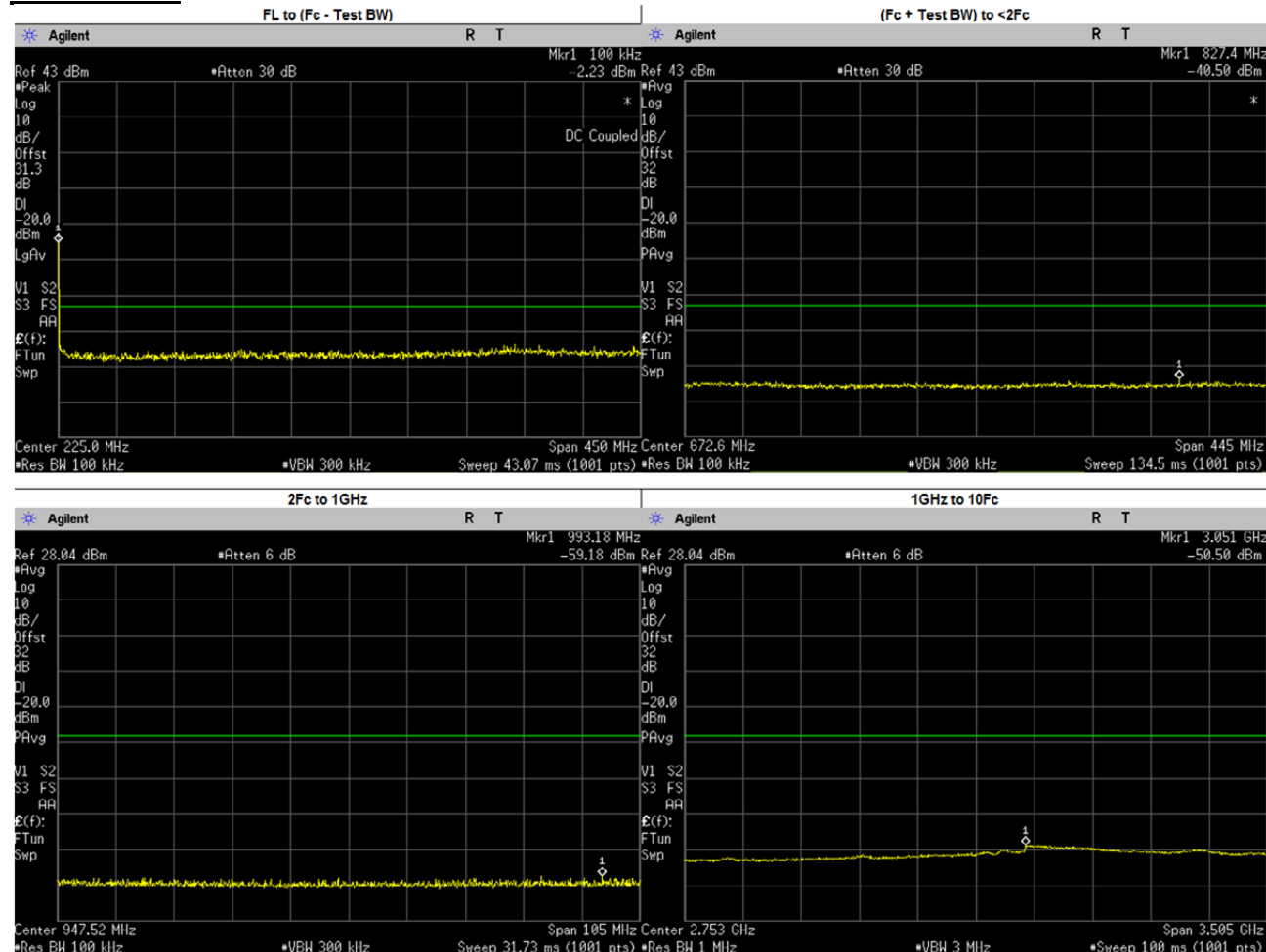
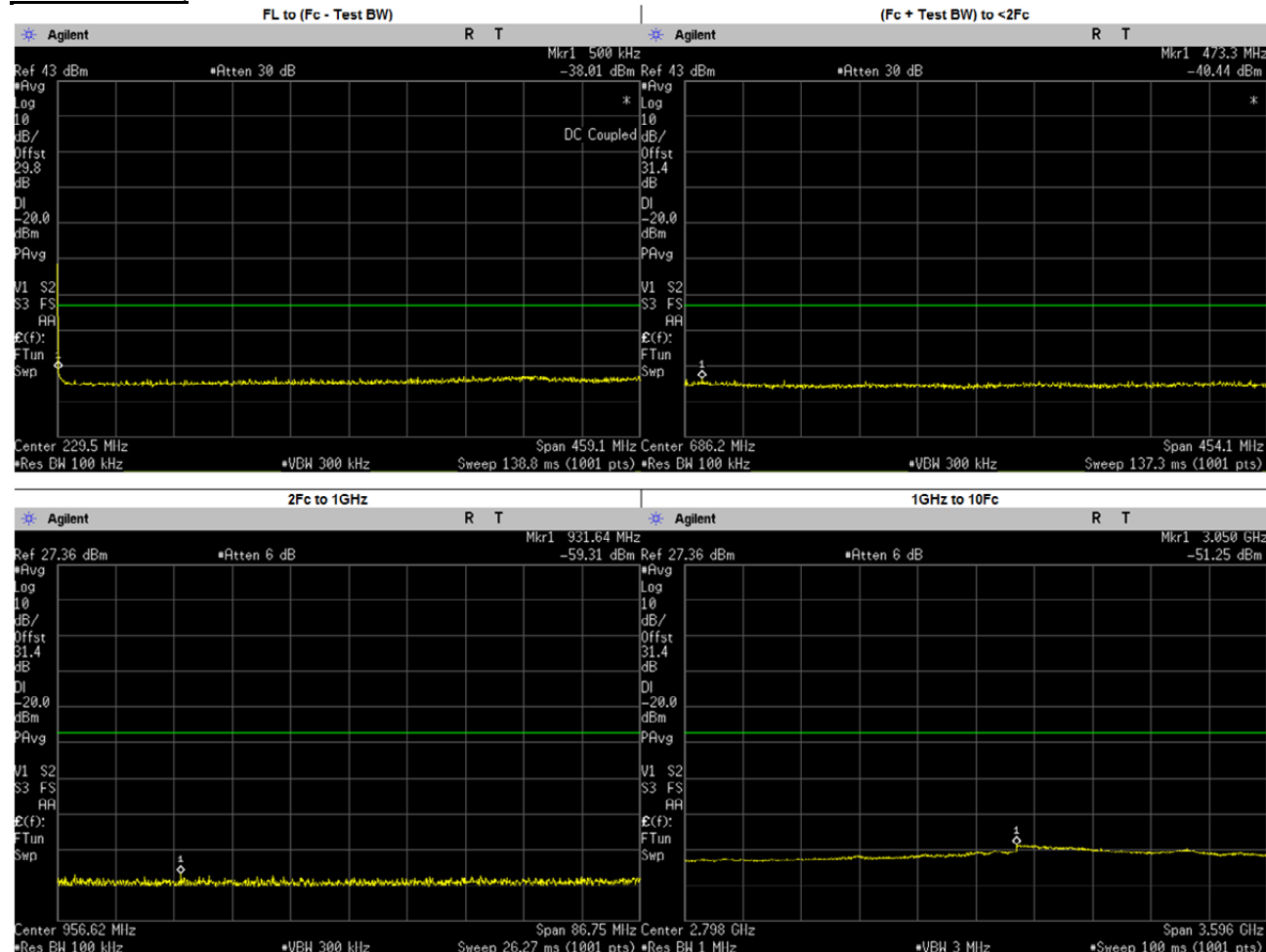


Digital : 450.025 MHz, 12.5kHz Channel Spacing, Low Power **FCC Part 90**



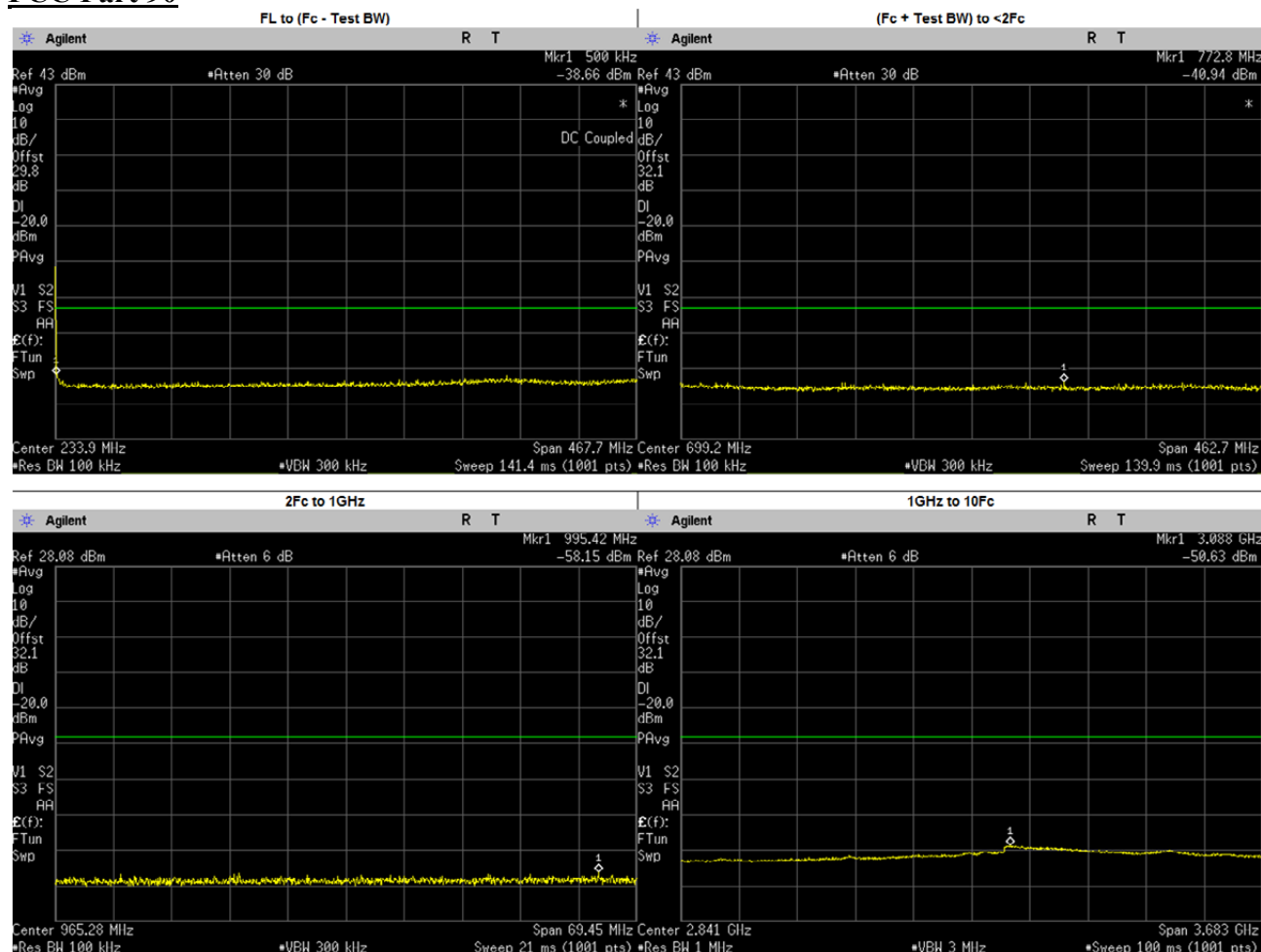
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	352.7770	-38.0691	-20	PASS
(Fc + Test BW) to <2Fc	827.4148	-40.5000	-20	PASS
2Fc to 1GHz	993.1783	-59.1800	-20	PASS
	900.0500	-60.7817	-20	PASS
1GHz to 10Fc	3050.5710	-50.5000	-20	PASS
	1350.0750	-54.9278	-20	PASS
	1800.1000	-54.5602	-20	PASS
	2250.1250	-54.3706	-20	PASS
	2700.1500	-53.1390	-20	PASS
	3150.1750	-51.0390	-20	PASS
	3600.2000	-52.2132	-20	PASS
	4050.2250	-52.3299	-20	PASS
	4500.2500	-53.2346	-20	PASS

Digital : 459.125 MHz, 12.5kHz Channel Spacing, Max Power
FCC Part 90,



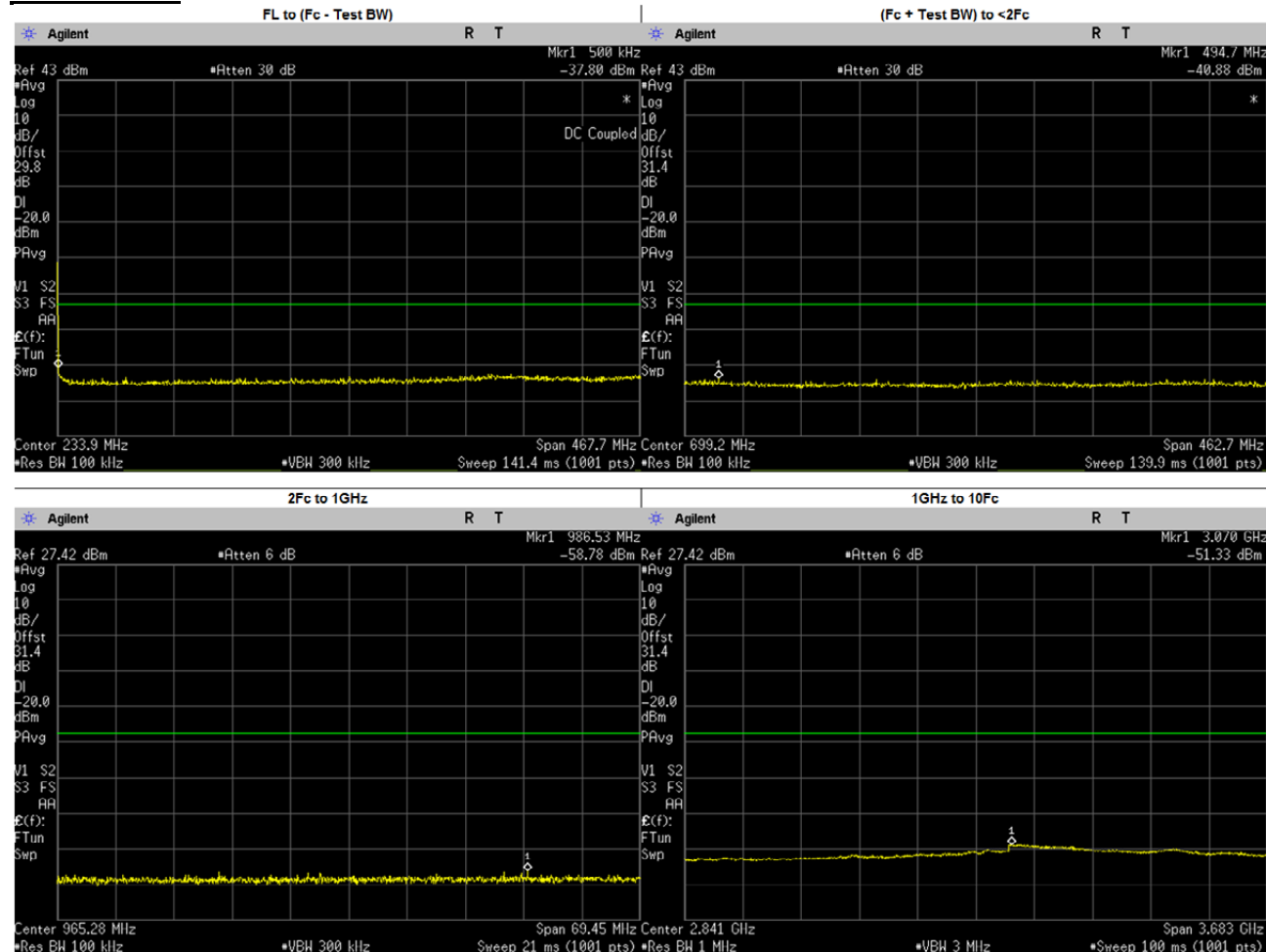
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	375.9785	-38.1076	-20	PASS
(Fc + Test BW) to <2Fc	473.2579	-40.4400	-20	PASS
2Fc to 1GHz	931.6410	-59.3100	-20	PASS
	918.2500	-61.1316	-20	PASS
1GHz to 10Fc	3049.8630	-51.2500	-20	PASS
	1377.3750	-55.4879	-20	PASS
	1836.5000	-55.2766	-20	PASS
	2295.6250	-54.8265	-20	PASS
	2754.7500	-54.0219	-20	PASS
	3213.8750	-51.7965	-20	PASS
	3673.0000	-53.1801	-20	PASS
	4132.1250	-53.1076	-20	PASS
	4591.2500	-54.2029	-20	PASS

