



TESTREPORT

Applicant Name : Bolt Modus Corp
Address : Oficina N.33 Edificio Ofidepositos Central, Calidonia - Distrito Federal, Panama
Report Number : RA221205-59242E-RF-00C
FCC ID: 2APW4LIV3S

Test Standard (s)

FCC PART 22H; FCC PART 24E

Sample Description

Product Type: 3G Smart Phone
Model No.: LIV3S
Multiple Model(s) No.: N/A
Trade Mark: YEZZ
Date Received: 2022/12/05
Report Date: 2022/12/21

Test Result:	Pass*
--------------	-------

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

Prepared and Checked By:

Approved By:

Andy Yu
EMC Engineer

Candy Li
EMC Engineer

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

Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk "★". Customer model name, addresses, names, trademarks etc. are not considered data.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

Shenzhen Accurate Technology Co., Ltd.

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

Tel: +86 755-26503290

Fax: +86 755-26503396

Web: www.atc-lab.com

Version 24: 2021-11-09

Page 1 of 71

FCC- 2G,3G

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY	3
GENERAL INFORMATION.....	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
OBJECTIVE	4
TEST METHODOLOGY	5
MEASUREMENT UNCERTAINTY	5
TEST FACILITY	5
SYSTEM TEST CONFIGURATION.....	6
DESCRIPTION OF TEST CONFIGURATION	6
EQUIPMENT MODIFICATIONS	6
SUPPORT EQUIPMENT LIST AND DETAILS	6
SUPPORT CABLE DESCRIPTION	6
BLOCK DIAGRAM OF TEST SETUP	7
SUMMARY OF TEST RESULTS	8
TEST EQUIPMENT LIST	9
FCC §1.1307(B) & §2.1093 - RF EXPOSURE INFORMATION.....	11
FCC§2.1047 - MODULATION CHARACTERISTIC	12
FCC § 2.1046, § 22.913 (A) (D) & § 24.232(C) (D) - RF OUTPUT POWER.....	13
APPLICABLE STANDARD	13
TEST PROCEDURE	13
TEST DATA	13
FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH.....	17
APPLICABLE STANDARD	17
TEST PROCEDURE	17
TEST DATA	17
FCC §2.1051, §22.917(A) & §24.238(A) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS	44
APPLICABLE STANDARD	44
TEST PROCEDURE	44
TEST DATA	44
FCC § 2.1053; § 22.917 (A);§ 24.238 (A) - SPURIOUS RADIATED EMISSIONS.....	54
APPLICABLE STANDARD	54
TEST PROCEDURE	54
TEST DATA	54
FCC§ 22.917 (A);§ 24.238 (A)- BAND EDGES.....	59
APPLICABLE STANDARD	59
TEST PROCEDURE	59
TEST DATA	59
FCC § 2.1055; § 22.355; § 24.235- FREQUENCY STABILITY	68
APPLICABLE STANDARD	68
TEST PROCEDURE	68
TEST DATA	69

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RA221205-59242E-RF-00C	Original Report	2022/12/21

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX)
Modulation Technique	2G: GMSK 3G: BPSK, QPSK, 16QAM
Antenna Specification*	GSM850/WCDMA Band 5: -2.0dBi PCS 1900/WCDMA Band 2: -1.6dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5V from adapter
Sample serial number	1U07-4 for Radiated Emissions Test 1TYL-1 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: CLIV3S Input: AC 100-240V, 50/60Hz Output: DC 5.0V, 1A
Extreme condition*	L.V.: Low Voltage 3.45V N.V.: Normal Voltage 3.85V H.V.: High Voltage 4.4V (provided by the applicant)

Objective

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

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

Test Methodology

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

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services

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

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

Each test item follows test standards and with no deviation.

Measurement Uncertainty

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

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

Test Facility

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

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

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

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

Test was performed as below table:

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.6	848.8
PCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B5	4.2	826.4	836.6	846.6

Equipment Modifications

No modification was made to the EUT.

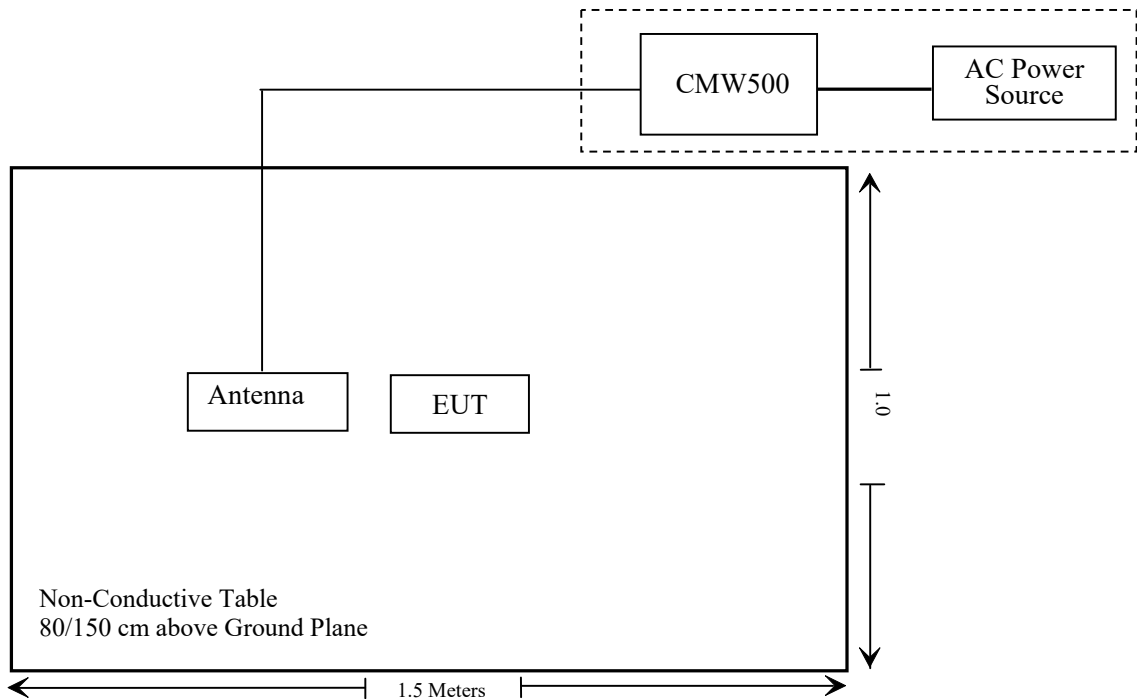
Support Equipment List and Details

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

Support Cable Description

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

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

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

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2022/11/25	2023/11/24
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2022/11/25	2023/11/24
SONOMA INSTRUMENT	Amplifier	310 N	186131	2022/11/08	2023/11/07
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2022/11/08	2023/11/07
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2022/11/08	2023/11/07
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.11	N1000	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.12	N040	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.13	N300	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.14	N800	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.15	N600	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.16	N650	2022/11/25	2023/11/24
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
PASTERNAK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-024-1)	2020/01/05	2023/01/04
PASTERNAK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-025-1)	2020/01/05	2023/01/04
Wainwright	High Pass Filter	WHKX3.6/18 G-10SS	5	2021/12/14	2022/12/13
CD	High Pass Filter	HPM-1.2/18G -60	110	2021/12/14	2022/12/13
Unknown	RFCoaxialCable	No.16	N200	2022/11/25	2023/11/24
Agilent	Signal Generator	N5183A	MY51040755	2022/11/25	2023/11/24

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
SPECTRUM ANALYZER	Rohde & Schwarz	FSU26	200982	2022/07/04	2023/07/03
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2022/11/25	2023/11/24
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2022/11/25	2023/11/24
REALE	Temp. & Humid. Chamber	RHP-800BT	R20170318310	2022/11/23	2023/11/22
Fluke	Multi Meter	45	7664009	2021/12/14	2022/12/13
Manson	DC Power Source	KPS-6604	ATCS-205	NCR	NCR
Unknown	RF Coaxial Cable	No.33	RF-03	Each time	

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

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

Applicable Standard

FCC§1.1307 and §2.1093.

Test Result

Compliant, please refer to the SAR report: RA221205-59242E-SA.

FCC§2.1047 - MODULATION CHARACTERISTIC

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

FCC § 2.1046, § 22.913 (a) (d) & § 24.232(c) (d) - 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.

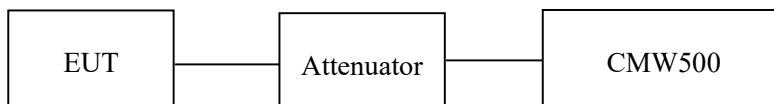
According to FCC §2.1046 and §24.232 (c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

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

Test Procedure

Conducted method:

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



Note: the path loss (cable loss and attenuator) has included in the result.

Test Data

Environmental Conditions

Temperature:	25.7 °C
Relative Humidity:	58.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang on 2022-12-12 and 2022-12-13.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	32.30	27.65	38.45
	190	836.6	32.40	27.75	38.45
	251	848.8	32.60	27.95	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	32.22	30.49	28.93	27.16	27.57	25.84	24.28	22.51	38.45
	190	836.6	32.36	30.51	28.93	27.14	27.71	25.86	24.28	22.49	38.45
	251	848.8	32.54	30.56	28.91	27.06	27.89	25.91	24.26	22.41	38.45

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		22.02	23.41	21.77	17.37	18.76	17.12
	HSDPA	1	20.84	22.53	20.45	16.19	17.88	15.80
		2	20.77	22.41	20.34	16.12	17.76	15.69
		3	20.69	22.39	20.37	16.04	17.74	15.72
		4	20.57	22.28	20.41	15.92	17.63	15.76
	HSUPA	1	20.82	22.23	20.43	16.17	17.58	15.78
		2	20.75	22.14	20.41	16.10	17.49	15.76
		3	20.68	22.26	20.37	16.03	17.61	15.72
		4	20.59	22.31	20.42	15.94	17.66	15.77
		5	20.74	22.18	20.39	16.09	17.53	15.74
	HSPA+	1	20.63	22.19	20.47	15.98	17.54	15.82

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

For GSM850 / WCDMA Band5: Antenna Gain = -2.0 dBi = -4.15dBd (0dBd=2.15dBi)

L_C = signal attenuation in the connecting cable between the transmitter and antenna in 0.5dB

Limit: ERP ≤ 38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	29.00	26.40	33
	661	1880.0	29.00	26.40	33
	810	1909.8	29.10	26.50	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	28.96	26.64	25.35	23.48	26.36	24.04	22.75	20.88	33
	661	1880.0	28.97	26.55	25.25	23.38	26.37	23.95	22.65	20.78	33
	810	1909.8	29.16	26.66	25.34	23.47	26.56	24.06	22.74	20.87	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		21.94	21.93	22.11	19.34	19.33	19.51
	HSDPA	1	21.48	20.89	21.29	18.88	18.29	18.69
		2	21.36	20.78	21.22	18.76	18.18	18.62
		3	21.28	20.84	21.23	18.68	18.24	18.63
		4	21.25	20.81	21.17	18.65	18.21	18.57
	HSUPA	1	21.39	20.77	21.27	18.79	18.17	18.67
		2	21.33	20.68	21.11	18.73	18.08	18.51
		3	21.28	20.59	21.17	18.68	17.99	18.57
		4	21.25	20.71	21.16	18.65	18.11	18.56
		5	21.31	20.66	21.15	18.71	18.06	18.55
	HSPA+	1	21.27	20.58	21.18	18.67	17.98	18.58

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

For PCS1900 / WCDMA Band2: Antenna Gain = -1.60dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in 1.0dB

Limit: EIRP ≤ 33dBm

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

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.65	13
	Middle	3.36	13
	High	4.42	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.08	13
	Middle	2.88	13
	High	3.11	13
HSDPA (16QAM)	Low	4.81	13
	Middle	4.68	13
	High	4.87	13
HSUPA (BPSK)	Low	3.43	13
	Middle	3.27	13
	High	3.46	13
HSPA+	Low	3.28	13
	Middle	3.19	13
	High	3.26	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.62	13
	Middle	4.16	13
	High	4.19	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	2.60	13
	Middle	2.63	13
	High	2.60	13
HSDPA (16QAM)	Low	3.88	13
	Middle	4.17	13
	High	2.63	13
HSUPA (BPSK)	Low	2.85	13
	Middle	3.08	13
	High	3.11	13
HSPA+	Low	3.05	13
	Middle	3.16	13
	High	3.22	13

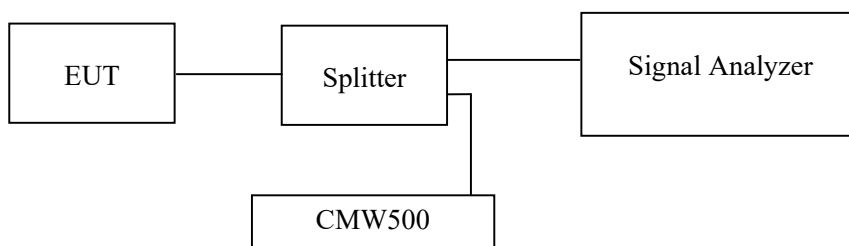
FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH**Applicable Standard**

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

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.



Note: the path loss (cable loss and attenuator) has included in the result.

Test Data**Environmental Conditions**

Temperature:	25.7 °C
Relative Humidity:	58.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang on 2022-12-12 and 2022-12-13.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables and plots.

Cellular Band (Part 22H)

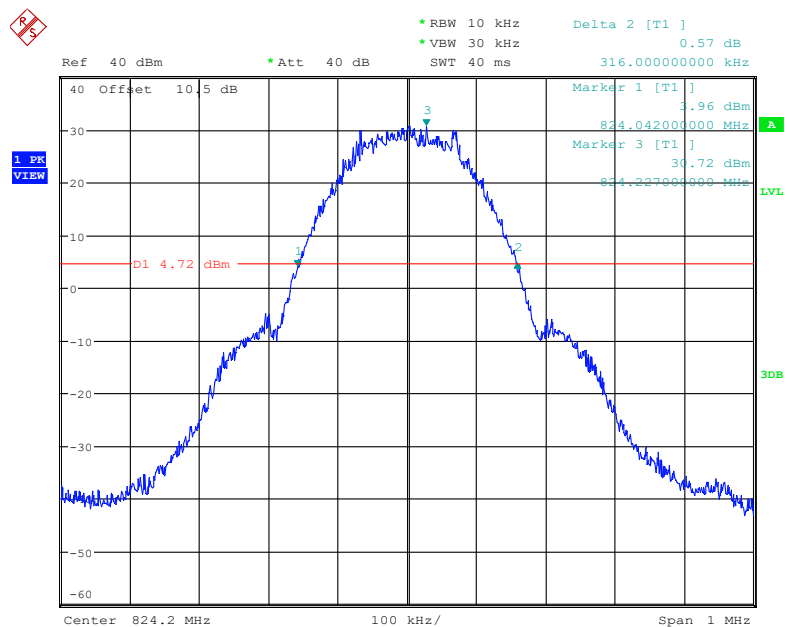
Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	128	824.2	242.00	316.00
	190	836.6	244.00	315.00
	251	848.8	244.00	322.00

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.13	4.68
	836.6	4.14	4.71
	846.6	4.16	4.68
HSDPA	826.4	4.16	4.71
	836.6	4.14	4.70
	846.6	4.14	4.70
HSUPA	826.4	4.13	4.68
	836.6	4.14	4.70
	846.6	4.16	4.68

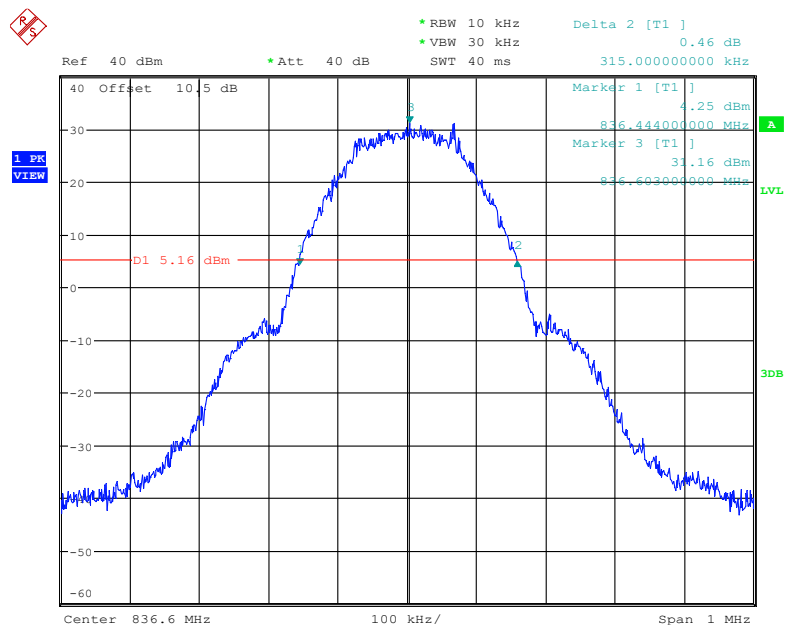
PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	512	1850.2	245.00	314.00
	661	1880.0	244.00	318.00
	810	1909.8	246.00	320.00

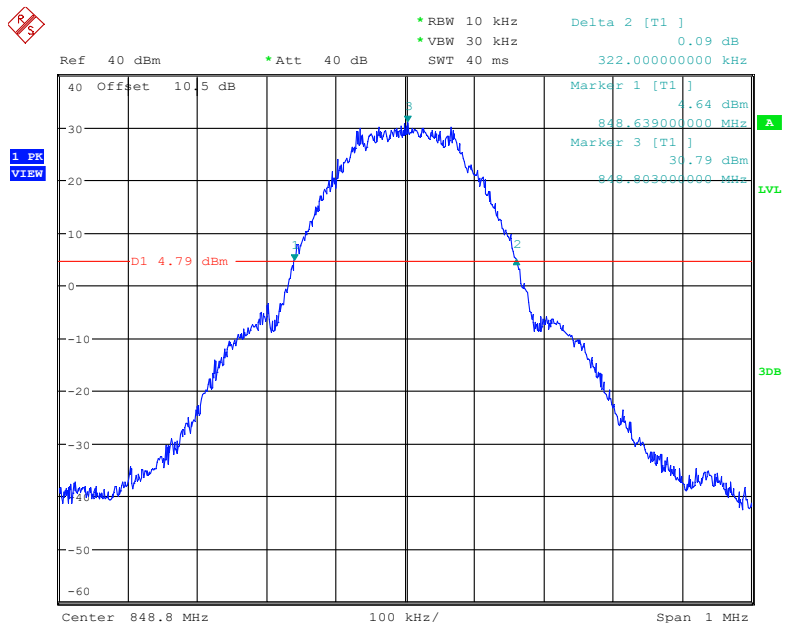
	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.14	4.71
	1880.0	4.14	4.73
	1907.6	4.13	4.70
HSDPA	1852.4	4.17	4.68
	1880.0	4.14	4.70
	1907.6	4.20	5.81
HSUPA	1852.4	4.14	4.70
	1880.0	4.14	4.71
	1907.6	4.11	4.68

