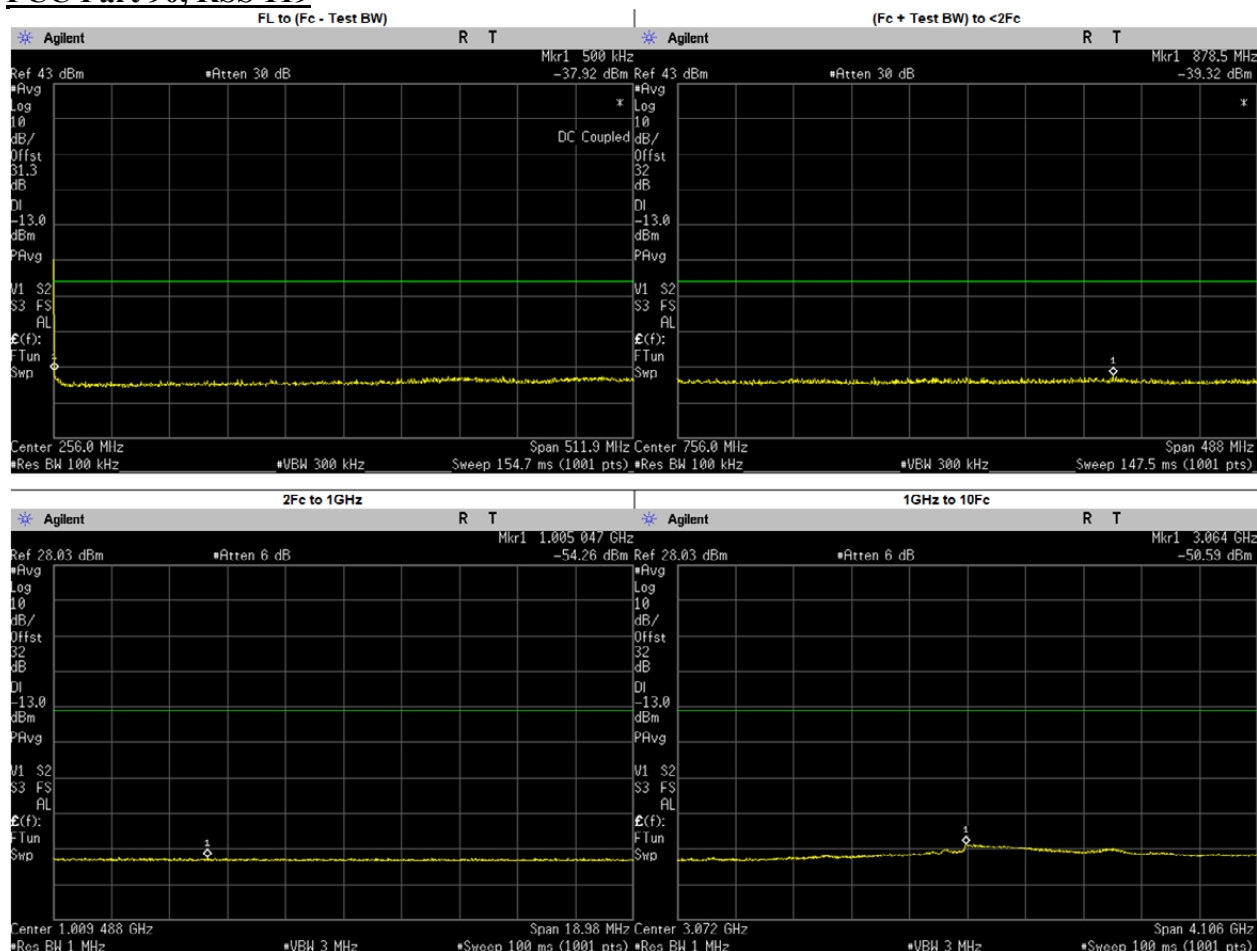
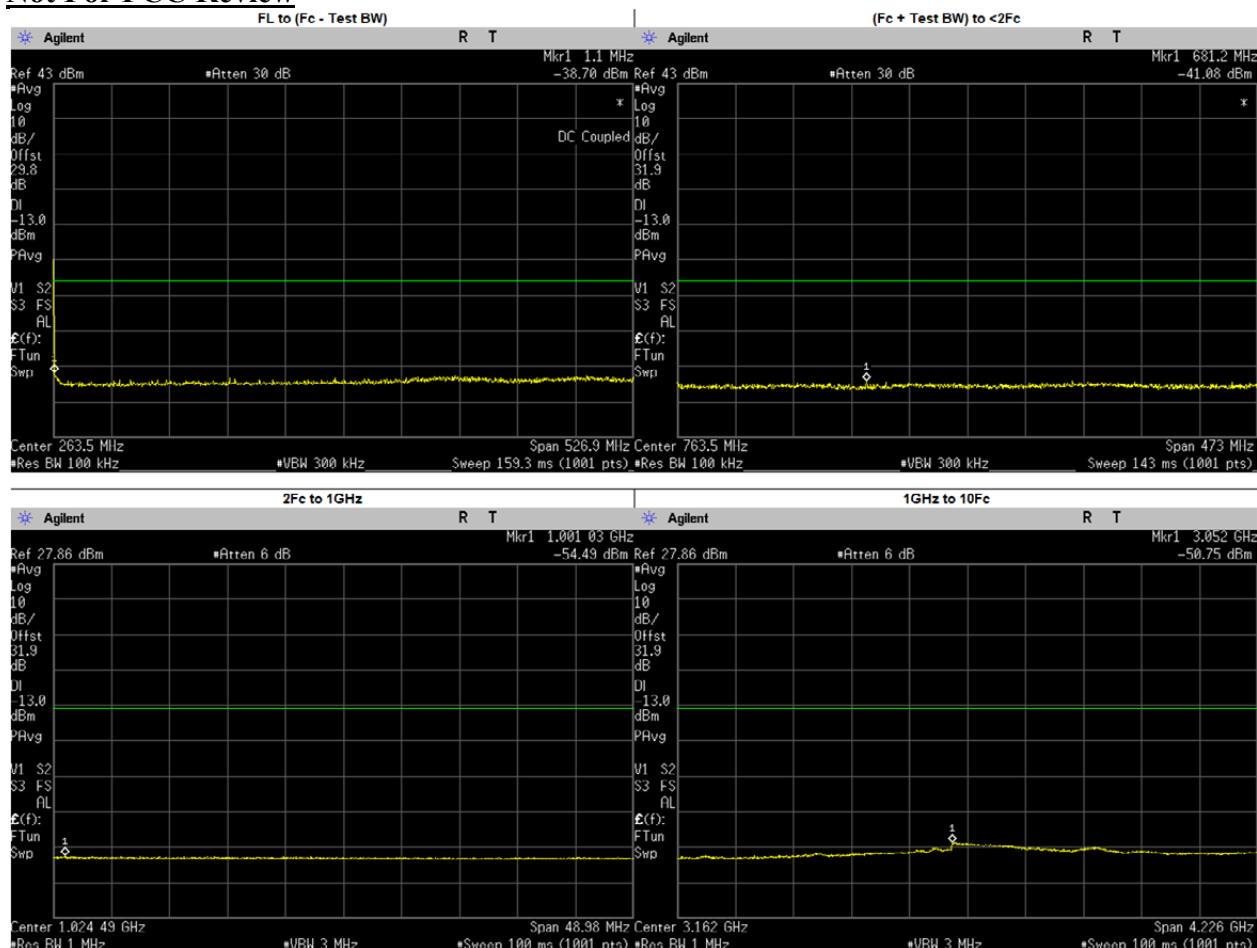


Analog: 511.9875 MHz, 25.0kHz Channel Spacing, Low Power
FCC Part 90, RSS 119



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	348.1158	-39.4400	-13.00	PASS
(Fc + Test BW) to <2Fc	878.4990	-39.3200	-13.00	PASS
2Fc to 1GHz	1005.0470	-54.2600	-13.00	PASS
1GHz to 10Fc	3063.7130	-50.5900	-13.00	PASS
	1023.9750	-55.0614	-13.00	PASS
	1535.9630	-54.6669	-13.00	PASS
	2047.9500	-53.8390	-13.00	PASS
	2559.9370	-53.5770	-13.00	PASS
	3071.9250	-50.8690	-13.00	PASS
	3583.9120	-52.2231	-13.00	PASS
	4095.9000	-52.0779	-13.00	PASS
	4607.8870	-53.5865	-13.00	PASS
	5119.8750	-53.3849	-13.00	PASS

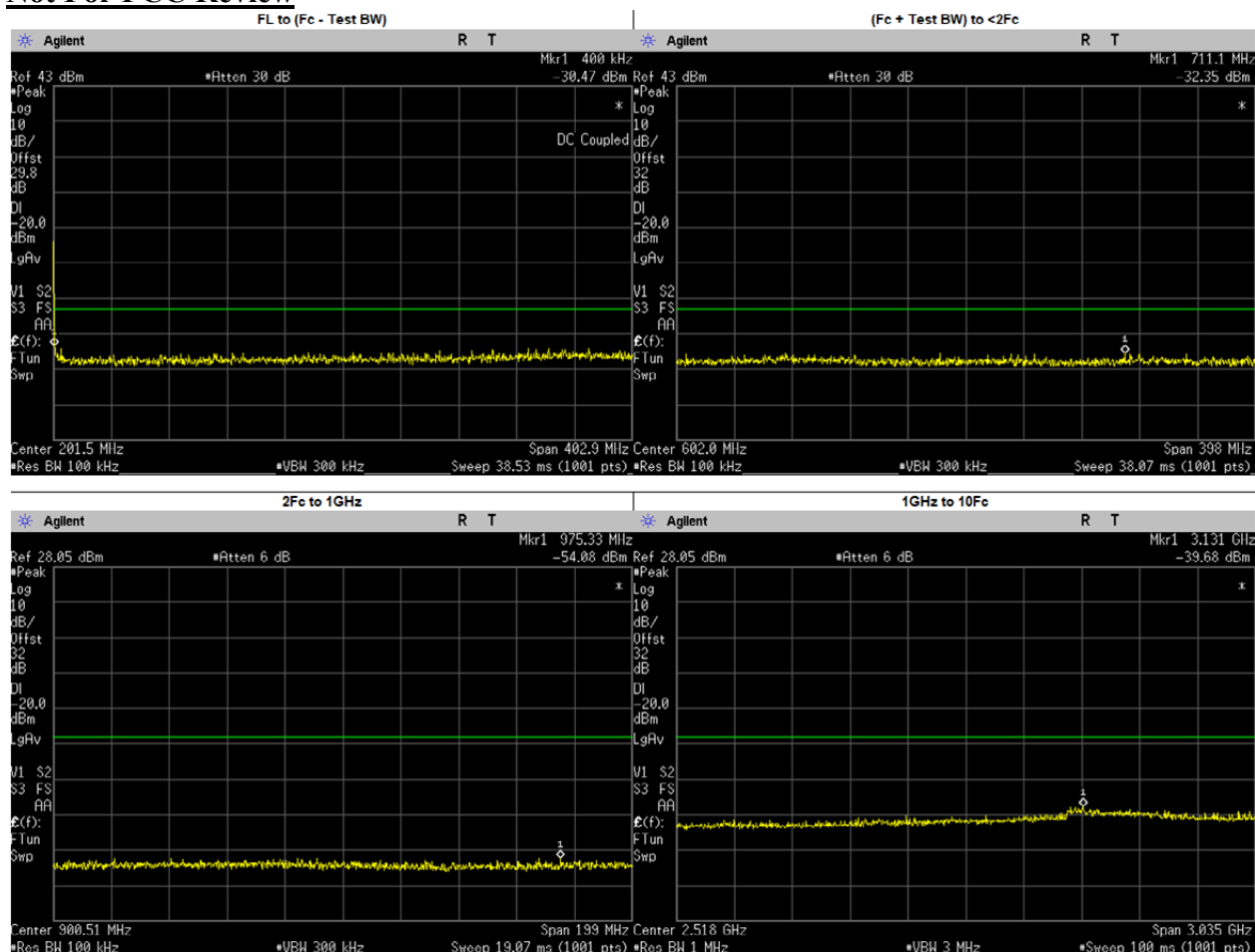
Analog: 526.9875 MHz, 25.0kHz Channel Spacing, Max Power
Not For FCC Review



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	484.7770	-39.4700	-13.00	PASS
(Fc + Test BW) to <2Fc	681.2279	-41.0800	-13.00	PASS
2Fc to 1GHz	1001.0290	-54.4900	-13.00	PASS
1GHz to 10Fc	3052.0520	-50.7500	-13.00	PASS
	1053.9750	-55.3274	-13.00	PASS
	1580.9630	-55.0160	-13.00	PASS
	2107.9500	-54.2268	-13.00	PASS
	2634.9370	-53.5270	-13.00	PASS
	3161.9250	-50.9310	-13.00	PASS
	3688.9120	-52.5594	-13.00	PASS
	4215.9000	-53.1000	-13.00	PASS
	4742.8870	-53.9935	-13.00	PASS
	5269.8750	-53.4690	-13.00	PASS

