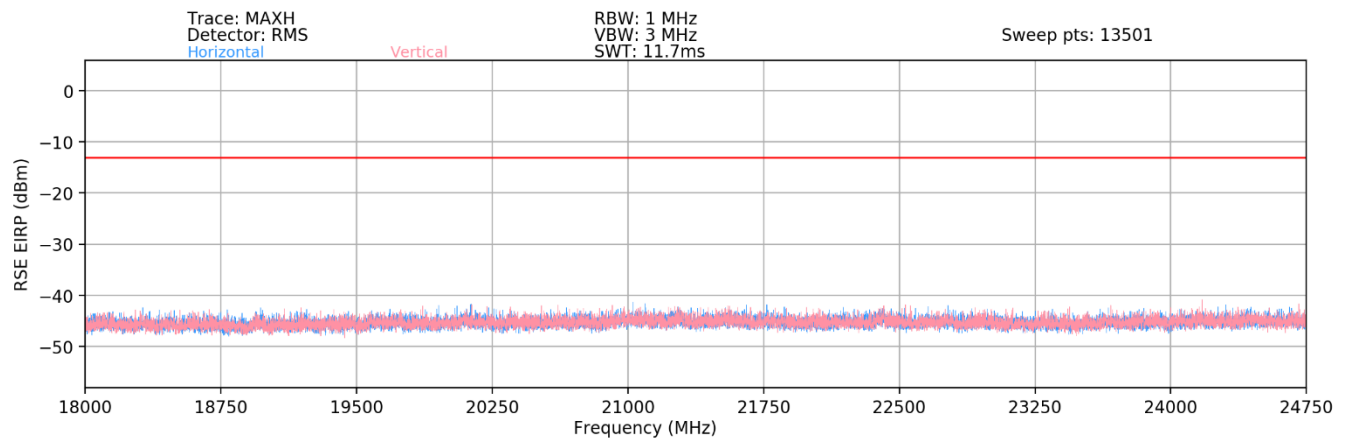
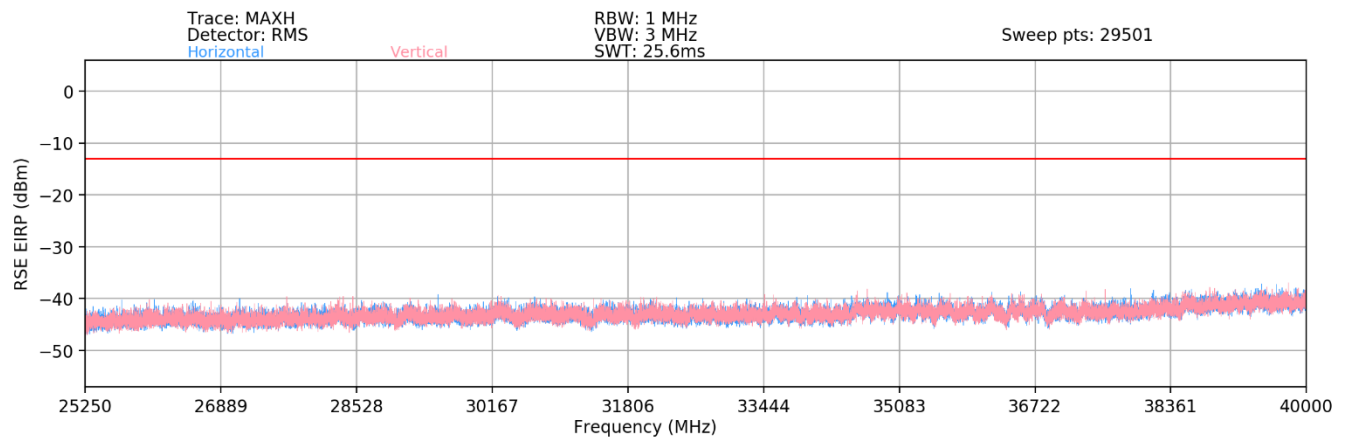


18GHz - 24.75GHz



Plot 7-81. Ant1-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

25.25GHz - 40GHz



Plot 7-82. Ant1-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

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Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
21756.50	Mid		2Tx	QPSK	H	-	-	-45.87	-13.00	-32.87
27635.00	Mid		2Tx	QPSK	H	-	-	-43.59	-13.00	-30.59
31746.00	Mid		2Tx	QPSK	H	-	-	-42.44	-13.00	-29.44

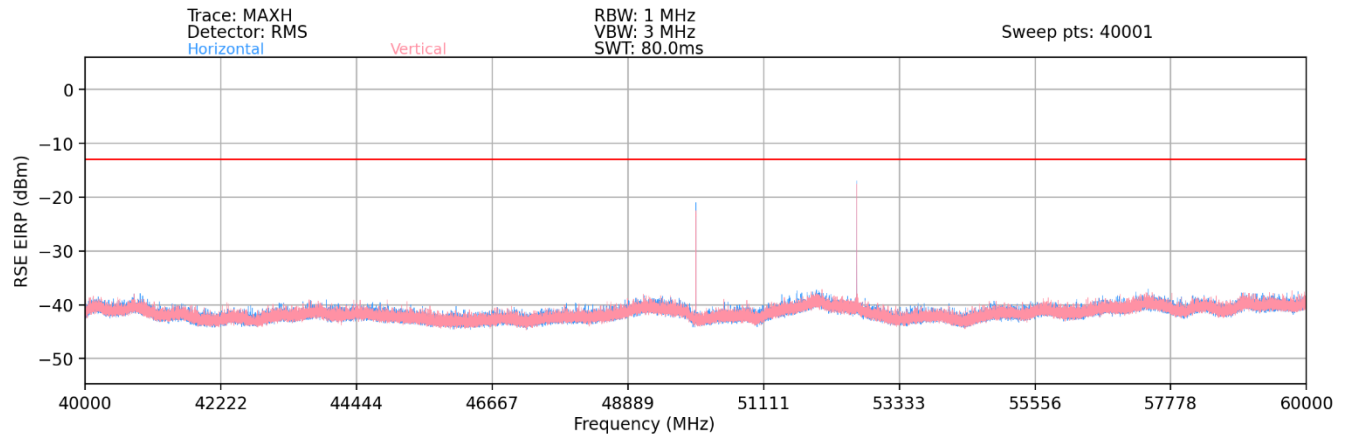
Table 7-62. Ant1 - 2Tx - Spurious Emissions Table (18GHz- 40GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1 meter.

FCC ID: A3LSMS908U	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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40GHz - 60GHz



Plot 7-83. Ant1-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
49551.18	Low	50	2Tx	QPSK	H	327	255	-23.15	-13.00	-10.15
52185.15	Low	50	2Tx	QPSK	H	28	354	-41.05	-13.00	-28.05
50000.88	Mid	50	2Tx	QPSK	H	331	302	-19.52	-13.00	-6.52
52649.00	Mid	50	2Tx	QPSK	H	246	158	-45.37	-13.00	-32.37
50451.15	High	50	2Tx	QPSK	H	312	255	-23.82	-13.00	-10.82
53097.10	High	50	2Tx	QPSK	H	309	274	-43.06	-13.00	-30.06

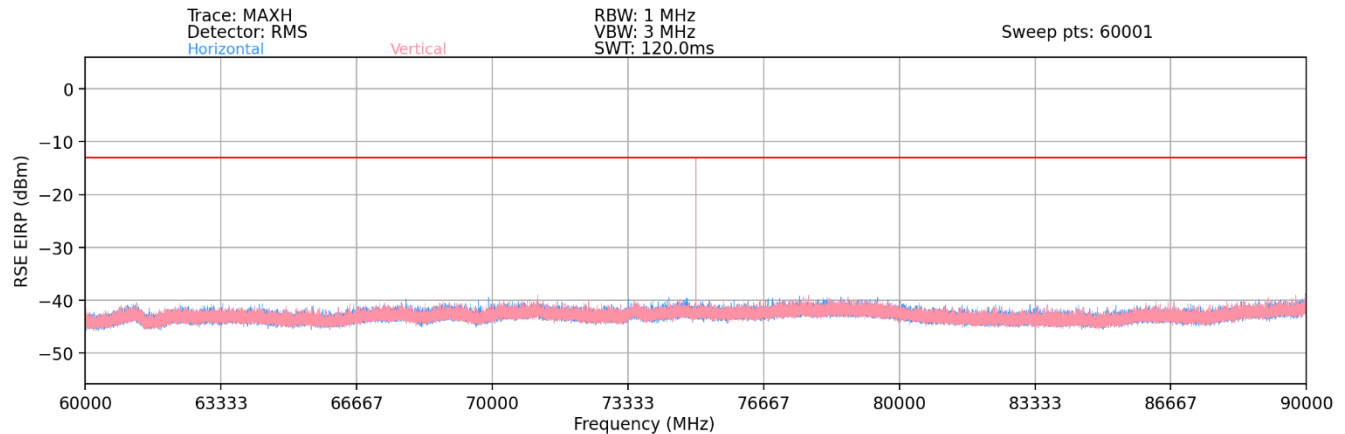
Table 7-63. Ant1 - 2Tx - Spurious Emissions Table (40GHz - 60GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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60GHz - 90GHz



Plot 7-84. Ant1-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74326.80	Low	50	2Tx	QPSK	H	*	*	-24.45	-13.00	-11.45
75001.29	Mid	50	2Tx	QPSK	H	*	*	-25.52	-13.00	-12.52
75676.56	High	50	2Tx	QPSK	H	*	*	-23.42	-13.00	-10.42

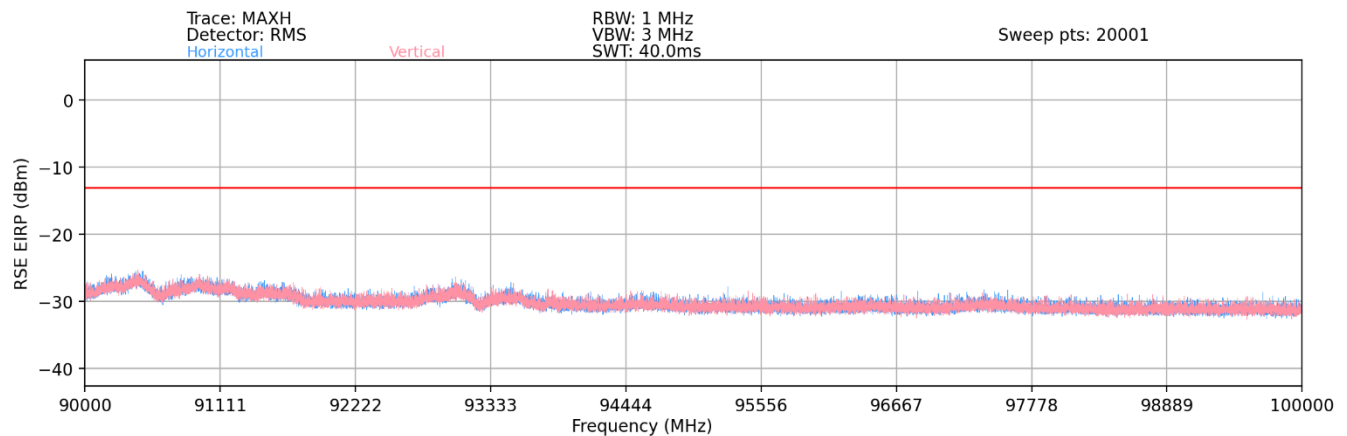
Table 7-64. Ant1 - 2Tx - Spurious Emissions Table (40GHz - 90GHz)

Notes

- 1) The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
- 2)
- 3) Rows marked with * indicate a spurious emission level that was measured using the Spherical Grid TRP Method per KDB 842590.

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90GHz - 100GHz



Plot 7-85. Ant1-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
99103.00	Low	50	2Tx	QPSK	V	168	149	-45.72	-13.00	-32.72
100002.34	Mid	50	2Tx	QPSK	V	163	256	-43.82	-13.00	-30.82

Table 7-65. Ant1 - 2Tx - Spurious Emissions Table (90GHz - 100GHz)

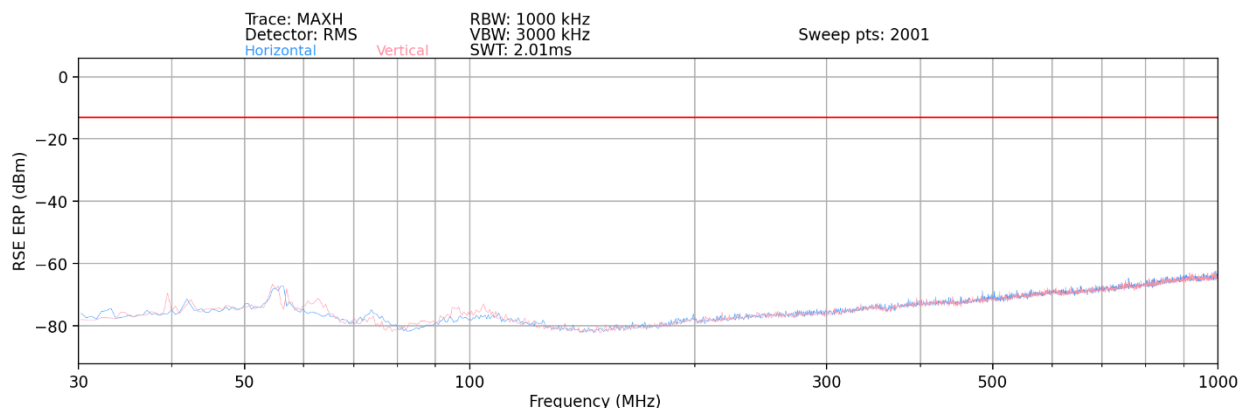
Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

FCC ID: A3LSMS908U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Ant2 Band n258-R2

30MHz - 1GHz



Plot 7-86. Ant2- n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions ERP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE ERP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE ERP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8 - 2.15 \text{ (dB)}$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
41.88	Mid	50	2Tx	QPSK	H	-	-	-71.35	-13.00	-58.35
55.93	Mid	50	2Tx	QPSK	H	-	-	-67.16	-13.00	-54.16
103.44	Mid	50	2Tx	QPSK	H	-	-	-76.55	-13.00	-63.55
597.41	Mid	50	2Tx	QPSK	H	-	-	-69.15	-13.00	-56.15
702.60	Mid	50	2Tx	QPSK	H	-	-	-68.10	-13.00	-55.10
808.76	Mid	50	2Tx	QPSK	H	-	-	-65.77	-13.00	-52.77

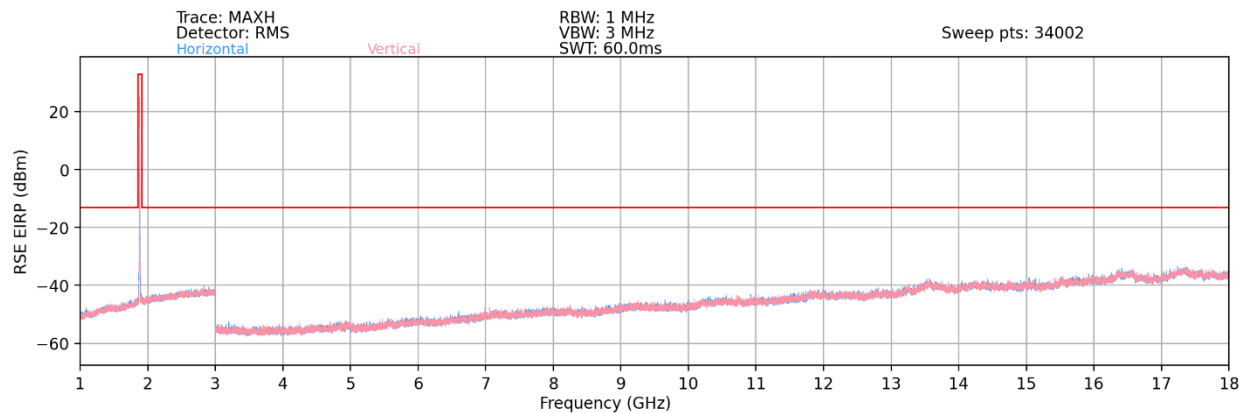
Table 7-66. Ant2 – 2Tx - Spurious Emissions Table (30MHz - 1GHz)

Notes

The RSE ERP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

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1GHz - 18GHz



Plot 7-87. Ant2-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5035.68	Mid	50	2Tx	QPSK	H	-	-	-55.39	-13.00	-42.39
8676.56	Mid	50	2Tx	QPSK	H	-	-	-48.80	-13.00	-35.80
12855.92	Mid	50	2Tx	QPSK	H	-	-	-43.40	-13.00	-30.40

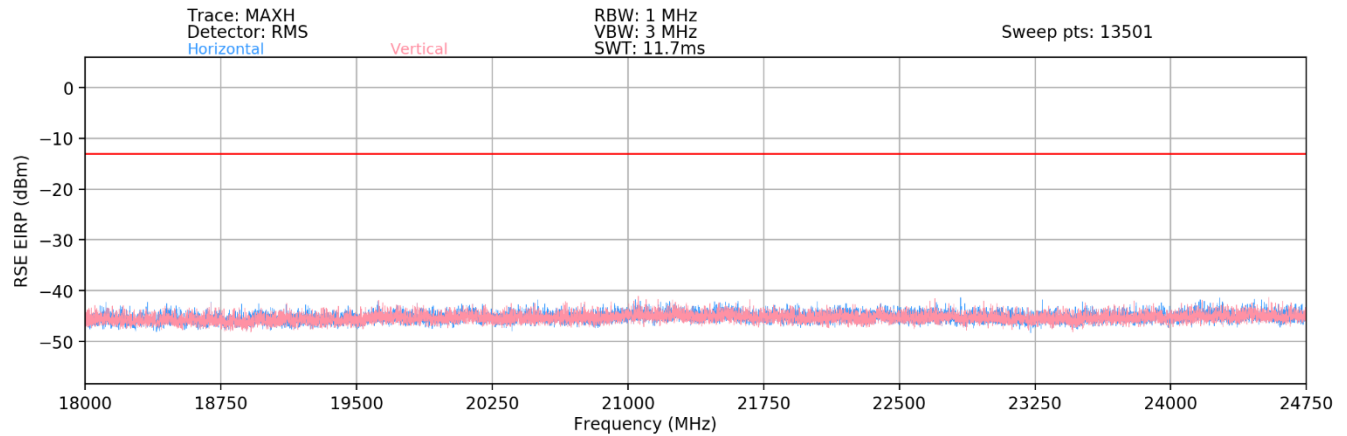
Table 7-67. Ant2 - 2Tx - Spurious Emissions Table (1GHz - 18GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

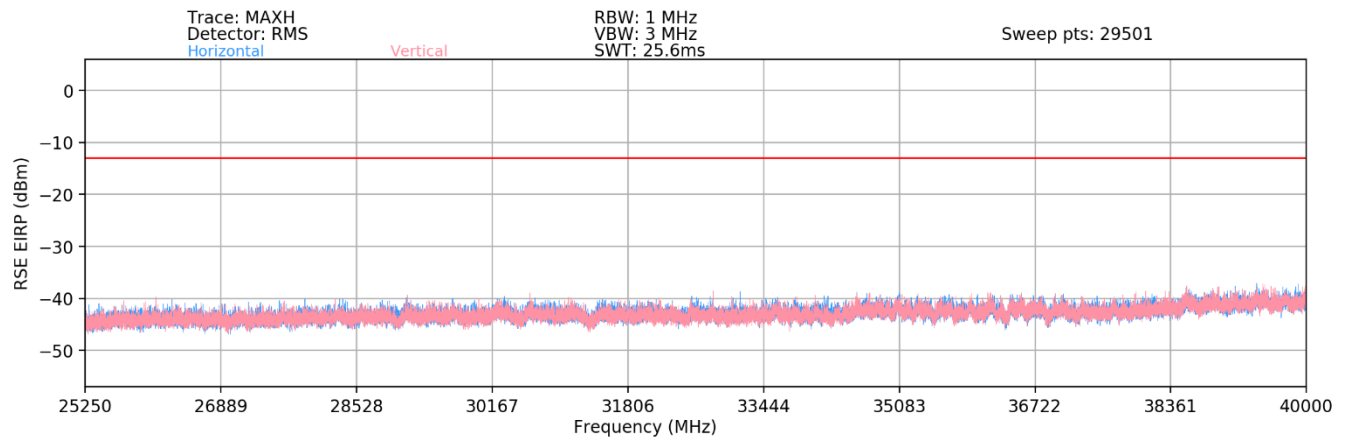
FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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18GHz – 24.75GHz



Plot 7-88. Ant2-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

25.25GHz - 40GHz



Plot 7-89. Ant2-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

FCC ID: A3LSMS908U	 Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
21519.00	Mid	50	2Tx	QPSK	H	-	-	-44.57	-13.00	-31.57
28812.00	Mid	50	2Tx	QPSK	H	-	-	-43.22	-13.00	-30.22
35331.50	Mid	50	2Tx	QPSK	H	-	-	-41.39	-13.00	-28.39

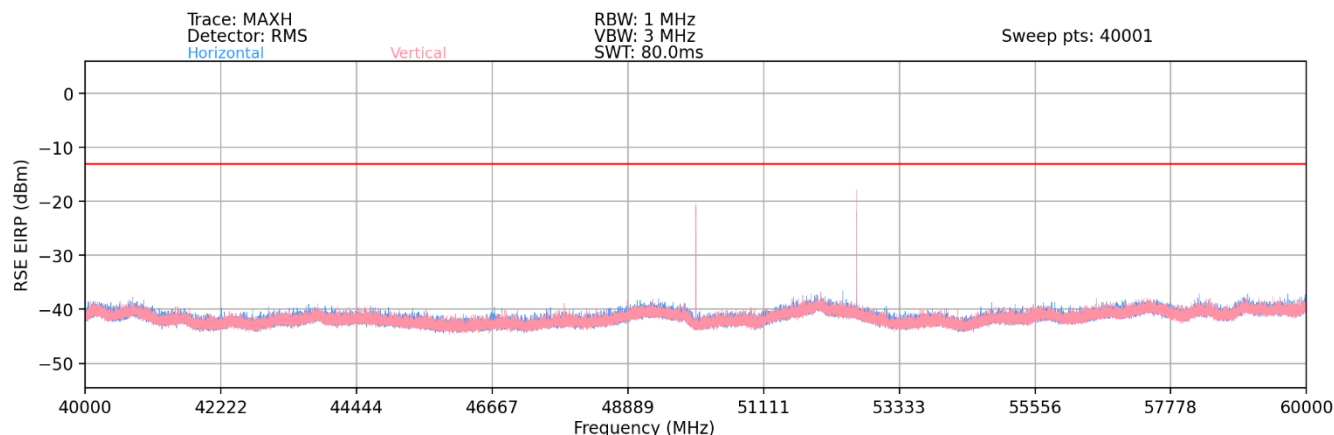
Table 7-68. Ant2 - 2Tx - Spurious Emissions Table (18GHz - 40GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1 meter.