Cellular Band (Part 22H)**26 dB Emissions for GSM (GMSK) Mode, Low channel**

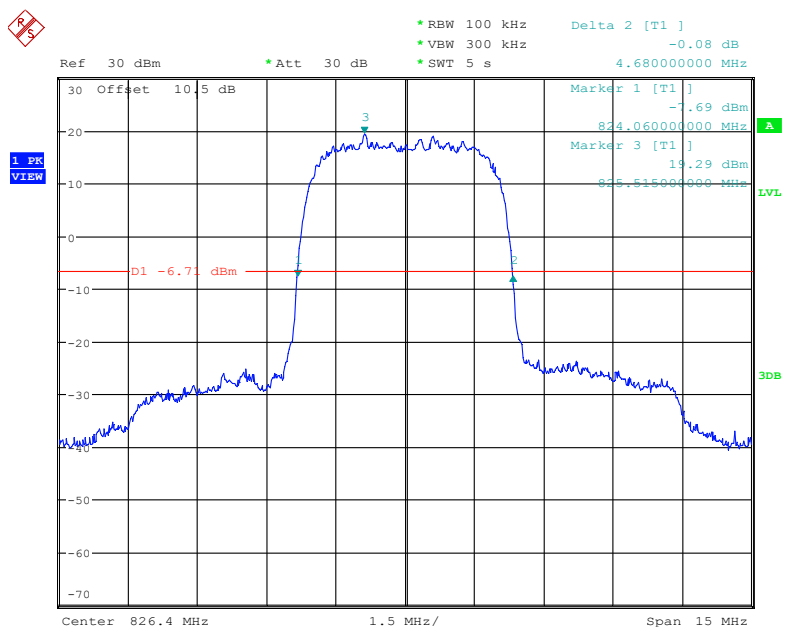
Date: 12.DEC.2022 10:23:36

26 dB Emissions for GSM (GMSK) Mode, Middle channel

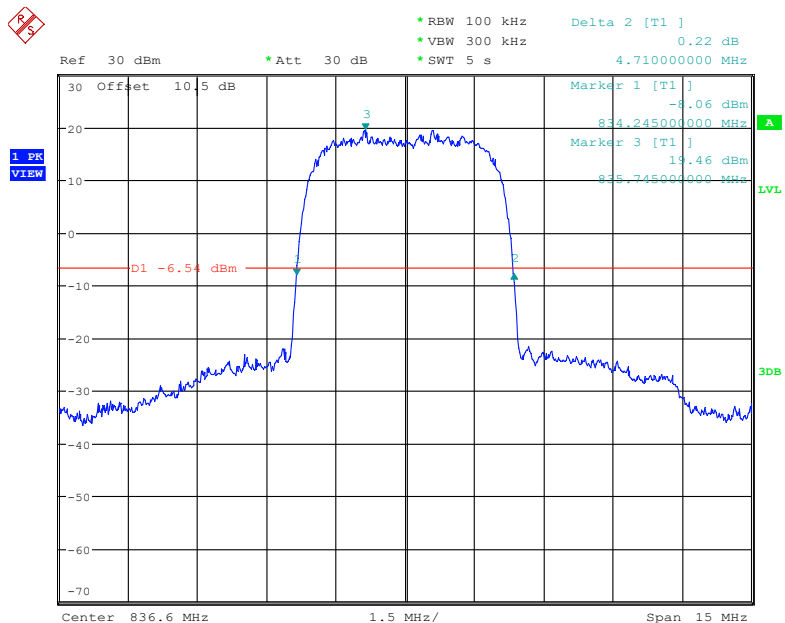
Date: 12.DEC.2022 10:29:34

26 dB Emissions for GSM (GMSK) Mode, High channel

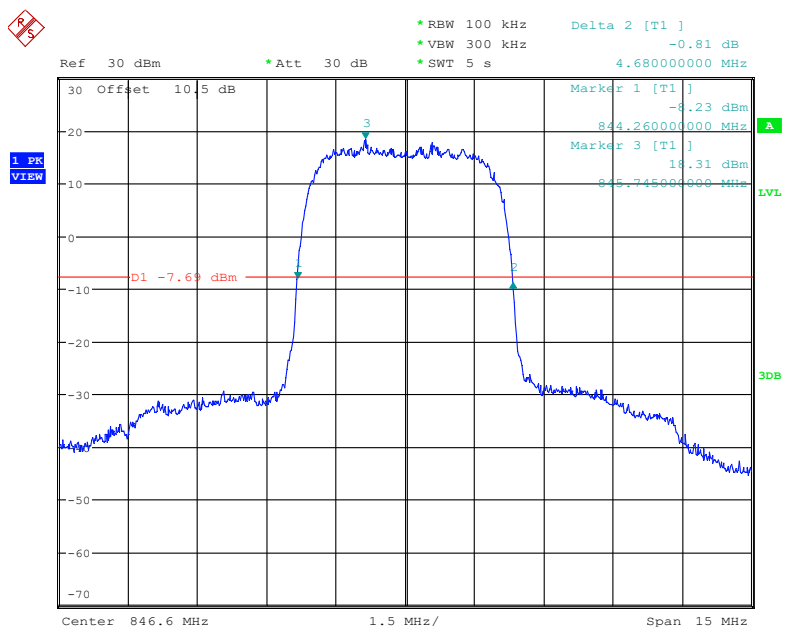
Date: 12.DEC.2022 10:33:37

26 dB Emissions for RMC (BPSK) Mode, Low channel

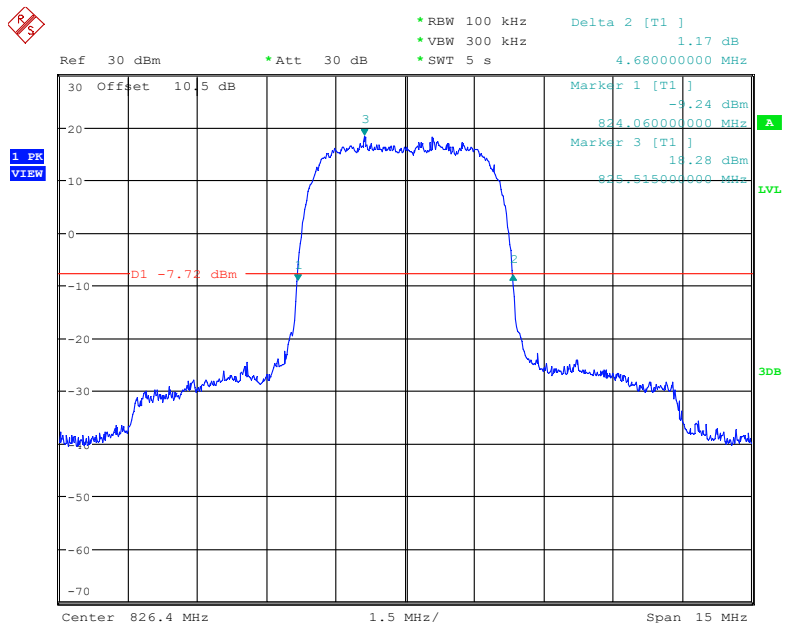
Date: 12.DEC.2022 14:05:38

26 dB Emissions for RMC (BPSK) Mode, Middle channel

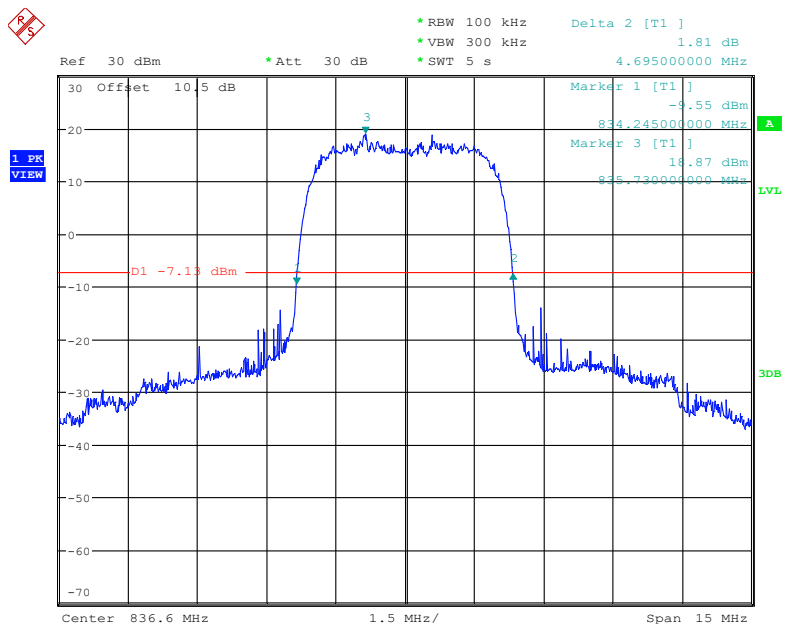
Date: 12.DEC.2022 14:09:03

26 dB Emissions for RMC (BPSK) Mode, High channel

Date: 12.DEC.2022 14:11:43

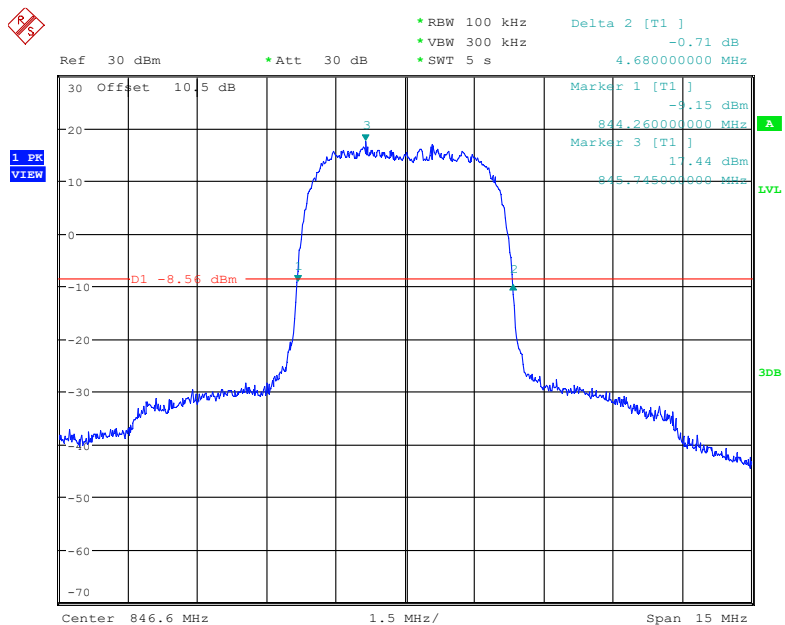
26 dB Emissions for HSUPA (QPSK) Mode, Low channel

Date: 12.DEC.2022 14:48:32

26 dB Emissions for HSUPA (QPSK) Mode, Middle channel

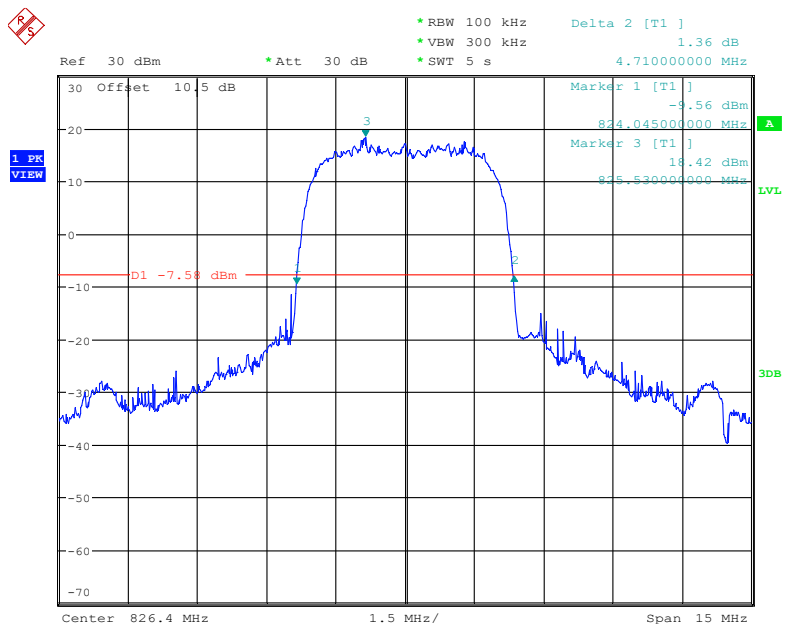
Date: 13.DEC.2022 09:23:23

26 dB Emissions for HSUPA (QPSK) Mode, High channel

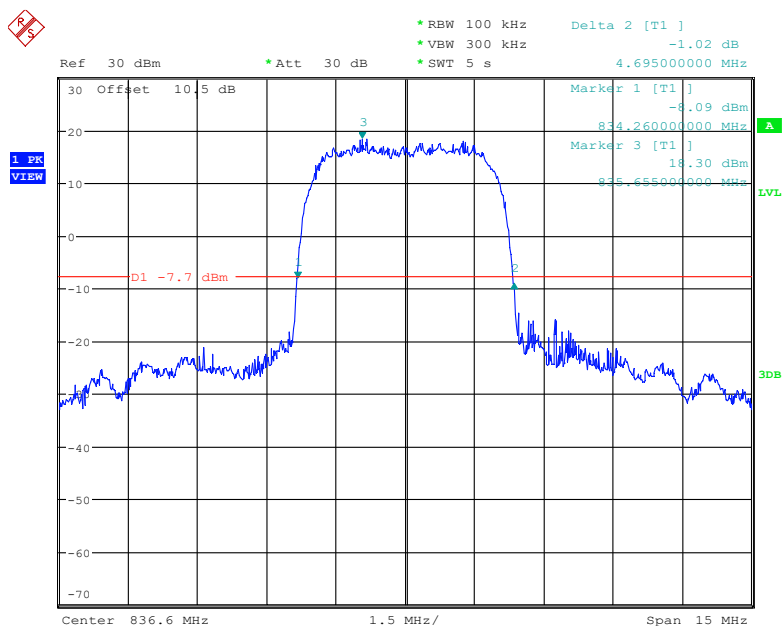


Date: 12.DEC.2022 14:56:08

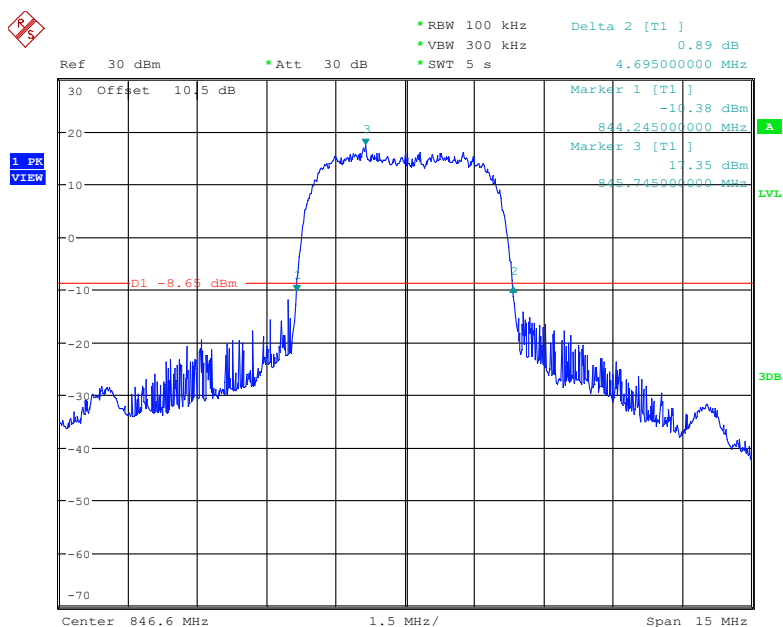
26 dB Emissions for HSDPA (16QAM) Mode, Low channel



Date: 12.DEC.2022 14:30:03

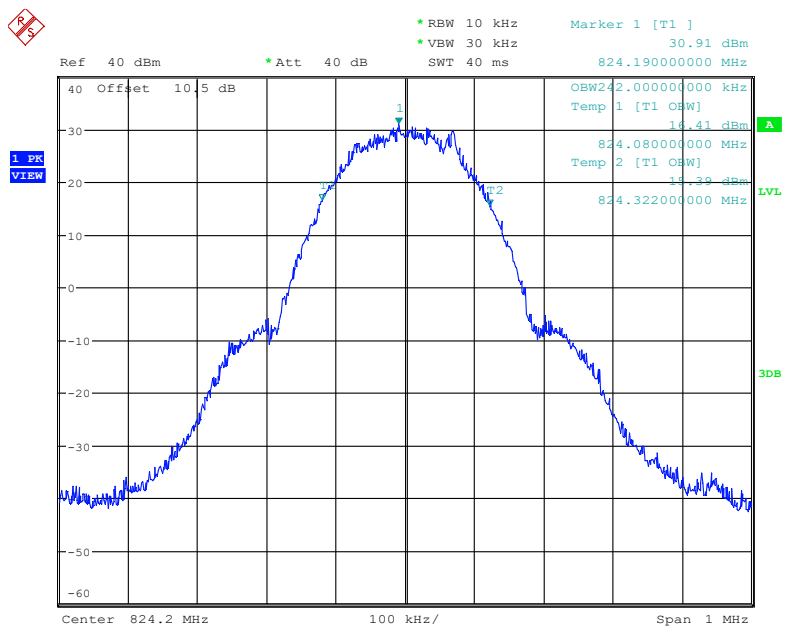
26 dB Emissions for HSDPA (16QAM) Mode, Middle channel

