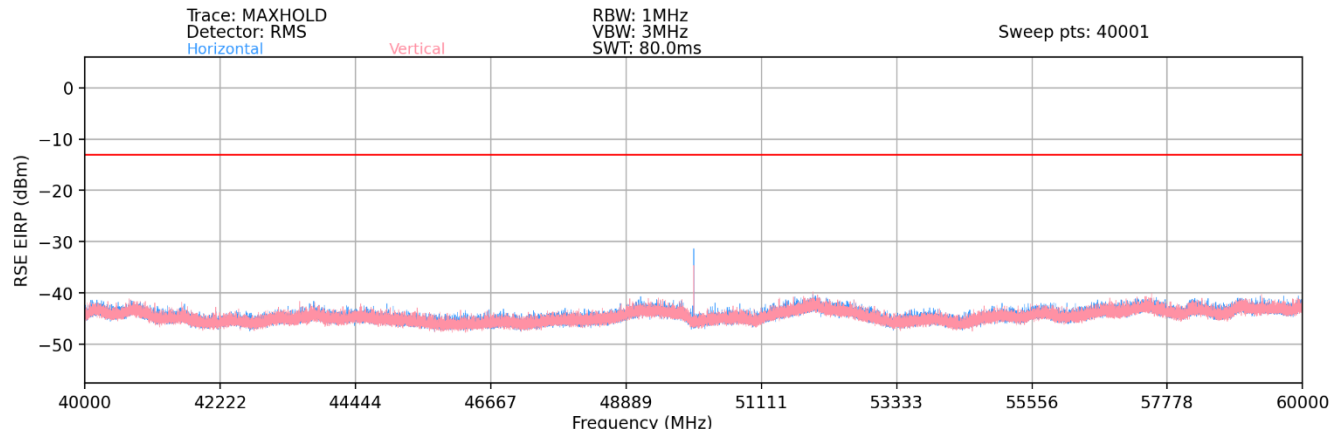


40GHz - 60GHz



Plot 7-83. Ant 1 - 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 1.5 meter.

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

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]
49550.16	Low	50	2Tx	QPSK	H	304	225	-24.08	-13.00	-11.08
49999.92	Mid	50	2Tx	QPSK	H	304	223	-26.27	-13.00	-13.27
50449.92	High	50	2Tx	QPSK	H	305	221	-26.94	-13.00	-13.94

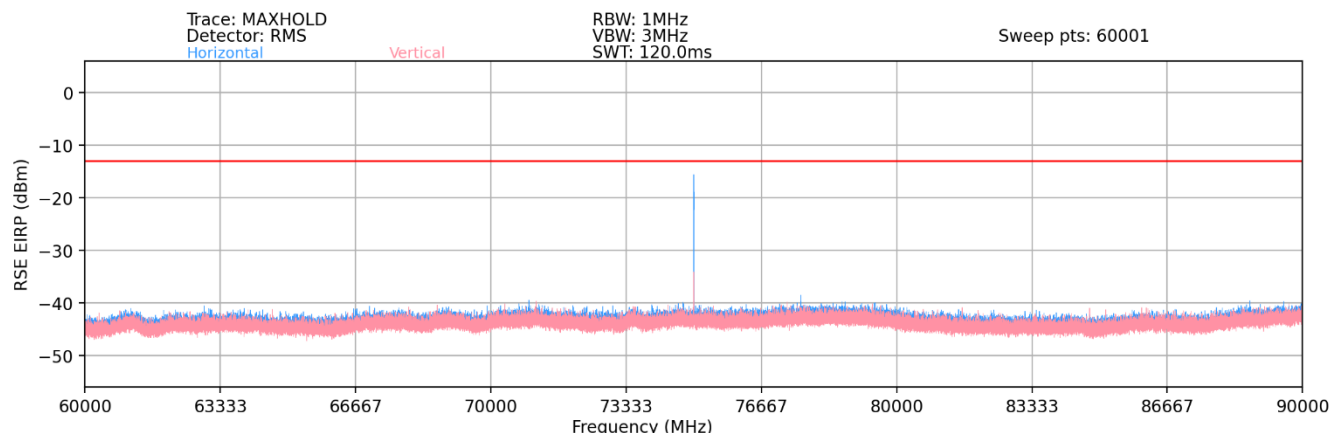
Table 7-65. Ant 1 - n258-R2 Radiated Spurious Emissions Table (40GHz - 60GHz)

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 7-84. Ant 1 - 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 1 meter.

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

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]
74325.24	Low	50	2Tx	QPSK	H	81	44	-16.95	-13.00	-3.95
* 74999.88	Mid	50	2Tx	QPSK	H	89	29	-21.81	-13.00	-8.81
75674.88	High	50	2Tx	QPSK	H	90	28	-16.11	-13.00	-3.11

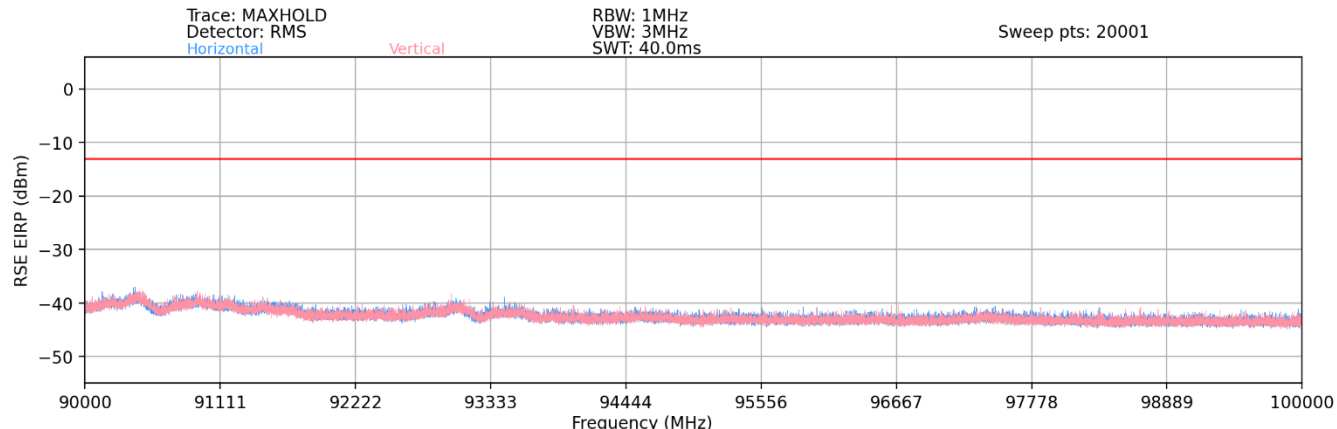
Table 7-66. Ant 1 - n258-R2 Radiated Spurious Emissions Table (60GHz - 90GHz)

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.

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90GHz - 100GHz



Plot 7-85. Ant 1 - 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 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]
99100.32	Low	50	2Tx	QPSK	H	-	-	-41.60	-13.00	-28.60
99999.84	Mid	50	2Tx	QPSK	H	-	-	-42.98	-13.00	-29.98
100000.00	High	50	2Tx	QPSK	H	-	-	-43.08	-13.00	-30.08

Table 7-67. Ant 1 - n258-R2 Radiated Spurious Emissions Table (90GHz - 100GHz)

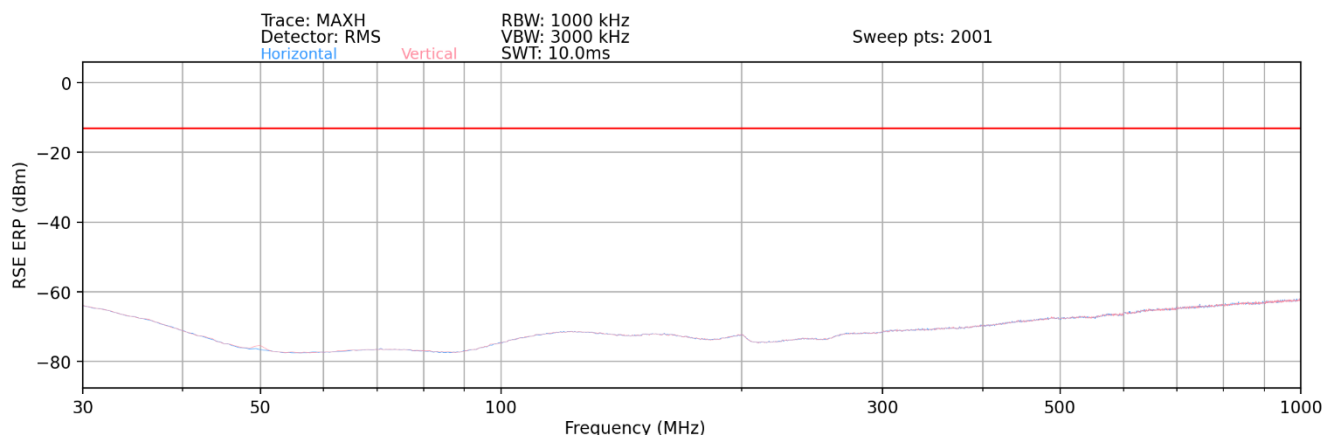
Notes

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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Band n258-R2 – Ant 2

30MHz - 1GHz



Plot 7-86. Ant 2 - 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]
393.65	Low	50	2Tx	QPSK	V	-	-	-68.19	-13.00	-55.19
482.00	Mid	50	2Tx	QPSK	V	-	-	-65.11	-13.00	-52.11
747.80	High	50	2Tx	QPSK	V	249	356	-60.98	-13.00	-47.98

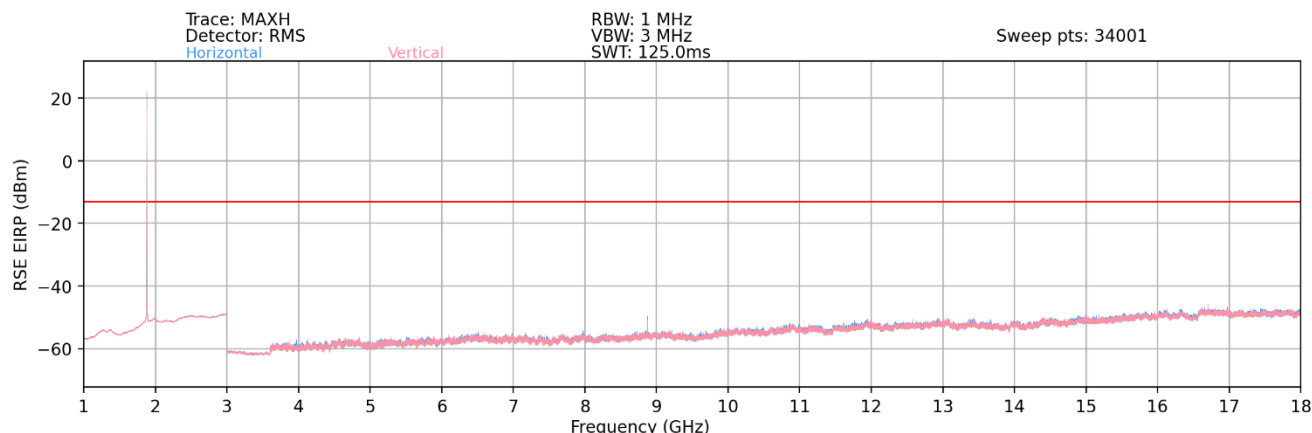
Table 7-68. Ant 2 - n258-R2 Radiated Spurious Emissions Table (30MHz - 1GHz)

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. Ant 2 - 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]
5640.00	Low	50	2Tx	QPSK	H	-	-	-59.08	-13.00	-46.08
8872.10	Mid	50	2Tx	QPSK	H	336	178	-47.93	-13.00	-34.93
16700.00	High	50	2Tx	QPSK	H	-	-	-48.04	-13.00	-35.04

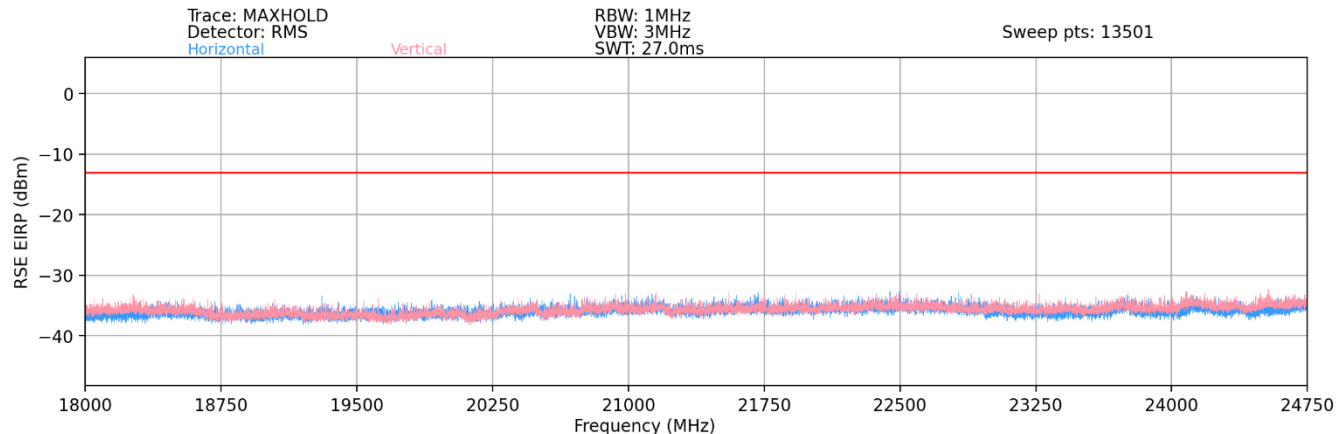
Table 7-69. Ant 2 - n258-R2 Radiated Spurious Emissions Table (1GHz - 18GHz)

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 - 24.75GHz



Plot 7-88. Ant 2 - 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 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]
24123.64	Low	50	2Tx	QPSK	H	-	-	-41.75	-13.00	-28.75
24160.85	Mid	50	2Tx	QPSK	H	-	-	-42.32	-13.00	-29.32
24180.29	High	50	2Tx	QPSK	H	-	-	-41.62	-13.00	-28.62

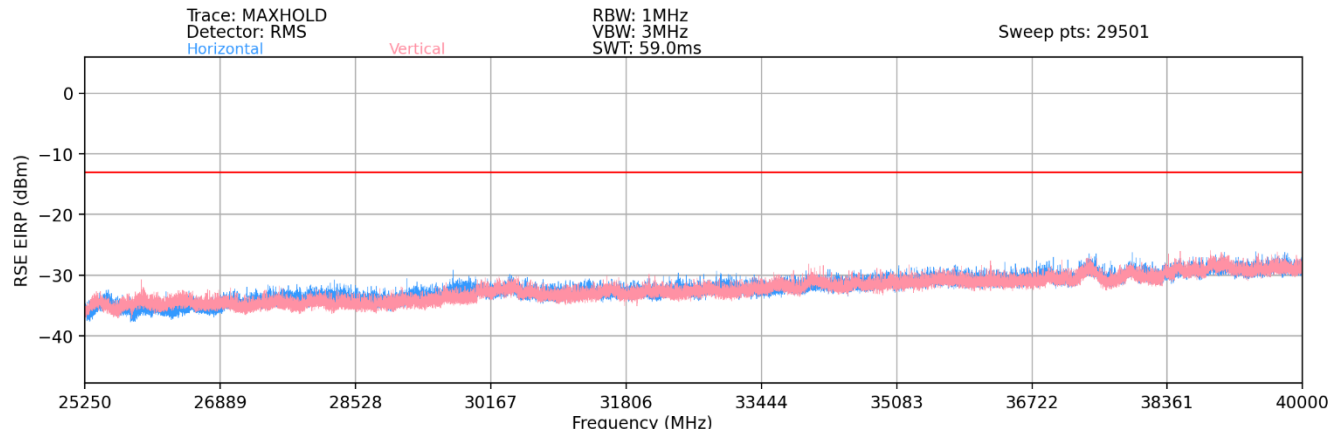
Table 7-70. Ant 2 - n258-R2 Radiated Spurious Emissions Table (18GHz - 24.75GHz)

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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25.25GHz - 40GHz



Plot 7-89. Ant 2 - 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 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]
30235.71	Low	50	2Tx	QPSK	H	-	-	-38.41	-13.00	-25.41
34568.00	Mid	50	2Tx	QPSK	H	-	-	-36.54	-13.00	-23.54
38524.20	High	50	2Tx	QPSK	H	-	-	-34.86	-13.00	-21.86

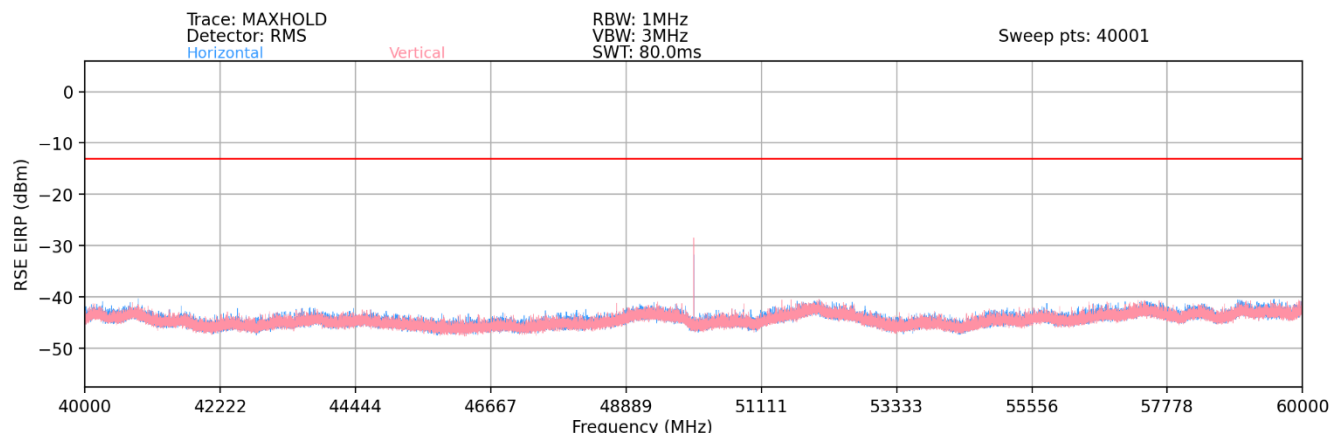
Table 7-71. Ant 2 - n258-R2 Radiated Spurious Emissions Table (25.25GHz - 40GHz)

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 7-90. Ant 2 - 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 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]
49550.16	Low	50	2Tx	QPSK	H	21	254	-25.03	-13.00	-12.03
49999.92	Mid	50	2Tx	QPSK	H	20	258	-25.76	-13.00	-12.76
50449.92	High	50	2Tx	QPSK	H	13	249	-21.95	-13.00	-8.95

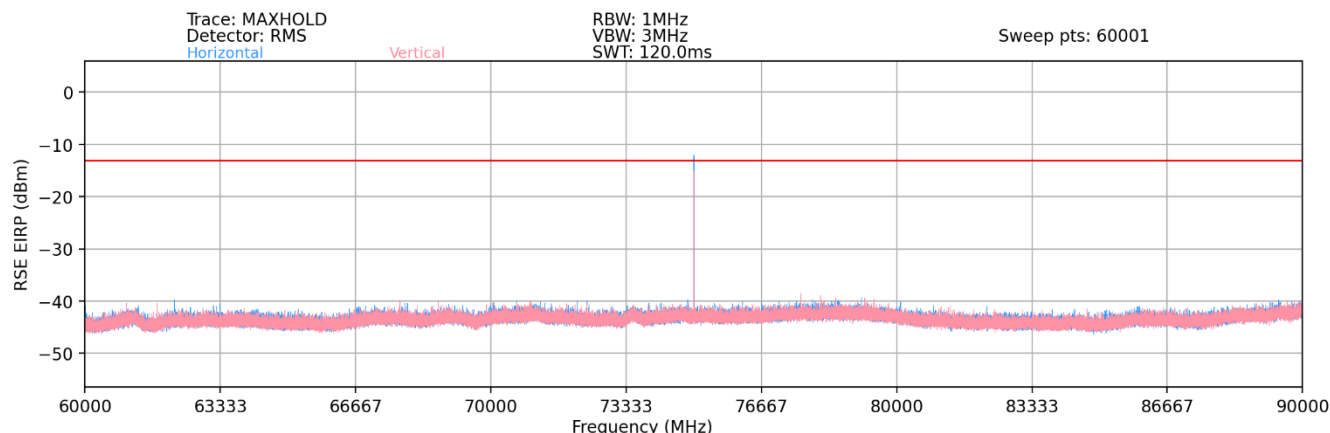
Table 7-72. Ant 2 - n258-R2 Radiated Spurious Emissions Table (40GHz - 60GHz)

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. Ant 2 - 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 1 meter.