FCC ID: A3LSMS908U	 PCTEST [®] Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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40GHz - 60GHz



Plot 7-90. Ant2-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
49551.36	Low	50	2Tx	QPSK	V	273	350	-19.16	-13.00	-6.16
52184.48	Low	50	2Tx	QPSK	V	31	234	-41.21	-13.00	-28.21
50001.00	Mid	50	2Tx	QPSK	V	276	340	-20.44	-13.00	-7.44
52647.99	Mid	50	2Tx	QPSK	V	34	253	-45.61	-13.00	-32.61
50451.12	High	50	2Tx	QPSK	V	276	340	-21.65	-13.00	-8.65
53095.43	High	50	2Tx	QPSK	V	204	48	-44.31	-13.00	-31.31

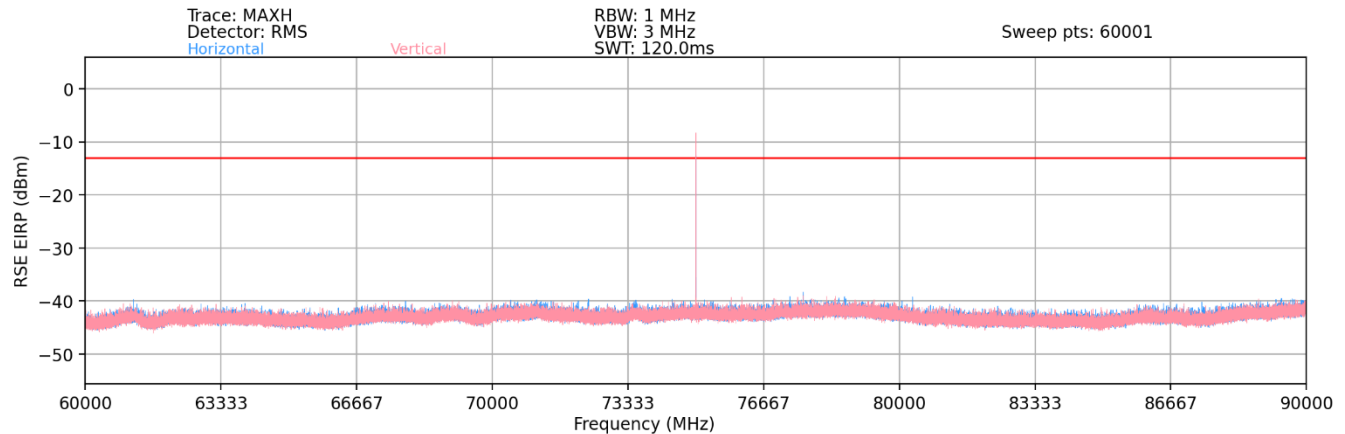
Table 7-69. Ant2 - 2Tx - Spurious Emissions Table (40GHz - 60GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.

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60GHz - 90GHz



Plot 7-91. Ant2-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74326.77	Low	50	2Tx	QPSK	V	*	*	-28.98	-13.00	-15.98
75001.53	Mid	50	2Tx	QPSK	V	*	*	-19.51	-13.00	-6.51
75676.67	High	50	2Tx	QPSK	V	*	*	-26.65	-13.00	-13.65

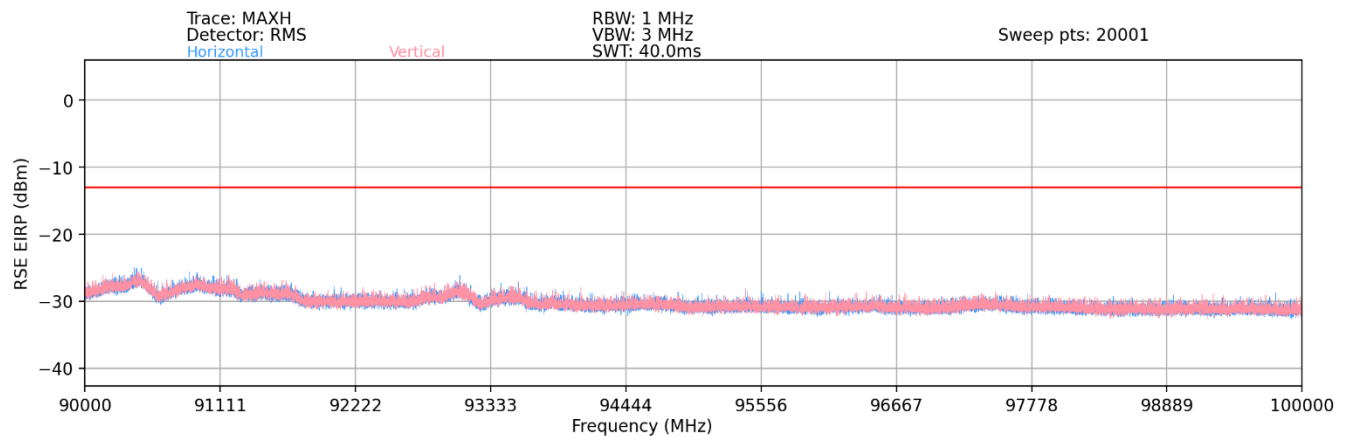
Table 7-70. Ant2 - 2Tx - Spurious Emissions Table (60GHz - 90GHz)

Notes

- 1) The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
- 2) Rows marked with * indicate a spurious emission level that was measured using the Spherical Grid TRP Method per KDB 842590.

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90GHz - 100GHz



Plot 7-92. Ant2-n258-R2 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n258-R2)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
99102.79	Low	50	2Tx	QPSK	H	323	233	-46.35	-13.00	-33.35
100002.13	Mid	50	2Tx	QPSK	H	330	325	-45.19	-13.00	-32.19

Table 7-71. Ant2 - 2Tx - Spurious Emissions Table (90GHz - 100GHz)

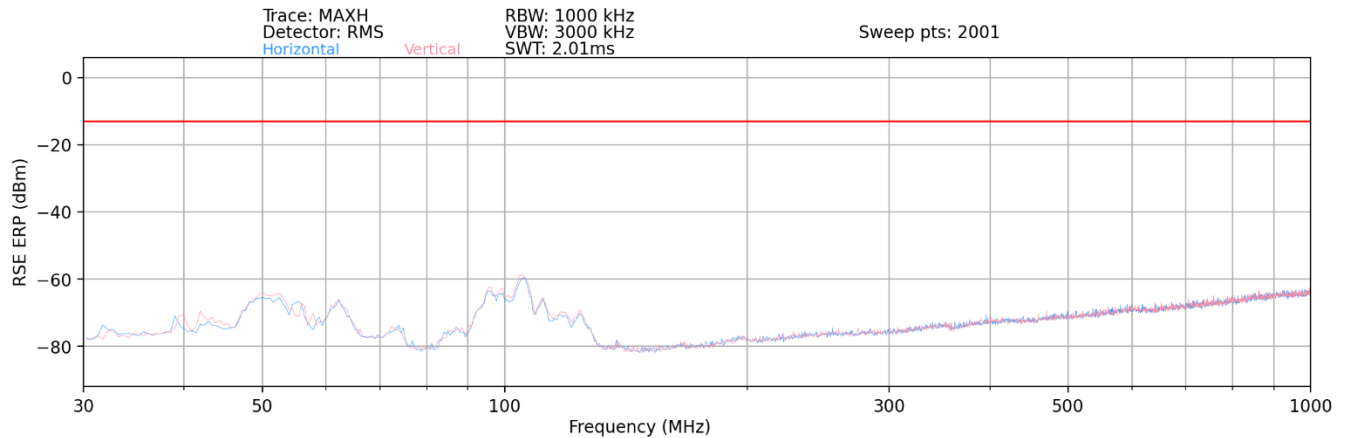
Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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Ant1 Band n261

30MHz - 1GHz



Plot 7-93. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions ERP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE ERP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE ERP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8 - 2.15 \text{ (dB)}$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
52.54	Mid	50	2Tx	QPSK	H	-	-	-65.61	-13.00	-52.61
62.24	Mid	50	2Tx	QPSK	H	-	-	-66.53	-13.00	-53.53
110.71	Mid	50	2Tx	QPSK	H	-	-	-67.62	-13.00	-54.62
645.40	Mid	50	2Tx	QPSK	H	-	-	-69.58	-13.00	-56.58
734.11	Mid	50	2Tx	QPSK	H	-	-	-67.36	-13.00	-54.36
872.75	Mid	50	2Tx	QPSK	H	-	-	-65.71	-13.00	-52.71

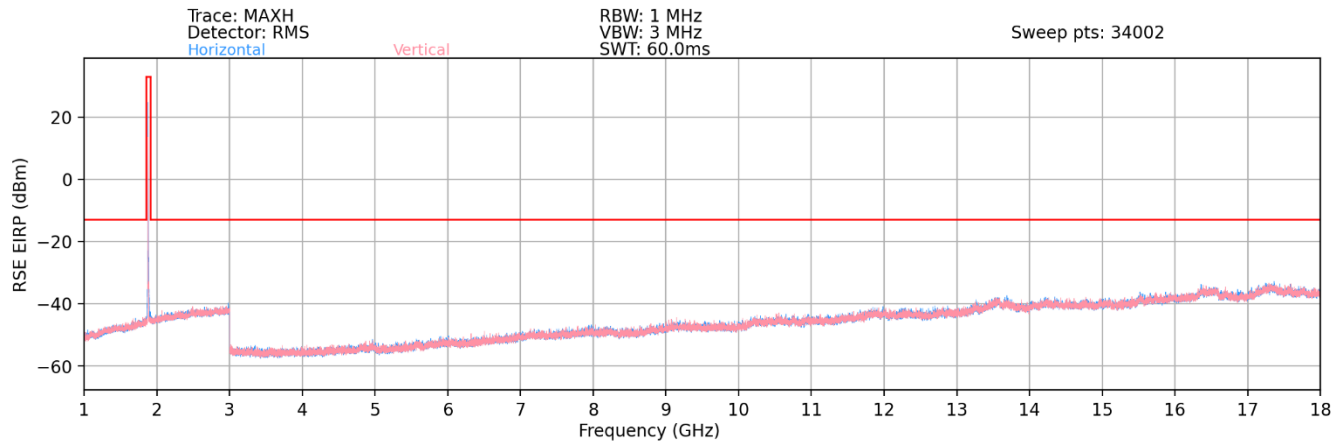
Table 7-72. Ant1 - 2Tx - Spurious Emissions Table (30MHz - 1GHz)

Notes

The RSE ERP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

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1GHz - 18GHz



Plot 7-94. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4248.71	Mid	50	2Tx	QPSK	H	-	-	-55.66	-13.00	-42.66
7943.59	Mid	50	2Tx	QPSK	H	-	-	-49.36	-13.00	-36.36
16305.81	Mid	50	2Tx	QPSK	H	-	-	-37.69	-13.00	-24.69

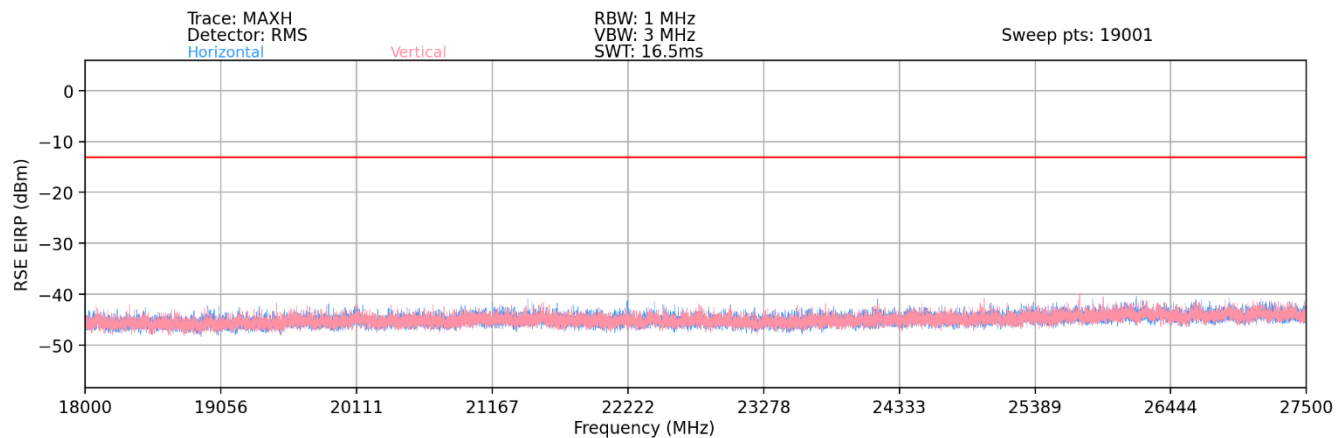
Table 7-73. Ant1 - 2Tx - Spurious Emissions Table (1GHz - 18GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

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18GHz - 27.5GHz



Plot 7-95. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
20315.50	Mid	50	2Tx	QPSK	H	-	-	-46.12	-13.00	-33.12
25103.50	Mid	50	2Tx	QPSK	H	-	-	-44.27	-13.00	-31.27
27051.00	Mid	50	2Tx	QPSK	H	-	-	-44.20	-13.00	-31.20

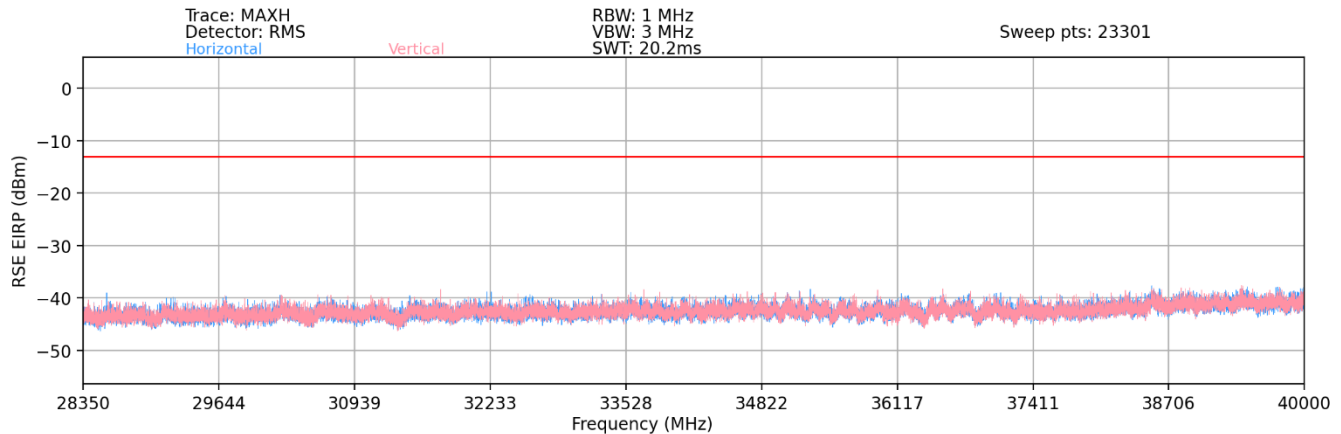
Table 7-74. Ant1 - 2Tx - Spurious Emissions Table (18GHz - 27.5GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1 meter.

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28.35GHz - 40GHz



Plot 7-96. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
29542.00	Mid	50	2Tx	QPSK	H	-	-	-43.66	-13.00	-30.66
33822.00	Mid	50	2Tx	QPSK	H	-	-	-42.99	-13.00	-29.99
38091.50	Mid	50	2Tx	QPSK	H	-	-	-42.68	-13.00	-29.68

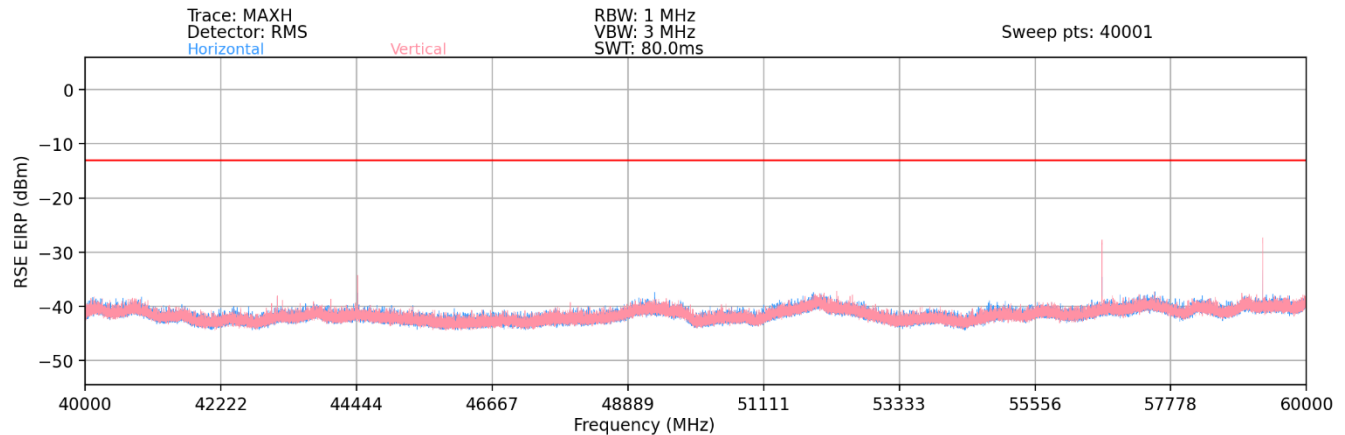
Table 7-75. Ant1 - 2Tx - Spurious Emissions Table (28.35GHz - 40GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1 meter.

