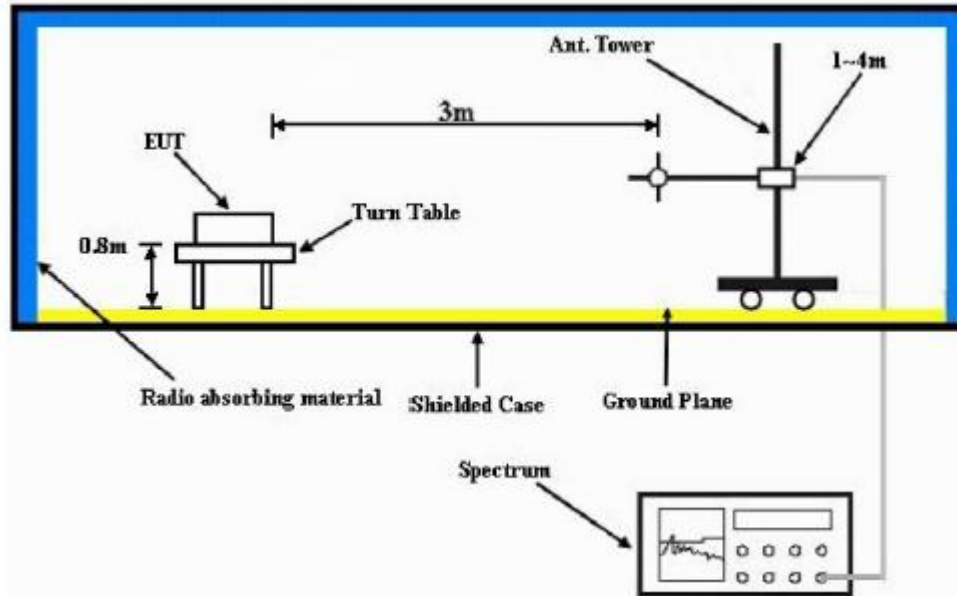


## 1.6. Radiated Spurious Emission

### 1.6.1. Test Setup



- 1) The spectrum setting for scanning Radiated Emission below 1 GHz is RBW = 100 kHz, VBW = 300 kHz and above 1 GHz is RBW = 1MHz, VBW = 3MHz. Detector mode is positive peak.
- 2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the Turn Table at 0.8m height for below 1Ghz measurement and at 1.5m height for above 1GHz measurement, 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 EUT 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.

### 1.6.2. Test Limit

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10} (P)$  dB. The emission limit equal to -13dBm.

