EMI MEASUREMENT AND TEST REPORT

For

CUBIX LATIN AMERICA, LLC

2841 NW 107th Ave, Doral, FL 33172

FCC ID: 2ACDE-QD3G-710-BK

2014-03-23

This Report Concerns: Original Report	Equipment Type: MID
Test Engineer:	Simon
Report No.:	TMC14040902
Receive EUT Date/Test Date:	2014-03-12 / 2014-03-12 ~ 2014-03-23
Reviewed By:	Michal Ling
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1. GENERAL INFORMATION

1.1. Report infor mation

1.1.1.This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that **WST** approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that **WST** in any way guarantees the later performance of the product/equipment.

1.1.2.The sample/s mentioned in this report is/are supplied by Applicant, **WST** therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

1.1.3.Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through **WST**, unless the applicant has authorized **WST** in writing to do so.

Test Facility –
The test site used to collect the radiated data is located on the address of
Shenzhen WST Testing Technology Co., Ltd.
(FCC Registered Test Site Number: 939433) on
1F,No.9 Building,TGK Science & Technology Park, Shenzhen, China
The Test Site is constructed and calibrated to meet the FCC requirements.

1.2. Measurement Uncertainty

The reported uncertainty of measurement y ± U,where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2,providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	+/-1.26dB
2	RF Power, Conducted	+/-0.21dB
3	Spurious emissions, conducted	+/-0.34dB
4	All emissions, radiated (<1G)	+/-3.42dB
5	All emissions, radiated (>1G)	+/-3.72dB
6	Temperature	+/-0.5°CdB
7	Humidity	+/-2%

2. PRODUCT DESCRIPTION

2.1. EUT Description

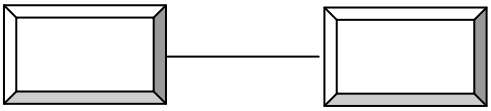
Description	:	MID
Applicant	:	CUBIX LATIN AMERICA, LLC 2841 NW 107th Ave, Doral, FL 33172
Model Number	:	QD3G-710-BK,QD3G-710-WT,QD3G-710-GR
Trade Name	:	QUO
Modulation		GMSK(GSM/GPRS) QPSK (WCDMA)
Frequency Bands	:	GSM 850: 824- 849MHz PCS 1900: 1850-1910MHz UMTS BAND V: 824-849MHz UMTS BAND 2: 1850-1910MHz
Antenna gain	:	0dBi for GSM850 and UMTS BAND V 0dBi for PCS1900 and UMTS BAND 2
Antenna Type	:	PIFA
Power Supply		DC 3.7V Battery or DC 5V (Powered by 120V/60 Hz Adapter)
Battery information	:	DC 3.4-4.2V

Name	Model No	S/N	Manufacturer	Used (Y/N)
Adapter	CW0502000	N/A	KBX	Y
Adapter	DYGK-050200	N/A	KBX	Y

The series products, model name: QD3G-710-BK,QD3G-710-WT,QD3G-710-GR have the same circuit diagram,PCB layout, software, RF Module, Features and functionality. The differences are the model name, so, we select MID QD3G-710-BK to test.

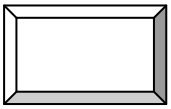
2.2. Block Diagram of EUT Configuration

Radiated output power



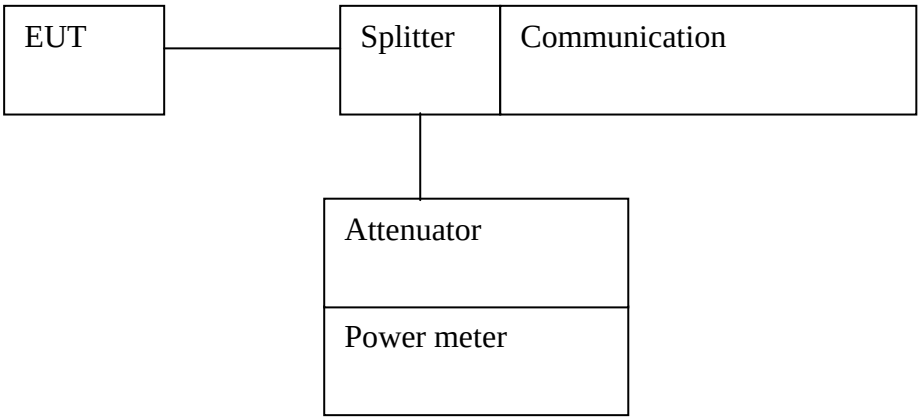
Horn Antenna

CMU200



EUT

Conducted output power



2.3. Configuration of Test Setup

EUT Orthogonal Axis:
X - denotes Laid on Table; Y - denotes Vertical Stand; Z - denotes Side Stand

2.4. Test Conditions

Temperature: 23~25℃
Relative Humidity: 55~63 %

3. TEST RESULTS SUMMARY

FCC PART 22H & FCC PART 24E

FCC Rules	Description of Test	Result
§1.1307, §2.1093	RF Exposure (SAR)	Compliance (Please refer to SAR report)
§2.1046; § 22.913 (a); § 24.232 (c)	RF Output Power	Compliance
24.232(d)	Peak to average radio	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905 § 22.917; § 24.238	Occupied Bandwidth	Compliance
§ 2.1051, § 22.917 (a); § 24.238 (a)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053 § 22.917 (a); § 24.238 (a)	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a); § 24.238 (a)	Out of band emission, Band Edge	Compliance
§ 2.1055 § 22.355; § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	Compliance

Modifications

No modification was made.

4. TEST EQUIPMENT USED

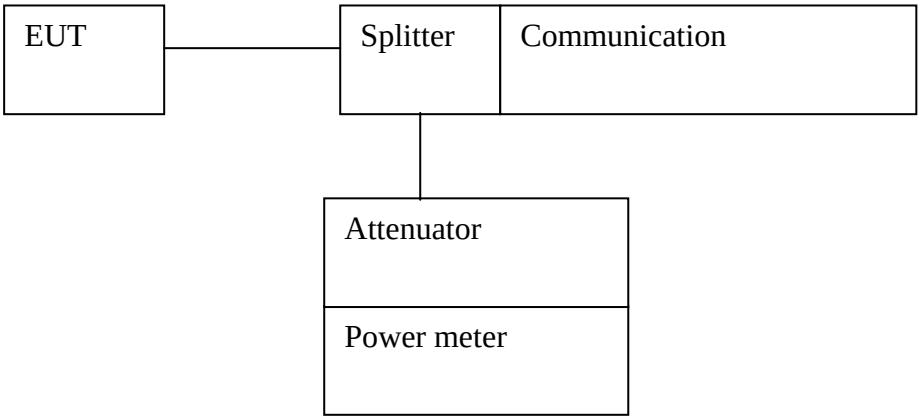
EQUIPMENT/FACILITIES	MANUFACTURER	MODEL	SERIAL NO.	DATE OF CAL.	CAL. INTERVAL
3m Semi-Anechoic Chamber	Chengyu Electron	9 (L)*6 (W)* 6 (H)	BSL086	Aug. 23 2013	1 Year
EMI Test Receiver	Rohde & Schwarz	ESCI3	BSL001	Sep. 28 2013	1 Year
BiConiLog Antenna	Rohde & Schwarz	HL562	BSL009	Sep. 28 2013	1 Year
Double -ridged waveguide horn	Rohde & Schwarz	9120D	BSL008	Aug. 27 2013	1 Year
Horn Antenna	ETS-LINDGREN	3160	BSL072	Dec. 28 2013	1 Year
Cable	Rohde & Schwarz	N/A	BSL045	Aug. 27 2013	1 Year
Cable	Rohde & Schwarz	N/A	BSL046	Aug. 27 2013	1 Year
Cable	Rohde & Schwarz	N/A	BSL047	Aug. 27 2013	1 Year
Amplifier(100kHz-40GHz)	R&S	SMR40	BSL007	Sep. 28 2013	1 Year
Band filter	Amindeon	82346	BSL049	Aug. 27 2013	1 Year
Active Loop Antenna	EMTES	EM15	BSL011	Sep. 28 2013	1 Year
Coaxial Switch	YUANFANG	TA218B	BSL004	Aug. 27 2013	1 Year
Spectrum analyzer	Rohde & Schwarz	FSP40	BSL049	Sep. 28 2013	1 Year
Shielding Room	zhongyu Electron	7.0(L)x3.0(W)x3.0(H)	BSL085	Sep. 28 2013	1 Year
EMI Test Receiver	R&S	ESPI	BSL002	Sep. 28 2013	1 Year
10dB Pulse Limita	R&S	N/A	BSL003	Sep. 28 2013	1 Year
Coaxial Switch	YUANFANG	TA218B	BSL004	Aug. 27 2013	1 Year
LISN	Rohde & Schwarz	ESH3-Y5	BSL005	Sep. 28 2013	1 Year
Coaxial Cable	YUANFANG	N/A	BSL048	Aug. 27 2013	1 Year
EMI TEST SOFTWARE	AUDIX	E3	N/A	N/A	N/A
Power Meter	R&S	NRVS	GTS216	Apr. 6, 2013	1 Year
Power Sensor	R&S	NRV-Z33	GTS220	Apr. 6, 2013	1 Year

5. OUTPUT POWER

5.1. Conducted Output Power

5.1.1.MEASUREMENT METHOD

The EUT was setup for the max output power with pseudo random data modulation. The EUT was directly connected to the power meter. The measurements were performed on all modes(GPRS850, GPRS1900, HSDPA band V&2) at 3 typical channels(the Top Channel, the Middle Channel and the Bottom Channel) for each band.



Power Limits

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.

5.1.2.MEASUREMENT RESULT

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Peak Output Power (dBm)
GSM	128	824.2	32.78
	190	836.6	32.77
	251	848.8	32.72

Mode	Frequency (MHz)	Peak Output Power (dBm)			
		Slot 1	Slot 2	Slot 3	Slot 4
GPRS	824.2	32.60	31.80	30.15	29.33
	836.6	32.59	32.79	30.13	29.30
	848.8	32.54	31.70	30.06	29.23

Mode	Frequency (MHz)	Peak Output Power (dBm)			
		Slot 1	Slot 2	Slot 3	Slot 4
EGPRS (EDGE)	824.2	26.64	25.66	23.47	22.14
	836.6	26.71	25.72	23.58	22.22
	848.8	26.77	25.76	23.52	22.27

Test Mode		3GPP Sub Test	Peak Output Power (dBm)		
			Low Frequency (826.4MHz)	Middle Frequency (836.6 MHz)	High Frequency (846.6MHz)
WCDMA	Rel 99	-	22.73	22.66	22.59
	Rel 6 HSDPA	1	22.50	22.54	22.51
		2	22.43	22.46	22.45
		3	22.00	22.27	22.20
		4	22.11	22.23	22.29
	Rel 6 HSUPA	1	22.41	22.59	22.44
		2	22.42	22.50	22.48
		3	22.24	22.45	22.25
		4	22.32	22.35	22.24
		5	22.15	22.19	22.27

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Peak Output Power (dBm)
GSM	512	1850.2	30.15
	661	1880.0	30.08
	810	1909.8	30.05

Mode	Frequency (MHz)	Peak Output Power (dBm)			
		Slot 1	Slot 2	Slot 3	Slot 4
GPRS	1850.2	30.19	29.48	27.98	27.00
	1880.0	30.14	29.43	27.93	26.97
	1909.8	30.07	29.35	27.87	26.90

Mode	Frequency (MHz)	Peak Output Power (dBm)			
		Slot 1	Slot 2	Slot 3	Slot 4
EGPRS (EDGE)	1850.2	26.64	25.66	23.47	22.14
	1880.0	26.71	25.72	23.58	22.22
	1909.8	26.77	25.76	23.52	22.27

Test Mode		3GPP Sub Test	Peak Output Power (dBm)		
			Low Frequency (1852.4 MHz)	Middle Frequency (1880.0 MHz)	High Frequency (1907.6 MHz)
WCDMA	Rel 99	-	22.61	22.56	22.35
	Rel 6 HSDPA	1	22.54	22.48	22.47
		2	22.45	22.45	22.50
		3	22.11	22.20	22.28
		4	21.97	22.25	22.18
	Rel 6 HSUPA	1	22.44	22.59	22.54
		2	22.32	22.51	22.50
		3	22.21	22.44	22.24
		4	22.16	22.33	22.22
		5	22.17	22.31	22.28

5.2. Peak to average radio

5.2.1.Definition

According to FCC section 2.1049 and FCC 24.232(d) the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Test Verdict

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.
Test procedures:

A .For GSM/EGPRS operating mode:
a. Set RBW=1MHz, VBW=1MHz, peak detector in spectrum analyzer.
b. Set EUT in maximum output power, and triggered the bust signal.
c. Measured respectively the peak level and mean level, and the deviation was recorded as Peak to Average radio.
B. For UMTS operating mode:
a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%.

1. Test Verdict:

Band	Frequency (MHz)	Peak POWER (dBm)	Average POWER (dBm)	Peak to Average radio (dBm)	Limit (dBm)	Verdict
GSM1900MHz	1850.2	30.19	29.96	0.23	13	PASS
	1880	30.14	29.89	0.25	13	PASS
	1909.8	30.07	29.84	0.23	13	PASS

Band	Frequency (MHz)	Peak POWER (dBm)	Average POWER (dBm)	Peak to Average radio (dBm)	Limit (dBm)	Verdict
WCDMA1900	1852.4	22.61	22.11	0.5	13	PASS
	1880	22.59	22.07	0.52	13	PASS
	1907.6	22.54	22.02	0.52	13	PASS

