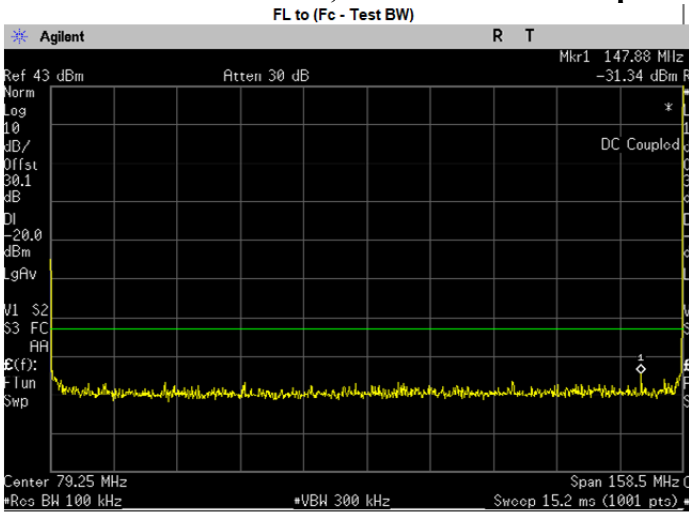
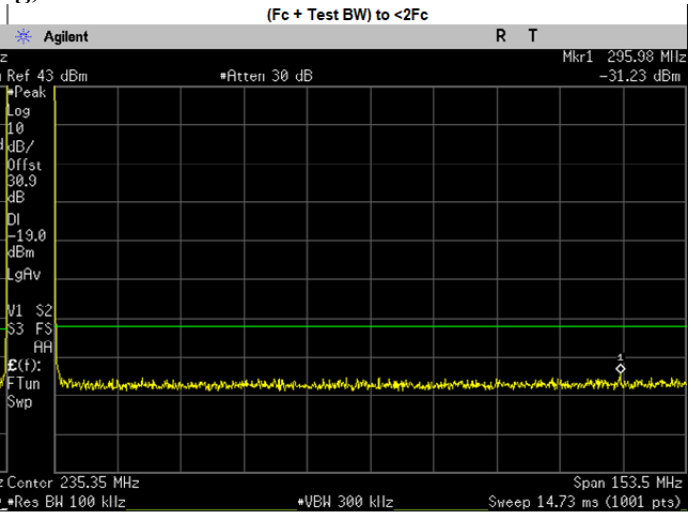
## Phase II: 158.55 MHz, 12.5 kHz Channel Spacing, Max. Power

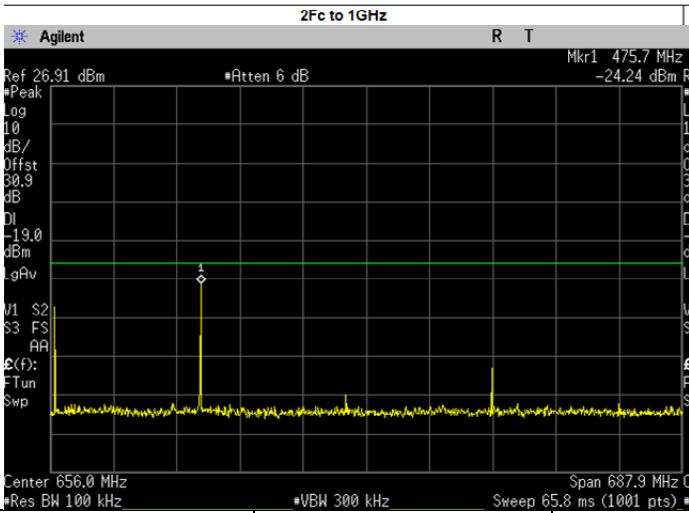
FL to (Fc - Test BW)



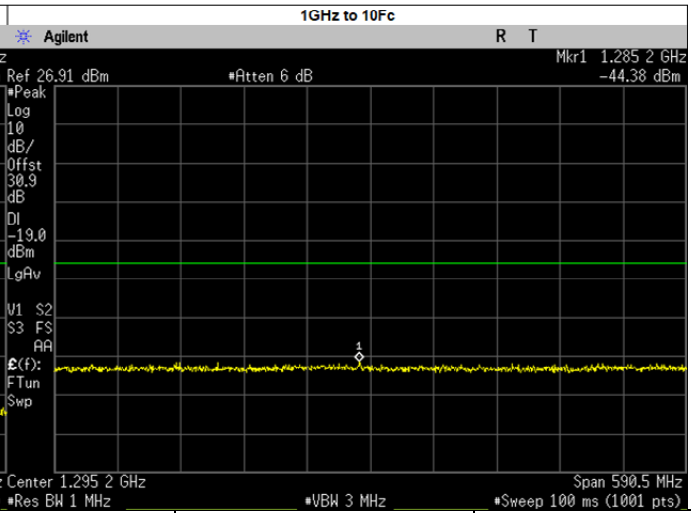

(Fc + Test BW) to <2Fc




2Fc to 1GHz



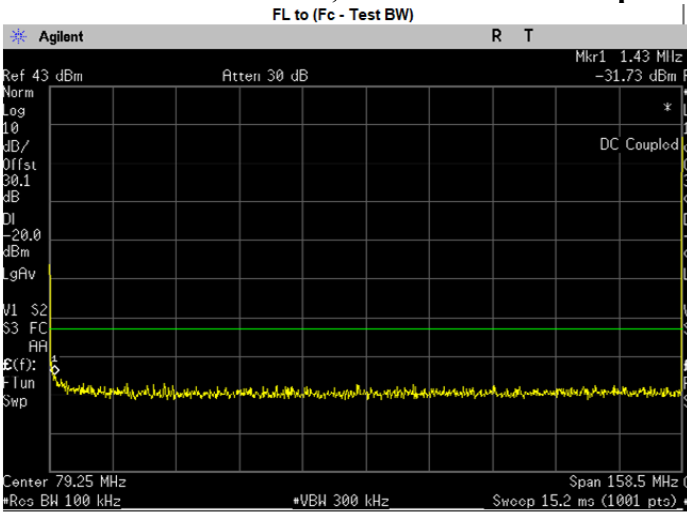

1GHz to 10Fc



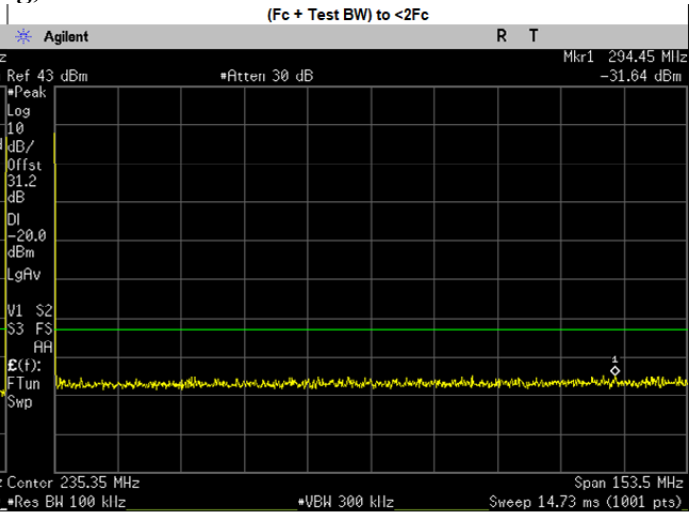

| Frequency Range | Highest Spur Frequency (MHz) | Spurious Level (dBm) | Failing Limit (dBm) | Results |
|---|---|---|---|---|
| FL to (Fc - Test BW) | 147.8800 | -31.3400 | -19.02 | PASS |
| (Fc + Test BW) to <2Fc | 295.9831 | -31.2300 | -19.02 | PASS |
| 2Fc to 1GHz | 475.7000 | -24.2400 | -19.02 | PASS |
| | 634.2000 | -54.1289 | -19.02 | PASS |
| | 792.7500 | -49.5984 | -19.02 | PASS |
| | 951.3000 | -58.2834 | -19.02 | PASS |
| | 317.1000 | -36.1017 | -19.02 | PASS |
| | 475.6500 | -30.8233 | -19.02 | PASS |
| 1GHz to 10Fc | 1285.2110 | -44.3800 | -19.02 | PASS |
| | 1109.8500 | -46.0993 | -19.02 | PASS |
| | 1268.4000 | -45.9233 | -19.02 | PASS |
| | 1426.9500 | -46.7115 | -19.02 | PASS |
| | 1585.5000 | -46.2395 | -19.02 | PASS |

## Phase II: 158.55 MHz, 12.5 kHz Channel Spacing, Low. Power

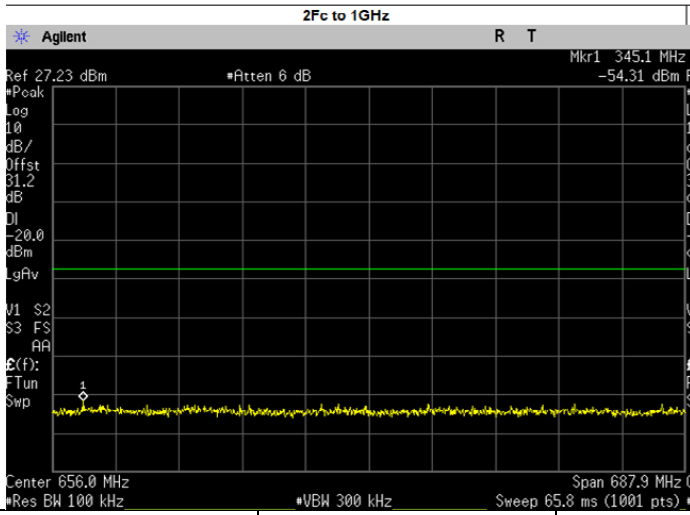
FL to (Fc - Test BW)



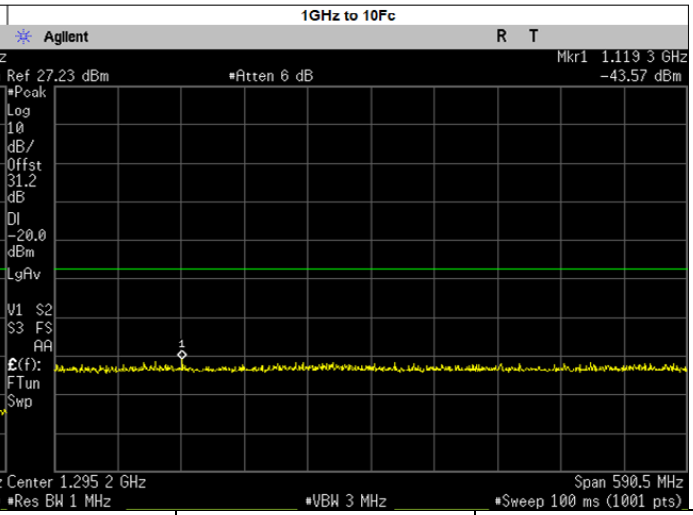

(Fc + Test BW) to <2Fc




2Fc to 1GHz



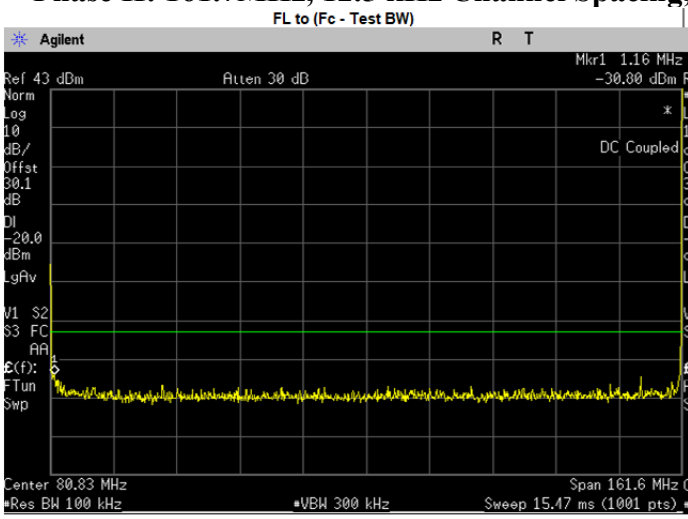

1GHz to 10Fc



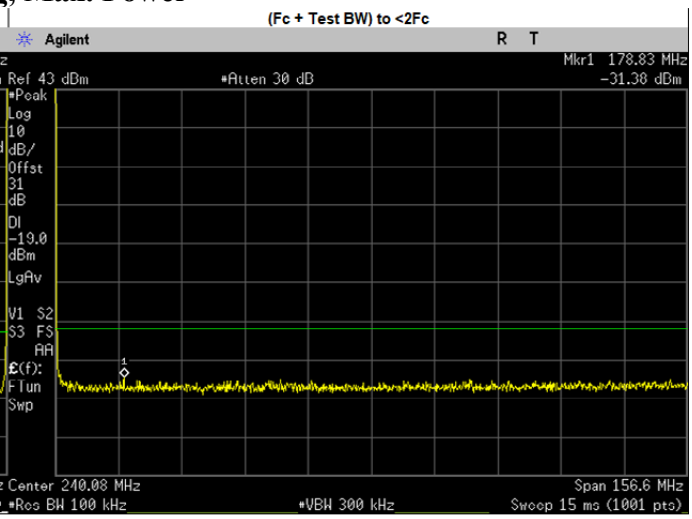

| Frequency Range | Highest Spur Frequency (MHz) | Spurious Level (dBm) | Failing Limit (dBm) | Results |
|---|---|---|---|---|
| FL to (Fc - Test BW) | 1.4300 | -31.7300 | -20.00 | PASS |
| (Fc + Test BW) to <2Fc | 294.4500 | -31.6400 | -20.00 | PASS |
| 2Fc to 1GHz | 345.1192 | -54.3100 | -20.00 | PASS |
| | 317.1000 | -57.2747 | -20.00 | PASS |
| | 475.6500 | -56.6499 | -20.00 | PASS |
| | 634.2000 | -57.5195 | -20.00 | PASS |
| | 792.7500 | -57.3205 | -20.00 | PASS |
| | 951.3000 | -57.6736 | -20.00 | PASS |
| 1GHz to 10Fc | 1119.2810 | -43.5700 | -20.00 | PASS |
| | 1109.8500 | -45.2856 | -20.00 | PASS |
| | 1268.4000 | -45.6523 | -20.00 | PASS |
| | 1426.9500 | -45.6937 | -20.00 | PASS |
| | 1585.5000 | -45.8706 | -20.00 | PASS |