Date: 12.DEC.2022 14:34:50

26 dB Emissions for HSDPA (16QAM) Mode, High channel

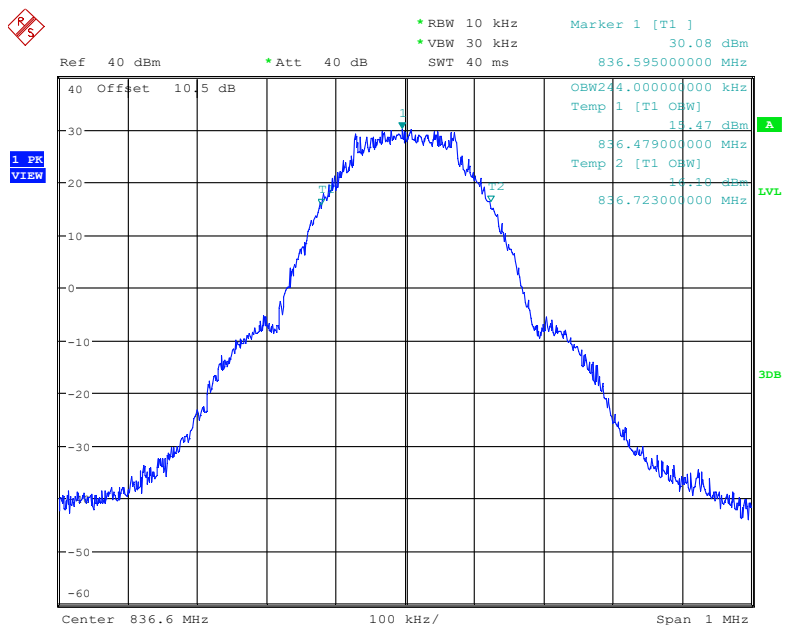
Date: 12.DEC.2022 14:43:37

99% Occupied Bandwidth for GSM (GMSK) Mode, Low channel

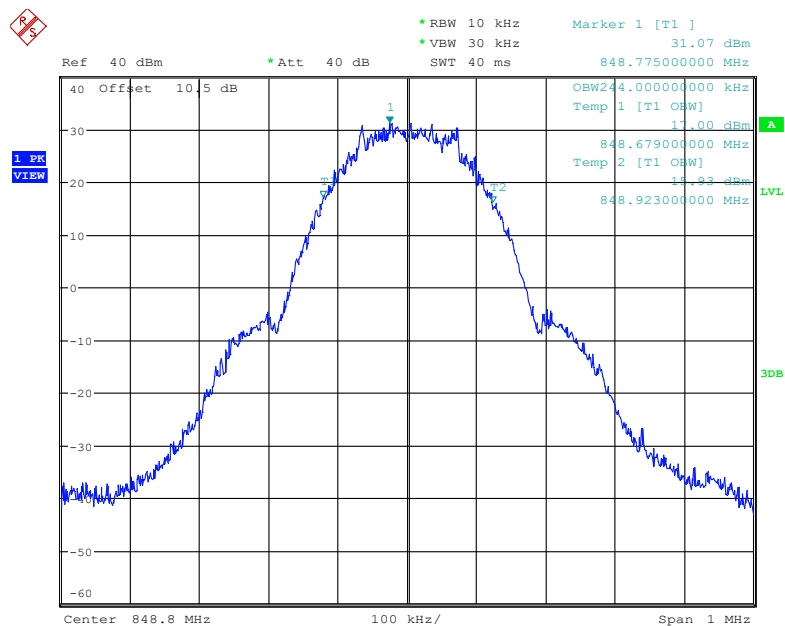


Date: 12.DEC.2022 10:22:54

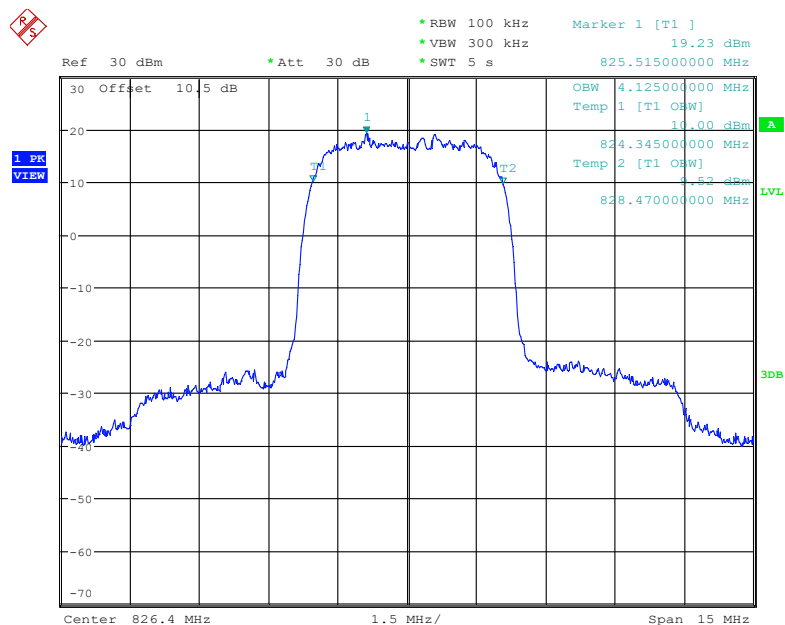
99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



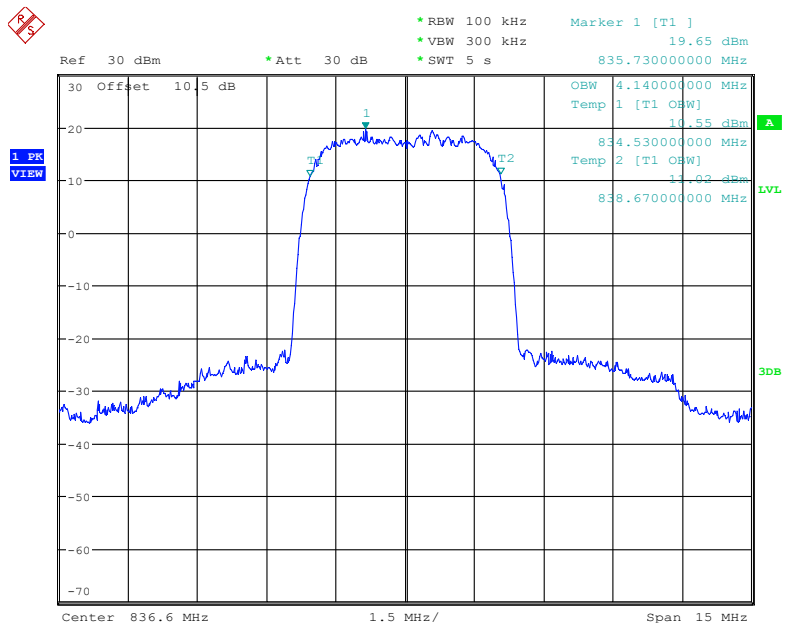
Date: 12.DEC.2022 10:28:56

99% Occupied Bandwidth for GSM (GMSK) Mode, High channel

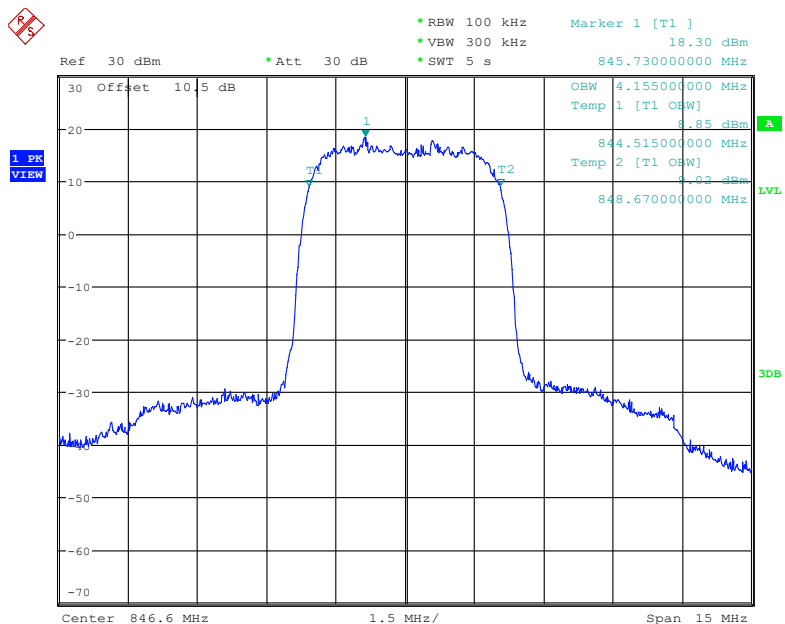
Date: 12.DEC.2022 10:32:57

99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel

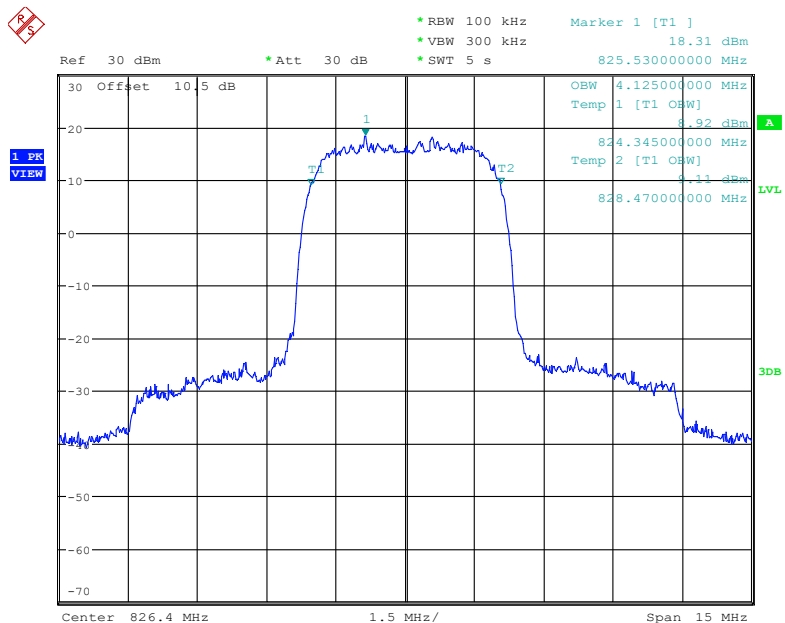
Date: 12.DEC.2022 14:04:58

99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel

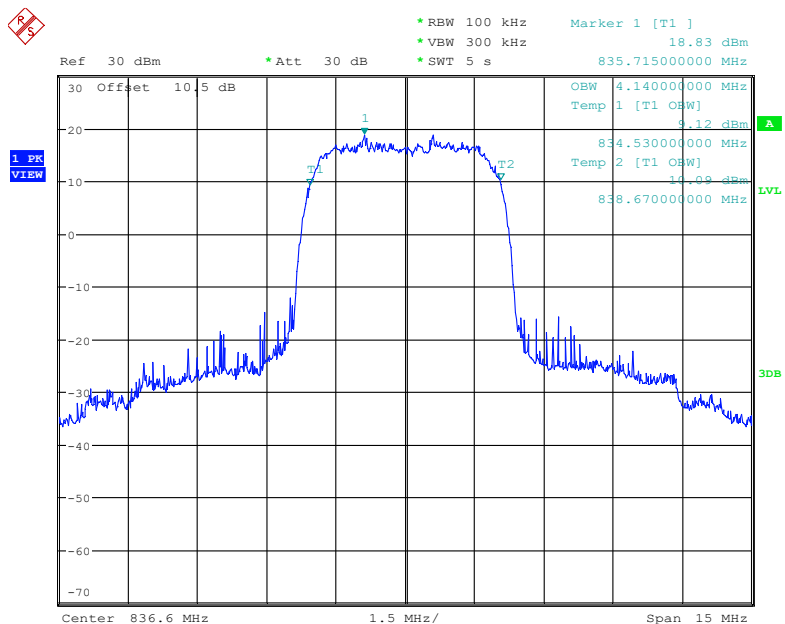
Date: 12.DEC.2022 14:08:24

99% Occupied Bandwidth for RMC (BPSK) Mode, High channel

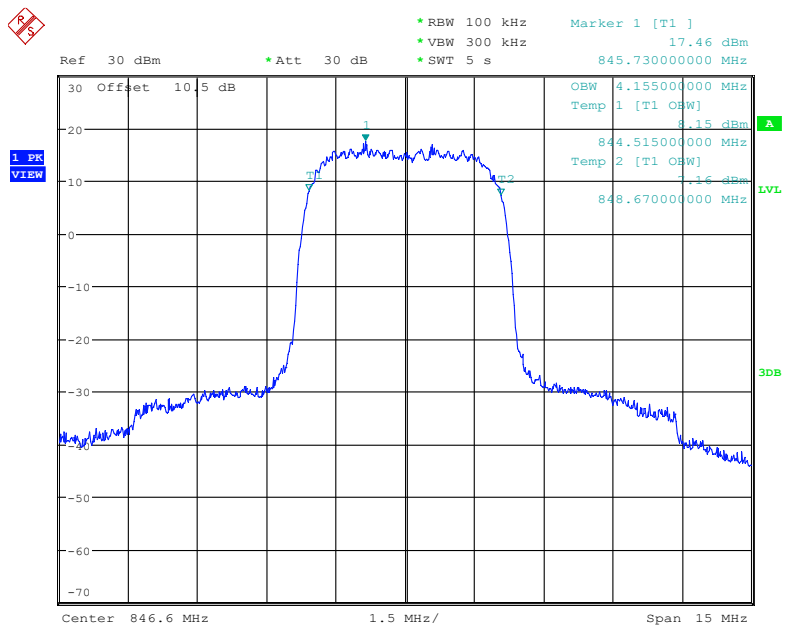
Date: 12.DEC.2022 14:11:03

99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel

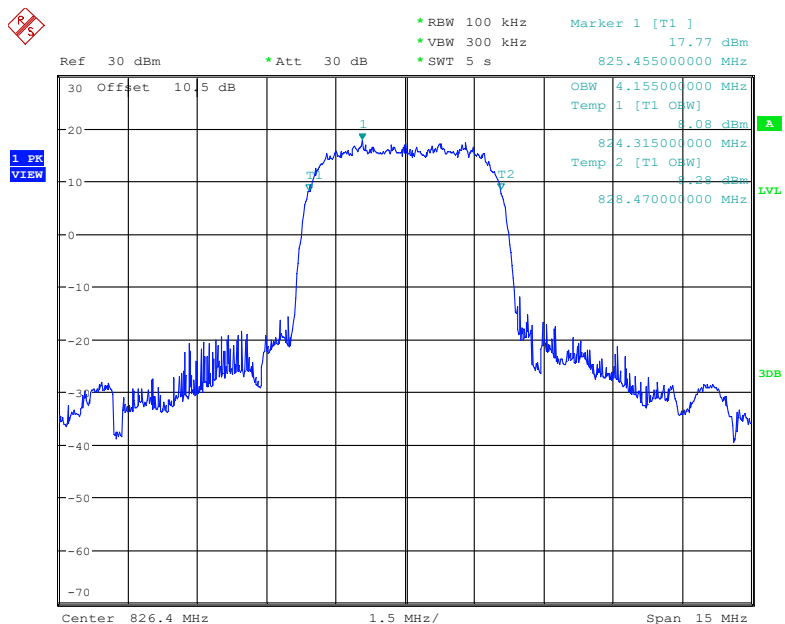
Date: 12.DEC.2022 14:47:54

99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel

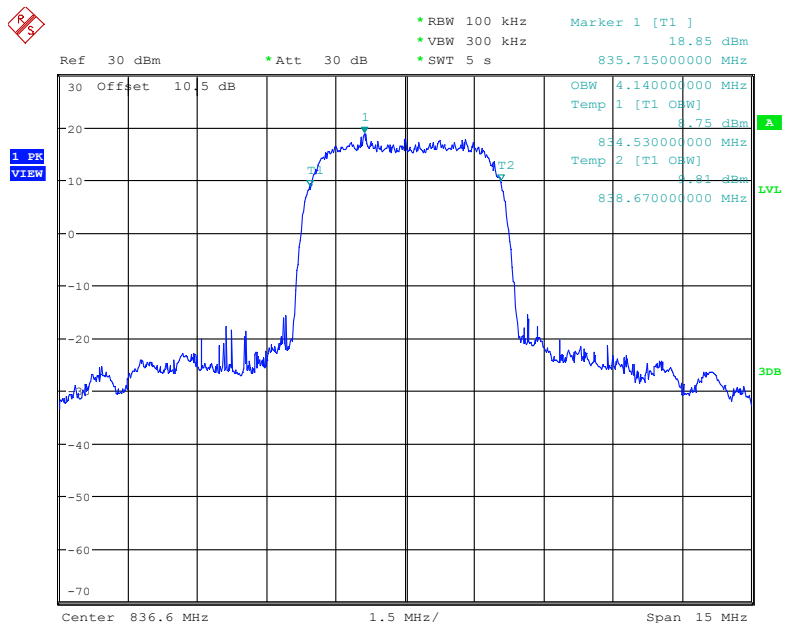
Date: 13.DEC.2022 09:22:41

99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel

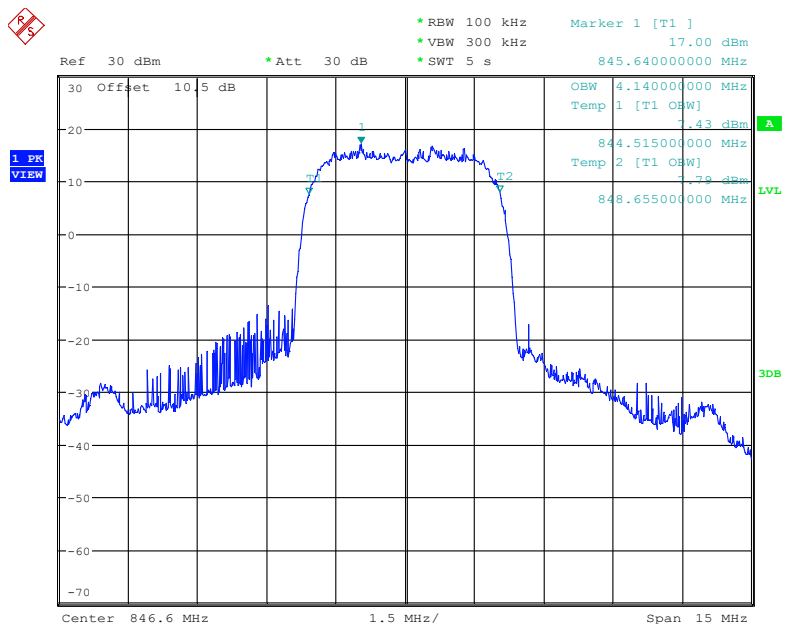
Date: 12.DEC.2022 14:55:27

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel

Date: 12.DEC.2022 14:29:24

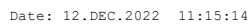
99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel

Date: 12.DEC.2022 14:34:11

99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel

Date: 12.DEC.2022 14:42:58

26 dB Emissions for GSM (GMSK) Mode, Low channel



Date: 12.DEC.2022 11:21:10

Date: 12.DEC.2022 11:31:08

Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 300 kHz *SWT 5 s Delta 2 [T1] 4.710000000 MHz

