



TEST REPORT

Product Name: Smartphone
FCC ID: 2BLI5-A35PRO
Trademark: PAGRAER
Model Number: A35 Pro, Note 50 Pro, P60 Pro, P50 Pro, Note30 Ultra, N20 Pro, GT3 Pro, Note 40 Pro, Note 12s, S24 Pro, S30 Pro, S35 Pro, M2 Pro, M3 Pro, A45 Pro, A60 Pro, A65 Pro, Hot 45 Pro, Hot 50 Pro, P65 Pro, A8 Pro, C50 Pro, C55 Pro, Note 55 Pro, Navo 7, Navo 8, Navo X, Pavo 40, Pavo 50
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Sample tested Date: Aug. 06, 2024 to Sep. 21, 2024
Issue Date: Sep. 21, 2024
Report No.: CTB240820062RFX
Test Standards: FCC Part 22H & 24E
Test Results: PASS
Remark: This is GSM radio test report.

Compiled by:

Reviewed by:

Approved by:

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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
CTB240820062RFX	Sep. 21, 2024	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

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°C
frequency	1×10-7

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model(s):	A35 Pro, Note 50 Pro, P60 Pro, P50 Pro, Note30 Ultra, N20 Pro, GT3 Pro, Note 40 Pro, Note 12s, S24 Pro, S30 Pro, S35 Pro, M2 Pro, M3 Pro, A45 Pro, A60 Pro, A65 Pro, Hot 45 Pro, Hot 50 Pro, P65 Pro, A8 Pro, C50 Pro, C55 Pro, Note 55 Pro, Navo 7, Navo 8, Navo X, Pavo 40, Pavo 50
Model Description:	All the model are the same circuit and RF module, only the model names are different. Test sample model: A35 Pro
Hardware Version:	V1.0
Software Version:	V1.0
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: 32.56dBm GSM1900: 29.18dBm WCDMA Band 2: 22.60dBm WCDMA Band 5: 23.41dBm
Type of Modulation:	GMSK, BPSK
Antenna installation:	Internal antenna
Antenna Gain:	GSM850: -0.98dBi GSM1900: 2.60dBi WCDMA Band 2: 2.60dBi WCDMA Band 5: -0.98dBi
Ratings:	ADAPTER: INPUT: 100-240V AC 50-60Hz 300mA OUTPUT: DC 5.0V~2.0A DC 3.85V by 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

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	ADAPTER	/	/	/	AE

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):NV	3.85V
Normal Temperature(°C)	23
Low Temperature(°C)	0
High Temperature(°C)	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, Xinhua 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

No.	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	A.14.16	2025/6/28
2	Power Sensor	Agilent	U2021XA	MY56120032	/	2025/6/28
3	Power Sensor	Agilent	U2021XA	MY56120034	/	2025/6/28
4	Communication test set	R&S	CMW500	108058	V3.5.80	2025/6/28
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2025/6/28
6	Signal Generator	Agilent	N5181A	MY50140365	A.01.60	2025/6/28
7	Vector signal generator	Agilent	N5182A	MY47420195	A.01.87	2025/6/28
8	Communication test set	Agilent	E5515C	MY50102567	B.19.07 (E1962B)	2025/6/28
9	2.4 GHz Filter	Shenxiang	MSF2400-24 83.5MS-1154	20181015001	/	2025/6/30
10	5 GHz Filter	Shenxiang	MSF5150-58 50MS-1155	20181015001	/	2025/6/30
11	Filter	Xingbo	XBLBQ-DZA 120	190821-1-1	/	2025/6/30
12	BT&WI-FI Automatic test software	Microwave	MTS8310	Ver. 2.0.0.0	/	/
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	/	2025/6/28
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	/	2025/6/28
15	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	/	/
16	966 chamber	C.R.T.	966	/	/	2027/6/21
17	Receiver	R&S	ESPI	100362	RF_ATTEN_7 (104489/003)	2025/6/28
18	Amplifier	HP	8447E	2945A02747	/	2025/6/28
19	Amplifier	Agilent	8449B	3008A01838	/	2025/6/28
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2025/6/28
21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	/	2025/6/28

22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2025/6/28
24	loop antenna	ZHINAN	ZN30900A	GTS534	/	/
25	40G Horn antenna	A/H/System	SAS-574	588	/	2025/6/28
26	Amplifier	AEROFLEX	Aeroflex	097	/	2025/6/28
27	Power Metter	KEYSIGHT	N1912AP	N/A	A.05.00	2025/6/28

6. RF OUTPUT POWER

6.1 Standard Applicable

According to §22.913(a)(2), The ERP of mobile and 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	Substitute 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	31.63	1.5	0	H	1.5	-0.98	29.15	38.45
824.2	31.75	1.5	0	V	1.5	-0.98	29.27	38.45
Middle Channel								
836.6	31.70	1.5	0	H	1.5	-0.98	29.22	38.45
836.6	31.66	1.5	0	V	1.5	-0.98	29.18	38.45
High Channel								
848.8	32.11	1.5	0	H	1.5	-0.98	29.63	38.45
848.8	31.82	1.5	0	V	1.5	-0.98	29.34	38.45

EIRP For GSM Mode PCS1900

Frequency	Substitute 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	28.40	1.5	0	H	1.9	2.6	29.10	33
1850.2	28.61	1.5	0	V	1.9	2.6	29.31	33
Middle Channel								
1880	28.44	1.5	0	H	1.9	2.6	29.14	33
1880	29.08	1.5	0	V	1.9	2.6	29.78	33
High Channel								
1909.8	28.42	1.5	0	H	1.9	2.6	29.12	33
1909.8	28.87	1.5	0	V	1.9	2.6	29.57	33

ERP For GPRS Mode GSM850

Frequency	Substitute 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	31.67	1.5	0	H	1.5	-0.98	29.19	38.45
824.2	31.80	1.5	0	V	1.5	-0.98	29.32	38.45
Middle Channel								
836.6	31.66	1.5	0	H	1.5	-0.98	29.18	38.45
836.6	32.25	1.5	0	V	1.5	-0.98	29.77	38.45
High Channel								
848.8	31.87	1.5	0	H	1.5	-0.98	29.39	38.45
848.8	31.82	1.5	0	V	1.5	-0.98	29.34	38.45

EIRP For GPRS Mode PCS1900

Frequency	Substitute 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	28.66	1.5	0	H	1.9	2.6	29.36	33
1850.2	28.22	1.5	0	V	1.9	2.6	28.92	33
Middle Channel								
1880	28.91	1.5	0	H	1.9	2.6	29.61	33
1880	28.92	1.5	0	V	1.9	2.6	29.62	33
High Channel								
1909.8	28.33	1.5	0	H	1.9	2.6	29.03	33
1909.8	28.62	1.5	0	V	1.9	2.6	29.32	33

ERP For EDGE Mode GSM850

Frequency	Substitute 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	31.75	1.5	0	H	1.5	-0.98	29.27	38.45
824.2	32.08	1.5	0	V	1.5	-0.98	29.60	38.45
Middle Channel								
836.6	32.25	1.5	0	H	1.5	-0.98	29.77	38.45
836.6	31.74	1.5	0	V	1.5	-0.98	29.26	38.45
High Channel								
848.8	31.83	1.5	0	H	1.5	-0.98	29.35	38.45
848.8	32.16	1.5	0	V	1.5	-0.98	29.68	38.45

EIRP For EDGE Mode PCS1900

Frequency	Substitute 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	28.29	1.5	0	H	1.9	2.6	28.99	33
1850.2	28.12	1.5	0	V	1.9	2.6	28.82	33
Middle Channel								
1880	28.59	1.5	0	H	1.9	2.6	29.29	33
1880	28.15	1.5	0	V	1.9	2.6	28.85	33
High Channel								
1909.8	28.37	1.5	0	H	1.9	2.6	29.07	33
1909.8	28.82	1.5	0	V	1.9	2.6	29.52	33

ERP For WCDMA Mode Band 5

Frequency	Substitute 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	23.33	1.5	0	H	1.5	-0.98	20.85	38.45
826.4	23.29	1.5	0	V	1.5	-0.98	20.81	38.45
Middle Channel								
836.6	22.77	1.5	0	H	1.5	-0.98	20.29	38.45
836.6	22.63	1.5	0	V	1.5	-0.98	20.15	38.45
High Channel								
846.6	22.53	1.5	0	H	1.5	-0.98	20.05	38.45
846.6	22.56	1.5	0	V	1.5	-0.98	20.08	38.45

ERP For HSDPA Mode Band 5

Frequency	Substitute 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	23.16	1.5	0	H	1.5	-0.98	20.68	38.45
826.4	22.78	1.5	0	V	1.5	-0.98	20.30	38.45
Middle Channel								
836.6	22.58	1.5	0	H	1.5	-0.98	20.10	38.45
836.6	22.42	1.5	0	V	1.5	-0.98	19.94	38.45
High Channel								
846.6	23.33	1.5	0	H	1.5	-0.98	20.85	38.45
846.6	23.28	1.5	0	V	1.5	-0.98	20.80	38.45

ERP For HSUPA Mode Band 5

Frequency	Substitute 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	22.57	1.5	0	H	1.5	-0.98	20.09	38.45
826.4	23.26	1.5	0	V	1.5	-0.98	20.78	38.45
Middle Channel								
836.6	22.35	1.5	0	H	1.5	-0.98	19.87	38.45
836.6	22.37	1.5	0	V	1.5	-0.98	19.89	38.45
High Channel								
846.6	23.03	1.5	0	H	1.5	-0.98	20.55	38.45
846.6	22.68	1.5	0	V	1.5	-0.98	20.20	38.45

EIRP For WCDMA Mode Band 2

Frequency	Substitute 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	22.95	1.5	0	H	1.9	2.6	23.65	33
1852.4	22.29	1.5	0	V	1.9	2.6	22.99	33
Middle Channel								
1880	22.86	1.5	0	H	1.9	2.6	23.56	33
1880	21.66	1.5	0	V	1.9	2.6	22.36	33
High Channel								
1907.6	22.66	1.5	0	H	1.9	2.6	23.36	33
1907.6	22.46	1.5	0	V	1.9	2.6	23.16	33

EIRP For HSDPA Mode Band 2

Frequency	Substitute 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	21.86	1.5	0	H	1.9	2.6	22.56	33
1852.4	21.71	1.5	0	V	1.9	2.6	22.41	33
Middle Channel								
1880	22.43	1.5	0	H	1.9	2.6	23.13	33
1880	23.22	1.5	0	V	1.9	2.6	23.92	33
High Channel								
1907.6	21.62	1.5	0	H	1.9	2.6	22.32	33
1907.6	22.41	1.5	0	V	1.9	2.6	23.11	33

EIRP For HSUPA Mode Band 2

Frequency	Substitute 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	22.20	1.5	0	H	1.9	2.6	22.90	33
1852.4	23.09	1.5	0	V	1.9	2.6	23.79	33
Middle Channel								
1880	21.82	1.5	0	H	1.9	2.6	22.52	33
1880	23.14	1.5	0	V	1.9	2.6	23.84	33
High Channel								
1907.6	22.03	1.5	0	H	1.9	2.6	22.73	33
1907.6	23.01	1.5	0	V	1.9	2.6	23.71	33

Note: Result = Substitute - 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	32.54	38.45
	Middle Channel	836.6	32.40	38.45
	High Channel	848.8	32.42	38.45
GPRS(1 Slot)	Low Channel	824.2	32.56	38.45
	Middle Channel	836.6	32.45	38.45
	High Channel	848.8	32.45	38.45
EDGE(1 Slot)	Low Channel	824.2	32.48	38.45
	Middle Channel	836.6	32.39	38.45
	High Channel	848.8	32.42	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	29.05	33.0
	Middle Channel	1880.0	29.16	33.0
	High Channel	1909.8	29.18	33.0
GPRS(1 Slot)	Low Channel	1850.2	28.98	33.0
	Middle Channel	1880.0	29.14	33.0
	High Channel	1909.8	29.17	33.0
EDGE(1 Slot)	Low Channel	1850.2	28.98	33.0
	Middle Channel	1880.0	29.13	33.0
	High Channel	1909.8	29.15	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	23.34	38.45
	Middle Channel	836.6	23.21	38.45
	High Channel	846.6	23.41	38.45
HSDPA	Low Channel	826.4	23.34	38.45
	Middle Channel	836.6	23.26	38.45
	High Channel	846.6	23.37	38.45
HSUPA	Low Channel	826.4	23.34	38.45
	Middle Channel	836.6	23.23	38.45
	High Channel	846.6	23.39	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	22.30	33.00
	Middle Channel	1880.0	22.49	33.00
	High Channel	1907.6	22.58	33.00
HSDPA	Low Channel	1852.4	22.29	33.00
	Middle Channel	1880.0	22.51	33.00
	High Channel	1907.6	22.57	33.00
HSUPA	Low Channel	1852.4	22.31	33.00
	Middle Channel	1880.0	22.48	33.00
	High Channel	1907.6	22.60	33.00

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

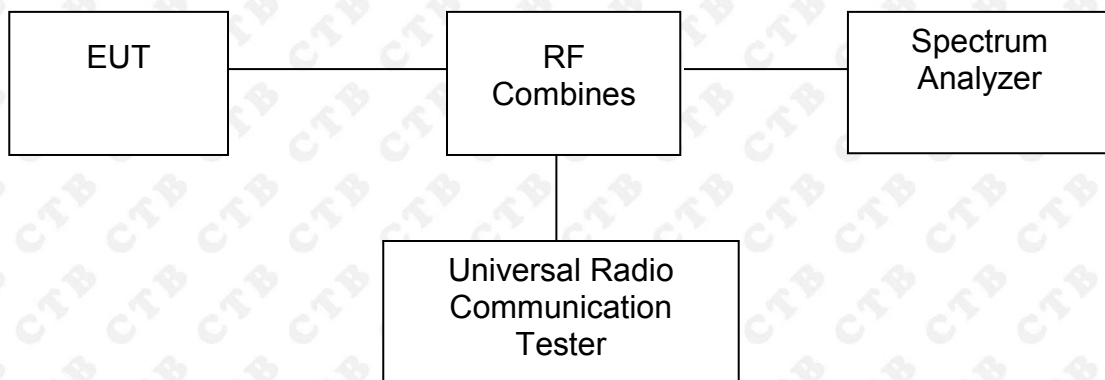
7.1 Standard Applicable

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	2.68	13
GPRS(1 Slot)	190	836.6	2.68	13
EDGE(1 Slot)	190	836.6	8.07	13

For PCS 1900

Test Mode	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)
GSM	512	1850.2	2.68	13
GPRS(1 Slot)	512	1850.2	2.67	13
EDGE(1 Slot)	512	1850.2	5.94	13