Digital : 467.775 MHz, 12.5kHz Channel Spacing, Max Power **FCC Part 90**



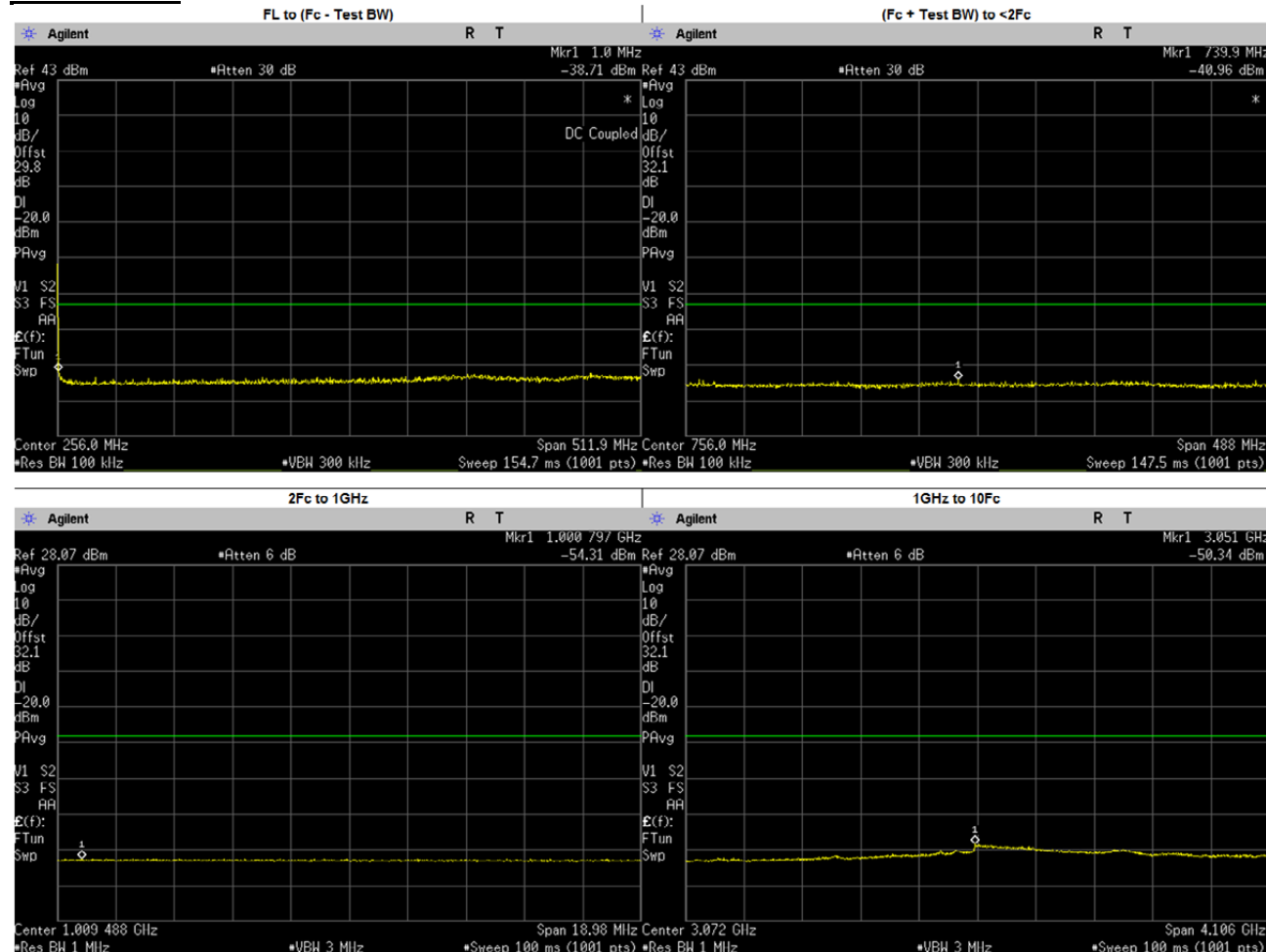
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	362.9513	-37.4782	-20	PASS
(Fc + Test BW) to <2Fc	772.7631	-40.9400	-20	PASS
2Fc to 1GHz	995.4163	-58.1500	-20	PASS
	935.5500	-60.2047	-20	PASS
1GHz to 10Fc	3088.1190	-50.6300	-20	PASS
	1403.3250	-54.8371	-20	PASS
	1871.1000	-54.5448	-20	PASS
	2338.8750	-53.9534	-20	PASS
	2806.6500	-52.7847	-20	PASS
	3274.4250	-51.4694	-20	PASS
	3742.2000	-52.5832	-20	PASS
	4209.9750	-52.7316	-20	PASS
	4677.7500	-53.6857	-20	PASS

Digital : 467.775 MHz, 12.5kHz Channel Spacing, Low Power **FCC Part 90**



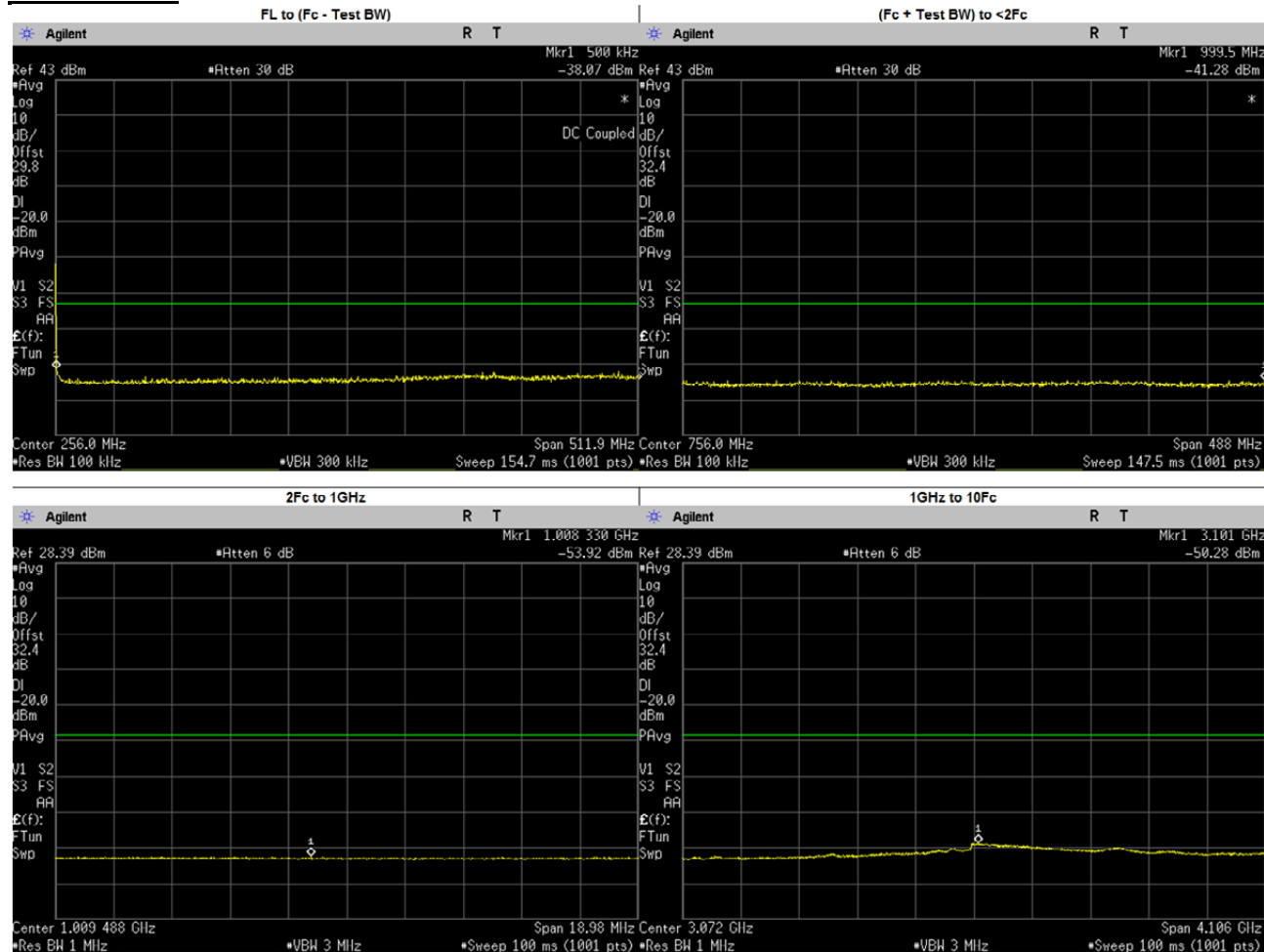
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	363.8868	-38.0344	-20	PASS
(Fc + Test BW) to <2Fc	494.6695	-40.8800	-20	PASS
2Fc to 1GHz	986.5267	-58.7800	-20	PASS
	935.5500	-61.3559	-20	PASS
1GHz to 10Fc	3069.7060	-51.3300	-20	PASS
	1403.3250	-55.5741	-20	PASS
	1871.1000	-55.2136	-20	PASS
	2338.8750	-54.4435	-20	PASS
	2806.6500	-53.4802	-20	PASS
	3274.4250	-52.0533	-20	PASS
	3742.2000	-53.2127	-20	PASS
	4209.9750	-53.7265	-20	PASS
	4677.7500	-54.2209	-20	PASS

Digital : 511.9875 MHz, 12.5kHz Channel Spacing, Max Power **FCC Part 90**



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	468.4174	-37.7520	-20	PASS
(Fc + Test BW) to <2Fc	739.9196	-40.9600	-20	PASS
2Fc to 1GHz	1000.7970	-54.3100	-20	PASS
1GHz to 10Fc	3051.3960	-50.3400	-20	PASS
	1023.9750	-55.0036	-20	PASS
	1535.9630	-54.6265	-20	PASS
	2047.9500	-53.9534	-20	PASS
	2559.9370	-53.6370	-20	PASS
	3071.9250	-50.6590	-20	PASS
	3583.9120	-52.0816	-20	PASS
	4095.9000	-51.9412	-20	PASS
	4607.8870	-53.6192	-20	PASS
	5119.8750	-53.5284	-20	PASS

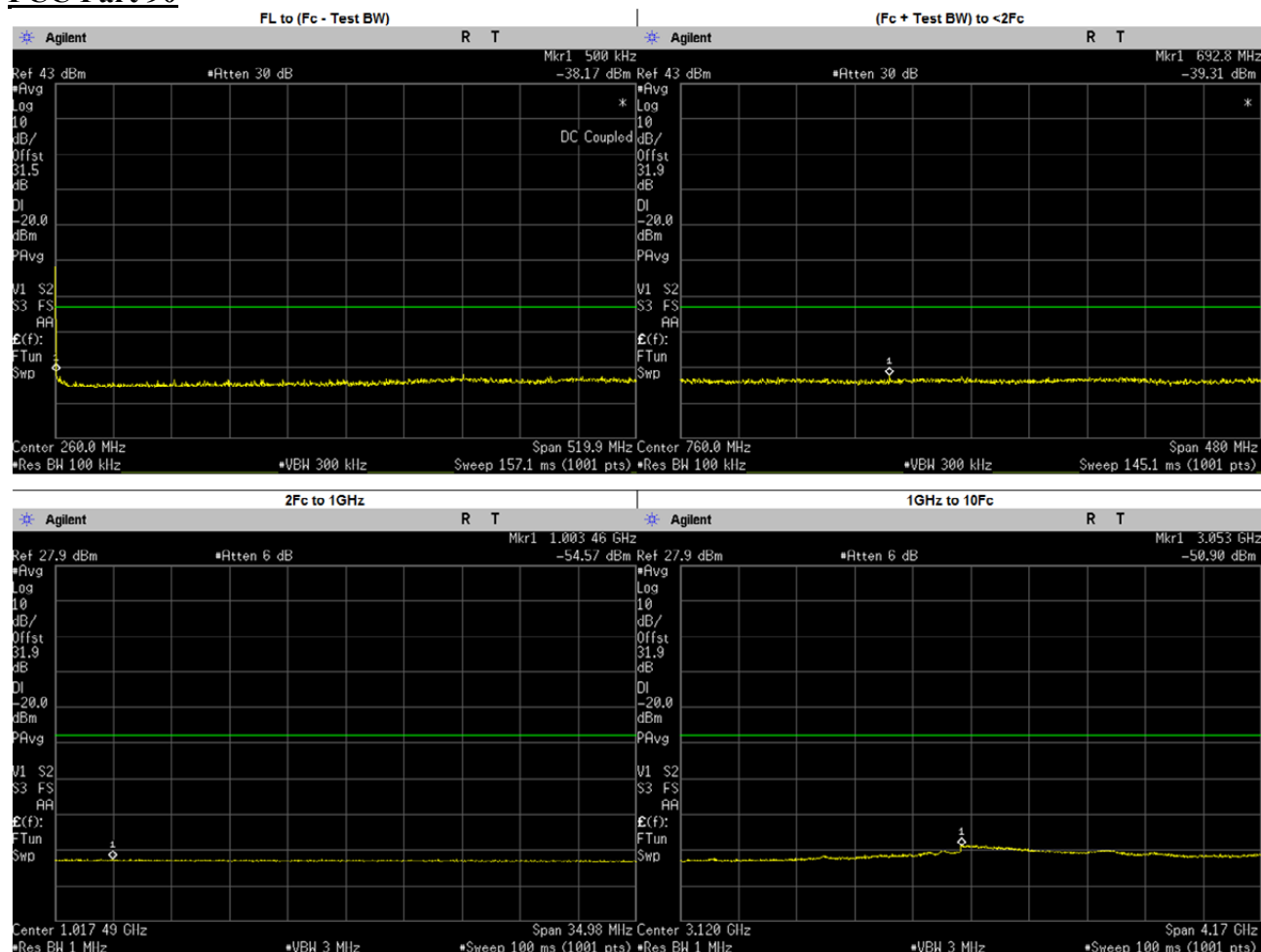
Digital : 511.9875 MHz, 12.5kHz Channel Spacing, Max Power **FCC Part 90**



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	494.5254	-37.4512	-20	PASS
(Fc + Test BW) to <2Fc	999.5120	-41.2800	-20	PASS
2Fc to 1GHz	1008.3300	-53.9200	-20	PASS
1GHz to 10Fc	3100.6660	-50.2800	-20	PASS
	1023.9750	-54.6849	-20	PASS
	1535.9630	-54.3295	-20	PASS
	2047.9500	-53.6677	-20	PASS
	2559.9370	-53.3550	-20	PASS
	3071.9250	-50.6690	-20	PASS
	3583.9120	-51.9188	-20	PASS
	4095.9000	-51.4850	-20	PASS
	4607.8870	-53.4031	-20	PASS
	5119.8750	-53.1582	-20	PASS

