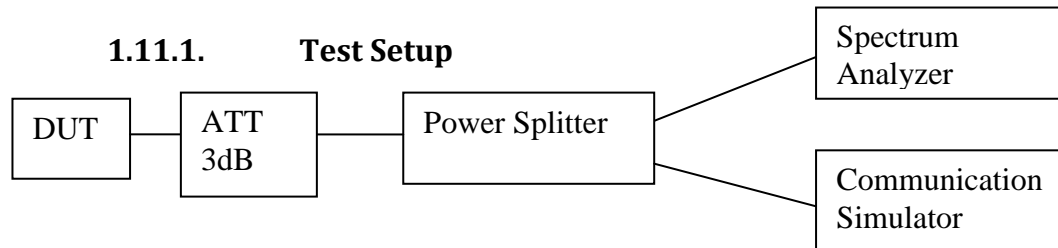


## 1.11. Conducted Spurious Emission



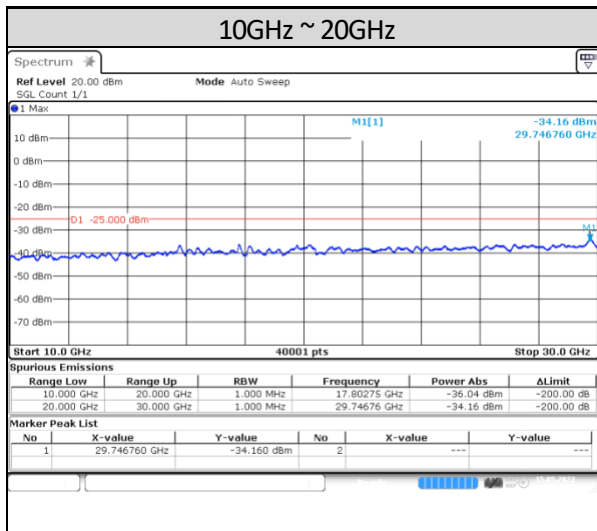
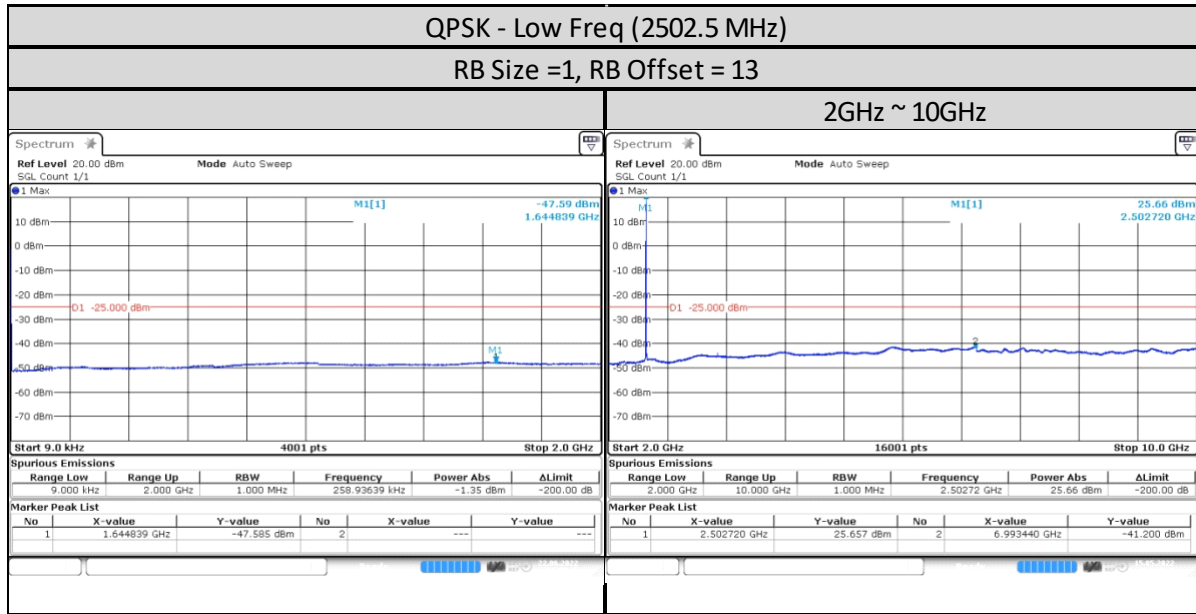
- 1) The DUT transmitter output port was connected to communication simulator with above setup.
- 2) Path loss for the measurement included.
- 3) Set DUT to transmit maximum power through communication simulator.
- 4) Spectrum Analyzer setting, RBW = 1 MHz, VBW = 3 MHz.
- 5) The spurious emission of lowest, middle and highest channels with the highest RF powers were measured.
- 6) Record the maximum trace plot into the test report.

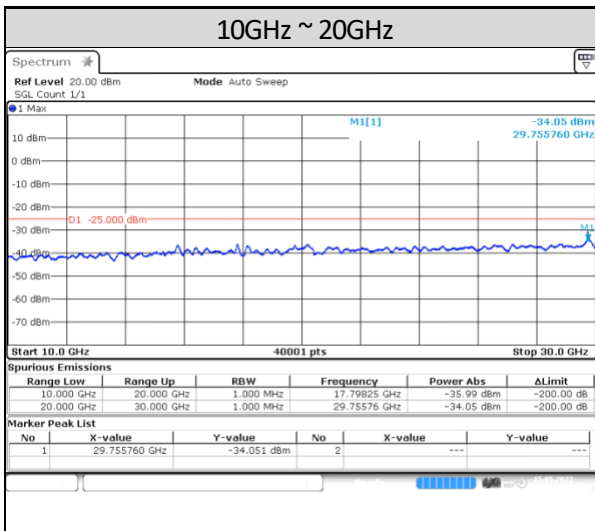
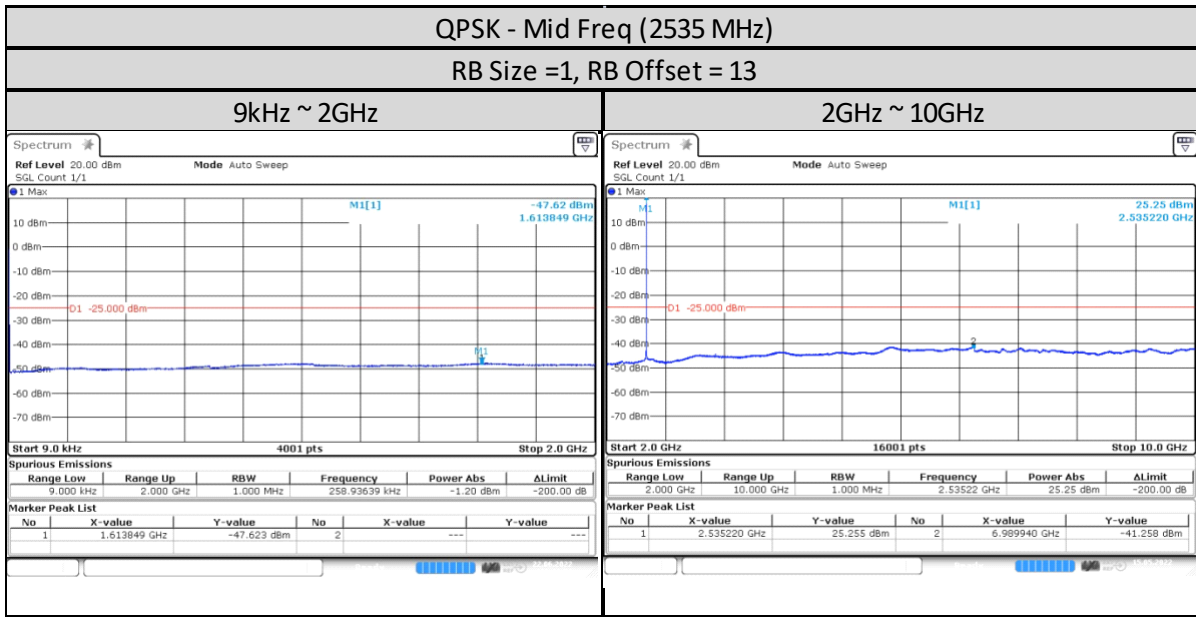
### 1.11.2. Test Limit

