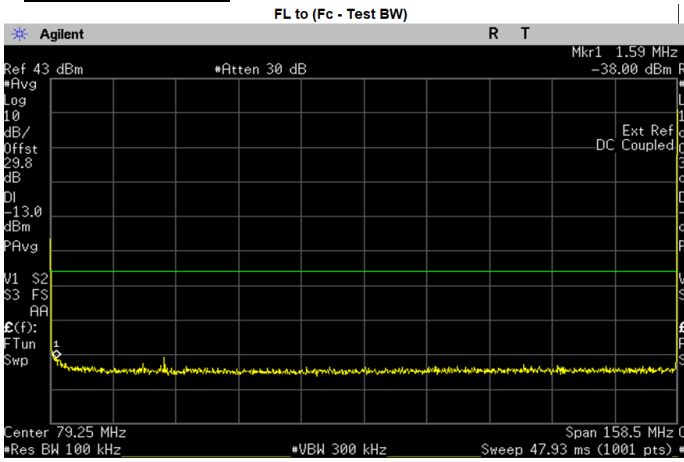
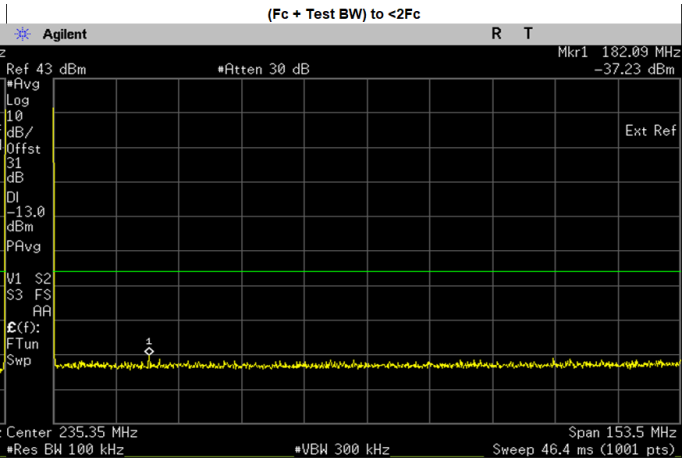
<u>Analog:</u> 158.55 MHz, 25.kHz Channel Spacing, Max. Power <u>For Part 22, 80</u>

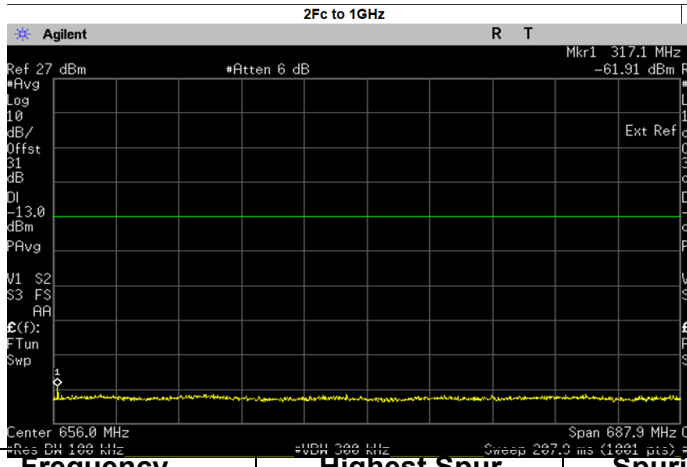
FL to (Fc - Test BW)



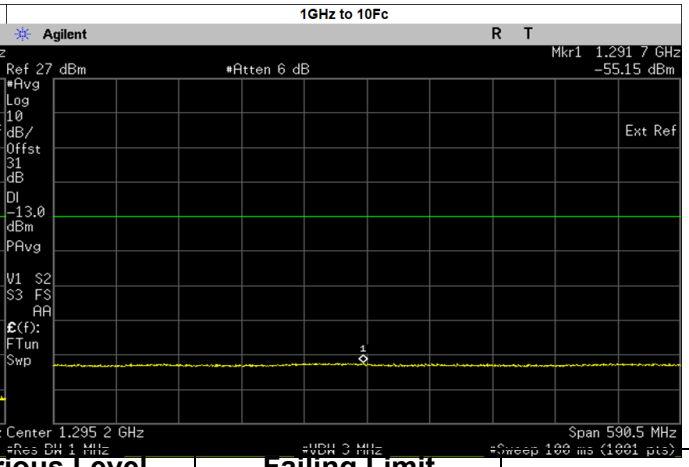
(Fc + Test BW) to <2Fc



2Fc to 1GHz

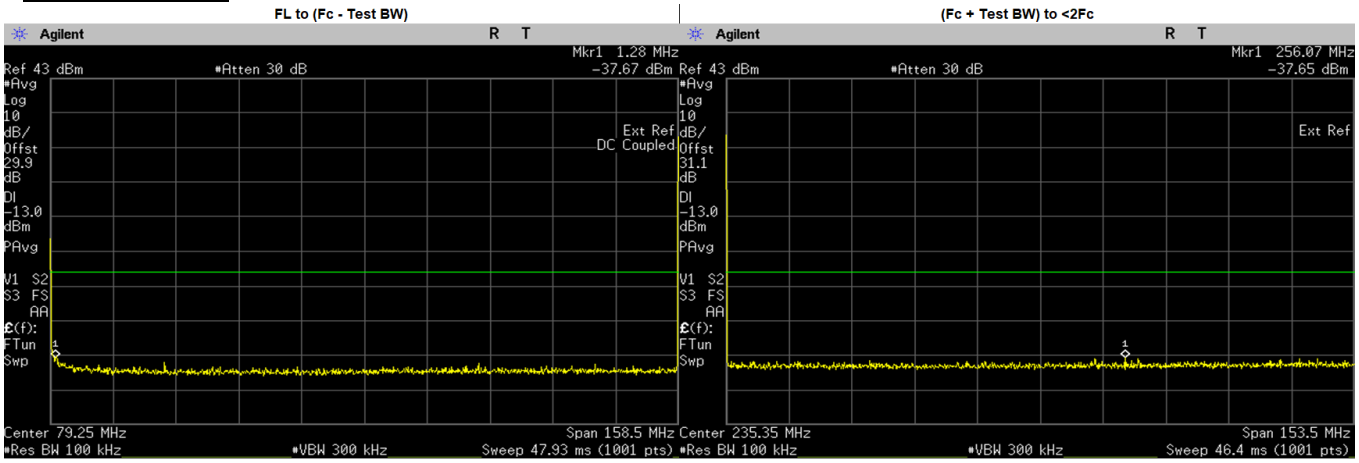


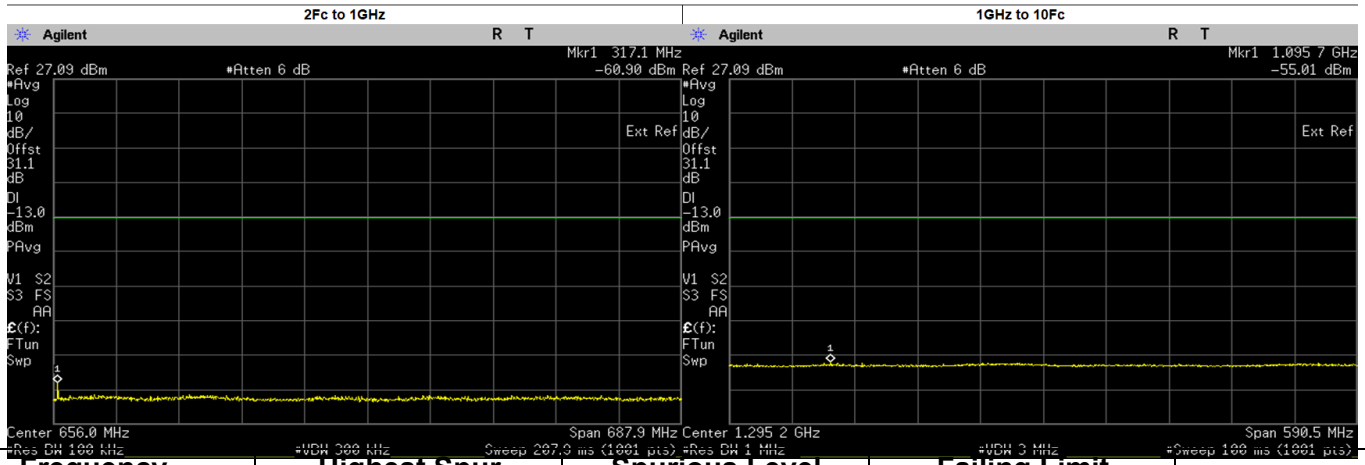
1GHz to 10Fc



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	1.5900	-37.9980	-13.00	PASS
(Fc + Test BW) to <2Fc	182.0903	-37.2300	-13.00	PASS
2Fc to 1GHz	317.1000	-61.9100	-13.00	PASS
	475.6500	-65.2040	-13.00	PASS
	634.2000	-64.6900	-13.00	PASS
	792.7500	-64.9602	-13.00	PASS
	951.3000	-65.4553	-13.00	PASS
1GHz to 10Fc	1291.7070	-55.1500	-13.00	PASS
	1109.8500	-55.8498	-13.00	PASS
	1268.4000	-55.7288	-13.00	PASS
	1426.9500	-56.1444	-13.00	PASS
	1585.5000	-56.0186	-13.00	PASS

<u>Analog:</u> 158.55 MHz, 25.kHz Channel Spacing, Low. Power
<u>For Part 22, 80</u>

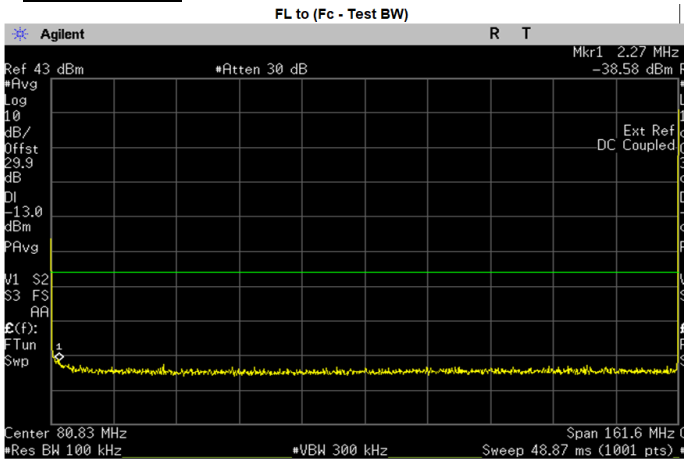




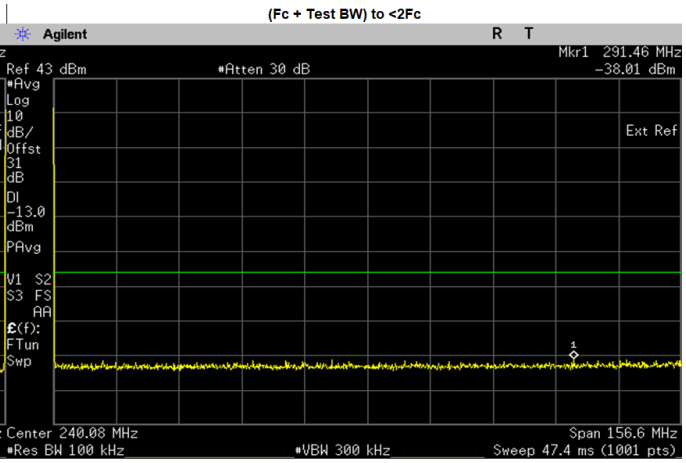
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	1.2800	-37.6730	-13.00	PASS
(Fc + Test BW) to <2Fc	256.0746	-37.6600	-13.00	PASS
2Fc to 1GHz	317.1000	-60.9000	-13.00	PASS
	475.6500	-64.9868	-13.00	PASS
	634.2000	-65.5141	-13.00	PASS
	792.7500	-65.7471	-13.00	PASS
	951.3000	-65.2202	-13.00	PASS
1GHz to 10Fc	1095.6610	-55.0200	-13.00	PASS
	1109.8500	-55.8155	-13.00	PASS
	1268.4000	-55.5141	-13.00	PASS
	1426.9500	-55.9599	-13.00	PASS
	1585.5000	-55.7889	-13.00	PASS