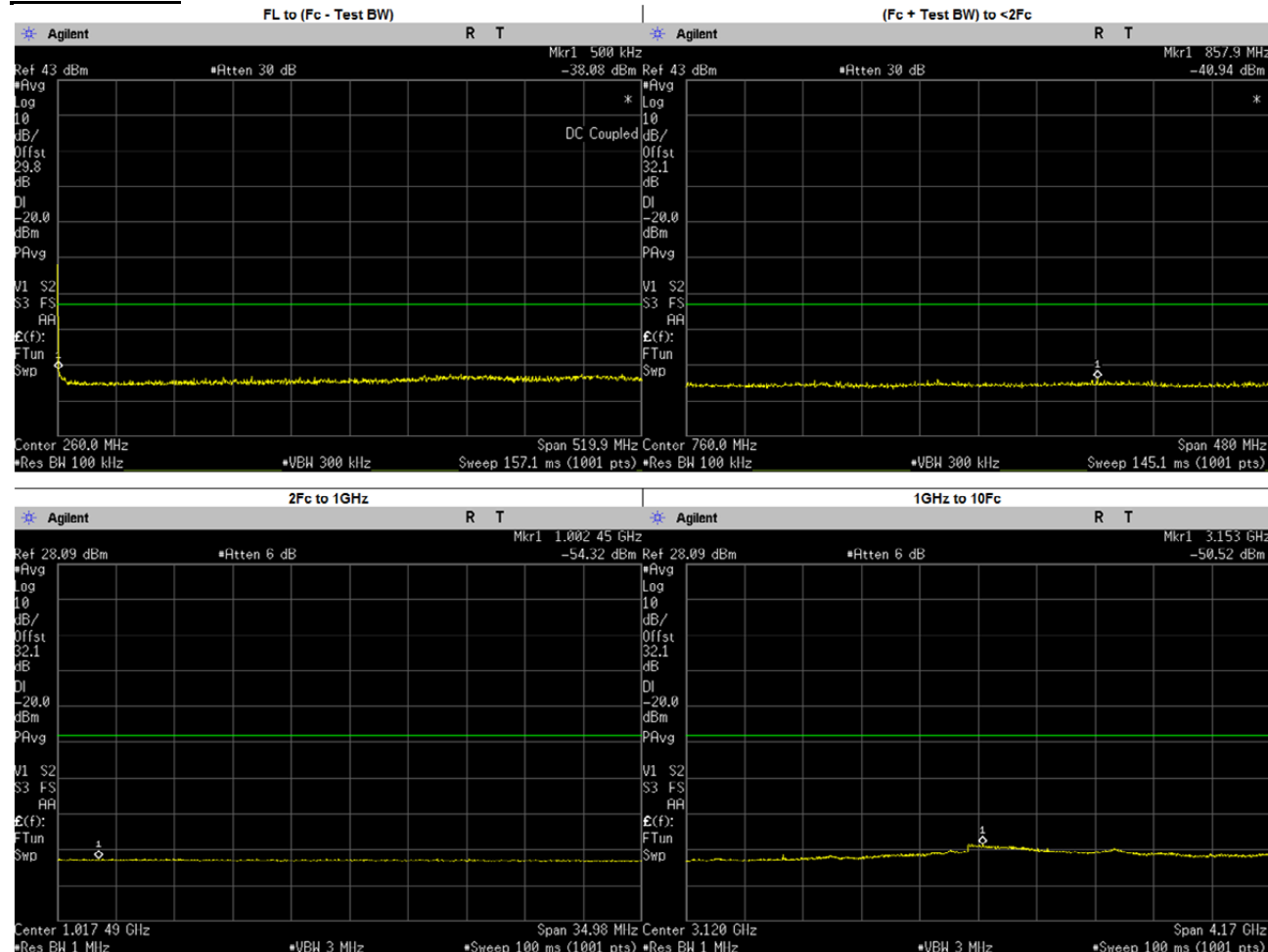
IC: -

Digital : 519.9875 MHz, 12.5kHz Channel Spacing, Max Power **FCC Part 90**



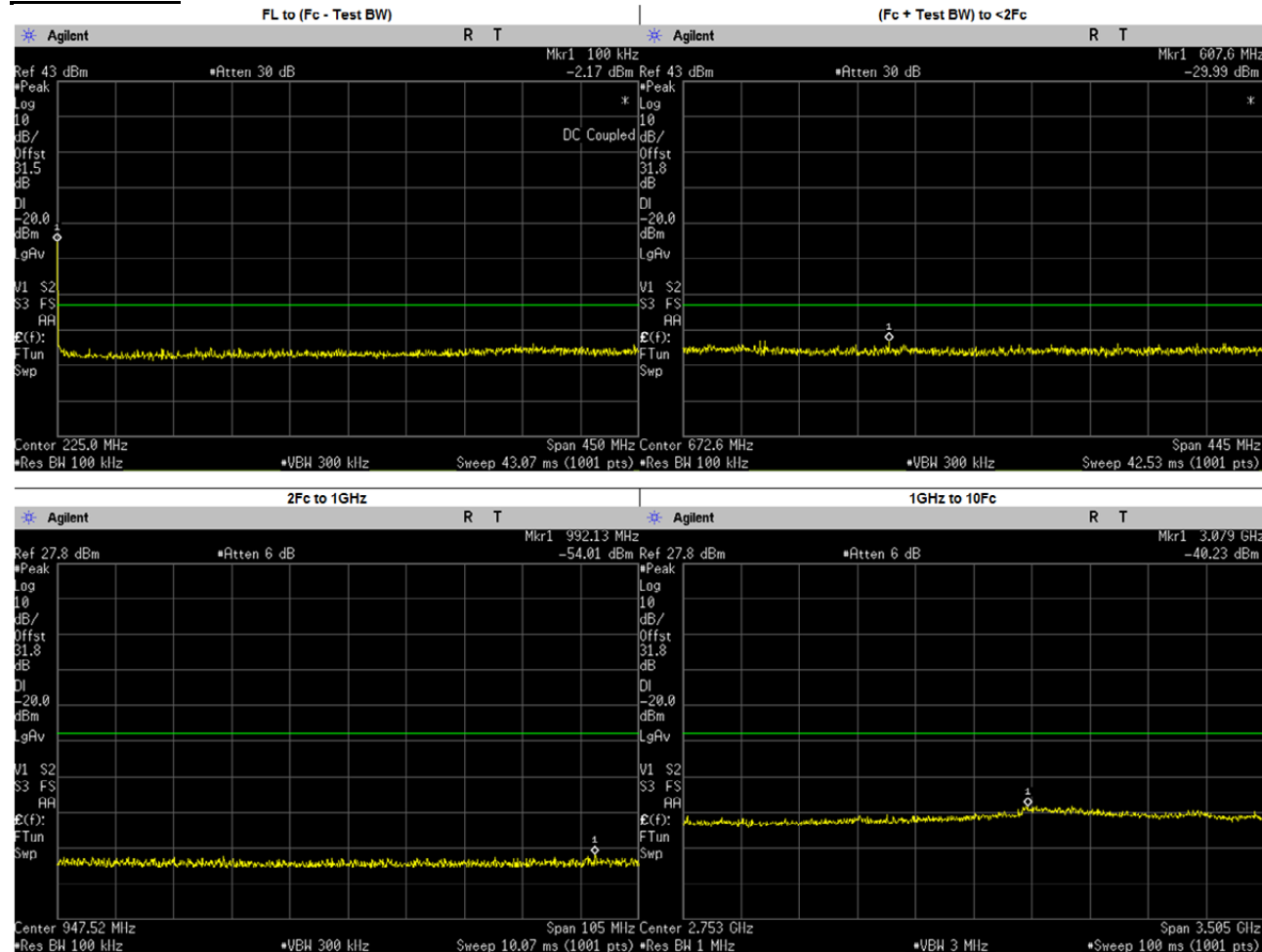
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	364.9940	-39.1893	-20	PASS
(Fc + Test BW) to <2Fc	692.8284	-39.3100	-20	PASS
2Fc to 1GHz	1003.4620	-54.5700	-20	PASS
1GHz to 10Fc	3053.2070	-50.9000	-20	PASS
	1039.9750	-54.9975	-20	PASS
	1559.9630	-54.9234	-20	PASS
	2079.9500	-53.8620	-20	PASS
	2599.9370	-53.7662	-20	PASS
	3119.9250	-51.2340	-20	PASS
	3639.9120	-52.5620	-20	PASS
	4159.9000	-52.7540	-20	PASS
	4679.8870	-54.0548	-20	PASS
	5199.8750	-53.6090	-20	PASS

Digital : 519.9875 MHz, 12.5kHz Channel Spacing, Max Power **FCC Part 90**



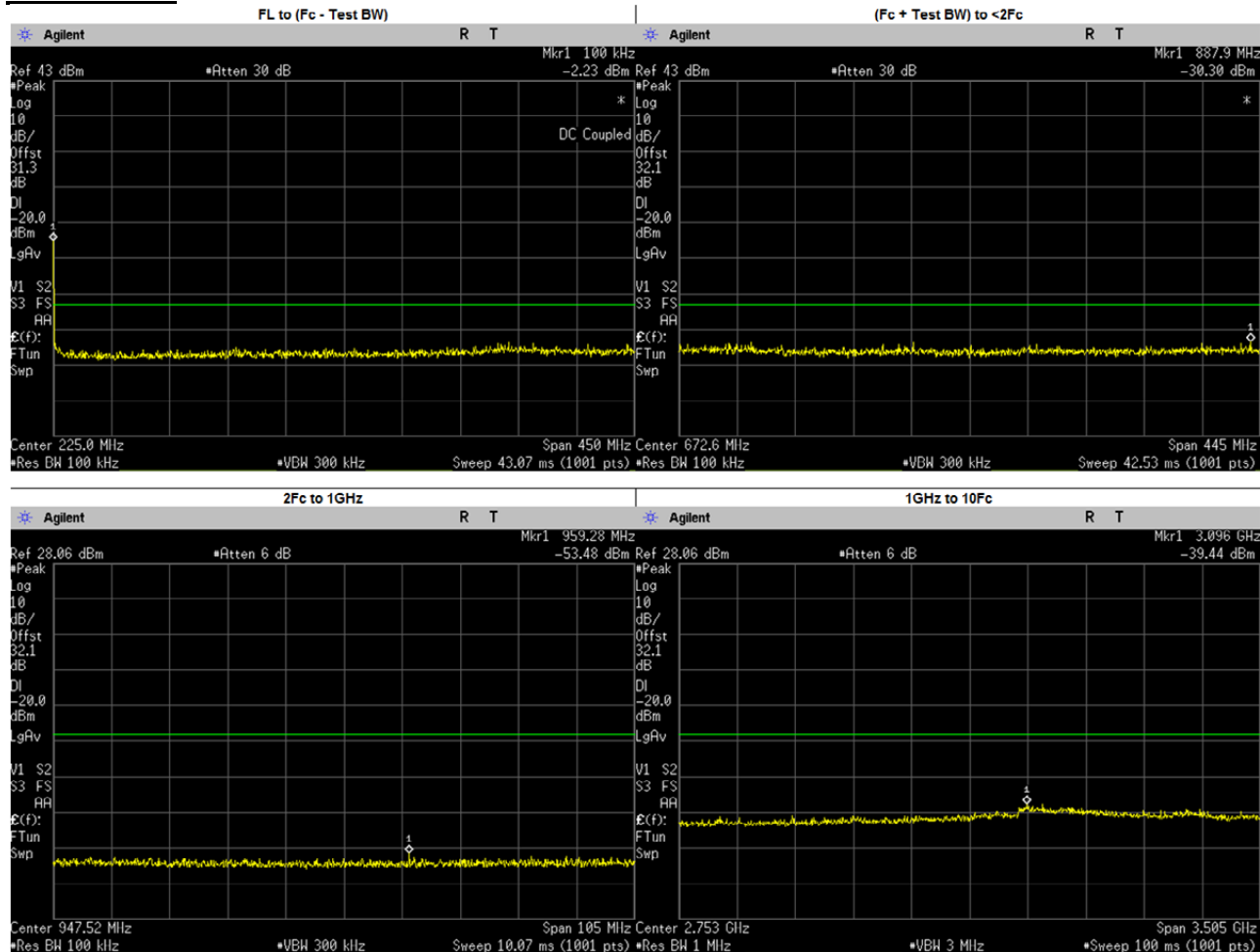
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	358.7550	-38.0110	-20	PASS
(Fc + Test BW) to <2Fc	857.9331	-40.9400	-20	PASS
2Fc to 1GHz	1002.4480	-54.3200	-20	PASS
1GHz to 10Fc	3153.2840	-50.5200	-20	PASS
	1039.9750	-55.1489	-20	PASS
	1559.9630	-54.7913	-20	PASS
	2079.9500	-53.7700	-20	PASS
	2599.9370	-53.4697	-20	PASS
	3119.9250	-51.0210	-20	PASS
	3639.9120	-52.3926	-20	PASS
	4159.9000	-52.4527	-20	PASS
	4679.8870	-53.7822	-20	PASS
	5199.8750	-53.4043	-20	PASS

Phase II : 450.025 MHz, 12.5kHz Channel Spacing, Max Power FCC Part 90



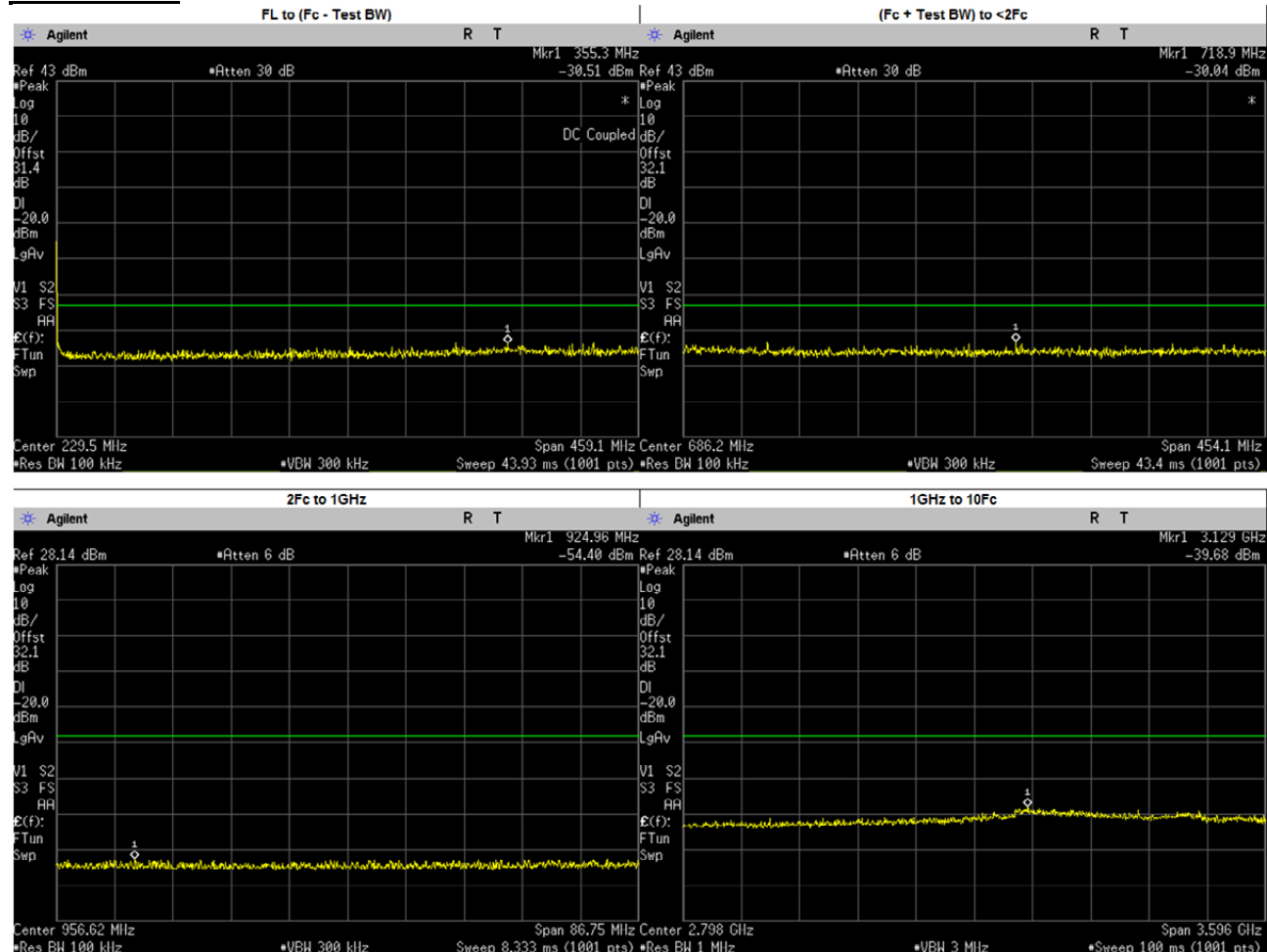
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	368.0756	-31.0543	-20	PASS
(Fc + Test BW) to <2Fc	607.6005	-29.9900	-20	PASS
2Fc to 1GHz	992.1287	-54.0100	-20	PASS
	900.0500	-55.8209	-20	PASS
1GHz to 10Fc	3078.6130	-40.2300	-20	PASS
	1350.0750	-45.1067	-20	PASS
	1800.1000	-45.3353	-20	PASS
	2250.1250	-45.1997	-20	PASS
	2700.1500	-43.7699	-20	PASS
	3150.1750	-41.5314	-20	PASS
	3600.2000	-42.8271	-20	PASS
	4050.2250	-42.4842	-20	PASS
	4500.2500	-43.3991	-20	PASS