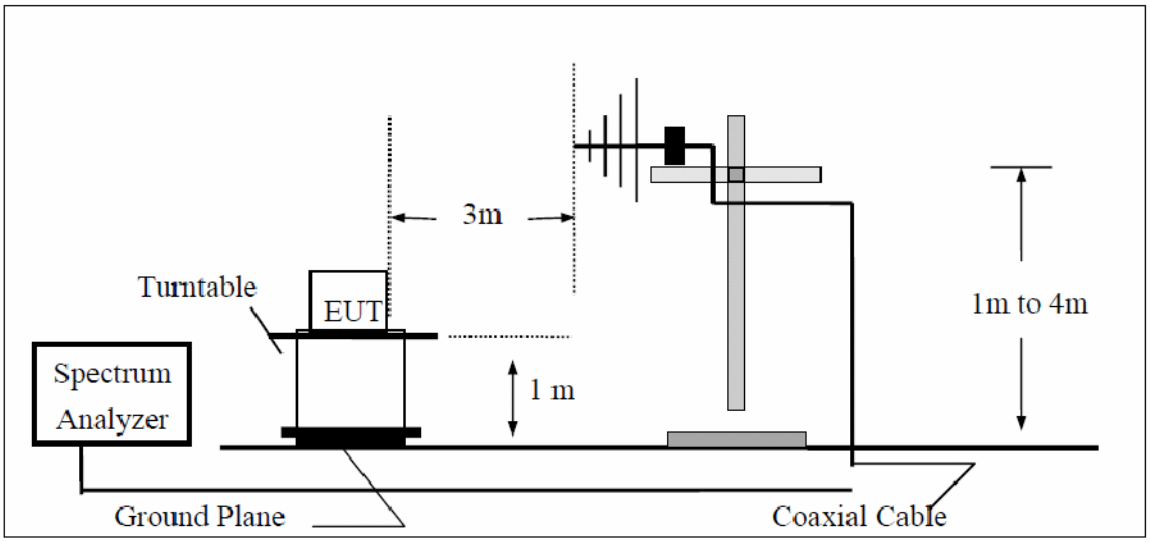
5.3. Radiated Output Power

5.3.1.**MEASUREMENT METHOD**

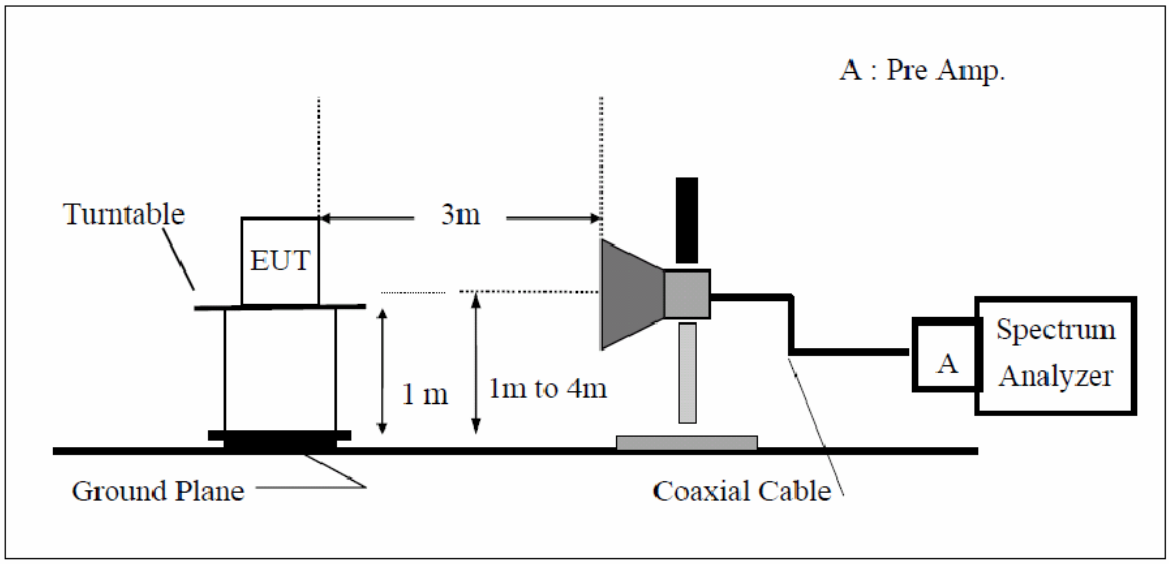
ANSI/TIA 603-D section 2.2.17

Test SET-UP (Block Diagram of Configuration)

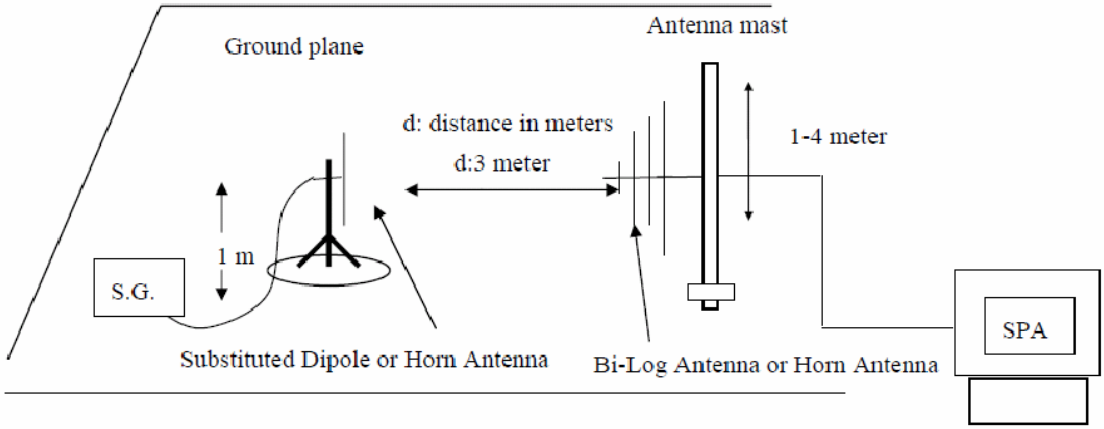
(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



Measurement Procedure

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824.2 –848.80.8MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

5.3.2.**PROVISIONS APPLICABLE**

This is the test for the maximum radiated power from the EUT. Rule Part 24.232(b) specifies, “Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power” and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.” Rule Part 22.913(a) specifies “Maximum ERP. The effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.”

Mode	Nominal Peak Power
GSM 850	<=38.45 dBm (7W)
PCS 1900	<=33 dBm (2W)
UMTS BAND II	<=33 dBm (2W)
UMTS BANDV	<=38.45 dBm (7W)

5.3.3.Measurement Result

ERP & EIRP

GSM Mode:

ERP for Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
836.6	87.46	16	1.5	H	23.29	0.69	0.0	22.6	38.45
836.6	98.16	2	1.6	V	33.09	0.69	0.0	32.4	38.45

EIRP for 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)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
1880.0	89.70	52	1.6	H	17.99	1.03	9.4	26.36	33
1880.0	89.70	6	1.8	V	21.29	1.03	9.4	29.66	33

EGPRS (EDGE) Mode:

ERP for Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
836.6	89.67	16	1.5	H	21.63	0.69	0	20.94	38.45
836.6	93.65	2	1.6	V	26.13	0.69	0	25.44	38.45

EIRP for PCS Band (Part 24E)

Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
1880	87.64	52	1.6	H	13.36	1.03	9.4	21.73	33
1880	86.59	6	1.8	V	17.52	1.03	9.4	25.89	33

WCDMA Mode:

ERP for Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
836.6	81.66	52	1.6	H	13.59	0.69	0.0	12.9	38.45
836.6	88.86	6	1.8	V	21.39	0.69	0.0	20.7	38.45

EIRP for PCS Band (Part 24E)

Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
1880.0	84.73	65	1.5	H	10.49	1.03	9.4	18.86	33
1880.0	82.12	66	1.5	V	12.99	1.03	9.4	21.36	33

6. SPURIOUS EMISSION

6.1. CONDUCTED SPURIOUS EMISSION

6.1.1.measurement method

The following steps outline the procedure used to measure the conducted emissions from the EUT.
1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the equipment of PCS1900 band, this equates to a frequency range of 30 MHz to 19.1 GHz, data taken from 30 MHz to 20 GHz. For GSM850, data taken from 30 MHz to 9 GHz.
2. Determine EUT transmit frequencies: the following typical channels were chosen to conducted emissions testing.

Typical Channels for testing of GSM850 band	
Channel	Frequency (MHz)
128	824.2
190	836.6
251	848.8

Typical Channels for testing of PCS1900 band	
Channel	Frequency (MHz)
512	1850.2
661	1880.0
810	1909.8

Typical Channels for testing of UMTS band V	
Channel	Frequency (MHz)
4132	826.4
4175	835.0
4233	826.6

Typical Channels for testing of UMTS band II	
Channel	Frequency (MHz)
9262	1852.4
9400	1880.0
9538	1907.6

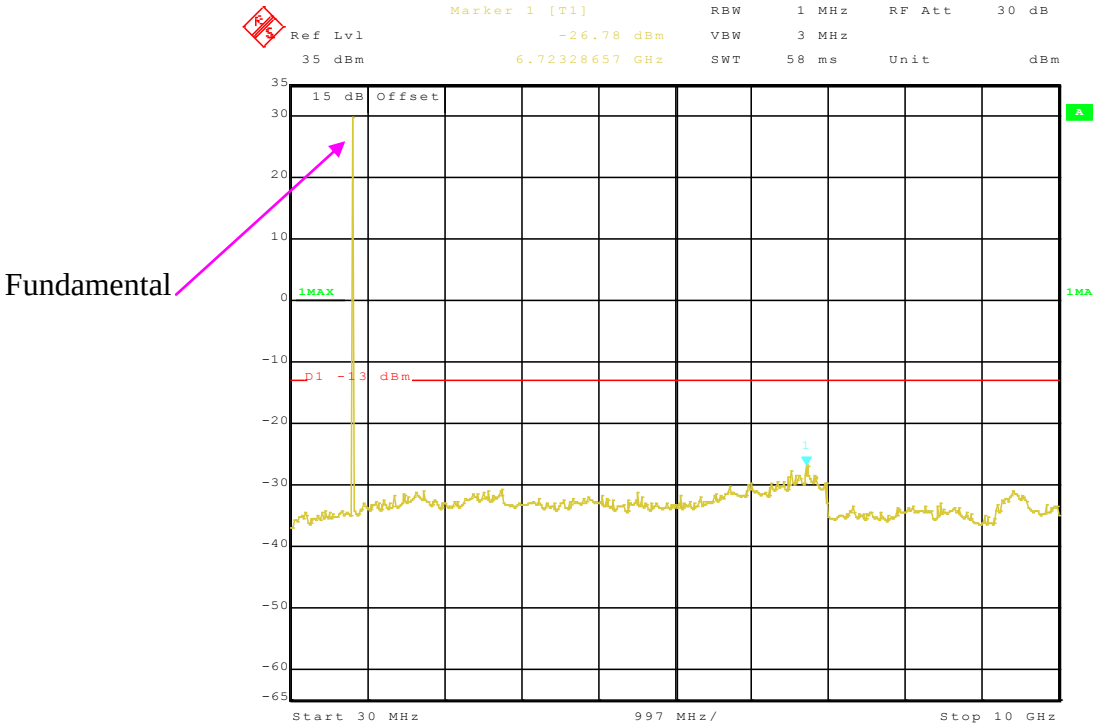
Note: 1. Below 30MHZ no Spurious found and The GSM modes is the worst condition.
2. As no emission found in standby or receive mode, no recording in this report.

6.1.2.Measurement Result

GSM mode:

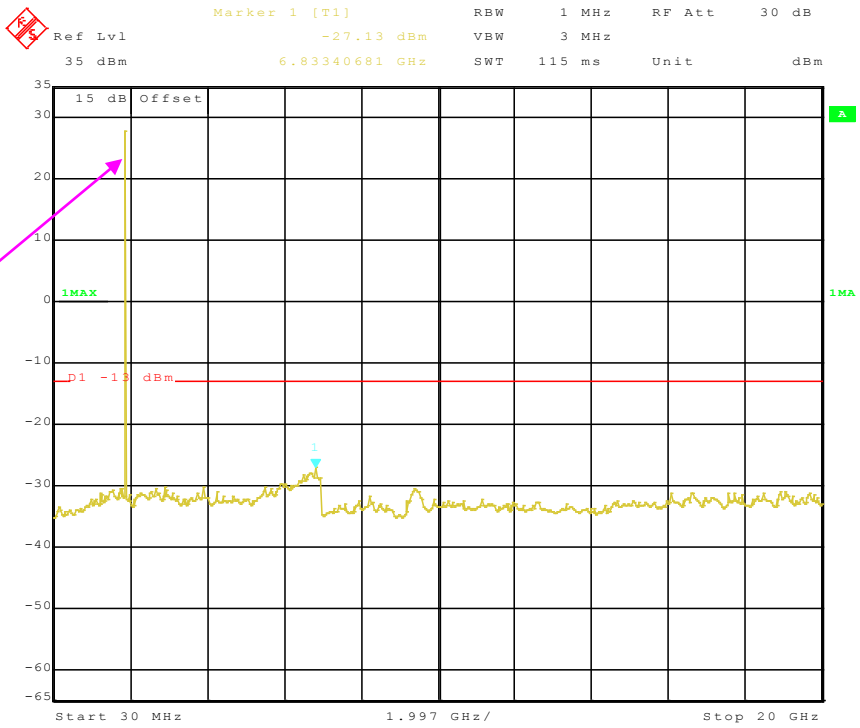
Cellular Band (Part 22H)

30 MHz – 10 GHz - Middle Channel



PCS Band (Part 24E)

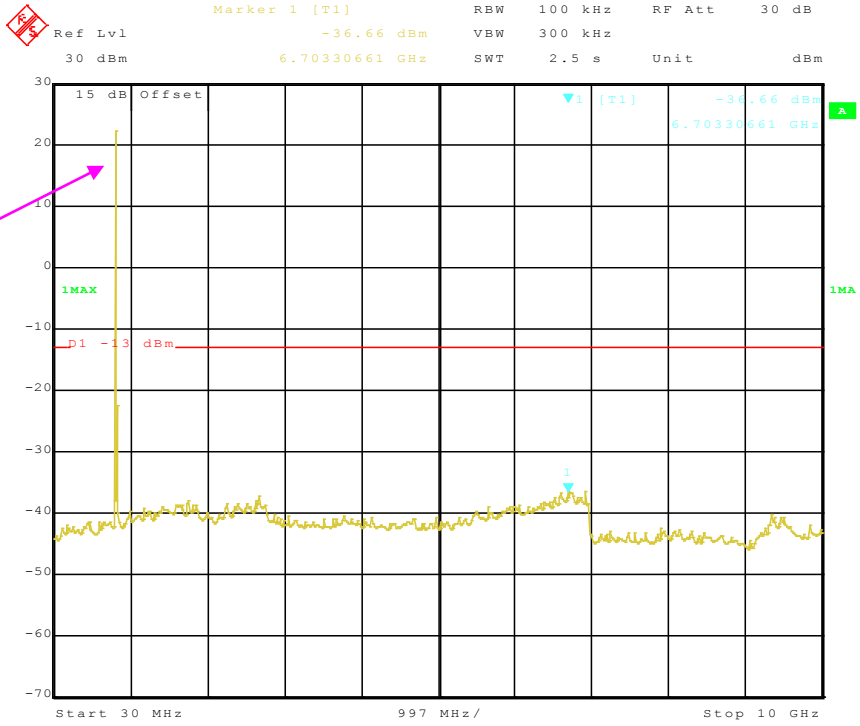
30 MHz – 20 GHz - Middle Channel



Fundamental

WCDMA mode:
Cellular Band (Part 22H)

