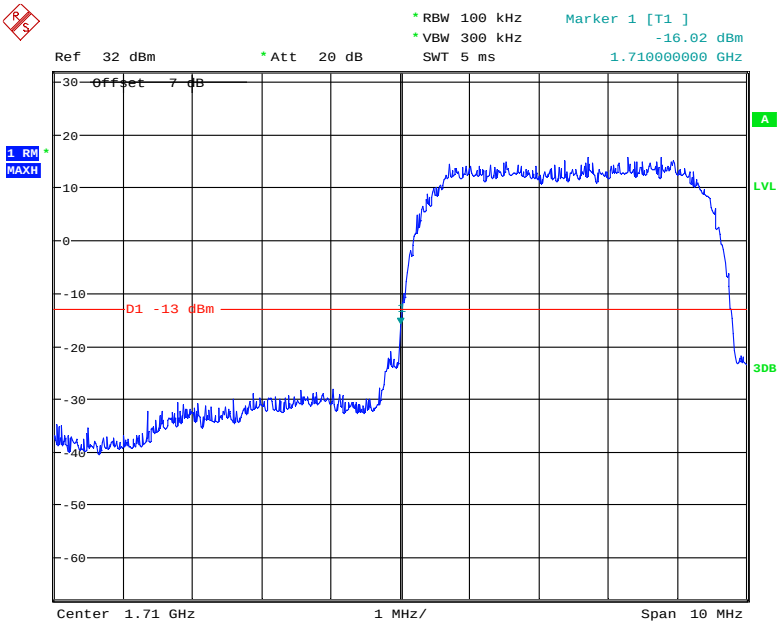
Date: 1.FEB.2021 14:44:42

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



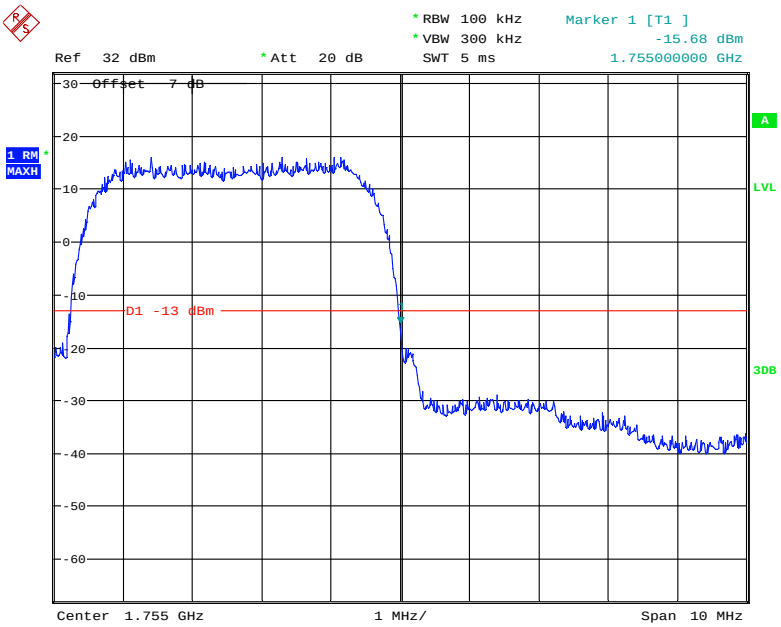
Date: 1.FEB.2021 14:45:39

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



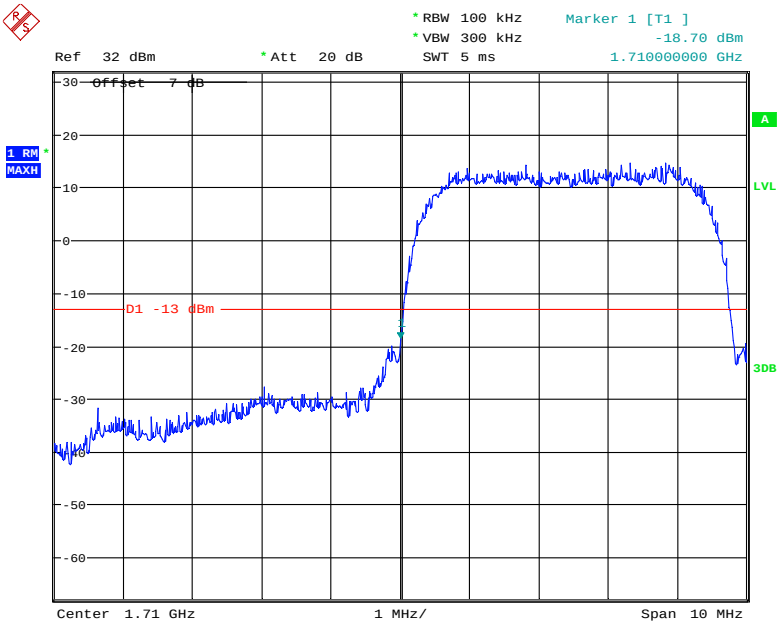
Date: 1.FEB.2021 15:15:31

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



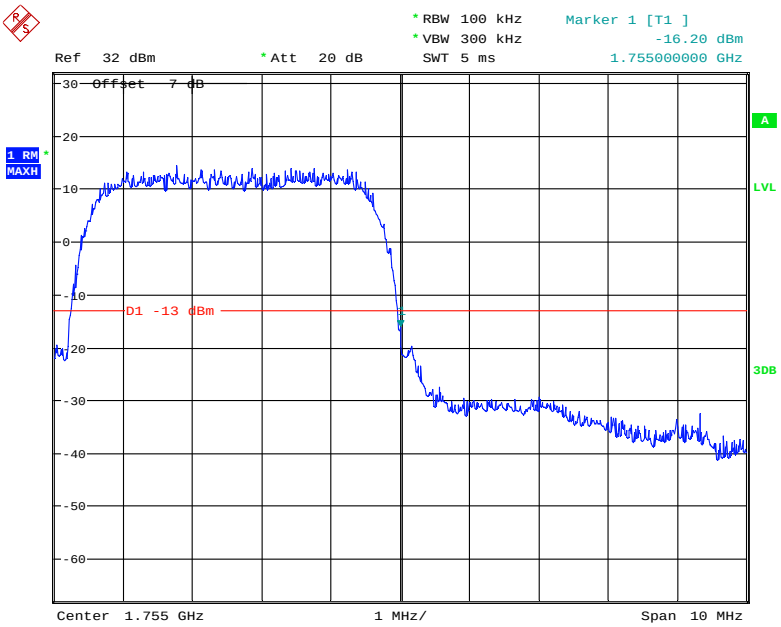
Date: 1.FEB.2021 15:14:52

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



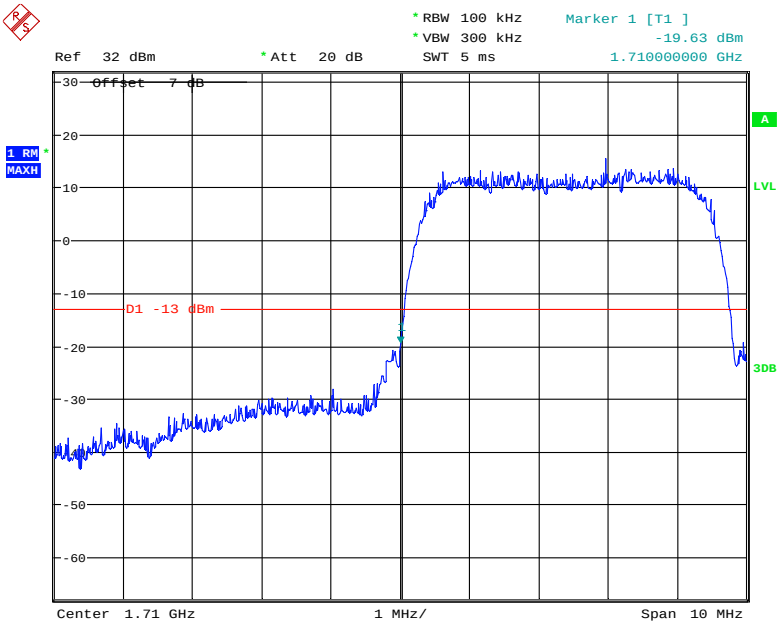
Date: 1.FEB.2021 15:40:04

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

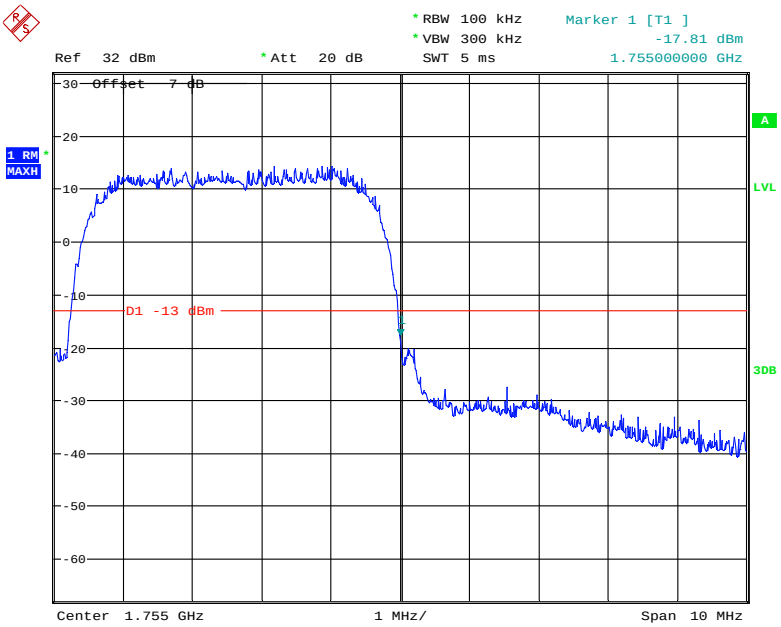


Date: 1.FEB.2021 15:40:35

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



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



The test plot of LTE band 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

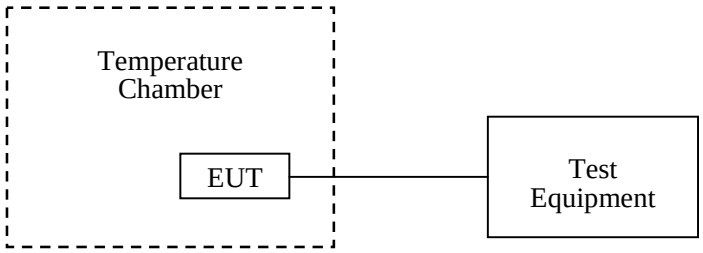
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