### 1.6.3. Radiated Spurious Emission - LTE Band 4 (1710-1755MHz)

**SAC Transmitter Radiated Emission:**

Model Number: H35UCT9PW8AN

S/N: 022TYP0004

SR:26977-EMC-00108

Battery Part No: PMNN4817A

Accy Part No: AN000411A01

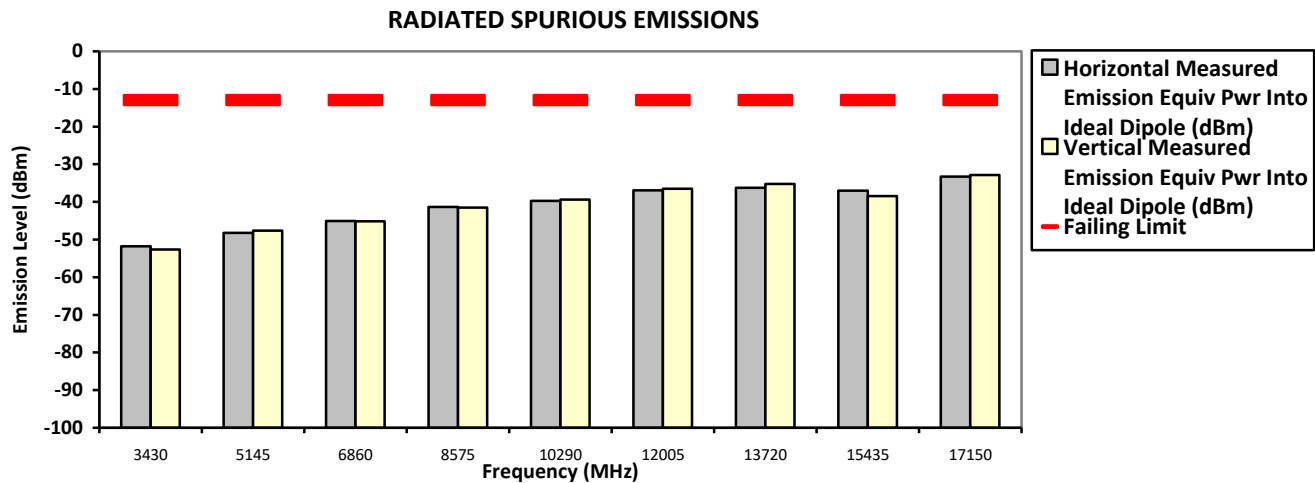
Test Mode: TX LTE (Band 4) X-Plane

1715.000000 MHz(Low)

Bandwidth 10MHz

0.252 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)
3430.0000	-13.0000	-51.7879 **	-52.6732 **
5145.0000	-13.0000	-48.2352 **	-47.6549 **
6860.0000	-13.0000	-45.0780 **	-45.1950 **
8575.0000	-13.0000	-41.3561 **	-41.5049 **
10290.0000	-13.0000	-39.7273 **	-39.4016 **
12005.0000	-13.0000	-36.9165 **	-36.5094 **
13720.0000	-13.0000	-36.2643 **	-35.2095 **
15435.0000	-13.0000	-37.0434 **	-38.4559 **
17150.0000	-13.0000	-33.2509 **	-32.8220 **



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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks: Passed Results Marginal Results Failed Results

**SAC Transmitter Radiated Emission:**

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) X-Plane**

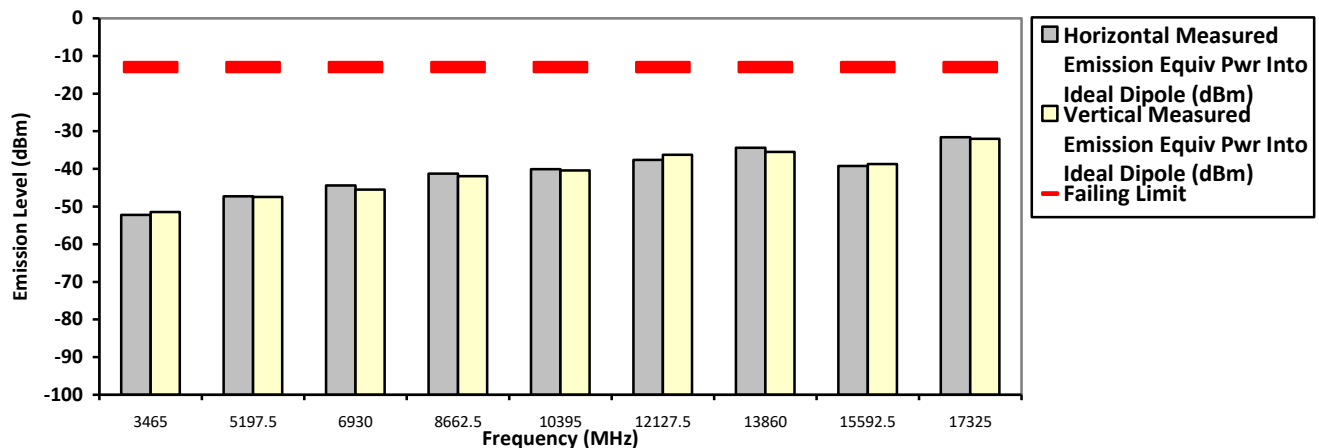
**1732.500000 MHz(Mid)**

**Bandwidth 10MHz**

**0.252 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)
3465.0000	-13.0000	-52.2062 **	-51.4302 **
5197.5000	-13.0000	-47.3101 **	-47.4667 **
6930.0000	-13.0000	-44.3587 **	-45.5207 **
8662.5000	-13.0000	-41.2431 **	-41.9014 **
10395.0000	-13.0000	-40.0568 **	-40.4117 **
12127.5000	-13.0000	-37.6157 **	-36.2659 **
13860.0000	-13.0000	-34.4056 **	-35.4474 **
15592.5000	-13.0000	-39.1864 **	-38.6748 **
17325.0000	-13.0000	-31.6165 **	-31.9862 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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