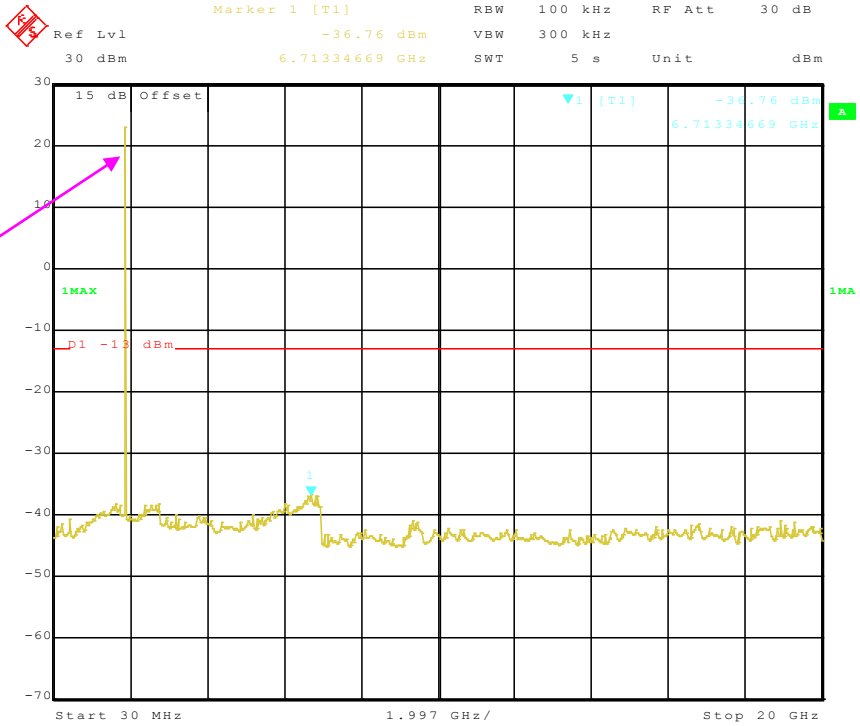
30 MHz – 10 GHz - Middle Channel



Fundamental

PCS Band (Part 24E)

30 MHz – 20 GHz - Middle Channel



Fundamental

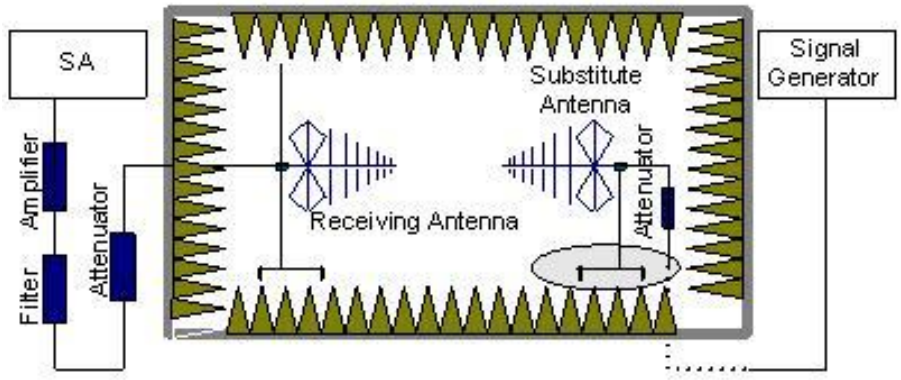
6.2. Radiated Spurious Emission

6.2.1. Measurement Method

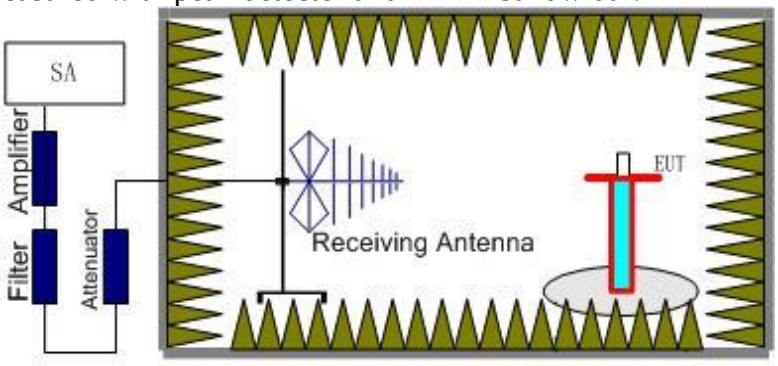
The measurements procedures specified in TIA-603C-2004 were used for testing. The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment. The resolution bandwidth is set 1MHz as outlined in Part 24.238. The measurements were performed on all modes(GPRS850, GPRS1900, HSDPA band V) at 3 typical channels(the Top Channel, the Middle Channel and the Bottom Channel) for each band.

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, RSE=Rx(dBuV)+CL(dB)+SA(dB)+Gain(dBi)-107(dBuV to dBm)The SA is calibrated using following setup.



b) EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector and 1MHz bandwidth.



Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the PCS 1900 band (1850.2 MHz, 1880 MHz and 1909.8 MHz) ,GSM850 band (824.2MHz, 836.6MHz, 848.8MHz), UMTS band V(826.4MHz, 835.0MHz, 846.6MHz) . It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs

occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below: Power=PMea+ARpl

6.2.2.Provisions Applicable

(a) On any frequency outside a licensee’s frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

Note: only result the worst condition of each test mode:

6.3. MEASUREMENT RESULT

30 MHz ~ 10 GHz:

Cellular Band (Part 22H) for GSM Mode

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
low Channel (824.2 MHz)										
2472.6	51.18	82	1.6	V	-45.15	1.46	10.7	-35.91	-13	22.91
2472.6	51.22	225	1.5	H	-49.55	1.46	10.7	-40.31	-13	27.31
1648.4	48.17	55	1.6	V	-52.25	0.97	9.4	-43.82	-13	30.82
3296.8	40.94	82	1.6	V	-52.65	2.08	10.8	-43.93	-13	30.93
3296.8	39.67	1	1.5	H	-54.75	2.08	10.8	-46.03	-13	33.03
1648.4	46.18	25	1.5	H	-56.85	0.97	9.4	-48.42	-13	35.42

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
Middle Channel (836.6 MHz)										
2509.8	52.13	82	1.6	V	-44.2	1.46	10.7	-34.96	-13	21.96
2509.8	52.17	225	1.5	H	-48.6	1.46	10.7	-39.36	-13	26.36
1673.2	49.12	55	1.6	V	-51.3	0.97	9.4	-42.87	-13	29.87
3346.4	41.89	82	1.6	V	-51.7	2.08	10.8	-42.98	-13	29.98
3346.4	40.62	1	1.5	H	-53.8	2.08	10.8	-45.08	-13	32.08
1673.2	47.13	25	1.5	H	-55.9	0.97	9.4	-47.47	-13	34.47

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
high Channel (848.8 MHz)										
2546.4	51.28	82	1.6	V	-45.05	1.46	10.7	-35.81	-13	22.81
2546.4	51.32	225	1.5	H	-49.45	1.46	10.7	-40.21	-13	27.21
1697.6	48.27	55	1.6	V	-52.15	0.97	9.4	-43.72	-13	30.72
3395.2	41.04	82	1.6	V	-52.55	2.08	10.8	-43.83	-13	30.83
3395.2	39.77	1	1.5	H	-54.65	2.08	10.8	-45.93	-13	32.93
1697.6	46.28	25	1.5	H	-56.75	0.97	9.4	-48.32	-13	35.32

Cellular Band (Part 22H) for WCDMA Mode

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
low Channel (826.4 MHz)										
2479.2	50.34	29	1.6	V	-46.05	1.46	10.7	-36.81	-13	23.81
2479.2	49.16	68	1.5	H	-51.55	1.46	10.7	-42.31	-13	29.31
1652.8	47.9	92	1.5	V	-52.55	0.97	9.4	-44.12	-13	31.12
3305.6	40.2	15	1.5	V	-53.35	2.08	10.8	-44.63	-13	31.63
3305.6	39.9	44	1.6	H	-54.55	2.08	10.8	-45.83	-13	32.83
1652.8	46.54	2	1.6	H	-56.45	0.97	9.4	-48.02	-13	35.02

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
Middle Channe (836.6 MHz)										
2505.0	51.29	29	1.6	V	-45.1	1.46	10.7	-35.86	-13	22.86
2505.0	50.11	68	1.5	H	-50.6	1.46	10.7	-41.36	-13	28.36
1670.0	48.85	92	1.5	V	-51.6	0.97	9.4	-43.17	-13	30.17
3340.0	41.15	15	1.5	V	-52.4	2.08	10.8	-43.68	-13	30.68
3340.0	40.85	44	1.6	H	-53.6	2.08	10.8	-44.88	-13	31.88
1670.0	47.49	2	1.6	H	-55.5	0.97	9.4	-47.07	-13	34.07

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
high Channel (846.6 MHz)										
2539.8	50.54	29	1.6	V	-45.85	1.46	10.7	-36.61	-13	23.61
2539.8	49.36	68	1.5	H	-51.35	1.46	10.7	-42.11	-13	29.11
1693.2	48.1	92	1.5	V	-52.35	0.97	9.4	-43.92	-13	30.92
3386.4	40.4	15	1.5	V	-53.15	2.08	10.8	-44.43	-13	31.43
3386.4	40.1	44	1.6	H	-54.35	2.08	10.8	-45.63	-13	32.63
1693.2	46.74	2	1.6	H	-56.25	0.97	9.4	-47.82	-13	34.82

30 MHz ~ 20 GHz:

PCS Band (Part 24E) for GSM Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
low Channel (1850.2 MHz)										
7400.8	39.47	56	1.6	H	-48.75	3.07	12.0	-39.82	-13	26.82
7400.8	40.11	5	1.5	V	-49.35	3.07	12.0	-40.42	-13	27.42
5550.6	40.94	82	1.8	V	-49.15	3.94	11.7	-41.39	-13	28.39
3700.4	42.51	85	1.4	V	-52.15	2.96	10.4	-44.71	-13	31.71
3700.4	43.86	256	1.5	H	-52.25	2.96	10.4	-44.81	-13	31.81
5550.6	39.4	2	1.6	H	-53.25	3.94	11.7	-45.49	-13	32.49

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
Middle Channel (1880.0 MHz)										
7520.0	40.22	56	1.6	H	-48.0	3.07	12.0	-39.07	-13	26.07
7520.0	40.86	5	1.5	V	-48.6	3.07	12.0	-39.67	-13	26.67
5640.0	41.69	82	1.8	V	-48.4	3.94	11.7	-40.64	-13	27.64
3760.0	43.26	85	1.4	V	-51.4	2.96	10.4	-43.96	-13	30.96
3760.0	44.61	256	1.5	H	-51.5	2.96	10.4	-44.06	-13	31.06
5640.0	40.15	2	1.6	H	-52.5	3.94	11.7	-44.74	-13	31.74

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
high Channel (1909.8 MHz)										
7639.2	39.27	56	1.6	H	-48.95	3.07	12.0	-40.02	-13	27.02
7639.2	39.91	5	1.5	V	-49.55	3.07	12.0	-40.62	-13	27.62
5729.4	40.74	82	1.8	V	-49.35	3.94	11.7	-41.59	-13	28.59
3819.6	42.31	85	1.4	V	-52.35	2.96	10.4	-44.91	-13	31.91
3819.6	43.66	256	1.5	H	-52.45	2.96	10.4	-45.01	-13	32.01
5729.4	39.2	2	1.6	H	-53.45	3.94	11.7	-45.69	-13	32.69

PCS Band (Part 24E) for WCDMA Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
low Channel (1852.4 MHz MHz)										
7409.6	40.23	3	1.6	H	-48.05	3.07	12.0	-39.12	-13	26.12
7409.6	40.93	82	1.6	V	-48.45	3.07	12.0	-39.52	-13	26.52
5557.2	41.16	62	1.5	V	-48.95	3.94	11.7	-41.19	-13	28.19
5557.2	43.01	2	1.6	H	-49.65	3.94	11.7	-41.89	-13	28.89
3704.8	41.3	62	1.4	V	-53.35	2.96	10.4	-45.91	-13	32.91
3704.8	42.33	66	1.8	H	-53.75	2.96	10.4	-46.31	-13	33.31

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
Middle Channel (1880.0 MHz)										
7520.0	41.18	3	1.6	H	-47.1	3.07	12.0	-38.17	-13	25.17
7520.0	41.88	82	1.6	V	-47.5	3.07	12.0	-38.57	-13	25.57
5640.0	42.11	62	1.5	V	-48.0	3.94	11.7	-40.24	-13	27.24
5640.0	43.96	2	1.6	H	-48.7	3.94	11.7	-40.94	-13	27.94
3760.0	42.25	62	1.4	V	-52.4	2.96	10.4	-44.96	-13	31.96
3760.0	43.28	66	1.8	H	-52.8	2.96	10.4	-45.36	-13	32.36

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
high Channel (1907.6 MHz)										
7630.4	40.43	3	1.6	H	-47.85	3.07	12.0	-38.92	-13	25.92
7630.4	41.13	82	1.6	V	-48.25	3.07	12.0	-39.32	-13	26.32
5722.8	41.36	62	1.5	V	-48.75	3.94	11.7	-40.99	-13	27.99
5722.8	43.21	2	1.6	H	-49.45	3.94	11.7	-41.69	-13	28.69
3815.2	41.5	62	1.4	V	-53.15	2.96	10.4	-45.71	-13	32.71
3815.2	42.53	66	1.8	H	-53.55	2.96	10.4	-46.11	-13	33.11

Note:

Absolute Level = SG Level - Cable loss + Antenna Gain

Margin = Limit- Absolute Level

7. MAINS CONDUCTED EMISSION

7.1. MEASUREMENT METHOD

The measurement procedure specified in ANSI C63.4-2003 was used for testing. Conducted Emission was measured with travel charger.

7.2. PROVISIONS APPLICABLE

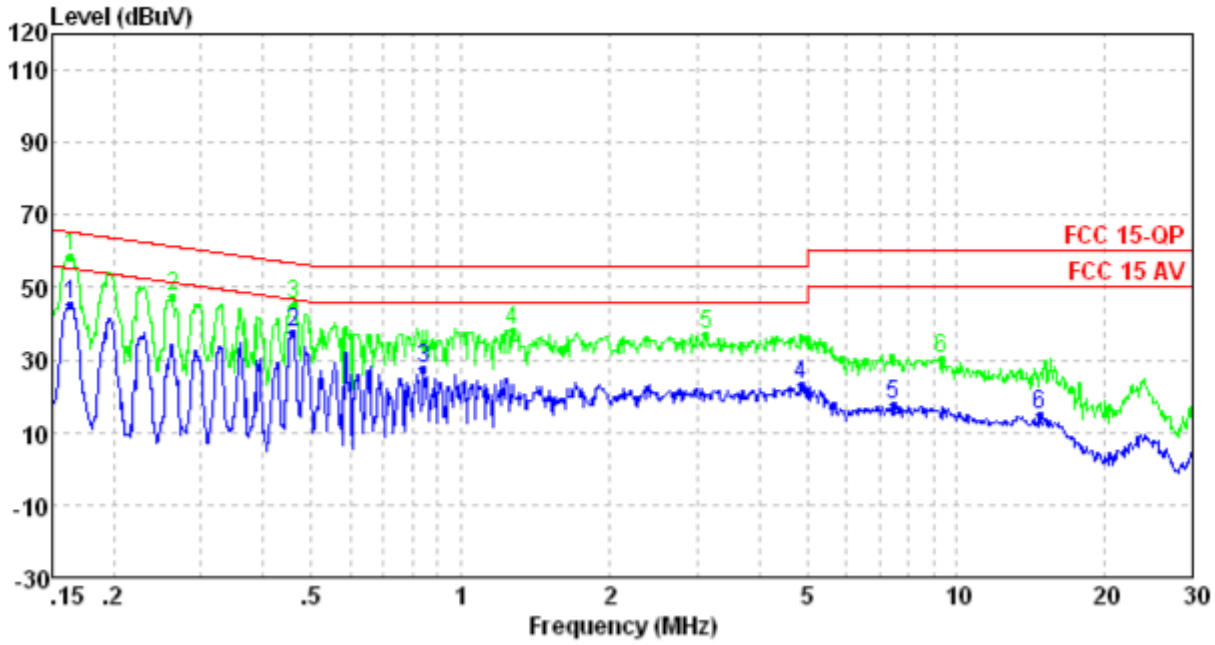
Frequency of Emission (MHz)	Conducted Limit(dBuV)	
	Quasi-Peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50
*Decreases with the logarithm of the frequency. *The lower limit shall apply at the transition frequency.		

