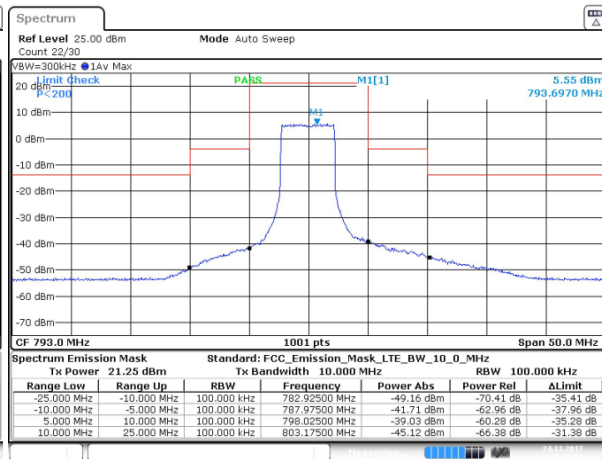
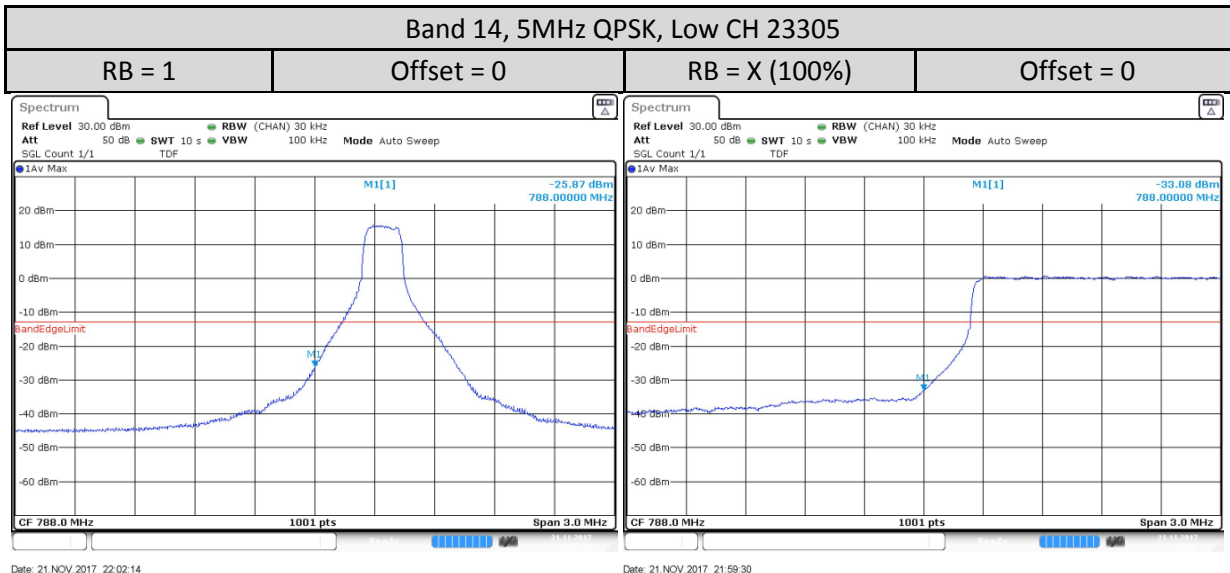


Date: 24.NOV.2017 14:32:03



Date: 24.NOV.2017 14:33:24

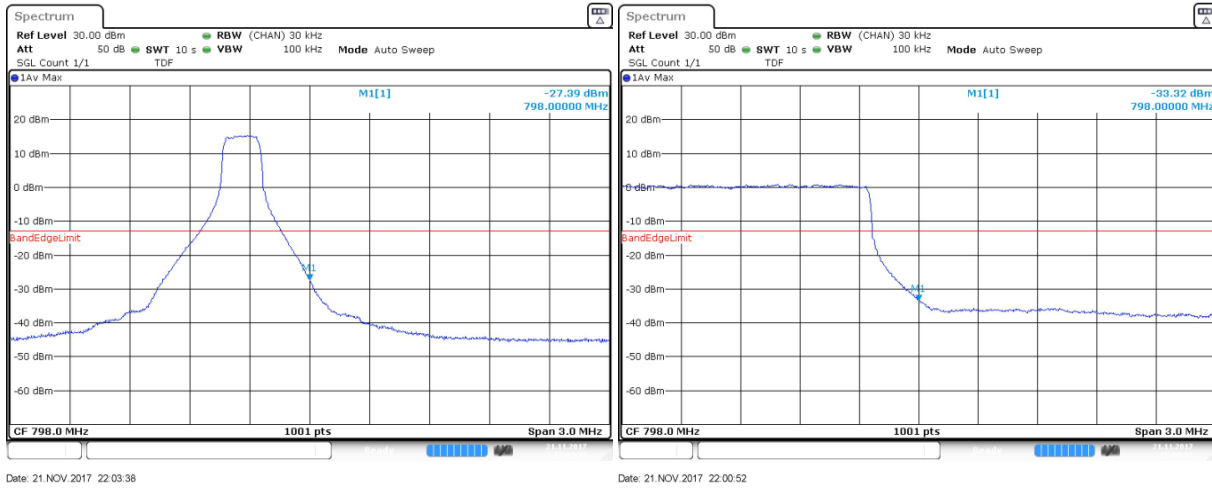
Band Edge Conducted Spurious Emission



Date: 21.NOV.2017 22:02:14

Date: 21.NOV.2017 21:59:30

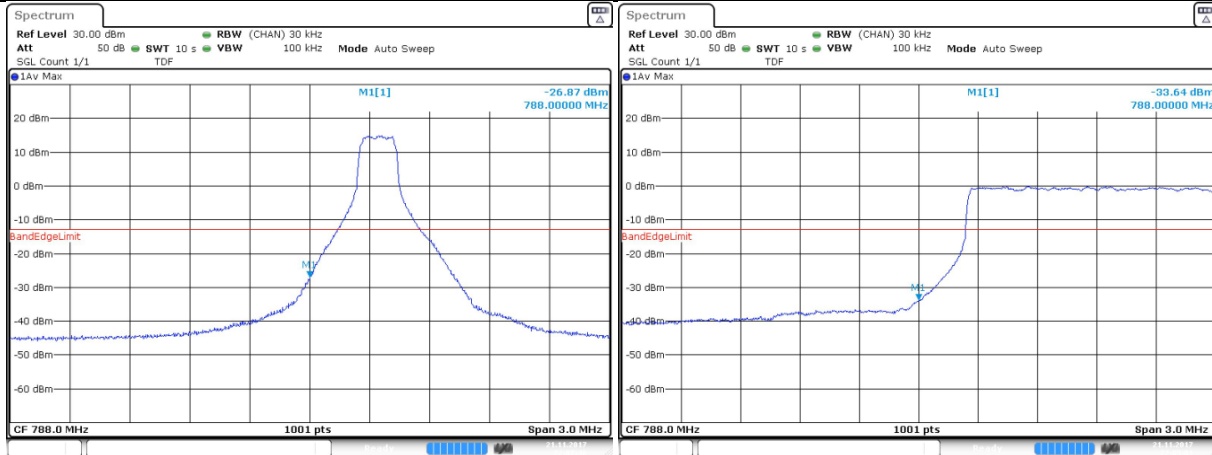
Band 14, 5MHz QPSK, High CH 23355			
RB = 1	Offset = X-1	RB = X (100%)	Offset = 0



