

FCC Test Report –Transmitter Radiated Emission Analog (Part 90)

Report ID : 05081-EMC-00001
FCC ID : AXI11374620
IC : 10239A-11374620
Tested Model : EVX-261-G6-5
Test Date : Mar 23, 2016 ~ Mar 24, 2016
Issued Date : April 4, 2016
Applicant : Vertex Standard LMR, Inc
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
IC Registration: 109AK

Prepare By: _____, Date: 4 April, 2016

Tey Pei Loo / Senior Staff Engineer / +6048503137 / Peiloo@motorolasolutions.com

Approved By: _____, Date: 4 April, 2016

Soon Oi May / Senior Staff Engineer / +6048503137 / oimaysoon@motorolasolutions.com

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

406.200000 MHz

12.5 kHz

5.500 Watt(s) /Max Power

Remarks:

Passed Results	Marginal Results	Failed Results
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SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHz 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

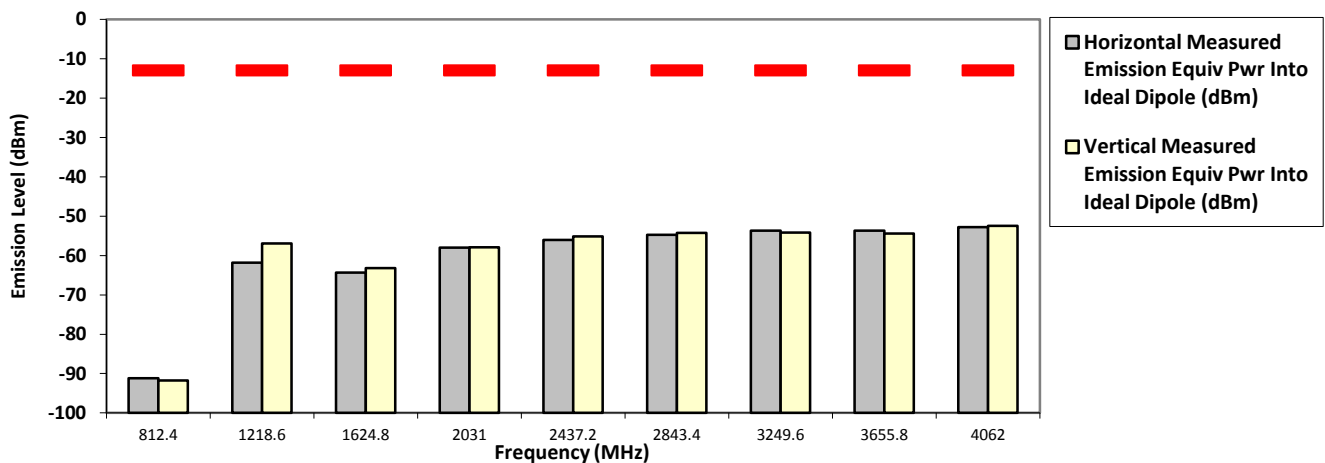
406.200000 MHz

12.5 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
812.4000	-20.0000	-91.1454 **	-91.7645 **
1218.6000	-20.0000	-61.7889 **	-56.9560 *
1624.8000	-20.0000	-64.3618 **	-63.1875 **
2031.0000	-20.0000	-58.0048 **	-57.8825 **
2437.2000	-20.0000	-56.0094 **	-55.1769 **
2843.4000	-20.0000	-54.7471 **	-54.2845 **
3249.6000	-20.0000	-53.6490 **	-54.1778 **
3655.8000	-20.0000	-53.7081 **	-54.4123 **
4062.0000	-20.0000	-52.8079 **	-52.4248 **