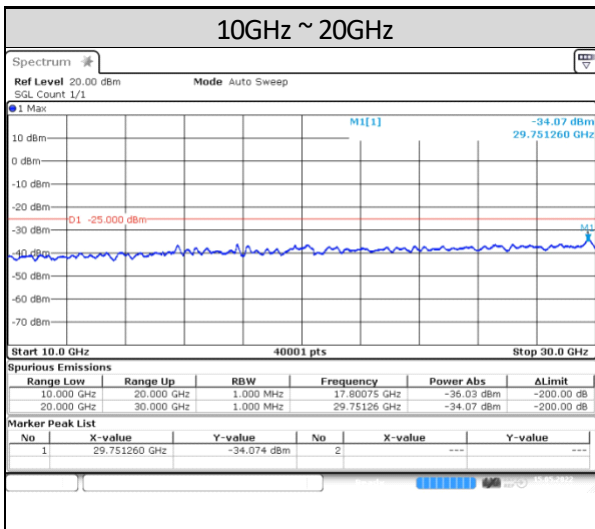
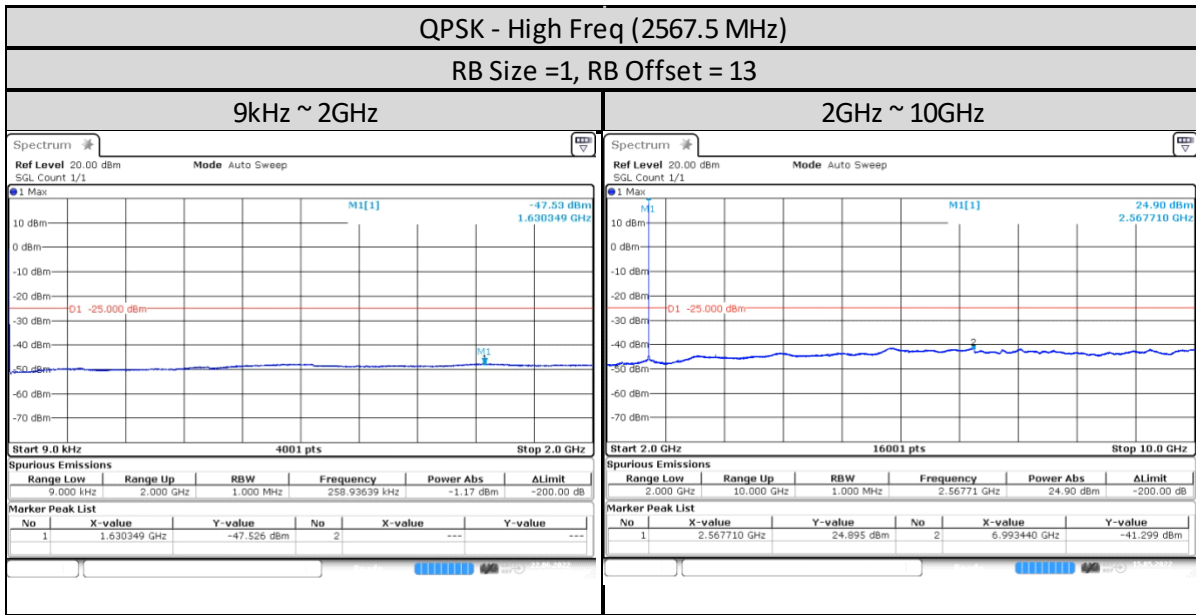
For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

### 1.11.3. Conducted Spurious Emissions – LTE Band 7 (2500-2570MHz)

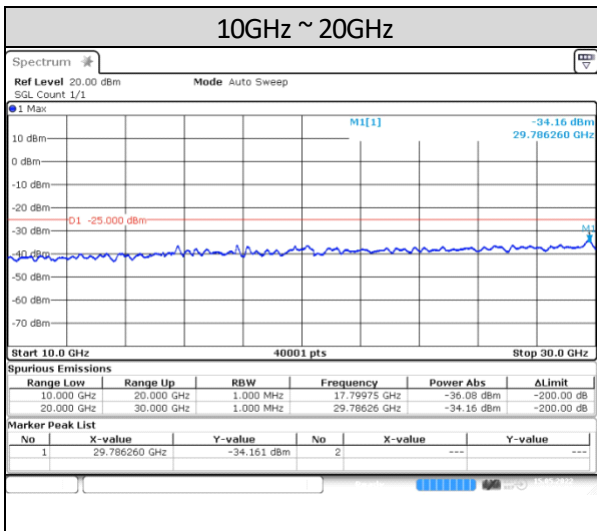
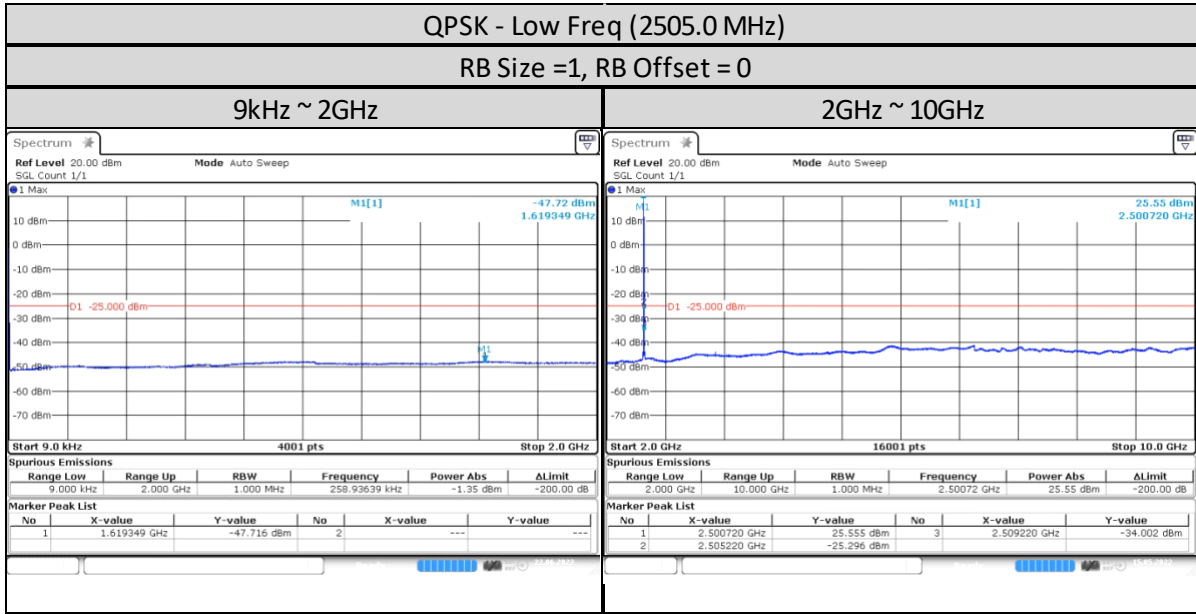
**5MHz**