Phase II : 450.025 MHz, 12.5kHz Channel Spacing, Low Power FCC Part 90



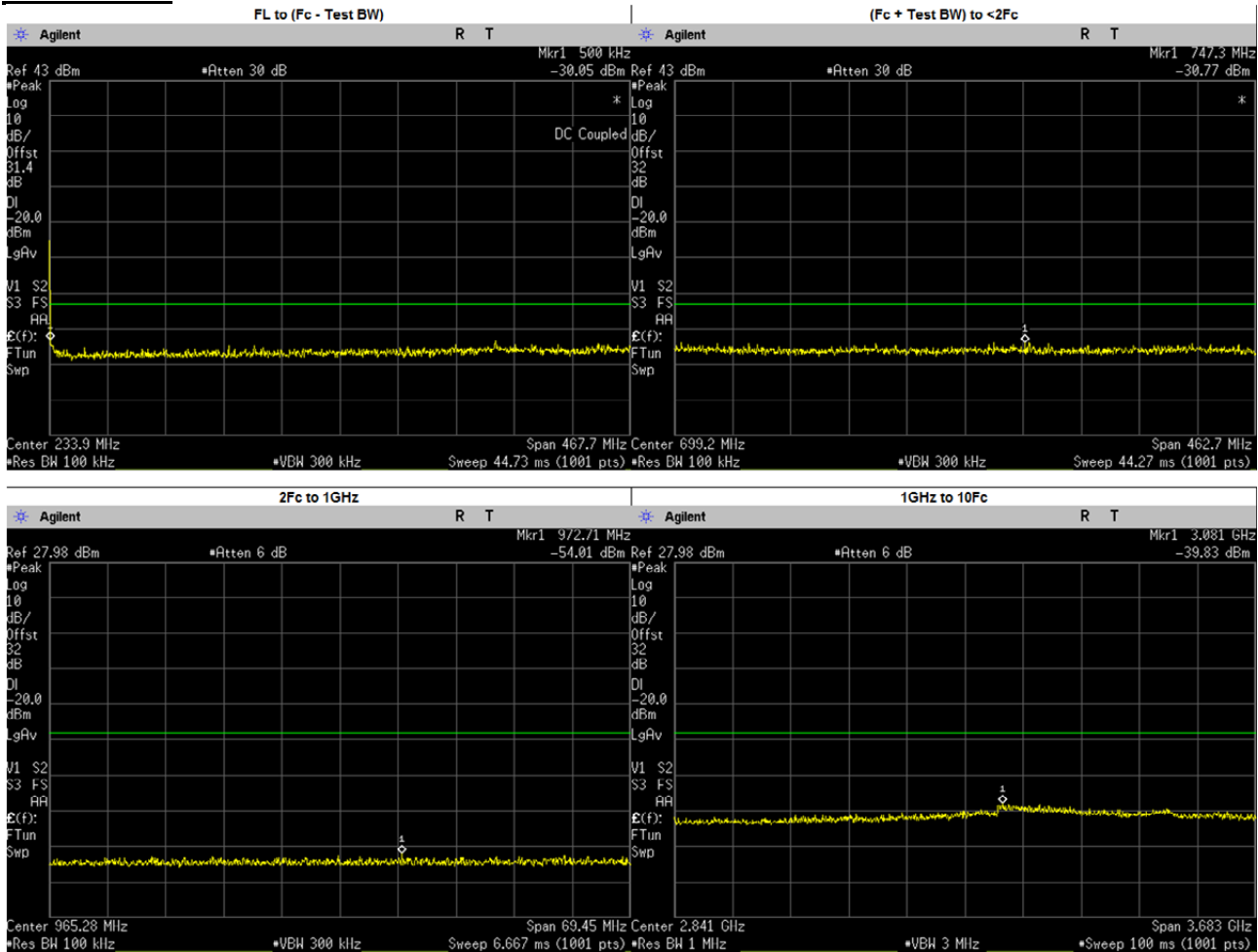
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	352.3271	-30.8538	-20	PASS
(Fc + Test BW) to <2Fc	887.9305	-30.3000	-20	PASS
2Fc to 1GHz	959.2794	-53.4800	-20	PASS
	900.0500	-55.8779	-20	PASS
1GHz to 10Fc	1350.0750	-45.3591	-20	PASS
	1800.1000	-45.0231	-20	PASS
	2250.1250	-43.5103	-20	PASS
	2700.1500	-44.1702	-20	PASS
	3150.1750	-41.2944	-20	PASS
	3600.2000	-42.9396	-20	PASS
	4050.2250	-42.0491	-20	PASS
	4500.2500	-43.8249	-20	PASS
	3096.1400	-39.4400	-20	PASS

Phase II : 459.125 MHz, 12.5kHz Channel Spacing, Max Power FCC Part 90



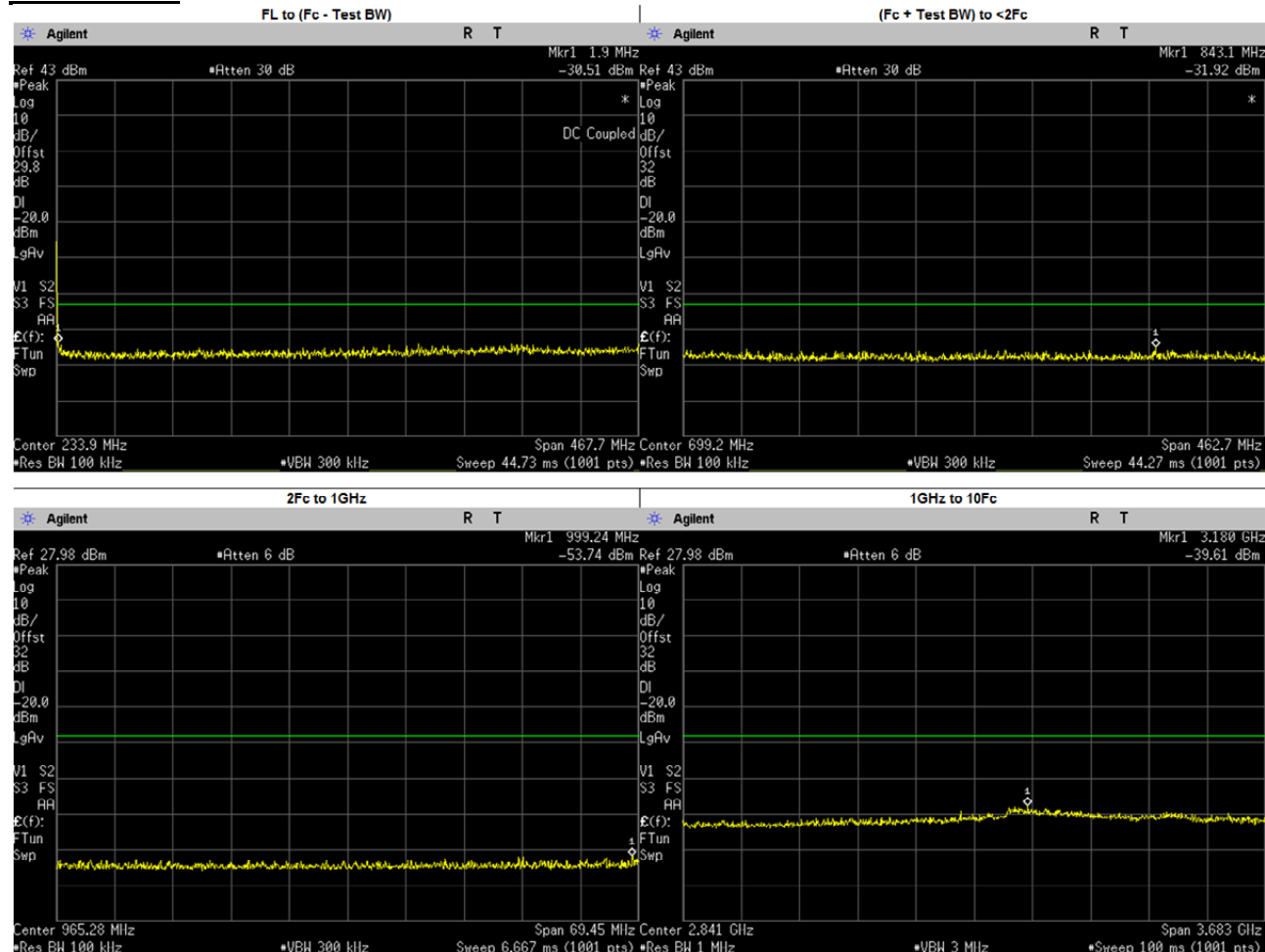
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	355.3208	-30.5100	-20	PASS
(Fc + Test BW) to <2Fc	718.9088	-30.0400	-20	PASS
2Fc to 1GHz	924.9612	-54.4000	-20	PASS
	918.2500	-55.8191	-20	PASS
1GHz to 10Fc	1377.3750	-44.9124	-20	PASS
	1836.5000	-44.6390	-20	PASS
	2295.6250	-44.5656	-20	PASS
	2754.7500	-42.7657	-20	PASS
	3213.8750	-41.4452	-20	PASS
	3673.0000	-42.3956	-20	PASS
	4132.1250	-41.7645	-20	PASS
	4591.2500	-43.7766	-20	PASS
	3128.9800	-39.6800	-20	PASS

Phase II : 467.775 MHz, 12.5kHz Channel Spacing, Max Power FCC Part 90



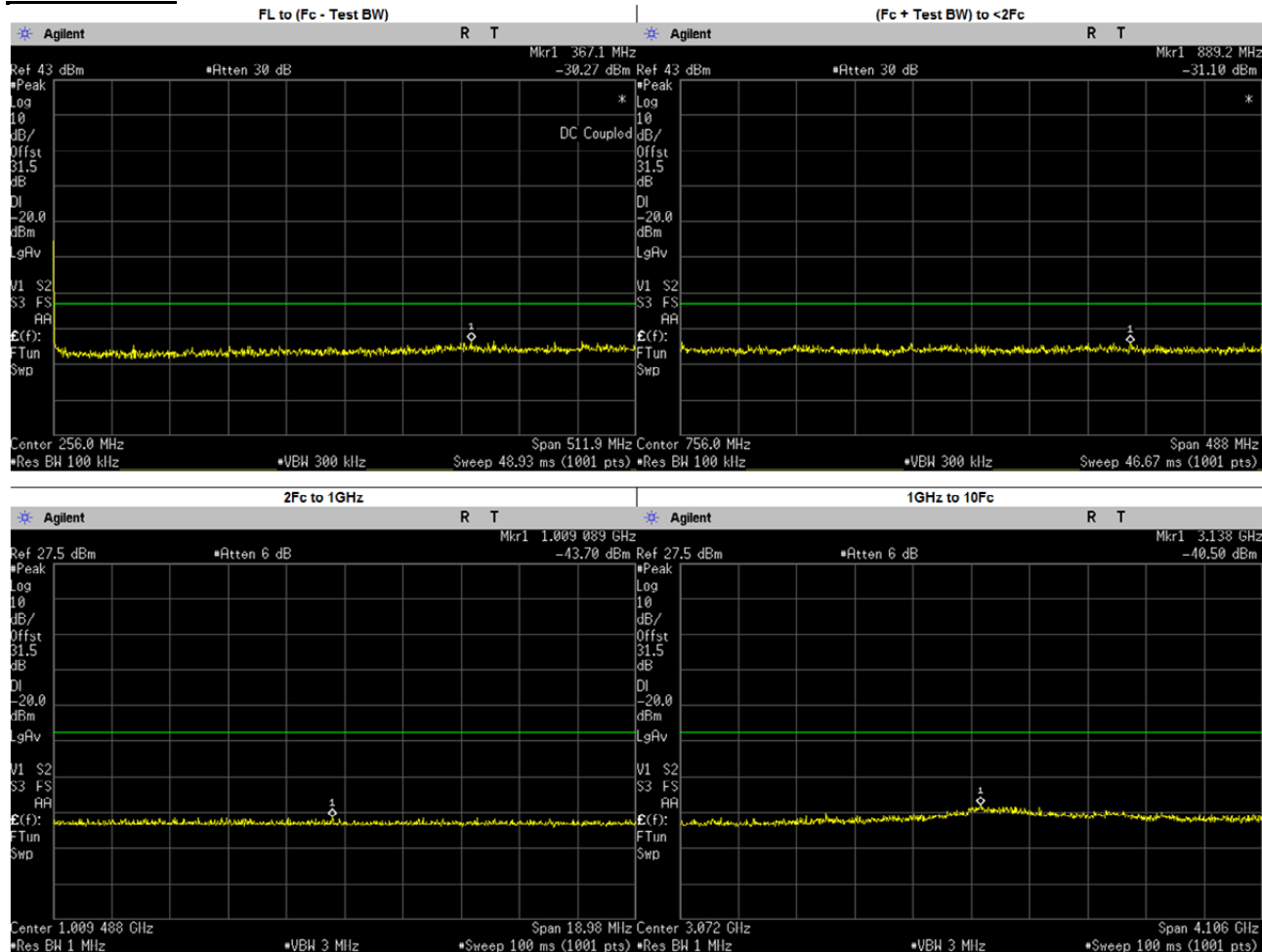
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	359.2097	-30.5199	-20	PASS
(Fc + Test BW) to <2Fc	747.3136	-30.7700	-20	PASS
2Fc to 1GHz	972.7061	-54.0100	-20	PASS
	935.5500	-57.4700	-20	PASS
1GHz to 10Fc	1403.3250	-44.8621	-20	PASS
	1871.1000	-44.4005	-20	PASS
	2338.8750	-44.3690	-20	PASS
	2806.6500	-43.1480	-20	PASS
	3274.4250	-42.0720	-20	PASS
	3742.2000	-42.7195	-20	PASS
	4209.9750	-43.6958	-20	PASS
	4677.7500	-43.5602	-20	PASS
	3080.7540	-39.8300	-20	PASS

Phase II : 467.775 MHz, 12.5kHz Channel Spacing, Low Power FCC Part 90



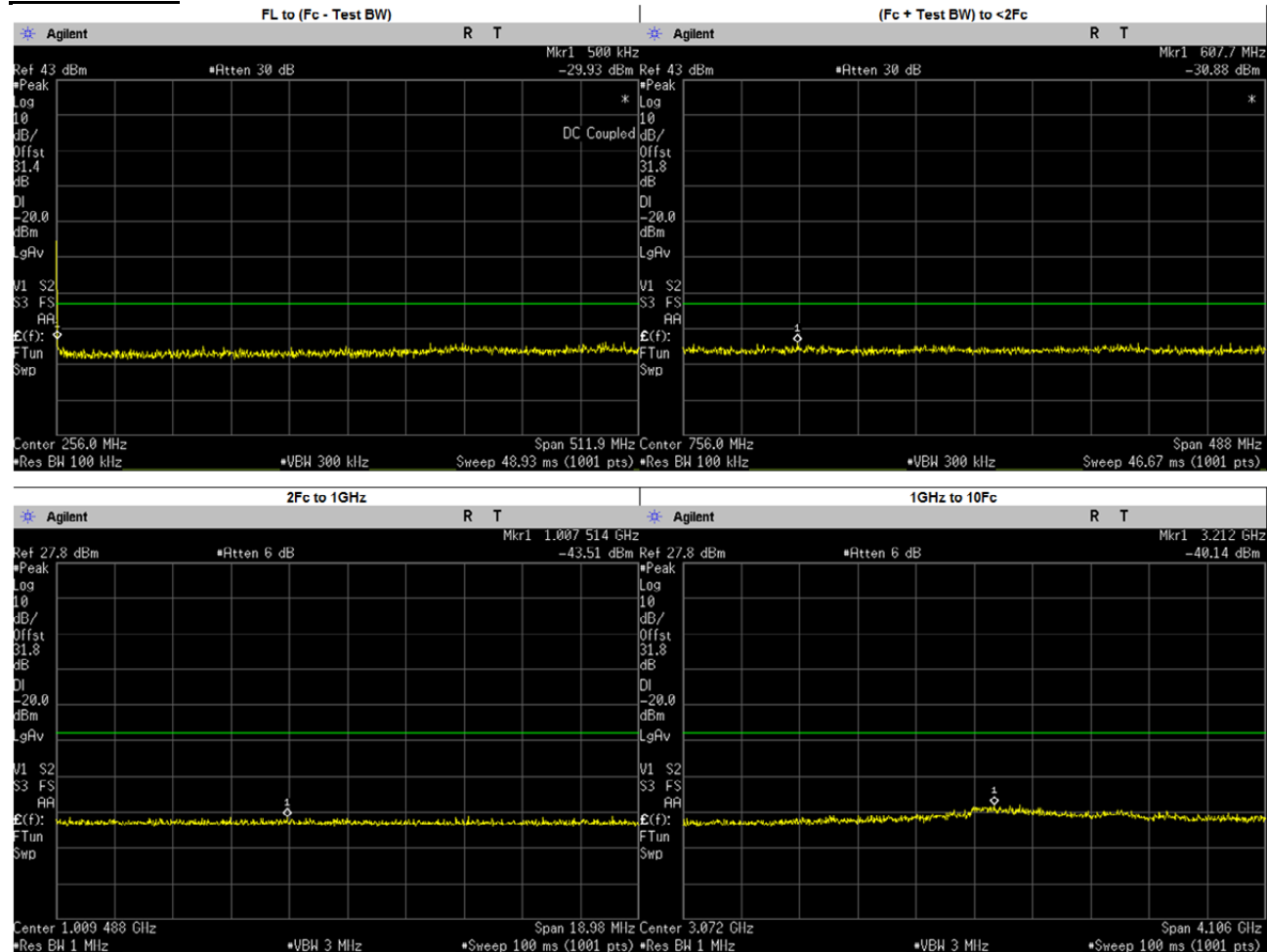
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	365.7576	-29.6790	-20	PASS
(Fc + Test BW) to <2Fc	843.0963	-31.9200	-20	PASS
2Fc to 1GHz	999.2360	-53.7400	-20	PASS
	935.5500	-56.7857	-20	PASS
1GHz to 10Fc	1403.3250	-45.1052	-20	PASS
	1871.1000	-45.3121	-20	PASS
	2338.8750	-44.2904	-20	PASS
	2806.6500	-43.1435	-20	PASS
	3274.4250	-41.8825	-20	PASS
	3742.2000	-43.0664	-20	PASS
	4209.9750	-43.4597	-20	PASS
	4677.7500	-43.5148	-20	PASS
	3180.1880	-39.6100	-20	PASS