RADIATED SPURIOUS EMISSIONS



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

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

Wed, Mar 23, 2016

FCC Registration: 772092

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): 69.1

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

5.500 Watt(s) /Max Power

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

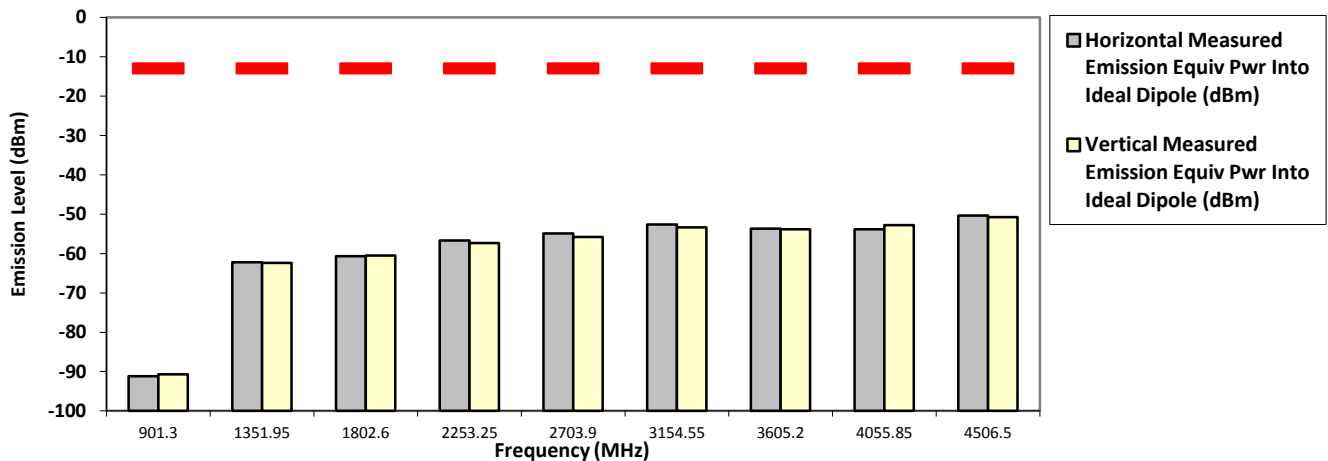
450.650000 MHz

12.5 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
901.3000	-20.0000	-91.1957 **	-90.6621 **
1351.9500	-20.0000	-62.2010 **	-62.3709 **
1802.6000	-20.0000	-60.6540 **	-60.4777 **
2253.2500	-20.0000	-56.6673 **	-57.3121 **
2703.9000	-20.0000	-54.9093 **	-55.7947 **
3154.5500	-20.0000	-52.5970 **	-53.3413 **
3605.2000	-20.0000	-53.6661 **	-53.8373 **
4055.8500	-20.0000	-53.8626 **	-52.7616 **
4506.5000	-20.0000	-50.3516 **	-50.7763 **