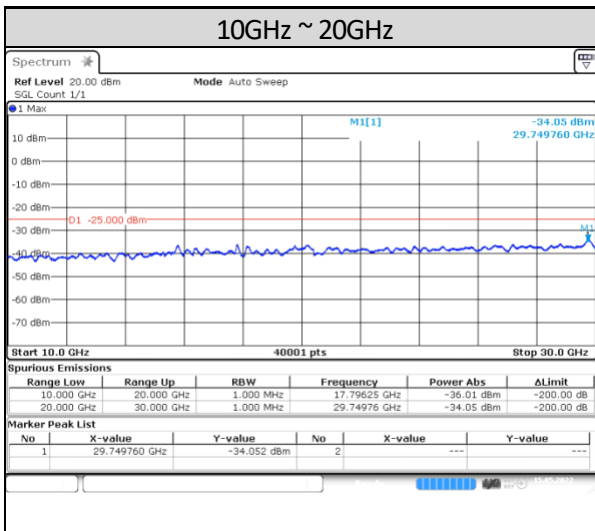
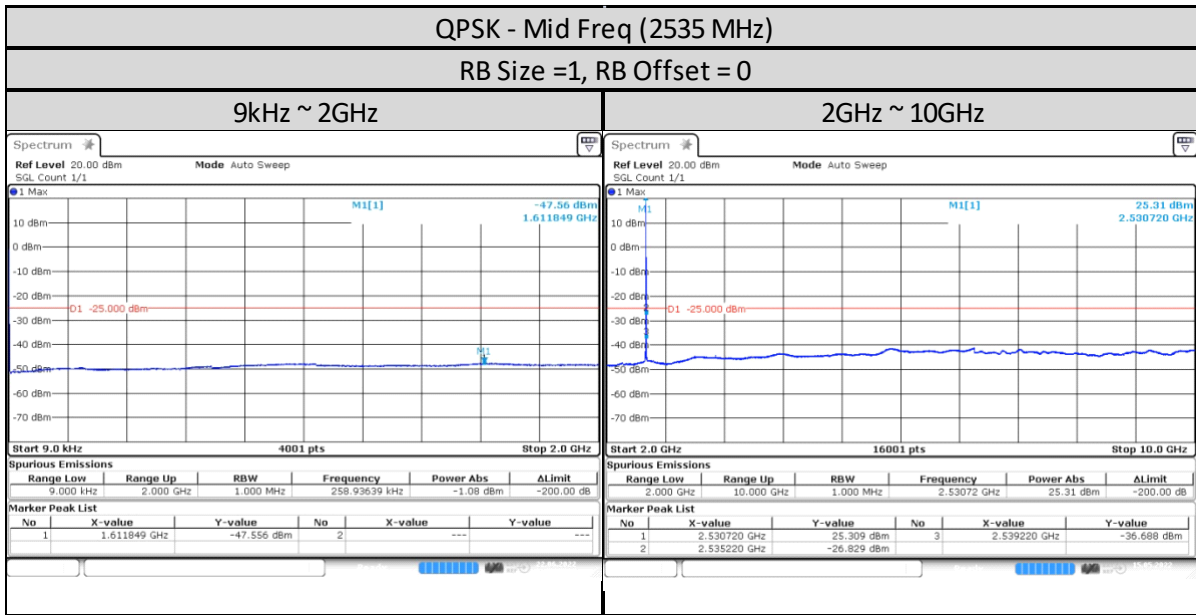


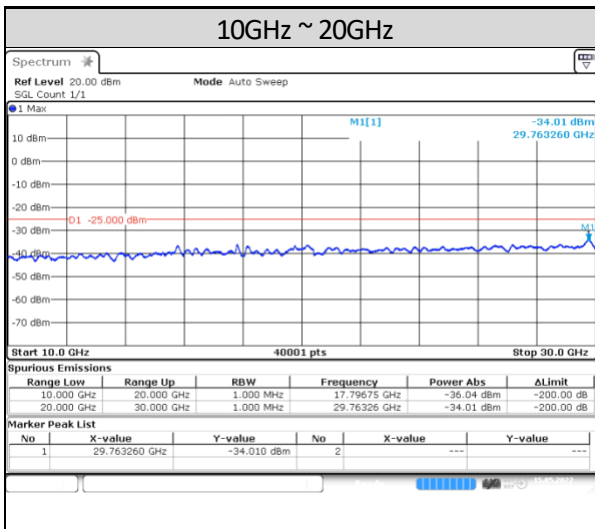
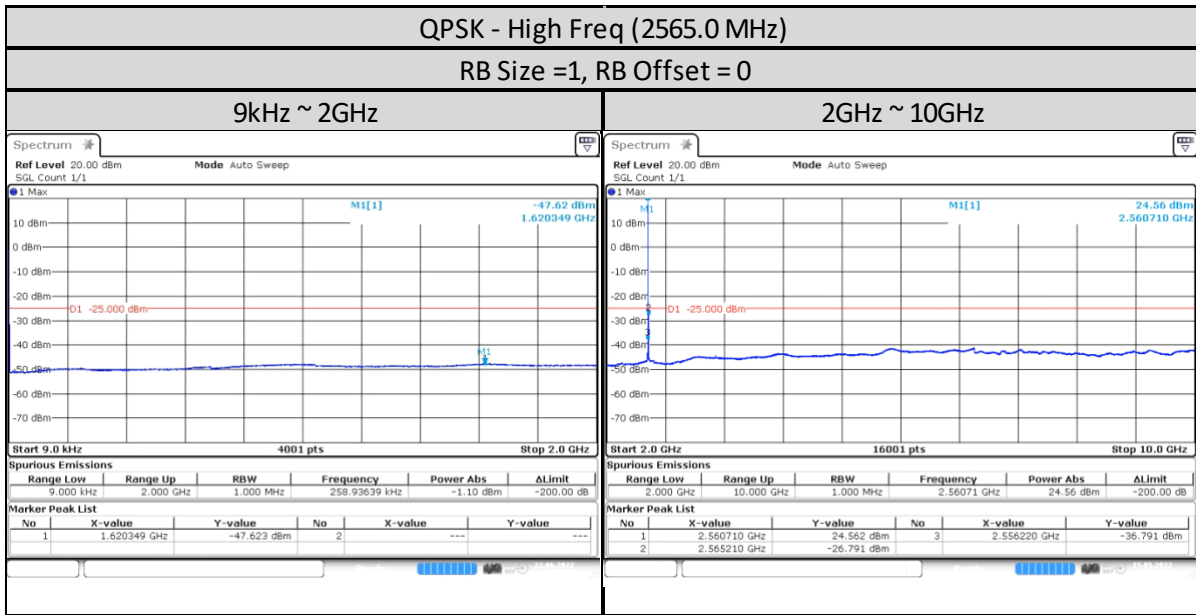