Date: 21.NOV.2017 22:03:38

Date: 21.NOV.2017 22:00:52

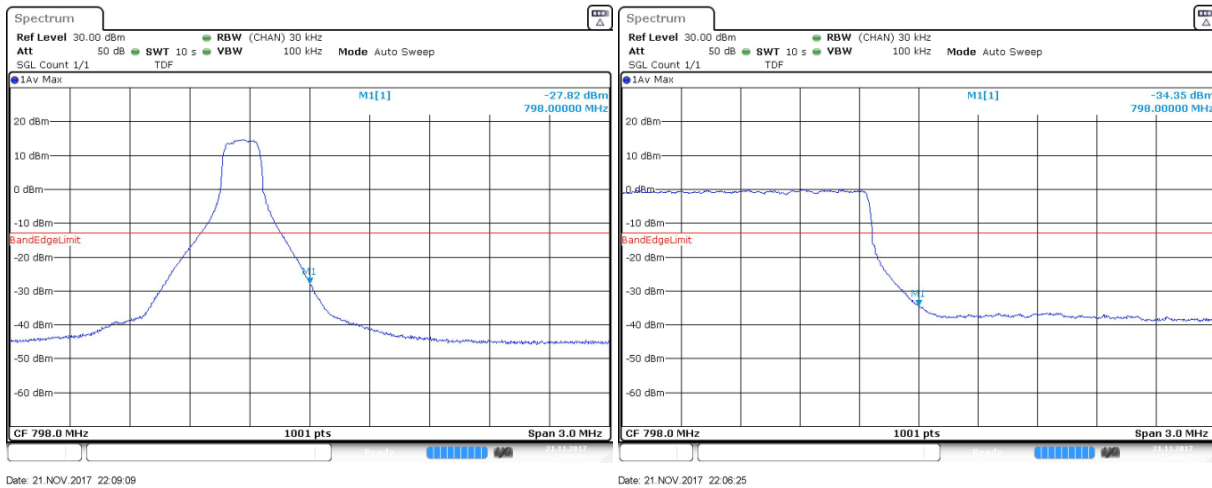
Band 14, 5MHz 16-QAM, Low CH 23305			
RB = 1	Offset = 0	RB = X (100%)	Offset = 0



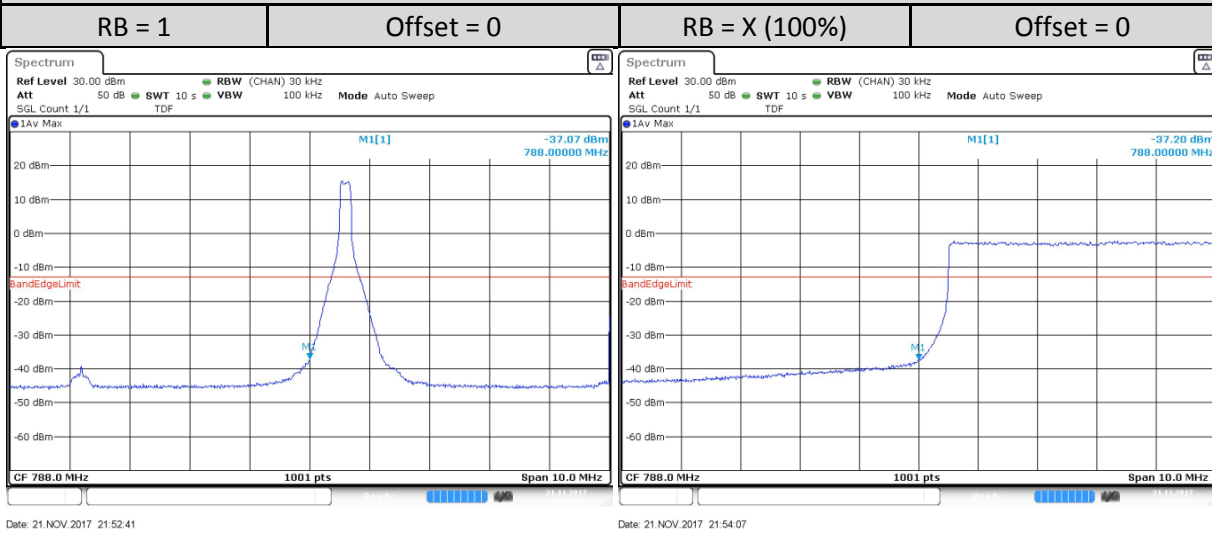
Date: 21.NOV.2017 22:07:48

Date: 21.NOV.2017 22:05:02

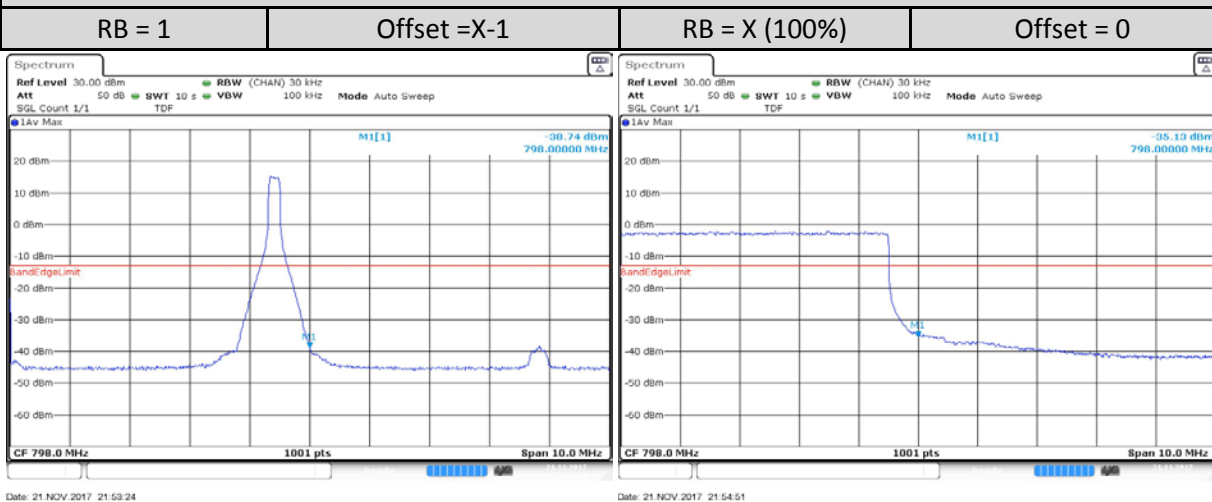
Band 14, 5MHz 16-QAM, High CH 23355			
RB = 1	Offset = X-1	RB = X (100%)	Offset = 0