7.3. MEASUREMENT RESULT

Pass.

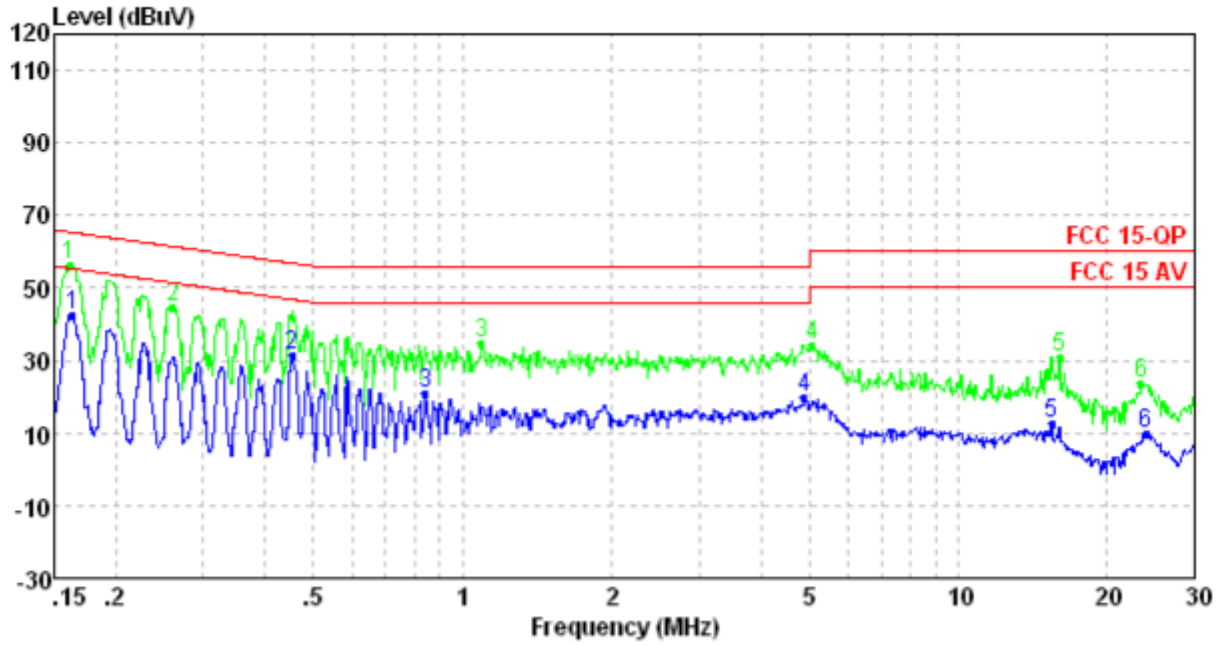
Note: The GSM850(1 UP Slot) mode is the worst condition and the test result as following

L line



Frequency (MHz)	Corrected Result (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK /QP/Ave.)
0.16	58.46	0.16	65.30	-6.84	QP
0.26	47.34	0.13	61.34	-14.00	QP
0.46	45.41	0.11	56.67	-11.26	QP
1.28	38.10	0.15	56.00	-17.90	QP
3.12	37.13	0.20	56.00	-18.87	QP
9.35	30.46	0.31	60.00	-29.54	QP
0.16	45.30	0.16	55.30	-10.00	AV
0.46	37.76	0.13	46.71	-8.95	AV
0.84	27.33	0.11	46.00	-18.67	AV
4.87	22.98	0.15	46.00	-23.02	AV
7.49	17.75	0.20	50.00	-32.25	AV
14.75	14.67	0.31	50.00	-35.33	AV

N line



Frequency (MHz)	Corrected Result (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK /QP/Ave.)
0.16	56.28	0.16	65.38	-9.10	QP
0.26	44.73	0.13	61.42	-16.69	QP
1.09	34.54	0.11	56.00	-21.46	QP
5.08	34.07	0.15	60.00	-25.93	QP
16.05	31.03	0.20	60.00	-28.97	QP
23.39	23.47	0.31	60.00	-36.53	QP
0.16	42.38	0.16	55.30	-12.92	AV
0.45	31.23	0.13	46.80	-15.57	AV
0.84	20.99	0.11	46.00	-25.01	AV
4.90	19.95	0.15	46.00	-26.05	AV
15.47	12.40	0.20	50.00	-37.60	AV
23.89	10.07	0.31	50.00	-39.93	AV

8. FREQUENCY STABILITY

8.1. Applicable Standard

FCC §2.1055 (a), §2.1055 (d), §22.355, §24.235

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

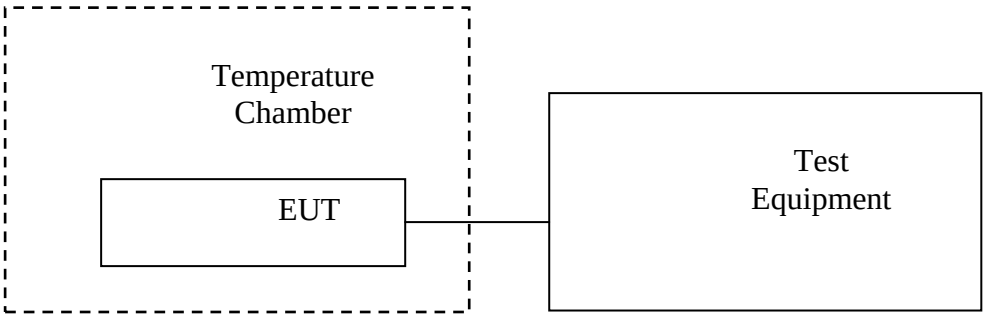
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

8.2. 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: An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.



8.3. Measurement Result

GSM (GMSK) mode

Cellular Band (Part 22H)

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
50	3.7	-4	-0.0048	2.5
40		-10	-0.0120	2.5
30		-4	-0.0048	2.5
20		-1	-0.0012	2.5
10		-7	-0.0084	2.5
0		-7	-0.0084	2.5
-10		-8	-0.0096	2.5
-20		-8	-0.0096	2.5
-30		-3	-0.0036	2.5
25	$V_{min.}$= 3.5	-6	-0.0072	2.5

PCS Band (Part 24E)

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.7	-18	-0.0096	Pass
-20		-15	-0.0080	Pass
-10		-19	-0.0101	Pass
0		-14	-0.0074	Pass
10		-15	-0.0080	Pass
20		-11	-0.0059	Pass
30		-12	-0.0064	Pass
40		-19	-0.0101	Pass
50		-14	-0.0074	Pass
25	$V_{min.}$= 3.5	-17	-0.0090	Pass

EGPRS (8PSK) mode

Cellular Band (Part 22H)

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.7	-5	-0.0060	2.5
-20		-10	-0.0120	2.5
-10		-9	-0.0108	2.5
0		-3	-0.0036	2.5
10		-4	-0.0048	2.5
20		-10	-0.0120	2.5
30		-4	-0.0048	2.5
40		-10	-0.0120	2.5
50		-10	-0.0120	2.5
25	$V_{min.}$= 3.5	-4	-0.0048	2.5

PCS Band (Part 24E)

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.7	-23	-0.0122	Pass
-20		-18	-0.0096	Pass
-10		-17	-0.0090	Pass
0		-19	-0.0101	Pass
10		-24	-0.0128	Pass
20		-24	-0.0128	Pass
30		-17	-0.0090	Pass
40		-20	-0.0106	Pass
50		-17	-0.0090	Pass
25	$V_{min.}$= 3.5	-18	-0.0096	Pass

WCDMA (QPSK) mode

Cellular Band (Part 22H)

Middle Channel, f_o =835.0MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.7	-9	-0.0108	2.5
-20		-9	-0.0108	2.5
-10		-8	-0.0096	2.5
0		-11	-0.0132	2.5
10		-14	-0.0168	2.5
20		-12	-0.0144	2.5
30		-14	-0.0168	2.5
40		-14	-0.0168	2.5
50		-10	-0.0120	2.5
25	$V_{min.}$= 3.5	-12	-0.0144	2.5

PCS Band (Part 24E)

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.7	-16	-0.0085	Pass
-20		-22	-0.0117	Pass
-10		-18	-0.0096	Pass
0		-21	-0.0112	Pass
10		-22	-0.0117	Pass
20		-18	-0.0096	Pass
30		-19	-0.0101	Pass
40		-25	-0.0133	Pass
50		-24	-0.0128	Pass
25	$V_{min.}$= 3.5	-16	-0.0085	Pass

9. OCCUPIED BANDWIDTH

9.1. MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

9.2. PROVISIONS APPLICABLE

The occupied bandwidth (99%) shall not exceed 300 KHz.

9.3. MEASUREMENT RESULT

Test Result: Compliance. Please refer to the following tables and plots.

Cellular Band (Part 22H)

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
GSM (GMSK)	836.6	246	313

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
EGPRS (8PSK)	836.6	248	311

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
WCDMA (QPSK)	836.6	4.168	4.669

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSUPA (64QAM)	836.6	4.168	4.649

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSDPA (16QAM)	836.6	4.168	4.649

PCS Band (Part 24E)

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
GSM (GMSK)	1880.0	244	315

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
EGPRS (8PSK)	1880.0	251	313

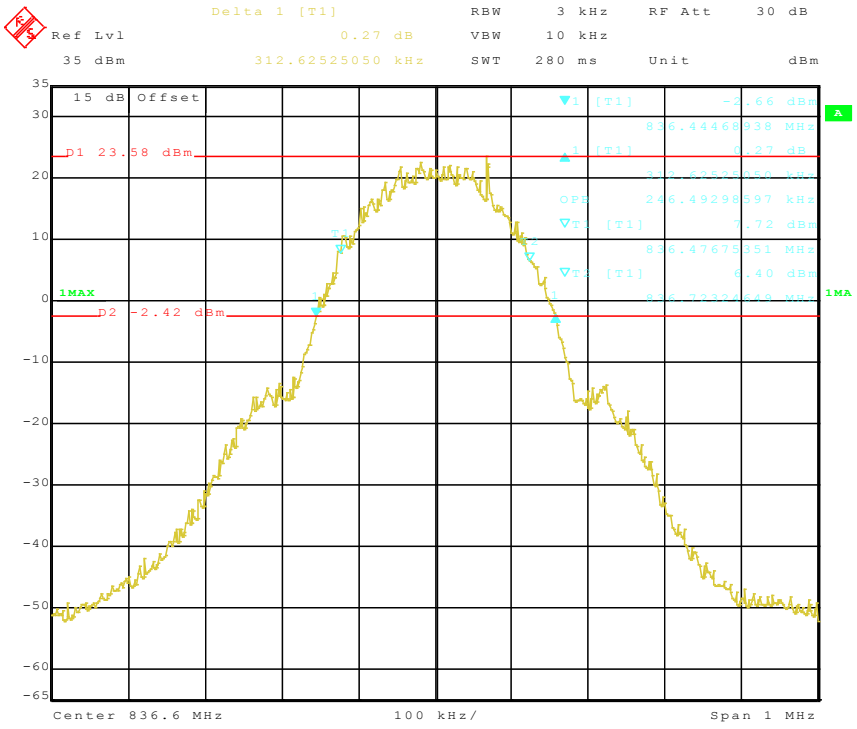
Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
WCDMA (QPSK)	1880.0	4.188	4.649

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSUPA (64QAM)	836.6	4.168	4.649

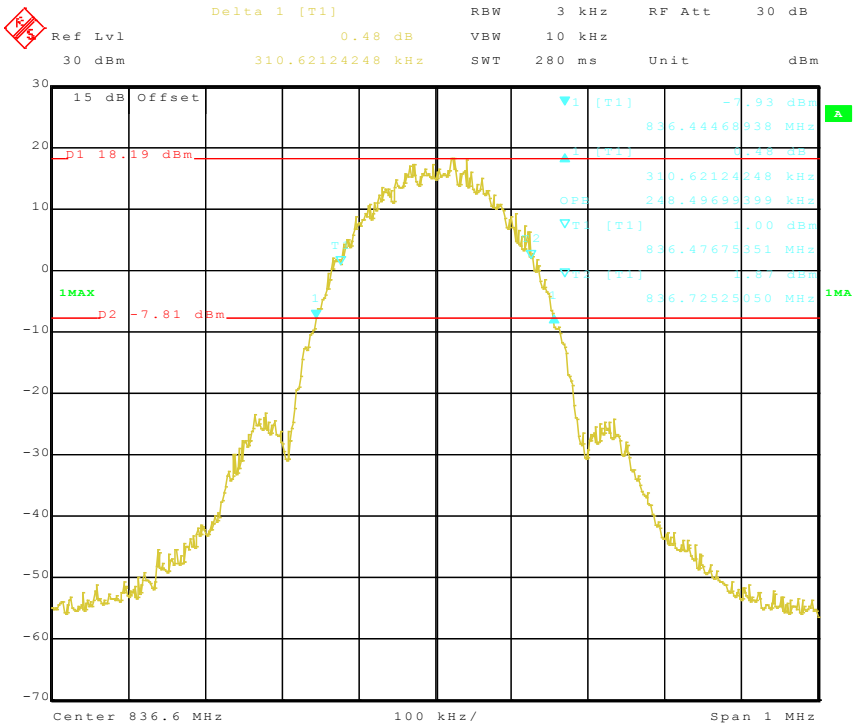
Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSDPA (16QAM)	836.6	4.188	4.649

Cellular Band (Part 22H)

