

FCC Test Report - GSM 850

Report ID: 03360-RF-00018

FCC ID : AZ489FT7078

Tested Model : LEX L10i

Test Date : Dec 4, 2015 ~ Feb 24, 2016

Issued Date : 2 Mar, 2016

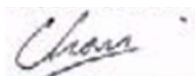
Applicant : Motorola Solution Malaysia Sdn Bhd

Address : Innoplex Plot 2A, Medan Bayan lepas, Mukim 12, S.W.D. 11900 Bayan Lepas, Penang, Malaysia

Testing Lab : Motorola Penang Adv. Comm. Laboratory

Lab Address : Motorola Solutions Malaysia Sdn Bhd, Plot 2, Bayan Lepas Technoplex Industrial Park, Mukim 12 S.W.D, 11900 Bayan Lepas, Penang, Malaysia.

FCC Registration: 772092



Prepare By: _____, Date: 2 Mar, 2016
Chan Choon Keet / Engineer / +6048503678 / choonkeet.chan@motorolasolutions.com



Approved By: _____, Date: 2 Mar, 2016
Alex Goh / Senior Staff Engineer / +6042527292 / aikhong.goh@motorolasolutions.com

Table of Contents

1.0.	Summary of Test Results	3
1.1.	Measurement Uncertainty	3
1.2.	Equipment List	4
1.3.	General Information	4
1.4.	Channel number and frequency info	5
1.5.	Test Mode Applicability and Tested Channel Detail	6
1.6.	Conducted RF Output Power	7
1.6.1.	Test Setup.....	7
1.6.2.	Conducted RF Output Power – GSM 850 (824-849MHz)	7
1.7.	Peak-to-Average Power Ratio	8
1.7.1.	Test Setup.....	8
1.7.2.	Test Limit.....	8
1.7.3.	Peak To Average Power Ratio – GSM 850 (824-849MHz)	8
1.8.	Occupied Bandwidth	9
1.8.1.	Test Setup.....	9
1.8.2.	Test Limit.....	9
1.8.3.	Occupied Bandwidth - GSM 850 (824-849MHz)	9
1.9.	Frequency Stability	11
1.9.1.	Test Setup.....	11
1.9.2.	Test Limit.....	11
1.9.3.	Frequency Stability - GSM 850 (824-849MHz)	11
1.10.	Band Edge Conducted Spurious Emission	13
1.10.1.	Test Setup.....	13
1.10.2.	Test Limit	13
1.10.3.	Band Edge Conducted Spurious Emission - GSM 850 (824-849MHz).....	13
1.11.	Conducted Spurious Emission	15
1.11.1.	Test Setup.....	15
1.11.2.	Test Limit	15
1.11.3.	Conducted Spurious Emission - GSM 850 (824-849MHz)	15
1.12.	Radiated Spurious Emission.....	19
1.12.1.	Test Setup.....	19
1.12.2.	Test Limit	19
1.12.3.	Radiated Spurious Emission – GSM 850 (824-849MHz).....	20
1.13.	Effective Radiated Power (ERP).....	26
1.13.1.	Test Setup.....	26
1.13.2.	Test Limit	26
1.13.3.	Effective Radiated Power (ERP) – GSM 850 (824-849MHz).....	27

1.0. Summary of Test Results

FCC Clause	Test Item	Results	Remark
2.1046 22.913(a)(2)	Conducted RF Output Power	PASS	Meet the requirement of limit
--	Peak-to-Average Power Ratio	PASS	Meet the requirement of limit
2.1049 22.917	Occupied Bandwidth (26dBc, 99%)	PASS	Meet the requirement of limit
2.1055 22.355	Frequency Stability	PASS	Meet the requirement of limit
2.1051 22.917	Band Edge Conducted Spurious Emission	PASS	Meet the requirement of limit
2.1051 22.917	Conducted Spurious Emissions	PASS	Meet the requirement of limit
22.913(a)(2)	Effective Radiated Power (ERP)	PASS	Meet the requirement of limit
2.1053 22.917	Radiated Spurious Emissions	PASS	Meet the requirement of limit

1.1. Measurement Uncertainty

Measurement	Frequency	Expanded Uncertainty (k=1.96) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	5.01
	200MHz ~ 1000MHz	5.01
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.01
	18GHz ~ 25GHz	5.01

1.2. Equipment List

Description	Model	Serial Number	Calibration Date	Calibration Due Date
POWER SUPPLY	6623A	2916A01428	3-Apr-15	3-Apr-16
Wideband Radio Communication Tester	CMW500	154550	23-Jun-15	23-Jun-16
SIGNAL ANALYZER	FSV40	101431	29-Apr-15	29-Apr-16
CHAMBER	SH-641	92002651	15-Mar-15	15-Mar-16
DRG HORN FREQ.	SAS-571	566	2-Aug-15	2-Aug-16
PREAMPLIFIER	PAM-0118P	361	NA	NA
BILOG ANTENNA	CBL6112B	2964	23-Apr-14	23-Apr-16
POWER SUPPLY	6031A	3121A02341	12-Jun-14	12-Jun-16
EMI TEST RECEIVER	ESIB26	100336	17-Jun-15	17-Jun-16
MICROWAVE SIGNAL GENERATOR	SMP04	100131	25-Jun-15	25-Jun-16
SYSTEM CONTROLLER	SC104V	050806-1	NA	NA
TURNTABLE FLUSH MOUNT 2M	FM2011	NA	NA	NA
ANTENNA POSITIONING TOWER	TLT2	NA	NA	NA
TEST RECEIVER	ESIB26	827769/009	16-Jun-15	16-Jun-16
SIGNAL ANALYZER	FSV40	101103	25-Jun-15	25-Jun-16
5m Semi-anechoic Chamber	S800-HX	J2308	29-Apr-15	29-Apr-16
BILOG ANTENNA	CBL6112B	2863	24-Jul-15	24-Jul-16
DATA LOGGER	TM320	12249289	12-Apr-15	12-Apr-16
BILOG ANTENNA	CBL6112D	25516	23-Apr-15	23-Apr-16

1.3. General Information

General Description of EUT

General Description of ECF			
Product	Smart phone		
Brand	Motorola Solutions		
Test Model	LEX L10i		
Power Supply Rating	3.7Vdc (Battery), 5Vdc (Adapter)		
Mode of operation	GSM 850, EDGE850		
Modulation Type	GMSK, 8PSK		
Operating Frequency	GSM 850 EDGE 850	Channel Bandwidth 200kHz	824.2MHz~848.8MHz
Max. ERP Power	GSM 850	32.87dBm	
	EDGE850	32.62dBm	
Antenna Type	GSM 850	Inverted-L Monopole with -0.4 to -2.2dBi gain	
SW Version	LEXL10-INT-D17		
HW Version	Rev A		

Note:

- The EUT contains following accessory devices and data cable.

Item	Brand	Model or P/N	Specification
Rechargeable Lithium ion battery	MOTOROLA	PMNN4472A	3.7Vdc, 2340mAh, 8.7Wh
Rechargeable Lithium ion battery	MOTOROLA	PMNN4475A	3.7Vdc, 4560mAh, 16.9Wh
ITE Power Supply	MOTOROLA	HKTN4009A	I/P: 100-240Vac, 50-60Hz, 0.2A O/P: 5Vdc, 1.2A

USB cable (CABLE: LEX USB SYNC AND CHARGE)	N/A	CB000262A01	-
Holster	N/A	HKLN4618A	-

Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	Product	Brand	Model No.	Serial No.	FCC ID
1	Wideband Radio Communication Tester	R&S	CMW500	154550	NA

NO.	Signal Cable Description of The above Support Units
1	NA

Note:

1. All power cords of the above support units are non-shielded.
2. Item 1 acted as a communication partner to transfer data.

EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency.

General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 22

KDB 971168 D01 Power Meas License Digital Systems v02r02

ANSI/TIA/-603-D

NOTE: All test items have been performed and recorded as per the above standards.

1.4. Channel number and frequency info

Band	Available Channel Number	Test Channel Number			Test Channel Frequency (MHz)		
		Low Channel	Mid Channel	High Channel	Low Channel	Mid Channel	High Channel
GSM 850	128~251	128	189	251	824.2	836.4	848.8

1.5. Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The Radiated Emission and Effective Radiated Power (ERP) worst case was found when positioned on Z-Plane for GSM 850.