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40GHz - 60GHz



Plot 7-97. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
558051.11	Low	50	2Tx	QPSK	V	49	332	-29.99	-13.00	-16.99
57684.01	Low	50	2Tx	QPSK	V	337	16	-45.76	-13.00	-32.76
55850.91	Mid	50	2Tx	QPSK	V	43	338	-30.46	-13.00	-17.46
43863.56	Mid	50	2Tx	QPSK	V	102	61	-44.45	-13.00	-31.45
58485.69	Mid	50	2Tx	QPSK	V	207	90	-44.81	-13.00	-31.81
56650.86	High	50	2Tx	QPSK	V	47	340	-30.94	-13.00	-17.94
44463.34	High	50	2Tx	QPSK	V	67	220	-48.40	-13.00	-35.40
59284.60	High	50	2Tx	QPSK	V	321	318	-45.51	-13.00	-32.51

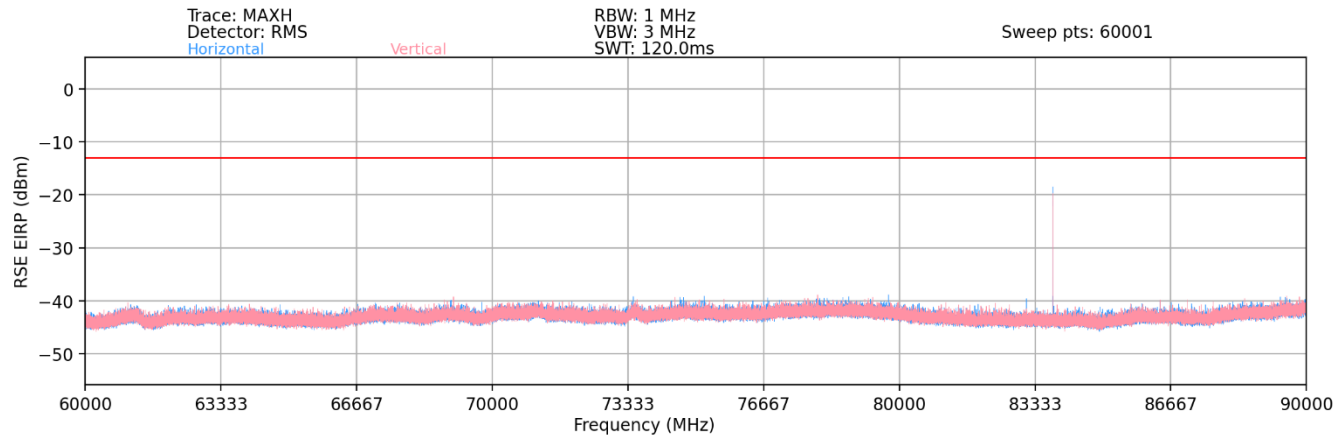
Table 7-76. Ant1 - 2Tx - Spurious Emissions Table (40GHz - 60GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.

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60GHz - 90GHz



Plot 7-98. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
82576.95	Low	50	2Tx	QPSK	H	*	*	-38.38	-13.00	-25.38
83776.54	Mid	50	2Tx	QPSK	H	*	*	-32.93	-13.00	-19.93
84976.59	High	50	2Tx	QPSK	H	*	*	-32.67	-13.00	-19.67

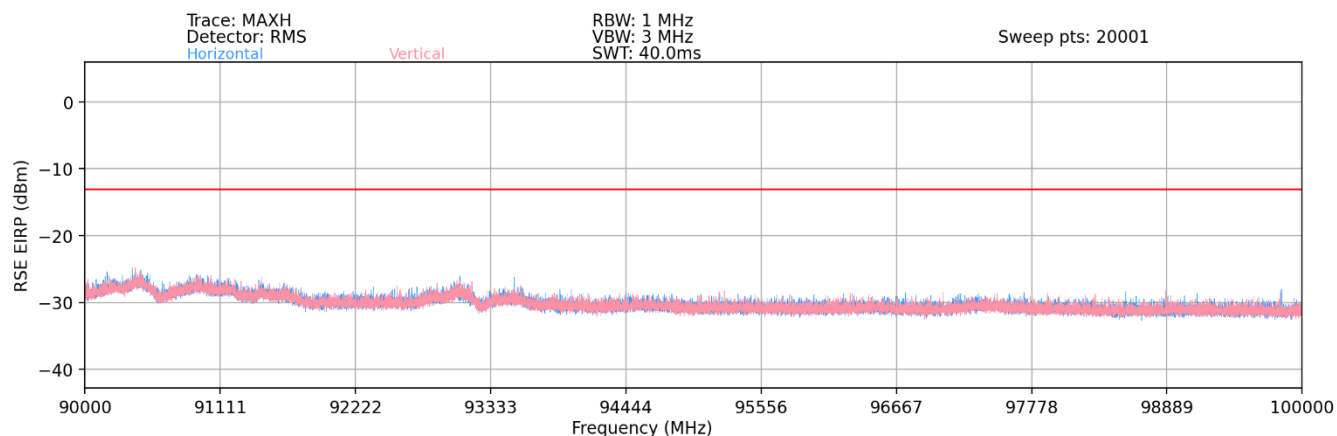
Table 7-77. Ant1 - 2Tx - Spurious Emissions Table (60GHz - 90GHz)

Notes

- 1) The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
- 2) Rows marked with * indicate a spurious emission level that was measured using the Spherical Grid TRP Method per KDB 842590.

FCC ID: A3LSMS908U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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90GHz - 100GHz



Plot 7-99. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
91295.50	Mid	50	2Tx	QPSK	H	-	-	-29.99	-13.00	-16.99
93323.50	Mid	50	2Tx	QPSK	H	-	-	-28.26	-13.00	-15.26
96166.00	Mid	50	2Tx	QPSK	H	-	-	-30.99	-13.00	-17.99

Table 7-77. Ant1- 2Tx - Spurious Emissions Table (90GHz - 100GHz)

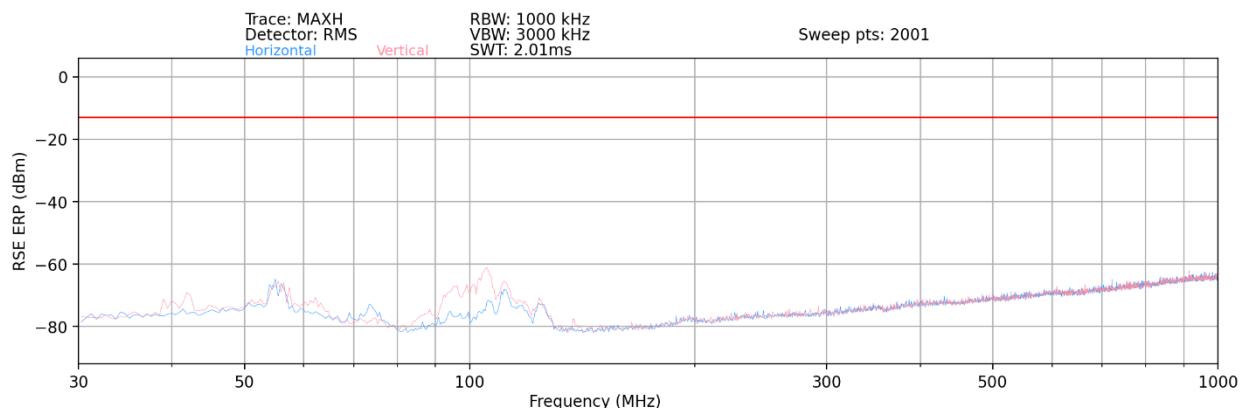
Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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Ant2 Band n261

30MHz - 1GHz



Plot 7-100. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions ERP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE ERP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE ERP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8 - 2.15 \text{ (dB)}$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
54.97	Mid	50	2Tx	QPSK	H	-	-	-67.90	-13.00	-54.90
103.44	Mid	50	2Tx	QPSK	H	-	-	-76.55	-13.00	-63.55
202.33	Mid	50	2Tx	QPSK	H	-	-	-78.97	-13.00	-65.97
353.58	Mid	50	2Tx	QPSK	H	-	-	-72.81	-13.00	-59.81
449.56	Mid	50	2Tx	QPSK	H	-	-	-72.52	-13.00	-59.52
530.51	Mid	50	2Tx	QPSK	H	-	-	-70.93	-13.00	-57.93

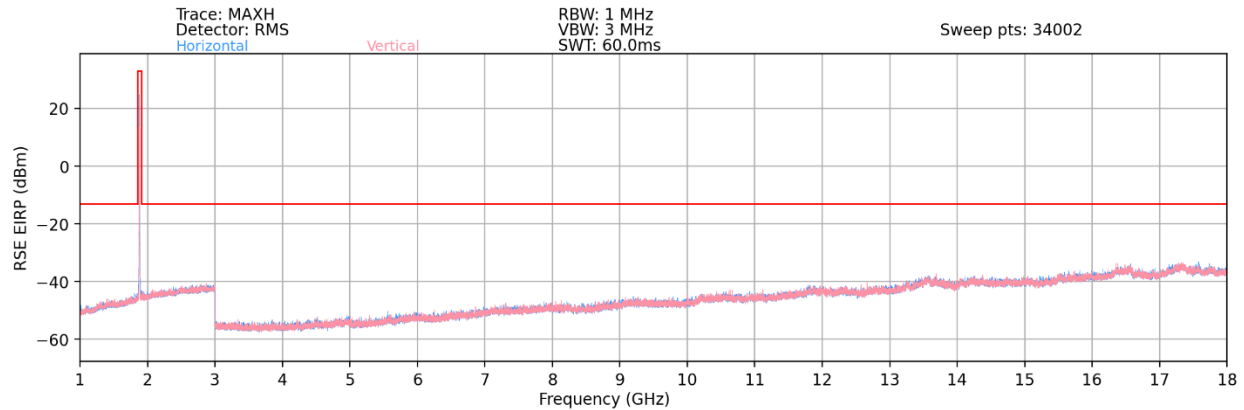
Table 7-78. Ant2- 2Tx - Spurious Emissions Table (30MHz - 1GHz)

Notes

The RSE ERP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

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1GHz - 18GHz



Plot 7-101. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3547.23	Mid	50	2Tx	QPSK	H	-	-	-54.90	-13.00	-41.90
4058.21	Mid	50	2Tx	QPSK	H	-	-	-56.35	-13.00	-43.35
7591.60	Mid	50	2Tx	QPSK	H	-	-	-48.85	-13.00	-35.85

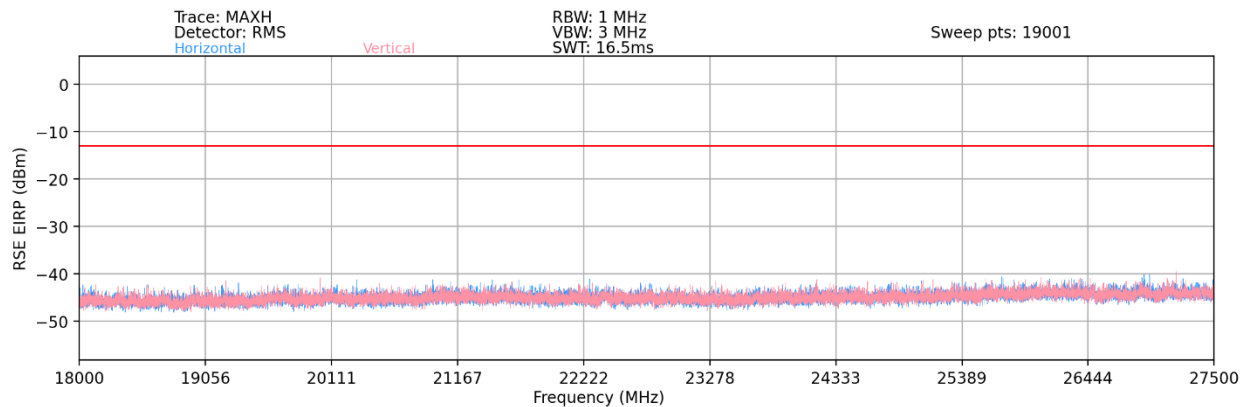
Table 7-79. Ant2 - 2Tx - Spurious Emissions Table (1GHz - 18GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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18GHz - 27.5GHz



Plot 7-102. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
20088.50	Mid	50	2Tx	QPSK	H	-	-	-45.39	-13.00	-32.39
23542.50	Mid	50	2Tx	QPSK	H	-	-	-44.90	-13.00	-31.90
26927.00	Mid	50	2Tx	QPSK	H	-	-	-43.63	-13.00	-30.63

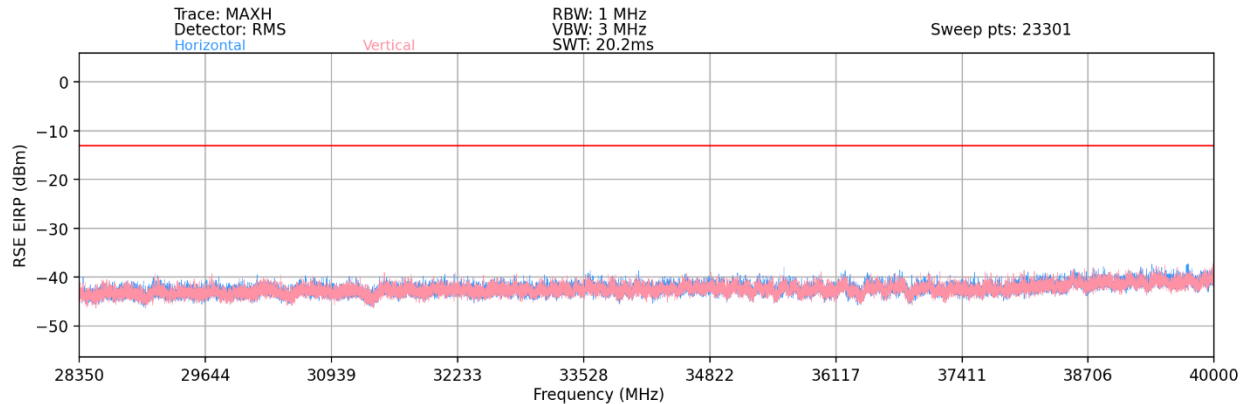
Table 7-80. Ant2 - 2Tx - Spurious Emissions Table (18GHz - 27.5GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1 meter.

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28.35GHz - 40GHz



Plot 7-103. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
28883.00	Mid	50	2Tx	QPSK	H	-	-	-43.21	-13.00	-30.21
32457.50	Mid	50	2Tx	QPSK	H	-	-	-42.81	-13.00	-29.81
36687.50	Mid	50	2Tx	QPSK	H	-	-	-43.07	-13.00	-30.07

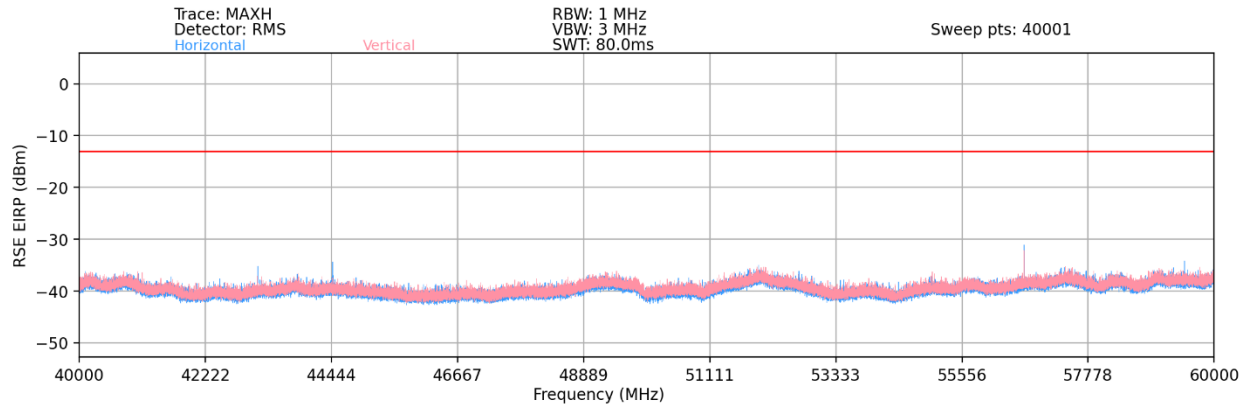
Table 7-81. Ant2 - 2Tx - Spurious Emissions Table (28.35GHz - 40GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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40GHz - 60GHz



Plot 7-104. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55050.87	Low	50	2Tx	QPSK	H	314	301	-26.60	-13.00	-13.60
55850.94	Mid	50	2Tx	QPSK	H	308	295	-30.60	-13.00	-17.60
56651.19	High	50	2Tx	QPSK	H	299	348	-35.13	-13.00	-22.13

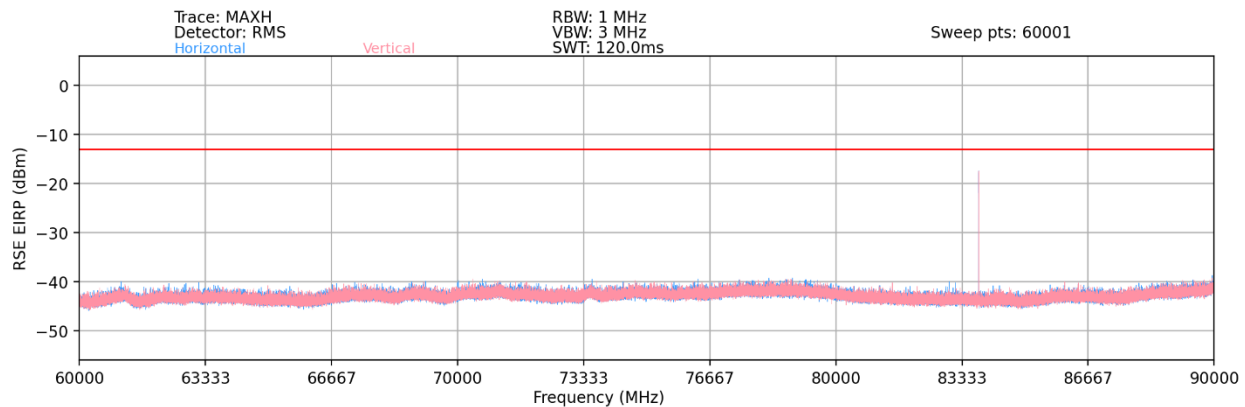
Table 7-82. Ant2 - 2Tx - Spurious Emissions Table (40GHz - 60GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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60GHz - 90GHz



Plot 7-105. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
82576.77	Low	50	2Tx	QPSK	V	*	*	-35.76	-13.00	-22.76
83776.54	Mid	50	2Tx	QPSK	V	*	*	-32.88	-13.00	-19.88
84976.41	High	50	2Tx	QPSK	V	*	*	-31.34	-13.00	-18.34

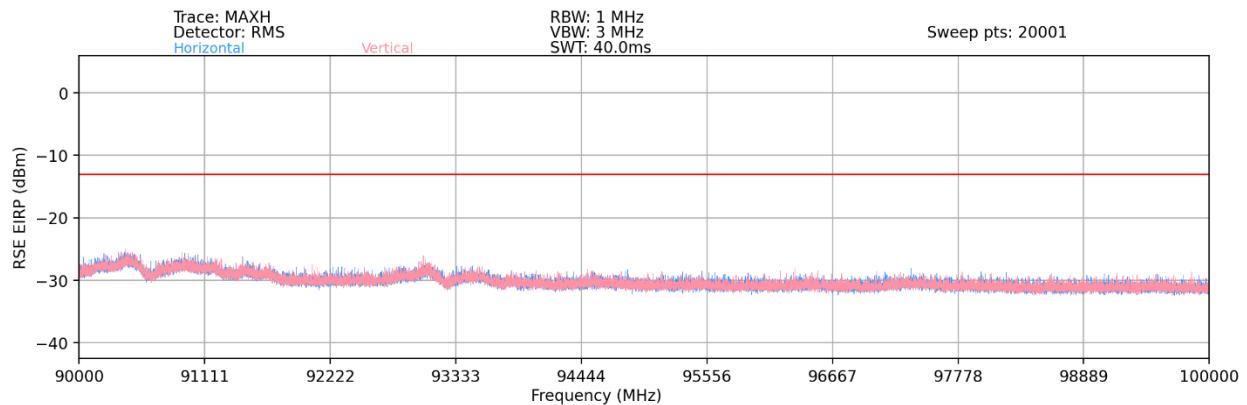
Table 7-83. Ant2 - 2Tx - Spurious Emissions Table (60GHz - 90GHz)

