TEST REPORT

Product Name:	Smart Phone
FCC ID:	2ANMU-WP19PRO
Trademark:	OUKITEL
Model Number:	WP19 Pro
Prepared For:	SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address:	A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX China
Manufacturer:	SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address:	A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX China
Prepared By:	Shenzhen CTB Testing Technology Co., Ltd.
Address:	1&2/F., Building A, No.26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	Oct. 18, 2023
Sample tested Date:	Oct. 18, 2023 to Oct. 31, 2023
Issue Date:	Oct. 31, 2023
Report No.:	CTB231031029RFX
Test Standards	FCC Part 22H & 24E
Test Results	PASS
Remark:	This is GSM radio test report.

Compiled by:	Reviewed by:	Approved by:
Zhou Kui	Arron Liu	Bin Mei / Director

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "*" indicates the testing items were fulfilled by subcontracted lab. "#" indicates the items are not in CNAS accreditation scope.

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(NOTE: N/A MEANS NOT APPLICABLE)

1. VERSION

Report No.	Issue Date	Description	Approved
CTB231031029RFX	Oct. 31, 2023	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

FCC Rules	Description of Test Item	Result
§1.1307,§2.1091	RF Exposure	Compliant
§22.913 (a), §24.232 (c)	RF Output Power	Compliant
§24.51	Peak-to-average Ratio(PAR) of Transmitter	Compliant
§22.917 (b), §24.238 (b)	Emission Bandwidth	Compliant
§22.917 (a), §24.238 (a)	Spurious Emissions at Antenna Terminal	Compliant
§22.917 (a), §24.238 (a)	Spurious Radiation Emissions	Compliant
§22.917 (a), §24.238 (a)	Out of Band Emissions	Compliant
§22.355, §24.235	Frequency Stability	Compliant

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3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Item	Uncertainty
Occupancy bandwidth	54.3kHz
Conducted output power Above 1G	0.9dB
Conducted output power below 1G	0.9dB
Power Spectral Density , Conduction	0.9dB
Conduction spurious emissions	2.0dB
Out of band emission	2.0dB
3m camber Radiated spurious emission(30MHz-1GHz)	4.6dB
3m chamber Radiated spurious emission(1GHz-18GHz)	5.1dB
3m chamber Radiated spurious emission(18GHz-40GHz)	3.4dB
Receiver Reference Sensitivity level	1.9dB
humidity uncertainty	5.5%
Temperature uncertainty	0.63℃
frequency	1×10-7

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model(s):	WP19 Pro
Model Description:	N/A
Hardware Version:	LG985_MB_V4.0
Software Version:	OUKITEL_WP19 Pro_EEA_V03_20231030
Operation Frequency:	GSM/GPRS/EDGE 850: 824~849MHz GSM/GPRS/EDGE 1900: 1850~1910MHz WCDMA Band 2: 1850~1910MHz WCDMA Band 5: 824~849MHz
Max. RF output power:	GSM850: 32.98dBm, GSM1900: 28.95dBm WCDMA Band 2: 23.46dBm, WCDMA Band 5: 23.07dBm
Type of Modulation:	GMSK, BPSK
Antenna installation:	FPC antenna
Antenna Gain:	GSM850: -2.31dBi, GSM1900: -1.06dBi WCDMA Band 2:-2.13dBi WCDMA Band 5: -1.06dBi
Ratings:	DC 5V charging from adapter DC 3.7V from battery

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1	Adapter	JIYIN	JY-05100C	/	/

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Testing Configure			
Support Band	Support Standard	Channel Frequency	Channel Number
GSM 850	GSM/GPRS/EDGE	824.2 MHz	128
		836.6 MHz	190
		848.8 MHz	251
PCS 1900	GSM/GPRS/EDGE	1850.2 MHz	512
		1880.0 MHz	661
		1909.8 MHz	810
WCDMA Band 5	WCDMA/HSDPA/HSUPA	826.4 MHz	4132
		836.6 MHz	4183
		846.6 MHz	4233
WCDMA Band 2	WCDMA/HSDPA/HSUPA	1852.4 MHz	9262
		1880.0 MHz	9400
		1907.6 MHz	9538
Note: the transmitter has been tested on the communications mode of GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA compliance test and record the worst case.			

4.5 Test Mode

Test Mode List		
Test Mode	Description	Remark
TM1	GSM 850	Low, Middle, High Channels
TM2	GPRS 850	Low, Middle, High Channels
TM3	EDGE 850	Low, Middle, High Channels
TM4	GSM 1900	Low, Middle, High Channels
TM5	GPRS 1900	Low, Middle, High Channels
TM6	EDGE 1900	Low, Middle, High Channels
TM7	WCDMA Band 5	Low, Middle, High Channels
TM8	HSDPA Band 5	Low, Middle, High Channels
TM9	HSUPA Band 5	Low, Middle, High Channels
TM10	WCDMA Band 2	Low, Middle, High Channels
TM11	HSDPA Band 2	Low, Middle, High Channels
TM12	HSUPA Band 2	Low, Middle, High Channels

4.6 Test Environment

Humidity(%):	54
Atmospheric Pressure(kPa):	101
Normal Voltage(DC):	3.7
Normal Temperature(℃)	23
Low Temperature(℃)	0
High Temperature(℃)	40

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at 1&2F., Building A, No. 26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

Item	Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	2024.07.05
2	Power Sensor	Agilent	U2021XA	MY56120032	2024.07.05
3	Power Sensor	Agilent	U2021XA	MY56120034	2024.07.05
4	Communication test set	R&S	CMW500	108058	2024.07.05
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	2024.07.05
6	Signal Generator	Agilent	N5181A	MY50140365	2024.07.05
7	Vector signal generator	Agilent	N5182A	MY47420195	2024.07.05
8	Communication test set	Agilent	E5515C	MY50102567	2024.07.06
9	2.4 GHz Filter	Shenxiang	MSF2400-2483.5MS-1154	20181015001	2024.07.05
10	5 GHz Filter	Shenxiang	MSF5150-5850 MS-1155	20181015001	2024.07.06
11	Filter	Xingbo	XBLBQ-DZA120	190821-1-1	2024.07.06
12	BT&WI-FI Automatic test software	Micowave	MTS8000	Ver. 2.0.0.0	/
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	2023.10.30
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	2024.07.05
15	234G Automatic test software	Micowave	MTS8200	Ver. 2.0.0.0	/
16	966 chamber	C.R.T.	966	/	2024.08.11
17	Receiver	R&S	ESPI	100362	2024.07.05
18	Amplifier	HP	8447E	2945A02747	2024.07.05
19	Amplifier	Agilent	8449B	3008A01838	2024.07.05
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	2024.07.08

21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	2024.07.08
22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	2024.07.08
24	loop antenna	ZHINAN	ZN30900A	GTS534	/
25	40G Horn antenna	A/H/System	SAS-574	588	2023.10.30
26	Amplifier	AEROFLEX	Aeroflex	097	2023.10.30

6. RF OUTPUT POWER

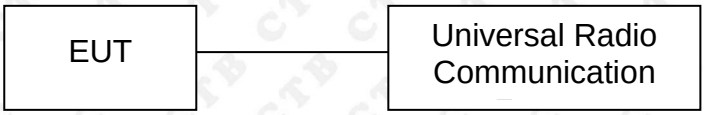
6.1 Standard Applicable

According to §22.913(a)(2),The ERP of mobileand portable stations transmitters and auxiliary test transmitters must not exceed 7 Watts.

According to §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.

6.2 Test Procedure

Conducted output power test method:



Radiated power test method:

1.The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
2.The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the 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.
3.The frequency range up to tenth harmonic of the fundamental frequency was investigated.

4.Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

6.3 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	54%
ATM Pressure:	1010 mbar

6.4 Summary of Test Results/Plots

Max. Radiated Power

ERP For GSM Mode GSM850

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 22H Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
824.2	32.79	1.5	0	H	1.5	-2.31	28.98	38.45
824.2	32.06	1.5	0	V	1.5	-2.31	28.25	38.45
Middle Channel								
836.6	32.26	1.5	0	H	1.5	-2.31	28.45	38.45
836.6	32.08	1.5	0	V	1.5	-2.31	28.27	38.45
High Channel								
848.8	27.97	1.5	0	H	1.5	-2.31	24.16	38.45
848.8	28.72	1.5	0	V	1.5	-2.31	24.91	38.45

EIRP For GSM Mode PCS1900

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 24E Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
1850.2	28.46	1.5	0	H	1.9	-1.06	25.50	33
1850.2	28.38	1.5	0	V	1.9	-1.06	25.42	33
Middle Channel								
1880	27.89	1.5	0	H	1.9	-1.06	24.93	33
1880	28.78	1.5	0	V	1.9	-1.06	25.82	33
High Channel								
1909.8	28.58	1.5	0	H	1.9	-1.06	25.62	33
1909.8	28.05	1.5	0	V	1.9	-1.06	25.09	33

ERP For GPRS Mode GSM850

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 22H Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
824.2	31.81	1.5	0	H	1.5	-2.31	28.00	38.45
824.2	32.09	1.5	0	V	1.5	-2.31	28.28	38.45
Middle Channel								
836.6	32.22	1.5	0	H	1.5	-2.31	28.41	38.45
836.6	32.47	1.5	0	V	1.5	-2.31	28.66	38.45
High Channel								
848.8	32.41	1.5	0	H	1.5	-2.31	28.60	38.45
848.8	32.83	1.5	0	V	1.5	-2.31	29.02	38.45

EIRP For GPRS Mode PCS1900

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 24E Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
1850.2	28.78	1.5	0	H	1.9	-1.06	25.82	33
1850.2	28.35	1.5	0	V	1.9	-1.06	25.39	33
Middle Channel								
1880	28.48	1.5	0	H	1.9	-1.06	25.52	33
1880	27.97	1.5	0	V	1.9	-1.06	25.01	33
High Channel								
1909.8	28.46	1.5	0	H	1.9	-1.06	25.50	33
1909.8	27.89	1.5	0	V	1.9	-1.06	24.93	33

ERP For EDGE Mode GSM850

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 22H Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
824.2	24.00	1.5	0	H	1.5	-2.31	20.19	38.45
824.2	24.65	1.5	0	V	1.5	-2.31	20.84	38.45
Middle Channel								
836.6	24.38	1.5	0	H	1.5	-2.31	20.57	38.45
836.6	24.78	1.5	0	V	1.5	-2.31	20.97	38.45
High Channel								
848.8	25.41	1.5	0	H	1.5	-2.31	21.60	38.45
848.8	24.89	1.5	0	V	1.5	-2.31	21.08	38.45

EIRP For EDGE Mode PCS1900

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 24E Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
1850.2	23.07	1.5	0	H	1.9	-1.06	20.11	33
1850.2	23.56	1.5	0	V	1.9	-1.06	20.60	33
Middle Channel								
1880	23.81	1.5	0	H	1.9	-1.06	20.85	33
1880	24.02	1.5	0	V	1.9	-1.06	21.06	33
High Channel								
1909.8	23.98	1.5	0	H	1.9	-1.06	21.02	33
1909.8	24.79	1.5	0	V	1.9	-1.06	21.83	33

ERP For WCDMA Mode Band 5

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 22H Limit
MHz	dBm	Meter	Degree	H / V	dB	dBd	dBm	dBm
Low Channel								
826.4	22.82	1.5	0	H	1.5	-1.06	20.26	38.45
826.4	22.85	1.5	0	V	1.5	-1.06	20.29	38.45
Middle Channel								
836.6	22.52	1.5	0	H	1.5	-1.06	19.96	38.45
836.6	22.87	1.5	0	V	1.5	-1.06	20.31	38.45
High Channel								
846.6	23.04	1.5	0	H	1.5	-1.06	20.48	38.45
846.6	23.00	1.5	0	V	1.5	-1.06	20.44	38.45

ERP For HSDPA Mode Band 5

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 22H Limit
MHz	dBm	Meter	Degree	H / V	dB	dBd	dBm	dBm
Low Channel								
826.4	20.03	1.5	0	H	1.5	-1.06	17.47	38.45
826.4	20.28	1.5	0	V	1.5	-1.06	17.72	38.45
Middle Channel								
836.6	20.10	1.5	0	H	1.5	-1.06	17.54	38.45
836.6	20.49	1.5	0	V	1.5	-1.06	17.93	38.45
High Channel								
846.6	21.02	1.5	0	H	1.5	-1.06	18.46	38.45
846.6	21.20	1.5	0	V	1.5	-1.06	18.64	38.45