Phase II : 511.9875 MHz, 12.5kHz Channel Spacing, Max Power FCC Part 90



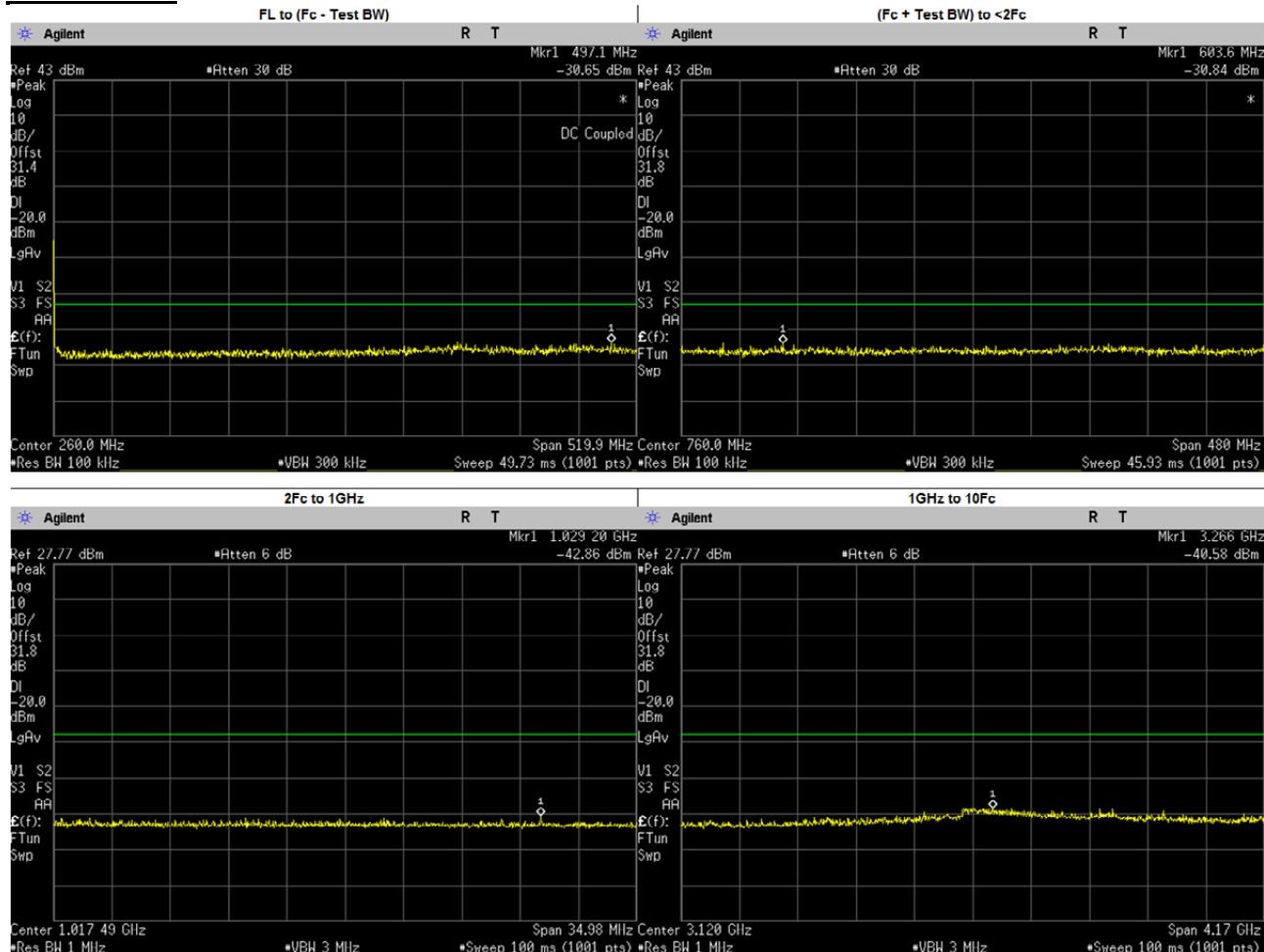
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	367.0569	-30.2700	-20	PASS
(Fc + Test BW) to <2Fc	889.2341	-31.1000	-20	PASS
2Fc to 1GHz	1009.0890	-43.7000	-20	PASS
1GHz to 10Fc	3137.6190	-40.5000	-20	PASS
	1023.9750	-45.8989	-20	PASS
	1535.9630	-44.5541	-20	PASS
	2047.9500	-43.6458	-20	PASS
	2559.9370	-44.2987	-20	PASS
	3071.9250	-41.5110	-20	PASS
	3583.9120	-43.1829	-20	PASS
	4095.9000	-42.9681	-20	PASS
	4607.8870	-44.0573	-20	PASS
	5119.8750	-43.9555	-20	PASS

Phase II : 511.9875 MHz, 12.5kHz Channel Spacing, Low Power FCC Part 90



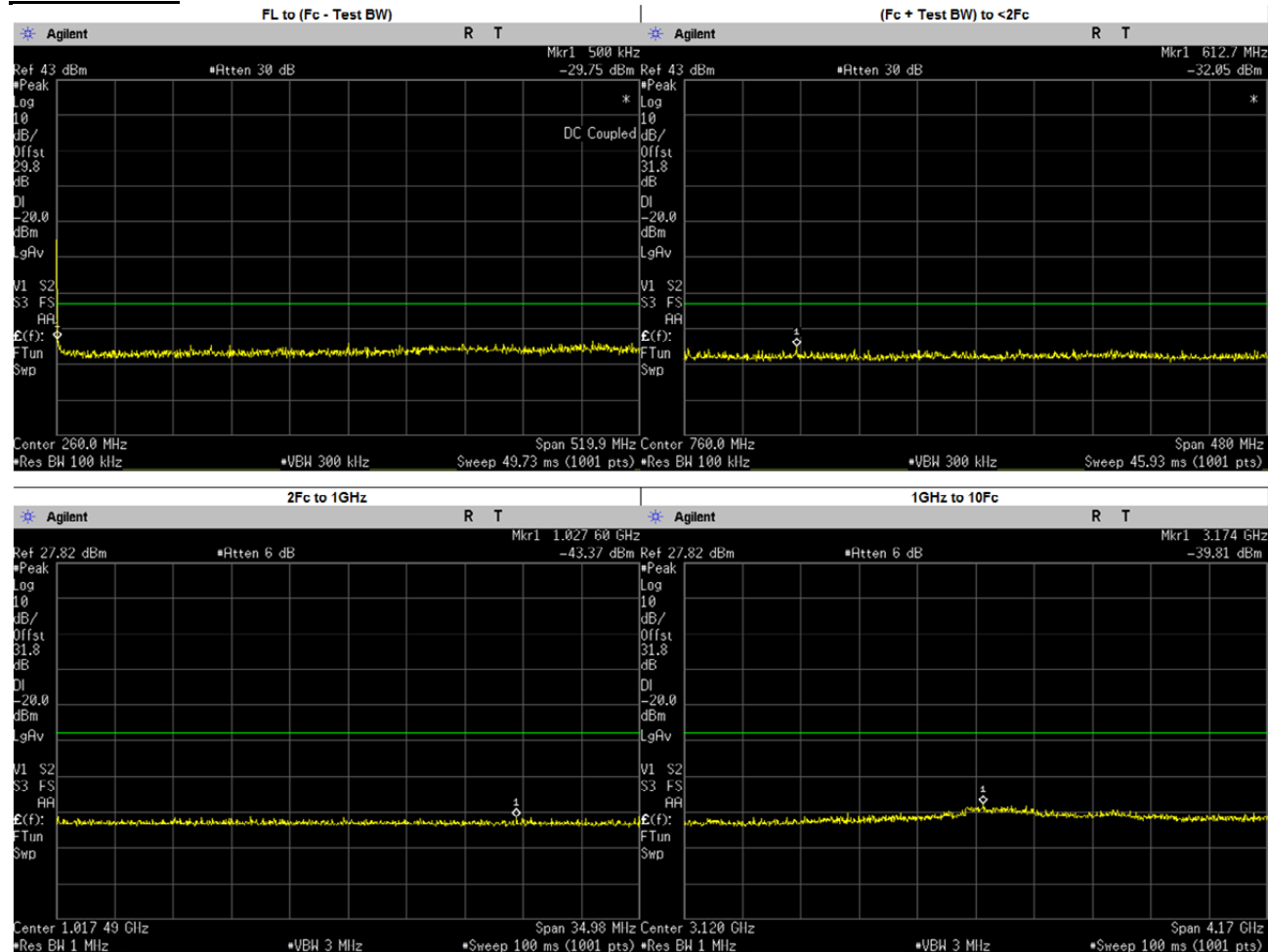
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	499.1327	-31.0799	-20	PASS
(Fc + Test BW) to <2Fc	607.6836	-30.8800	-20	PASS
2Fc to 1GHz	1007.5140	-43.5100	-20	PASS
1GHz to 10Fc	3211.5260	-40.1400	-20	PASS
	1023.9750	-45.3924	-20	PASS
	1535.9630	-45.3304	-20	PASS
	2047.9500	-44.8671	-20	PASS
	2559.9370	-44.4727	-20	PASS
	3071.9250	-40.5100	-20	PASS
	3583.9120	-42.0987	-20	PASS
	4095.9000	-42.7425	-20	PASS
	4607.8870	-44.4843	-20	PASS
	5119.8750	-43.8403	-20	PASS

Phase II : 519.9875 MHz, 12.5kHz Channel Spacing, Max Power FCC Part 90



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	497.0541	-30.6500	-20	PASS
(Fc + Test BW) to <2Fc	603.5566	-30.8400	-20	PASS
2Fc to 1GHz	1029.2040	-42.8600	-20	PASS
1GHz to 10Fc	3265.8720	-40.5800	-20	PASS
	1039.9750	-45.4427	-20	PASS
	1559.9630	-45.2246	-20	PASS
	2079.9500	-43.9364	-20	PASS
	2599.9370	-44.4106	-20	PASS
	3119.9250	-41.1760	-20	PASS
	3639.9120	-42.8359	-20	PASS
	4159.9000	-43.2433	-20	PASS
	4679.8870	-44.1811	-20	PASS
	5199.8750	-43.7181	-20	PASS

Phase II : 519.9875 MHz, 12.5kHz Channel Spacing, Low Power FCC Part 90



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (dbm)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	477.8170	-29.0216	-20	PASS
(Fc + Test BW) to <2Fc	612.6758	-32.0500	-20	PASS
2Fc to 1GHz	1027.5950	-43.3700	-20	PASS
1GHz to 10Fc	1039.9750	-45.5586	-20	PASS
	1559.9630	-45.5161	-20	PASS
	2079.9500	-44.3263	-20	PASS
	2599.9370	-43.9522	-20	PASS
	3119.9250	-41.1510	-20	PASS
	3639.9120	-42.9680	-20	PASS
	4159.9000	-43.1027	-20	PASS
	4679.8870	-44.1706	-20	PASS
	5199.8750	-44.1754	-20	PASS
	3174.1340	-39.8100	-20	PASS

7.10.4. Test Limit

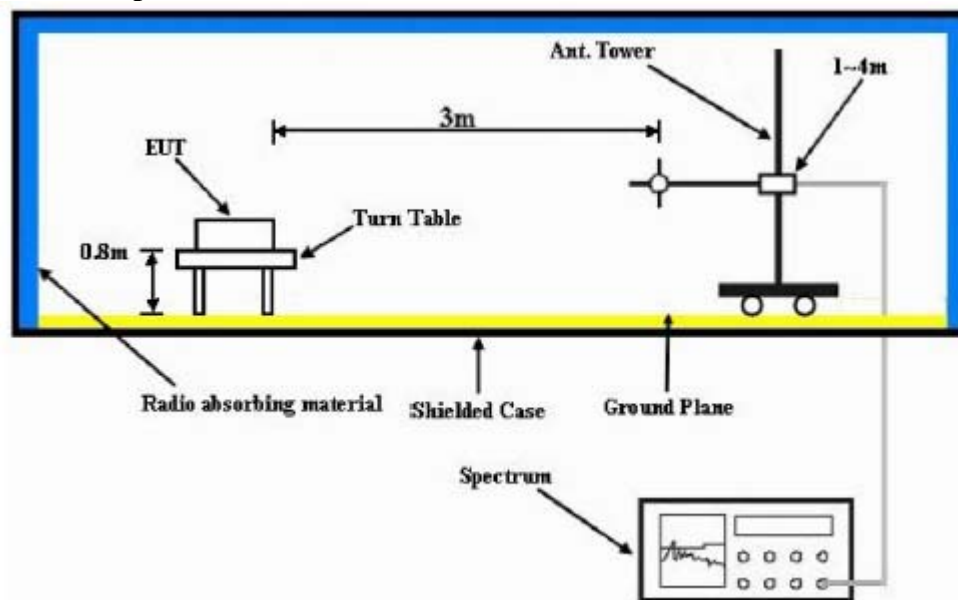
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

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)

7.11. Radiated Spurious Emission

7.11.1. 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 frequencies < 1GHz) or 1.5m (for frequencies > 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.

7.11.1. Test Result (Analog)

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN

S/N: 756TVZ0040

SR:03878-EMC-00061

Battery Part No: PMNN4494A

Accy Part No: NA

Test Mode: TX Analog

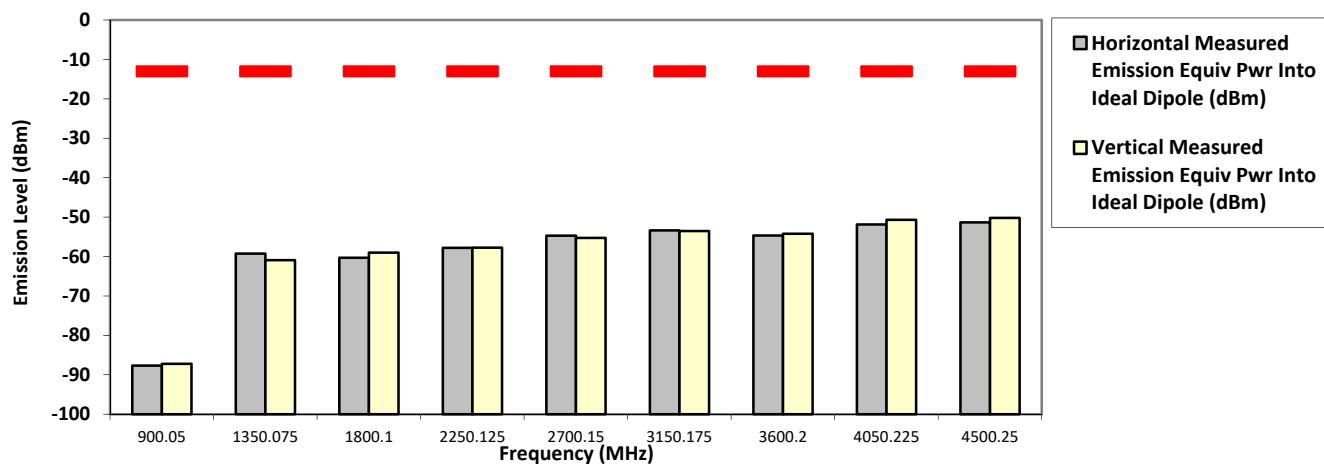
450.025000 MHz

25 kHz

1.000 Watt(s) /Low Power

[illegible]

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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN

S/N: 756TVZ0040

SR:03878-EMC-00061

Battery Part No: PMNN4494A

Accy Part No: NA

Test Mode: TX Analog

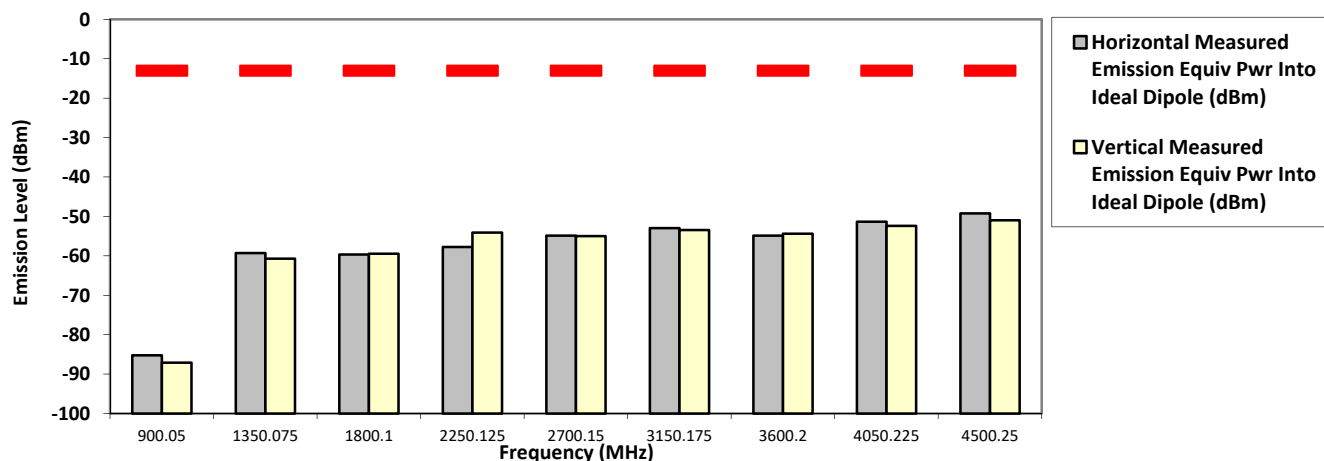
450.025000 MHz

25 kHz

5.600 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	-85.2493 **	-87.0938 **
1350.0750	-13.0000	-59.3034 **	-60.7435 **
1800.1000	-13.0000	-59.6579 **	-59.4597 **
2250.1250	-13.0000	-57.7516 **	-54.0883 **
2700.1500	-13.0000	-54.8954 **	-54.9989 **
3150.1750	-13.0000	-52.9751 **	-53.4730 **
3600.2000	-13.0000	-54.8860 **	-54.3864 **
4050.2250	-13.0000	-51.3420 **	-52.4010 **
4500.2500	-13.0000	-49.2346 **	-50.9853 **