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:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Alen He from 2020-01-30 to 2021-02-01.

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	3.87	-12	-0.0143	2.5
-20		-6	-0.0072	2.5
-10		-6	-0.0072	2.5
0		-10	-0.0120	2.5
10		-9	-0.0108	2.5
20		-13	-0.0155	2.5
30		-10	-0.0120	2.5
40		3	0.0036	2.5
50		-2	-0.0024	2.5
20	V min.= 3.45	5	0.0060	2.5
	V max.= 4.45	11	0.0131	2.5

EDGE Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.87	-13	-0.0155	2.5
-20		-5	-0.0060	2.5
-10		-6	-0.0072	2.5
0		-12	-0.0143	2.5
10		-7	-0.0084	2.5
20		-12	-0.0143	2.5
30		-10	-0.0120	2.5
40		3	0.0036	2.5
50		-4	-0.0048	2.5
20	V min.= 3.45	5	0.0060	2.5
	V max.= 4.45	13	0.0155	2.5

WCDMA Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.87	-13	-0.0155	2.5
-20		-8	-0.0096	2.5
-10		-9	-0.0108	2.5
0		-11	-0.0131	2.5
10		2	0.0024	2.5
20		-17	-0.0203	2.5
30		-16	-0.0191	2.5
40		1	0.0012	2.5
50		-2	-0.0024	2.5