ERP For HSUPA Mode Band 5

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 22H Limit
MHz	dBm	Meter	Degree	H / V	dB	dBd	dBm	dBm
Low Channel								
826.4	19.60	1.5	0	H	1.5	-1.06	17.04	38.45
826.4	19.41	1.5	0	V	1.5	-1.06	16.85	38.45
Middle Channel								
836.6	20.63	1.5	0	H	1.5	-1.06	18.07	38.45
836.6	20.49	1.5	0	V	1.5	-1.06	17.93	38.45
High Channel								
846.6	20.51	1.5	0	H	1.5	-1.06	17.95	38.45
846.6	21.01	1.5	0	V	1.5	-1.06	18.45	38.45

EIRP For WCDMA Mode Band 2

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 24E Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
1852.4	23.82	1.5	0	H	1.9	-2.13	19.79	33
1852.4	23.17	1.5	0	V	1.9	-2.13	19.14	33
Middle Channel								
1880	21.52	1.5	0	H	1.9	-2.13	17.49	33
1880	20.64	1.5	0	V	1.9	-2.13	16.61	33
High Channel								
1907.6	21.26	1.5	0	H	1.9	-2.13	17.23	33
1907.6	20.38	1.5	0	V	1.9	-2.13	16.35	33

EIRP For HSDPA Mode Band 2

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 24E Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
1852.4	20.03	1.5	0	H	1.9	-2.13	16.00	33
1852.4	21.33	1.5	0	V	1.9	-2.13	17.30	33
Middle Channel								
1880	20.50	1.5	0	H	1.9	-2.13	16.47	33
1880	20.56	1.5	0	V	1.9	-2.13	16.53	33
High Channel								
1907.6	20.50	1.5	0	H	1.9	-2.13	16.47	33
1907.6	19.27	1.5	0	V	1.9	-2.13	15.24	33

EIRP For HSUPA Mode Band 2

Frequency	Substitude SG	Height	Table	Polar	Cable loss	Antenna Gain	Result	FCC Part 24E Limit
MHz	dBm	Meter	Degree	H / V	dB	dB	dBm	dBm
Low Channel								
1852.4	20.08	1.5	0	H	1.9	-2.13	16.05	33
1852.4	18.92	1.5	0	V	1.9	-2.13	14.89	33
Middle Channel								
1880	20.85	1.5	0	H	1.9	-2.13	16.82	33
1880	21.00	1.5	0	V	1.9	-2.13	16.97	33
High Channel								
1907.6	18.86	1.5	0	H	1.9	-2.13	14.83	33
1907.6	20.48	1.5	0	V	1.9	-2.13	16.45	33

Note: Result = Substitude - Cable loss + Antenna Gain

Max. Conducted Output Power

For Cellular Band (GSM850)

Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	FCC Part 22.913 Limit (dBm)
GSM	Low Channel	824.2	32.80	38.45
	Middle Channel	836.6	32.89	38.45
	High Channel	848.8	32.96	38.45
GPRS(1 Slot)	Low Channel	824.2	32.80	38.45
	Middle Channel	836.6	32.92	38.45
	High Channel	848.8	32.98	38.45
EDGE(1 Slot)	Low Channel	824.2	24.71	38.45
	Middle Channel	836.6	24.94	38.45
	High Channel	848.8	25.64	38.45

For PCS Band (GSM1900)

Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	FCC Part 24.232 Limit (dBm)
GSM	Low Channel	1850.2	28.93	33.0
	Middle Channel	1880.0	28.88	33.0
	High Channel	1909.8	28.71	33.0
GPRS(1 Slot)	Low Channel	1850.2	28.95	33.0
	Middle Channel	1880.0	28.88	33.0
	High Channel	1909.8	28.72	33.0
EDGE(1 Slot)	Low Channel	1850.2	23.82	33.0
	Middle Channel	1880.0	24.44	33.0
	High Channel	1909.8	24.82	33.0

For WCDMA Band 5

Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	FCC Part 22.913 Limit (dBm)
WCDMA	Low Channel	826.4	23.26	38.45
	Middle Channel	836.6	23.27	38.45
	High Channel	846.6	23.46	38.45
HSDPA	Low Channel	826.4	20.99	38.45
	Middle Channel	836.6	20.98	38.45
	High Channel	846.6	21.23	38.45
HSUPA	Low Channel	826.4	19.95	38.45
	Middle Channel	836.6	20.77	38.45
	High Channel	846.6	21.11	38.45

For WCDMA Band 2

Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	FCC Part 24.232 Limit (dBm)
WCDMA	Low Channel	1852.4	23.07	33.00
	Middle Channel	1880.0	21.25	33.00
	High Channel	1907.6	20.82	33.00
HSDPA	Low Channel	1852.4	20.76	33.00
	Middle Channel	1880.0	20.53	33.00
	High Channel	1907.6	20.12	33.00
HSUPA	Low Channel	1852.4	19.84	33.00
	Middle Channel	1880.0	20.52	33.00
	High Channel	1907.6	19.86	33.00

7. PEAK-TO-AVERAGE RATIO(PAR) OF TRANSMITTER

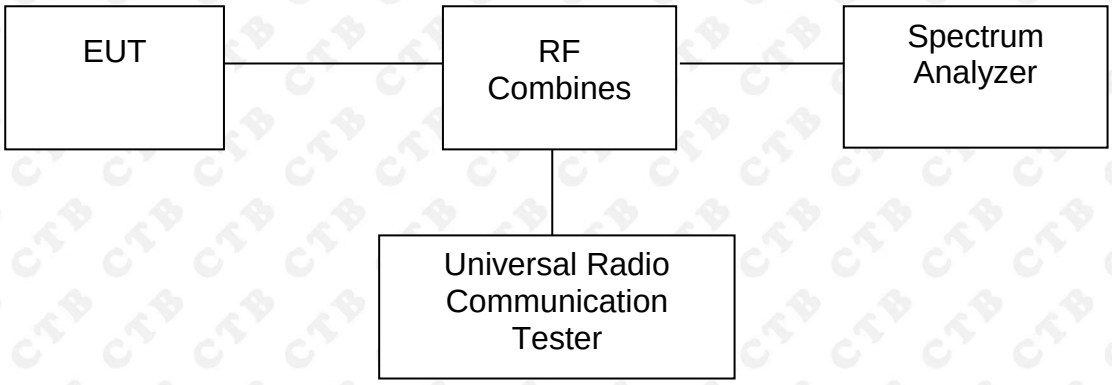
7.1 Standard Applicable

According to §24.232(d), Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

7.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 30kHz and the peak-to-average ratio (PAR) of the transmission was recorded.Record the maximum PAPR level associated with a probability of 0.1%.

Test Configuration for the emission bandwidth testing:



7.3 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	54%
ATM Pressure:	1010 mbar

7.4 Summary of Test Results

Only the worst case was selected to record
For GSM850

Test Mode	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)
GSM	190	836.6	2.65	13
GPRS(1 Slot)	190	836.6	2.65	13
EDGE(1 Slot)	190	836.6	9.30	13

For PCS 1900

Test Mode	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)
GSM	512	1850.2	2.67	13
GPRS(1 Slot)	512	1850.2	2.67	13
EDGE(1 Slot)	512	1850.2	6.63	13

For WCDMA Band 5

Test Mode	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)
WCDMA	4182	836.4	2.98	13
HSDPA	4182	836.4	4.99	13
HSUPA	4182	836.4	4.47	13

For WCDMA Band 2

Test Mode	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)
WCDMA	9262	1852.4	3.21	13
HSDPA	9400	1852.4	4.80	13
HSUPA	9400	1852.4	4.26	13

GSM :


Center Freq 836.600000 MHz
Trig: RF Burst
Counts:1.00 M1.00 Mpt
Radio Std: None
Average Power
24.44 dBm
44.28 % at 0dB
10.0 % 3.99 dB
1.0 % 9.27 dB
0.1 % 9.30 dB
0.01 % 9.32 dB
0.001 % 9.34 dB
0.0001 % 9.34 dB
Peak 9.45 dB
33.89 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 510.00 kHz

WCDMA:


Center Freq 836.400000 MHz
Trig: Free Run
Counts:1.00 M1.00 Mpt
Average Power
20.23 dBm
44.87 % at 0dB
10.0 % 3.03 dB
1.0 % 4.35 dB
0.1 % 4.99 dB
0.01 % 5.50 dB
0.001 % 5.93 dB
0.0001 % 6.40 dB
Peak 6.52 dB
26.75 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 5.0000 MHz

8. EMISSION BANDWIDTH

8.1 Standard Applicable

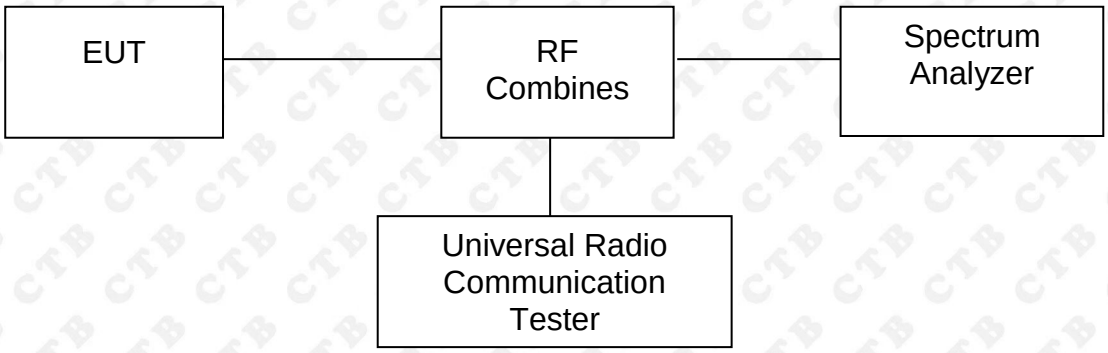
According to §22.917(b),The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

According to §24.238(b), The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

8.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 10kHz for GSM mode and 100kHz for WCDMA mode, VBW shall be at least 3 times the RBW, and the 26dB bandwidth was recorded.

Test Configuration for the emission bandwidth testing:



8.3 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	54%
ATM Pressure:	1010 mbar

8.4 Summary of Test Results/Plots

For Cellular Band

Test Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM	128	824.2	243.044	314.466
	190	836.6	249.135	317.366
	251	848.8	245.507	316.738
GPRS	128	824.2	243.627	309.845
	190	836.6	244.331	318.253
	251	848.8	241.775	320.339
EDGE	128	824.2	238.525	306.519
	190	836.6	246.763	310.270
	251	848.8	244.644	312.761

For PCS Band

Test Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM	512	1850.2	250.249	310.265
	661	1880.0	248.253	308.116
	810	1909.8	241.510	316.075
GPRS	512	1850.2	240.778	312.496
	661	1880.0	249.574	314.033
	810	1909.8	239.605	316.538
EDGE	512	1850.2	241.783	294.611
	661	1880.0	239.582	304.182
	810	1909.8	243.870	291.287

For Band 5

Test Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
WCDMA	4132	826.4	4148.996	4682.712
	4183	836.6	4160.031	4692.132
	4233	846.6	4161.837	4669.455
HSDPA	4132	826.4	4178.921	4701.424
	4183	836.6	4149.982	4698.088
	4233	846.6	4162.818	4686.412
HSUPA	4132	826.4	4168.196	4714.345
	4183	836.6	4139.563	4701.391
	4233	846.6	4153.096	4681.793

For Band 2

Test Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
WCDMA	9262	1852.4	4178.995	4680.814
	9400	1880.0	4171.795	4680.097
	9538	1907.6	4167.499	4694.032
HSDPA	9262	1852.4	4180.494	4678.865
	9400	1880.0	4170.145	4686.852
	9538	1907.6	4183.489	4700.089
HSUPA	9262	1852.4	4184.430	4681.745
	9400	1880.0	4180.836	4699.668
	9538	1907.6	4168.727	4708.549