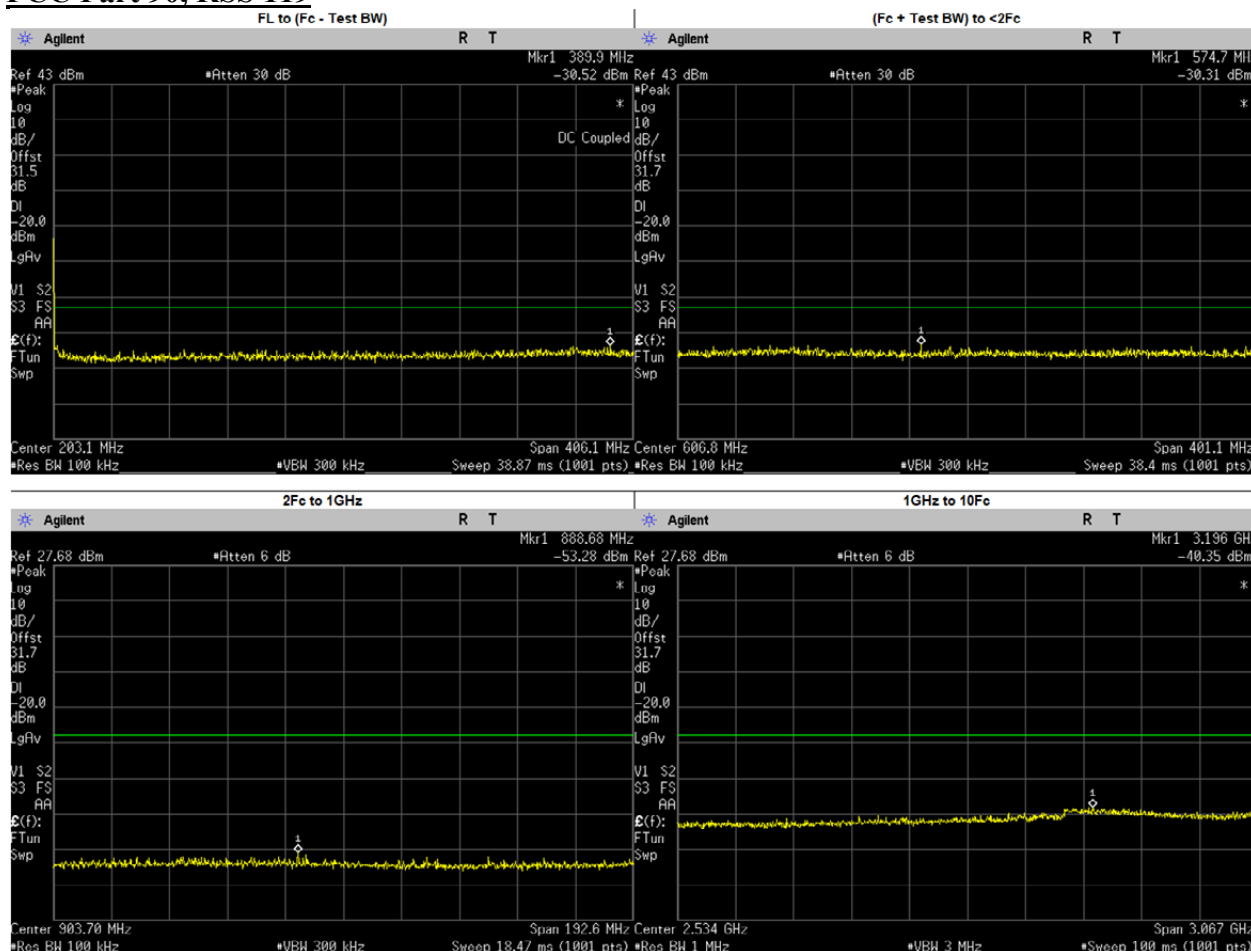
6.10.3. Test Result (Digital)

4FSK: 403.0125 MHz, 12.5 kHz Channel Spacing, Max Power Not For FCC Review



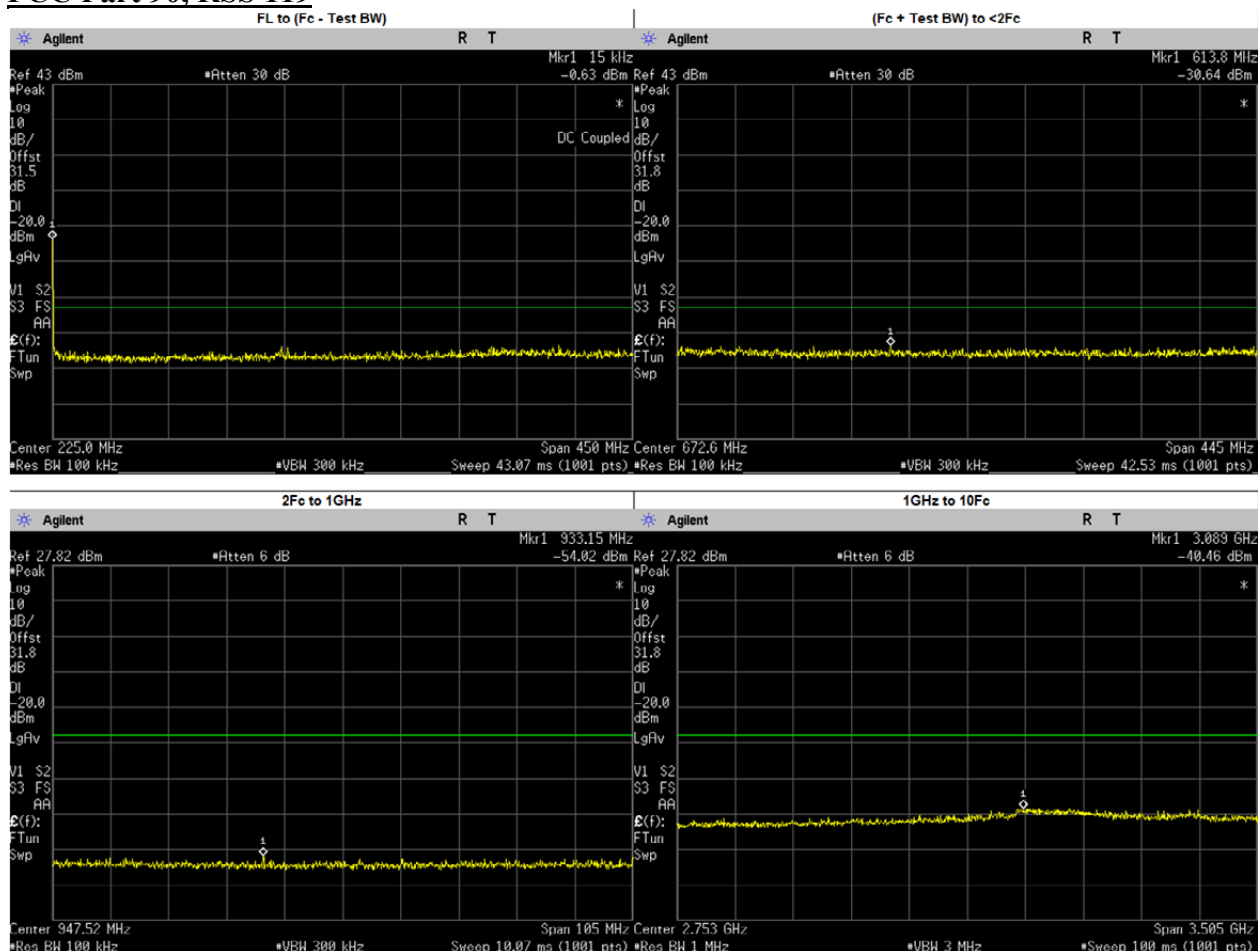
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	372.7358	-29.7307	-20.00	PASS
(Fc + Test BW) to <2Fc	711.0867	-32.3500	-20.00	PASS
2Fc to 1GHz	975.3271	-54.0800	-20.00	PASS
	806.0250	-56.6215	-20.00	PASS
1GHz to 10Fc	3170.1140	-39.6800	-20.00	PASS
	1209.0370	-44.9468	-20.00	PASS
	1612.0500	-44.6088	-20.00	PASS
	2015.0620	-44.3157	-20.00	PASS
	2418.0750	-43.1331	-20.00	PASS
	2821.0880	-42.1546	-20.00	PASS
	3224.1000	-41.9070	-20.00	PASS
	3627.1130	-42.4685	-20.00	PASS
	4030.1250	-42.6149	-20.00	PASS

4FSK: 406.2 MHz, 12.5 kHz Channel Spacing, Max Power **FCC Part 90, RSS 119**



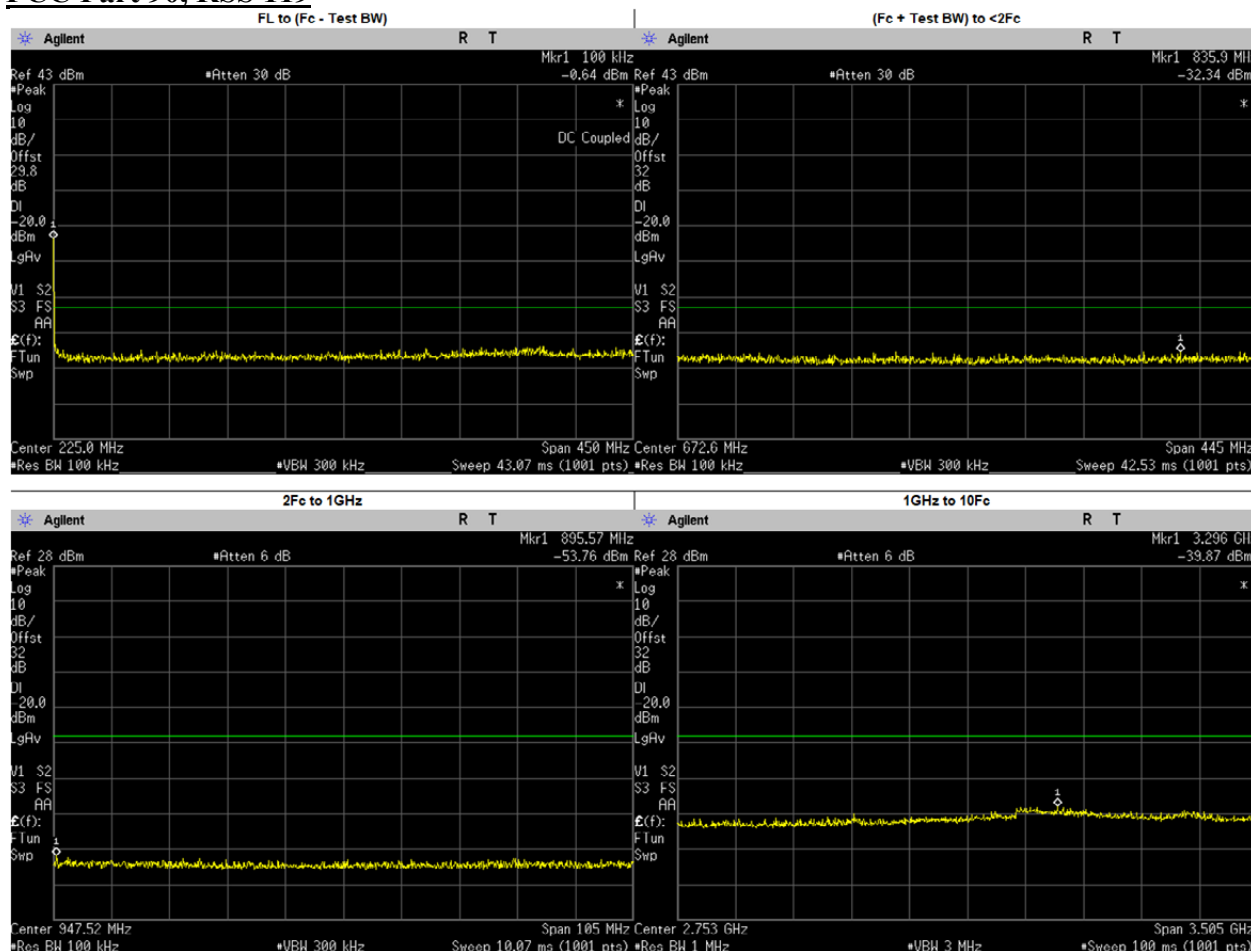
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	389.8990	-30.5200	-20.00	PASS
(Fc + Test BW) to <2Fc	574.7363	-30.3100	-20.00	PASS
2Fc to 1GHz	888.6772	-53.2800	-20.00	PASS
	812.4000	-56.9783	-20.00	PASS
1GHz to 10Fc	3195.9720	-40.3500	-20.00	PASS
	1218.6000	-45.0345	-20.00	PASS
	1624.8000	-45.0597	-20.00	PASS
	2031.0000	-44.5993	-20.00	PASS
	2437.2000	-44.3037	-20.00	PASS
	2843.4000	-43.4424	-20.00	PASS
	3249.6000	-41.3905	-20.00	PASS
	3655.8000	-42.9555	-20.00	PASS
	4062.0000	-42.7203	-20.00	PASS