30 Offset 11 dB

1 PK VIEW

Marker 1 [T1] -9.99 dBm 1.850043000 GHz

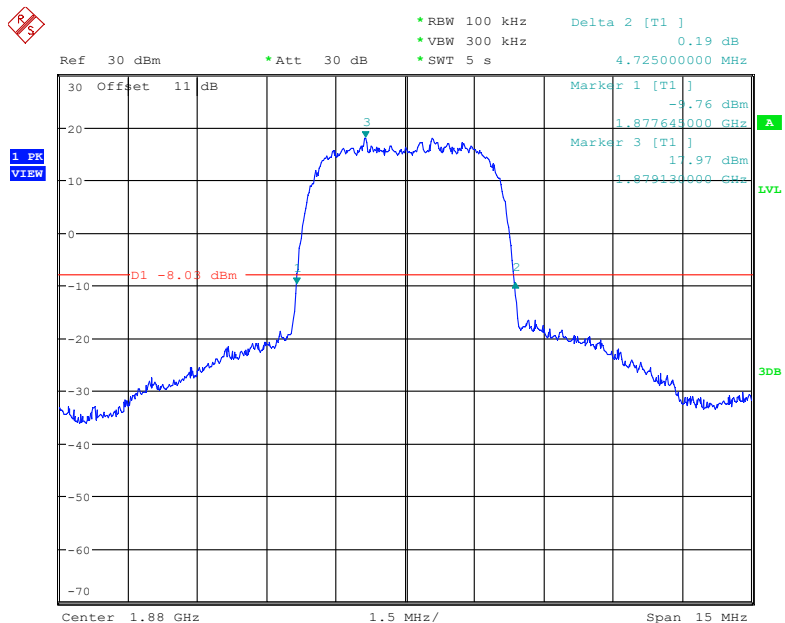
Marker 3 [T1] 18.14 dBm 1.851534000 GHz

D1 -7.86 dBm

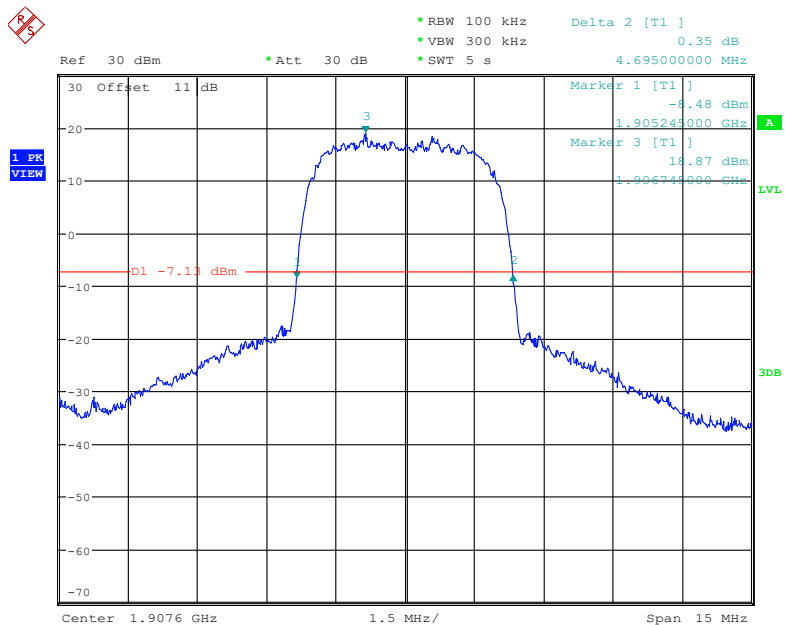
3dB

Center 1.8524 GHz 1.5 MHz/ Span 15 MHz

Date: 12.DEC.2022 13:31:27

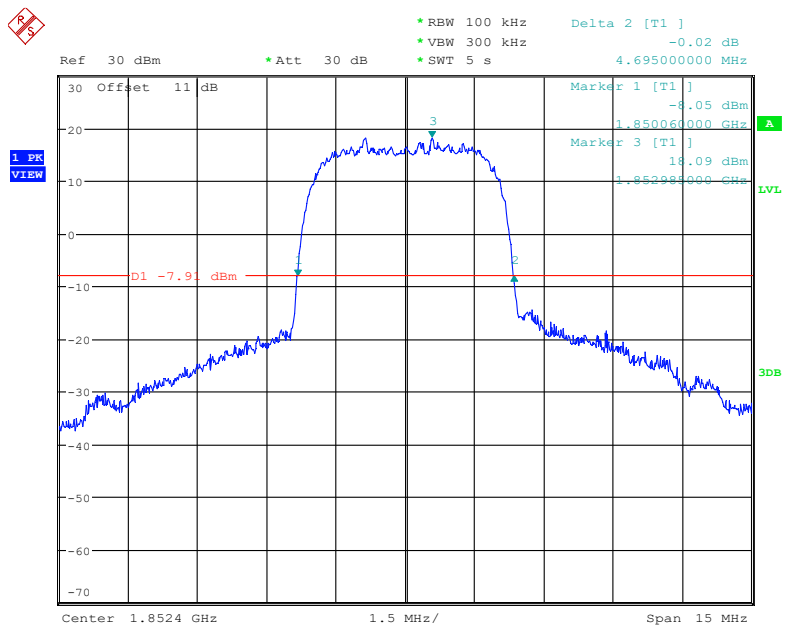
26 dB Emissions for RMC (BPSK) Mode, Middle channel

Date: 12.DEC.2022 13:37:27

26 dB Emissions for RMC (BPSK) Mode, High channel

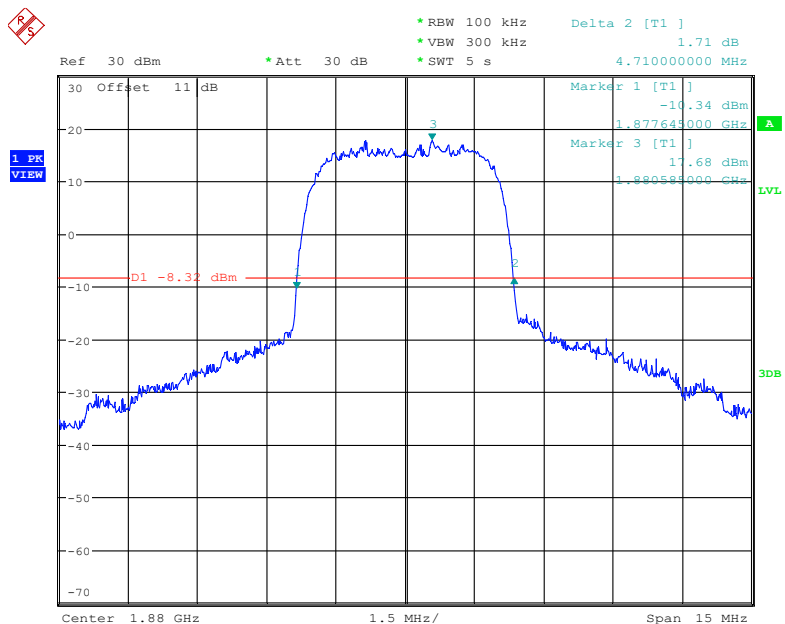
Date: 12.DEC.2022 13:54:25

26 dB Emissions for HSUPA (QPSK) Mode, Low channel

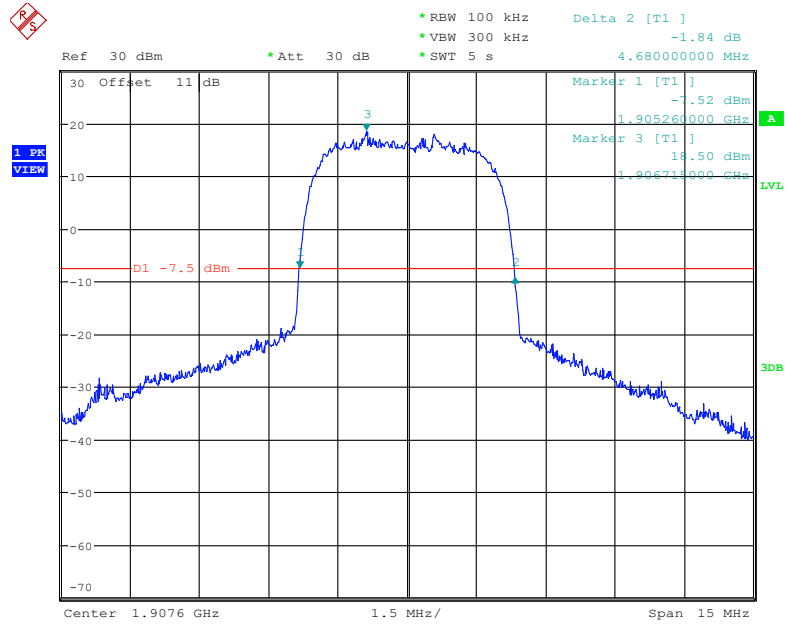


Date: 12.DEC.2022 15:00:07

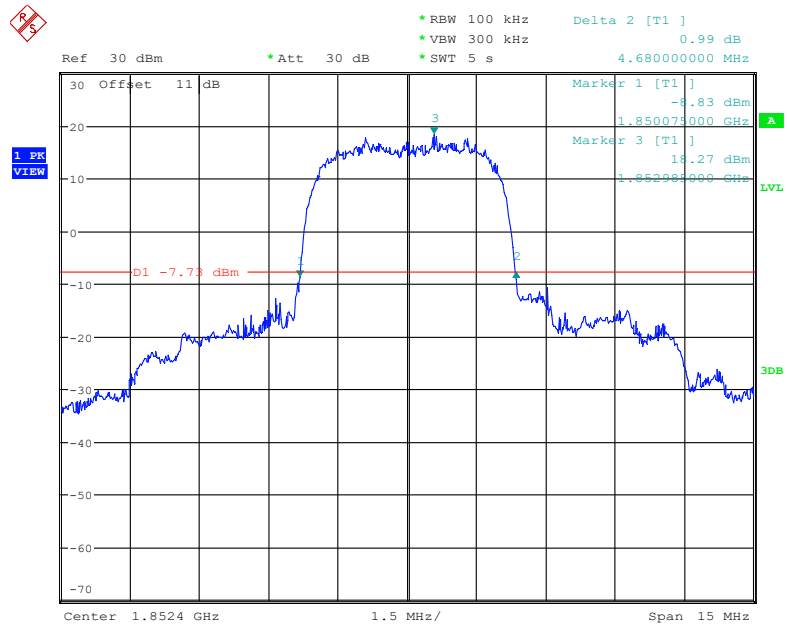
26 dB Emissions for HSUPA (QPSK) Mode, Middle channel



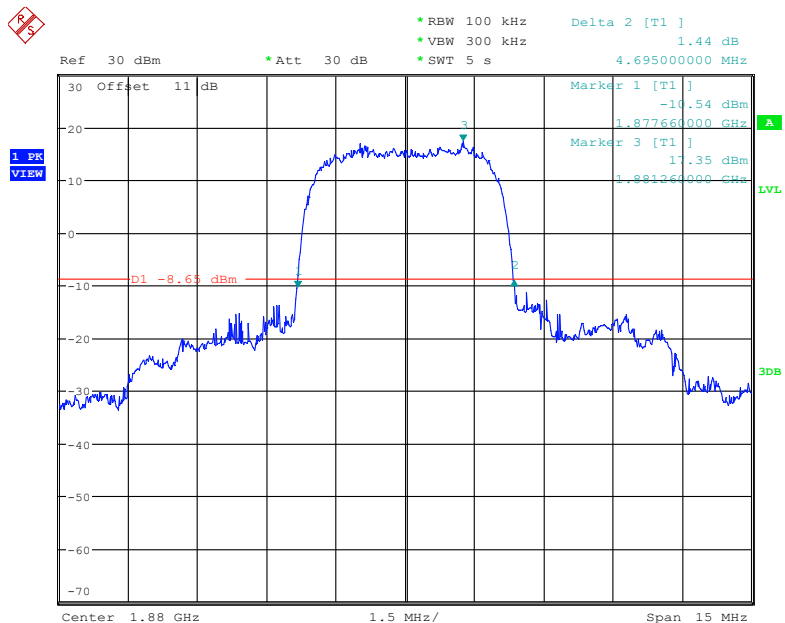
Date: 12.DEC.2022 15:04:06

26 dB Emissions for HSUPA (QPSK) Mode, High channel

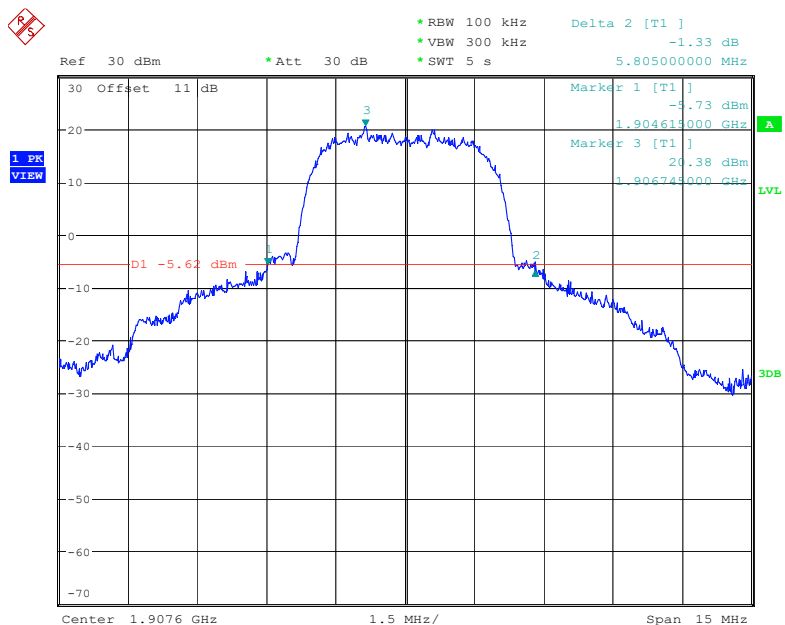
Date: 12.DEC.2022 15:07:54

26 dB Emissions for HSDPA (16QAM) Mode, Low channel

Date: 12.DEC.2022 14:19:40

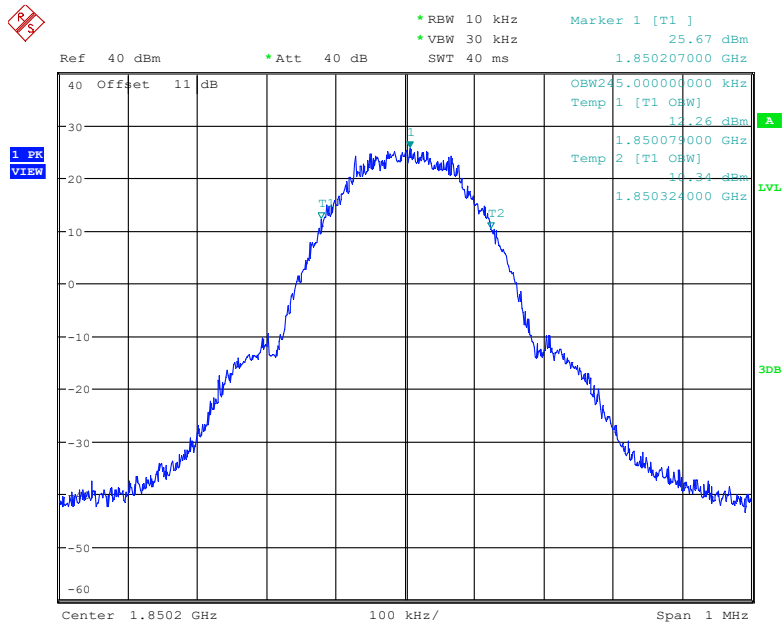
26 dB Emissions for HSDPA (16QAM) Mode, Middle channel