RADIATED SPURIOUS EMISSIONS



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

Wed, Mar 23, 2016

FCC Registration: 772092

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): 69.1

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

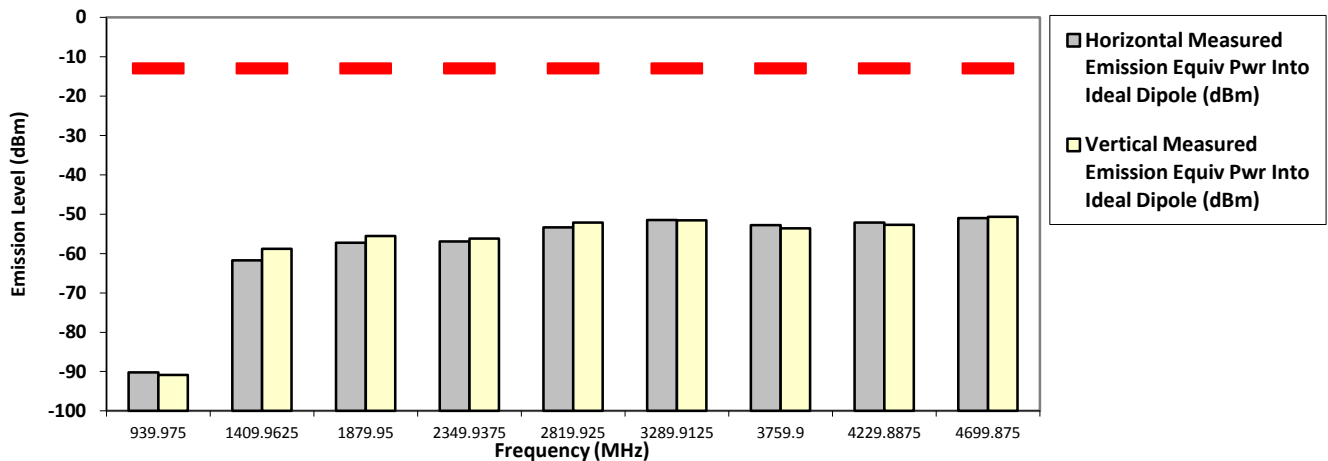
469.987500 MHz

12.5 kHz

5.500 Watt(s) /Max Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
939.9750	-20.0000	-90.1687 **	-90.8311 **
1409.9625	-20.0000	-61.7456 **	-58.8044 **
1879.9500	-20.0000	-57.2757 **	-55.5292 **
2349.9375	-20.0000	-56.8982 **	-56.1798 **
2819.9250	-20.0000	-53.3718 **	-52.1032 **
3289.9125	-20.0000	-51.4800 **	-51.5752 **
3759.9000	-20.0000	-52.8138 **	-53.5625 **
4229.8875	-20.0000	-52.1647 **	-52.7093 **
4699.8750	-20.0000	-51.0314 **	-50.6586 **

RADIATED SPURIOUS EMISSIONS



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

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Wed, Mar 23, 2016

FCC Registration: 772092

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): 69.1

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

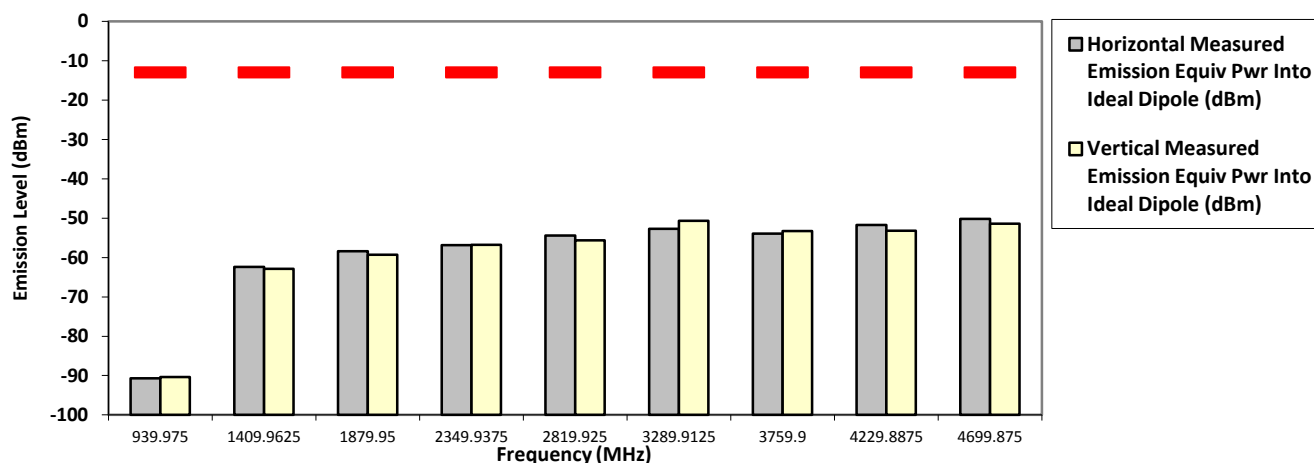
469.987500 MHz

12.5 kHz

5.500 Watt(s) /Low Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
939.9750	-20.0000	-90.7085 **	-90.3460 **
1409.9625	-20.0000	-62.3954 **	-62.8383 **
1879.9500	-20.0000	-58.4250 **	-59.2703 **
2349.9375	-20.0000	-56.8793 **	-56.7594 **
2819.9250	-20.0000	-54.4024 **	-55.6347 **
3289.9125	-20.0000	-52.6960 **	-50.6469 **
3759.9000	-20.0000	-53.9376 **	-53.2949 **
4229.8875	-20.0000	-51.7116 **	-53.1717 **
4699.8750	-20.0000	-50.2082 **	-51.3677 **