Band 14, 10MHz QPSK, Low CH 23330

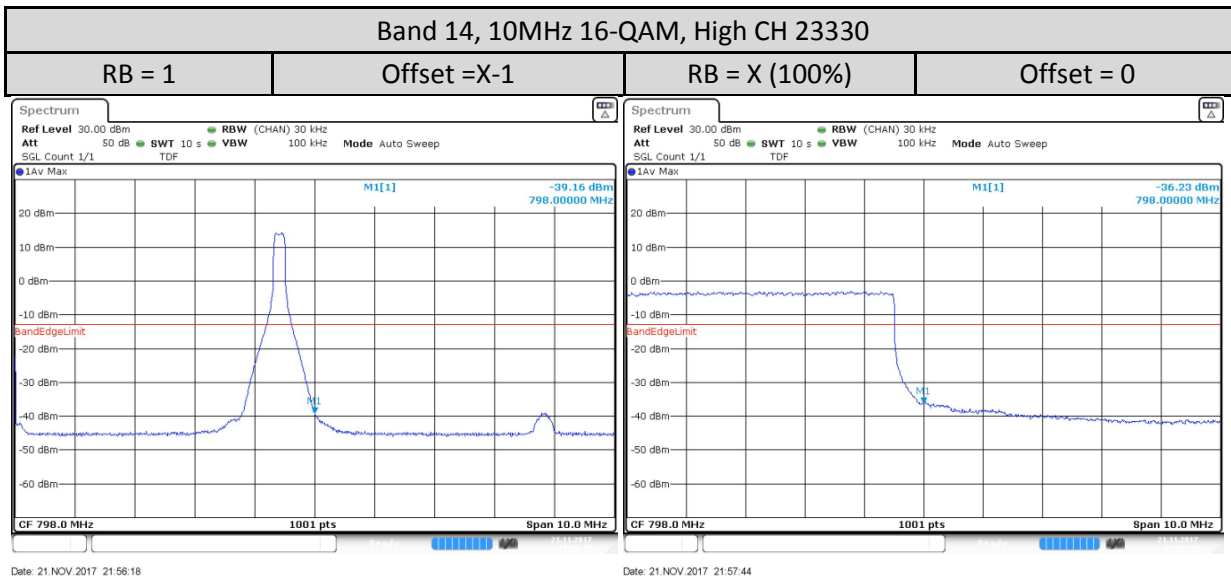
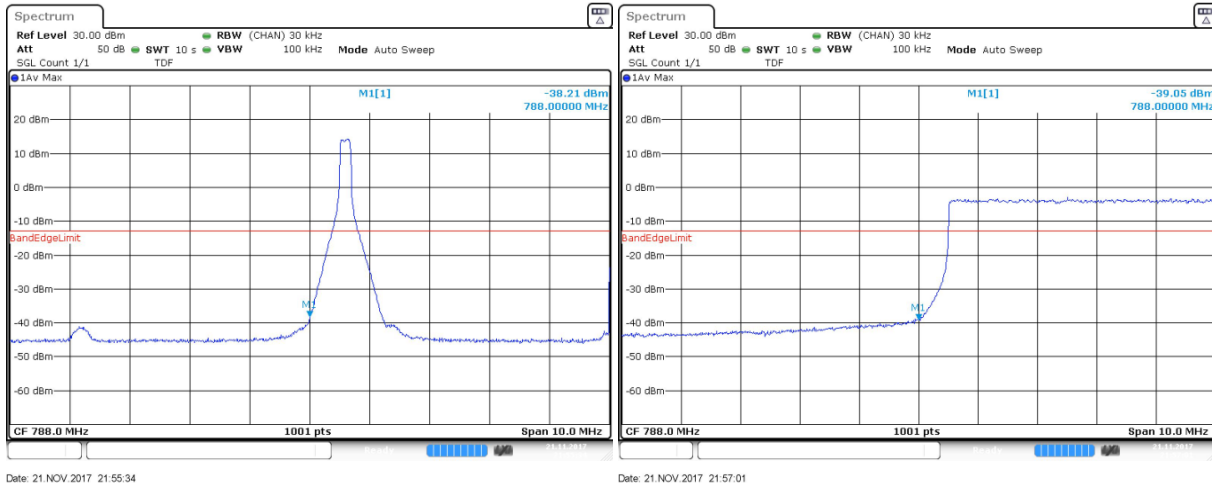


Band 14, 10MHz QPSK, High CH 23330



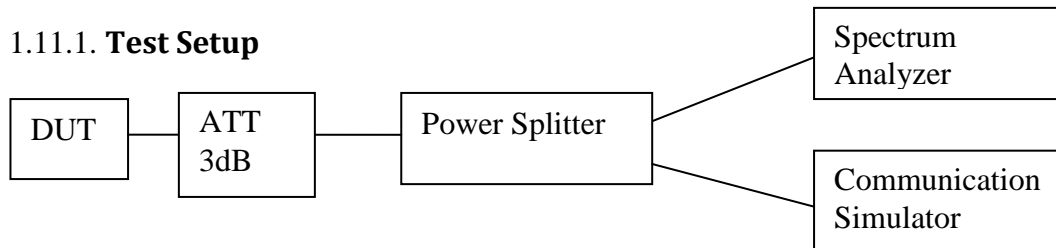
Band 14, 10MHz 16-QAM, Low CH 23330





1.11. Conducted Spurious Emission

1.11.1. Test Setup



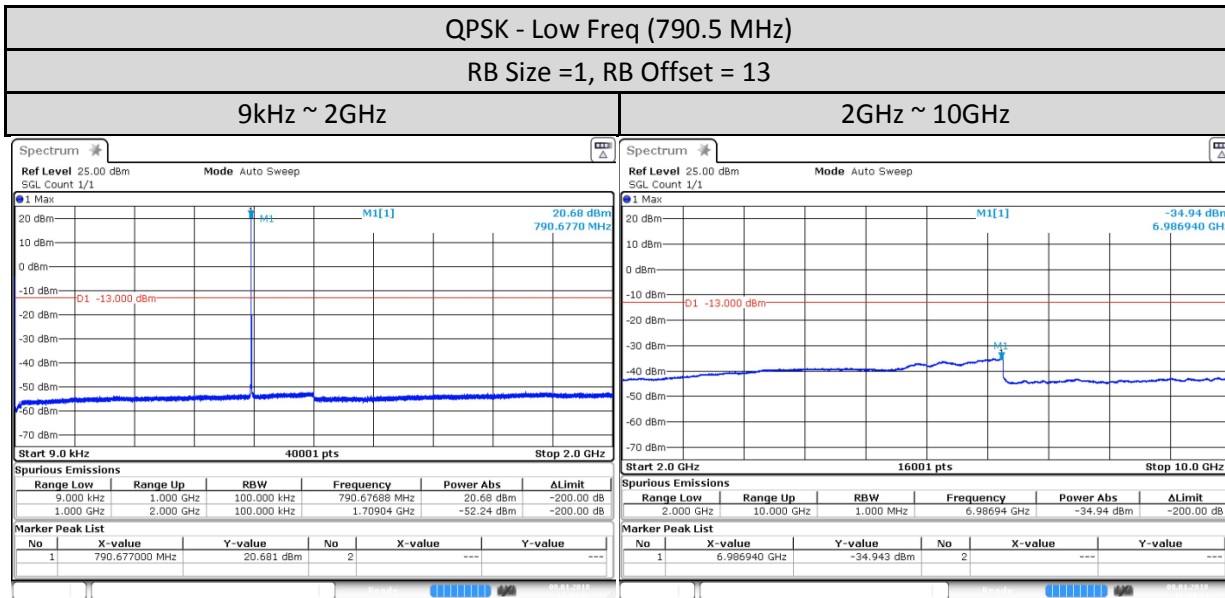
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) Spectrum Analyzer setting, RBW = 100 kHz or greater, VBW = 3*RBW.
- 5) The spurious 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

- (e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
- (1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations.
 - (2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.
 - (3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.
 - (4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.
 - (5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

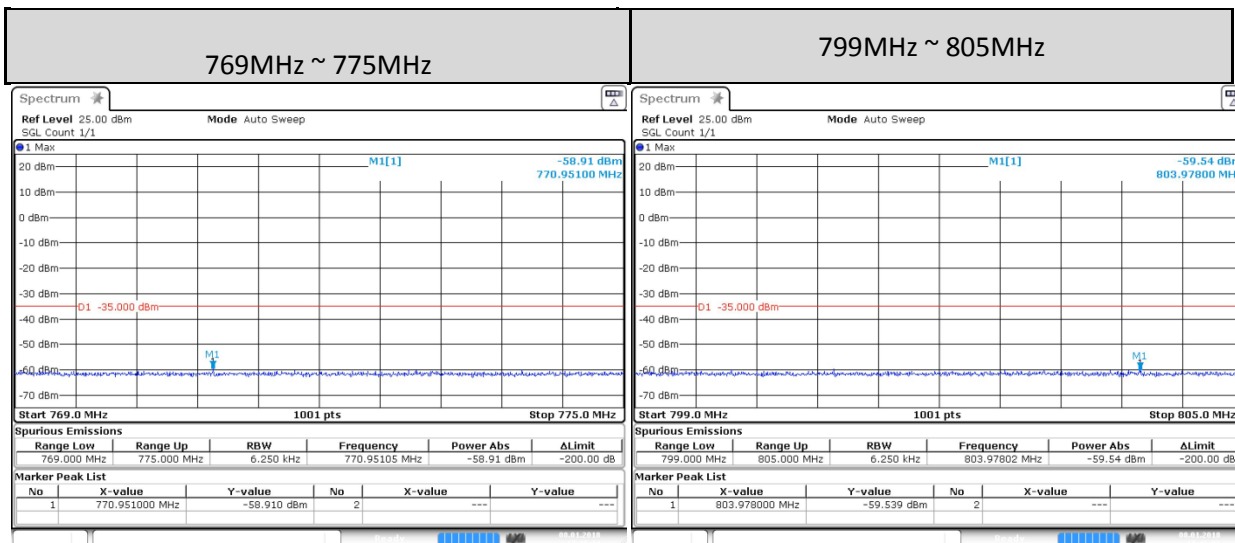
1.11.3. Conducted Spurious Emission - LTE Band 14 (788-798MHz)