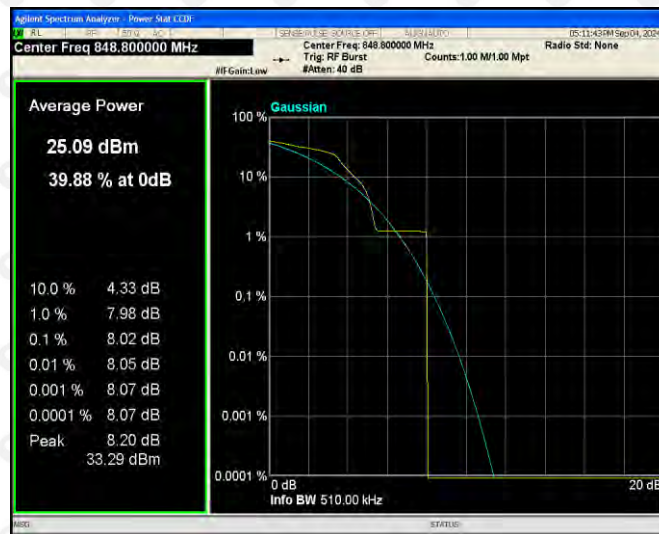
For WCDMA Band 5

Test Mode	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)
WCDMA	4182	836.4	2.95	13
HSDPA	4182	836.4	2.95	13
HSUPA	4182	836.4	2.95	13

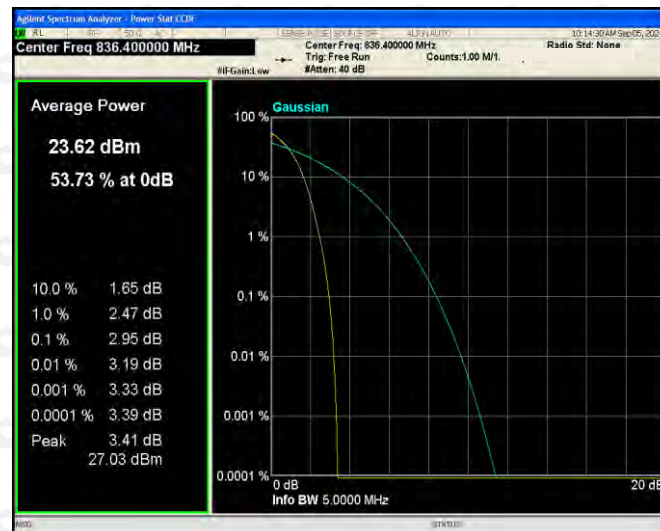
For WCDMA Band 2

Test Mode	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)
WCDMA	9262	1852.4	2.89	13
HSDPA	9400	1852.4	2.89	13
HSUPA	9400	1852.4	2.89	13

GSM :



WCDMA:



8. EMISSION BANDWIDTH

8.1 Standard Applicable

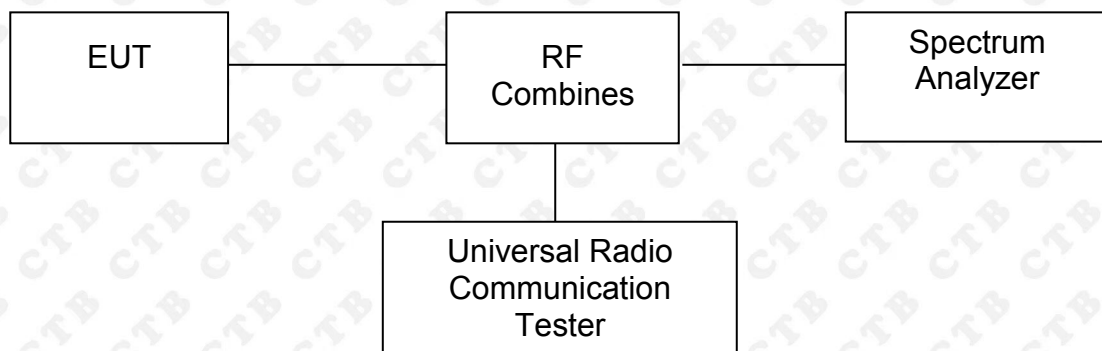
According to §22.917(b), The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

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	247.635	306.594
	190	836.6	246.599	318.327
	251	848.8	249.762	318.337
GPRS	128	824.2	248.973	320.652
	190	836.6	243.125	310.036
	251	848.8	246.796	319.015
EDGE	128	824.2	245.100	307.481
	190	836.6	244.903	317.162
	251	848.8	251.405	310.461

For PCS Band

Test Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM	512	1850.2	241.168	312.291
	661	1880.0	248.678	318.795
	810	1909.8	248.712	319.251
GPRS	512	1850.2	246.071	319.061
	661	1880.0	244.483	321.055
	810	1909.8	240.153	314.190
EDGE	512	1850.2	244.302	311.772
	661	1880.0	249.065	317.385
	810	1909.8	248.579	317.420

For Band 5

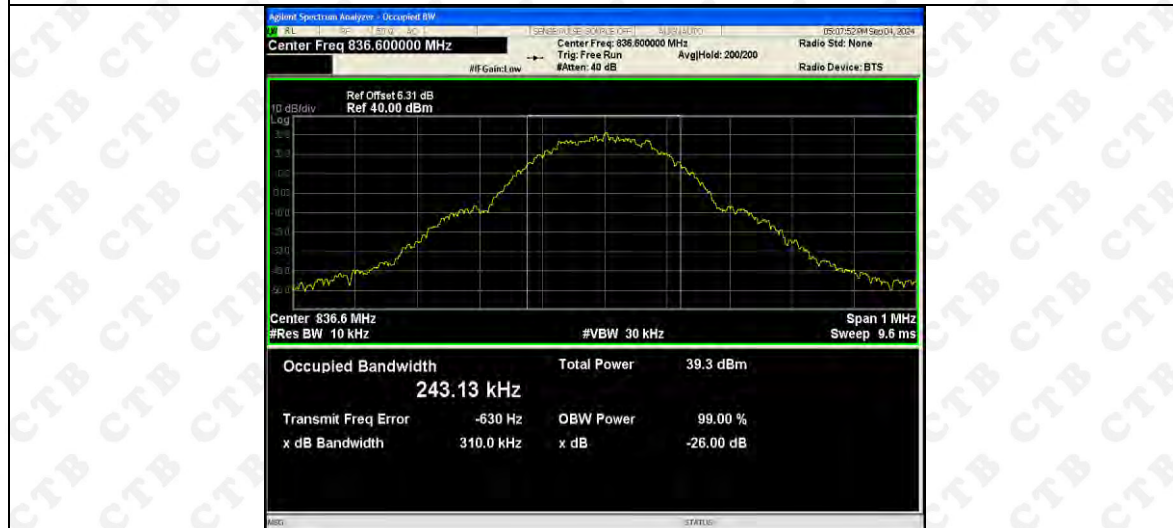
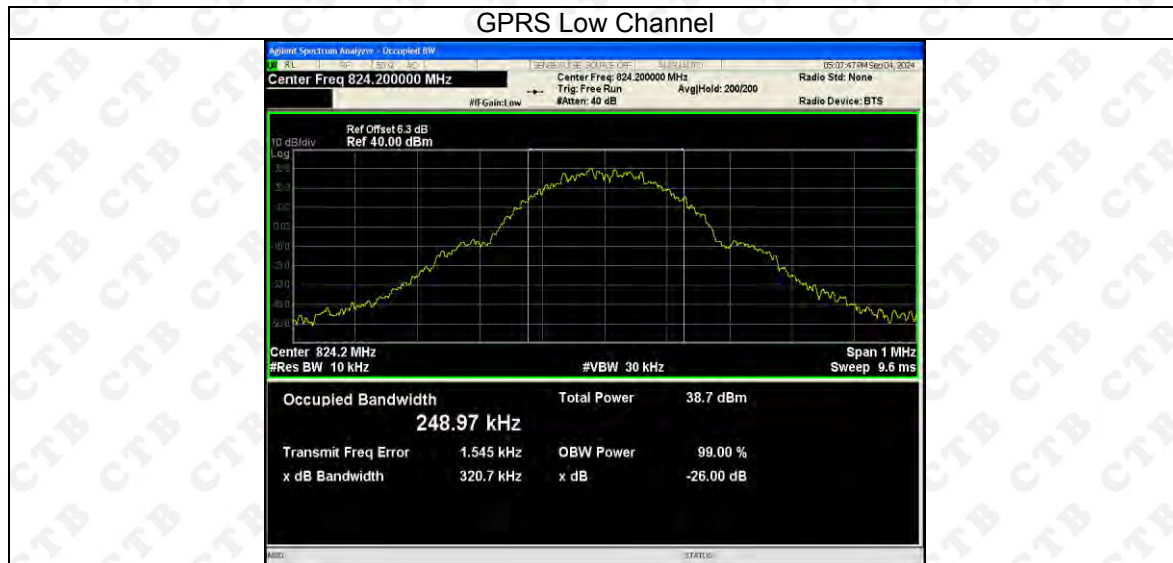
Test Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
WCDMA	4132	826.4	4175.582	4715.201
	4183	836.6	4164.049	4708.526
	4233	846.6	4185.186	4724.910
HSDPA	4132	826.4	4172.458	4705.443
	4183	836.6	4177.142	4696.330
	4233	846.6	4182.037	4711.127
HSUPA	4132	826.4	4165.928	4716.886
	4183	836.6	4166.003	4723.109
	4233	846.6	4185.022	4713.573

For Band 2

Test Mode	Channel	Frequency (MHz)	99% Emission Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
WCDMA	9262	1852.4	4187.536	4698.908
	9400	1880.0	4160.058	4723.315
	9538	1907.6	4180.463	4717.592
HSDPA	9262	1852.4	4176.453	4735.260
	9400	1880.0	4188.232	4724.276
	9538	1907.6	4182.003	4697.165
HSUPA	9262	1852.4	4172.485	4697.657
	9400	1880.0	4188.052	4701.570
	9538	1907.6	4175.804	4730.294