RADIATED SPURIOUS EMISSIONS



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Wed, Mar 23, 2016

FCC Registration: 772092

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): 69.1

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

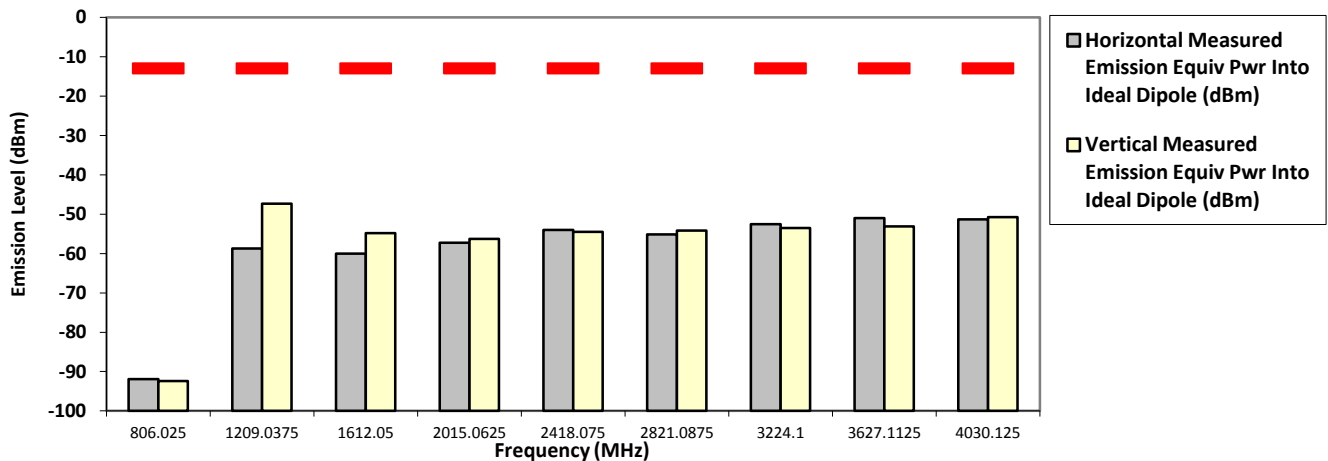
403.012500 MHz

25 kHz

5.500 Watt(s) /Max Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
806.0250	-13.0000	-91.9161 **	-92.3780 **
1209.0375	-13.0000	-58.7574 **	-47.3592 **
1612.0500	-13.0000	-60.0332 **	-54.8168 **
2015.0625	-13.0000	-57.2340 **	-56.2982 **
2418.0750	-13.0000	-54.0330 **	-54.5093 **
2821.0875	-13.0000	-55.1458 **	-54.1621 **
3224.1000	-13.0000	-52.5553 **	-53.5517 **
3627.1125	-13.0000	-51.0344 **	-53.1374 **
4030.1250	-13.0000	-51.3247 **	-50.7611 **

RADIATED SPURIOUS EMISSIONS



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

Wed, Mar 23, 2016

FCC Registration: 772092

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): 70.3

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

1.000 Watt(s) /Low Power

[illegible]

The chart displays the emission level in dBm across various frequencies in MHz. The y-axis ranges from -100 to 0 dBm, and the x-axis shows frequencies from 806.025 to 4030.125 MHz. Two data series are plotted: Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm) in grey and Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm) in yellow. A red dashed line indicates a reference level at -12.5 dBm.

Frequency (MHz)	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
806.025	-92	-91
1209.0375	-61	-56
1612.05	-60	-60
2015.0625	-58	-57
2418.075	-57	-56
2821.0875	-55	-55
3224.1	-54	-53
3627.1125	-52	-54
4030.125	-53	-52

Remarks:

Passed Results	Marginal Results	Failed Results
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5.500 Watt(s) /Max Power