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

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]
* 74325.24	Low	50	2Tx	QPSK	H	9	33	-23.02	-13.00	-10.02
* 74999.88	Mid	50	2Tx	QPSK	H	7	43	-20.45	-13.00	-7.45
* 75674.88	High	50	2Tx	QPSK	H	8	49	-20.10	-13.00	-7.10

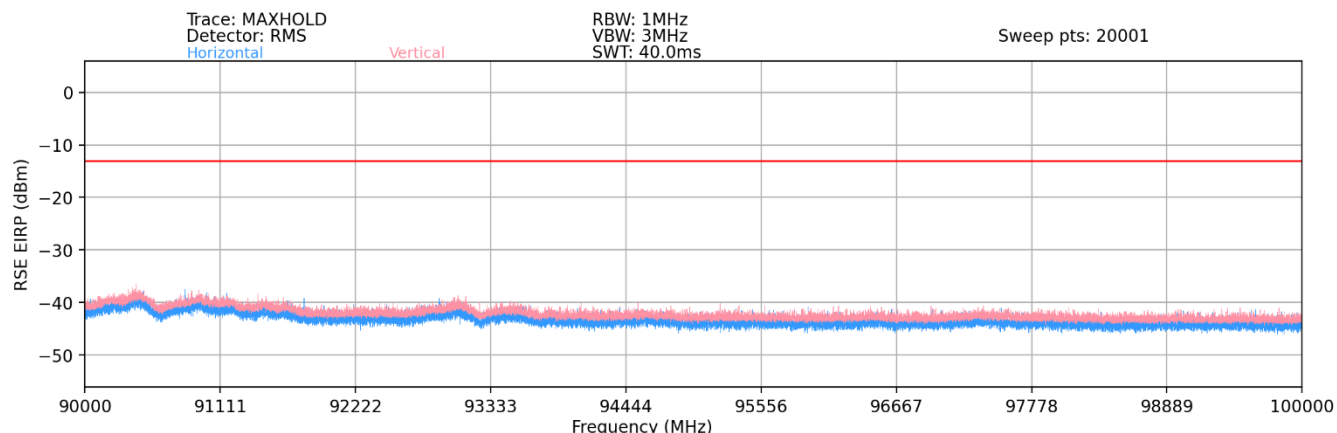
Table 7-73. Ant 2 - n258-R2 Radiated Spurious Emissions Table (60GHz - 90GHz)

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. Ant 2 - 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 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]
99100.32	Low	50	2Tx	QPSK	H	-	-	-41.46	-13.00	-28.46
99999.84	Mid	50	2Tx	QPSK	H	-	-	-42.48	-13.00	-29.48
100000.00	High	50	2Tx	QPSK	H	-	-	-43.26	-13.00	-30.26

Table 7-74. Ant 2 - n258-R2 Radiated Spurious Emissions Table (90GHz - 100GHz)

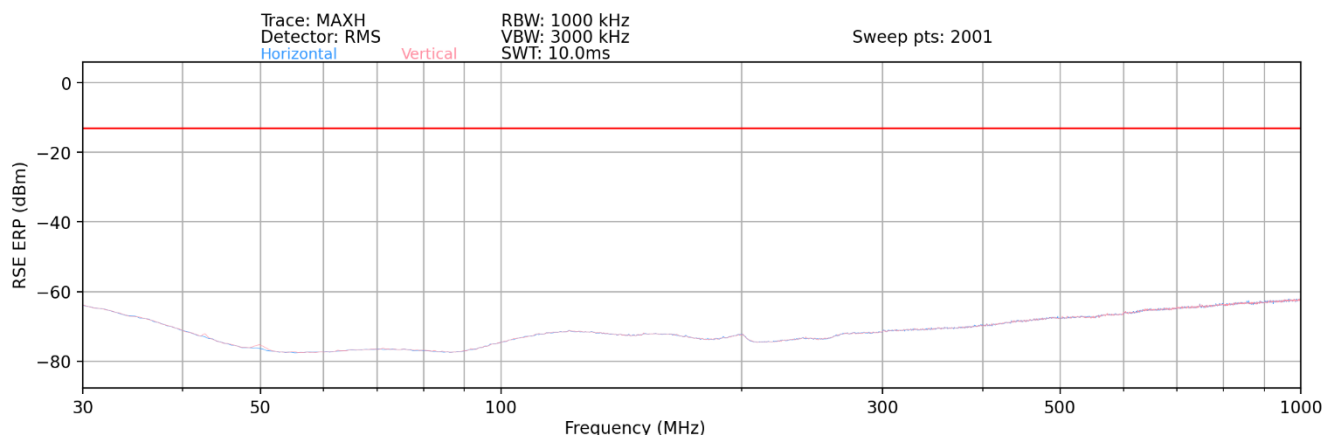
Notes

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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Band n261 – Ant 1

30MHz - 1GHz



Plot 7-93. Ant 1 - 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]
540.30	Low	50	2Tx	QPSK	V	-	-	-65.71	-13.00	-52.71
685.40	Mid	50	2Tx	QPSK	V	-	-	-63.36	-13.00	-50.36
838.16	High	50	2Tx	QPSK	V	-	-	-58.61	-13.00	-45.61

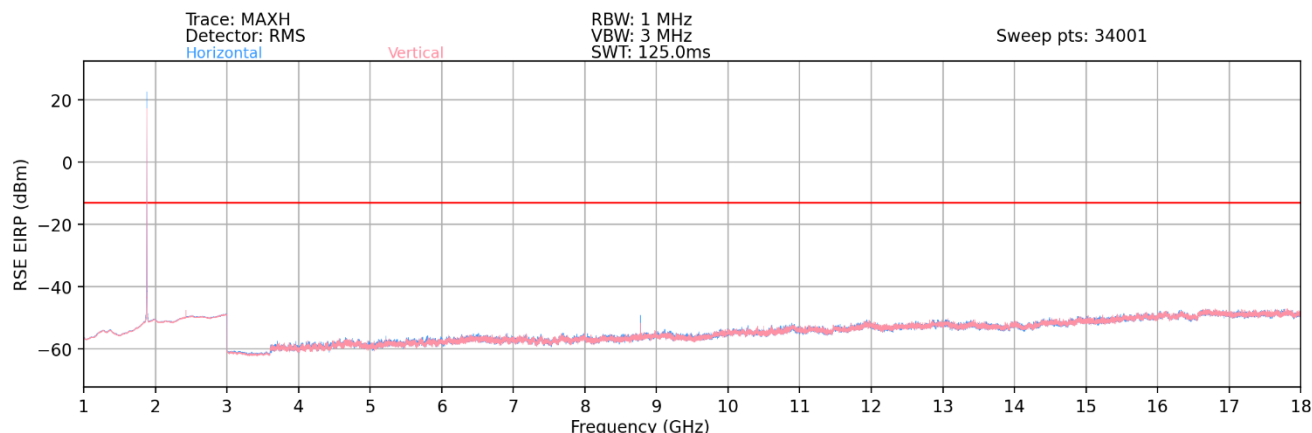
Table 7-75. Ant 1 - n261 Radiated Spurious Emissions Table (30MHz - 1GHz)

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. Ant 1 - 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]
3958.00	Low	50	2Tx	QPSK	H	-	-	-61.84	-13.00	-48.84
8777.00	Mid	50	2Tx	QPSK	H	16	117	-48.03	-13.00	-35.03
12993.45	High	50	2Tx	QPSK	H	-	-	-54.89	-13.00	-41.89

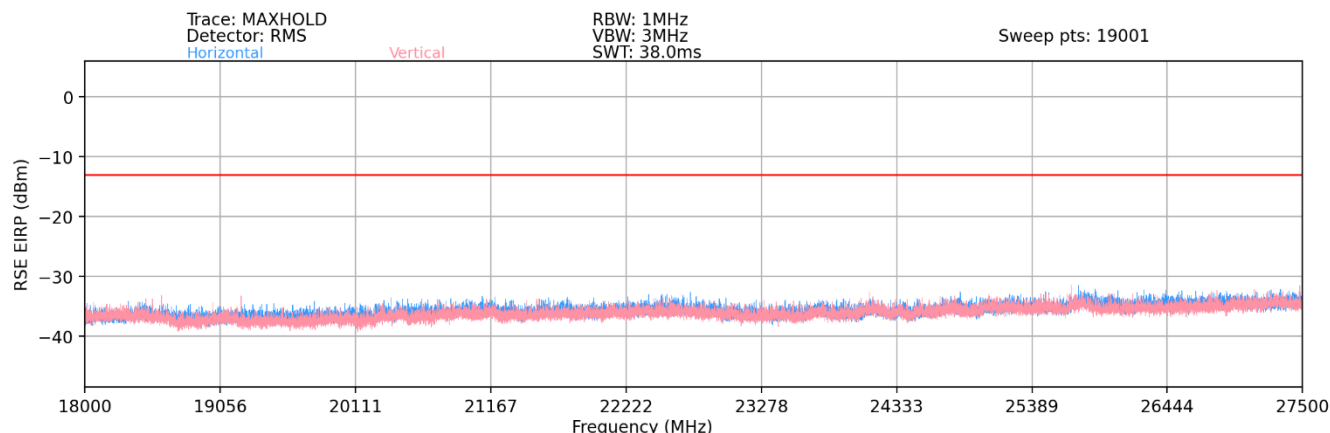
Table 7-76. Ant 1 - n261 Radiated Spurious Emissions Table (1GHz - 18GHz)

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. Ant 1 - 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 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]
20071.67	Low	50	2Tx	QPSK	V	-	-	-42.45	-13.00	-29.45
22139.09	Mid	50	2Tx	QPSK	V	-	-	-41.59	-13.00	-28.59
24457.39	High	50	2Tx	QPSK	V	-	-	-41.30	-13.00	-28.30

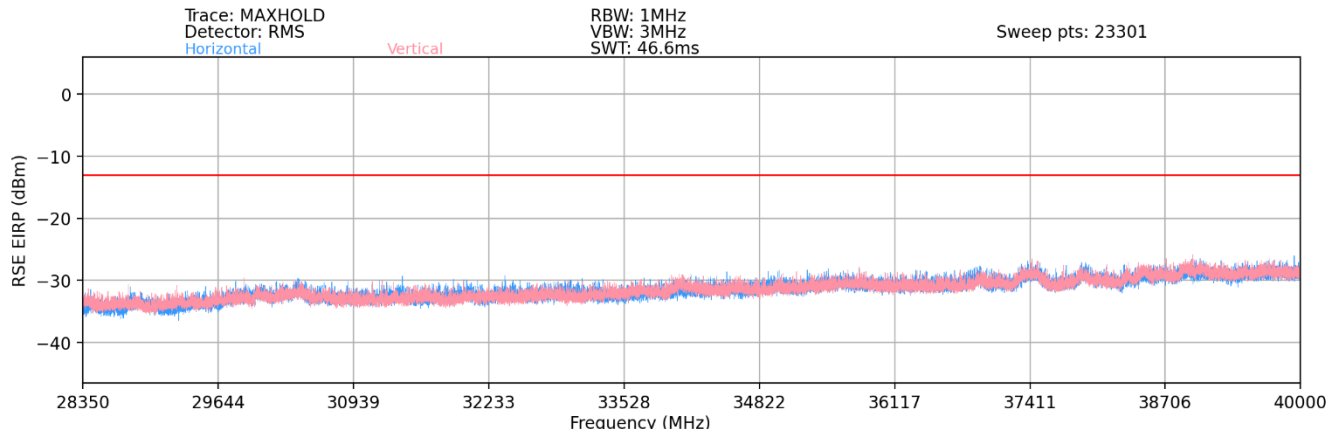
Table 7-77. Ant 1 - n261 Radiated Spurious Emissions Table (18GHz - 27.5GHz)

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. Ant 1 - 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 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]
32173.16	Low	50	2Tx	QPSK	V	-	-	-36.86	-13.00	-23.86
36143.92	Mid	50	2Tx	QPSK	V	-	-	-35.30	-13.00	-22.30
38551.76	High	50	2Tx	QPSK	V	-	-	-34.38	-13.00	-21.38

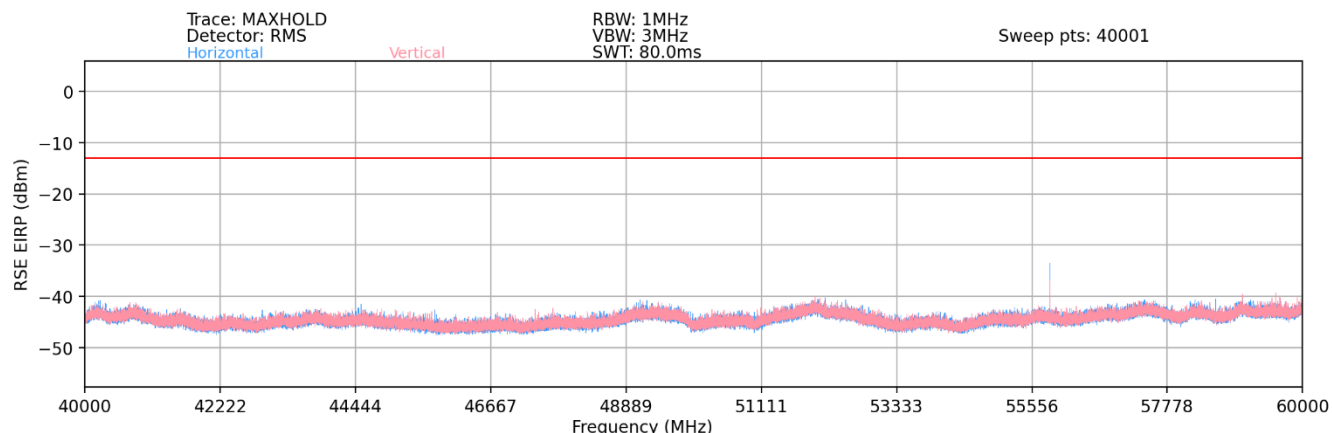
Table 7-78. Ant 1 - n261 Radiated Spurious Emissions Table (28.35GHz - 40GHz)

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. Ant 1 - 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 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]
55050.00	Low	50	2Tx	QPSK	V	228	301	-31.27	-13.00	-18.27
55849.92	Mid	50	2Tx	QPSK	V	229	295	-31.05	-13.00	-18.05
56649.84	High	50	2Tx	QPSK	V	236	286	-30.61	-13.00	-17.61

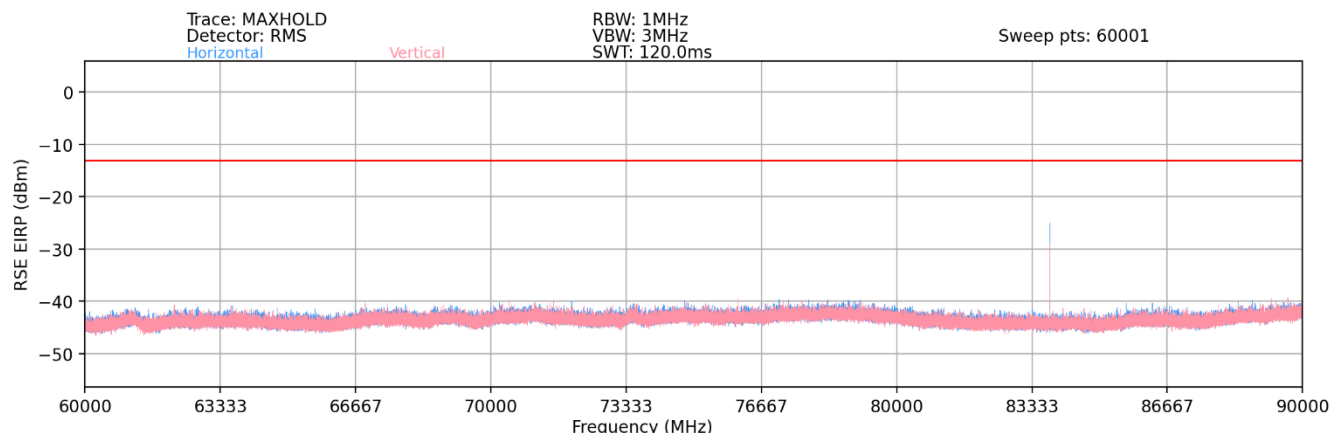
Table 7-79. Ant 1 - n261 Radiated Spurious Emissions Table (40GHz - 60GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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60GHz - 90GHz



Plot 7-98. Ant 1 - 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 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]
82575.00	Low	50	2Tx	QPSK	V	90	2	-26.09	-13.00	-13.09
83774.88	Mid	50	2Tx	QPSK	V	50	3	-23.79	-13.00	-10.79
84974.76	High	50	2Tx	QPSK	V	50	2	-24.34	-13.00	-11.34

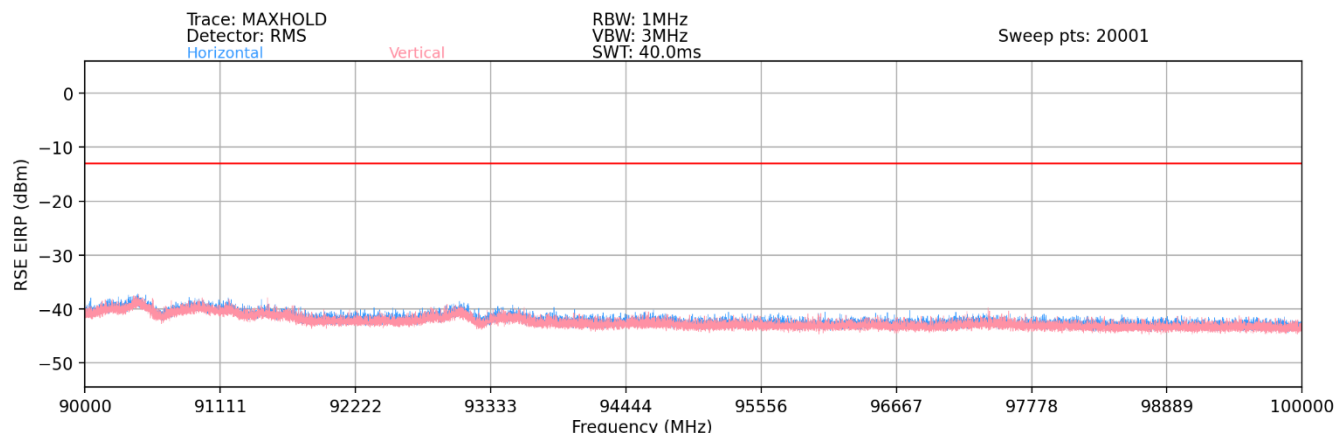
Table 7-80. Ant 1 - n261 Radiated Spurious Emissions Table (60GHz - 90GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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90GHz - 100GHz



Plot 7-99. Ant 1 - 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 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]
95012.24	Low	50	2Tx	QPSK	V	-	-	-41.61	-13.00	-28.61
96514.97	Mid	50	2Tx	QPSK	V	-	-	-40.00	-13.00	-27.00
99008.17	High	50	2Tx	QPSK	V	-	-	-41.37	-13.00	-28.37

Table 7-81. Ant 1 - n261 Radiated Spurious Emissions Table (90GHz - 100GHz)