5MHz



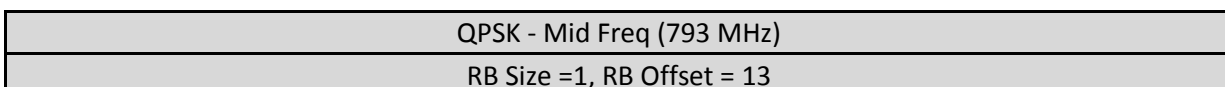
Date: 8 JAN 2018 17:43:43

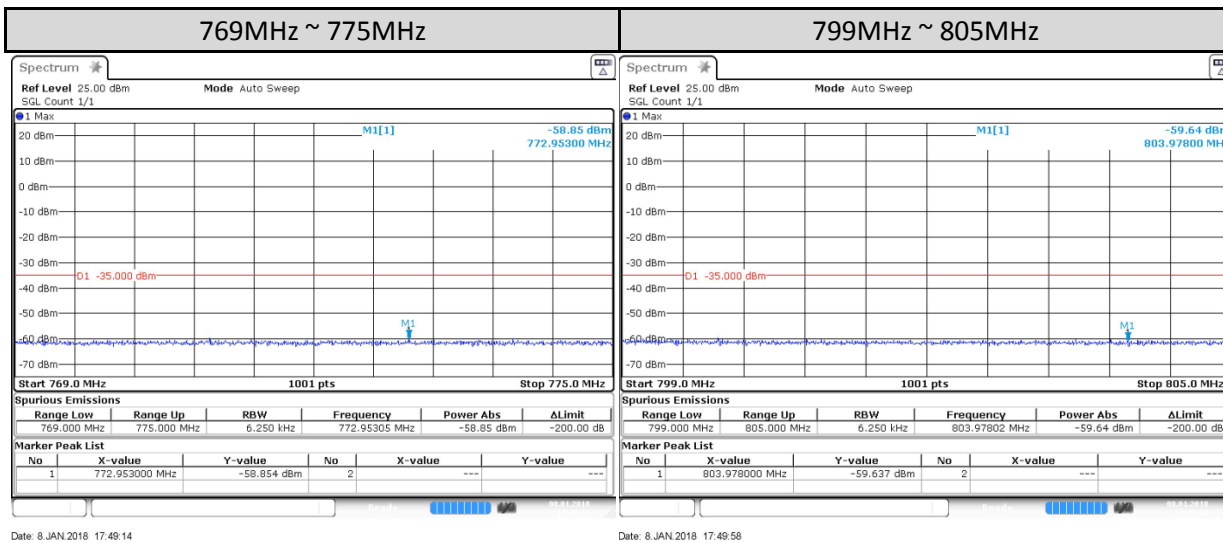
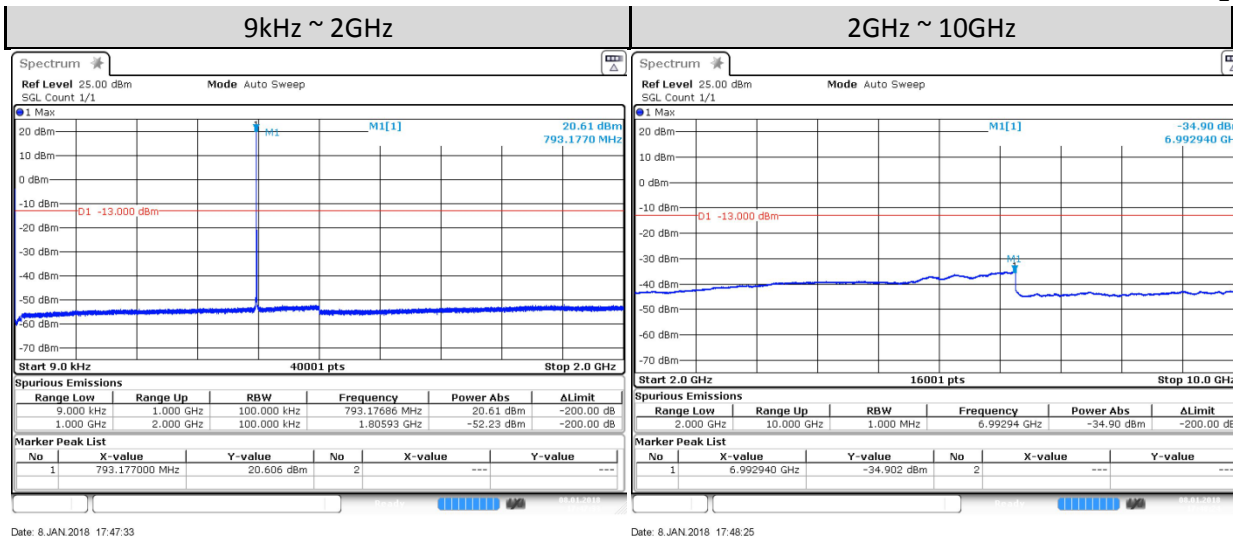
Date: 8 JAN 2018 17:44:34



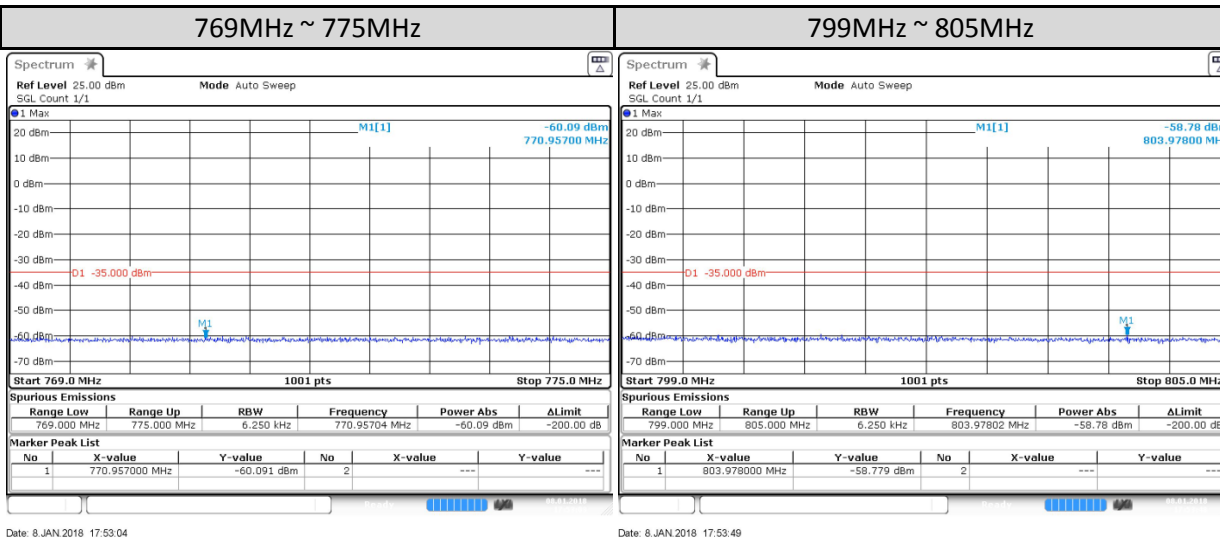
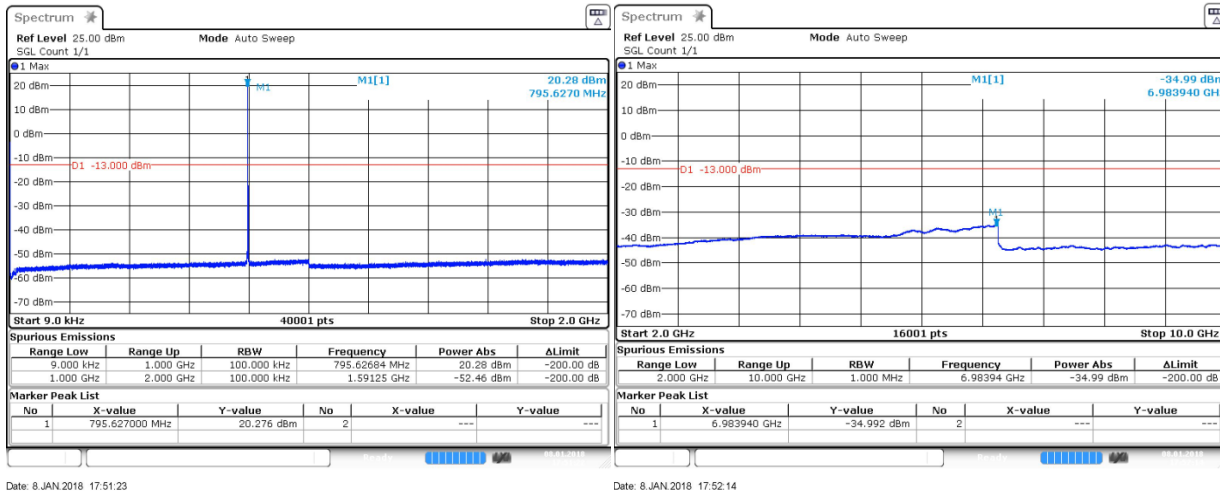
Date: 8 JAN 2018 17:45:24