## Phase II: 161.7MHz, 12.5 kHz Channel Spacing, Max. Power

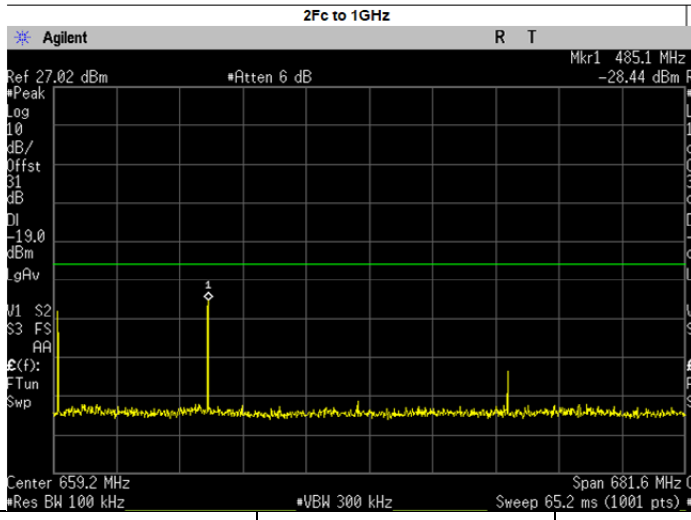
FL to (Fc - Test BW)



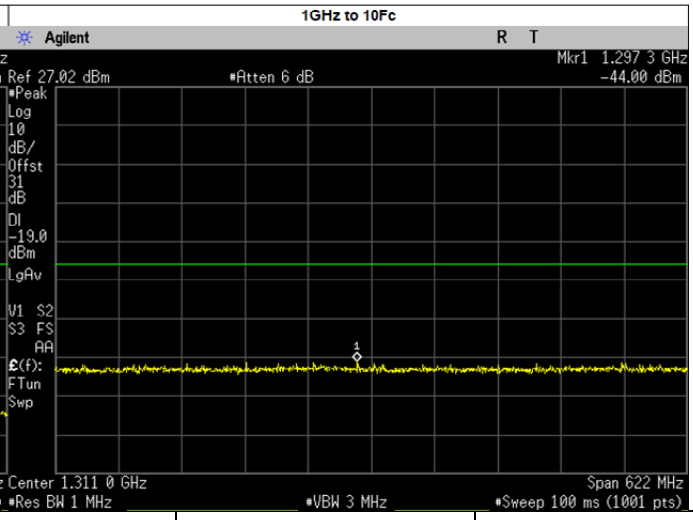

(Fc + Test BW) to <2Fc




2Fc to 1GHz

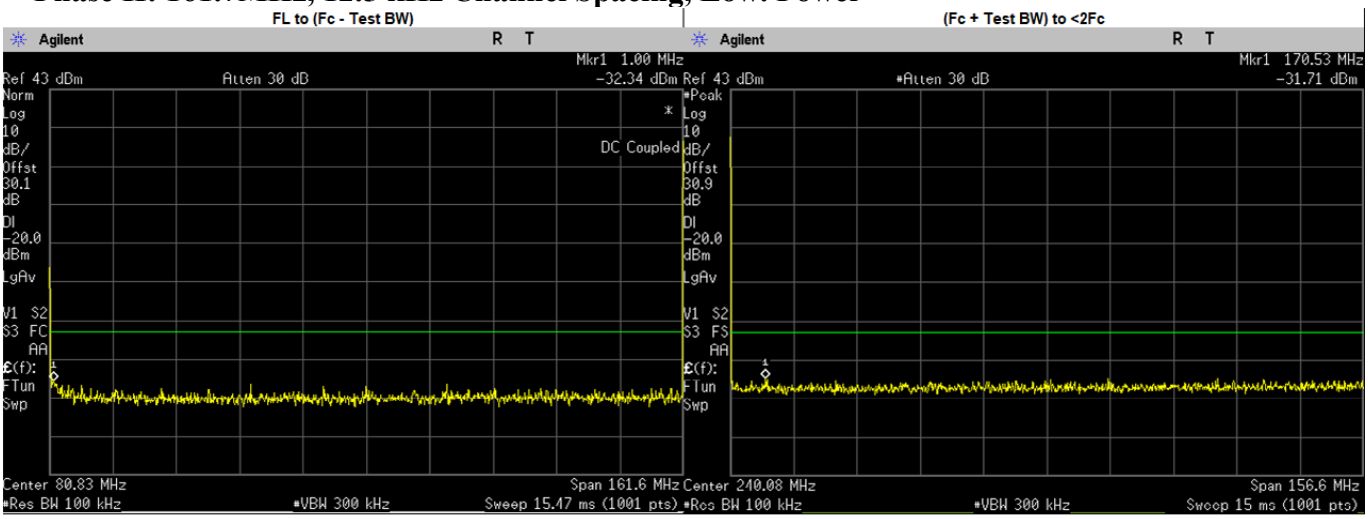


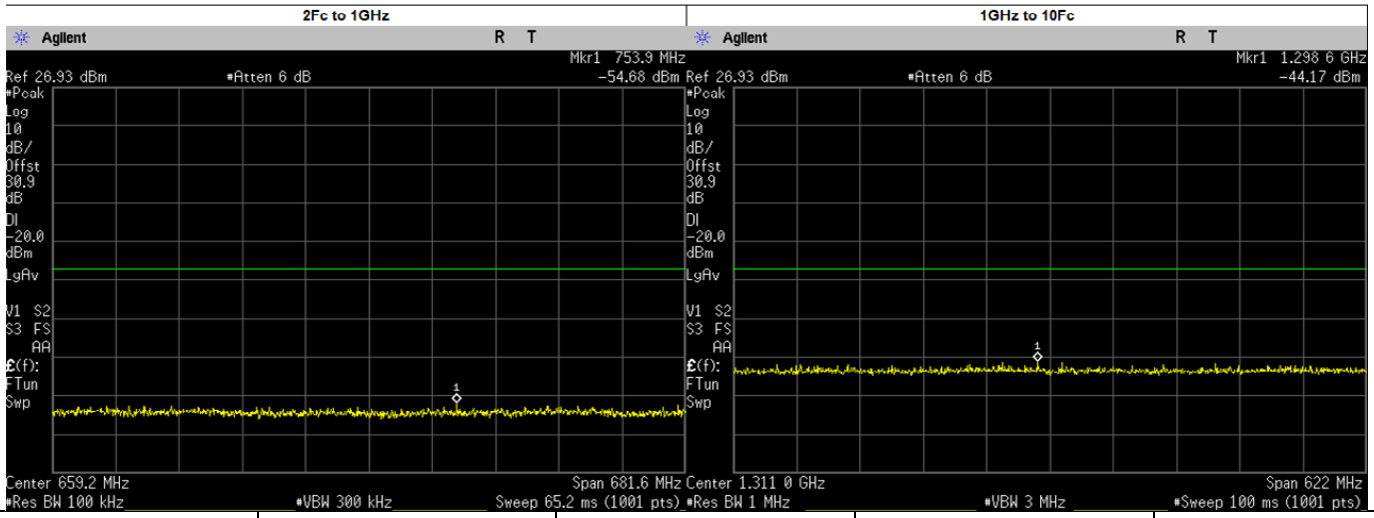

1GHz to 10Fc




| Frequency Range | Highest Spur Frequency (MHz) | Spurious Level (dBm) | Failing Limit (dBm) | Results |
|---|---|---|---|---|
| FL to (Fc - Test BW) | 1.1600 | -30.8000 | -18.99 | PASS |
| (Fc + Test BW) to <2Fc | 178.8299 | -31.3800 | -18.99 | PASS |
| 2Fc to 1GHz | 485.1000 | -28.4400 | -18.99 | PASS |
| | 808.5000 | -47.1496 | -18.99 | PASS |
| | 970.2000 | -57.0341 | -18.99 | PASS |
| | 484.7104 | -30.4700 | -18.99 | PASS |
| | 323.4000 | -34.5388 | -18.99 | PASS |
| | 485.1000 | -29.3114 | -18.99 | PASS |
| 1GHz to 10Fc | 1297.3160 | -44.0000 | -18.99 | PASS |
| | 1131.9000 | -46.5454 | -18.99 | PASS |
| | 1293.6000 | -46.0334 | -18.99 | PASS |
| | 1455.3000 | -45.5325 | -18.99 | PASS |
| | 1617.0000 | -46.3011 | -18.99 | PASS |

## Phase II: 161.7MHz, 12.5 kHz Channel Spacing, Low. Power

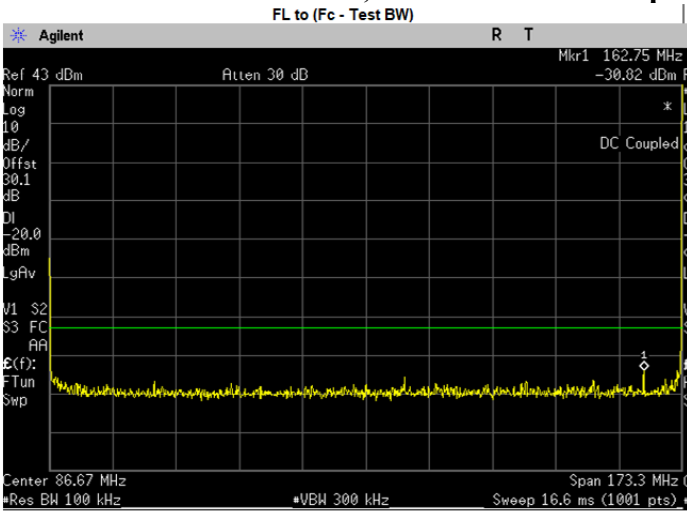


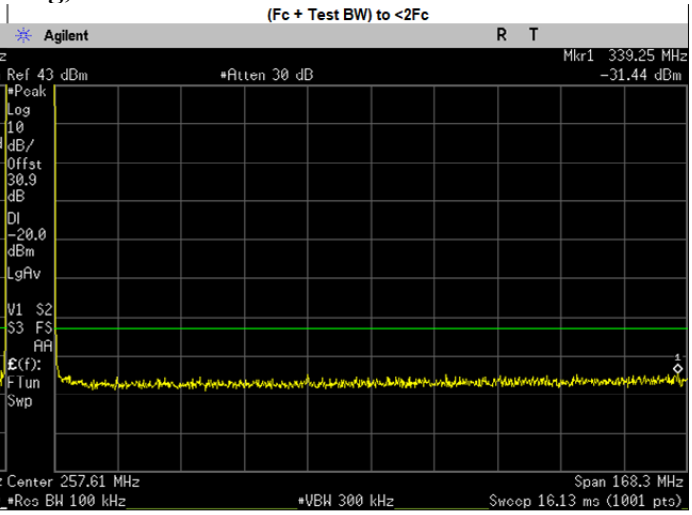

| Frequency Range | Highest Spur Frequency (MHz) | Spurious Level (dBm) | Failing Limit (dBm) | Results |
|---|---|---|---|---|
| FL to (Fc - Test BW) | 1.0000 | -32.3400 | -20.00 | PASS |
| (Fc + Test BW) to <2Fc | 170.5277 | -31.7100 | -20.00 | PASS |
| 2Fc to 1GHz | 753.9424 | -54.6800 | -20.00 | PASS |
| | 323.4000 | -56.7057 | -20.00 | PASS |
| | 485.1000 | -56.6086 | -20.00 | PASS |
| | 646.8000 | -56.3228 | -20.00 | PASS |
| | 808.5000 | -56.6325 | -20.00 | PASS |
| | 970.2000 | -57.6176 | -20.00 | PASS |
| 1GHz to 10Fc | 1298.5600 | -44.1700 | -20.00 | PASS |
| | 1131.9000 | -46.8122 | -20.00 | PASS |
| | 1293.6000 | -46.3612 | -20.00 | PASS |
| | 1455.3000 | -46.7703 | -20.00 | PASS |
| | 1617.0000 | -46.1077 | -20.00 | PASS |

## Phase II: 173.3875 MHz, 12.5 kHz Channel Spacing, Max. Power

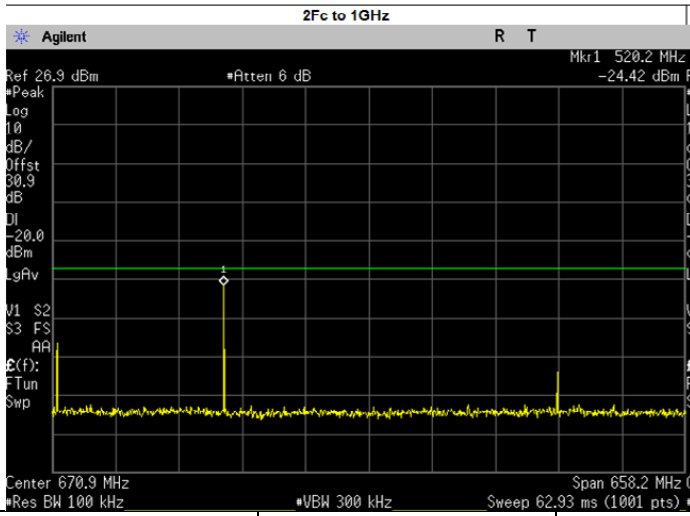
FL to (Fc - Test BW)