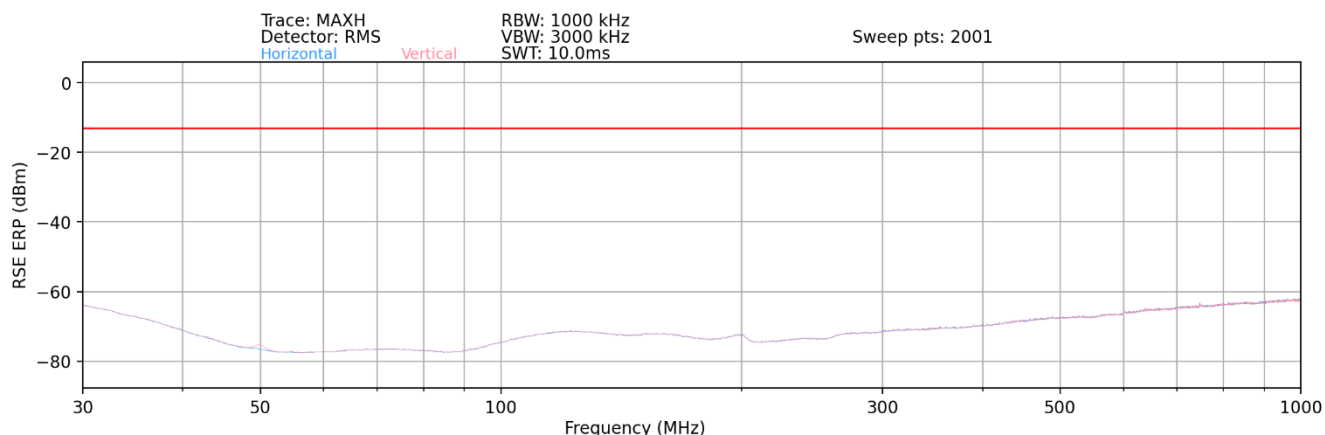
Notes

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band n261 – Ant 2

30MHz - 1GHz



Plot 7-100. Ant 2 - 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]
423.00	Low	50	2Tx	QPSK	H	-	-	-66.54	-13.00	-53.54
656.50	Mid	50	2Tx	QPSK	H	-	-	-63.57	-13.00	-50.57
829.48	High	50	2Tx	QPSK	H	-	-	-60.13	-13.00	-47.13

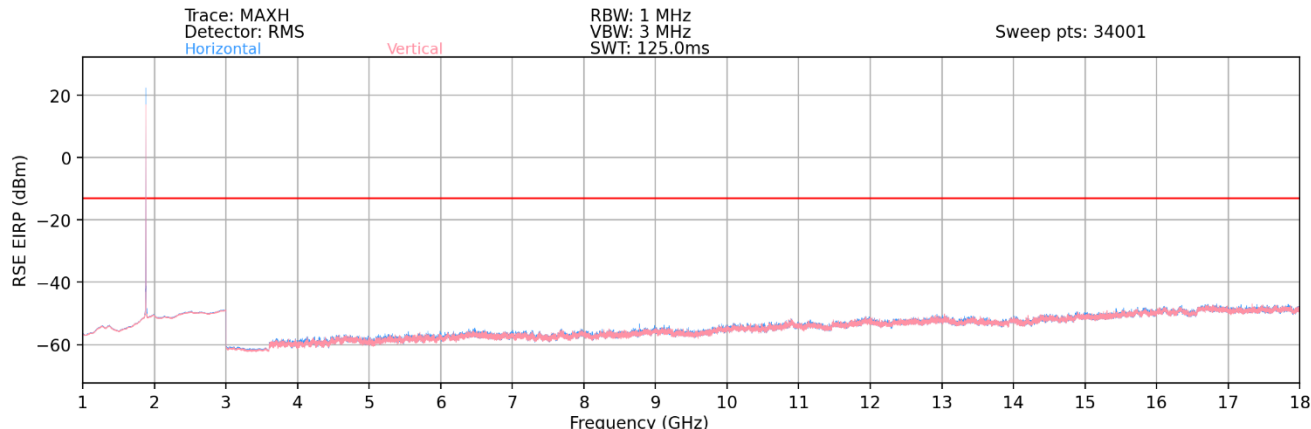
Table 7-82. Ant 2 - n261 Radiated Spurious Emissions Table (30MHz - 1GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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1GHz - 18GHz



Plot 7-101. Ant 2 - 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]
4049.00	Low	50	2Tx	QPSK	H	-	-	-60.64	-13.00	-47.64
8777.00	Mid	50	2Tx	QPSK	H	353	175	-53.17	-13.00	-40.17
12998.71	High	50	2Tx	QPSK	H	-	-	-48.70	-13.00	-35.70

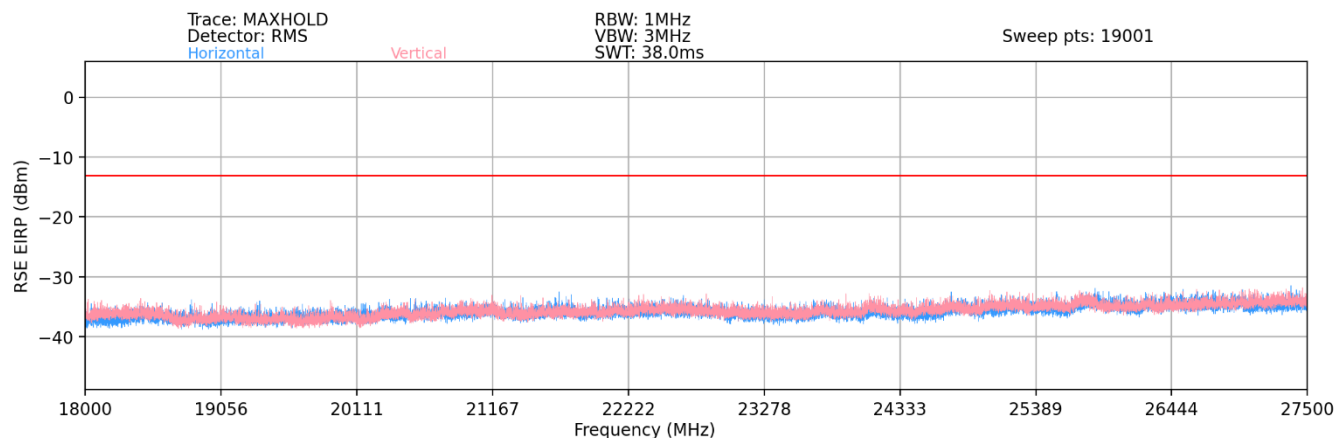
Table 7-83. Ant 2 - n261 Radiated Spurious Emissions Table (1GHz - 18GHz)

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: A3LSMS906U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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18GHz - 27.5GHz



Plot 7-102. Ant 2 - 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 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]
22141.16	Low	50	2Tx	QPSK	H	-	-	-39.45	-13.00	-26.45
23909.11	Mid	50	2Tx	QPSK	H	-	-	-38.62	-13.00	-25.62
26804.13	High	50	2Tx	QPSK	H	-	-	-36.97	-13.00	-23.97

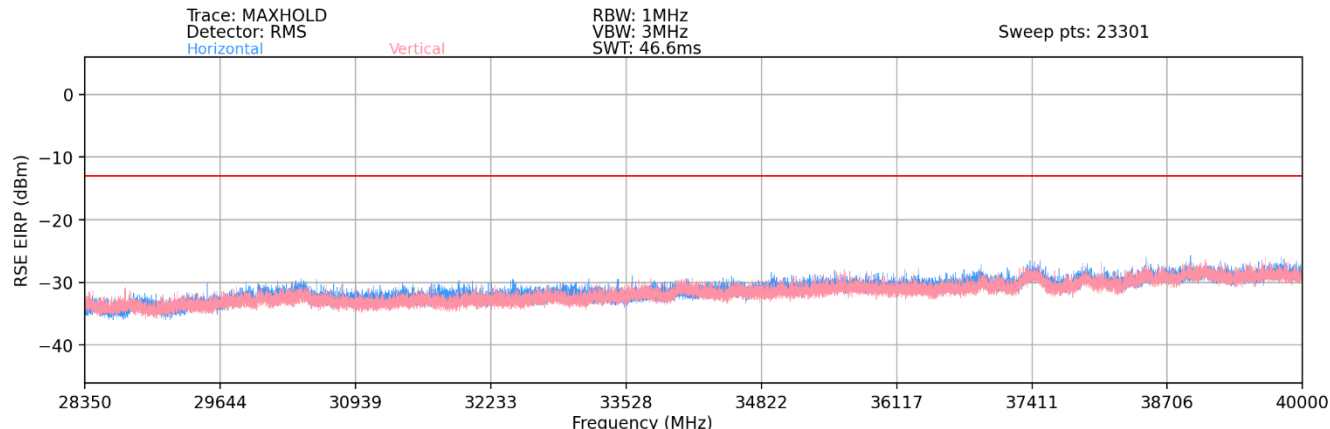
Table 7-84. Ant 2 - n261 Radiated Spurious Emissions Table (18GHz - 27.5GHz)

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.

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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28.35GHz - 40GHz



Plot 7-103. Ant 2 - 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 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]
32172.26	Low	50	2Tx	QPSK	H	-	-	-36.19	-13.00	-23.19
36449.48	Mid	50	2Tx	QPSK	H	-	-	-35.12	-13.00	-22.12
38556.14	High	50	2Tx	QPSK	H	-	-	-33.90	-13.00	-20.90

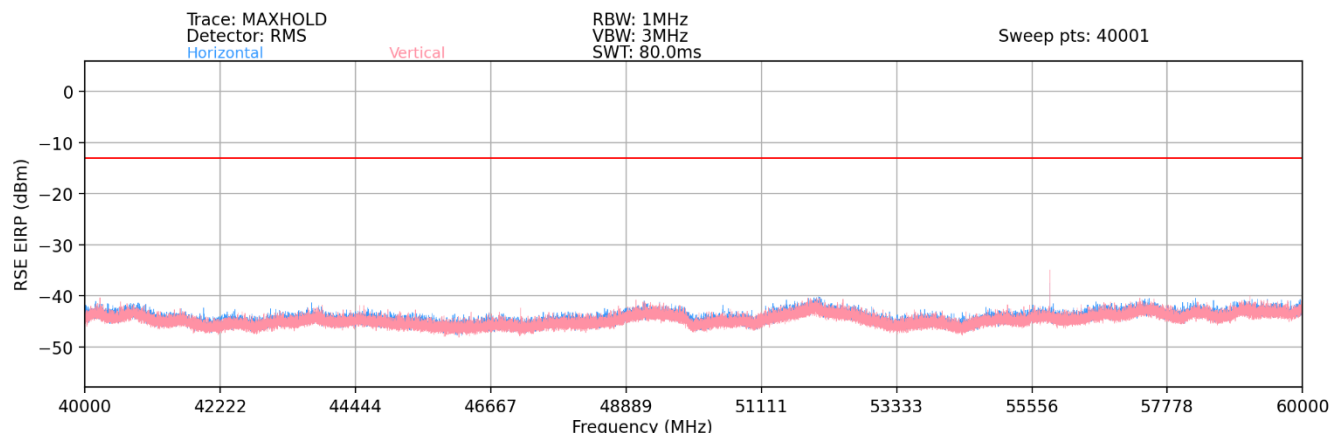
Table 7-85. Ant 2 - n261 Radiated Spurious Emissions Table (28.35GHz - 40GHz)

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 7-104. Ant 2 - 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 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]
55050.00	Low	50	2Tx	QPSK	H	15	302	-32.99	-13.00	-19.99
55849.92	Mid	50	2Tx	QPSK	H	14	301	-32.31	-13.00	-19.31
56649.84	High	50	2Tx	QPSK	H	13	303	-29.93	-13.00	-16.93

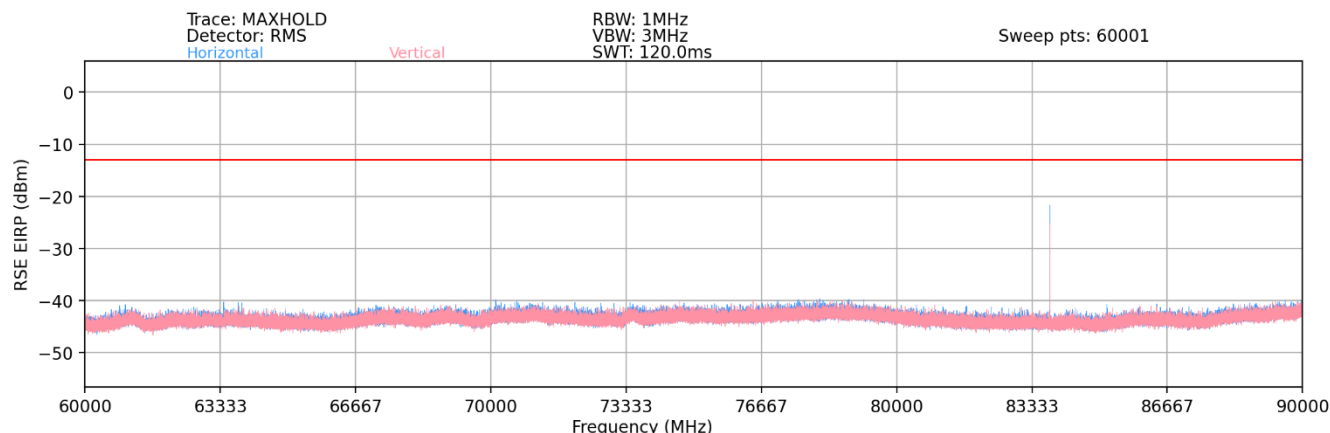
Table 7-86. Ant 2 - n261 Radiated Spurious Emissions Table (40GHz - 60GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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60GHz - 90GHz



Plot 7-105. Ant 2 - 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 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]
82575.00	Low	50	2Tx	QPSK	H	68	223	-23.11	-13.00	-10.11
83774.88	Mid	50	2Tx	QPSK	H	40	356	-17.68	-13.00	-4.68
84974.76	High	50	2Tx	QPSK	H	39	359	-18.44	-13.00	-5.44

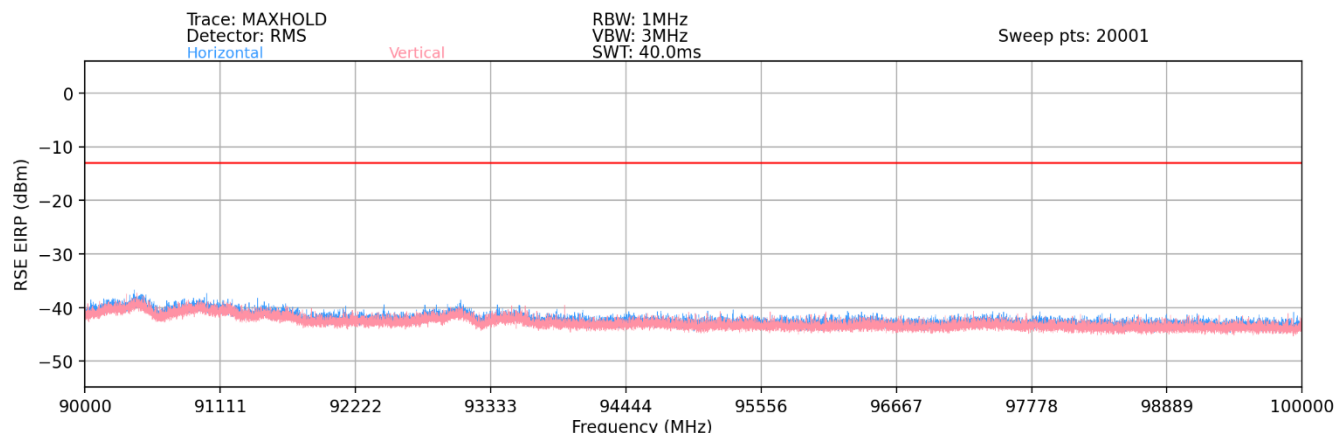
Table 7-87. Ant 2 - n261 Radiated Spurious Emissions Table (60GHz - 90GHz)

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 - 100GHz



Plot 7-106. Ant 2 - 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 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]
91540.22	Low	50	2Tx	QPSK	H	-	-	-41.78	-13.00	-28.78
96499.54	Mid	50	2Tx	QPSK	H	-	-	-40.20	-13.00	-27.20
99001.44	High	50	2Tx	QPSK	H	-	-	-41.34	-13.00	-28.34

Table 7-88. Ant 2 - n261 Radiated Spurious Emissions Table (90GHz - 100GHz)

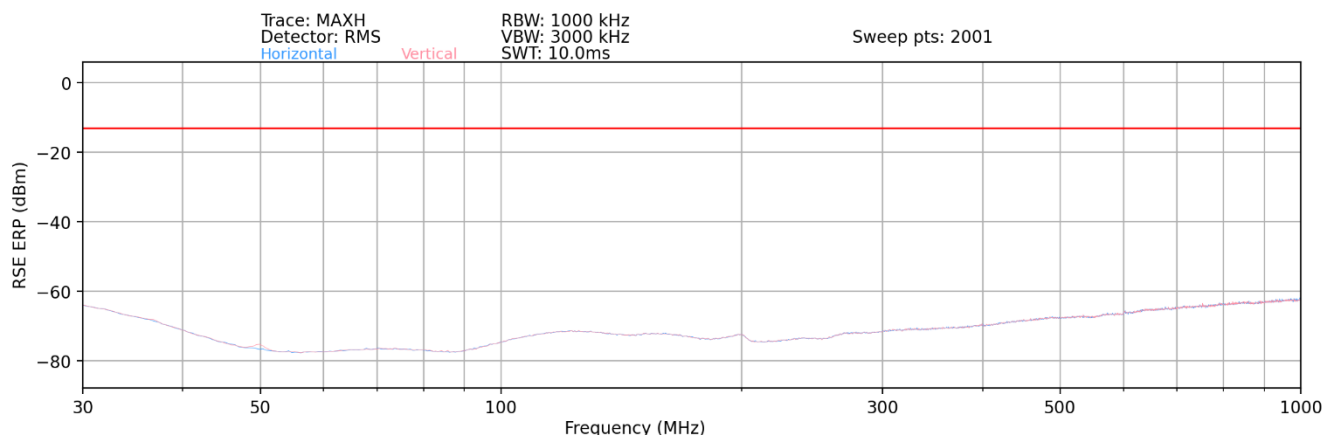
Notes

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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Band n260 – Ant 1

30MHz - 1GHz



Plot 7-107. Ant 1 - 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]
460.20	Low	50	2Tx	QPSK	H	-	-	-65.71	-13.00	-52.71
747.80	Mid	50	2Tx	QPSK	H	-	-	-62.62	-13.00	-49.62
979.25	High	50	2Tx	QPSK	H	-	-	-59.49	-13.00	-46.49

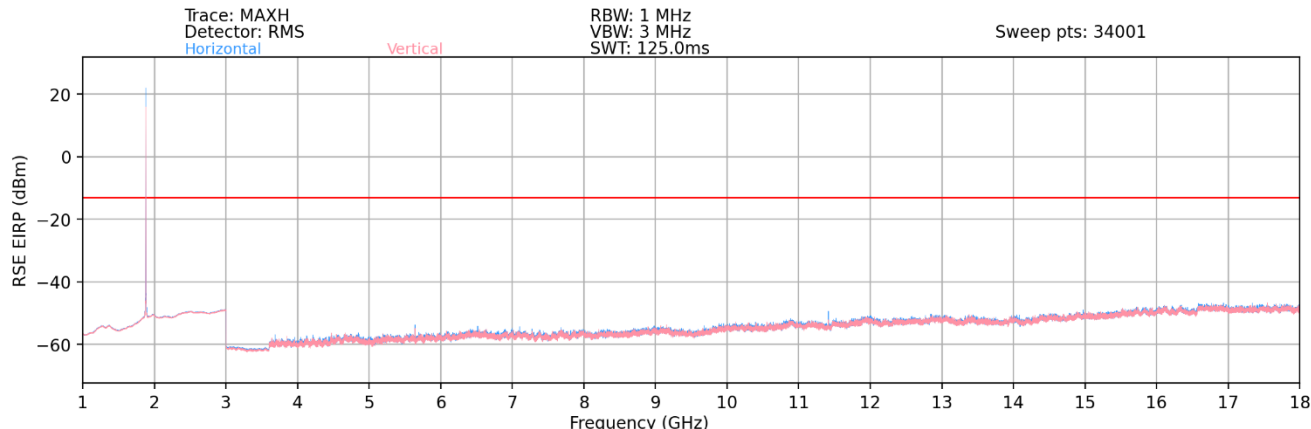
Table 7-89. Ant 1 - n260 Radiated Spurious Emissions Table (30MHz - 1GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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1GHz - 18GHz



Plot 7-108. Ant 1 - 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]
3715.50	Low	50	2Tx	QPSK	H	335	114	-61.36	-13.00	-48.36
5640.50	Mid	50	2Tx	QPSK	H	215	112	-56.65	-13.00	-43.65
11415.00	High	50	2Tx	QPSK	H	298	114	-44.02	-13.00	-31.02