<u>Analog:</u> 161.7 MHz, 25.kHz Channel Spacing, Max. Power <u>For Part 74</u>

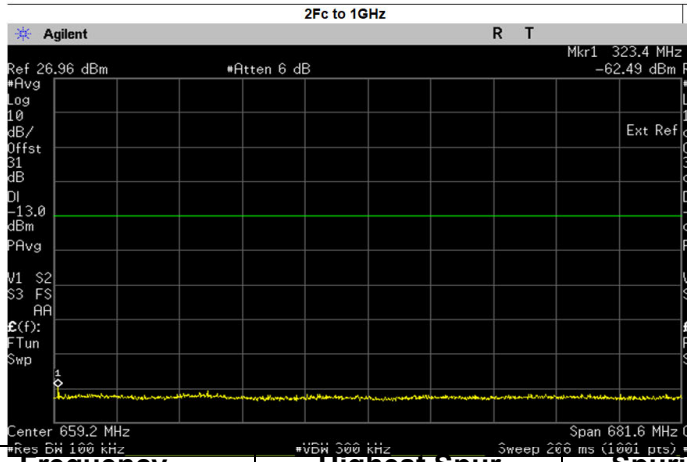
FL to (Fc - Test BW)



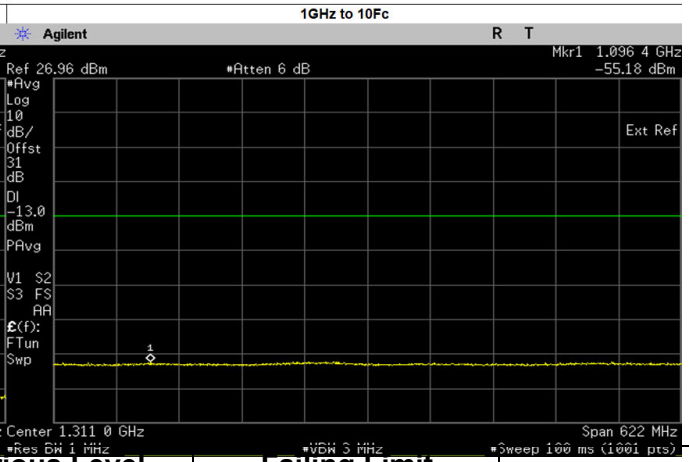
(Fc + Test BW) to <2Fc



2Fc to 1GHz



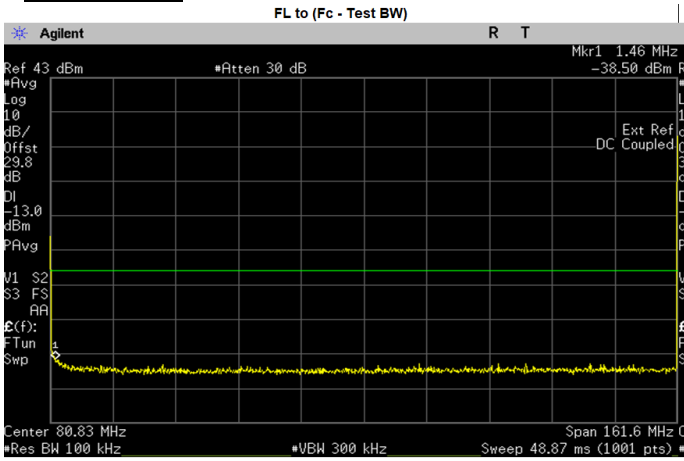
1GHz to 10Fc



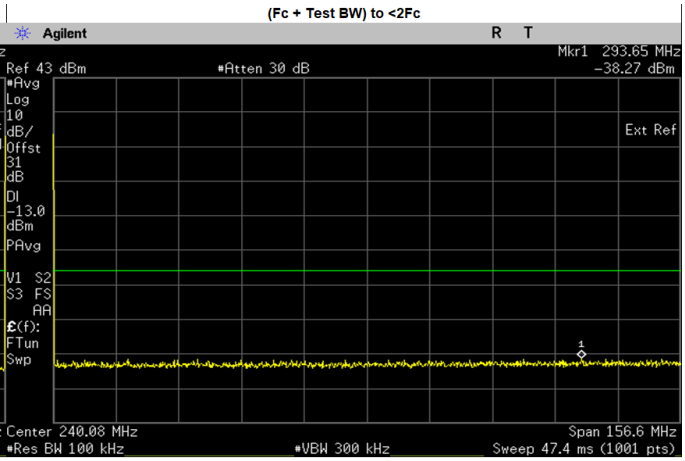
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	2.2700	-38.5850	-13.00	PASS
(Fc + Test BW) to <2Fc	291.4572	-38.0200	-13.00	PASS
2Fc to 1GHz	323.4000	-62.4900	-13.00	PASS
	485.1000	-64.0931	-13.00	PASS
	646.8000	-65.2469	-13.00	PASS
	808.5000	-65.4181	-13.00	PASS
	970.2000	-65.7930	-13.00	PASS
1GHz to 10Fc	1096.4100	-55.1800	-13.00	PASS
	1131.9000	-56.0034	-13.00	PASS
	1293.6000	-55.7731	-13.00	PASS
	1455.3000	-56.0946	-13.00	PASS
	1617.0000	-55.8600	-13.00	PASS

<u>Analog:</u> 161.7 MHz, 25.kHz Channel Spacing, Low. Power <u>For Part 74</u>

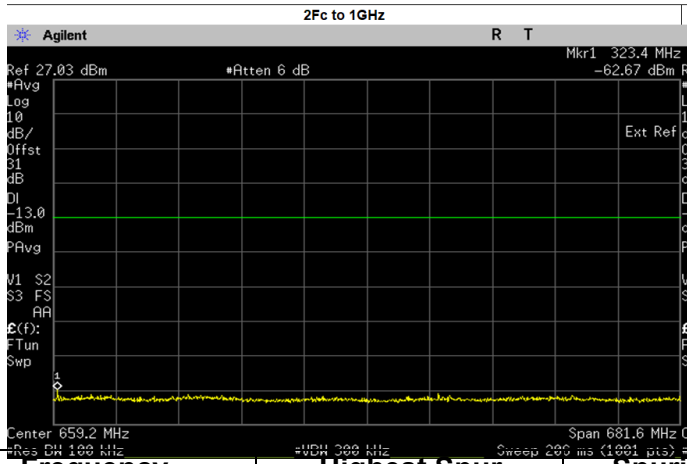
FL to (Fc - Test BW)



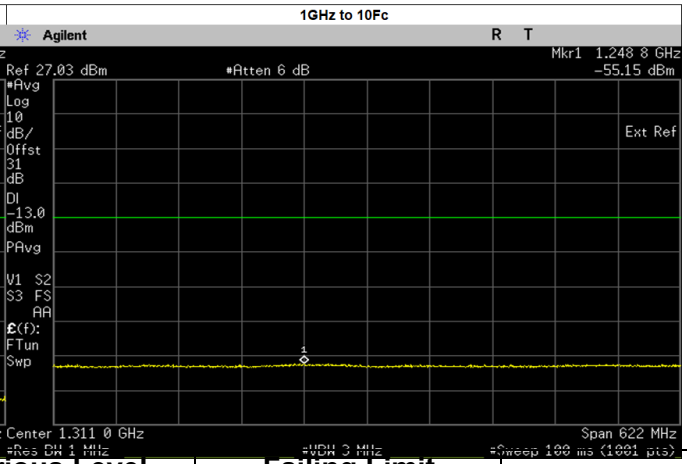
(Fc + Test BW) to <2Fc



2Fc to 1GHz



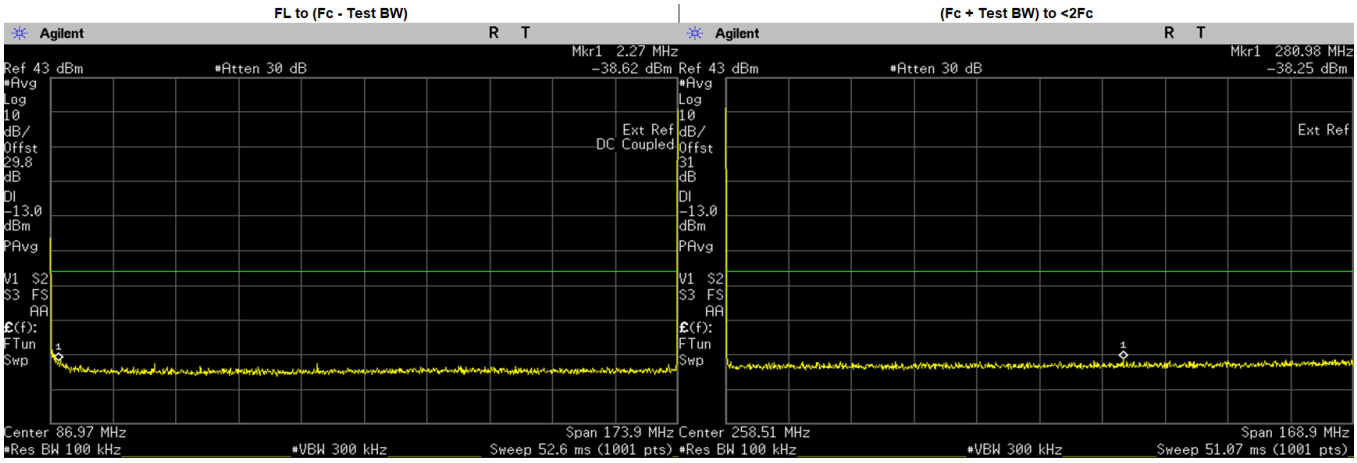
1GHz to 10Fc

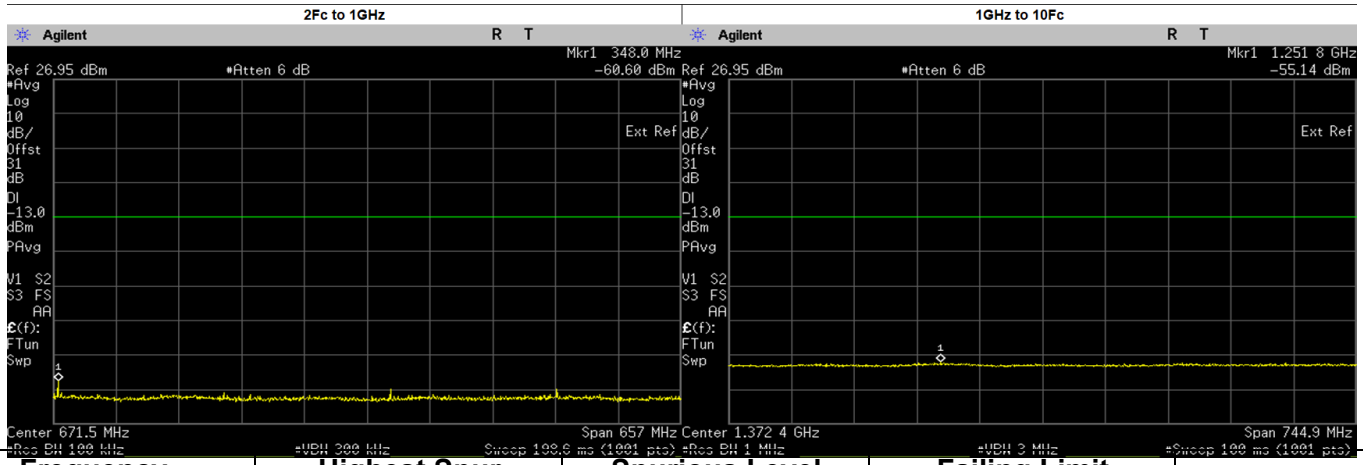


Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	1.4600	-38.4990	-13.00	PASS
(Fc + Test BW) to <2Fc	293.6502	-38.2700	-13.00	PASS
2Fc to 1GHz	323.4000	-62.6700	-13.00	PASS
	485.1000	-64.8448	-13.00	PASS
	646.8000	-65.6930	-13.00	PASS
	808.5000	-65.6640	-13.00	PASS
	970.2000	-65.5078	-13.00	PASS
1GHz to 10Fc	1248.8000	-55.1500	-13.00	PASS
	1131.9000	-56.1794	-13.00	PASS
	1293.6000	-55.8200	-13.00	PASS
	1455.3000	-55.8244	-13.00	PASS
	1617.0000	-55.8956	-13.00	PASS