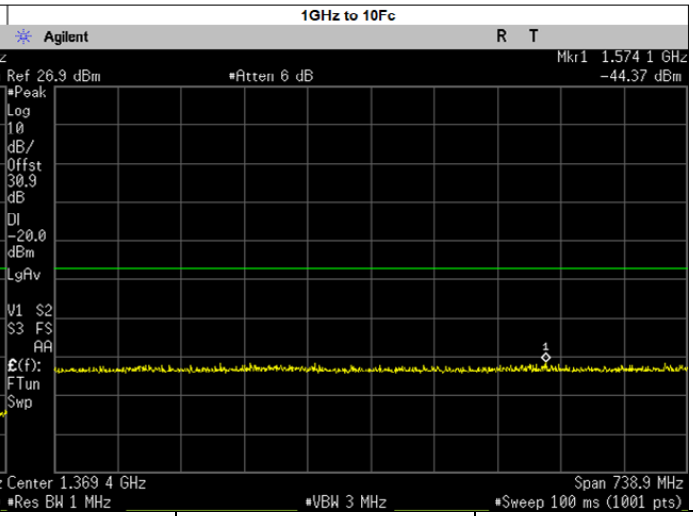

(Fc + Test BW) to <2Fc




2Fc to 1GHz



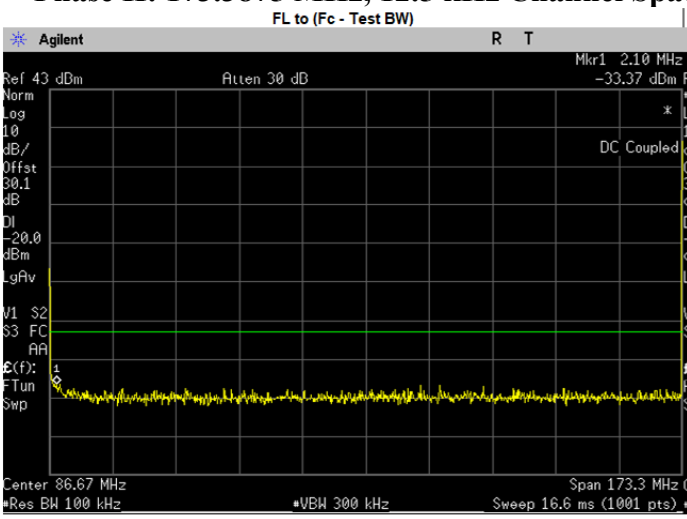

1GHz to 10Fc



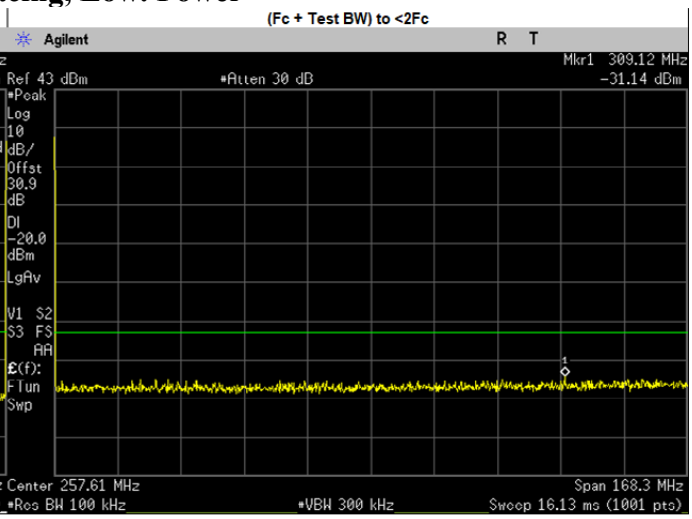

| Frequency Range | Highest Spur Frequency (MHz) | Spurious Level (dBm) | Failing Limit (dBm) | Results |
|---|---|---|---|---|
| FL to (Fc - Test BW) | 162.7500 | -30.8200 | -20.00 | PASS |
| (Fc + Test BW) to <2Fc | 339.2500 | -31.4400 | -20.00 | PASS |
| 2Fc to 1GHz | 520.2000 | -24.4200 | -20.00 | PASS |
| | 346.7750 | -40.7820 | -20.00 | PASS |
| | 693.5500 | -56.0331 | -20.00 | PASS |
| | 866.9375 | -48.5127 | -20.00 | PASS |
| | 520.1625 | -24.8471 | -20.00 | PASS |
| 1GHz to 10Fc | 1574.1060 | -44.3700 | -20.00 | PASS |
| | 1040.3250 | -45.9748 | -20.00 | PASS |
| | 1213.7130 | -46.7548 | -20.00 | PASS |
| | 1387.1000 | -46.2122 | -20.00 | PASS |
| | 1560.4870 | -46.2833 | -20.00 | PASS |
| | 1733.8750 | -46.2013 | -20.00 | PASS |

## Phase II: 173.3875 MHz, 12.5 kHz Channel Spacing, Low. Power

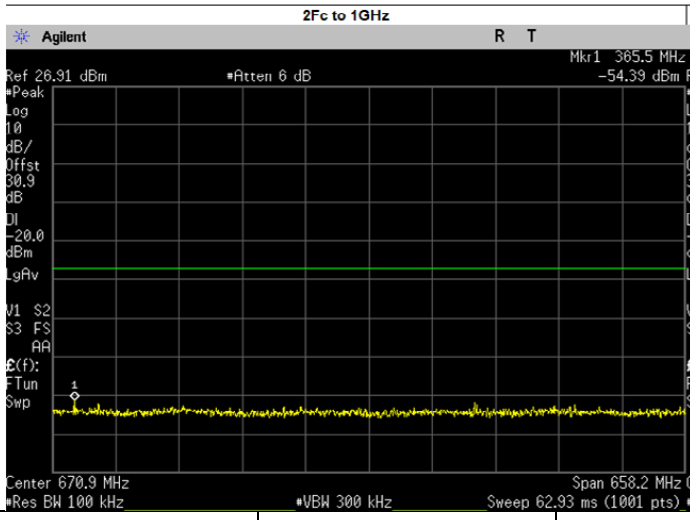
FL to (Fc - Test BW)



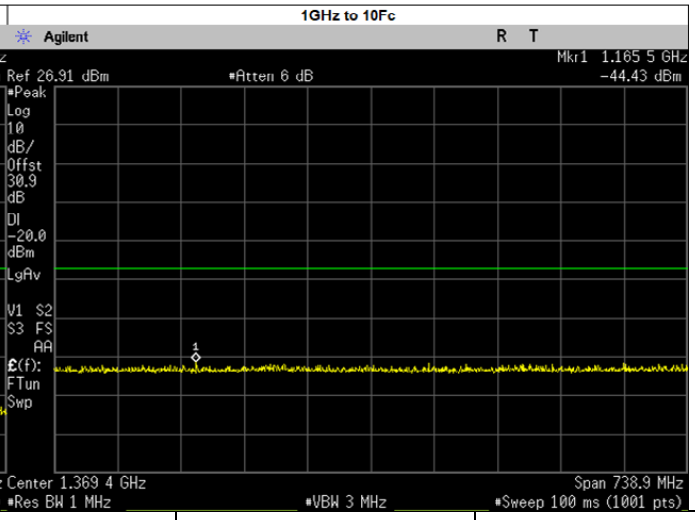

(Fc + Test BW) to <2Fc




2Fc to 1GHz




1GHz to 10Fc




| Frequency Range | Highest Spur Frequency (MHz) | Spurious Level (dBm) | Failing Limit (dBm) | Results |
|---|---|---|---|---|
| FL to (Fc - Test BW) | 2.1000 | -33.3700 | -20.00 | PASS |
| (Fc + Test BW) to <2Fc | 309.1186 | -31.1400 | -20.00 | PASS |
| 2Fc to 1GHz | 365.4711 | -54.3900 | -20.00 | PASS |
| | 346.7750 | -56.8904 | -20.00 | PASS |
| | 520.1625 | -57.7636 | -20.00 | PASS |
| | 693.5500 | -57.0430 | -20.00 | PASS |
| | 866.9375 | -56.5491 | -20.00 | PASS |
| 1GHz to 10Fc | 1165.5080 | -44.4300 | -20.00 | PASS |
| | 1040.3250 | -46.8869 | -20.00 | PASS |
| | 1213.7130 | -46.9309 | -20.00 | PASS |
| | 1387.1000 | -46.7165 | -20.00 | PASS |
| | 1560.4870 | -46.4178 | -20.00 | PASS |
| | 1733.8750 | -46.4658 | -20.00 | PASS |

### 6.10.4. Test Limit

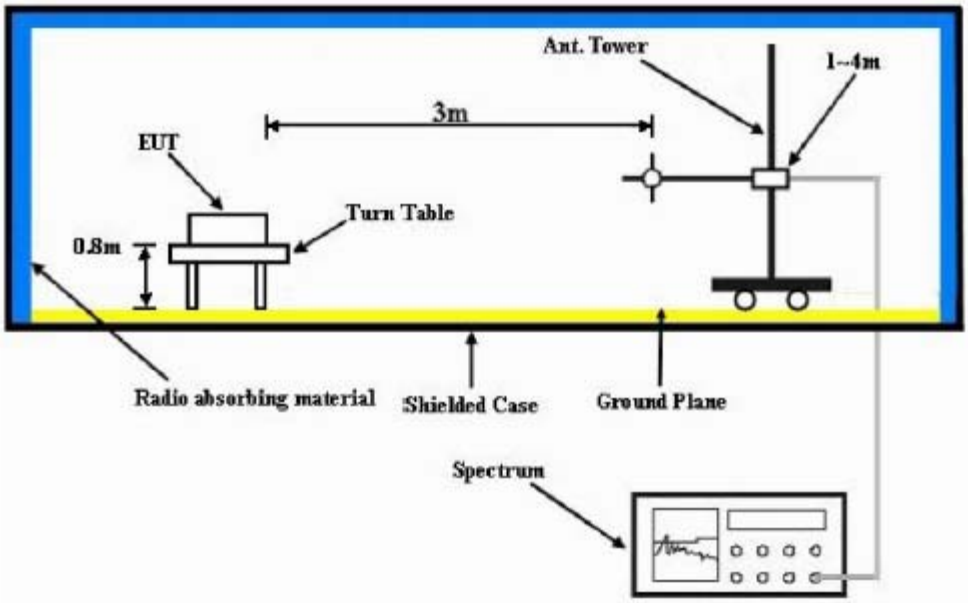
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

| 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: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**

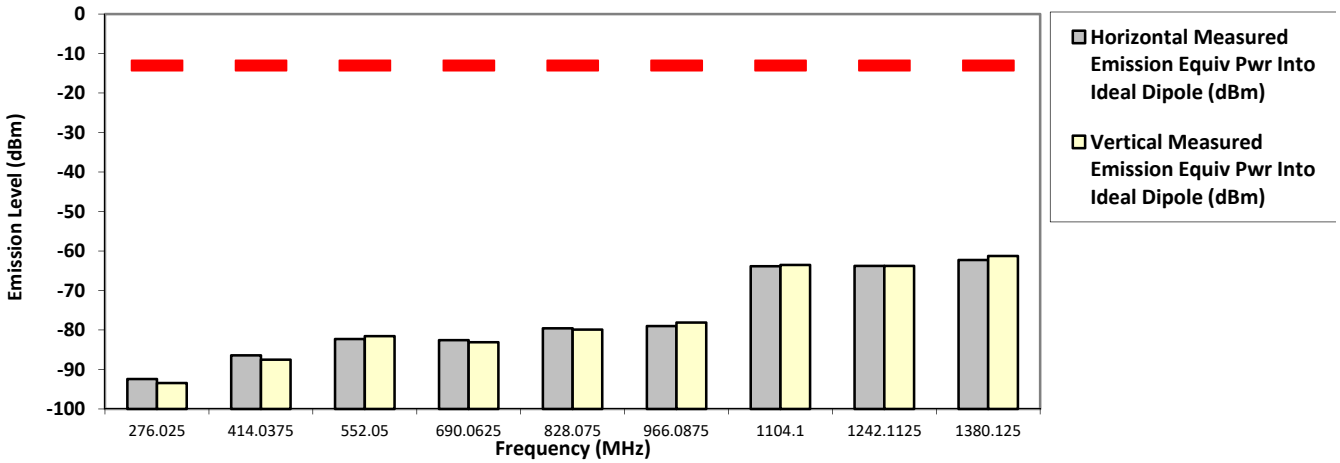
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**

**Test Mode: TX Analog**

**138.012500 MHz** **25 kHz** **120.000 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 | -92.4442 ** | -93.4477 ** |
| 414.0375 | -13.0000 | -86.4479 ** | -87.5192 ** |
| 552.0500 | -13.0000 | -82.2894 ** | -81.5683 ** |
| 690.0625 | -13.0000 | -82.6018 ** | -83.1101 ** |
| 828.0750 | -13.0000 | -79.5942 ** | -79.9185 ** |
| 966.0875 | -13.0000 | -79.0255 ** | -78.1293 ** |
| 1104.1000 | -13.0000 | -63.8546 ** | -63.5405 ** |
| 1242.1125 | -13.0000 | -63.7665 ** | -63.7768 ** |
| 1380.1250 | -13.0000 | -62.2895 ** | -61.2702 ** |
| | | | |
| | | | |

**RADIATED SPURIOUS EMISSIONS**




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

**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Tue, 1 Dec, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

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

**SAC Transmitter Radiated Emission:**

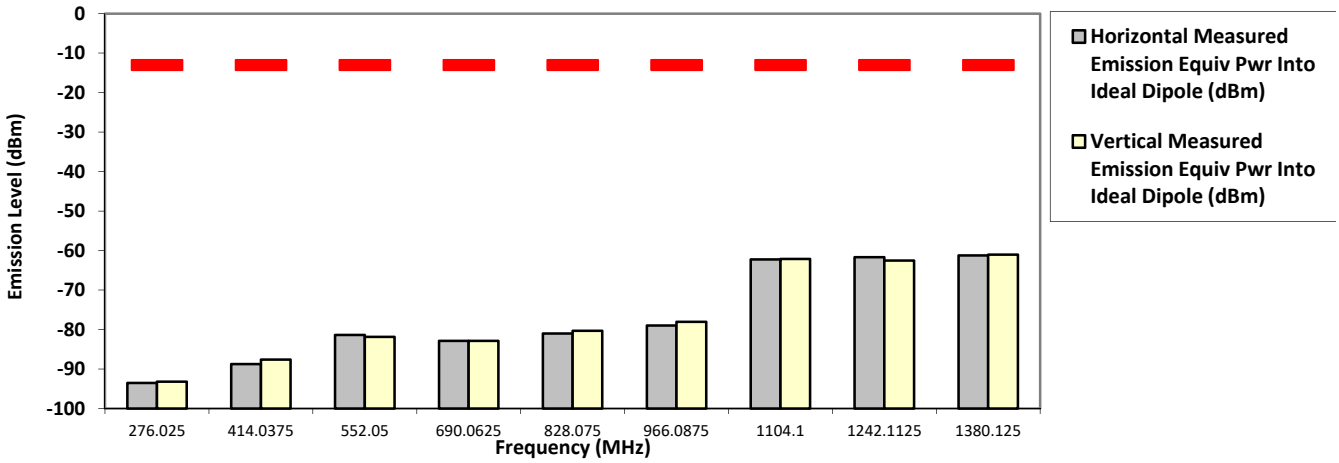
**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**