For Cellular Band





EDGE Low Channel



EDGE Middle Channel

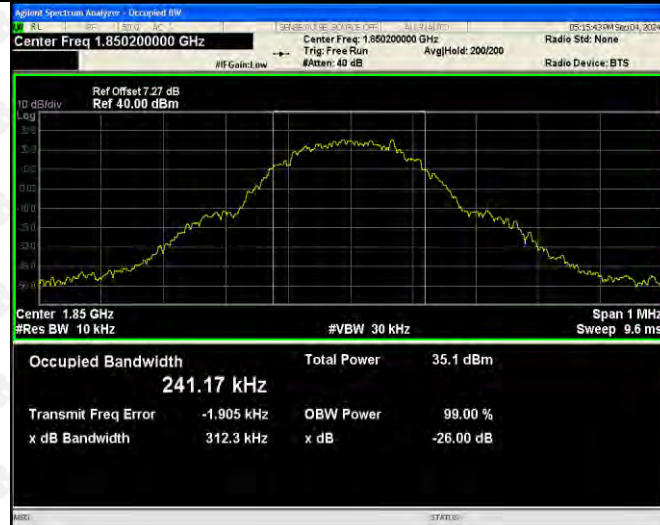


EDGE High Channel

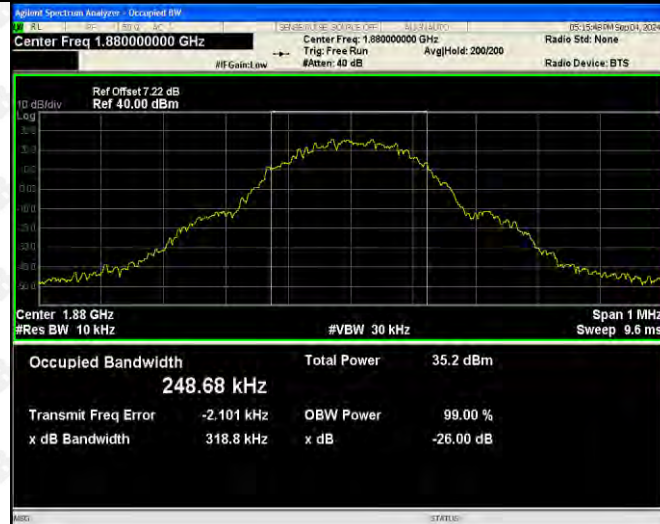


For PCS Band

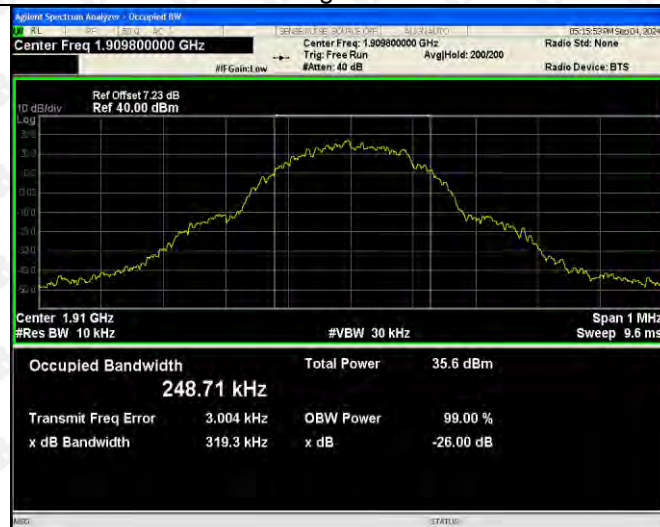
GSM Low Channel



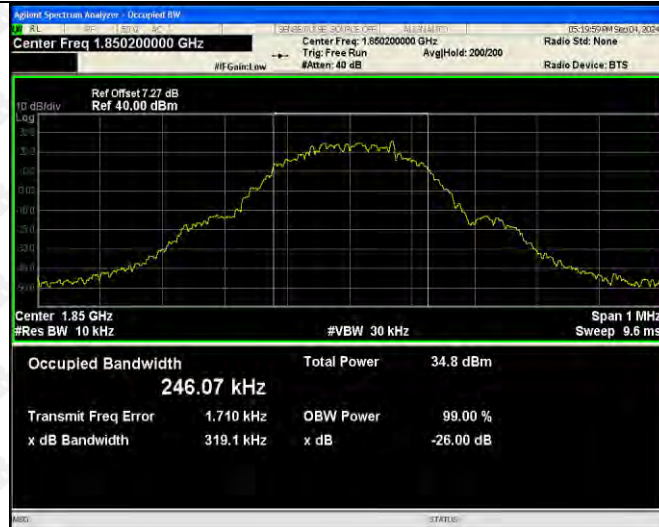
GSM Middle Channel



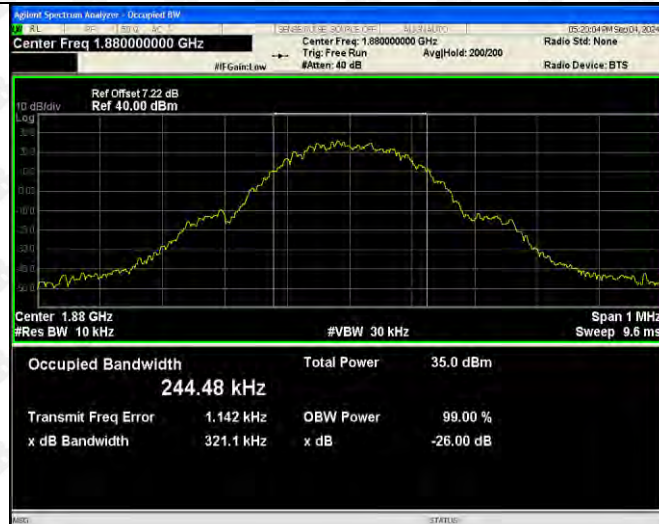
GSM High Channel



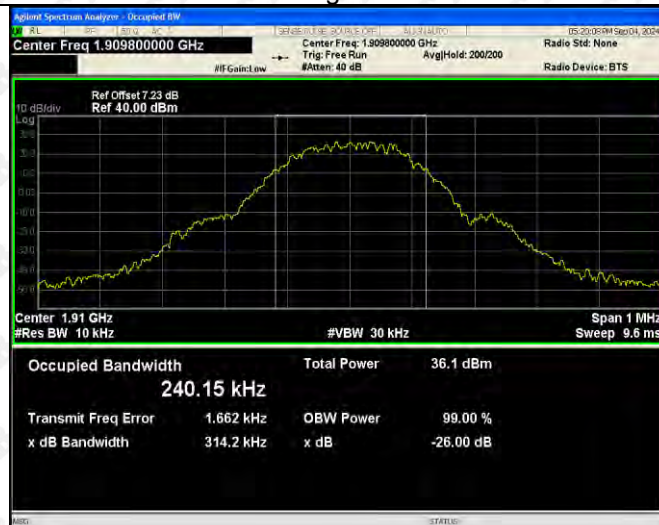
GPRS Low Channel



GPRS Middle Channel



GPRS High Channel



EDGE Low Channel



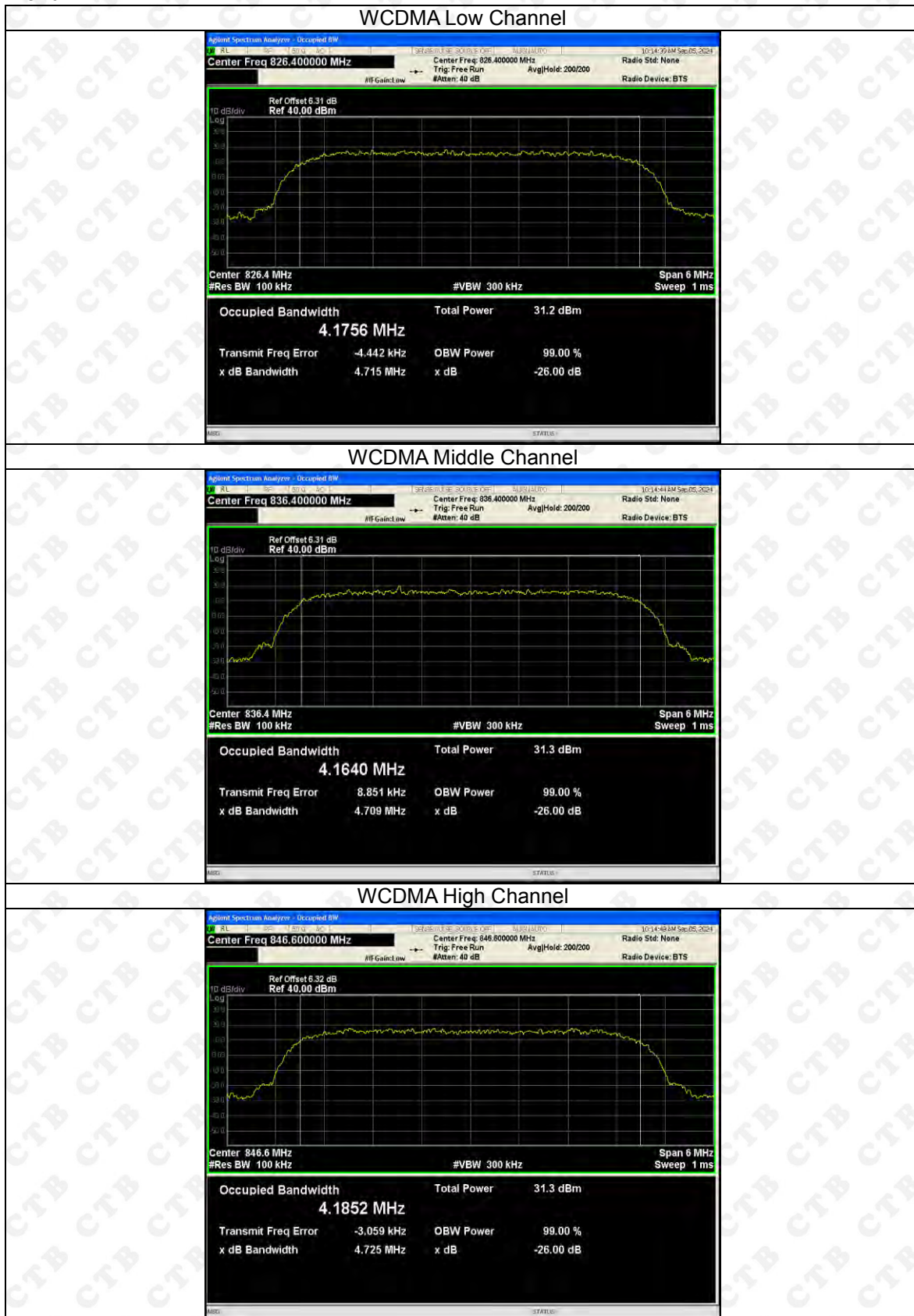
EDGE Middle Channel



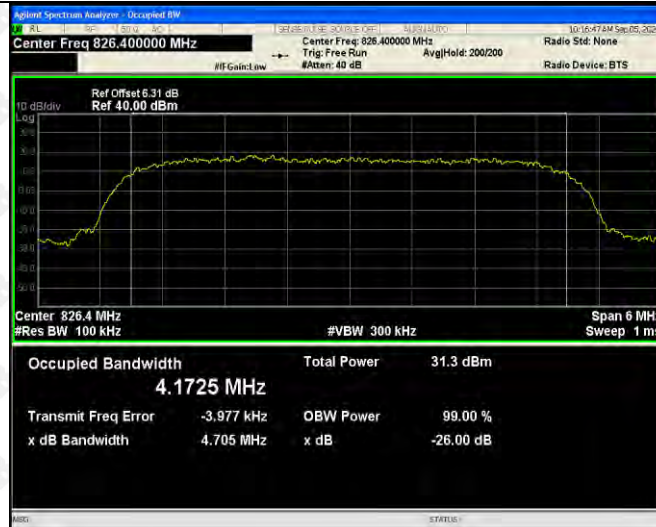
EDGE High Channel



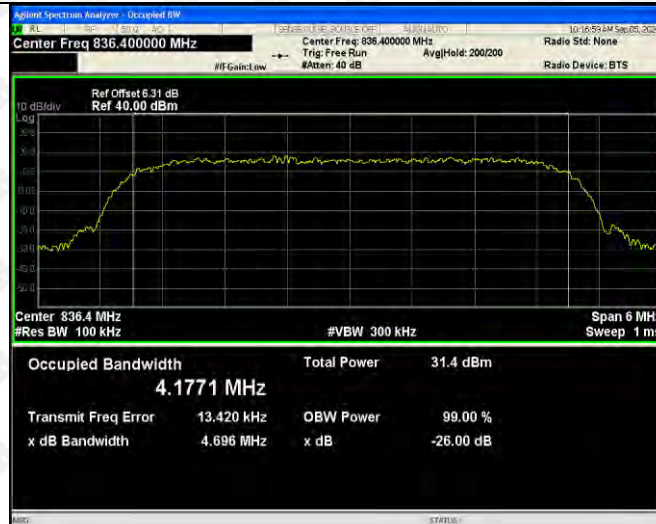
For Band V



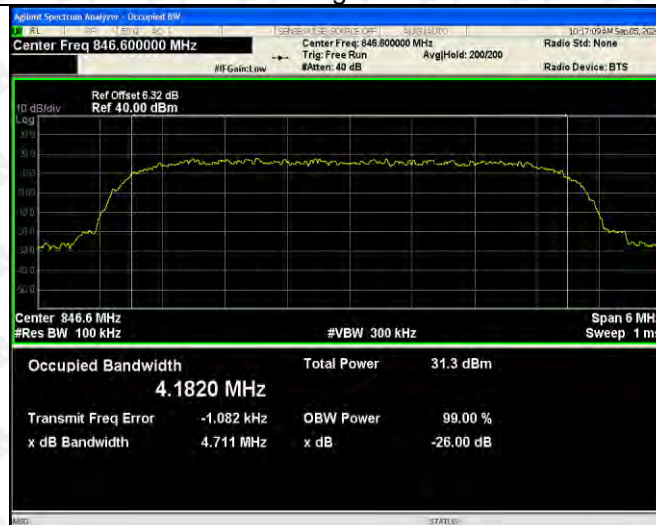
HSDPA Low Channel



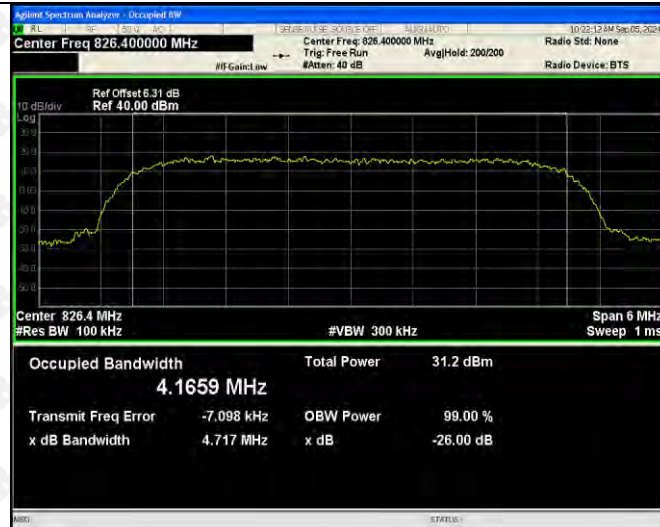
HSDPA Middle Channel



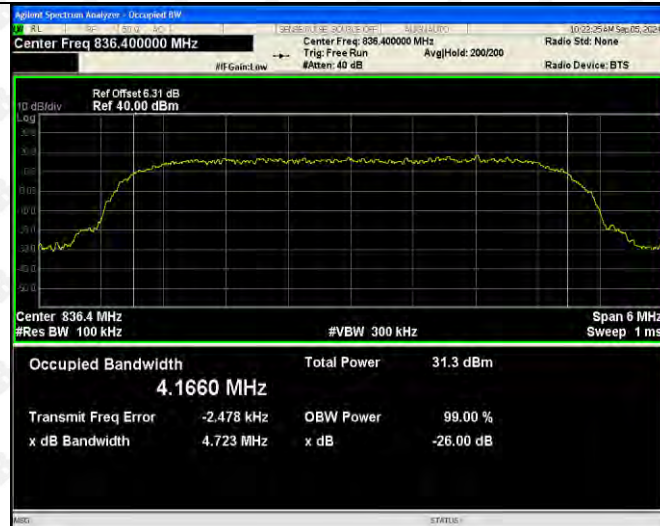
HSDPA High Channel



HSUPA Low Channel