For Cellular Band

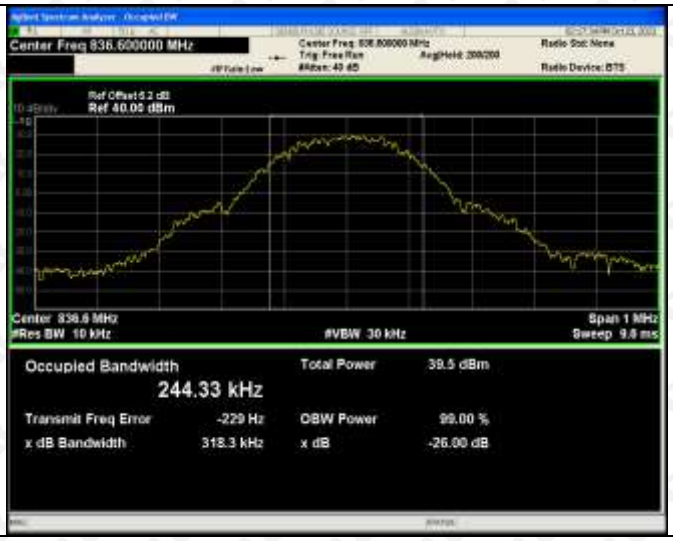
GSM Low Channel

GSM Middle Channel

GSM High Channel

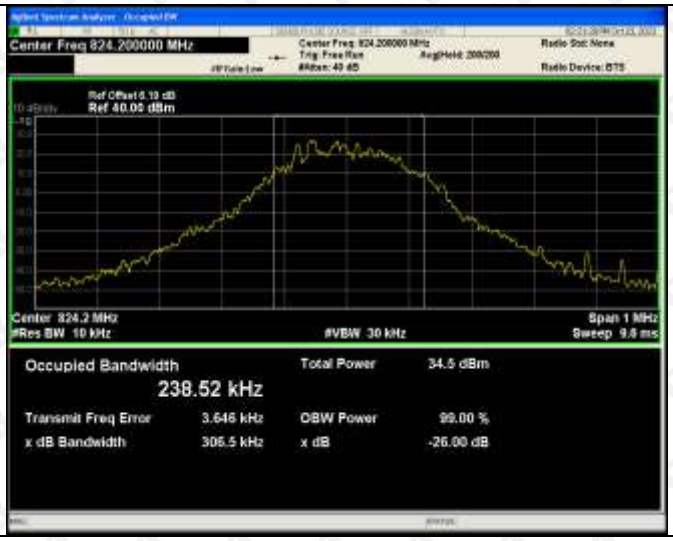

GPRS Low Channel

GPRS Middle Channel

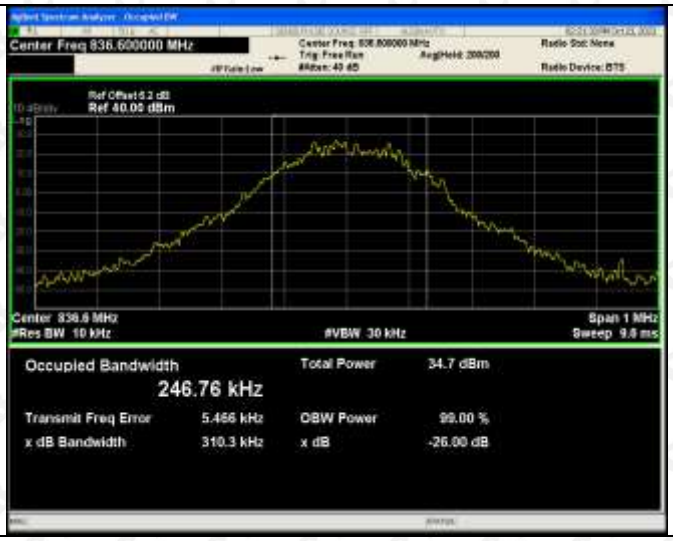


GPRS High Channel

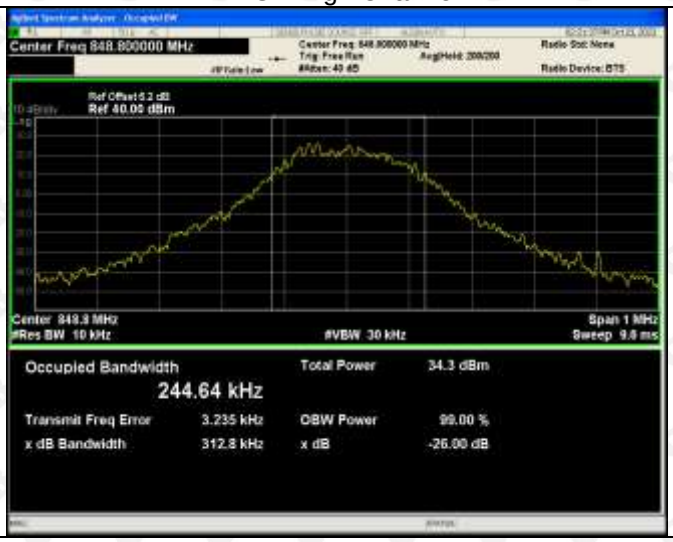
EDGE Low Channel



EDGE Middle Channel



EDGE High Channel

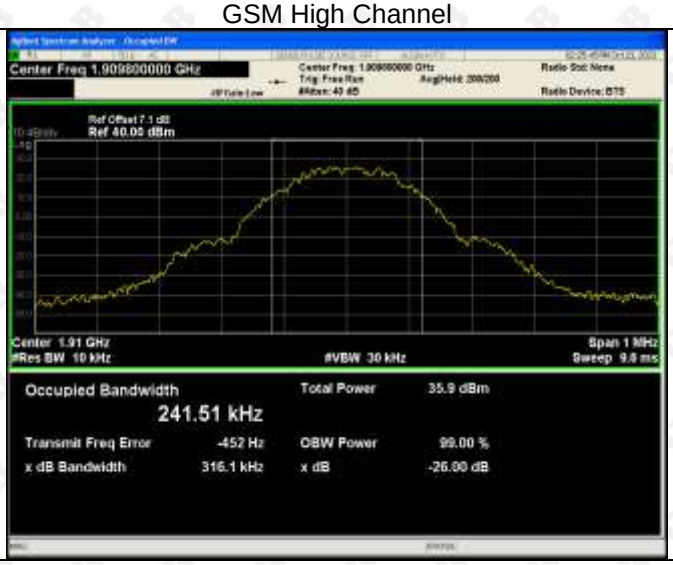


For PCS Band

GSM Low Channel

GSM Middle Channel

GSM High Channel



GPRS Low Channel

GPRS Middle Channel

GPRS High Channel

EDGE Low Channel

EDGE Middle Channel

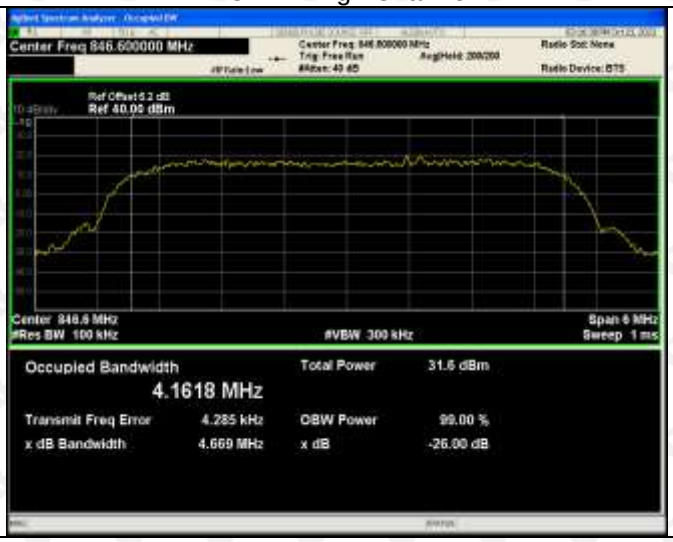
EDGE High Channel

For Band V

WCDMA Low Channel

WCDMA Middle Channel

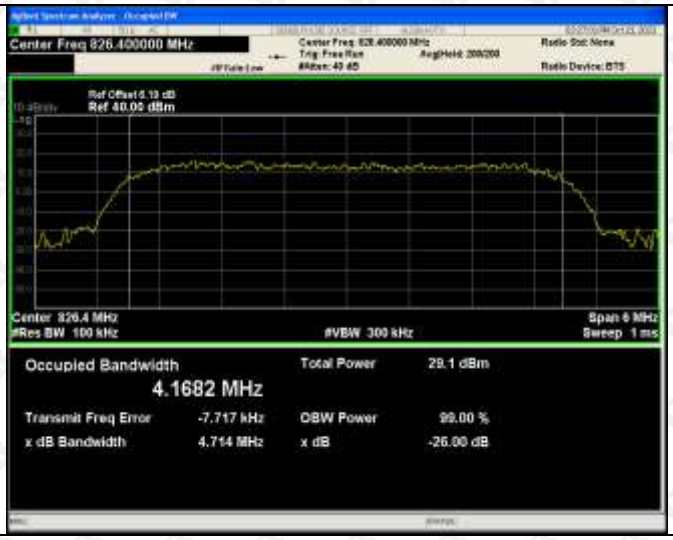
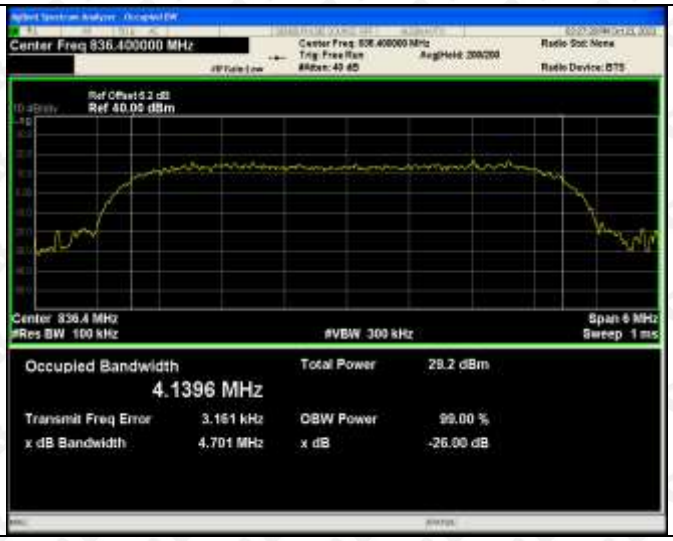
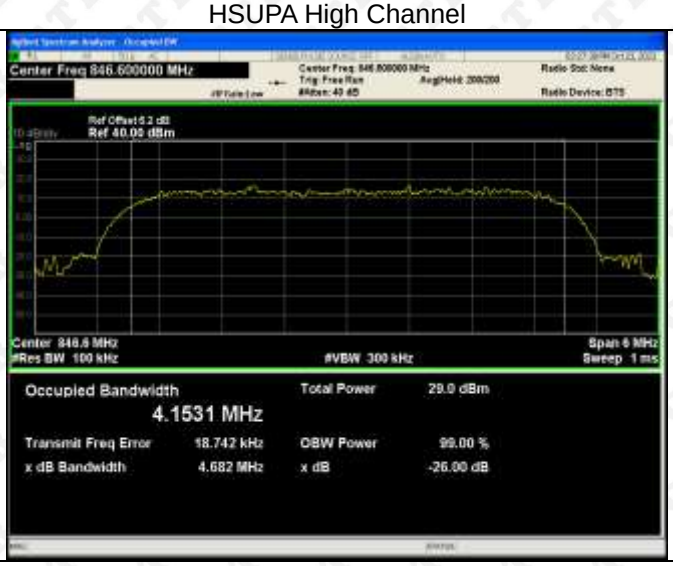
WCDMA High Channel