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

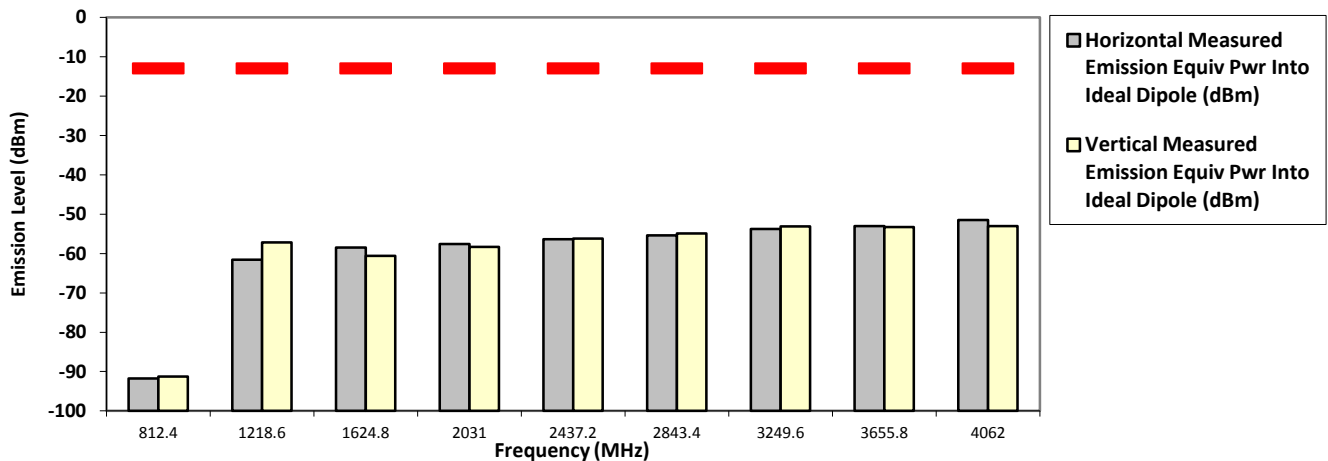
406.200000 MHz

25 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
812.4000	-13.0000	-91.7857 **	-91.2861 **
1218.6000	-13.0000	-61.5430 **	-57.1930 *
1624.8000	-13.0000	-58.5137 **	-60.5734 **
2031.0000	-13.0000	-57.6031 **	-58.2835 **
2437.2000	-13.0000	-56.3495 **	-56.2310 **
2843.4000	-13.0000	-55.4217 **	-54.9369 **
3249.6000	-13.0000	-53.8054 **	-53.1475 **
3655.8000	-13.0000	-53.0099 **	-53.2817 **
4062.0000	-13.0000	-51.4612 **	-53.0592 **

RADIATED SPURIOUS EMISSIONS



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

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

Wed, Mar 23, 2016

FCC Registration: 772092

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): 70.3

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

5.500 Watt(s) /Max Power

[illegible]

The chart displays the emission level in dBm across nine frequency points. The y-axis ranges from -100 to 0 dBm. A red dashed line indicates a reference level at -12.5 dBm. The legend identifies two data series: Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm) (grey bars) and Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm) (yellow bars).

Frequency (MHz)	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
859.975	-92	-93
1289.9625	-58	-49
1719.95	-61	-59
2149.9375	-57	-55
2579.925	-48	-49
3009.9125	-52	-51
3439.9	-55	-54
3869.8875	-53	-51
4299.875	-52	-52

*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): 70.3

Remarks:

Passed Results	Marginal Results	Failed Results
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SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