Date: 12.DEC.2022 14:26:25

26 dB Emissions for HSDPA (16QAM) Mode, High channel

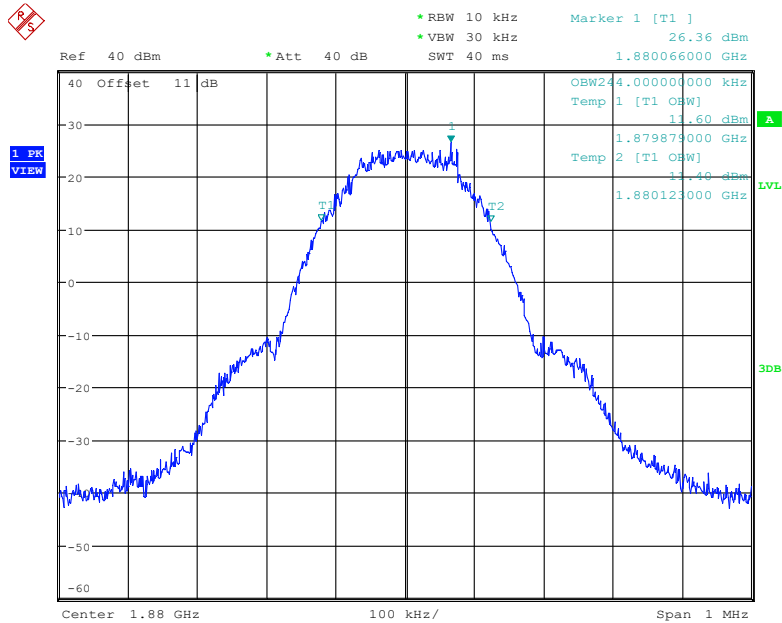
Date: 12.DEC.2022 20:04:44

99% Occupied Bandwidth for GSM (GMSK) Mode, Low channel



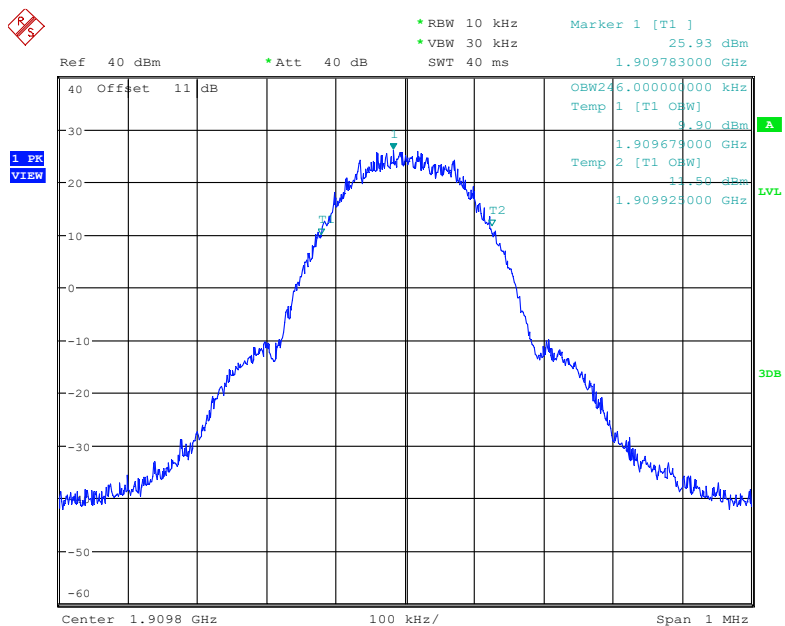
Date: 12.DEC.2022 11:14:34

99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



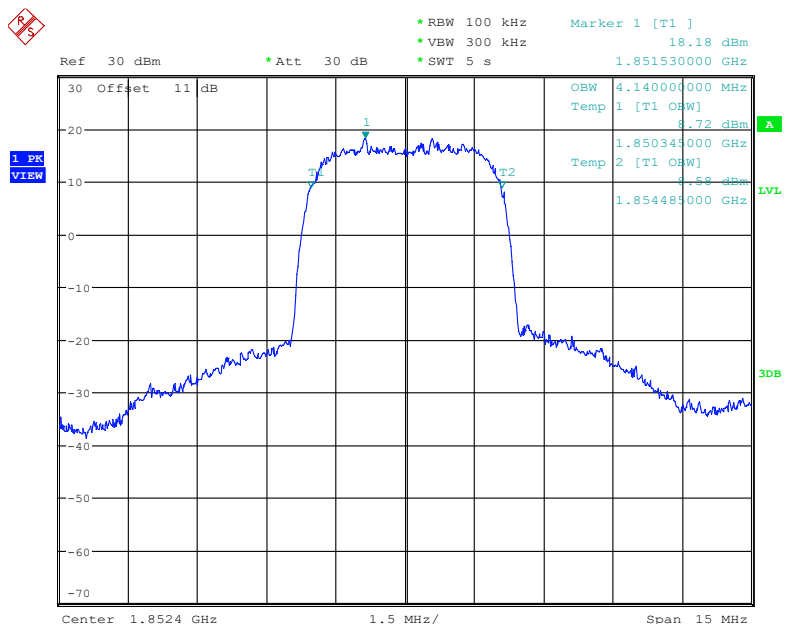
Date: 12.DEC.2022 11:20:30

99% Occupied Bandwidth for GSM (GMSK) Mode, High channel



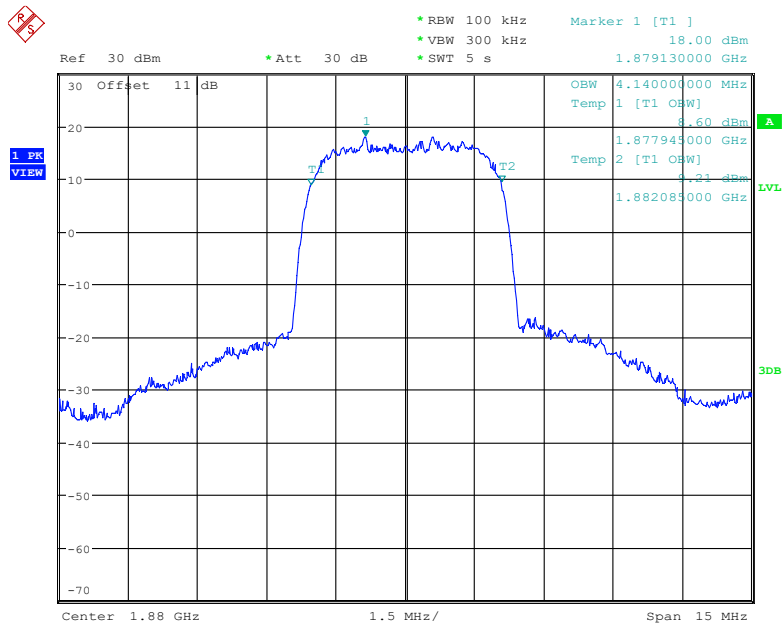
Date: 12.DEC.2022 11:30:28

99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



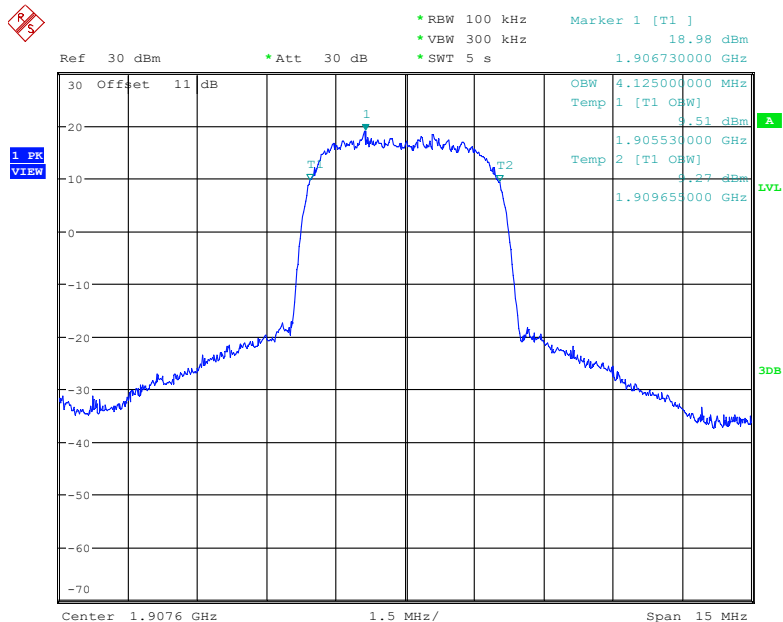
Date: 12.DEC.2022 13:30:48

99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel

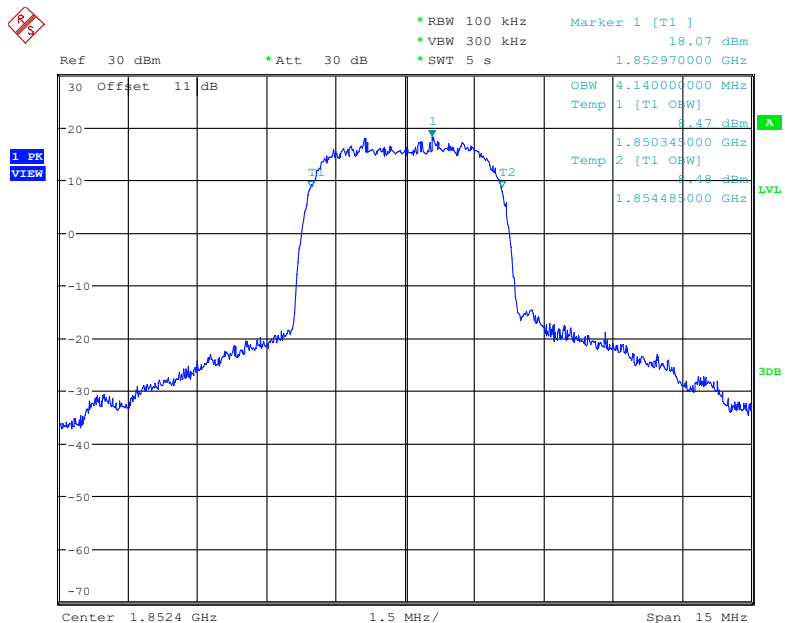


Date: 12.DEC.2022 13:36:47

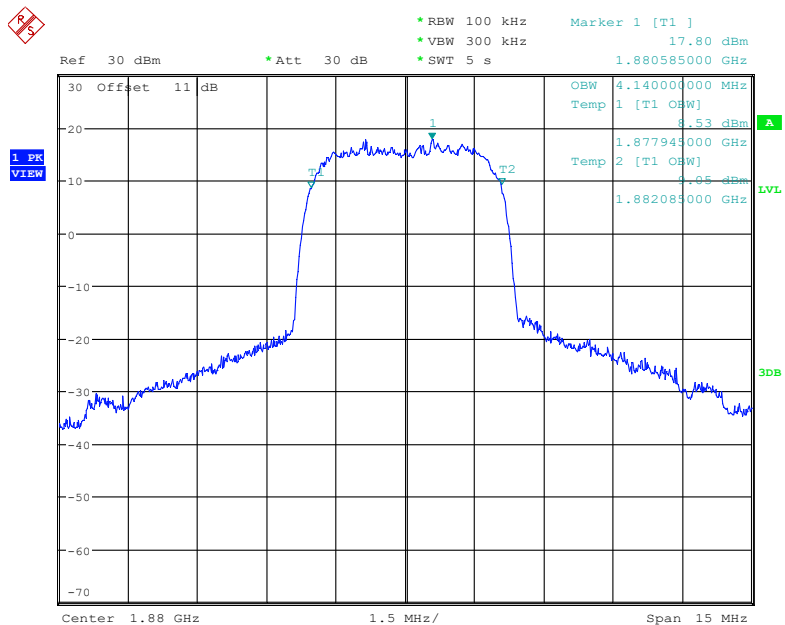
99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



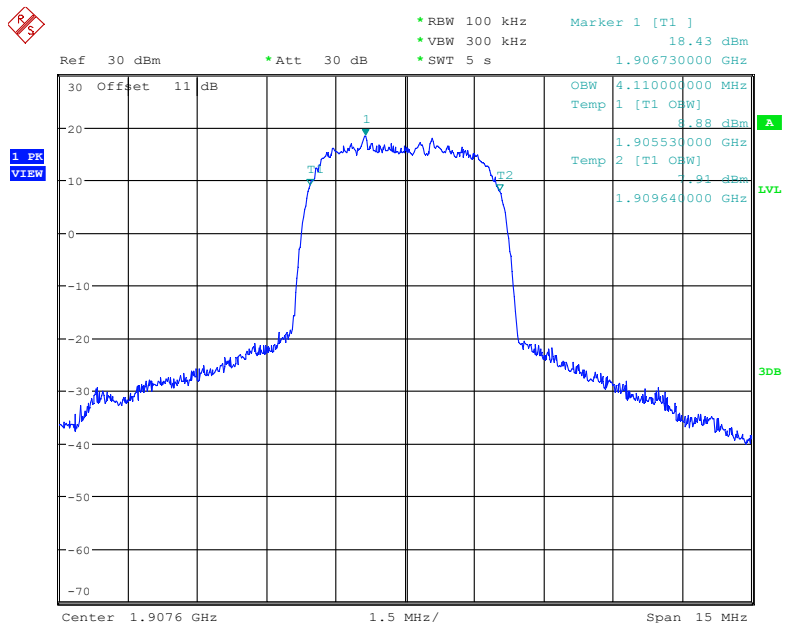
Date: 12.DEC.2022 13:53:46

99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel

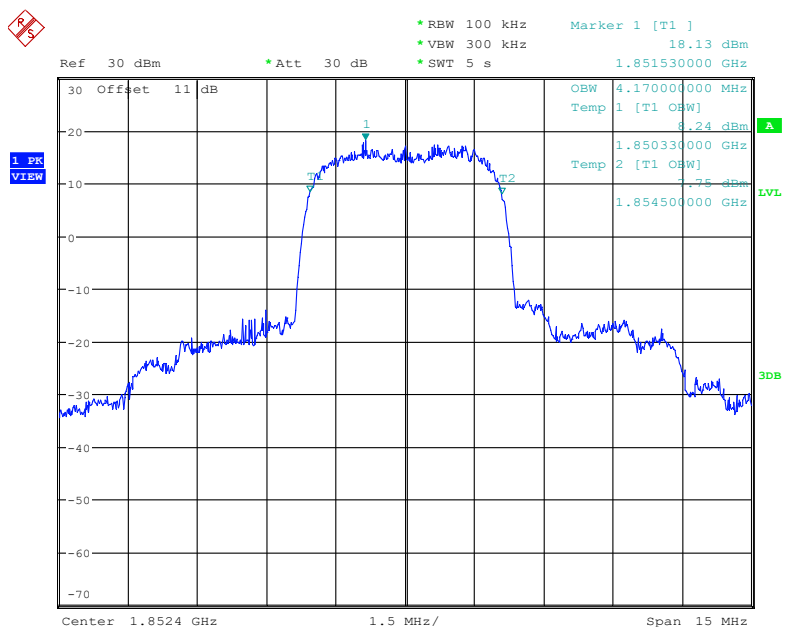
Date: 12.DEC.2022 14:59:27

99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel

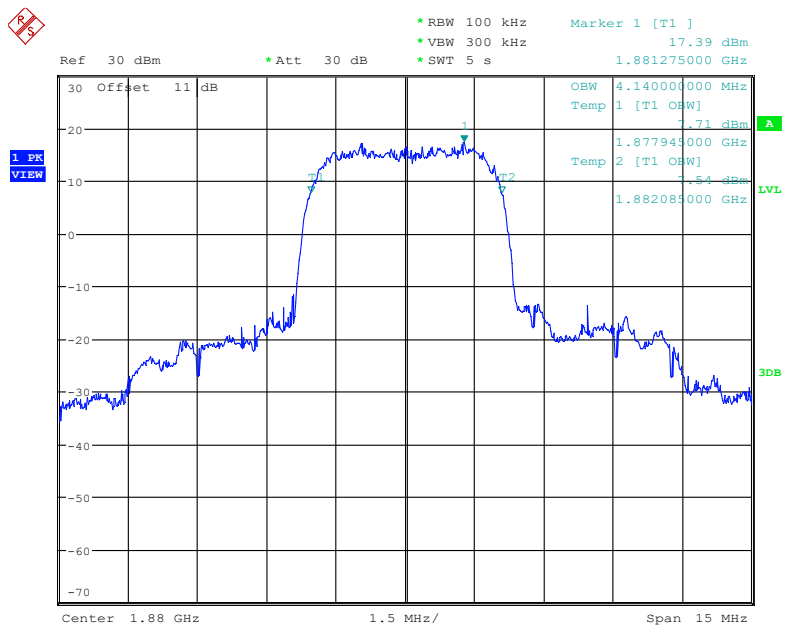
Date: 12.DEC.2022 15:03:26

99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel

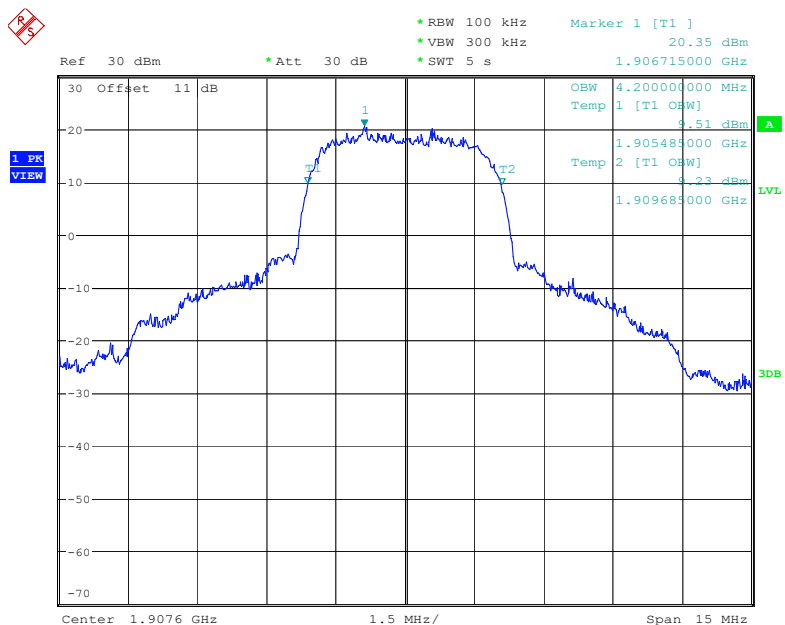
Date: 12.DEC.2022 15:07:15

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel

Date: 12.DEC.2022 14:19:01

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel

Date: 12.DEC.2022 14:25:45

99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel

Date: 12.DEC.2022 20:04:05

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

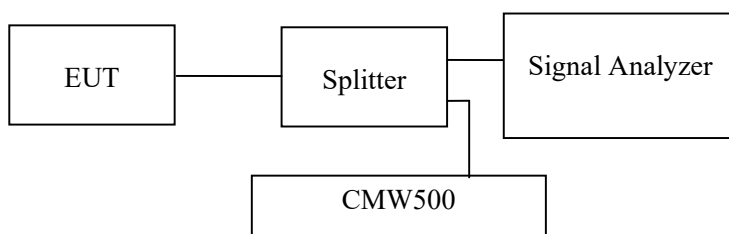
Applicable Standard

FCC §2.1051, §22.917(a) & §24.238(a).

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

Test Procedure

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



Note: the path loss (cable loss and attenuator) has included in the result.

Test Data

Environmental Conditions

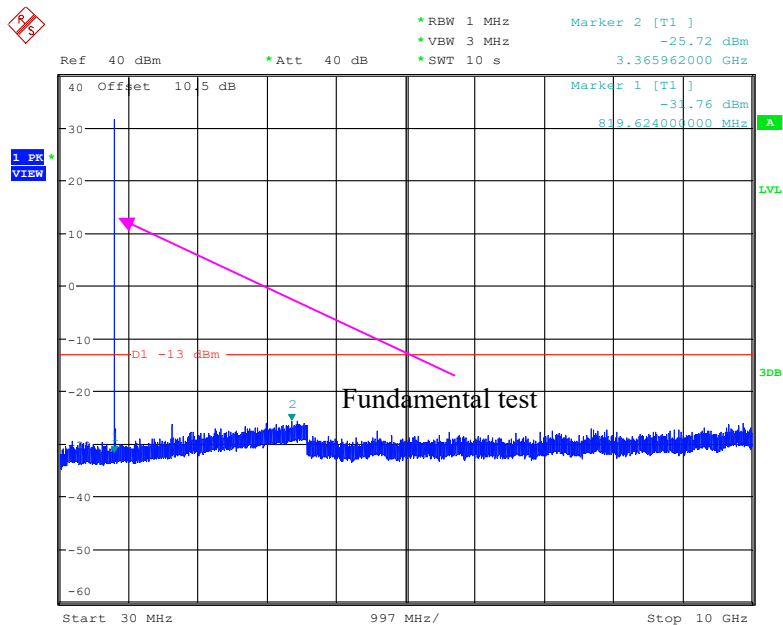
Temperature:	25.7 °C
Relative Humidity:	58.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang on 2022-12-12.

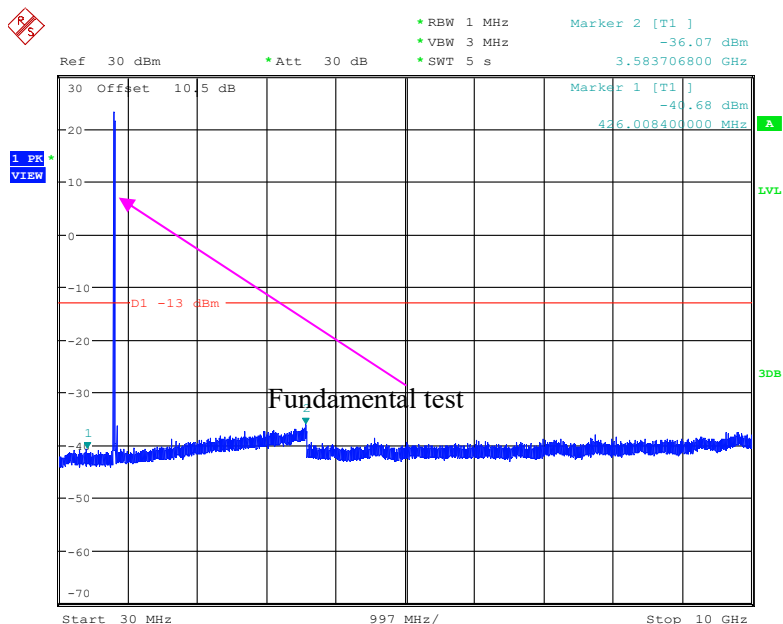
EUT operation mode: Transmitting

Test result: Pass

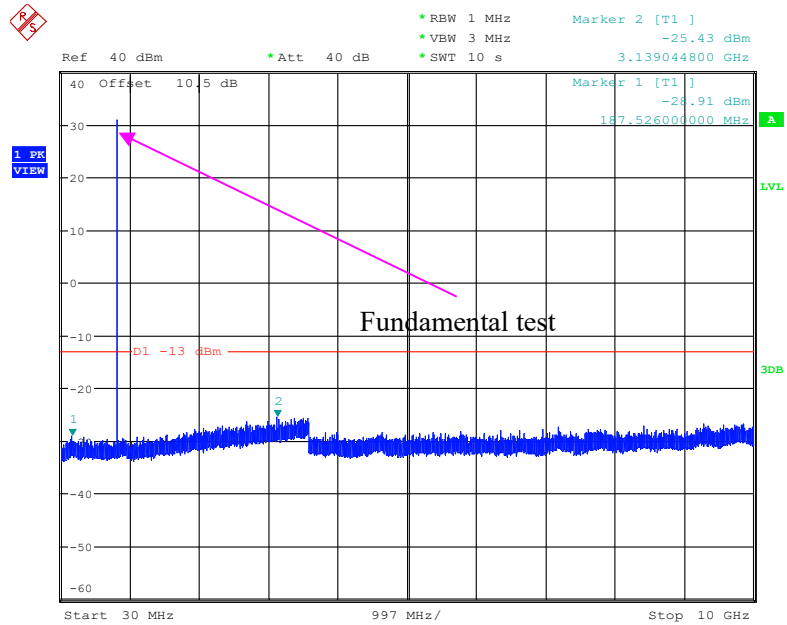
Please refer to the following plots.