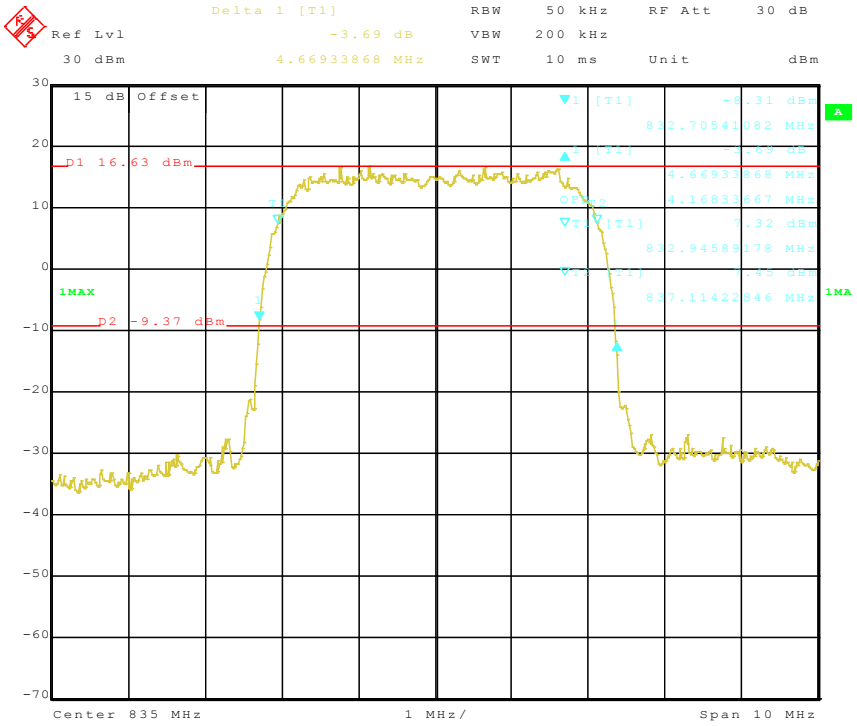
Bandwidth for GSM (GMSK) Mode



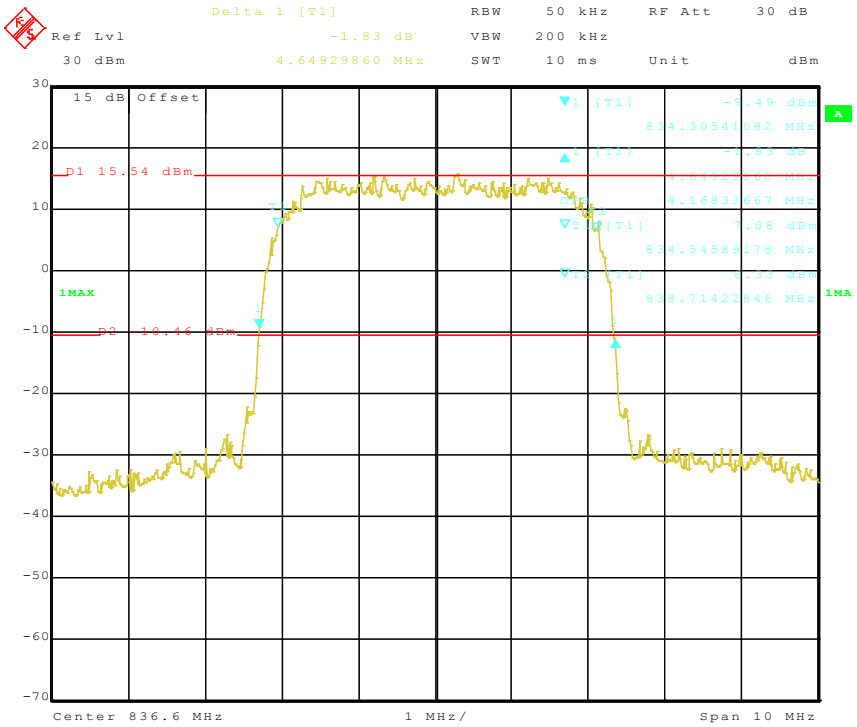
Bandwidth for EGPRS (8PSK) Mode



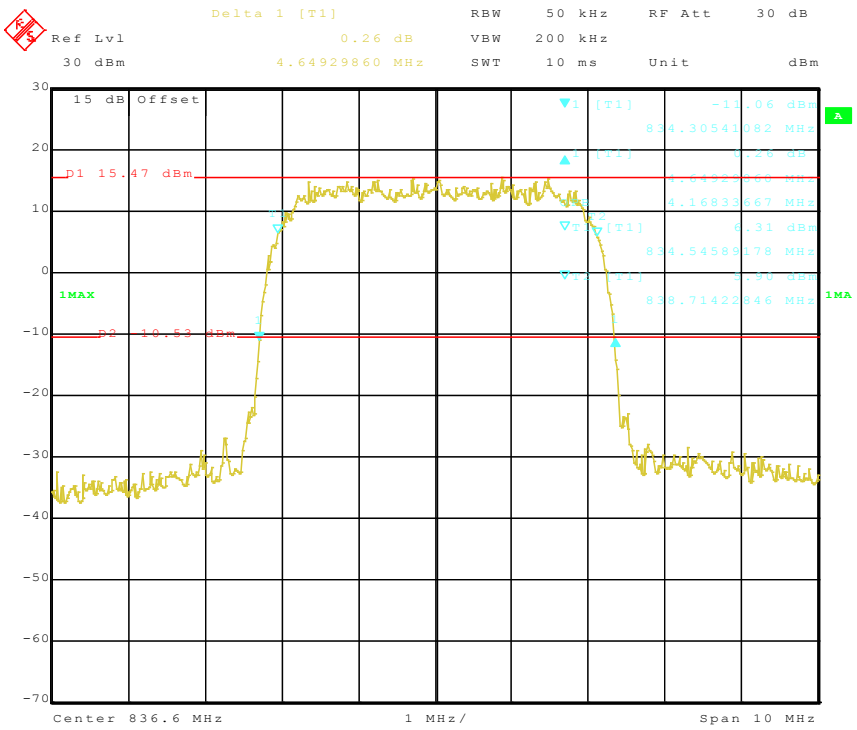
Bandwidth for WCDMA (QPSK) Mode



Bandwidth for HSUPA (64QMA) Mode

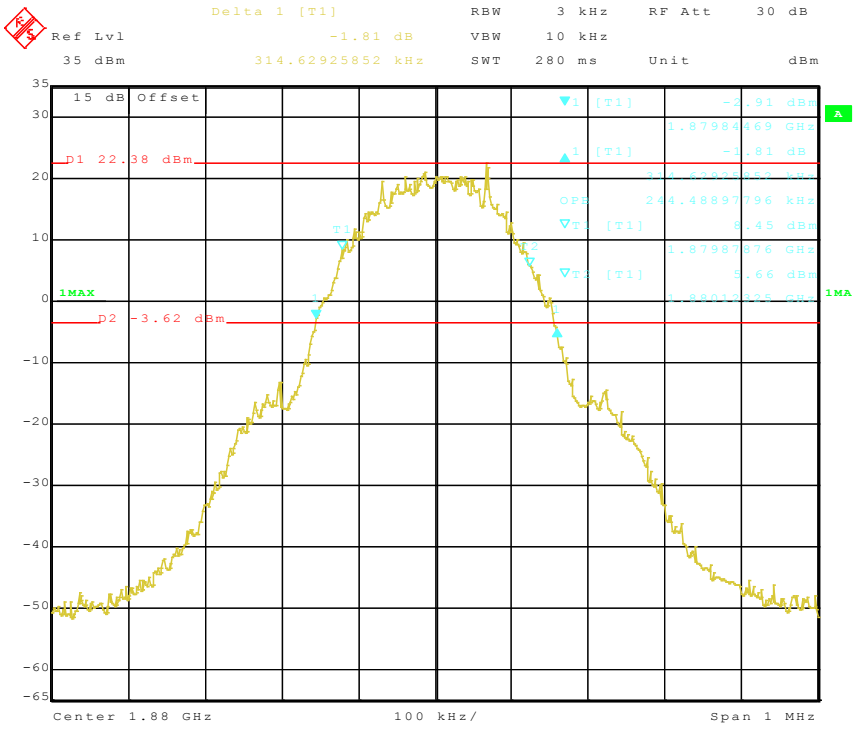


Bandwidth for HSDPA (16QMA) Mode

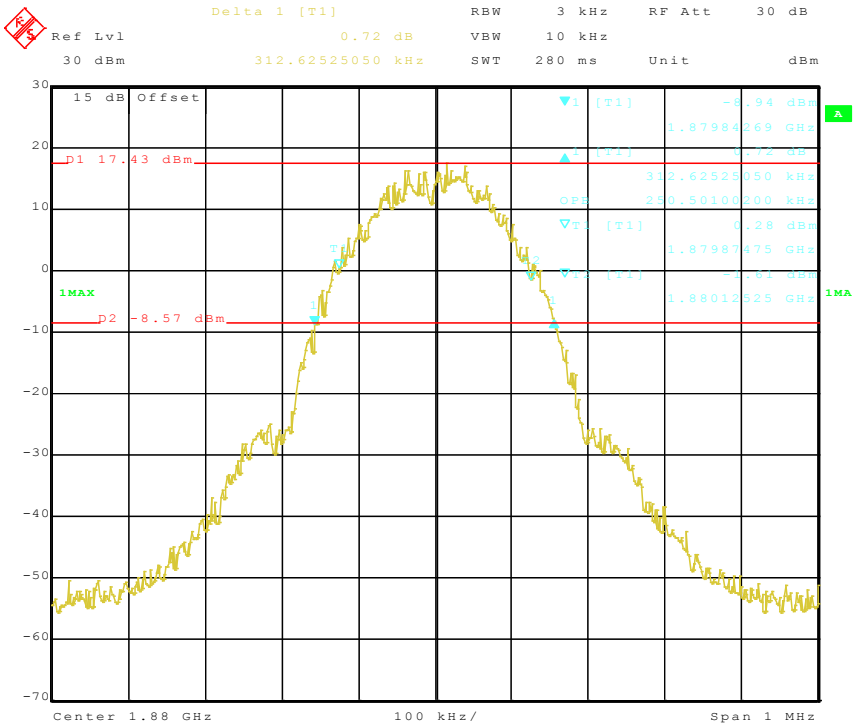


PCS Band (Part 24E)

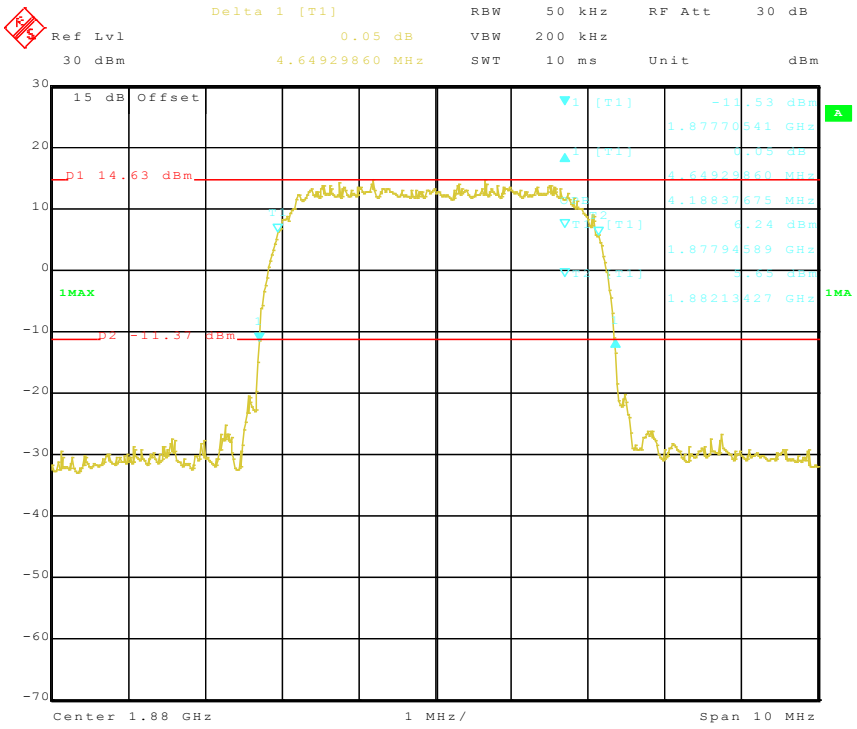
Bandwidth for GSM (GMSK) Mode



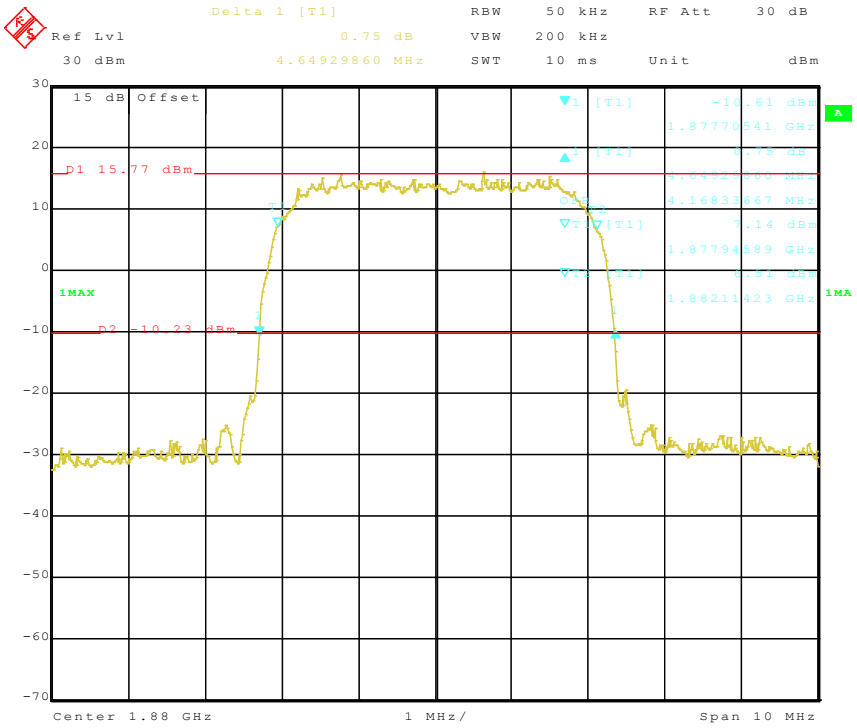
Bandwidth for EGPRS (8PSK) Mode



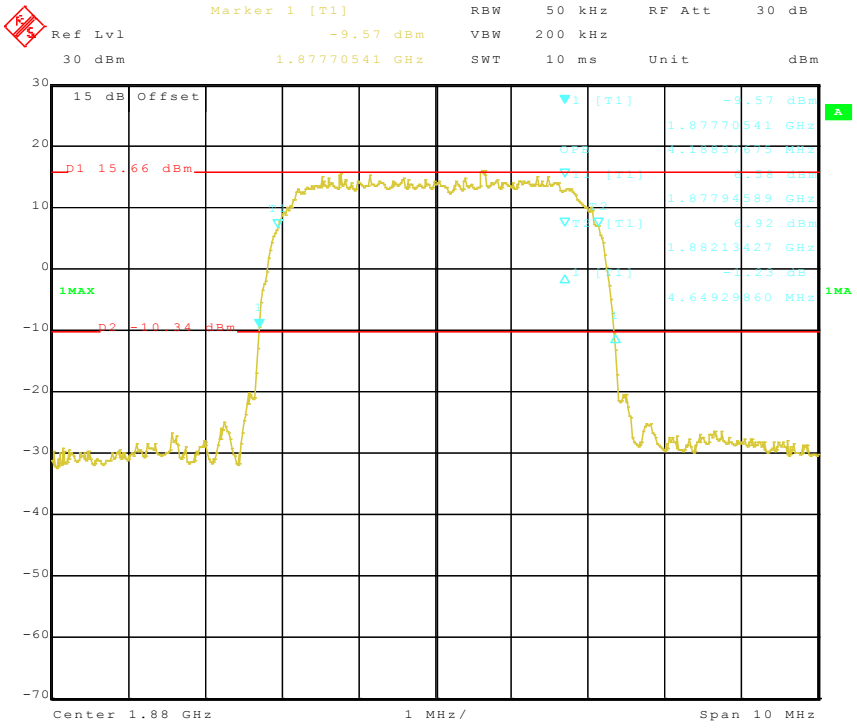
Bandwidth for WCDMA (QPSK) Mode



Bandwidth for HSUPA (64QMA) Mode



Bandwidth for HSDPA (16QMA) Mode



10. EMISSION BANDWIDTH

10.1.MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

10.2.PROVISIONS APPLICABLE

The emission bandwidth is defined as two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power

10.3.MEASUREMENT RESULT

Test Result: Compliance. Please refer to the following tables and plots.