**SAC Transmitter Radiated Emission:**

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) X-Plane**

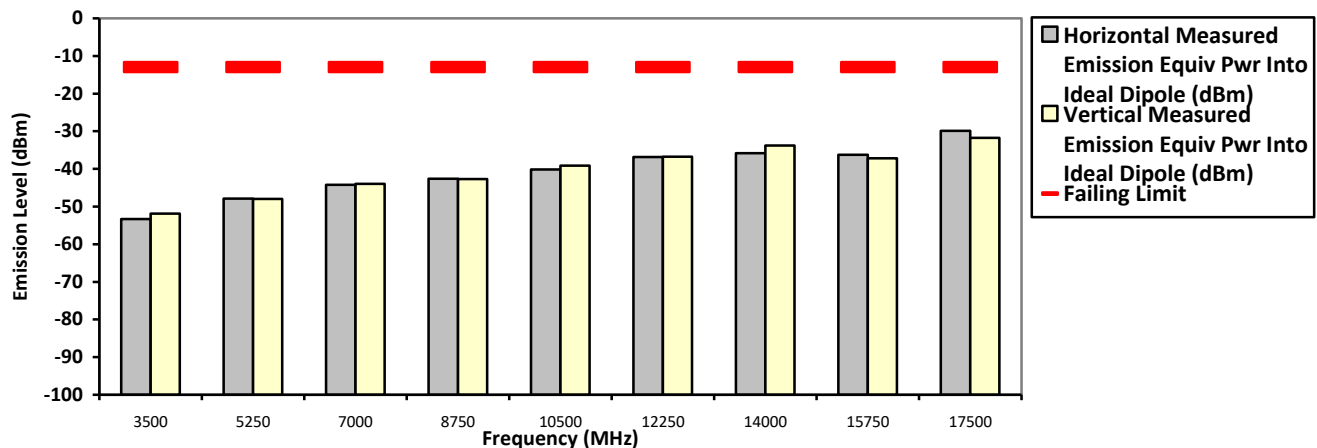
**1750.000000 MHz(High)**

**Bandwidth 10MHz**

**0.252 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)
3500.0000	-13.0000	-53.3085 **	-51.8892 **
5250.0000	-13.0000	-47.9125 **	-47.9639 **
7000.0000	-13.0000	-44.2347 **	-43.9955 **
8750.0000	-13.0000	-42.5846 **	-42.7363 **
10500.0000	-13.0000	-40.1411 **	-39.1175 **
12250.0000	-13.0000	-36.8310 **	-36.7838 **
14000.0000	-13.0000	-35.8534 **	-33.7539 **
15750.0000	-13.0000	-36.2145 **	-37.1881 **
17500.0000	-13.0000	-29.8641 **	-31.7300 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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