20	V min.= 3.45	7	0.0084	2.5
	V max.= 4.45	11	0.0131	2.5

PCS Band (Part 24E)

GSM Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.87	-6	-0.0032	pass
-20		-8	-0.0043	pass
-10		-5	-0.0027	pass
0		15	0.0080	pass
10		-18	-0.0096	pass
20		-13	-0.0069	pass
30		-10	-0.0053	pass
40		-5	-0.0027	pass
50		3	0.0016	pass
20	V min.= 3.45	6	0.0032	pass
	V max.=4.45	5	0.0027	pass

EDGE Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.87	-5	-0.0027	pass
-20		-7	-0.0037	pass
-10		-9	-0.0048	pass
0		15	0.0080	pass
10		-13	-0.0069	pass
20		-16	-0.0085	pass
30		-12	-0.0064	pass
40		-5	-0.0027	pass
50		7	0.0037	pass
20	V min.= 3.45	2	0.0011	pass
	V max.=4.45	4	0.0021	pass

WCDMA Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.87	-9	-0.0048	pass
-20		-6	-0.0032	pass
-10		-7	-0.0037	pass
0		-24	-0.0128	pass
10		13	0.0069	pass
20		-21	-0.0112	pass
30		-10	-0.0053	pass
40		-9	-0.0048	pass
50		3	0.0016	pass
20	V min.= 3.45	4	0.0021	pass
	V max.=4.45	5	0.0027	pass

AWS Band (Part 27)

Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	1710.6340	1754.5834	1710	1755
-20		1710.6383	1754.5834	1710	1755
-10		1710.6393	1754.5870	1710	1755
0		1710.6363	1754.5869	1710	1755
10		1710.6346	1754.5834	1710	1755
20		1710.6342	1754.5804	1710	1755
30		1710.6367	1754.5884	1710	1755
40		1710.6366	1754.5871	1710	1755
50		1710.6383	1754.5807	1710	1755
20	V min.= 3.45	1710.6342	1754.5883	1710	1755
	V max.=4.45	1710.6355	1754.5851	1710	1755

LTE:
QPSK:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.87	-5	-0.0027	pass
-20		-6	-0.0032	pass
-10		4	0.0021	pass
0		1	0.0005	pass
10		13	0.0069	pass
20		-18	-0.0096	pass
30		-12	-0.0064	pass
40		-9	-0.0048	pass
50		3	0.0016	pass
20	V min.= 3.45	2	0.0011	pass
	V max.=4.45	6	0.0032	pass

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	1710.4556	1754.6307	1710	1755
-20		1710.4582	1754.6317	1710	1755
-10		1710.4579	1754.6296	1710	1755
0		1710.4577	1754.6272	1710	1755
10		1710.4536	1754.6299	1710	1755
20		1710.4576	1754.6282	1710	1755
30		1710.4526	1754.6318	1710	1755
40		1710.4509	1754.6303	1710	1755
50		1710.4583	1754.6346	1710	1755
20	V min.= 3.45	1710.4550	1754.6273	1710	1755
	V max.=4.45	1710.4561	1754.6321	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.87	-13	-0.0155	2.5
-20		-6	-0.0072	2.5
-10		-9	-0.0108	2.5
0		2	0.0024	2.5
10		2	0.0024	2.5
20		-14	-0.0167	2.5
30		-16	-0.0191	2.5
40		3	0.0036	2.5
50		-2	-0.0024	2.5
20	V min.= 3.45	5	0.0060	2.5
	V max.=4.45	8	0.0096	2.5

Band 7:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	2500.4646	2569.6596	2500	2570
-20		2500.4631	2569.6624	2500	2570
-10		2500.4660	2569.6641	2500	2570
0		2500.4611	2569.6662	2500	2570
10		2500.4638	2569.6624	2500	2570
20		2500.4631	2569.6671	2500	2570
30		2500.4642	2569.6669	2500	2570
40		2500.4637	2569.6604	2500	2570
50		2500.4665	2569.6631	2500	2570
20	V min.= 3.45	2500.4631	2569.6633	2500	2570
	V max.=4.45	2500.4636	2569.6670	2500	2570

Band 38:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	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	V min.= 3.45	2570.5203	2619.8322	2570	2620
	V max.=4.45	2570.5141	2619.8302	2570	2620

Band 40 Lower:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	2305.6426	2314.7171	2305	2315
-20		2305.6458	2314.7124	2305	2315
-10		2305.6391	2314.7163	2305	2315
0		2305.6457	2314.7122	2305	2315
10		2305.6418	2314.7152	2305	2315
20		2305.6466	2314.7191	2305	2315
30		2305.6392	2314.7144	2305	2315
40		2305.6459	2314.7167	2305	2315
50		2305.6417	2314.7202	2305	2315
20	V min.= 3.45	2305.6452	2314.7160	2305	2315
	V max.=4.45	2305.6445	2314.7160	2305	2315

Band 40 Upper

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	2350.6459	2359.7197	2350	2360
-20		2350.6449	2359.7207	2350	2360
-10		2350.6487	2359.7212	2350	2360
0		2350.6458	2359.7196	2350	2360
10		2350.6443	2359.7168	2350	2360
20		2350.6418	2359.7206	2350	2360
30		2350.6446	2359.7198	2350	2360
40		2350.6485	2359.7170	2350	2360
50		2350.6492	2359.7183	2350	2360
20	V min.= 3.45	2350.6440	2359.7200	2350	2360
	V max.= 4.45	2350.6465	2359.7144	2350	2360

Band 41:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	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	V min.= 3.45	2535.6427	2654.7134	2535	2655
	V max.=4.45	2535.6468	2654.7169	2535	2655

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

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	1710.6483	1779.7199	1710	1780
-20		1710.6450	1779.7226	1710	1780
-10		1710.6480	1779.7199	1710	1780
0		1710.6448	1779.7186	1710	1780
10		1710.6438	1779.7205	1710	1780
20		1710.6443	1779.7227	1710	1780
30		1710.6488	1779.7255	1710	1780
40		1710.6414	1779.7239	1710	1780
50		1710.6464	1779.7227	1710	1780
20	V min.= 3.45	1710.6448	1779.7186	1710	1780
	V max.=4.45	1710.6452	1779.7229	1710	1780