Cellular Band (Part 22H)

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
GSM (GMSK)	836.6	246	313

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
EGPRS (8PSK)	836.6	248	311

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
WCDMA (QPSK)	836.6	4.168	4.669

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSUPA (64QAM)	836.6	4.168	4.649

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSDPA (16QAM)	836.6	4.168	4.649

PCS Band (Part 24E)

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
GSM (GMSK)	1880.0	244	315

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
EGPRS (8PSK)	1880.0	251	313

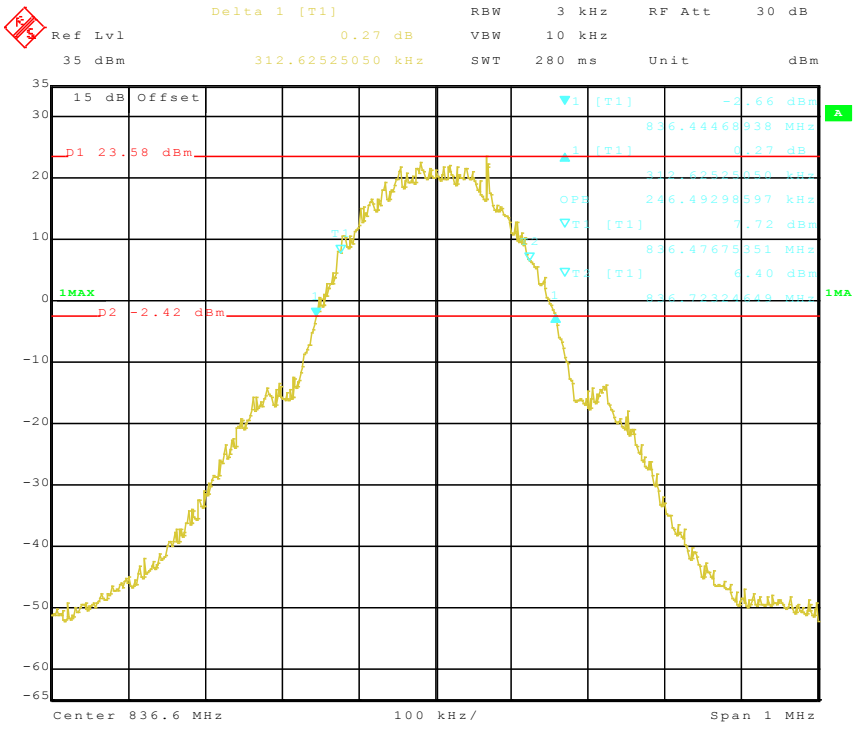
Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
WCDMA (QPSK)	1880.0	4.188	4.649

Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSUPA (64QAM)	836.6	4.168	4.649

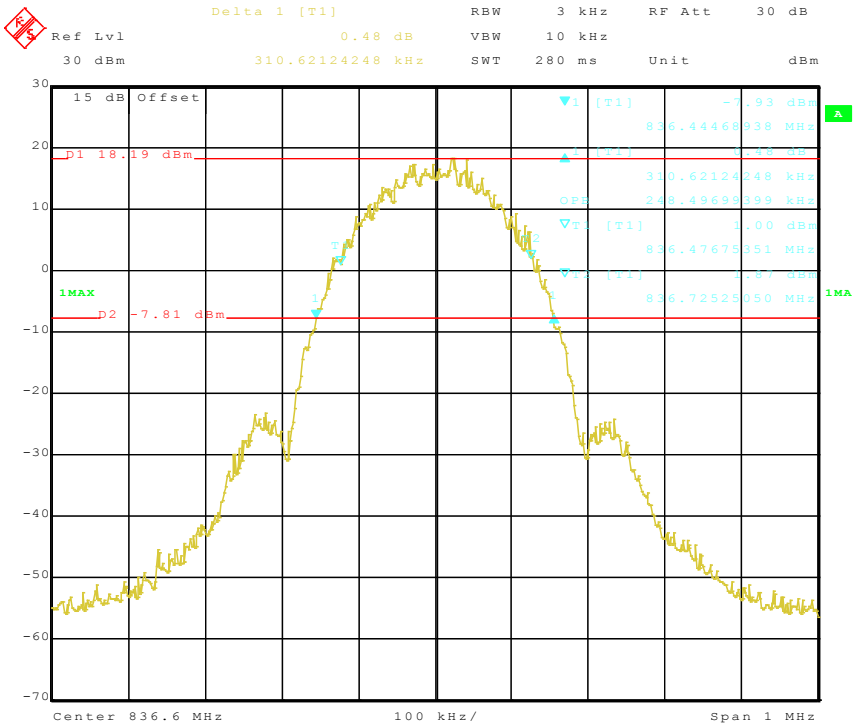
Mode	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
HSDPA (16QAM)	836.6	4.188	4.649

Cellular Band (Part 22H)

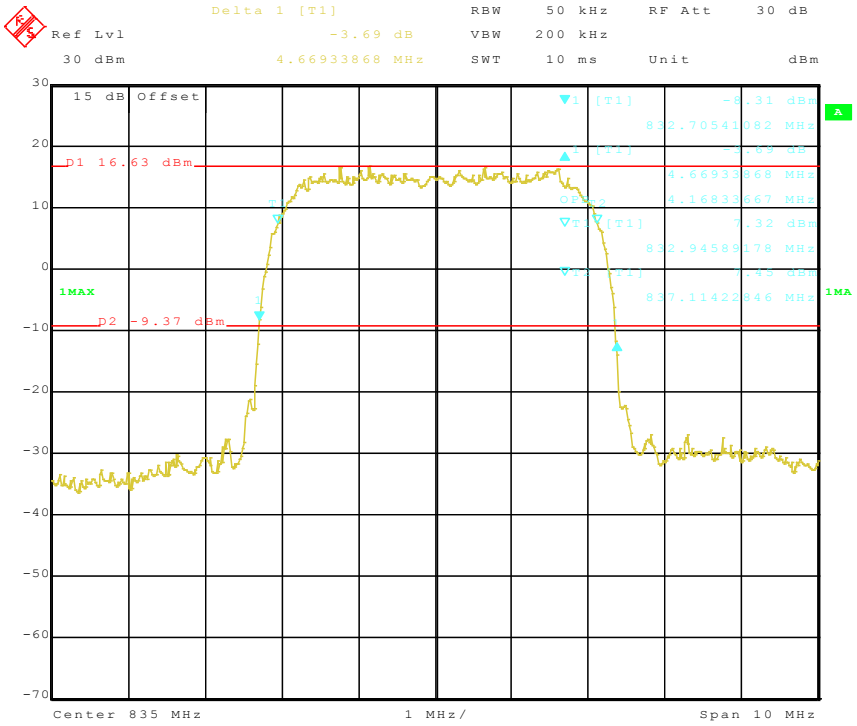
Bandwidth for GSM (GMSK) Mode



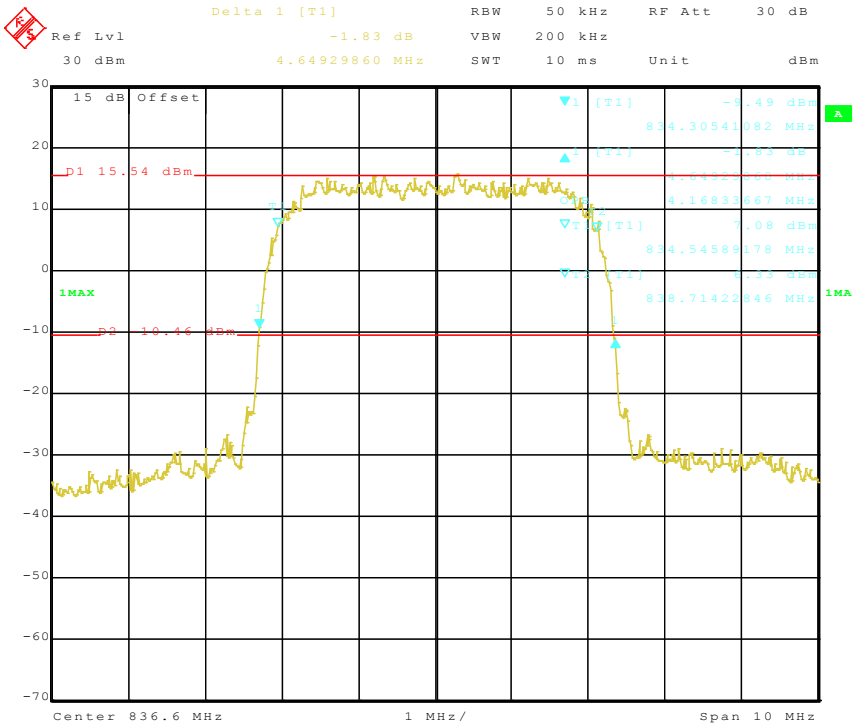
Bandwidth for EGPRS (8PSK) Mode



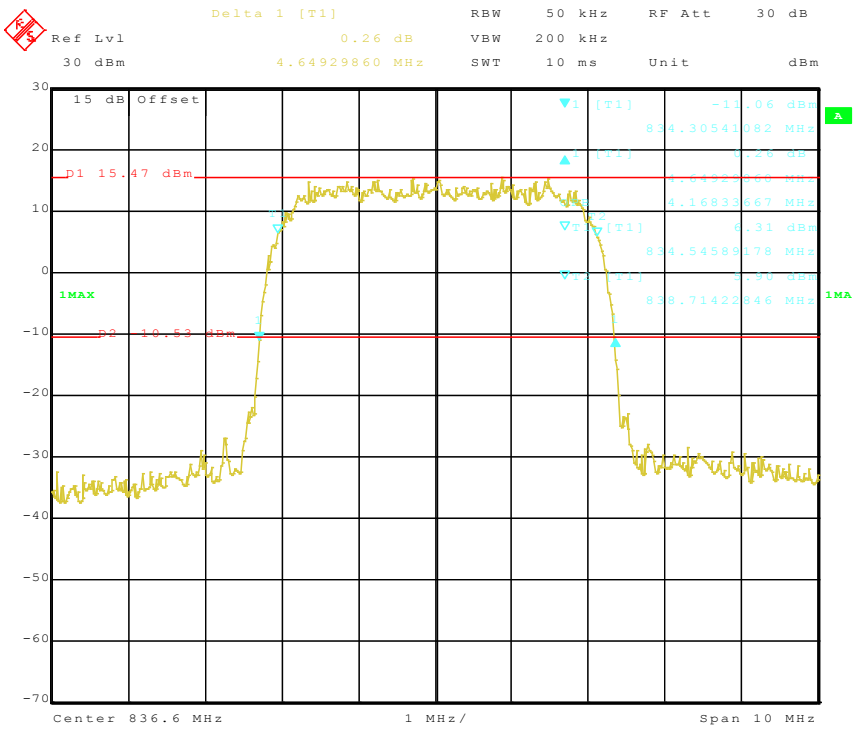
Bandwidth for WCDMA (QPSK) Mode



Bandwidth for HSUPA (64QMA) Mode

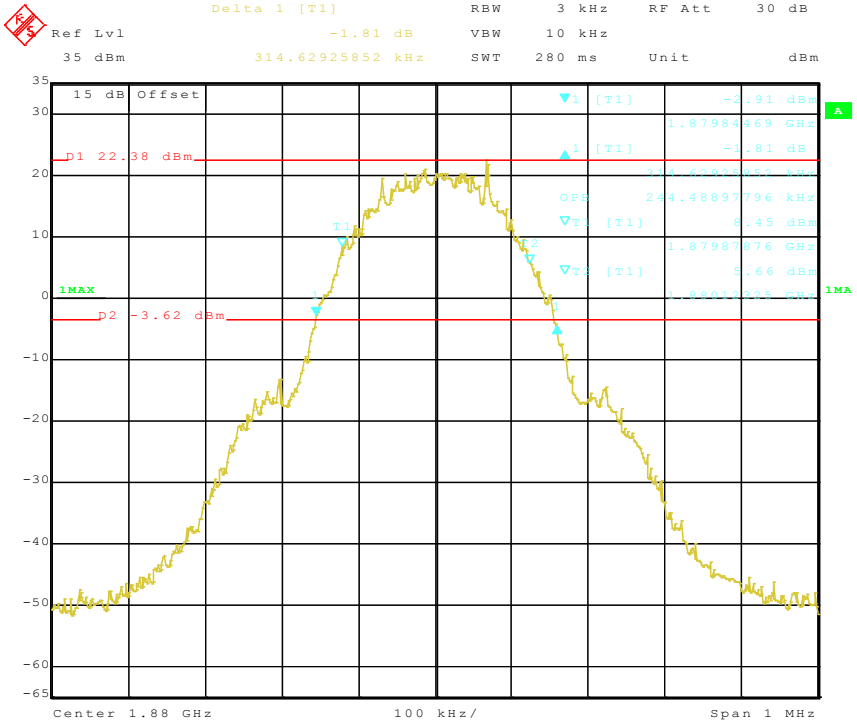


Bandwidth for HSDPA (16QMA) Mode

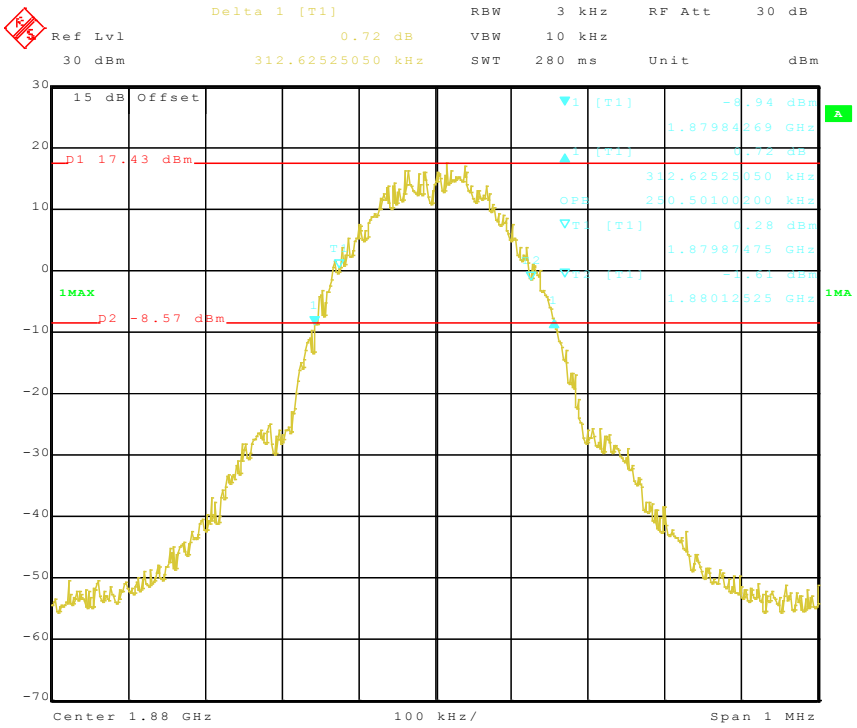


PCS Band (Part 24E)