<u>Analog:</u> 173.9875 MHz, 25.kHz Channel Spacing, Max. Power

Not for FCC review

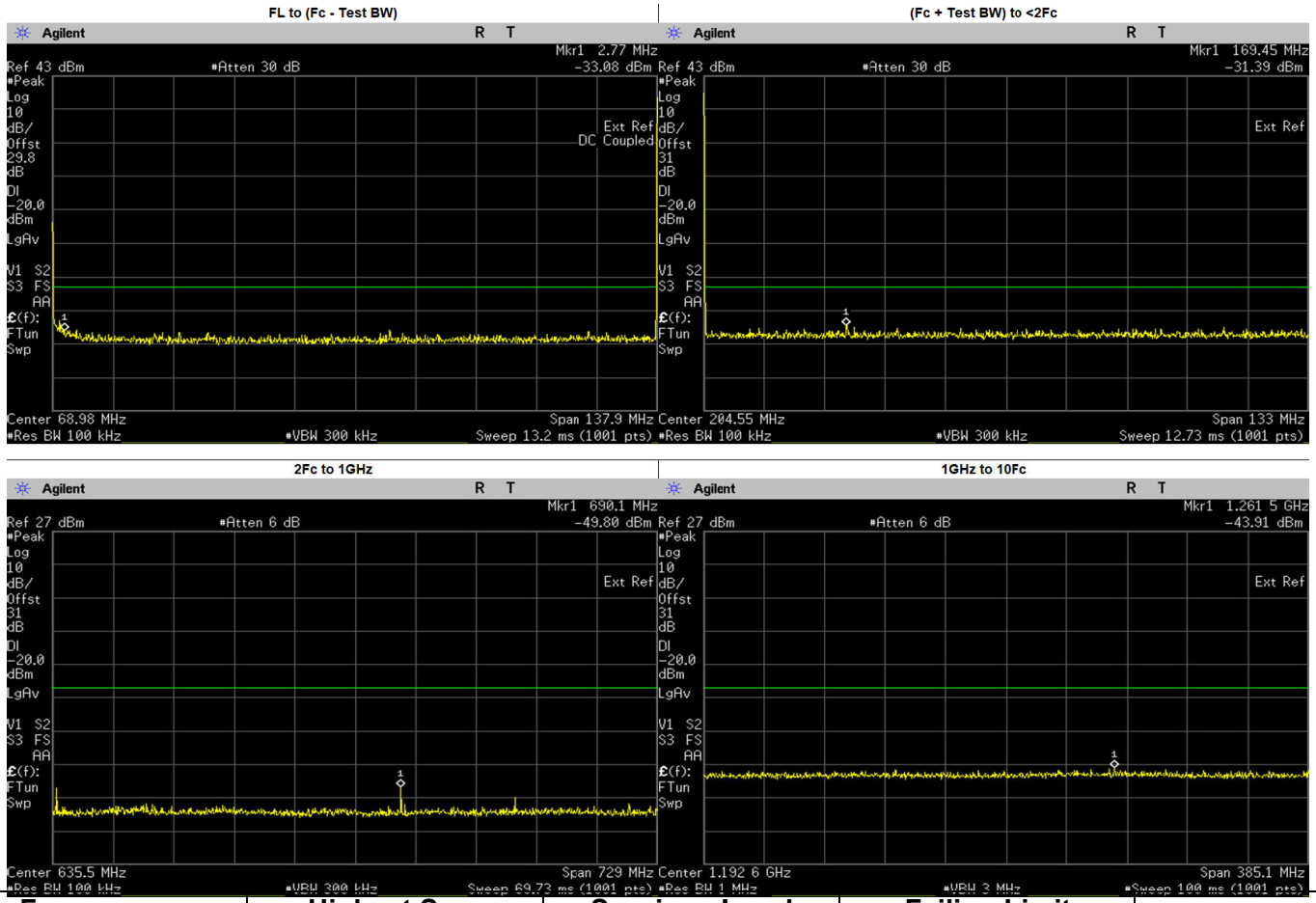




Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	2.2700	-38.6230	-13.00	PASS
(Fc + Test BW) to <2Fc	280.9770	-38.2500	-13.00	PASS
2Fc to 1GHz	348.0000	-60.6000	-13.00	PASS
	521.9625	-64.6579	-13.00	PASS
	695.9500	-63.6260	-13.00	PASS
	869.9375	-63.0232	-13.00	PASS
1GHz to 10Fc	1251.7680	-55.1400	-13.00	PASS
	1043.9250	-56.1611	-13.00	PASS
	1217.9120	-55.9080	-13.00	PASS
	1391.9000	-55.8570	-13.00	PASS
	1565.8880	-55.9812	-13.00	PASS
	1739.8750	-55.8774	-13.00	PASS

6.10.3. Test Result (Digital)

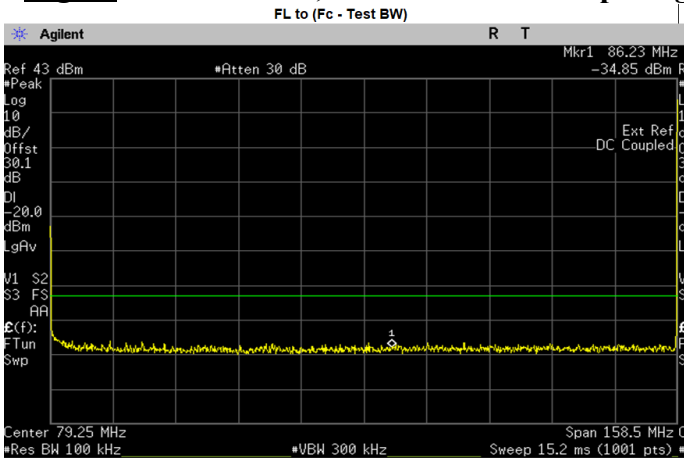
Digital.: 138.0125. MHz, 12.5 kHz Channel Spacing, Max. Power
Not for FCC review



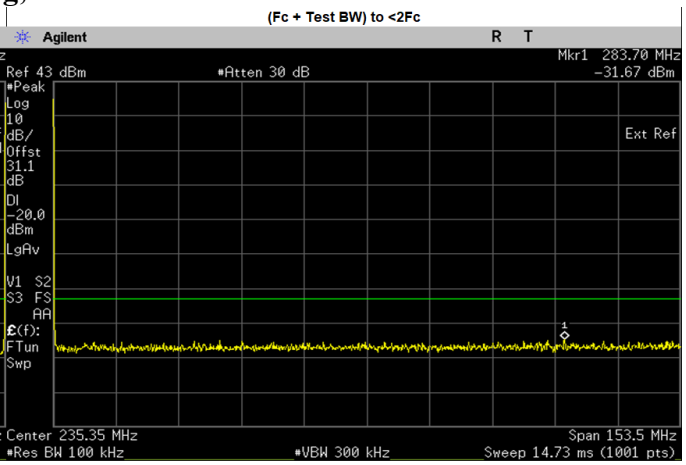
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	2.7700	-33.0750	-20.00	PASS
(Fc + Test BW) to <2Fc	169.4459	-31.3900	-20.00	PASS
2Fc to 1GHz	690.1000	-49.8000	-20.00	PASS
	276.0250	-51.2048	-20.00	PASS
	414.0375	-55.9353	-20.00	PASS
	552.0500	-57.1214	-20.00	PASS
	828.0750	-53.6837	-20.00	PASS
	966.0875	-55.3910	-20.00	PASS
1GHz to 10Fc	1261.5000	-43.9100	-20.00	PASS
	1104.1000	-46.2012	-20.00	PASS
	1242.1120	-45.8970	-20.00	PASS
	1380.1250	-46.3967	-20.00	PASS

Digital.: 158.55. MHz, 12.5 kHz Channel Spacing, Max. Power

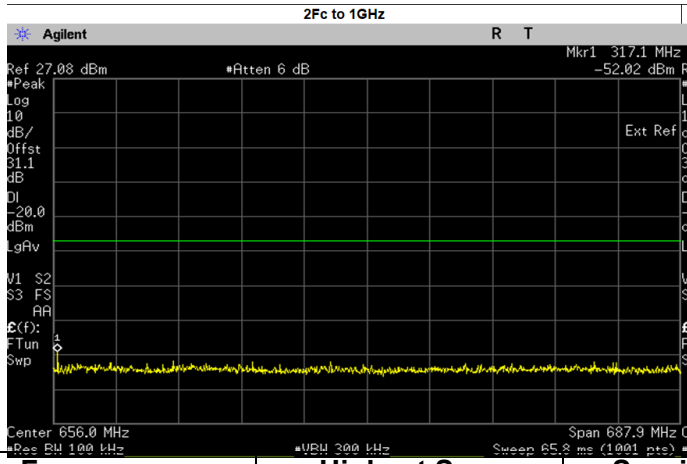
FL to (Fc - Test BW)



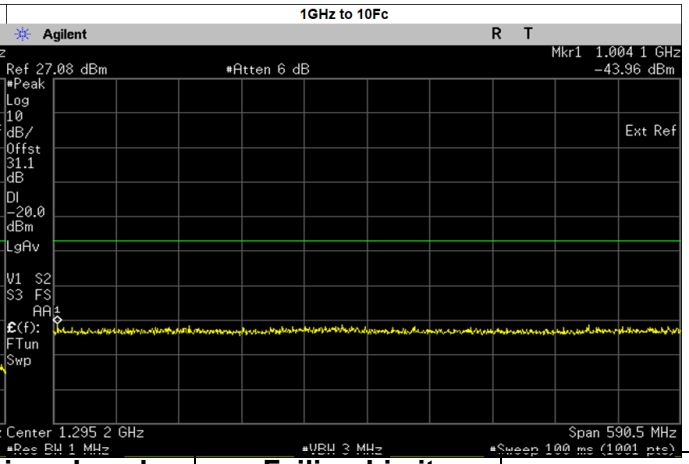
(Fc + Test BW) to <2Fc



2Fc to 1GHz



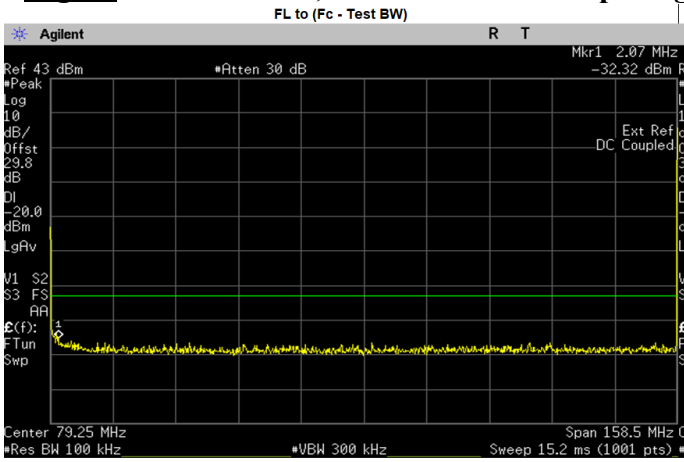
1GHz to 10Fc



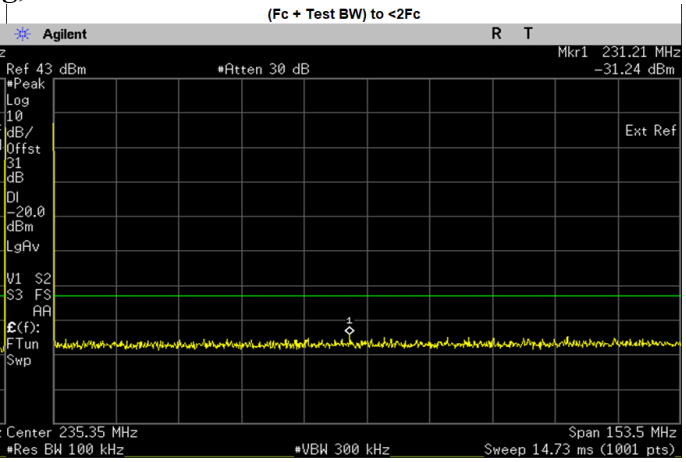
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	86.2300	-34.8460	-20.00	PASS
(Fc + Test BW) to <2Fc	283.7035	-31.6600	-20.00	PASS
2Fc to 1GHz	317.1000	-52.0200	-20.00	PASS
	475.6500	-57.5498	-20.00	PASS
	634.2000	-56.9643	-20.00	PASS
	792.7500	-56.6560	-20.00	PASS
	951.3000	-57.6554	-20.00	PASS
1GHz to 10Fc	1004.1340	-43.9600	-20.00	PASS
	1109.8500	-46.1243	-20.00	PASS
	1268.4000	-45.3365	-20.00	PASS
	1426.9500	-45.2392	-20.00	PASS
	1585.5000	-45.8746	-20.00	PASS