**4FSK: 450.025 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90, RSS 119**



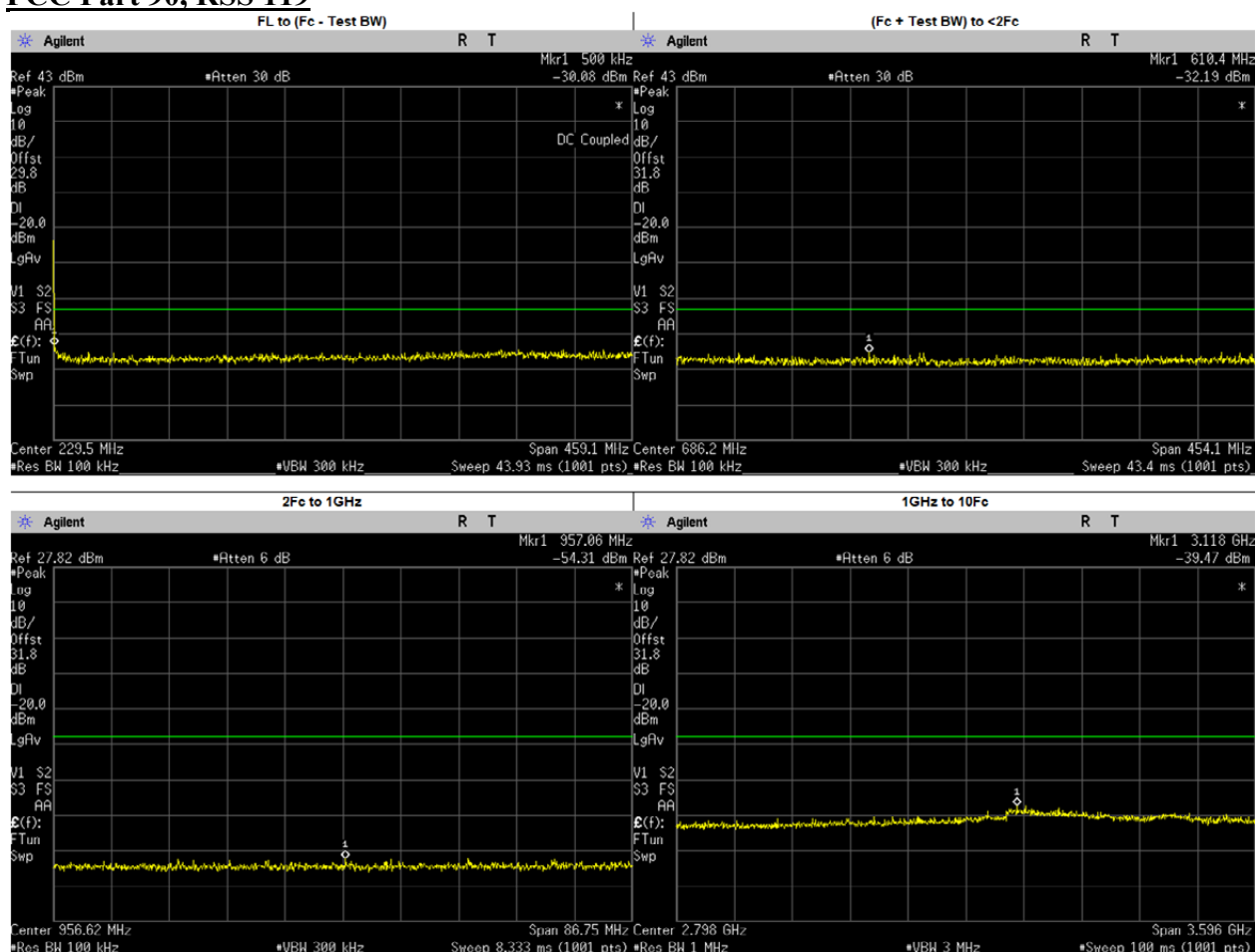
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	392.8234	-30.6995	-20.00	PASS
(Fc + Test BW) to <2Fc	613.8301	-30.6400	-20.00	PASS
2Fc to 1GHz	933.1468	-54.0200	-20.00	PASS
	900.0500	-55.3756	-20.00	PASS
1GHz to 10Fc	3089.1290	-40.4600	-20.00	PASS
	1350.0750	-45.6612	-20.00	PASS
	1800.1000	-43.7132	-20.00	PASS
	2250.1250	-44.6059	-20.00	PASS
	2700.1500	-43.5708	-20.00	PASS
	3150.1750	-41.3856	-20.00	PASS
	3600.2000	-42.9771	-20.00	PASS
	4050.2250	-42.9176	-20.00	PASS
	4500.2500	-43.3880	-20.00	PASS

4FSK: 450.025 MHz, 12.5 kHz Channel Spacing, Low Power
FCC Part 90, RSS 119



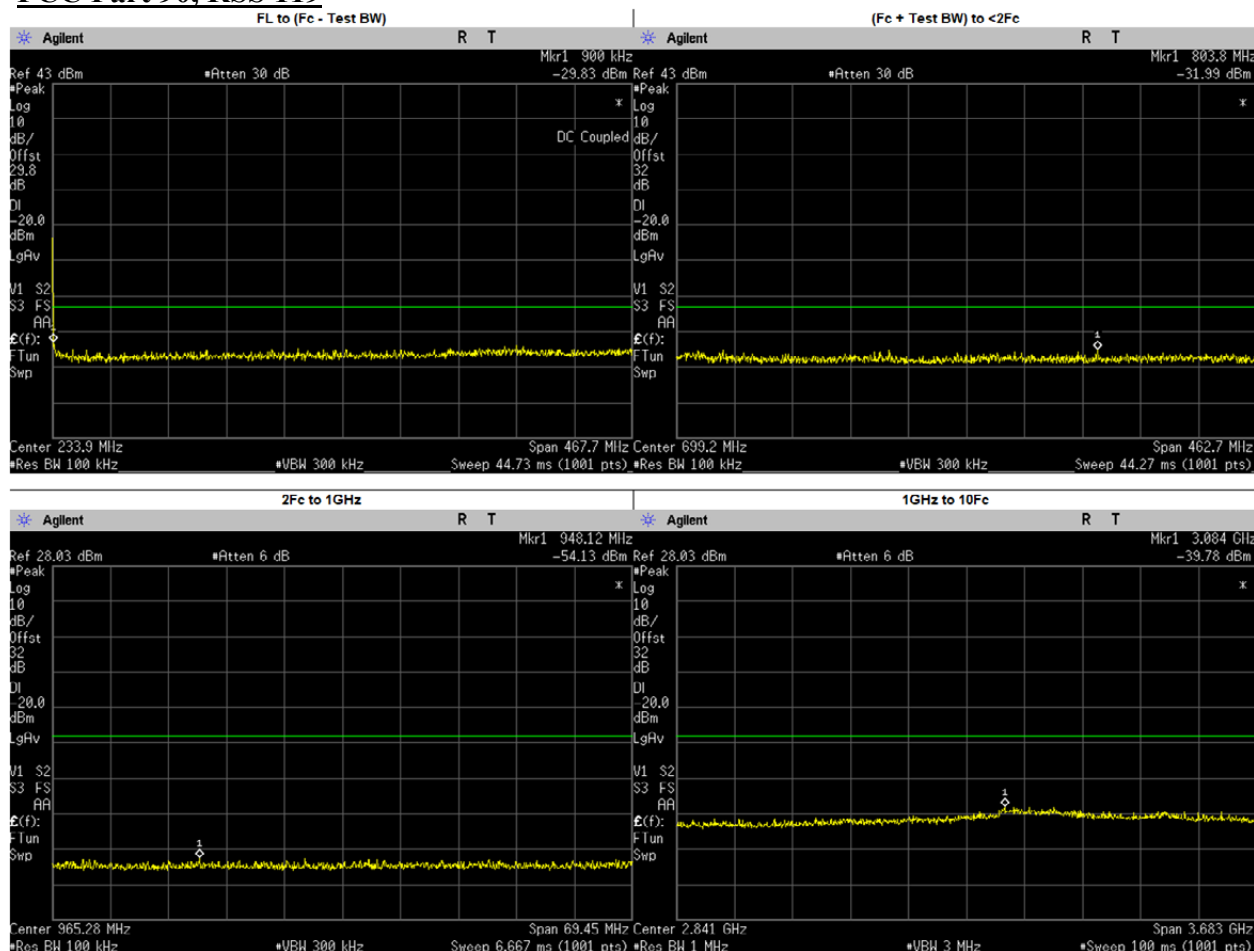
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	380.2245	-29.3051	-20.00	PASS
(Fc + Test BW) to <2Fc	835.8692	-32.3400	-20.00	PASS
2Fc to 1GHz	895.5747	-53.7600	-20.00	PASS
	900.0500	-55.6163	-20.00	PASS
1GHz to 10Fc	1350.0750	-45.3301	-20.00	PASS
	1800.1000	-44.6628	-20.00	PASS
	2250.1250	-44.3262	-20.00	PASS
	2700.1500	-43.2910	-20.00	PASS
	3150.1750	-40.9648	-20.00	PASS
	3600.2000	-42.4438	-20.00	PASS
	4050.2250	-41.9943	-20.00	PASS
	4500.2500	-43.7829	-20.00	PASS
	3295.9390	-39.8700	-20.00	PASS

4FSK: 459.125 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90, RSS 119



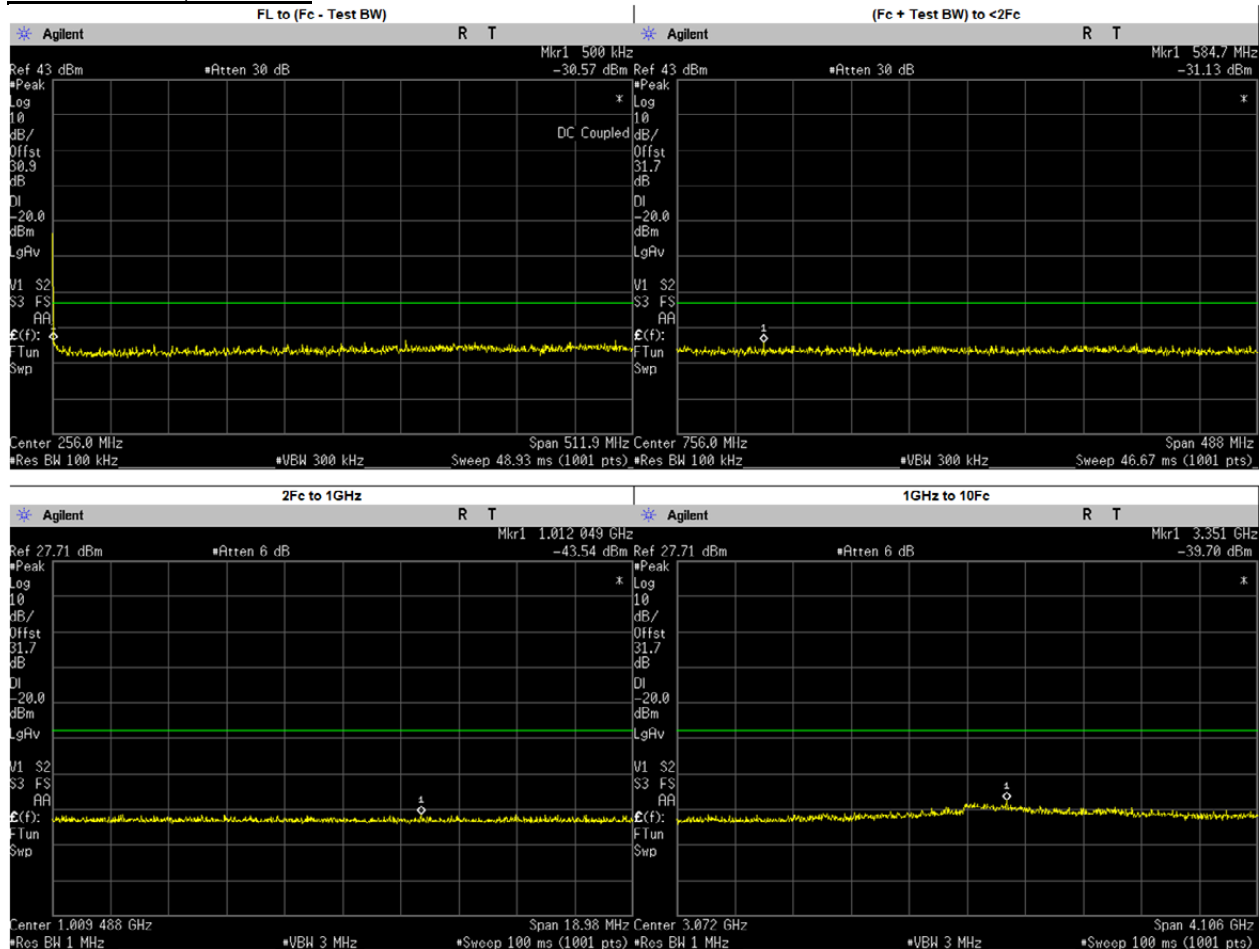
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	369.0926	-29.7996	-20.00	PASS
(Fc + Test BW) to <2Fc	610.3865	-32.1900	-20.00	PASS
2Fc to 1GHz	957.0588	-54.3100	-20.00	PASS
	918.2500	-57.1623	-20.00	PASS
1GHz to 10Fc	1377.3750	-43.9099	-20.00	PASS
	1836.5000	-45.3213	-20.00	PASS
	2295.6250	-44.7567	-20.00	PASS
	2754.7500	-44.5565	-20.00	PASS
	3213.8750	-41.3143	-20.00	PASS
	3673.0000	-42.4388	-20.00	PASS
	4132.1250	-43.0783	-20.00	PASS
	4591.2500	-44.1825	-20.00	PASS
	3168.5390	-39.4700	-20.00	PASS