HSDPA Low Channel

HSDPA Middle Channel

HSDPA High Channel


HSUPA Low Channel

HSUPA Middle Channel

HSUPA High Channel


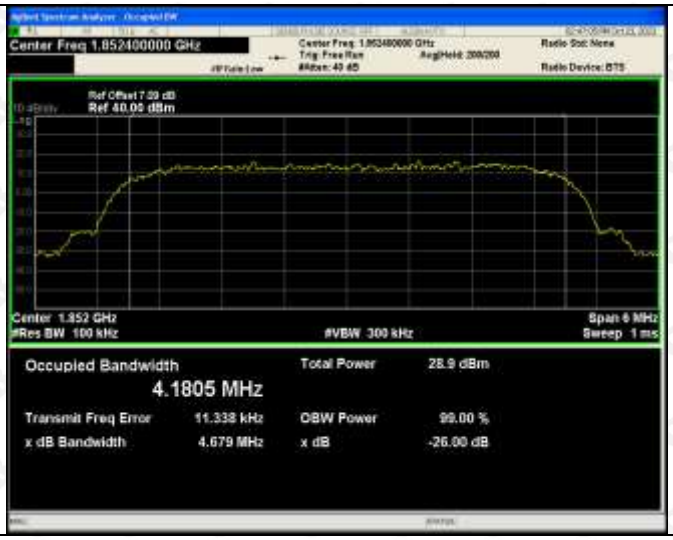
For Band II

WCDMA Low Channel

WCDMA Middle Channel

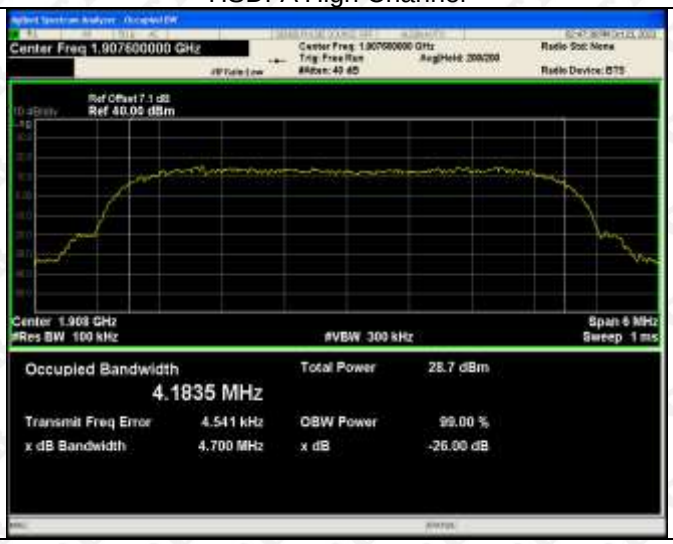
WCDMA High Channel

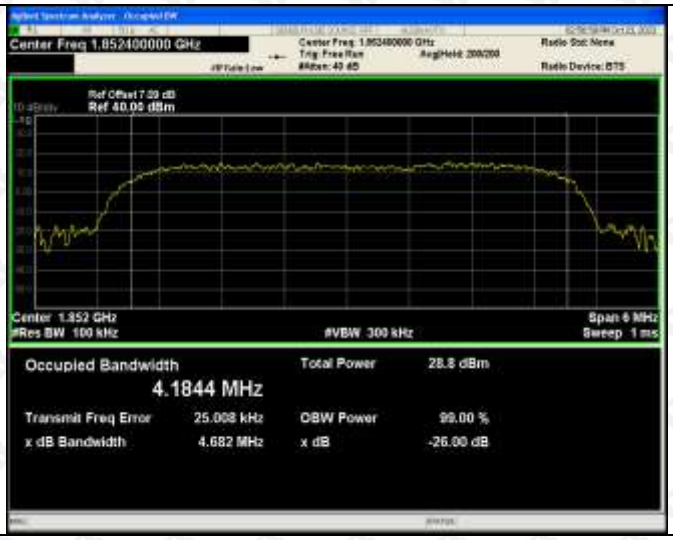

HSDPA Low Channel

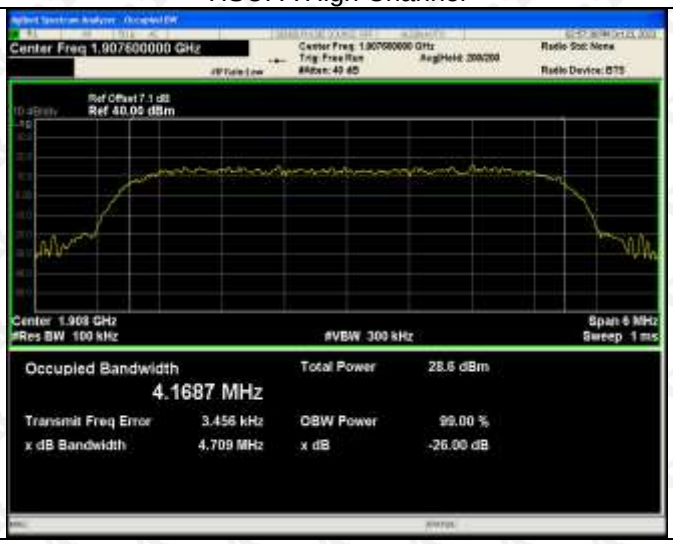


HSDPA Middle Channel

HSDPA High Channel



HSUPA Low Channel

HSUPA Middle Channel

HSUPA High Channel


9. OUT OF BAND EMISSIONS AT ANTENNA TERMINAL

9.1 Standard Applicable

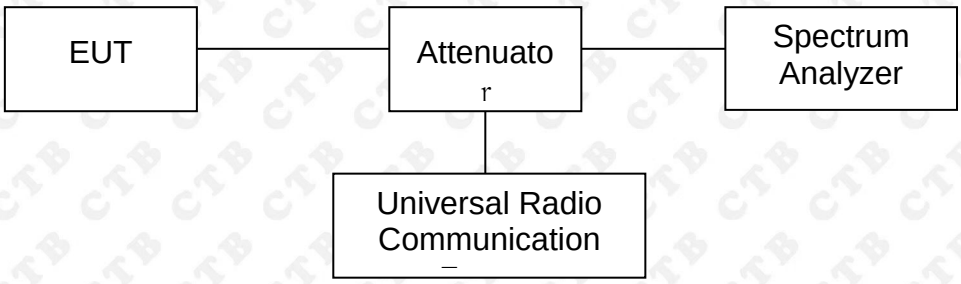
According to §22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

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.

9.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 100kHz and 1MHz for the scan frequency from 30MHz to 1GHz and the scan frequency from 1GHz to up to 10th harmonic.

Test Configuration for the out of band emissions testing:



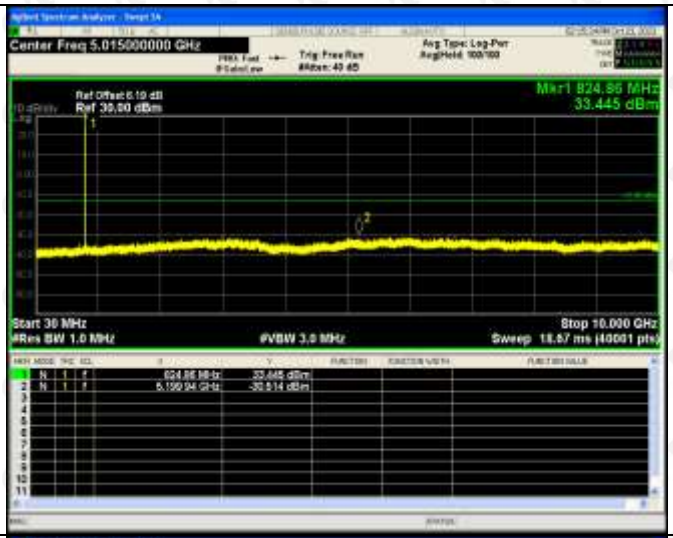
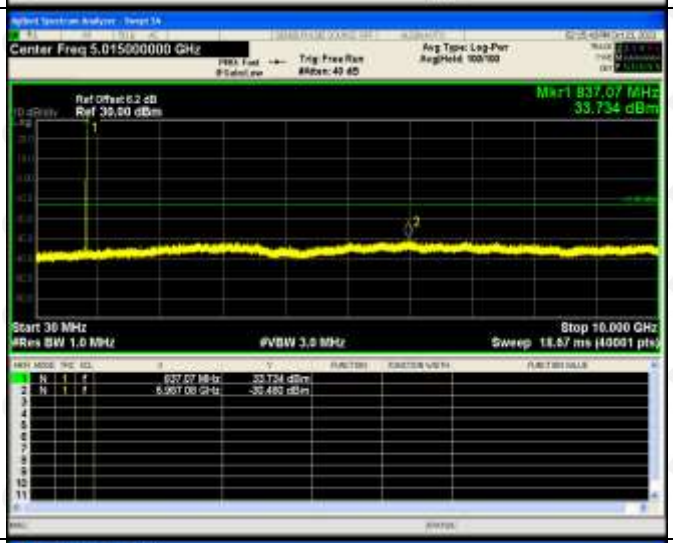
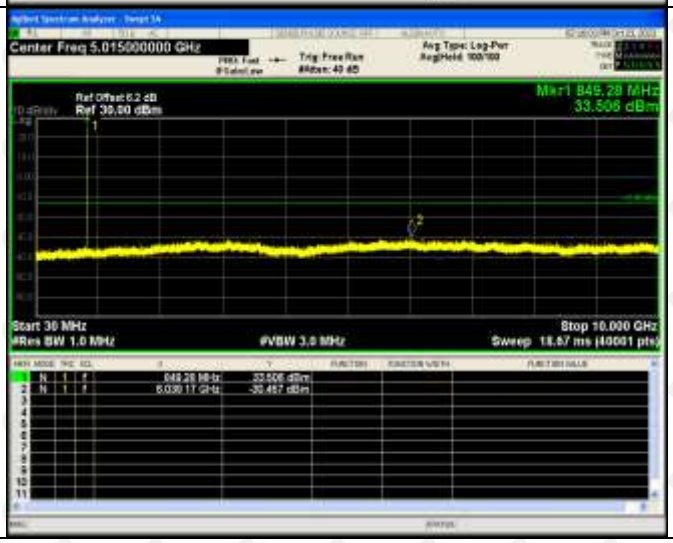
9.3 Environmental Conditions

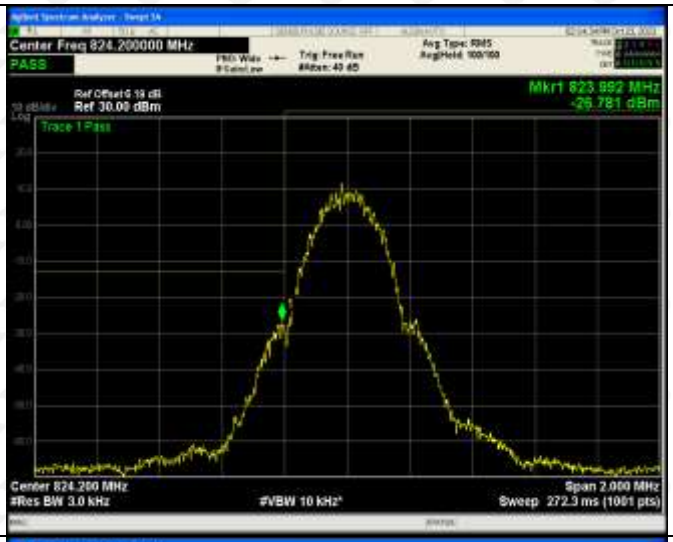
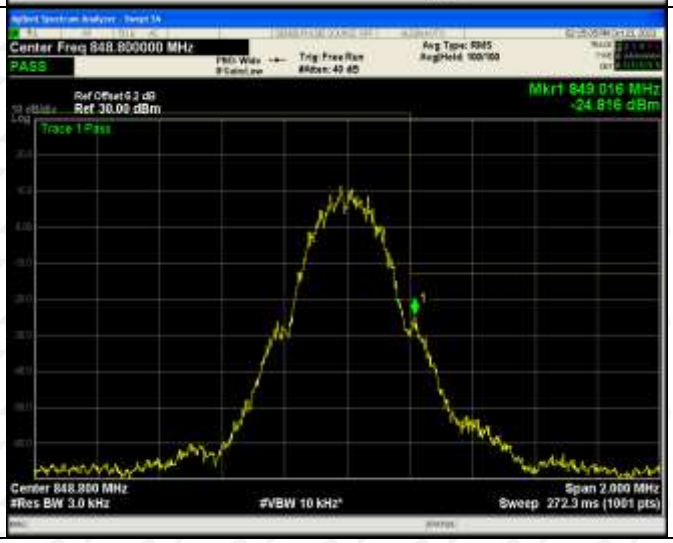
Temperature:	23 °C
Relative Humidity:	54%
ATM Pressure:	1010 mbar