The following channel(s) was (were) selected for the final test as listed below:

GSM 850

Test Item	Available Channel	Tested Channel	Modulation	Mode
Conducted RF Output Power	128~ 251	128, 189, 251	GMSK, 8PSK	All Modes
Peak to Average Power Ratio	128~ 251	128, 189, 251	GMSK, 8PSK	GSM uplink 1 slot, EDGE MCS-9 uplink 1 slot
Occupied Bandwidth	128~ 251	128, 189, 251	GMSK, 8PSK	GSM uplink 1 slot, EDGE MCS-9 uplink 1 slot
Frequency Stability	128~ 251	189	GMSK, 8PSK	GSM uplink 1 slot, EDGE MCS-9 uplink 1 slot
Band Edge Conducted Spurious Emission	128~ 251	128, 251	GMSK, 8PSK	GSM uplink 1 slot, EDGE MCS-9 uplink 1 slot
Conducted Spurious Emission	128~ 251	128, 189, 251	GMSK, 8PSK	GSM uplink 1 slot, EDGE MCS-9 uplink 1 slot
Radiated Emission	128~ 251	128, 189, 251	GMSK, 8PSK	GSM uplink 1 slot, EDGE MCS-9 uplink 1 slot
Effective Radiated Power (ERP)	128~ 251	128, 189, 251	GMSK, 8PSK	GSM uplink 1 slot, EDGE MCS-9 uplink 1 slot

NOTE:

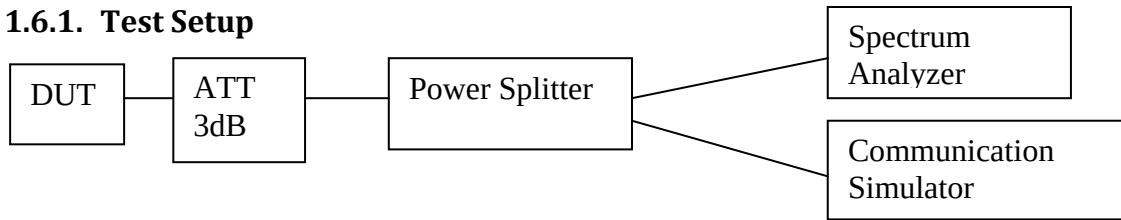
1. The Peak to average ratio, occupied bandwidth, frequency stability, band edge conducted spurious emission, conducted spurious emission, radiated emission and Effective Radiated power (ERP) was performed under GSM uplink 1 slot and Edge MSC-9 uplink 1 slot because this is worst case value (highest power) found in 2 different modulations.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Conducted RF Output Power	25°C, 50% RH	3.7V DC	ckchan
Peak-to-Average Power Ratio	25°C, 50% RH	3.7V DC	ckchan
Occupied Bandwidth	25°C, 50% RH	3.7V DC	ckchan
Frequency Stability	25°C, 50% RH	3.7V DC	ckchan
Band Edge Conducted Spurious Emission	25°C, 50% RH	3.7V DC	ckchan
Conducted Spurious Emission	25°C, 50% RH	3.7V DC	ckchan
Radiated Spurious Emission	25°C, 63.7% RH	3.7V DC	Nazrin/Qawiman
Effective Radiated Power (ERP)	25°C, 63.7% RH	3.7V DC	Nazrin/Qawiman

1.6. Conducted RF Output Power

1.6.1. Test Setup



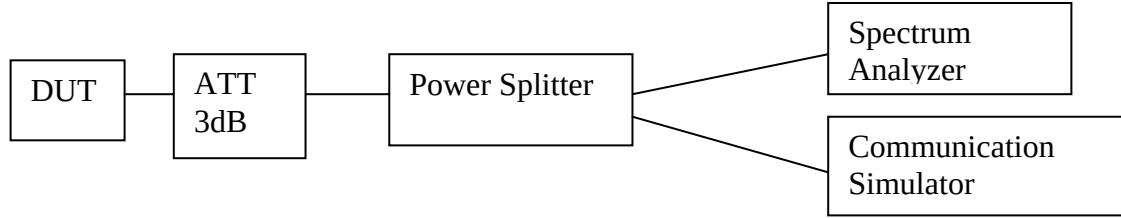
1. The DUT transmitter output port was connected to communication simulator with above setup.
2. Path loss for the measurement included.
3. Set DUT to transmit maximum power through communication simulator
4. All the measurements were done at low, mid, high channel for each band and different modulation.
5. Record the average power into the test report.

1.6.2. Conducted RF Output Power – GSM 850 (824-849MHz)

	Test Mode	Conducted Output Power (dBm)		
		Low CH 128	Mid CH 189	High CH 251
		824.2 MHz	836.4 MHz	848.8 MHz
GSM	Uplink 1 slot	32.612	32.307	32.491
GPRS, CS4	Multislot class 8, uplink 1 slot	32.578	32.310	32.456
	Multislot class 10, uplink 2slot	30.948	30.686	30.821
	Multislot class 11, uplink 3 slot	28.635	28.471	28.541
	Multislot class 12, uplink 4slot	26.644	26.516	26.599
EDGE MCS-9 (8-PSK)	Multislot class 8, uplink 1 slot	27.034	26.953	26.937
	Multislot class 10, uplink 2slot	25.051	24.738	24.789
	Multislot class 11, uplink 3 slot	22.887	22.574	22.685
	Multislot class 12, uplink 4slot	20.724	20.706	20.684

1.7. Peak-to-Average Power Ratio

1.7.1. Test Setup



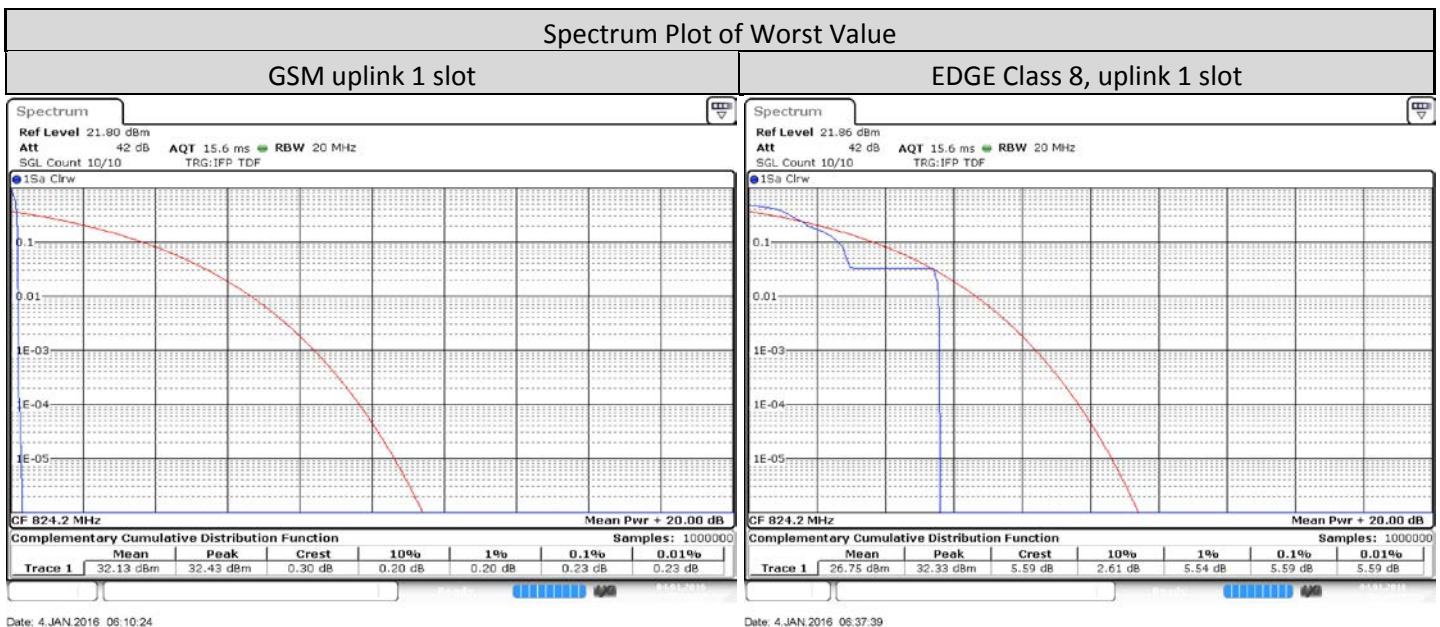
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator
- 4) Set the CCDF (Complementary Cumulative Distribution Function) option in the spectrum analyzer.
- 5) Spectrum Analyzer setting, RBW = 20MHz.
- 6) Recorded the maximum PAR level associated with a probability of 0.1% as Peak to Average Ratio.
- 7) All the measurements were done at low, mid, high channel for each band and different modulation.

