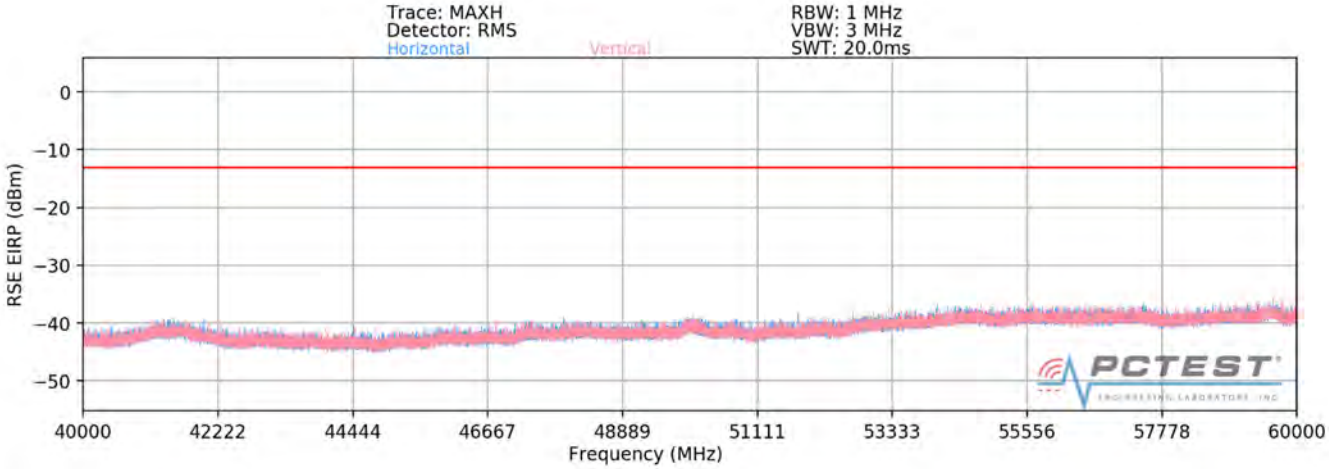
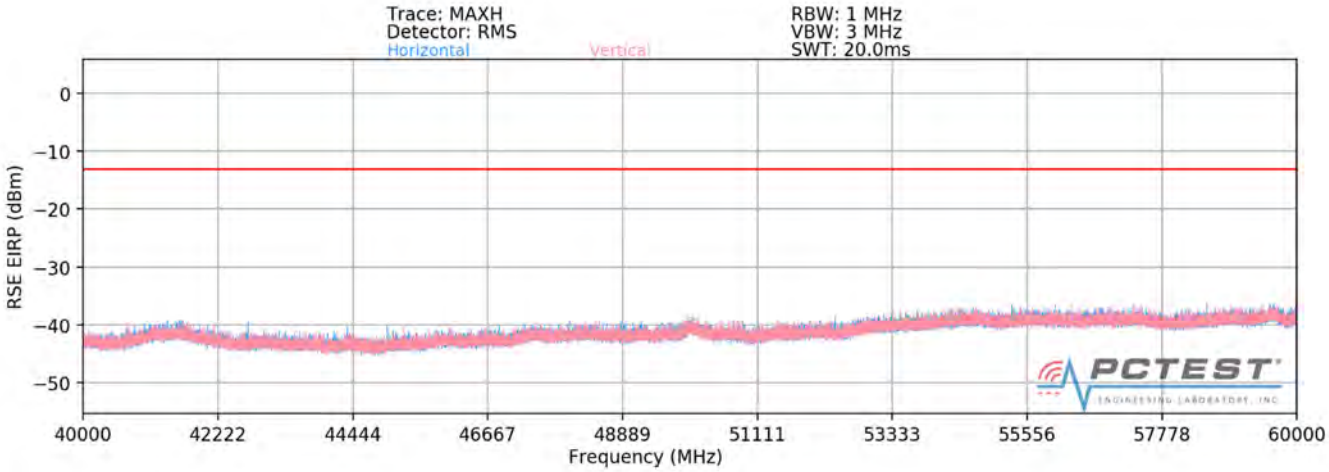
40GHz - 60GHz



Plot 7-133. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-134. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55070.88	Low	50	H	QPSK	H	73	221	-52.65	-13.00	-39.65
55071.06	Low	50	V	QPSK	V	39	341	-48.79	-13.00	-35.79
55845.27	Mid	50	H	QPSK	H	73	220	-49.95	-13.00	-36.95
55845.03	Mid	50	V	QPSK	V	99	213	-46.89	-13.00	-33.89
56639.85	High	50	H	QPSK	H	69	217	-48.70	-13.00	-35.70
56639.67	High	50	V	QPSK	V	43	331	-52.19	-13.00	-39.19

Table 7-81. Ant3 - SISO -Spurious Emissions Table (40GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-47.29	-13.00	-34.29
Mid	50	QPSK	-45.15	-13.00	-32.15
High	50	QPSK	-47.09	-13.00	-34.09

Table 7-82. Ant3 - MIMO -Spurious Emissions Table (40GHz - 60GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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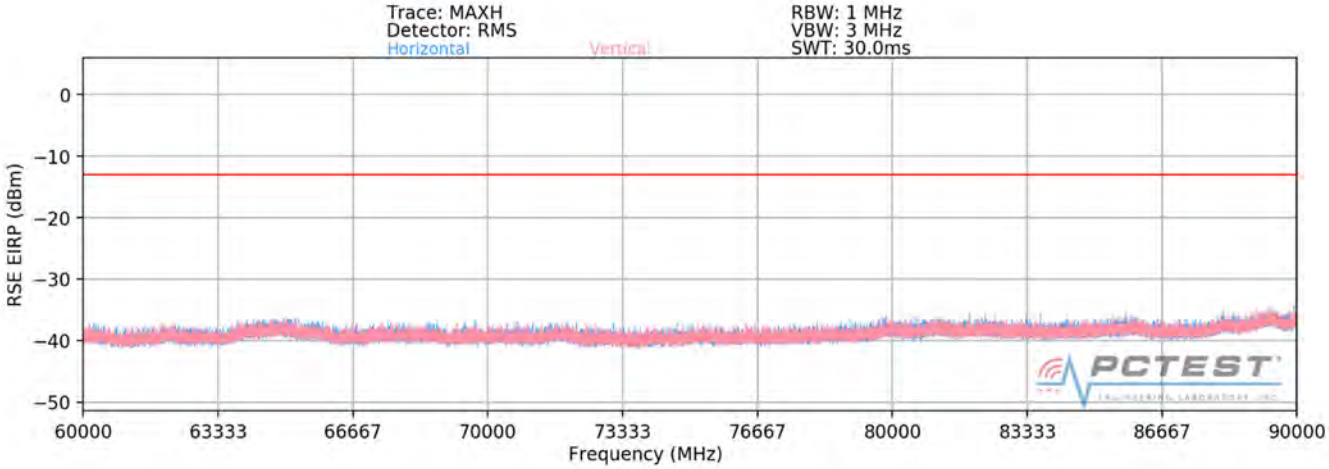
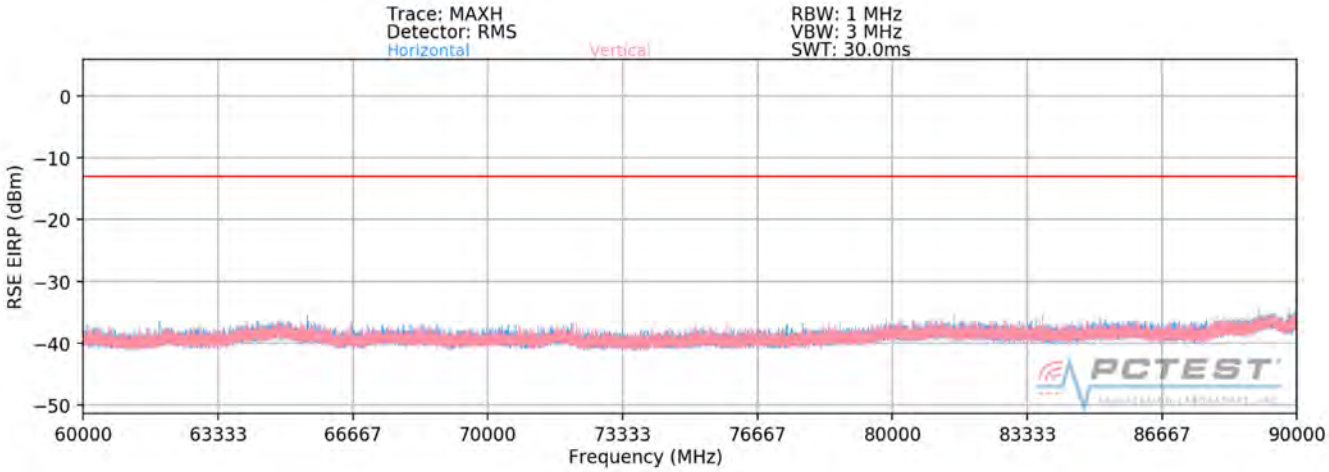
60GHz - 90GHz



Plot 7-135. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-136. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
82602.15	Low	50	H	QPSK	H	211	55	-54.12	-13.00	-41.12
82604.45	Low	50	V	QPSK	V	313	125	-53.98	-13.00	-40.98
83767.48	Mid	50	H	QPSK	H	187	47	-54.13	-13.00	-41.13
83767.44	Mid	50	V	QPSK	V	257	148	-54.04	-13.00	-41.04
84961.57	High	50	H	QPSK	H	216	65	-53.61	-13.00	-40.61
84962.75	High	50	V	QPSK	V	46	184	-53.74	-13.00	-40.74

Table 7-83. Ant3 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-51.03	-13.00	-38.03
Mid	50	QPSK	-51.08	-13.00	-38.08
High	50	QPSK	-50.66	-13.00	-37.66

Table 7-84. Ant3 - MIMO -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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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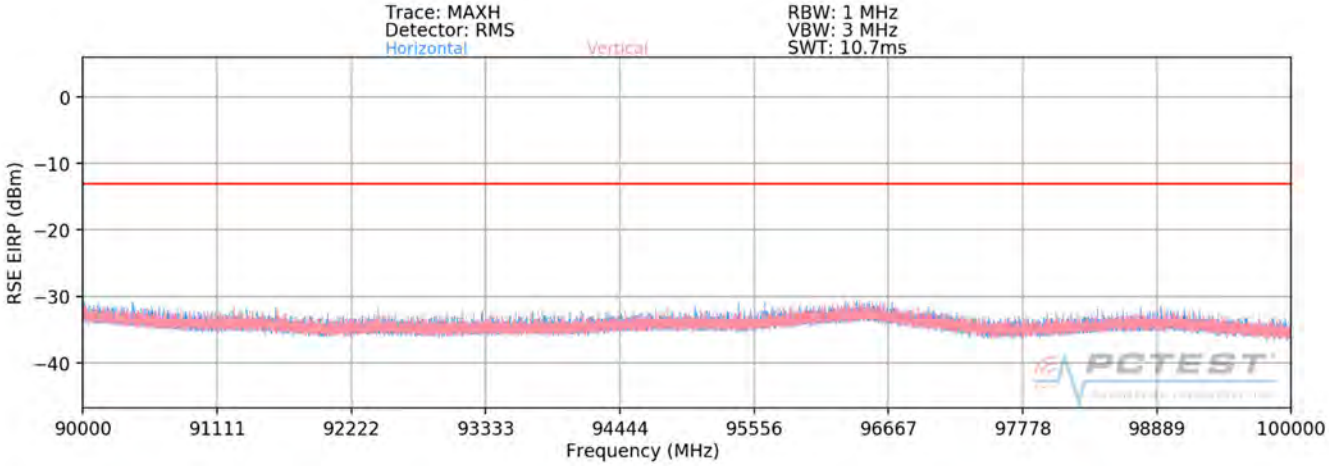
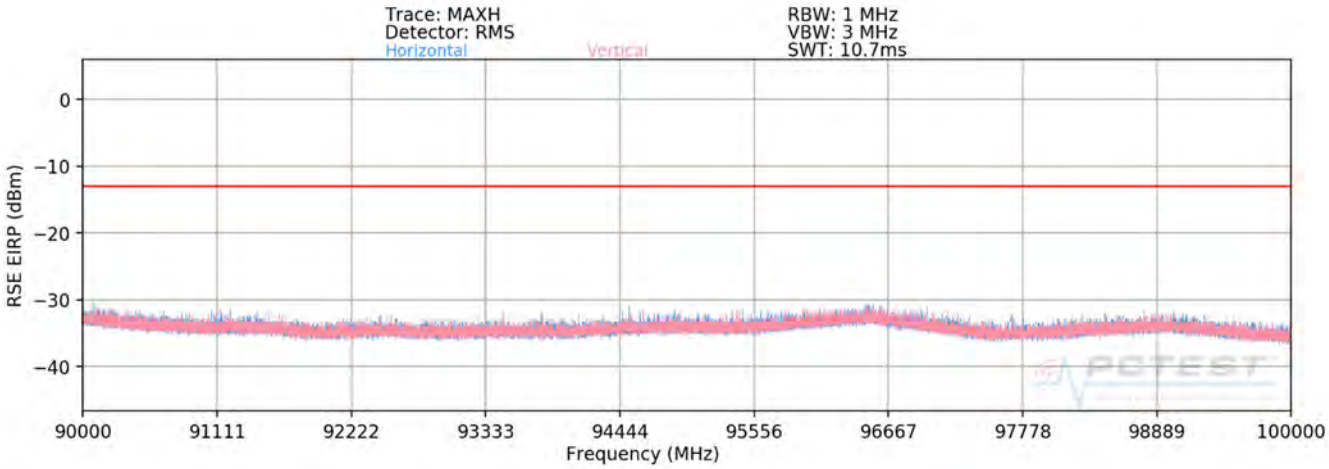
90GHz - 100GHz



Plot 7-137. Ant1-n263 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-138. Ant1-n263 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
96468.52	Low	50	H	QPSK	V	-	-	-40.60	-13.00	-27.60
96464.80	Low	50	V	QPSK	V	-	-	-40.38	-13.00	-27.38
96474.28	Mid	50	H	QPSK	V	-	-	-40.15	-13.00	-27.15
96472.33	Mid	50	V	QPSK	V	-	-	-40.48	-13.00	-27.48
96471.63	High	50	H	QPSK	V	-	-	-40.47	-13.00	-27.47
96486.52	High	50	V	QPSK	V	-	-	-40.52	-13.00	-27.52

Table 7-85. Ant3 - SISO -Spurious Emissions Table (90GHz - 100GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-37.48	-13.00	-24.48
Mid	50	QPSK	-37.30	-13.00	-24.30
High	50	QPSK	-37.49	-13.00	-24.49

Table 7-86. Ant3 - MIMO -Spurious Emissions Table (90GHz - 100GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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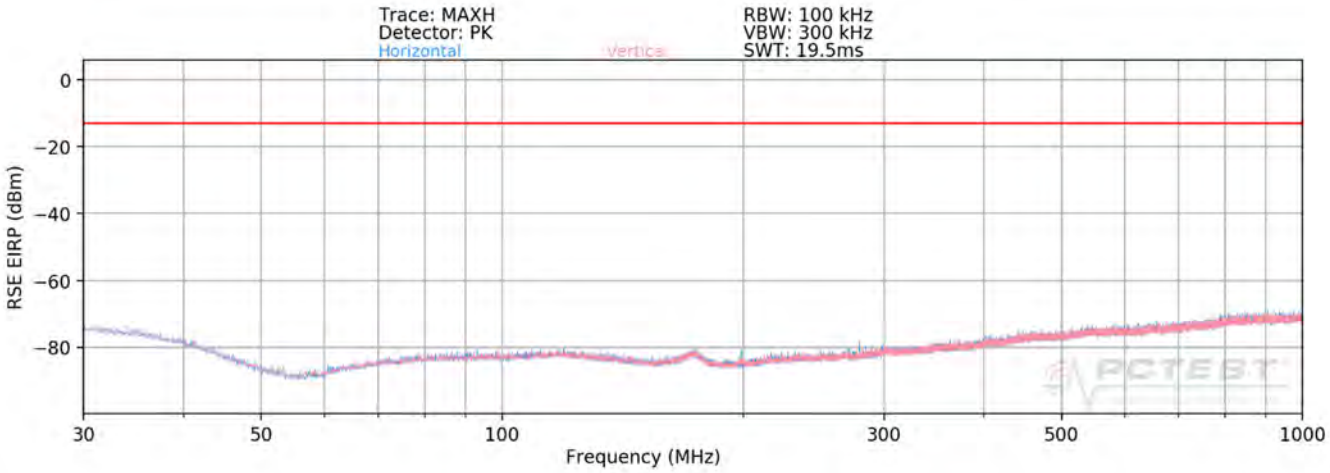
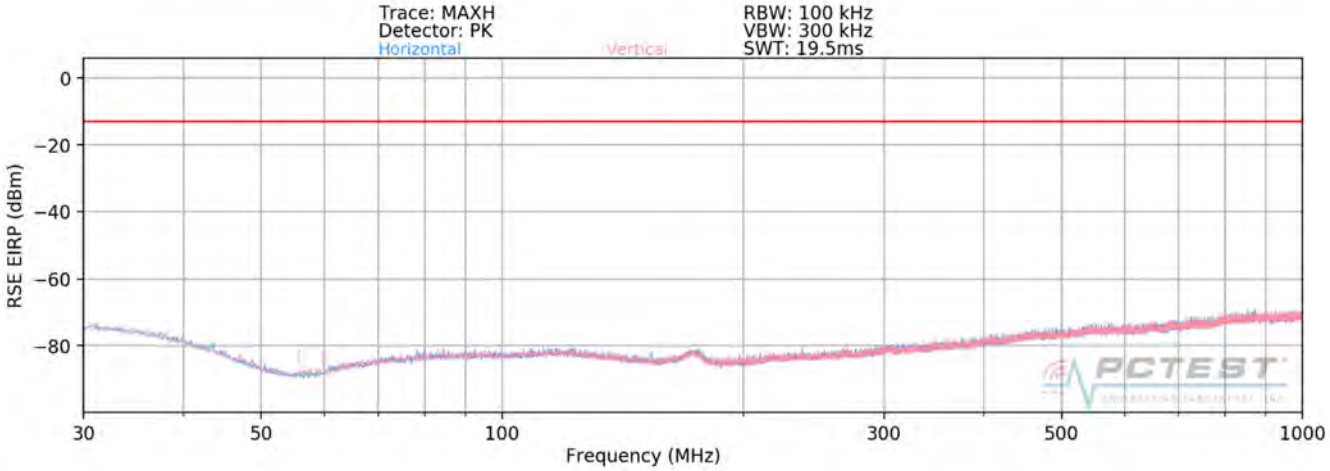
Band n261 – Ant4
30MHz - 1GHz



Plot 7-139. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-140. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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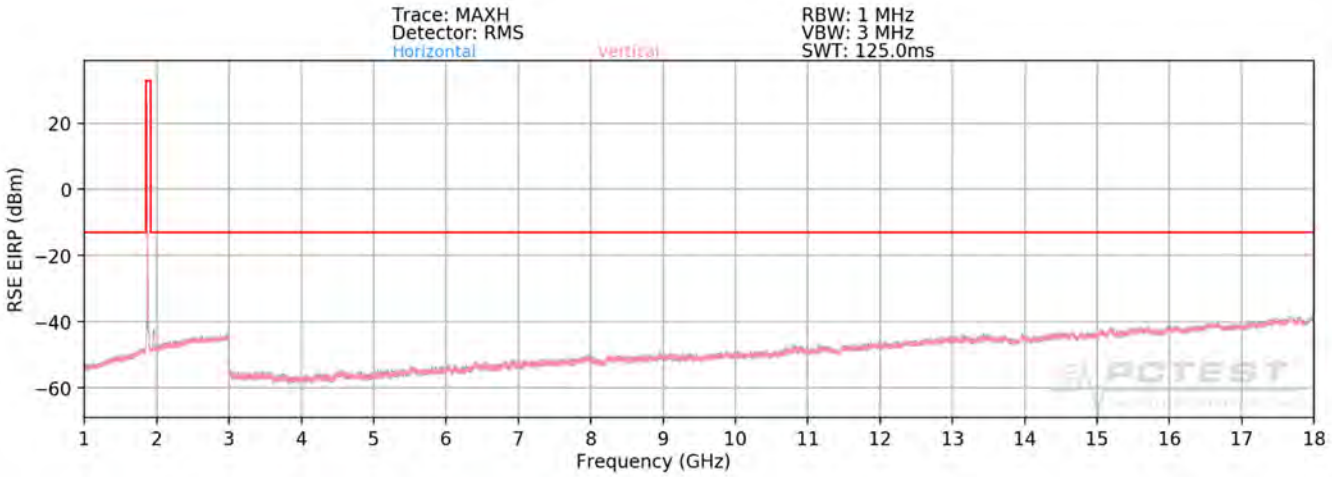
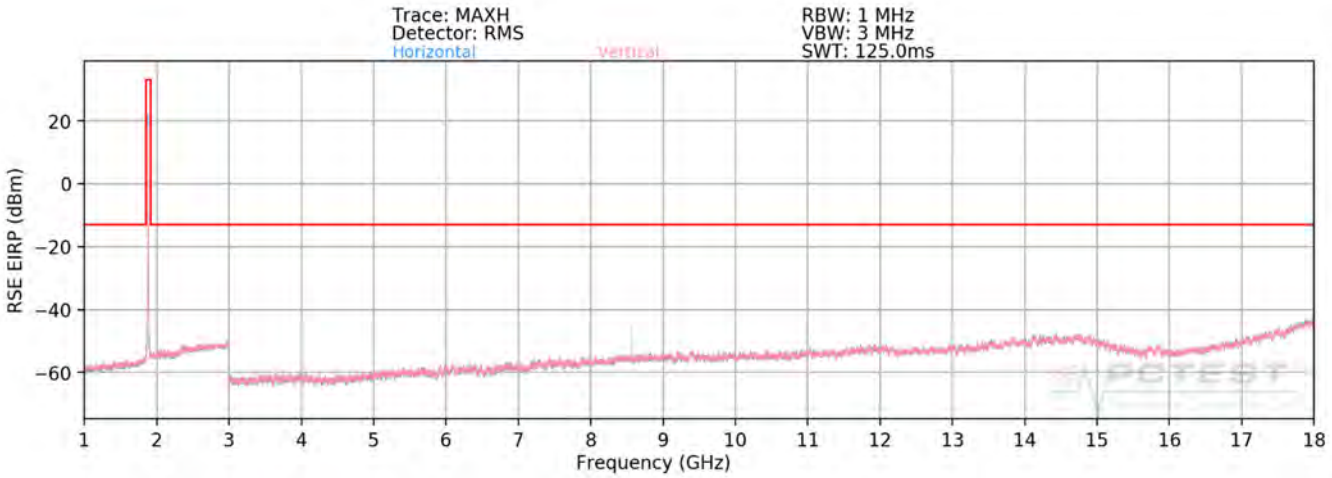
1GHz - 18GHz