**Test Mode: TX Analog**

**138.012500 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) |
|---|---|---|---|
| 276.0250 | -13.0000 | -93.5418 ** | -93.1810 ** |
| 414.0375 | -13.0000 | -88.7442 ** | -87.6117 ** |
| 552.0500 | -13.0000 | -81.3786 ** | -81.8526 ** |
| 690.0625 | -13.0000 | -82.8781 ** | -82.8608 ** |
| 828.0750 | -13.0000 | -81.0062 ** | -80.3256 ** |
| 966.0875 | -13.0000 | -78.9714 ** | -78.0484 ** |
| 1104.1000 | -13.0000 | -62.2610 ** | -62.1393 ** |
| 1242.1125 | -13.0000 | -61.6632 ** | -62.5142 ** |
| 1380.1250 | -13.0000 | -61.2182 ** | -61.0387 ** |
| | | | |
| | | | |
| | | | |

**RADIATED SPURIOUS EMISSIONS**




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

**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Tue, 1 Dec, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

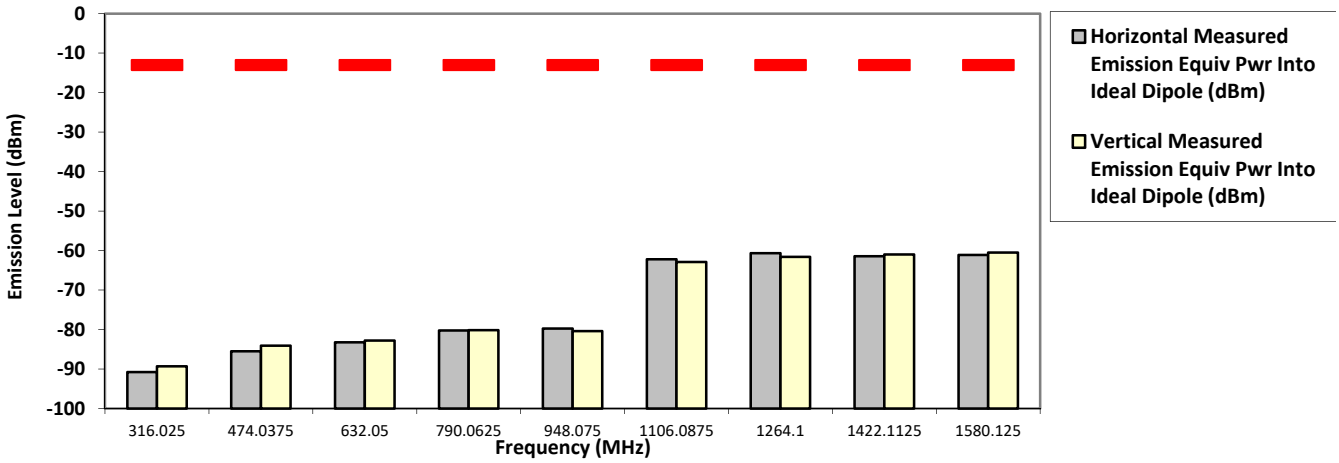
| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX Analog**
**158.550000 MHz** **25 kHz** **120.000 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) |
|---|---|---|---|
| 316.0250 | -13.0000 | -90.7752 ** | -89.3059 ** |
| 474.0375 | -13.0000 | -85.4951 ** | -84.0942 ** |
| 632.0500 | -13.0000 | -83.2353 ** | -82.7892 ** |
| 790.0625 | -13.0000 | -80.2508 ** | -80.1419 ** |
| 948.0750 | -13.0000 | -79.7550 ** | -80.3878 ** |
| 1106.0875 | -13.0000 | -62.1930 ** | -62.8765 ** |
| 1264.1000 | -13.0000 | -60.6495 ** | -61.6043 ** |
| 1422.1125 | -13.0000 | -61.4386 ** | -61.0069 ** |
| 1580.1250 | -13.0000 | -61.1321 ** | -60.5145 ** |
| | | | |
| | | | |
| | | | |

**RADIATED SPURIOUS EMISSIONS**




**The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.**
**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Tue, 1 Dec, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

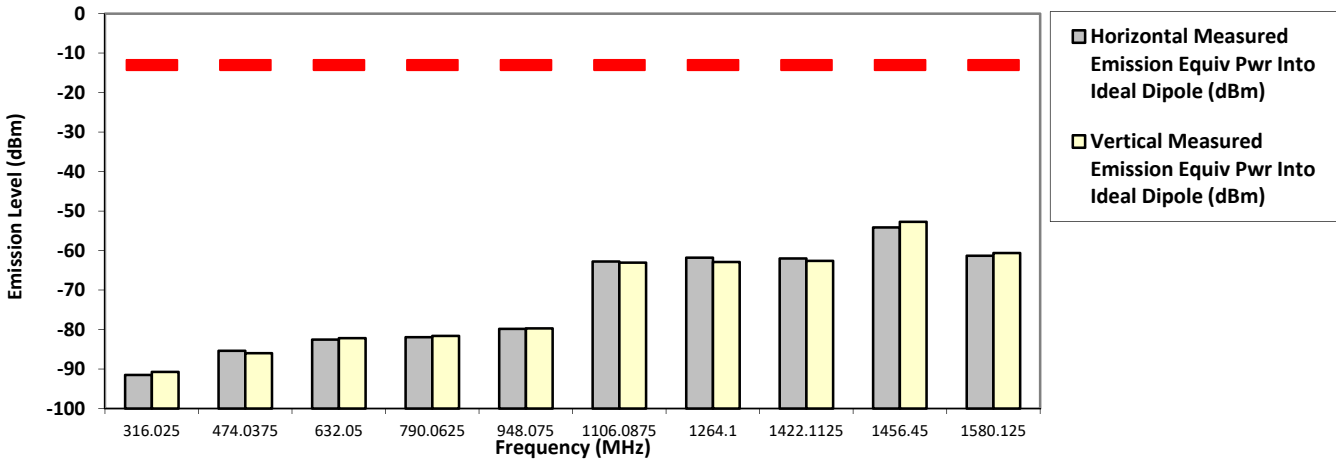
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX Analog**
**158.550000 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) |
|---|---|---|---|
| 316.0250 | -13.0000 | -91.4921 ** | -90.7241 ** |
| 474.0375 | -13.0000 | -85.3870 ** | -86.0057 ** |
| 632.0500 | -13.0000 | -82.5374 ** | -82.1676 ** |
| 790.0625 | -13.0000 | -81.9214 ** | -81.6070 ** |
| 948.0750 | -13.0000 | -79.8264 ** | -79.7040 ** |
| 1106.0875 | -13.0000 | -62.7882 ** | -63.0628 ** |
| 1264.1000 | -13.0000 | -61.8203 ** | -62.8893 ** |
| 1422.1125 | -13.0000 | -62.0170 ** | -62.5994 ** |
| 1456.4500 | -13.0000 | -54.1300 * | -52.7200 * |
| 1580.1250 | -13.0000 | -61.3176 ** | -60.6196 ** |
| | | | |
| | | | |

**RADIATED SPURIOUS EMISSIONS**




**The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.**
**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Wed, 25 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

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

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX Analog**
**161.700000 MHz** **25 kHz** **120.000 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 | -90.3330 ** | -91.7952 ** |
| 485.1000 | -13.0000 | -86.4362 ** | -84.2734 ** |
| 646.8000 | -13.0000 | -82.6847 ** | -82.7320 ** |
| 808.5000 | -13.0000 | -81.7240 ** | -81.6047 ** |
| 970.2000 | -13.0000 | -78.1397 ** | -78.3990 ** |
| 1131.9000 | -13.0000 | -64.3360 ** | -64.6820 ** |
| 1293.6000 | -13.0000 | -63.4299 ** | -63.9951 ** |
| 1455.3000 | -13.0000 | -62.1150 ** | -61.8276 ** |
| 1617.0000 | -13.0000 | -60.9093 ** | -63.0837 ** |
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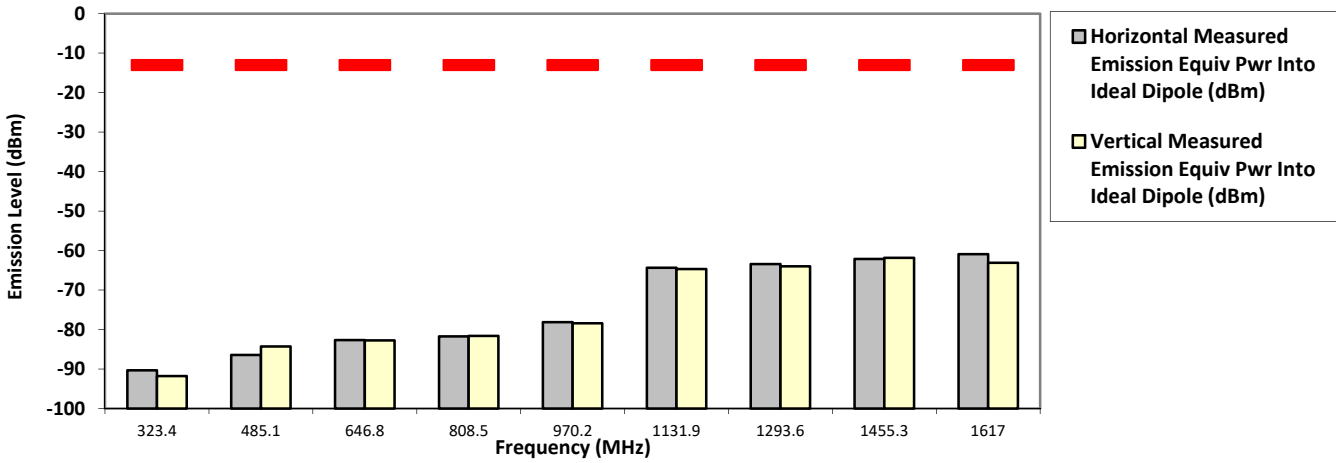
**RADIATED SPURIOUS EMISSIONS**




**The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.**
**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Tue, 1 Dec, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

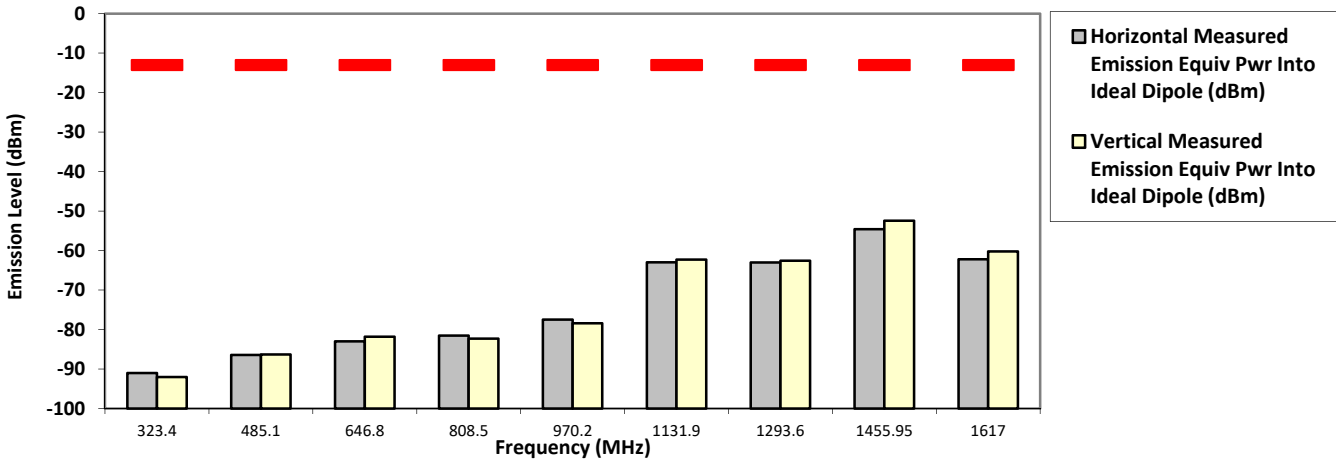
**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**

**Test Mode: TX Analog**

**161.700000 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 | -91.0149 ** | -92.0427 ** |
| 485.1000 | -13.0000 | -86.4449 ** | -86.3324 ** |
| 646.8000 | -13.0000 | -82.9730 ** | -81.8119 ** |
| 808.5000 | -13.0000 | -81.5169 ** | -82.2961 ** |
| 970.2000 | -13.0000 | -77.4782 ** | -78.4223 ** |
| 1131.9000 | -13.0000 | -62.9689 ** | -62.2868 ** |
| 1293.6000 | -13.0000 | -63.0160 ** | -62.5551 ** |
| 1455.9500 | -13.0000 | -54.5700 * | -52.4500 * |
| 1617.0000 | -13.0000 | -62.2123 ** | -60.2218 ** |
| | | | |
| | | | |
| | | | |

**RADIATED SPURIOUS EMISSIONS**




**The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.**
**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Wed, 25 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**

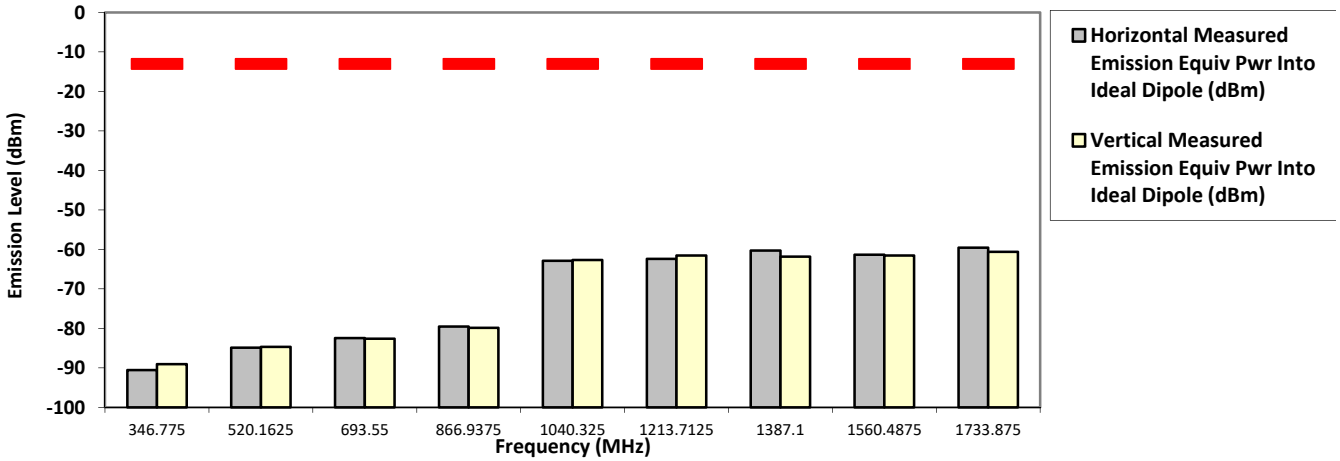
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**