1.7.2. Test Limit

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

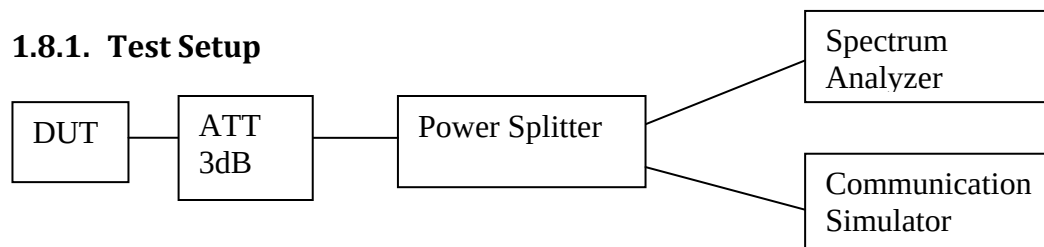
1.7.3. Peak To Average Power Ratio - GSM 850 (824-849MHz)

GSM Band	Channel Number	Tx Frequency (MHz)	Peak To Average (dB)	
			GSM uplink 1 slot	EDGE Class 8, uplink 1 slot
GSM850	Low CH 128	824.2 MHz	0.23	5.59
	Mid CH 189	836.4 MHz	0.20	4.93
	High CH 251	848.8 MHz	0.22	5.07



1.8. Occupied Bandwidth

1.8.1. Test Setup



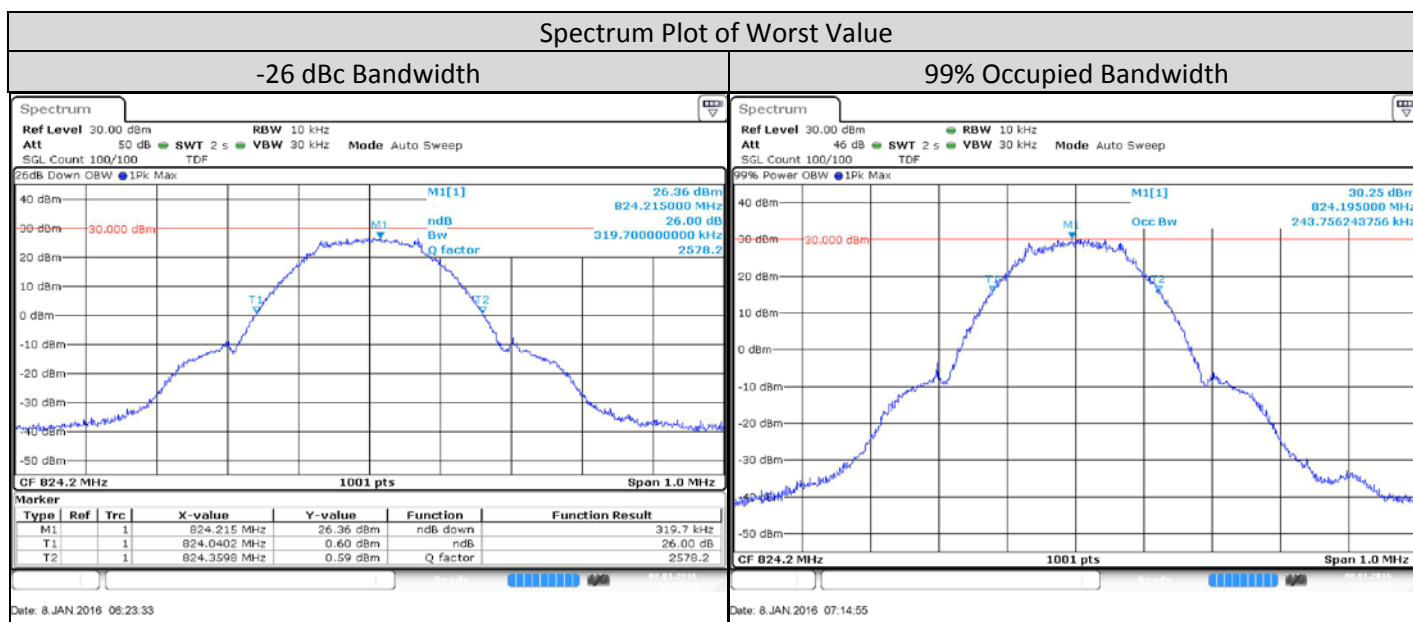
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) For GSM measurement, set DUT to transmit maximum power & full RB size through communication simulator.
- 4) For GSM measurement, set DUT to transmit maximum power through communication simulator.
- 5) Measure & record -26dBc and 99% occupied bandwidth (BW).
- 6) Spectrum Analyzer setting, RBW = 10 kHz, VBW = 30 kHz.
- 7) All the measurement was done at low, mid, high channel for each band and different modulation.

1.8.2. Test Limit

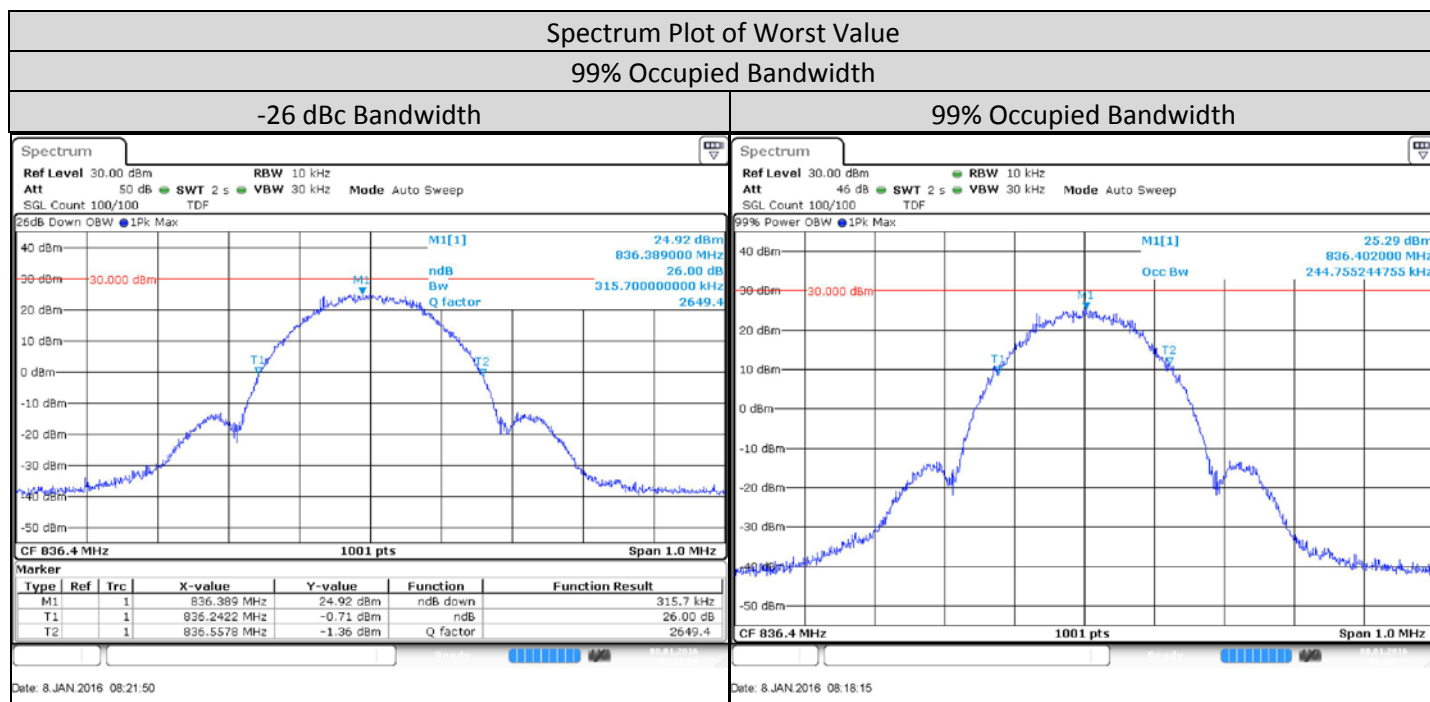
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

1.8.3. Occupied Bandwidth - GSM 850 (824-849MHz)

Mode	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (kHz)	99% Occupied Bandwidth (kHz)
GSM uplink 1 slot	Low CH 128	824.2 MHz	319.700	243.756
	Mid CH 189	836.4 MHz	318.700	243.756
	High CH 251	848.8 MHz	316.700	242.757

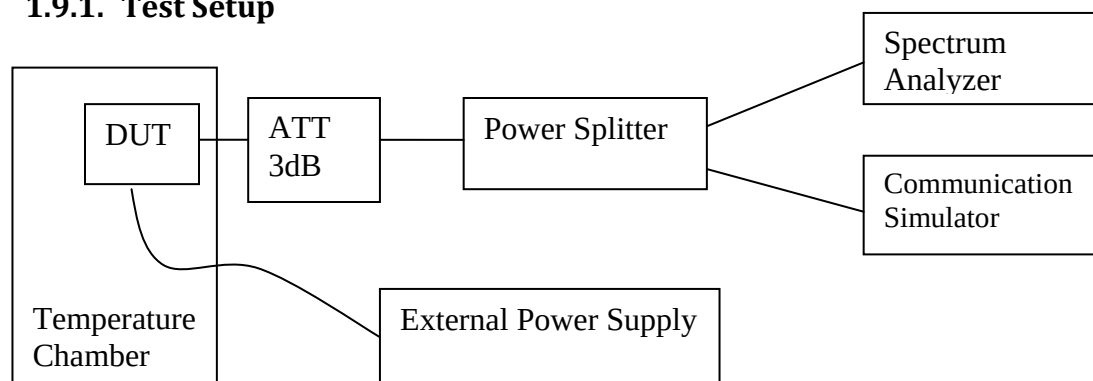


Mode	Channel Number	Tx Frequency (MHz)	-26 dBc Bandwidth (kHz)	99 % Occupied Bandwidth (kHz)
EDGE Class 8, uplink 1 slot	Low CH 128	824.2 MHz	312.700	243.756
	Mid CH 189	836.4 MHz	315.700	244.755
	High CH 251	848.8 MHz	312.700	244.755



1.9. Frequency Stability

1.9.1. Test Setup



- 1) The DUT is placed in the temperature chamber and DUT is power up by external power supply to control the DC input voltage.
- 2) The temperature chamber could control the temperature and humidity and external power supply could control the test voltage range from minimum to maximum operating voltage.
- 3) Measured frequency error from the communication simulator by vary below step :
 - i. Vary temperature of the temperature chamber from -10 ~ 60 deg C (10 deg C / Step)** and set external supply voltage constant at nominal voltage.
 - ii. Vary external supply voltage from minimum to maximum operation voltage support by DUT and set temperature chamber constant at room temp.
- 4) All the measurement was done at mid channel for each band.