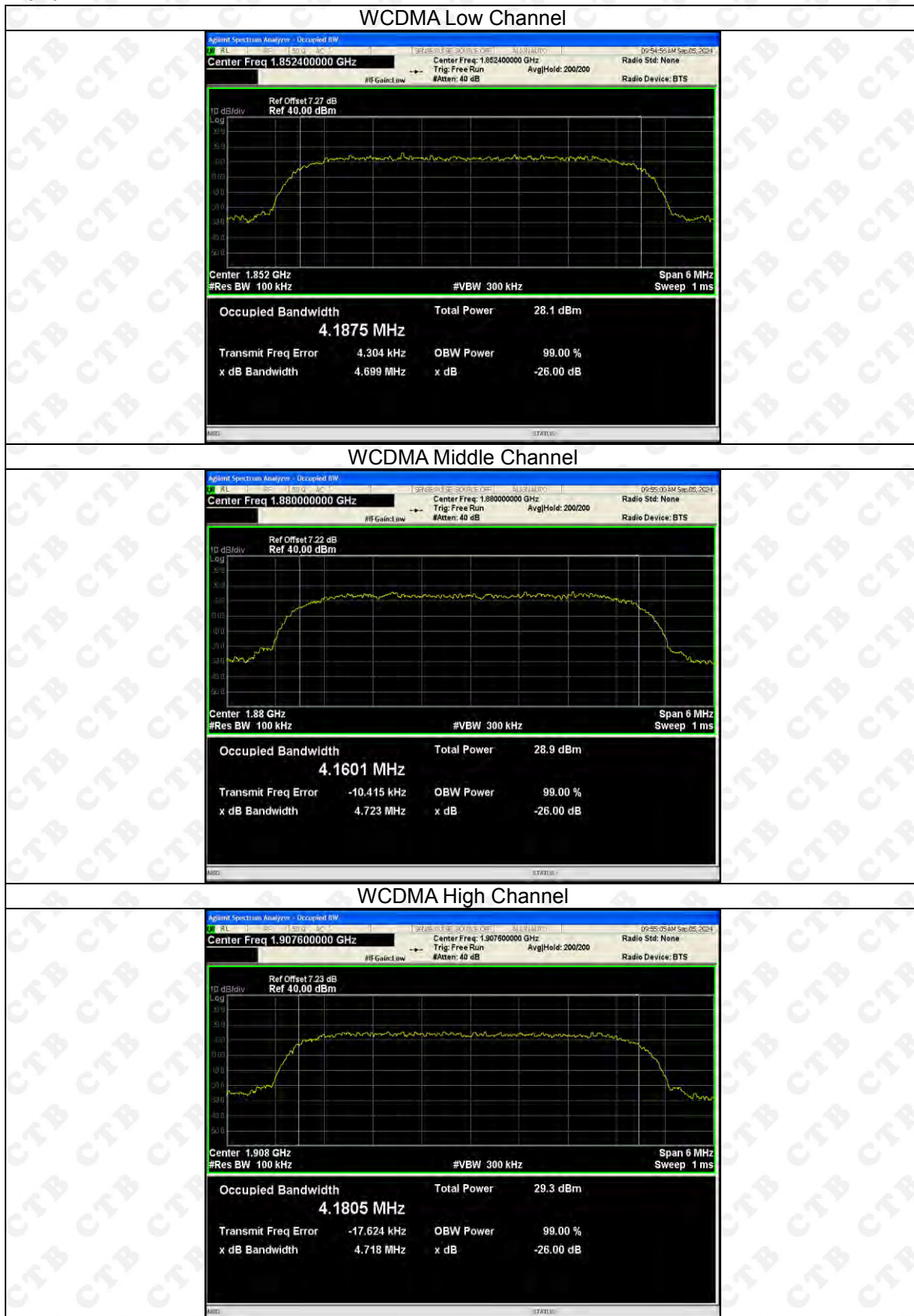
HSUPA Middle Channel



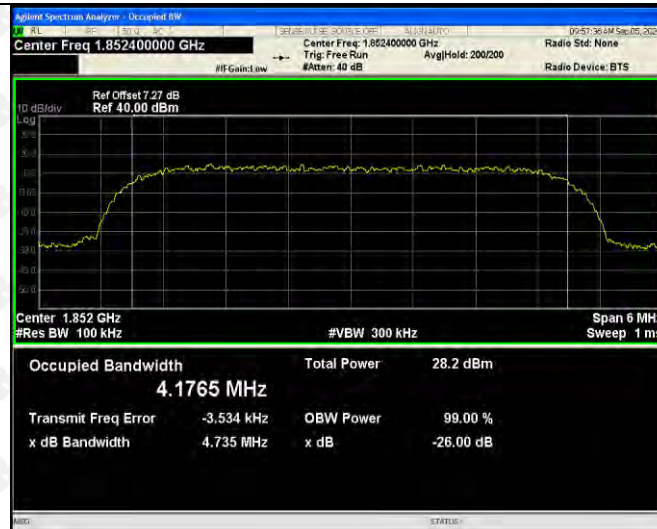
HSUPA High Channel



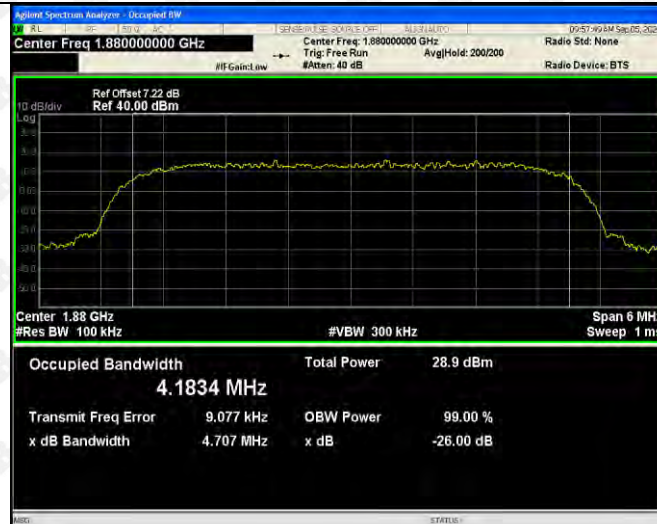
For Band II



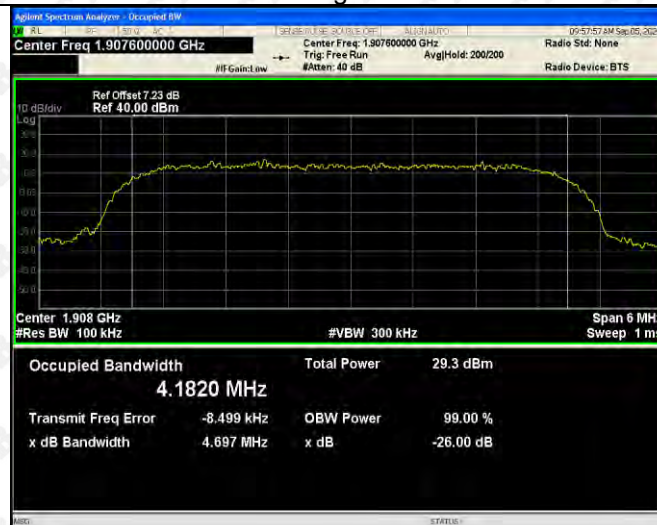
HSDPA Low Channel



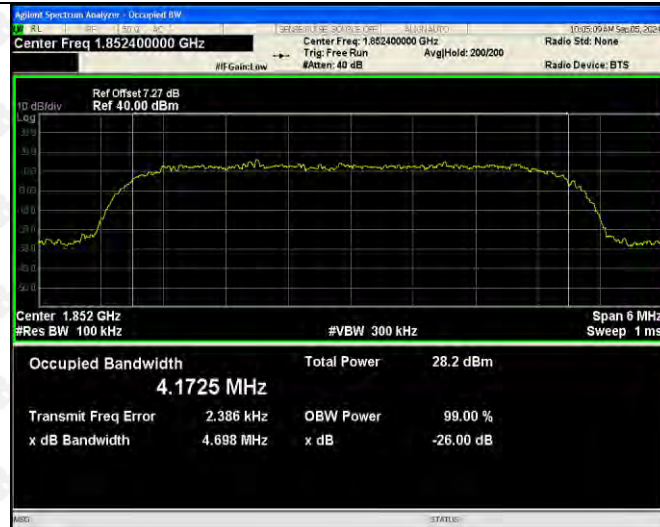
HSDPA Middle Channel



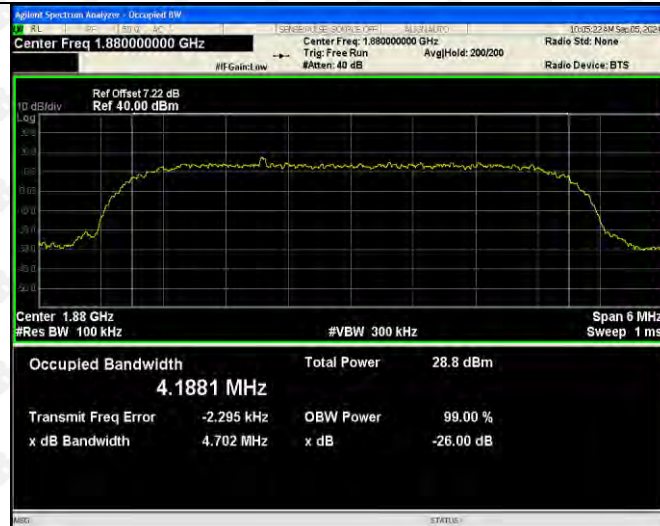
HSDPA High Channel



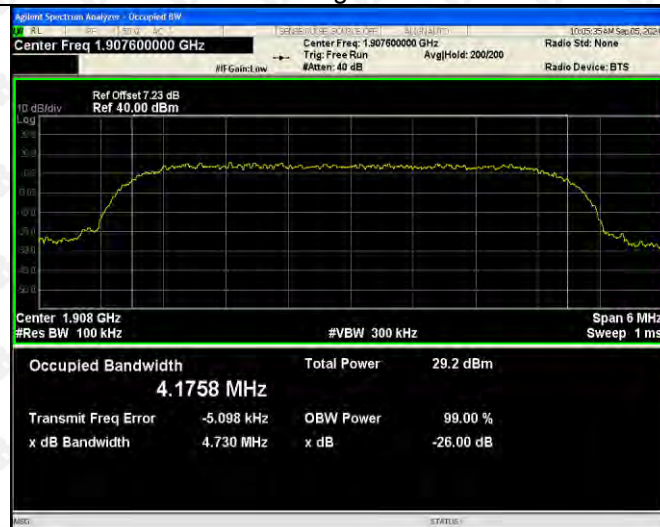
HSUPA Low Channel



HSUPA Middle Channel



HSUPA High Channel



9. OUT OF BAND EMISSIONS AT ANTENNA TERMINAL

9.1 Standard Applicable

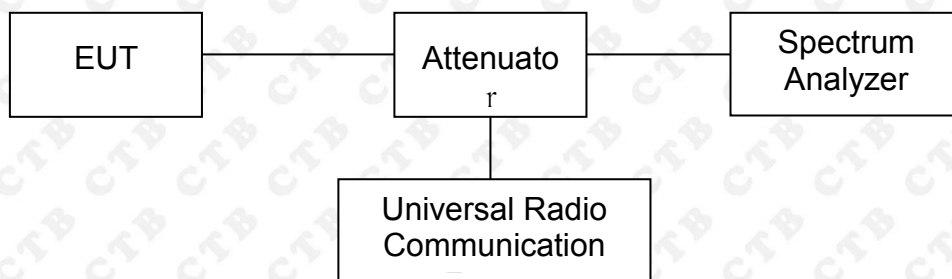
According to §22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

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:



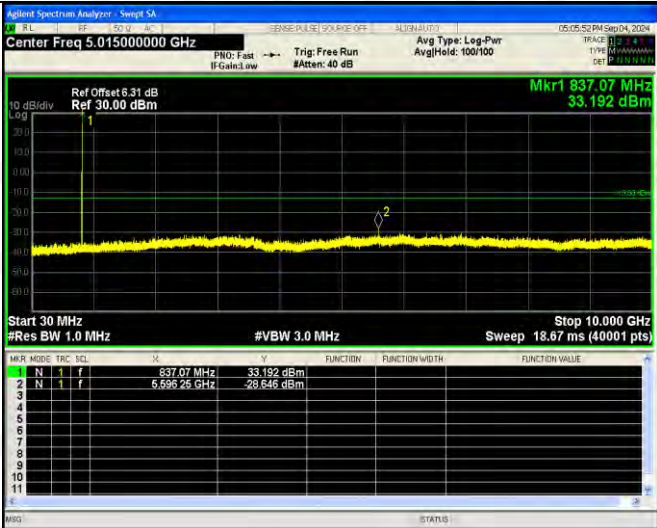
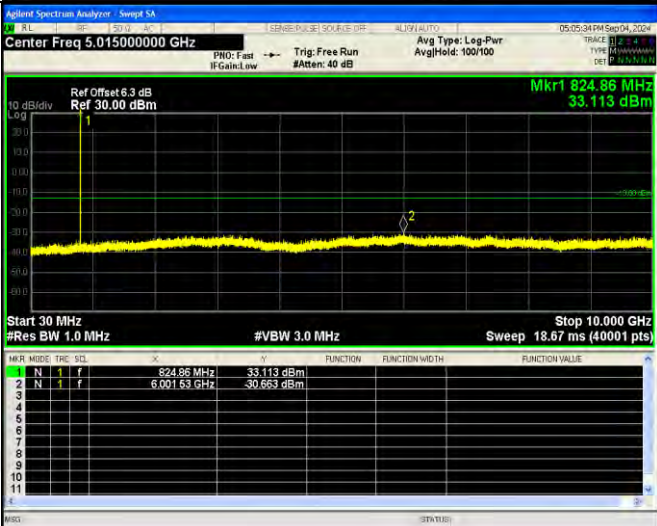
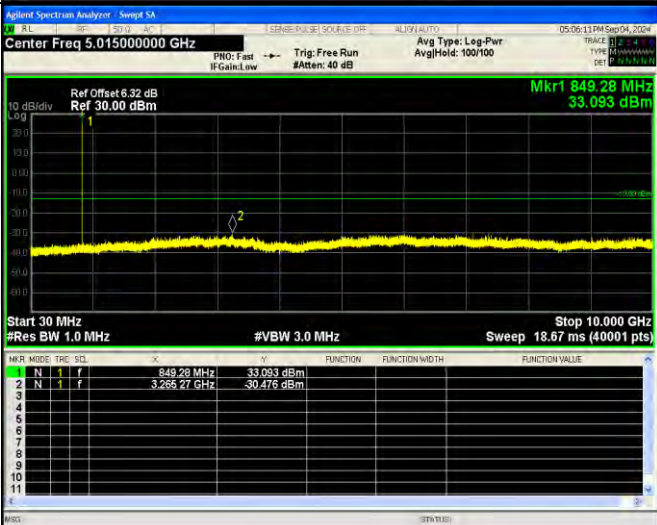
9.3 Environmental Conditions