**Test Mode: TX Analog**

**173.387500 MHz** **25 kHz** **120.000 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) |
|---|---|---|---|
| 346.7750 | -13.0000 | -90.5839 ** | -89.0749 ** |
| 520.1625 | -13.0000 | -84.8766 ** | -84.7095 ** |
| 693.5500 | -13.0000 | -82.4812 ** | -82.6291 ** |
| 866.9375 | -13.0000 | -79.5416 ** | -79.8793 ** |
| 1040.3250 | -13.0000 | -62.8885 ** | -62.6837 ** |
| 1213.7125 | -13.0000 | -62.4156 ** | -61.5557 ** |
| 1387.1000 | -13.0000 | -60.2832 ** | -61.8589 ** |
| 1560.4875 | -13.0000 | -61.3361 ** | -61.5648 ** |
| 1733.8750 | -13.0000 | -59.5643 ** | -60.6291 ** |
| | | | |
| | | | |

**RADIATED SPURIOUS EMISSIONS**




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

**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Wed, 25 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

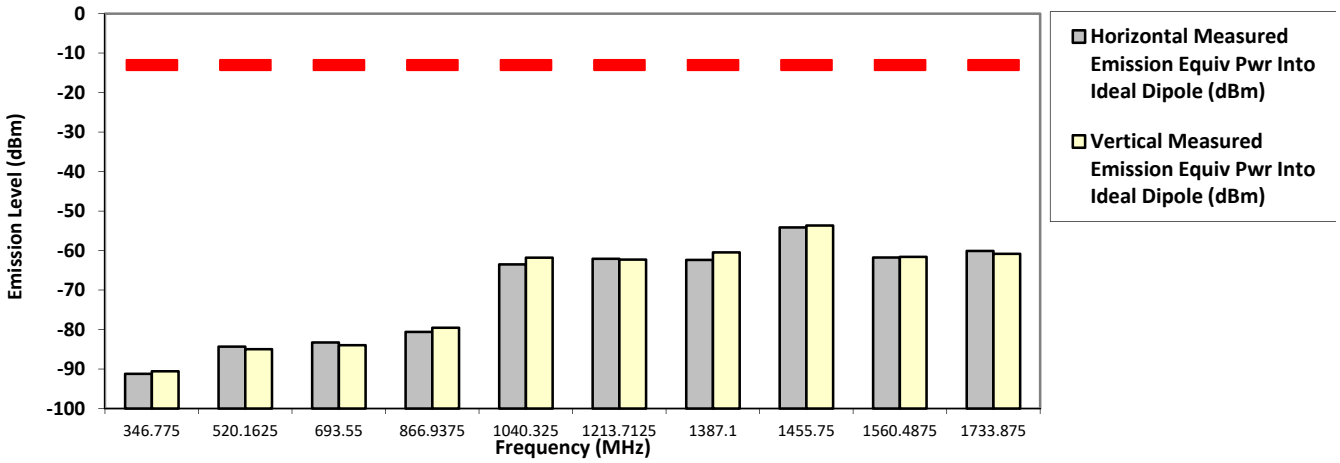
| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX Analog**
**173.387500 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) |
|---|---|---|---|
| 346.7750 | -13.0000 | -91.2222 ** | -90.5804 ** |
| 520.1625 | -13.0000 | -84.3140 ** | -84.9879 ** |
| 693.5500 | -13.0000 | -83.2837 ** | -83.9462 ** |
| 866.9375 | -13.0000 | -80.6044 ** | -79.5351 ** |
| 1040.3250 | -13.0000 | -63.4842 ** | -61.7867 ** |
| 1213.7125 | -13.0000 | -62.0873 ** | -62.3022 ** |
| 1387.1000 | -13.0000 | -62.3744 ** | -60.4443 ** |
| 1455.7500 | -13.0000 | -54.1300 * | -53.6600 * |
| 1560.4875 | -13.0000 | -61.7410 ** | -61.6135 ** |
| 1733.8750 | -13.0000 | -60.0902 ** | -60.8129 ** |
| | | | |
| | | | |

**RADIATED SPURIOUS EMISSIONS**




**The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.**
**Motorola Penang EMC Lab - Test Performed by: Nazrin&Fendi** **Wed, 25 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

## 6.11.3. Test Result (Digital)

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**

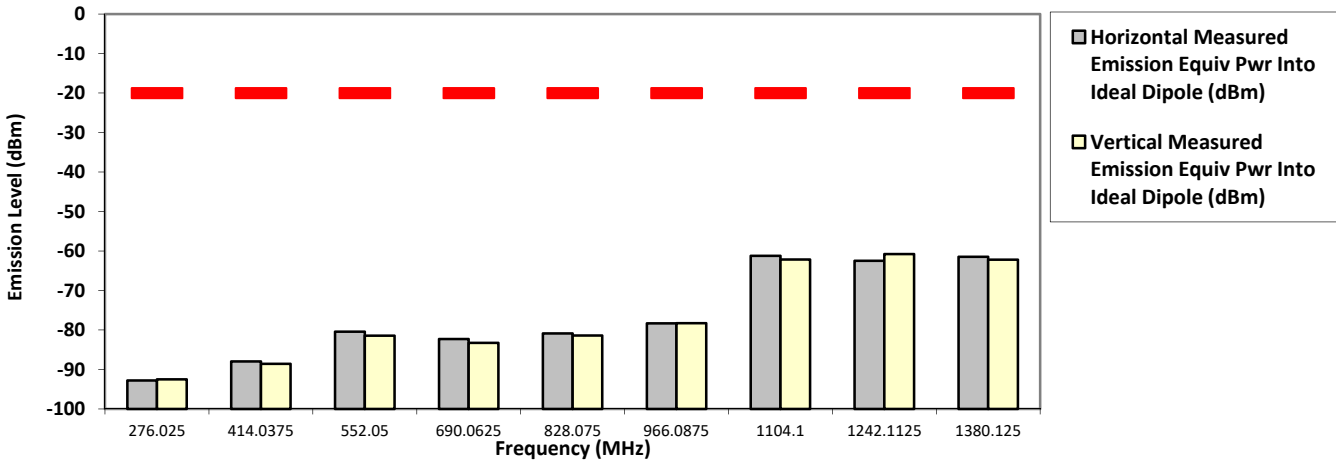
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**

**Test Mode: TX APCO Digital C4FM**

**138.012500 MHz** **12.5 kHz** **120.000 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 | -92.7857 ** | -92.4969 ** |
| 414.0375 | -20.0000 | -87.9931 ** | -88.5847 ** |
| 552.0500 | -20.0000 | -80.4312 ** | -81.4549 ** |
| 690.0625 | -20.0000 | -82.2863 ** | -83.2832 ** |
| 828.0750 | -20.0000 | -80.8928 ** | -81.4300 ** |
| 966.0875 | -20.0000 | -78.3383 ** | -78.3013 ** |
| 1104.1000 | -20.0000 | -61.2417 ** | -62.1653 ** |
| 1242.1125 | -20.0000 | -62.5037 ** | -60.8066 ** |
| 1380.1250 | -20.0000 | -61.4965 ** | -62.2089 ** |
| | | | |
| | | | |

**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&Fendi** **Sat, 28 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

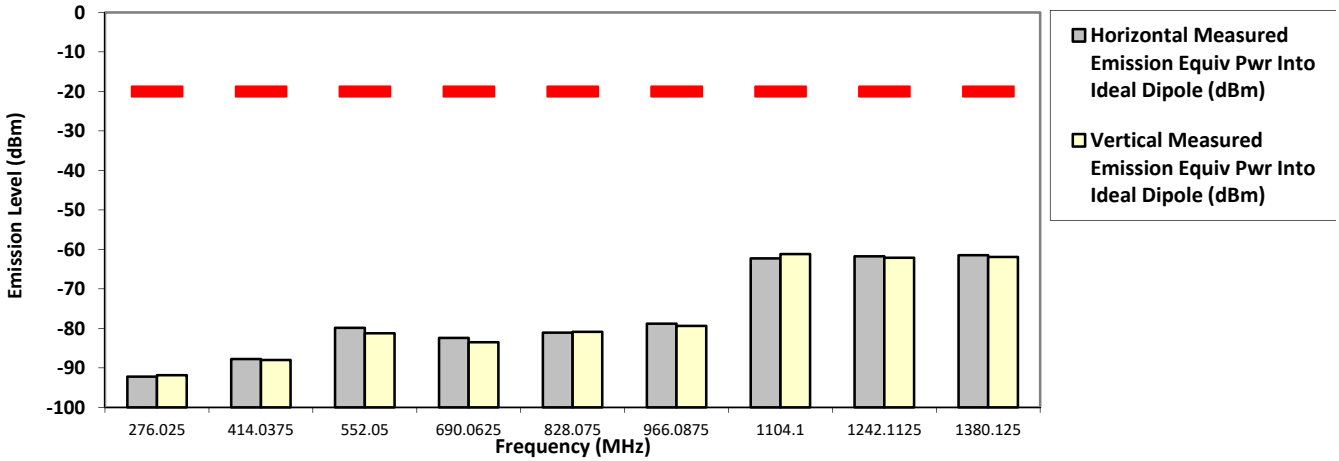
| Passed Results | Marginal Results | Failed Results |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital C4FM**
**138.012500 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) |
|---|---|---|---|
| 276.0250 | -20.0000 | -92.2374 ** | -91.8799 ** |
| 414.0375 | -20.0000 | -87.7829 ** | -87.9993 ** |
| 552.0500 | -20.0000 | -79.8566 ** | -81.2598 ** |
| 690.0625 | -20.0000 | -82.4165 ** | -83.5176 ** |
| 828.0750 | -20.0000 | -81.0847 ** | -80.8760 ** |
| 966.0875 | -20.0000 | -78.7985 ** | -79.3765 ** |
| 1104.1000 | -20.0000 | -62.2968 ** | -61.2022 ** |
| 1242.1125 | -20.0000 | -61.7581 ** | -62.1302 ** |
| 1380.1250 | -20.0000 | -61.4598 ** | -61.9168 ** |
| | | | |
| | | | |

**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&Fendi** **Sat, 28 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

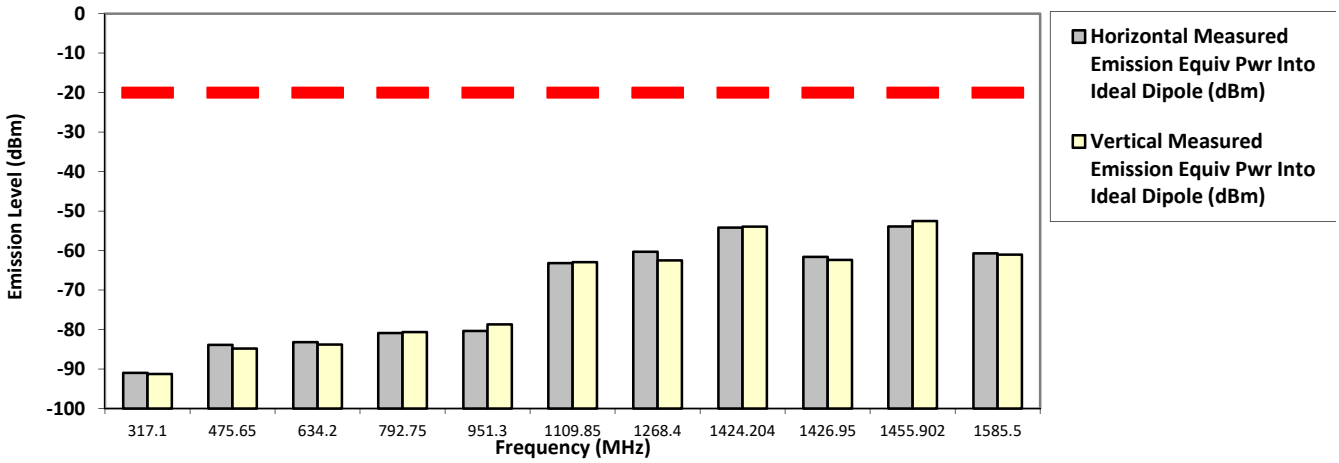
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital C4FM**
**158.550000 MHz** **12.5 kHz** **120.000 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 | -90.9650 ** | -91.2741 ** |
| 475.6500 | -20.0000 | -83.8874 ** | -84.8158 ** |
| 634.2000 | -20.0000 | -83.1893 ** | -83.8131 ** |
| 792.7500 | -20.0000 | -80.8980 ** | -80.6388 ** |
| 951.3000 | -20.0000 | -80.3560 ** | -78.6794 ** |
| 1109.8500 | -20.0000 | -63.1847 ** | -62.9368 ** |
| 1268.4000 | -20.0000 | -60.3127 ** | -62.4867 ** |
| 1424.2040 | -20.0000 | -54.1900 * | -53.9600 * |
| 1426.9500 | -20.0000 | -61.5882 ** | -62.3488 ** |
| 1455.9020 | -20.0000 | -53.9000 * | -52.5100 * |
| 1585.5000 | -20.0000 | -60.7232 ** | -61.0362 ** |
| | | | |

**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&Fendi** **Sat, 28 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