1.9.2. Test Limit

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations and ± 1.5 ppm for base stations.

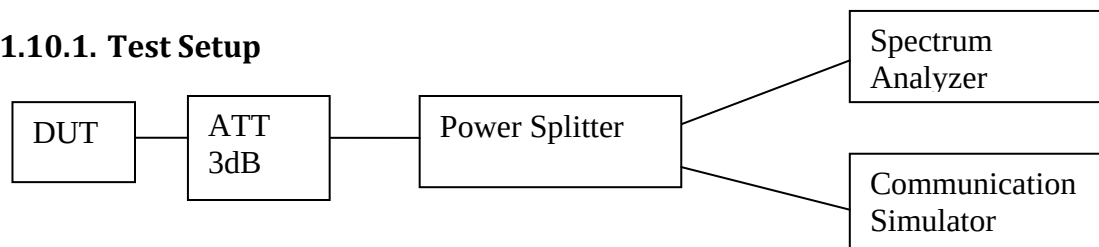
1.9.3. Frequency Stability - GSM 850 (824-849MHz)

Band	Frequency Error VS Temperature		
	Temp (Deg C)	Frequency Error (ppm)	
		GSM uplink 1 slot	EDGE Class 8 uplink 1 slot
GSM 850	60	0.0331	0.0381
	50	0.0325	0.0383
	40	0.0317	0.0405
	30	0.0283	0.0367
	20	0.0266	0.0361
	10	0.0256	0.0338
	0	0.0256	0.0328
	-10	0.0218	0.0285
	-20	0.0215	0.0270
	-30	0.0205	0.0271

Band	Frequency Error VS Voltage		
	Voltage (V)	Frequency Error (ppm)	
		GSM uplink 1 slot	EDGE Class 8 uplink 1 slot
GSM 850	High V	0.0295	0.0334
	Nominal	0.0293	0.0366
	Low V	0.0294	0.0368

1.10. Band Edge Conducted Spurious Emission

1.10.1. Test Setup

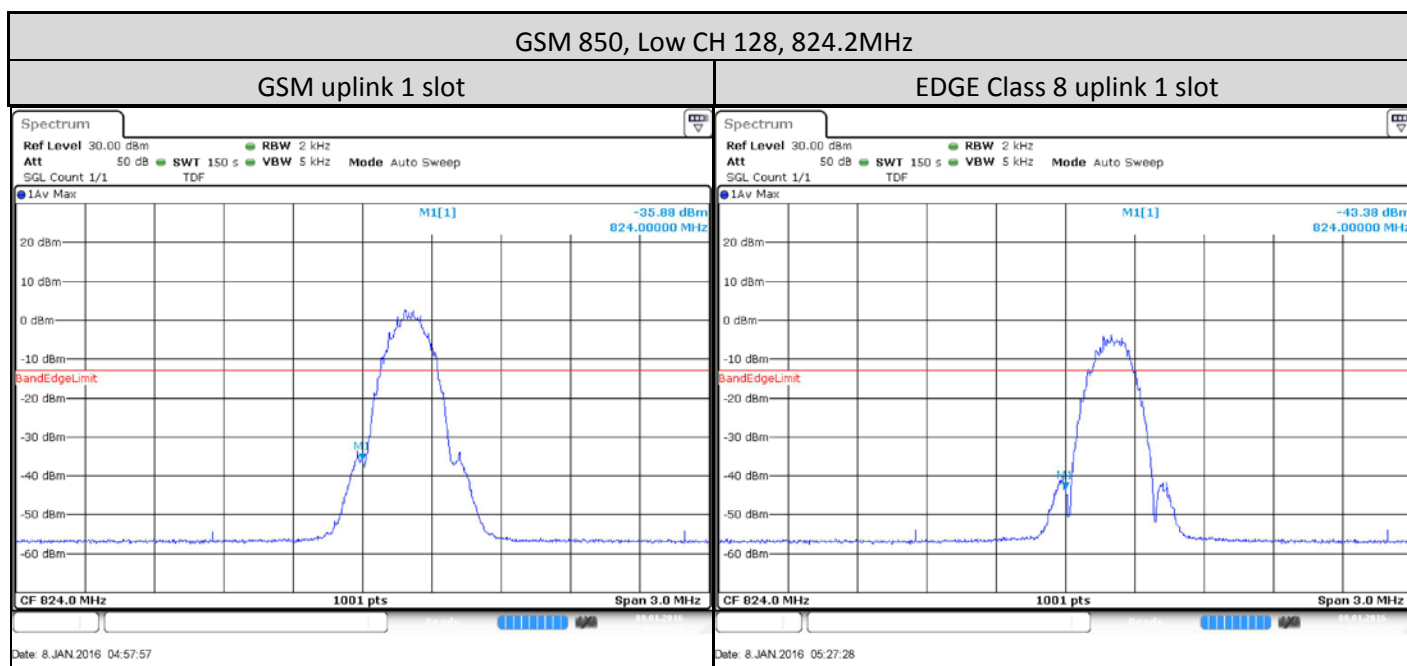


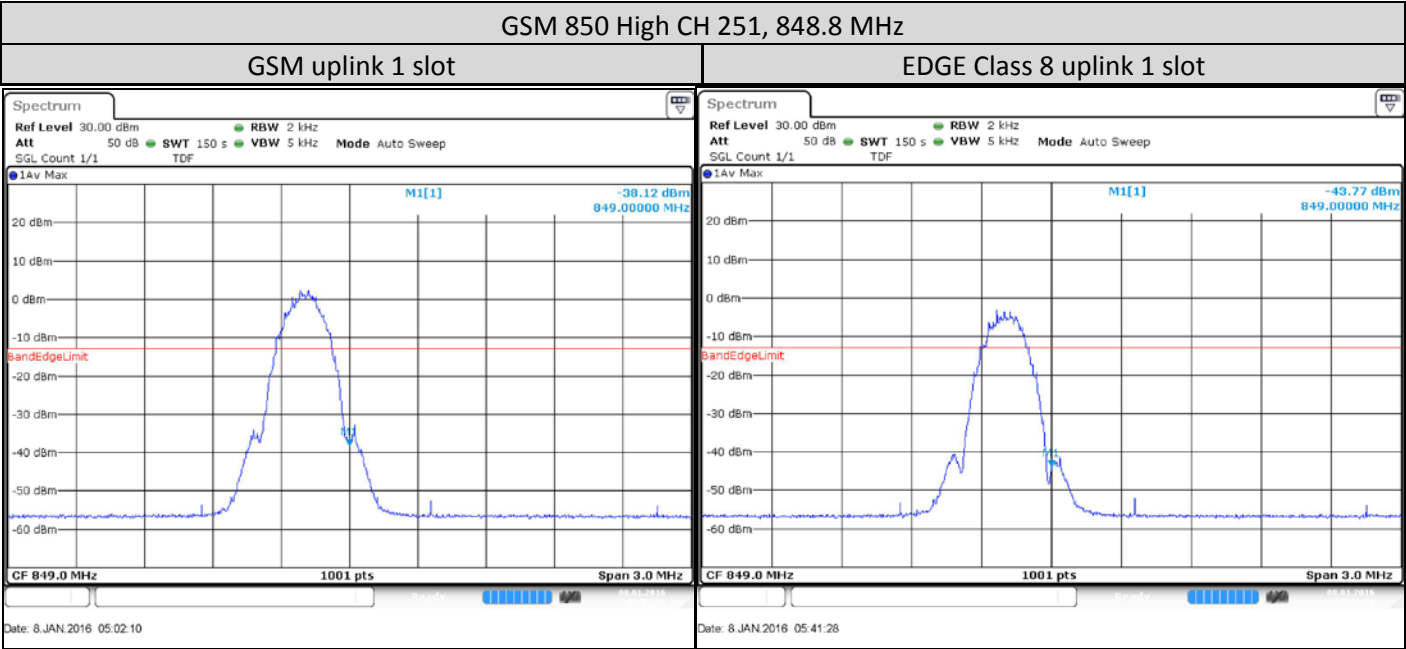
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) The band edges of lowest and highest channels with the highest RF powers were measured.
- 5) The center frequency of spectrum is the band edge frequency, span is 3MHz, RBW is 1~3% of OBW and VBW is 3 times of RBW.
- 6) Record the maximum trace plot into the test report.