**SAC Transmitter Radiated Emission:**

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) Y-Plane**

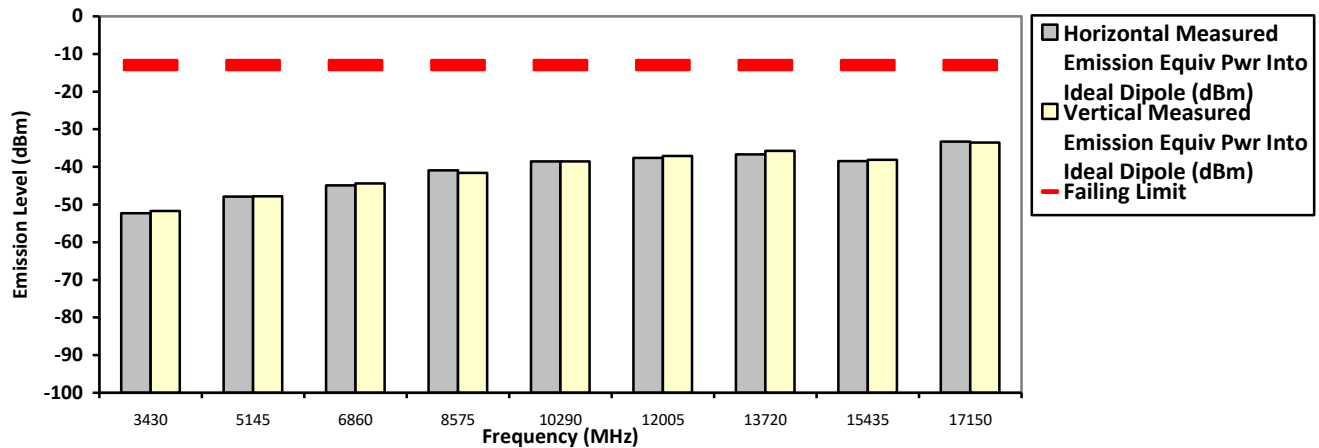
**1715.000000 MHz(Low)**

**Bandwidth 10MHz**

**0.252 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)
3430.0000	-13.0000	-52.2779 **	-51.6914 **
5145.0000	-13.0000	-47.8952 **	-47.7923 **
6860.0000	-13.0000	-44.9259 **	-44.4208 **
8575.0000	-13.0000	-40.9508 **	-41.6019 **
10290.0000	-13.0000	-38.5710 **	-38.5331 **
12005.0000	-13.0000	-37.5950 **	-37.1038 **
13720.0000	-13.0000	-36.7014 **	-35.7708 **
15435.0000	-13.0000	-38.4972 **	-38.1213 **
17150.0000	-13.0000	-33.2756 **	-33.5295 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) Y-Plane**

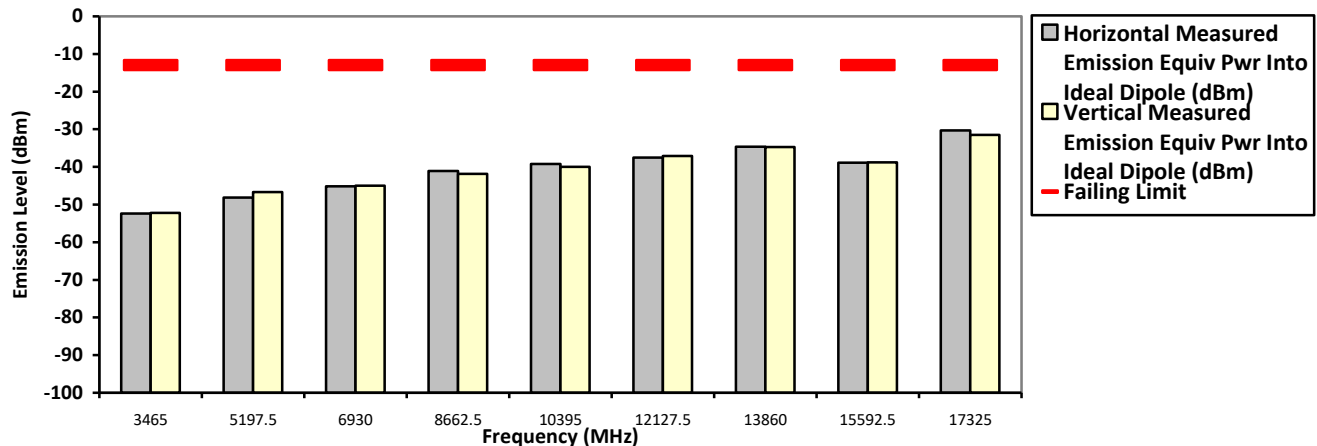
**1732.500000 MHz(Mid)**

**Bandwidth 10MHz**

**0.252 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)
3465.0000	-13.0000	-52.4068 **	-52.2395 **
5197.5000	-13.0000	-48.1412 **	-46.6469 **
6930.0000	-13.0000	-45.1484 **	-44.9743 **
8662.5000	-13.0000	-41.0573 **	-41.8182 **
10395.0000	-13.0000	-39.2585 **	-40.0054 **
12127.5000	-13.0000	-37.4906 **	-37.0641 **
13860.0000	-13.0000	-34.6070 **	-34.7342 **
15592.5000	-13.0000	-38.8540 **	-38.8139 **
17325.0000	-13.0000	-30.2802 **	-31.5247 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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