4FSK: 467.775 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90, RSS 119



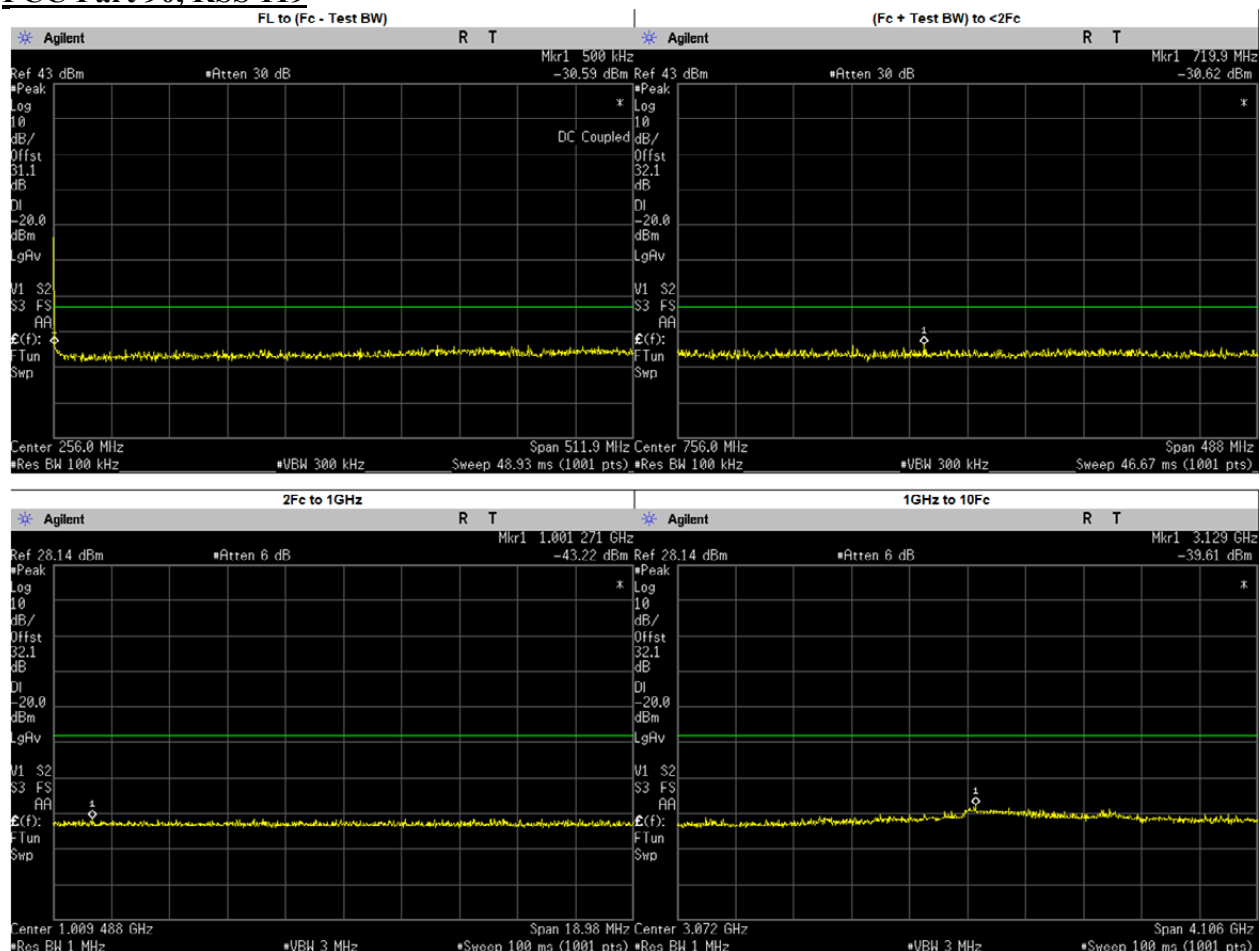
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	374.1764	-29.3753	-20.00	PASS
(Fc + Test BW) to <2Fc	803.7652	-31.9900	-20.00	PASS
2Fc to 1GHz	948.1209	-54.1300	-20.00	PASS
	935.5500	-55.9241	-20.00	PASS
1GHz to 10Fc	1403.3250	-44.5566	-20.00	PASS
	1871.1000	-44.7346	-20.00	PASS
	2338.8750	-44.4350	-20.00	PASS
	2806.6500	-42.6012	-20.00	PASS
	3274.4250	-41.5469	-20.00	PASS
	3742.2000	-42.2898	-20.00	PASS
	4209.9750	-43.4452	-20.00	PASS
	4677.7500	-42.7815	-20.00	PASS
	3084.4360	-39.7800	-20.00	PASS

**4FSK: 511.9875 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90, RSS 119**



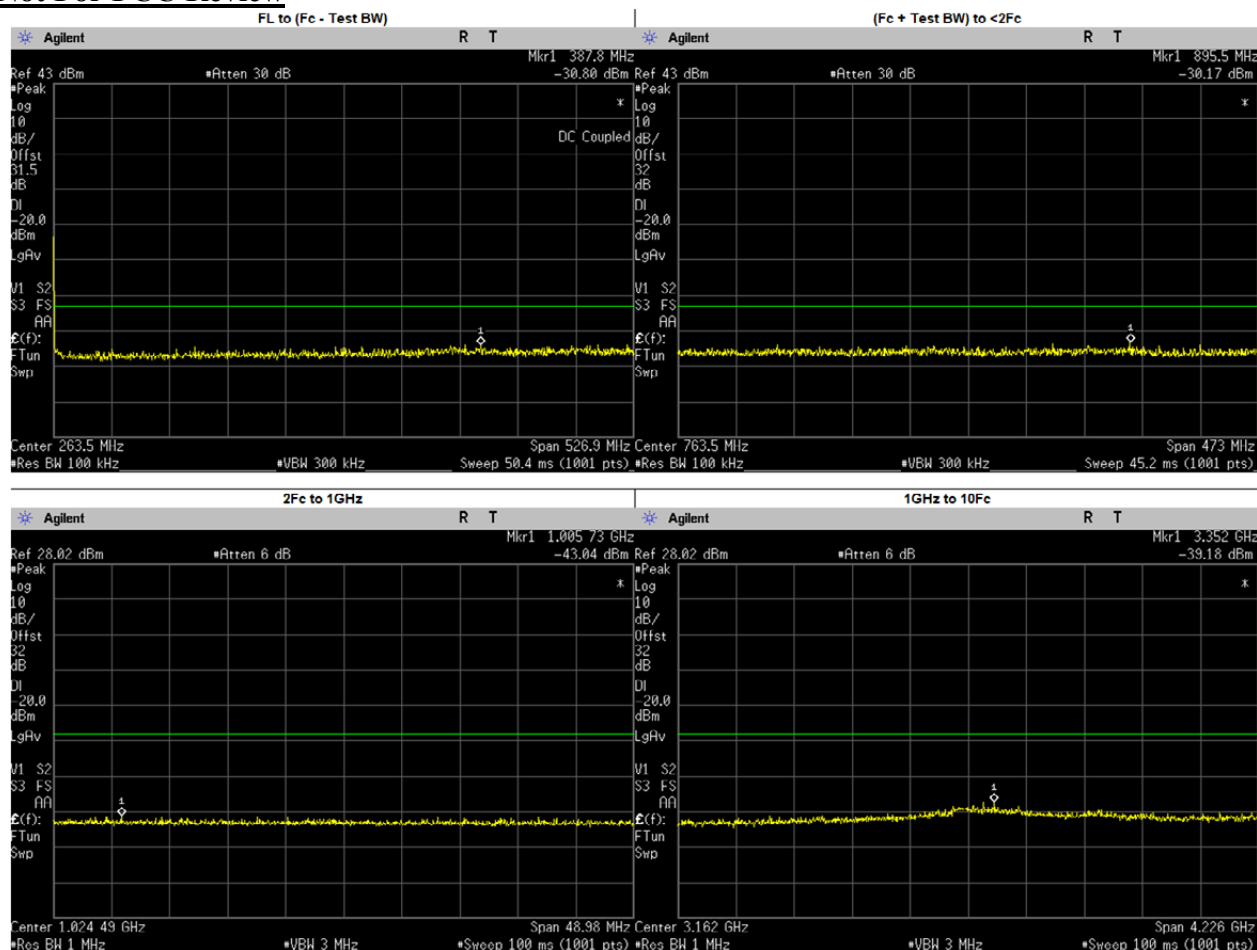
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	496.0611	-30.4300	-20.00	PASS
(Fc + Test BW) to <2Fc	584.7497	-31.1300	-20.00	PASS
2Fc to 1GHz	1012.0490	-43.5400	-20.00	PASS
1GHz to 10Fc	1023.9750	-46.0084	-20.00	PASS
	1535.9630	-45.7831	-20.00	PASS
	2047.9500	-44.5180	-20.00	PASS
	2559.9370	-44.1414	-20.00	PASS
	3071.9250	-41.1520	-20.00	PASS
	3583.9120	-42.4998	-20.00	PASS
	4095.9000	-42.6517	-20.00	PASS
	4607.8870	-44.7582	-20.00	PASS
	5119.8750	-43.7238	-20.00	PASS
	3351.1260	-39.7000	-20.00	PASS

4FSK: 511.9875 MHz, 12.5 kHz Channel Spacing, Low Power
FCC Part 90, RSS 119



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	418.7610	-30.7222	-20.00	PASS
(Fc + Test BW) to <2Fc	719.9134	-30.6200	-20.00	PASS
2Fc to 1GHz	1001.2710	-43.2200	-20.00	PASS
1GHz to 10Fc	1023.9750	-45.0382	-20.00	PASS
	1535.9630	-44.4069	-20.00	PASS
	2047.9500	-44.4800	-20.00	PASS
	2559.9370	-43.6129	-20.00	PASS
	3071.9250	-41.1800	-20.00	PASS
	3583.9120	-41.3931	-20.00	PASS
	4095.9000	-42.0000	-20.00	PASS
	4607.8870	-43.3231	-20.00	PASS
	5119.8750	-43.9423	-20.00	PASS
	3129.4080	-39.6100	-20.00	PASS

4FSK: 526.9875 MHz, 12.5 kHz Channel Spacing, Low Power **Not For FCC Review**



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	387.8234	-30.8000	-20.00	PASS
(Fc + Test BW) to <2Fc	895.5000	-30.1700	-20.00	PASS
2Fc to 1GHz	1005.7300	-43.0400	-20.00	PASS
1GHz to 10Fc	1053.9750	-45.2786	-20.00	PASS
	1580.9630	-45.2897	-20.00	PASS
	2107.9500	-44.1955	-20.00	PASS
	2634.9370	-43.7026	-20.00	PASS
	3161.9250	-40.7480	-20.00	PASS
	3688.9120	-42.6701	-20.00	PASS
	4215.9000	-43.5256	-20.00	PASS
	4742.8870	-43.5388	-20.00	PASS
	5269.8750	-42.8747	-20.00	PASS
	3352.0900	-39.1800	-20.00	PASS

6.10.4. Test Limit

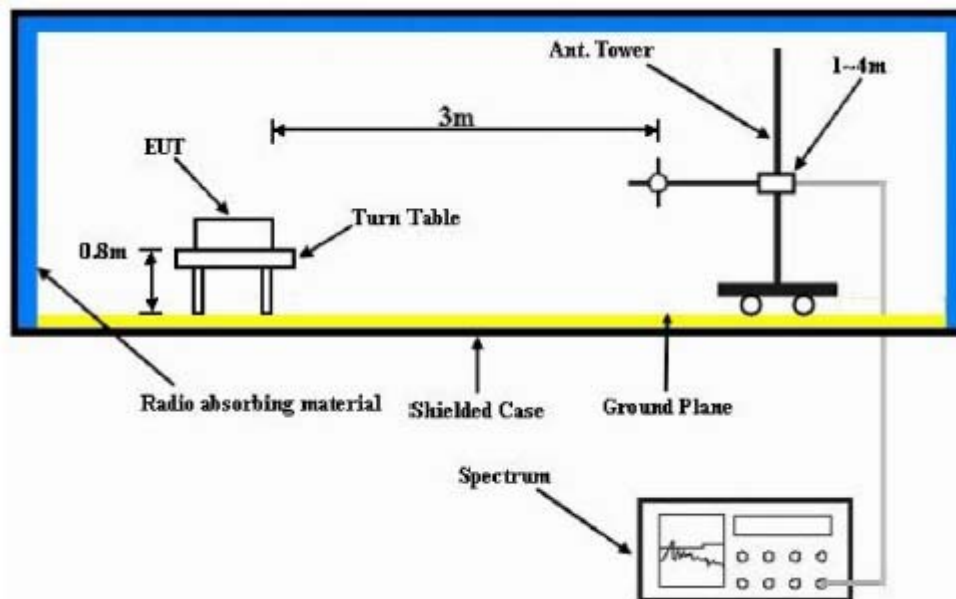
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

Channel Spacing	Part 22	Part 24D	Part 74	Part 80	Part 90 (UHF, VHF, 800, 900)	Part 90 (700)
12.5kHz	$43 + \log_{10}(P)$ (-13 dBm)	$43 + \log_{10}(P)$ (-13 dBm)	$43 + \log_{10}(P)$ (-13 dBm)	Not Applicable	$50 + \log_{10}(P)$ (-20 dBm)	$43 + \log_{10}(P)$ (-13 dBm)
25kHz		Not Applicable		$43 + \log_{10}(P)$ (-13 dBm)	$43 + \log_{10}(P)$ (-13 dBm)	$43 + \log_{10}(P)$ (-13 dBm)