Plot 7-141. Ant4-n261 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel H Beam – ENDC Anchor Band 2)



Plot 7-142. Ant4-n261 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel V Beam - – ENDC Anchor Band 2)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
8821.85	Low	50	H	QPSK	H	195	72	-49.39	-13.00	-36.39
8821.85	Low	50	V	QPSK	H	259	3	-38.55	-13.00	-25.55
8569.16	Mid	50	H	QPSK	H	250	348	-50.08	-13.00	-37.08
8569.16	Mid	50	V	QPSK	H	250	1	-43.00	-13.00	-30.00
8966.56	High	50	H	QPSK	H	199	72	-50.46	-13.00	-37.46
8966.56	High	50	V	QPSK	H	231	1	-40.75	-13.00	-27.75

Table 7-87. Ant4 - SISO -Spurious Emissions Table (1GHz - 18GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-38.21	-13.00	-25.21
Mid	50	QPSK	-42.22	-13.00	-29.22
High	50	QPSK	-40.31	-13.00	-27.31

Table 7-88. Ant4 - MIMO -Spurious Emissions Table (1GHz - 18GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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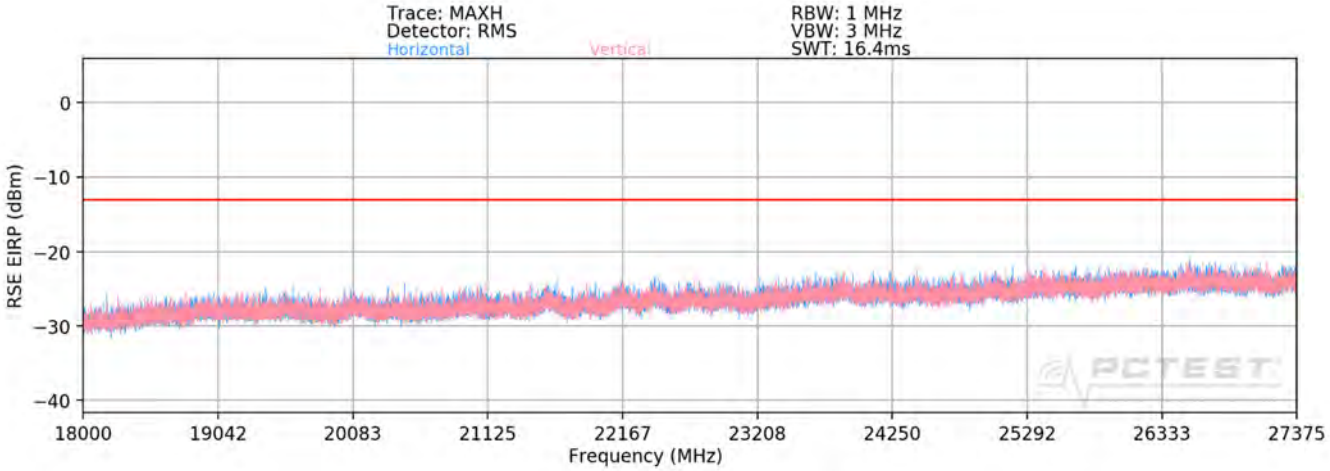
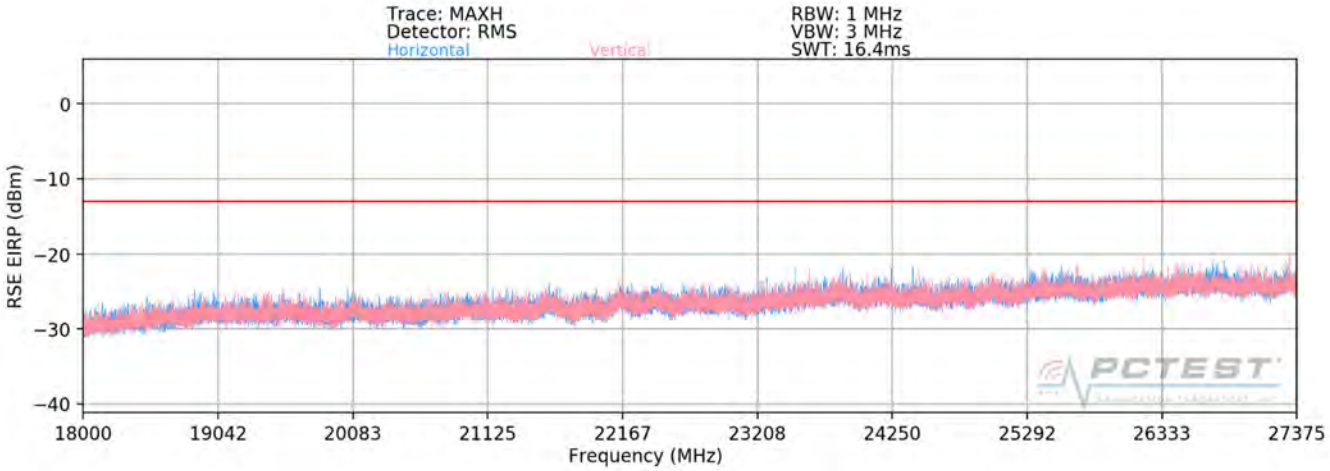
18GHz - 27.375GHz



Plot 7-143. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-144. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
27228.21	Low	50	H	QPSK	V	278	327	-26.28	-13.00	-13.28
27381.93	Low	50	V	QPSK	V	184	217	-31.23	-13.00	-18.23
27385.32	Mid	50	H	QPSK	V	273	320	-34.63	-13.00	-21.63
27385.23	Mid	50	V	QPSK	V	183	209	-33.39	-13.00	-20.39
27140.65	High	50	H	QPSK	V	278	320	-35.22	-13.00	-22.22
26173.74	High	50	V	QPSK	V	-	-	-35.76	-13.00	-22.76

Table 7-89. Ant4 - SISO -Spurious Emissions Table (18GHz - 27.375GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-25.07	-13.00	-12.07
Mid	50	QPSK	-30.96	-13.00	-17.96
High	50	QPSK	-32.47	-13.00	-19.47

Table 7-90. Ant4 - MIMO -Spurious Emissions Table (18GHz - 27.375GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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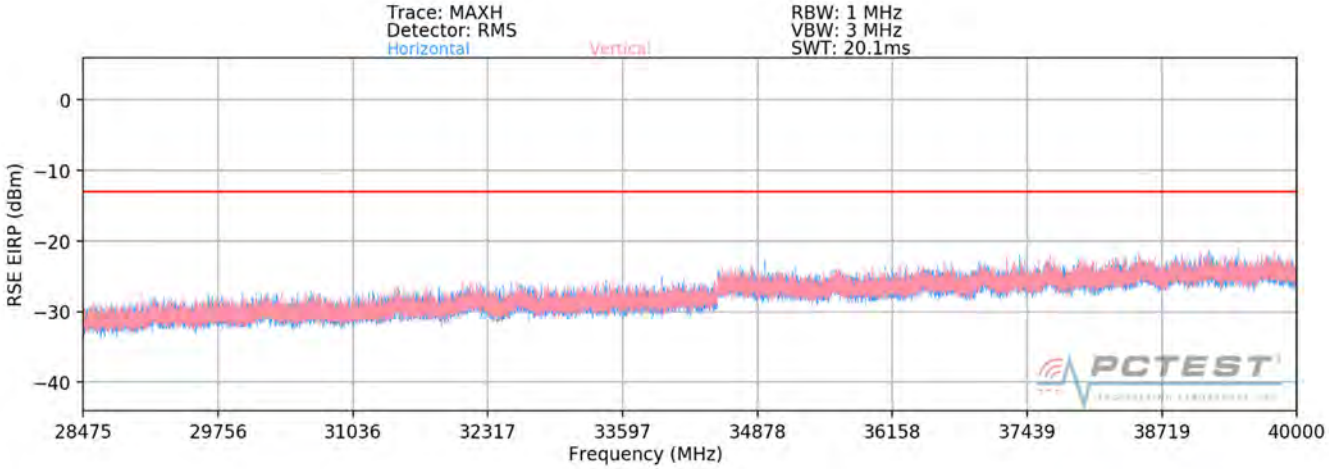
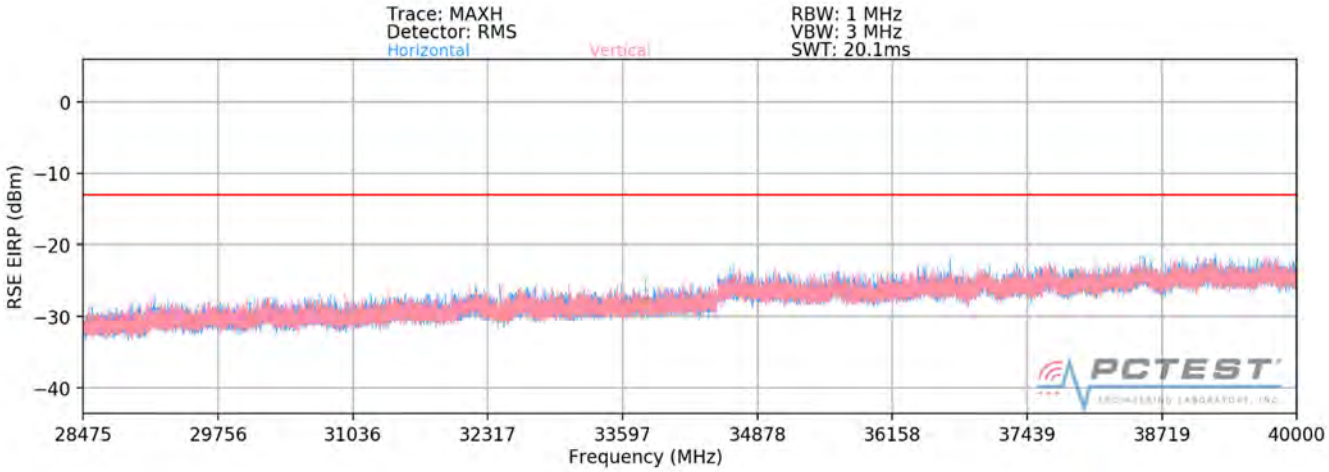
28.475GHz - 40GHz



Plot 7-145. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-146. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
28605.45	Low	50	H	QPSK	V	286	330	-25.05	-13.00	-12.05
28605.45	Low	50	V	QPSK	V	189	218	-24.69	-13.00	-11.69
30138.10	Mid	50	H	QPSK	V	274	317	-30.14	-13.00	-17.14
30138.10	Mid	50	V	QPSK	V	199	226	-30.23	-13.00	-17.23
28626.08	High	50	H	QPSK	V	372	319	-28.00	-13.00	-15.00
29740.38	High	50	V	QPSK	V	199	219	-28.89	-13.00	-15.89

Table 7-91. Ant4 - SISO -Spurious Emissions Table (28.475GHz - 40GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-21.85	-13.00	-8.85
Mid	50	QPSK	-27.18	-13.00	-14.18
High	50	QPSK	-25.41	-13.00	-12.41

Table 7-92. Ant4 - MIMO -Spurious Emissions Table (28.475GHz - 40GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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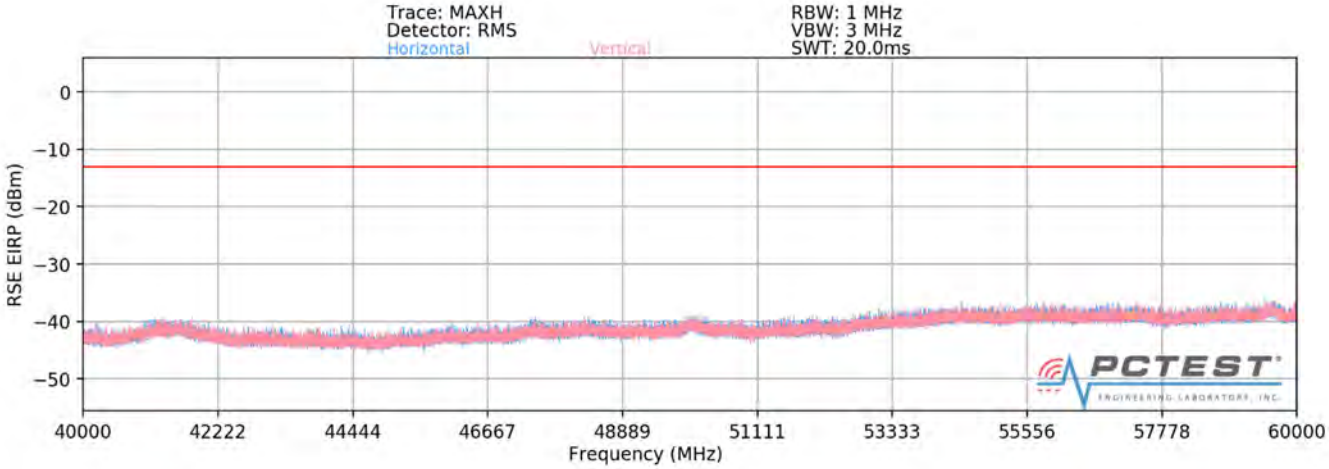
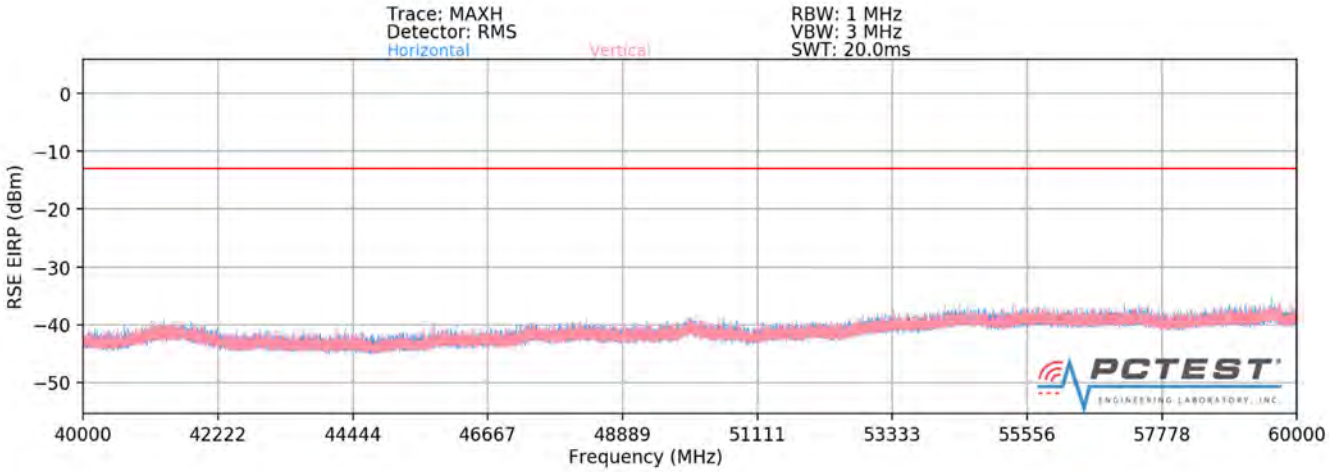
40GHz - 60GHz



Plot 7-147. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-148. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55071.00	Low	50	H	QPSK	V	333	16	-52.96	-13.00	-39.96
55070.67	Low	50	V	QPSK	V	338	11	-52.85	-13.00	-39.85
55845.36	Mid	50	H	QPSK	V	324	39	-52.36	-13.00	-39.36
55845.27	Mid	50	V	QPSK	V	339	24	-53.38	-13.00	-40.38
56640.06	High	50	H	QPSK	V	327	28	-50.37	-13.00	-37.37
56640.12	High	50	V	QPSK	V	220	36	-48.89	-13.00	-35.89

Table 7-93. Ant4 - SISO -Spurious Emissions Table (40GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-49.89	-13.00	-36.89
Mid	50	QPSK	-49.83	-13.00	-36.83
High	50	QPSK	-46.56	-13.00	-33.56

Table 7-94. Ant4 - MIMO -Spurious Emissions Table (40GHz - 60GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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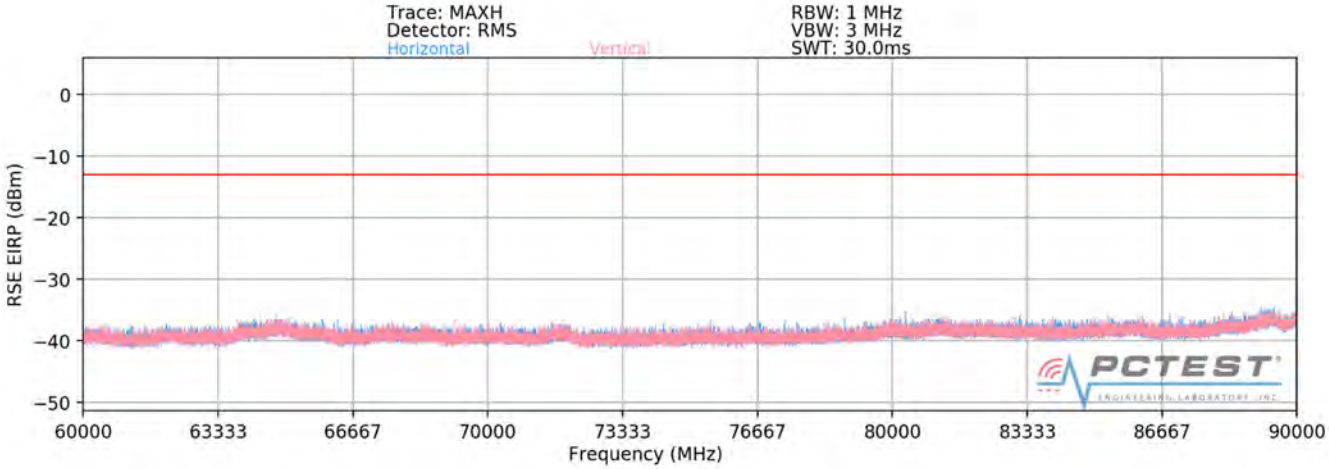
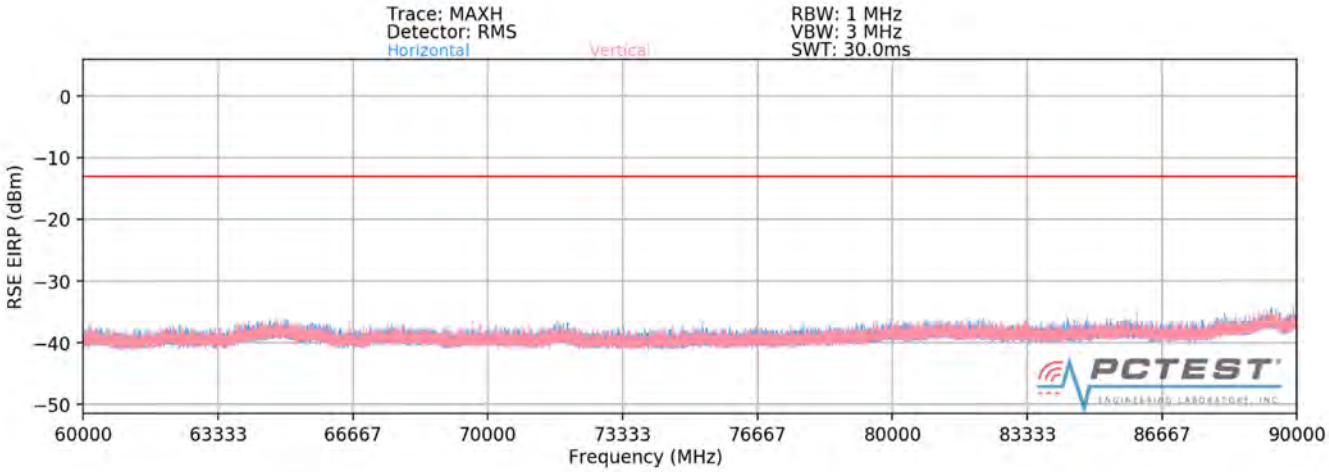
60GHz - 90GHz



Plot 7-149. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-150. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
82604.15	Low	50	H	QPSK	V	47	338	-54.01	-13.00	-41.01
82605.78	Low	50	V	QPSK	V	283	110	-53.86	-13.00	-40.86
83765.74	Mid	50	H	QPSK	V	302	273	-54.21	-13.00	-41.21
83766.27	Mid	50	V	QPSK	V	308	354	-54.14	-13.00	-41.14
84960.51	High	50	H	QPSK	V	22	313	-53.73	-13.00	-40.73
84961.15	High	50	V	QPSK	V	69	120	-53.76	-13.00	-40.76

Table 7-95. Ant4 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-50.92	-13.00	-37.92
Mid	50	QPSK	-51.16	-13.00	-38.16
High	50	QPSK	-50.74	-13.00	-37.74