**SAC Transmitter Radiated Emission:**

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) Y-Plane**

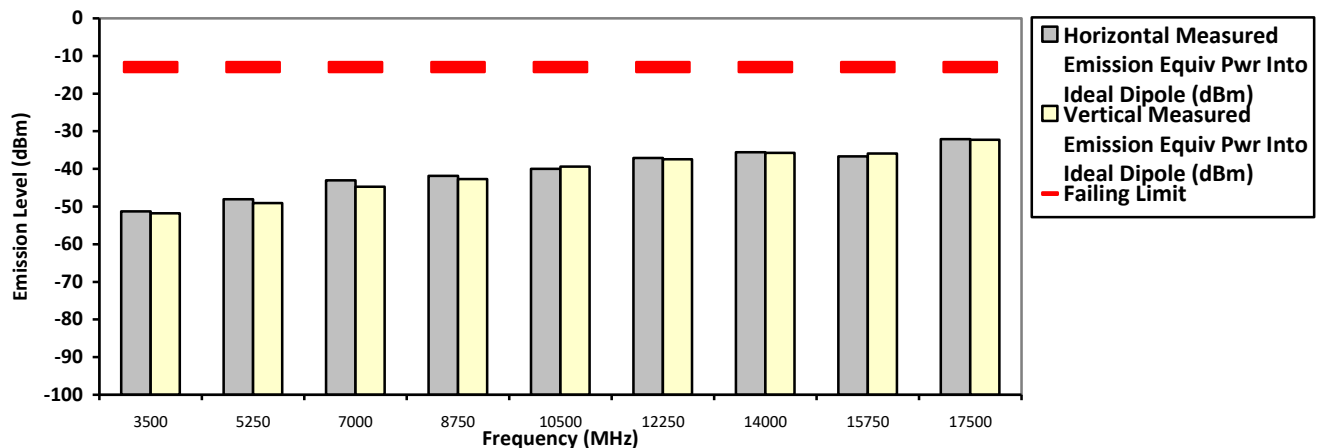
**1750.000000 MHz(High)**

**Bandwidth 10MHz**

**0.252 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)
3500.0000	-13.0000	-51.3110 **	-51.7890 **
5250.0000	-13.0000	-48.0123 **	-49.0545 **
7000.0000	-13.0000	-43.0060 **	-44.7275 **
8750.0000	-13.0000	-41.8208 **	-42.6677 **
10500.0000	-13.0000	-39.9635 **	-39.4020 **
12250.0000	-13.0000	-37.1242 **	-37.4490 **
14000.0000	-13.0000	-35.6059 **	-35.7569 **
15750.0000	-13.0000	-36.7052 **	-35.8818 **
17500.0000	-13.0000	-32.1243 **	-32.2389 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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

**SAC Transmitter Radiated Emission:**

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) Z-Plane**

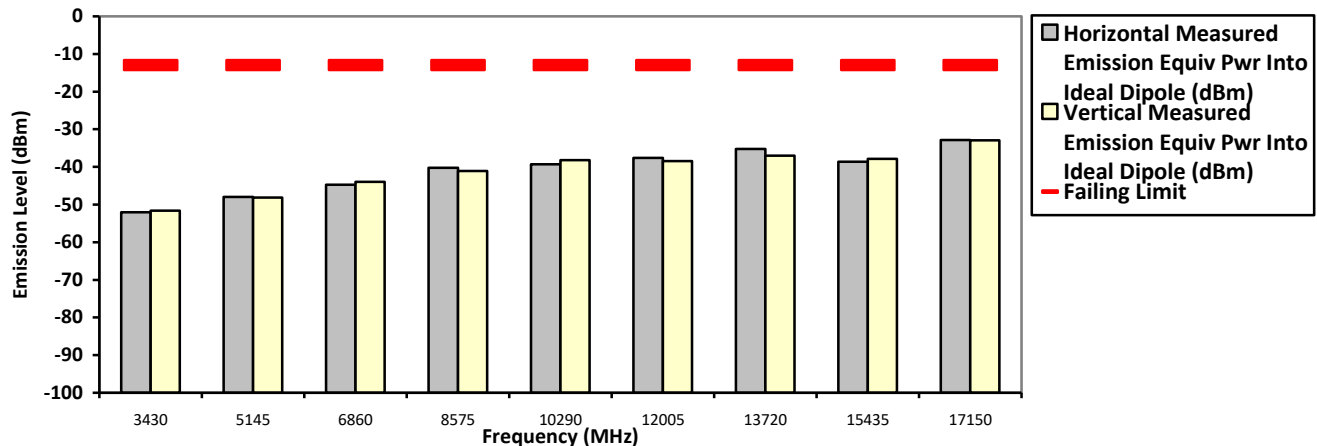
**1715.000000 MHz(Low)**

**Bandwidth 10MHz**

**0.252 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)
3430.0000	-13.0000	-52.0796 **	-51.5870 **
5145.0000	-13.0000	-47.9816 **	-48.1713 **
6860.0000	-13.0000	-44.7365 **	-43.9828 **
8575.0000	-13.0000	-40.2734 **	-41.0553 **
10290.0000	-13.0000	-39.2840 **	-38.2056 **
12005.0000	-13.0000	-37.6430 **	-38.4923 **
13720.0000	-13.0000	-35.2226 **	-37.0164 **
15435.0000	-13.0000	-38.6668 **	-37.8767 **
17150.0000	-13.0000	-32.8652 **	-32.9625 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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