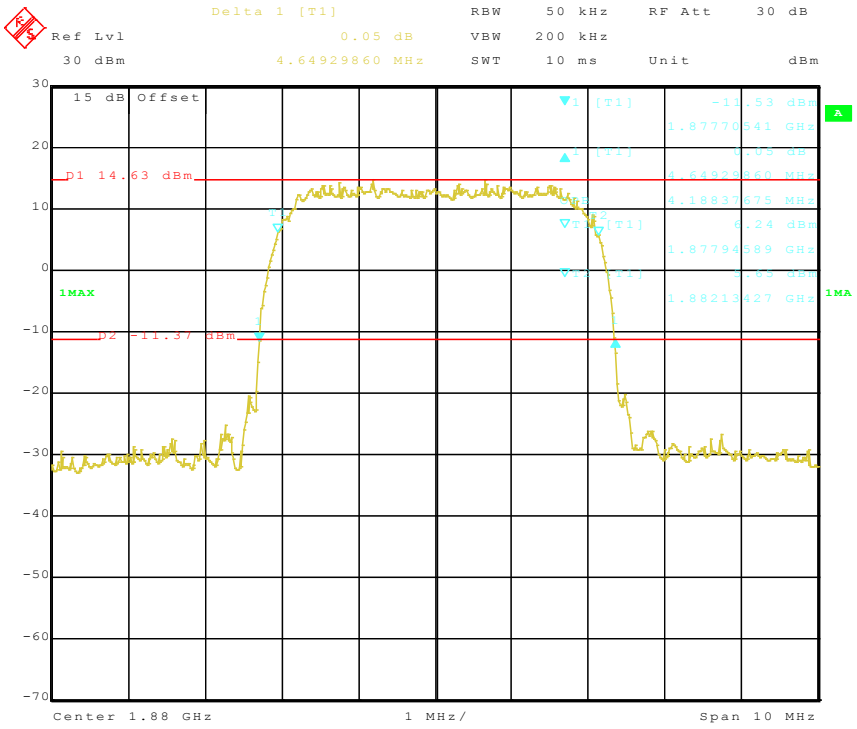
Bandwidth for GSM (GMSK) Mode



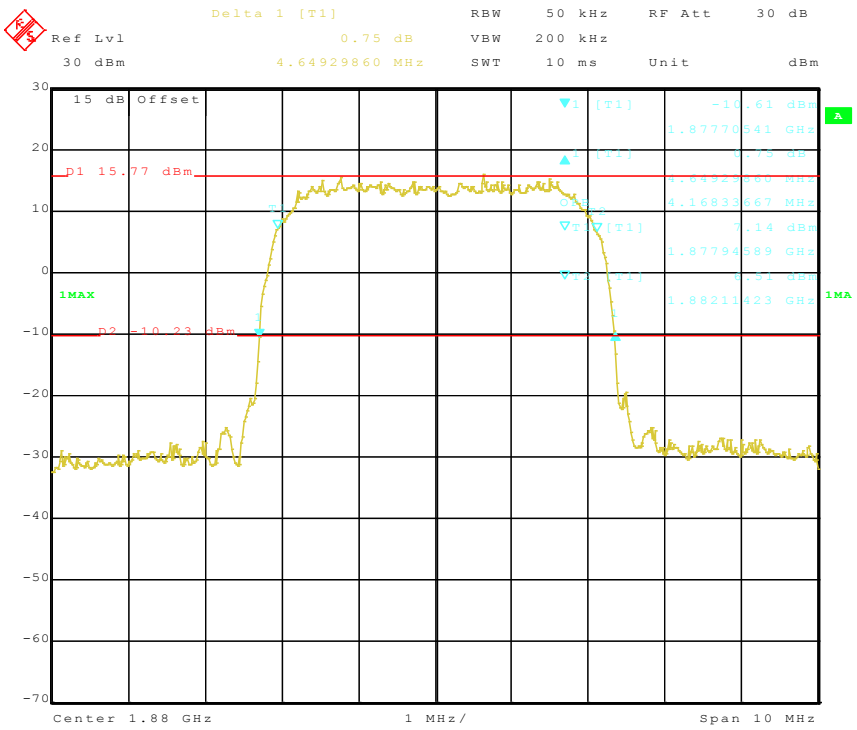
Bandwidth for EGPRS (8PSK) Mode



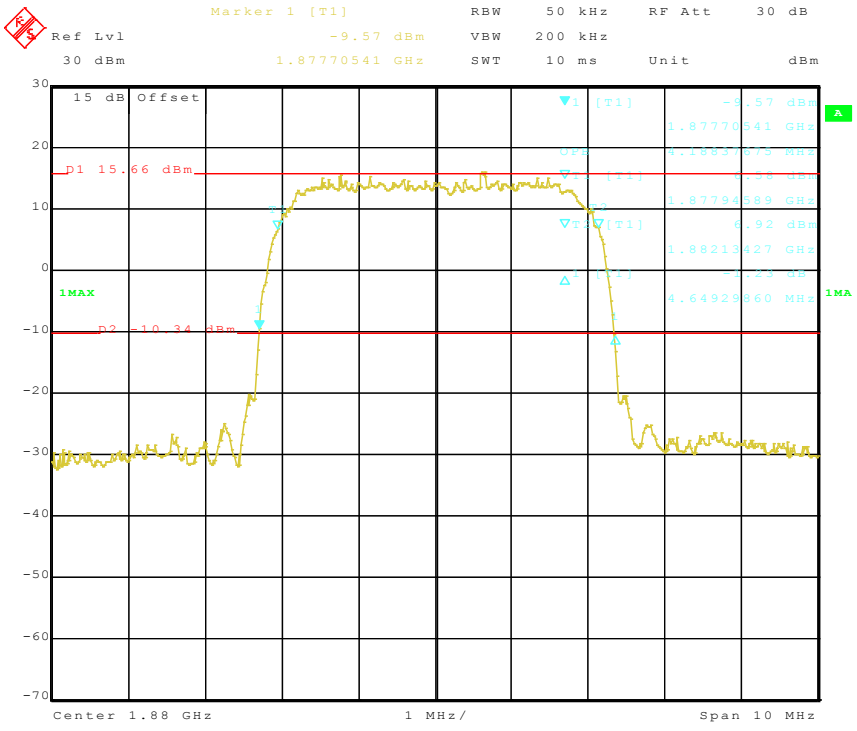
Bandwidth for WCDMA (QPSK) Mode



Bandwidth for HSUPA (64QMA) Mode



Bandwidth for HSDPA (16QMA) Mode



11. BAND EDGE

11.1.MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

11.2.PROVISIONS APPLICABLE

as Specified in FCC rules of 22.917(b) and 24.238(b)

11.3.MEASUREMENT RESULT

Test Result: Compliance. Please refer to the following tables and plots.

Cellular Band (Part 22H)

Mode	Band edges	Emission (dBm)	Limit (dBm)
GSM (GMSK)	L	-15.22	≤-13
	R	-15.45	≤-13

Mode	Band edges	Emission (dBm)	Limit (dBm)
EGPRS (8PSK)	L	-21.83	≤-13
	R	-22.44	≤-13

Mode	Band edges	Emission (dBm)	Limit (dBm)
WCDMA (QPSK)	L	-22.66	≤-13
	R	-18.76	≤-13

PCS Band (Part 24E)

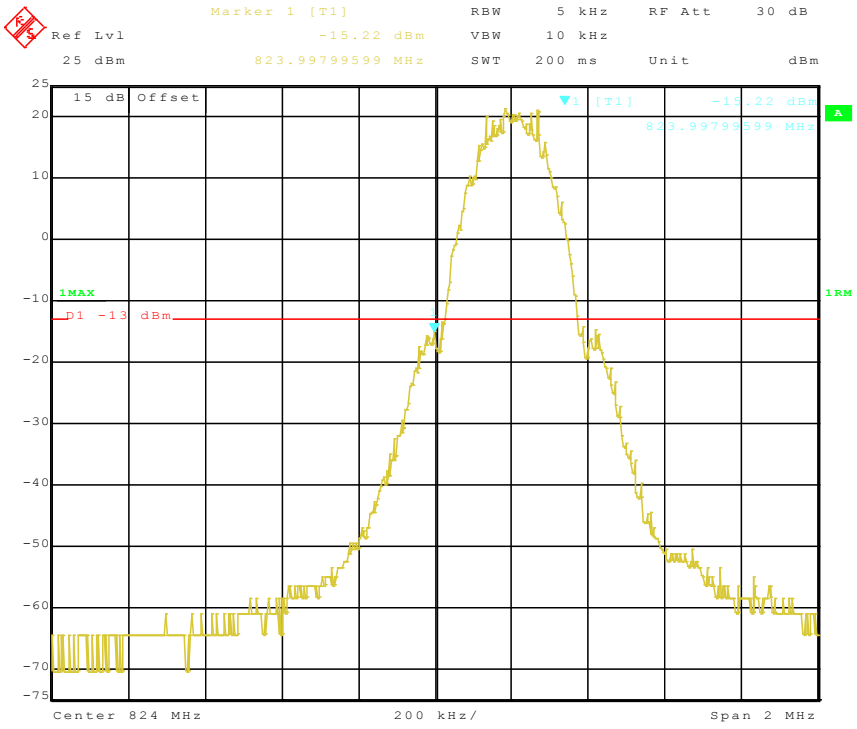
Mode	Band edges	Emission (dBm)	Limit (dBm)
GSM (GMSK)	L	-16.94	≤-13
	R	-24.95	≤-13

Mode	Band edges	Emission (dBm)	Limit (dBm)
EGPRS (8PSK)	L	-21.90	≤-13
	R	-24.95	≤-13

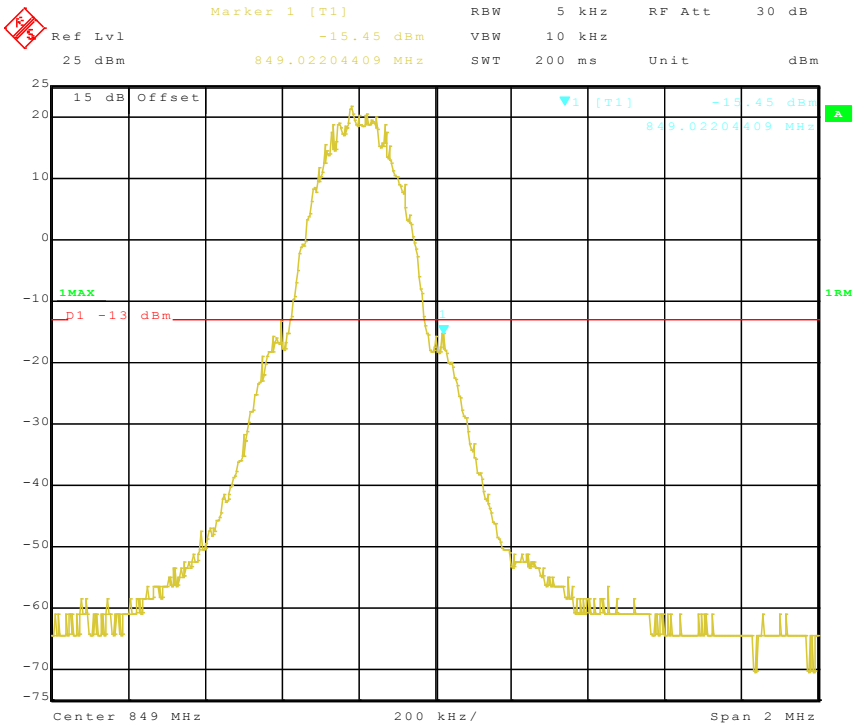
Mode	Band edges	Emission (dBm)	Limit (dBm)
WCDMA (QPSK)	L	-18.36	≤-13
	R	-21.82	≤-13