Digital.: 158.55. MHz, 12.5 kHz Channel Spacing, Low. Power

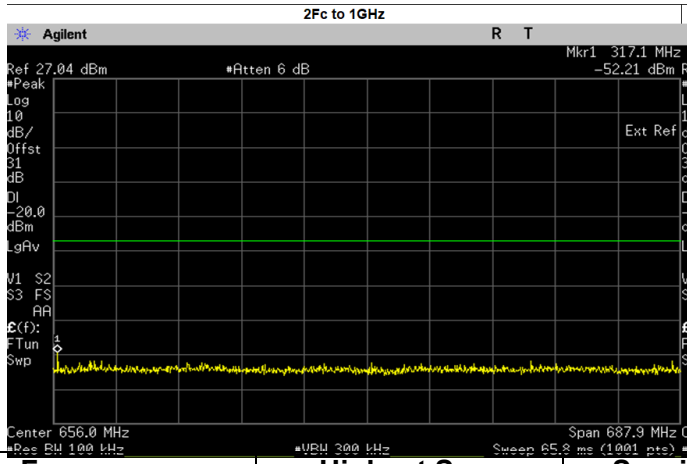
FL to (Fc - Test BW)



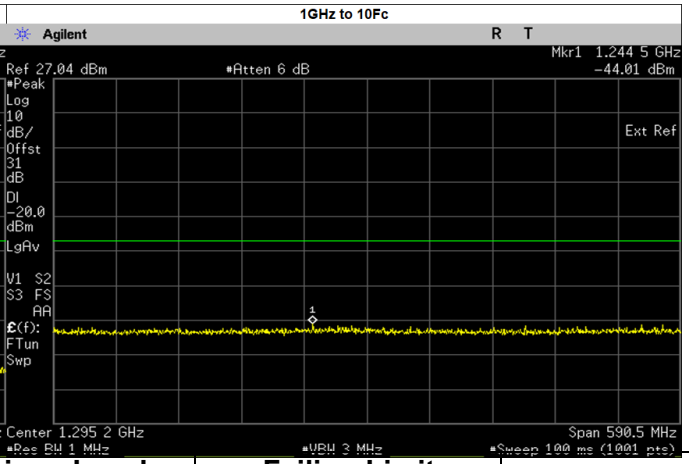
(Fc + Test BW) to <2Fc



2Fc to 1GHz



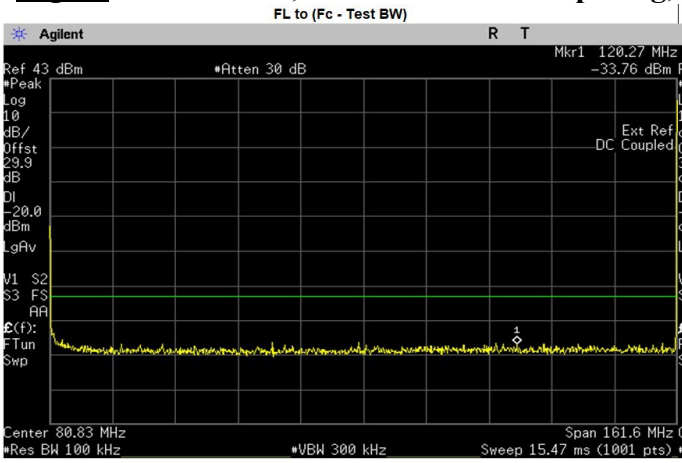
1GHz to 10Fc



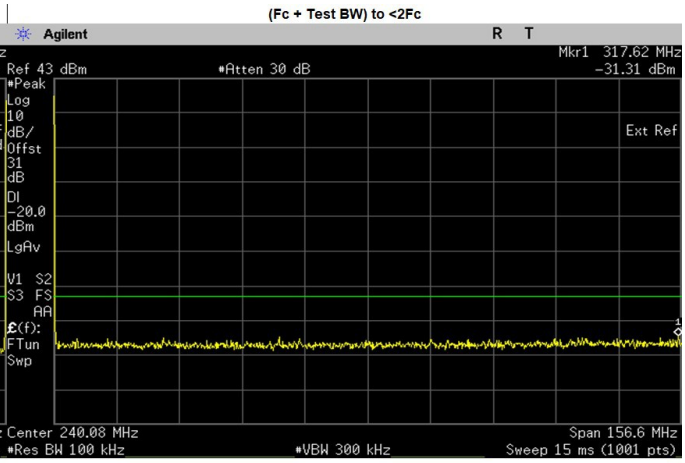
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	2.0700	-32.3240	-20.00	PASS
(Fc + Test BW) to <2Fc	231.2085	-31.2400	-20.00	PASS
2Fc to 1GHz	317.1000	-52.2100	-20.00	PASS
	475.6500	-56.9325	-20.00	PASS
	634.2000	-57.0415	-20.00	PASS
	792.7500	-56.9038	-20.00	PASS
	951.3000	-56.8689	-20.00	PASS
1GHz to 10Fc	1244.4670	-44.0100	-20.00	PASS
	1109.8500	-46.8552	-20.00	PASS
	1268.4000	-45.1453	-20.00	PASS
	1426.9500	-45.8044	-20.00	PASS
	1585.5000	-46.2104	-20.00	PASS

Digital.: 161.7. MHz, 12.5 kHz Channel Spacing, Max. Power

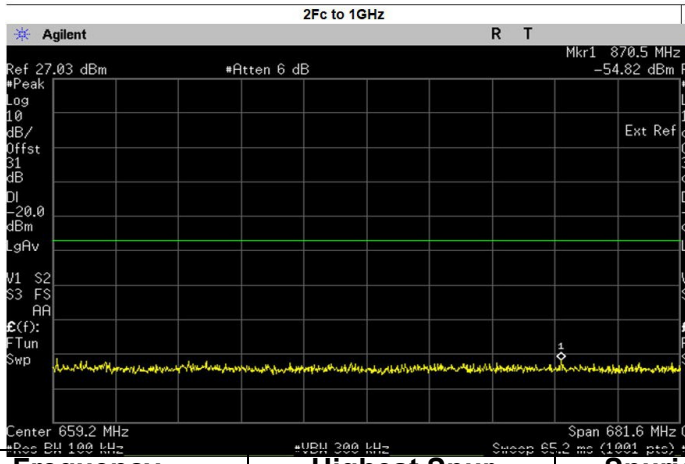
FL to (Fc - Test BW)



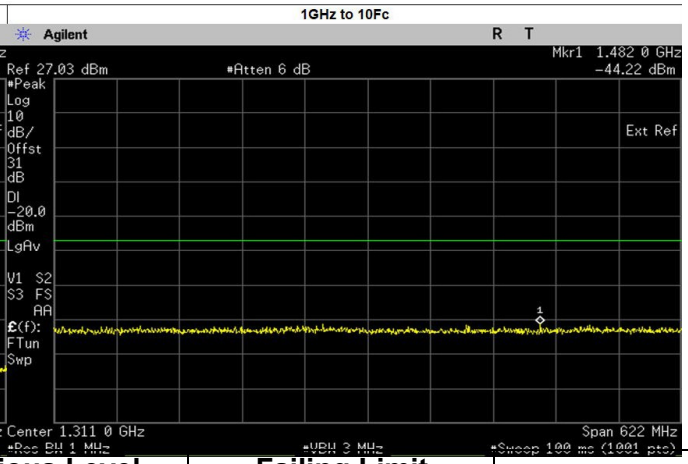
(Fc + Test BW) to <2Fc



2Fc to 1GHz

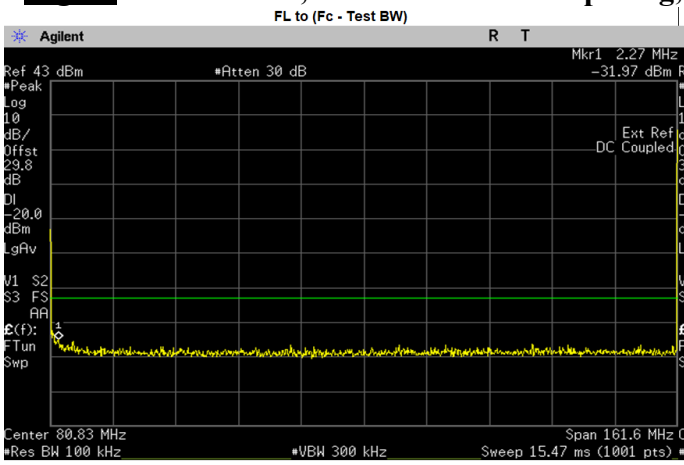


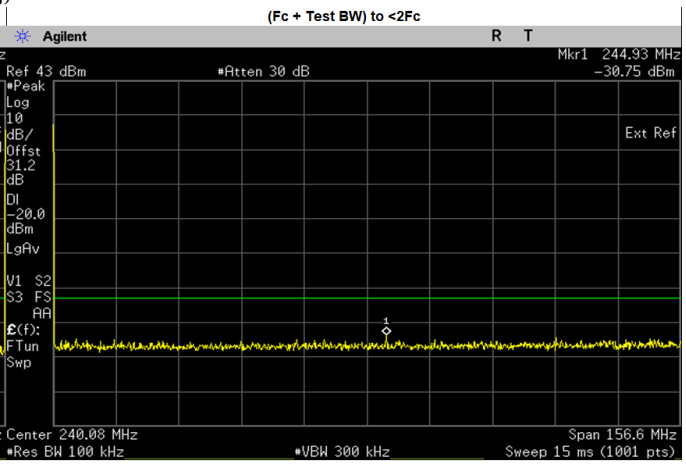
1GHz to 10Fc

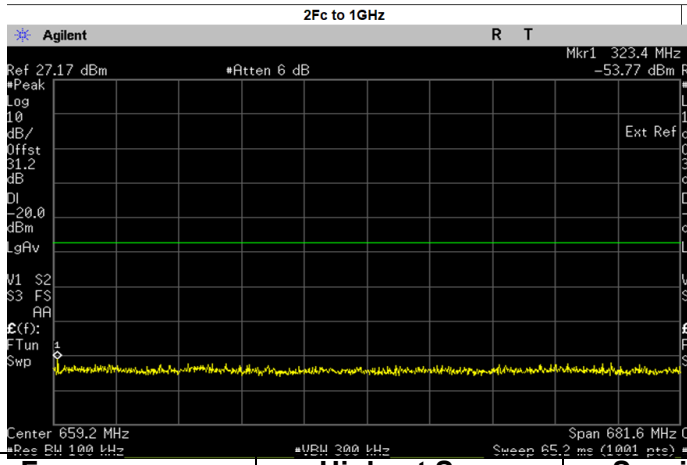


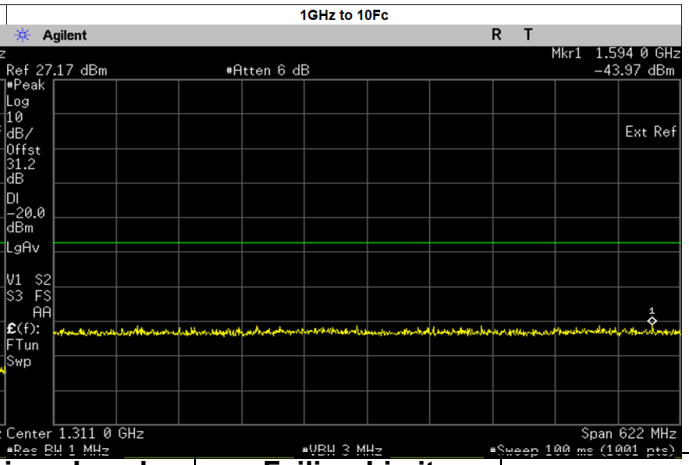
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	120.2700	-33.7630	-20.00	PASS
(Fc + Test BW) to <2Fc	317.6168	-31.3100	-20.00	PASS
2Fc to 1GHz	870.4960	-54.8200	-20.00	PASS
	323.4000	-55.1963	-20.00	PASS
	485.1000	-55.3149	-20.00	PASS
	646.8000	-56.0111	-20.00	PASS
	808.5000	-57.0747	-20.00	PASS
	970.2000	-58.0220	-20.00	PASS
1GHz to 10Fc	1482.0500	-44.2200	-20.00	PASS
	1131.9000	-46.6443	-20.00	PASS
	1293.6000	-46.5978	-20.00	PASS
	1455.3000	-45.8657	-20.00	PASS
	1617.0000	-45.9942	-20.00	PASS