**SAC Transmitter Radiated Emission:**

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) Z-Plane**

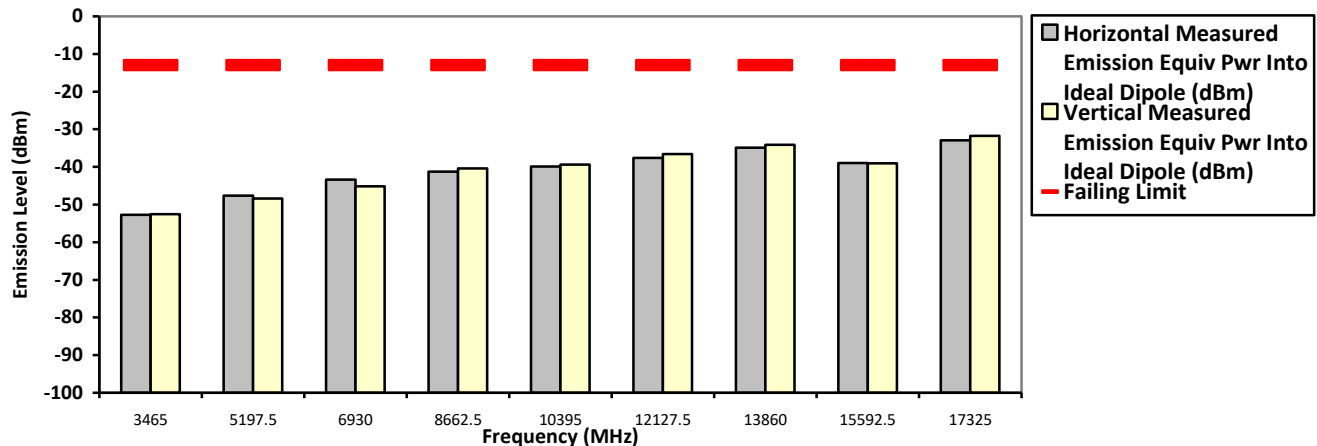
**1732.500000 MHz(Mid)**

**Bandwidth 10MHz**

**0.252 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)
3465.0000	-13.0000	-52.6849 **	-52.5720 **
5197.5000	-13.0000	-47.6514 **	-48.3955 **
6930.0000	-13.0000	-43.4105 **	-45.1739 **
8662.5000	-13.0000	-41.2683 **	-40.4149 **
10395.0000	-13.0000	-39.8736 **	-39.3950 **
12127.5000	-13.0000	-37.5641 **	-36.5696 **
13860.0000	-13.0000	-34.9262 **	-34.0986 **
15592.5000	-13.0000	-38.9378 **	-39.0753 **
17325.0000	-13.0000	-32.9392 **	-31.7442 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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