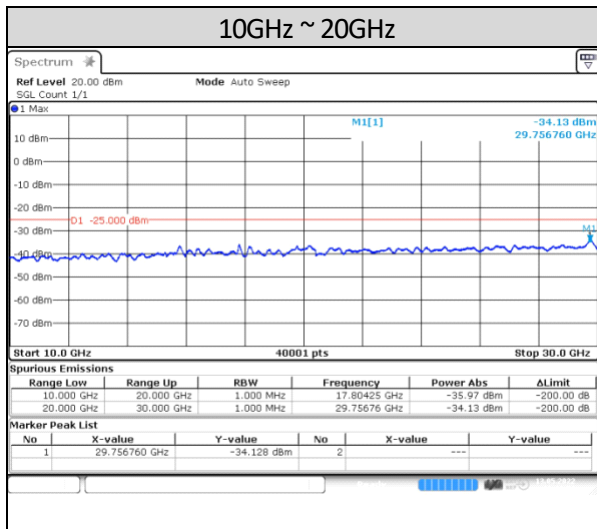
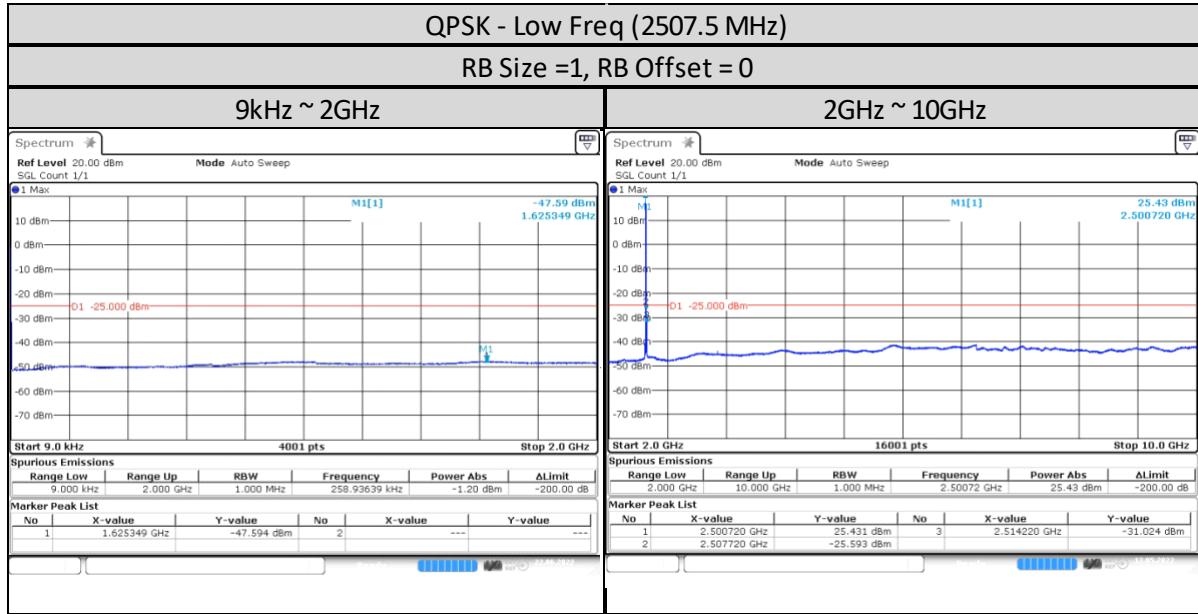
**10MHz**



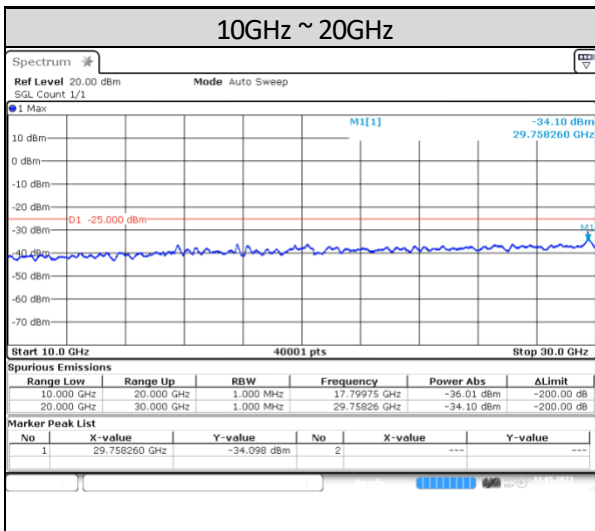
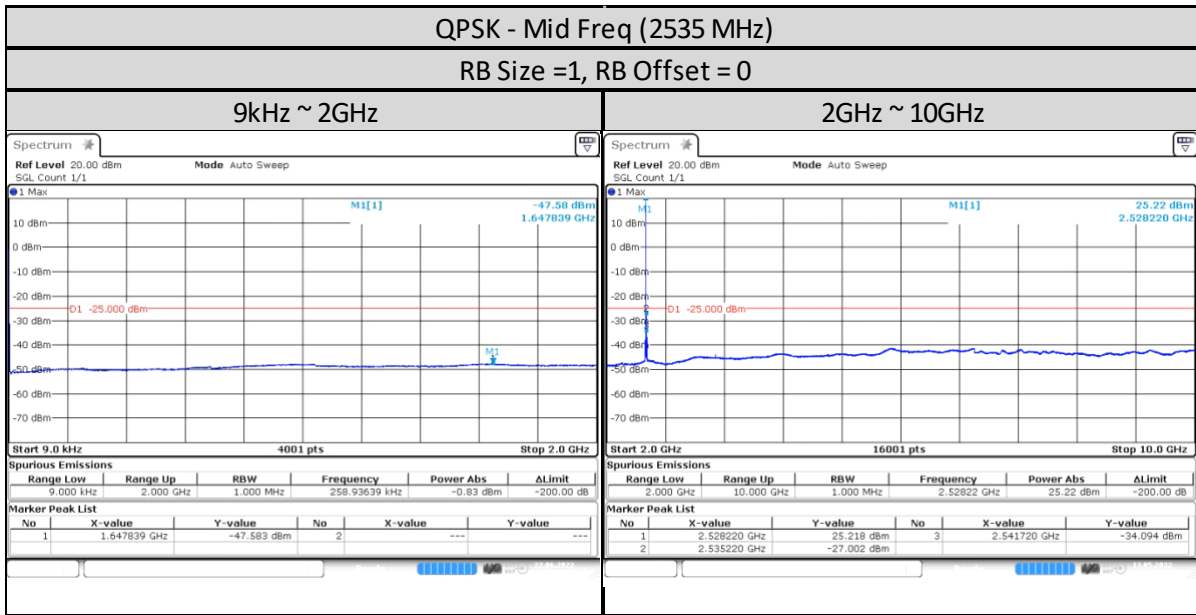