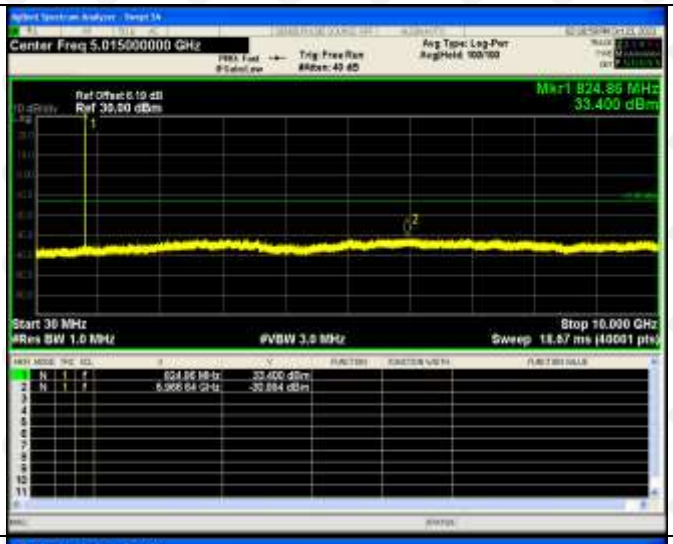
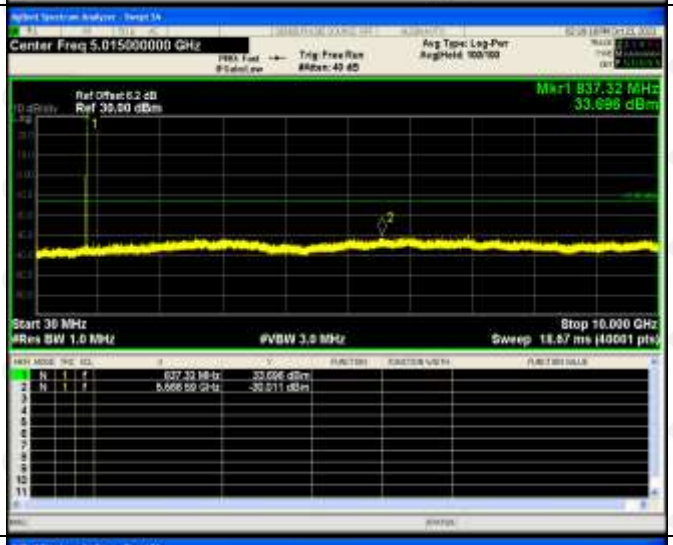
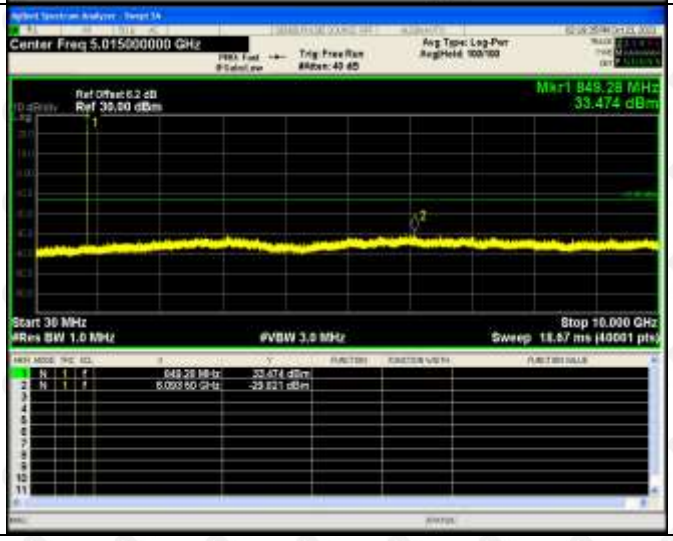
9.4 Summary of Test Results/Plots

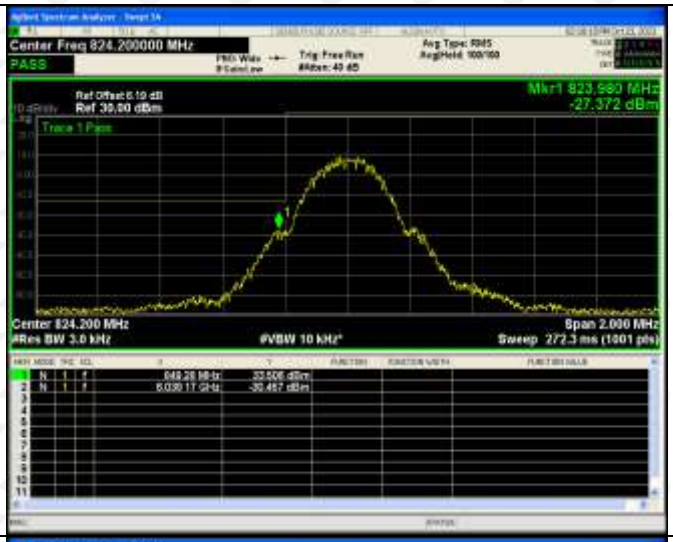
Please refer to the following test plots

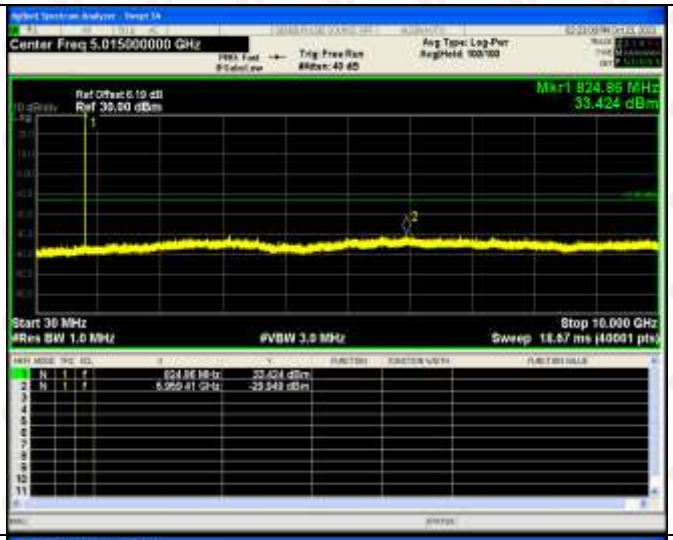
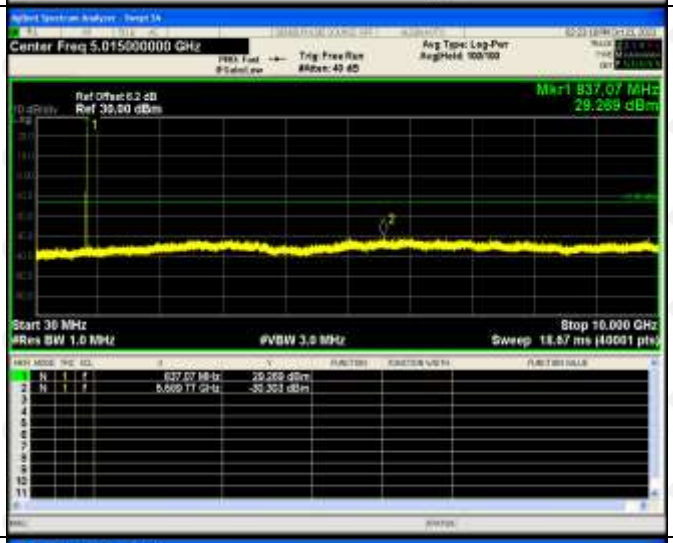
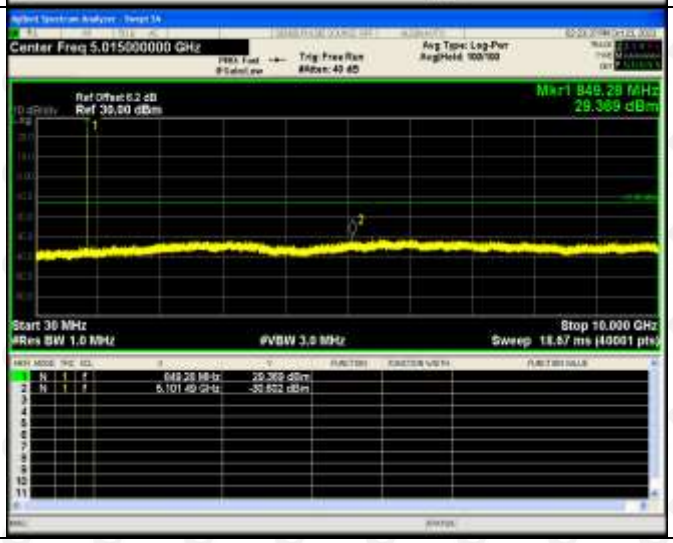
For Cellular Band

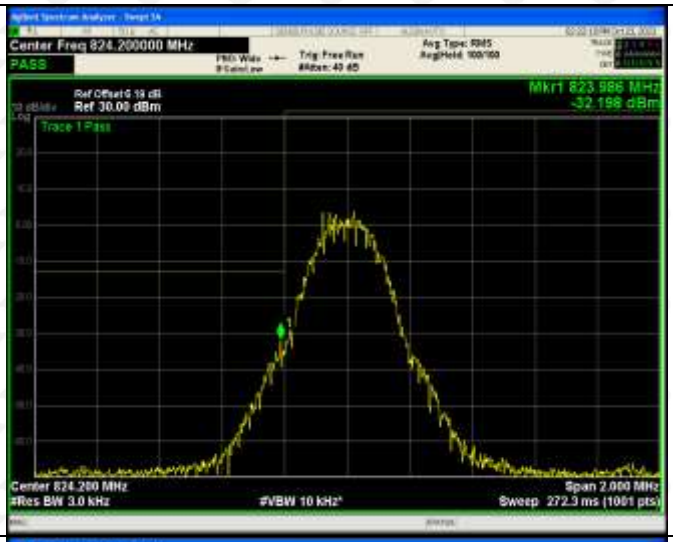
GSM Low Channel			
GSM Middle Channel			
GSM High Channel			

GSM Low Band Emission			
GSM High Band Emission			

GPRS Low Channel			
GPRS Middle Channel			
GPRS High Channel			

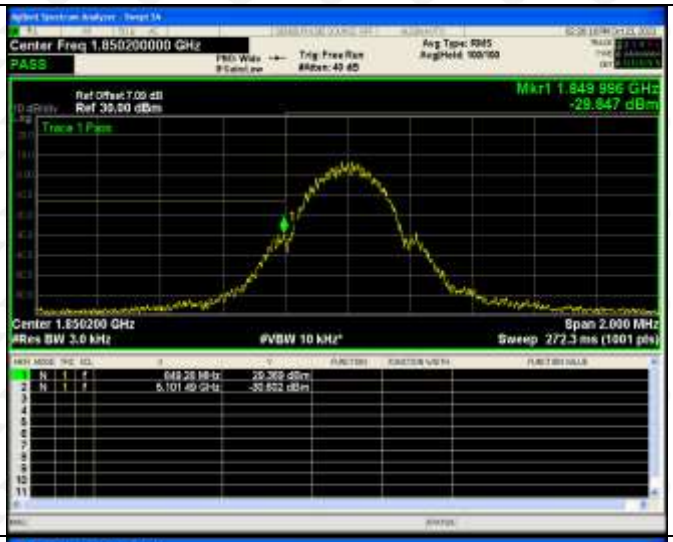
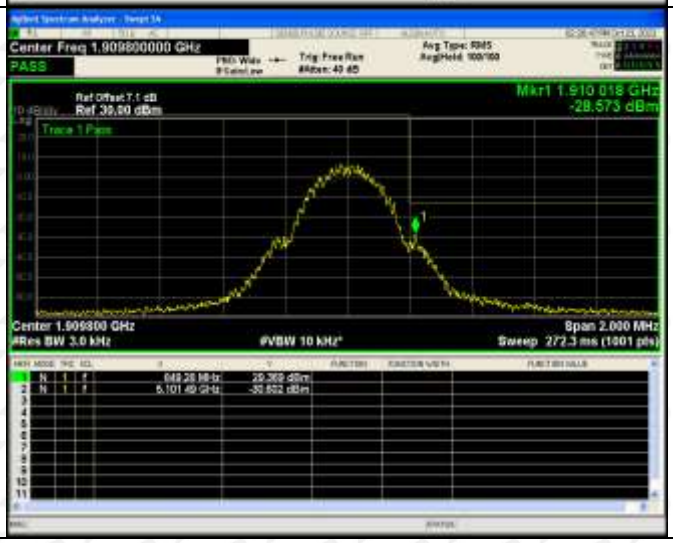
GPRS Low Band Emission			
GPRS High Band Emission			