Table 7-96. Ant4 - MIMO -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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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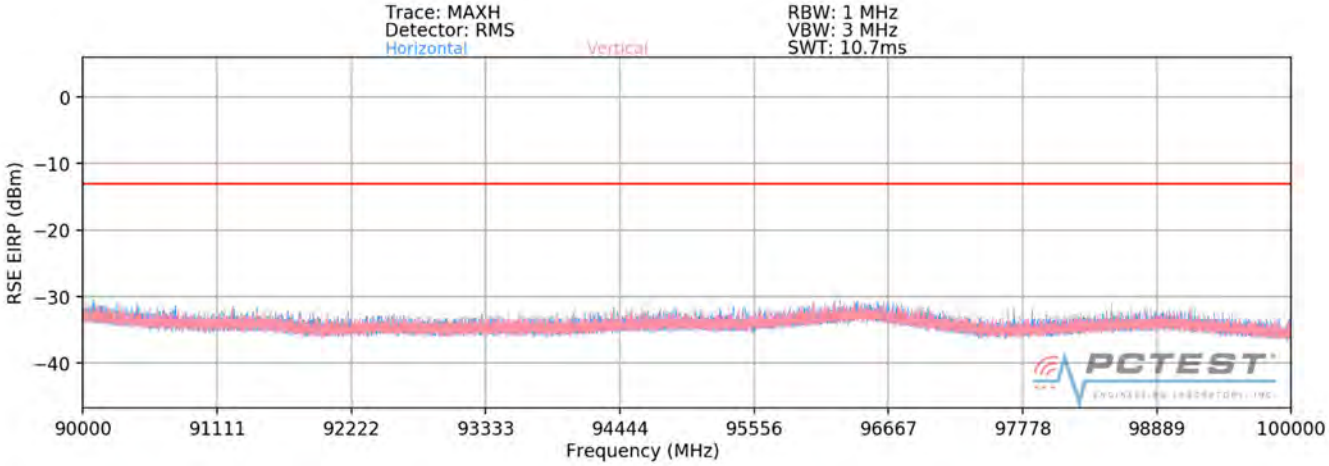
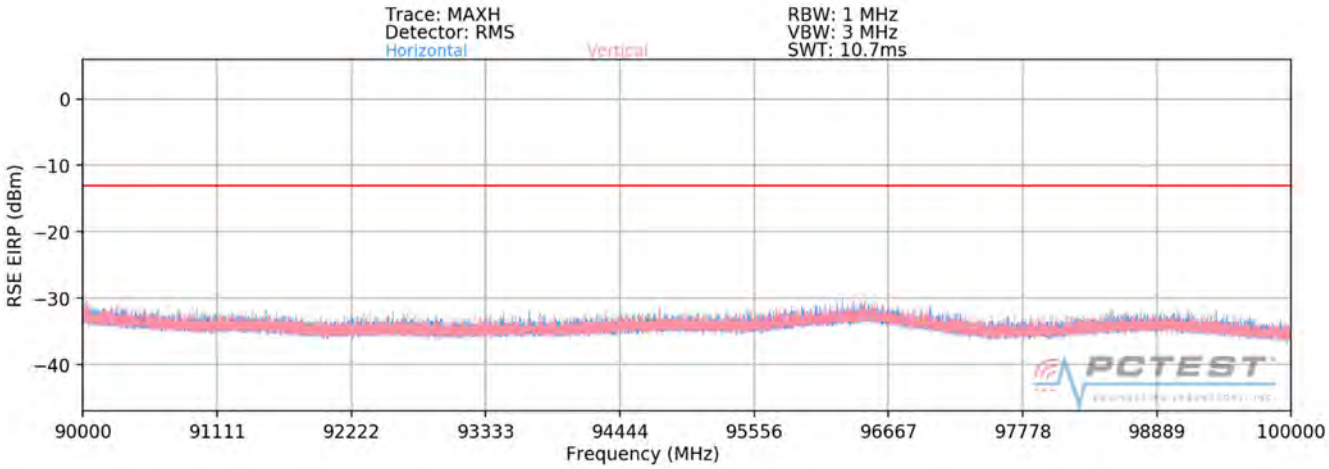
90GHz - 100GHz



Plot 7-151. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC Anchor B2)



Plot 7-152. Ant4-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC Anchor B2)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
96447.44	Low	50	H	QPSK	V	-	-	-40.04	-13.00	-27.04
96453.62	Low	50	V	QPSK	V	-	-	-40.84	-13.00	-27.84
96434.30	Mid	50	H	QPSK	V	-	-	-40.06	-13.00	-27.06
96450.05	Mid	50	V	QPSK	V	-	-	-40.14	-13.00	-27.14
96444.66	High	50	H	QPSK	V	-	-	-40.51	-13.00	-27.51
96456.48	High	50	V	QPSK	V	-	-	-40.49	-13.00	-27.49

Table 7-97. Ant4 - SISO -Spurious Emissions Table (90GHz - 100GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-37.41	-13.00	-24.41
Mid	50	QPSK	-37.09	-13.00	-24.09
High	50	QPSK	-37.49	-13.00	-24.49

Table 7-98. Ant4 - MIMO -Spurious Emissions Table (90GHz - 100GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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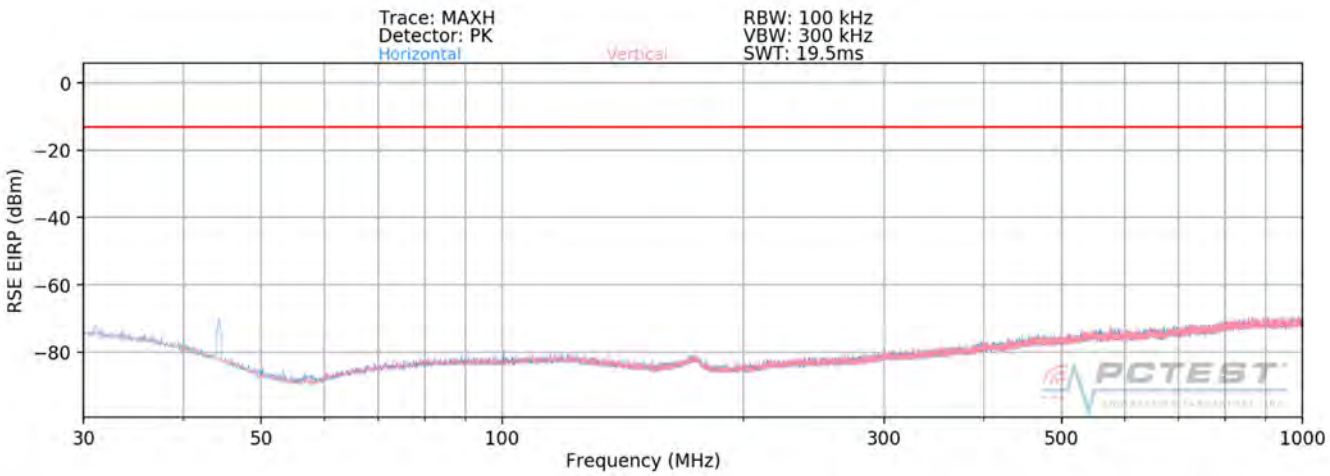
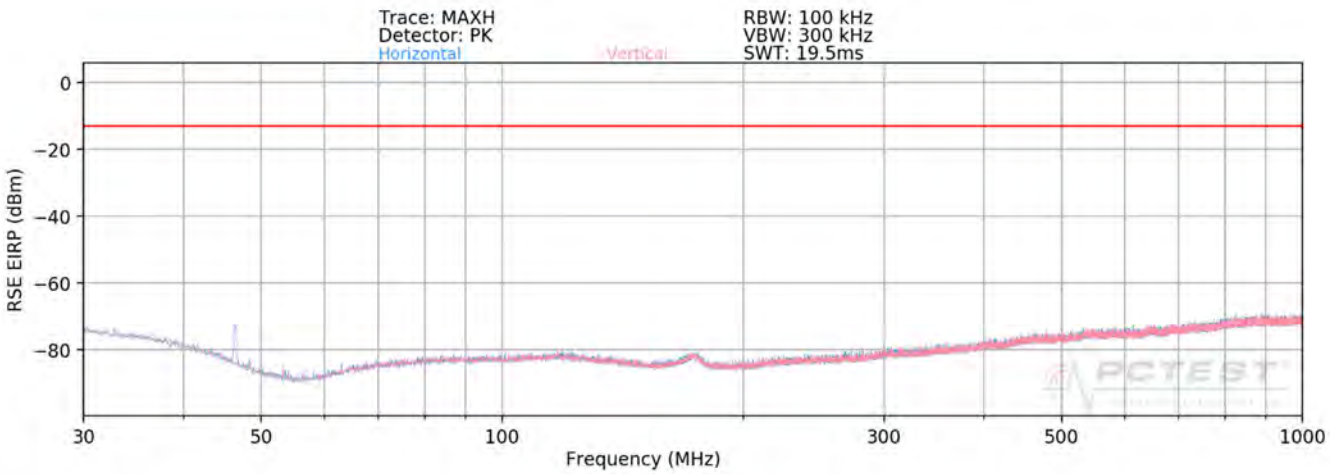
Band n260- Ant1

30MHz - 1GHz



Plot 7-153. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-154. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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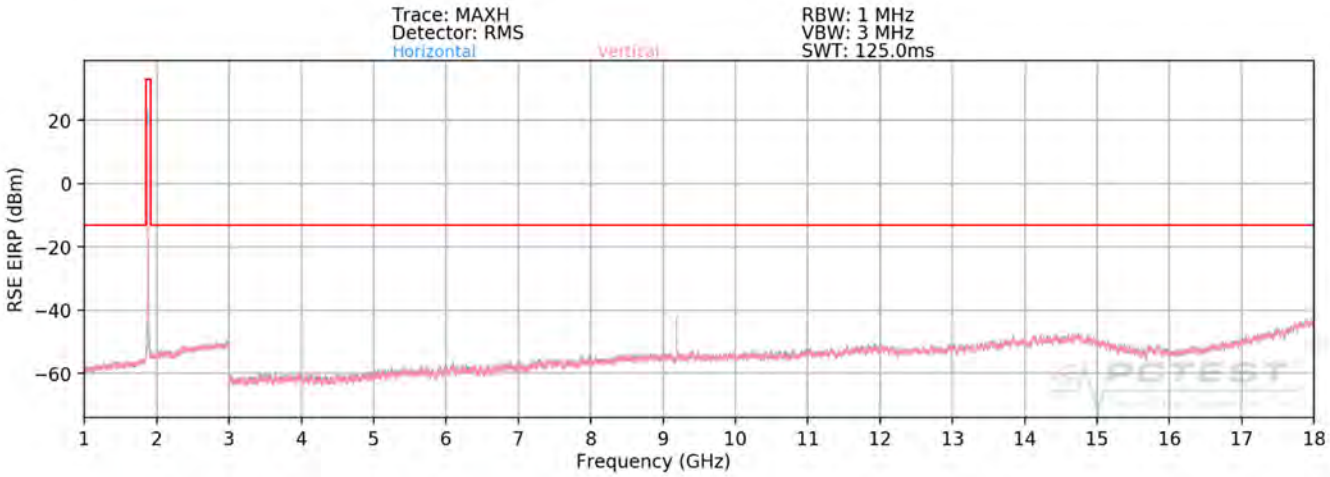
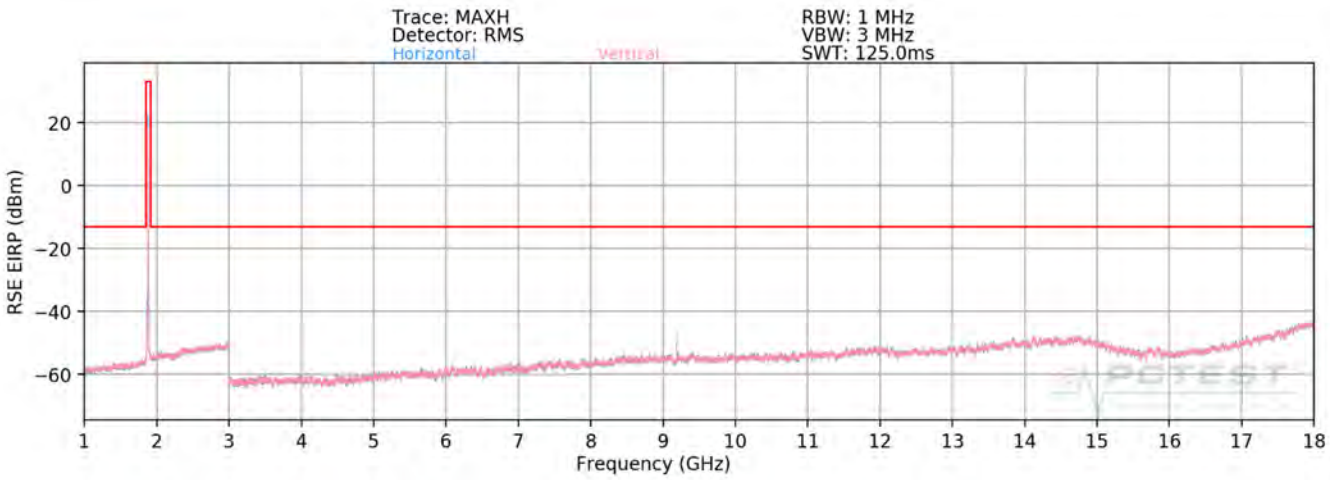
1GHz - 18GHz



Plot 7-155. Ant1-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-156. Ant1-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
8407.15	Low	50	H	QPSK	V	238	336	-45.62	-13.00	-32.62
8407.15	Low	50	V	QPSK	H	278	10	-48.17	-13.00	-35.17
9109.17	Mid	50	H	QPSK	V	141	341	-42.00	-13.00	-29.00
9109.17	Mid	50	V	QPSK	H	147	311	-46.35	-13.00	-33.35
9144.46	High	50	H	QPSK	V	257	350	-42.34	-13.00	-29.34
9144.46	High	50	V	QPSK	H	216	307	-46.53	-13.00	-33.53

Table 7-99. Ant1 - SISO -Spurious Emissions Table (1GHz - 18GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-43.70	-13.00	-30.70
Mid	50	QPSK	-40.64	-13.00	-27.64
High	50	QPSK	-40.94	-13.00	-27.94

Table 7-100. Ant1 - MIMO -Spurious Emissions Table (1GHz - 18GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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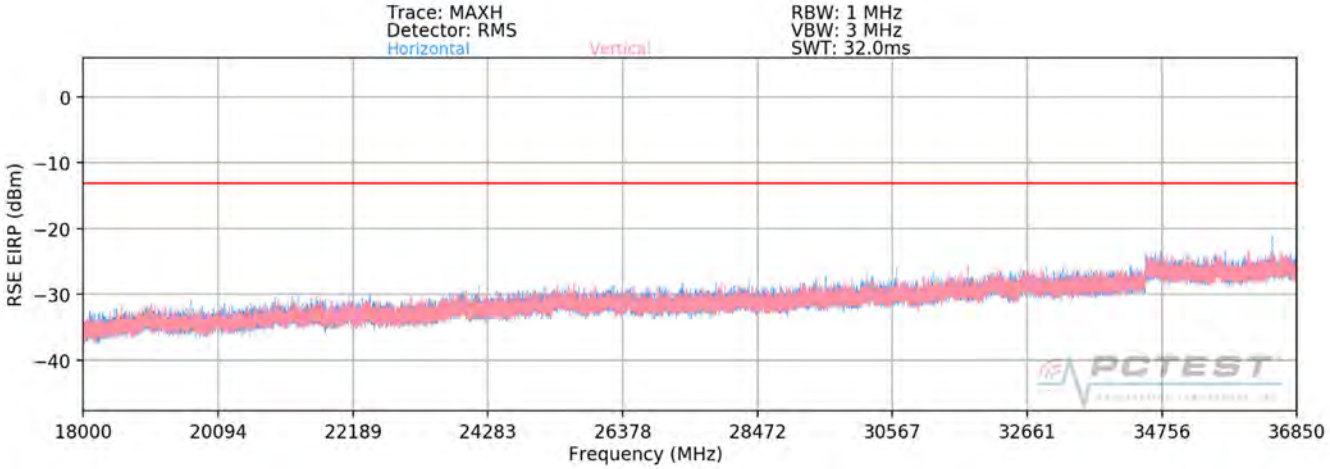
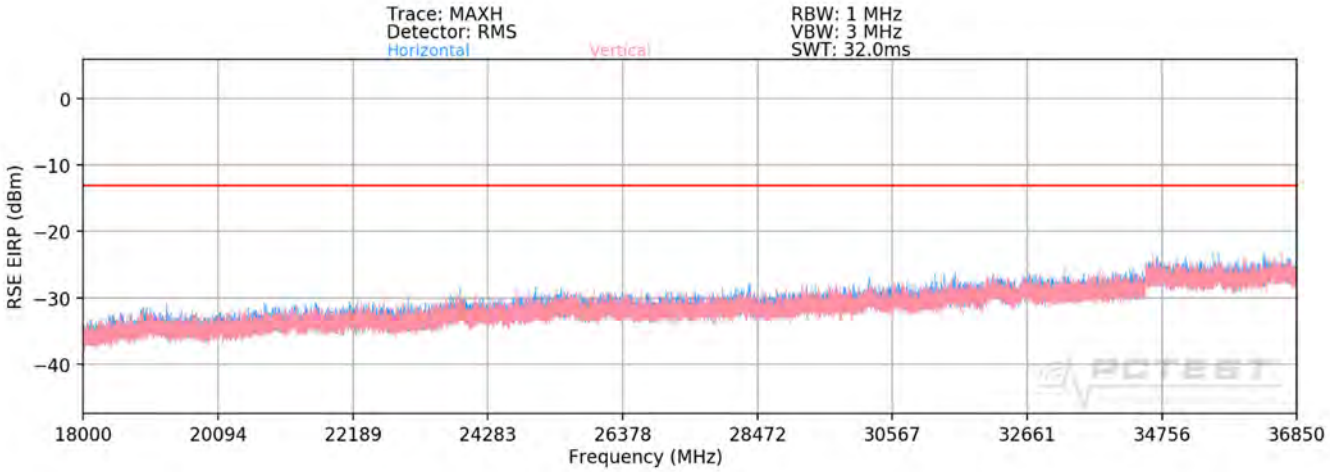
18GHz – 36.85GHz



Plot 7-157. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-158. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
36639.02	Low	50	H	QPSK	H	111	86	-31.93	-13.00	-18.93
36644.20	Low	50	V	QPSK	V	84	74	-31.42	-13.00	-18.42
36713.40	Mid	50	H	QPSK	H	112	54	-31.05	-13.00	-18.05
36537.70	Mid	50	V	QPSK	V	88	65	-31.77	-13.00	-18.77
36843.72	High	50	H	QPSK	H	119	34	-30.60	-13.00	-17.60
36979.30	High	50	V	QPSK	V	91	48	-30.99	-13.00	-17.99

Table 7-101. Ant1 - SISO -Spurious Emissions Table (18GHz – 36.85GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-28.65	-13.00	-15.65
Mid	50	QPSK	-28.39	-13.00	-15.39
High	50	QPSK	-27.78	-13.00	-14.78

Table 7-102. Ant1 - MIMO -Spurious Emissions Table (18GHz – 36.85GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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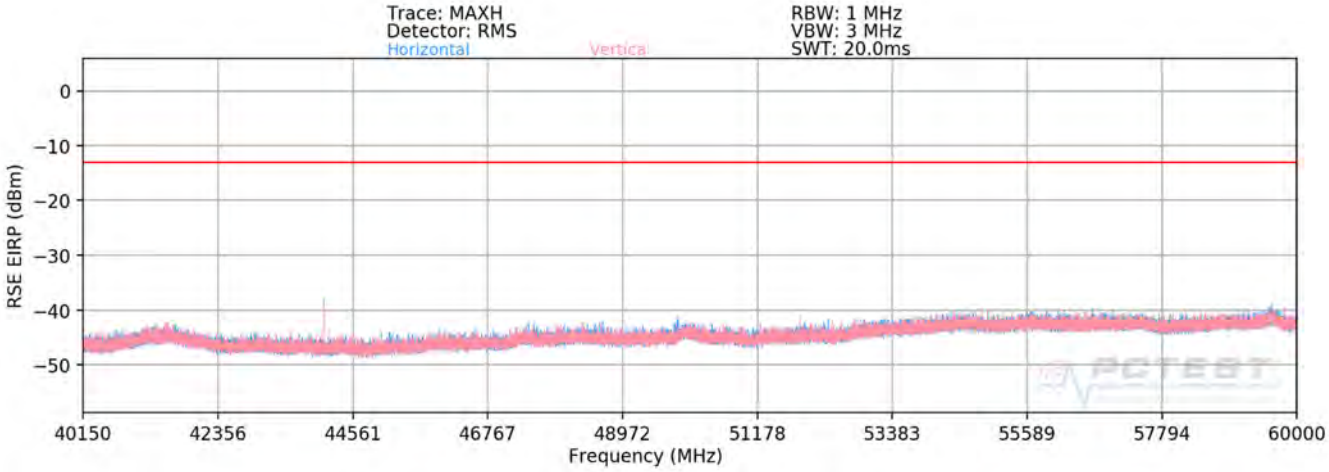
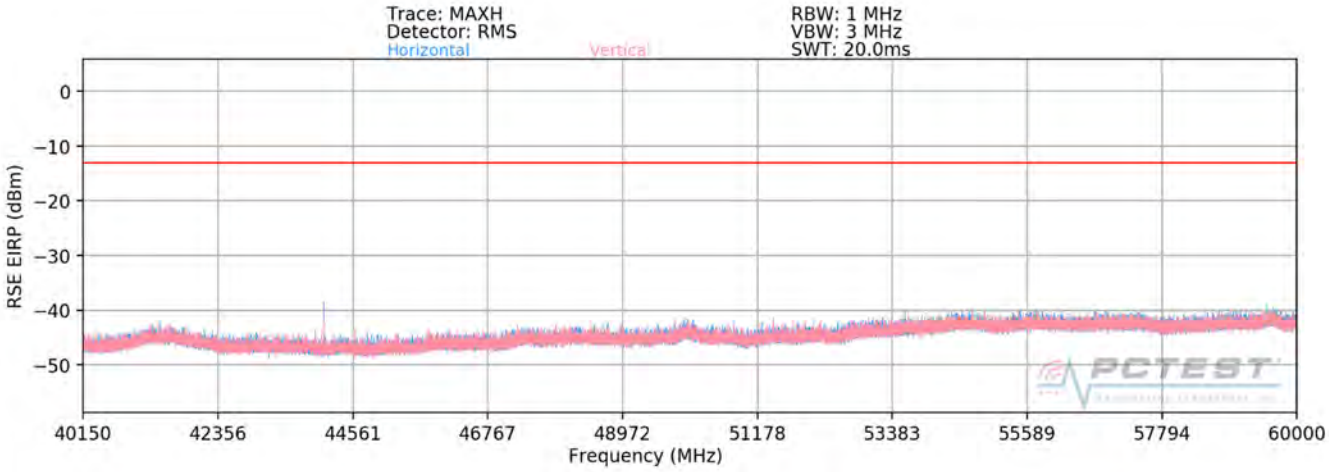
40.15GHz - 60GHz



Plot 7-159. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-160. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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 1.5 meter.