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

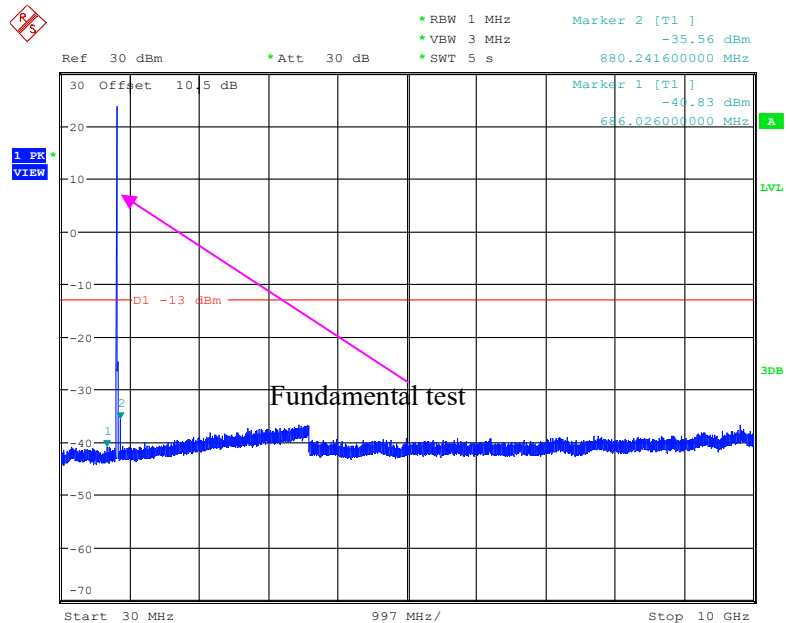
Date: 12.DEC.2022 10:27:19

30 MHz – 10 GHz (RMC Mode)

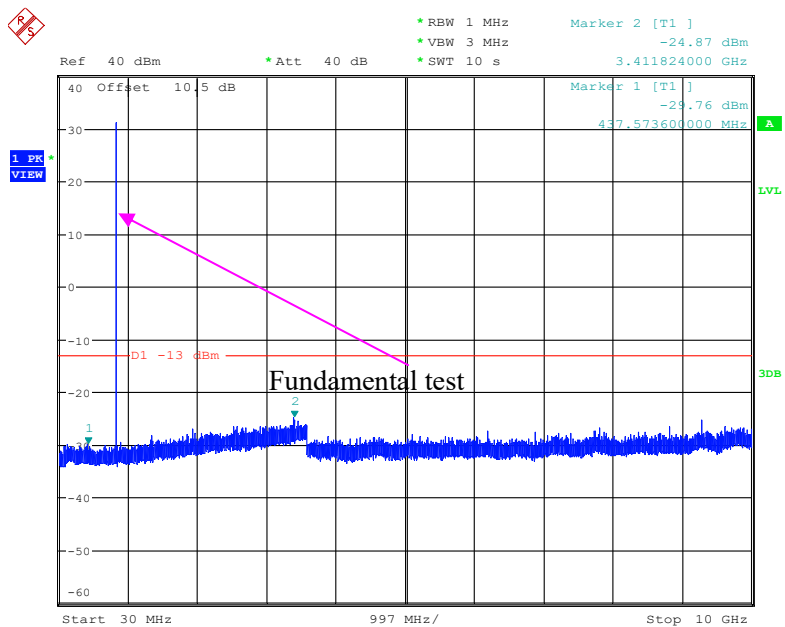
Date: 12.DEC.2022 14:06:58

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

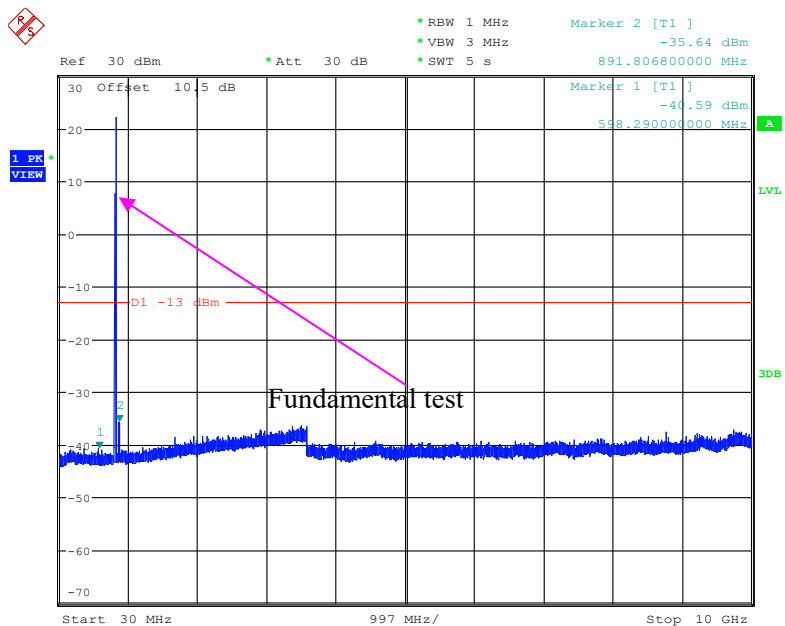
Date: 12.DEC.2022 10:31:31

30 MHz – 10 GHz (RMC Mode)

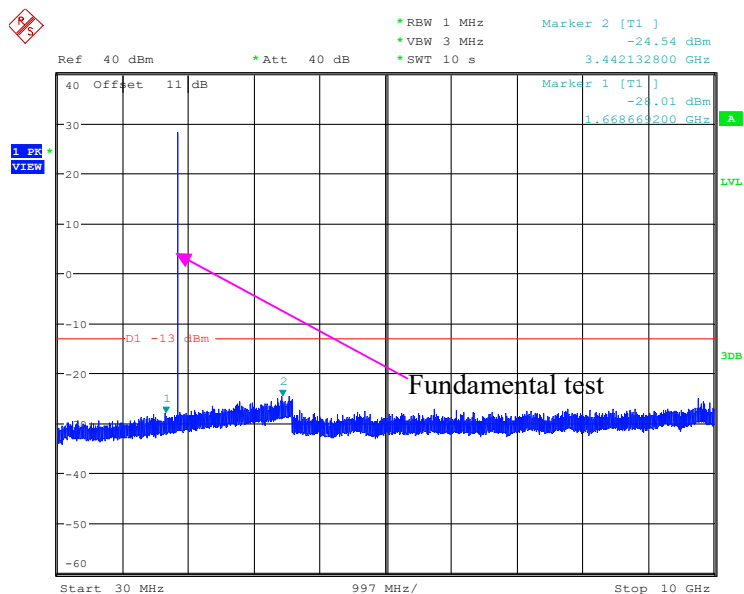
Date: 12.DEC.2022 14:09:44

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

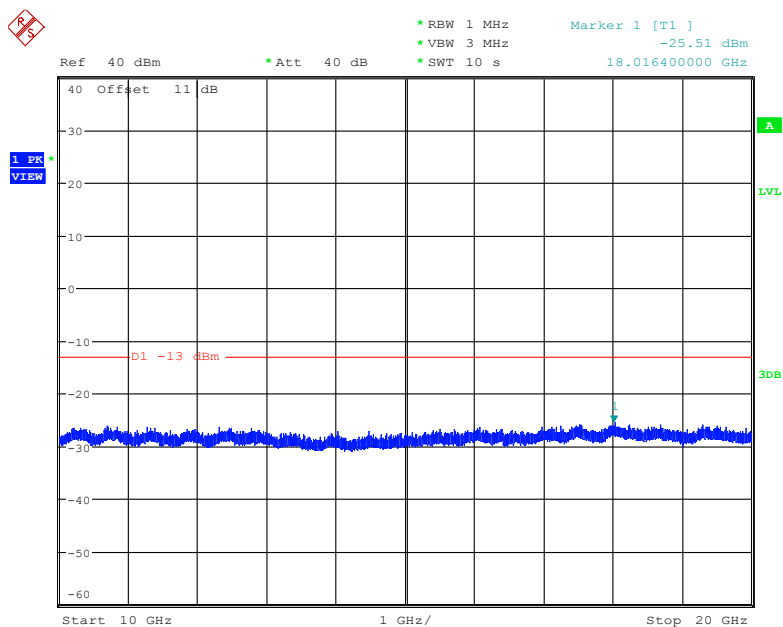
Date: 12.DEC.2022 10:37:43

30 MHz – 10 GHz (RMC Mode)

Date: 12.DEC.2022 14:13:03

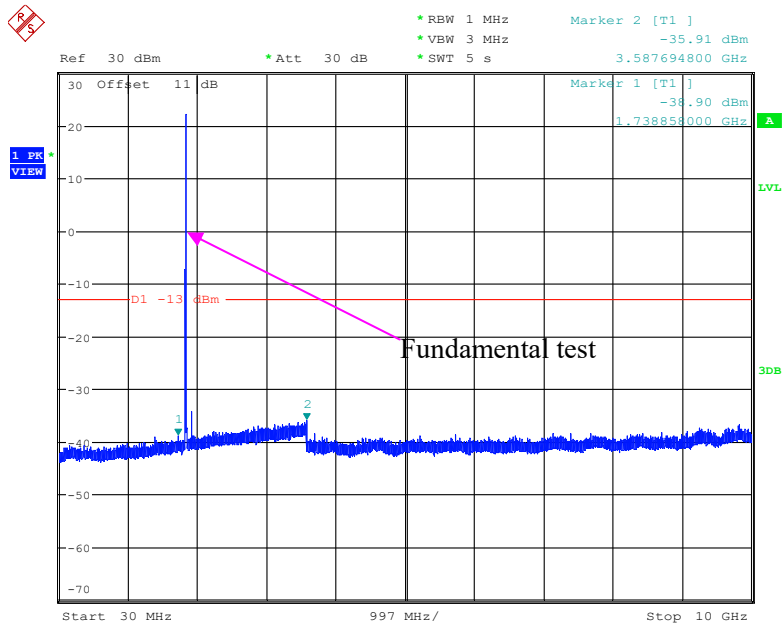
PCS Band (Part 24E)
Low Channel:**30 MHz – 10 GHz (GSM Mode)**

Date: 19.DEC.2022 17:04:22

10 GHz – 20 GHz (GSM Mode)

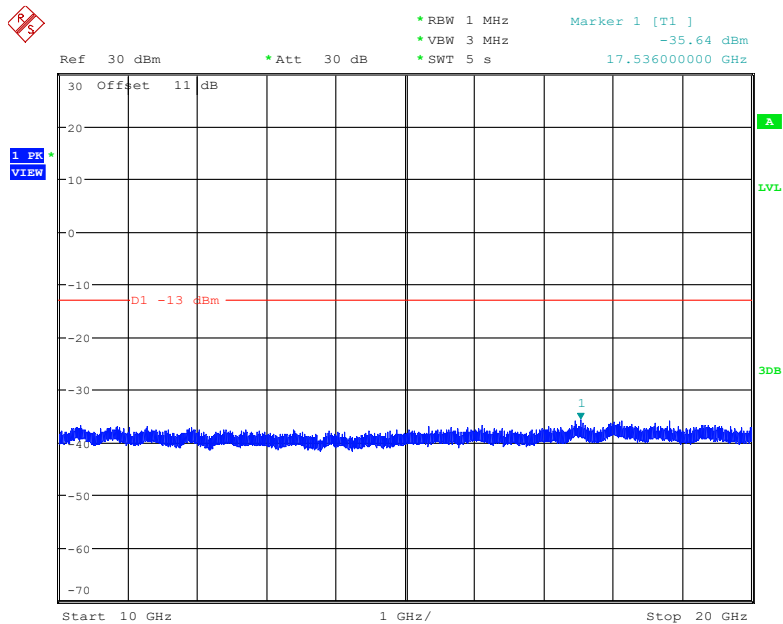
Date: 12.DEC.2022 11:18:28

30 MHz – 10 GHz (RMC Mode)

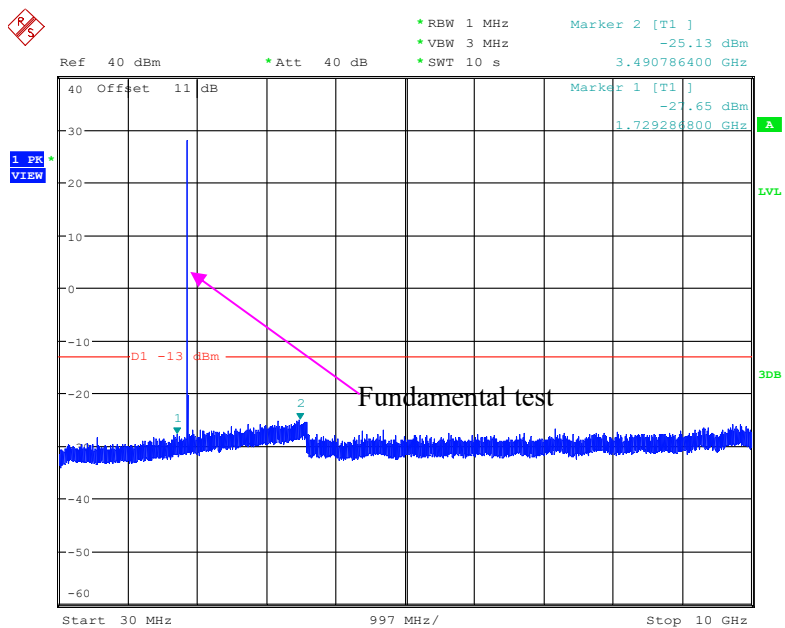


Date: 12.DEC.2022 13:32:47

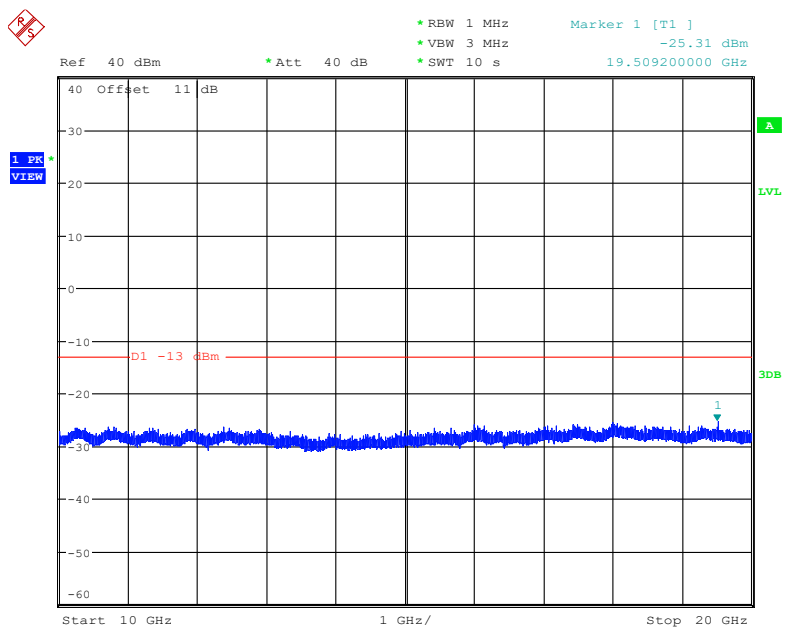
10 GHz – 20GHz (RMC Mode)