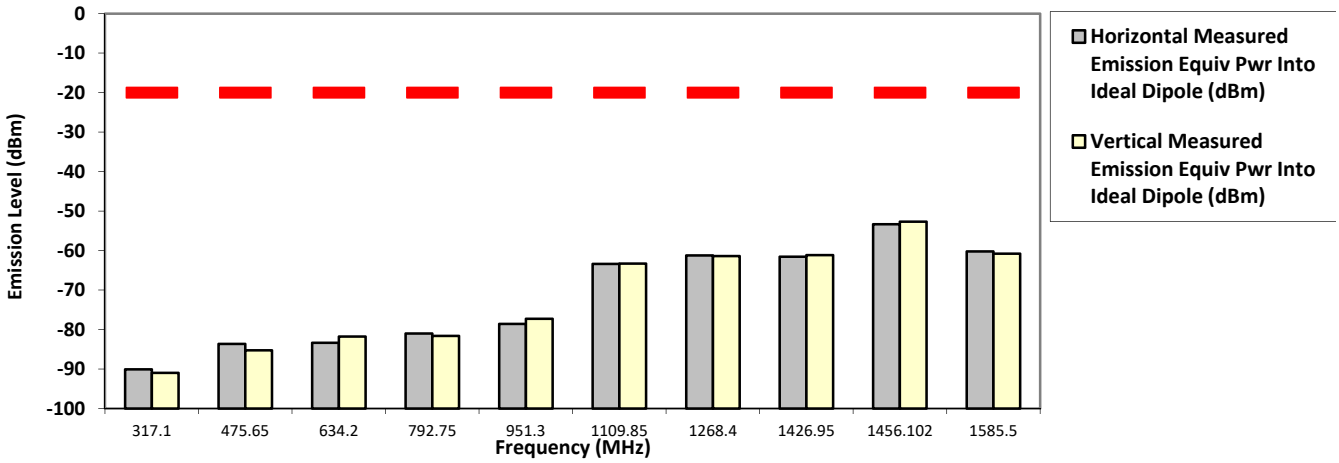
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital C4FM**
**158.550000 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 | -90.0735 ** | -90.9773 ** |
| 475.6500 | -20.0000 | -83.6527 ** | -85.2587 ** |
| 634.2000 | -20.0000 | -83.3503 ** | -81.7916 ** |
| 792.7500 | -20.0000 | -81.0033 ** | -81.6332 ** |
| 951.3000 | -20.0000 | -78.5759 ** | -77.2865 ** |
| 1109.8500 | -20.0000 | -63.3892 ** | -63.3083 ** |
| 1268.4000 | -20.0000 | -61.2389 ** | -61.4059 ** |
| 1426.9500 | -20.0000 | -61.5586 ** | -61.1516 ** |
| 1456.1020 | -20.0000 | -53.3500 * | -52.6800 * |
| 1585.5000 | -20.0000 | -60.2348 ** | -60.7776 ** |
| | | | |
| | | | |

**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&Fendi** **Sat, 28 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

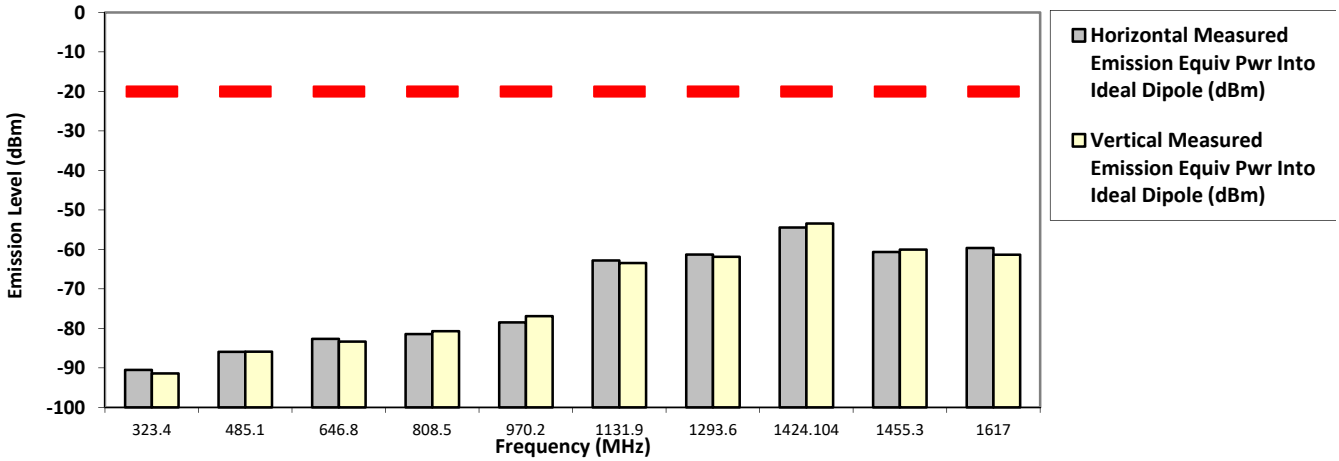
| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital C4FM**
**161.700000 MHz** **12.5 kHz** **120.000 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 | -90.5279 ** | -91.4362 ** |
| 485.1000 | -20.0000 | -85.9372 ** | -85.9185 ** |
| 646.8000 | -20.0000 | -82.6714 ** | -83.3704 ** |
| 808.5000 | -20.0000 | -81.4456 ** | -80.7199 ** |
| 970.2000 | -20.0000 | -78.4781 ** | -76.9255 ** |
| 1131.9000 | -20.0000 | -62.8327 ** | -63.4662 ** |
| 1293.6000 | -20.0000 | -61.3330 ** | -61.8846 ** |
| 1424.1040 | -20.0000 | -54.4700 * | -53.4700 * |
| 1455.3000 | -20.0000 | -60.6817 ** | -60.0510 ** |
| 1617.0000 | -20.0000 | -59.6661 ** | -61.3653 ** |
| | | | |

**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&Fendi** **Sat, 28 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

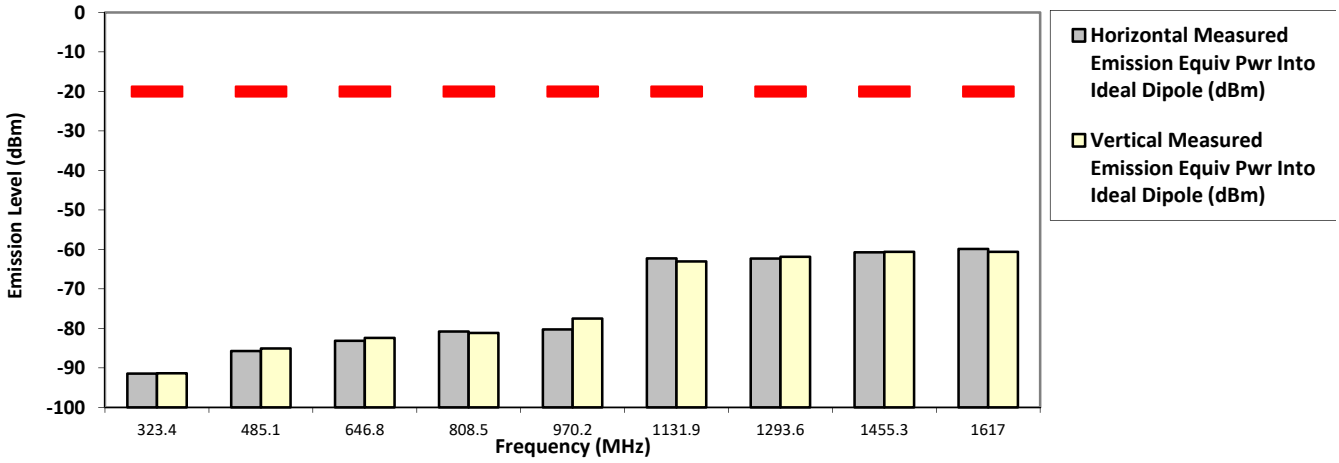
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital C4FM**
**161.700000 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 | -91.4562 ** | -91.3647 ** |
| 485.1000 | -20.0000 | -85.7548 ** | -85.1038 ** |
| 646.8000 | -20.0000 | -83.1700 ** | -82.4325 ** |
| 808.5000 | -20.0000 | -80.7845 ** | -81.1606 ** |
| 970.2000 | -20.0000 | -80.2867 ** | -77.5401 ** |
| 1131.9000 | -20.0000 | -62.2768 ** | -63.0764 ** |
| 1293.6000 | -20.0000 | -62.3369 ** | -61.8961 ** |
| 1455.3000 | -20.0000 | -60.7454 ** | -60.6279 ** |
| 1617.0000 | -20.0000 | -59.8877 ** | -60.6281 ** |
| | | | |
| | | | |

**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&Fendi** **Wed, 2 Dec, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

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

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital C4FM**

**173.387500 MHz** **12.5 kHz** **120.000 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) |
|---|---|---|---|
| 346.7750 | -20.0000 | -90.7151 ** | -90.6789 ** |
| 520.1625 | -20.0000 | -84.5819 ** | -84.7690 ** |
| 693.5500 | -20.0000 | -81.3360 ** | -83.1956 ** |
| 866.9375 | -20.0000 | -80.2208 ** | -79.2387 ** |
| 1040.3250 | -20.0000 | -63.5950 ** | -62.5929 ** |
| 1213.7125 | -20.0000 | -61.7903 ** | -60.8645 ** |
| 1387.1000 | -20.0000 | -62.3407 ** | -60.9428 ** |
| 1424.0040 | -20.0000 | -54.1800 * | -52.9000 * |
| 1456.3520 | -20.0000 | -54.3000 * | -53.8600 * |
| 1560.4875 | -20.0000 | -59.3372 ** | -61.1662 ** |
| 1733.8750 | -20.0000 | -59.4325 ** | -60.9736 ** |
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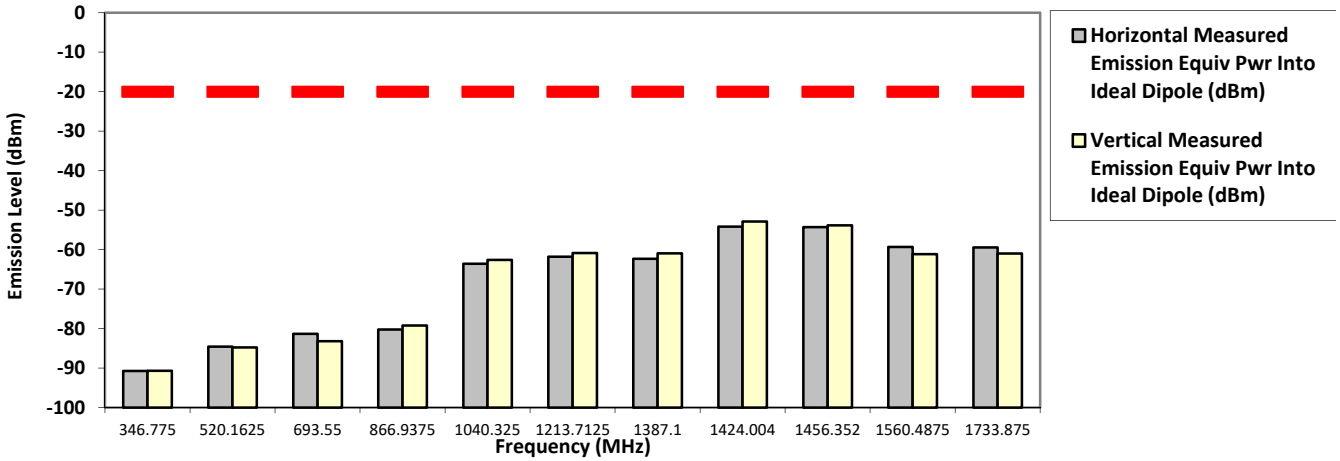
**RADIATED SPURIOUS EMISSIONS**




**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&Fendi** **Sat, 28 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

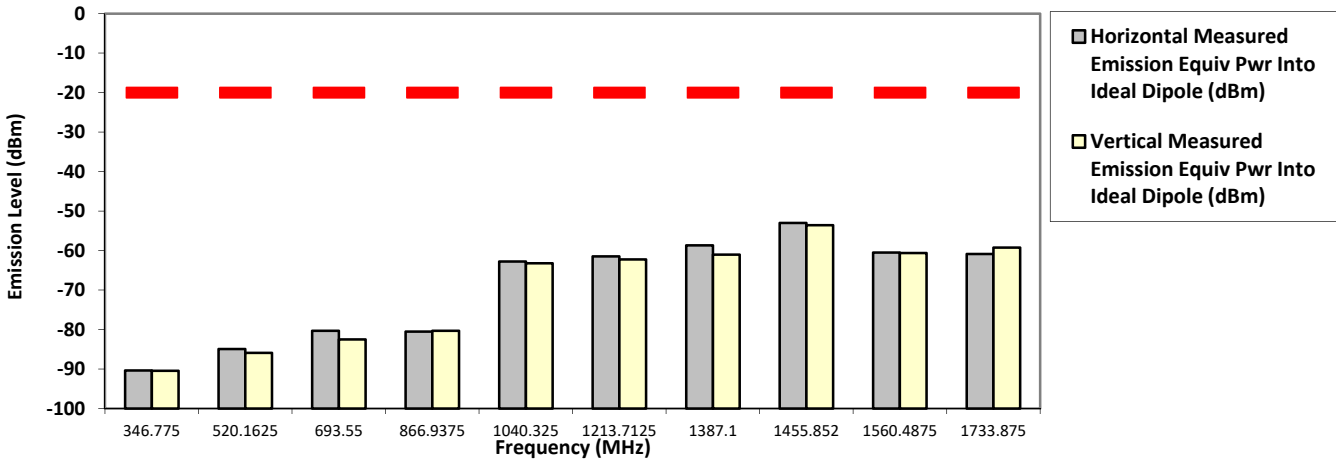
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital C4FM**
**173.387500 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) |
|---|---|---|---|
| 346.7750 | -20.0000 | -90.3800 ** | -90.4263 ** |
| 520.1625 | -20.0000 | -84.9372 ** | -85.8948 ** |
| 693.5500 | -20.0000 | -80.3259 ** | -82.4861 ** |
| 866.9375 | -20.0000 | -80.5335 ** | -80.3194 ** |
| 1040.3250 | -20.0000 | -62.7925 ** | -63.2153 ** |
| 1213.7125 | -20.0000 | -61.4705 ** | -62.2402 ** |
| 1387.1000 | -20.0000 | -58.6938 ** | -61.0208 ** |
| 1455.8520 | -20.0000 | -53.0100 * | -53.5800 * |
| 1560.4875 | -20.0000 | -60.5029 ** | -60.6457 ** |
| 1733.8750 | -20.0000 | -60.8682 ** | -59.2652 ** |
| | | | |
| | | | |