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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
44083.16	Low	50	H	QPSK	V	358	155	-29.47	-13.00	-16.47
44083.19	Low	50	V	QPSK	V	350	150	-31.49	-13.00	-18.49
44083.15	Mid	50	H	QPSK	V	9	158	-29.61	-13.00	-16.61
44083.16	Mid	50	V	QPSK	V	10	155	-30.49	-13.00	-17.49
44083.16	High	50	H	QPSK	V	170	155	-32.97	-13.00	-19.97
44083.16	High	50	V	QPSK	V	175	150	-31.55	-13.00	-18.55

Table 7-103. Ant1 - SISO -Spurious Emissions Table (40.15GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-27.35	-13.00	-14.35
Mid	50	QPSK	-27.02	-13.00	-14.02
High	50	QPSK	-29.19	-13.00	-16.19

Table 7-104. Ant1 - MIMO -Spurious Emissions Table (40.15GHz - 60GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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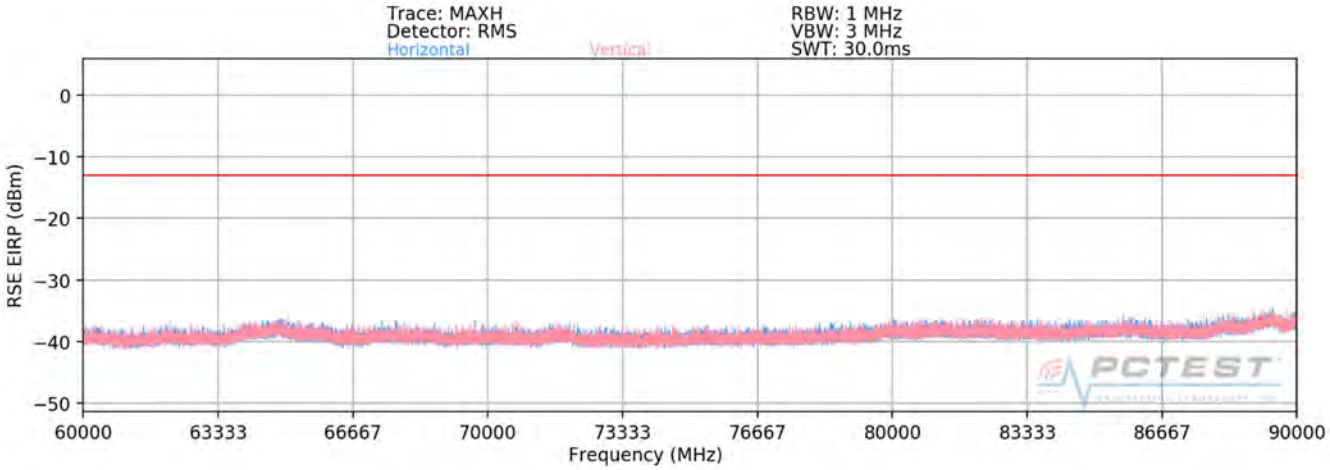
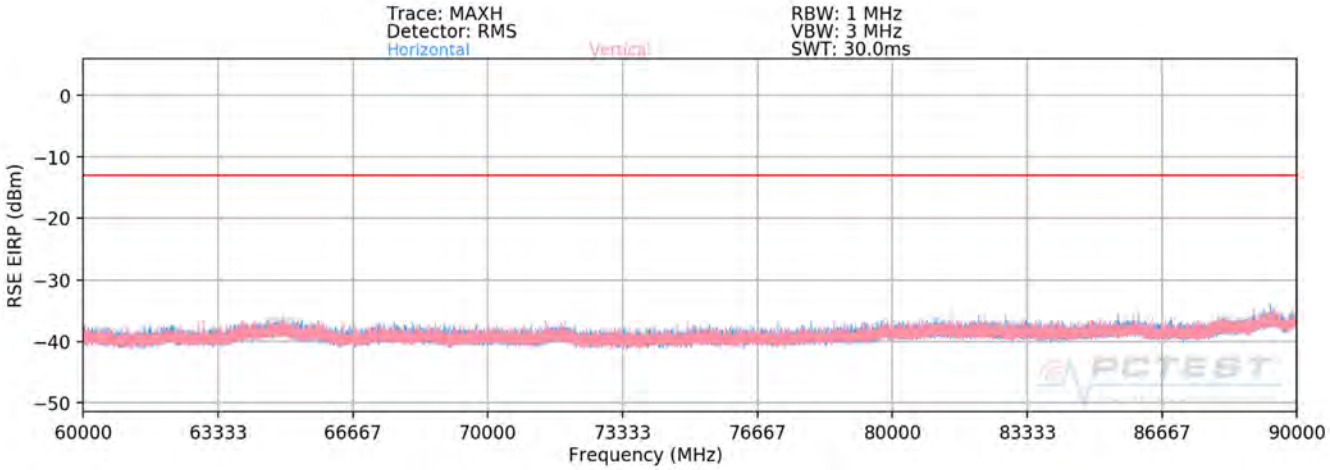
60GHz - 90GHz



Plot 7-161. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-162. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74056.80	Low	50	H	QPSK	H	168	8	-49.47	-13.00	-36.47
74056.20	Low	50	V	QPSK	H	144	11	-50.40	-13.00	-37.40
76994.70	Mid	50	H	QPSK	H	-	-	-54.63	-13.00	-41.63
76996.02	Mid	50	V	QPSK	H	143	0	-53.17	-13.00	-40.17
79942.92	High	50	H	QPSK	H	-	-	-53.89	-13.00	-40.89
79924.86	High	50	V	QPSK	H	-	-	-53.90	-13.00	-40.90

Table 7-105. Ant1 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-46.90	-13.00	-33.90
Mid	50	QPSK	-50.83	-13.00	-37.83
High	50	QPSK	-50.88	-13.00	-37.88

Table 7-106. Ant1 - MIMO -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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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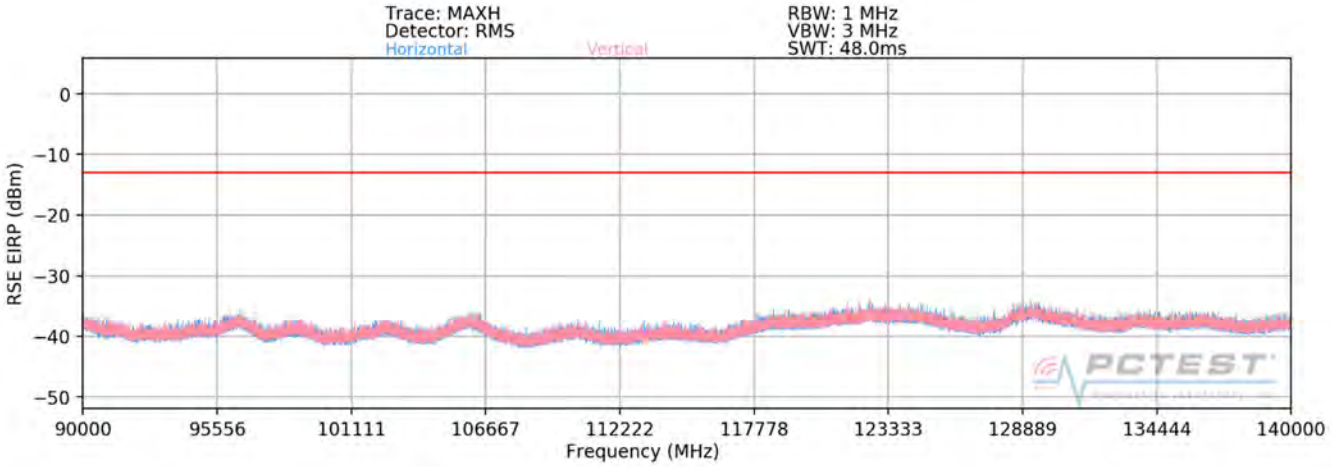
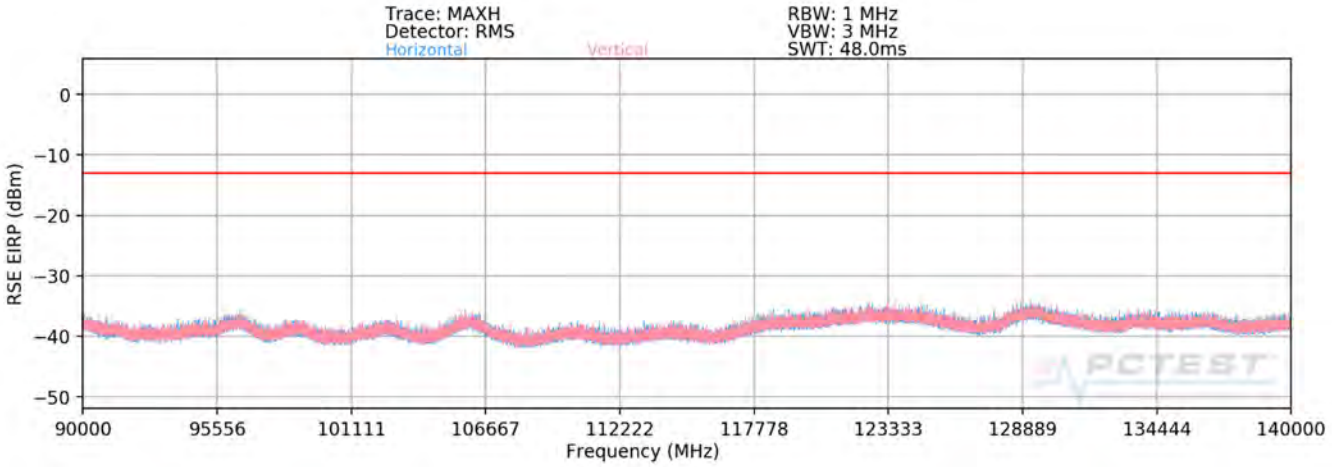
90GHz - 140GHz



Plot 7-163. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-164. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
111083.73	Low	50	H	QPSK	V	319	105	-43.66	-13.00	-30.66
111083.64	Low	50	V	QPSK	V	38	276	-43.76	-13.00	-30.76
115500.72	Mid	50	H	QPSK	V	-	-	-51.16	-13.00	-38.16
115503.51	Mid	50	V	QPSK	V	-	-	-51.28	-13.00	-38.28
119885.67	High	50	H	QPSK	V	-	-	-48.94	-13.00	-35.94
119905.11	High	50	V	QPSK	V	-	-	-49.02	-13.00	-36.02

Table 7-107. Ant1 - SISO -Spurious Emissions Table (90GHz - 140GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-40.70	-13.00	-27.70
Mid	50	QPSK	-48.21	-13.00	-35.21
High	50	QPSK	-45.97	-13.00	-32.97

Table 7-108. Ant1 - MIMO -Spurious Emissions Table (90GHz - 140GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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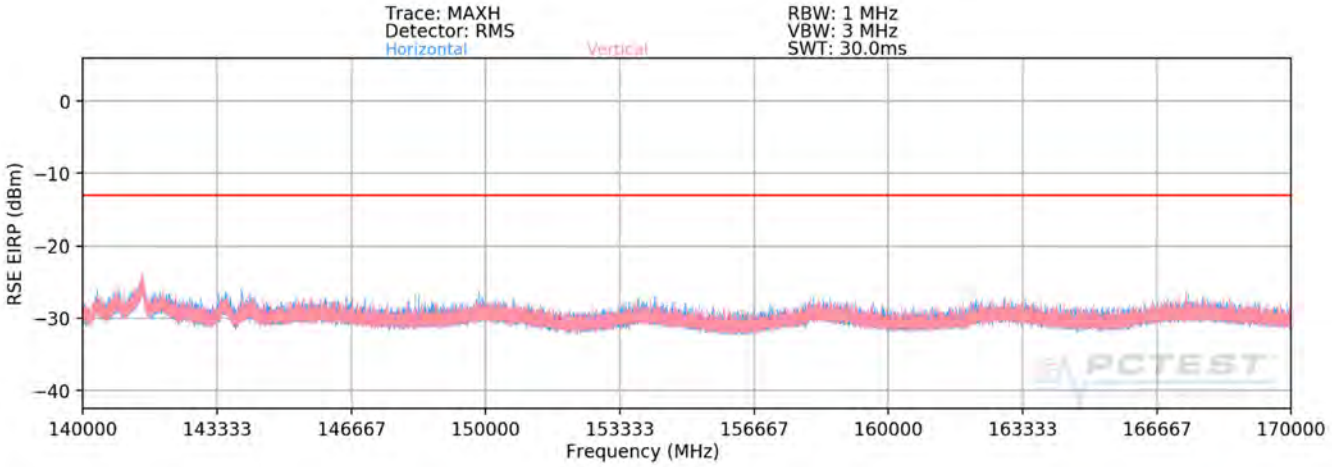
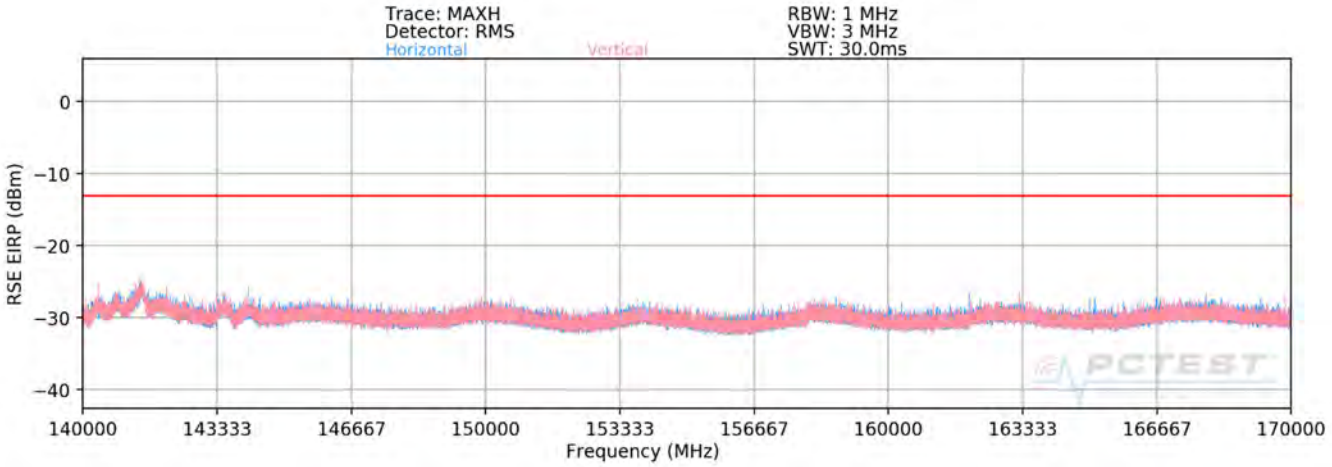
140GHz - 170GHz



Plot 7-165. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-166. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
141443.00	Low	50	H	QPSK	V	-	-	-32.39	-13.00	-19.39
141472.50	Low	50	V	QPSK	V	-	-	-32.71	-13.00	-19.71
141478.00	Mid	50	H	QPSK	V	-	-	-32.83	-13.00	-19.83
141456.00	Mid	50	V	QPSK	V	-	-	-33.12	-13.00	-20.12
141462.50	High	50	H	QPSK	V	-	-	-32.38	-13.00	-19.38
141431.50	High	50	V	QPSK	V	-	-	-32.42	-13.00	-19.42

Table 7-109. Ant1 - SISO -Spurious Emissions Table (140GHz - 170GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-29.54	-13.00	-16.54
Mid	50	QPSK	-29.96	-13.00	-16.96
High	50	QPSK	-29.39	-13.00	-16.39

Table 7-110. Ant1 - MIMO -Spurious Emissions Table (140GHz - 170GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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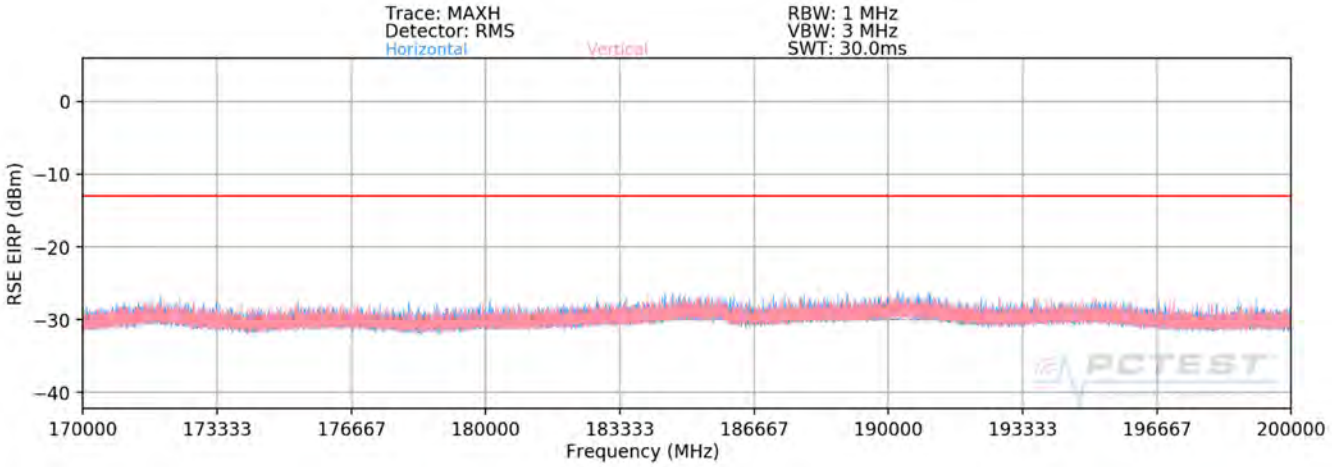
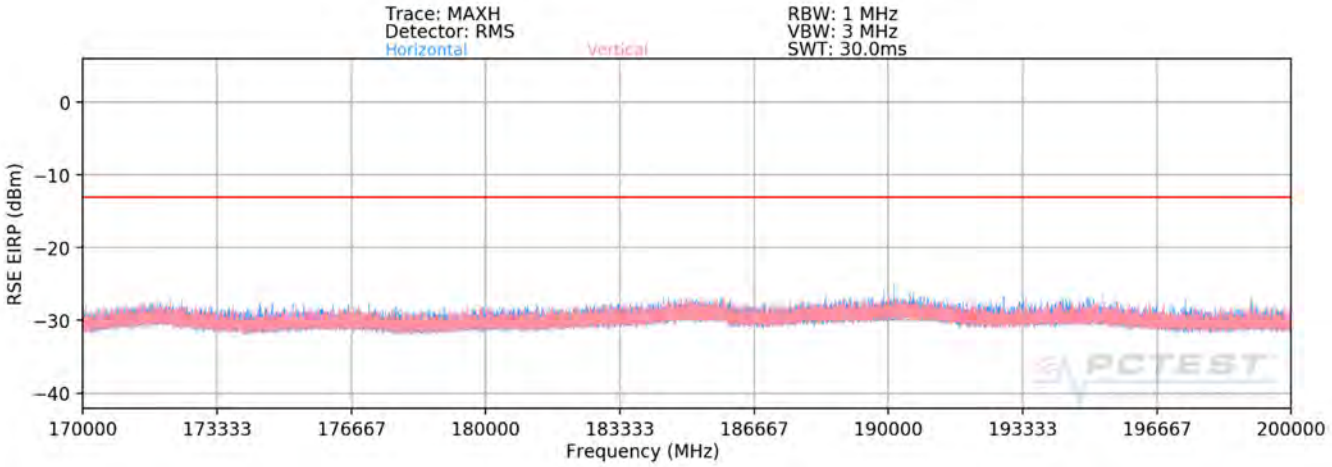
170GHz - 200GHz



Plot 7-167. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-168. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
171998.50	Low	50	H	QPSK	V	-	-	-34.95	-13.00	-21.95
172330.00	Low	50	V	QPSK	V	-	-	-35.16	-13.00	-22.16
191044.00	Mid	50	H	QPSK	V	-	-	-35.01	-13.00	-22.01
191058.50	Mid	50	V	QPSK	V	-	-	-35.24	-13.00	-22.24
172031.50	High	50	H	QPSK	V	-	-	-35.06	-13.00	-22.06
172094.00	High	50	V	QPSK	V	-	-	-35.20	-13.00	-22.20

Table 7-111. Ant1 - SISO -Spurious Emissions Table (170GHz - 200GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-32.05	-13.00	-19.05
Mid	50	QPSK	-32.11	-13.00	-19.11
High	50	QPSK	-32.12	-13.00	-19.12

Table 7-112. Ant1 - MIMO -Spurious Emissions Table (170GHz - 200GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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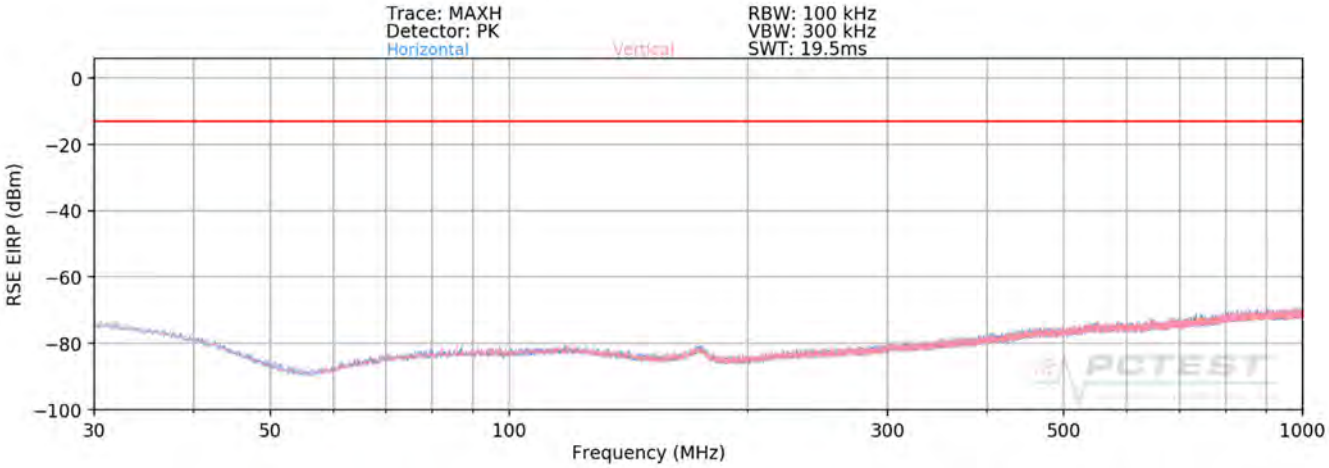
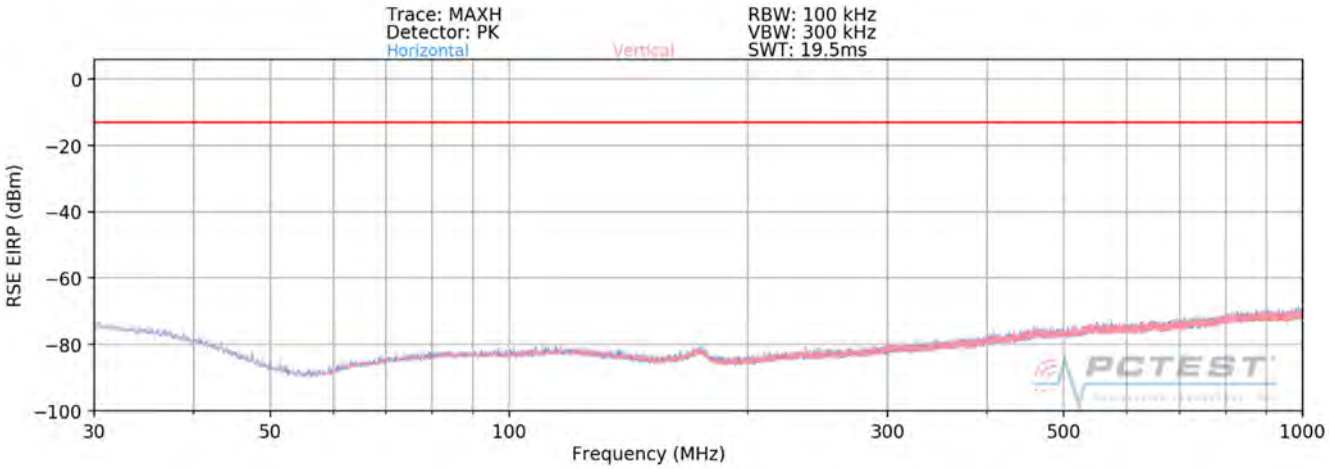
Band n260- Ant2