1.10.2. Test Limit

FCC: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

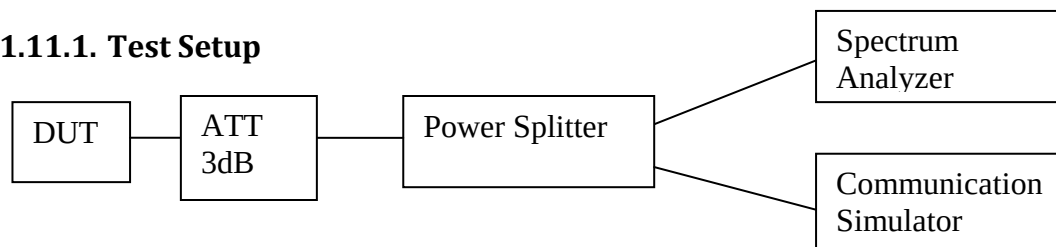
1.10.3. Band Edge Conducted Spurious Emission - GSM 850 (824-849MHz)





1.11. Conducted Spurious Emission

1.11.1. Test Setup

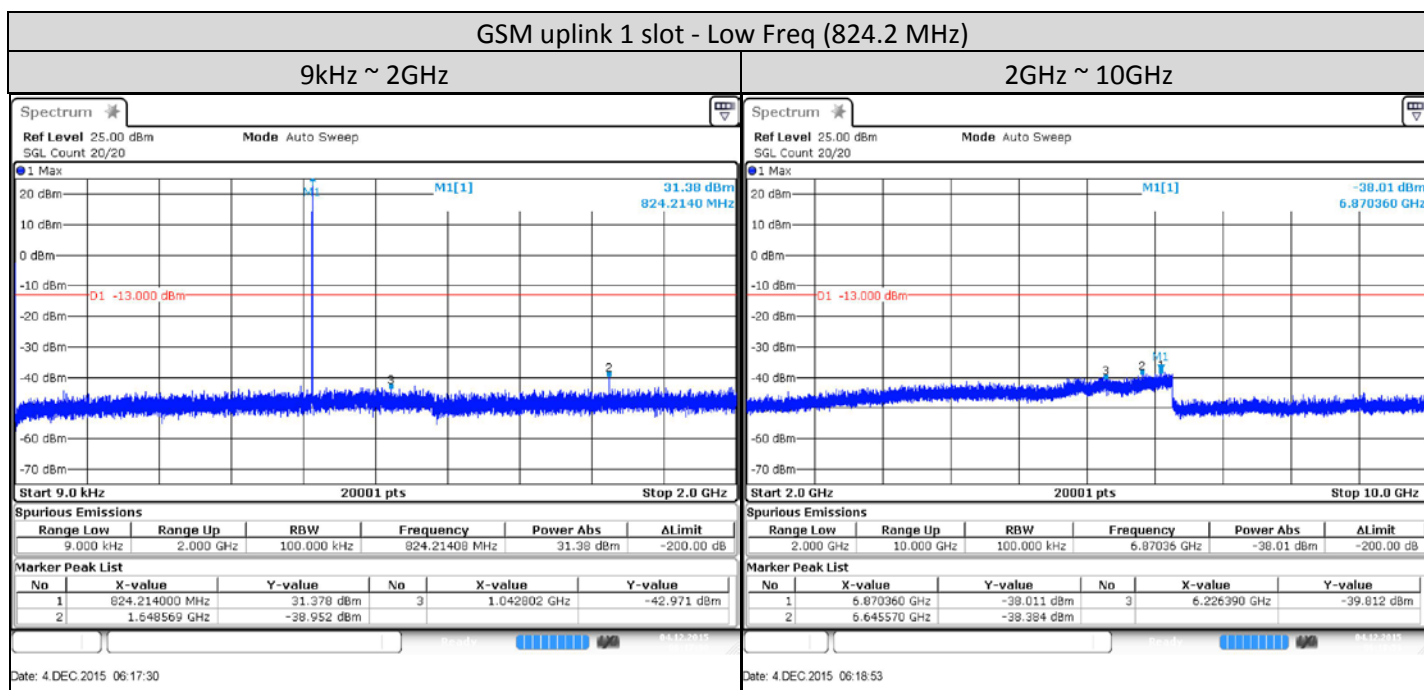


- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) Spectrum Analyzer setting, RBW = 100 kHz, VBW = 300 kHz.
- 5) The spurious emission of lowest, middle and highest channels with the highest RF powers were measured.
- 6) Record the maximum trace plot into the test report.

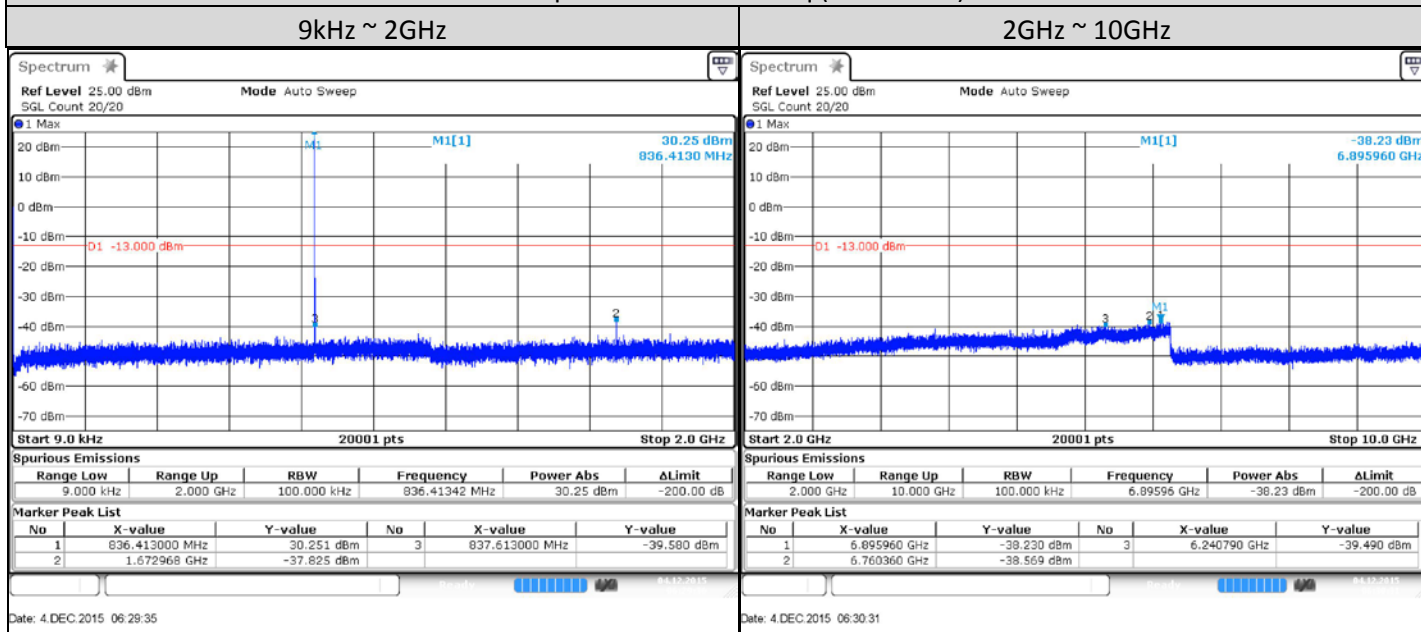
1.11.2. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

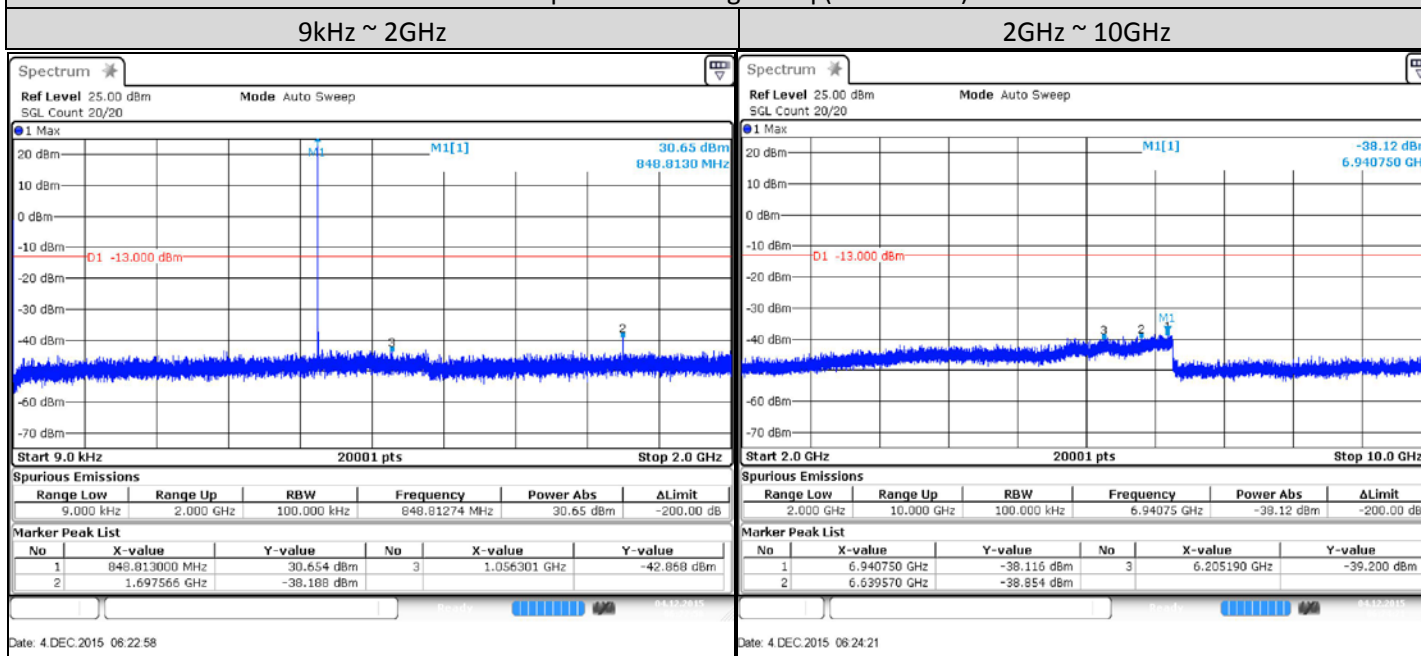
1.11.3. Conducted Spurious Emission - GSM 850 (824-849MHz)