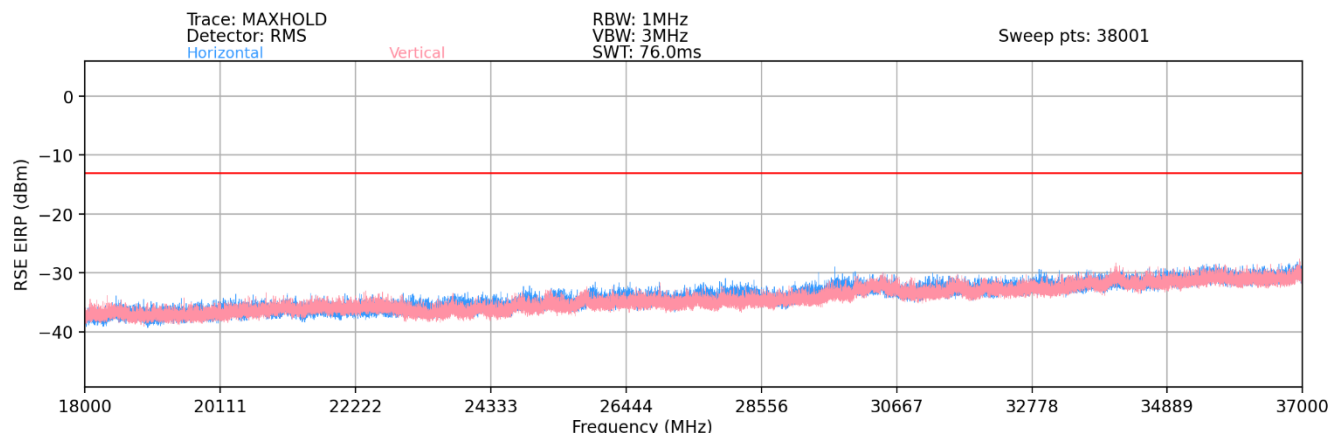
Table 7-90. Ant 1 - n260 Radiated Spurious Emissions Table (1GHz - 18GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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18GHz - 37GHz



Plot 7-109. Ant 1 - 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]
26166.30	Low	50	2Tx	QPSK	H	-	-	-40.39	-13.00	-27.39
30213.27	Mid	50	2Tx	QPSK	H	-	-	-36.90	-13.00	-23.90
32729.55	High	50	2Tx	QPSK	H	-	-	-37.25	-13.00	-24.25

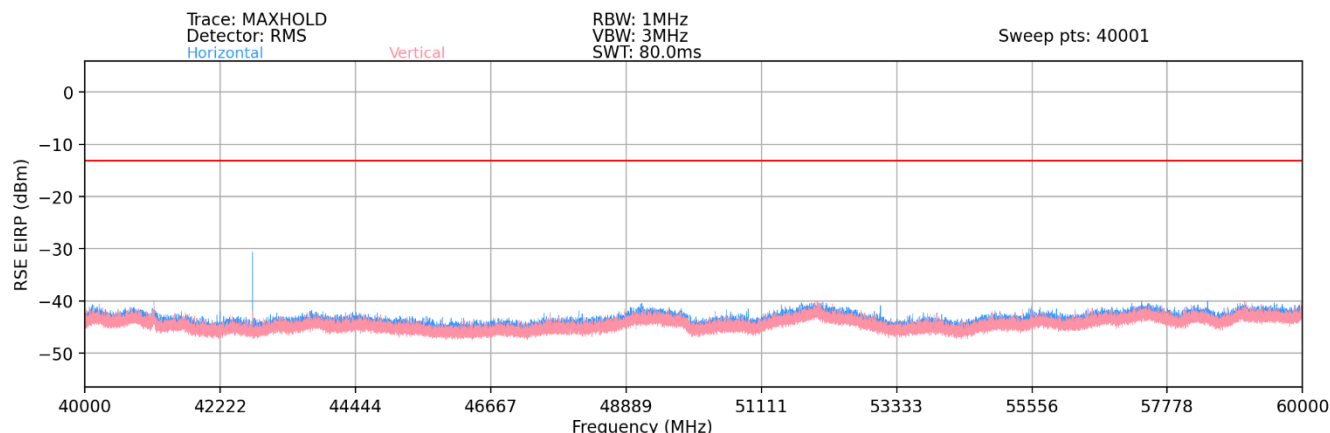
Table 7-91. Ant 1 - n260 Radiated Spurious Emissions Table (18GHz - 37GHz)

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.

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40GHz - 60GHz



Plot 7-110. Ant 1 - 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.

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]
40388.47	Low	50	2Tx	QPSK	H	59	35	-27.50	-13.00	-14.50
42753.42	Mid	50	2Tx	QPSK	H	22	10	-32.07	-13.00	-19.07
44811.26	High	50	2Tx	QPSK	H	23	15	-28.72	-13.00	-15.72

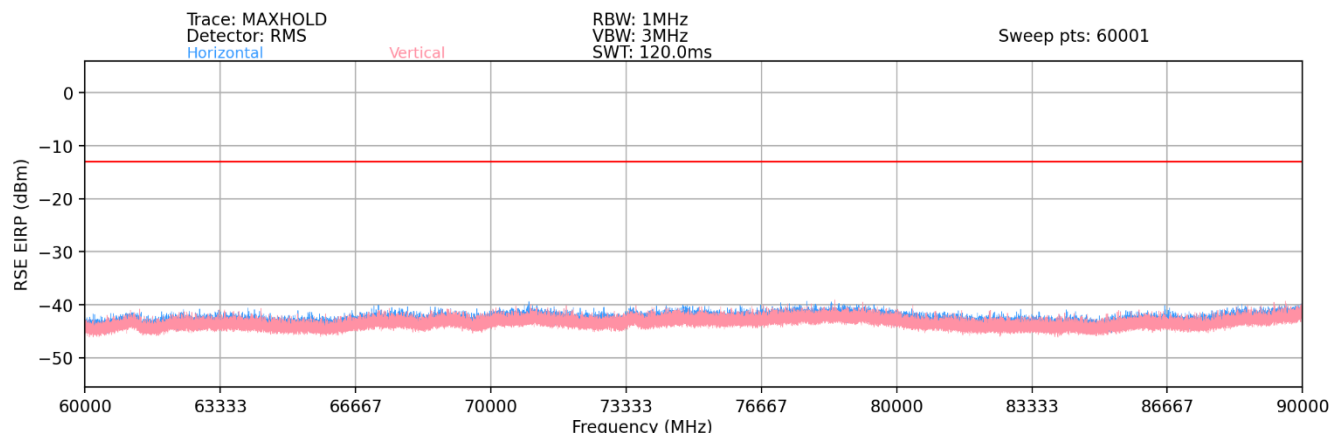
Table 7-92. Ant 1 - n260 Radiated Spurious Emissions Table (40GHz - 60GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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60GHz - 90GHz



Plot 7-111. Ant 1 - 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]
74050.08	Low	50	2Tx	QPSK	H	-	-	-44.26	-13.00	-31.26
76999.92	Mid	50	2Tx	QPSK	H	-	-	-44.49	-13.00	-31.49
79950.00	High	50	2Tx	QPSK	H	13	345	-40.83	-13.00	-27.83

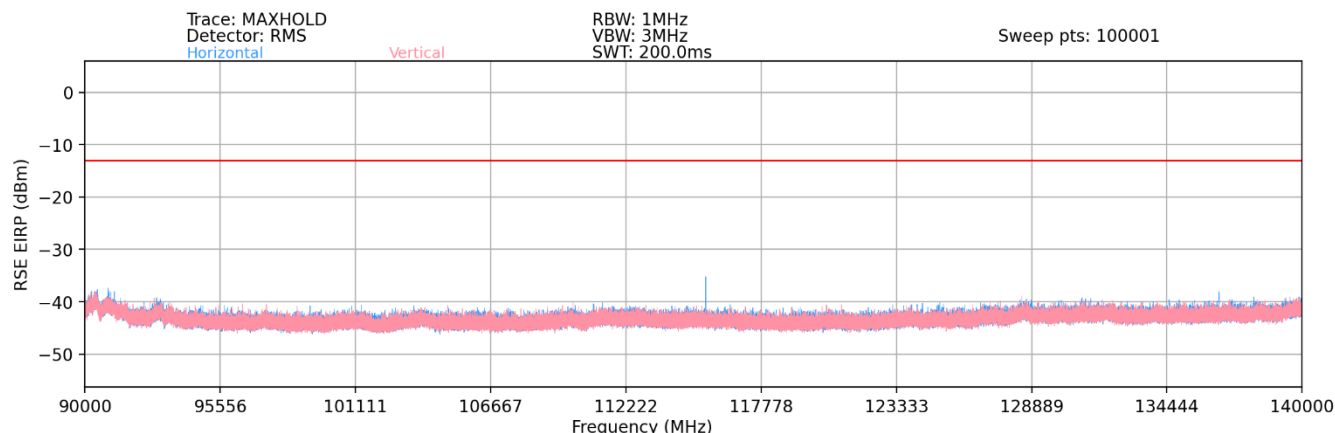
Table 7-93. Ant 1 - n260 Radiated Spurious Emissions Table (60GHz - 90GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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90GHz - 140GHz



Plot 7-112. Ant 1 - 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]
111075.12	Low	50	2Tx	QPSK	H	350	326	-37.35	-13.00	-24.35
115499.88	Mid	50	2Tx	QPSK	H	15	335	-38.62	-13.00	-25.62
119925.00	High	50	2Tx	QPSK	H	7	358	-36.85	-13.00	-23.85

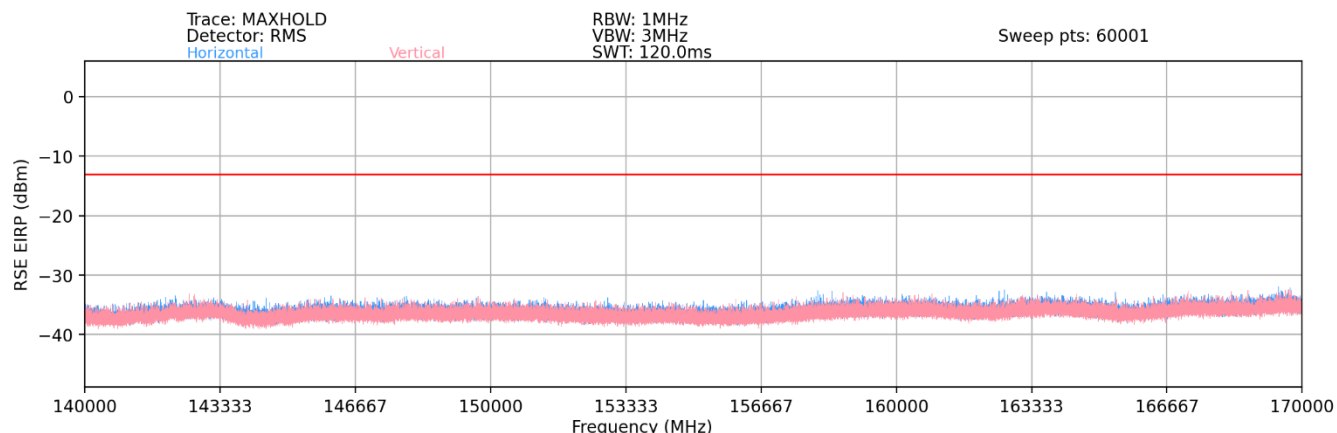
Table 7-94. Ant 1 - n260 Radiated Spurious Emissions Table (90GHz - 140GHz)

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.

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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140GHz - 170GHz



Plot 7-113. Ant 1 - 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]
148100.16	Low	50	2Tx	QPSK	H	-	-	-39.15	-13.00	-26.15
153999.84	Mid	50	2Tx	QPSK	H	-	-	-38.79	-13.00	-25.79
159900.00	High	50	2Tx	QPSK	H	-	-	-39.21	-13.00	-26.21

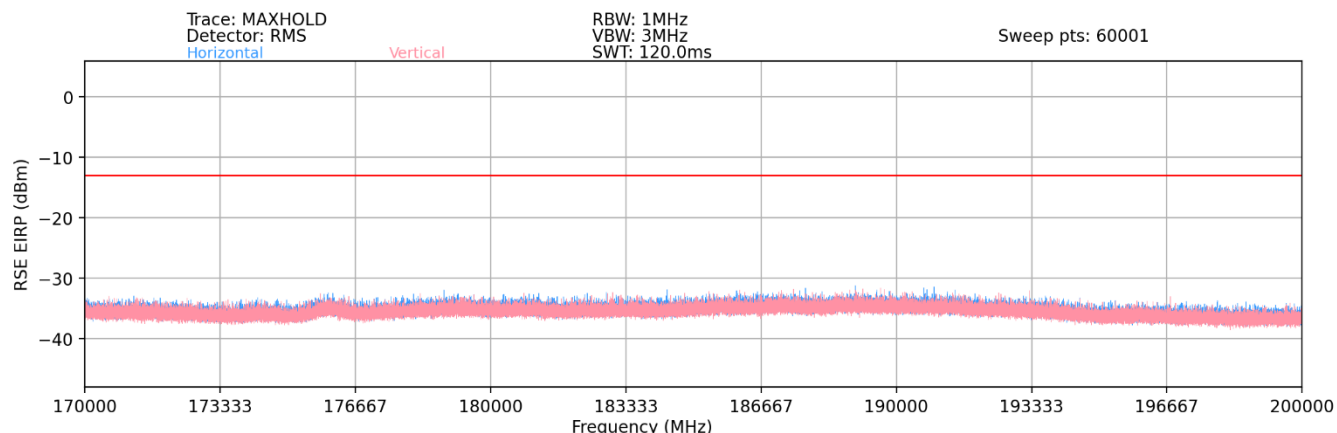
Table 7-95. Ant 1 - n260 Radiated Spurious Emissions Table (140GHz - 170GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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170GHz - 200GHz



Plot 7-114. Ant 1 - 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]
185125.20	Low	50	2Tx	QPSK	H	-	-	-37.69	-13.00	-24.69
192499.80	Mid	50	2Tx	QPSK	H	-	-	-38.34	-13.00	-25.34
199875.00	High	50	2Tx	QPSK	H	-	-	-38.25	-13.00	-25.25

Table 7-96. Ant 1 - n260 Radiated Spurious Emissions Table (170GHz - 200GHz)

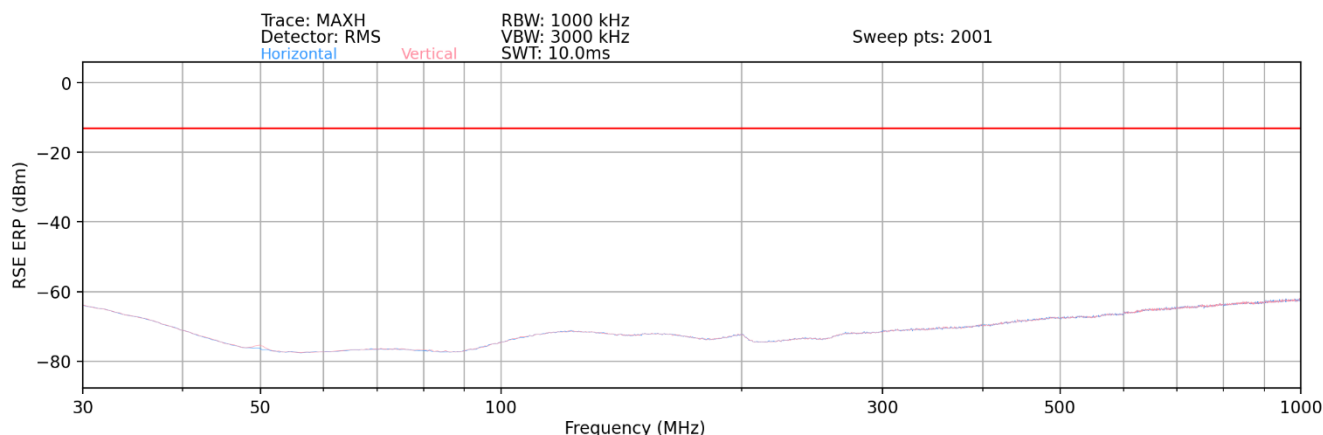
Notes

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: A3LSMS906U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band n260 – Ant 2

30MHz - 1GHz



Plot 7-115. Ant 2 - 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]
542.34	Low	50	2Tx	QPSK	H	-	-	-64.76	-13.00	-51.76
748.52	Mid	50	2Tx	QPSK	H	-	-	-62.31	-13.00	-49.31
998.97	High	50	2Tx	QPSK	H	-	-	-59.70	-13.00	-46.70

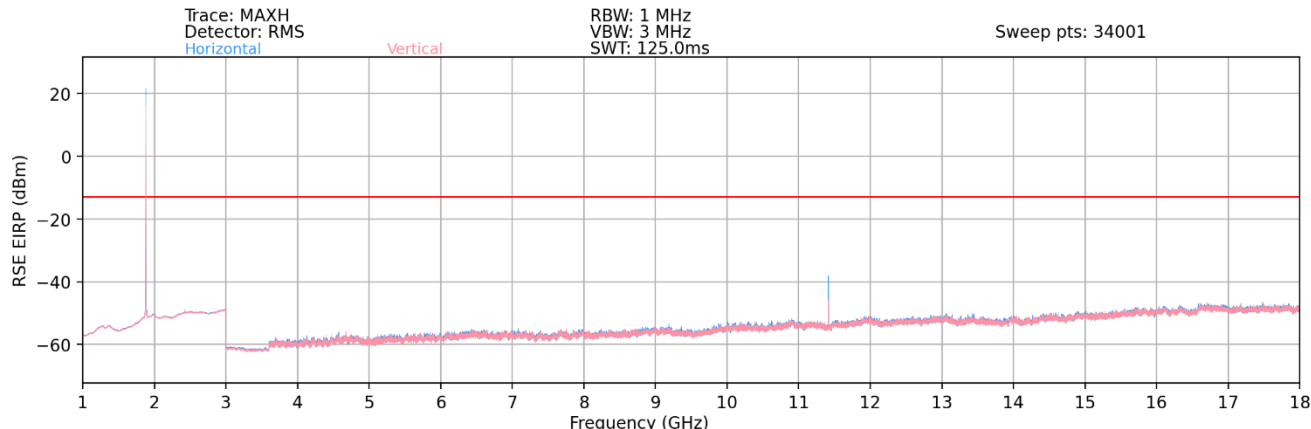
Table 7-97. Ant 2 - n260 Radiated Spurious Emissions Table (30MHz - 1GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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1GHz - 18GHz



Plot 7-116. Ant 2 - 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]
4717.00	Low	50	2Tx	QPSK	H	-	-	-60.13	-13.00	-47.13
9000.00	Mid	50	2Tx	QPSK	H	-	-	-50.39	-13.00	-37.39
11416.00	High	50	2Tx	QPSK	H	37	139	-41.05	-13.00	-28.05

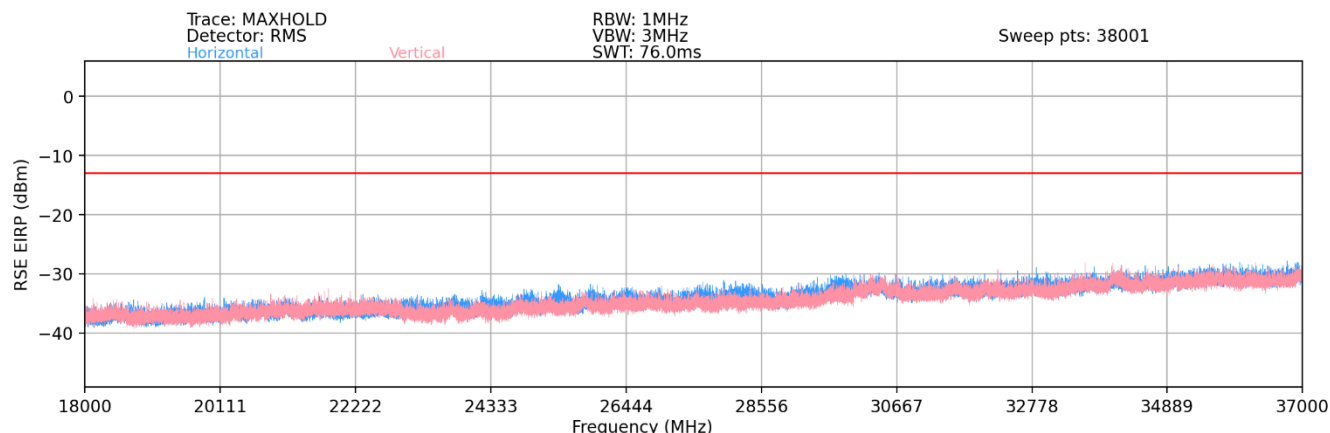
Table 7-98. Ant 2 - n260 Radiated Spurious Emissions Table (1GHz - 18GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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18GHz - 37GHz



Plot 7-117. Ant 2 - 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]
26832.17	Low	50	2Tx	QPSK	V	-	-	-40.17	-13.00	-27.17
27498.00	Mid	50	2Tx	QPSK	V	-	-	-39.54	-13.00	-26.54
30227.21	High	50	2Tx	QPSK	V	-	-	-35.67	-13.00	-22.67

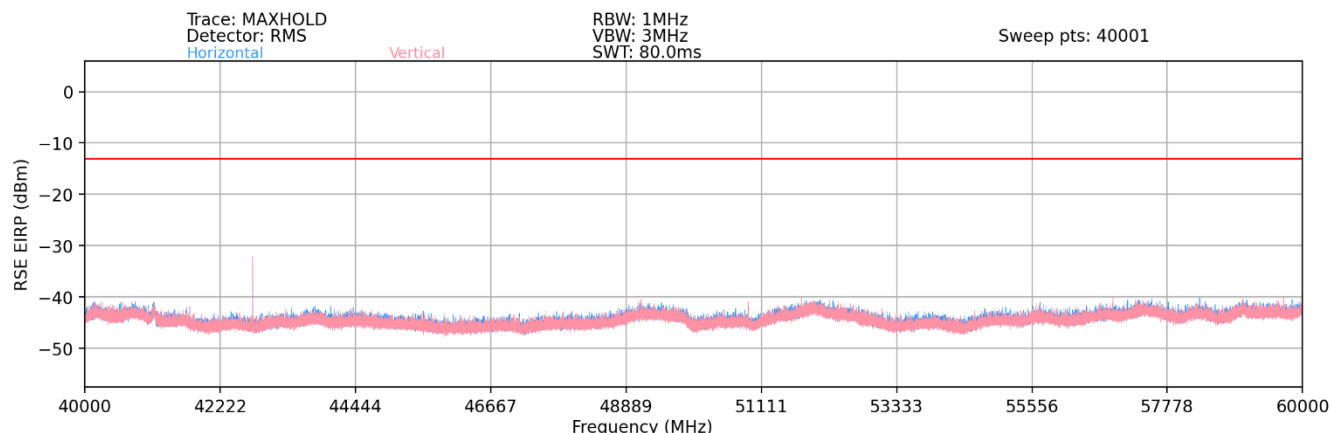
Table 7-99. Ant 2 - n260 Radiated Spurious Emissions Table (18GHz - 37GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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40GHz - 60GHz



Plot 7-118. Ant 2 - 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.