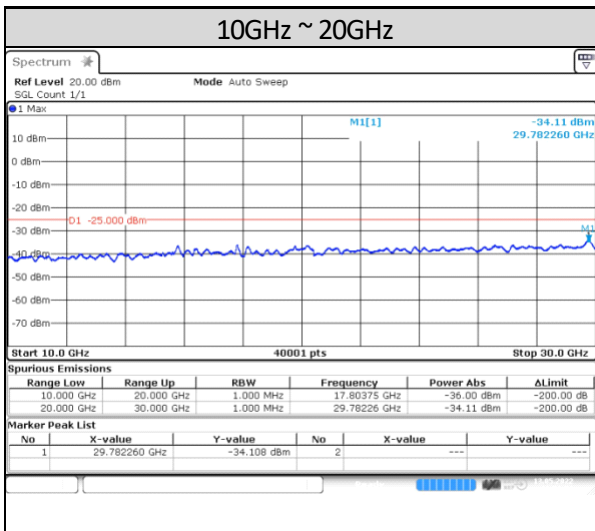
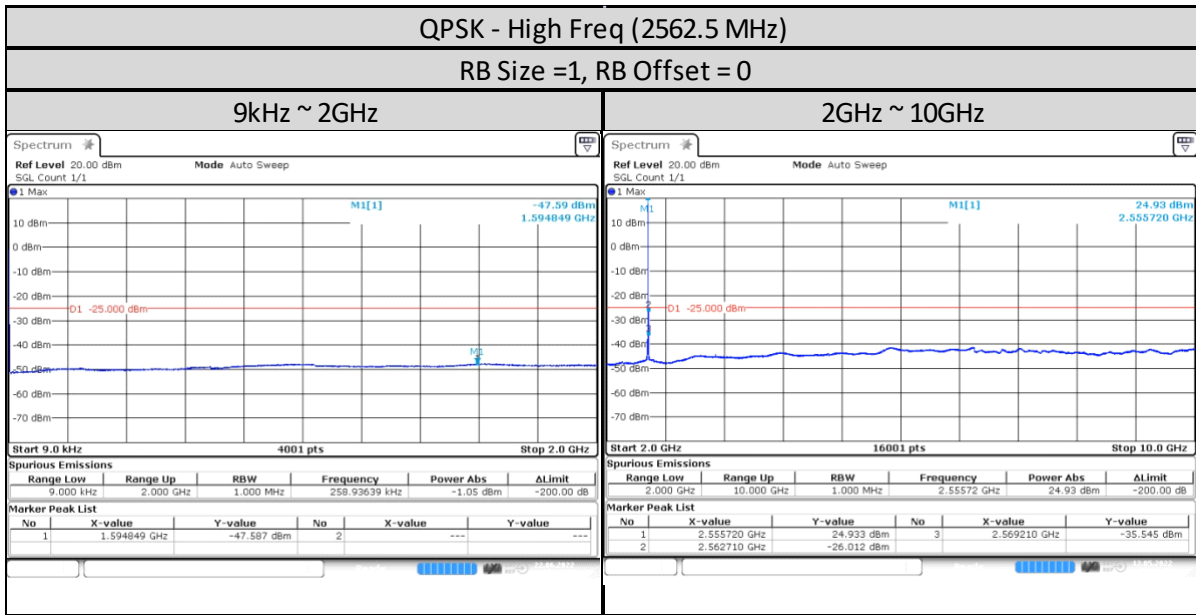


**15MHz**

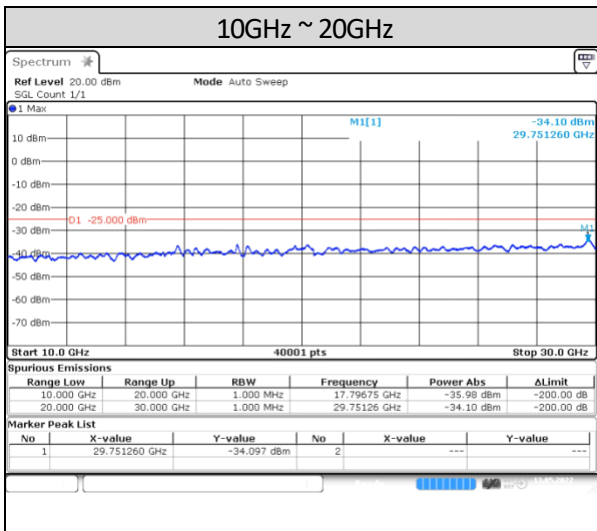
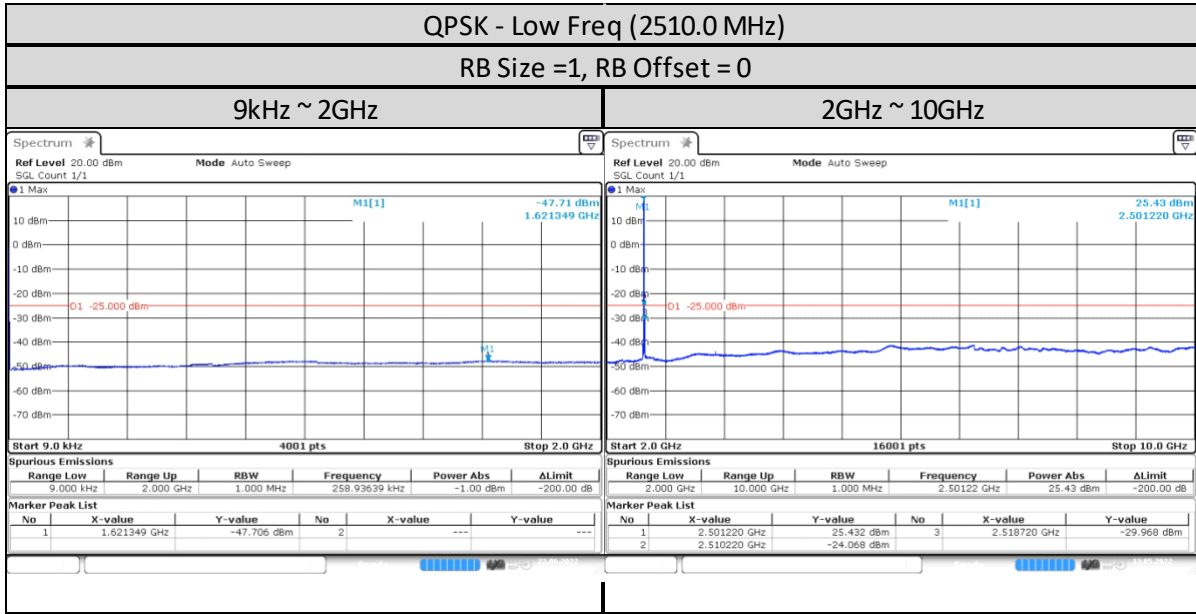