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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

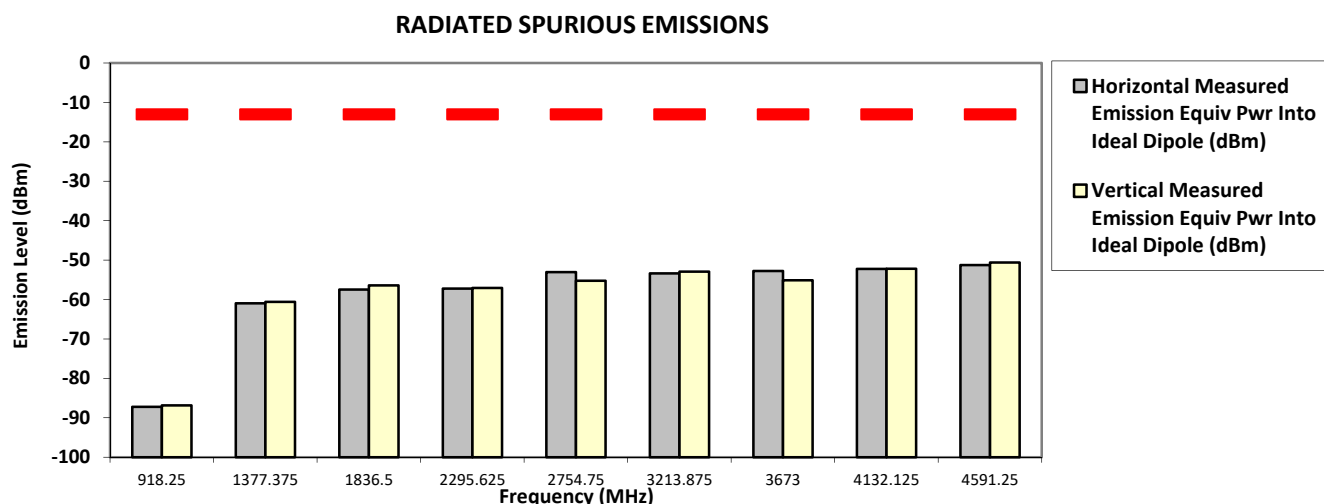
System MU: 4.03 dB

Remarks:

Passed Results	Marginal Results	Failed Results
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SAC Transmitter Radiated Emission:
Model Number: H98SDH9PW7BN **S/N: 756TVZ0040** **SR:03878-EMC-00061**
Battery Part No: PMNN4494A **Accy Part No: NA**
Test Mode: TX Analog
459.125000 MHz **25 kHz** **5.600 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	-13.0000	-87.2162 **	-86.8703 **
1377.3750	-13.0000	-60.9535 **	-60.5949 **
1836.5000	-13.0000	-57.4797 **	-56.4314 **
2295.6250	-13.0000	-57.2533 **	-57.0538 **
2754.7500	-13.0000	-53.0493 **	-55.2558 **
3213.8750	-13.0000	-53.3735 **	-52.9192 **
3673.0000	-13.0000	-52.7769 **	-55.1429 **
4132.1250	-13.0000	-52.2412 **	-52.2087 **
4591.2500	-13.0000	-51.2725 **	-50.6013 **



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: Faris Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

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

SR:03878-EMC-00061

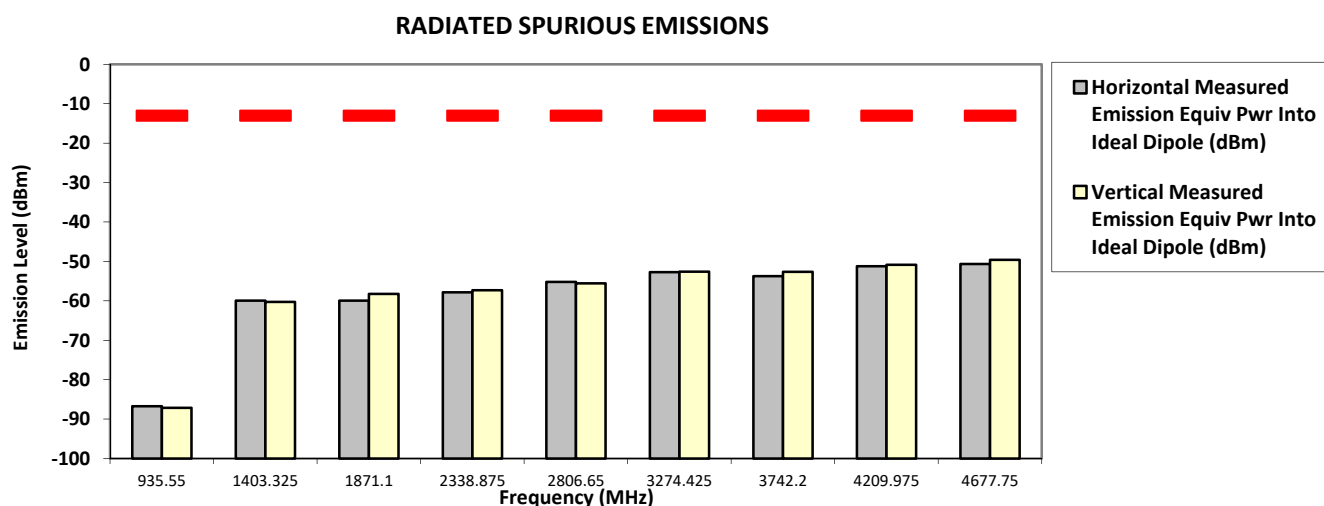
S/N: 756TVZ0040

Accy Part No: NA

Test Mode: TX Analog

25 kHz

1.000 Watt(s) /Low 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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

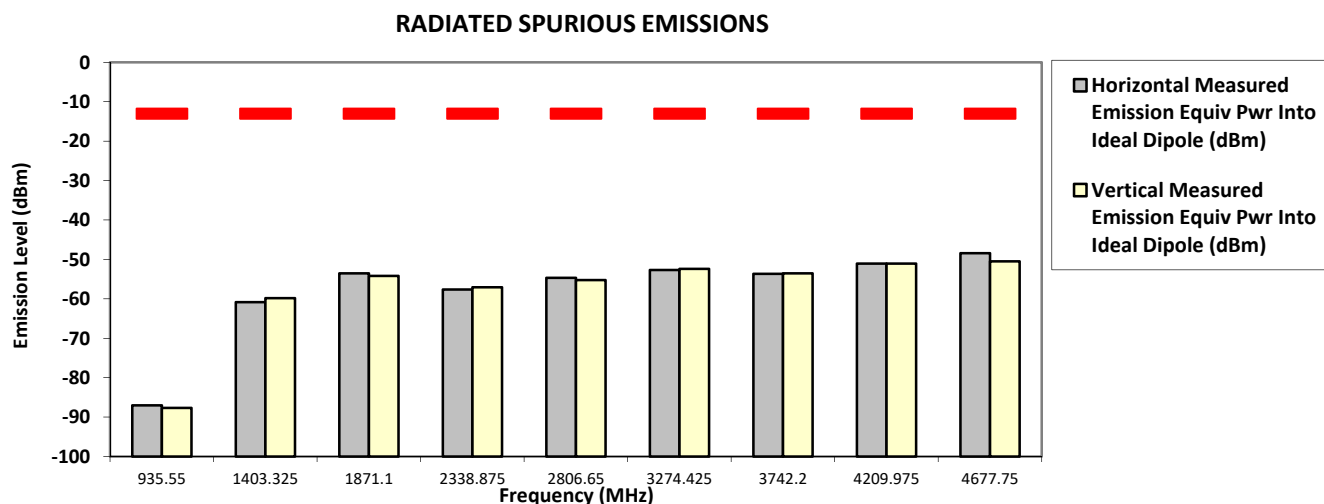
Marginal Results

Failed Results

SR:03878-EMC-00061

Accy Part No: NA

5.600 Watt(s) /Max Power

[illegible]

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN

S/N: 756TVZ0040

SR:03878-EMC-00061

Battery Part No: PMNN4494A

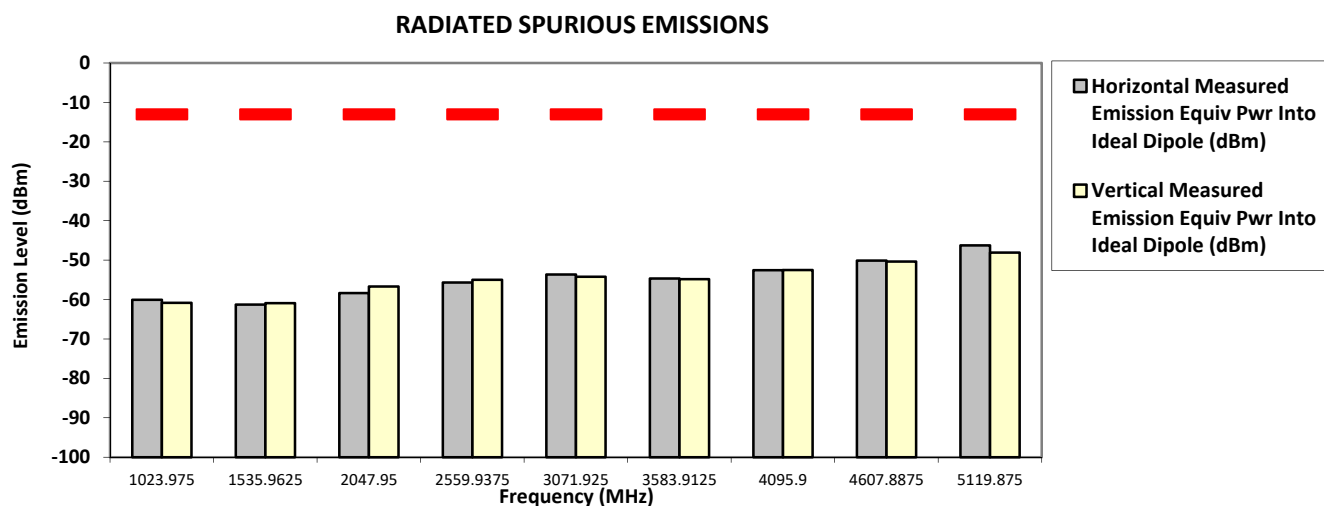
Accy Part No: NA

Test Mode: TX Analog

511.987500 MHz

25 kHz

1.000 Watt(s) /Low 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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

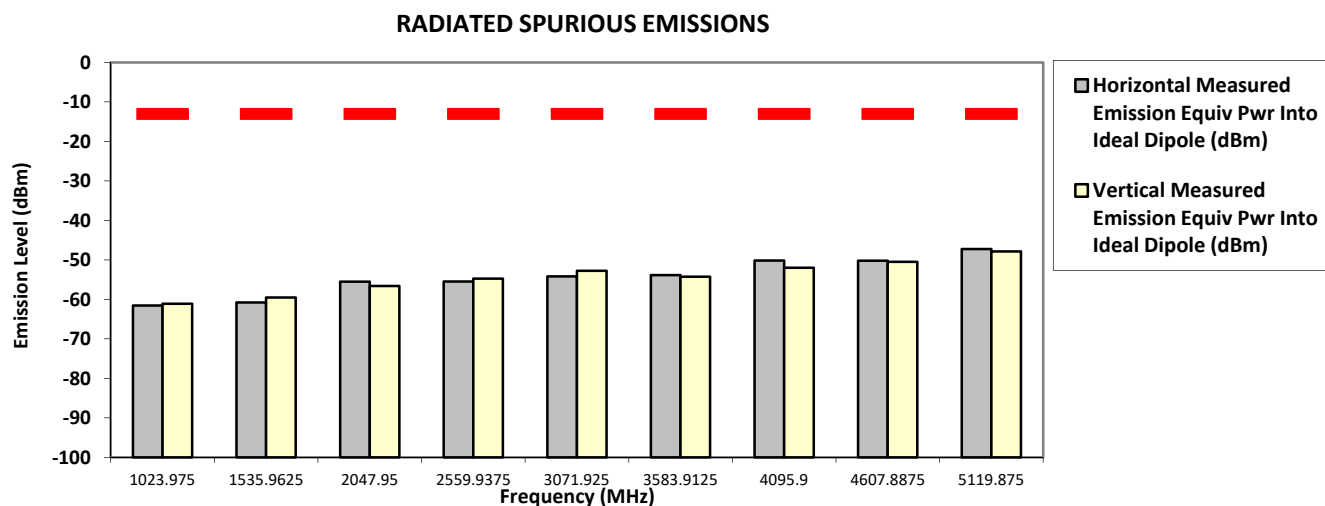
Marginal Results

Failed Results

SR:03878-EMC-00061

Accy Part No: NA

5.600 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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

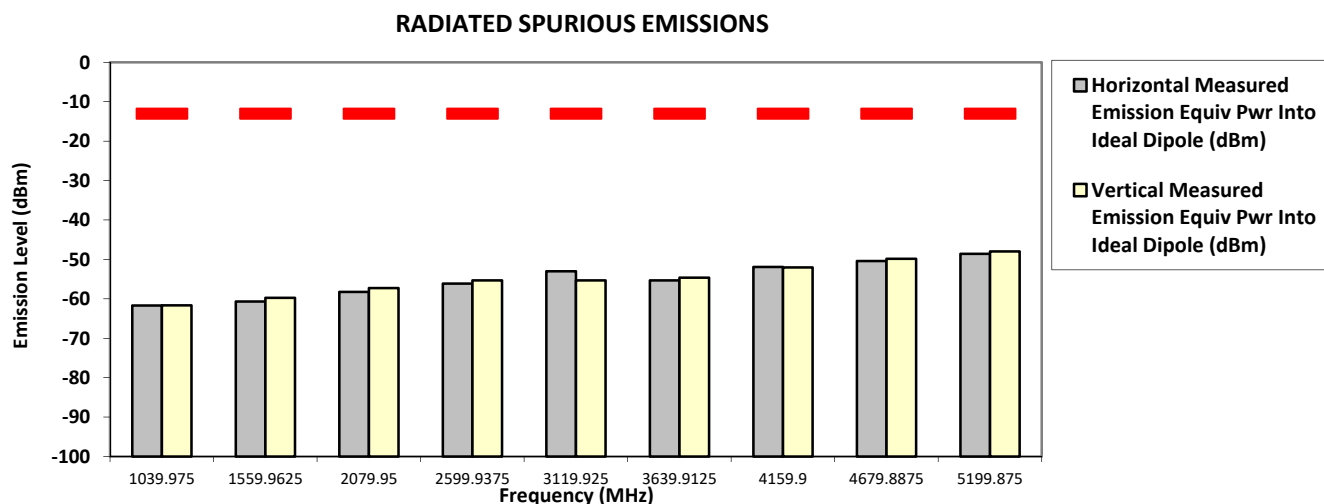
Marginal Results

Failed Results

SR:03878-EMC-00061

Accy Part No: NA

5.600 Watt(s) /Max Power

[illegible]

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

Marginal Results

Failed Results

7.11.2. Test Result (Digital)

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN

S/N: 756TVZ0040

SR:03878-EMC-00061

Battery Part No: PMNN4494A

Accy Part No: NA

Test Mode: TX APCO Digital C4FM

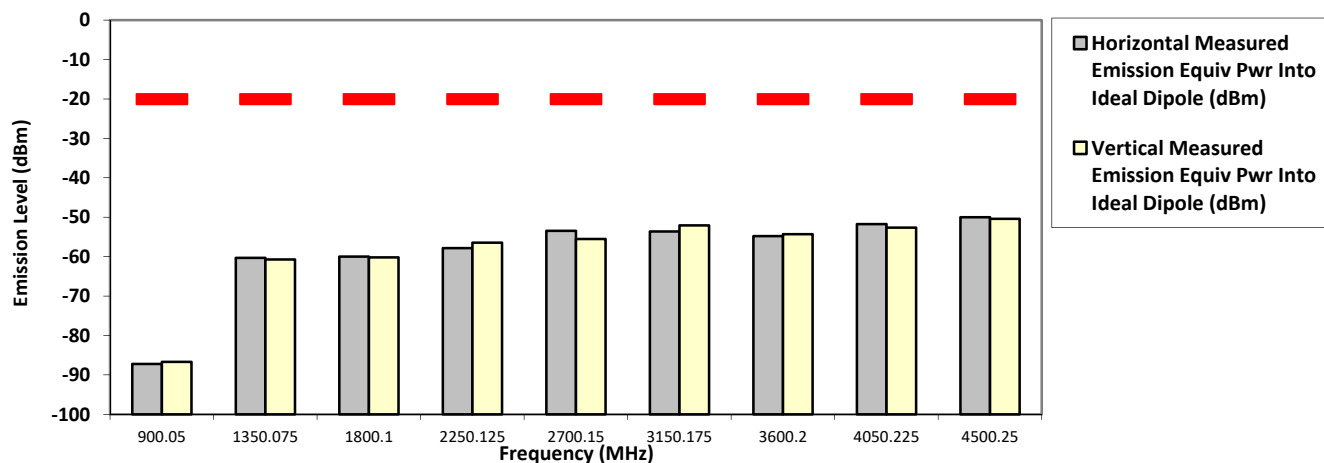
450.025000 MHz

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	-87.2222 **	-86.7106 **
1350.0750	-20.0000	-60.3070 **	-60.7266 **
1800.1000	-20.0000	-59.9914 **	-60.1958 **
2250.1250	-20.0000	-57.8620 **	-56.4473 **
2700.1500	-20.0000	-53.4689 **	-55.5252 **
3150.1750	-20.0000	-53.6351 **	-52.0755 **
3600.2000	-20.0000	-54.8167 **	-54.2981 **
4050.2250	-20.0000	-51.7670 **	-52.6430 **
4500.2500	-20.0000	-50.0033 **	-50.4320 **