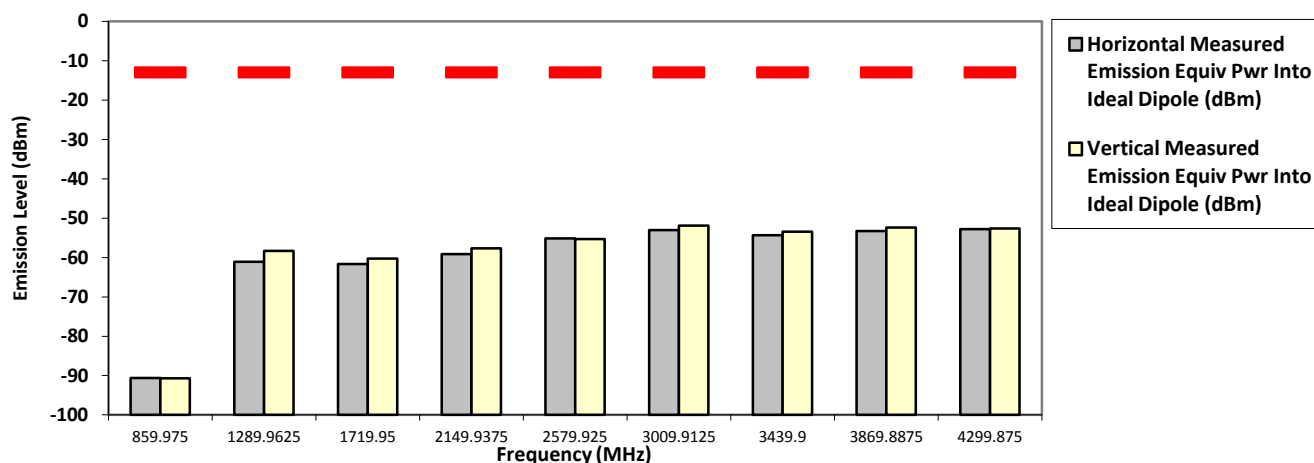
429.987500 MHz

25 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
859.9750	-13.0000	-90.5998 **	-90.6793 **
1289.9625	-13.0000	-61.1186 **	-58.3072 *
1719.9500	-13.0000	-61.6567 **	-60.3119 **
2149.9375	-13.0000	-59.1733 **	-57.6853 **
2579.9250	-13.0000	-55.1245 **	-55.2884 **
3009.9125	-13.0000	-53.0313 **	-51.9077 **
3439.9000	-13.0000	-54.3601 **	-53.4221 **
3869.8875	-13.0000	-53.2448 **	-52.4105 **
4299.8750	-13.0000	-52.7760 **	-52.6339 **

RADIATED SPURIOUS EMISSIONS



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

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

Wed, Mar 23, 2016

FCC Registration: 772092

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): 70.3

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHz 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

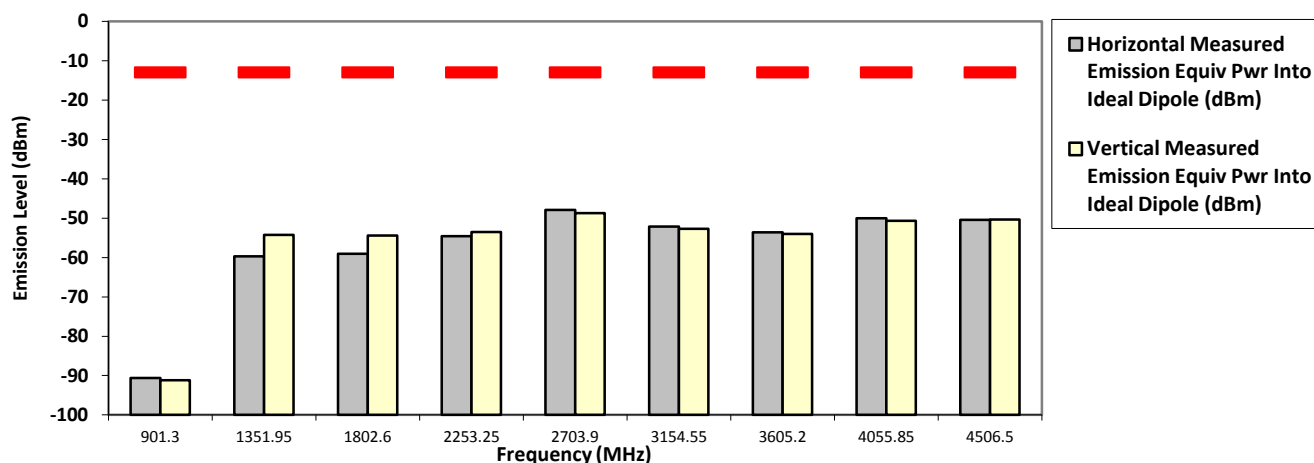
450.650000 MHz

25 kHz

5.500 Watt(s) /Max Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
901.3000	-13.0000	-90.6361 **	-91.2026 **
1351.9500	-13.0000	-59.7051 **	-54.2649 *
1802.6000	-13.0000	-59.0601 **	-54.4531 *
2253.2500	-13.0000	-54.5480 **	-53.5122 **
2703.9000	-13.0000	-47.9065 *	-48.6991 *
3154.5500	-13.0000	-52.1155 **	-52.6841 **
3605.2000	-13.0000	-53.6191 **	-54.0290 **
4055.8500	-13.0000	-50.0078 **	-50.7086 **
4506.5000	-13.0000	-50.4381 **	-50.3209 **