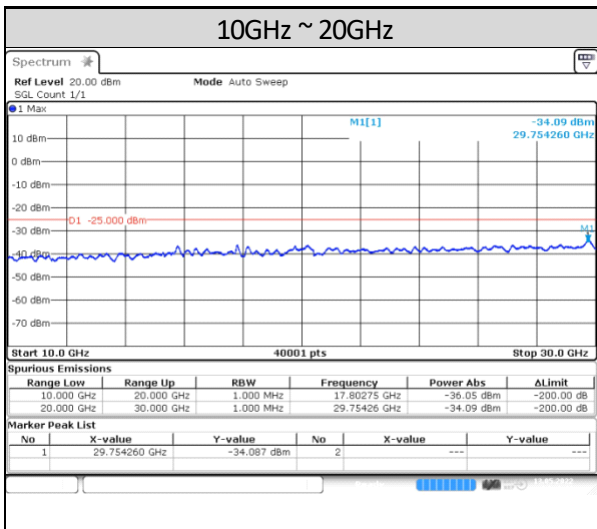
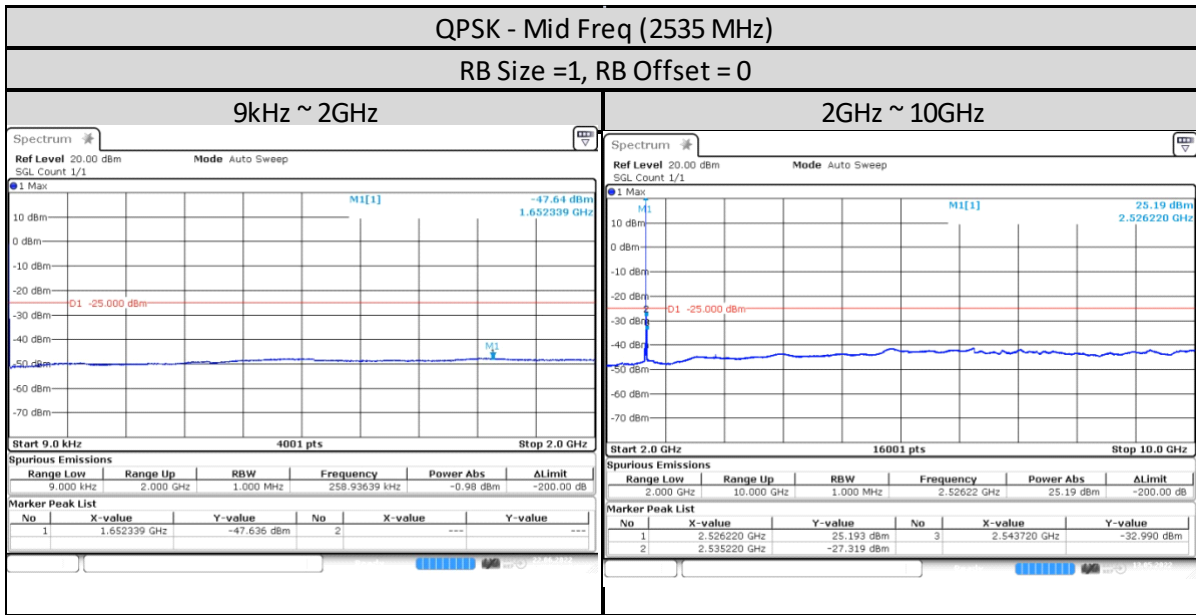


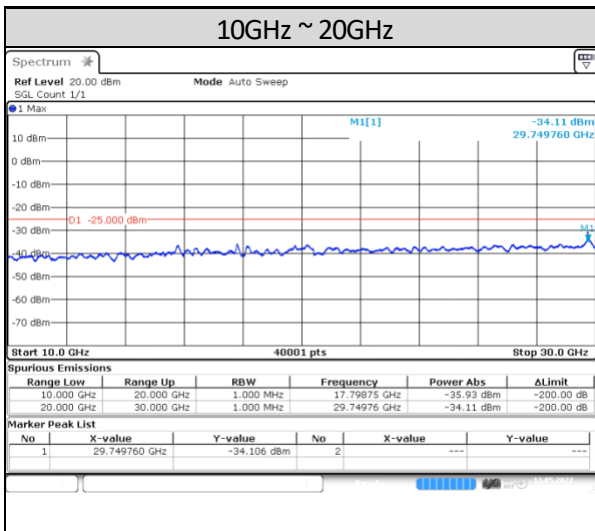
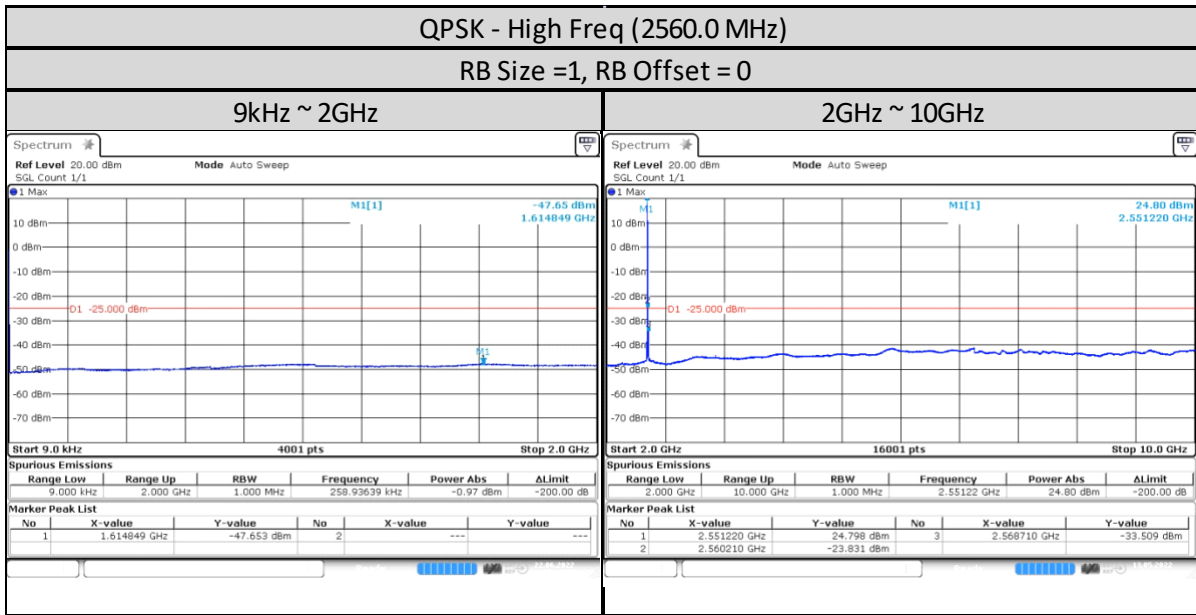