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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

Marginal Results

Failed Results

RADIATED SPURIOUS EMISSIONS

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN

S/N: 756TVZ0040

SR:03878-EMC-00061

Battery Part No: PMNN4494A

Accy Part No: NA

Test Mode: TX APCO Digital C4FM

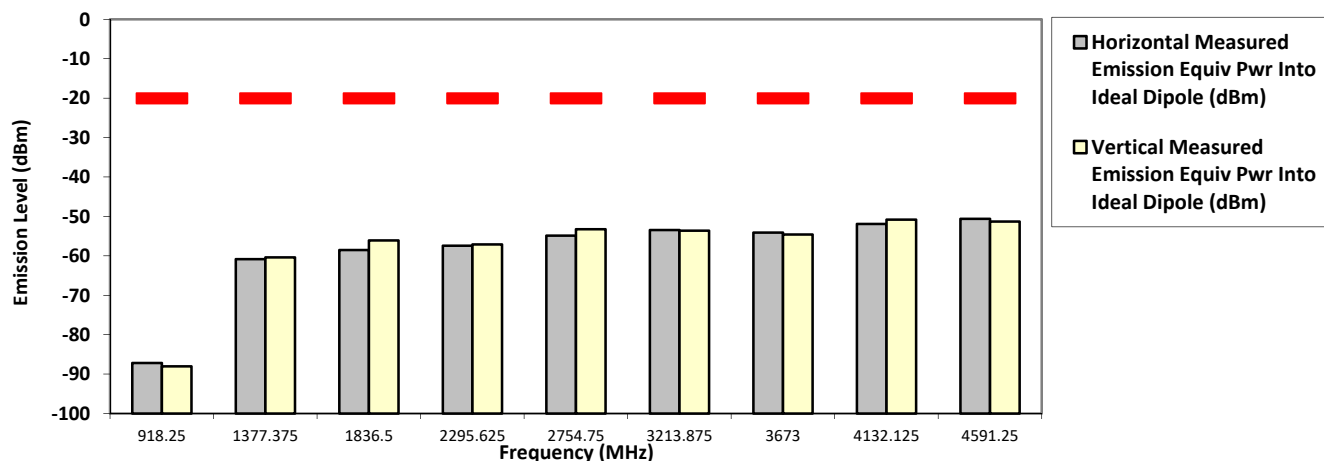
459.125000 MHz

12.5 kHz

5.600 Watt(s) /Max Power

[illegible]

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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN

S/N: 756TVZ0040

SR:03878-EMC-00061

Battery Part No: PMNN4494A

Accy Part No: NA

Test Mode: TX APCO Digital C4FM

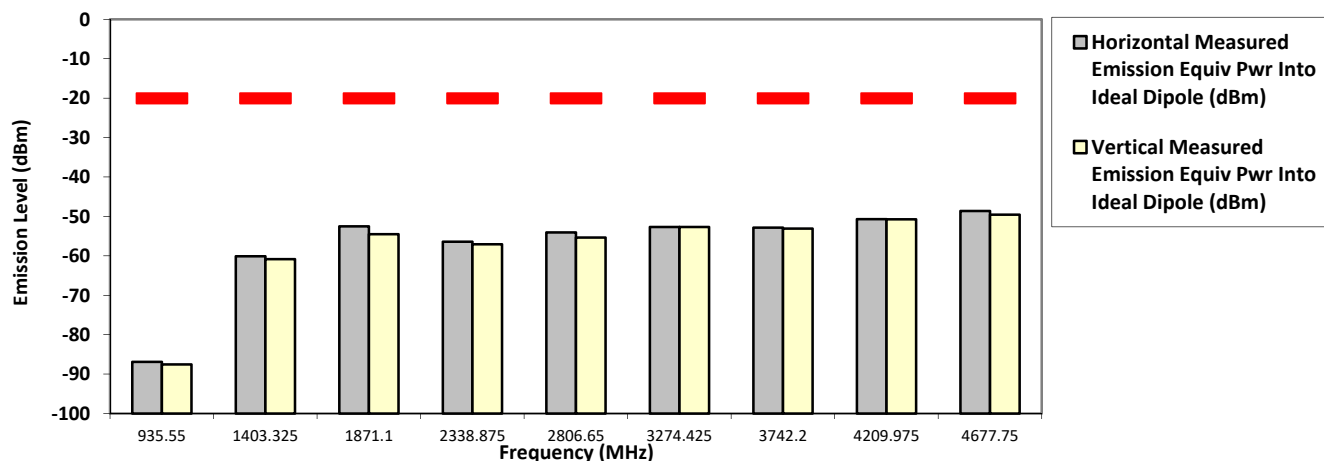
467.775000 MHz

12.5 kHz

5.600 Watt(s) /Max Power

[illegible]

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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results

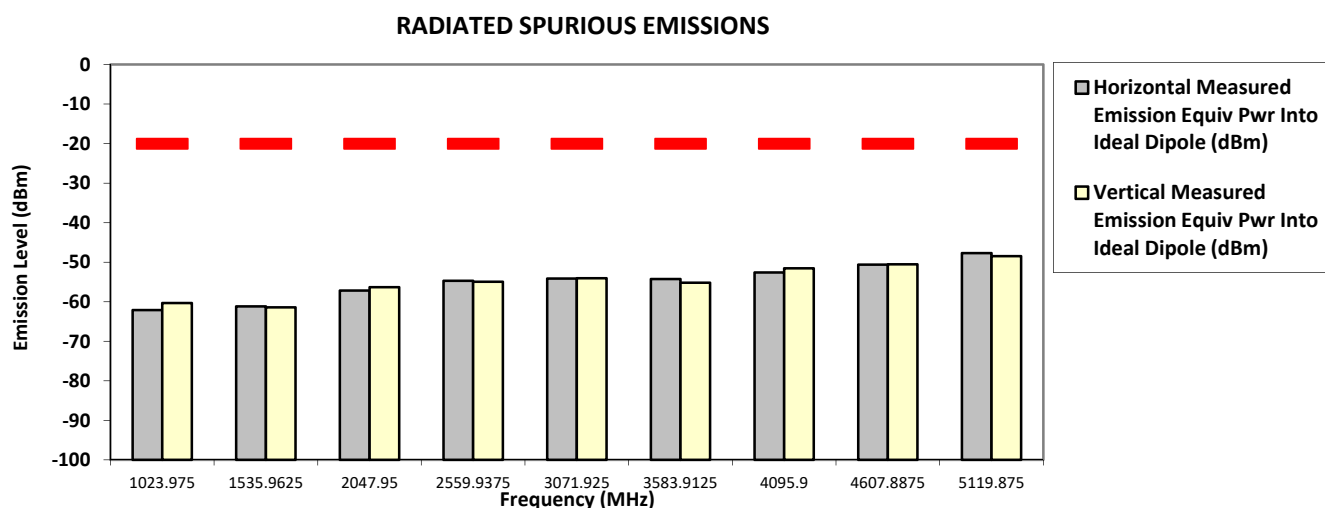
Marginal Results

Failed Results

RADIATED SPURIOUS EMISSIONS

SAC Transmitter Radiated Emission:
Model Number: : H98SDH9PW7BN S/N: 756TVZ0040 SR:03878-EMC-00061
Battery Part No: PMNN4494A Accy Part No: NA
Test Mode: TX APCO Digital C4FM
511.987500 MHz 12.5 kHz 5.600 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	-62.0942 **	-60.3351 **
1535.9625	-20.0000	-61.1862 **	-61.4015 **
2047.9500	-20.0000	-57.1491 **	-56.3120 **
2559.9375	-20.0000	-54.7141 **	-54.9294 **
3071.9250	-20.0000	-54.1473 **	-54.0355 **
3583.9125	-20.0000	-54.2470 **	-55.1832 **
4095.9000	-20.0000	-52.6074 **	-51.5385 **
4607.8875	-20.0000	-50.6102 **	-50.5422 **
5119.8750	-20.0000	-47.7021 **	-48.4530 **



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: Faris Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

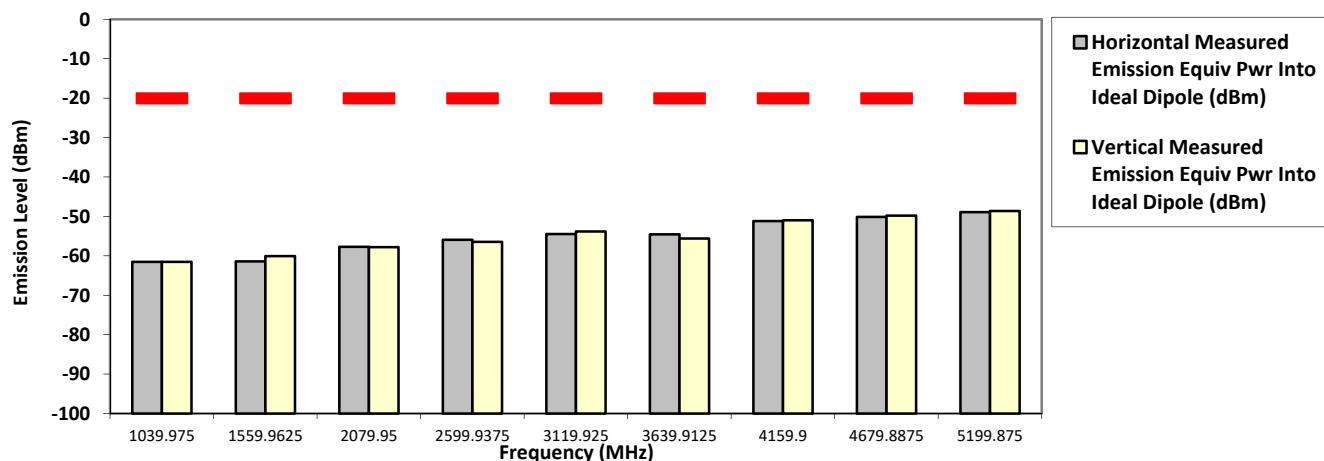
Remarks:

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

SAC Transmitter Radiated Emission:
Model Number: : H98SDH9PW7BN S/N: 756TVZ0040 SR:03878-EMC-00061
Battery Part No: PMNN4494A Accy Part No: NA
Test Mode: TX APCO Digital C4FM
519.987500 MHz 12.5 kHz 5.600 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)
1039.9750	-20.0000	-61.5342 **	-61.5190 **
1559.9625	-20.0000	-61.3967 **	-60.0799 **
2079.9500	-20.0000	-57.7352 **	-57.7879 **
2599.9375	-20.0000	-55.9267 **	-56.4487 **
3119.9250	-20.0000	-54.4824 **	-53.8104 **
3639.9125	-20.0000	-54.5417 **	-55.6051 **
4159.9000	-20.0000	-51.2022 **	-50.9765 **
4679.8875	-20.0000	-50.1411 **	-49.8221 **
5199.8750	-20.0000	-48.8991 **	-48.6418 **

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: Faris Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

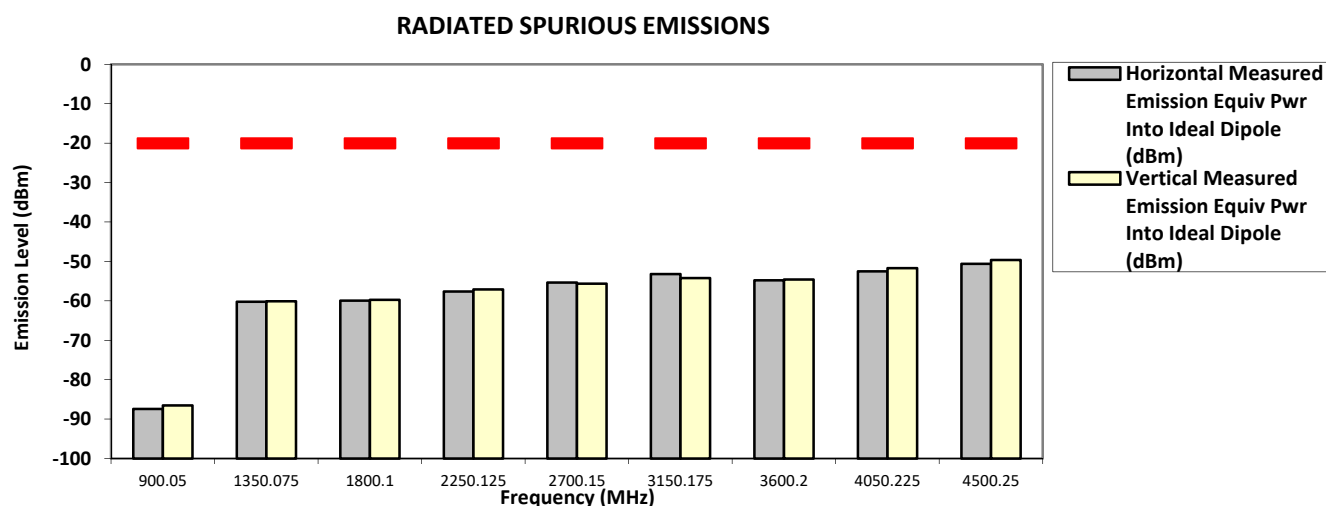
System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:
Model Number: H98SDH9PW7BN S/N: 756TVZ0040 SR:03878-EMC-00061
Battery Part No: PMNN4494A Accy Part No: NA
Test Mode: TX APCO Digital Phase II
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	-87.4471 **	-86.5539 **
1350.0750	-20.0000	-60.2328 **	-60.1250 **
1800.1000	-20.0000	-59.9494 **	-59.7696 **
2250.1250	-20.0000	-57.6590 **	-57.1306 **
2700.1500	-20.0000	-55.3832 **	-55.6589 **
3150.1750	-20.0000	-53.2038 **	-54.2210 **
3600.2000	-20.0000	-54.7992 **	-54.5754 **
4050.2250	-20.0000	-52.5180 **	-51.6955 **
4500.2500	-20.0000	-50.6169 **	-49.6555 **



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: Faris Tue, Jan 07, 2020

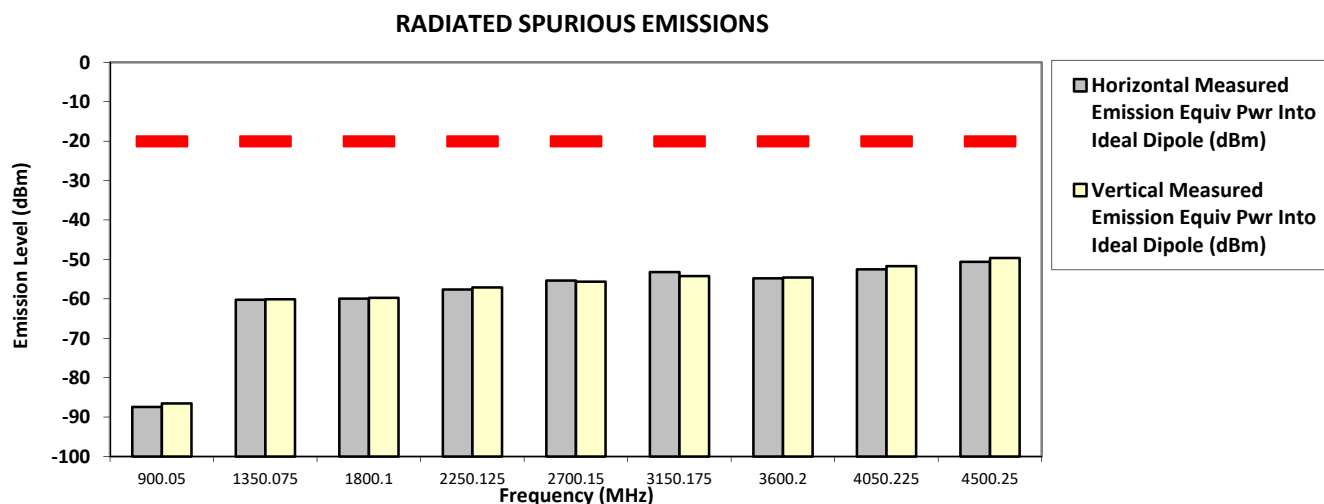
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:
Model Number: H98SDH9PW7BN **S/N: 756TVZ0040** **SR:03878-EMC-00061**
Battery Part No: PMNN4494A **Accy Part No: NA**
Test Mode: TX APCO Digital Phase II
450.025000 MHz **12.5 kHz** **5.600 Watt(s) /Max Power**