Digital.: 161.7. MHz, 12.5 kHz Channel Spacing, Low. Power



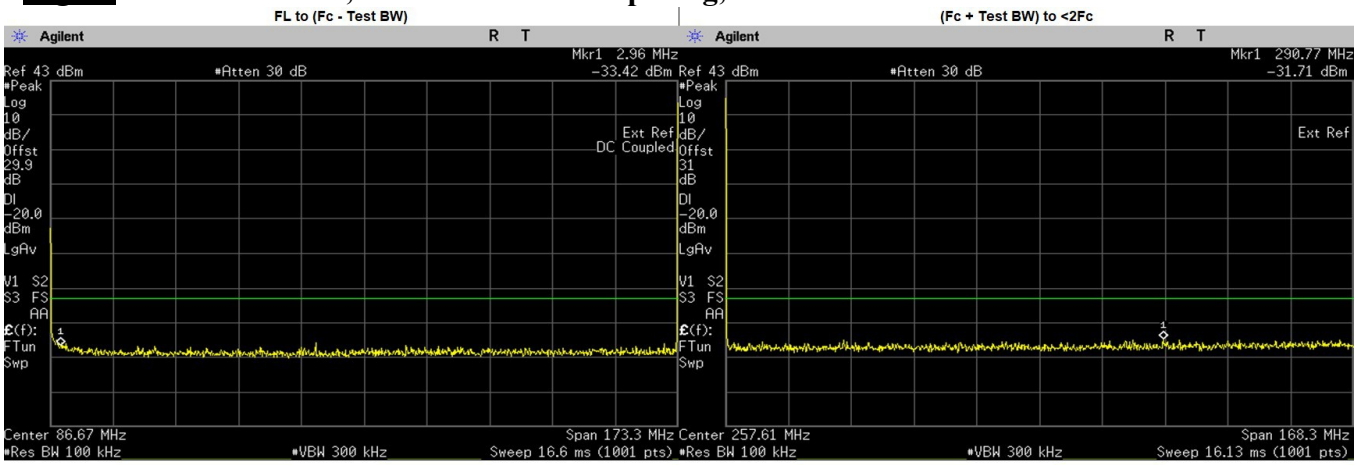


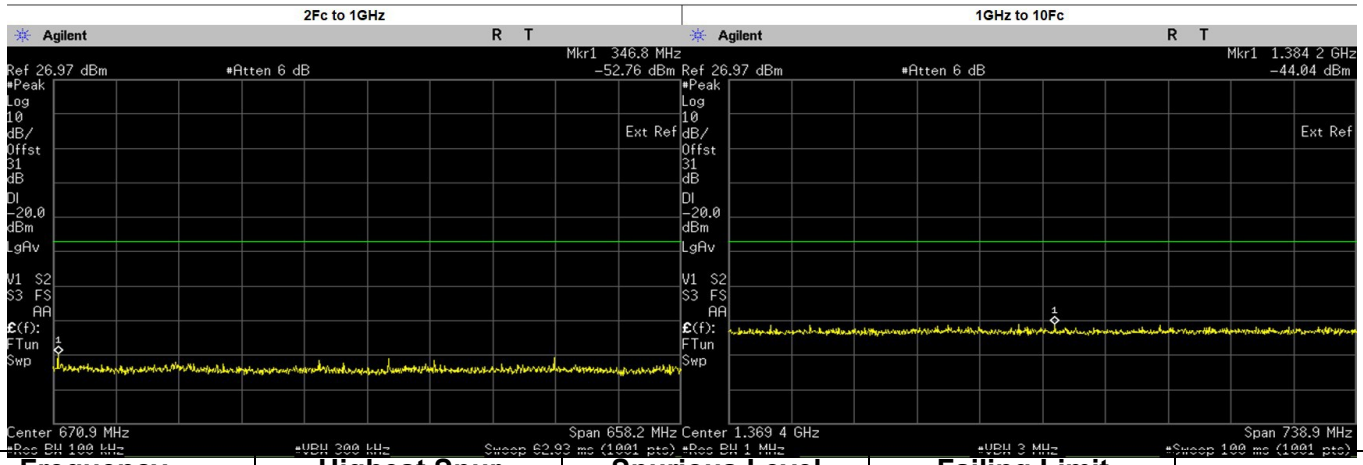




Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	2.2700	-31.9740	-20.00	PASS
(Fc + Test BW) to <2Fc	244.9338	-30.7500	-20.00	PASS
2Fc to 1GHz	323.4000	-53.7700	-20.00	PASS
	485.1000	-56.7544	-20.00	PASS
	646.8000	-57.4814	-20.00	PASS
	808.5000	-57.5336	-20.00	PASS
	970.2000	-57.6358	-20.00	PASS
1GHz to 10Fc	1594.0100	-43.9700	-20.00	PASS
	1131.9000	-45.5861	-20.00	PASS
	1293.6000	-45.9895	-20.00	PASS
	1455.3000	-45.3680	-20.00	PASS
	1617.0000	-46.3160	-20.00	PASS

Digital.: 173.3875. MHz, 12.5 kHz Channel Spacing, Max. Power





Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dBm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	2.9600	-33.4190	-20.00	PASS
(Fc + Test BW) to <2Fc	290.7704	-31.7100	-20.00	PASS
2Fc to 1GHz	346.7750	-52.7600	-20.00	PASS
	520.1625	-55.4560	-20.00	PASS
	693.5500	-54.6853	-20.00	PASS
	866.9375	-54.2097	-20.00	PASS
1GHz to 10Fc	1384.2150	-44.0500	-20.00	PASS
	1040.3250	-46.1676	-20.00	PASS
	1213.7130	-46.2442	-20.00	PASS
	1387.1000	-46.1369	-20.00	PASS
	1560.4870	-46.1388	-20.00	PASS
	1733.8750	-45.8515	-20.00	PASS

6.10.4. Test Limit

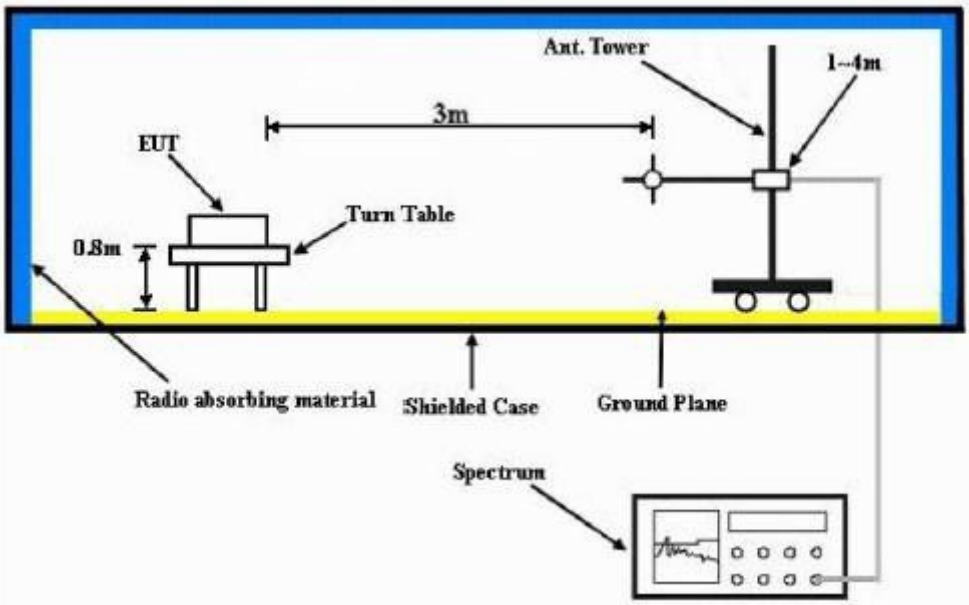
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

Channel Spacing	Part 22	Part 24D	Part 74	Part 80	Part 90 (UHF, VHF, 800, 900)	Part 90 (700)
12.5kHz	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz		Not Applicable		43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

Channel Spacing	RSS 134	RSS 182	RSS 119 (UHF, VHF, 800, 900)	RSS 119 (700)
12.5kHz	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz	Not Applicable	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

6.11. Radiated Spurious Emission

6.11.1. Test Setup

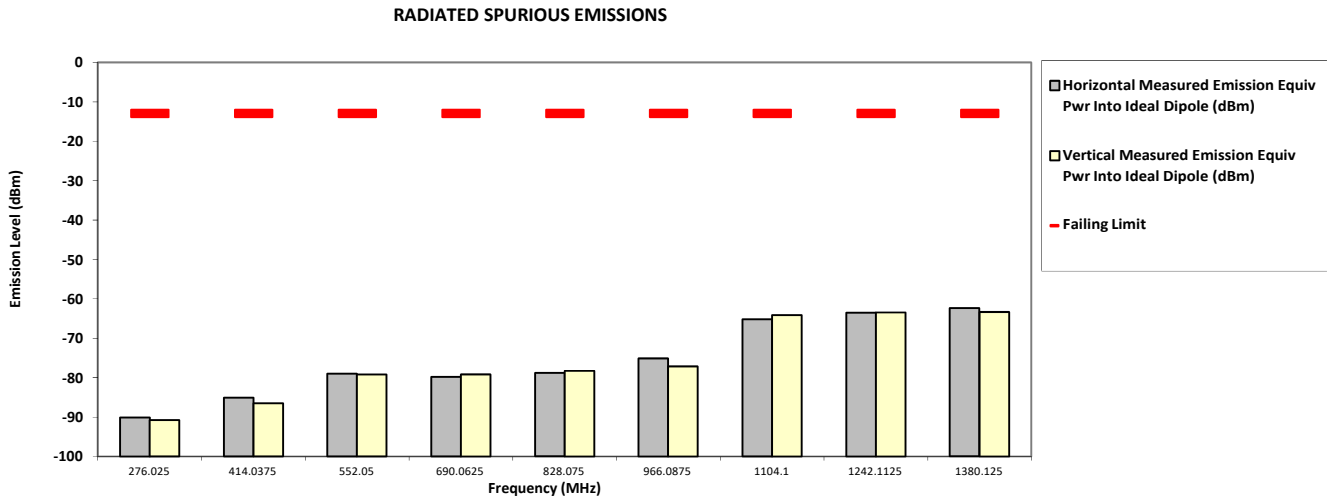


1) The Resolution Bandwidth for scanning Radiated Emission below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector mode is positive peak.
2) In the semi- anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height (for Fc < 1GHz) or 1.5m height (for Fc > 1GHz) 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: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**
Battery Part No: PMNN4810A **Accy Part No: NA**
Test Mode: TX Analog
138.0125 MHz (Not for FCC review) **25 kHz** **6.000 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)
276.0250	-13.0000	-90.0879 **	-90.7597 **
414.0375	-13.0000	-85.0809 **	-86.5043 **
552.0500	-13.0000	-79.0105 **	-79.2061 **
690.0625	-13.0000	-79.8029 **	-79.1764 **
828.0750	-13.0000	-78.8436 **	-78.2531 **
966.0875	-13.0000	-75.0946 **	-77.1134 **
1104.1000	-13.0000	-65.1903 **	-64.0917 **
1242.1125	-13.0000	-63.4759 **	-63.4645 **
1380.1250	-13.0000	-62.4026 **	-63.3479 **



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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