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

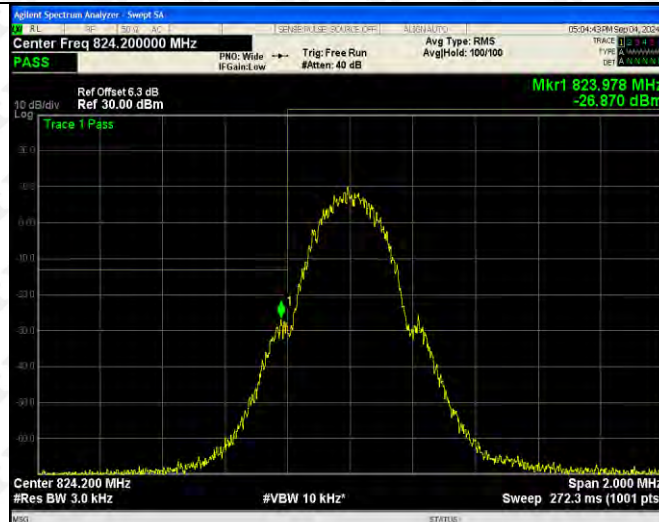
9.4 Summary of Test Results/Plots

Please refer to the following test plots

For Cellular Band

GSM Low Channel		
GSM Middle Channel		
GSM High Channel		

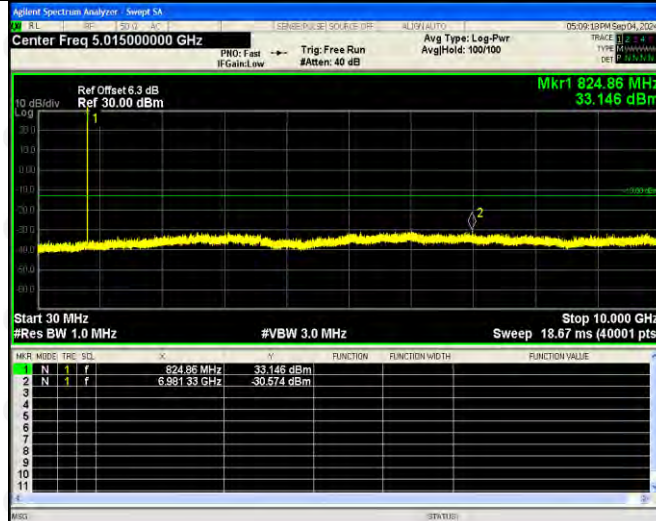
GSM
Low
Band
Emission



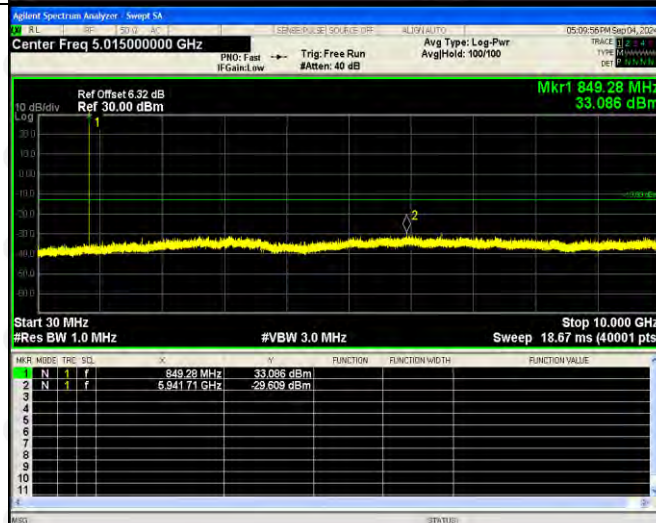
GSM
High
Band
Emission



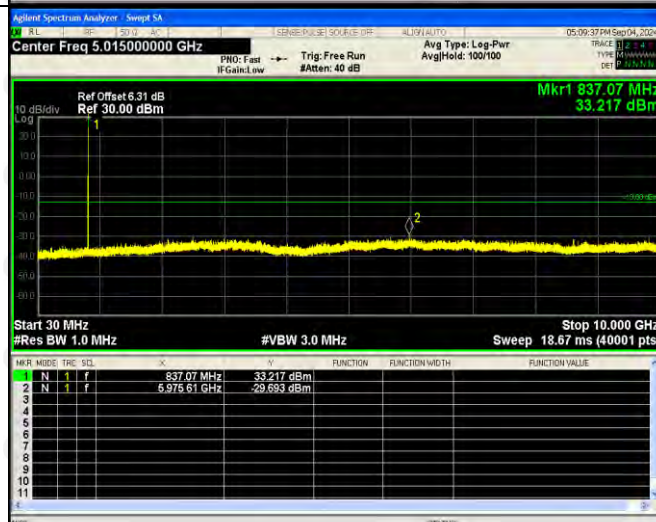
GPRS
Low
Channel



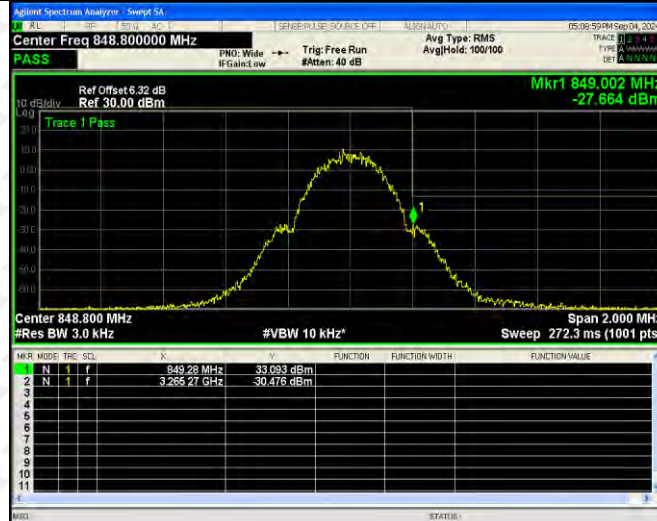
GPRS
Middle
Channel



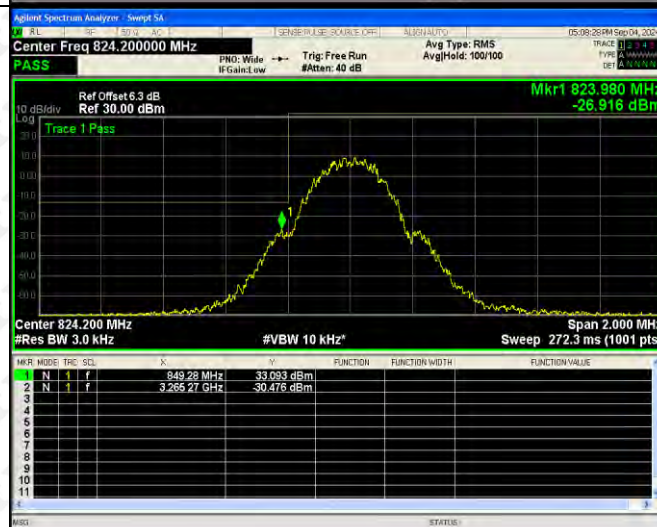
GPRS
High
Channel



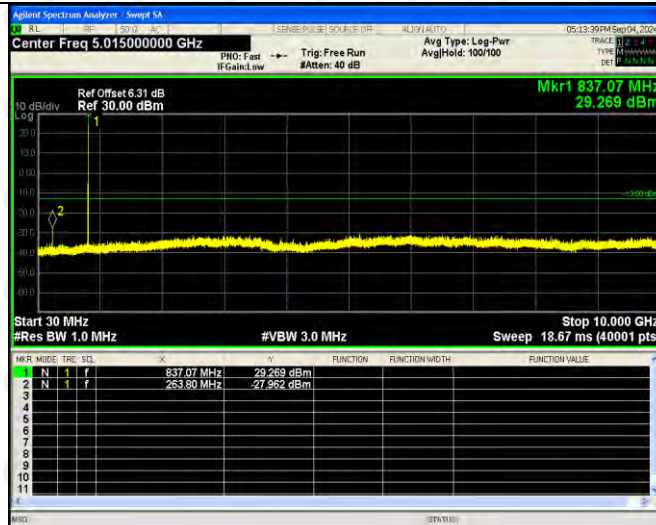
GPRS
Low
Band
Emission



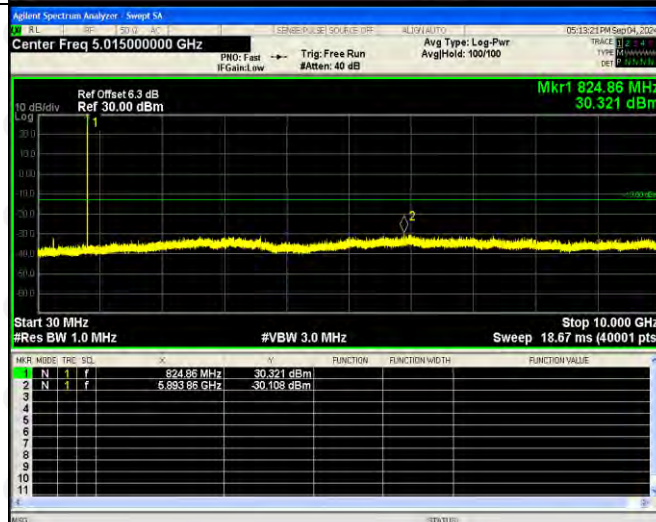
GPRS
High
Band
Emission



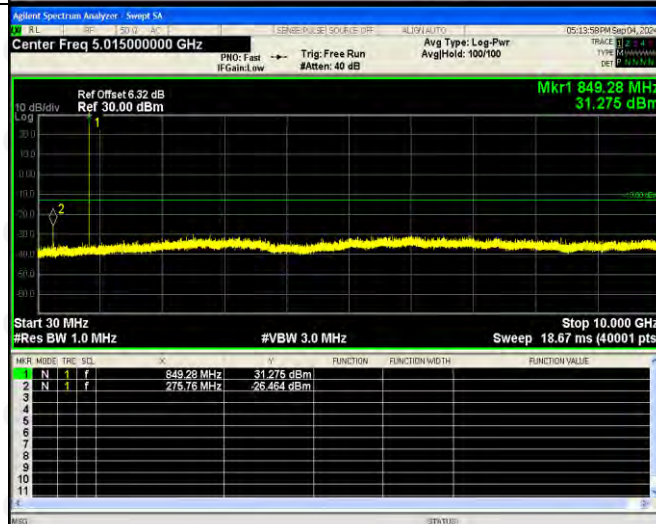
EDGE
Low
Channel



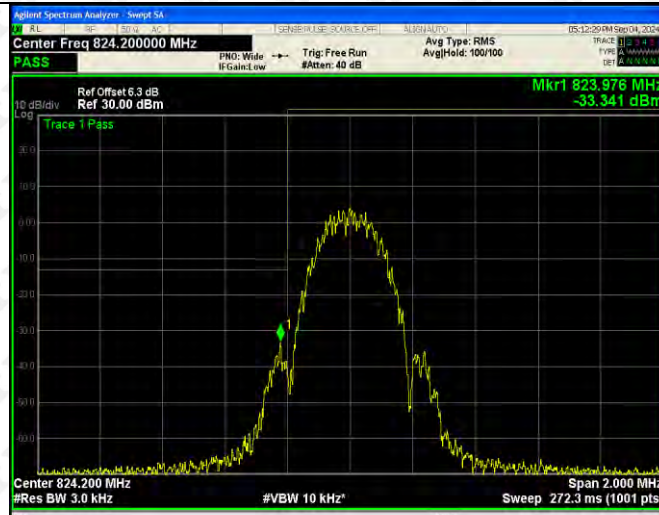
EDGE
Middle
Channel



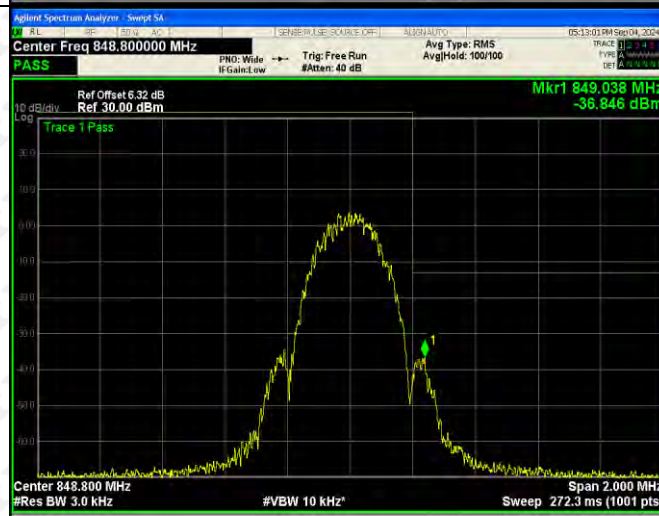
EDGE
High
Channel



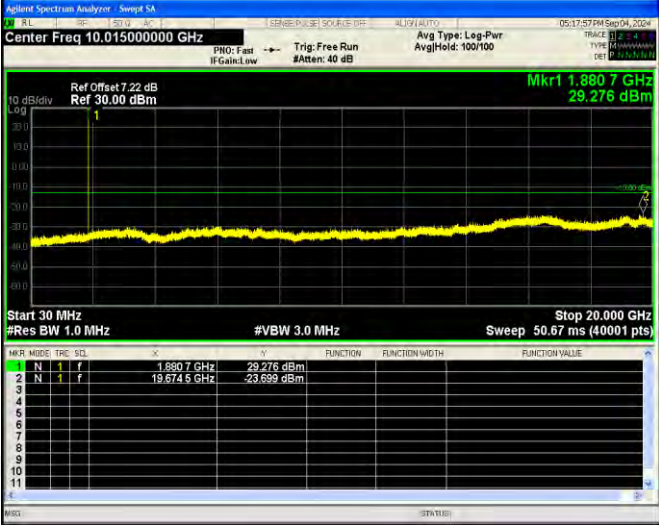
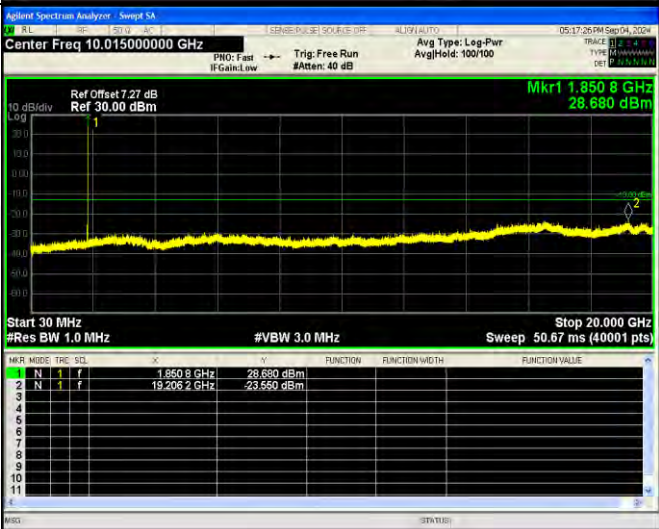
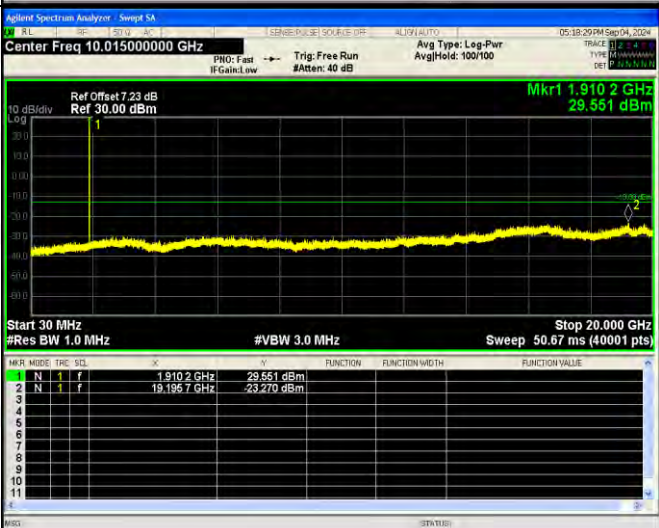
EDGE
Low
Band
Emission