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]
40388.53	Low	50	2Tx	QPSK	V	32	269	-25.72	-13.00	-12.72
42753.39	Mid	50	2Tx	QPSK	V	18	285	-27.29	-13.00	-14.29
44811.44	High	50	2Tx	QPSK	V	75	2	-29.97	-13.00	-16.97

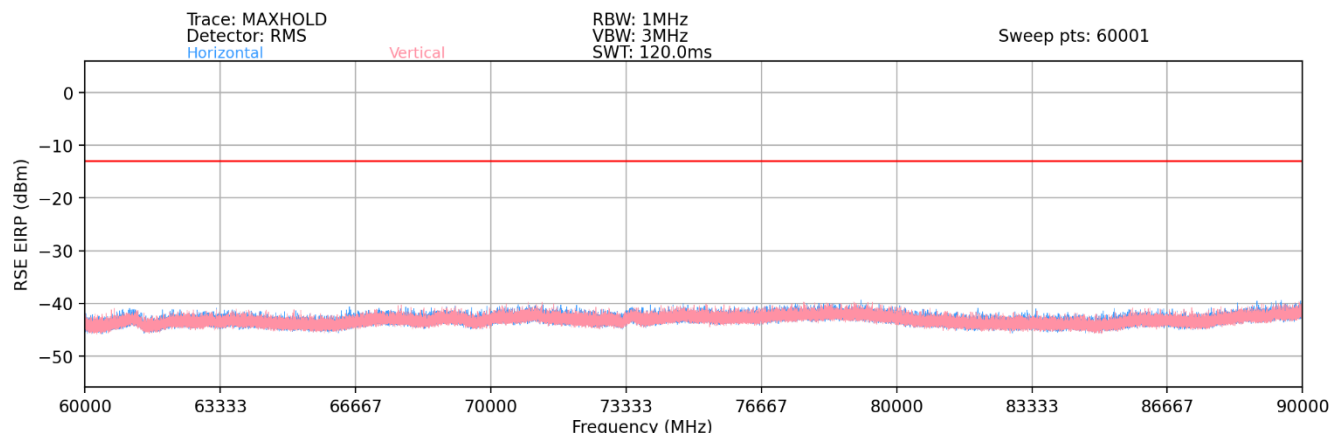
Table 7-100. Ant 2 - n260 Radiated Spurious Emissions Table (40GHz - 60GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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60GHz - 90GHz



Plot 7-119. Ant 2 - 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]
74050.08	Low	50	2Tx	QPSK	V	89	19	-42.41	-13.00	-29.41
76999.92	Mid	50	2Tx	QPSK	V	341	85	-44.03	-13.00	-31.03
79950.00	High	50	2Tx	QPSK	V	4	90	-37.09	-13.00	-24.09

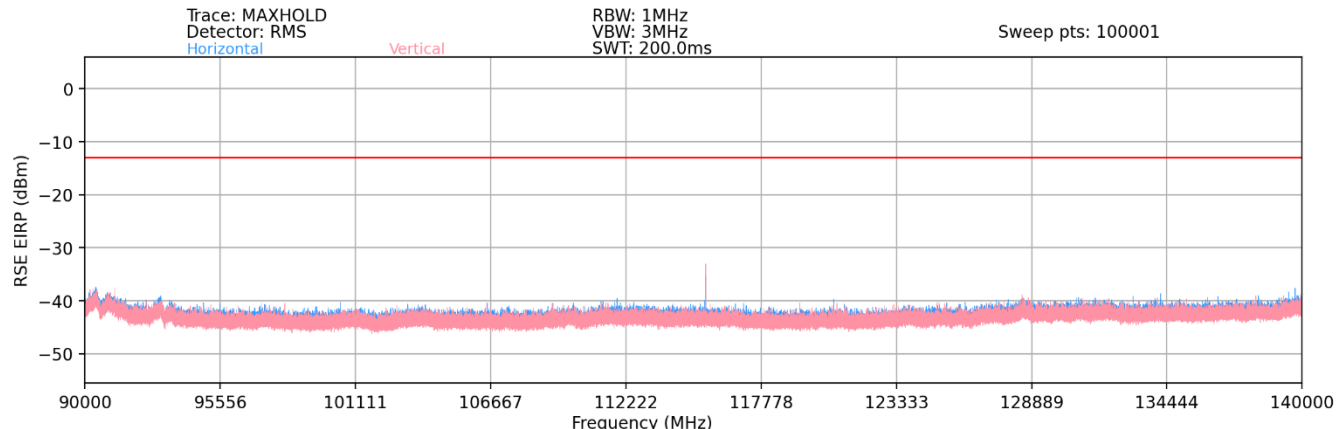
Table 7-101. Ant 2 - n260 Radiated Spurious Emissions Table (60GHz - 90GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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90GHz - 140GHz



Plot 7-120. Ant 2 - 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]
111075.12	Low	50	2Tx	QPSK	V	64	251	-35.40	-13.00	-22.40
115499.88	Mid	50	2Tx	QPSK	V	5	79	-31.05	-13.00	-18.05
119925.00	High	50	2Tx	QPSK	V	69	3	-33.55	-13.00	-20.55

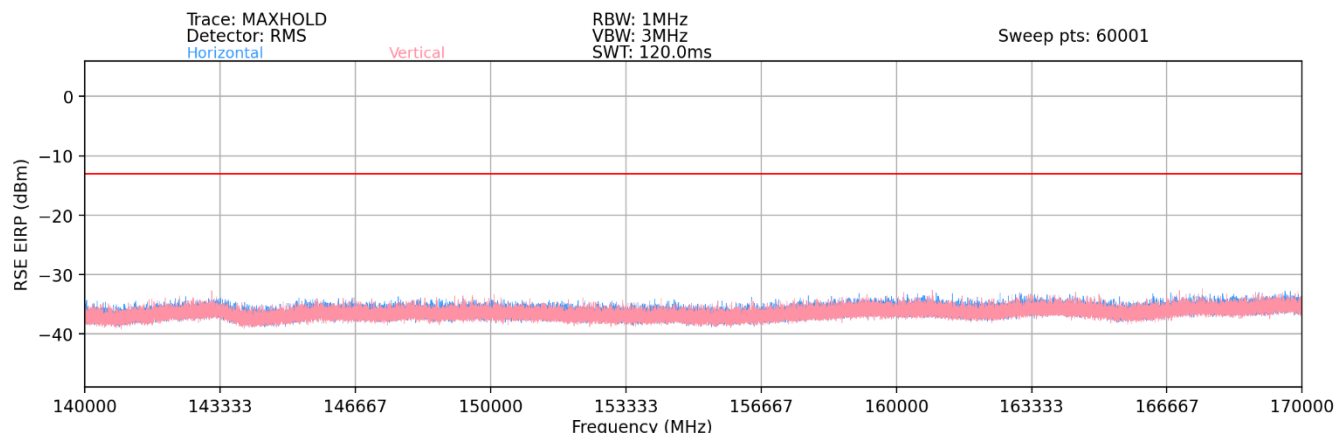
Table 7-102. Ant 2 - n260 Radiated Spurious Emissions Table (90GHz - 140GHz)

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.

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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140GHz - 170GHz



Plot 7-121. Ant 2 - 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]
148100.16	Low	50	2Tx	QPSK	V	-	-	-39.13	-13.00	-26.13
153999.84	Mid	50	2Tx	QPSK	V	-	-	-38.83	-13.00	-25.83
159900.00	High	50	2Tx	QPSK	V	-	-	-38.95	-13.00	-25.95

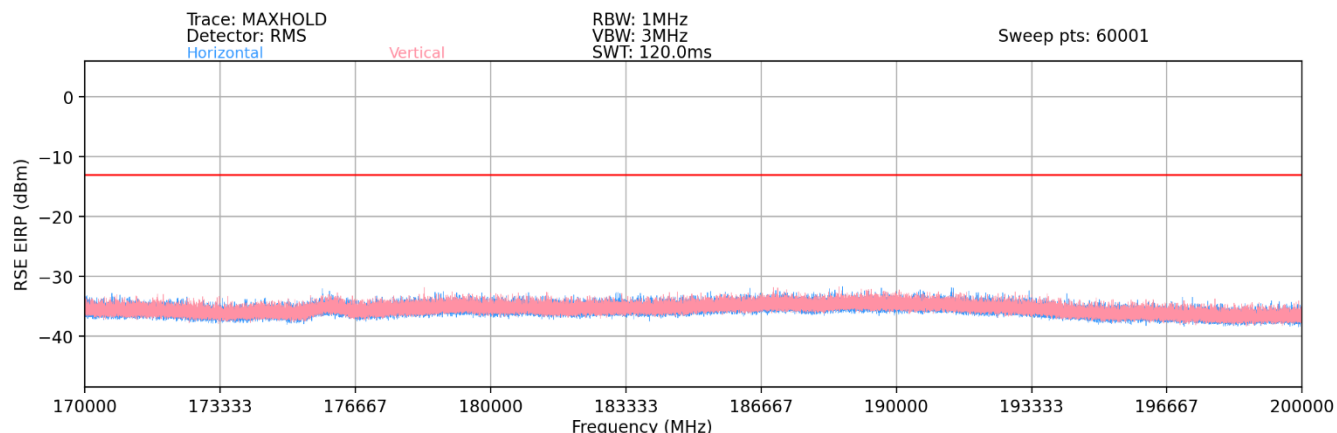
Table 7-103. Ant 2 - n260 Radiated Spurious Emissions Table (140GHz - 170GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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170GHz - 200GHz



Plot 7-122. Ant 2 - 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]
185125.20	Low	50	2Tx	QPSK	V	-	-	-39.17	-13.00	-26.17
192499.80	Mid	50	2Tx	QPSK	V	-	-	-38.47	-13.00	-25.47
199875.00	High	50	2Tx	QPSK	V	-	-	-38.08	-13.00	-25.08

Table 7-104. Ant 2 - n260 Radiated Spurious Emissions Table (170GHz - 200GHz)

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: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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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 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 has the higher power PCC at the band edge for the worst case.
- 7) Unless otherwise specified, the radiated band edge plots in this section display the worst case EIRP measurements for the indicated bandwidth–component carrier configuration.
- 8) The plots in this section that display Total Radiated Power (TRP) were obtained from measurements that 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

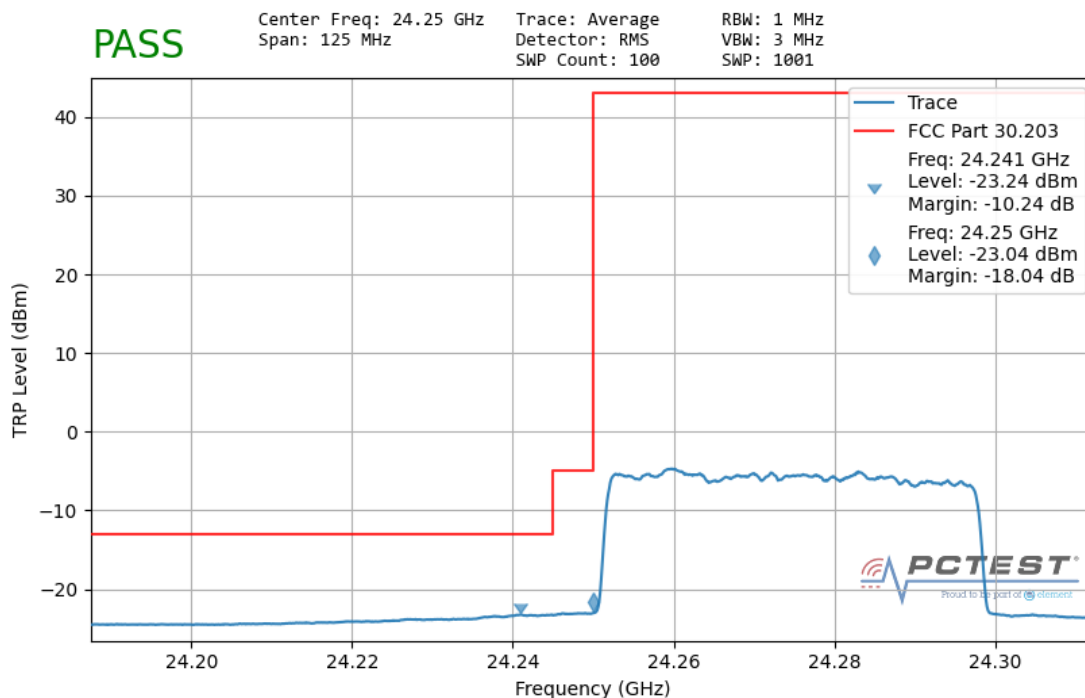
Analyzer Offset (dB) = AF (dB/m) + CL (dB) + 107 + 20log₁₀(D) – 104.8dB, where D = 1m

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

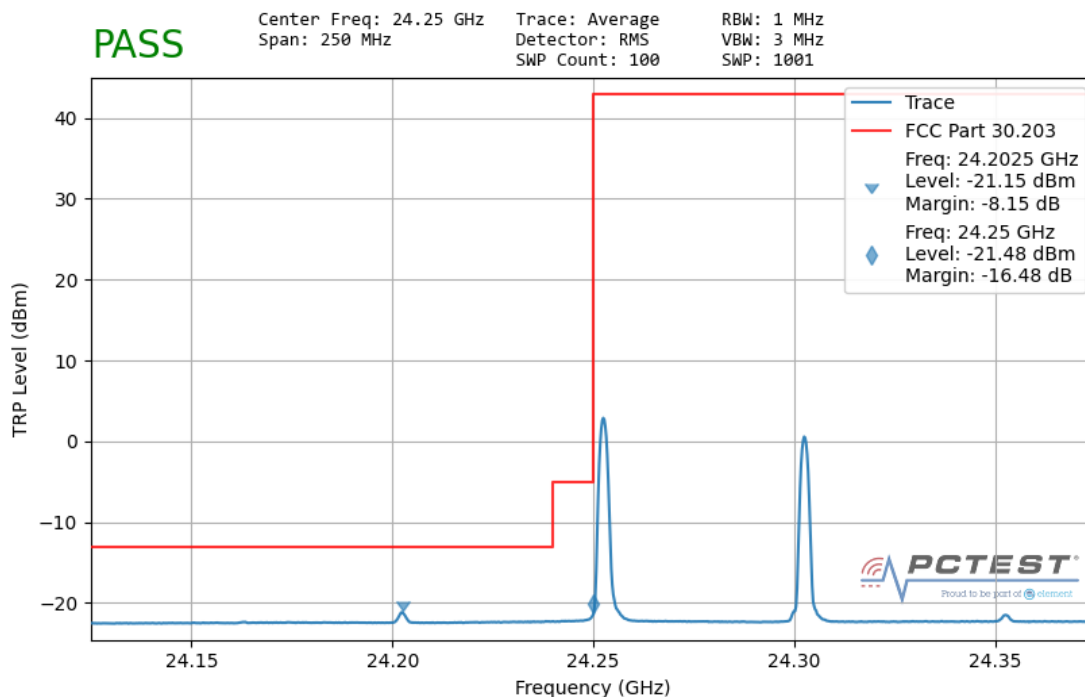
$$= 51.72\text{dB}$$

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Band n258-R1 – Worst-Case

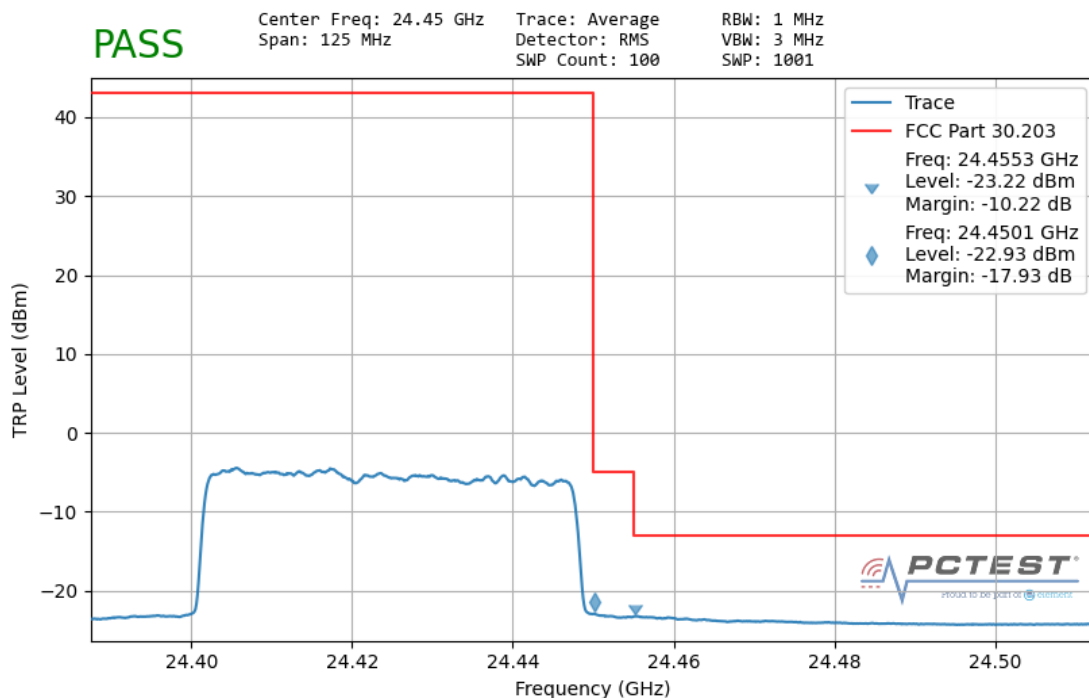


Plot 7-123. Ant 1 Lower Band Edge – TRP (50MHz-1CC – QPSK Full RB)