**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&Fendi** **Sat, 28 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

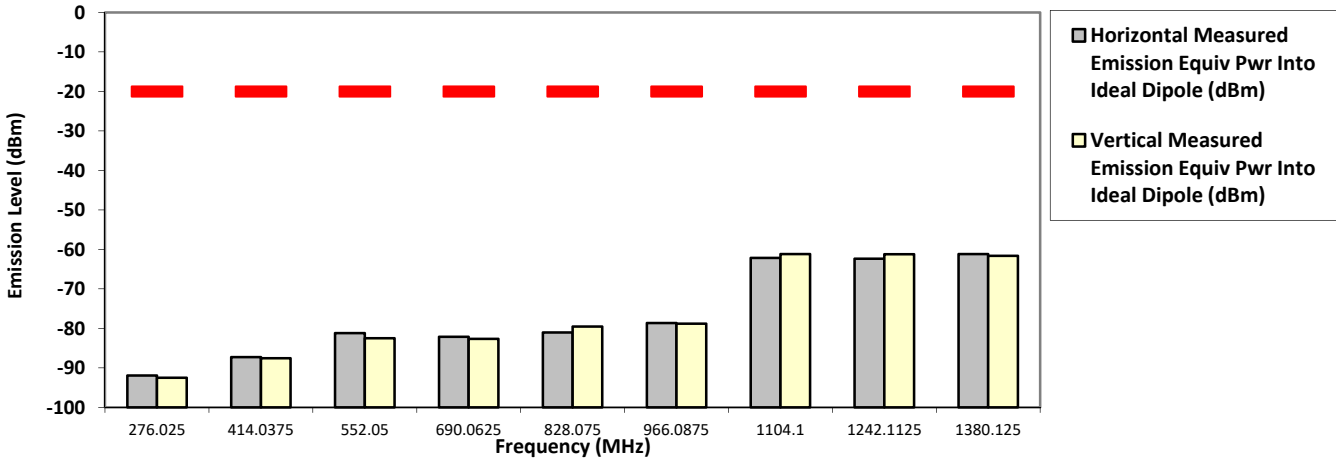
| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital Phase II**
**138.012500 MHz** **12.5 kHz** **120.000 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 | -91.9530 ** | -92.5153 ** |
| 414.0375 | -20.0000 | -87.3007 ** | -87.5823 ** |
| 552.0500 | -20.0000 | -81.2038 ** | -82.4965 ** |
| 690.0625 | -20.0000 | -82.1253 ** | -82.6562 ** |
| 828.0750 | -20.0000 | -81.0333 ** | -79.5424 ** |
| 966.0875 | -20.0000 | -78.6475 ** | -78.8006 ** |
| 1104.1000 | -20.0000 | -62.1544 ** | -61.2007 ** |
| 1242.1125 | -20.0000 | -62.3609 ** | -61.2299 ** |
| 1380.1250 | -20.0000 | -61.1885 ** | -61.6212 ** |
| | | | |
| | | | |

**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&Fendi** **Sun, 29 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

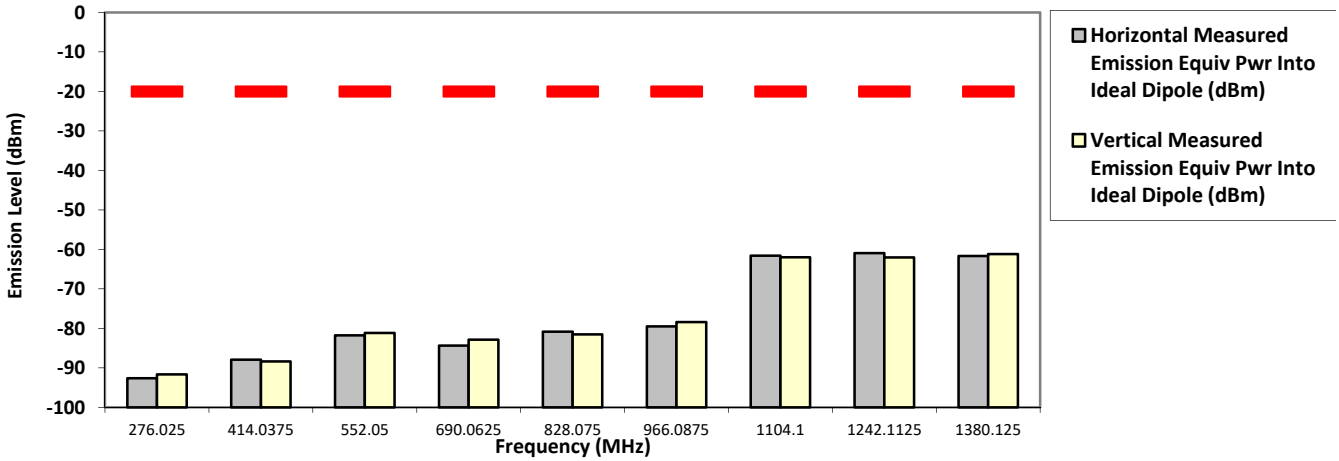
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital Phase II**
**138.012500 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) |
|---|---|---|---|
| 276.0250 | -20.0000 | -92.6174 ** | -91.6588 ** |
| 414.0375 | -20.0000 | -87.9172 ** | -88.3882 ** |
| 552.0500 | -20.0000 | -81.7751 ** | -81.1547 ** |
| 690.0625 | -20.0000 | -84.3719 ** | -82.8568 ** |
| 828.0750 | -20.0000 | -80.8415 ** | -81.5486 ** |
| 966.0875 | -20.0000 | -79.4903 ** | -78.3997 ** |
| 1104.1000 | -20.0000 | -61.5842 ** | -62.0089 ** |
| 1242.1125 | -20.0000 | -60.9669 ** | -62.0431 ** |
| 1380.1250 | -20.0000 | -61.6901 ** | -61.1813 ** |
| | | | |
| | | | |

**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&Fendi** **Sun, 29 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

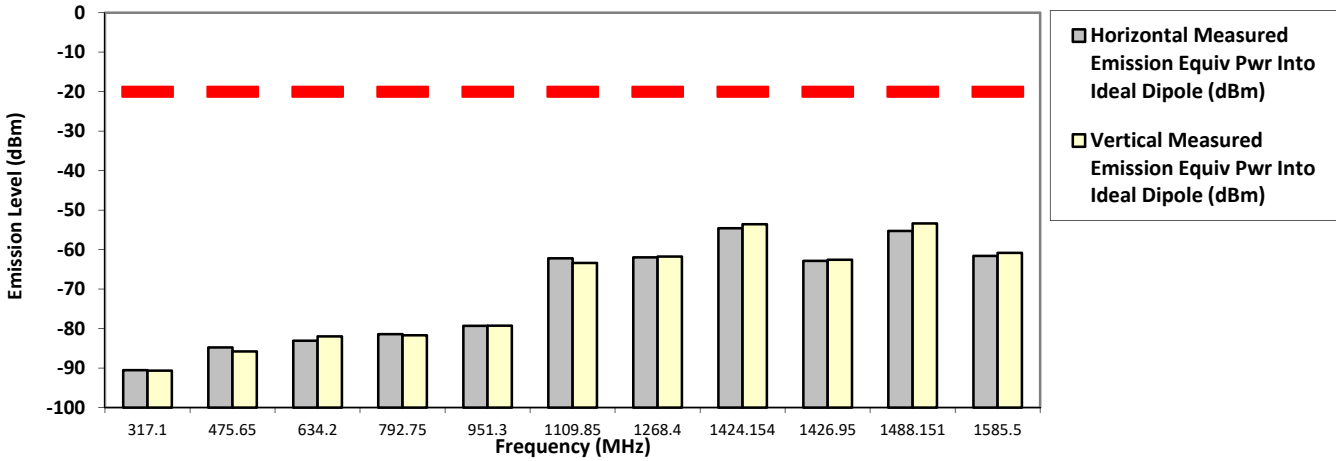
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital Phase II**
**158.550000 MHz** **12.5 kHz** **120.000 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 | -90.5413 ** | -90.6289 ** |
| 475.6500 | -20.0000 | -84.7806 ** | -85.7728 ** |
| 634.2000 | -20.0000 | -83.0647 ** | -81.9868 ** |
| 792.7500 | -20.0000 | -81.4250 ** | -81.7072 ** |
| 951.3000 | -20.0000 | -79.3077 ** | -79.2609 ** |
| 1109.8500 | -20.0000 | -62.1956 ** | -63.3737 ** |
| 1268.4000 | -20.0000 | -61.9474 ** | -61.7514 ** |
| 1424.1540 | -20.0000 | -54.6000 * | -53.5600 * |
| 1426.9500 | -20.0000 | -62.8654 ** | -62.5899 ** |
| 1488.1510 | -20.0000 | -55.2600 * | -53.3800 * |
| 1585.5000 | -20.0000 | -61.5831 ** | -60.8284 ** |
| | | | |
| | | | |

**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&Fendi** **Sun, 29 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

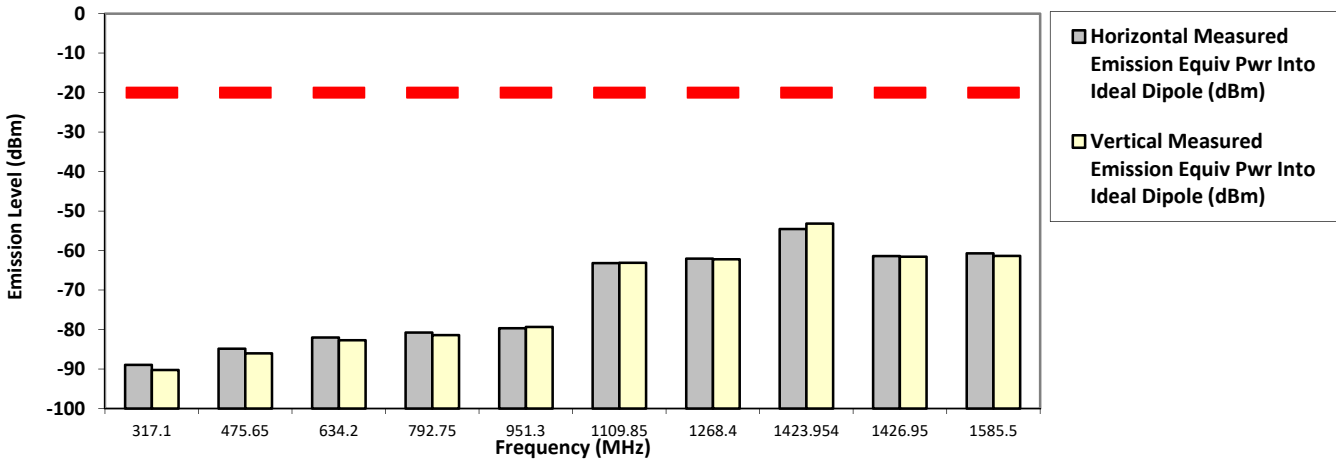
***Remarks:*** Passed Results | **Marginal Results** | **Failed Results**

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital Phase II**
**158.550000 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 | -88.9550 ** | -90.2270 ** |
| 475.6500 | -20.0000 | -84.8512 ** | -86.0173 ** |
| 634.2000 | -20.0000 | -82.0031 ** | -82.7014 ** |
| 792.7500 | -20.0000 | -80.7665 ** | -81.4113 ** |
| 951.3000 | -20.0000 | -79.6870 ** | -79.3451 ** |
| 1109.8500 | -20.0000 | -63.1753 ** | -63.1020 ** |
| 1268.4000 | -20.0000 | -62.0622 ** | -62.1906 ** |
| 1423.9540 | -20.0000 | -54.5500 * | -53.1700 * |
| 1426.9500 | -20.0000 | -61.3767 ** | -61.5585 ** |
| 1585.5000 | -20.0000 | -60.6924 ** | -61.3410 ** |
| | | | |
| | | | |

**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&Fendi** **Sun, 29 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital Phase II**
**161.700000 MHz** **12.5 kHz** **120.000 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 | -89.4053 ** | -91.2270 ** |
| 485.1000 | -20.0000 | -86.1572 ** | -85.8671 ** |
| 646.8000 | -20.0000 | -82.5486 ** | -82.3179 ** |
| 808.5000 | -20.0000 | -80.5760 ** | -82.1004 ** |
| 970.2000 | -20.0000 | -78.7900 ** | -78.2828 ** |
| 1131.9000 | -20.0000 | -62.4494 ** | -62.0329 ** |
| 1293.6000 | -20.0000 | -61.5991 ** | -62.1109 ** |
| 1455.3000 | -20.0000 | -61.3494 ** | -60.9420 ** |
| 1617.0000 | -20.0000 | -61.1040 ** | -60.6333 ** |
| | | | |
| | | | |
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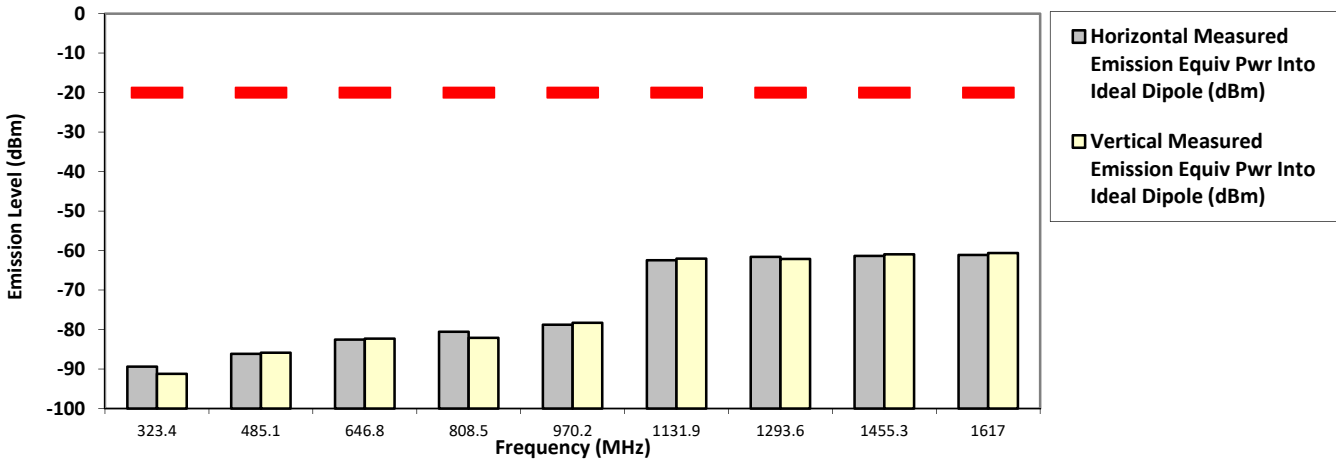
**RADIATED SPURIOUS EMISSIONS**