**20MHz**

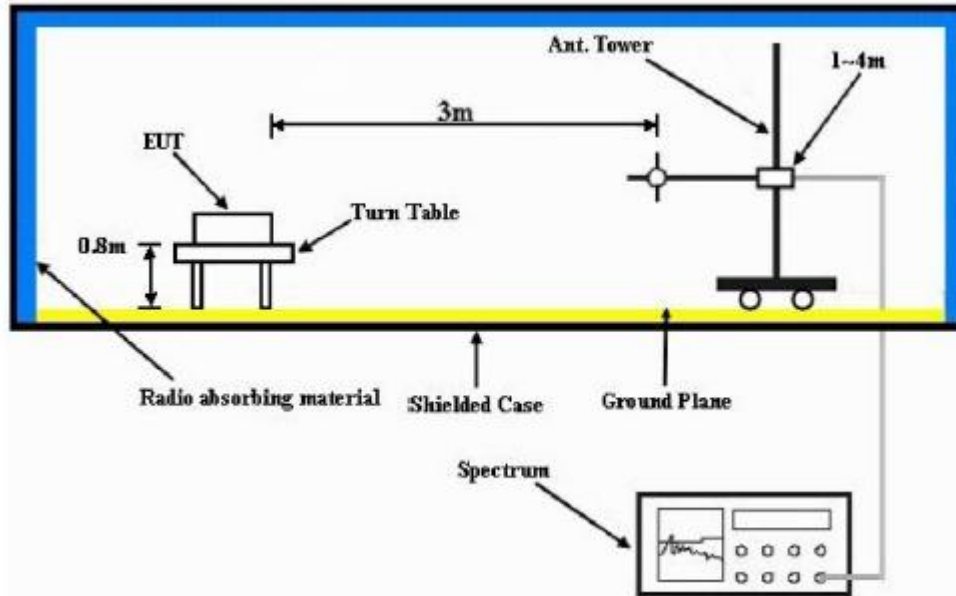






## 1.12. Radiated Spurious Emission

### 1.12.1. 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.

### 1.12.2. Test Limit

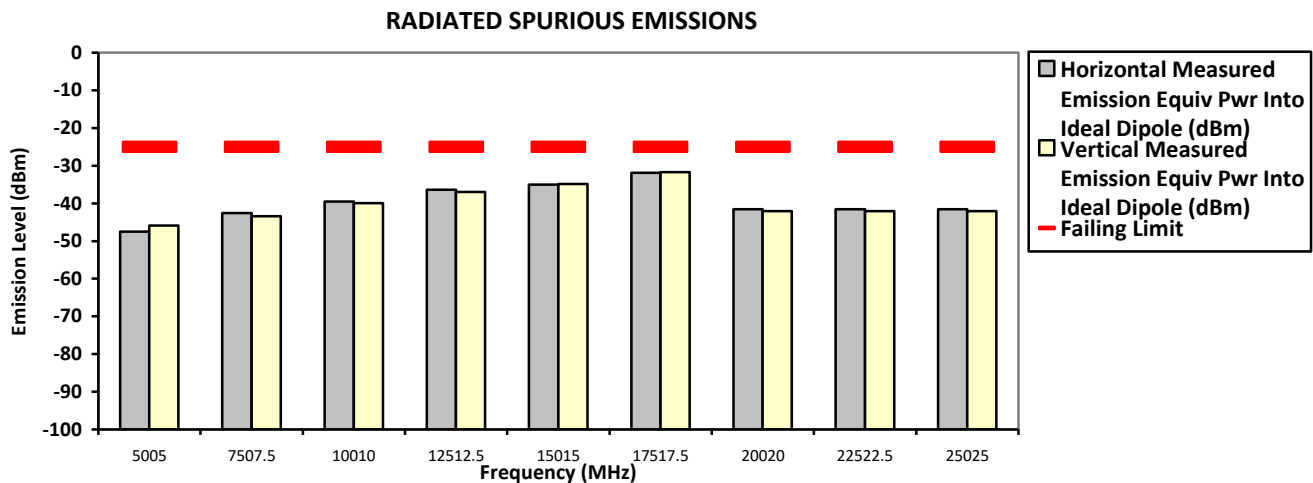
For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

### 1.12.3. Radiated Spurious Emission – LTE Band 7 (2500-2570MHz)

**SAC Transmitter Radiated Emission:**

Model Number: AAH90UCU9RH1AN      S/N: 734TYF0069      SR:27331-EMC-00030  
 Battery Part No: PMNN4805A      Accy Part No: AN000415A01  
 Test Mode: TX LTE (Band 7) X-Plane  
 2502.500000 MHz (Low)      Bandwidth 5MHz      0.252 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equip Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equip Pwr Into ideal Dipole (dBm)
5005.0000	-25.0000	-47.4933 **	-45.8916 **
7507.5000	-25.0000	-42.5529 **	-43.4605 **
10010.0000	-25.0000	-39.5461 **	-39.9605 **
12512.5000	-25.0000	-36.3754 **	-37.0017 **
15015.0000	-25.0000	-35.0677 **	-34.8342 **
17517.5000	-25.0000	-31.8847 **	-31.7498 **
20020.0000	-25.0000	-41.5760 **	-42.0367 **
22522.5000	-25.0000	-41.5760 **	-42.0367 **
25025.0000	-25.0000	-41.5760 **	-42.0367 **



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: Azil&Qawiman      Sat, 23 Apr, 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): 23.3 Hum(%RH): 69.3

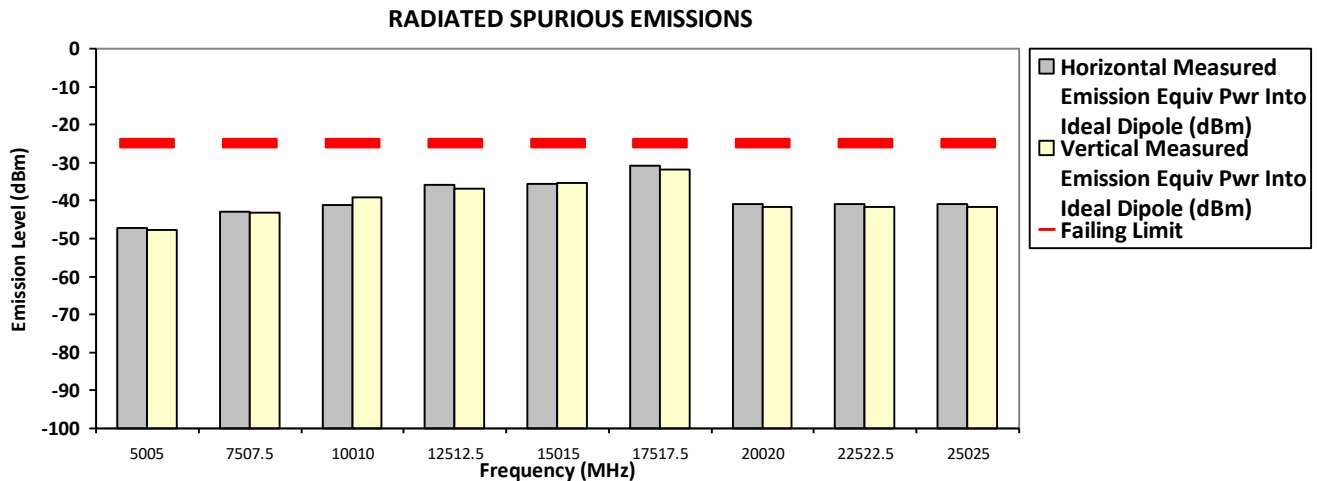
System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