EDGE Low Channel			
EDGE Middle Channel			
EDGE High Channel			

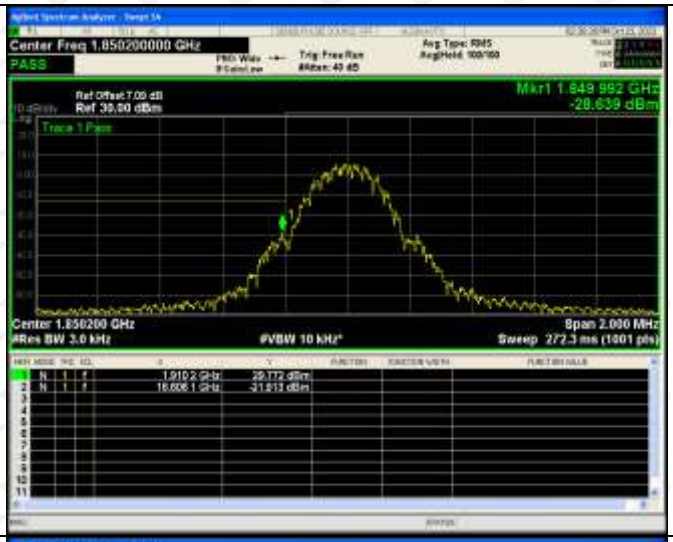
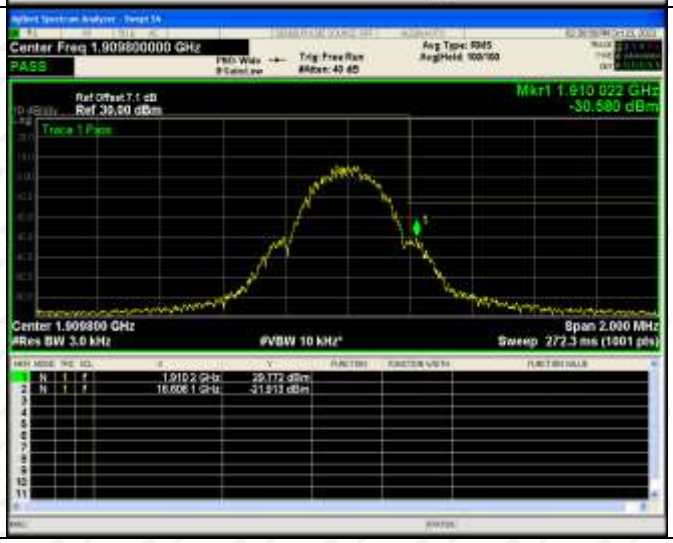
EDGE Low Band Emission			
EDGE High Band Emission			

For PCS Band

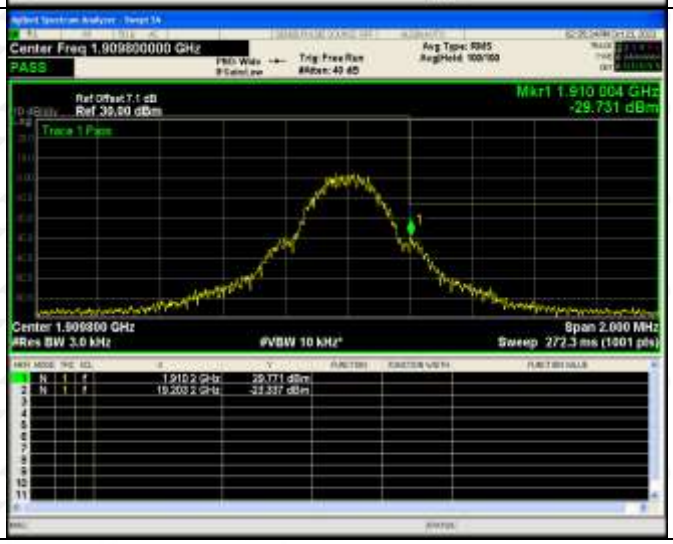
GSM Low Channel			
GSM Middle Channel			
GSM High Channel			

GSM Low Band Emission			
GSM High Band Emission			

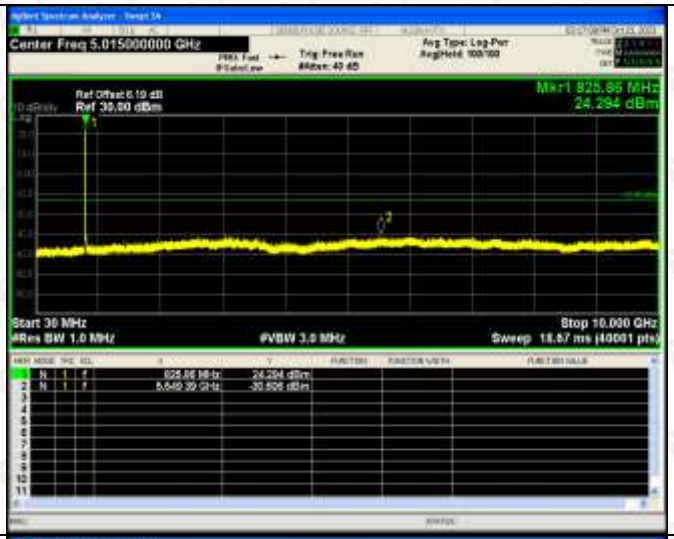
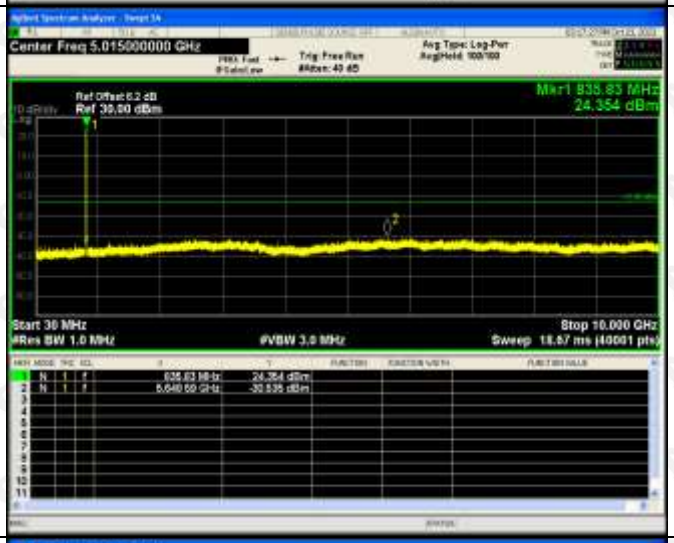
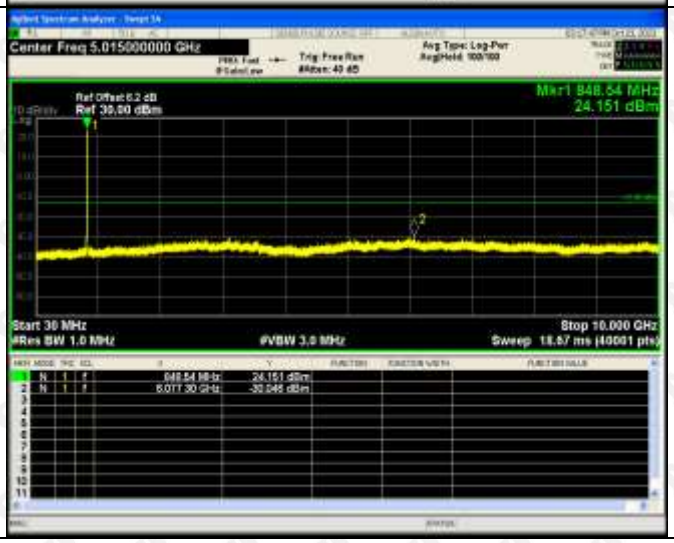
GPRS Low Channel			
GPRS Middle Channel			
GPRS High Channel			

GPRS Low Band Emission			
GPRS High Band Emission			

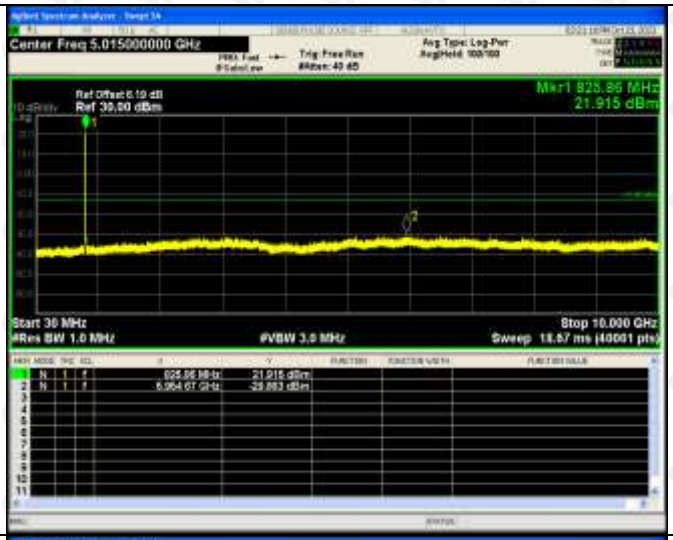
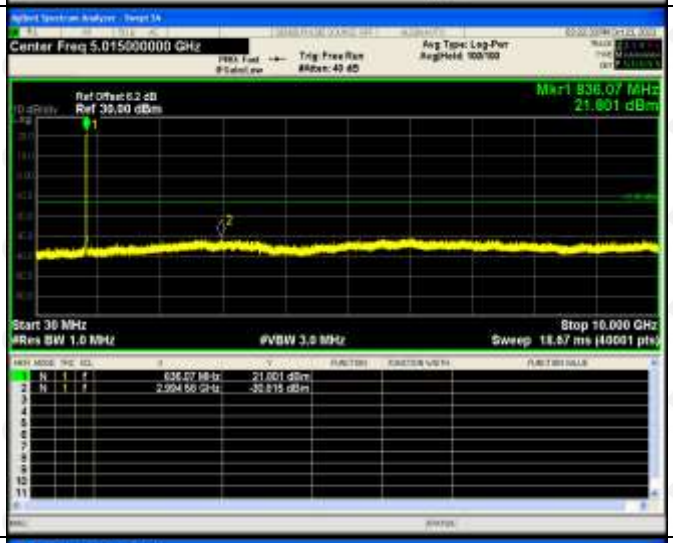
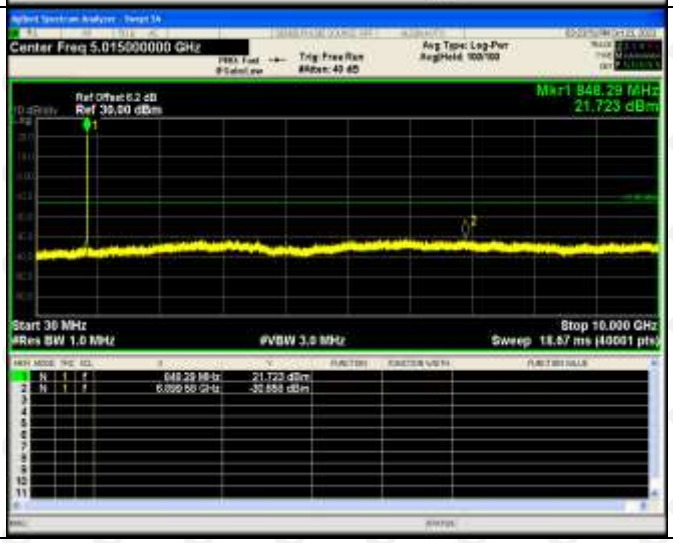
EDGE Low Channel			
EDGE Middle Channel			
EDGE High Channel			