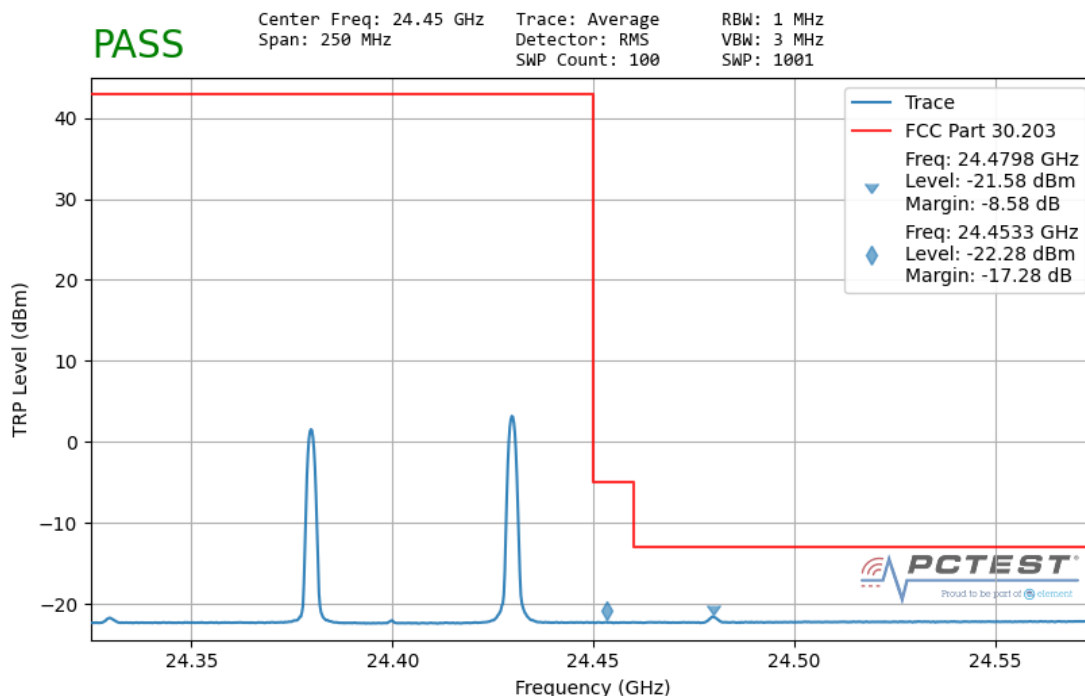


Plot 7-124. Ant 1 Lower Band Edge – TRP (50MHz-2CC – QPSK 1 RB)

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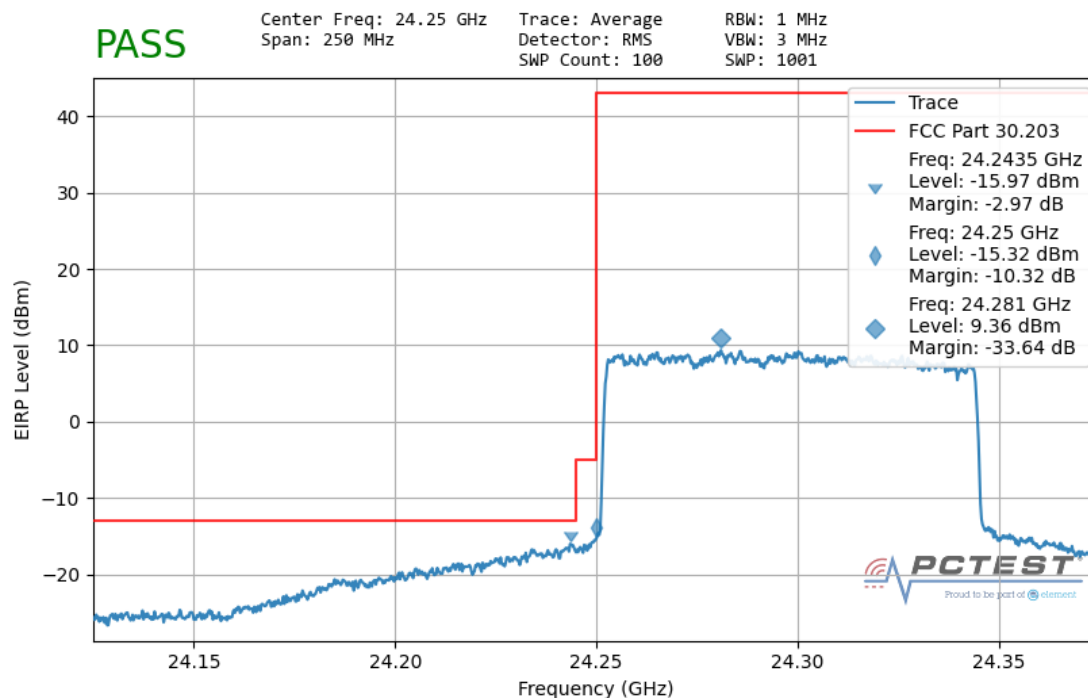


Plot 7-125. Ant 1 Upper Band Edge – TRP (50MHz-1CC – QPSK Full RB)

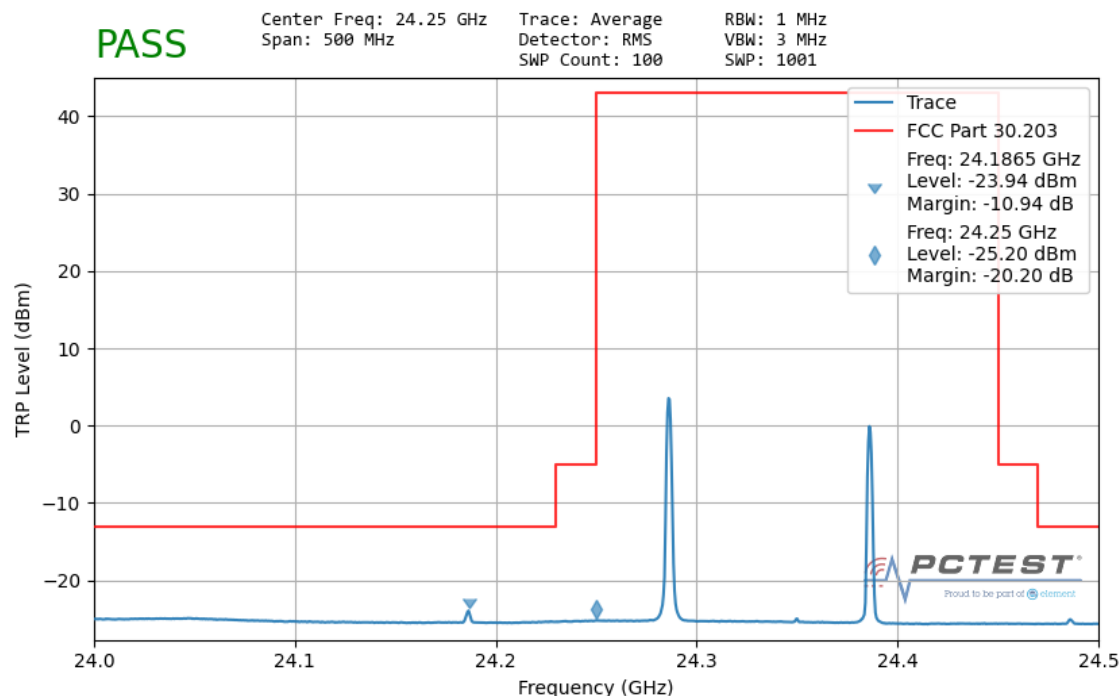


Plot 7-126. Ant 1 Upper Band Edge – TRP (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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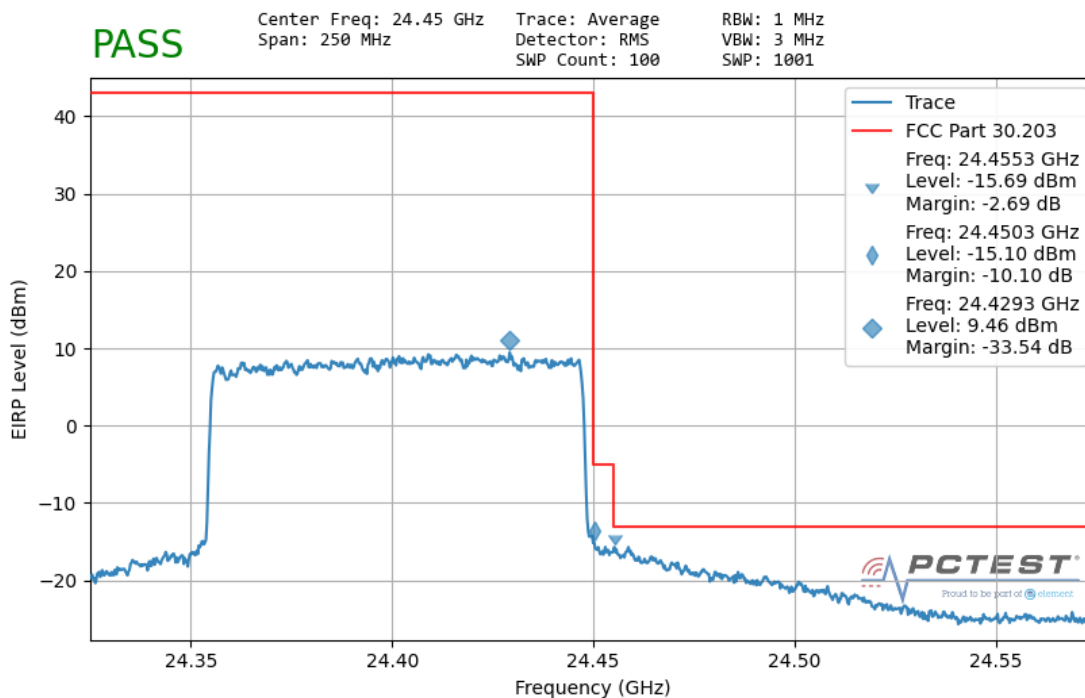


Plot 7-127. Ant 1 Lower Band Edge (100MHz-1CC – QPSK Full RB)

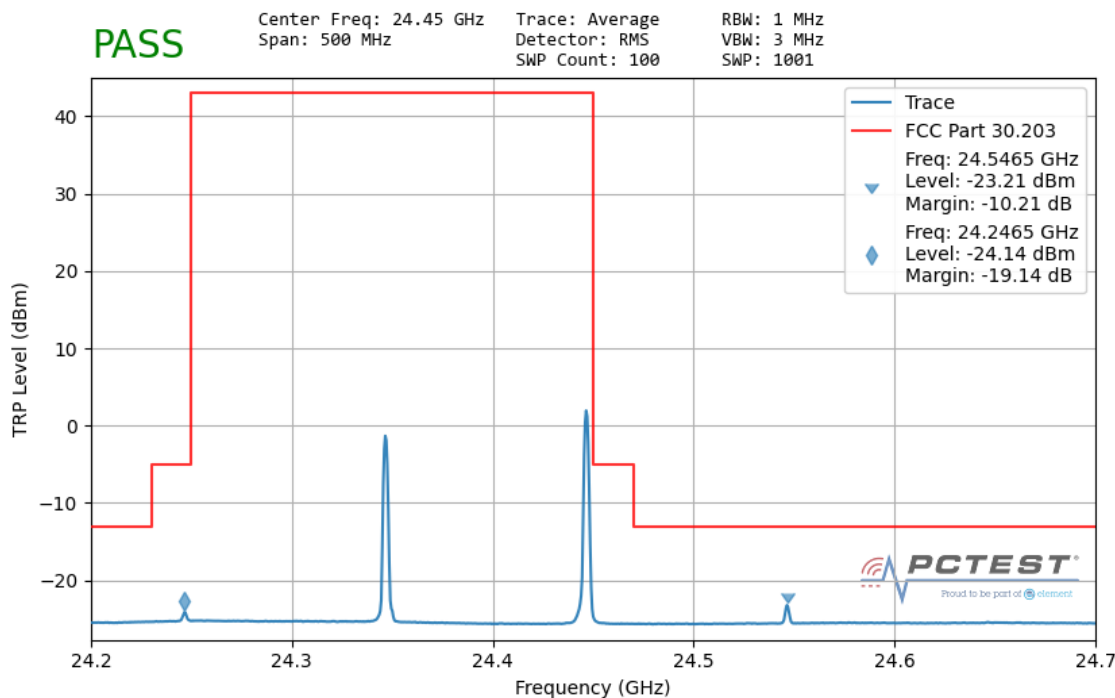


Plot 7-128. Ant 1 Lower Band Edge – TRP (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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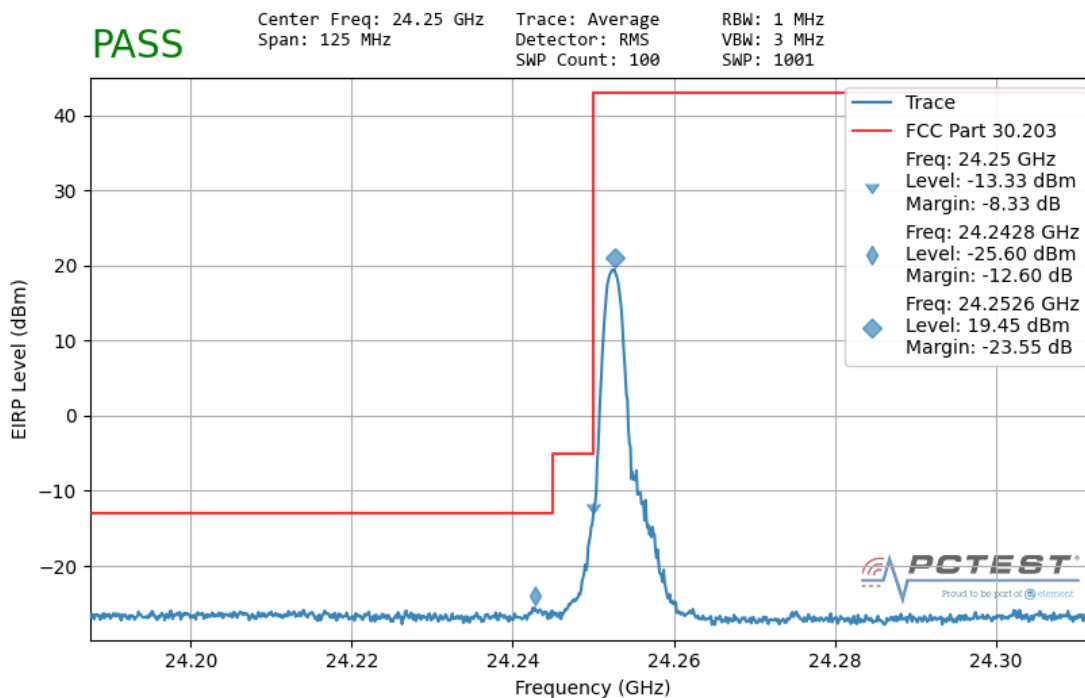


Plot 7-129. Ant 1 Upper Band Edge (100MHz-1CC – QPSK Full RB)

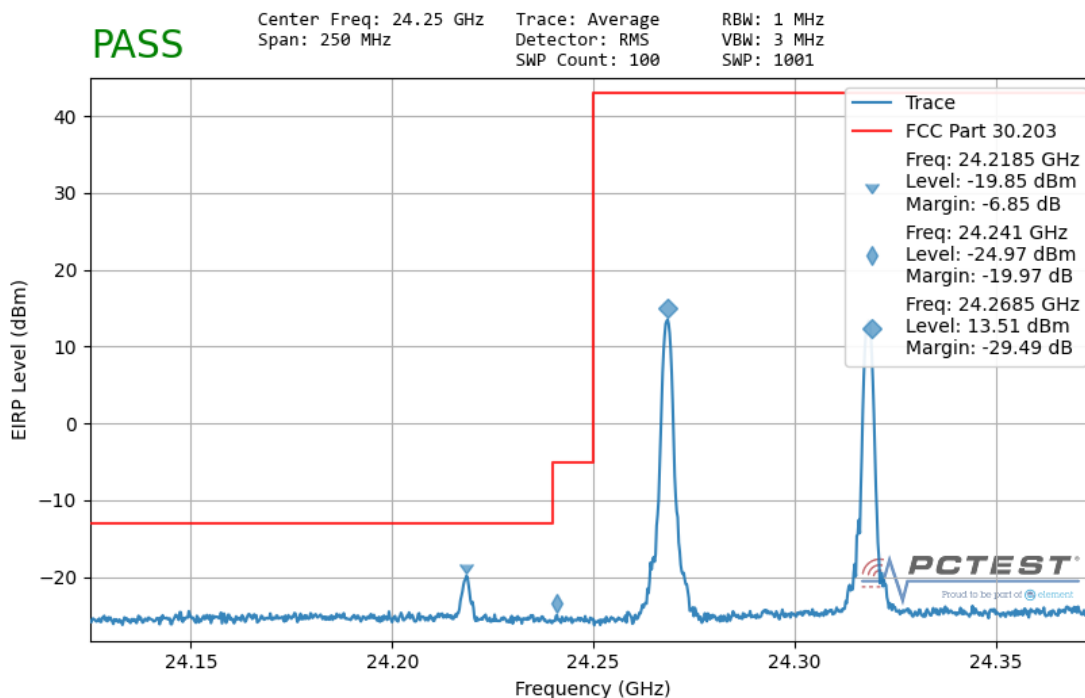


Plot 7-130. Ant 1 Upper Band Edge – TRP (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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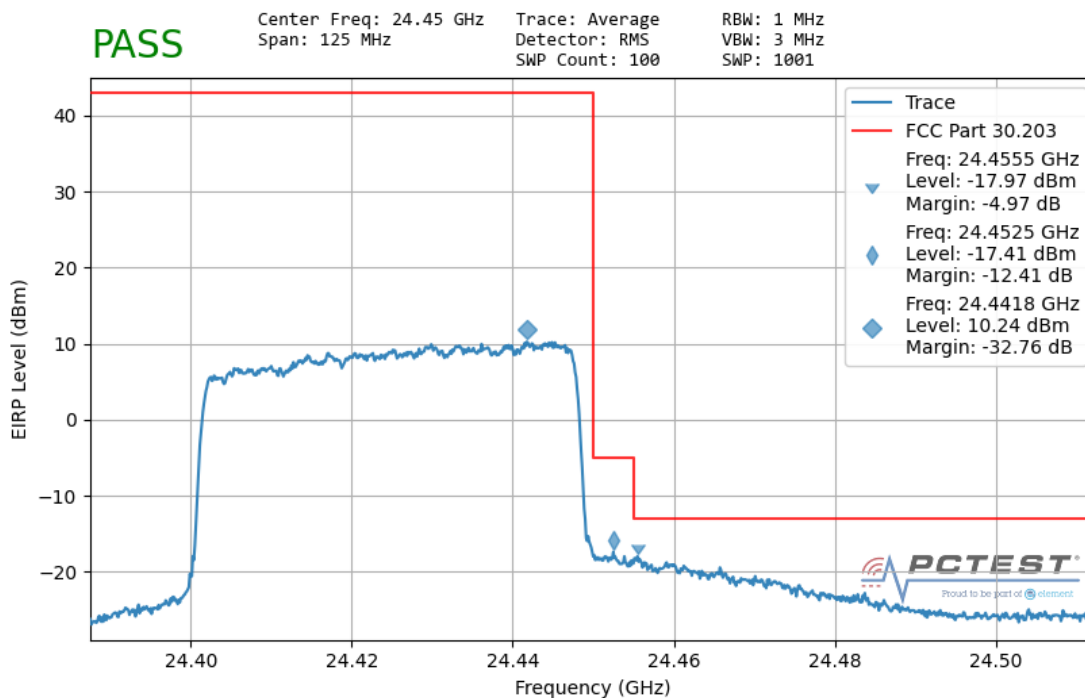