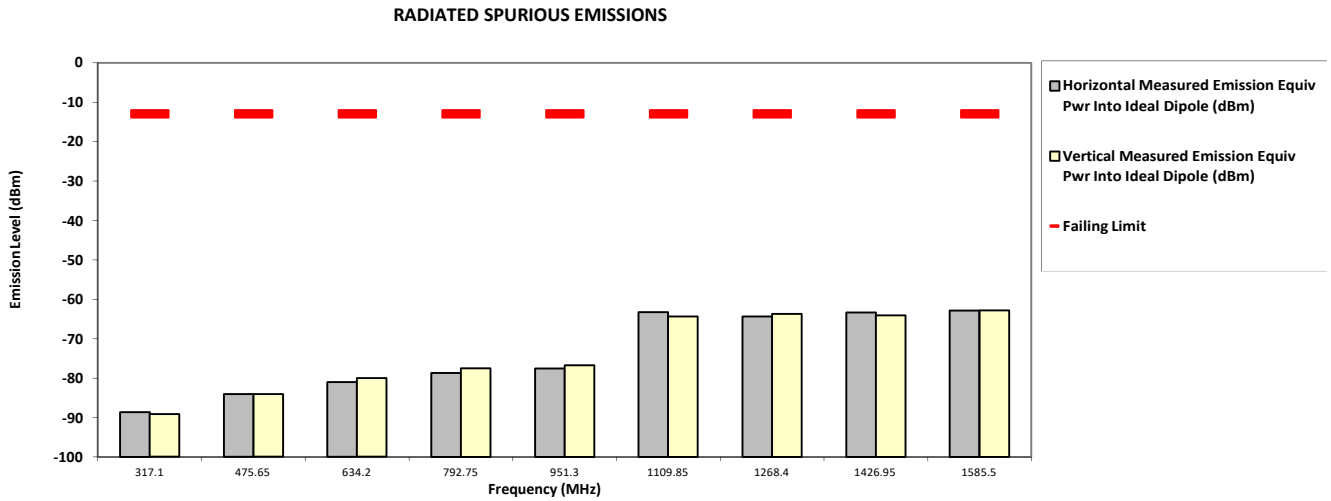
Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Analog

158.55 MHz **25 kHz** **6.000 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)
317.1000	-13.0000	-88.6115 **	-89.1973 **
475.6500	-13.0000	-84.0832 **	-84.0986 **
634.2000	-13.0000	-81.0171 **	-80.0632 **
792.7500	-13.0000	-78.6552 **	-77.4812 **
951.3000	-13.0000	-77.5320 **	-76.7125 **
1109.8500	-13.0000	-63.2372 **	-64.3617 **
1268.4000	-13.0000	-64.3667 **	-63.6924 **
1426.9500	-13.0000	-63.3427 **	-64.0676 **
1585.5000	-13.0000	-62.8636 **	-62.7934 **



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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

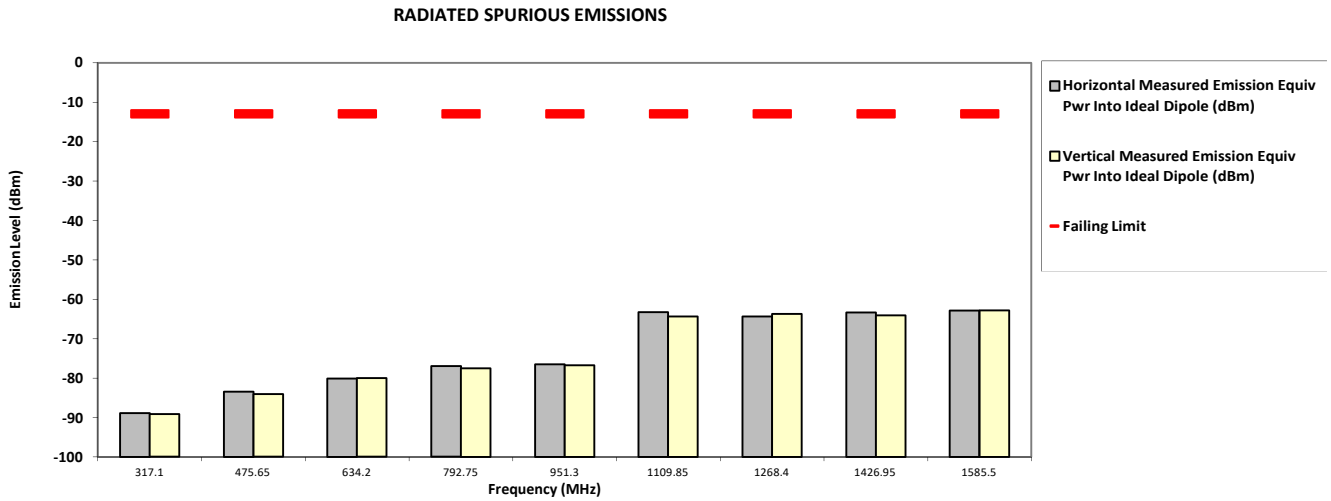
Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Analog

158.55 MHz **25 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)
317.1000	-13.0000	-88.8621 **	-89.1973 **
475.6500	-13.0000	-83.4281 **	-84.0986 **
634.2000	-13.0000	-80.1008 **	-80.0632 **
792.7500	-13.0000	-77.0164 **	-77.4812 **
951.3000	-13.0000	-76.4936 **	-76.7125 **
1109.8500	-13.0000	-63.2372 **	-64.3617 **
1268.4000	-13.0000	-64.3667 **	-63.6924 **
1426.9500	-13.0000	-63.3427 **	-64.0676 **
1585.5000	-13.0000	-62.8636 **	-62.7934 **



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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	**Marginal Results**	**Failed Results**

SAC Transmitter Radiated Emission:

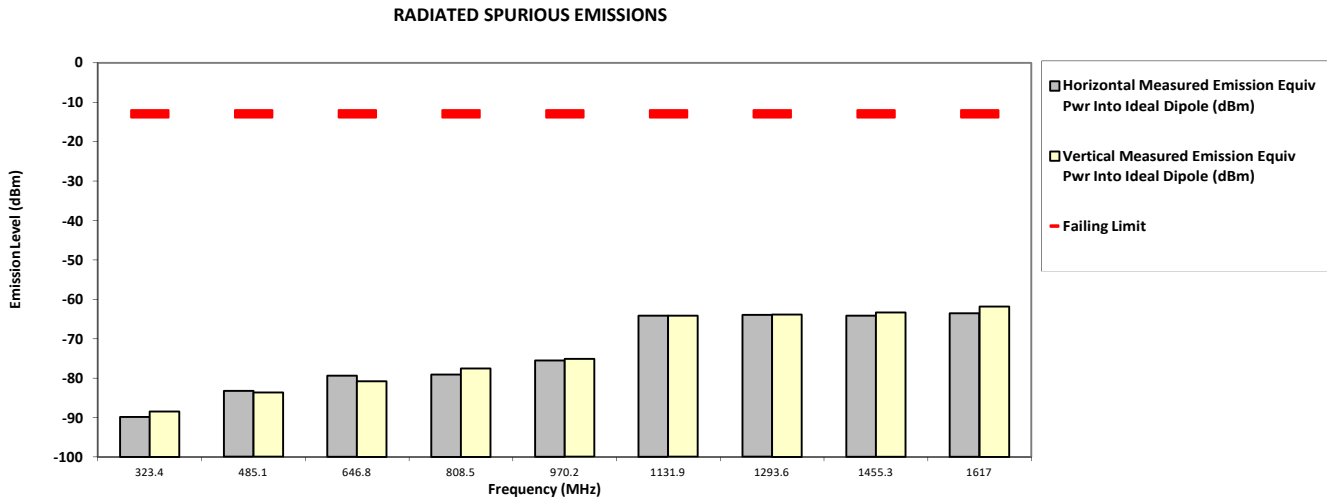
Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Analog

161.7 MHz **25 kHz** **6.000 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)
323.4000	-13.0000	-89.8317 **	-88.4751 **
485.1000	-13.0000	-83.3182 **	-83.7124 **
646.8000	-13.0000	-79.3948 **	-80.7884 **
808.5000	-13.0000	-79.0988 **	-77.5226 **
970.2000	-13.0000	-75.5618 **	-75.1999 **
1131.9000	-13.0000	-64.1937 **	-64.2337 **
1293.6000	-13.0000	-64.0034 **	-63.8780 **
1455.3000	-13.0000	-64.1945 **	-63.3853 **
1617.0000	-13.0000	-63.5910 **	-61.8281 **



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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

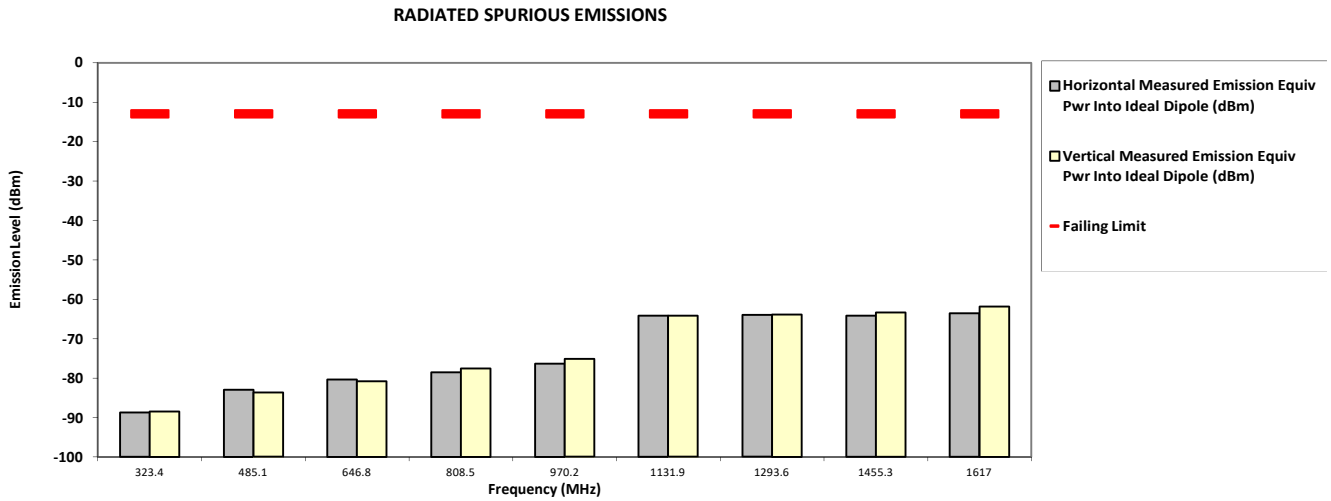
Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Analog

161.7 MHz **25 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)
323.4000	-13.0000	-88.7452 **	-88.4751 **
485.1000	-13.0000	-82.9317 **	-83.7124 **
646.8000	-13.0000	-80.3503 **	-80.7884 **
808.5000	-13.0000	-78.4924 **	-77.5226 **
970.2000	-13.0000	-76.3321 **	-75.1999 **
1131.9000	-13.0000	-64.1937 **	-64.2337 **
1293.6000	-13.0000	-64.0034 **	-63.8780 **
1455.3000	-13.0000	-64.1945 **	-63.3853 **
1617.0000	-13.0000	-63.5910 **	-61.8281 **



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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	**Marginal Results**	**Failed Results**

SAC Transmitter Radiated Emission:

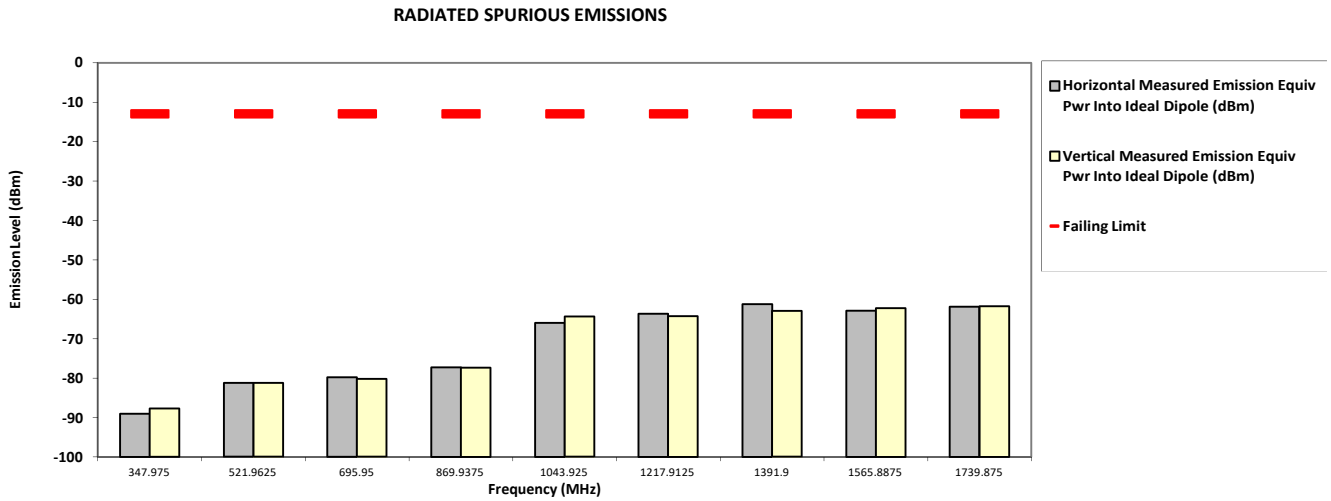
Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Analog