Channel Spacing	RSS 134	RSS 182	RSS 119 (UHF, VHF, 800, 900)	RSS 119 (700)
12.5kHz	$43 + \log_{10}(P)$ (-13 dBm)	Not Applicable	$50 + \log_{10}(P)$ (-20 dBm)	$43 + \log_{10}(P)$ (-13 dBm)
25kHz	Not Applicable	$43 + \log_{10}(P)$ (-13 dBm)	$43 + \log_{10}(P)$ (-13 dBm)	$43 + \log_{10}(P)$ (-13 dBm)

6.11. Radiated Spurious Emission

6.11.1. Test Setup



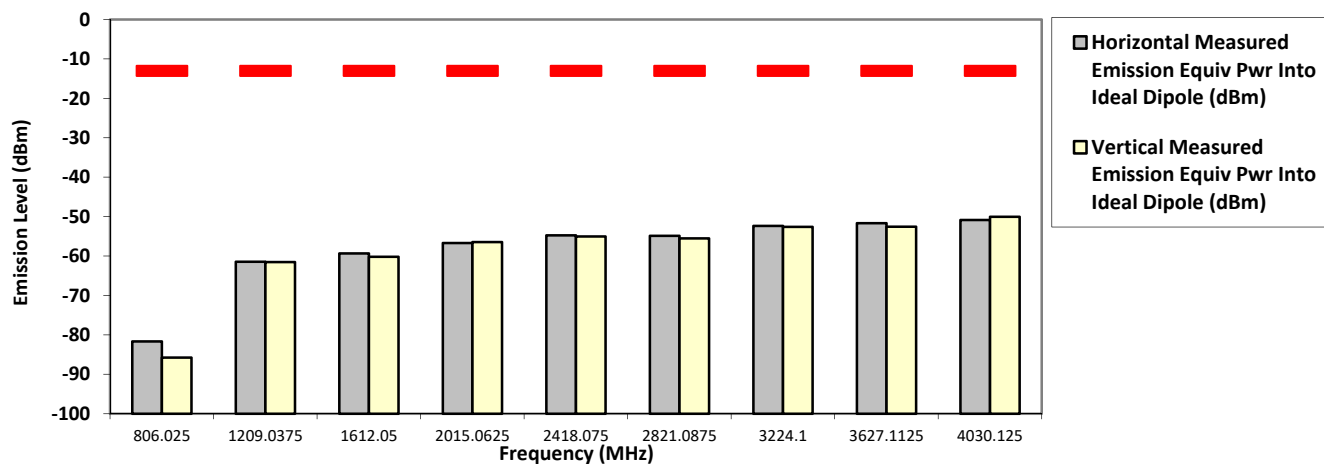
- 1) The Resolution Bandwidth for scanning Radiated Emission below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector mode is positive peak.
- 2) In the semi- anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height (for $F_c < 1\text{GHz}$) or 1.5m height (for $F_c > 1\text{GHz}$) 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 DUT 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.

6.11.2. Test Result (Analog)

SAC Transmitter Radiated Emission:
Model Number: AAH56RDN9RA1AN S/N: 871TWB3893 SR:20392-EMC-00025
Battery Part No: PMNN4489A Accy Part No: NA
Test Mode: TX Analog
403.012500 MHz 25 kHz 4.800 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)
806.0250	-13.0000	-81.6560 **	-85.7744 **
1209.0375	-13.0000	-61.4713 **	-61.5295 **
1612.0500	-13.0000	-59.3573 **	-60.1775 **
2015.0625	-13.0000	-56.7038 **	-56.4590 **
2418.0750	-13.0000	-54.7389 **	-55.0602 **
2821.0875	-13.0000	-54.8731 **	-55.5426 **
3224.1000	-13.0000	-52.3826 **	-52.6209 **
3627.1125	-13.0000	-51.6590 **	-52.5857 **
4030.1250	-13.0000	-50.8434 **	-50.0404 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

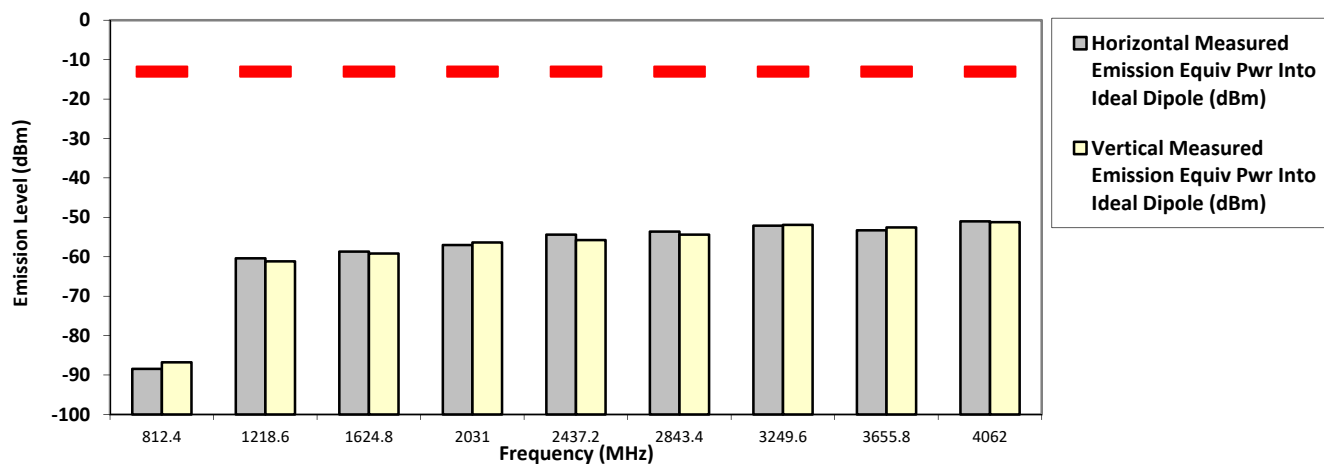
Test Mode: TX Analog
 25 kHz

406.200000 MHz

4.800 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)
812.4000	-13.0000	-88.4342 **	-86.7687 **
1218.6000	-13.0000	-60.3824 **	-61.1884 **
1624.8000	-13.0000	-58.6878 **	-59.1710 **
2031.0000	-13.0000	-57.0147 **	-56.3623 **
2437.2000	-13.0000	-54.3731 **	-55.7829 **
2843.4000	-13.0000	-53.6267 **	-54.4000 **
3249.6000	-13.0000	-52.1204 **	-51.8989 **
3655.8000	-13.0000	-53.2859 **	-52.5726 **
4062.0000	-13.0000	-51.0048 **	-51.2191 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
 Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:	Passed Results	Marginal Results	Failed Results
----------	----------------	------------------	----------------

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

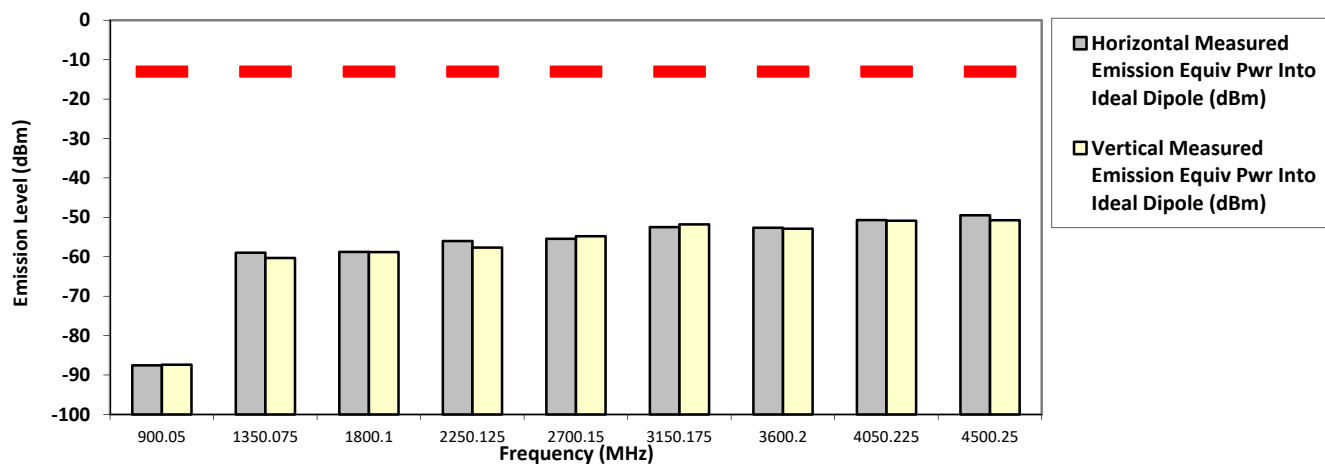
Test Mode: TX Analog
25 kHz

450.025000 MHz

1.000 Watt(s) /Low Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
900.0500	-13.0000	-87.5480 **	-87.3813 **
1350.0750	-13.0000	-58.9769 **	-60.3239 **
1800.1000	-13.0000	-58.7926 **	-58.8108 **
2250.1250	-13.0000	-56.0312 **	-57.6618 **
2700.1500	-13.0000	-55.4566 **	-54.8107 **
3150.1750	-13.0000	-52.4742 **	-51.7851 **
3600.2000	-13.0000	-52.6303 **	-52.8789 **
4050.2250	-13.0000	-50.6988 **	-50.8614 **
4500.2500	-13.0000	-49.4973 **	-50.7332 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

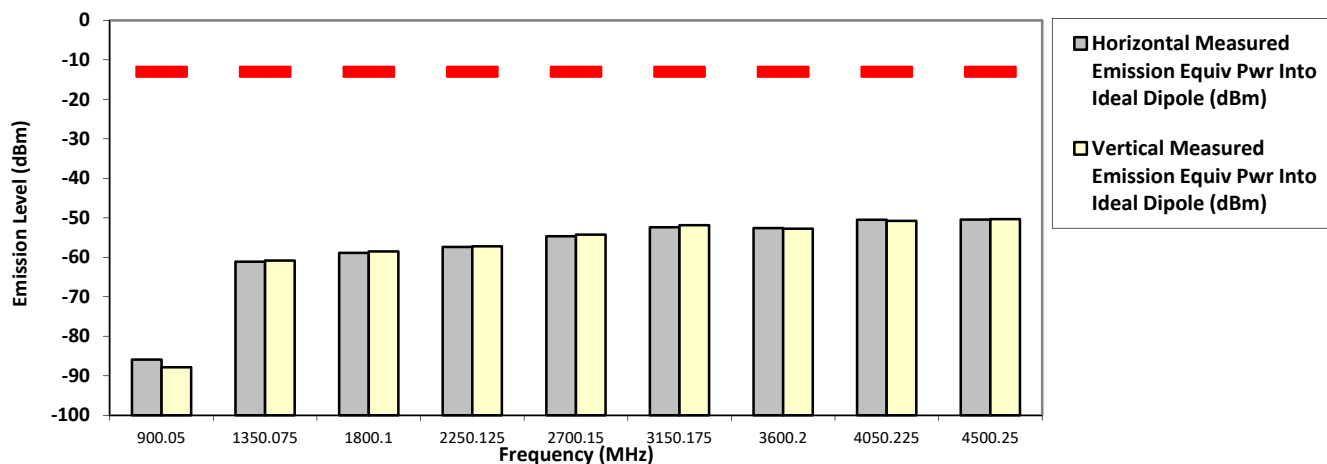
Test Mode: TX Analog
25 kHz

450.025000 MHz

4.800 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)
900.0500	-13.0000	-85.8988 **	-87.8344 **
1350.0750	-13.0000	-61.0945 **	-60.8321 **
1800.1000	-13.0000	-58.8839 **	-58.5344 **
2250.1250	-13.0000	-57.3891 **	-57.2166 **
2700.1500	-13.0000	-54.6515 **	-54.2648 **
3150.1750	-13.0000	-52.4081 **	-51.8854 **
3600.2000	-13.0000	-52.6197 **	-52.7495 **
4050.2250	-13.0000	-50.5171 **	-50.7618 **
4500.2500	-13.0000	-50.4698 **	-50.3507 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

[illegible]