Date: 8 JAN 2018 17:46:09



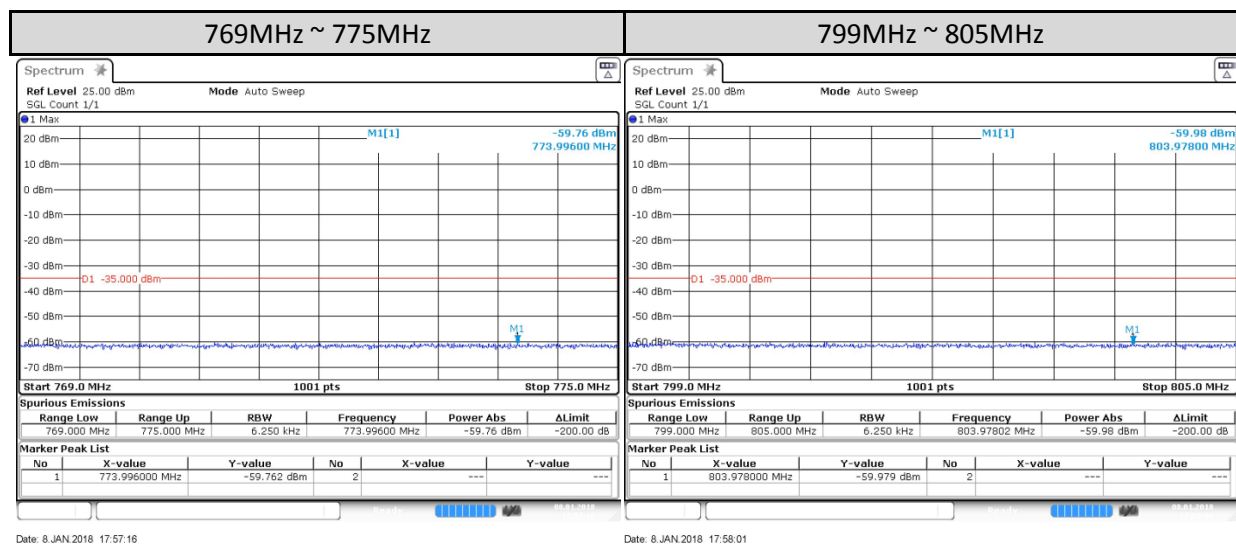
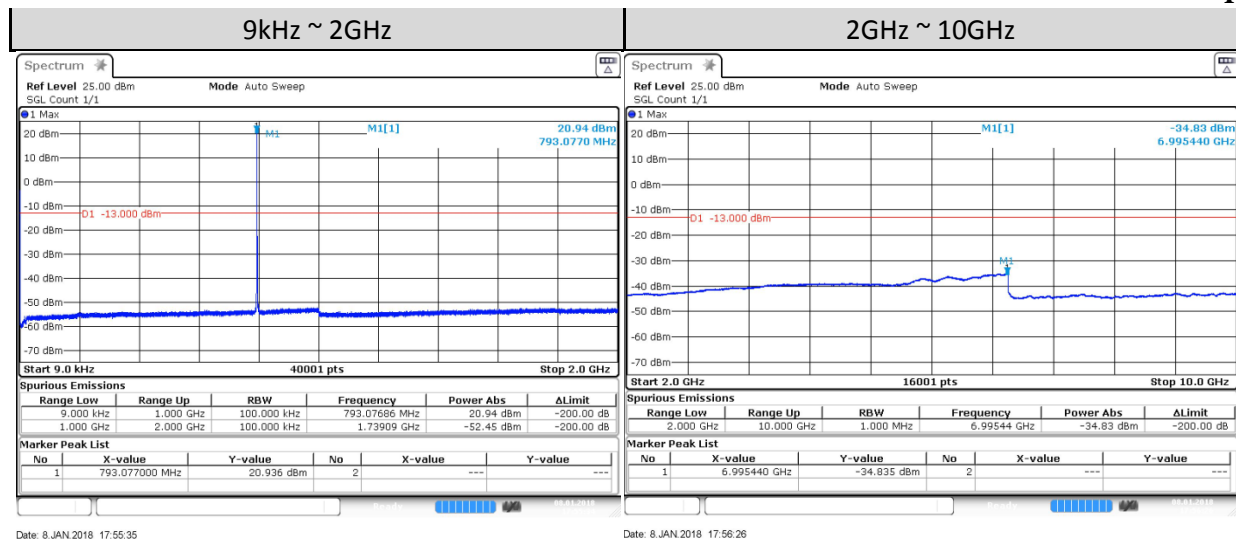


QPSK - High Freq (795.5 MHz)	
RB Size =1, RB Offset = 13	
9kHz ~ 2GHz	2GHz ~ 10GHz



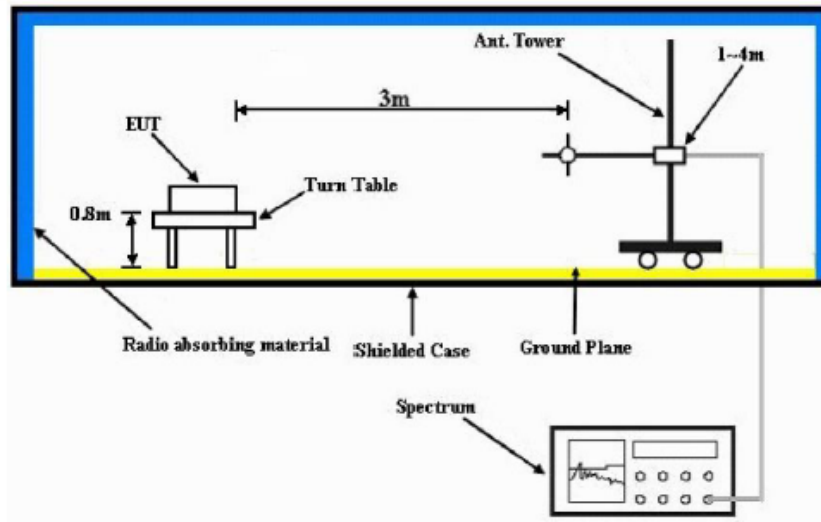
10MHz

QPSK - Mid Freq (793 MHz)
RB Size =1, RB Offset = 25



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 Turn Table at 0.8m height for below 1GHz measurement and at 1.5m height for above 1GHz measurement, 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

(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations.
- (2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.
- (3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.
- (4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.
- (5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