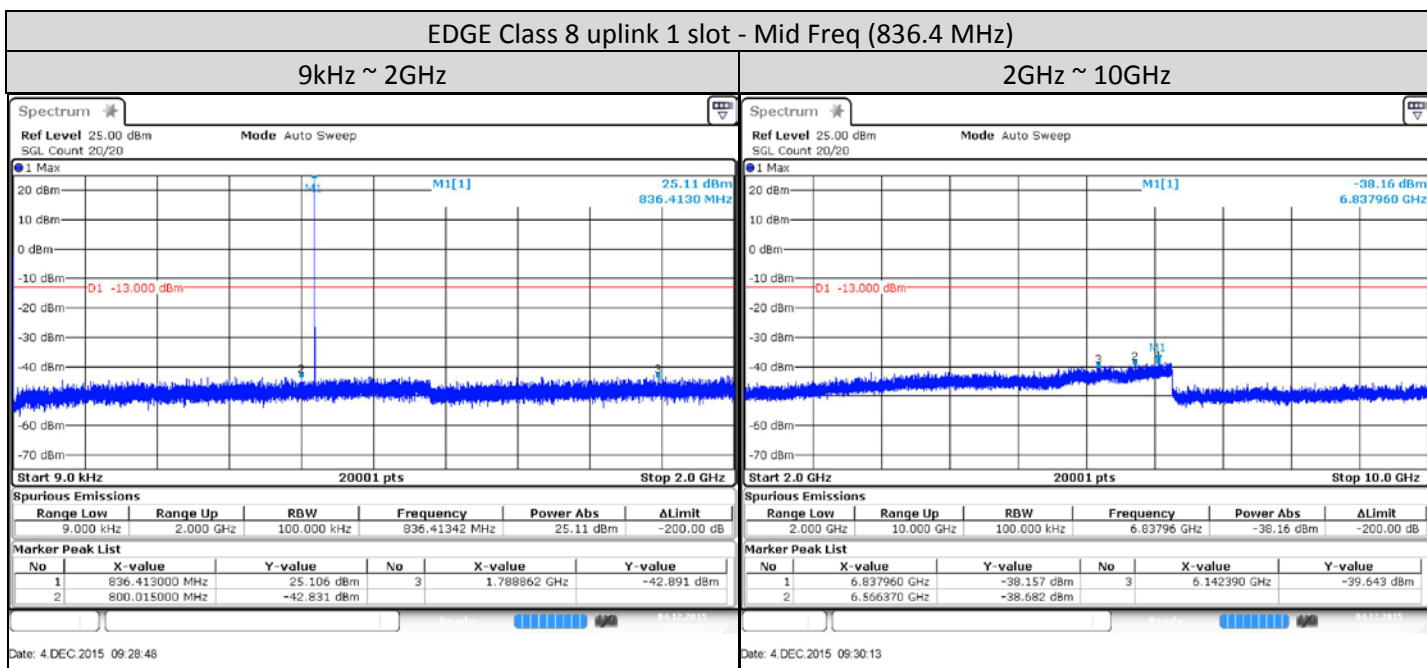
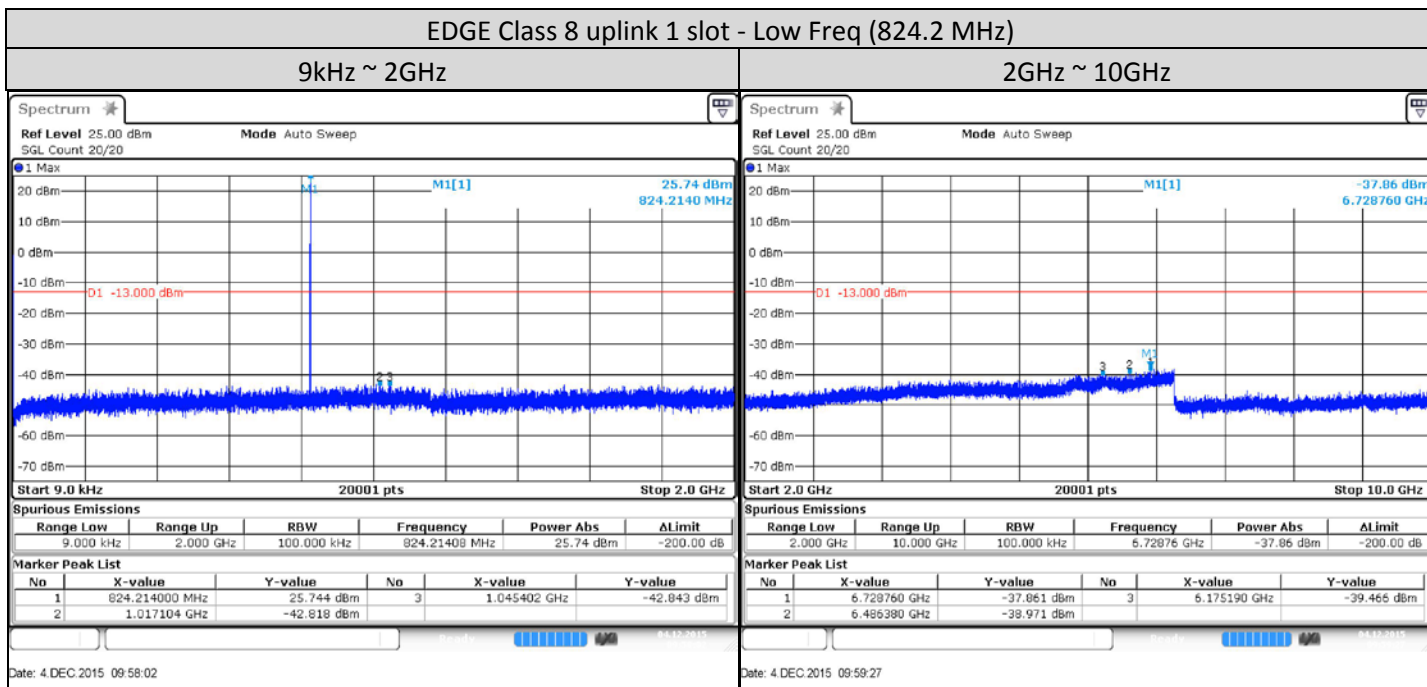


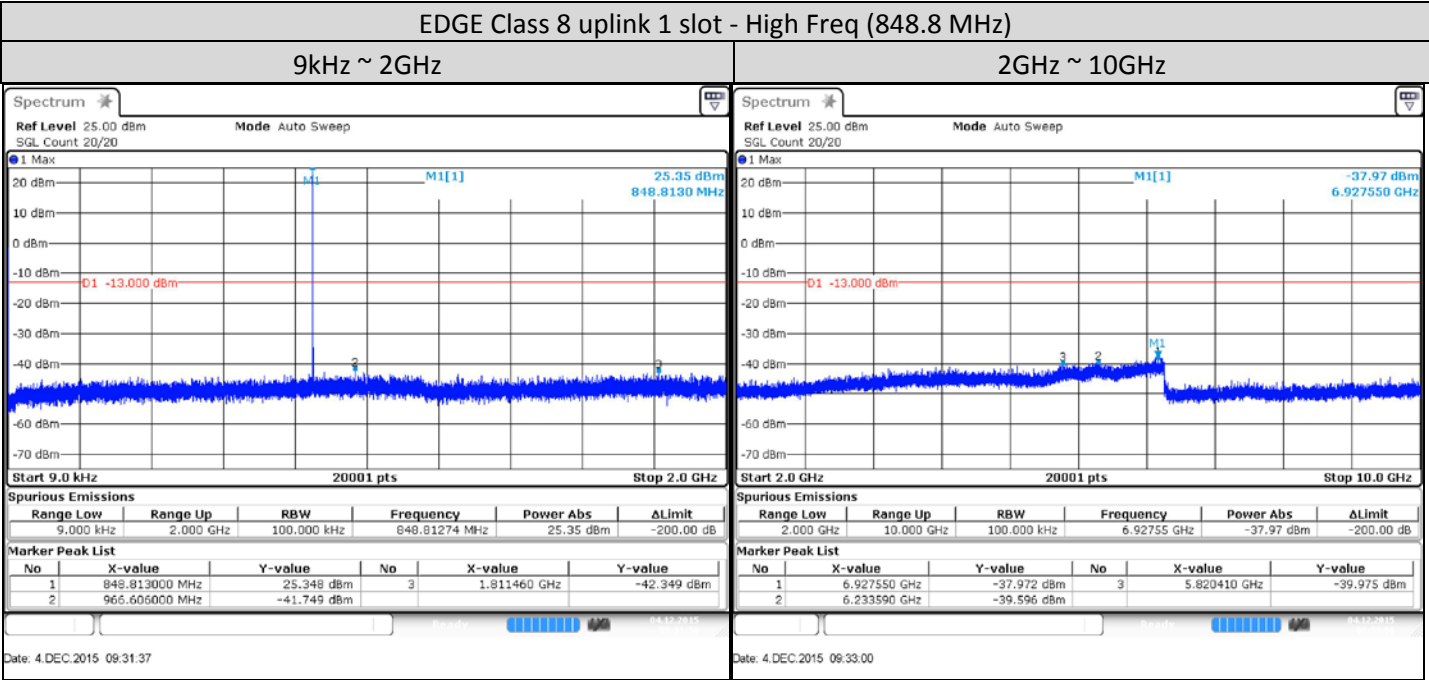
GSM uplink 1 slot - Mid Freq (836.4 MHz)