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

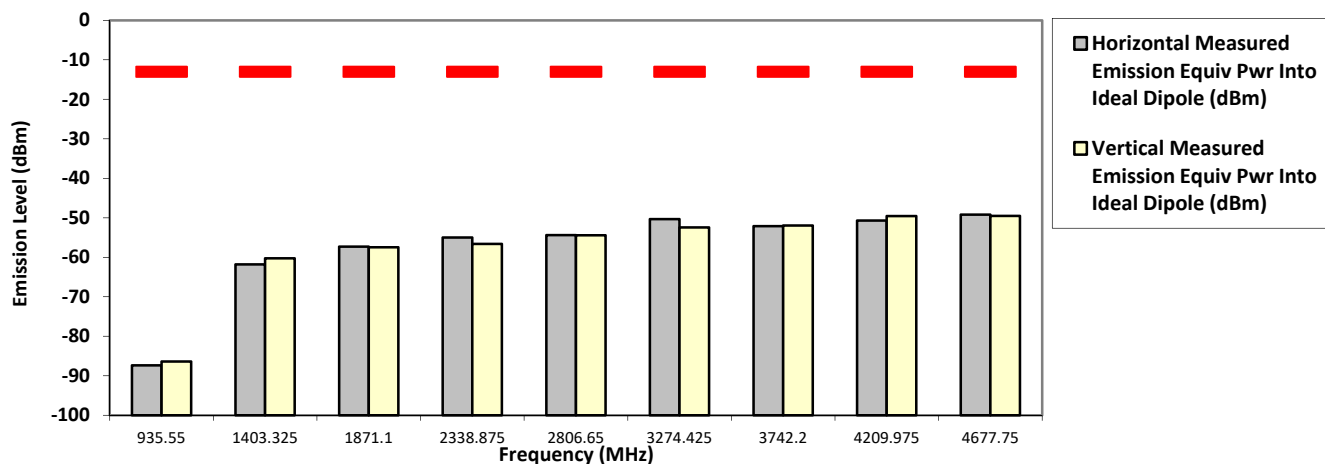
Test Mode: TX Analog
25 kHz

467.775000 MHz

2.000 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)
935.5500	-13.0000	-87.3484 **	-86.4000 **
1403.3250	-13.0000	-61.7860 **	-60.2738 **
1871.1000	-13.0000	-57.3099 **	-57.4723 **
2338.8750	-13.0000	-54.9945 **	-56.6058 **
2806.6500	-13.0000	-54.3915 **	-54.4078 **
3274.4250	-13.0000	-50.3504 **	-52.4599 **
3742.2000	-13.0000	-52.1056 **	-51.9613 **
4209.9750	-13.0000	-50.7023 **	-49.5697 **
4677.7500	-13.0000	-49.2107 **	-49.5383 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Mon, Feb 10, 2020

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): 22.5 Hum(%RH): 69.8

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

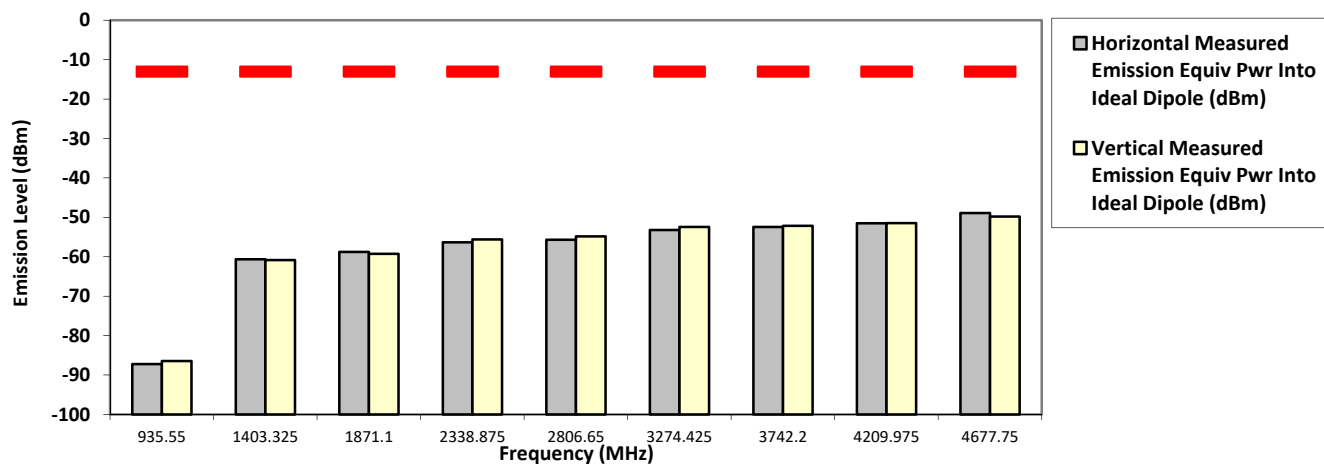
Test Mode: TX Analog
25 kHz

467.775000 MHz

4.800 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)
935.5500	-13.0000	-87.2368 **	-86.4589 **
1403.3250	-13.0000	-60.6397 **	-60.8587 **
1871.1000	-13.0000	-58.7906 **	-59.2438 **
2338.8750	-13.0000	-56.3589 **	-55.6042 **
2806.6500	-13.0000	-55.6962 **	-54.8342 **
3274.4250	-13.0000	-53.2326 **	-52.4633 **
3742.2000	-13.0000	-52.4263 **	-52.1641 **
4209.9750	-13.0000	-51.5260 **	-51.4657 **
4677.7500	-13.0000	-48.9235 **	-49.8023 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

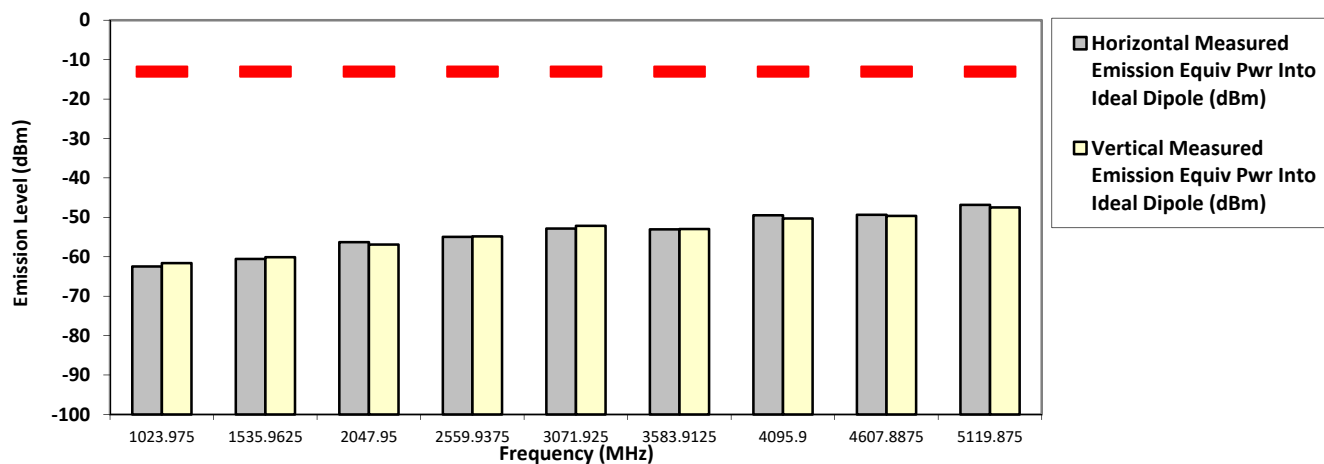
511.987500 MHz

**Test Mode: TX Analog
25 kHz**

4.800 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)
1023.9750	-13.0000	-62.4698 **	-61.6327 **
1535.9625	-13.0000	-60.5516 **	-60.1190 **
2047.9500	-13.0000	-56.3072 **	-56.8960 **
2559.9375	-13.0000	-54.9797 **	-54.8416 **
3071.9250	-13.0000	-52.8326 **	-52.1417 **
3583.9125	-13.0000	-53.0360 **	-52.9860 **
4095.9000	-13.0000	-49.4977 **	-50.2923 **
4607.8875	-13.0000	-49.3589 **	-49.6497 **
5119.8750	-13.0000	-46.8267 **	-47.4773 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
 Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:	Passed Results	Marginal Results	Failed Results
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SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

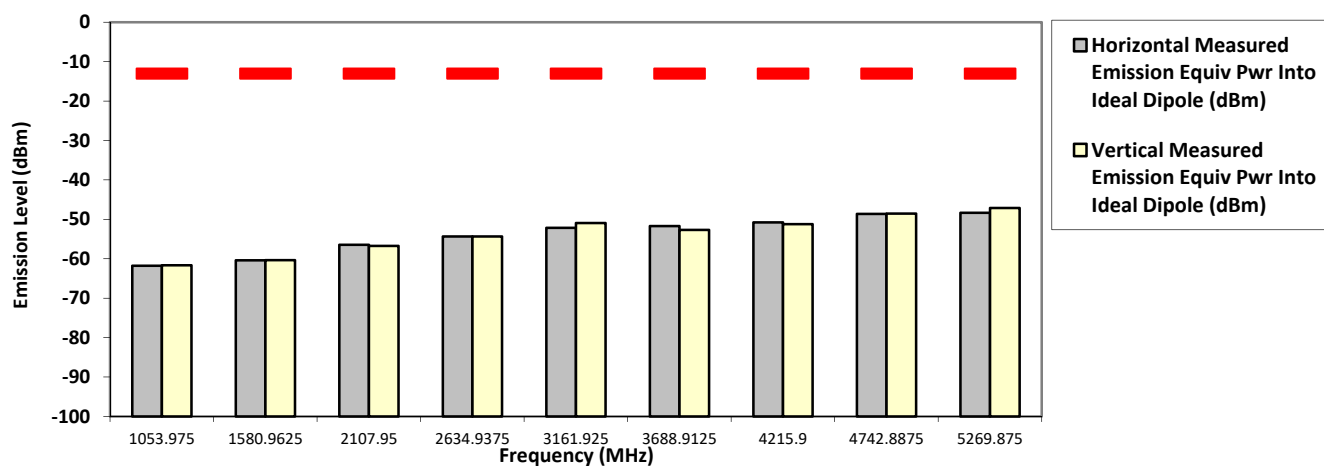
Test Mode: TX Analog
25 kHz

526.987500 MHz

4.800 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)
1053.9750	-13.0000	-61.7808 **	-61.6592 **
1580.9625	-13.0000	-60.4079 **	-60.3473 **
2107.9500	-13.0000	-56.4722 **	-56.7576 **
2634.9375	-13.0000	-54.3487 **	-54.3685 **
3161.9250	-13.0000	-52.1594 **	-50.9589 **
3688.9125	-13.0000	-51.7170 **	-52.6949 **
4215.9000	-13.0000	-50.7830 **	-51.2202 **
4742.8875	-13.0000	-48.6462 **	-48.5511 **
5269.8750	-13.0000	-48.3346 **	-47.1223 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Azil Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

Passed Results	Marginal Results	Failed Results
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6.11.3. Test Result (Digital)

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

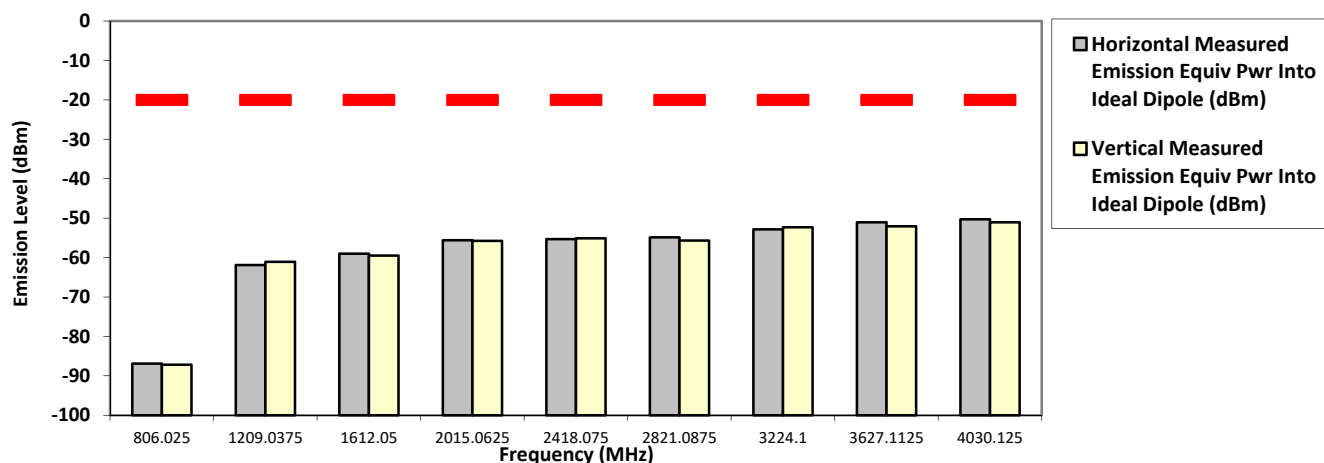
403.012500 MHz

12.5 kHz

4.800 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)
806.0250	-20.0000	-86.9051 **	-87.2053 **
1209.0375	-20.0000	-61.9073 **	-61.0790 **
1612.0500	-20.0000	-59.0386 **	-59.5093 **
2015.0625	-20.0000	-55.6062 **	-55.7904 **
2418.0750	-20.0000	-55.3176 **	-55.1078 **
2821.0875	-20.0000	-54.8605 **	-55.7015 **
3224.1000	-20.0000	-52.8613 **	-52.3153 **
3627.1125	-20.0000	-51.0791 **	-52.0817 **
4030.1250	-20.0000	-50.3015 **	-51.0701 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Qawiman Sat, Feb 08, 2020