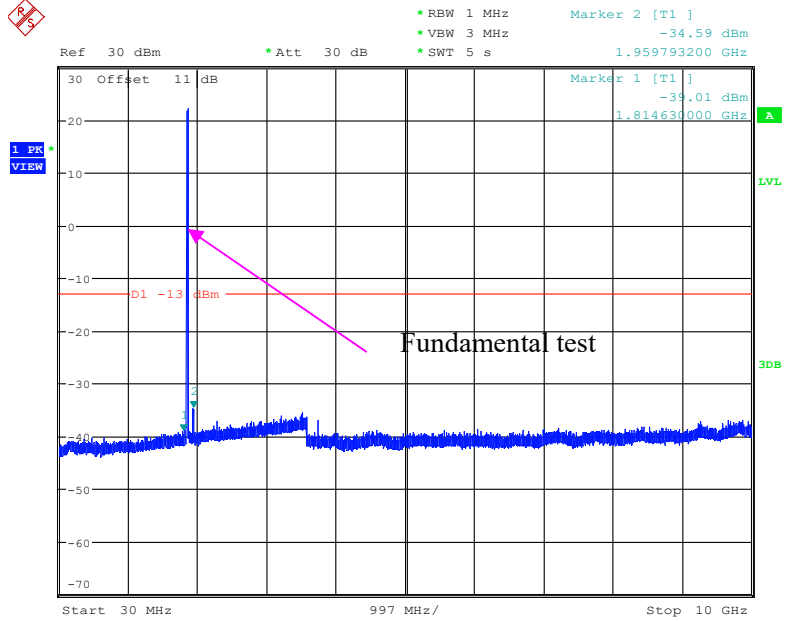
Date: 12.DEC.2022 13:33:29

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

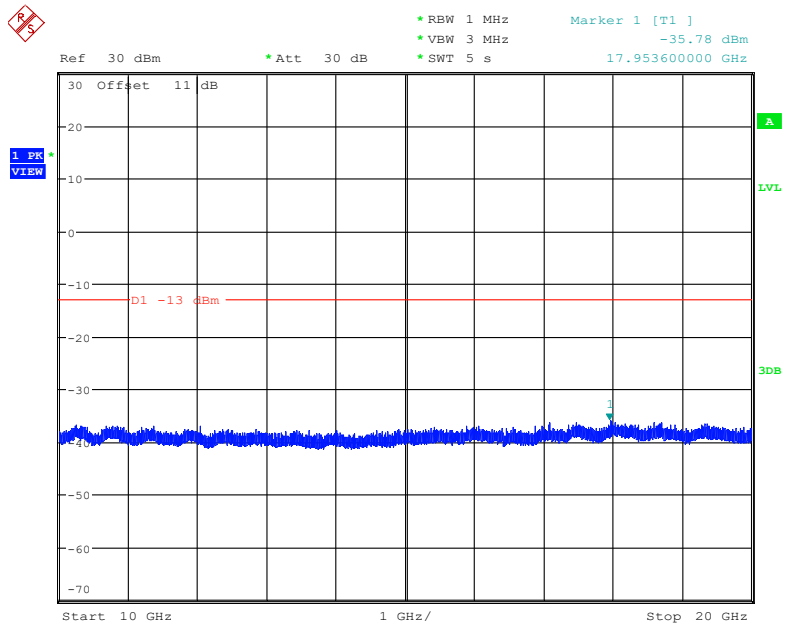
Date: 12.DEC.2022 11:22:30

10 GHz – 20 GHz (GSM Mode)

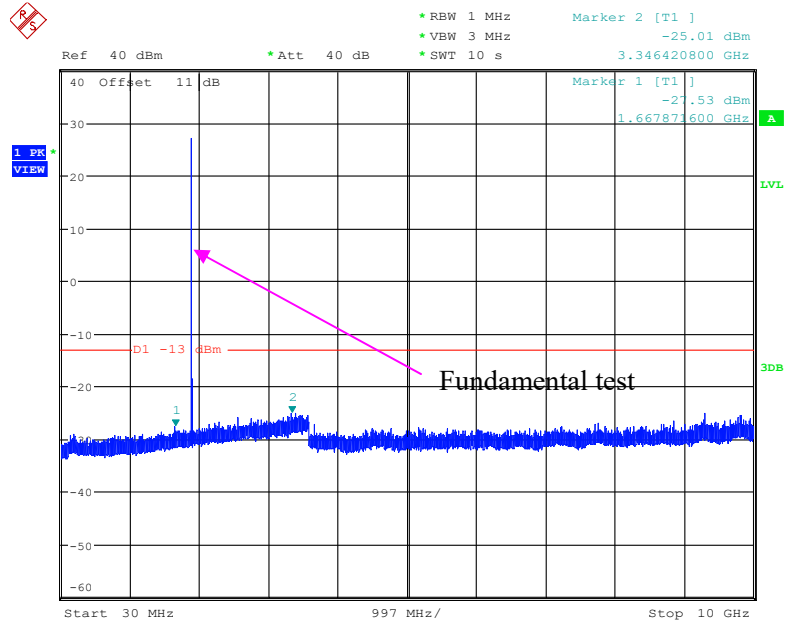
Date: 12.DEC.2022 11:23:42

30 MHz – 10 GHz (RMC Mode)

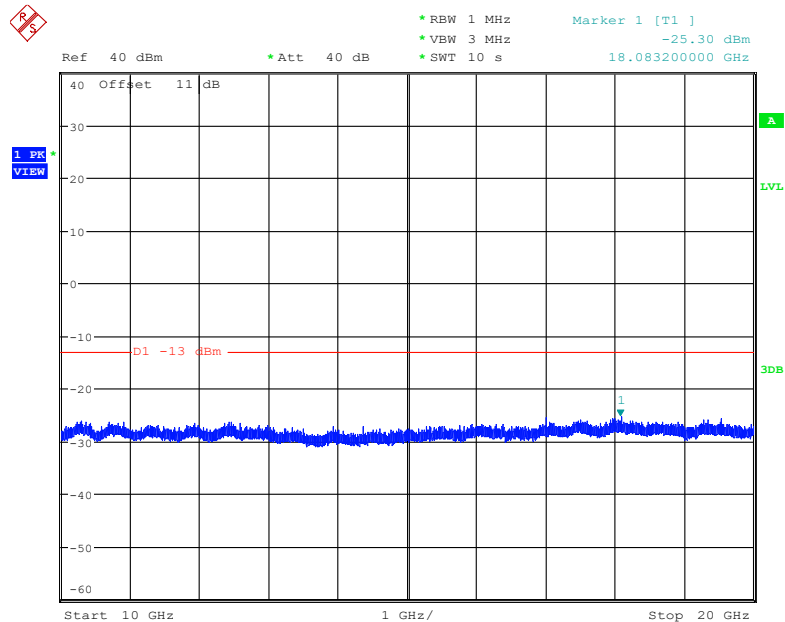
Date: 12.DEC.2022 13:38:08

10 GHz – 20GHz (RMC Mode)

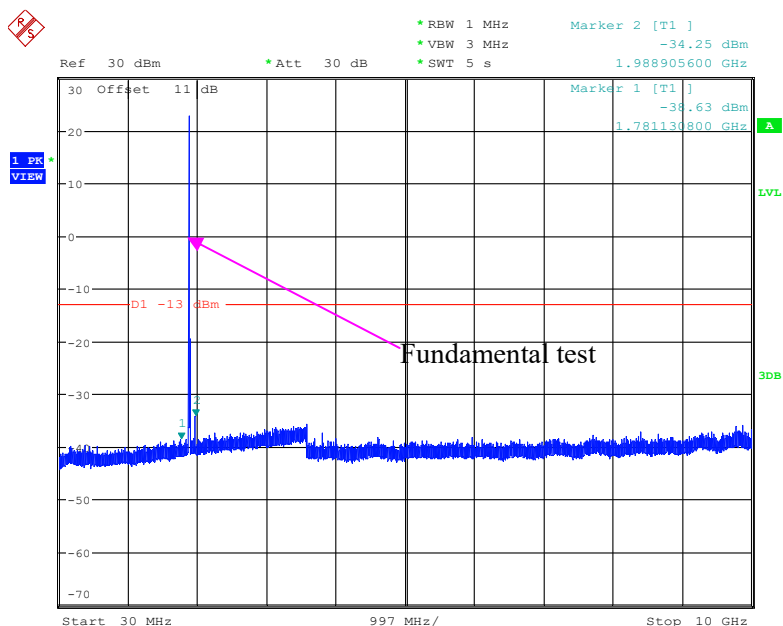
Date: 12.DEC.2022 13:38:49

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

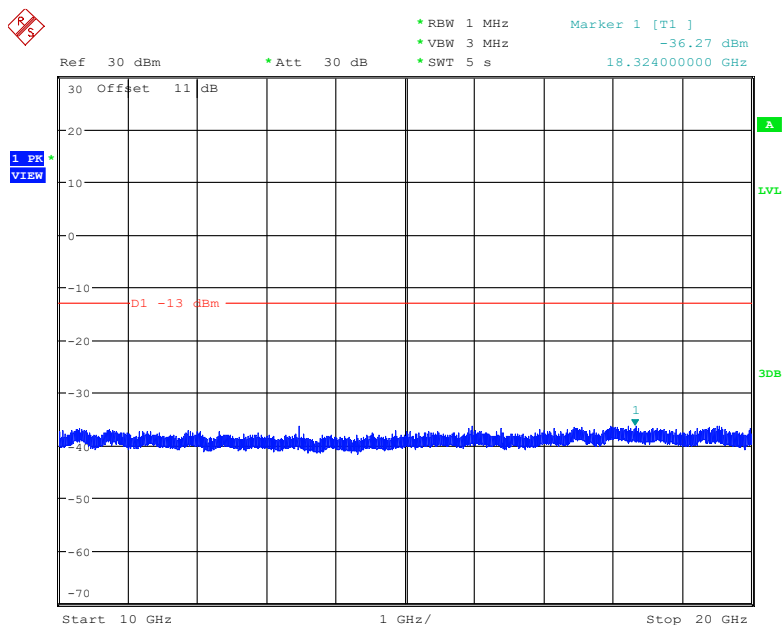
Date: 12.DEC.2022 11:33:07

10 GHz – 20 GHz (GSM Mode)

Date: 12.DEC.2022 11:34:20

30 MHz – 10 GHz (RMC Mode)

Date: 12.DEC.2022 13:55:34

10 GHz – 20GHz (RMC Mode)

Date: 12.DEC.2022 13:56:16

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

Applicable Standard

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

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:	25.9 °C
Relative Humidity:	58 %
ATM Pressure:	101.0 kPa

The testing was performed by Jason Liu on 2022-12-08.

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

The worst case is as below:

30MHz-10GHz:**Cellular Band (Part 22H)**

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substitute d Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM850								
Low Channel								
950.03	-72.64	81	2.0	H	10.0	-62.64	-13	-49.64
950.03	-74.85	344	1.1	V	11.7	-63.15	-13	-50.15
1648.4	-45.00	22	2.2	H	3.5	-41.50	-13	-28.50
1648.4	-43.50	349	1.6	V	3.1	-40.40	-13	-27.40
2472.6	-45.80	270	1.6	H	6.6	-39.20	-13	-26.20
2472.6	-41.40	158	1.8	V	5.8	-35.60	-13	-22.60
3296.8	-48.40	278	1.2	H	6.4	-42.00	-13	-29.00
3296.8	-47.50	27	1.2	V	5.7	-41.80	-13	-28.80
Middle Channel								
952.39	-72.35	80	2.3	H	10.0	-62.35	-13	-49.35
952.39	-74.77	235	1.5	V	11.7	-63.07	-13	-50.07
1673.2	-44.10	320	2.1	H	3.8	-40.30	-13	-27.30
1673.2	-41.10	116	2.1	V	3.1	-38.00	-13	-25.00
2509.8	-45.70	152	1.3	H	6.2	-39.50	-13	-26.50
2509.8	-40.00	303	1.8	V	5.6	-34.40	-13	-21.40
3346.4	-49.00	342	1.6	H	6.6	-42.40	-13	-29.40
3346.4	-46.60	198	1.3	V	5.4	-41.20	-13	-28.20
High Channel								
956.82	-71.12	175	2.0	H	10.0	-61.12	-13	-48.12
956.82	-77.52	331	2.1	V	11.7	-65.82	-13	-52.82
1697.6	-43.10	235	1.8	H	4.1	-39.00	-13	-26.00
1697.6	-41.10	358	1.4	V	3.1	-38.00	-13	-25.00
2546.4	-44.40	209	2.3	H	6.1	-38.30	-13	-25.30
2546.4	-39.40	323	1.6	V	5.8	-33.60	-13	-20.60
3395.2	-48.10	72	1.3	H	6.2	-41.90	-13	-28.90
3395.2	-47.20	140	1.4	V	5.4	-41.80	-13	-28.80

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substitute d Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 5								
Low Channel								
950.95	-72.75	151	2.4	H	10.0	-62.75	-13	-49.75
950.95	-77.35	169	2.4	V	11.7	-65.65	-13	-52.65
1652.8	-46.90	294	2.4	H	3.5	-43.40	-13	-30.40
1652.8	-44.30	191	1.5	V	3.1	-41.20	-13	-28.20
2479.2	-56.10	57	1.5	H	6.6	-49.50	-13	-36.50
2479.2	-55.00	162	1.5	V	5.8	-49.20	-13	-36.20
3305.6	-51.90	201	1.7	H	6.4	-45.50	-13	-32.50
3305.6	-50.70	174	1.1	V	5.7	-45.00	-13	-32.00
Middle Channel								
951.74	-70.55	101	1.1	H	10.0	-60.55	-13	-47.55
951.74	-77.39	142	2.2	V	11.7	-65.69	-13	-52.69
1673.2	-46.60	222	2.3	H	3.8	-42.80	-13	-29.80
1673.2	-44.80	98	2.1	V	3.1	-41.70	-13	-28.70
2509.8	-55.80	336	2.3	H	6.2	-49.60	-13	-36.60
2509.8	-54.70	128	2.3	V	5.6	-49.10	-13	-36.10
3346.4	-51.50	232	2	H	6.6	-44.90	-13	-31.90
3346.4	-50.30	11	1.1	V	5.4	-44.90	-13	-31.90
High Channel								
951.54	-71.06	323	2.1	H	10.0	-61.06	-13	-48.06
951.54	-75.98	179	1.6	V	11.7	-64.28	-13	-51.28
1693.2	-47.60	337	1.7	H	4.1	-43.50	-13	-30.50
1693.2	-44.00	328	1.4	V	3.1	-40.90	-13	-27.90
2539.8	-55.60	248	2.5	H	6.1	-49.50	-13	-36.50
2539.8	-54.80	206	1.0	V	5.8	-49.00	-13	-36.00
3386.4	-51.20	52	2.4	H	6.2	-45.00	-13	-32.00
3386.4	-50.10	48	1.6	V	5.4	-44.70	-13	-31.70

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

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substitute d Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM 1900								
Low Channel								
950.30	-71.50	345	1.9	H	10.0	-61.50	-13	-48.50
950.30	-76.65	21	2.4	V	11.7	-64.95	-13	-51.95
3700.4	-51.50	180	1.1	H	8.1	-43.40	-13	-30.40
3700.4	-50.10	29	1.6	V	7.6	-42.50	-13	-29.50
Middle Channel								
951.49	-70.19	125	1.9	H	10.0	-60.19	-13	-47.19
951.49	-76.58	245	2.1	V	11.7	-64.88	-13	-51.88
3760	-53.30	138	2	H	8.8	-44.50	-13	-31.50
3760	-51.60	47	1	V	8	-43.60	-13	-30.60
High Channel								
951.74	-71.55	7	1.1	H	10.0	-61.55	-13	-48.55
951.74	-75.58	344	1.7	V	11.7	-63.88	-13	-50.88
3819.6	-52.50	188	2.2	H	8.7	-43.80	-13	-30.80
3819.6	-50.90	243	2.5	V	7.9	-43.00	-13	-30.00

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substitute d Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Low Channel								
953.60	-72.50	27	1.7	H	10.0	-62.50	-13	-49.50
953.60	-75.45	141	2.3	V	11.7	-63.75	-13	-50.75
3704.8	-47.90	300	1.8	H	8.1	-39.80	-13	-26.80
3704.8	-45.40	175	2.1	V	7.6	-37.80	-13	-24.80
Middle Channel								
952.67	-70.82	277	2.1	H	10.0	-60.82	-13	-47.82
952.67	-75.44	213	2.3	V	11.7	-63.74	-13	-50.74
3760	-49.00	319	2.4	H	8.8	-40.20	-13	-27.20
3760	-46.30	307	1.7	V	8	-38.30	-13	-25.30
High Channel								
954.66	-70.10	145	1.5	H	10.0	-60.10	-13	-47.10
954.66	-75.05	138	1.9	V	11.7	-63.35	-13	-50.35
3815.2	-48.90	193	1.9	H	8.7	-40.20	-13	-27.20
3815.2	-46.20	121	2.2	V	7.9	-38.30	-13	-25.30

Note:

Absolute Level = Reading Level + Substituted Factor

Substituted Factor contains: SG Level - Cable loss+ Antenna Gain

Margin = Absolute Level -Limit

FCC§ 22.917 (a);§ 24.238 (a)- BAND EDGES

Applicable Standard

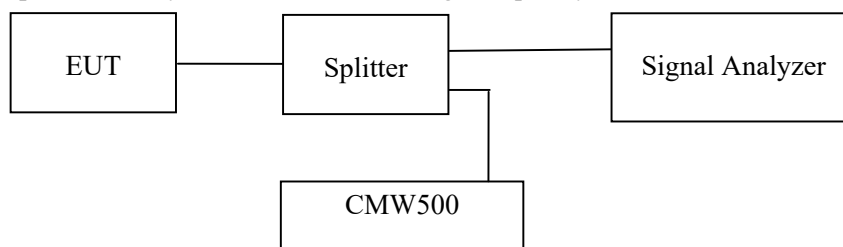
According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

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.

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



Note: the path loss (cable loss and attenuator) has included in the result.

Test Data

Environmental Conditions

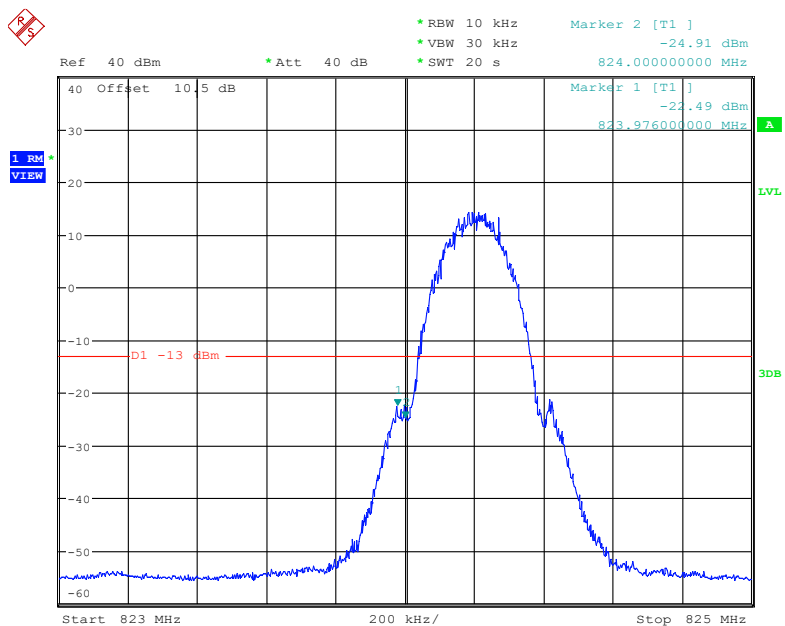
Temperature:	25.7 °C
Relative Humidity:	58.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang on 2022-12-12.

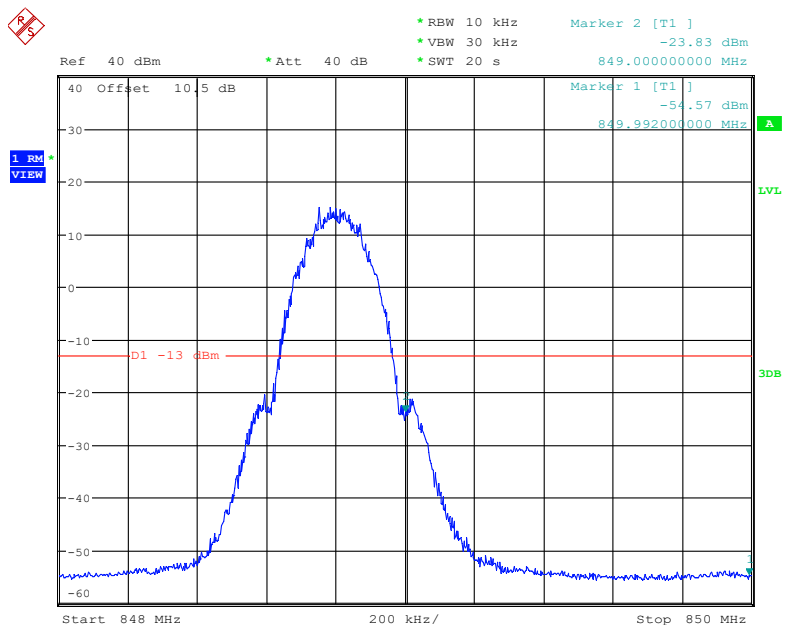
EUT operation mode: Transmitting (Worst case)

Test Result: Pass

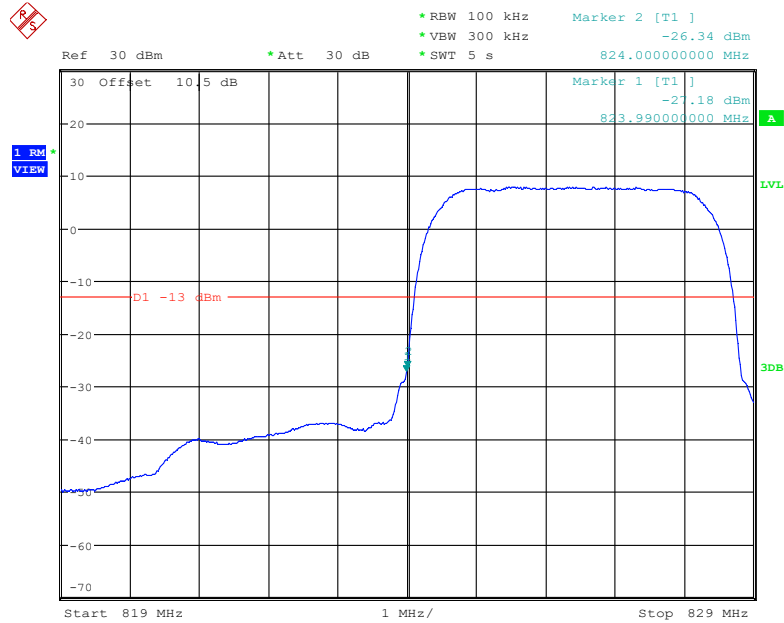
Please refer to the following plots.