GSM uplink 1 slot - High Freq (848.8 MHz)

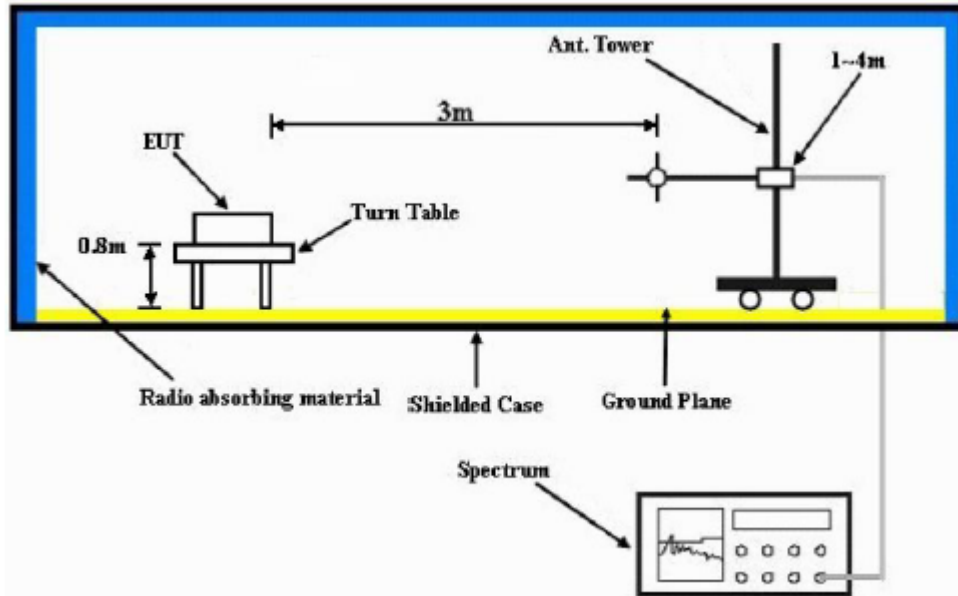






1.12. Radiated Spurious Emission

1.12.1. Test Setup



- 1) The spectrum setting for scanning Radiated Emission below 1 GHz is RBW = 100 kHz, VBW = 300 kHz and above 1 GHz is RBW = 1MHz, VBW = 3MHz. Detector mode is positive peak.
- 2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- 3) The substitution antenna is substituted for EUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.
- 4) Final Radiated Spurious Emission = “Read Value” + Measured substitution value.

1.12.2. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

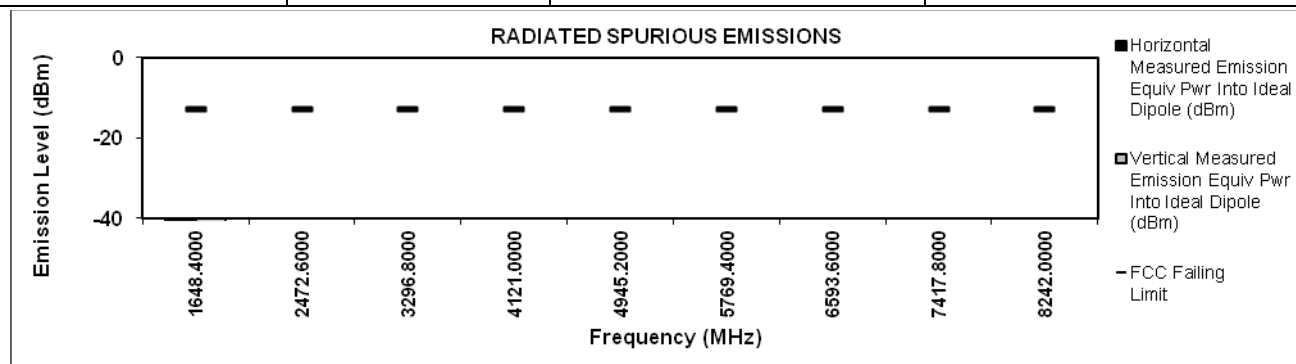
TRANSMITTER RADIATED SPURIOUS EMISSIONS

Battery : PMNN4472A, Accy : 3360-HKTN4009A-3, 3360-CB000262A01-3

(Low)
GSM 850

1.9953 Watt(s)/Max Power

S/N: 171PRO1569

[illegible]

January 19, 2016

Industry Canada: 109AK

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported

Temp(Deg): 24.6 Hum(%RH): 68.1

Passed Results	Marginal Results	Failed Results
----------------	------------------	----------------

MODEL #: LEX L10i

Battery : PMNN4472A, Accy : 3360-HKTN4009A-3, 3360-CB000262A01-3

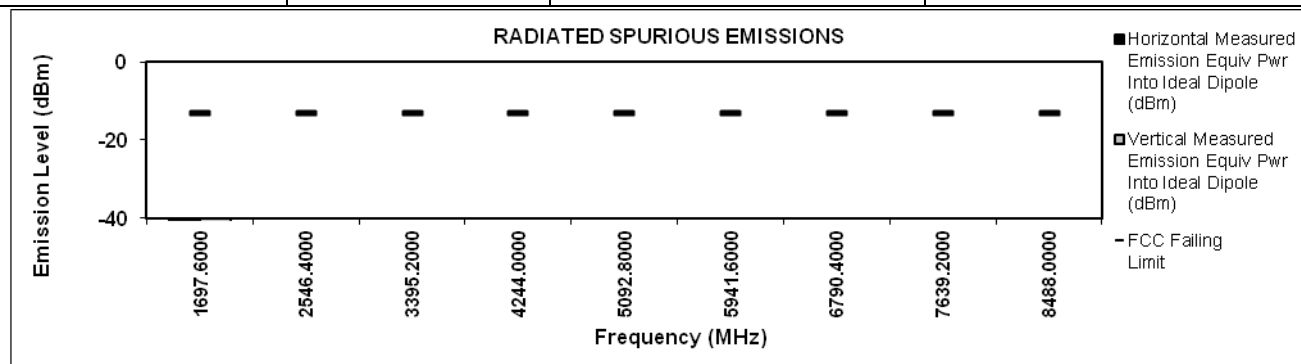
(High)

848.8 MHz

GSM 850

1.9953 Watt(s)/Max Power

S/N: 171PRO1569

[illegible]

Motorola Penang EMC Lab - Test Performed by: Qawiman/Nazrin

January 19, 2016

FCC Registration: 772092

Industry Canada: 109AK

Remarks:** Indicates the spurious emission could not be detected due to noise limitations or ambients.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported

Temp(Deg): 24.6 Hum(%RH): 68.1

Remarks:

Passed Results

Marginal Results

Failed Results

MODEL #: LEX L10i

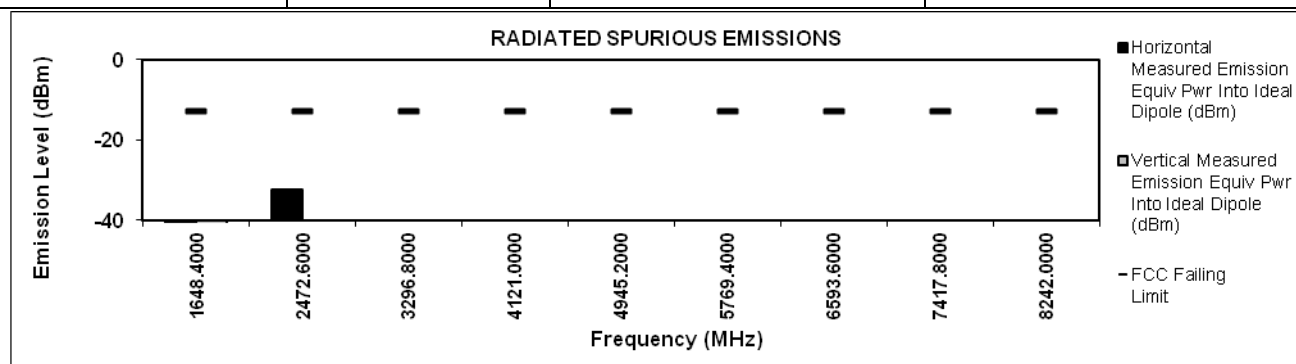
(Low)