Notes

- The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
- Rows marked with * indicate a spurious emission level that was measured using the Spherical Grid TRP Method per KDB 842590.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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90GHz - 100GHz



Plot 7-106. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor B2)

Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
92965.00	Mid	50	2Tx	QPSK	H	-	-	-28.21	-13.00	-15.21
95241.50	Mid	50	2Tx	QPSK	H	-	-	-30.44	-13.00	-17.44
97668.50	Mid	50	2Tx	QPSK	H	-	-	-31.12	-13.00	-18.12

Table 7-84. Ant2 - 2Tx - Spurious Emissions Table (90GHz - 100GHz)

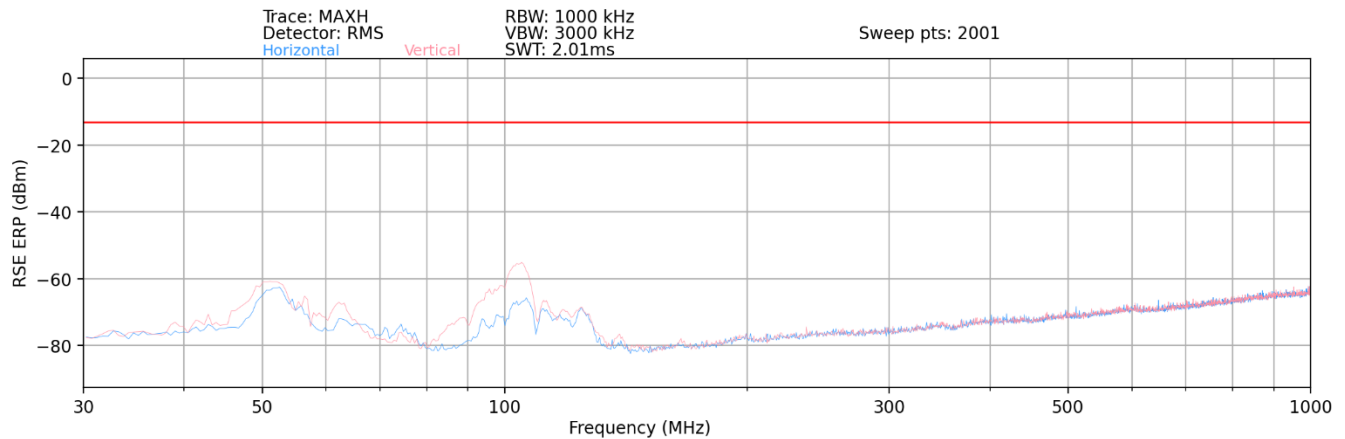
Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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Ant1 Band n260

30MHz - 1GHz



Plot 7-107. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions ERP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE ERP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE ERP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8 - 2.15 \text{ (dB)}$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
52.54	Mid	50	2Tx	QPSK	H	-	-	-62.52	-13.00	-49.52
105.86	Mid	50	2Tx	QPSK	H	-	-	-66.46	-13.00	-53.46
285.22	Mid	50	2Tx	QPSK	H	-	-	-75.18	-13.00	-62.18
521.79	Mid	50	2Tx	QPSK	H	-	-	-70.92	-13.00	-57.92
670.12	Mid	50	2Tx	QPSK	H	-	-	-67.26	-13.00	-54.26
829.61	Mid	50	2Tx	QPSK	H	-	-	-64.92	-13.00	-51.92

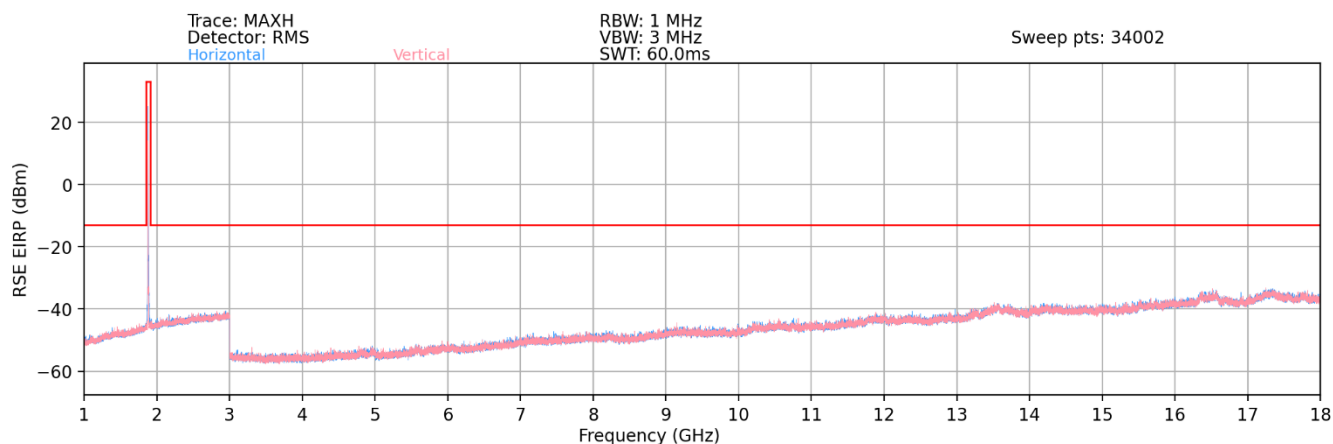
Table 7-85. Ant1 - 2Tx - Spurious Emissions Table (30MHz - 1GHz)

Notes

The RSE ERP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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1GHz - 18GHz



Plot 7-108. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4823.69	Mid	50	2Tx	QPSK	H	-	-	-53.71	-13.00	-40.71
8484.57	Mid	50	2Tx	QPSK	H	-	-	-50.17	-13.00	-37.17
12228.94	Mid	50	2Tx	QPSK	H	-	-	-43.23	-13.00	-30.23

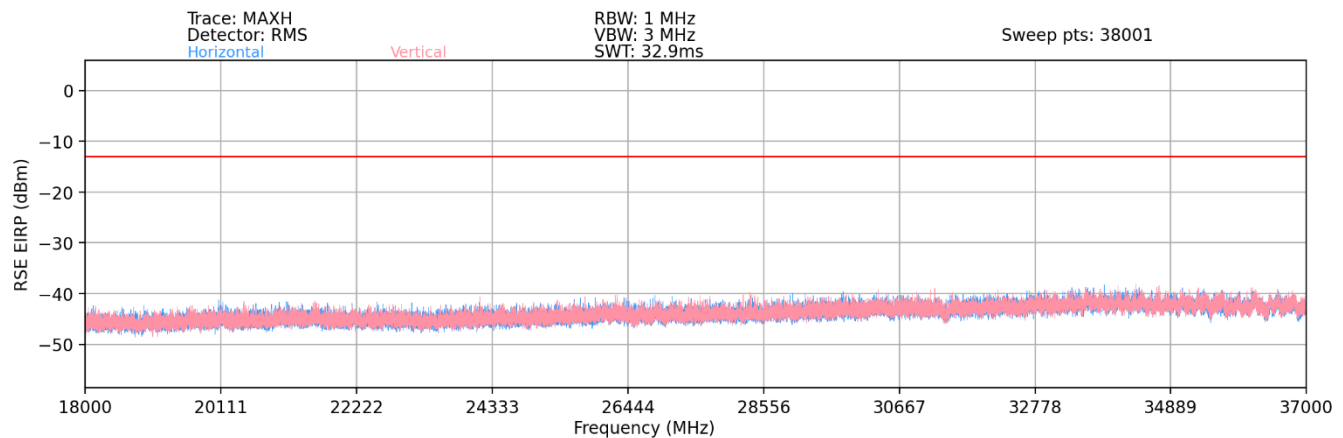
Table 7-86. Ant1 - 2Tx - Spurious Emissions Table (1GHz - 18GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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18GHz – 37GHz



Plot 7-109. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
22351.50	Mid	50	2Tx	QPSK	H	-	-	-46.77	-13.00	-33.77
28139.00	Mid	50	2Tx	QPSK	H	-	-	-44.44	-13.00	-31.44
36954.00	Mid	50	2Tx	QPSK	H	-	-	-42.88	-13.00	-29.88

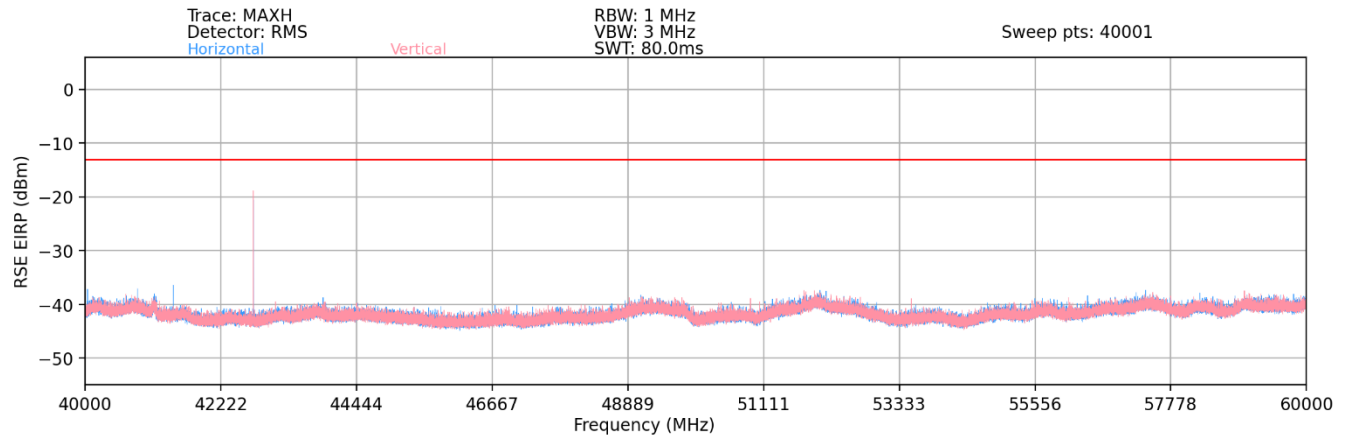
Table 7-87. Ant1 - 2Tx - Spurious Emissions Table (18GHz – 37GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1 meter.

FCC ID: A3LSMS908U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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40GHz - 60GHz



Plot 7-110. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
40388.62	Low	50	2Tx	QPSK	V	64	326	-27.70	-13.00	-14.70
42753.68	Mid	50	2Tx	QPSK	V	63	339	-21.26	-13.00	-8.26
44811.59	High	50	2Tx	QPSK	V	67	319	-21.20	-13.00	-8.20

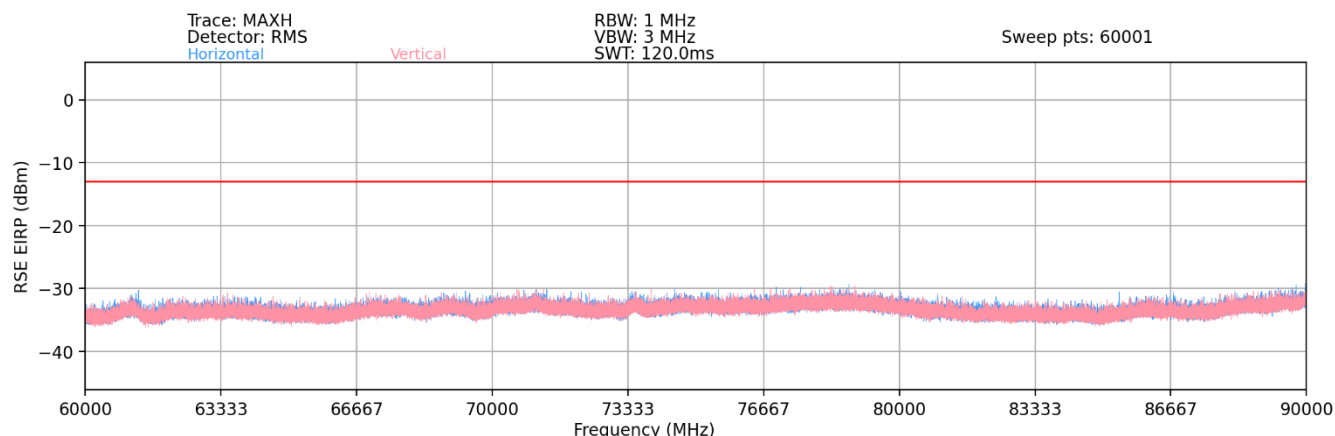
Table 7-88. Ant1 - 2Tx - Spurious Emissions Table (40GHz - 60GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 1.5 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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60GHz - 90GHz



Plot 7-111. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74051.46	Low	50	2Tx	QPSK	V	112	332	-42.75	-13.00	-29.75
77000.43	Mid	50	2Tx	QPSK	V	112	329	-41.89	-13.00	-28.89
79950.99	High	50	2Tx	QPSK	V	85	354	-40.78	-13.00	-27.78

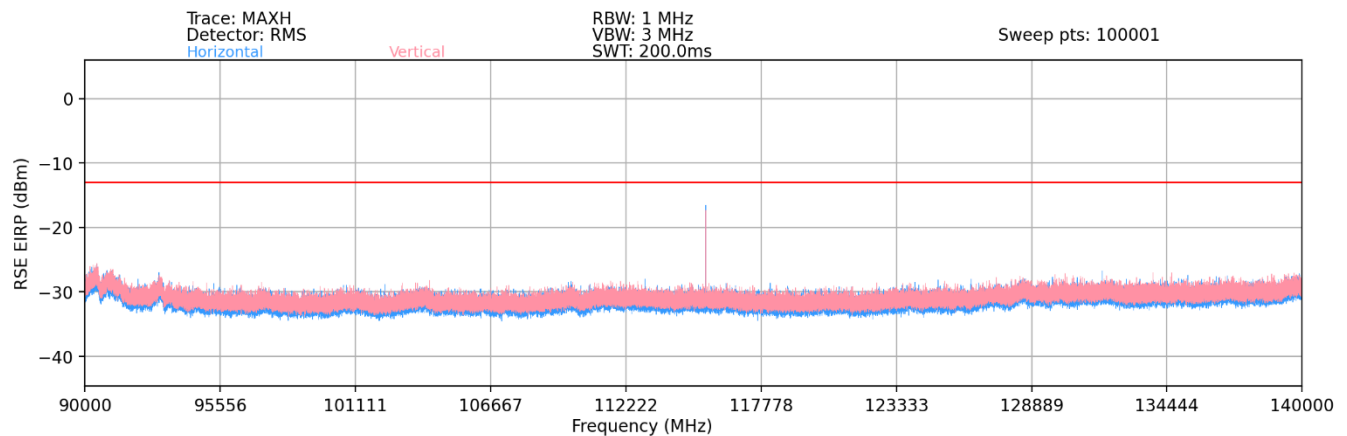
Table 7-89. Ant1 - 2Tx - Spurious Emissions Table (60GHz - 90GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

FCC ID: A3LSMS908U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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90GHz - 140GHz



Plot 7-112. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
111076.14	Low	50	2Tx	QPSK	H	306	313	-37.28	-13.00	-24.28
115501.76	Mid	50	2Tx	QPSK	H	232	271	-29.05	-13.00	-16.05
119925.96	High	50	2Tx	QPSK	H	262	350	-31.50	-13.00	-18.50

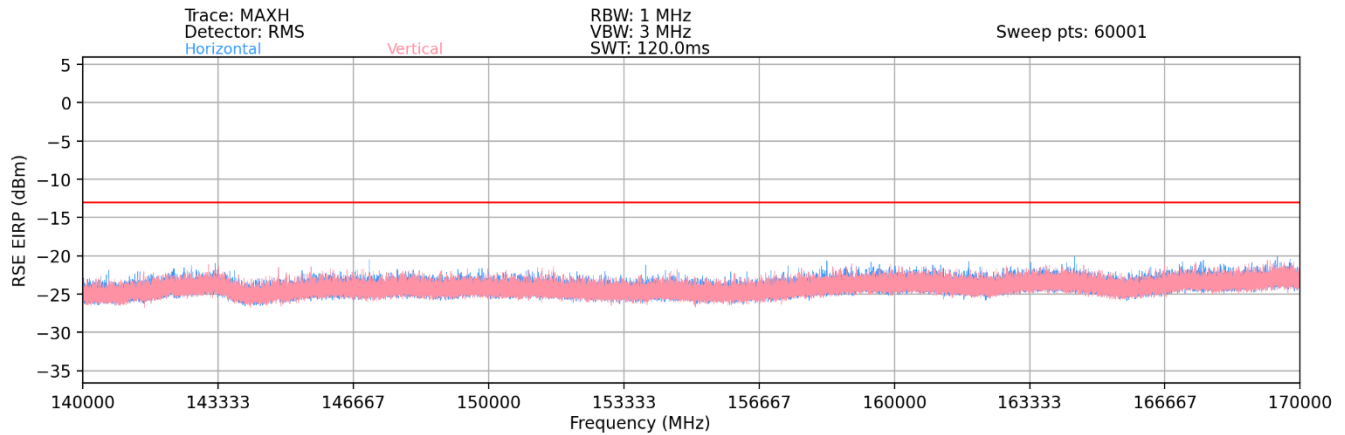
Table 7-90. Ant1 - 2Tx - Spurious Emissions Table (90GHz - 140GHz)

Notes

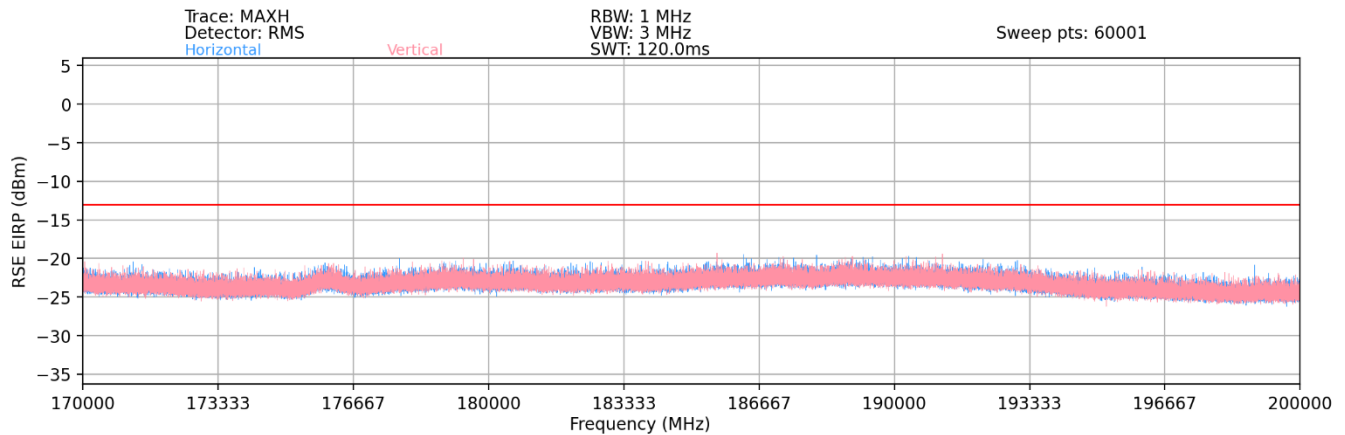
The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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140GHz - 200GHz



Plot 7-113. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)



Plot 7-114. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

FCC ID: A3LSMS908U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
148115.90	Low	50	2Tx	QPSK	H	-	-	-40.06	-13.00	-27.06
185134.52	Low	50	2Tx	QPSK	H	-	-	-39.01	-13.00	-26.01
153993.34	Mid	50	2Tx	QPSK	H	-	-	-40.70	-13.00	-27.70
192494.34	Mid	50	2Tx	QPSK	H	-	-	-38.97	-13.00	-25.97
159893.71	High	50	2Tx	QPSK	H	-	-	-39.97	-13.00	-26.97
199870.06	High	50	2Tx	QPSK	H	-	-	-40.75	-13.00	-27.75

