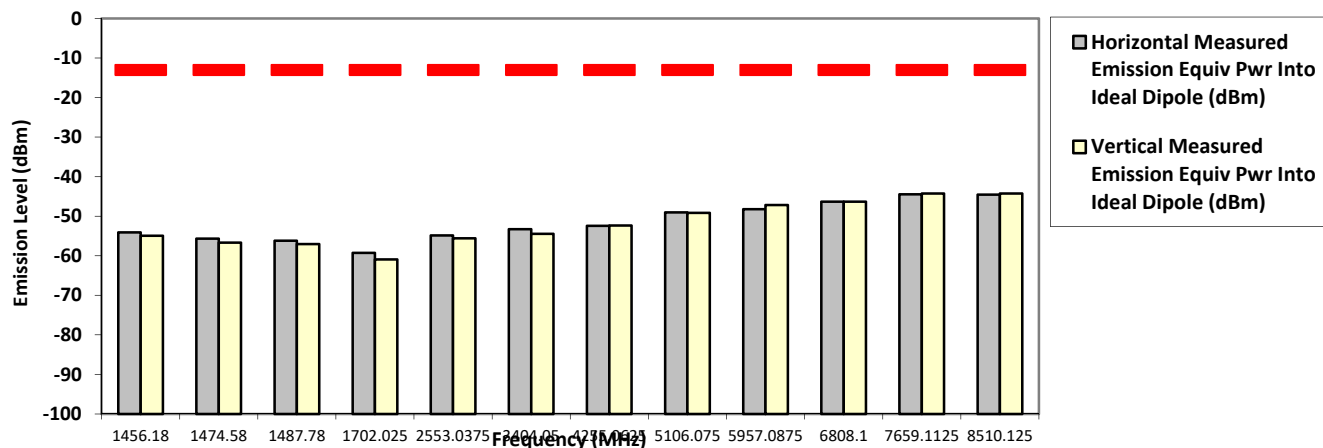


SAC Transmitter Radiated Emission:

Model Number: M37TSS9PW1AN **S/N:** G0P0UX0X3C **SR:** 03466-EMC-00243
Battery Part No: NA **Accy Part No:** HMN4079G-CF2, HSN4031B-C1, HKN4192B-C6, HKN6164B-C1, HKN6188B-C2, 13921-HKN6172C-1, PMHN4194C-C20, PMUN1057B-C9, AS000016A02
Test Mode: TX APCO Digital Phase II
851.012500 MHz (For FCC only) **12.5 kHz** **42.000 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)
1456.1800	-13.0000	-54.0900 *	-54.9400 *
1474.5800	-13.0000	-55.6700 *	-56.6800 *
1487.7800	-13.0000	-56.1800 *	-57.0500 *
1702.0250	-13.0000	-59.2747 **	-60.9252 **
2553.0375	-13.0000	-54.8452 **	-55.5943 **
3404.0500	-13.0000	-53.2782 **	-54.4440 **
4255.0625	-13.0000	-52.4477 **	-52.3394 **
5106.0750	-13.0000	-49.0352 **	-49.1586 **
5957.0875	-13.0000	-48.2165 **	-47.1957 **
6808.1000	-13.0000	-46.3386 **	-46.3451 **
7659.1125	-13.0000	-44.4565 **	-44.2545 **
8510.1250	-13.0000	-44.5462 **	-44.2645 **

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 Sun, 20 Feb, 2022

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): 22.3 Hum(%RH): 69.3

Remarks:

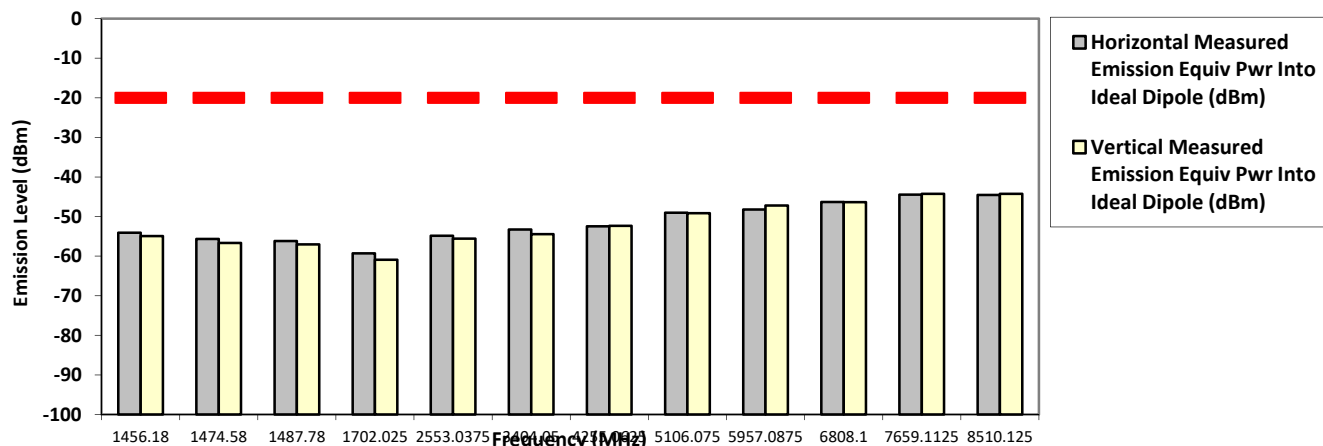
Passed Results	Marginal Results	Failed Results
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SAC Transmitter Radiated Emission:

Model Number: M37TSS9PW1AN **S/N:** G0P0UX0X3C **SR:** 03466-EMC-00243
Battery Part No: NA **Accy Part No:** HMN4079G-CF2, HSN4031B-C1, HKN4192B-C6, HKN6164B-C1, HKN6188B-C2, 13921-HKN6172C-1, PMHN4194C-C20, PMUN1057B-C9, AS000016A02
Test Mode: TX APCO Digital Phase II
851.012500 MHz (For IC only) **12.5 kHz** **42.000 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)
1456.1800	-20.0000	-54.0900 *	-54.9400 *
1474.5800	-20.0000	-55.6700 *	-56.6800 *
1487.7800	-20.0000	-56.1800 *	-57.0500 *
1702.0250	-20.0000	-59.2747 **	-60.9252 **
2553.0375	-20.0000	-54.8452 **	-55.5943 **
3404.0500	-20.0000	-53.2782 **	-54.4440 **
4255.0625	-20.0000	-52.4477 **	-52.3394 **
5106.0750	-20.0000	-49.0352 **	-49.1586 **
5957.0875	-20.0000	-48.2165 **	-47.1957 **
6808.1000	-20.0000	-46.3386 **	-46.3451 **
7659.1125	-20.0000	-44.4565 **	-44.2545 **
8510.1250	-20.0000	-44.5462 **	-44.2645 **

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 Sun, 20 Feb, 2022

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): 22.3 Hum(%RH): 69.3

Remarks:

Passed Results	Marginal Results	Failed Results
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Model Number: M37TSS9PW1AN
Battery Part No: NA

SAC Transmitter Radiated Emission:

S/N: 681TXT7177

SR:03466-EMC-00198

Accy Part No: AN000163A01, HMN4079G-C4, HKN6163C-C6, PMHN4194C

Test Mode: TX APCO Digital Phase II

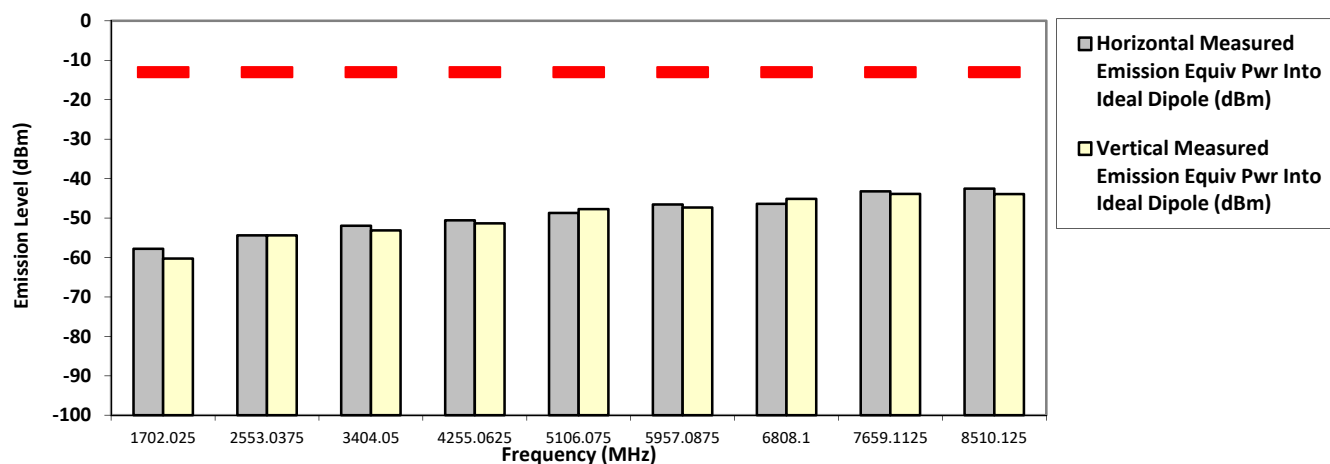
851.012500 MHz

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)
1702.0250	-13.0000	-57.7852 **	-60.2943 **
2553.0375	-13.0000	-54.3826 **	-54.4104 **
3404.0500	-13.0000	-51.9721 **	-53.1450 **
4255.0625	-13.0000	-50.5759 **	-51.3395 **
5106.0750	-13.0000	-48.6981 **	-47.7346 **
5957.0875	-13.0000	-46.5657 **	-47.3417 **
6808.1000	-13.0000	-46.3881 **	-45.1423 **
7659.1125	-13.0000	-43.2397 **	-43.8897 **
8510.1250	-13.0000	-42.5501 **	-43.9176 **

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: Qawiman&Nazrin

Sun, 12 Dec, 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): 24.1 Hum(%RH): 69.8

Remarks:

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

Model Number: M37TSS9PW1AN
Battery Part No: NA

SAC Transmitter Radiated Emission:

S/N: 681TXT7177

SR:03466-EMC-00198

Accy Part No: AN000163A01, HMN4079G-C4, HKN6163C-C6, PMHN4194C

Test Mode: TX APCO Digital Phase II

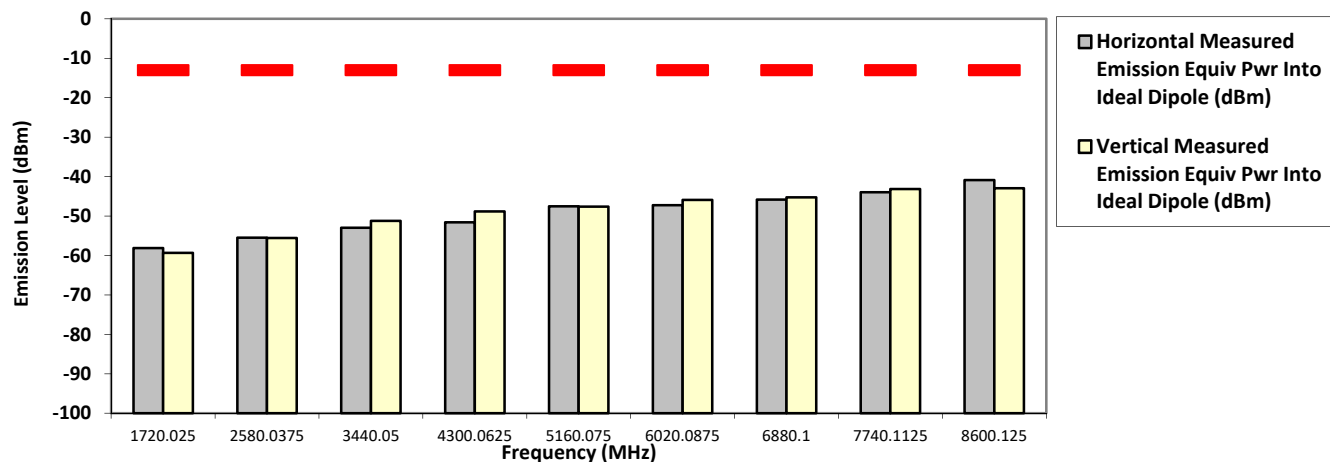
860.012500 MHz

12.5 kHz

42.000 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)
1720.0250	-13.0000	-58.1359 **	-59.3368 **
2580.0375	-13.0000	-55.4965 **	-55.5891 **
3440.0500	-13.0000	-52.9847 **	-51.2521 **
4300.0625	-13.0000	-51.6029 **	-48.8442 **
5160.0750	-13.0000	-47.5557 **	-47.6370 **
6020.0875	-13.0000	-47.2465 **	-45.9089 **
6880.1000	-13.0000	-45.8367 **	-45.2581 **
7740.1125	-13.0000	-43.9609 **	-43.1612 **
8600.1250	-13.0000	-40.8979 **	-42.9423 **

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: Qawiman&Nazrin

Sun, 12 Dec, 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): 24.1 Hum(%RH): 69.8

Remarks:

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

Model Number: M37TSS9PW1AN
Battery Part No: NA

SAC Transmitter Radiated Emission:

S/N: 681TXT7177

SR:03466-EMC-00198

Accy Part No: AN000163A01, HMN4079G-C4, HKN6163C-C6, PMHN4194C

Test Mode: TX APCO Digital Phase II

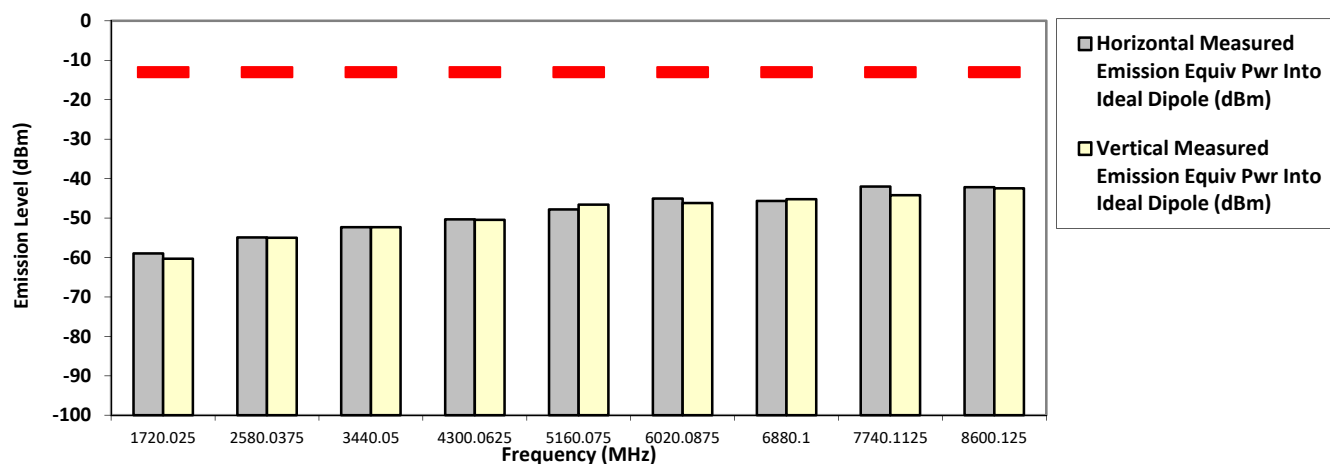
860.012500 MHz

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)
1720.0250	-13.0000	-58.9989 **	-60.3098 **
2580.0375	-13.0000	-54.9082 **	-54.9931 **
3440.0500	-13.0000	-52.3393 **	-52.3416 **
4300.0625	-13.0000	-50.3457 **	-50.4597 **
5160.0750	-13.0000	-47.8362 **	-46.6247 **
6020.0875	-13.0000	-45.0622 **	-46.1981 **
6880.1000	-13.0000	-45.6703 **	-45.2232 **
7740.1125	-13.0000	-42.0175 **	-44.2067 **
8600.1250	-13.0000	-42.2048 **	-42.4541 **

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: Qawiman&Nazrin

Sun, 12 Dec, 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): 24.1 Hum(%RH): 69.8

Remarks:

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

Model Number: M37TSS9PW1AN
Battery Part No: NA

SAC Transmitter Radiated Emission:

S/N: 681TXT7177

SR:03466-EMC-00198

Accy Part No: AN000163A01, HMN4079G-C4, HKN6163C-C6, PMHN4194C

Test Mode: TX APCO Digital Phase II

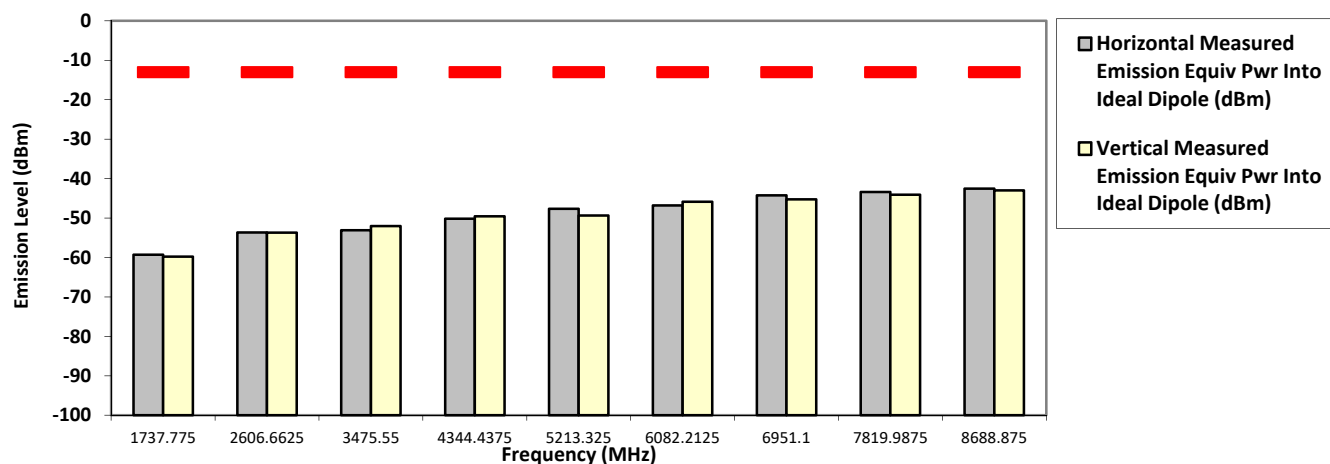
868.887500 MHz

12.5 kHz

42.000 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)
1737.7750	-13.0000	-59.2886 **	-59.7974 **
2606.6625	-13.0000	-53.6715 **	-53.7102 **
3475.5500	-13.0000	-53.1052 **	-52.0592 **
4344.4375	-13.0000	-50.1846 **	-49.5489 **
5213.3250	-13.0000	-47.6752 **	-49.3707 **
6082.2125	-13.0000	-46.8074 **	-45.8939 **
6951.1000	-13.0000	-44.2693 **	-45.2534 **
7819.9875	-13.0000	-43.4109 **	-44.1081 **
8688.8750	-13.0000	-42.5444 **	-42.9950 **

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: Qawiman&Nazrin

Sun, 12 Dec, 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): 24.1 Hum(%RH): 69.8

Remarks:

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

Model Number: M37TSS9PW1AN
Battery Part No: NA

SAC Transmitter Radiated Emission:

S/N: 681TXT7177

SR:03466-EMC-00198

Accy Part No: AN000163A01, HMN4079G-C4, HKN6163C-C6, PMHN4194C

Test Mode: TX APCO Digital Phase II

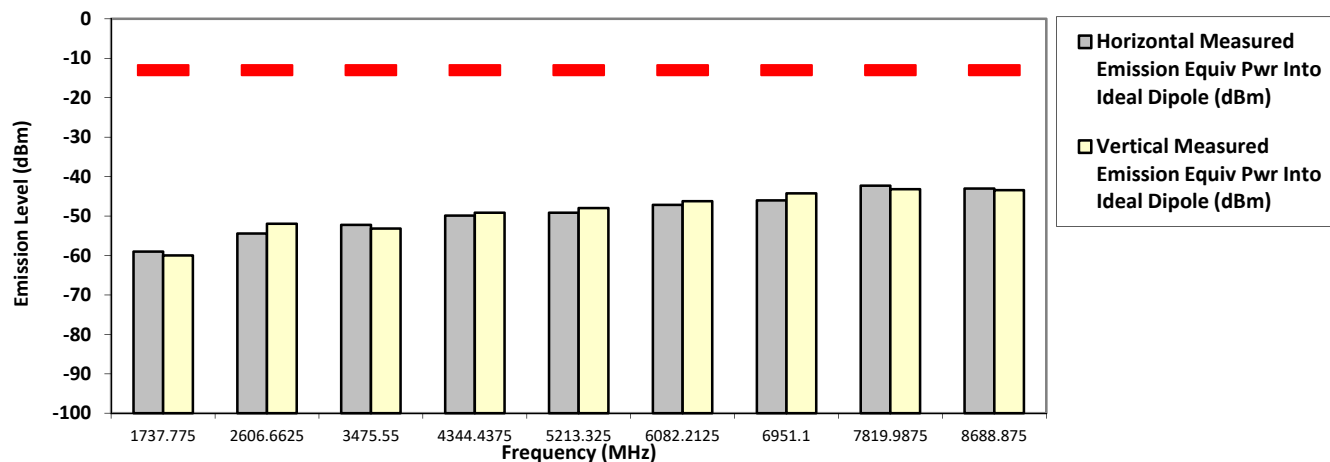
868.887500 MHz

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)
1737.7750	-13.0000	-59.0090 **	-59.9874 **
2606.6625	-13.0000	-54.4179 **	-51.9458 **
3475.5500	-13.0000	-52.2430 **	-53.1848 **
4344.4375	-13.0000	-49.9064 **	-49.1662 **
5213.3250	-13.0000	-49.1729 **	-47.9873 **
6082.2125	-13.0000	-47.1678 **	-46.2395 **
6951.1000	-13.0000	-46.0200 **	-44.2555 **
7819.9875	-13.0000	-42.2933 **	-43.1887 **
8688.8750	-13.0000	-43.0425 **	-43.4385 **