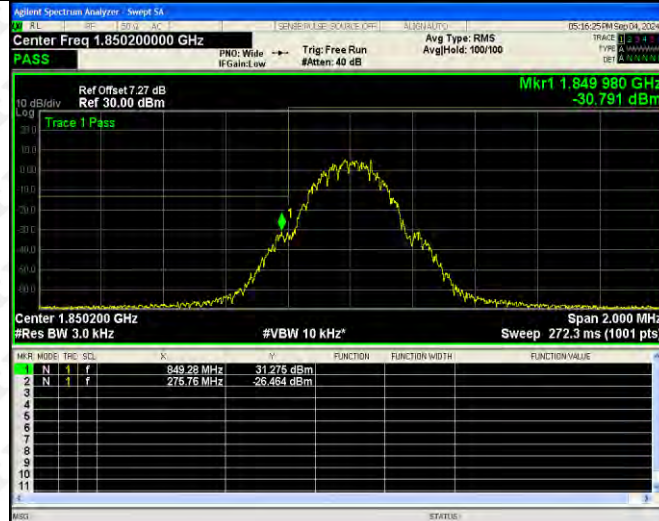
EDGE
High
Band
Emission



For PCS Band

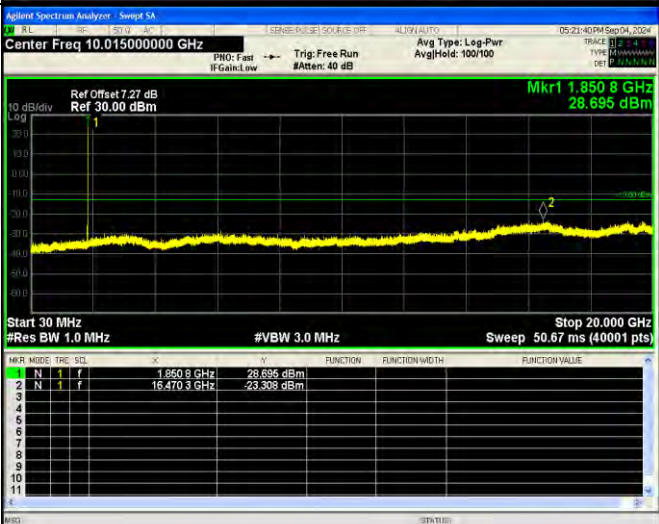
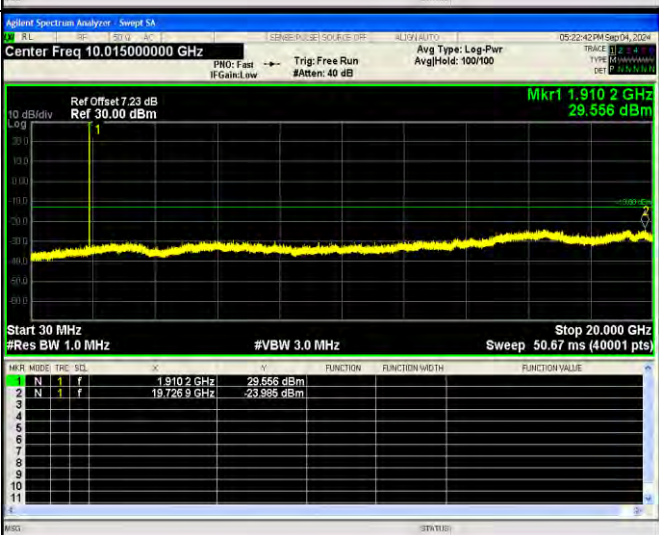
GSM Low Channel		
GSM Middle Channel		
GSM High Channel		

GSM
Low
Band
Emission

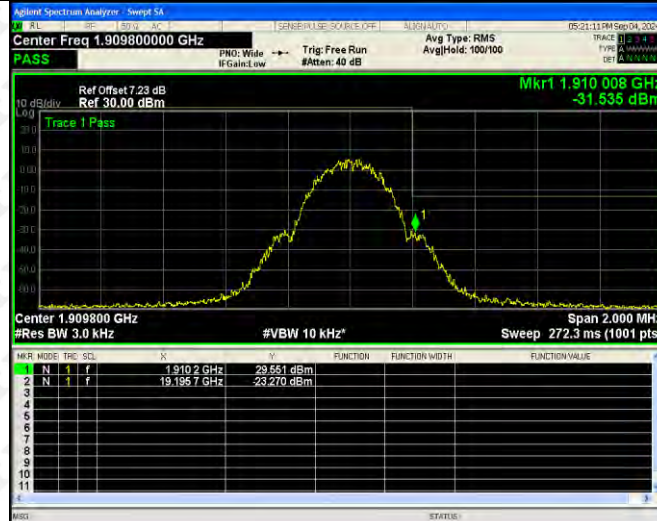


GSM
High
Band
Emission

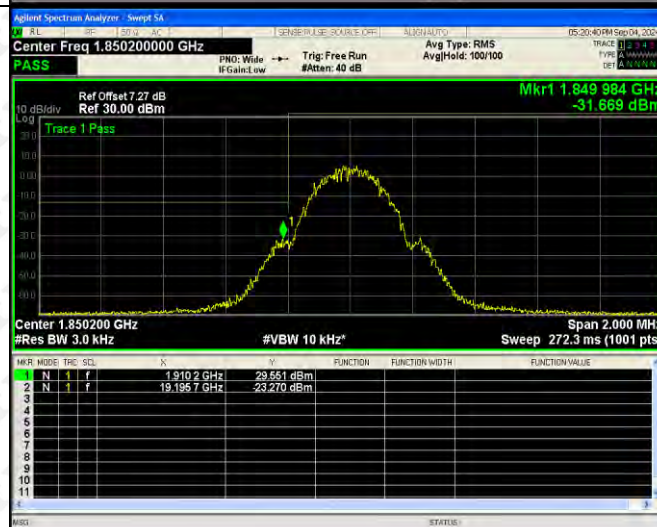


GPRS Low Channel		
GPRS Middle Channel		
GPRS High Channel		

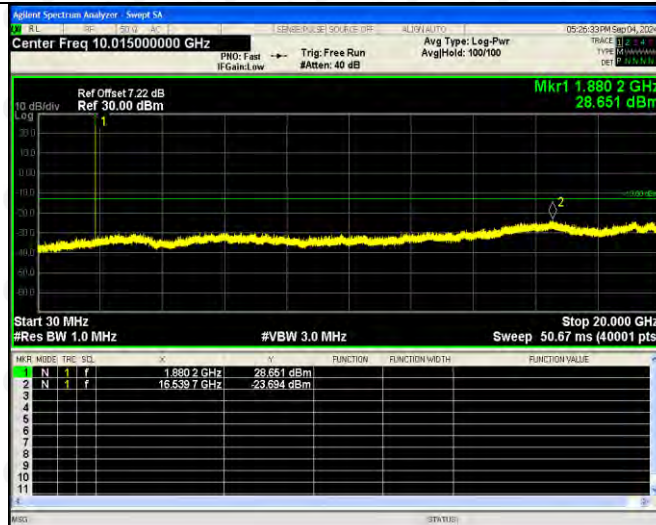
GPRS
Low
Band
Emission



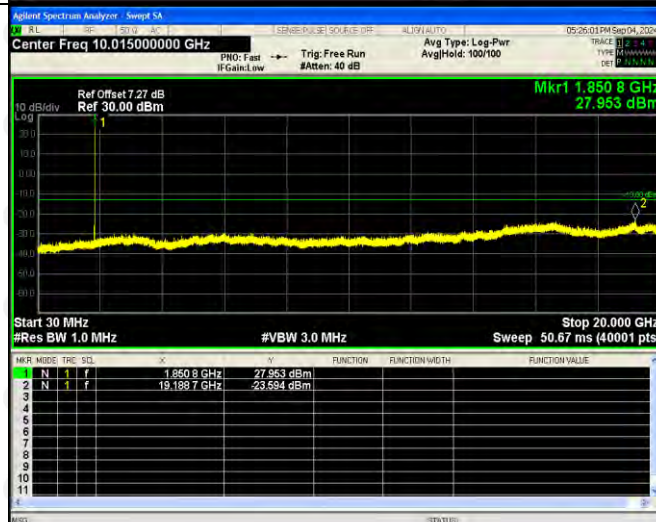
GPRS
High
Band
Emission



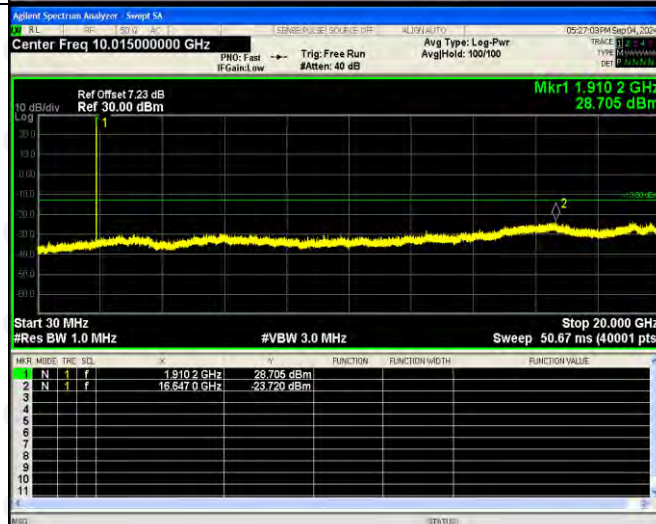
EDGE
Low
Channel



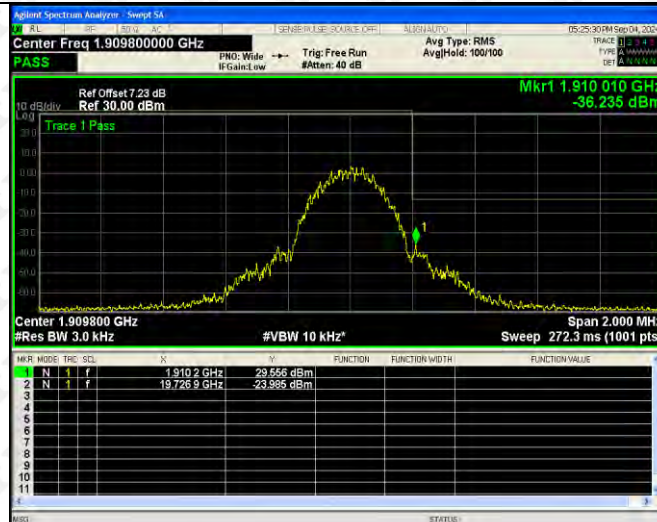
EDGE
Middle
Channel



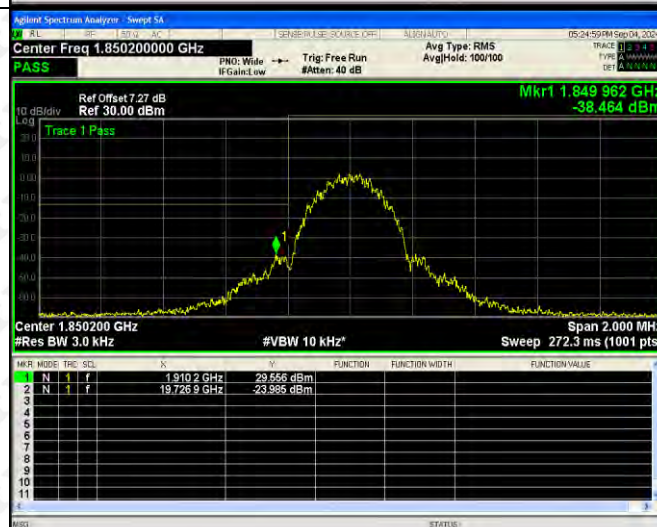
EDGE
High
Channel



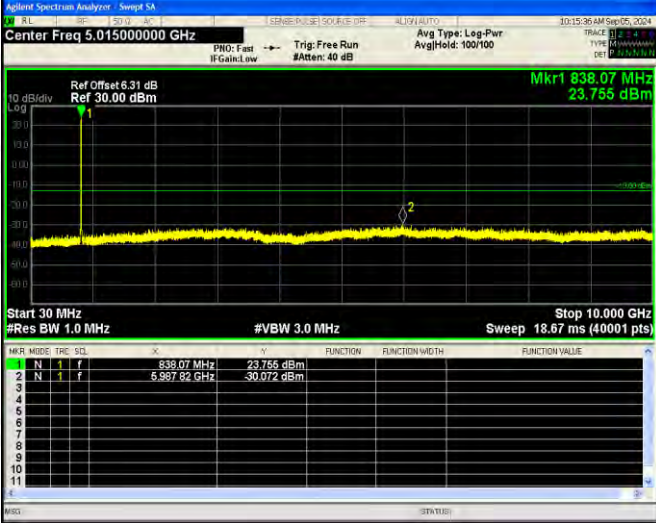
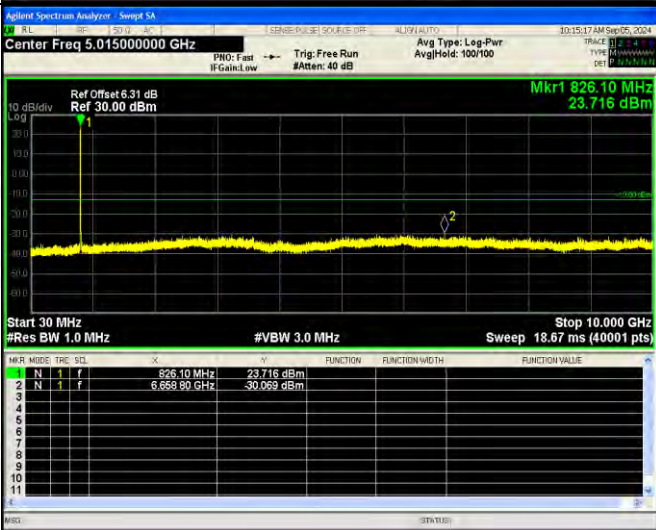
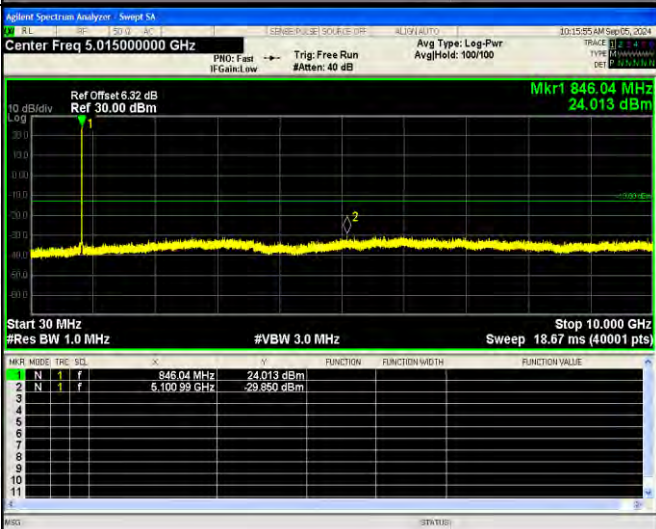
EDGE
Low
Band
Emission