EDGE Low Band Emission			
EDGE High Band Emission			

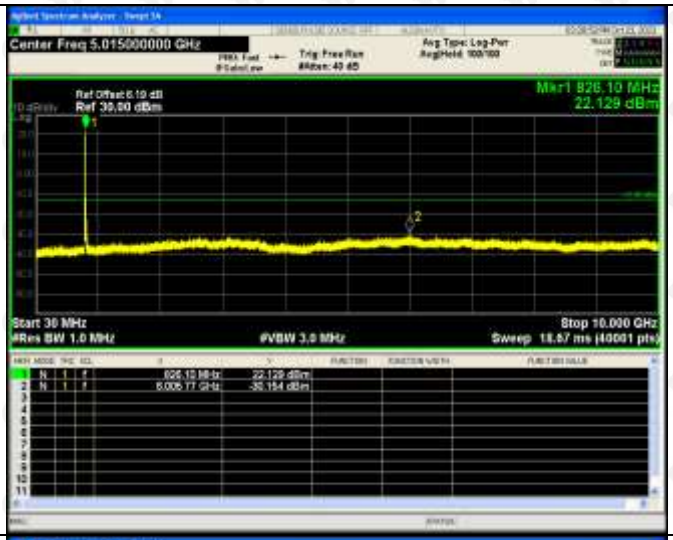
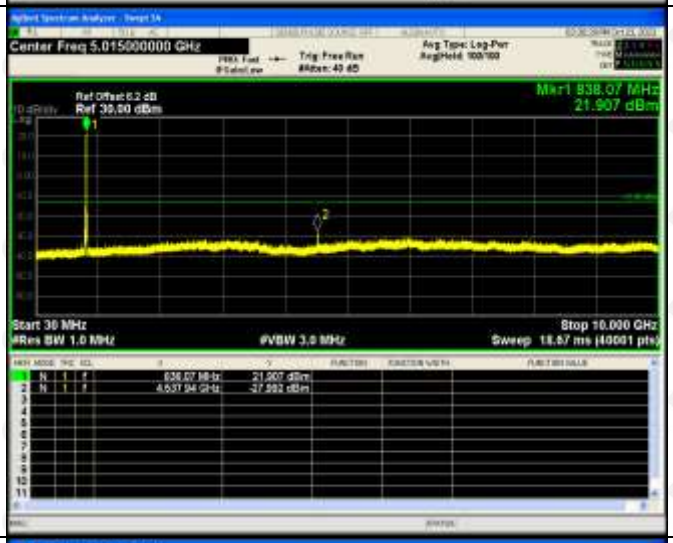
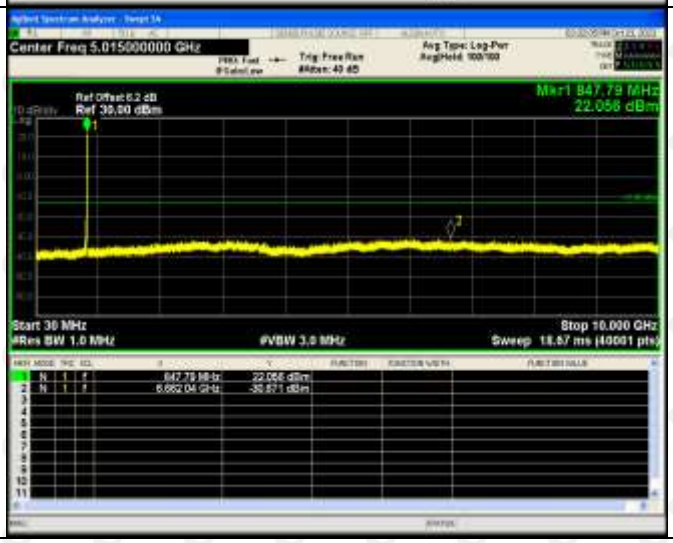
For Band V

WCDMA Low Channel			
WCDMA Middle Channel			
WCDMA High Channel			

WCDMA Low Band Spurious Emission			
WCDMA High Band Spurious Emission			

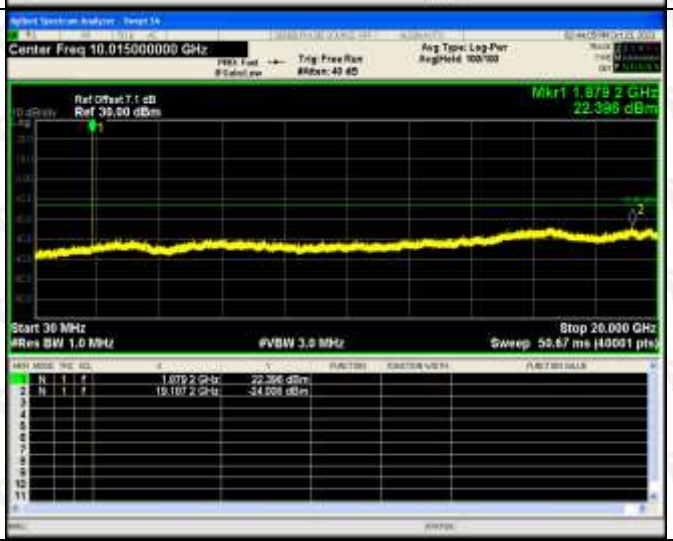
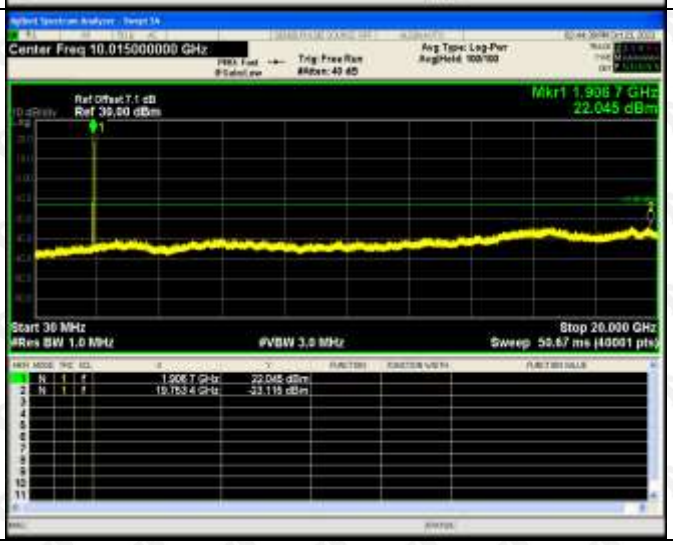
HSDPA Low Channel			
HSDPA Middle Channel			
HSDPA High Channel			

HSDPA Low Band Spurious Emission		
HSDPA High Band Spurious Emission		

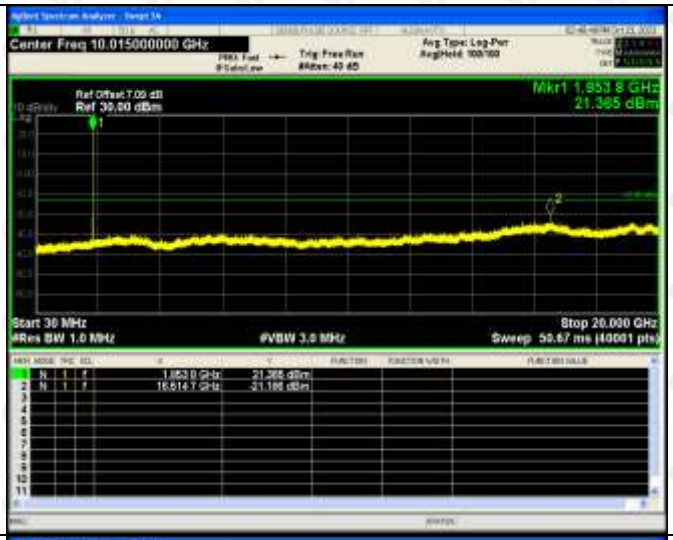
HSUPA Low Channel			
HSUPA Middle Channel			
HSUPA High Channel			

HSUPA Low Band Spurious Emission			
HSUPA High Band Spurious Emission			

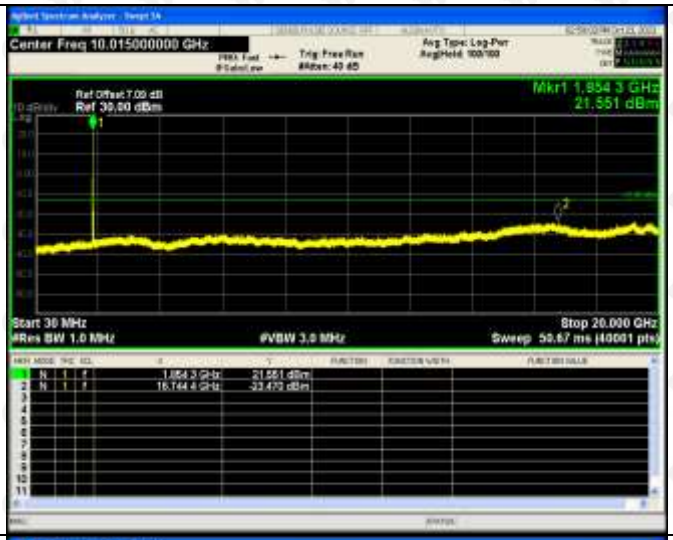
For Band II

WCDMA Low Channel			
WCDMA Middle Channel			
WCDMA High Channel			

WCDMA Low Band Spurious Emission			
WCDMA High Band Spurious Emission			

HSDPA Low Channel			
HSDPA Middle Channel			
HSDPA High Channel			

HSDPA Low Band Spurious Emission			
HSDPA High Band Spurious Emission			

HSUPA Low Channel			
HSUPA Middle Channel			
HSUPA High Channel			

HSUPA Low Band Spurious Emission			
HSUPA High Band Spurious Emission			

10. SPURIOUS RADIATED EMISSIONS

10.1 Standard Applicable

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.

10.2 Test Procedure

1. The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the 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.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious attenuation limit in dB =43+10 Log_{10} (power out in Watts)

10.3 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	54%
ATM Pressure:	101 kPa
Test Voltage	DC6.4V

10.4 Summary of Test Results/Plots

According to the data below, the FCC Part22.917 and 24.238 standards, and had the worst margin of:

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

All test modes are performed, but only the worst case is recorded in this report.

For Cellular Band_GSM850 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (824.2MHz)						
45.44	-69.01	3.9	-65.11	-13	-52.11	H
1642.83	-54.01	4.83	-49.18	-13	-36.18	H
2469.59	-53.54	8.08	-45.46	-13	-32.46	H
41.43	-70.05	4.02	-66.03	-13	-53.03	V
1643.80	-53.00	4.48	-48.52	-13	-35.52	V
2465.01	-48.48	8.2	-40.28	-13	-27.28	V
Middle Channel (836.6MHz)						
39.97	-74.90	3.84	-71.06	-13	-58.06	H
1666.48	-55.74	4.62	-51.12	-13	-38.12	H
2508.22	-57.06	8.25	-48.81	-13	-35.81	H
46.29	-66.48	4.25	-62.23	-13	-49.23	V
1663.82	-55.11	4.54	-50.57	-13	-37.57	V
2503.68	-48.07	8.35	-39.72	-13	-29.75	V
High Channel (848.8MHz)						
44.33	-74.39	4.22	-78.61	-13	-65.61	H
1696.67	-59.29	4.87	-64.16	-13	-51.16	H
2540.40	-57.43	8.38	-65.81	-13	-52.81	H
37.89	-66.35	4.02	-70.37	-13	-57.37	V
1690.92	-46.93	4.56	-51.49	-13	-38.49	V
2543.28	-50.00	8.41	-58.41	-13	-45.41	V

For PCS Band_GSM1900 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1850.2MHz)						
38.47	-70.98	4.34	-66.64	-13	-53.64	H
3692.88	-59.35	10.54	-48.81	-13	-35.81	H
5546.22	-61.78	13.37	-48.41	-13	-35.41	H
40.64	-74.46	4.34	-70.12	-13	-57.12	V
3697.23	-52.34	10.54	-41.80	-13	-28.80	V
5545.07	-57.31	13.37	-43.94	-13	-30.94	V
Middle Channel (1880MHz)						
38.95	-71.64	4.02	-67.62	-13	-54.62	H
3759.63	-52.14	10.71	-41.43	-13	-28.43	H
5636.15	-53.70	13.73	-39.97	-13	-26.97	H
42.25	-65.02	4.14	-60.88	-13	-47.88	V
3755.10	-49.38	10.22	-39.16	-13	-26.16	V
5632.24	-53.15	13.16	-39.99	-13	-26.99	V
High Channel (1909.8MHz)						
45.44	-72.11	4.02	-68.09	-13	-55.09	H
3810.93	-63.52	4.9	-58.62	-13	-45.62	H
5725.84	-49.84	8.09	-41.75	-13	-28.75	H
39.03	-62.99	4.25	-58.74	-13	-45.74	V
3819.08	-64.32	4.93	-59.39	-13	-46.39	V
5724.91	-56.25	8.43	-47.82	-13	-34.82	V