30MHz - 1GHz



Plot 7-169. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-170. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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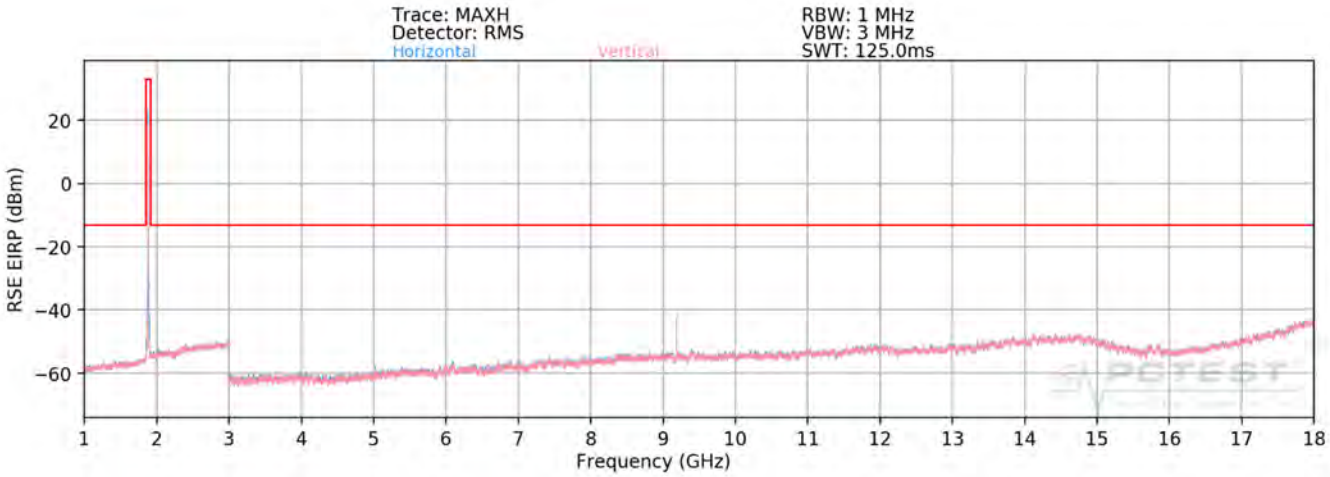
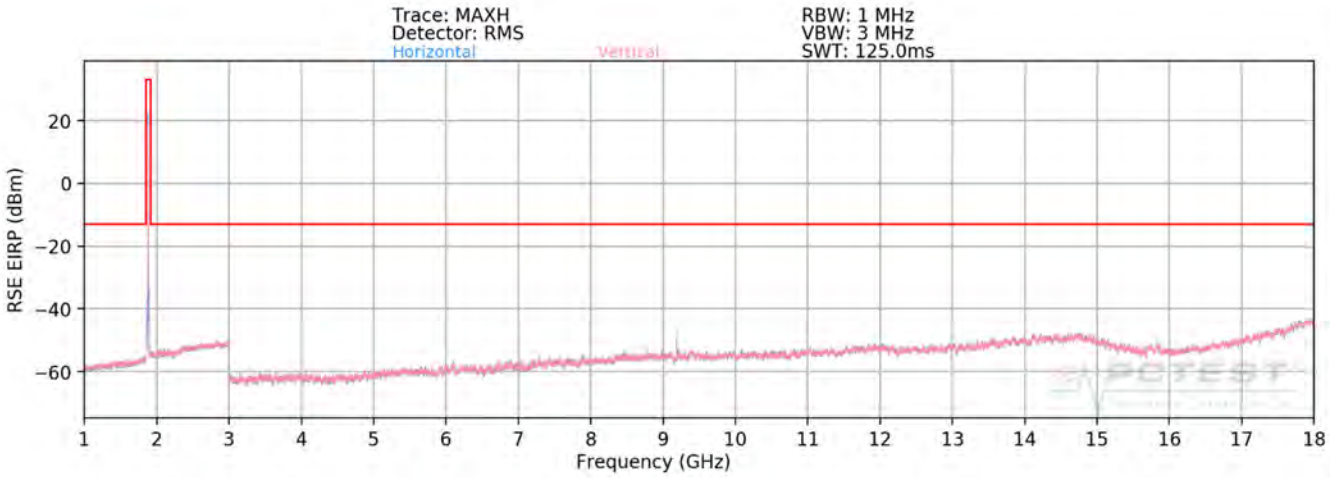
1GHz - 18GHz



Plot 7-171. Ant2-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-172. Ant2-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
8407.15	Low	50	H	QPSK	V	155	332	-46.83	-13.00	-33.83
8407.15	Low	50	V	QPSK	H	240	8	-48.14	-13.00	-35.14
9109.17	Mid	50	H	QPSK	V	214	346	-41.72	-13.00	-28.72
9109.17	Mid	50	V	QPSK	H	161	312	-46.27	-13.00	-33.27
9144.46	High	50	H	QPSK	V	145	350	-43.12	-13.00	-30.12
9144.46	High	50	V	QPSK	H	143	315	-47.69	-13.00	-34.69

Table 7-113. Ant2 - SISO -Spurious Emissions Table (1GHz - 18GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-44.43	-13.00	-31.43
Mid	50	QPSK	-40.41	-13.00	-27.41
High	50	QPSK	-41.82	-13.00	-28.82

Table 7-114. Ant2 - MIMO -Spurious Emissions Table (1GHz - 18GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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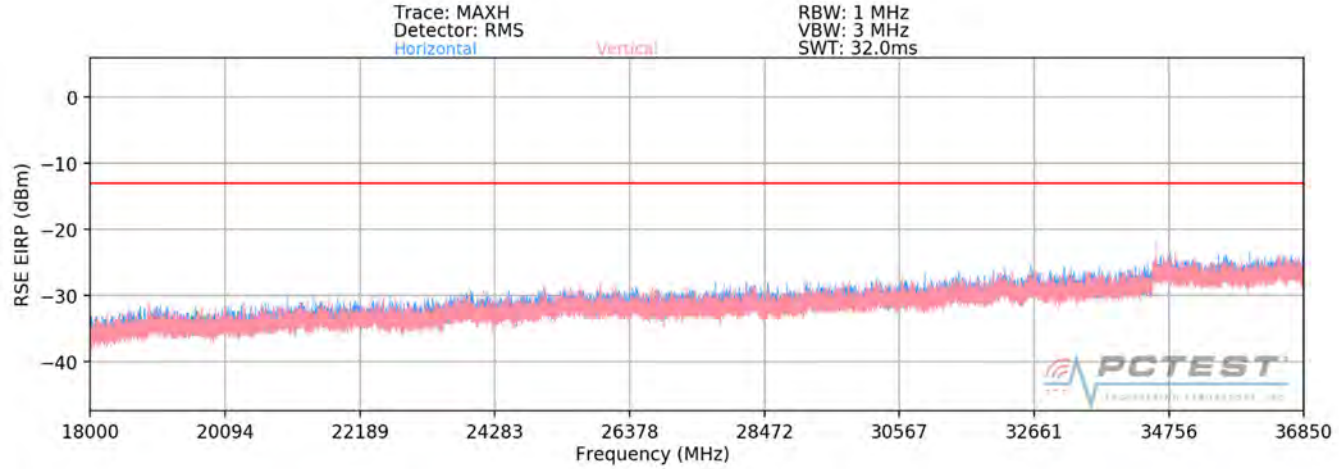
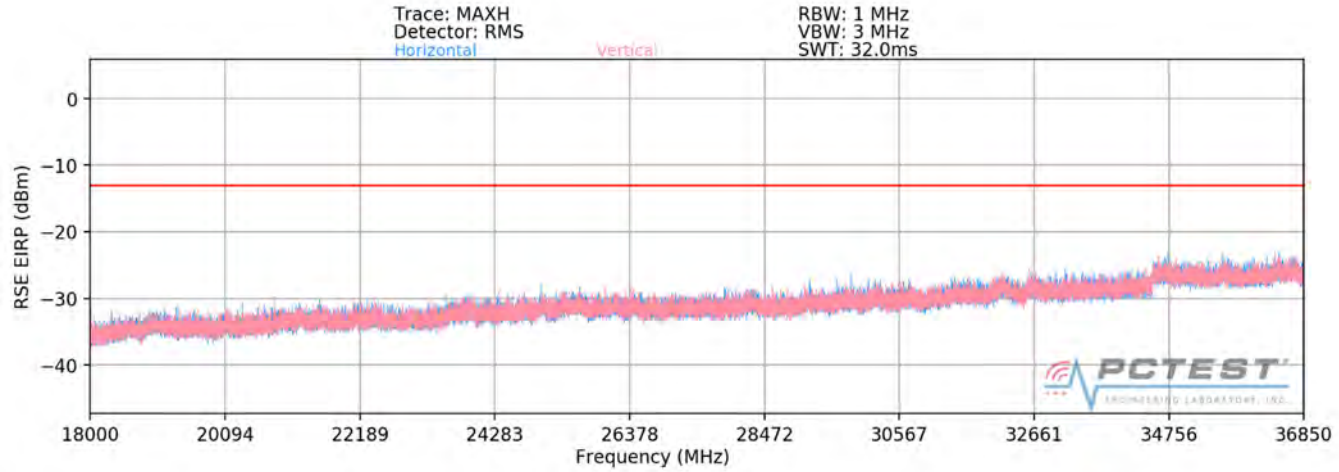
18GHz – 36.85GHz



Plot 7-173. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-174. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
36701.70	Low	50	H	QPSK	H	120	55	-31.39	-13.00	-18.39
36420.20	Low	50	V	QPSK	V	145	23	-31.17	-13.00	-18.17
36985.15	Mid	50	H	QPSK	H	149	54	-31.74	-13.00	-18.74
36999.10	Mid	50	V	QPSK	V	157	33	-30.38	-13.00	-17.38
36725.50	High	50	H	QPSK	H	118	45	-31.25	-13.00	-18.25
36663.50	High	50	V	QPSK	V	55	124	-30.88	-13.00	-17.88

Table 7-115. Ant2 - SISO -Spurious Emissions Table (18GHz – 36.85GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-28.27	-13.00	-15.27
Mid	50	QPSK	-27.99	-13.00	-14.99
High	50	QPSK	-28.05	-13.00	-15.05

Table 7-116. Ant2 - MIMO -Spurious Emissions Table (18GHz – 36.85GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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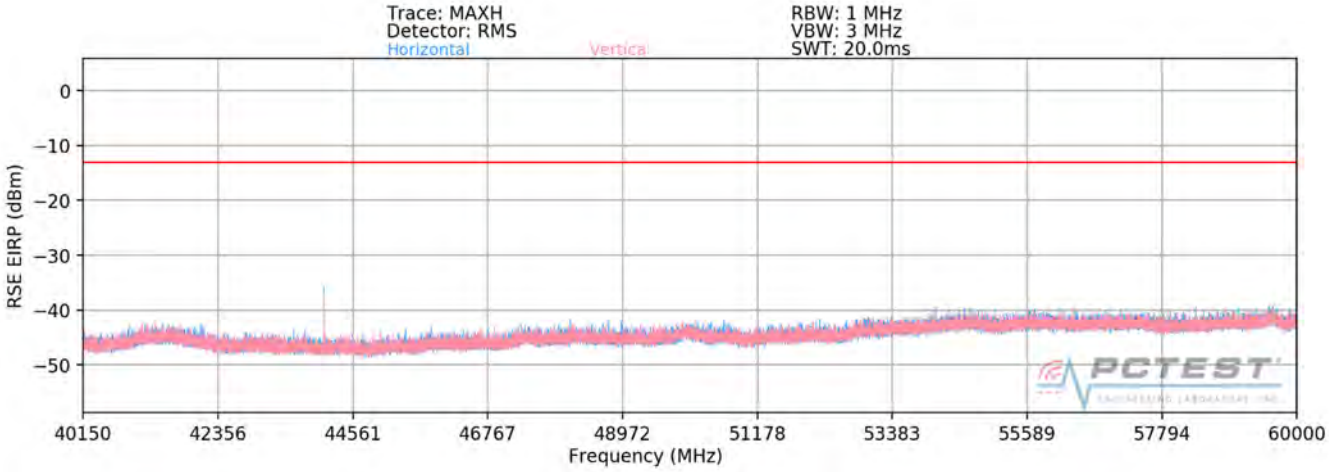
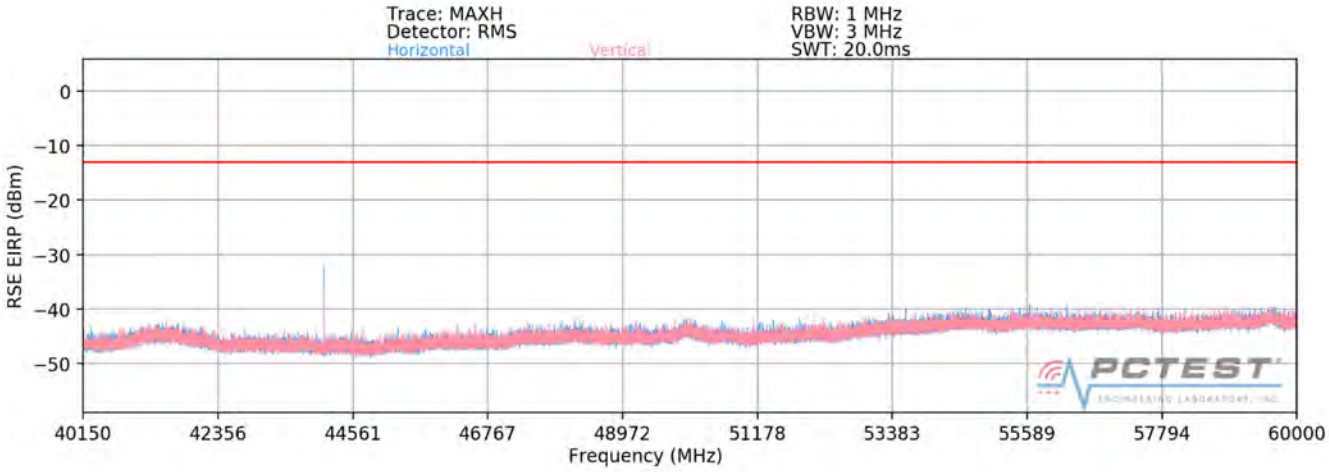
40.15GHz - 60GHz



Plot 7-175. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-176. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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 1.5 meter.

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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
44083.13	Low	50	H	QPSK	V	129	150	-29.17	-13.00	-16.17
44083.30	Low	50	V	QPSK	V	180	153	-30.25	-13.00	-17.25
44083.14	Mid	50	H	QPSK	V	130	155	-30.14	-13.00	-17.14
44083.04	Mid	50	V	QPSK	V	179	153	-32.32	-13.00	-19.32
44083.15	High	50	H	QPSK	V	125	155	-31.73	-13.00	-18.73
44083.15	High	50	V	QPSK	V	181	155	-30.65	-13.00	-17.65

Table 7-117. Ant2 - SISO -Spurious Emissions Table (40.15GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-26.67	-13.00	-13.67
Mid	50	QPSK	-28.08	-13.00	-15.08
High	50	QPSK	-28.14	-13.00	-15.14

Table 7-118. Ant2 - MIMO -Spurious Emissions Table (40.15GHz - 60GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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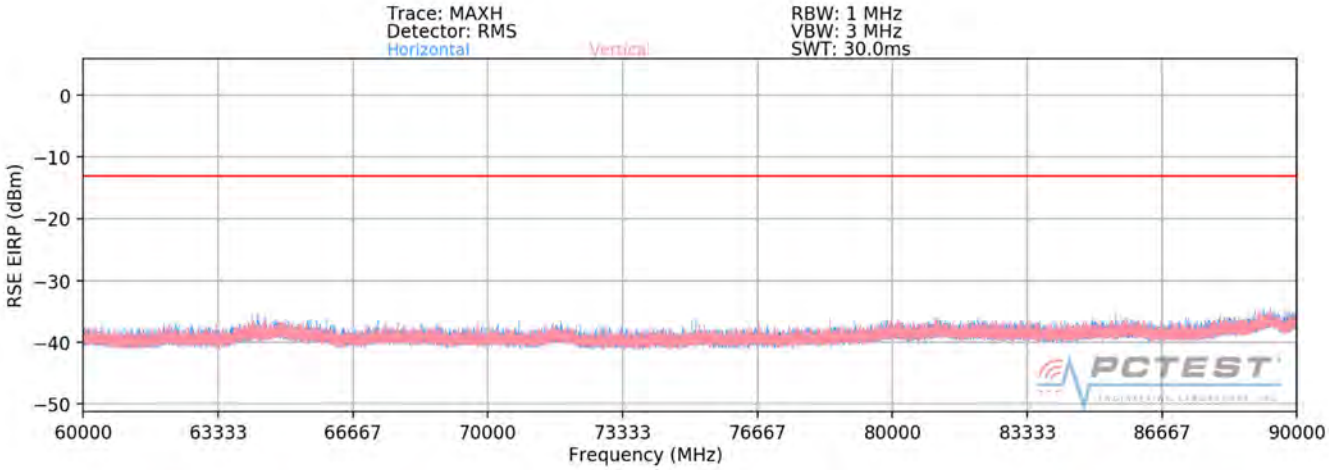
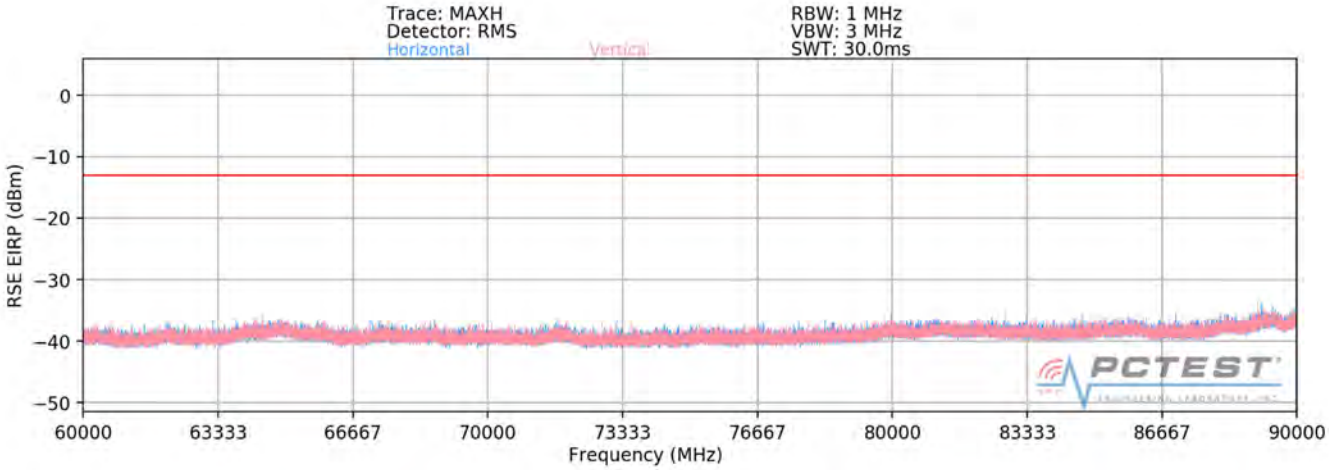
60GHz - 90GHz



Plot 7-177. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-178. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74056.14	Low	50	H	QPSK	H	287	167	-53.54	-13.00	-40.54
74055.60	Low	50	V	QPSK	V	272	77	-54.23	-13.00	-41.23
76996.41	Mid	50	H	QPSK	H	76	257	-50.50	-13.00	-37.50
76995.99	Mid	50	V	QPSK	V	99	321	-51.70	-13.00	-38.70
79933.95	High	50	H	QPSK	H	248	14	-52.67	-13.00	-39.67
79933.77	High	50	V	QPSK	V	76	264	-47.91	-13.00	-34.91

Table 7-119. Ant2 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-50.86	-13.00	-37.86
Mid	50	QPSK	-48.05	-13.00	-35.05
High	50	QPSK	-46.66	-13.00	-33.66