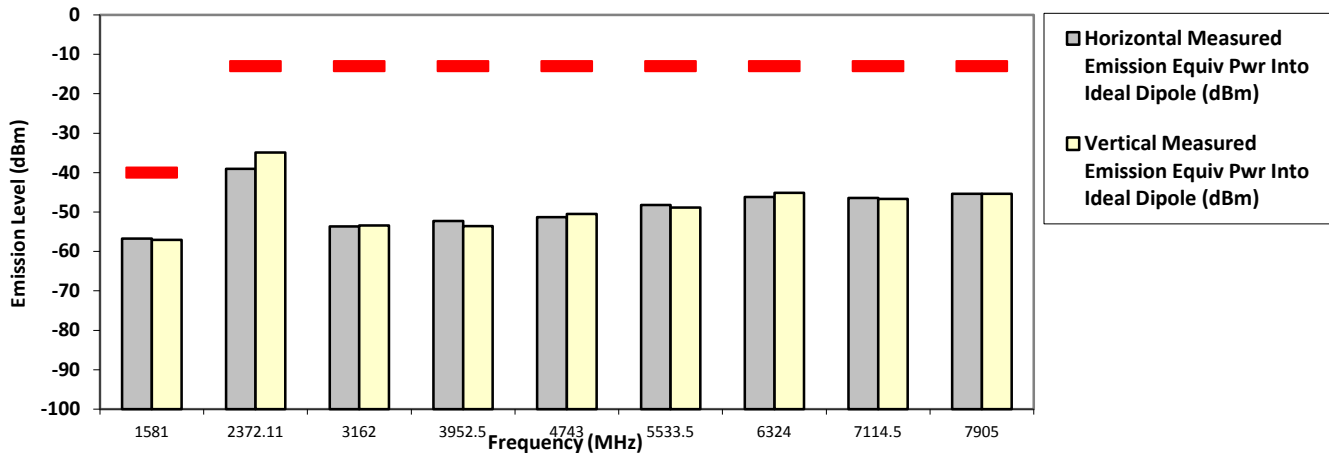
1.12.3. Radiated Spurious Emission – LTE Band 14 (788-798MHz)

DC configuration: Link Mode 12V

Link Mode Radiated Emission:
 Model Number: LEX L11n S/N: 790TTV0214 SR:08397-EMC-00123
 Battery Part No: PMNN4546A Accy Part No: 8397-PMLN7779A-5
 Test Mode: TX LTE (Band 14)
 790.500000 MHz (Low) Bandwidth 5MHz 0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1581.0000	-40.0000	-56.7372 **	-57.0883 **
2372.1100	-13.0000	-39.0700 *	-34.9300 *
3162.0000	-13.0000	-53.6844 **	-53.3813 **
3952.5000	-13.0000	-52.2533 **	-53.5623 **
4743.0000	-13.0000	-51.3238 **	-50.4754 **
5533.5000	-13.0000	-48.1757 **	-48.8465 **
6324.0000	-13.0000	-46.2027 **	-45.1034 **
7114.5000	-13.0000	-46.4229 **	-46.6981 **
7905.0000	-13.0000	-45.3496 **	-45.3720 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

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

Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

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

Link Mode Radiated Emission:

Model Number: LEX L11n

S/N: 790TTV0214

SR:08397-EMC-00123

Battery Part No: PMNN4546A

Accy Part No: 8397-PMLN7779A-5

Test Mode: TX LTE (Band 14)

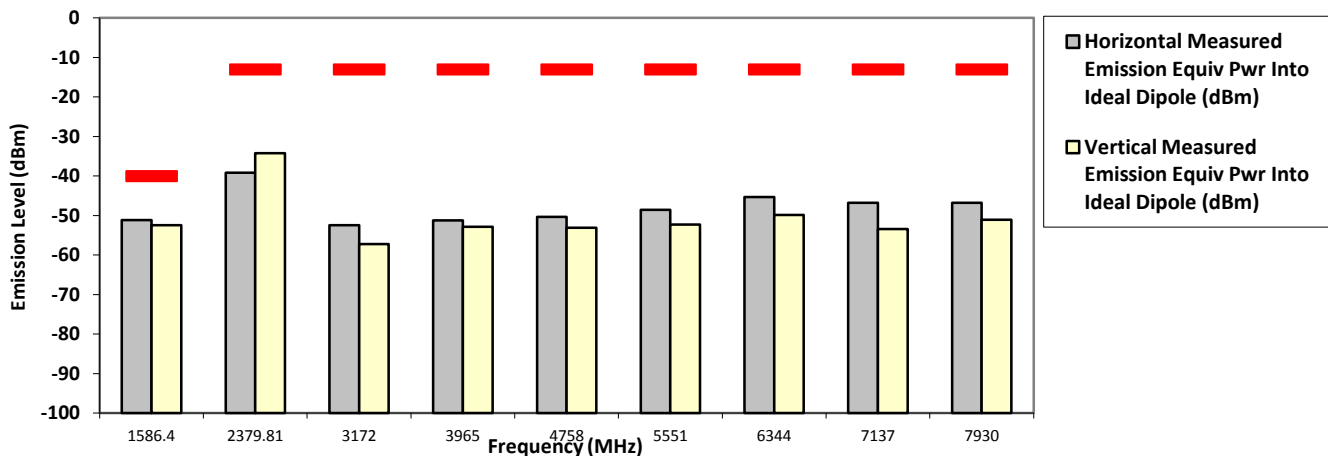
793.000000 MHz (Mid)

Bandwidth 5MHz

0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1586.4000	-40.0000	-51.1200	-52.4900
2379.8100	-13.0000	-39.1500 *	-34.2000 *
3172.0000	-13.0000	-52.4413 **	-57.2380 **
3965.0000	-13.0000	-51.2208 **	-52.8334 **
4758.0000	-13.0000	-50.3259 **	-53.0946 **
5551.0000	-13.0000	-48.5777 **	-52.2935 **
6344.0000	-13.0000	-45.3034 **	-49.8507 **
7137.0000	-13.0000	-46.7755 **	-53.4396 **
7930.0000	-13.0000	-46.7809 **	-51.1136 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

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

Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

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

Model Number: LEX L11n

Link Mode Radiated Emission:
 S/N: 790TTV0214

SR:08397-EMC-00123

Battery Part No: PMNN4546A

Accy Part No: 8397-PMLN7779A-5

Test Mode: TX LTE (Band 14)

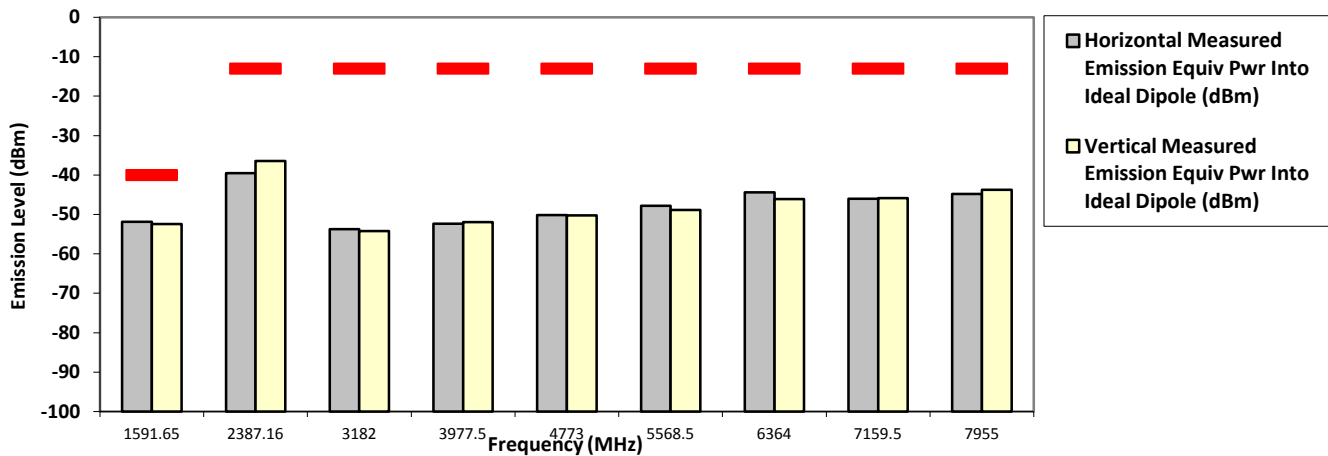
795.500000 MHz (High)