EDGE
High
Band
Emission



For Band V

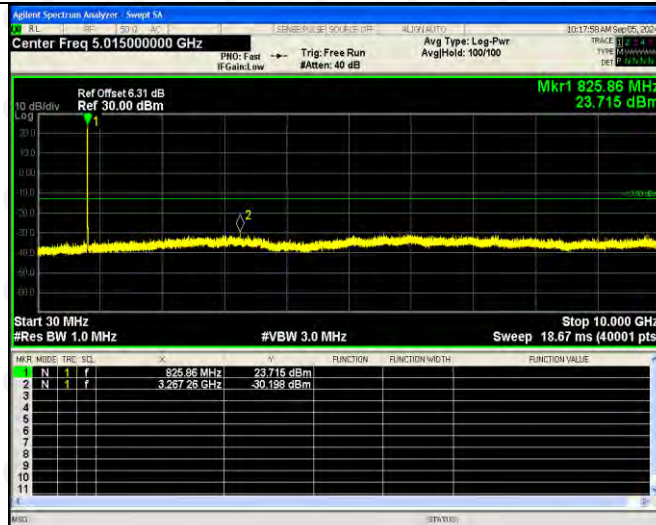
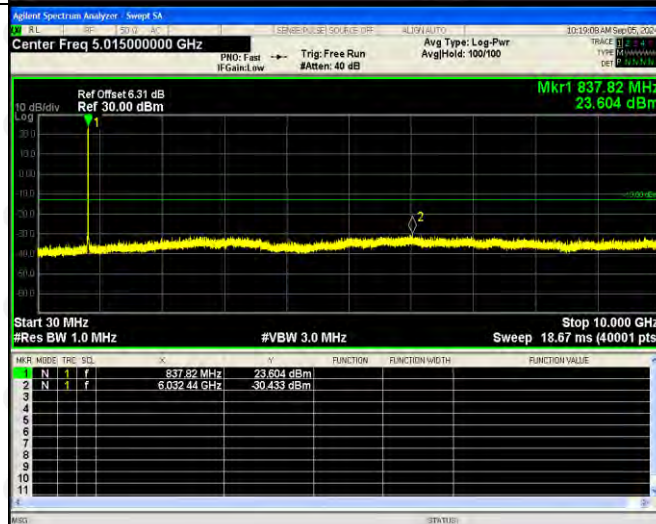
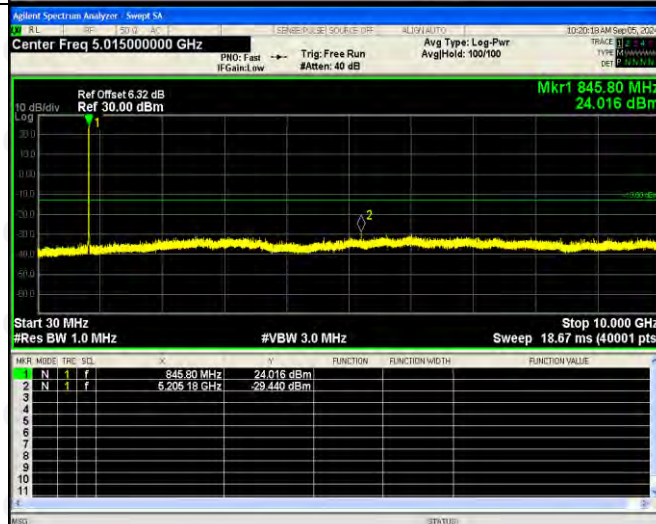
WCDMA Low Channel	
WCDMA Middle Channel	
WCDMA High Channel	

WCDMA
Low
Band
Spurious
Emission



WCDMA
High
Band
Spurious
Emission



HSDPA
Low
Channel

HSDPA
Middle
Channel

HSDPA
High
Channel


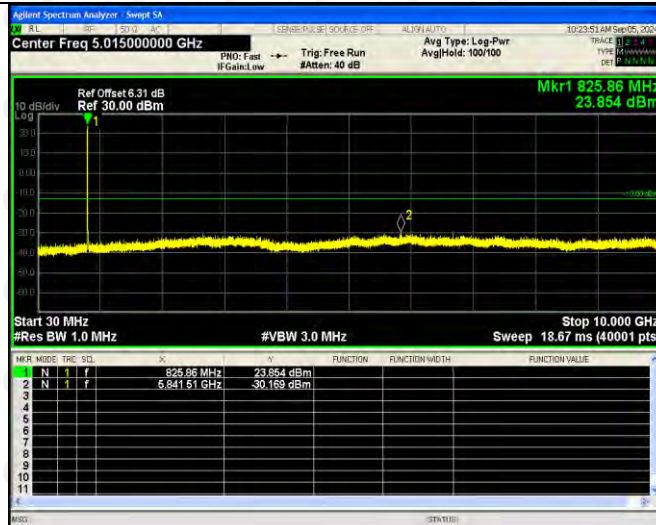
HSDPA
Low
Band
Spurious
Emission



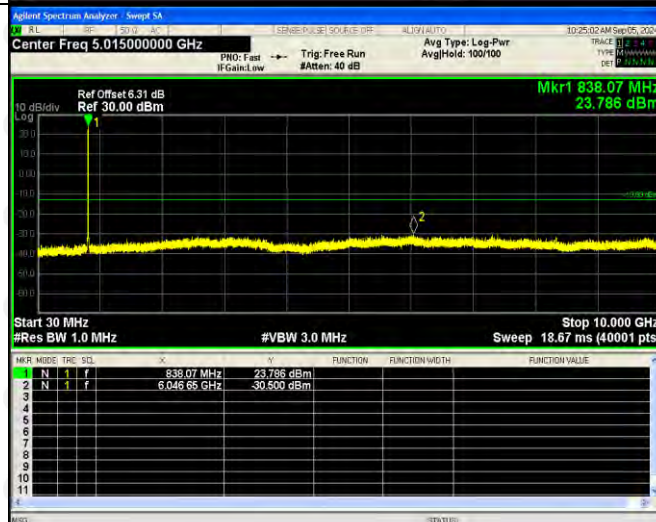
HSDPA
High
Band
Spurious
Emission



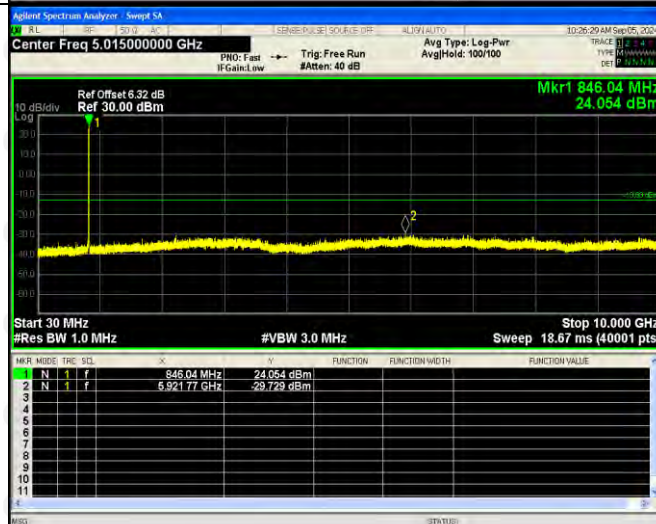
HSUPA
Low
Channel



HSUPA
Middle
Channel



HSUPA
High
Channel



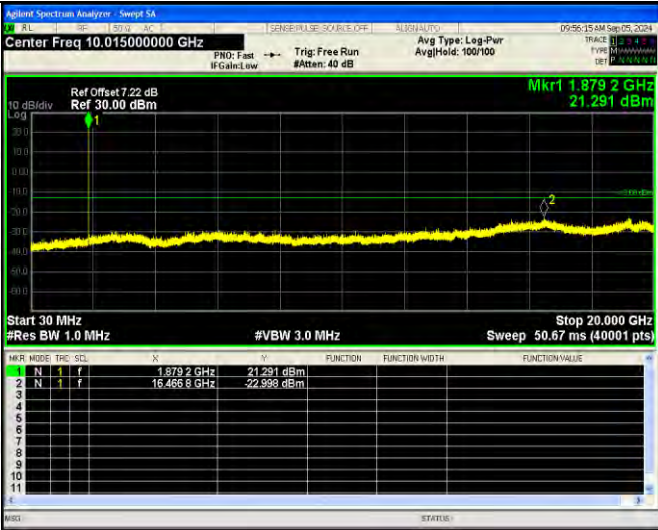
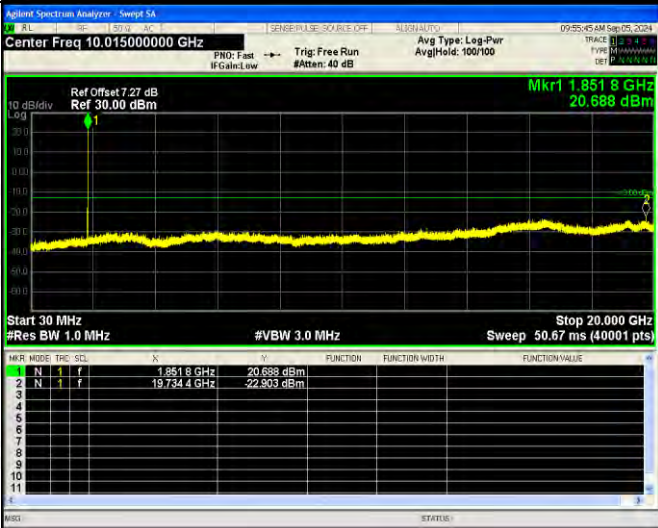
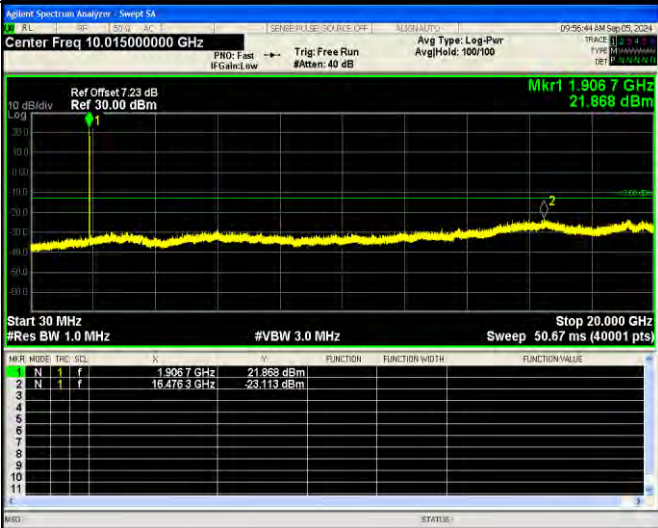
HSUPA
Low
Band
Spurious
Emission