Table 7-120. Ant2 - MIMO -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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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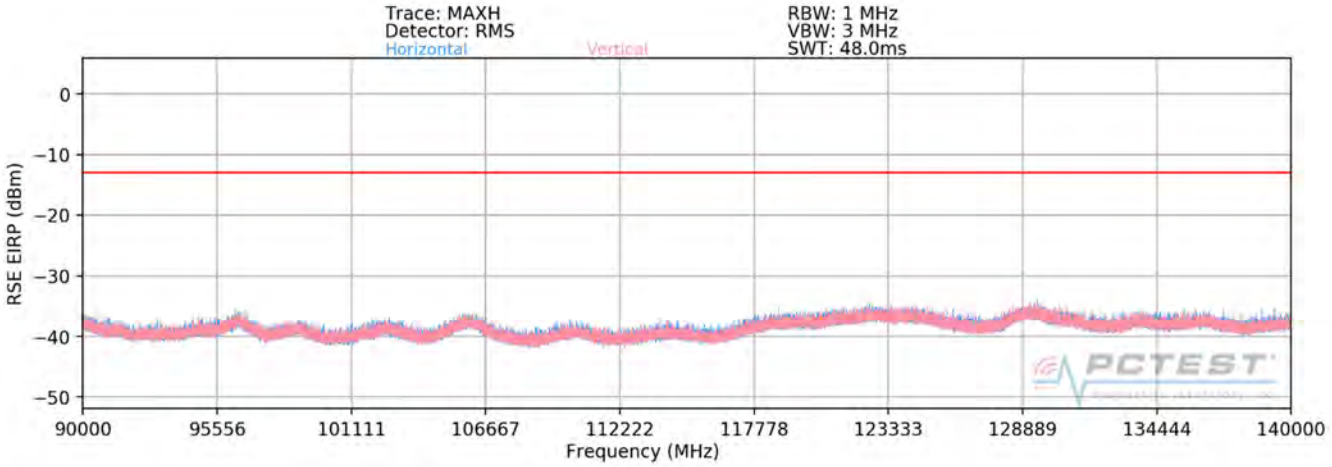
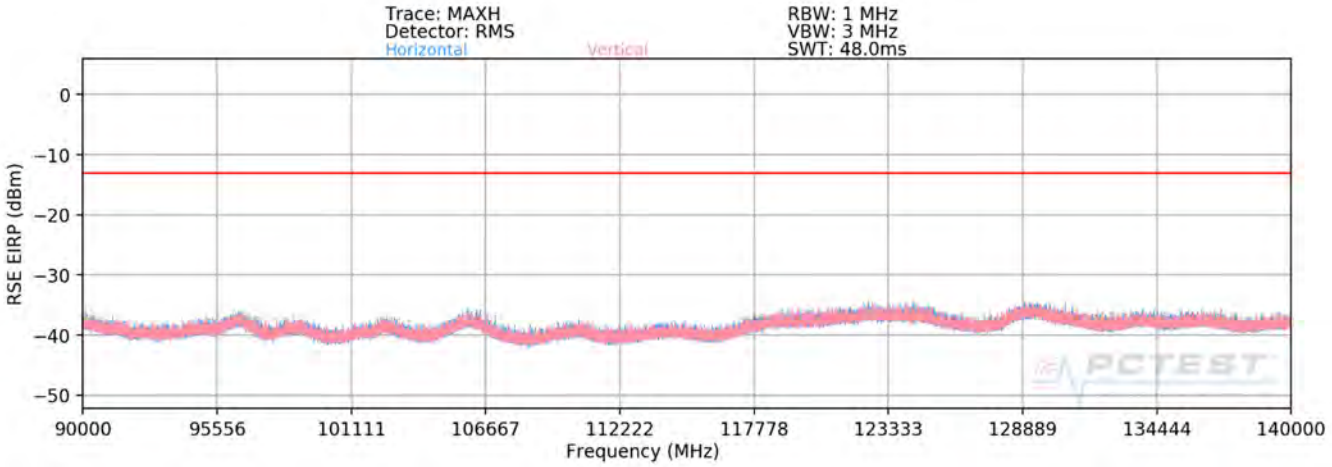
90GHz - 140GHz



Plot 7-179. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-180. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
111083.34	Low	50	H	QPSK	H	48	354	-49.90	-13.00	-36.90
111082.08	Low	50	V	QPSK	H	-	-	-51.24	-13.00	-38.24
115494.93	Mid	50	H	QPSK	H	-	-	-51.44	-13.00	-38.44
115504.14	Mid	50	V	QPSK	H	-	-	-51.38	-13.00	-38.38
119900.40	High	50	H	QPSK	H	337	49	-44.98	-13.00	-31.98
119900.58	High	50	V	QPSK	H	283	49	-43.30	-13.00	-30.30

Table 7-121. Ant2 - SISO -Spurious Emissions Table (90GHz - 140GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-47.51	-13.00	-34.51
Mid	50	QPSK	-48.40	-13.00	-35.40
High	50	QPSK	-41.05	-13.00	-28.05

Table 7-122. Ant2 - MIMO -Spurious Emissions Table (90GHz - 140GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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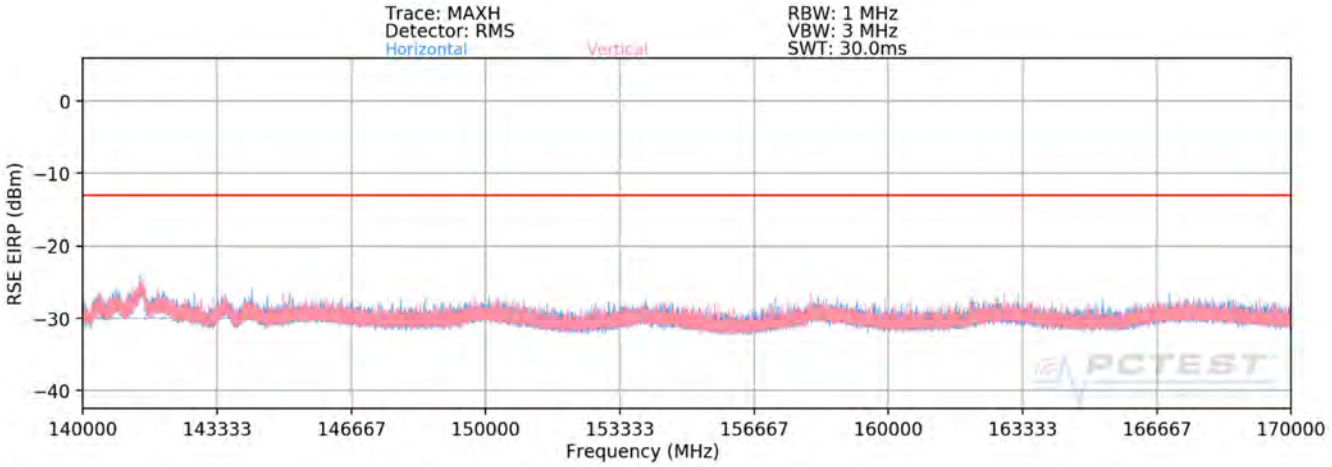
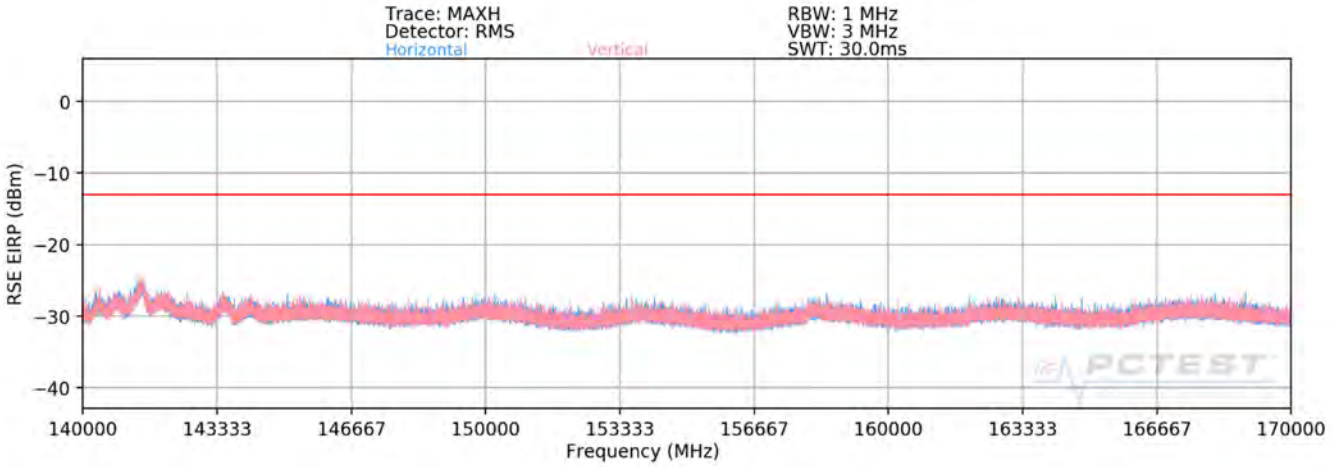
140GHz - 170GHz



Plot 7-181. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-182. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
141445.50	Low	50	H	QPSK	H	-	-	-32.58	-13.00	-19.58
141490.50	Low	50	V	QPSK	H	-	-	-32.38	-13.00	-19.38
141472.00	Mid	50	H	QPSK	H	-	-	-32.39	-13.00	-19.39
141432.50	Mid	50	V	QPSK	H	-	-	-32.78	-13.00	-19.78
141465.50	High	50	H	QPSK	H	-	-	-32.50	-13.00	-19.50
141472.50	High	50	V	QPSK	H	-	-	-32.80	-13.00	-19.80

Table 7-123. Ant2 - SISO -Spurious Emissions Table (140GHz - 170GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-29.47	-13.00	-16.47
Mid	50	QPSK	-29.57	-13.00	-16.57
High	50	QPSK	-29.64	-13.00	-16.64

Table 7-124. Ant2 - MIMO -Spurious Emissions Table (140GHz - 170GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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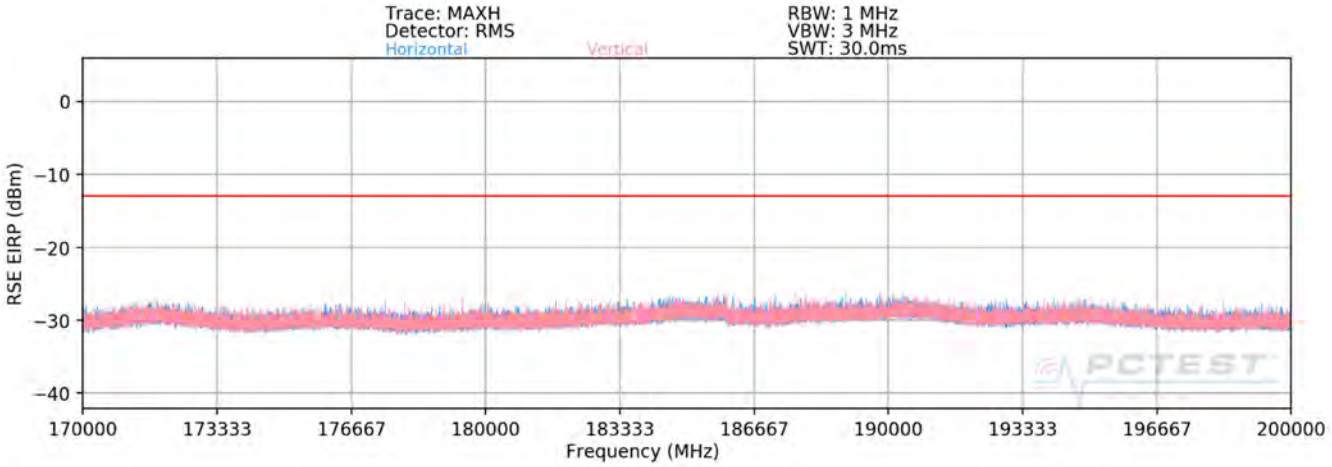
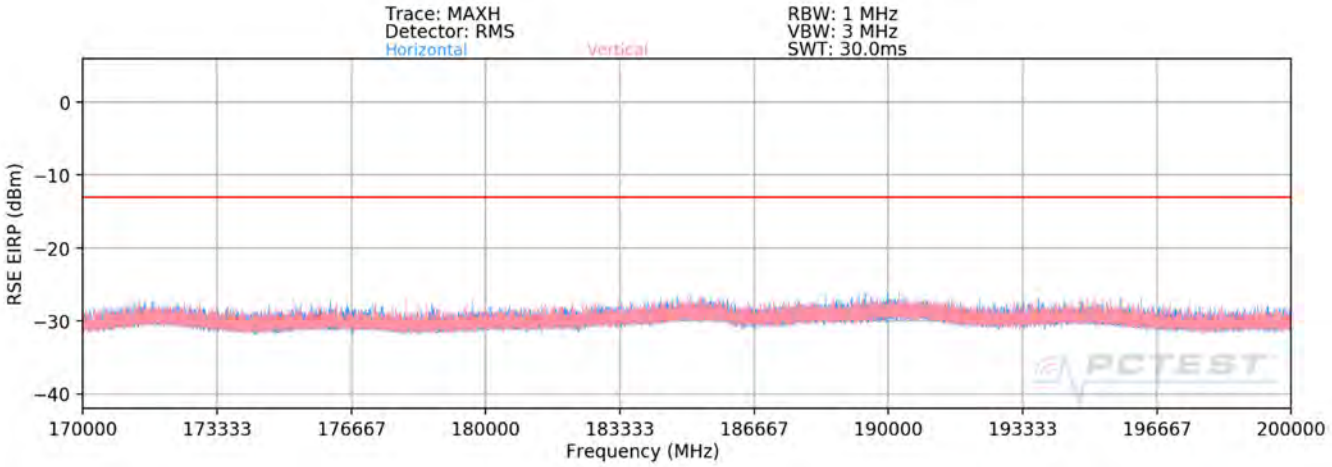
170GHz - 200GHz



Plot 7-183. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-184. Ant2-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
172061.00	Low	50	H	QPSK	H	-	-	-35.28	-13.00	-22.28
172060.50	Low	50	V	QPSK	H	-	-	-35.10	-13.00	-22.10
171935.50	Mid	50	H	QPSK	H	-	-	-35.09	-13.00	-22.09
190916.50	Mid	50	V	QPSK	H	-	-	-35.17	-13.00	-22.17
171886.00	High	50	H	QPSK	H	-	-	-34.85	-13.00	-21.85
171822.00	High	50	V	QPSK	H	-	-	-35.15	-13.00	-22.15

Table 7-125. Ant2 - SISO -Spurious Emissions Table (170GHz - 200GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-32.18	-13.00	-19.18
Mid	50	QPSK	-32.12	-13.00	-19.12
High	50	QPSK	-31.98	-13.00	-18.98

Table 7-126. Ant2 - MIMO -Spurious Emissions Table (170GHz - 200GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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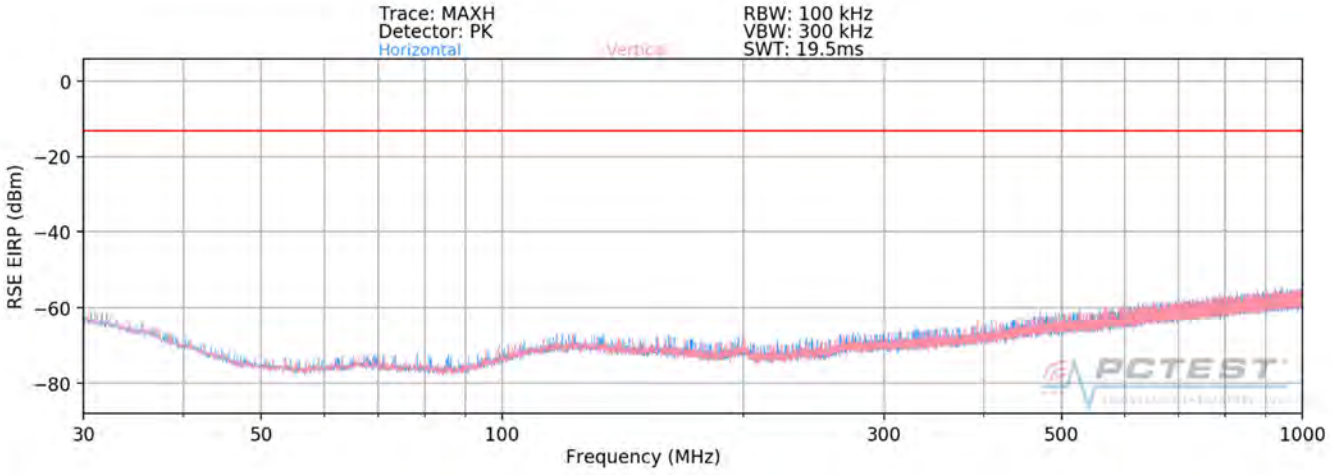
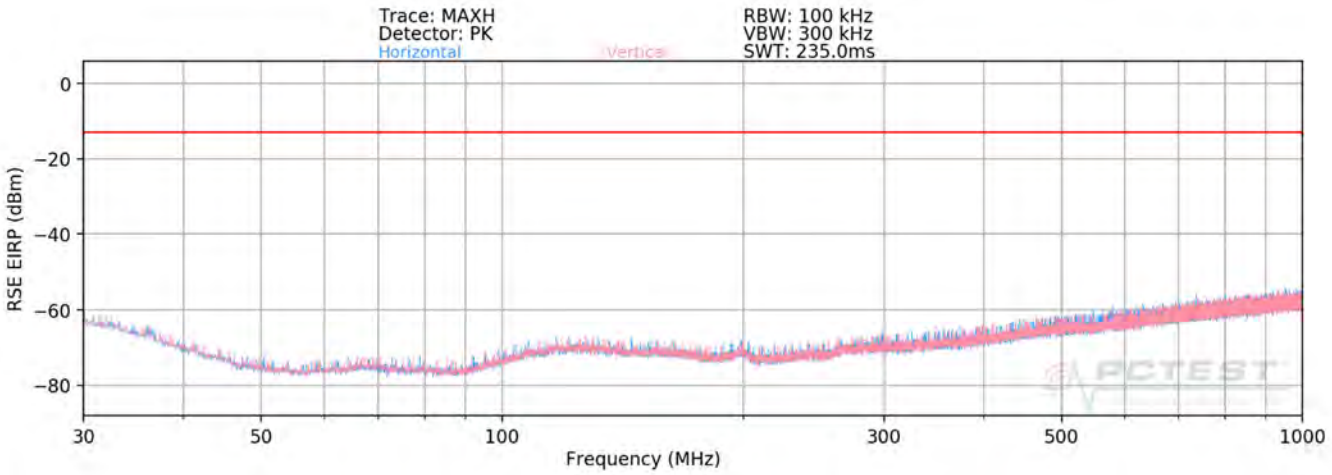
Band n260- Ant3

30MHz - 1GHz



Plot 7-185. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-186. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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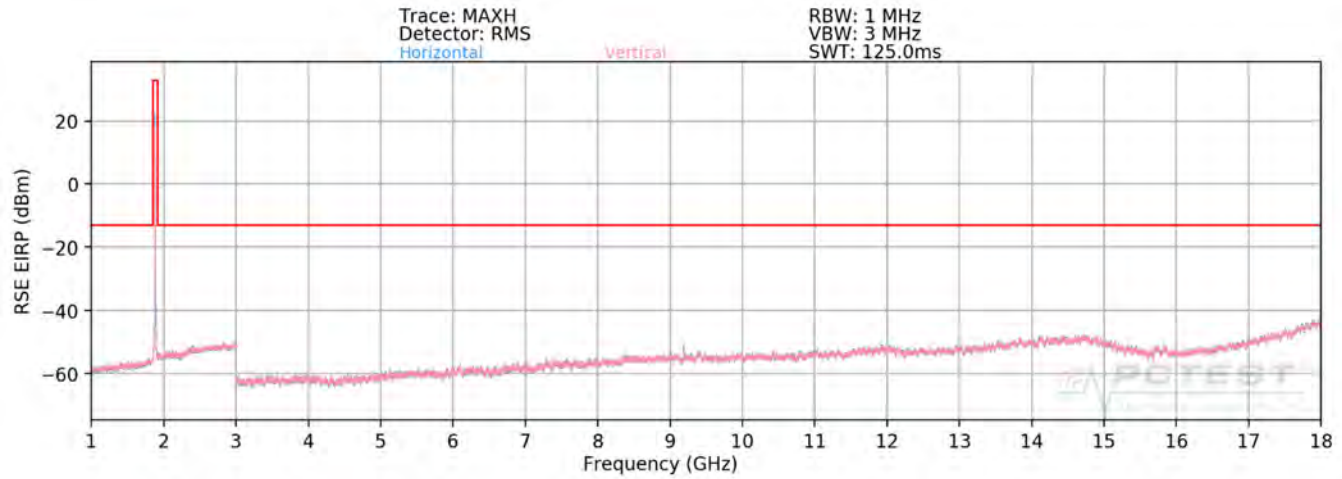
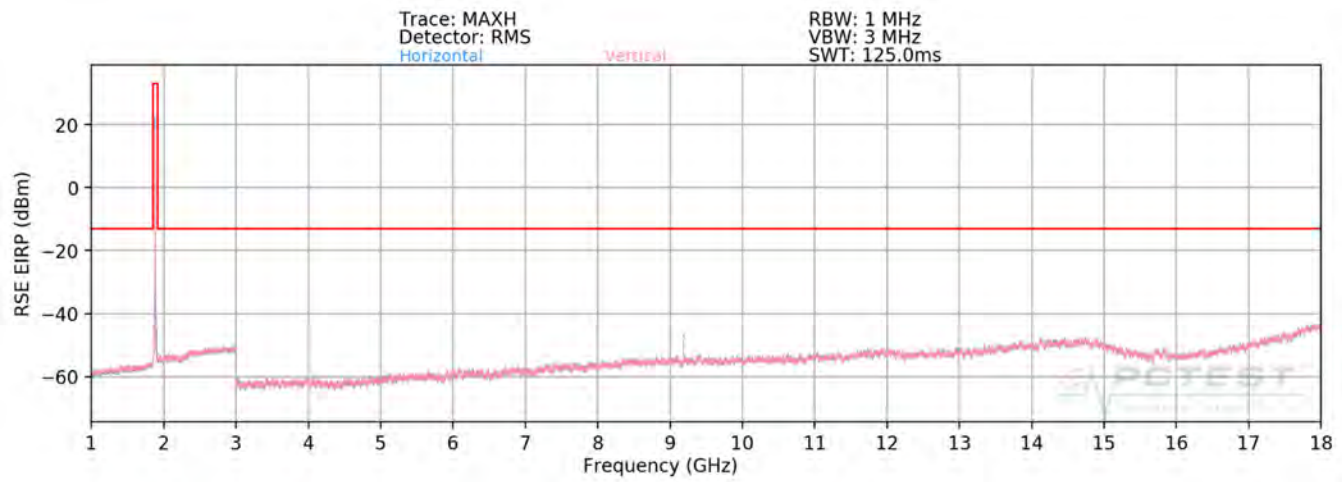
1GHz - 18GHz



Plot 7-187. Ant3-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-188. Ant3-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
8407.15	Low	50	H	QPSK	H	209	3	-52.57	-13.00	-39.57
8407.15	Low	50	V	QPSK	H	183	30	-50.09	-13.00	-37.09
9109.17	Mid	50	H	QPSK	H	165	59	-48.14	-13.00	-35.14
9109.17	Mid	50	V	QPSK	H	158	7	-48.73	-13.00	-35.73
9144.46	High	50	H	QPSK	H	148	61	-48.83	-13.00	-35.83
9144.46	High	50	V	QPSK	H	148	5	-48.67	-13.00	-35.67

Table 7-127. Ant3 - SISO -Spurious Emissions Table (1GHz - 18GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-48.15	-13.00	-35.15
Mid	50	QPSK	-45.77	-13.00	-32.77
High	50	QPSK	-45.74	-13.00	-32.74