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: Qawiman&Nazrin

Sun, 12 Dec, 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): 24.1 Hum(%RH): 69.8

Remarks:

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

6.11.4. Test Limit

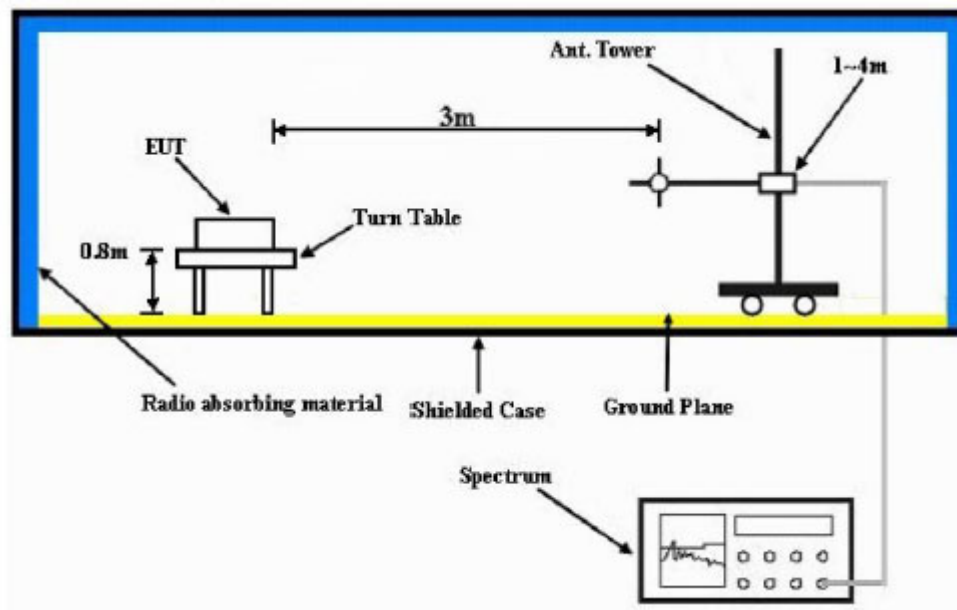
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

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

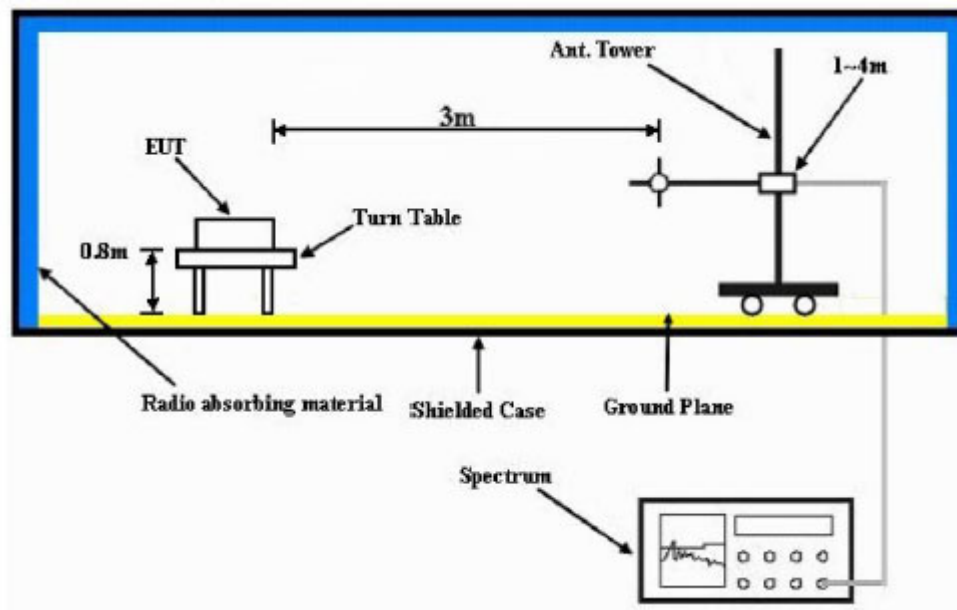
Not Applicable

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 ~