Table 7-91. Ant1 - 2Tx - Spurious Emissions Table (140GHz - 220GHz)

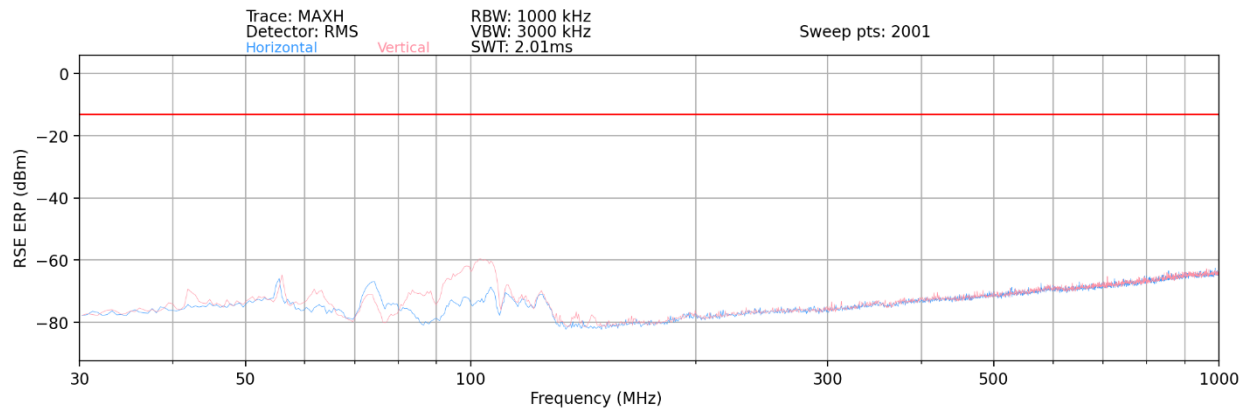
Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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Ant2 Band n260

30MHz - 1GHz



Plot 7-115. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions ERP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE ERP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE ERP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8 - 2.15 \text{ (dB)}$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55.45	Mid	50	2Tx	QPSK	H	-	-	-65.97	-13.00	-52.97
78.72	Mid	50	2Tx	QPSK	H	-	-	-73.93	-13.00	-60.93
104.90	Mid	50	2Tx	QPSK	H	-	-	-70.95	-13.00	-57.95
429.68	Mid	50	2Tx	QPSK	H	-	-	-72.41	-13.00	-59.41
824.28	Mid	50	2Tx	QPSK	H	-	-	-67.47	-13.00	-54.47
934.32	Mid	50	2Tx	QPSK	H	-	-	-65.18	-13.00	-52.18

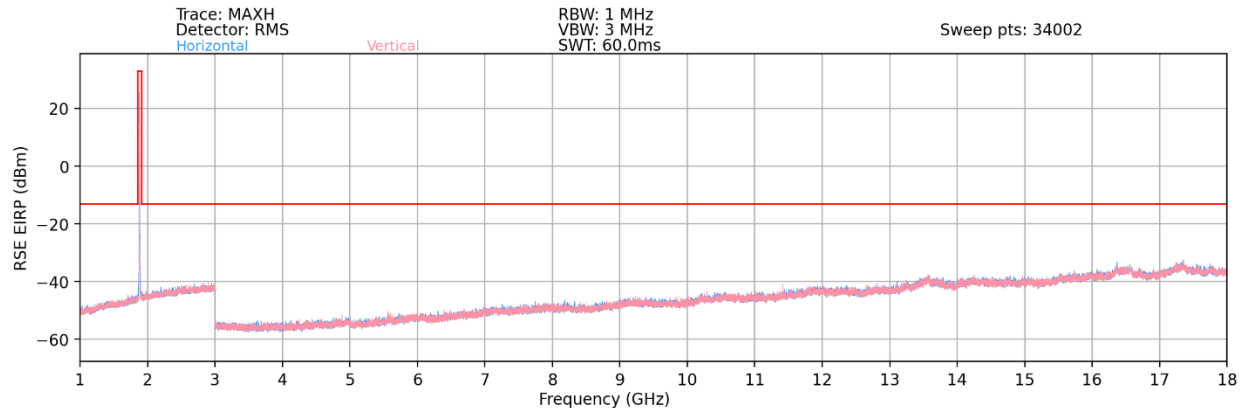
Table 7-92. Ant2 - 2Tx - Spurious Emissions Table (30MHz - 1GHz)

Notes

The RSE ERP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

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1GHz - 18GHz



Plot 7-116. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 3 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4907.19	Mid	50	2Tx	QPSK	H	-	-	-53.98	-13.00	-40.98
10164.01	Mid	50	2Tx	QPSK	H	-	-	-46.07	-13.00	-33.07
15245.34	Mid	50	2Tx	QPSK	H	-	-	-40.75	-13.00	-27.75

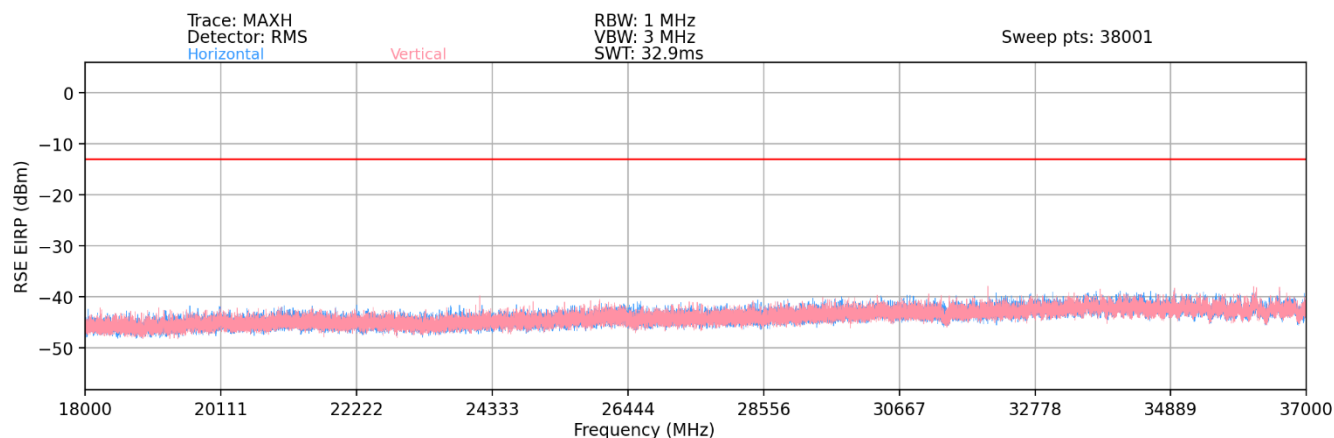
Table 7-93. Ant2 - 2Tx - Spurious Emissions Table (1GHz - 18GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

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18GHz – 37GHz



Plot 7-117. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx– EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
23790.50	Mid	50	2Tx	QPSK	H	-	-	-45.63	-13.00	-32.63
26037.00	Mid	50	2Tx	QPSK	H	-	-	-43.73	-13.00	-30.73
32876.50	Mid	50	2Tx	QPSK	H	-	-	-42.77	-13.00	-29.77

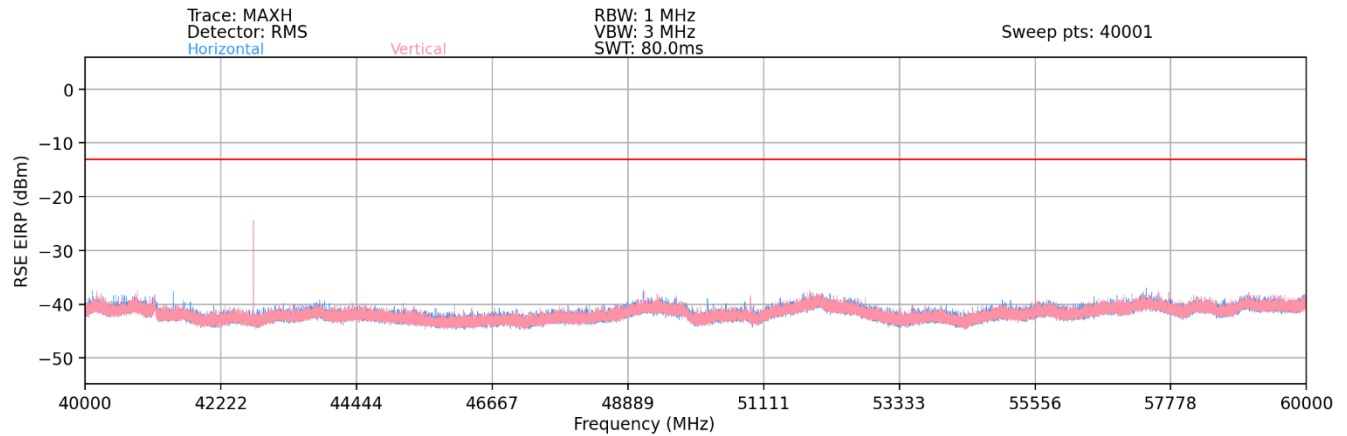
Table 7-94. Ant2 - 2Tx - Spurious Emissions Table (18GHz – 37GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses. Measurements were performed at a distance of 1 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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40GHz - 60GHz



Plot 7-118. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP (dBm)} = \text{Analyzer Level (dBm)} + 107 + \text{AFCL (dB/m)} + 20\text{Log(Dm)} - 104.8$$

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
40387.45	Low	50	2Tx	QPSK	V	164	51	-22.13	-13.00	-9.13
42752.84	Mid	50	2Tx	QPSK	V	166	28	-24.53	-13.00	-11.53
44812.44	High	50	2Tx	QPSK	V	164	35	-20.62	-13.00	-7.62

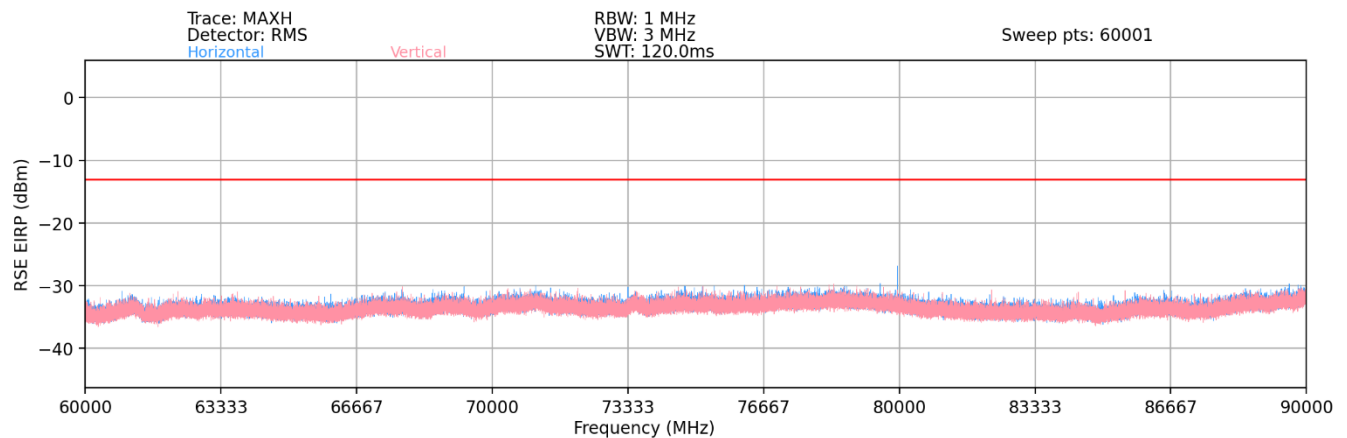
Table 7-95. Ant2 - 2Tx - Spurious Emissions Table (40GHz - 60GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses. Measurements were performed at a distance of 1.5 meter.

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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60GHz - 90GHz



Plot 7-119. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74050.80	Low	50	2Tx	QPSK	H	259	8	-42.72	-13.00	-29.72
77000.79	Mid	50	2Tx	QPSK	H	248	344	-41.61	-13.00	-28.61
79951.02	High	50	2Tx	QPSK	H	210	310	-37.44	-13.00	-24.44

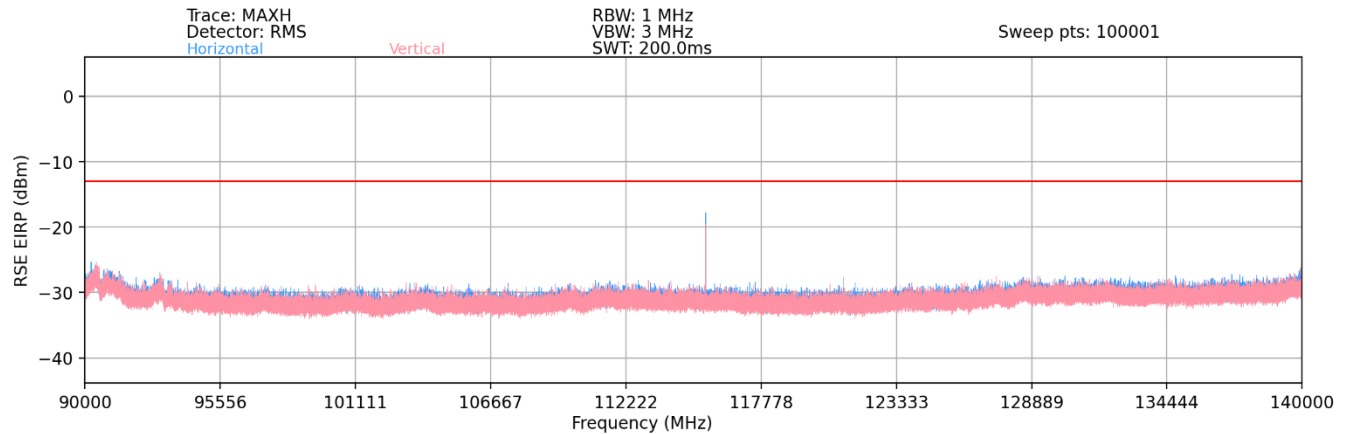
Table 7-96. Ant2 - 2Tx -Spurious Emissions Table (60GHz - 90GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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90GHz - 140GHz



Plot 7-120. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
111076.23	Low	50	2Tx	QPSK	V	106	8	-30.25	-13.00	-17.25
115501.34	Mid	50	2Tx	QPSK	V	89	30	-25.00	-13.00	-12.00
119926.23	High	50	2Tx	QPSK	V	69	4	-32.57	-13.00	-19.57

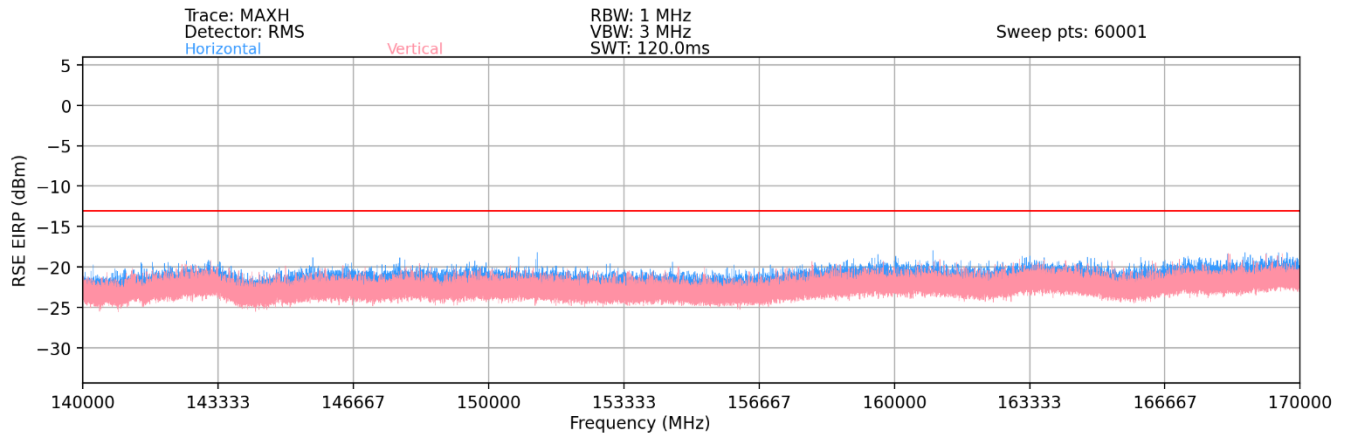
Table 7-97. Ant2 -2Tx - Spurious Emissions Table (90GHz - 140GHz)

Notes

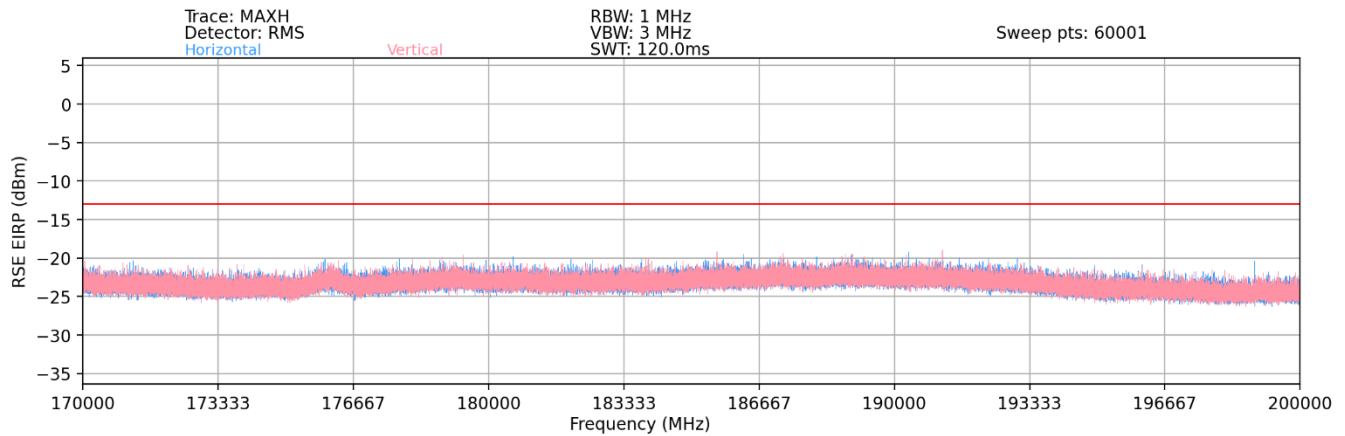
The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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140GHz - 200GHz



Plot 7-121. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)



Plot 7-122. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel 2Tx – EN-DC Anchor Band 2)

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Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8 + Harmonic Mixer Conversion Loss [dB]

Frequency [MHz]	Channel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
148106.94	Low	50	2Tx	QPSK	H	-	-	-40.43	-13.00	-27.43
185116.75	Low	50	2Tx	QPSK	H	-	-	-39.05	-13.00	-26.05
154009.49	Mid	50	2Tx	QPSK	H	-	-	-40.85	-13.00	-27.85
192504.41	Mid	50	2Tx	QPSK	H	-	-	-39.25	-13.00	-26.25
159912.74	High	50	2Tx	QPSK	H	-	-	-40.02	-13.00	-27.02
199873.72	High	50	2Tx	QPSK	H	-	-	-40.91	-13.00	-27.91

Table 7-98. Ant2 - 2Tx - Spurious Emissions Table (140GHz - 220GHz)

Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.

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7.5 Band Edge Emissions

§2.1051, §30.203

Test Overview

All out of band emissions are measured in a radiated setup while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is -13dBm/1MHz. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.

Test Procedure Used

ANSI C63.26-2015 Section 5 and ANSI C63.26-2015 Section 6.4
 KDB 842590 D01 v01r02 Section 4.4.2.4

Test Settings

1. Start and stop frequency were set such that both upper and lower band edges are measured.
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW = 1MHz
4. VBW $\geq 3 \times$ RBW
5. Detector = RMS
6. Number of sweep points $\geq 2 \times$ Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.
- 2) Band Edge emissions were measured at a 1 meter distance.
- 3) The spectrum analyzer for each measurement shows an offset value that was determined using the measurement antenna factor, cable loss, far field measurement distance. A sample calculation is shown on the following page.
- 4) This device supports transmission of H-polarized and V-polarized beams from the antenna array in both CP-OFDM and DFT-s-OFDM transmission schemes. SISO and 2Tx/MIMO operation is also supported for some configurations. As part of the testing, all modes were fully investigated and only the worst case has been included in this report.