Plot 7-131. Ant 2 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

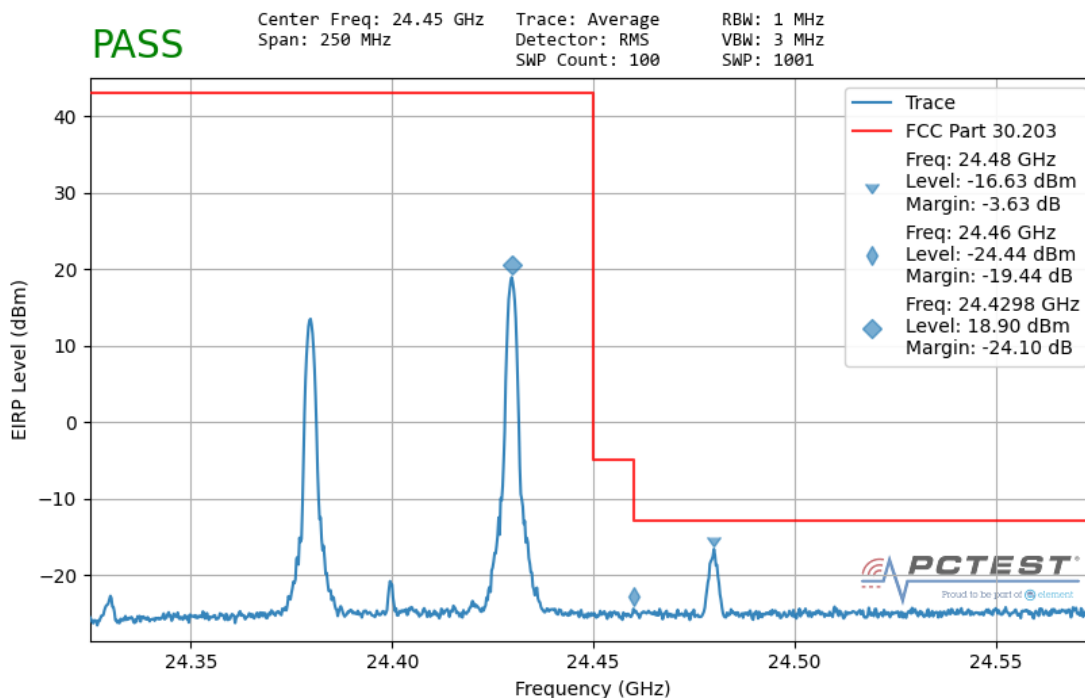


Plot 7-132. Ant 2 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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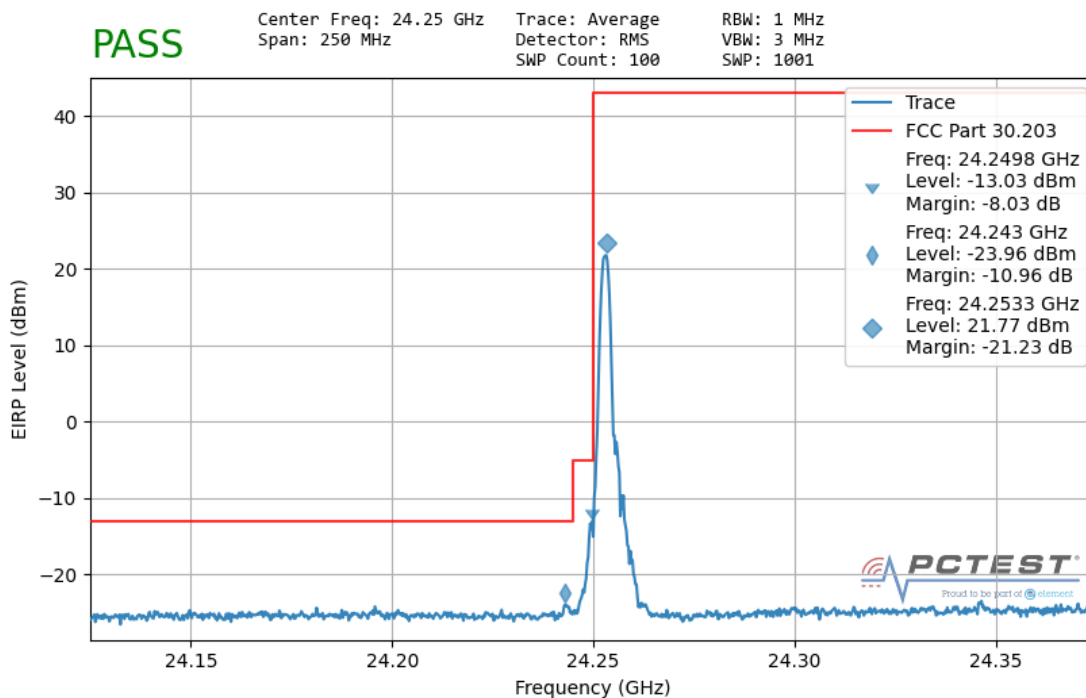


Plot 7-133. Ant 2 Upper Band Edge (50MHz-1CC – QPSK Full RB)

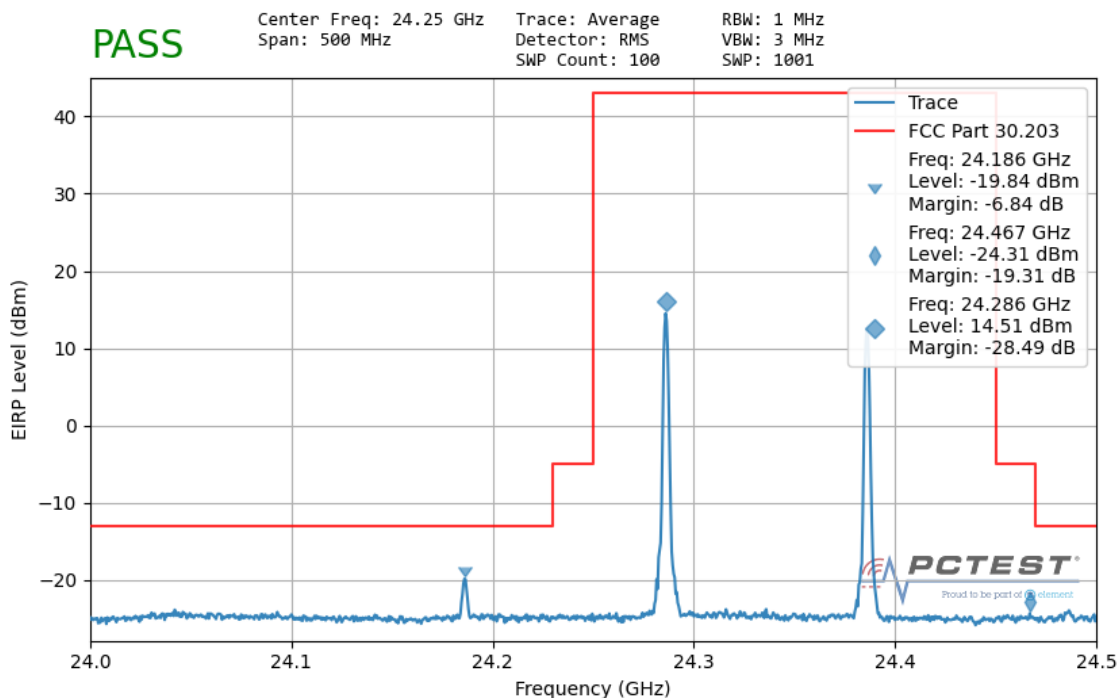


Plot 7-134. Ant 2 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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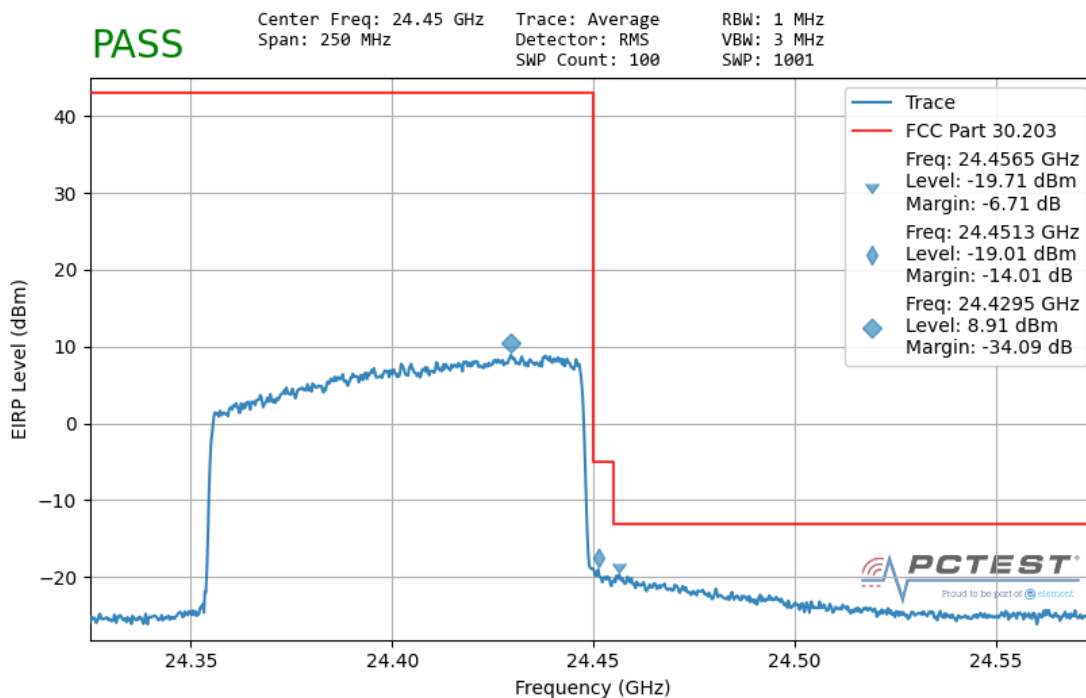


Plot 7-135. Ant 2 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

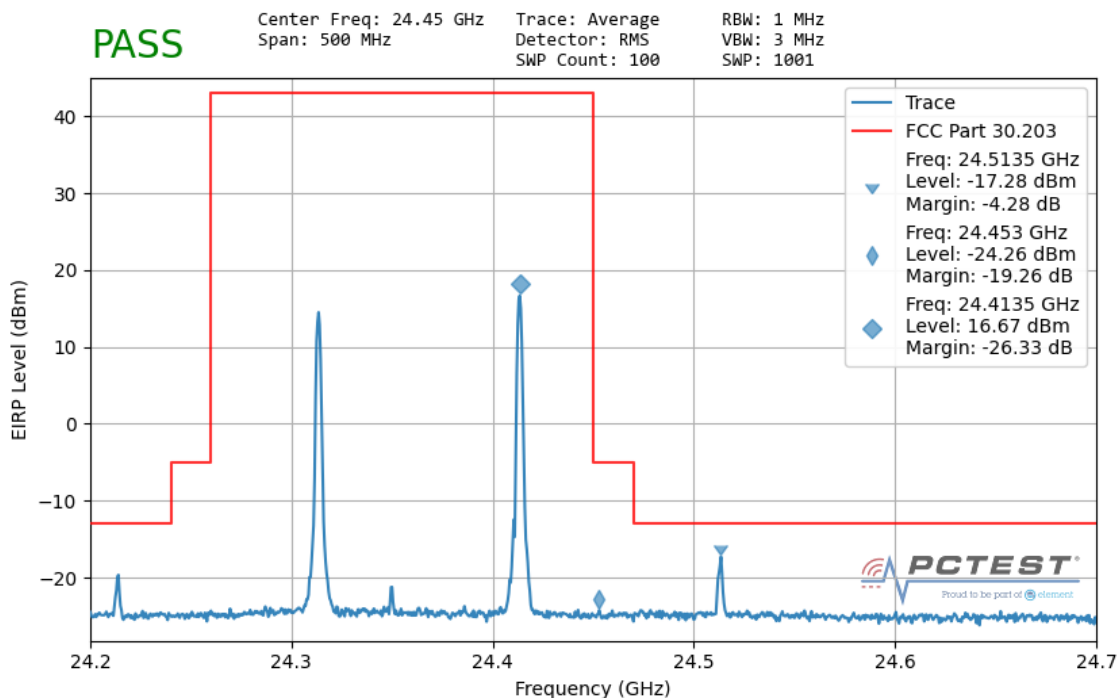


Plot 7-136. Ant 2 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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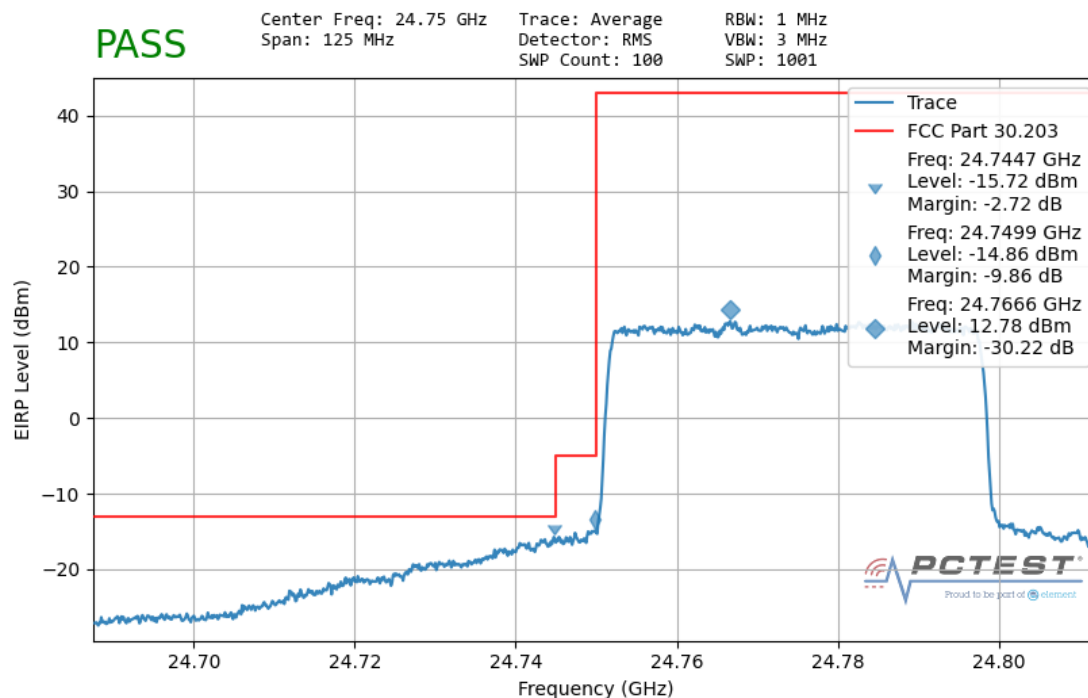
Plot 7-137. Ant 2 Upper Band Edge (100MHz-1CC – QPSK Full RB)



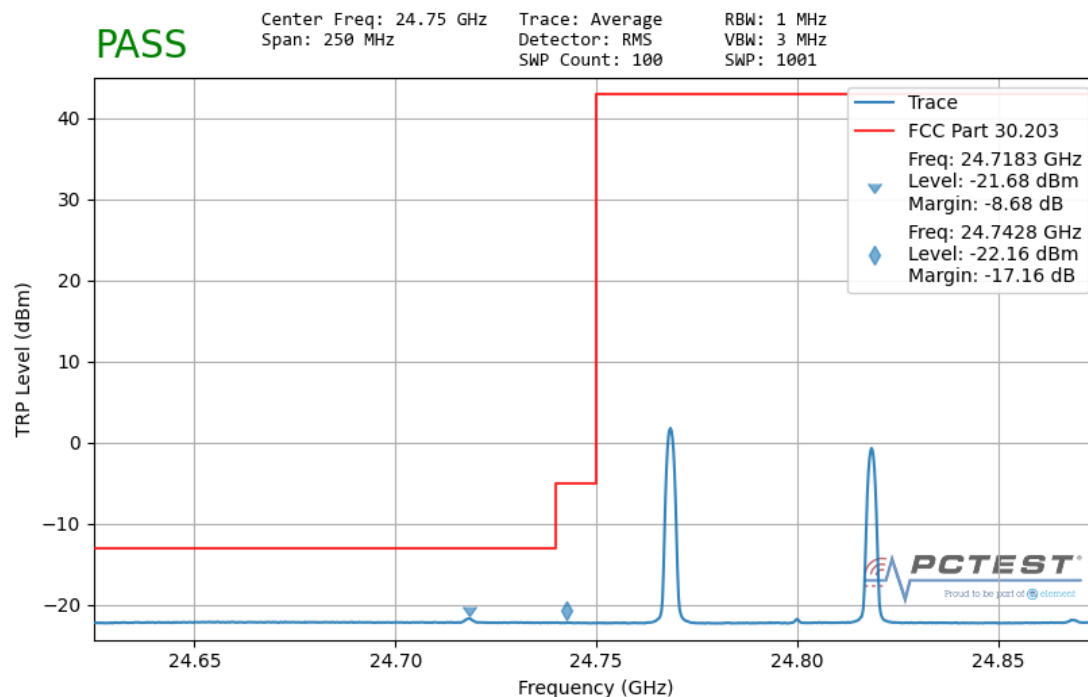
Plot 7-138. Ant 2 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band n258-R2 – Worst-Case

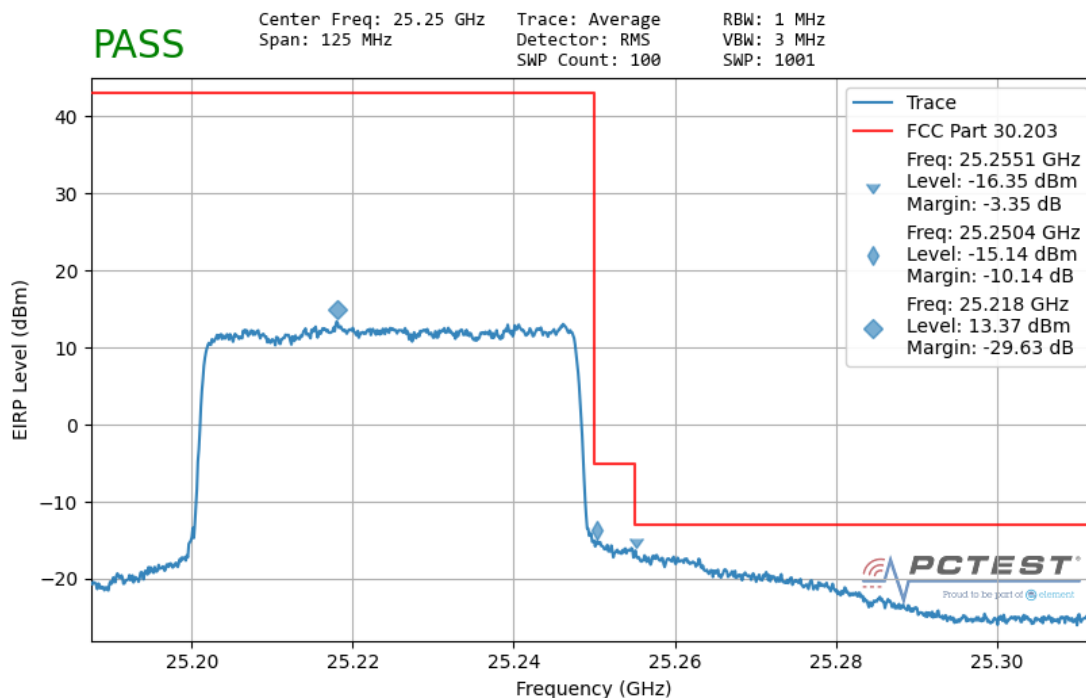


Plot 7-139. Ant 1 Lower Band Edge (50MHz-1CC – QPSK Full RB)