[illegible]

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

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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

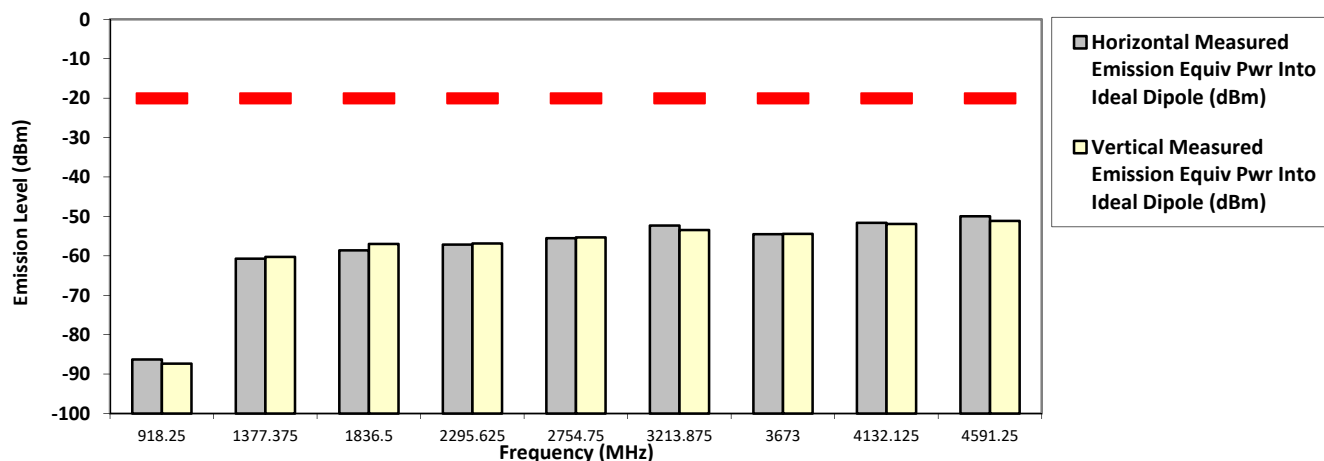
Remarks:

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

SAC Transmitter Radiated Emission:
Model Number: H98SDH9PW7BN S/N: 756TVZ0040 SR:03878-EMC-00061
Battery Part No: PMNN4494A Accy Part No: NA
Test Mode: TX APCO Digital Phase II
459.125000 MHz 12.5 kHz 5.600 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	-86.2963 **	-87.3504 **
1377.3750	-20.0000	-60.7311 **	-60.2959 **
1836.5000	-20.0000	-58.6215 **	-57.0086 **
2295.6250	-20.0000	-57.1514 **	-56.8574 **
2754.7500	-20.0000	-55.5340 **	-55.3141 **
3213.8750	-20.0000	-52.3050 **	-53.4562 **
3673.0000	-20.0000	-54.5049 **	-54.4229 **
4132.1250	-20.0000	-51.6140 **	-51.9007 **
4591.2500	-20.0000	-49.9553 **	-51.1596 **

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: Faris Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN

S/N: 756TVZ0040

SR:03878-EMC-00061

Battery Part No: PMNN4494A

Accy Part No: NA

Test Mode: TX APCO Digital Phase II

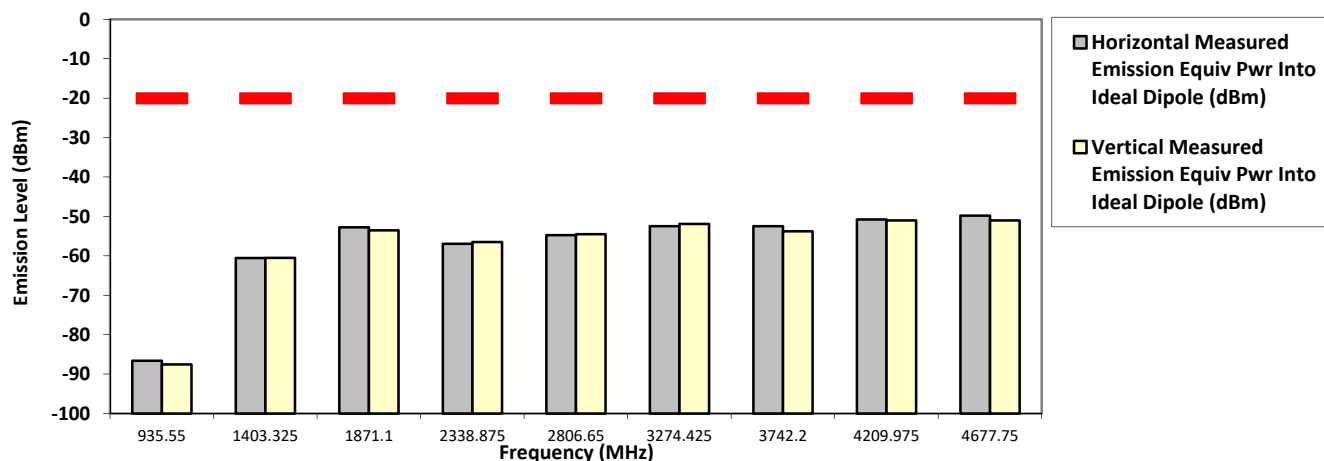
467.775000 MHz

12.5 kHz

5.600 Watt(s) /Max Power

[illegible]

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: Faris

Tue, Jan 07, 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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

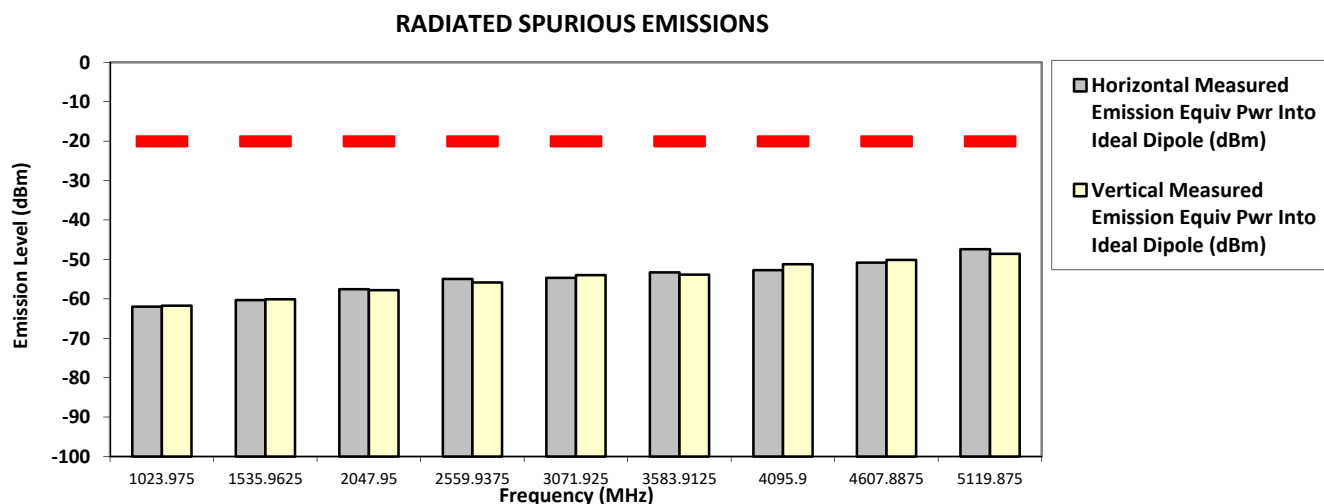
Passed Results

Marginal Results

Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN	S/N: 756TVZ0040	SR: 03878-EMC-00061
Battery Part No: PMNN4494A	Accy Part No: NA	
Test Mode: TX APCO Digital Phase II		
511.987500 MHz	12.5 kHz	1.000 Watt(s) /Low Power

[illegible]

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

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): 22.7 Hum(%RH): 70.0

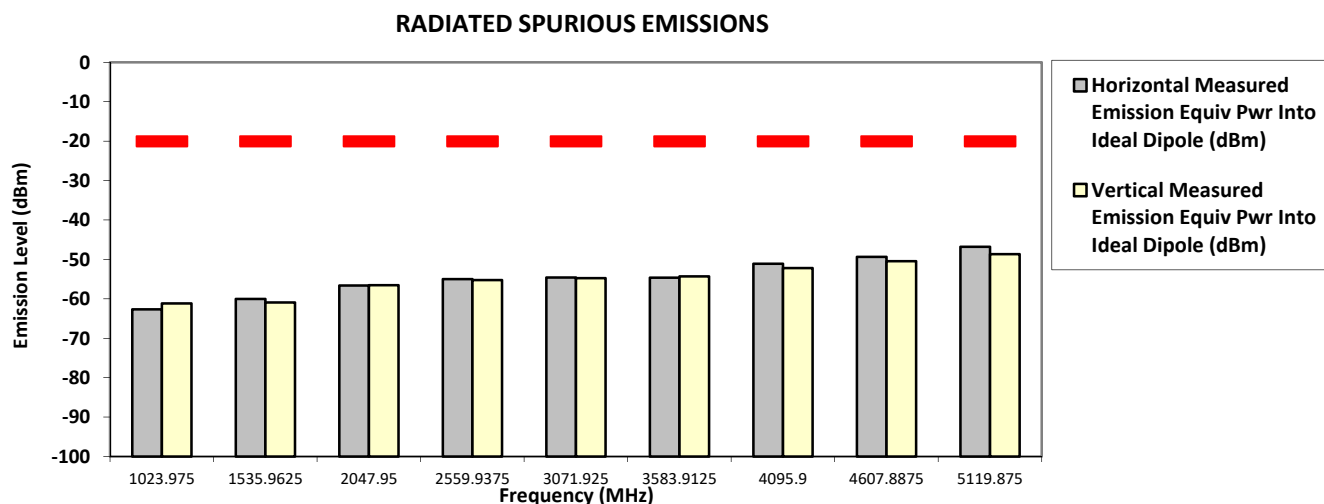
System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN	S/N: 756TVZ0040	SR: 03878-EMC-00061
Battery Part No: PMNN4494A	Accy Part No: NA	
Test Mode: TX APCO Digital Phase II		
511.987500 MHz	12.5 kHz	5.600 Watt(s) /Max Power

[illegible]

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

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): 22.7 Hum(%RH): 70.0

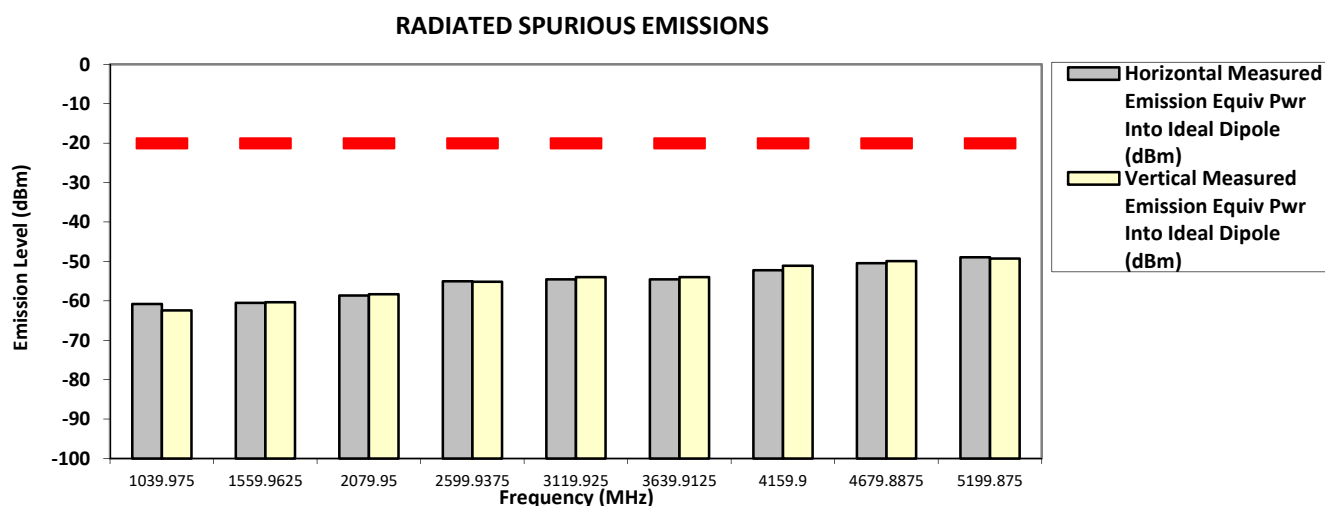
System MU: 4.03 dB

Remarks:

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

SAC Transmitter Radiated Emission:

Model Number: H98SDH9PW7BN	S/N: 756TVZ0040	SR: 03878-EMC-00061
Battery Part No: PMNN4494A	Accy Part No: NA	
Test Mode: TX APCO Digital Phase II		
519.987500 MHz	12.5 kHz	5.600 Watt(s) /Max Power

[illegible]

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

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): 22.7 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

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

7.11.3. Test Limit

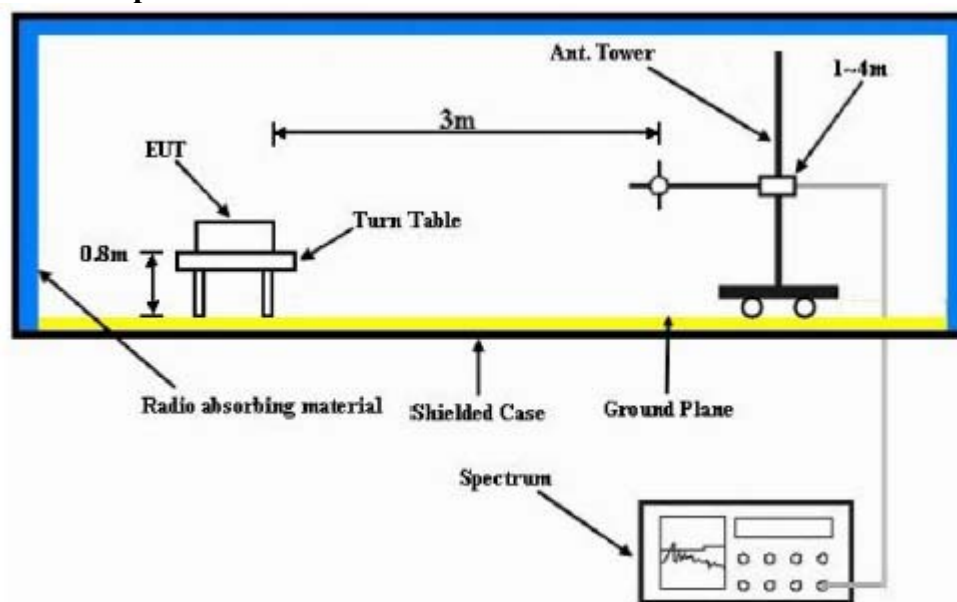
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

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)

7.12. Effective Radiated Power (ERP)

7.12.1. 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 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.

7.12.2. Test Result

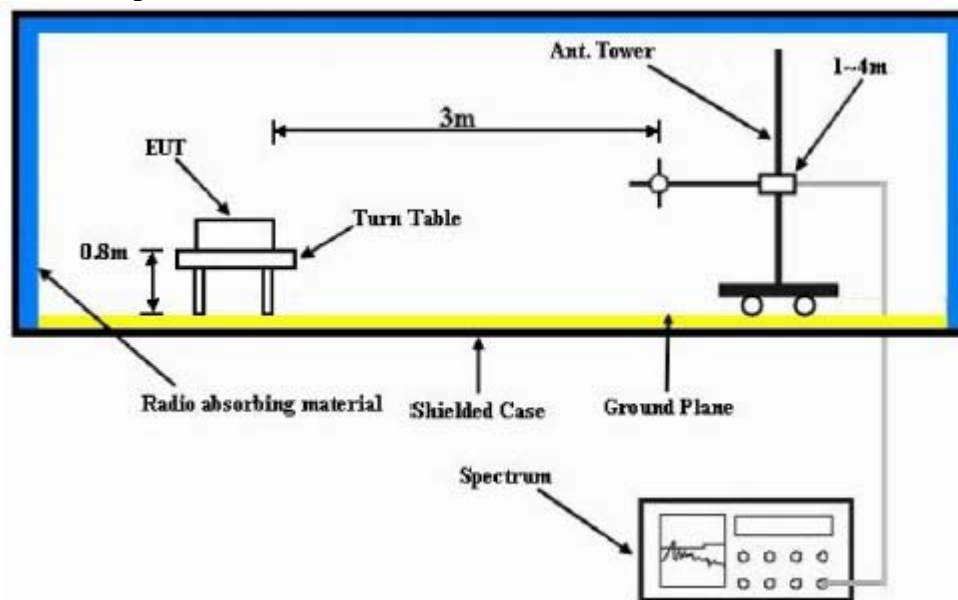
NA → Not Applicable

7.12.3. 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).

7.13. GNSS (EIRP for 1559 - 1610MHz)

7.13.1. 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) $EIRP = \text{“Read Value”} + \text{Measured substitution value} + 2.15$.

7.13.2. Test Result

NA → Not Applicable

7.13.3. 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 Report ~