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

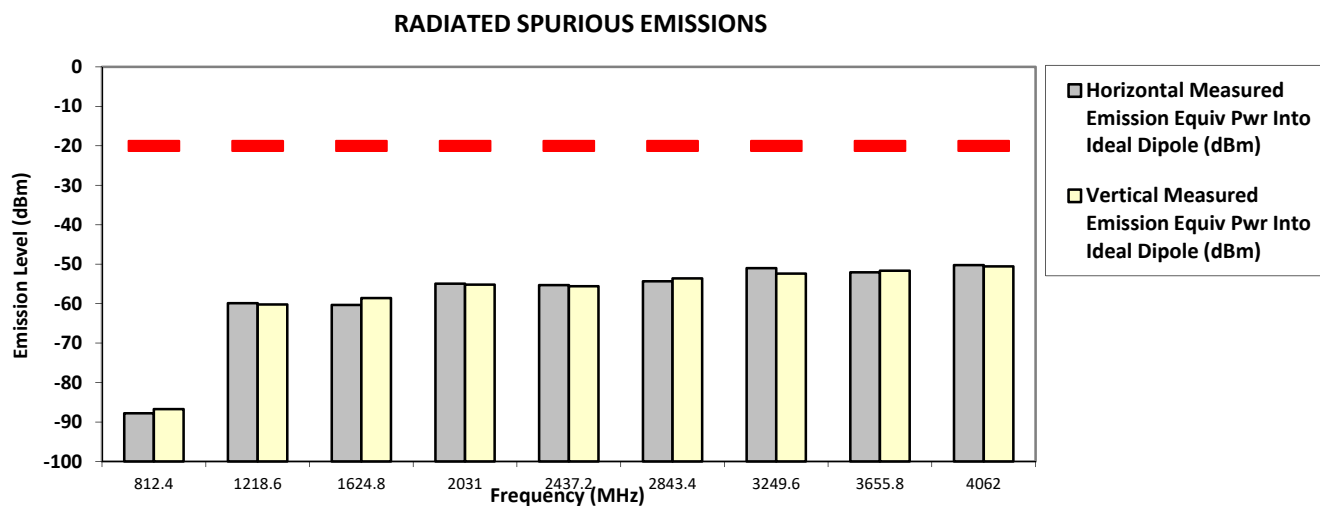
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:
Model Number: AAH56RDN9RA1AN **S/N: 871TWB3893** **SR:20392-EMC-00025**
Battery Part No: PMNN4489A **Accy Part No: NA**
Test Mode: TX Digital
406.200000 MHz **12.5 kHz** **4.800 Watt(s) /Max Power**

[illegible]

The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Qawiman Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

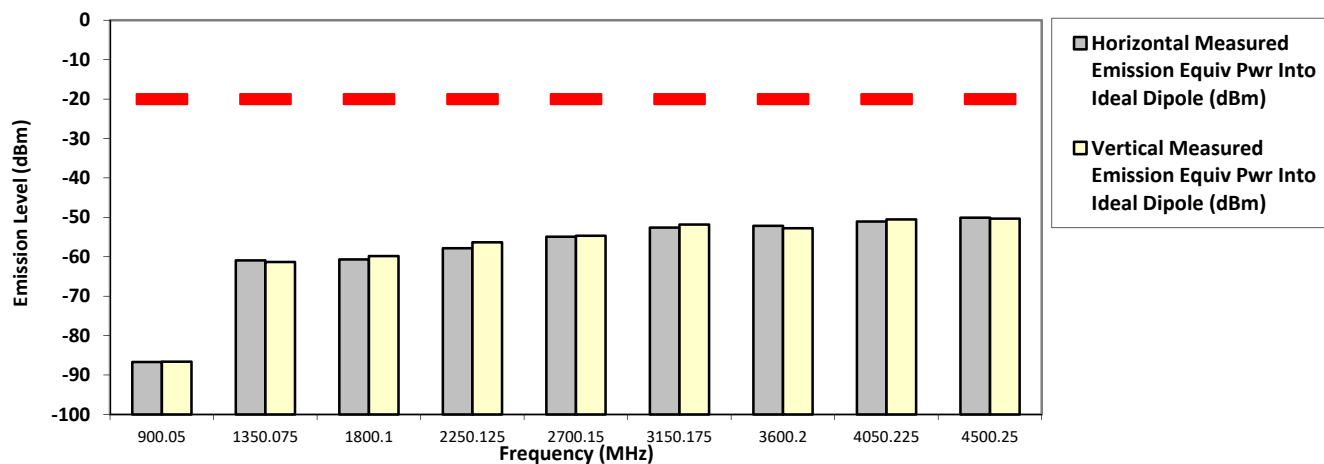
450.025000 MHz

12.5 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
900.0500	-20.0000	-86.7134 **	-86.6028 **
1350.0750	-20.0000	-60.9313 **	-61.3162 **
1800.1000	-20.0000	-60.6712 **	-59.8358 **
2250.1250	-20.0000	-57.8240 **	-56.3374 **
2700.1500	-20.0000	-54.9157 **	-54.6641 **
3150.1750	-20.0000	-52.5897 **	-51.8383 **
3600.2000	-20.0000	-52.1397 **	-52.7760 **
4050.2250	-20.0000	-51.0587 **	-50.5371 **
4500.2500	-20.0000	-50.0876 **	-50.3257 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Qawiman Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

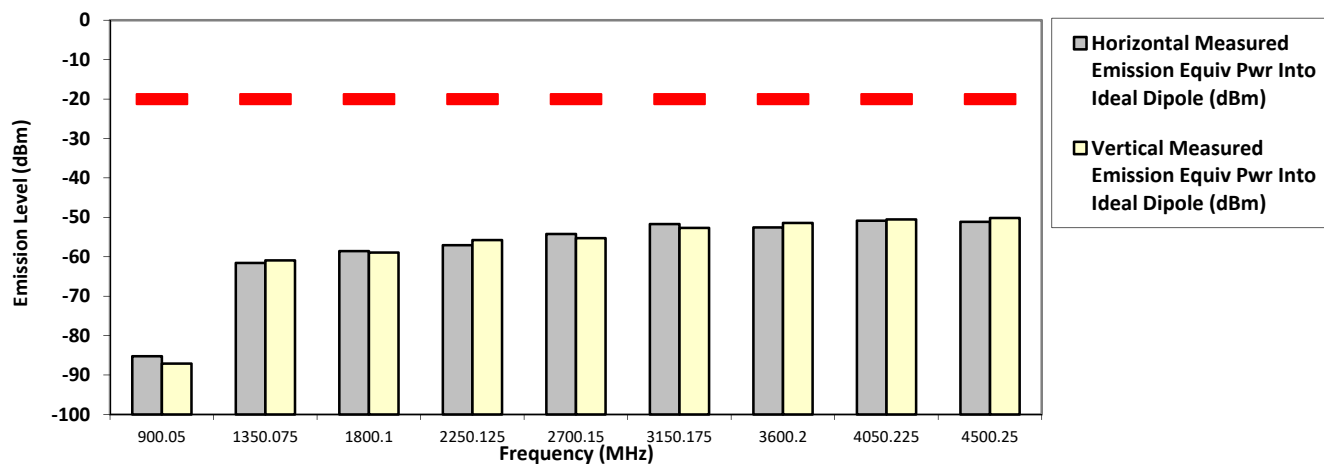
450.025000 MHz

12.5 kHz

4.800 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)
900.0500	-20.0000	-85.2353 **	-87.0962 **
1350.0750	-20.0000	-61.5725 **	-60.9430 **
1800.1000	-20.0000	-58.5702 **	-58.9576 **
2250.1250	-20.0000	-57.0913 **	-55.7779 **
2700.1500	-20.0000	-54.2152 **	-55.2935 **
3150.1750	-20.0000	-51.7148 **	-52.6795 **
3600.2000	-20.0000	-52.5492 **	-51.4238 **
4050.2250	-20.0000	-50.8804 **	-50.5243 **
4500.2500	-20.0000	-51.1312 **	-50.1888 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Qawiman Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

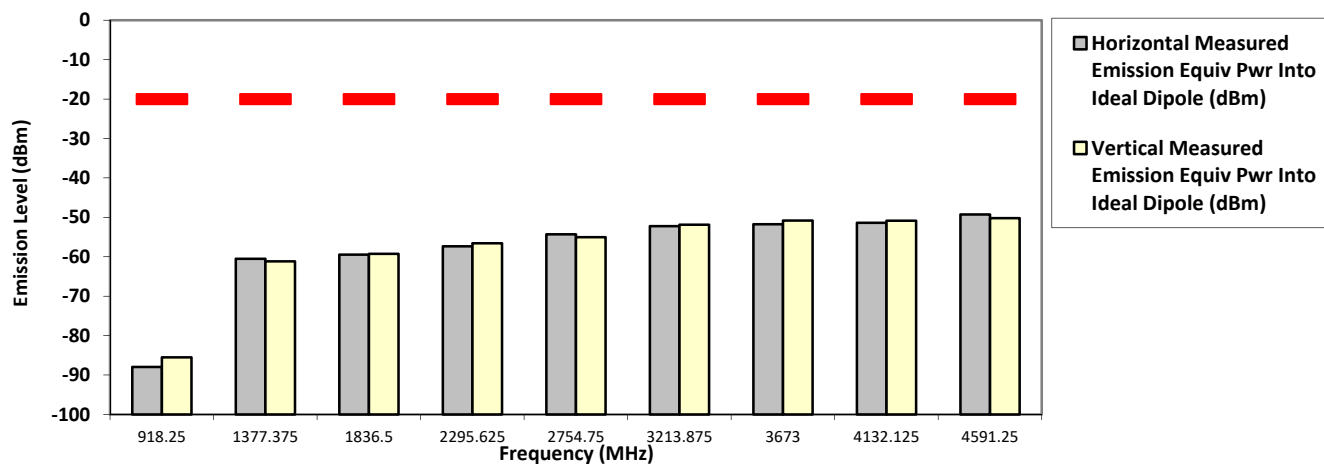
459.125000 MHz

12.5 kHz

4.800 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)
918.2500	-20.0000	-87.9540 **	-85.5153 **
1377.3750	-20.0000	-60.5313 **	-61.1820 **
1836.5000	-20.0000	-59.4476 **	-59.2497 **
2295.6250	-20.0000	-57.3642 **	-56.5643 **
2754.7500	-20.0000	-54.3071 **	-55.0370 **
3213.8750	-20.0000	-52.2537 **	-51.8631 **
3673.0000	-20.0000	-51.7735 **	-50.8011 **
4132.1250	-20.0000	-51.3902 **	-50.8541 **
4591.2500	-20.0000	-49.2852 **	-50.2205 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Qawiman Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

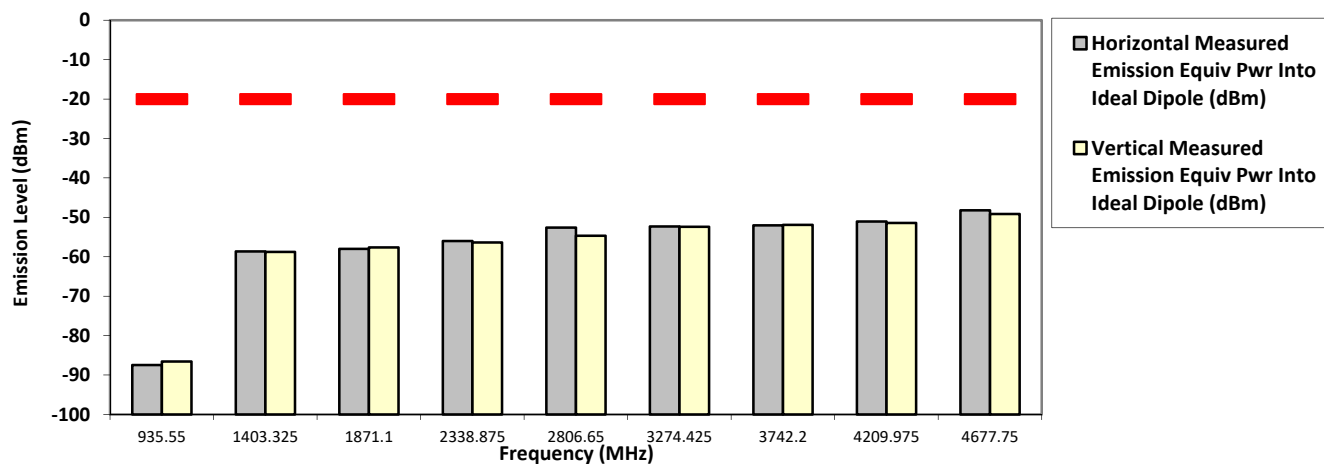
467.775000 MHz

12.5 kHz

4.800 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)
935.5500	-20.0000	-87.4677 **	-86.5665 **
1403.3250	-20.0000	-58.6590 **	-58.7576 **
1871.1000	-20.0000	-57.9960 **	-57.6259 **
2338.8750	-20.0000	-56.0146 **	-56.4003 **
2806.6500	-20.0000	-52.6078 **	-54.6610 **
3274.4250	-20.0000	-52.3204 **	-52.3918 **
3742.2000	-20.0000	-52.0179 **	-51.9294 **
4209.9750	-20.0000	-51.0840 **	-51.4132 **
4677.7500	-20.0000	-48.2249 **	-49.1438 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Qawiman Sat, Feb 08, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