HSUPA
High
Band
Spurious
Emission



For Band II

WCDMA Low Channel		
WCDMA Middle Channel		
WCDMA High Channel		

WCDMA
Low
Band
Spurious
Emission



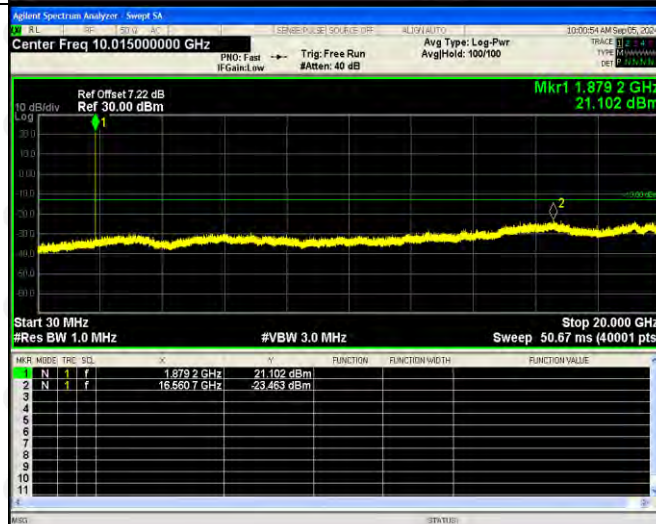
WCDMA
High
Band
Spurious
Emission



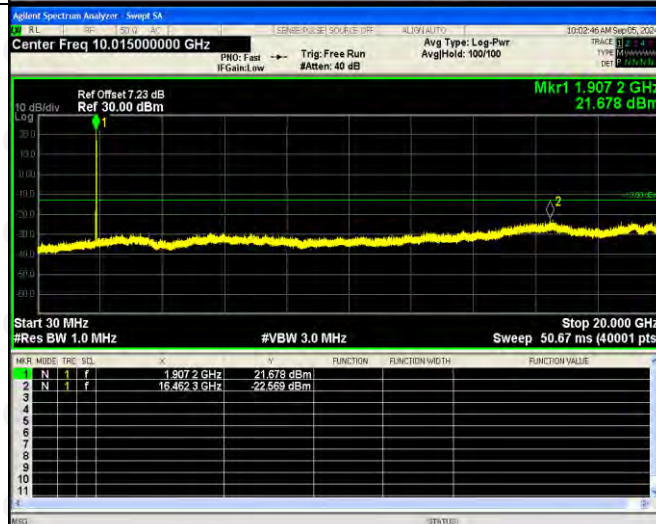
HSDPA
Low
Channel



HSDPA
Middle
Channel



HSDPA
High
Channel



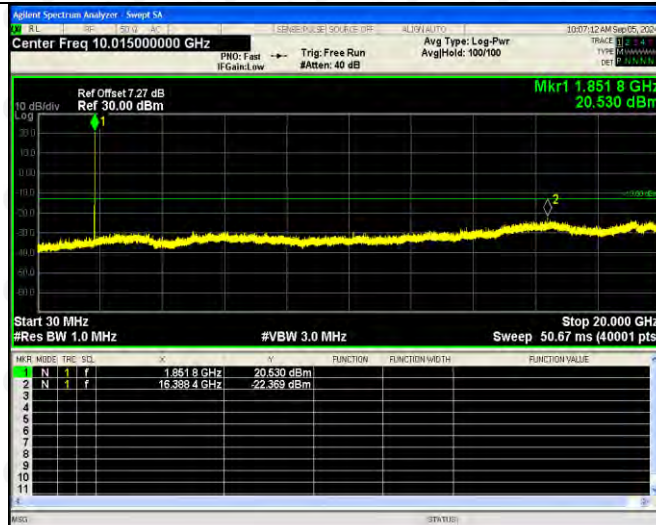
HSDPA
Low
Band
Spurious
Emission



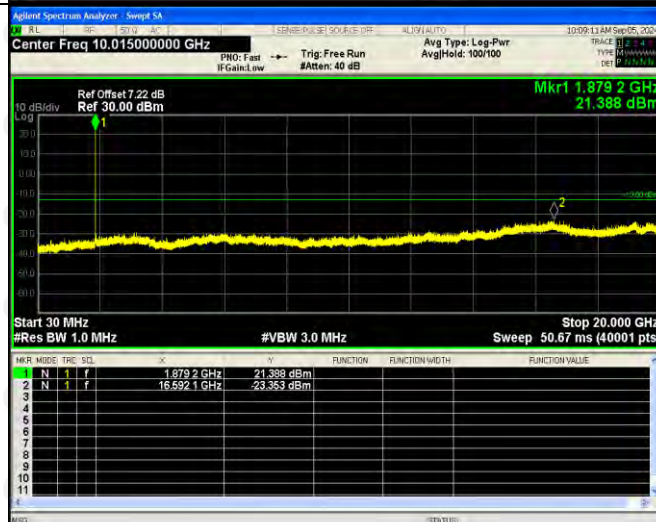
HSDPA
High
Band
Spurious
Emission



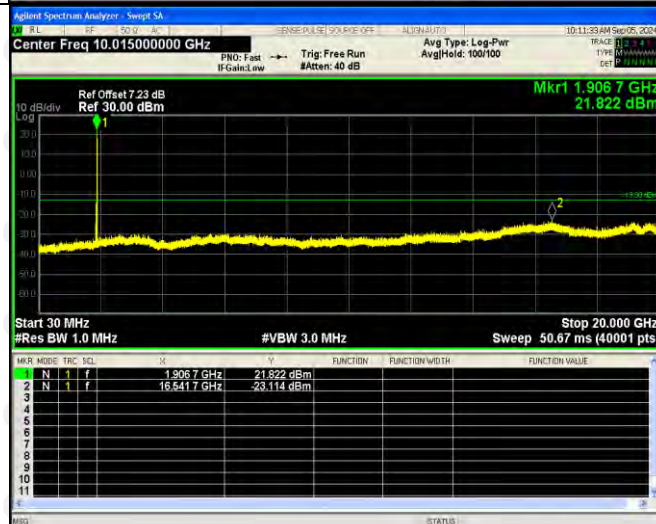
HSUPA
Low
Channel



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	DC 3.85V

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)						
46.26	-72.01	3.9	-68.11	-13	-55.11	H
1639.56	-57.61	4.83	-52.78	-13	-39.78	H
2466.85	-52.26	8.08	-44.18	-13	-31.18	H
45.22	-68.45	4.02	-64.43	-13	-51.43	V
1642.63	-56.49	4.48	-52.01	-13	-39.01	V
2471.86	-56.47	8.2	-48.27	-13	-35.27	V
Middle Channel (836.6MHz)						
42.04	-74.55	3.84	-70.71	-13	-57.71	H
1669.32	-53.06	4.62	-48.44	-13	-35.44	H
2506.81	-55.25	8.25	-47.00	-13	-34.00	H
44.58	-65.34	4.25	-61.09	-13	-48.09	V
1663.69	-51.96	4.54	-47.42	-13	-34.42	V
2499.88	-47.25	8.35	-38.90	-13	-29.75	V
High Channel (848.8MHz)						
38.04	-70.05	4.22	-74.27	-13	-61.27	H
1693.60	-56.52	4.87	-61.39	-13	-48.39	H
2538.11	-52.89	8.38	-61.27	-13	-48.27	H
44.06	-69.16	4.02	-73.18	-13	-60.18	V
1691.31	-48.74	4.56	-53.30	-13	-40.30	V
2539.59	-47.34	8.41	-55.75	-13	-42.75	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)						
39.63	-75.01	4.34	-70.67	-13	-57.67	H
3692.05	-52.14	10.54	-41.60	-13	-28.60	H
5543.96	-55.65	13.37	-42.28	-13	-29.28	H
40.59	-65.79	4.34	-61.45	-13	-48.45	V
3697.40	-49.86	10.54	-39.32	-13	-26.32	V
5550.54	-55.63	13.37	-42.26	-13	-29.26	V
Middle Channel (1880MHz)						
44.24	-69.21	4.02	-65.19	-13	-52.19	H
3754.12	-51.69	10.71	-40.98	-13	-27.98	H
5639.04	-60.65	13.73	-46.92	-13	-33.92	H
44.51	-74.11	4.14	-69.97	-13	-56.97	V
3757.68	-57.56	10.22	-47.34	-13	-34.34	V
5632.12	-56.42	13.16	-43.26	-13	-30.26	V
High Channel (1909.8MHz)						
44.78	-67.24	4.02	-63.22	-13	-50.22	H
3811.54	-60.83	4.9	-55.93	-13	-42.93	H
5723.30	-50.35	8.09	-42.26	-13	-29.26	H
36.73	-56.33	4.25	-52.08	-13	-39.08	V
3810.01	-59.76	4.93	-54.83	-13	-41.83	V
5725.47	-62.41	8.43	-53.98	-13	-40.98	V

For Band 5 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (826.4MHz)						
40.08	-73.77	3.91	-69.86	-13	-56.86	H
1651.64	-49.99	10.56	-39.43	-13	-26.43	H
2470.32	-57.60	13.5	-44.10	-13	-31.10	H
40.85	-74.73	3.93	-70.80	-13	-57.80	V
1643.50	-52.36	10.41	-41.95	-13	-28.95	V
2473.26	-57.65	13.16	-44.49	-13	-31.49	V
Middle Channel (836.6MHz)						
44.99	-73.37	4.02	-69.35	-13	-56.35	H
1672.31	-61.72	4.66	-57.06	-13	-44.06	H
2506.80	-45.93	8.34	-37.59	-13	-24.59	H
39.19	-56.83	4.17	-52.66	-13	-39.66	V
1664.93	-59.74	4.94	-54.80	-13	-41.80	V
2505.06	-60.46	8.19	-52.27	-13	-39.27	V
High Channel (846.6MHz)						
36.72	-66.72	3.87	-62.85	-13	-49.85	H
1686.80	-58.77	4.89	-53.88	-13	-40.88	H
2533.72	-42.16	8.42	-33.74	-13	-20.74	H
42.54	-62.55	3.95	-58.60	-13	-45.60	V
1693.12	-58.81	4.99	-53.82	-13	-40.82	V
2538.71	-64.48	8.12	-56.36	-13	-43.36	V

For Band 2 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1852.4MHz)						
39.92	-74.50	4.22	-70.28	-13	-57.28	H
1650.87	-57.26	10.7	-46.56	-13	-33.56	H
2471.86	-59.51	13.73	-45.78	-13	-32.78	H
40.84	-69.24	3.93	-65.31	-13	-52.31	V
1649.14	-50.26	10.09	-40.17	-13	-27.17	V
2470.18	-58.06	13.11	-44.95	-13	-31.95	V
Middle Channel (1880MHz)						
44.24	-73.18	4.26	-68.92	-13	-55.92	H
1667.97	-59.23	4.76	-54.47	-13	-41.47	H
2502.74	-41.88	8.37	-33.51	-13	-20.51	H
37.80	-54.69	3.96	-50.73	-13	-37.73	V
1669.69	-57.03	4.63	-52.40	-13	-39.40	V
2501.67	-61.85	8.1	-53.75	-13	-40.75	V
High Channel (1907.6MHz)						
45.81	-70.45	4.26	-66.19	-13	-53.19	H
1686.59	-57.94	4.76	-53.18	-13	-40.18	H
2535.19	-49.36	8.37	-40.99	-13	-27.99	H
43.67	-54.52	3.96	-50.56	-13	-37.56	V
1691.45	-59.87	4.63	-55.24	-13	-42.24	V
2537.23	-65.12	8.1	-57.02	-13	-44.02	V

Note: Result=Reading+ Correct, Margin= Result- Limit

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in 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	8.82	0.01054
40	NV	9.61	0.01149
30	NV	9.14	0.01093
20	NV	9.80	0.01171
10	NV	10.02	0.01198
0	NV	10.02	0.01198
-10	NV	10.55	0.01261
-20	NV	10.93	0.01306
-30	NV	11.05	0.01320

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	12.33	0.00656
40	NV	12.23	0.00651
30	NV	12.59	0.00670
20	NV	12.64	0.00672
10	NV	13.50	0.00718
0	NV	13.12	0.00698
-10	NV	13.86	0.00737
-20	NV	13.73	0.00730
-30	NV	14.23	0.00757

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	9.21	0.01101
40	NV	9.09	0.01087
30	NV	9.25	0.01106
20	NV	9.82	0.01173
10	NV	9.76	0.01167
0	NV	10.21	0.01221
-10	NV	10.17	0.01216
-20	NV	10.85	0.01297
-30	NV	11.09	0.01326

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	12.57	0.00669
40	NV	12.34	0.00656
30	NV	12.40	0.00660
20	NV	12.97	0.00690
10	NV	13.47	0.00716
0	NV	13.19	0.00702
-10	NV	13.99	0.00744
-20	NV	14.08	0.00749
-30	NV	14.33	0.00762

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	10.97	0.01311
40	NV	11.55	0.01381
30	NV	11.46	0.01370
20	NV	12.02	0.01437
10	NV	11.62	0.01388
0	NV	11.49	0.01374
-10	NV	11.64	0.01391
-20	NV	12.26	0.01466
-30	NV	13.26	0.01585

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	-10.33	-0.00549
40	NV	-9.50	-0.00505
30	NV	-9.67	-0.00515
20	NV	-9.74	-0.00518
10	NV	-9.01	-0.00479
0	NV	-8.93	-0.00475
-10	NV	-8.84	-0.00470
-20	NV	-8.18	-0.00435
-30	NV	-8.49	-0.00452

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	-0.25	-0.00030
40	NV	0.35	0.00042
30	NV	0.21	0.00026
20	NV	0.40	0.00048
10	NV	0.96	0.00115
0	NV	0.69	0.00082
-10	NV	1.28	0.00153
-20	NV	0.77	0.00093
-30	NV	1.53	0.00183

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	-0.32	-0.00017
40	NV	0.10	0.00005
30	NV	0.48	0.00026
20	NV	0.36	0.00019
10	NV	0.34	0.00018
0	NV	0.66	0.00035
-10	NV	1.16	0.00062
-20	NV	1.66	0.00088
-30	NV	1.87	0.00099

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	-0.00021
40	NV	-0.43	-0.00052
30	NV	0.24	0.00029
20	NV	0.53	0.00064
10	NV	0.64	0.00076
0	NV	0.63	0.00075
-10	NV	1.37	0.00164
-20	NV	1.48	0.00176
-30	NV	2.16	0.00258

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	4.87	0.00259
40	NV	5.46	0.00291
30	NV	5.61	0.00298
20	NV	5.71	0.00304
10	NV	6.23	0.00331
0	NV	6.27	0.00334
-10	NV	6.91	0.00368
-20	NV	7.38	0.00393
-30	NV	2.12	0.00113

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	0.64	0.00077
40	NV	0.90	0.00108
30	NV	0.98	0.00117
20	NV	1.12	0.00134
10	NV	0.85	0.00102
0	NV	1.58	0.00189
-10	NV	1.52	0.00182
-20	NV	2.37	0.00283
-30	NV	1.98	0.00237

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	6.65	0.00354
40	NV	6.81	0.00362
30	NV	7.43	0.00395
20	NV	7.39	0.00393
10	NV	7.72	0.00411
0	NV	8.39	0.00446
-10	NV	8.72	0.00464
-20	NV	9.25	0.00492
-30	NV	1.82	0.00097

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	10.93	0.01306
	NV	11.23	0.01342
	HV	11.29	0.01349
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	14.50	0.00771
	NV	14.34	0.00763
	HV	14.36	0.00764

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	11.10	0.01327
	NV	11.23	0.01342
	HV	11.59	0.01385
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	14.94	0.00795
	NV	14.61	0.00777
	HV	15.05	0.00800

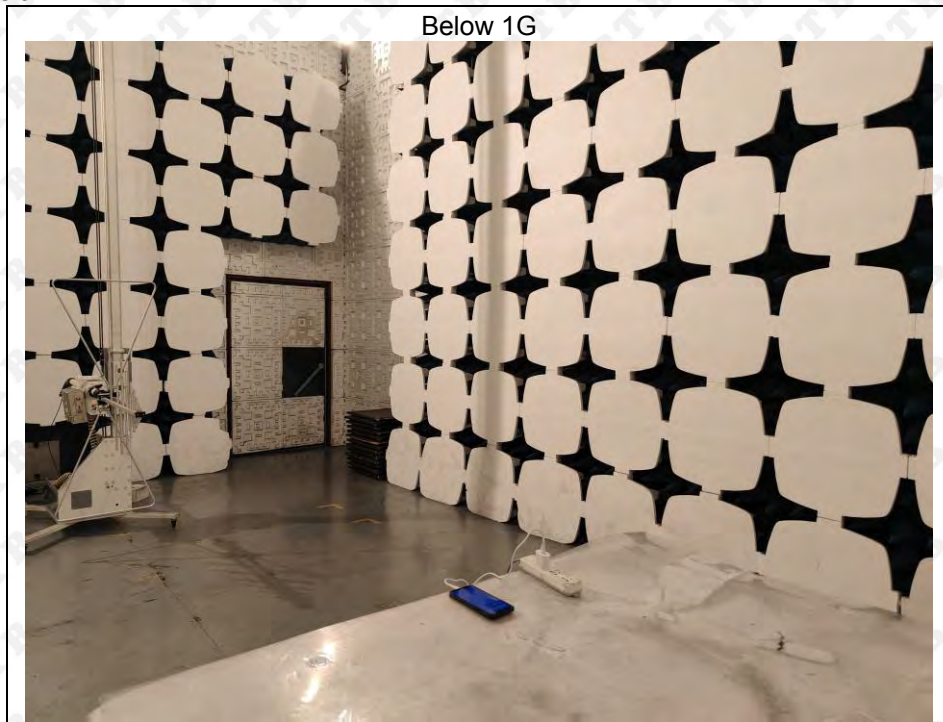
Reference Frequency(Middle Channel): EDGE 836.6MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	13.14	0.01571
	NV	12.66	0.01513
	HV	12.93	0.01545
Reference Frequency(Middle Channel): EDGE 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	LV	-7.64	-0.00406
	NV	-7.33	-0.00390
	HV	-7.46	-0.00397
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	1.14	0.00137
	NV	1.56	0.00186
	HV	1.77	0.00212
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	0.90	0.00108
	NV	0.29	0.00035
	HV	1.01	0.00121
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	1.87	0.00099
	NV	2.68	0.00143
	HV	2.60	0.00138

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	1.84	0.00106
	NV	2.18	0.00261
	HV	2.58	0.00309
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	6.59	0.00380
	NV	6.53	0.00780
	HV	6.64	0.00794
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	6.46	0.00344
	NV	6.50	0.00346
	HV	7.37	0.00392
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	1.99	0.00115
	NV	2.51	0.00300
	HV	3.41	0.00407
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	5.19	0.00300
	NV	6.10	0.00730
	HV	6.66	0.00796

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	9.29	0.00494
	NV	9.20	0.00489
	HV	9.70	0.00516

12. EUT TEST PHOTO

Radiated Emission



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