173.9875 MHz (Not for FCC review) **25 kHz** **6.000 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)
347.9750	-13.0000	-89.0371 **	-87.7171 **
521.9625	-13.0000	-81.2536 **	-81.2536 **
695.9500	-13.0000	-79.7924 **	-80.2518 **
869.9375	-13.0000	-77.2443 **	-77.3554 **
1043.9250	-13.0000	-65.9693 **	-64.4081 **
1217.9125	-13.0000	-63.6470 **	-64.2788 **
1391.9000	-13.0000	-61.2271 **	-63.0187 **
1565.8875	-13.0000	-62.8701 **	-62.2402 **
1739.8750	-13.0000	-61.8901 **	-61.7648 **



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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

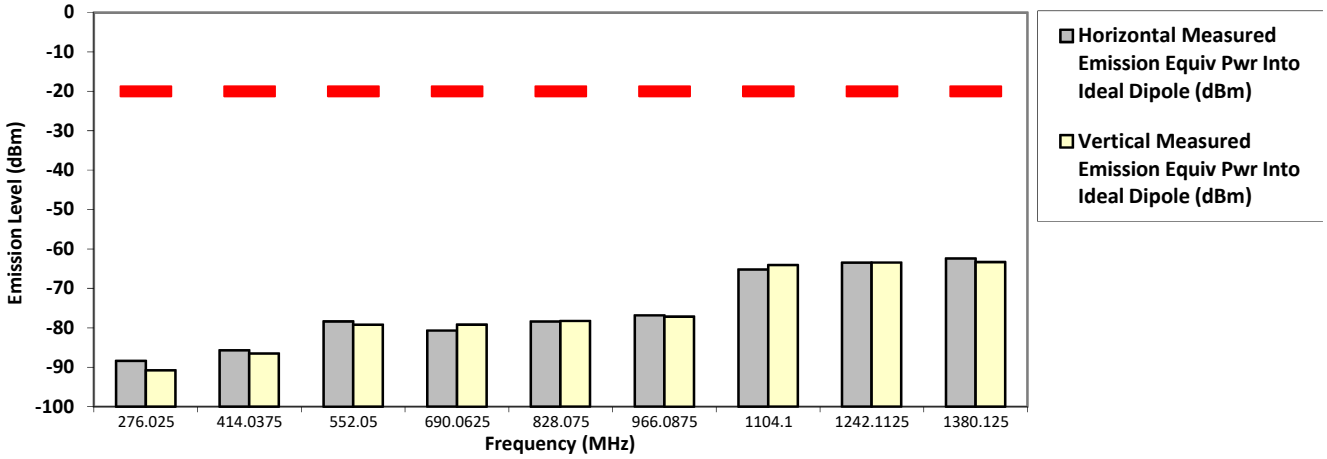
Passed Results	Marginal Results	Failed Results

6.11.3. Test Result (Digital)

SAC Transmitter Radiated Emission:
Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**
Battery Part No: PMNN4810A **Accy Part No: NA**
Test Mode: TX Digital
138.0125 MHz (Not for FCC review) **12.5 kHz** **6.000 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)
276.0250	-20.0000	-88.3878 **	-90.7597 **
414.0375	-20.0000	-85.6986 **	-86.5043 **
552.0500	-20.0000	-78.3442 **	-79.2061 **
690.0625	-20.0000	-80.7176 **	-79.1764 **
828.0750	-20.0000	-78.3965 **	-78.2531 **
966.0875	-20.0000	-76.8549 **	-77.1134 **
1104.1000	-20.0000	-65.1903 **	-64.0917 **
1242.1125	-20.0000	-63.4759 **	-63.4645 **
1380.1250	-20.0000	-62.4026 **	-63.3479 **

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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

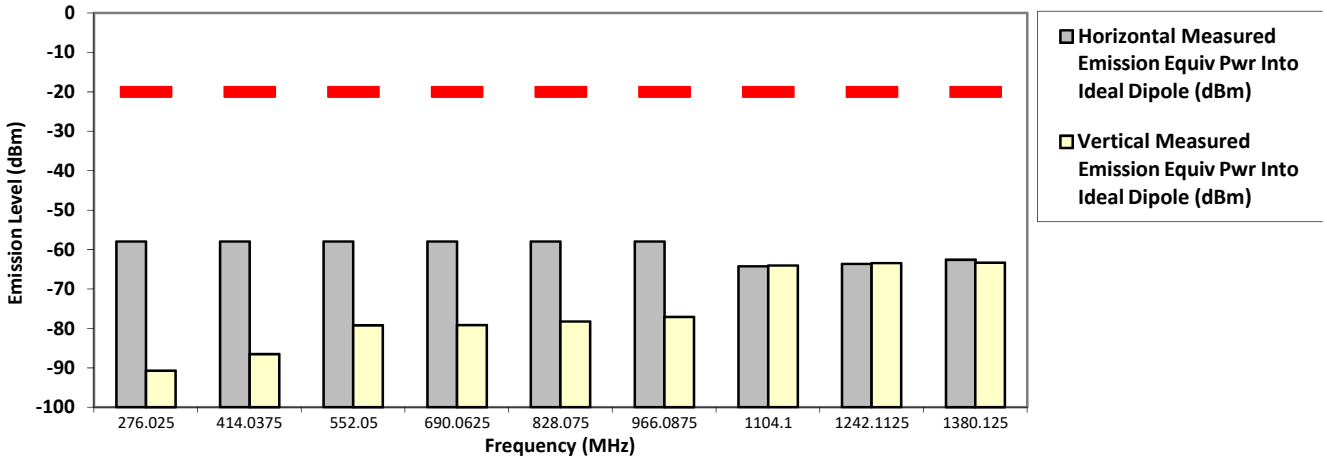
Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Digital

138.0125 MHz (Not for FCC review) **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)
276.0250	-20.0000	-90.4128 **	-89.8961 **
414.0375	-20.0000	-85.4634 **	-85.4771 **
552.0500	-20.0000	-78.5333 **	-79.6455 **
690.0625	-20.0000	-79.4854 **	-80.4277 **
828.0750	-20.0000	-78.0362 **	-78.5244 **
966.0875	-20.0000	-76.7452 **	-76.1549 **
1104.1000	-20.0000	-64.2990 **	-64.9395 **
1242.1125	-20.0000	-63.6646 **	-64.4022 **
1380.1250	-20.0000	-62.5864 **	-62.8502 **

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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks: Passed Results | **Marginal Results** | **Failed Results**

SAC Transmitter Radiated Emission:

Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

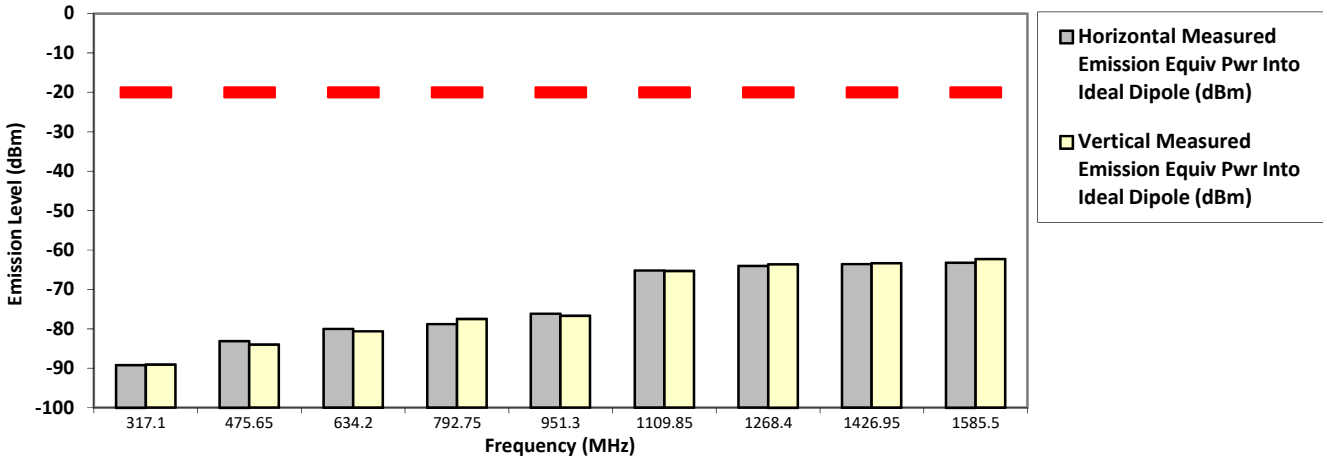
Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Digital

158.55 MHz **12.5 kHz** **6.000 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)
317.1000	-20.0000	-89.1827 **	-89.0535 **
475.6500	-20.0000	-83.0960 **	-83.9822 **
634.2000	-20.0000	-79.9952 **	-80.6414 **
792.7500	-20.0000	-78.8141 **	-77.5001 **
951.3000	-20.0000	-76.1625 **	-76.6788 **
1109.8500	-20.0000	-65.2086 **	-65.3293 **
1268.4000	-20.0000	-64.0670 **	-63.6204 **
1426.9500	-20.0000	-63.5894 **	-63.3184 **
1585.5000	-20.0000	-63.2208 **	-62.2567 **

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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

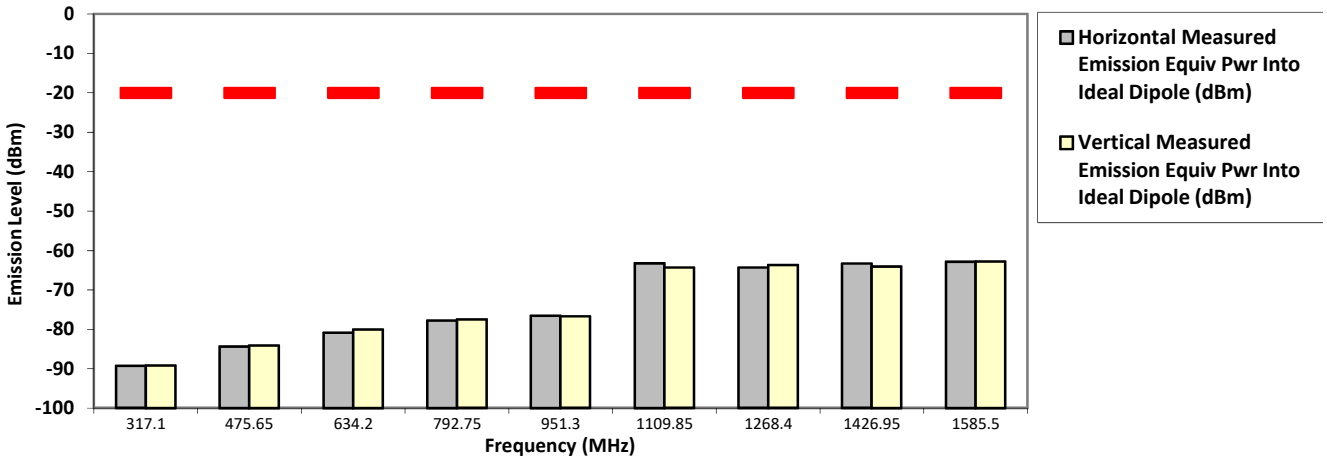
Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Digital

158.55 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)
317.1000	-20.0000	-89.2821 **	-89.1973 **
475.6500	-20.0000	-84.3604 **	-84.0986 **
634.2000	-20.0000	-80.8725 **	-80.0632 **
792.7500	-20.0000	-77.7904 **	-77.4812 **
951.3000	-20.0000	-76.5753 **	-76.7125 **
1109.8500	-20.0000	-63.2372 **	-64.3617 **
1268.4000	-20.0000	-64.3667 **	-63.6924 **
1426.9500	-20.0000	-63.3427 **	-64.0676 **
1585.5000	-20.0000	-62.8636 **	-62.7934 **

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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	**Marginal Results**	**Failed Results**

SAC Transmitter Radiated Emission:

Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

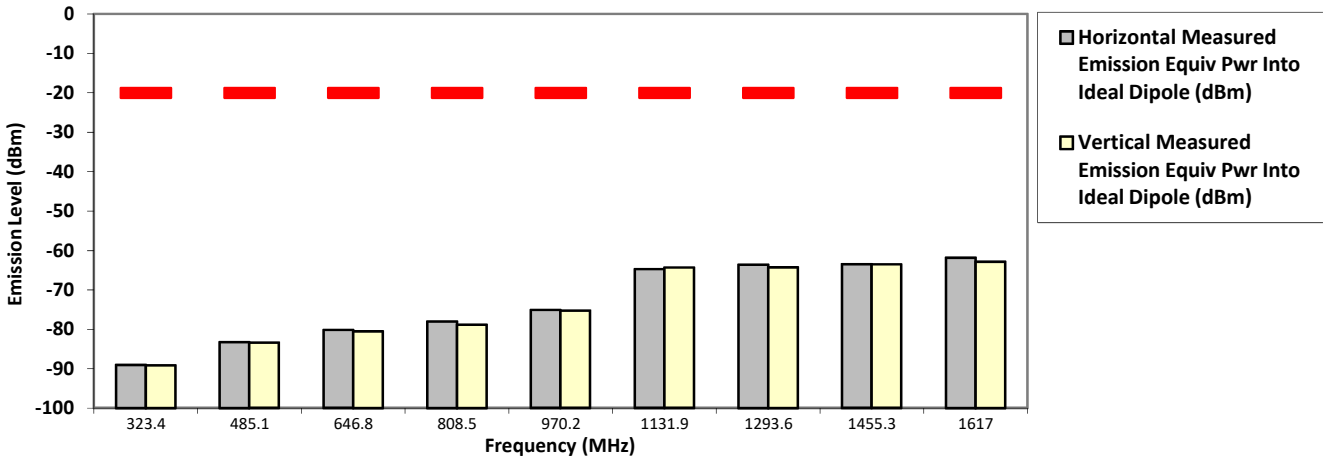
Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Digital

161.7 MHz **12.5 kHz** **6.000 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)
323.4000	-20.0000	-89.0384 **	-89.1376 **
485.1000	-20.0000	-83.2458 **	-83.3801 **
646.8000	-20.0000	-80.1582 **	-80.4836 **
808.5000	-20.0000	-78.0383 **	-78.8355 **
970.2000	-20.0000	-75.0913 **	-75.2648 **
1131.9000	-20.0000	-64.7677 **	-64.3342 **
1293.6000	-20.0000	-63.6038 **	-64.2722 **
1455.3000	-20.0000	-63.5031 **	-63.5503 **
1617.0000	-20.0000	-61.8288 **	-62.8351 **

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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	**Marginal Results**	**Failed Results**

SAC Transmitter Radiated Emission:

Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

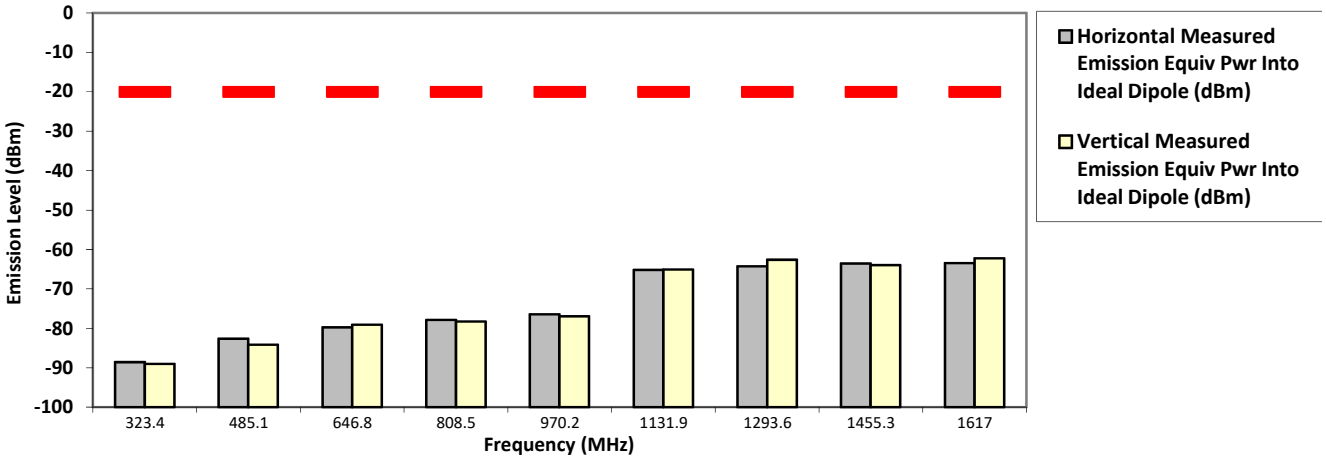
Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Digital

161.7 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)
323.4000	-20.0000	-88.5712 **	-89.0074 **
485.1000	-20.0000	-82.6723 **	-84.1543 **
646.8000	-20.0000	-79.7510 **	-79.1292 **
808.5000	-20.0000	-77.8917 **	-78.3035 **
970.2000	-20.0000	-76.4509 **	-76.9641 **
1131.9000	-20.0000	-65.2108 **	-65.1159 **
1293.6000	-20.0000	-64.2564 **	-62.6122 **
1455.3000	-20.0000	-63.5698 **	-63.9805 **
1617.0000	-20.0000	-63.4596 **	-62.2438 **

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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	**Marginal Results**	**Failed Results**

SAC Transmitter Radiated Emission:

Model Number: AAH06JDN9RA1AN **S/N: 865TXP0444** **SR:22640-EMC-00110**

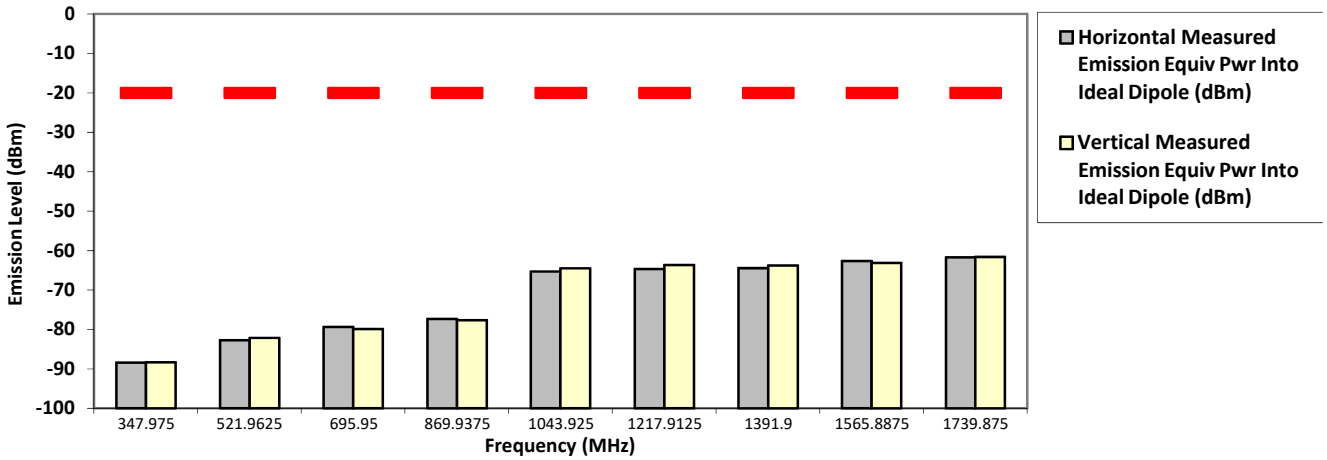
Battery Part No: PMNN4810A **Accy Part No: NA**

Test Mode: TX Digital

173.3875 MHz **12.5 kHz** **6.000 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)
347.9750	-20.0000	-88.4169 **	-88.3465 **
521.9625	-20.0000	-82.7496 **	-82.1873 **
695.9500	-20.0000	-79.3812 **	-79.9160 **
869.9375	-20.0000	-77.3721 **	-77.6569 **
1043.9250	-20.0000	-65.3558 **	-64.5387 **
1217.9125	-20.0000	-64.7080 **	-63.6886 **
1391.9000	-20.0000	-64.4327 **	-63.7777 **
1565.8875	-20.0000	-62.6593 **	-63.1458 **
1739.8750	-20.0000	-61.7088 **	-61.6214 **

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: Amaluddin&Azil **Sat, Aug 23, 2021**

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): 23.5 Hum(%RH): 70.0

Remarks:

Passed Results	Marginal Results	Failed Results

6.11.4. Test Limit

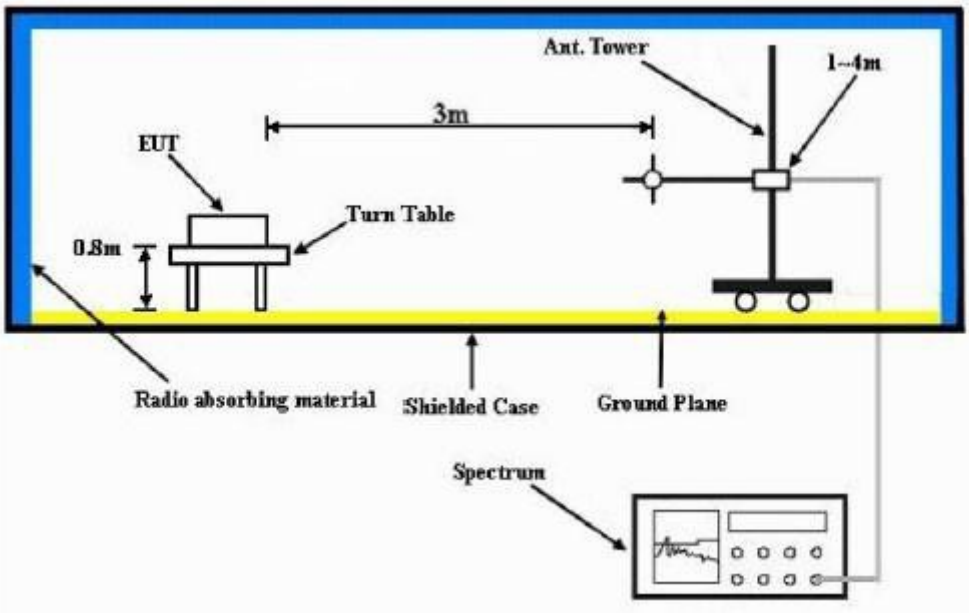
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

Channel Spacing	Part 22	Part 24D	Part 74	Part 80	Part 90 (UHF, VHF, 800, 900)	Part 90 (700)
12.5kHz	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz		Not Applicable		43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

Channel Spacing	RSS 134	RSS 182	RSS 119 (UHF, VHF, 800, 900)	RSS 119 (700)
12.5kHz	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz	Not Applicable	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(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 Fc < 1GHz) or 1.5m (for Fc > 1GHz) 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

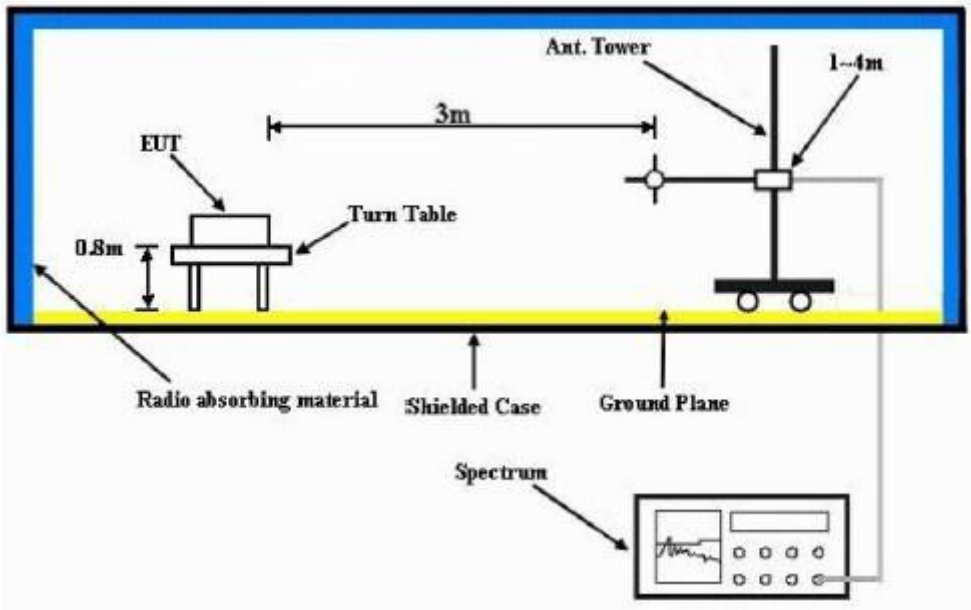
Not Applicable.

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 = "Read Value" + 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 ~