RADIATED SPURIOUS EMISSIONS



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

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Wed, Mar 23, 2016

FCC Registration: 772092

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): 70.3

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

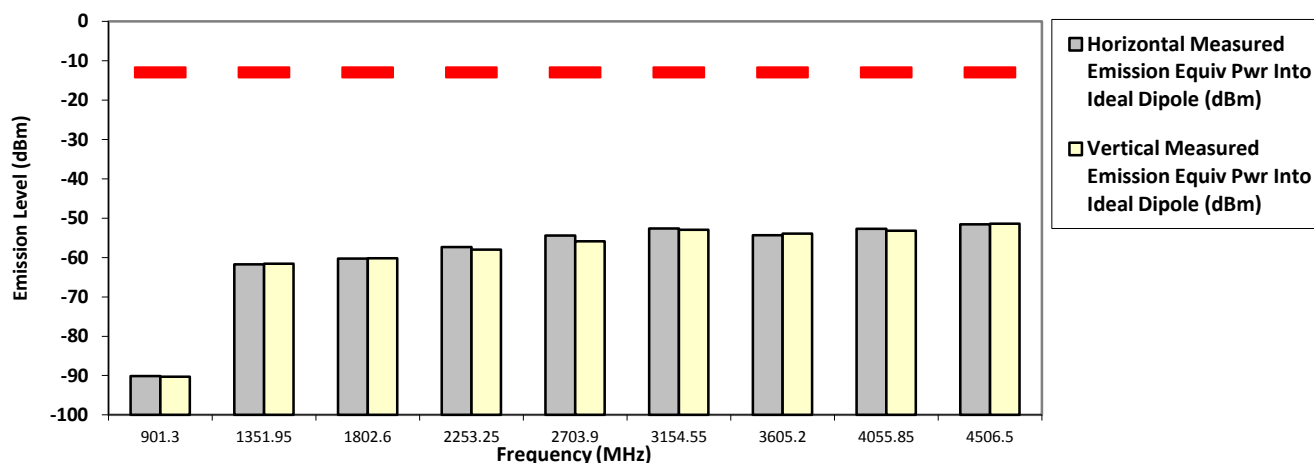
450.650000 MHz

25 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
901.3000	-13.0000	-90.1210 **	-90.2598 **
1351.9500	-13.0000	-61.7188 **	-61.6110 **
1802.6000	-13.0000	-60.2839 **	-60.2094 **
2253.2500	-13.0000	-57.3231 **	-57.9629 **
2703.9000	-13.0000	-54.4033 **	-55.8671 **
3154.5500	-13.0000	-52.6070 **	-52.9334 **
3605.2000	-13.0000	-54.3241 **	-53.8898 **
4055.8500	-13.0000	-52.6756 **	-53.1709 **
4506.5000	-13.0000	-51.5413 **	-51.4312 **