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- 5) All combinations of 1CC and 2CC were fully investigated, and only the worst case has been included in this report.
- 6) All 2CC cases were investigated with PCC prioritization feature, which was the higher PCC at the band edge for the worst case.
- 7) The Total Radiated Power measurements shown in this section were performed in accordance with the guidance of Section 4.4.2.4 of KDB 842590 D01 for the Spherical Method.

Sample Analyzer Offset Calculation (at 27.5GHz)

Measurement Antenna Factor = 40.70dB/m

Cable Loss = 8.82dB

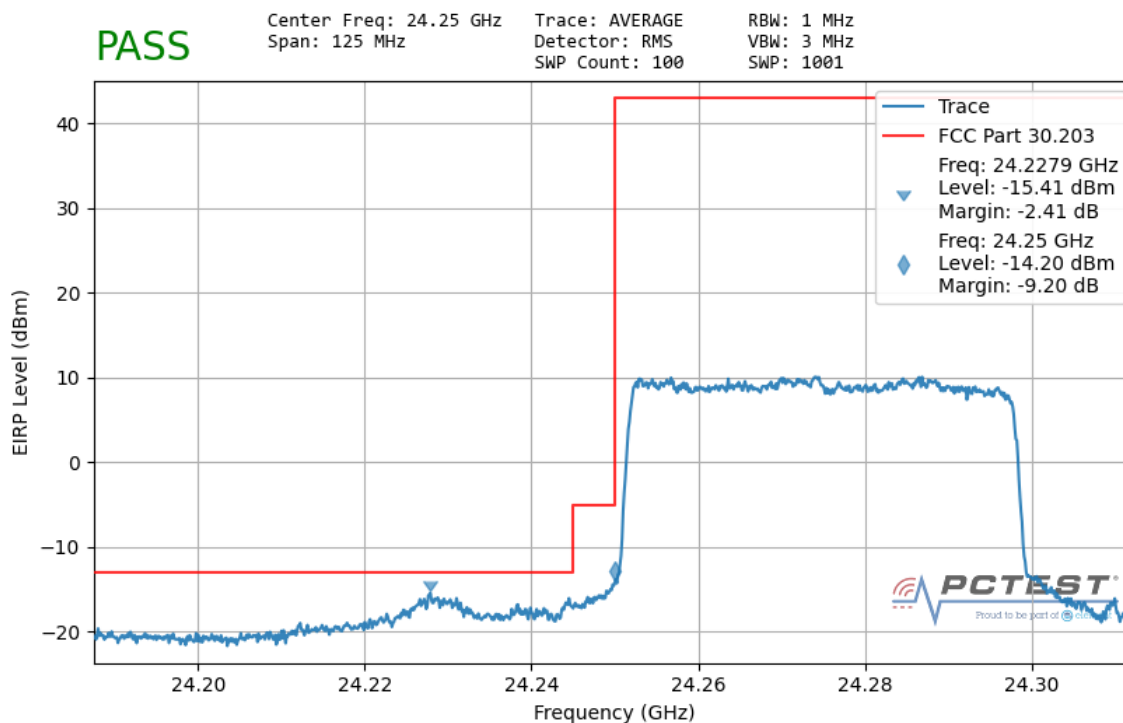
Analyzer Offset (dB) = AF (dB/m) + CL (dB) + 107 + 20log₁₀(D) – 104.8dB, where D = 1m

$$= 40.70\text{dB/m} + 8.82\text{dB} + 107 + 20\log_{10}(1\text{m}) - 104.8\text{dB}$$

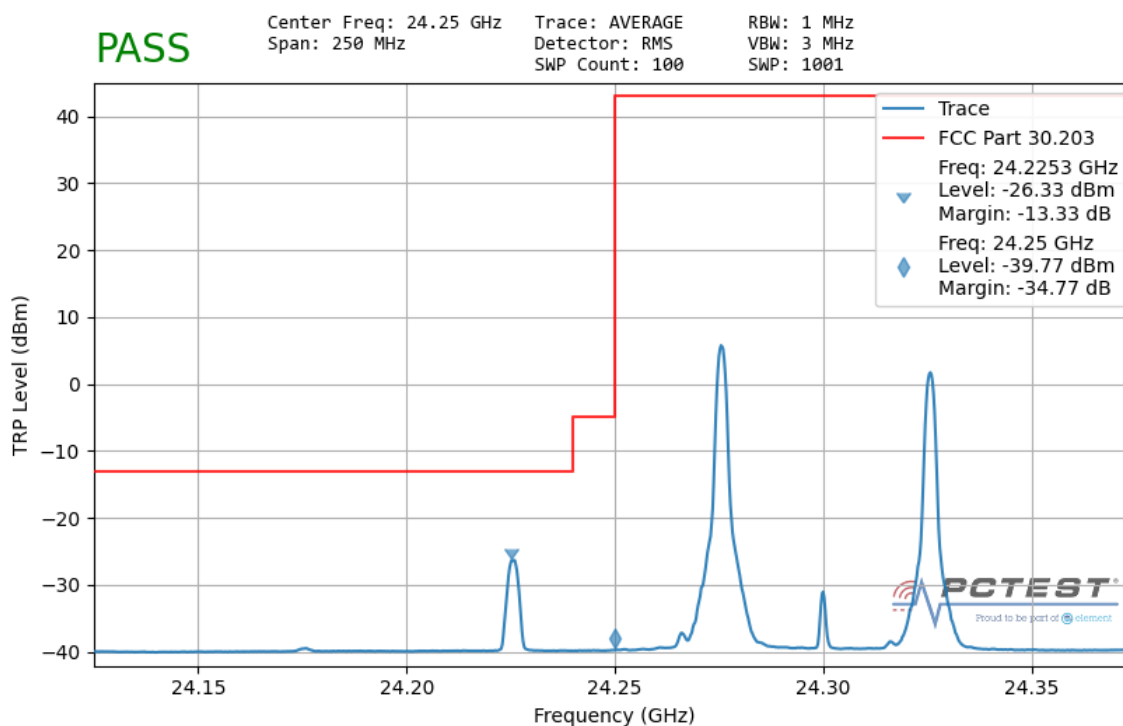
$$= 51.72\text{dB}$$

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Band n258-R1 – Worst Case

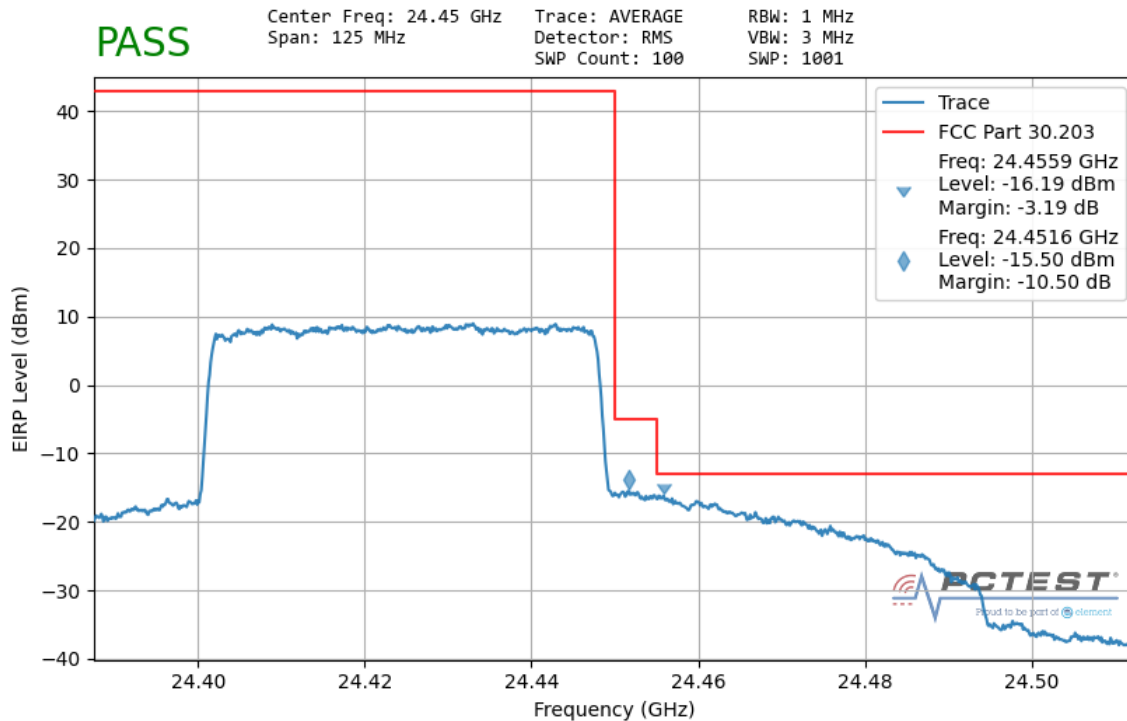


Plot 7-123. Ant1 Lower Band Edge (50MHz-1CC – $\pi/2$ -BPSK Full RB)

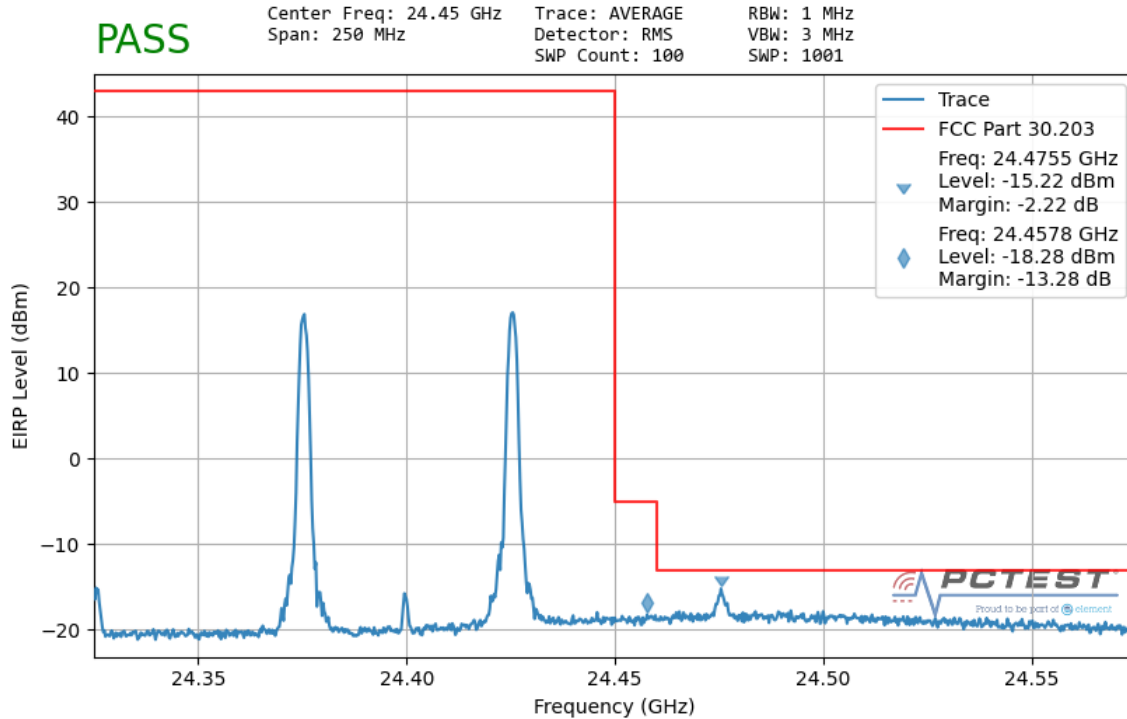


Plot 7-124. Ant1 Lower Band Edge – TRP (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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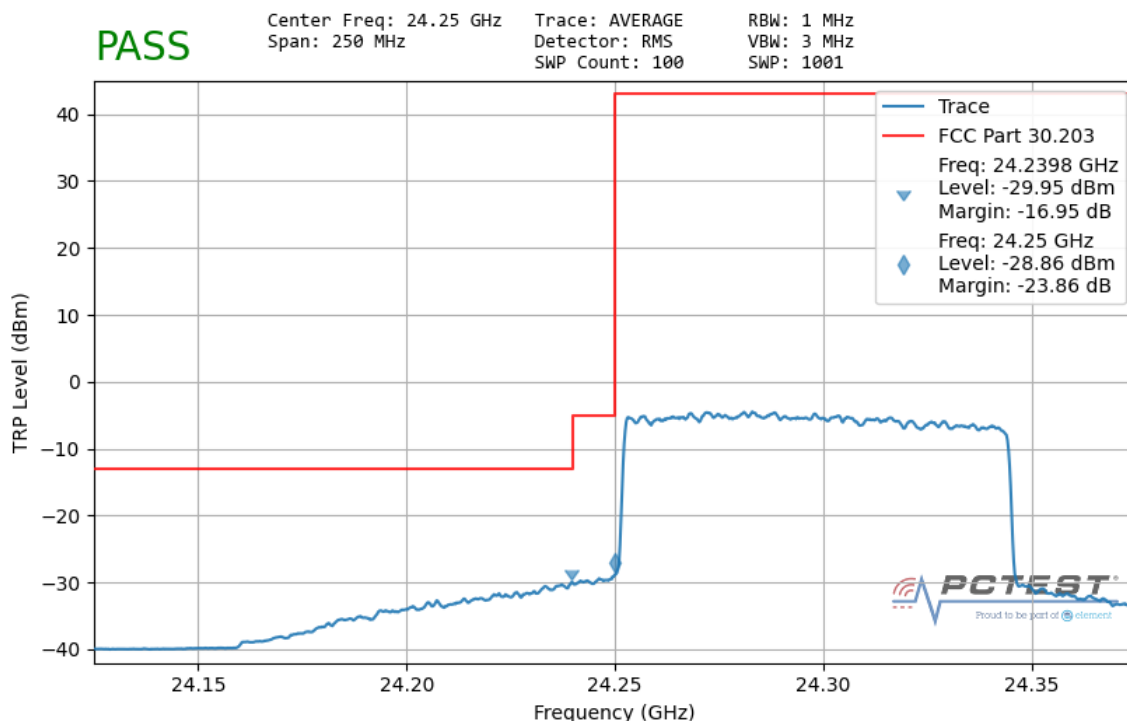


Plot 7-125. Ant1 Upper Band Edge (50MHz-1CC – QPSK Full RB)

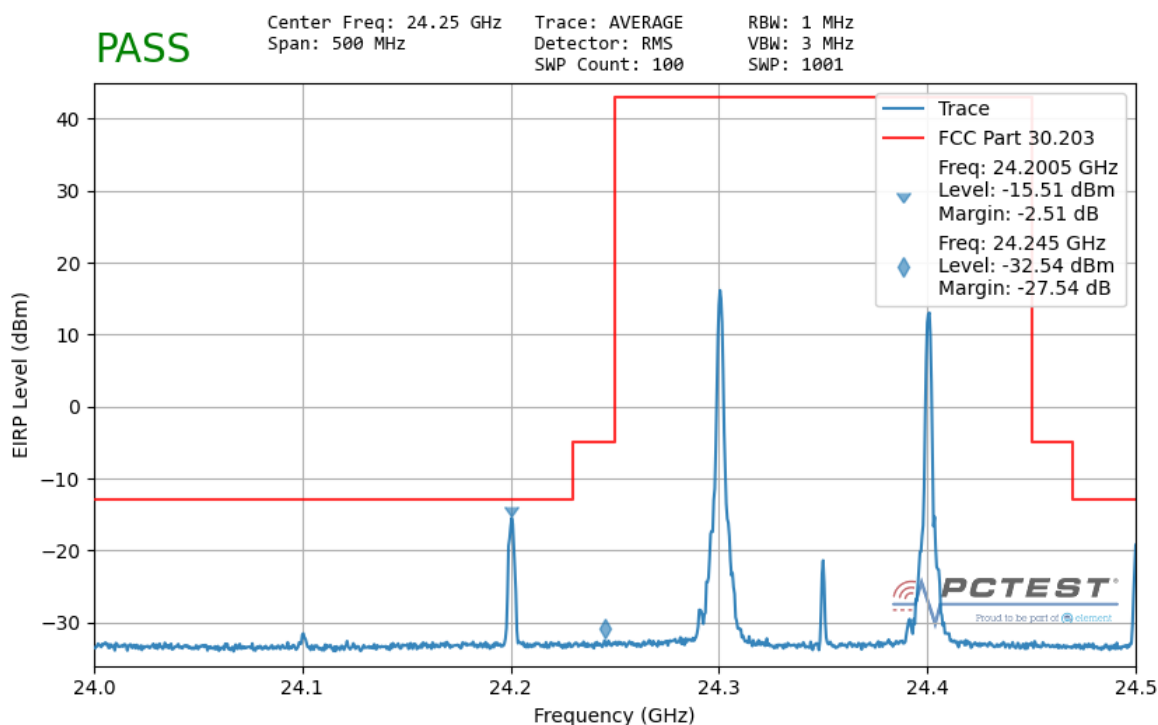


Plot 7-126. Ant1 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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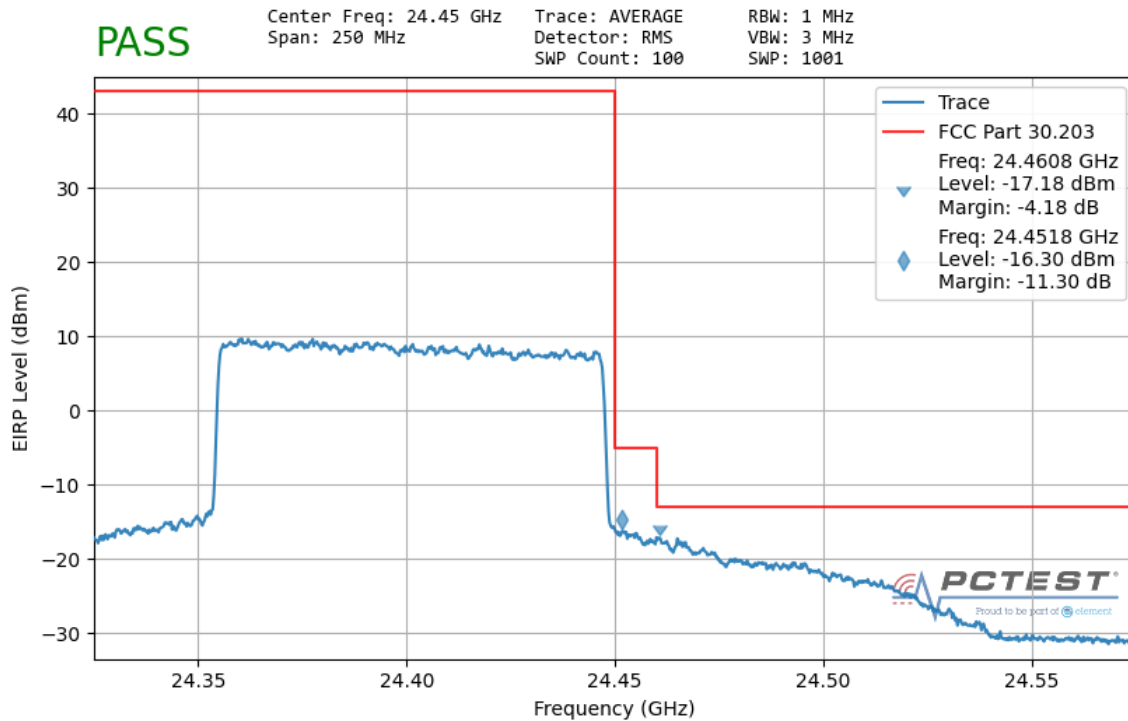


Plot 7-127. Ant1 Lower Band Edge – TRP (100MHz-1CC – QPSK Full RB)