Table 7-128. Ant3 - MIMO -Spurious Emissions Table (1GHz - 18GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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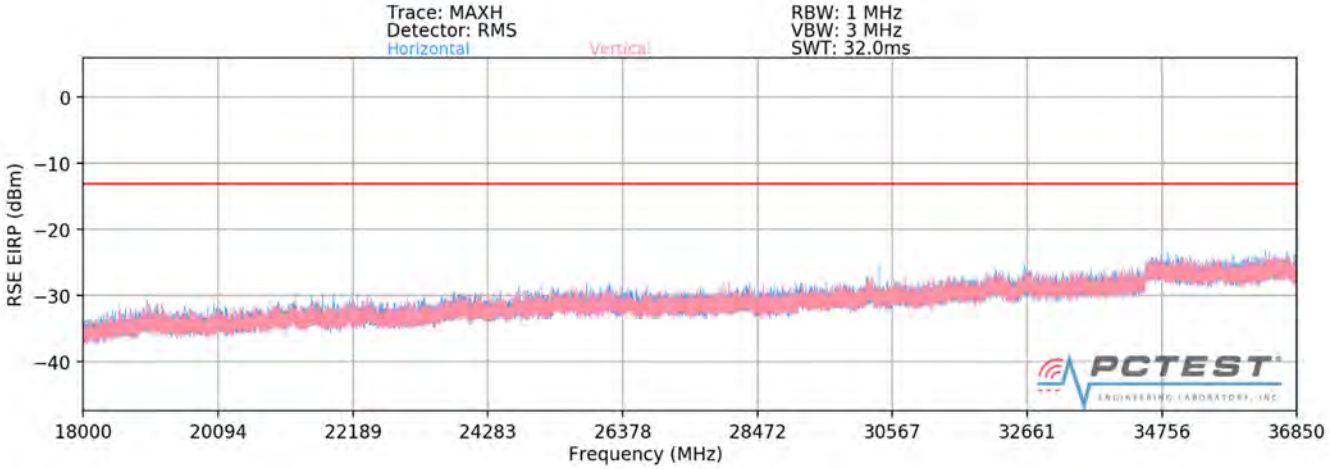
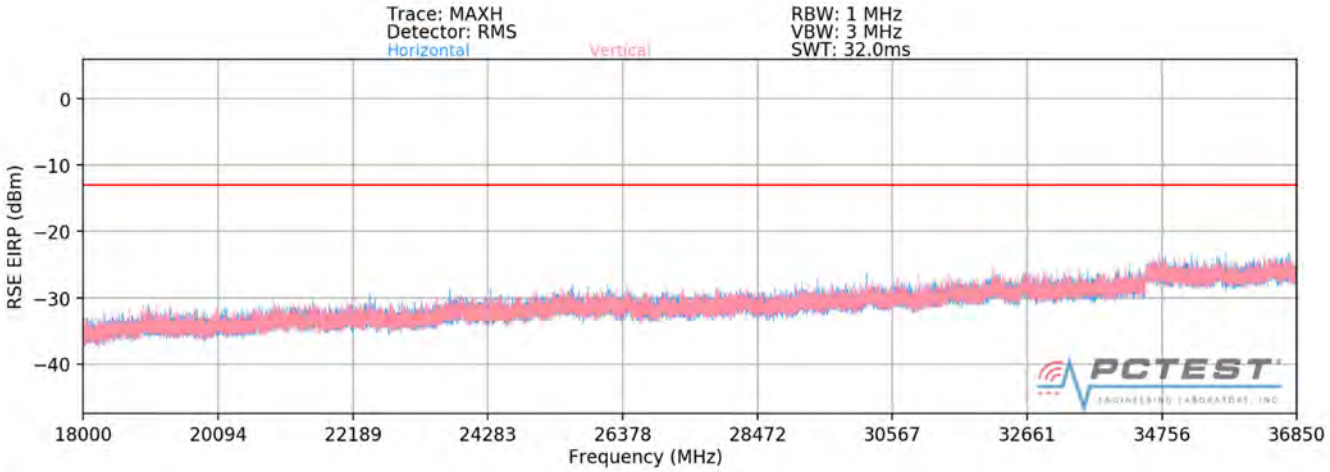
18GHz – 36.85GHz



Plot 7-189. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-190. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
34669.80	Low	50	H	QPSK	H	-	-	-31.82	-13.00	-18.82
34545.90	Low	50	V	QPSK	V	-	-	-31.44	-13.00	-18.44
36480.10	Mid	50	H	QPSK	H	-	-	-30.19	-13.00	-17.19
36683.50	Mid	50	V	QPSK	V	-	-	-30.88	-13.00	-17.88
36452.20	High	50	H	QPSK	H	-	-	-31.00	-13.00	-18.00
36746.50	High	50	V	QPSK	V	-	-	-31.01	-13.00	-18.01

Table 7-129. Ant3 - SISO -Spurious Emissions Table (18GHz – 36.85GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-28.61	-13.00	-15.61
Mid	50	QPSK	-27.51	-13.00	-14.51
High	50	QPSK	-28.00	-13.00	-15.00

Table 7-130. Ant3 - MIMO -Spurious Emissions Table (18GHz – 36.85GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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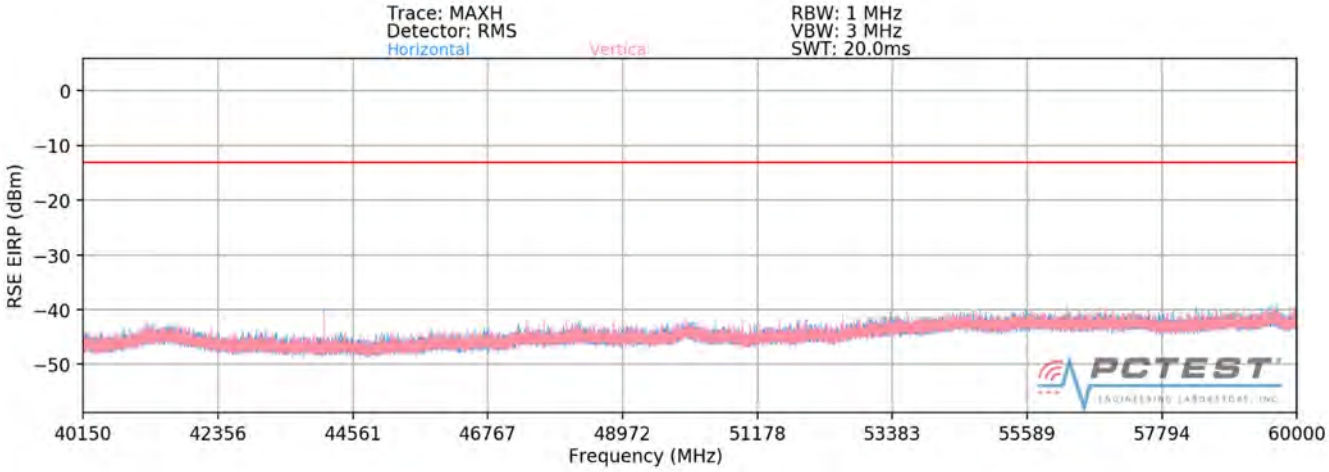
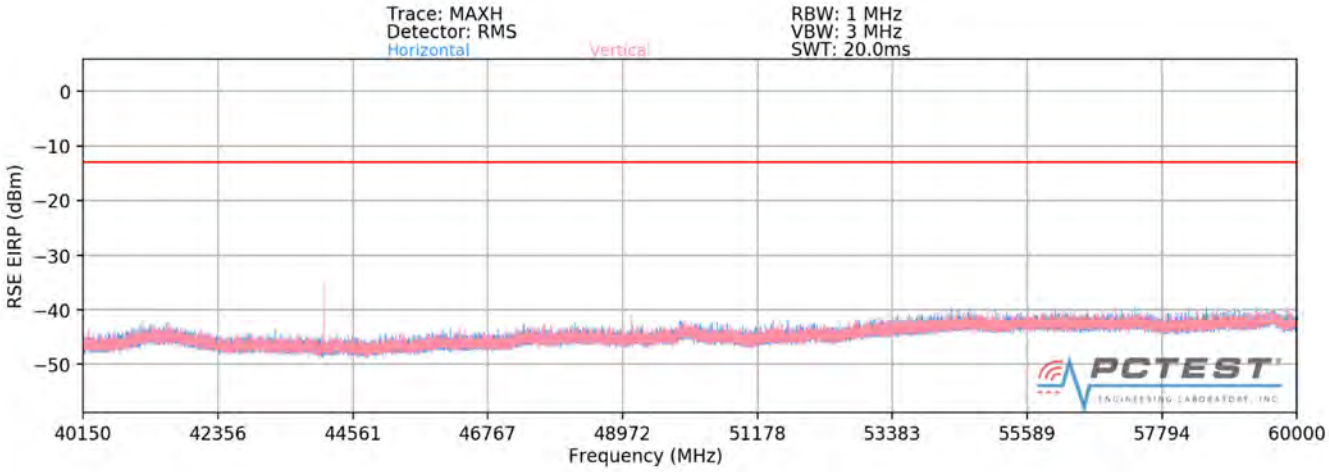
40.15GHz - 60GHz



Plot 7-191. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-192. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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 1.5 meter.

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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
44082.98	Low	50	H	QPSK	H	171	150	-36.95	-13.00	-23.95
44083.18	Low	50	V	QPSK	H	138	152	-31.52	-13.00	-18.52
44083.16	Mid	50	H	QPSK	H	170	150	-38.48	-13.00	-25.48
44083.16	Mid	50	V	QPSK	H	139	151	-31.50	-13.00	-18.50
44083.14	High	50	H	QPSK	H	170	150	-36.49	-13.00	-23.49
44083.11	High	50	V	QPSK	H	137	152	-33.17	-13.00	-20.17

Table 7-131. Ant3 - SISO -Spurious Emissions Table (40.15GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-30.42	-13.00	-17.42
Mid	50	QPSK	-30.71	-13.00	-17.71
High	50	QPSK	-31.51	-13.00	-18.51

Table 7-132. Ant3 - MIMO -Spurious Emissions Table (40.15GHz - 60GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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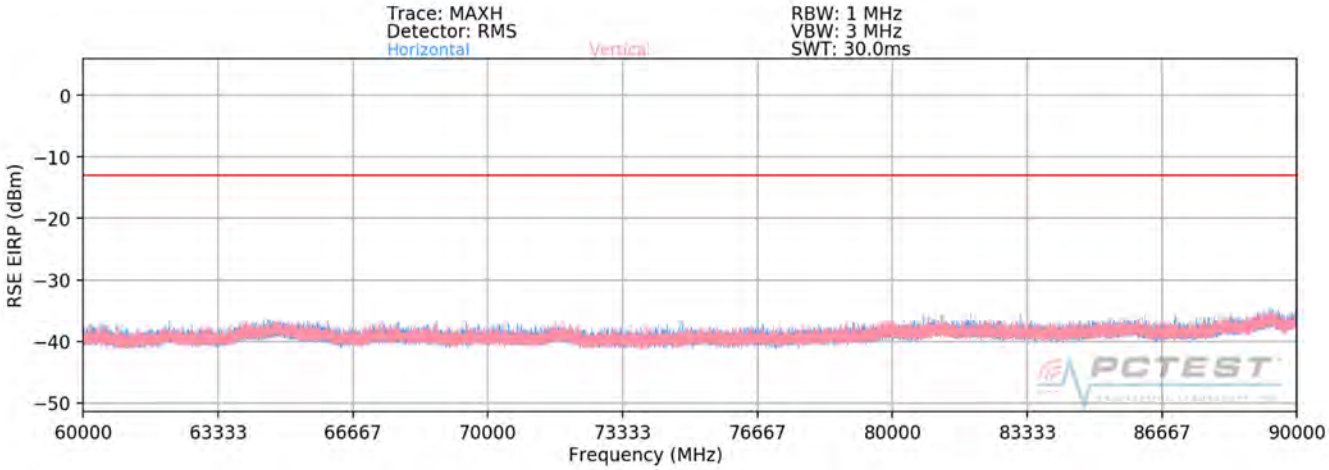
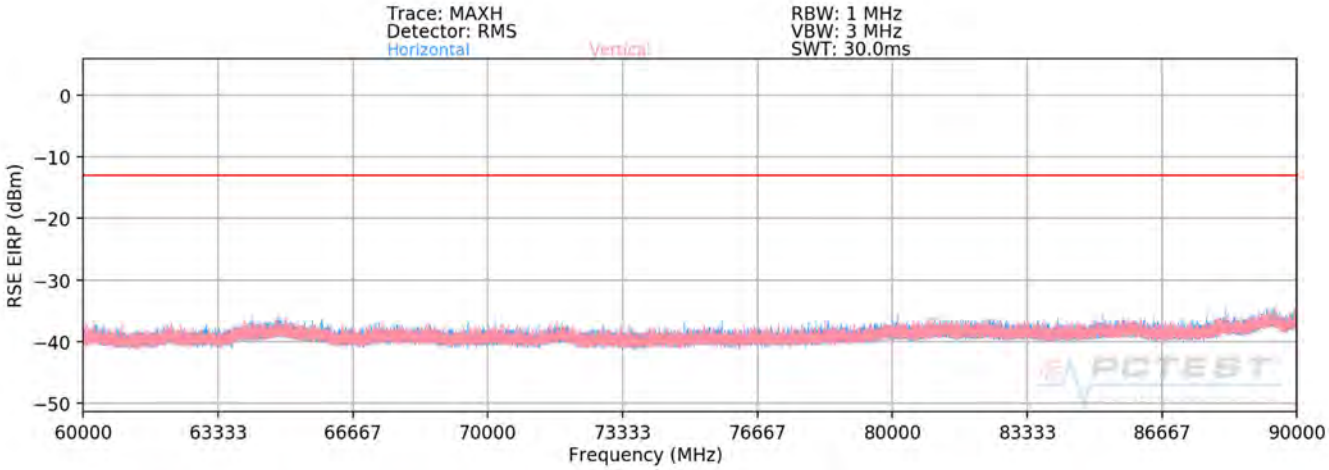
60GHz - 90GHz



Plot 7-193. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-194. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
740010.06	Low	50	H	QPSK	H	65	327	-49.62	-13.00	-36.62
74009.61	Low	50	V	QPSK	H	98	336	-53.01	-13.00	-40.01
76950.12	Mid	50	H	QPSK	H	72	346	-51.88	-13.00	-38.88
76950.12	Mid	50	V	QPSK	H	101	335	-51.67	-13.00	-38.67
79894.31	High	50	H	QPSK	H	-	-	-53.88	-13.00	-40.88
79929.15	High	50	V	QPSK	H	-	-	-53.81	-13.00	-40.81

Table 7-133. Ant1 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-47.98	-13.00	-34.98
Mid	50	QPSK	-48.76	-13.00	-35.76
High	50	QPSK	-50.83	-13.00	-37.83

Table 7-134. Ant1 - MIMO -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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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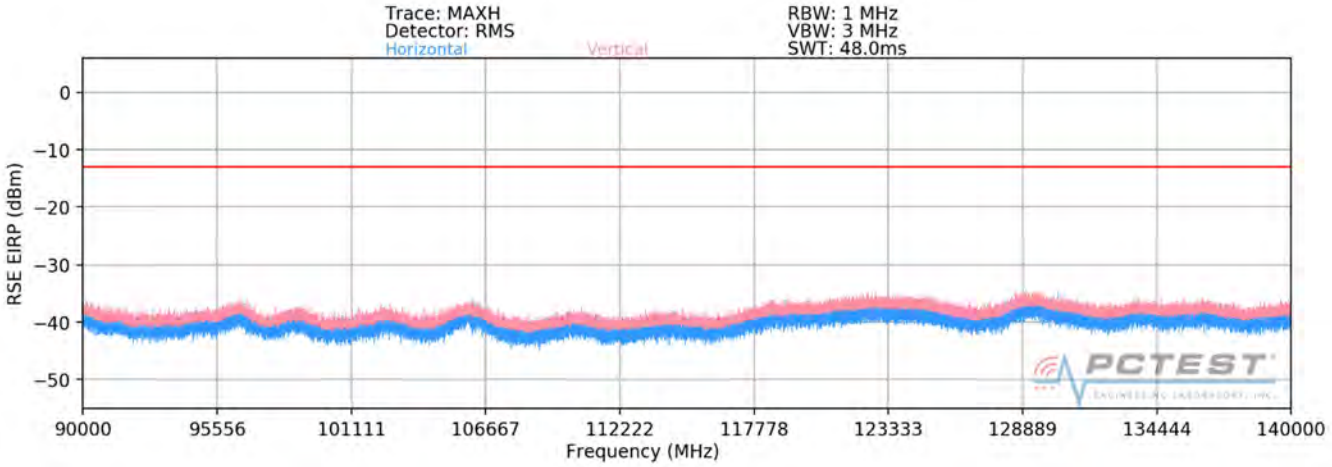
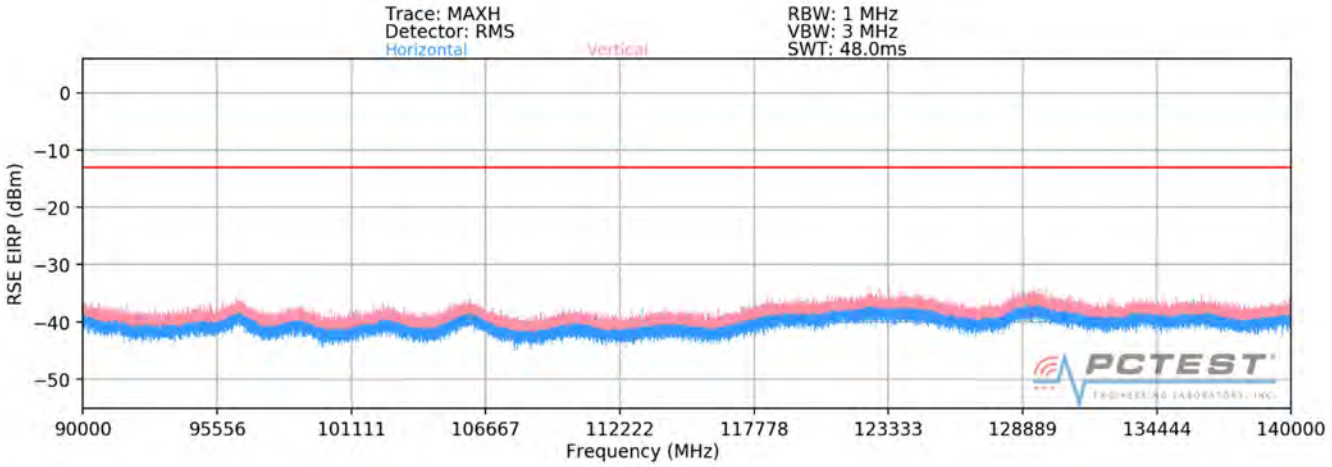
90GHz - 140GHz



Plot 7-195. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-196. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
111083.52	Low	50	H	QPSK	H	11	348	-45.43	-13.00	-32.43
111083.67	Low	50	V	QPSK	V	326	5	-48.57	-13.00	-35.57
115493.82	Mid	50	H	QPSK	H	6	349	-46.66	-13.00	-33.66
115468.23	Mid	50	V	QPSK	V	17	290	-45.67	-13.00	-32.67
119900.88	High	50	H	QPSK	H	343	33	-47.94	-13.00	-34.94
119896.35	High	50	V	QPSK	V	300	27	-48.02	-13.00	-35.02

Table 7-135. Ant3 - SISO -Spurious Emissions Table (90GHz - 140GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-43.71	-13.00	-30.71
Mid	50	QPSK	-43.13	-13.00	-30.13
High	50	QPSK	-44.97	-13.00	-31.97

Table 7-136. Ant3 - MIMO -Spurious Emissions Table (90GHz - 140GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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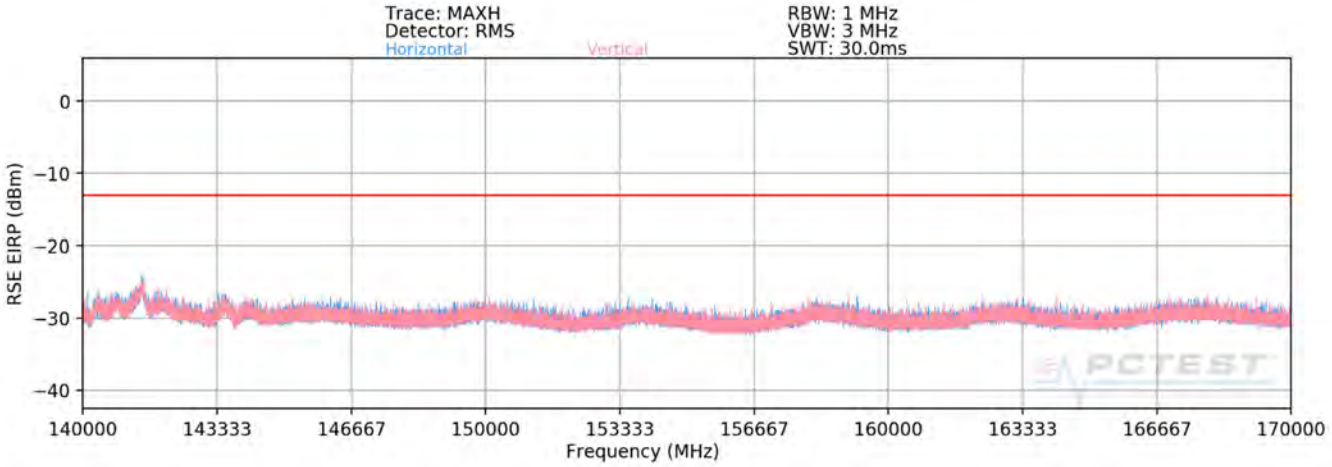
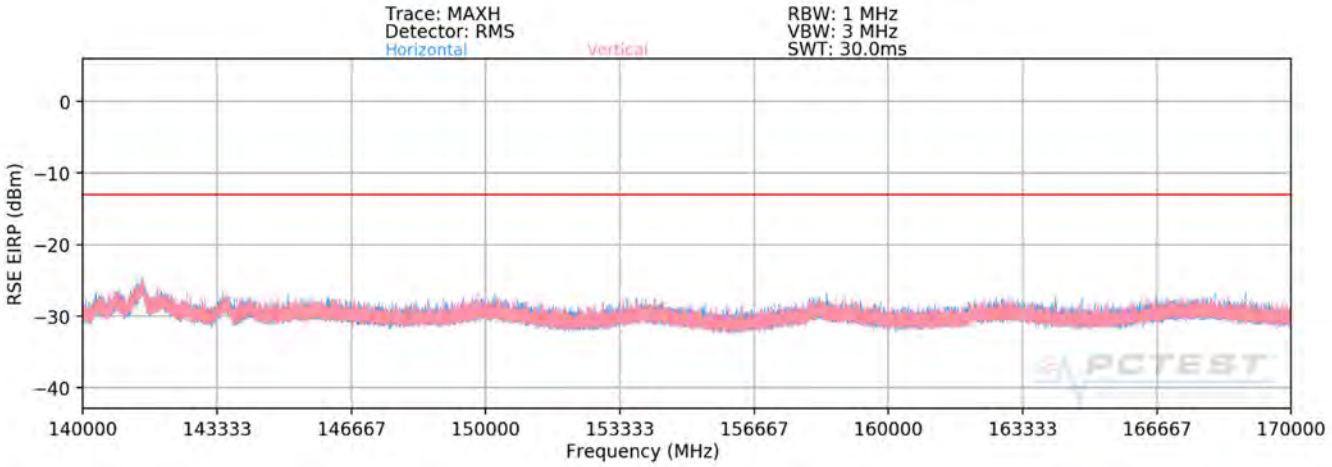
140GHz - 170GHz