RADIATED SPURIOUS EMISSIONS



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Wed, Mar 23, 2016

FCC Registration: 772092

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): 70.3

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

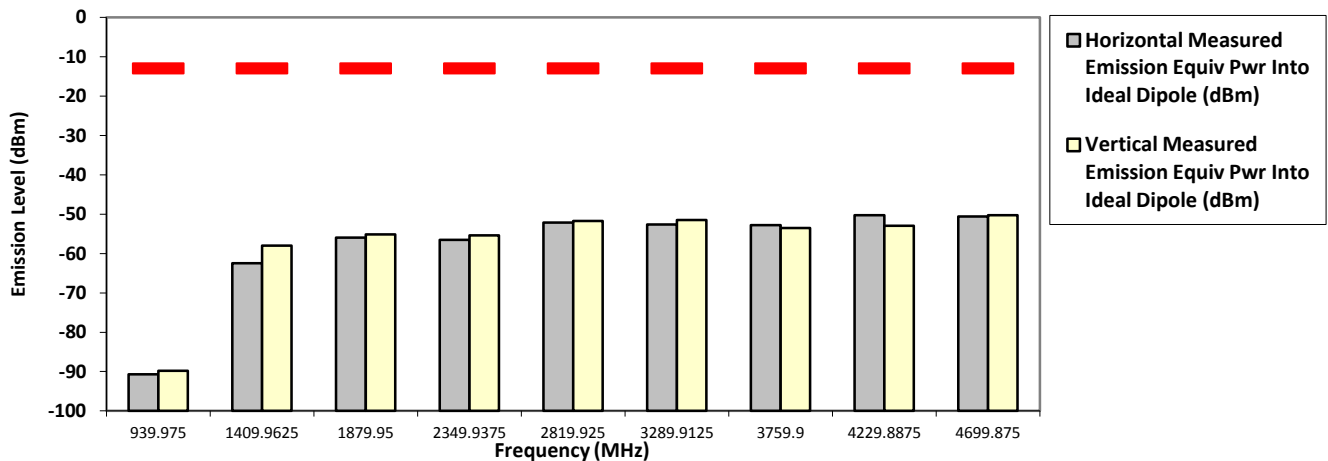
469.987500 MHz

25 kHz

5.500 Watt(s) /Max Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
939.9750	-13.0000	-90.7052 **	-89.8216 **
1409.9625	-13.0000	-62.4934 **	-57.9701 *
1879.9500	-13.0000	-56.0007 **	-55.1844 *
2349.9375	-13.0000	-56.5253 **	-55.3888 **
2819.9250	-13.0000	-52.1115 **	-51.7701 **
3289.9125	-13.0000	-52.6596 **	-51.4775 **
3759.9000	-13.0000	-52.8013 **	-53.5219 **
4229.8875	-13.0000	-50.3076 **	-52.9899 **
4699.8750	-13.0000	-50.6073 **	-50.2833 **

RADIATED SPURIOUS EMISSIONS



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Wed, Mar 23, 2016

FCC Registration: 772092

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): 70.3

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission : EVX-261-G6-5 403-470MHZ 5W

Model #: EVX-261

S/N: 2B6C300013

SR:05081-EMC-00001

Battery Part No: FNB-V134LI-UNI

Accy Part No: ATU-6A, ATU-6C

Test Mode: TX Analog

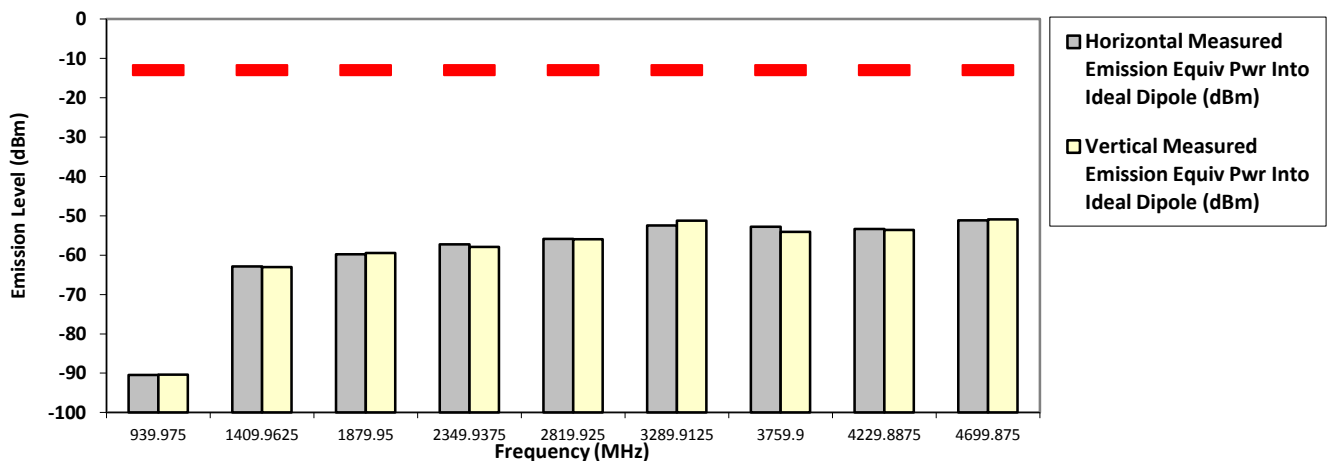
469.987500 MHz

25 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	FCC Failing Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
939.9750	-13.0000	-90.4296 **	-90.3380 **
1409.9625	-13.0000	-62.8948 **	-63.0586 **
1879.9500	-13.0000	-59.7928 **	-59.4881 **
2349.9375	-13.0000	-57.2713 **	-57.9058 **
2819.9250	-13.0000	-55.8876 **	-55.9804 **
3289.9125	-13.0000	-52.4923 **	-51.2164 **
3759.9000	-13.0000	-52.8121 **	-54.0829 **
4229.8875	-13.0000	-53.3376 **	-53.5632 **
4699.8750	-13.0000	-51.1498 **	-50.9586 **

RADIATED SPURIOUS EMISSIONS



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

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

Wed, Mar 23, 2016

FCC Registration: 772092

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): 70.3

System MU: 5.01 dB

Remarks:

Passed Results

Marginal Results

Failed Results