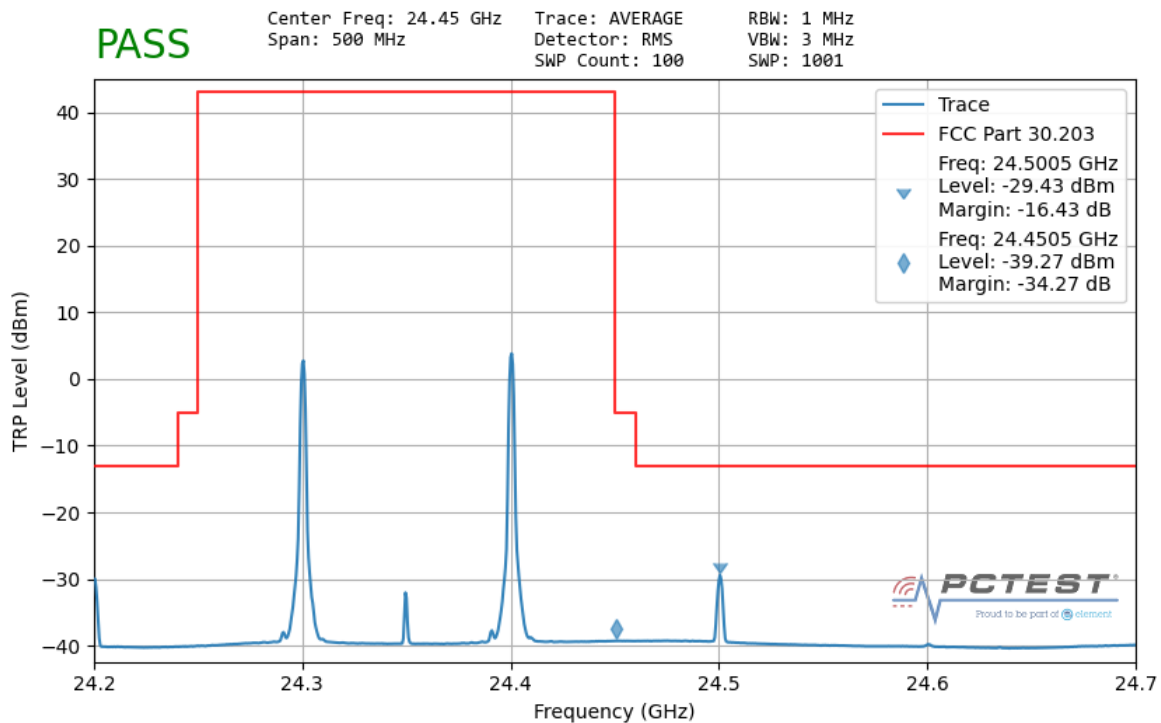


Plot 7-128. Ant1 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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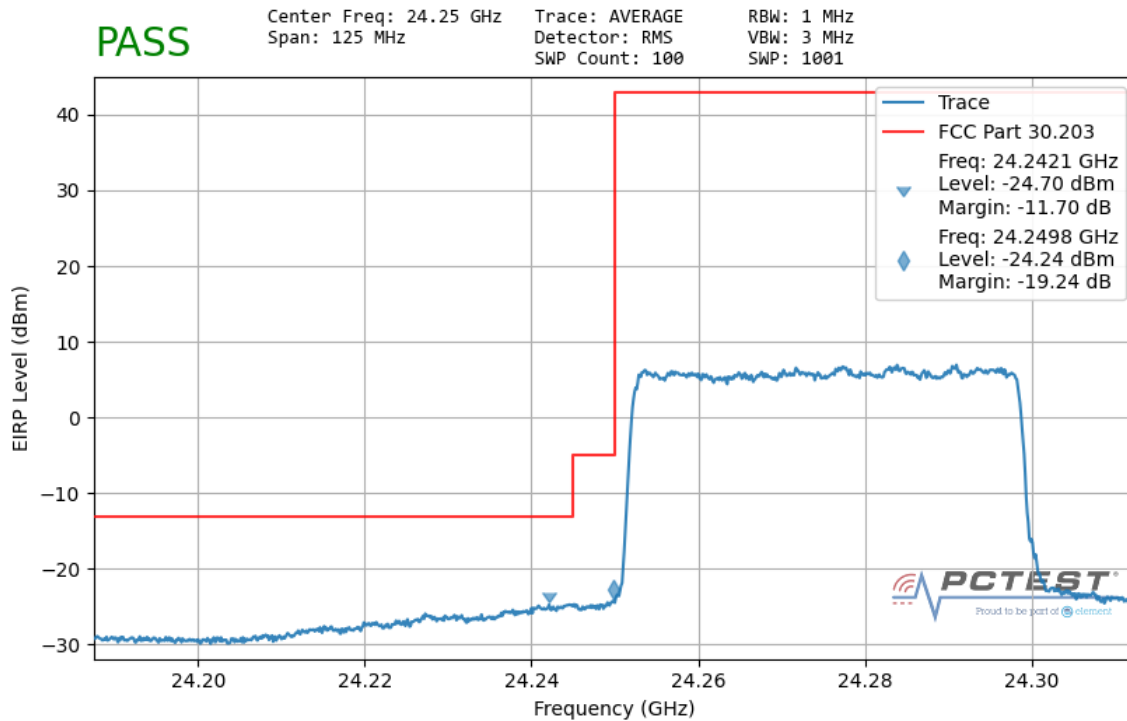


Plot 7-129. Ant1 Upper Band Edge (100MHz-1CC – QPSK Full RB)

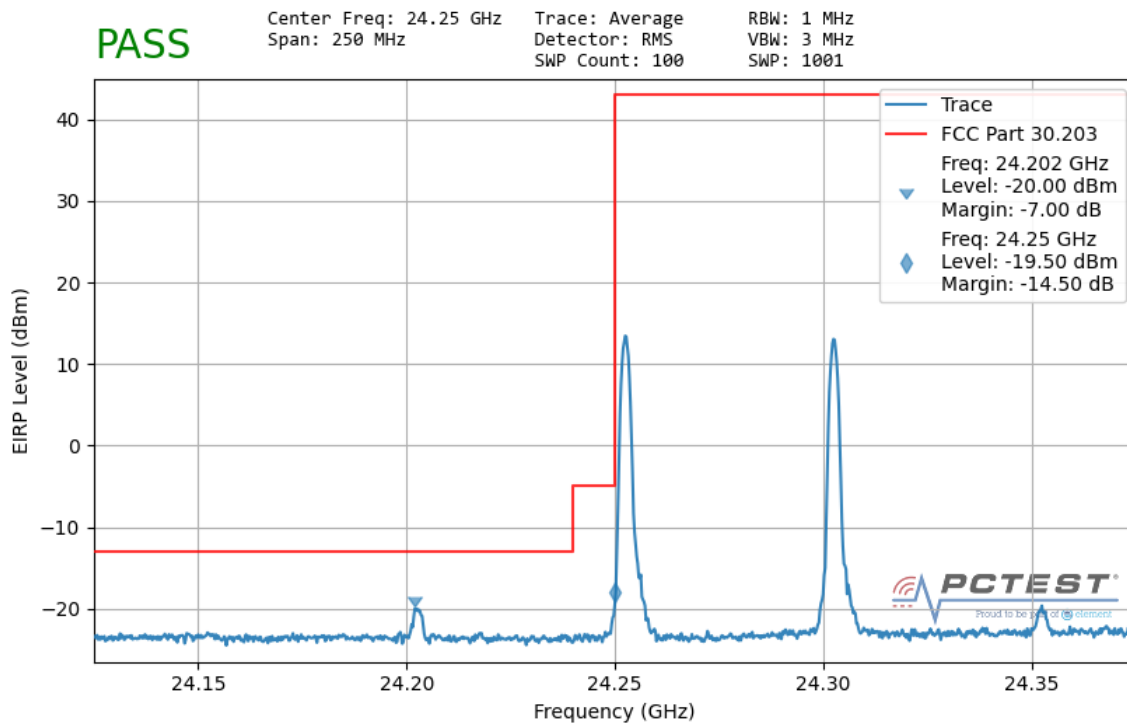


Plot 7-130. Ant1 Upper Band Edge – TRP (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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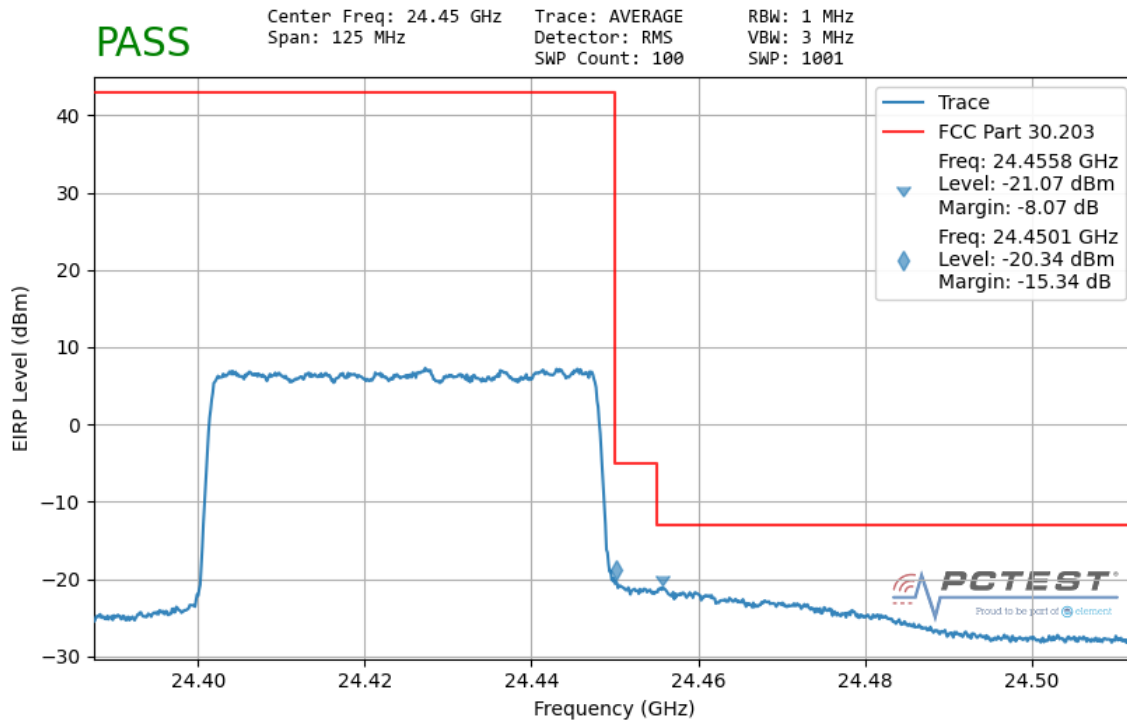


Plot 7-131. Ant2 Lower Band Edge (50MHz-1CC – QPSK Full RB)

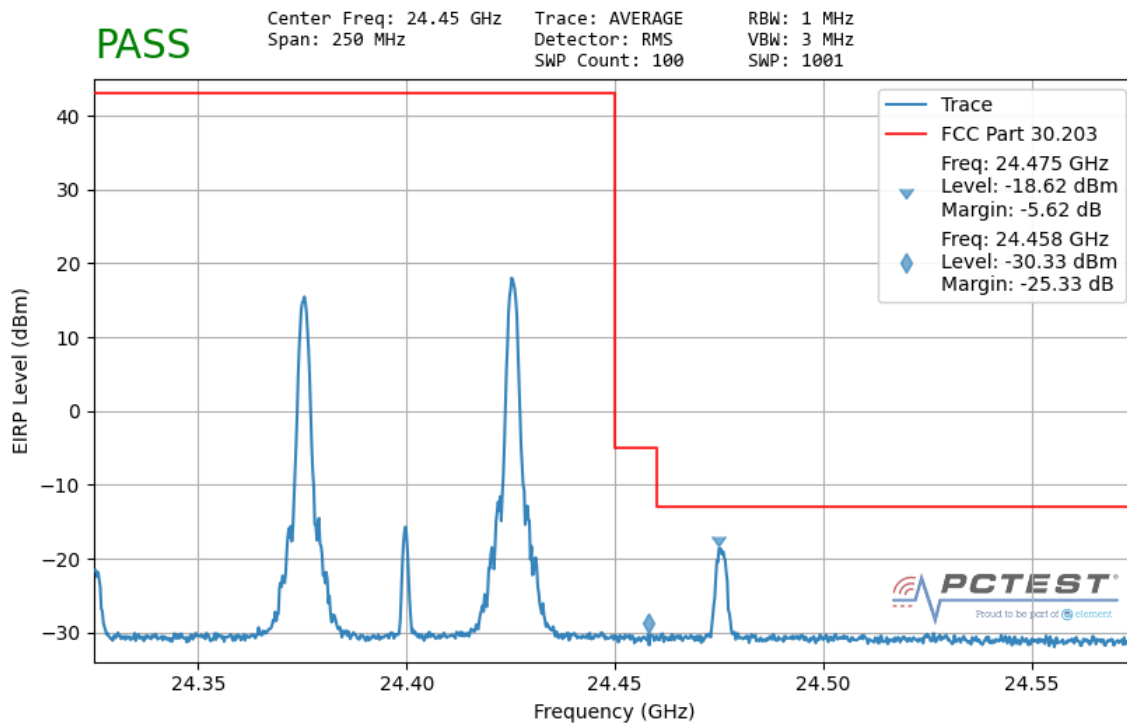


Plot 7-132. Ant2 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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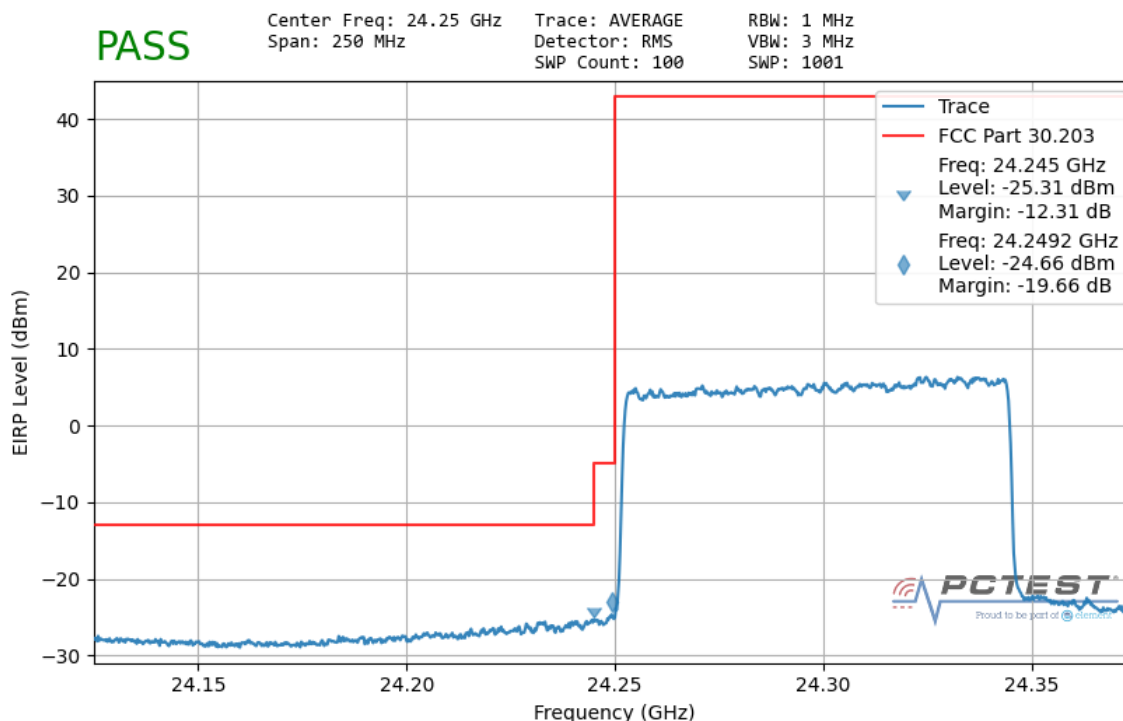


Plot 7-133. Ant2 Upper Band Edge (50MHz-1CC – QPSK Full RB)

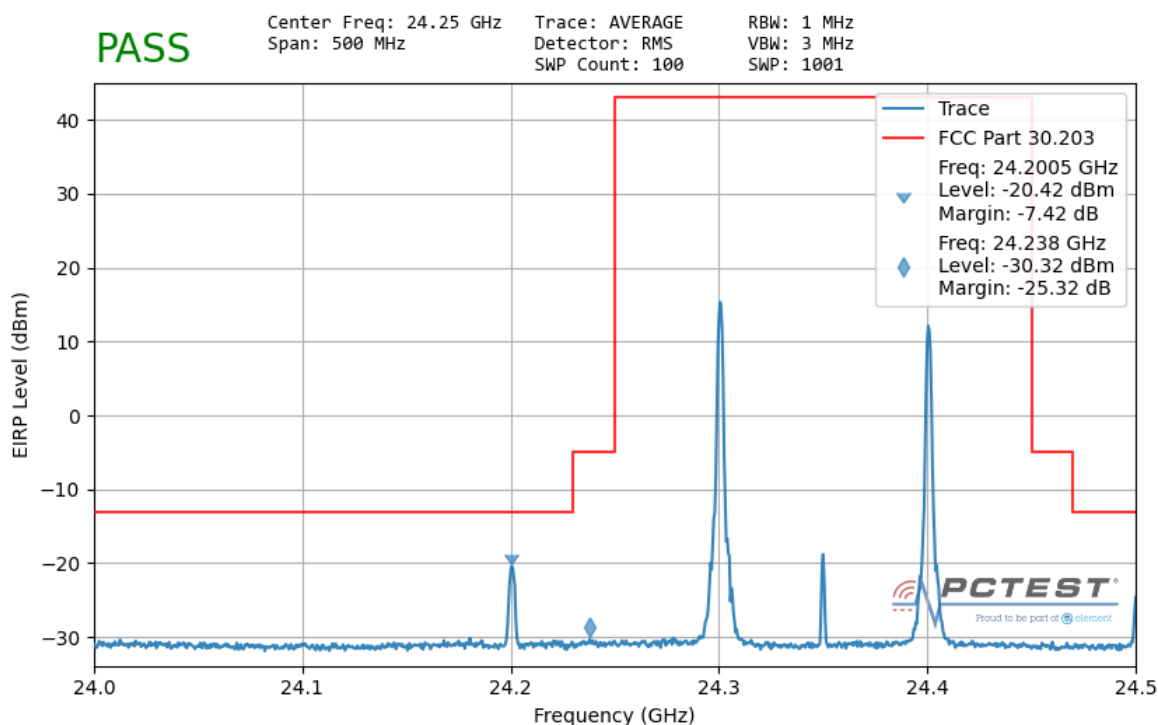


Plot 7-134. Ant2 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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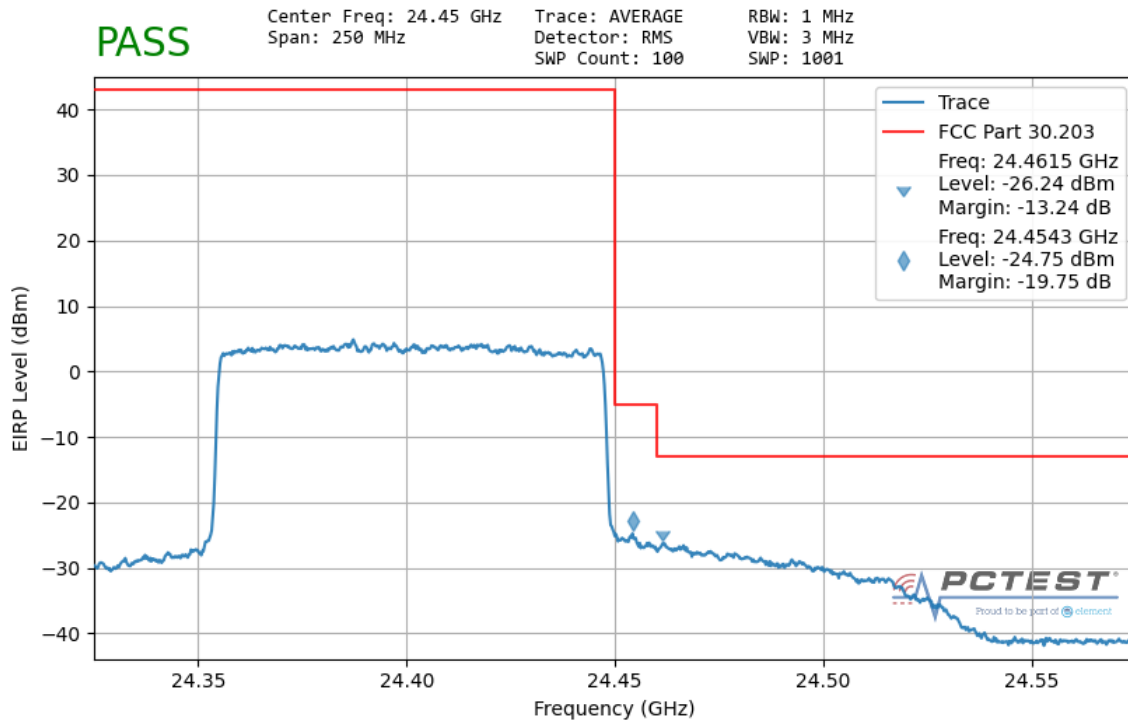