**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&Fendi** **Wed, 2 Dec, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

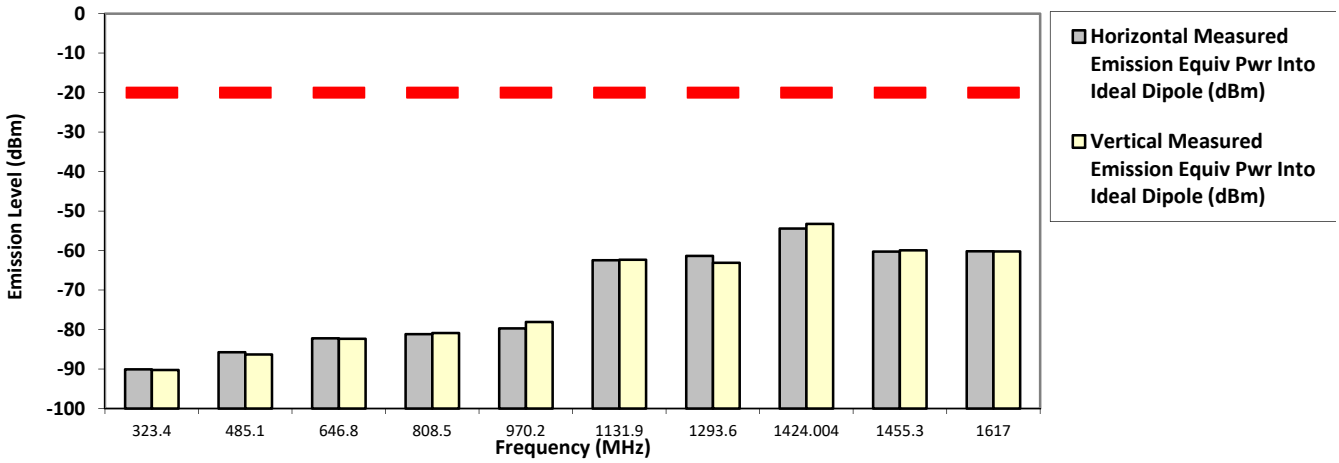
| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital Phase II**
**161.700000 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 | -90.0707 ** | -90.2331 ** |
| 485.1000 | -20.0000 | -85.7663 ** | -86.3005 ** |
| 646.8000 | -20.0000 | -82.2097 ** | -82.3465 ** |
| 808.5000 | -20.0000 | -81.1548 ** | -80.8726 ** |
| 970.2000 | -20.0000 | -79.7084 ** | -78.0792 ** |
| 1131.9000 | -20.0000 | -62.4476 ** | -62.3326 ** |
| 1293.6000 | -20.0000 | -61.3358 ** | -63.1066 ** |
| 1424.0040 | -20.0000 | -54.4300 * | -53.2700 * |
| 1455.3000 | -20.0000 | -60.2781 ** | -59.9280 ** |
| 1617.0000 | -20.0000 | -60.1910 ** | -60.2188 ** |
| | | | |
| | | | |

**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&Fendi** **Sun, 29 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: APX8500** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**

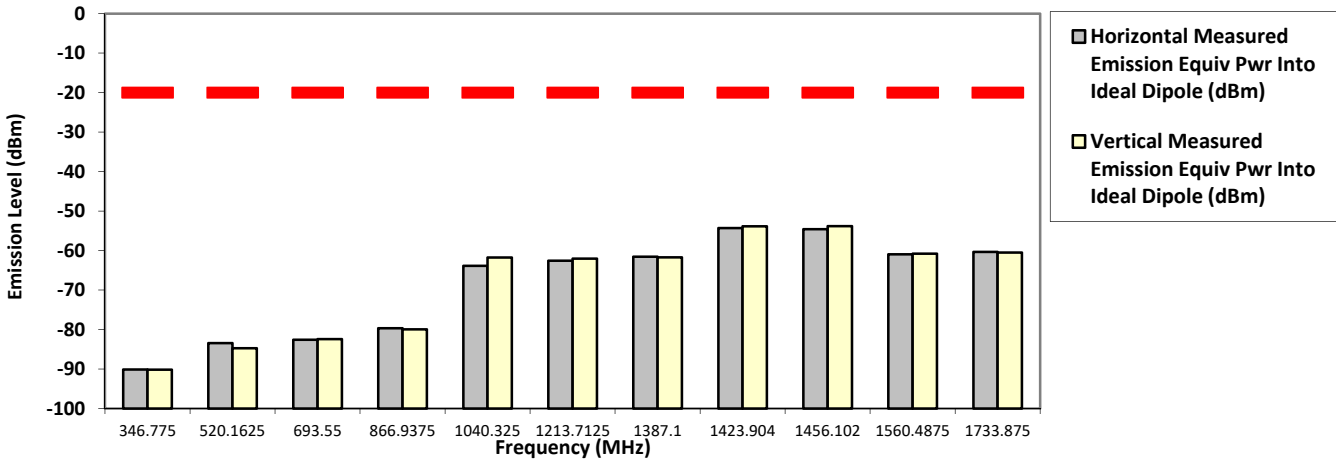
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**

**Test Mode: TX APCO Digital Phase II**

**173.387500 MHz** **12.5 kHz** **120.000 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) |
|---|---|---|---|
| 346.7750 | -20.0000 | -90.1303 ** | -90.1588 ** |
| 520.1625 | -20.0000 | -83.4378 ** | -84.7533 ** |
| 693.5500 | -20.0000 | -82.5881 ** | -82.4341 ** |
| 866.9375 | -20.0000 | -79.6552 ** | -79.9615 ** |
| 1040.3250 | -20.0000 | -63.8695 ** | -61.7636 ** |
| 1213.7125 | -20.0000 | -62.5765 ** | -62.0408 ** |
| 1387.1000 | -20.0000 | -61.5567 ** | -61.7323 ** |
| 1423.9040 | -20.0000 | -54.2900 * | -53.8700 * |
| 1456.1020 | -20.0000 | -54.5900 * | -53.8000 * |
| 1560.4875 | -20.0000 | -60.9695 ** | -60.7829 ** |
| 1733.8750 | -20.0000 | -60.3265 ** | -60.5217 ** |
| | | | |

**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&Fendi** **Sun, 29 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

***Remarks:***

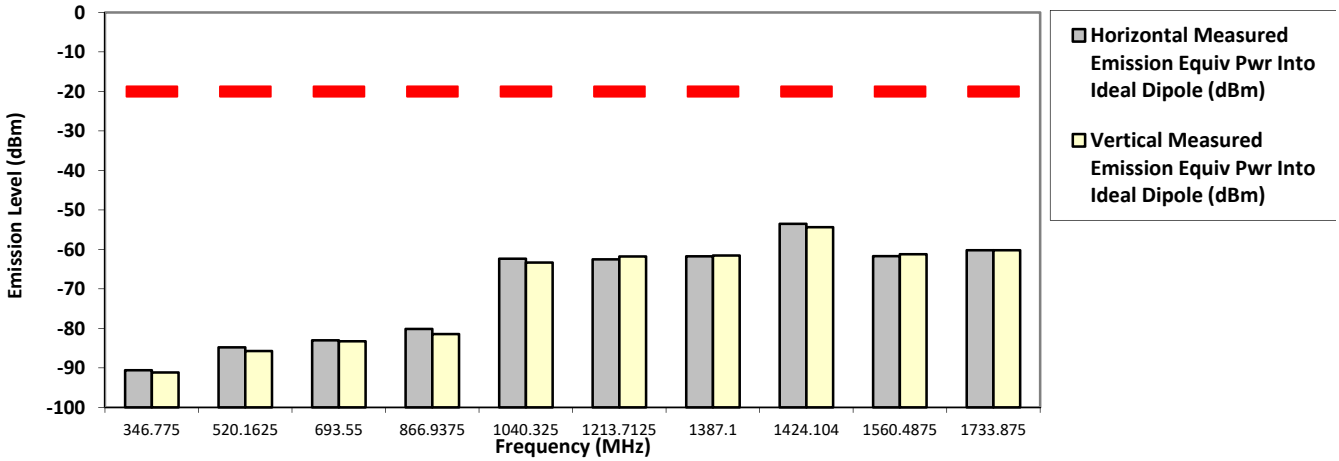
| Passed Results | **Marginal Results** | **Failed Results** |
|---|---|---|

**SAC Transmitter Radiated Emission:**

**Model Number: M37TXS9PW1AN** **S/N: PHUW1001H-CF2** **SR:08878-EMC-00042**
**Battery Part No: NA** **Accy Part No: HMN4079G-C2, 3466-HKN6163C-1, HKN6170B-CF1, 657-HKN6188B, PMHN4194A-CF9, PMUN1057B-CF2, AN000163A01**
**Test Mode: TX APCO Digital Phase II**
**173.387500 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) |
|---|---|---|---|
| 346.7750 | -20.0000 | -90.6208 ** | -91.1789 ** |
| 520.1625 | -20.0000 | -84.8141 ** | -85.7361 ** |
| 693.5500 | -20.0000 | -83.0326 ** | -83.2675 ** |
| 866.9375 | -20.0000 | -80.1480 ** | -81.4564 ** |
| 1040.3250 | -20.0000 | -62.3580 ** | -63.3547 ** |
| 1213.7125 | -20.0000 | -62.5504 ** | -61.7927 ** |
| 1387.1000 | -20.0000 | -61.7691 ** | -61.5609 ** |
| 1424.1040 | -20.0000 | -53.5400 * | -54.3700 * |
| 1560.4875 | -20.0000 | -61.7182 ** | -61.2168 ** |
| 1733.8750 | -20.0000 | -60.2031 ** | -60.2109 ** |
| | | | |

**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&Fendi** **Sun, 29 Nov, 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): 23.9 Hum(%RH): 69.9**

**System MU: 4.03 dB**

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

### 6.11.4. Test Limit

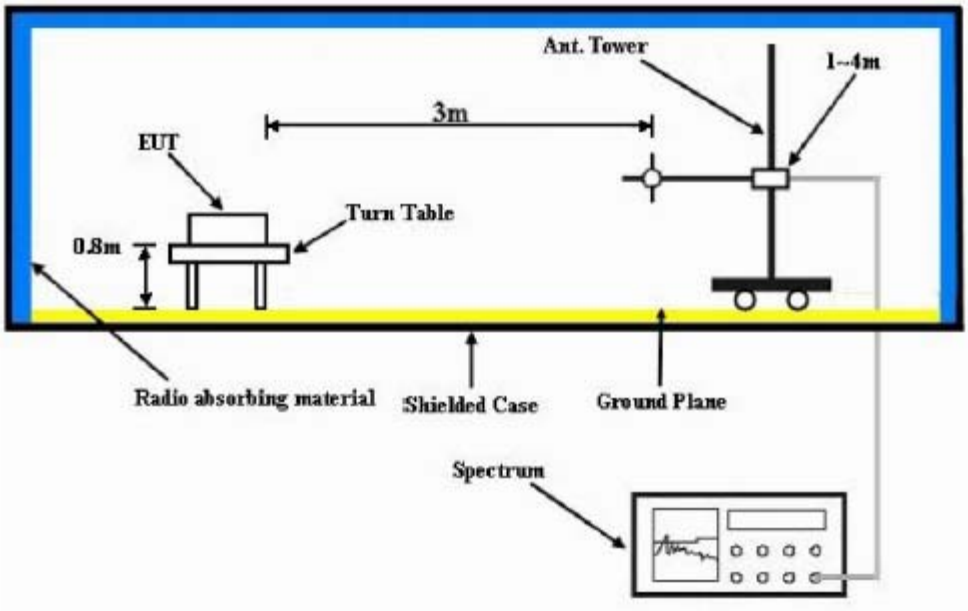
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

| Channel Spacing | Part 22 | Part 24D | Part 74 | Part 80 | Part 90 (UHF, VHF, 800, 900) | Part 90 (700) |
|---|---|---|---|---|---|---|
| 12.5kHz | 43 + 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

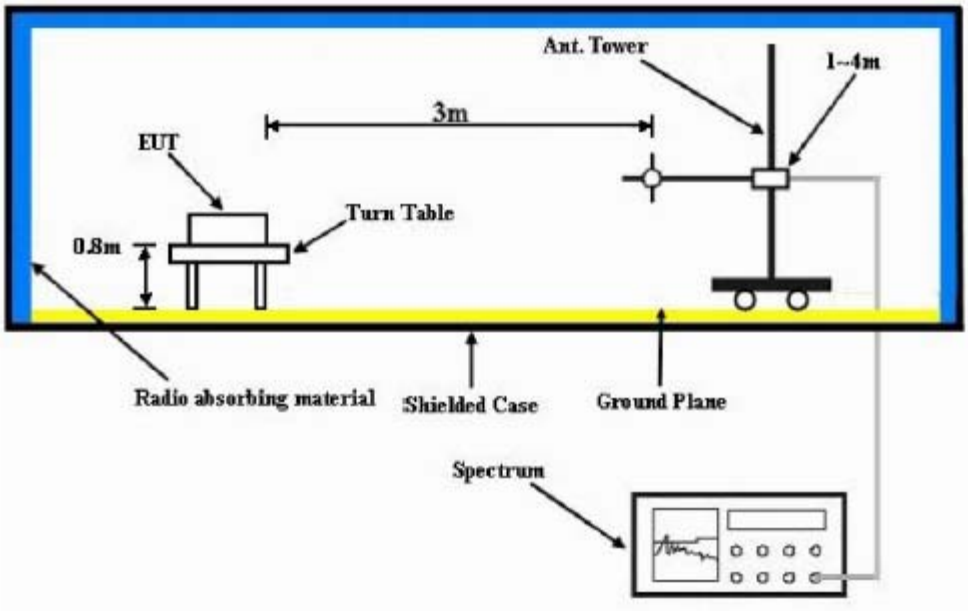
Not Applicable

### 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 ~**