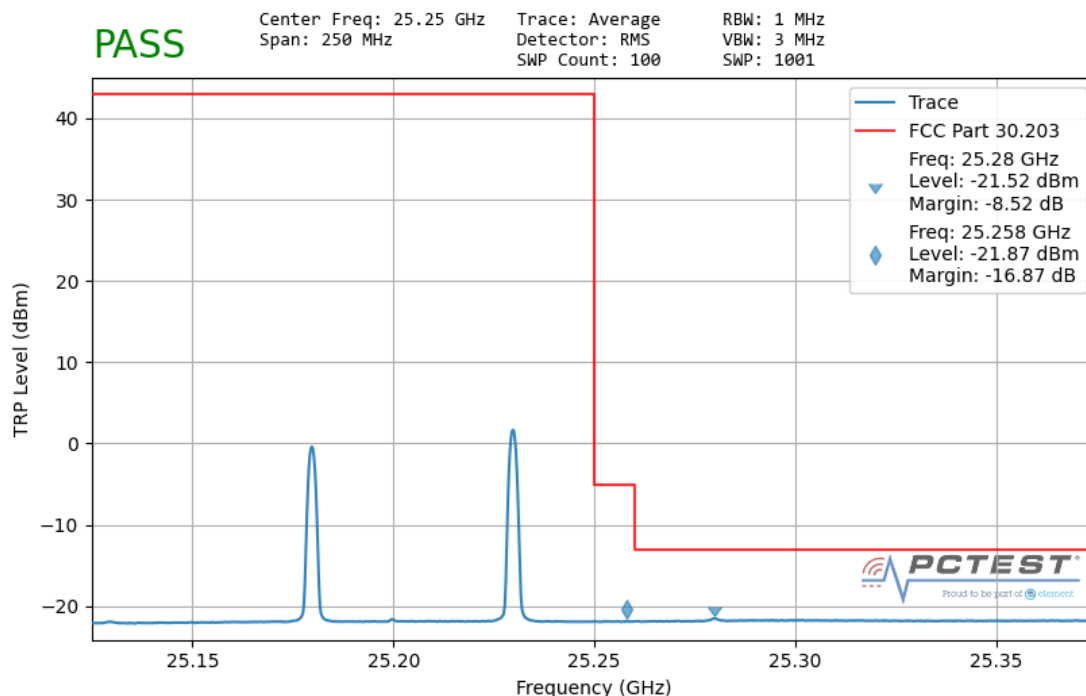


Plot 7-140. Ant 1 Lower Band Edge – TRP (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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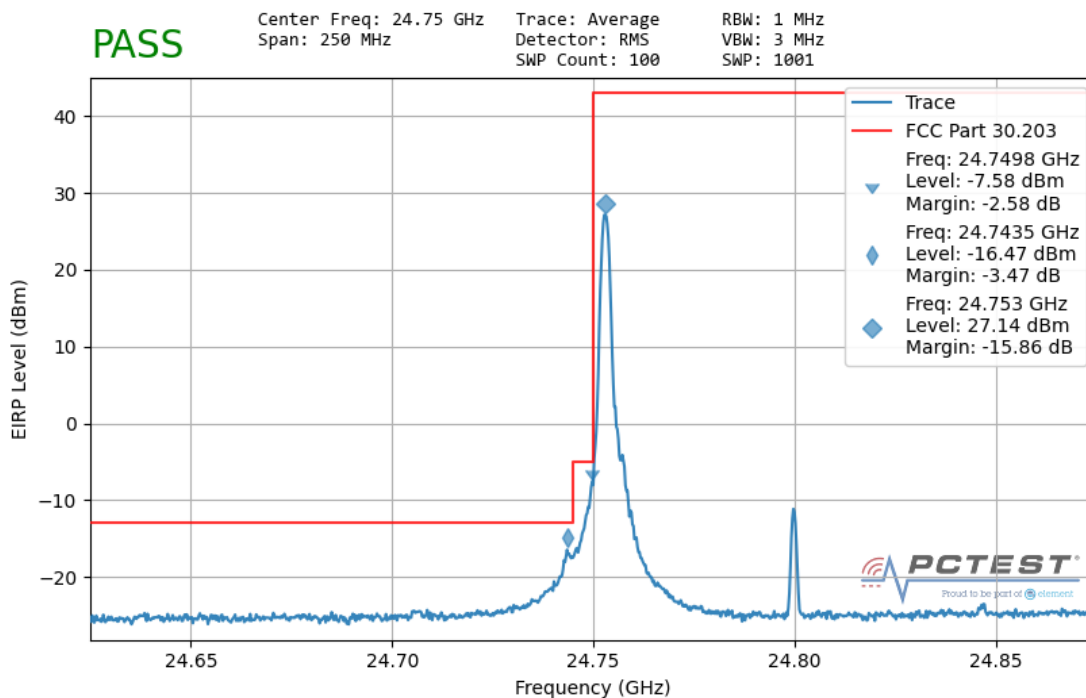


Plot 7-141. Ant 1 Upper Band Edge (50MHz-1CC – QPSK Full RB)

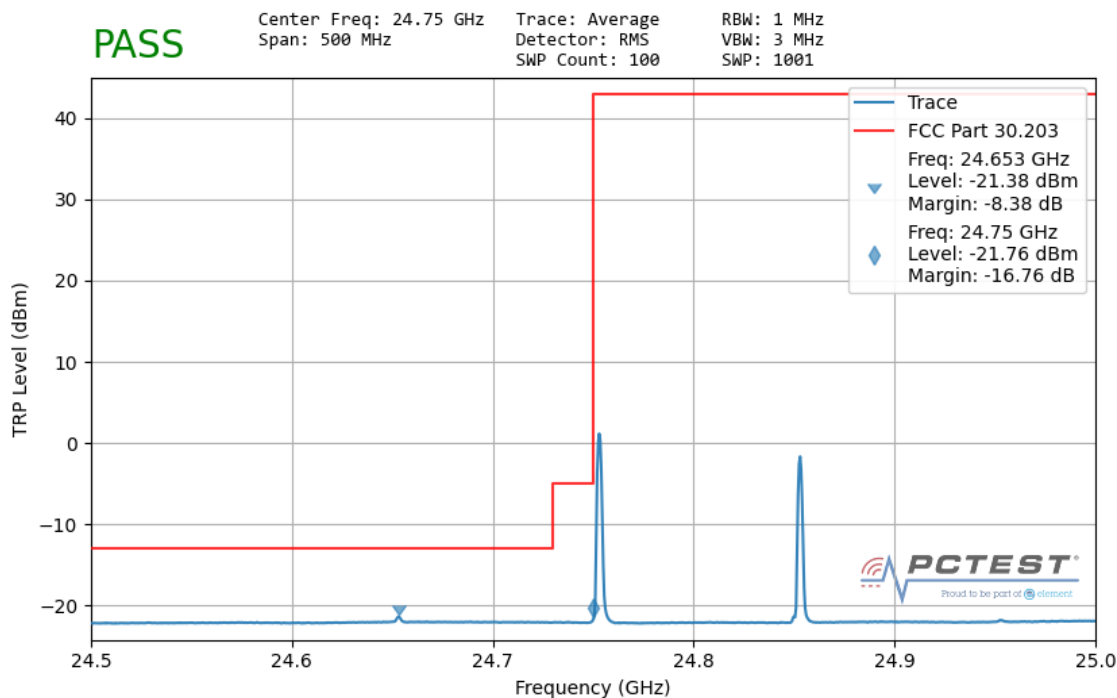


Plot 7-142. Ant 1 Upper Band Edge – TRP (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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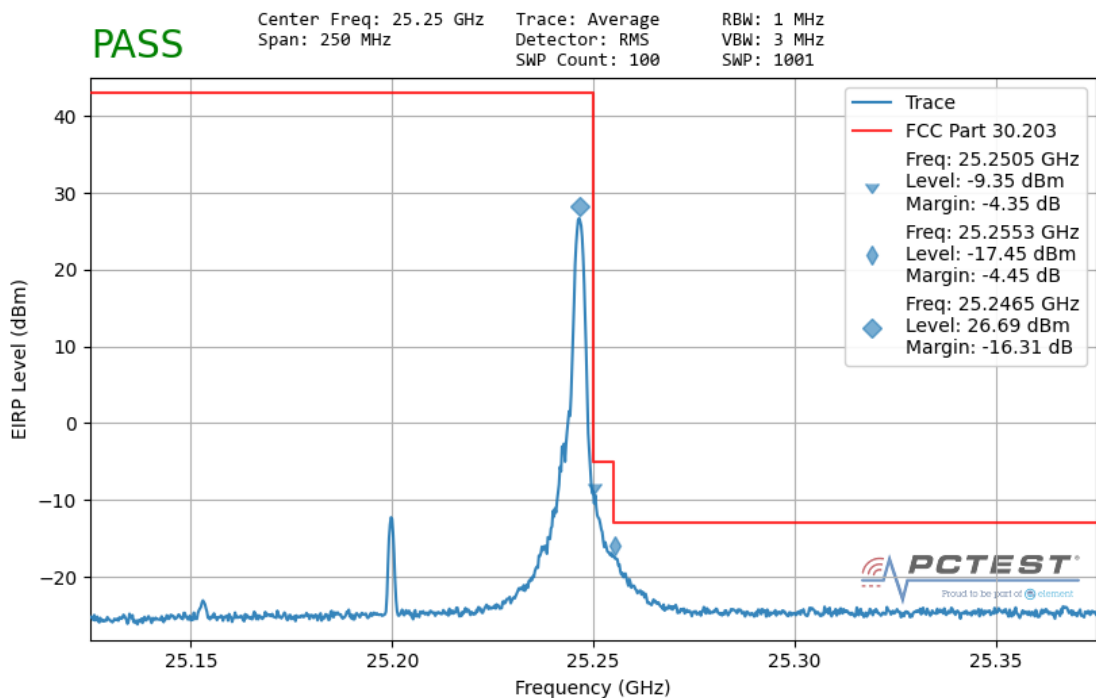


Plot 7-143. Ant 1 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

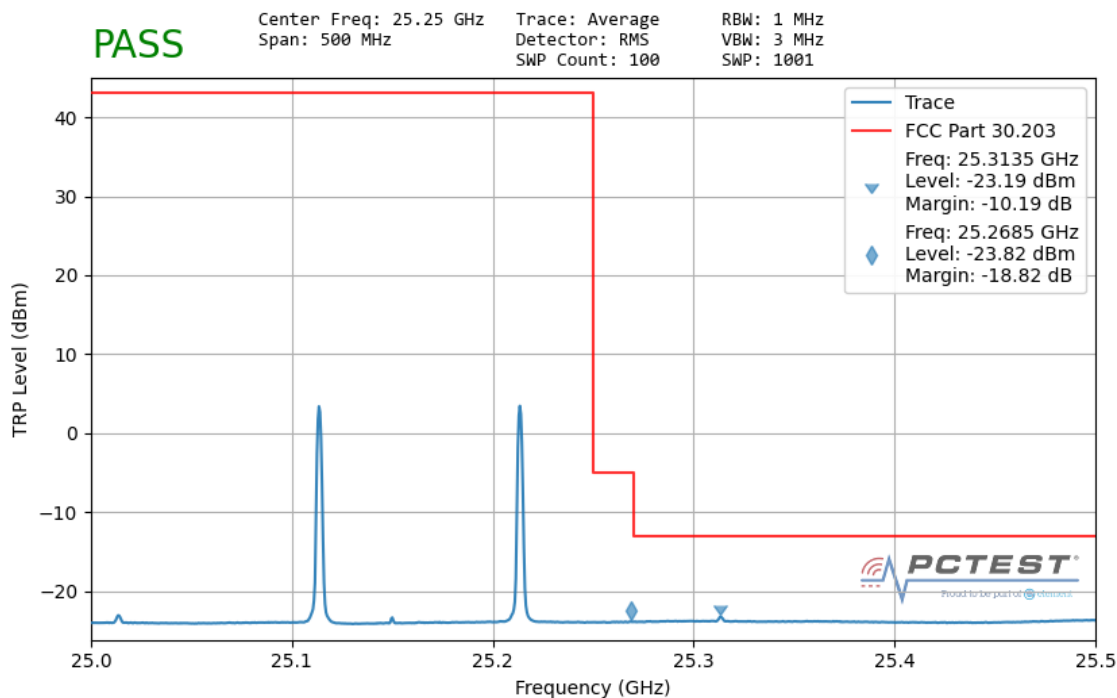


Plot 7-144. Ant 1 Lower Band Edge – TRP (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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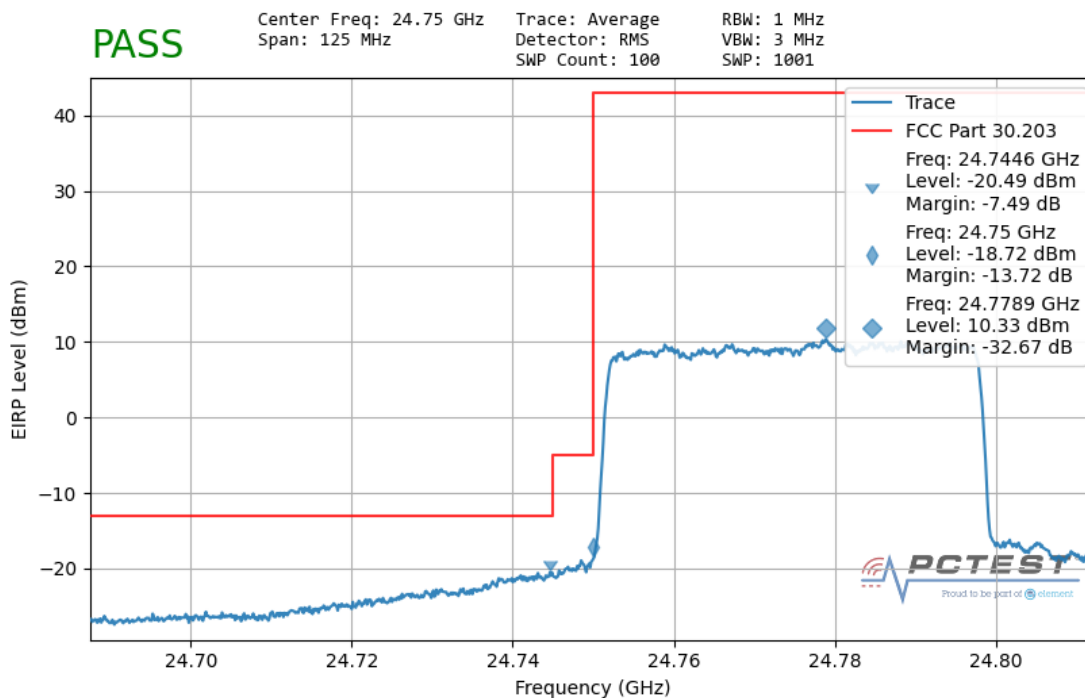


Plot 7-145. Ant 1 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

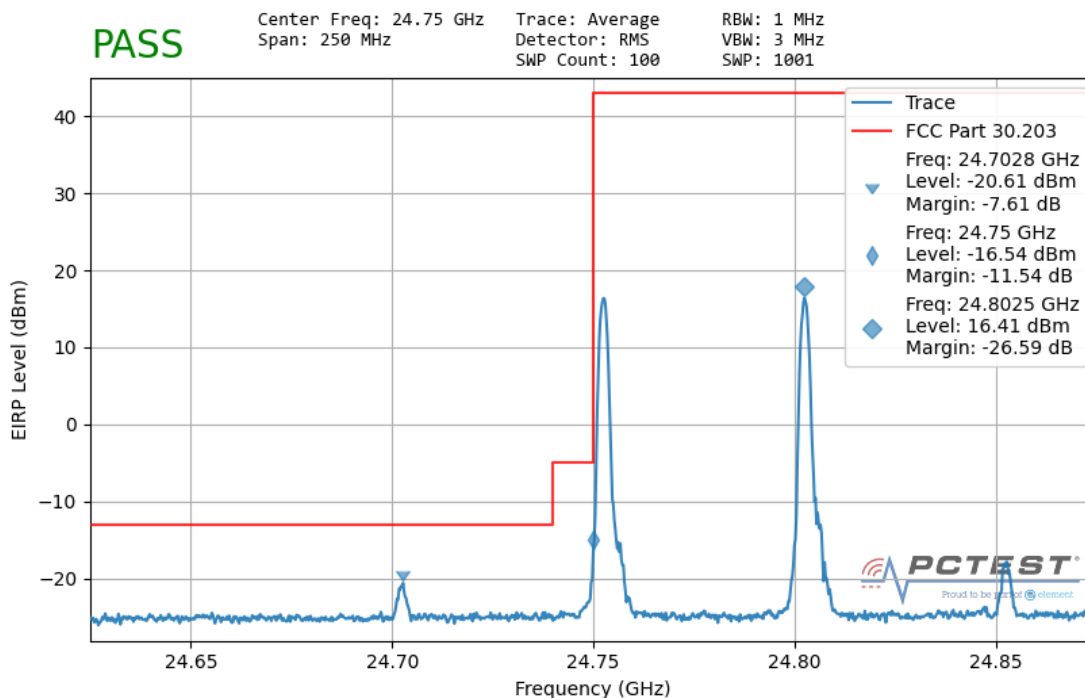


Plot 7-146. Ant 1 Upper Band Edge – TRP (100MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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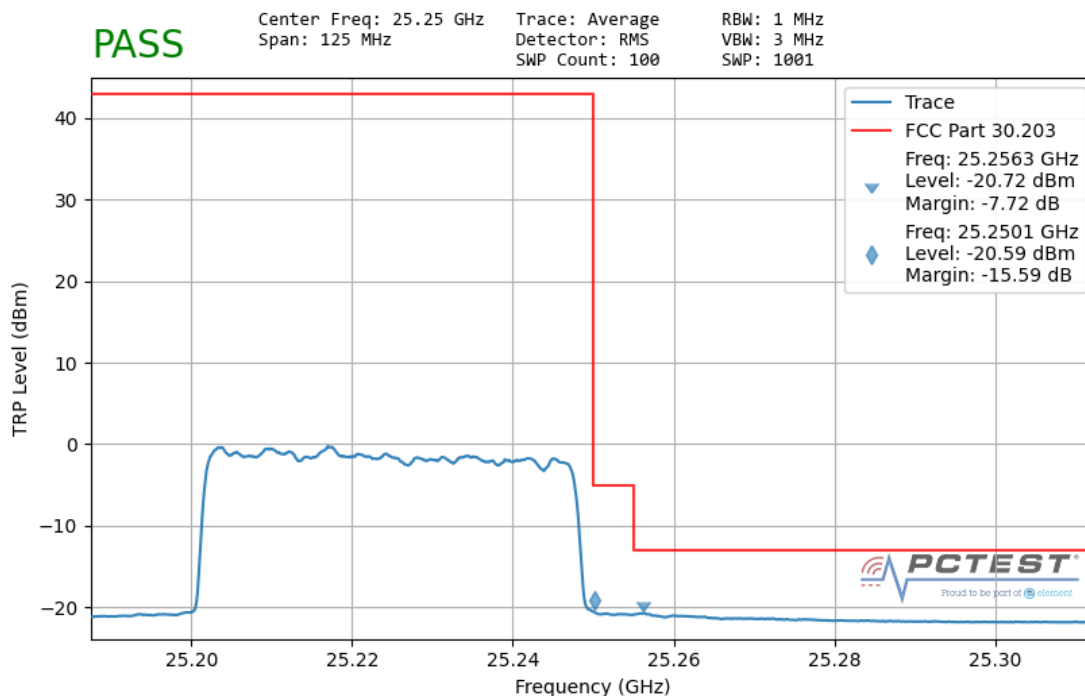


Plot 7-147. Ant 2 Lower Band Edge (50MHz-1CC – QPSK Full RB)

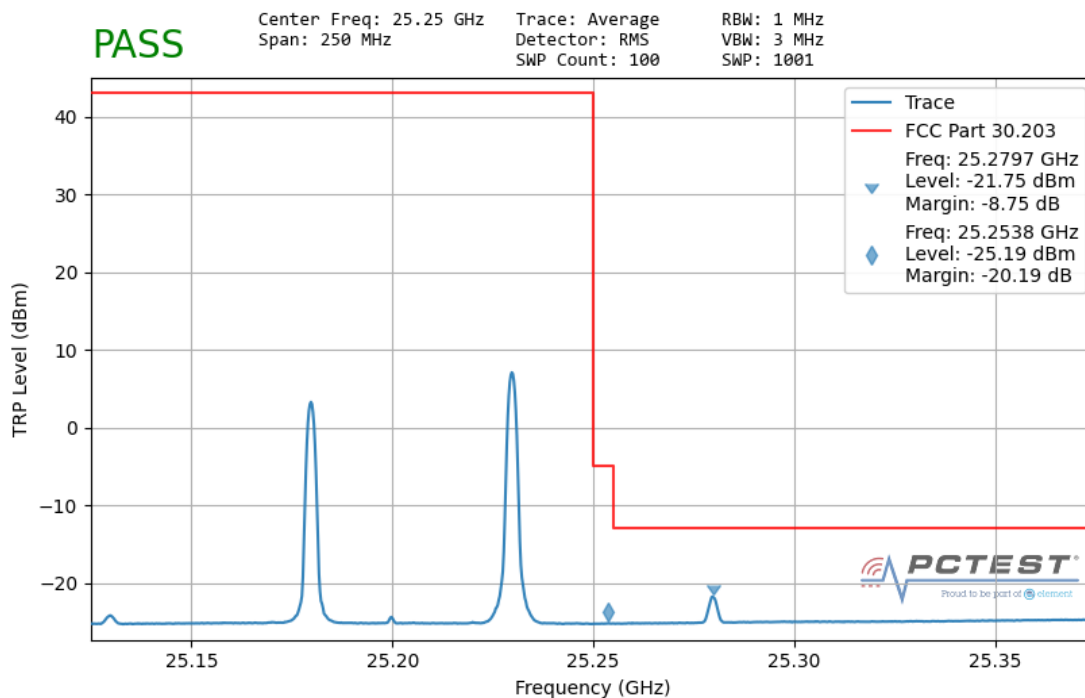


Plot 7-148. Ant 2 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

FCC ID: A3LSMS906U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-149. Ant 2 Upper Band Edge – TRP (50MHz-1CC – QPSK Full RB)



Plot 7-150. Ant 2 Upper Band Edge – TRP (50MHz-2CC – QPSK 1 RB)

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