For Band 5 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (826.4MHz)						
36.38	-72.48	3.91	-68.57	-13	-55.57	H
1647.15	-58.84	10.56	-48.28	-13	-35.28	H
2470.43	-56.48	13.5	-42.98	-13	-29.98	H
43.22	-68.40	3.93	-64.47	-13	-51.47	V
1645.23	-51.73	10.41	-41.32	-13	-28.32	V
2470.52	-53.68	13.16	-40.52	-13	-27.52	V
Middle Channel (836.6MHz)						
39.90	-72.89	4.02	-68.87	-13	-55.87	H
1662.81	-61.83	4.66	-57.17	-13	-44.17	H
2507.55	-48.09	8.34	-39.75	-13	-26.75	H
41.72	-54.62	4.17	-50.45	-13	-37.45	V
1665.27	-56.80	4.94	-51.86	-13	-38.86	V
2502.73	-56.51	8.19	-48.32	-13	-35.32	V
High Channel (846.6MHz)						
41.57	-67.74	3.87	-63.87	-13	-50.87	H
1691.50	-57.26	4.89	-52.37	-13	-39.37	H
2538.80	-42.86	8.42	-34.44	-13	-21.44	H
46.33	-63.68	3.95	-59.73	-13	-46.73	V
1683.74	-56.00	4.99	-51.01	-13	-38.01	V
2539.73	-65.34	8.12	-57.22	-13	-44.22	V

For Band 2 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1852.4MHz)						
44.78	-75.40	3.91	-71.49	-13	-58.49	H
1648.72	-57.94	10.56	-47.38	-13	-34.38	H
2474.73	-53.53	13.5	-40.03	-13	-27.03	H
38.07	-72.95	3.93	-69.02	-13	-56.02	V
1647.49	-58.58	10.41	-48.17	-13	-35.17	V
2472.20	-57.27	13.16	-44.11	-13	-31.11	V
Middle Channel (1880MHz)						
46.27	-70.95	4.02	-66.93	-13	-53.93	H
1664.28	-59.37	4.66	-54.71	-13	-41.71	H
2501.64	-43.43	8.34	-35.09	-13	-22.09	H
45.24	-56.35	4.17	-52.18	-13	-39.18	V
1672.13	-60.23	4.94	-55.29	-13	-42.29	V
2501.26	-62.66	8.19	-54.47	-13	-41.47	V
High Channel (1907.6MHz)						
38.46	-66.05	3.87	-62.18	-13	-49.18	H
1691.47	-62.82	4.89	-57.93	-13	-44.93	H
2532.61	-47.43	8.42	-39.01	-13	-26.01	H
37.33	-61.35	3.95	-57.40	-13	-44.40	V
1688.07	-59.28	4.99	-54.29	-13	-41.29	V
2532.48	-60.11	8.12	-51.99	-13	-38.99	V

Note: Result=Reading+ Correct, Margin= Result- Limit
Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listedin the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

11. FREQUENCY STABILITY

11.1 Standard Applicable

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 Cellular Band

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 emission stays within the authorized frequency block.

According to §27.54 The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

11.2 Test Procedure

According to §2.1055, the following test procedure was performed.
The Frequency Stability is measured directly with a Frequency Domain Analyzer. Frequency Deviation in ppm is calculated from the measured peak to peak value.
The Carrier Frequency Stability over Power Supply Voltage and over Temperature is measured with a Frequency Domain Analyzer in histogram mode

11.3 Environmental Conditions

Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	101kPa

11.4 Summary of Test Results/Plots

For Cellular Band GSM Mode

Reference Frequency(Middle Channel): 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	8.35	0.00998
40	NV	9.34	0.01117
30	NV	9.07	0.01084
20	NV	9.49	0.01134
10	NV	9.97	0.01191
0	NV	10.11	0.01209
-10	NV	10.54	0.01260
-20	NV	10.94	0.01307
-30	NV	11.31	0.01352

For PCS Band GSM Mode

Reference Frequency(Middle Channel): 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	12.23	0.00651
40	NV	12.36	0.00658
30	NV	12.58	0.00669
20	NV	12.33	0.00656
10	NV	13.67	0.00727
0	NV	13.32	0.00709
-10	NV	13.82	0.00735
-20	NV	14.51	0.00772
-30	NV	13.99	0.00744

For Cellular Band GPRS Mode

Reference Frequency(Middle Channel): 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	8.31	0.00993
40	NV	9.45	0.01129
30	NV	9.66	0.01154
20	NV	9.68	0.01157
10	NV	10.46	0.01251
0	NV	10.73	0.01282
-10	NV	10.58	0.01265
-20	NV	10.42	0.01246
-30	NV	10.99	0.01313

For PCS Band GPRS Mode

Reference Frequency(Middle Channel): 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	12.73	0.00677
40	NV	13.05	0.00694
30	NV	12.31	0.00655
20	NV	13.25	0.00705
10	NV	13.61	0.00724
0	NV	13.79	0.00733
-10	NV	13.75	0.00731
-20	NV	13.71	0.00729
-30	NV	14.30	0.00761

For Cellular Band EDGE Mode

Reference Frequency(Middle Channel): 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	10.60	0.01267
40	NV	11.51	0.01376
30	NV	11.50	0.01374
20	NV	11.71	0.01400
10	NV	11.77	0.01407
0	NV	12.23	0.01462
-10	NV	12.42	0.01484
-20	NV	12.30	0.01470
-30	NV	12.51	0.01495

For PCS Band EDGE Mode

Reference Frequency(Middle Channel): 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	-10.11	-0.00538
40	NV	-9.50	-0.00505
30	NV	-10.08	-0.00536
20	NV	-9.46	-0.00503
10	NV	-8.76	-0.00466
0	NV	-8.46	-0.00450
-10	NV	-8.90	-0.00474
-20	NV	-8.60	-0.00458
-30	NV	-7.94	-0.00422

For WCDMA Band 5 Mode

Reference Frequency(Middle Channel): 836.6 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	0.13	0.00015
40	NV	0.52	0.00063
30	NV	0.79	0.00094
20	NV	0.68	0.00081
10	NV	0.70	0.00084
0	NV	0.73	0.00087
-10	NV	1.03	0.00124
-20	NV	1.03	0.00123
-30	NV	1.13	0.00135

For WCDMA Band 2 Mode

Reference Frequency(Middle Channel): 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	0.18	0.00009
40	NV	-0.48	-0.00025
30	NV	0.07	0.00004
20	NV	0.42	0.00022
10	NV	1.14	0.00061
0	NV	1.07	0.00057
-10	NV	1.31	0.00070
-20	NV	1.43	0.00076
-30	NV	1.70	0.00091

For HSDPA Band 5 Mode

Reference Frequency(Middle Channel): 836.6 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	-0.17	-0.00020
40	NV	0.09	0.00011
30	NV	0.57	0.00068
20	NV	0.32	0.00038
10	NV	1.17	0.00139
0	NV	0.95	0.00114
-10	NV	1.00	0.00120
-20	NV	1.77	0.00212
-30	NV	1.24	0.00148

For HSDPA Band 2 Mode

Reference Frequency(Middle Channel): 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	5.31	0.00283
40	NV	4.58	0.00244
30	NV	5.45	0.00290
20	NV	5.65	0.00301
10	NV	5.78	0.00308
0	NV	6.67	0.00355
-10	NV	6.27	0.00333
-20	NV	7.01	0.00373
-30	NV	6.55	0.00349

For HSUPA Band 5 Mode

Reference Frequency(Middle Channel): 836.6 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	0.10	0.00012
40	NV	0.82	0.00098
30	NV	0.48	0.00057
20	NV	1.24	0.00148
10	NV	1.33	0.00159
0	NV	1.14	0.00136
-10	NV	1.52	0.00182
-20	NV	2.30	0.00274
-30	NV	2.79	0.00334

For HSUPA Band 2 Mode

Reference Frequency(Middle Channel): 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	NV	6.32	0.00336
40	NV	7.09	0.00377
30	NV	7.16	0.00381
20	NV	7.24	0.00385
10	NV	8.03	0.00427
0	NV	8.42	0.00448
-10	NV	7.94	0.00422
-20	NV	8.44	0.00449
-30	NV	8.96	0.00477

So, Frequency Stability Versus Input Voltage is:

Reference Frequency(Middle Channel): GSM 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	10.68	0.01276
	NV	11.68	0.01396
	HV	11.50	0.01375
Reference Frequency(Middle Channel): GSM 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	14.45	0.00769
	NV	14.99	0.00797
	HV	14.85	0.00790

Reference Frequency(Middle Channel): GPRS 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	11.30	0.00601
	NV	11.48	0.00611
	HV	11.33	0.00603
Reference Frequency(Middle Channel): GPRS 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	14.78	0.00786
	NV	14.35	0.00763
	HV	14.38	0.00765

Reference Frequency(Middle Channel): EDGE 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	12.41	0.01483
	NV	13.20	0.01577
	HV	13.72	0.01640
Reference Frequency(Middle Channel): EDGE 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	-7.89	-0.00419
	NV	-7.42	-0.00395
	HV	-7.42	-0.00395
Reference Frequency(Middle Channel): WCDMA 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	0.92	0.00110
	NV	1.05	0.00126
	HV	1.71	0.00205
Reference Frequency(Middle Channel): WCDMA 1732.4MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	0.82	0.00047
	NV	0.57	0.00033
	HV	1.30	0.00075
Reference Frequency(Middle Channel): WCDMA 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	2.23	0.00119
	NV	2.68	0.00143
	HV	2.85	0.00151

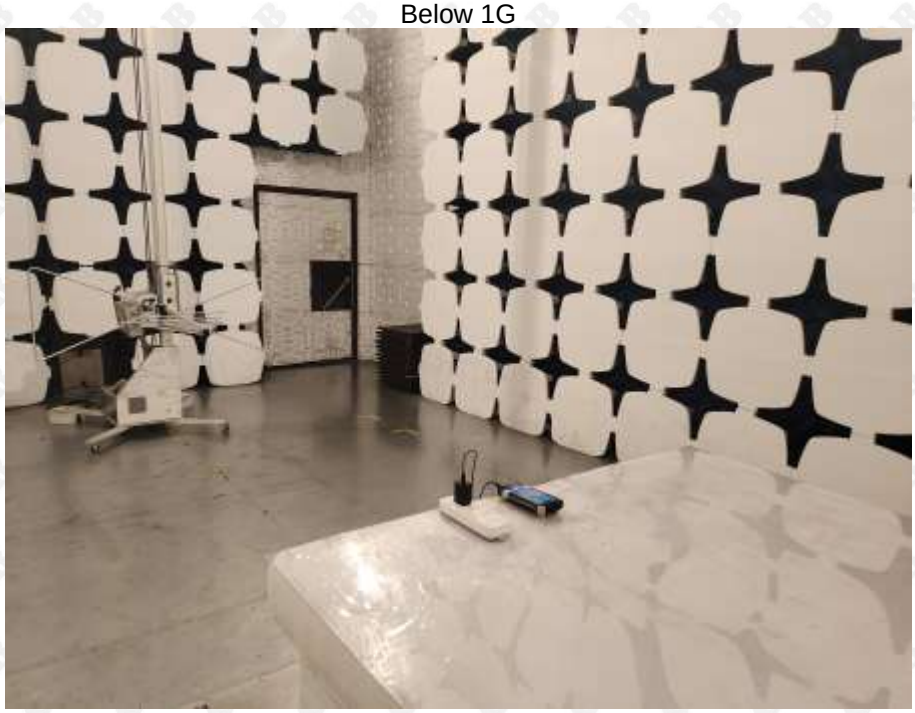
Reference Frequency(Middle Channel): HSDPA 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	1.89	0.00225
	NV	1.64	0.00196
	HV	1.98	0.00237
Reference Frequency(Middle Channel): HSDPA 1732.4MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	5.76	0.003323502
	NV	5.86	0.003383957
	HV	6.90	0.003983132
Reference Frequency(Middle Channel): HSDPA 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	6.43	0.00342
	NV	7.43	0.00395
	HV	7.29	0.00388
Reference Frequency(Middle Channel): HSUPA 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	2.57	0.00307
	NV	2.69	0.00321
	HV	2.70	0.00323
Reference Frequency(Middle Channel): HSUPA 1732.4MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	5.04	0.00291
	NV	5.92	0.00342
	HV	6.06	0.00350

Reference Frequency(Middle Channel): HSUPA 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	9.07	0.00483
	NV	8.65	0.00460
	HV	9.85	0.00524

12. EUT TEST PHOTO

Radiated Emission

Below 1G



Above 1G

※※※※※ **END OF REPORT** ※※※※※