**SAC Transmitter Radiated Emission:**

Model Number: **AAH90UCU9RH1AN**      S/N: **734TYF0069**      SR:**27331-EMC-00030**  
 Battery Part No: **PMNN4805A**      Accy Part No: **AN000415A01**  
 Test Mode: **TX LTE (Band 7) Y-Plane**  
 2502.500000 MHz (Low)      Bandwidth 5MHz      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)
5005.0000	-25.0000	-47.1481 **	-47.6679 **
7507.5000	-25.0000	-42.9507 **	-43.0686 **
10010.0000	-25.0000	-41.2007 **	-39.1097 **
12512.5000	-25.0000	-35.8950 **	-36.8098 **
15015.0000	-25.0000	-35.6673 **	-35.2854 **
17517.5000	-25.0000	-30.6922 **	-31.8607 **
20020.0000	-25.0000	-40.9111 **	-41.6540 **
22522.5000	-25.0000	-40.9111 **	-41.6540 **
25025.0000	-25.0000	-40.9111 **	-41.6540 **



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: Azil&Qawiman      Sat, 23 Apr, 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): 23.3 Hum(%RH): 69.3

System MU: 4.03 dB

Remarks: 

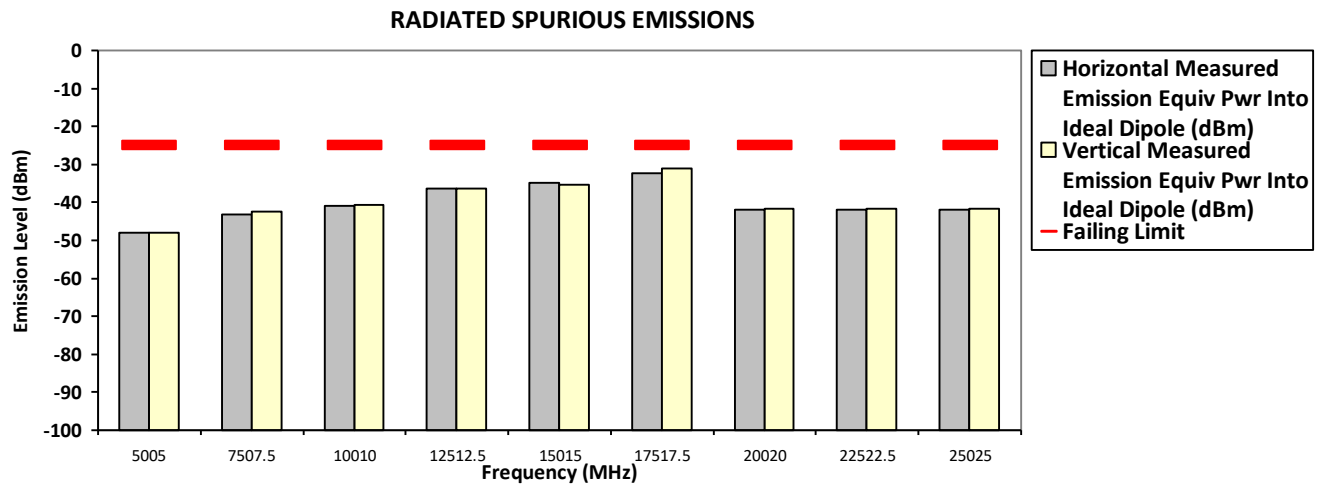
Passed Results	Marginal Results	Failed Results
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**SAC Transmitter Radiated Emission:**

Model Number: AAH90UCU9RH1AN      S/N: 734TYF0069      SR:27331-EMC-00030  
 Battery Part No: PMNN4805A      Accy Part No: AN000415A01  
 Test Mode: TX LTE (Band 7) Z-Plane  
 2502.500000 MHz (Low)      Bandwidth 5MHz      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)
5005.0000	-25.0000	-47.9566 **	-47.9086 **
7507.5000	-25.0000	-43.1568 **	-42.3738 **
10010.0000	-25.0000	-40.9505 **	-40.6080 **
12512.5000	-25.0000	-36.3750 **	-36.3077 **
15015.0000	-25.0000	-34.8488 **	-35.3155 **
17517.5000	-25.0000	-32.3847 **	-31.0663 **
20020.0000	-25.0000	-41.8275 **	-41.6568 **
22522.5000	-25.0000	-41.8275 **	-41.6568 **
25025.0000	-25.0000	-41.8275 **	-41.6568 **



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: Azil&Qawiman      Sat, 23 Apr, 2022

Remarks: \*\* Indicates the spurious emission could not be detected due to noise limitations or ambient.

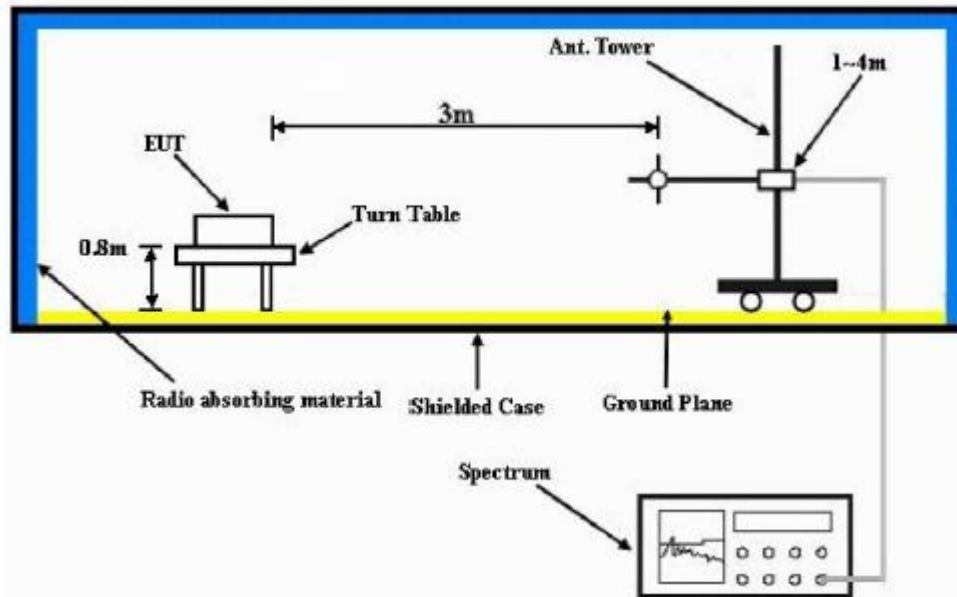
\*Pursuant to CFR 47 Part 2.1057 ( c ), emissions attenuated more than 20 dB below the permissible limit are not reported  
 Temp(Deg): 23.3 Hum(%RH): 69.3

System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

### 1.13. Equivalent Isotropically Radiated Power (EIRP)

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

#### 1.13.2. Test Limit

FCC: Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

ISED: For mobile subscriber equipment, the e.i.r.p. shall not exceed 2 watts.

#### 1.13.3. Equivalent Isotropically Radiated Power (EIRP) - LTE Band 7 (2500-2570MHz)

**Not Performed.**

--End of Test Report--