**SAC Transmitter Radiated Emission:**

**Model Number: H35UCT9PW8AN**

**S/N: 022TYP0004**

**SR:26977-EMC-00108**

**Battery Part No: PMNN4817A**

**Accy Part No: AN000411A01**

**Test Mode: TX LTE (Band 4) Z-Plane**

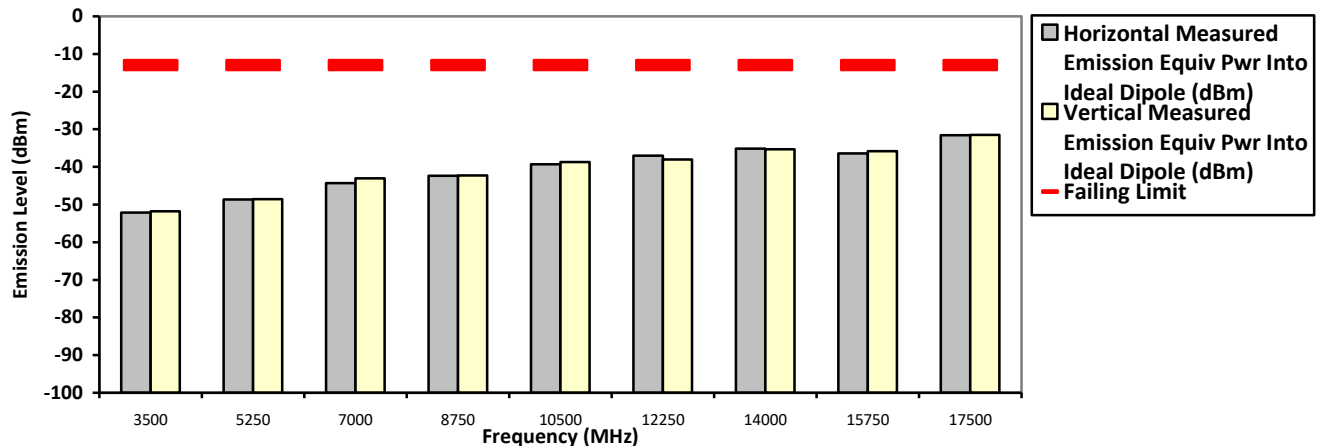
**1750.000000 MHz(High)**

**Bandwidth 10MHz**

**0.252 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)
3500.0000	-13.0000	-52.1582 **	-51.8046 **
5250.0000	-13.0000	-48.6121 **	-48.5618 **
7000.0000	-13.0000	-44.3115 **	-43.0209 **
8750.0000	-13.0000	-42.3640 **	-42.2422 **
10500.0000	-13.0000	-39.2870 **	-38.7008 **
12250.0000	-13.0000	-36.9833 **	-38.0002 **
14000.0000	-13.0000	-35.1372 **	-35.3243 **
15750.0000	-13.0000	-36.3959 **	-35.8530 **
17500.0000	-13.0000	-31.5674 **	-31.5122 **

**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

Tue, 16 Aug, 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

System MU: 4.03 dB

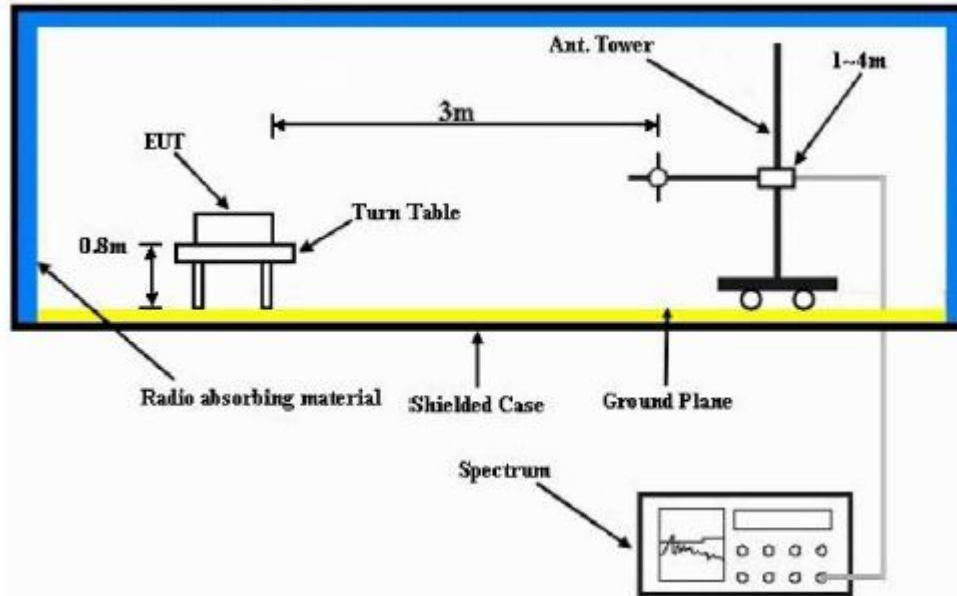
Temp(Deg): 23.5 Hum(%RH): 69.9

Remarks:

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

## 1.7. Equivalent Isotropically Radiated Power (EIRP)

### 1.7.1. Test Setup



- 1) The spectrum setting for scanning Radiated Emission below 1 GHz is RBW = 100 kHz, VBW = 300 kHz and above 1 GHz is RBW = 1MHz, VBW = 3MHz. Detector mode is RMS.
- 2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the Turn Table at 0.8m height for below 1GHz measurement and at 1.5m height for above 1GHz measurement, 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 EUT 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)  $EIRP = \text{“Read Value”} + \text{Measured substitution value.}$

### 1.7.2. Test Limit

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

### 1.7.3. Equivalent Isotropically Radiated Power (EIRP) - LTE Band 4 (1710-1755MHz)

**Not Performed.**

--End of Test Report--