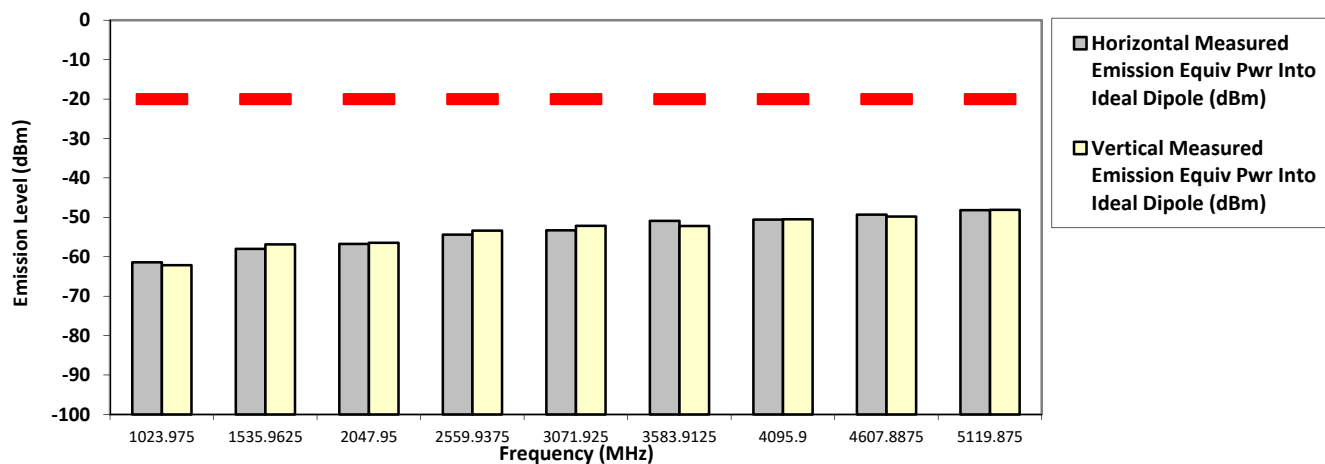
511.987500 MHz

12.5 kHz

1.000 Watt(s) /Low Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1023.9750	-20.0000	-61.3952 **	-62.1441 **
1535.9625	-20.0000	-58.0155 **	-56.8670 **
2047.9500	-20.0000	-56.7313 **	-56.4440 **
2559.9375	-20.0000	-54.4009 **	-53.3903 **
3071.9250	-20.0000	-53.3143 **	-52.1702 **
3583.9125	-20.0000	-50.9207 **	-52.1840 **
4095.9000	-20.0000	-50.5818 **	-50.5009 **
4607.8875	-20.0000	-49.3063 **	-49.8172 **
5119.8750	-20.0000	-48.1710 **	-48.1029 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Motorola Penang EMC Lab - Test Performed by: Nazrin&Qawiman Sun, Feb 09, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

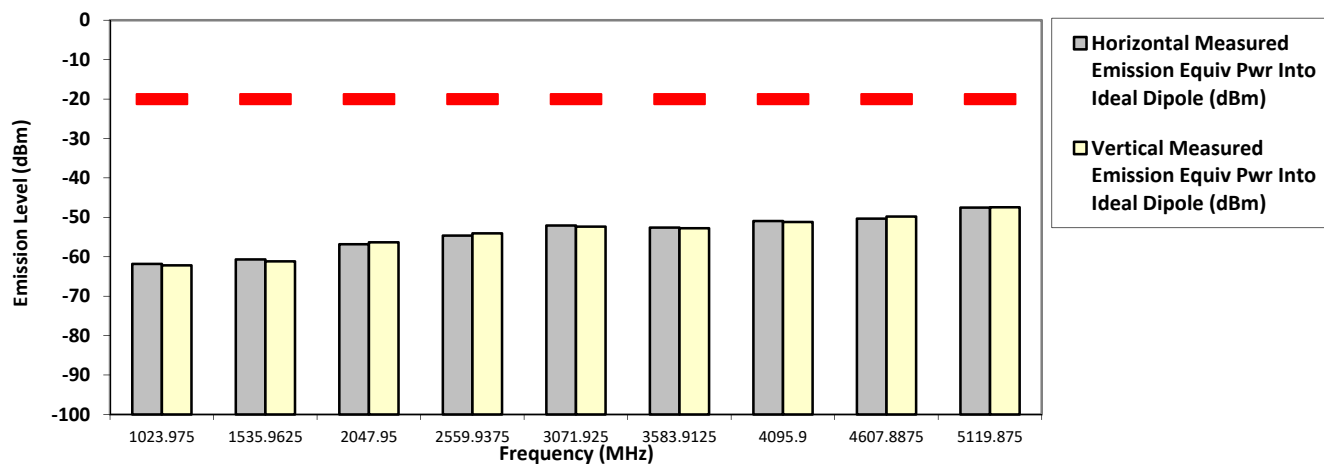
511.987500 MHz

12.5 kHz

4.800 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)
1023.9750	-20.0000	-61.8264 **	-62.2021 **
1535.9625	-20.0000	-60.6873 **	-61.1551 **
2047.9500	-20.0000	-56.8241 **	-56.3605 **
2559.9375	-20.0000	-54.6456 **	-54.0720 **
3071.9250	-20.0000	-52.0795 **	-52.3694 **
3583.9125	-20.0000	-52.5974 **	-52.7617 **
4095.9000	-20.0000	-50.9539 **	-51.2053 **
4607.8875	-20.0000	-50.3216 **	-49.8199 **
5119.8750	-20.0000	-47.5137 **	-47.4571 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

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

Sun, Feb 09, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: AAH56RDN9RA1AN

S/N: 871TWB3893

SR:20392-EMC-00025

Battery Part No: PMNN4489A

Accy Part No: NA

Test Mode: TX Digital

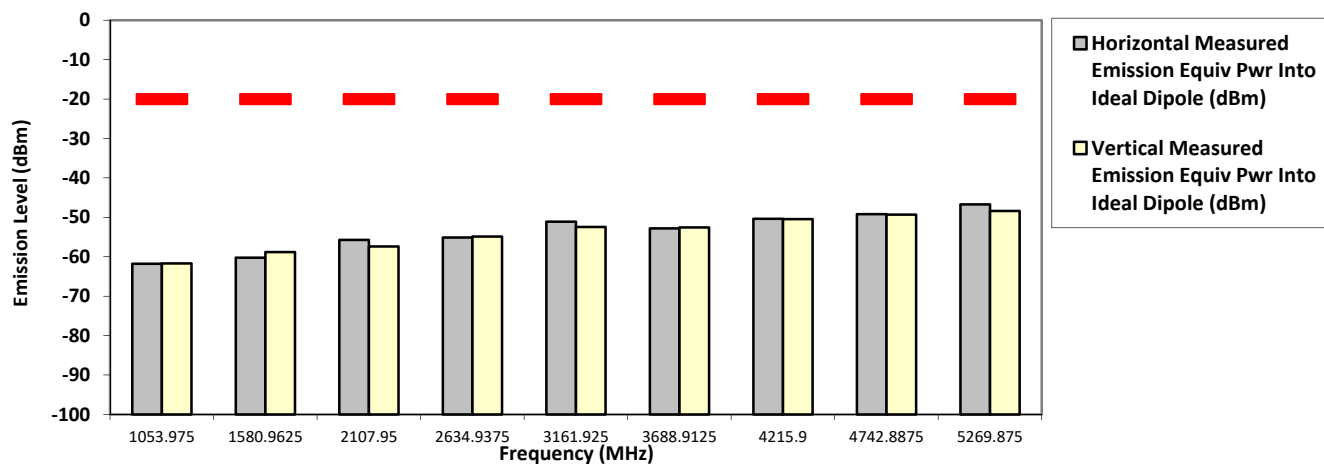
526.987500 MHz

12.5 kHz

4.800 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)
1053.9750	-20.0000	-61.7840 **	-61.6974 **
1580.9625	-20.0000	-60.2504 **	-58.8055 **
2107.9500	-20.0000	-55.7476 **	-57.3911 **
2634.9375	-20.0000	-55.1235 **	-54.8829 **
3161.9250	-20.0000	-51.1023 **	-52.4499 **
3688.9125	-20.0000	-52.7895 **	-52.5504 **
4215.9000	-20.0000	-50.3590 **	-50.4625 **
4742.8875	-20.0000	-49.1979 **	-49.3016 **
5269.8750	-20.0000	-46.7126 **	-48.3806 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

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

Sun, Feb 09, 2020

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): 22.8 Hum(%RH): 70.1

System MU: 4.03 dB

Remarks:

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

6.11.4. Test Limit

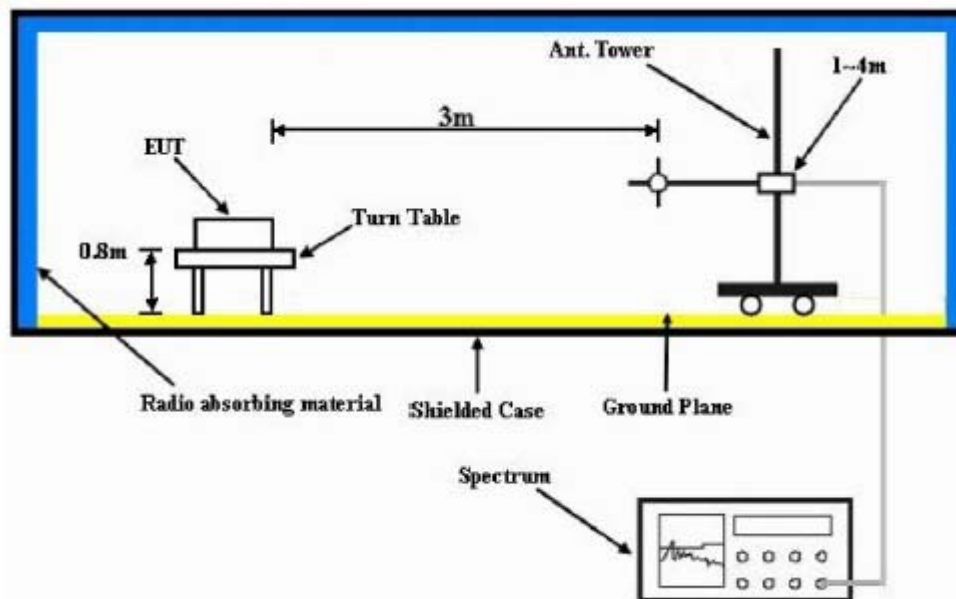
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

Channel Spacing	Part 22	Part 24D	Part 74	Part 80	Part 90 (UHF, VHF, 800, 900)	Part 90 (700)
12.5kHz	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	Not Applicable	50 + log ₁₀ (P) (-20 dBm)	43 + log ₁₀ (P) (-13 dBm)
25kHz		Not Applicable		43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)

Channel Spacing	RSS 134	RSS 182	RSS 119 (UHF, VHF, 800, 900)	RSS 119 (700)
12.5kHz	43 + log ₁₀ (P) (-13 dBm)	Not Applicable	50 + log ₁₀ (P) (-20 dBm)	43 + log ₁₀ (P) (-13 dBm)
25kHz	Not Applicable	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)

6.12. Effective Radiated Power (ERP)

6.12.1. Test Setup



- 1) The Resolution Bandwidth for Equivalent Radiated Power (ERP) below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for EIRP above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector Mode is RMS.
- 2) In the semi-anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height (for $F_c < 1\text{GHz}$) or 1.5m (for $F_c > 1\text{GHz}$) 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 DUT 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.

6.12.2. Test Result

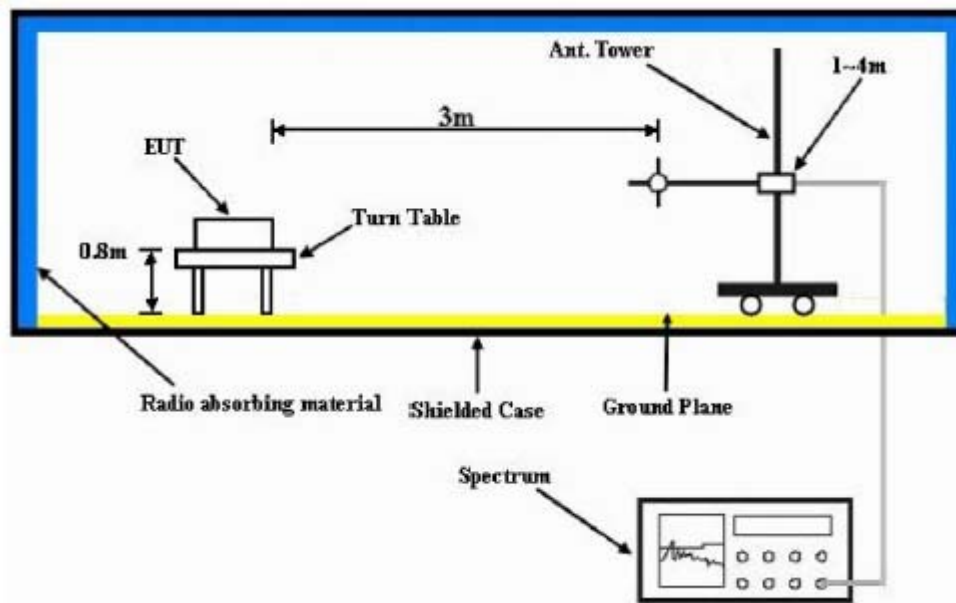
Not Applicable

6.12.3. Test Limit

The maximum output power of the transmitter for mobile stations is 100 watts (20 dB). Power is given in terms of effective radiated power (ERP).

6.13. GNSS (EIRP for 1559 - 1610MHz)

6.13.1. Test Setup



- 4) The Resolution Bandwidth for Equivalent Isotropically Radiated Power (EIRP) below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for EIRP above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector Mode is RMS.
- 5) In the semi-anechoic chamber, setup as illustrated above the DUT 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.
- 6) The substitution antenna is substituted for DUT 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.
- 7) $EIRP = \text{“Read Value”} + \text{Measured substitution value} + 2.15$.

6.13.1. Test Result
Not Applicable

6.13.2. Test Limit
For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

~ End of Test Report ~