16QAM:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.87	-5	-0.0027	pass
-20		-6	-0.0032	pass
-10		3	0.0016	pass
0		1	0.0005	pass
10		9	0.0048	pass
20		-18	-0.0096	pass
30		-12	-0.0064	pass
40		-8	-0.0043	pass
50		3	0.0016	pass
20	V min.= 3.45	4	0.0021	pass
	V max.=4.45	6	0.0032	pass

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	1710.4668	1754.6338	1710	1755
-20		1710.4694	1754.6354	1710	1755
-10		1710.4699	1754.6344	1710	1755
0		1710.4674	1754.6358	1710	1755
10		1710.4685	1754.6351	1710	1755
20		1710.4718	1754.6386	1710	1755
30		1710.4682	1754.6409	1710	1755
40		1710.4672	1754.6370	1710	1755
50		1710.4656	1754.6400	1710	1755
20	V min.= 3.45	1710.4676	1754.6375	1710	1755
	V max.=4.45	1710.4697	1754.6405	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o=836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.87	-13	-0.0155	2.5
-20		-4	-0.0048	2.5
-10		-7	-0.0084	2.5
0		3	0.0036	2.5
10		2	0.0024	2.5
20		-12	-0.0143	2.5
30		-16	-0.0191	2.5
40		4	0.0048	2.5
50		-2	-0.0024	2.5
20	V min.= 3.45	6	0.0072	2.5
	V max.=4.45	8	0.0096	2.5

Band 7:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	2500.6789	2569.4954	2500	2570
-20		2500.6783	2569.4980	2500	2570
-10		2500.6773	2569.4970	2500	2570
0		2500.6758	2569.5001	2500	2570
10		2500.6741	2569.4958	2500	2570
20		2500.6767	2569.4976	2500	2570
30		2500.6739	2569.4969	2500	2570
40		2500.6786	2569.4968	2500	2570
50		2500.6788	2569.5003	2500	2570
20	V min.= 3.45	2500.6766	2569.4988	2500	2570
	V max.=4.45	2500.6776	2569.4978	2500	2570

Band 38:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	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	V min.= 3.45	2570.6352	2619.5008	2570	2620
	V max.=4.45	2570.6382	2619.5014	2570	2620

Band 40 Lower:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	2305.6426	2314.5977	2305	2315
-20		2305.6431	2314.5983	2305	2315
-10		2305.6406	2314.5972	2305	2315
0		2305.6371	2314.5985	2305	2315
10		2305.6389	2314.5968	2305	2315
20		2305.6376	2314.5953	2305	2315
30		2305.6386	2314.6016	2305	2315
40		2305.6378	2314.5968	2305	2315
50		2305.6384	2314.5947	2305	2315
20	V min.= 3.45	2305.6409	2314.5948	2305	2315
	V max.=4.45	2305.6361	2314.5947	2305	2315

Band 40 Upper

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	2350.6508	2359.7141	2350	2360
-20		2350.6363	2359.7139	2350	2360
-10		2350.6416	2359.7263	2350	2360
0		2350.6333	2359.7216	2350	2360
10		2350.6353	2359.7162	2350	2360
20		2350.6392	2359.7166	2350	2360
30		2350.6342	2359.7150	2350	2360
40		2350.6463	2359.7089	2350	2360
50		2350.6590	2359.7141	2350	2360
20	V min.= 3.45	2350.6364	2359.7076	2350	2360
	V max.= 4.45	2350.6486	2359.7211	2350	2360

Band 41:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	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	V min.= 3.45	2535.6354	2654.6025	2535	2655
	V max.=4.45	2535.6420	2654.6024	2535	2655

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

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	3.87	1710.6337	1779.5964	1710	1780
-20		1710.6347	1779.6007	1710	1780
-10		1710.6388	1779.6026	1710	1780
0		1710.6348	1779.6035	1710	1780
10		1710.6359	1779.5991	1710	1780
20		1710.6367	1779.6010	1710	1780
30		1710.6331	1779.5989	1710	1780
40		1710.6336	1779.5974	1710	1780
50		1710.6364	1779.6029	1710	1780
20	V min.= 3.45	1710.6355	1779.6006	1710	1780
	V max.=4.45	1710.6362	1779.5989	1710	1780

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