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

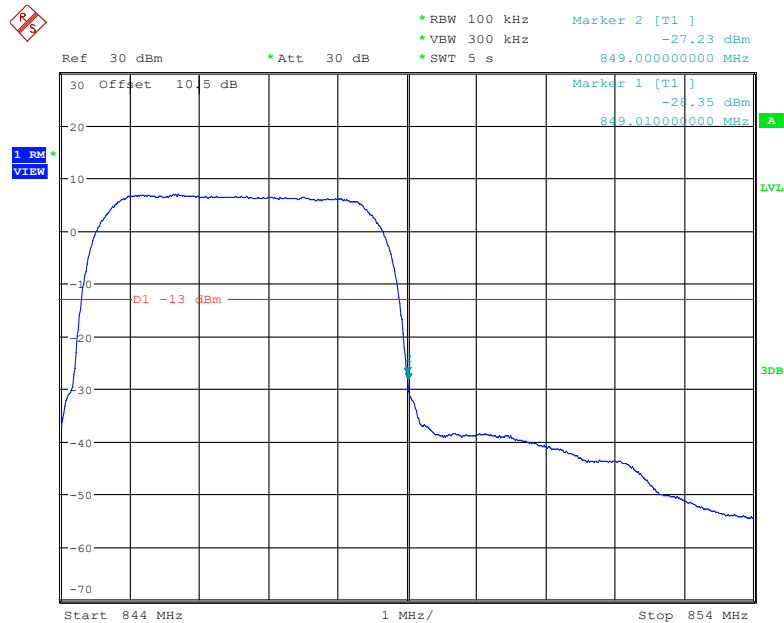
Date: 12.DEC.2022 10:25:56

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

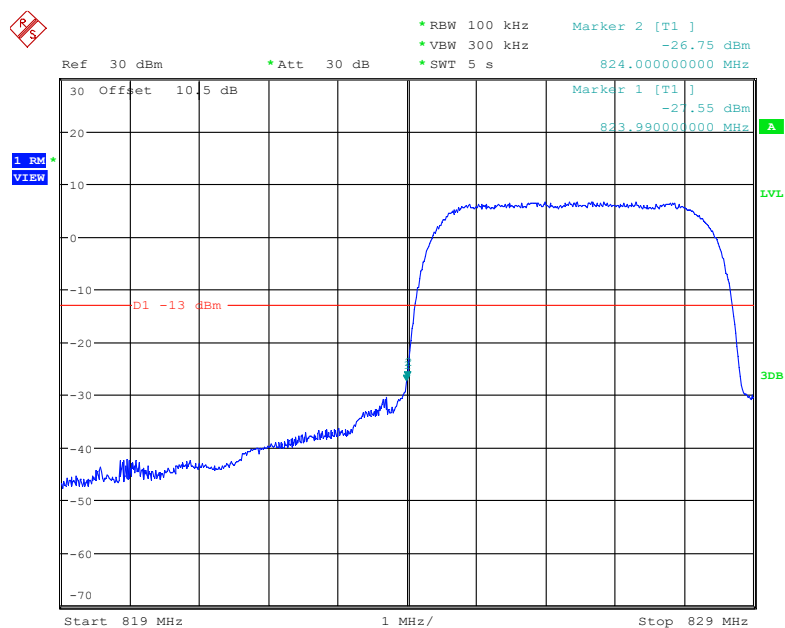
Date: 12.DEC.2022 10:35:08

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

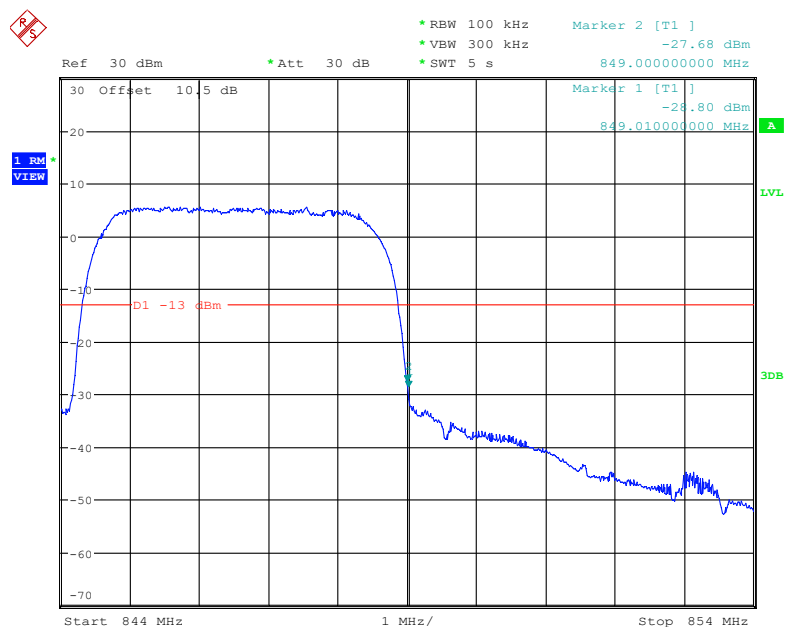
Date: 12.DEC.2022 14:06:17

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

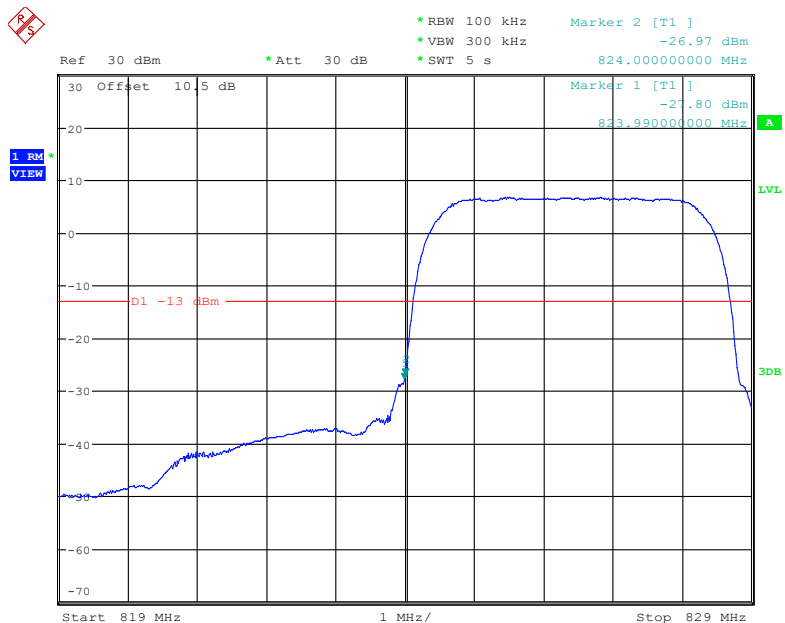
Date: 12.DEC.2022 14:12:22

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

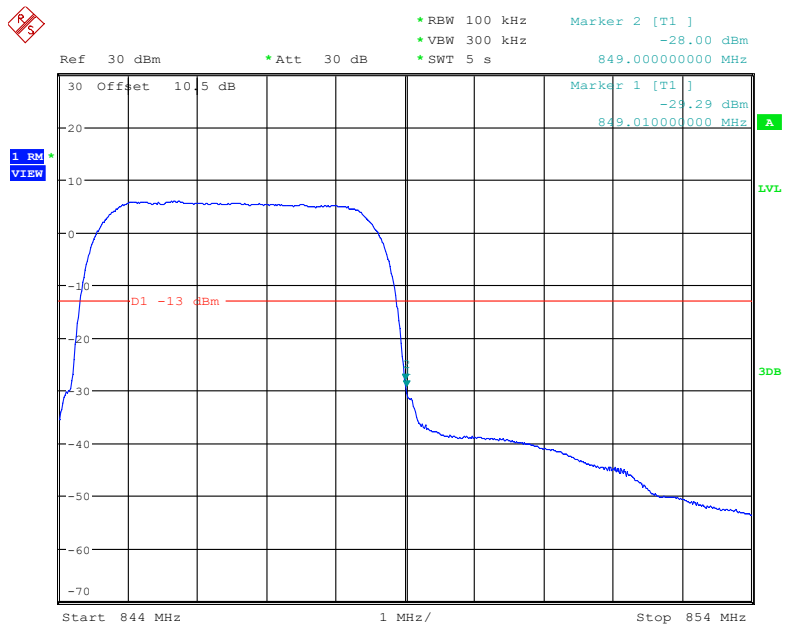
Date: 12.DEC.2022 14:30:43

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

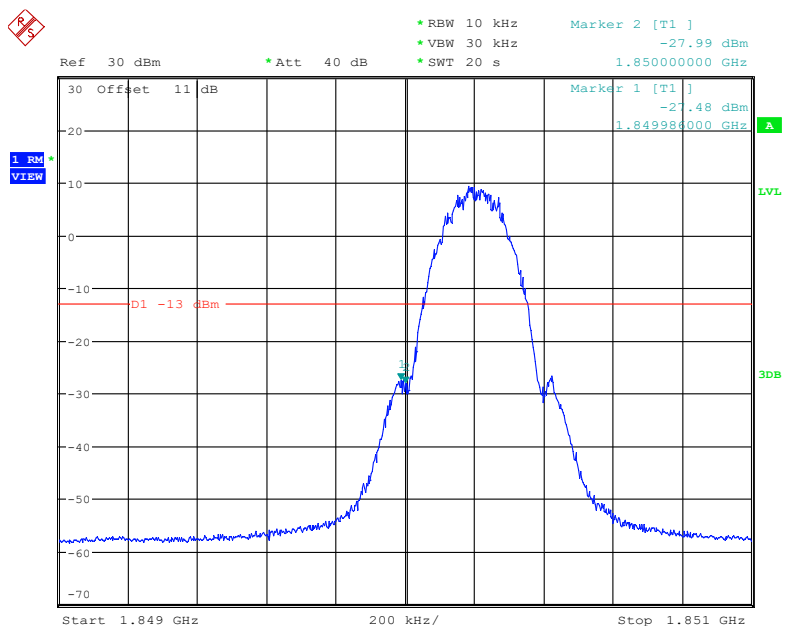
Date: 12.DEC.2022 14:44:17

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

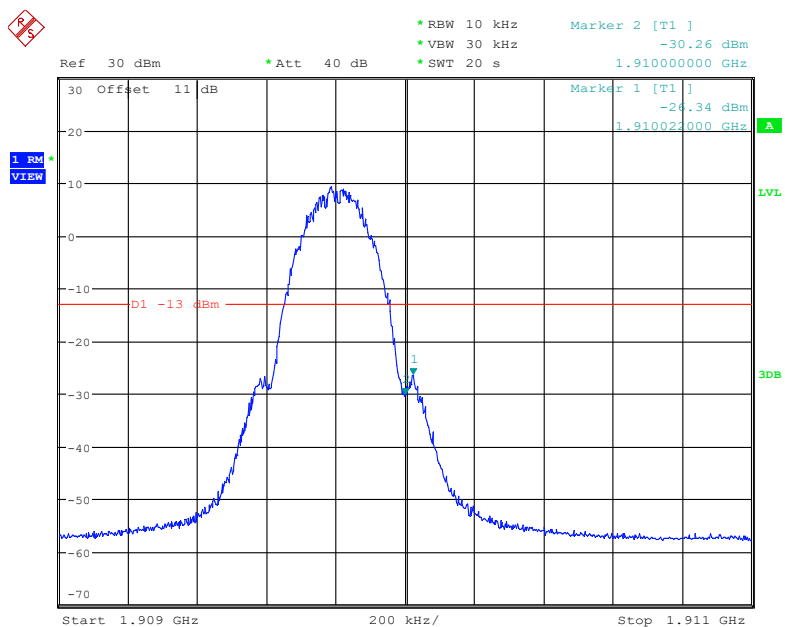
Date: 12.DEC.2022 14:49:13

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

Date: 12.DEC.2022 14:56:46

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

Date: 12.DEC.2022 11:16:44

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

Date: 12.DEC.2022 11:32:38

Ref 30 dBm * Att 30 dB

* RBW 100 kHz * VBW 300 kHz * SWT 5 s

Marker 2 [T1] -24.96 dBm

1.85000000 GHz

Marker 1 [T1] -24.05 dBm

1.84999000 GHz

D1 -13 dBm

Start 1.845 GHz 1 MHz/ Stop 1.855 GHz

1 RM VIEW

LVL

3DB

Marker 1 [T1] -24.05 dBm

1.84999000 GHz

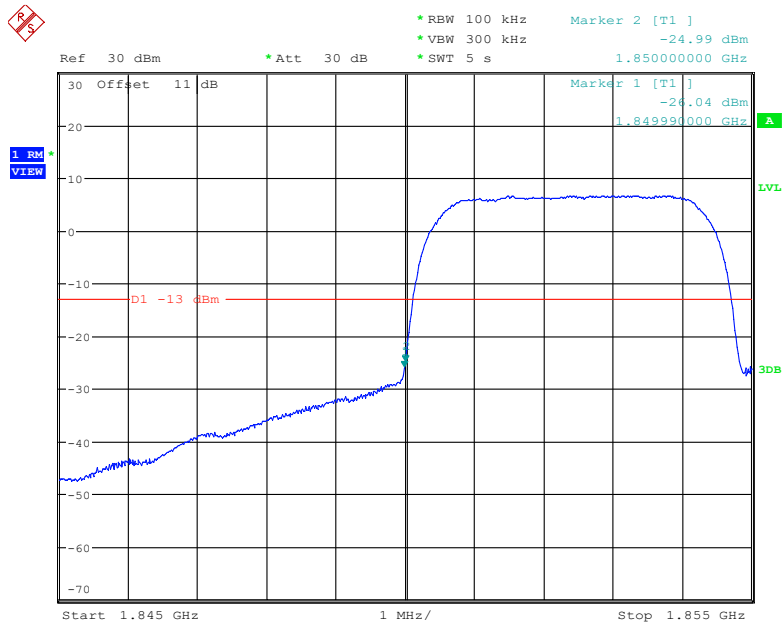
Date: 12.DEC.2022 13:32:08

The screenshot displays a spectrum analyzer interface. The main plot shows a signal spectrum with a peak at 1.915 GHz. The y-axis represents power in dBm, ranging from -70 to 30. The x-axis represents frequency in GHz, ranging from 1.905 to 1.915. A red horizontal line is drawn at -13 dBm, labeled 'D1 -13 dBm'. A blue curve represents the signal, which is flat at approximately 25 dBm until 1.915 GHz, where it drops sharply. A green vertical line is positioned at 1.915 GHz, with a green 'x' marker at the signal's drop. The top of the screen shows settings: 'Ref 30 dBm', '*Att 30 dB', '*RBW 100 kHz', '*VBW 300 kHz', '*SWT 5 s', 'Marker 2 [T1] -24.34 dBm', and '1.91000000 GHz'. The bottom of the screen shows 'Start 1.905 GHz', '1 MHz/' (frequency span), and 'Stop 1.915 GHz'. On the left, there is a '1 RM VIEW' button. On the right, there are labels 'LVL' and '3DB'.

Date: 12.DEC.2022 13:55:05

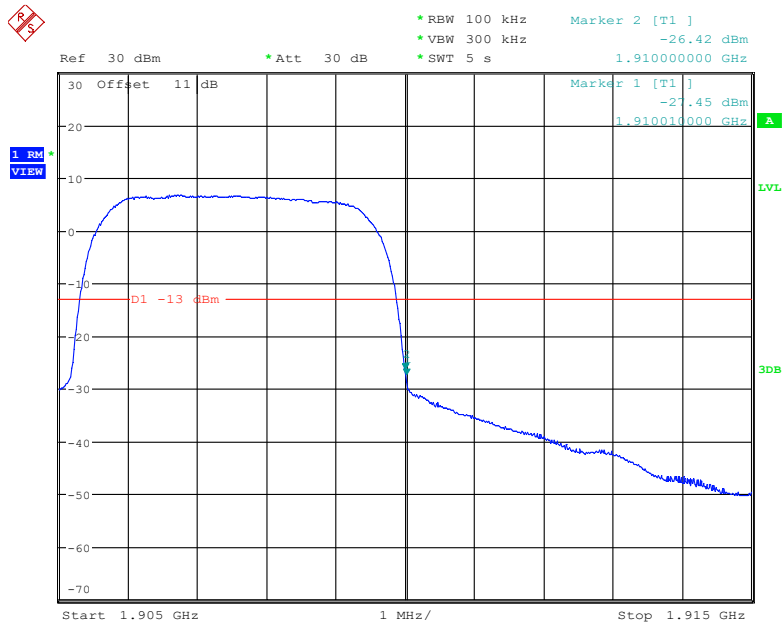


PCS Band, Left Band Edge for HSUPA (QPSK) Mode



Date: 12.DEC.2022 15:00:47

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



Date: 12.DEC.2022 15:08:35

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

Applicable Standard

FCC § 2.1055, §22.355, §24.235.

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

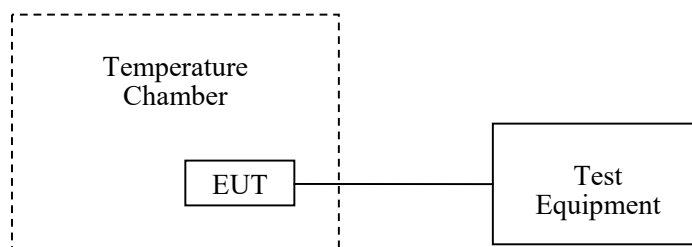
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external AC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The AC leads and RF output cable exited the chamber through an opening made for the purpose.

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

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



Test Data**Environmental Conditions**

Temperature:	25.7 °C
Relative Humidity:	58.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang on 2022-12-12 and 2022-12-13.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

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

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	2	0.0024	2.5
-20		-3	-0.0036	2.5
-10		4	0.0048	2.5
0		3	0.0036	2.5
10		-7	-0.0084	2.5
20		19	0.0192	2.5
30		5	0.0060	2.5
40		-3	-0.0036	2.5
50		-6	-0.0072	2.5
20	L.V.	-8	-0.0096	2.5
	H.V.	-9	-0.0108	2.5

WCDMA Mode

Middle Channel, $f_0=836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	N.V.	1.39	0.0017	2.5
-20		1.41	0.0017	2.5
-10		1.58	0.0019	2.5
0		1.46	0.0017	2.5
10		1.33	0.0016	2.5
20		1.07	0.0013	2.5
30		1.29	0.0015	2.5
40		1.34	0.0016	2.5
50		1.34	0.0016	2.5
20	L.V.	1.26	0.0015	2.5
	H.V.	1.28	0.0015	2.5

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

Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	N.V.	1850.0652	1909.9346	1850	1910
-20		1850.0661	1909.9291	1850	1910
-10		1850.0720	1909.9322	1850	1910
0		1850.0709	1909.9303	1850	1910
10		1850.0681	1909.9317	1850	1910
20		1850.0729	1909.9328	1850	1910
30		1850.0718	1909.9290	1850	1910
40		1850.0711	1909.9316	1850	1910
50		1850.0664	1909.9287	1850	1910
20	L.V.	1850.0720	1909.9344	1850	1910
	H.V.	1850.0704	1909.9358	1850	1910

WCDMA Mode

Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	1850.3449	1909.6575	1850	1910
-20		1850.3434	1909.6587	1850	1910
-10		1850.3453	1909.6556	1850	1910
0		1850.3449	1909.6555	1850	1910
10		1850.3433	1909.6568	1850	1910
20		1850.3459	1909.6567	1850	1910
30		1850.3471	1909.6577	1850	1910
40		1850.3466	1909.6583	1850	1910
50		1850.3414	1909.6608	1850	1910
20	L.V.	1850.3447	1909.6615	1850	1910
	H.V.	1850.3474	1909.6577	1850	1910

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