Plot 7-135. Ant2 Lower Band Edge (100MHz-1CC – QPSK Full RB)

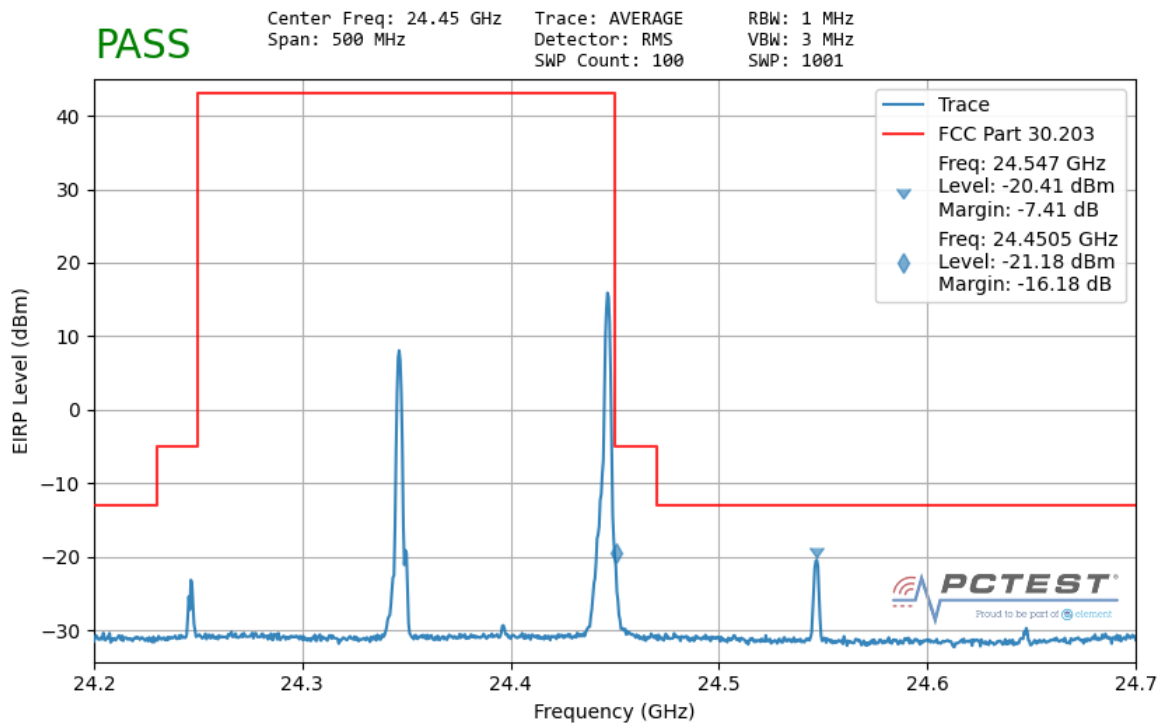


Plot 7-136. Ant2 Lower Band Edge – TRP (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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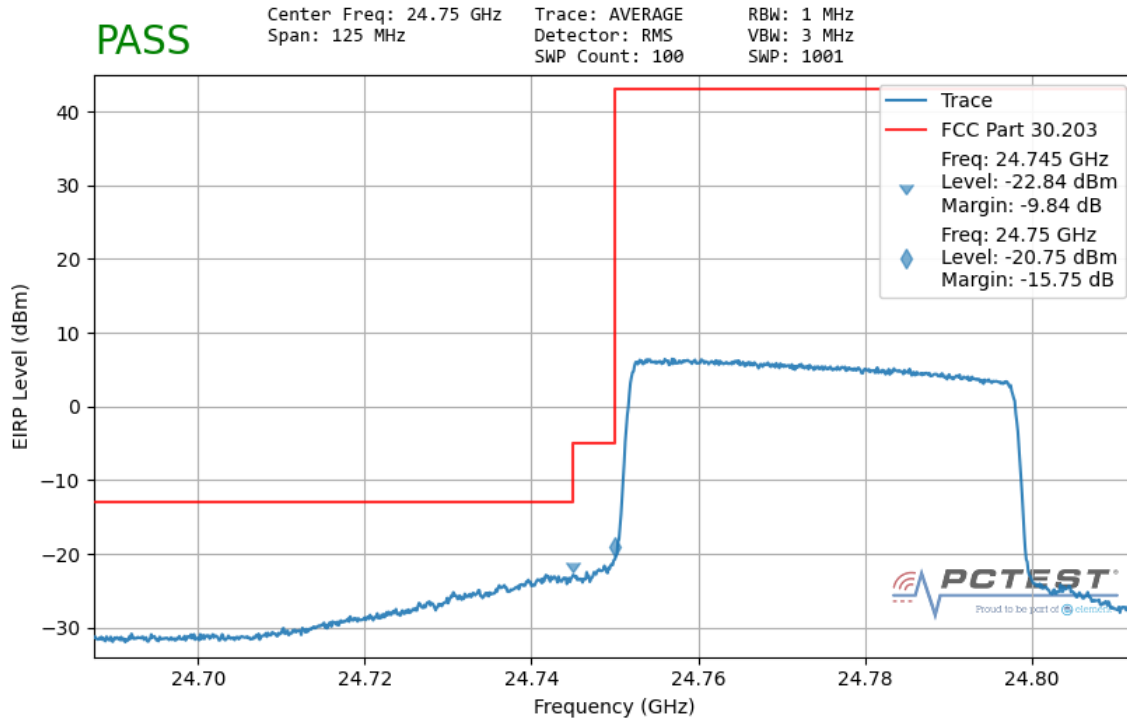
Plot 7-137. Ant2 Upper Band Edge (100MHz-1CC – QPSK Full RB)



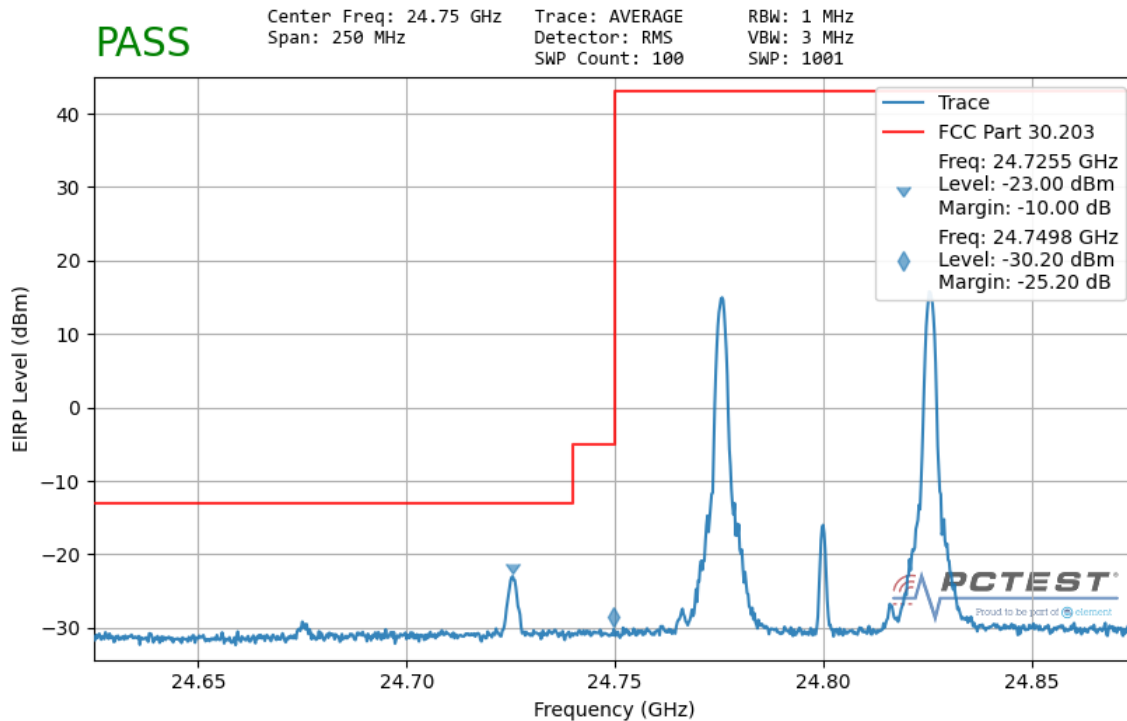
Plot 7-138. Ant2 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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Band n258-R2 – Worst Case

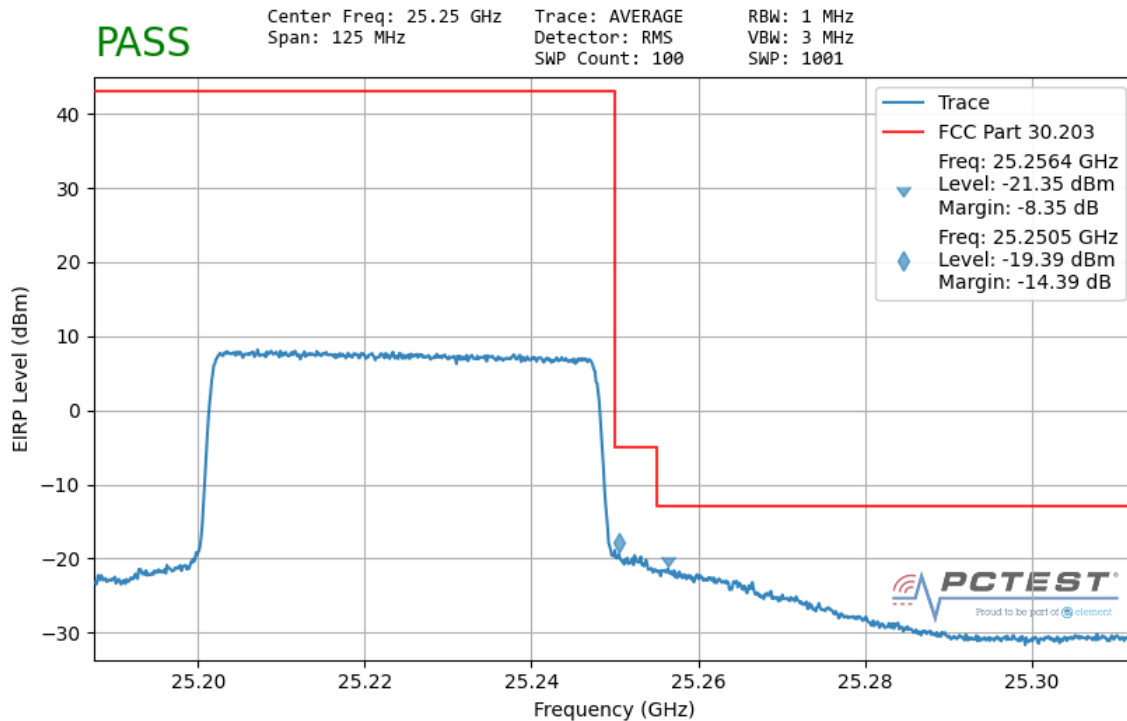


Plot 7-139. Ant1 Lower Band Edge (50MHz-1CC – QPSK Full RB)

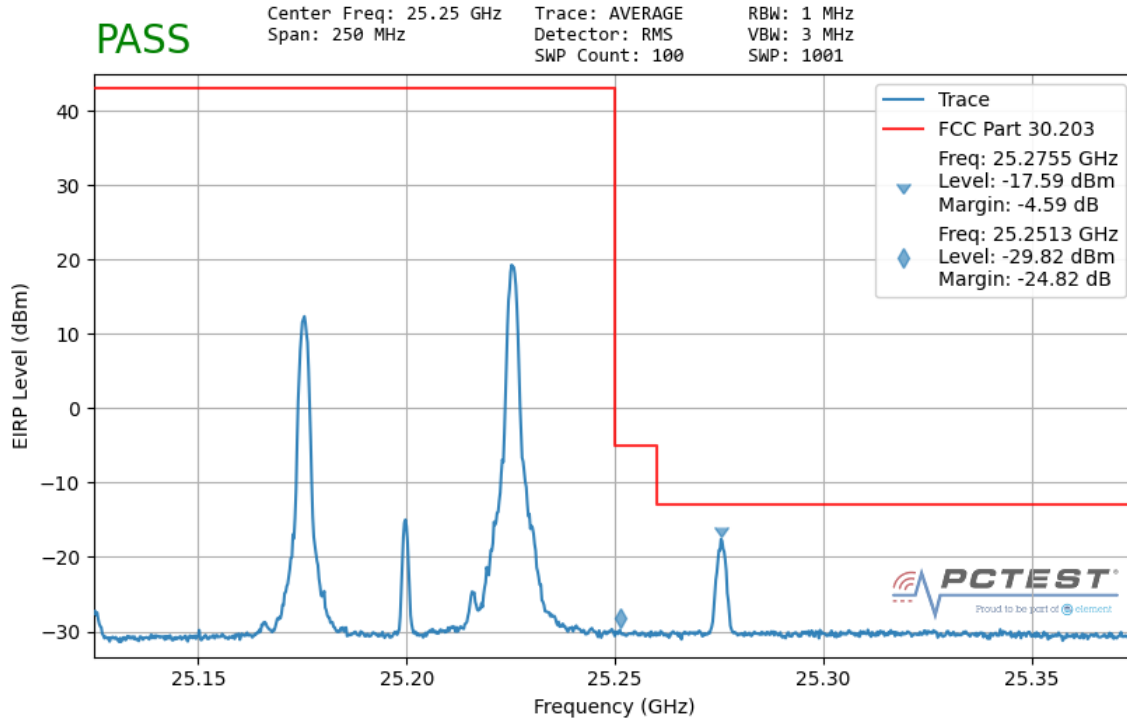


Plot 7-140. Ant1 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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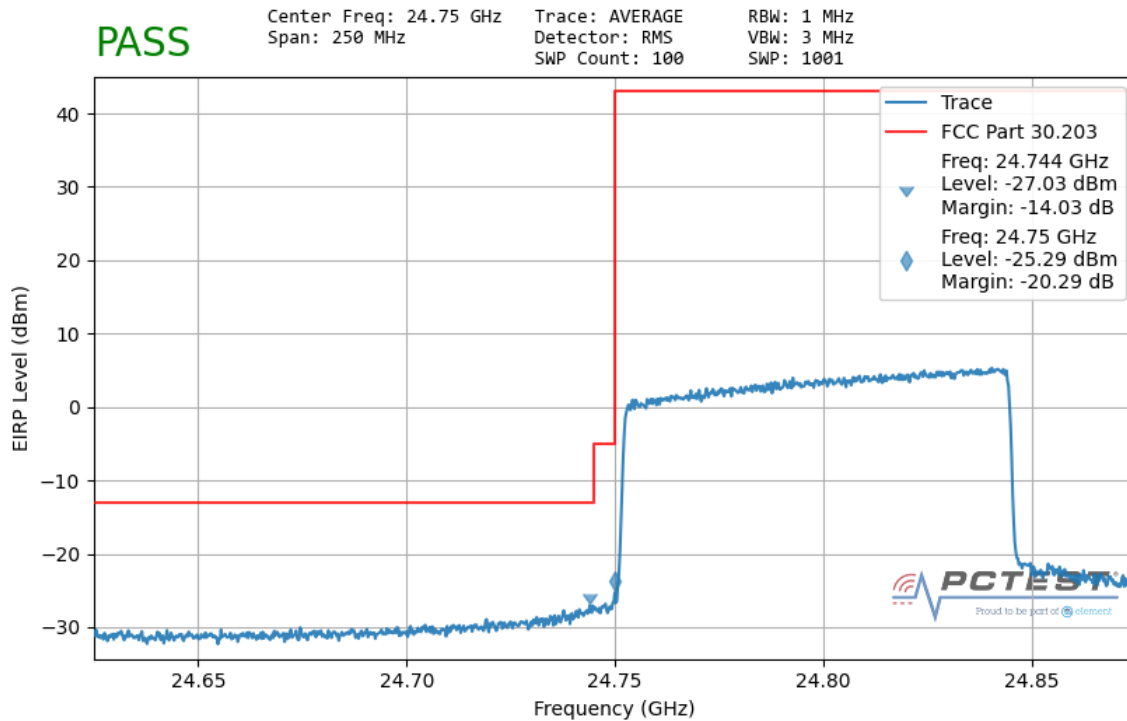


Plot 7-141. Ant1 Upper Band Edge (50MHz-1CC – QPSK Full RB)

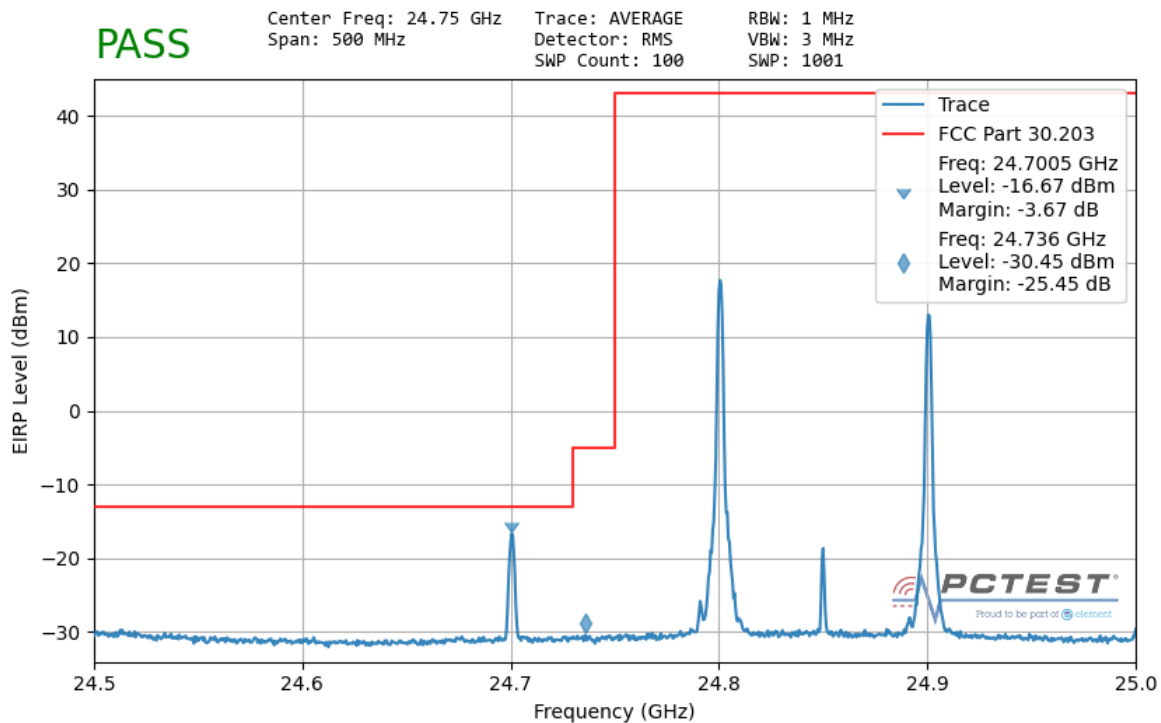


Plot 7-142. Ant1 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 7-143. Ant1 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-144. Ant1 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS908U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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