Bandwidth 5MHz

0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1591.6500	-40.0000	-51.8800	-52.4400
2387.1600	-13.0000	-39.5500 *	-36.4300 *
3182.0000	-13.0000	-53.7586 **	-54.1886 **
3977.5000	-13.0000	-52.3420 **	-51.9689 **
4773.0000	-13.0000	-50.1642 **	-50.2374 **
5568.5000	-13.0000	-47.8391 **	-48.8331 **
6364.0000	-13.0000	-44.3876 **	-46.1328 **
7159.5000	-13.0000	-45.9922 **	-45.8379 **
7955.0000	-13.0000	-44.7976 **	-43.7815 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

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

Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

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

Link Mode Radiated Emission:

Model Number: LEX L11n

S/N: 790TTV0214

SR:08397-EMC-00123

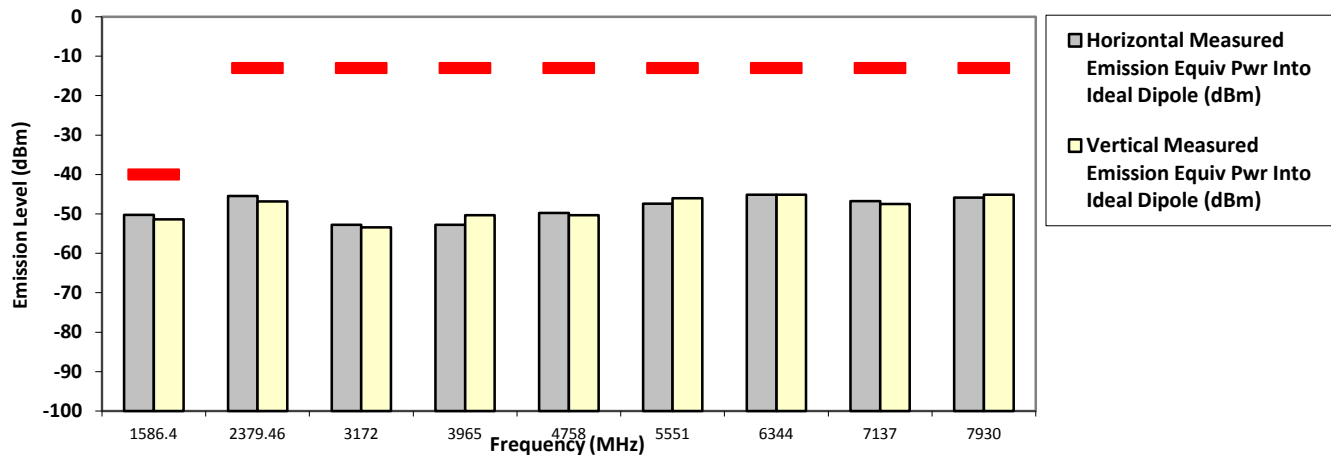
Battery Part No: PMNN4546A

Accy Part No: 8397-PMLN7779A-5

793.000000 MHz (Mid) Test Mode: TX LTE (Band 14) Bandwidth 10MHz 0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1586.4000	-40.0000	-50.2400	-51.3600
2379.4600	-13.0000	-45.4200 *	-46.8700 *
3172.0000	-13.0000	-52.7313 **	-53.4115 **
3965.0000	-13.0000	-52.7302 **	-50.3047 **
4758.0000	-13.0000	-49.7641 **	-50.3109 **
5551.0000	-13.0000	-47.4217 **	-46.0001 **
6344.0000	-13.0000	-45.1308 **	-45.0916 **
7137.0000	-13.0000	-46.7398 **	-47.4646 **
7930.0000	-13.0000	-45.8854 **	-45.1618 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

DC configuration: Link Mode 24V

Link Mode Radiated Emission:

Model Number: LEX L11n

S/N: 790TTV0214

SR:08397-EMC-00123

Battery Part No: PMNN4546A

Accy Part No: 8397-PMLN7779A-5

Test Mode: TX LTE (Band 14)

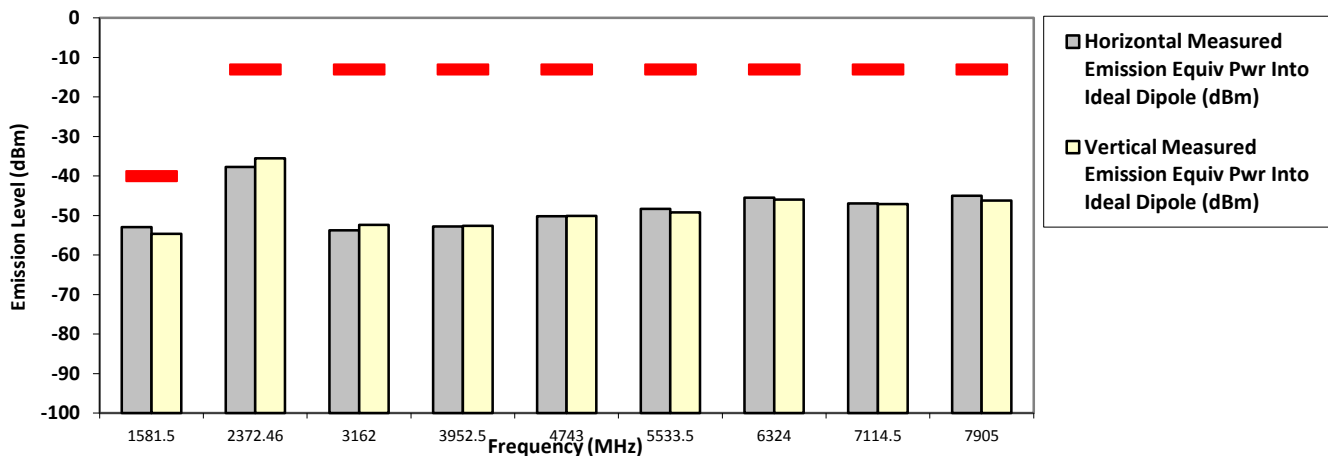
790.500000 MHz (Low)

Bandwidth 5MHz

0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1581.5000	-40.0000	-52.9500	-54.6200
2372.4600	-13.0000	-37.6800 *	-35.5600 *
3162.0000	-13.0000	-53.7607 **	-52.3697 **
3952.5000	-13.0000	-52.8085 **	-52.6473 **
4743.0000	-13.0000	-50.1756 **	-50.1373 **
5533.5000	-13.0000	-48.3039 **	-49.1786 **
6324.0000	-13.0000	-45.4839 **	-45.9844 **
7114.5000	-13.0000	-46.9539 **	-47.1177 **
7905.0000	-13.0000	-45.0315 **	-46.2316 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
 Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

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

Link Mode Radiated Emission:

Model Number: LEX L11n

S/N: 790TTV0214

SR:08397-EMC-00123

Battery Part No: PMNN4546A

Accy Part No: 8397-PMLN7779A-5

Test Mode: TX LTE (Band 14)