824.2 MHz

EDGE 850

0.631 Watt(s)/Max Power

S/N: 171PRO1569

[illegible]

January 19, 2016

Industry Canada: 109AK

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported

Temp(Deg): 24.6 Hum(%RH): 68.1

Remarks:

Passed Results	Marginal Results	Failed Results
----------------	------------------	----------------

MODEL #: LEX L10i

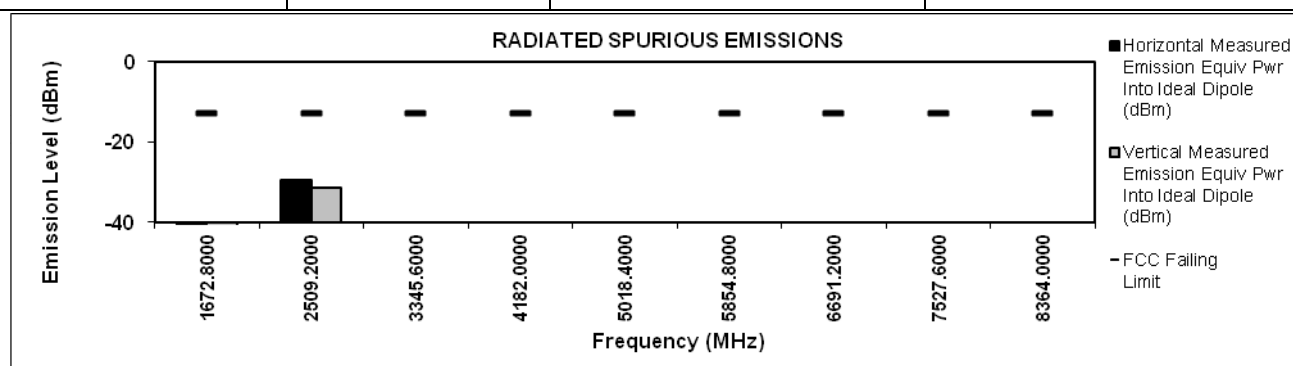
(Mid)

836.4 MHz

EDGE 850

0.631 Watt(s)/Max Power

S/N: 171PRO1569

[illegible]

January 19, 2016

Industry Canada: 109AK

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported

Temp(Deg): 24.6 Hum(%RH): 68.1

Remarks:

Passed Results	Marginal Results	Failed Results
----------------	------------------	----------------

MODEL #: LEX L10i

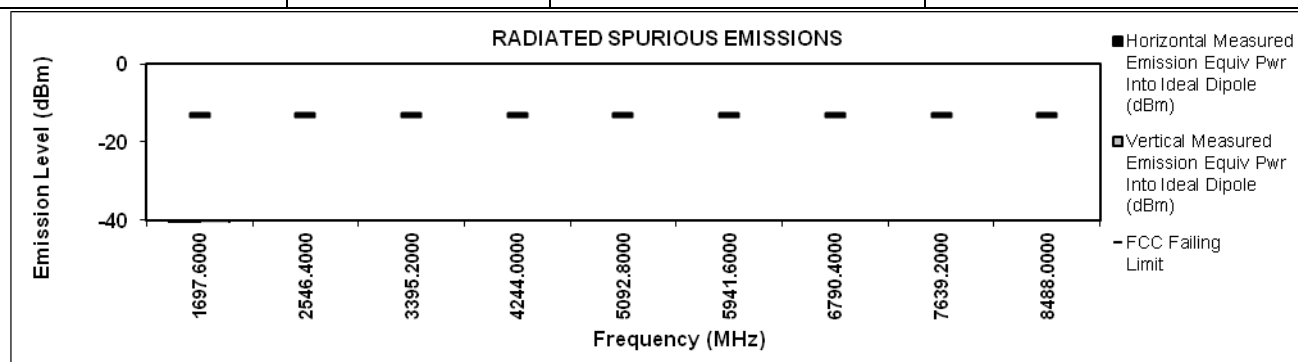
(High)

848.8 MHz

EDGE 850

0.631 Watt(s)/Max Power

S/N: 171PRQ1569

[illegible]

Motorola Penang EMC Lab - Test Performed by: Qawiman/Nazrin

FCC Registration: 772092

Industry Canada: 109AK

Remarks:** Indicates the spurious emission could not be detected due to noise limitations or ambients.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported

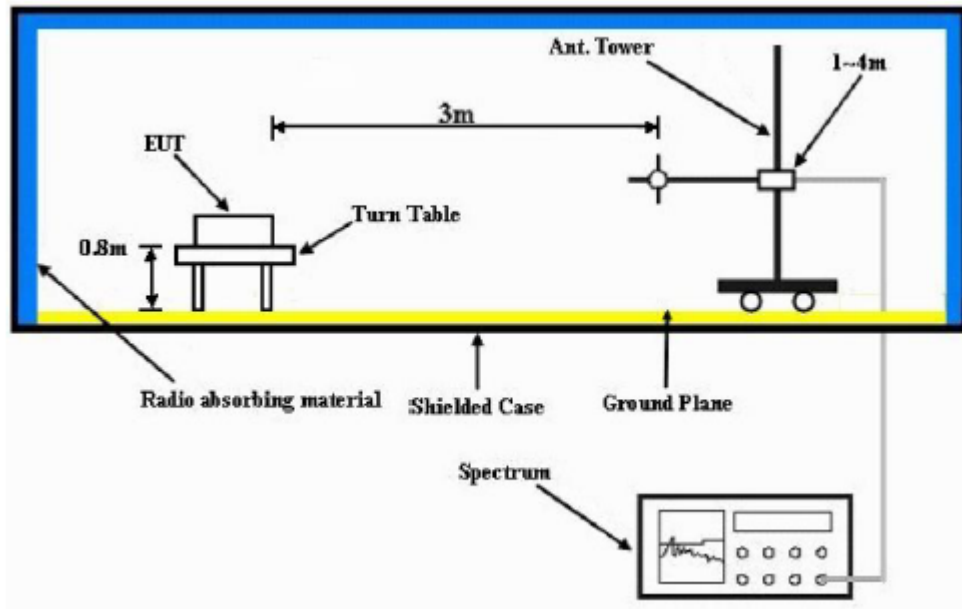
Temp(Deg): 24.6 Hum(%RH): 68.1

Remarks:

Passed Results	Marginal Results	Failed Results
----------------	------------------	----------------

1.13. Effective Radiated Power (ERP)

1.13.1. Test Setup



- 1) The spectrum setting for Effective Radiated Power (ERP) is RBW = 100 kHz, VBW = 300 kHz. Detector Mode is RMS.
- 2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the 0.8m height of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The “Read Value” is the spectrum reading of maximum power value.
- 3) The substitution antenna is substituted for EUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.
- 4) $ERP = \text{“Read Value”} + \text{Measured substitution value.}$

1.13.2. Test Limit

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

1.13.3. Effective Radiated Power (ERP) – GSM 850 (824-849MHz)

GSM850 - Low Freq (824.2 MHz)

EIRP/ERP

GSM 850
S/N: 171PRQ1568 Tx Power: 1.9953 Watts
Accessory: 3360-HKTN4009A-3, 3360-CB000262A01-3

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	824.2	34.81	32.66
Vert.	824.2	26.77	24.62

GSM850 - Mid Freq (836.4 MHz)

EIRP/ERP

GSM 850
S/N: 171PRQ1568 Tx Power: 1.9953 Watts
Accessory: 3360-HKTN4009A-3, 3360-CB000262A01-3

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	836.4	35.02	32.87
Vert.	836.4	25.73	23.58

GSM850 - High Freq (848.8 MHz)

EIRP/ERP

GSM 850
S/N: 171PRQ1568 Tx Power: 1.9953 Watts
Accessory: 3360-HKTN4009A-3, 3360-CB000262A01-3

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	848.8	33.63	31.48
Vert.	848.8	28.27	26.12

EDGE850 - Low Freq (824.2 MHz)

EIRP/ERP

EDGE 850
S/N: 171PRQ1568 Tx Power: 0.631 Watts
Accessory: 3360-HKTN4009A-3, 3360-CB000262A01-3

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	824.2	34.77	32.62
Vert.	824.2	27.01	24.86

EDGE850 - Mid Freq (836.4 MHz)

EIRP/ERP

EDGE 850
S/N: 171PRQ1568 Tx Power: 0.631 Watts
Accessory: 3360-HKTN4009A-3, 3360-CB000262A01-3

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	836.4	34.61	32.46
Vert.	836.4	28.68	26.53

EDGE850 - High Freq (848.8 MHz)

EIRP/ERP

EDGE 850
S/N: 171PRQ1568 Tx Power: 0.631 Watts
Accessory: 3360-HKTN4009A-3, 3360-CB000262A01-3

Antenna Polarization	Frequency (MHz)	EIRP (dBm)	ERP (dBm)
Horiz.	848.8	33.62	31.47
Vert.	848.8	28.38	26.23