GSM(GMSK) Mode

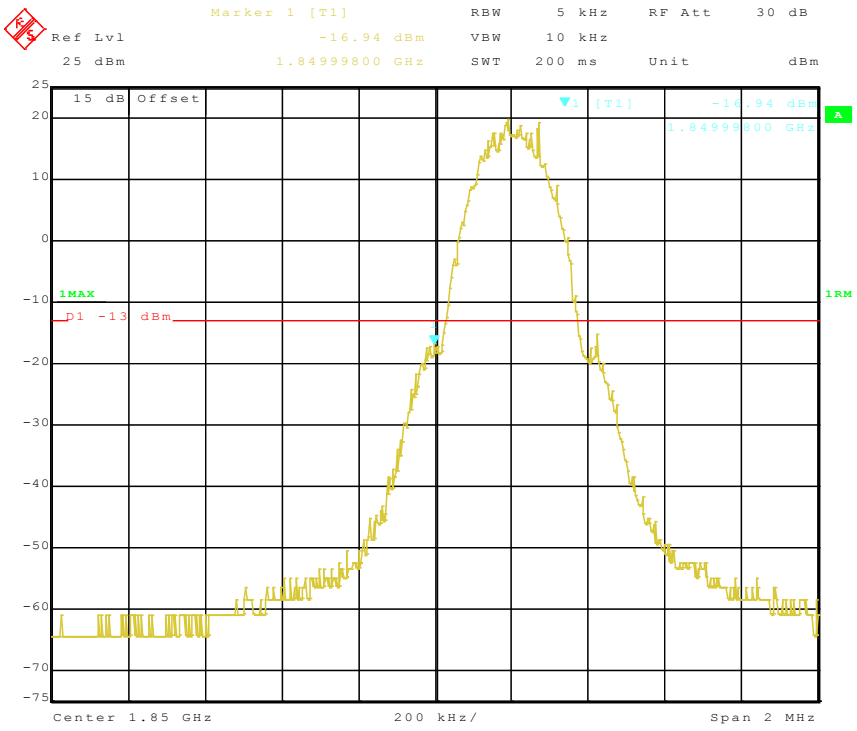
Cellular Band, Left Band Edge



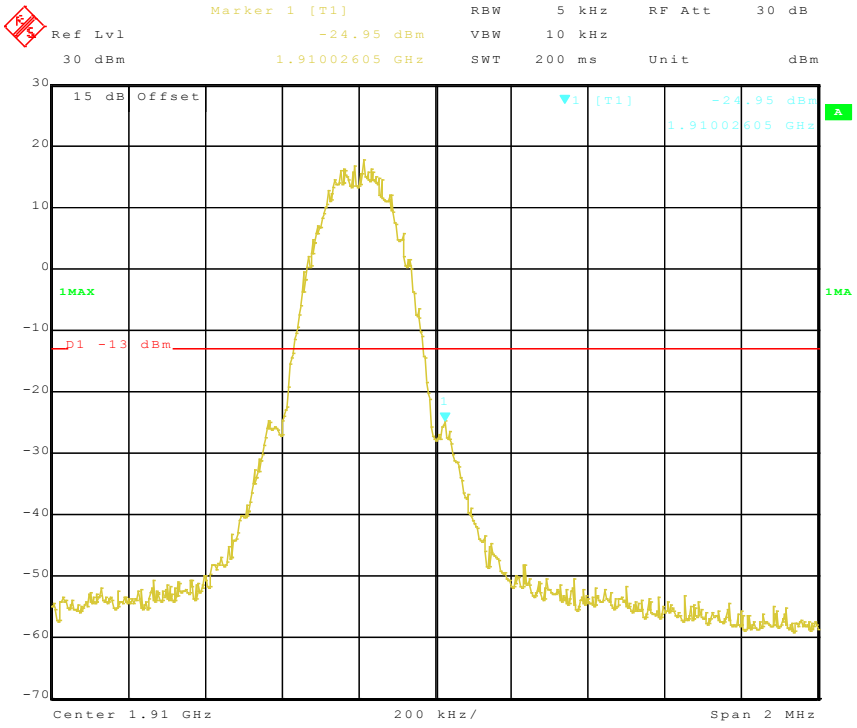
Cellular Band, Right Band Edge



PCS Band, Left Band Edge

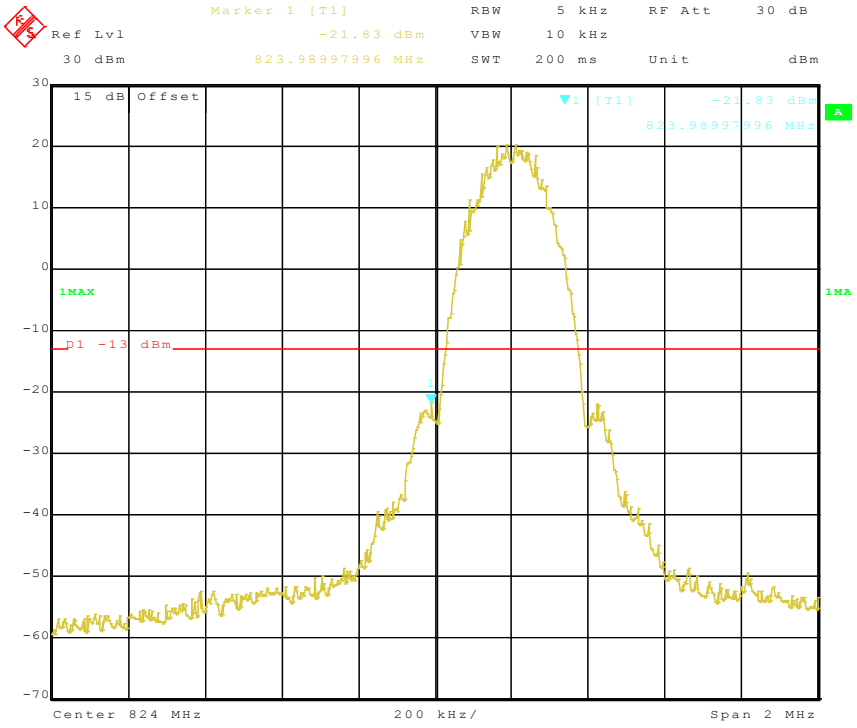


PCS Band, Right Band Edge

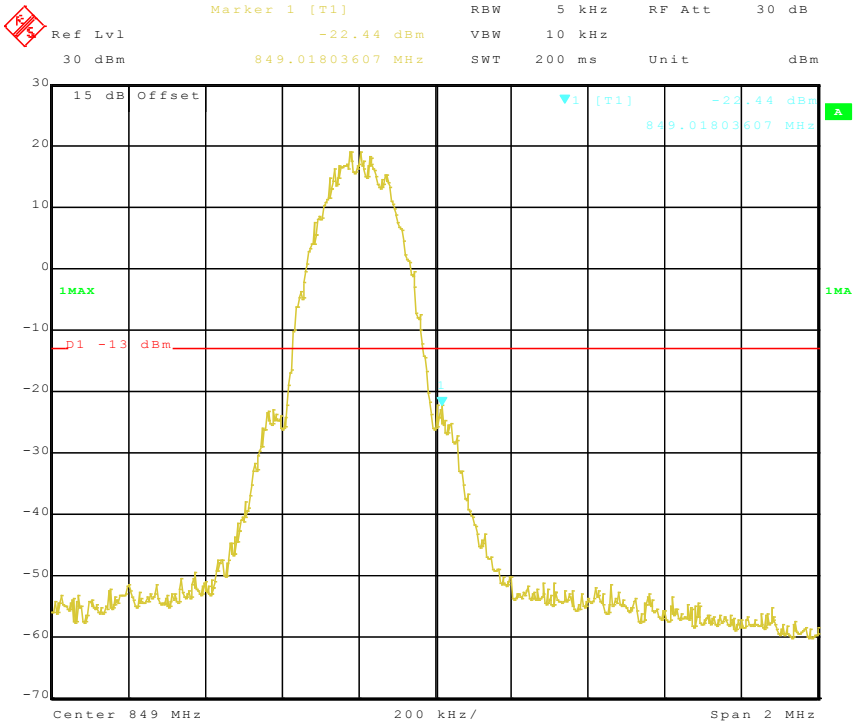


EGPRS (8PSK) Mode

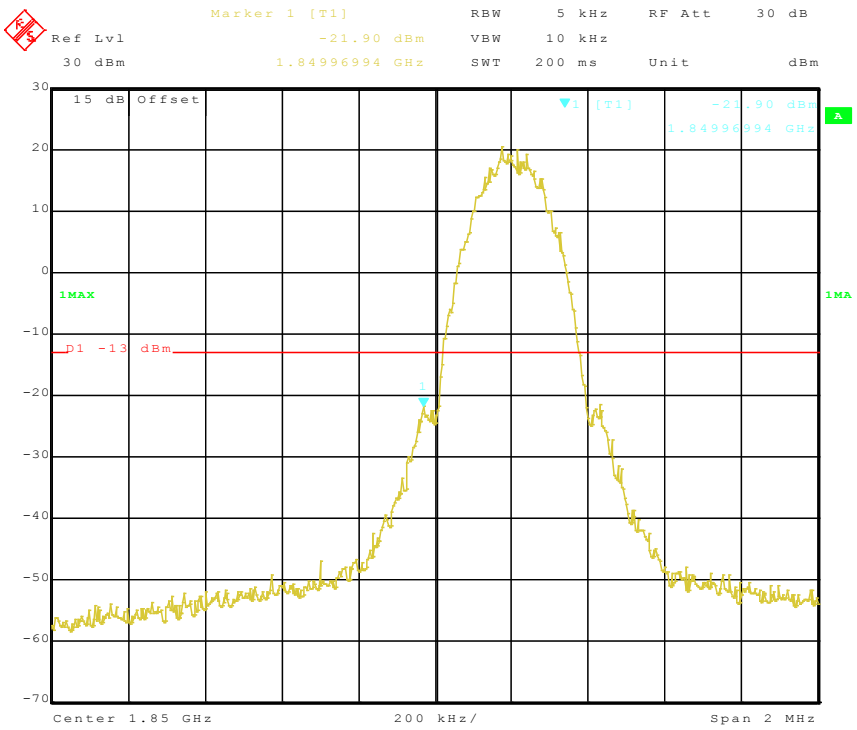
Cellular Band, Left Band Edge



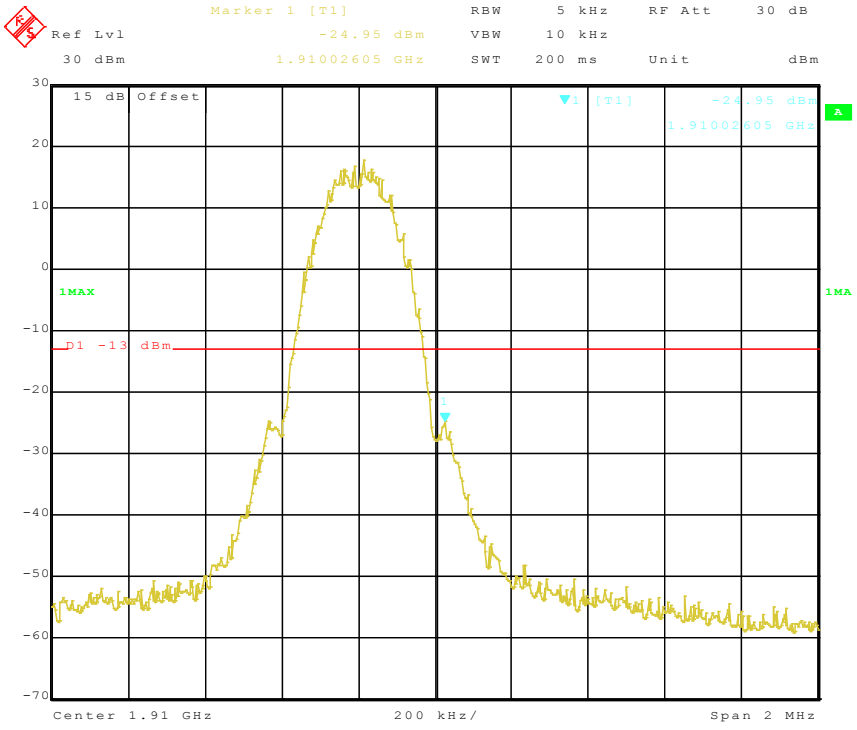
Cellular Band, Right Band Edge



PCS Band, Left Band Edge

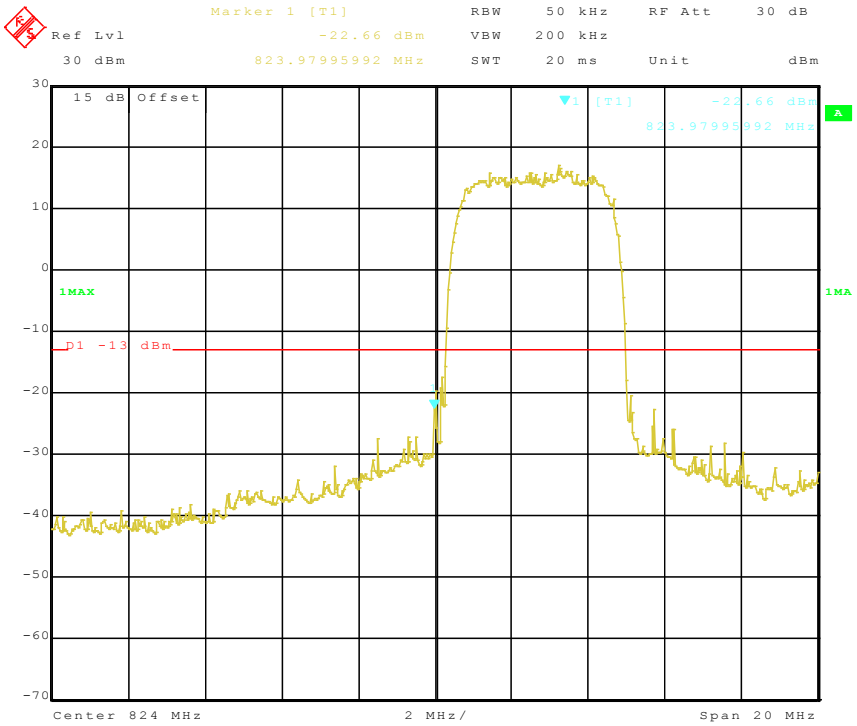


PCS Band, Right Band Edge

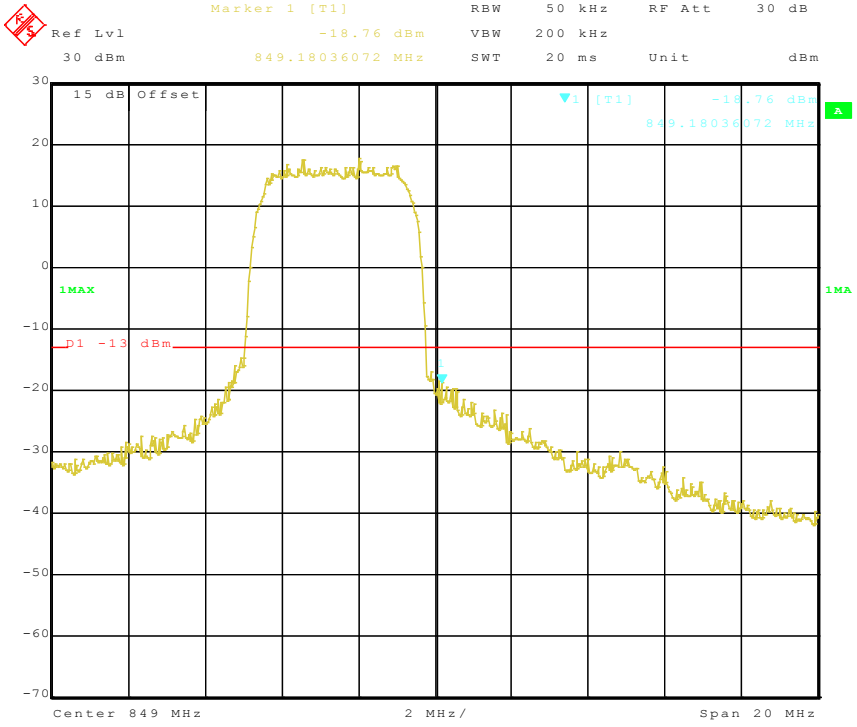


WCDMA(QPSK) Mode

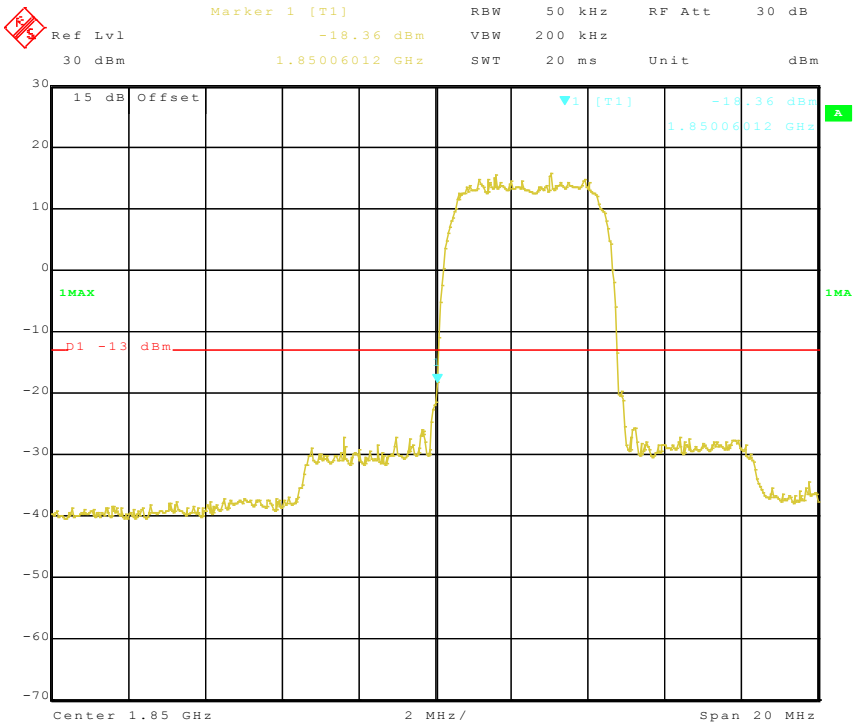
Cellular Band, Left Band Edge



Cellular Band, Right Band Edge



PCS Band, Left Band Edge



PCS Band, Right Band Edge