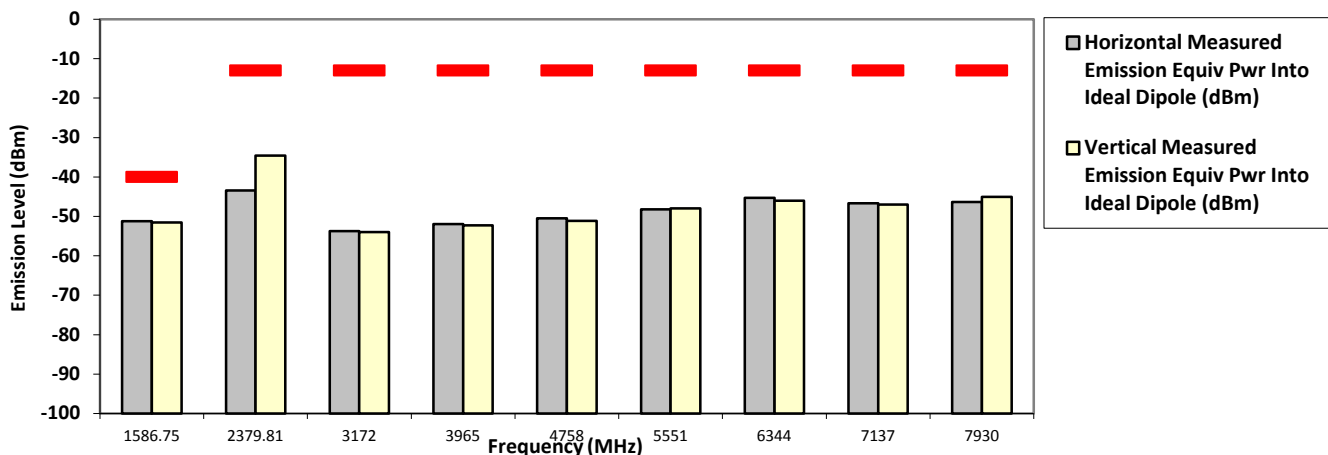
793.000000 MHz (Mid)

Bandwidth 5MHz

0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1586.7500	-40.0000	-51.2200	-51.5100
2379.8100	-13.0000	-43.4600 *	-34.5600 *
3172.0000	-13.0000	-53.7653 **	-53.9819 **
3965.0000	-13.0000	-51.9730 **	-52.2765 **
4758.0000	-13.0000	-50.5139 **	-51.1328 **
5551.0000	-13.0000	-48.2125 **	-48.0038 **
6344.0000	-13.0000	-45.3323 **	-45.9977 **
7137.0000	-13.0000	-46.7123 **	-46.9778 **
7930.0000	-13.0000	-46.3650 **	-45.0507 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

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

Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

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

Model Number: LEX L11n

Link Mode Radiated Emission:

S/N: 790TTV0214

SR:08397-EMC-00123

Battery Part No: PMNN4546A

Accy Part No: 8397-PMLN7779A-5

Test Mode: TX LTE (Band 14)

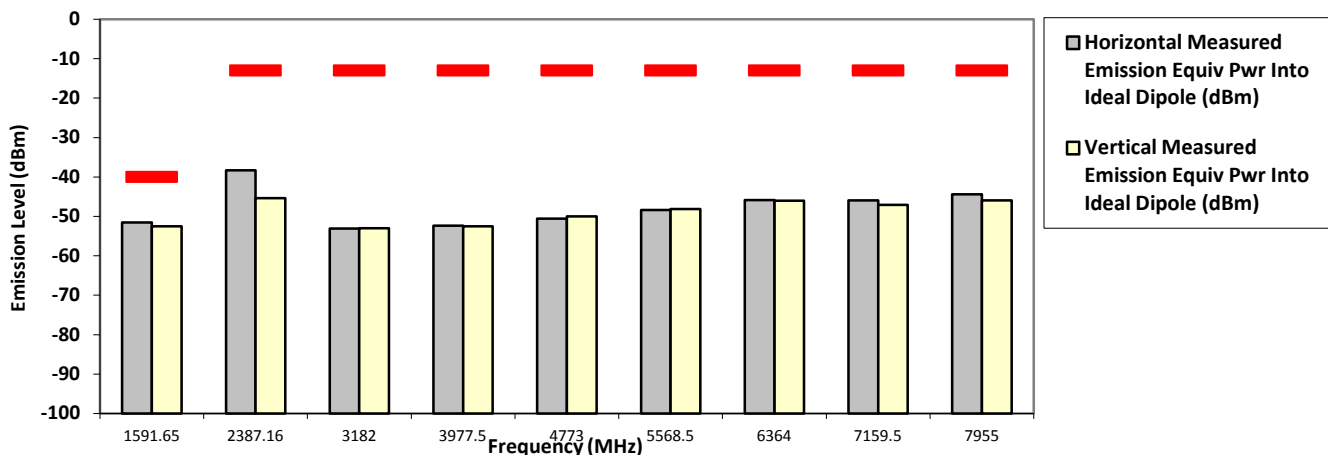
795.500000 MHz (High)

Bandwidth 5MHz

0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1591.6500	-40.0000	-51.5600	-52.5400
2387.1600	-13.0000	-38.3200 *	-45.3600 *
3182.0000	-13.0000	-53.0857 **	-53.0066 **
3977.5000	-13.0000	-52.3896 **	-52.5546 **
4773.0000	-13.0000	-50.5676 **	-49.9670 **
5568.5000	-13.0000	-48.3826 **	-48.1658 **
6364.0000	-13.0000	-45.8722 **	-45.9918 **
7159.5000	-13.0000	-45.9133 **	-47.1190 **
7955.0000	-13.0000	-44.4204 **	-45.9439 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

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

Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

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

Link Mode Radiated Emission:

Model Number: LEX L11n

S/N: 790TTV0214

SR:08397-EMC-00123

Battery Part No: PMNN4546A

Accy Part No: 8397-PMLN7779A-5

Test Mode: TX LTE (Band 14)

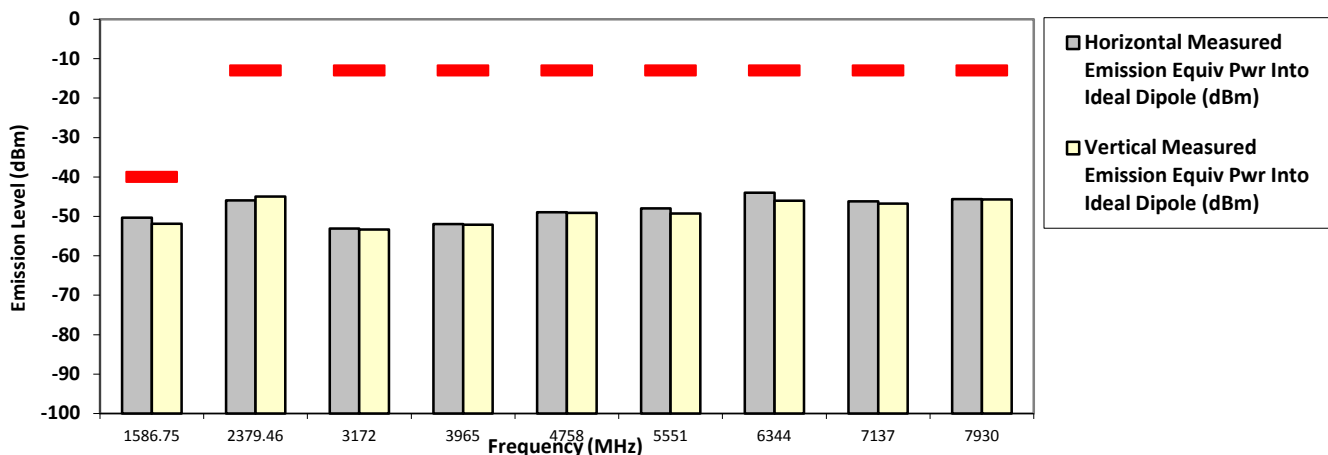
793.000000 MHz (Mid)

Bandwidth 10MHz

0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1586.7500	-40.0000	-50.3200	-51.8800
2379.4600	-13.0000	-45.9100 *	-44.9600 *
3172.0000	-13.0000	-53.1136 **	-53.3587 **
3965.0000	-13.0000	-51.9120 **	-52.1027 **
4758.0000	-13.0000	-48.9808 **	-49.1352 **
5551.0000	-13.0000	-47.9817 **	-49.2566 **
6344.0000	-13.0000	-43.9842 **	-46.0024 **
7137.0000	-13.0000	-46.1789 **	-46.7915 **
7930.0000	-13.0000	-45.6224 **	-45.6589 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

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

Mon, Jan 22, 2018

Industry Canada: 109AK

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

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

Temp(Deg): 23.6 Hum(%RH): 69.8

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results
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--Test Report End--