Plot 7-197. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-198. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
141444.50	Low	50	H	QPSK	H	-	-	-32.47	-13.00	-19.47
141476.50	Low	50	V	QPSK	V	-	-	-32.26	-13.00	-19.26
141457.00	Mid	50	H	QPSK	H	-	-	-33.13	-13.00	-20.13
141492.00	Mid	50	V	QPSK	V	-	-	-32.68	-13.00	-19.68
141475.50	High	50	H	QPSK	H	-	-	-32.54	-13.00	-19.54
141486.50	High	50	V	QPSK	V	-	-	-32.18	-13.00	-19.18

Table 7-137. Ant3 - SISO -Spurious Emissions Table (140GHz - 170GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-29.35	-13.00	-16.35
Mid	50	QPSK	-29.89	-13.00	-16.89
High	50	QPSK	-29.35	-13.00	-16.35

Table 7-138. Ant3 - MIMO -Spurious Emissions Table (140GHz - 170GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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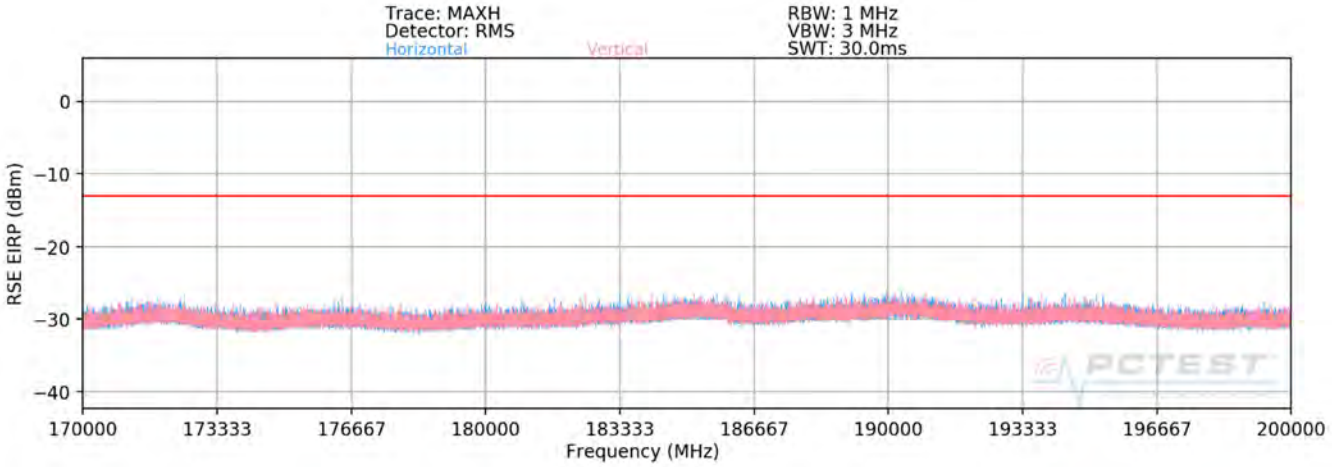
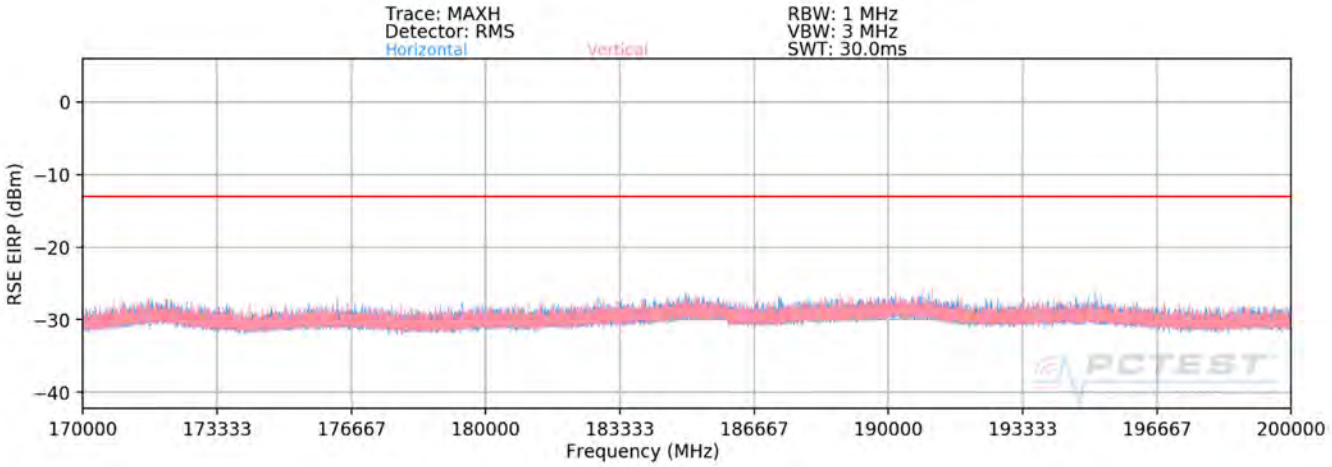
170GHz - 200GHz



Plot 7-199. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-200. Ant3-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
191024.00	Low	50	H	QPSK	H	-	-	-34.81	-13.00	-21.81
171951.00	Low	50	V	QPSK	V	-	-	-35.27	-13.00	-22.27
171993.00	Mid	50	H	QPSK	H	-	-	-35.08	-13.00	-22.08
189915.50	Mid	50	V	QPSK	V	-	-	-34.93	-13.00	-21.93
172027.50	High	50	H	QPSK	H	-	-	-35.04	-13.00	-22.04
171910.50	High	50	V	QPSK	V	-	-	-35.19	-13.00	-22.19

Table 7-139. Ant3 - SISO -Spurious Emissions Table (170GHz - 200GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-32.02	-13.00	-19.02
Mid	50	QPSK	-31.99	-13.00	-18.99
High	50	QPSK	-32.10	-13.00	-19.10

Table 7-140. Ant3 - MIMO -Spurious Emissions Table (170GHz - 200GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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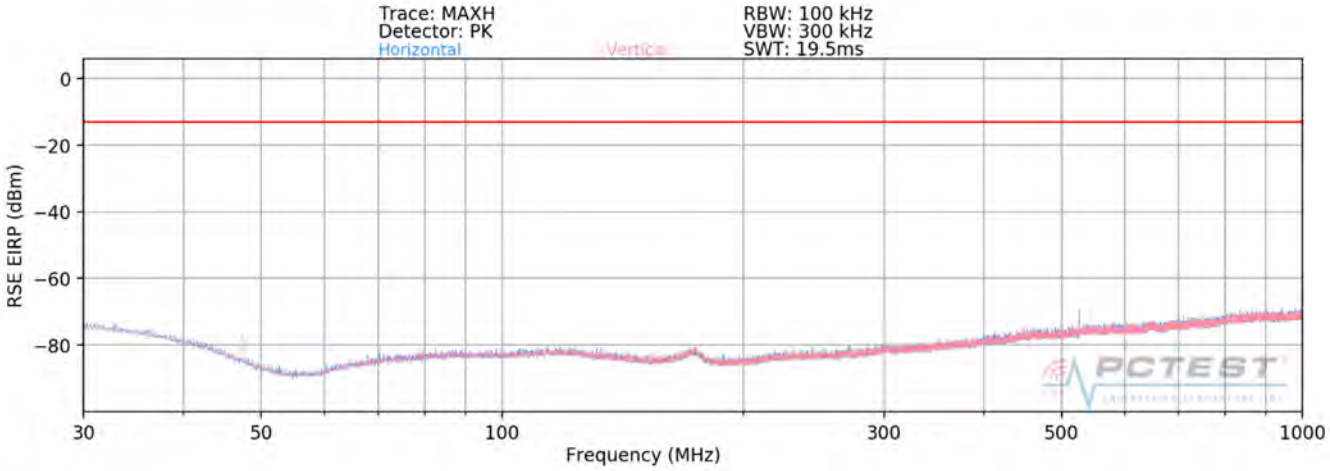
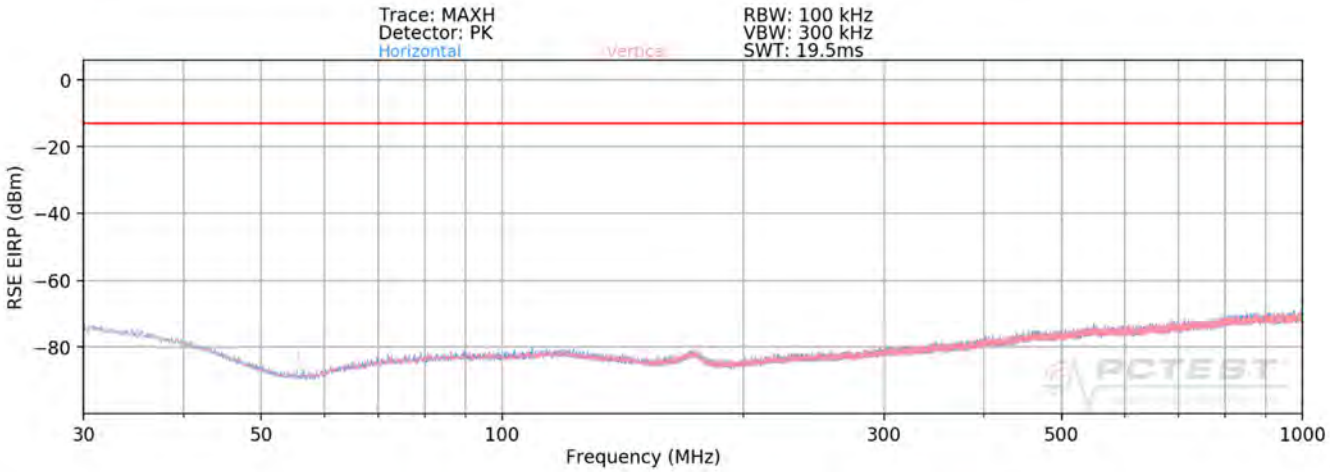
Band n260- Ant4

30MHz - 1GHz



Plot 7-201. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-202. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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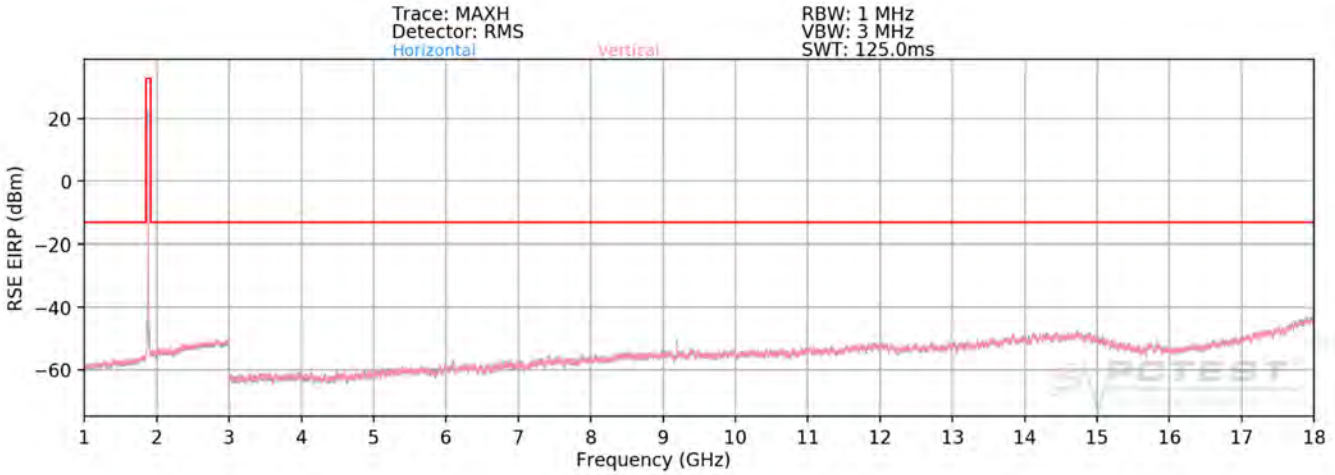
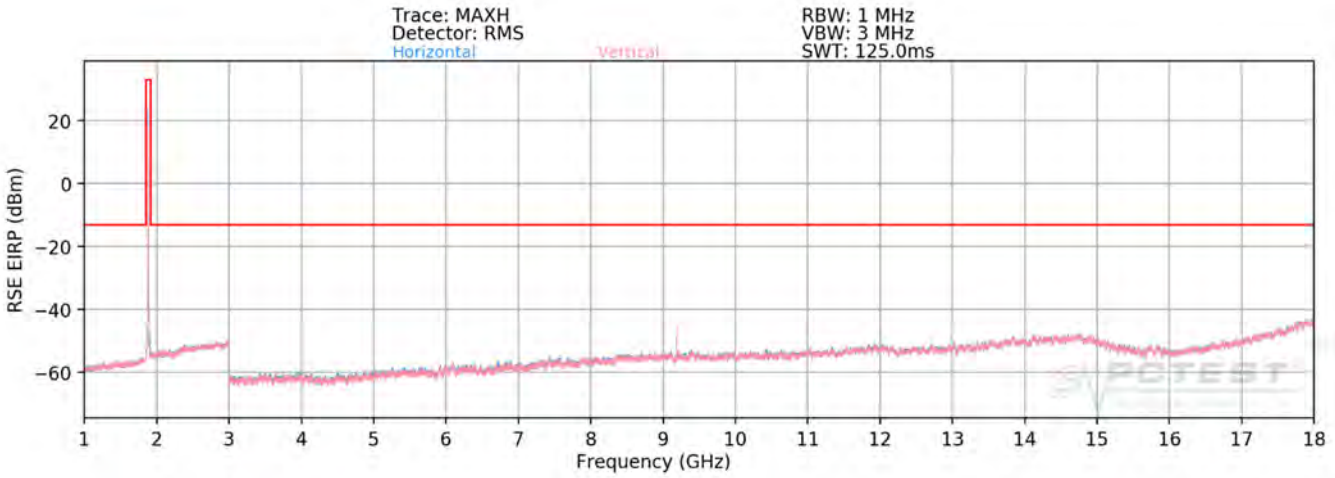
1GHz - 18GHz



Plot 7-203. Ant4-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-204. Ant4-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
8407.15	Low	50	H	QPSK	H	240	61	-50.39	-13.00	-37.39
8407.15	Low	50	V	QPSK	V	185	334	-44.11	-13.00	-31.11
9109.17	Mid	50	H	QPSK	H	203	55	-50.56	-13.00	-37.56
9109.17	Mid	50	V	QPSK	V	142	4	-41.76	-13.00	-28.76
9144.46	High	50	H	QPSK	H	154	62	-52.27	-13.00	-39.27
9144.46	High	50	V	QPSK	V	140	358	-43.25	-13.00	-30.25

Table 7-141. Ant4 - SISO -Spurious Emissions Table (1GHz - 18GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-43.19	-13.00	-30.19
Mid	50	QPSK	-41.39	-13.00	-28.39
High	50	QPSK	-42.74	-13.00	-29.74

Table 7-142. Ant4 - MIMO -Spurious Emissions Table (1GHz - 18GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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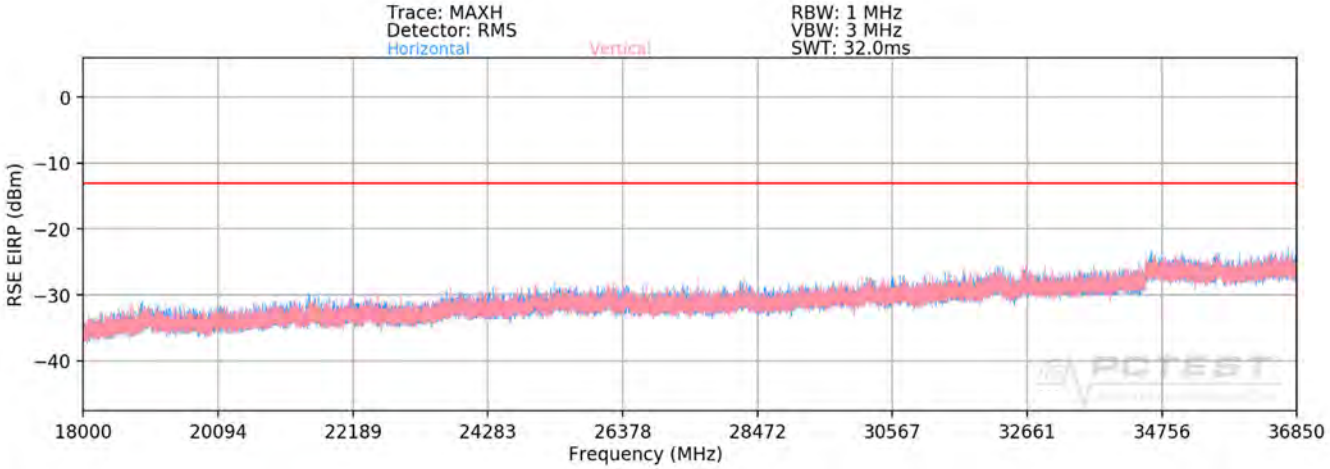
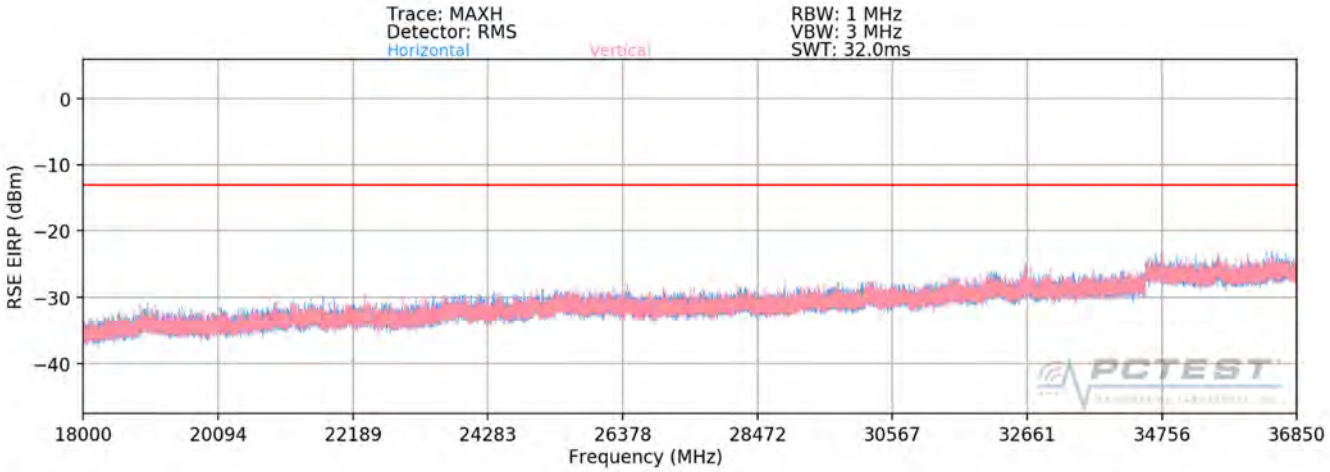
18GHz – 36.85GHz



Plot 7-205. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-206. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
36493.50	Low	50	H	QPSK	H	-	-	-31.11	-13.00	-18.11
36701.15	Low	50	V	QPSK	V	-	-	-31.13	-13.00	-18.13
36992.50	Mid	50	H	QPSK	H	-	-	-31.46	-13.00	-18.46
36468.50	Mid	50	V	QPSK	V	-	-	-31.61	-13.00	-18.61
36715.50	High	50	H	QPSK	H	-	-	-30.04	-13.00	-17.04
36459.50	High	50	V	QPSK	V	-	-	-30.70	-13.00	-17.70

Table 7-143. Ant4 - SISO -Spurious Emissions Table (18GHz – 36.85GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-28.11	-13.00	-15.11
Mid	50	QPSK	-28.52	-13.00	-15.52
High	50	QPSK	-27.35	-13.00	-14.35

Table 7-144. Ant4 - MIMO -Spurious Emissions Table (18GHz – 36.85GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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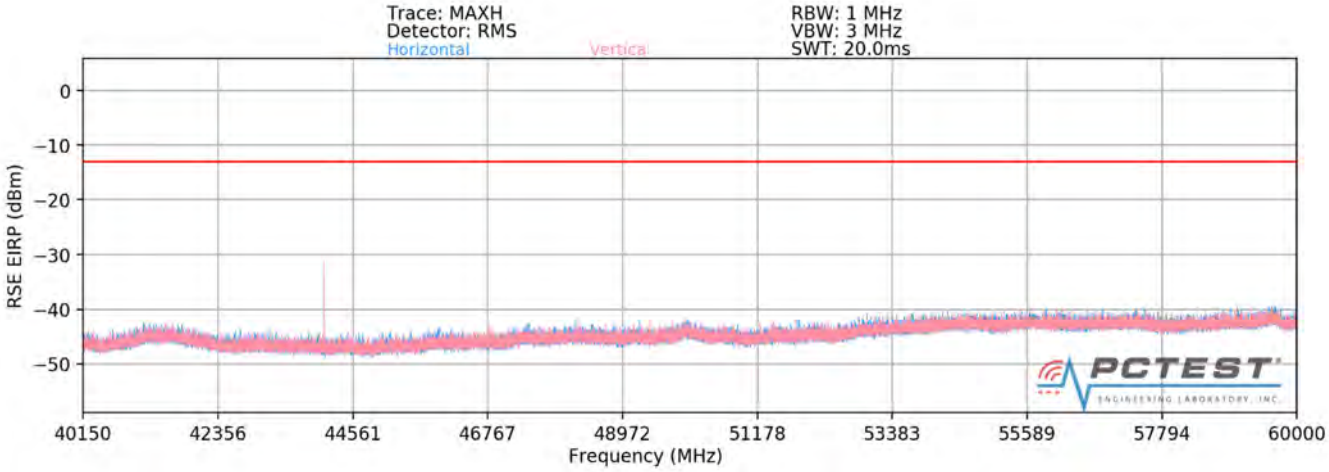
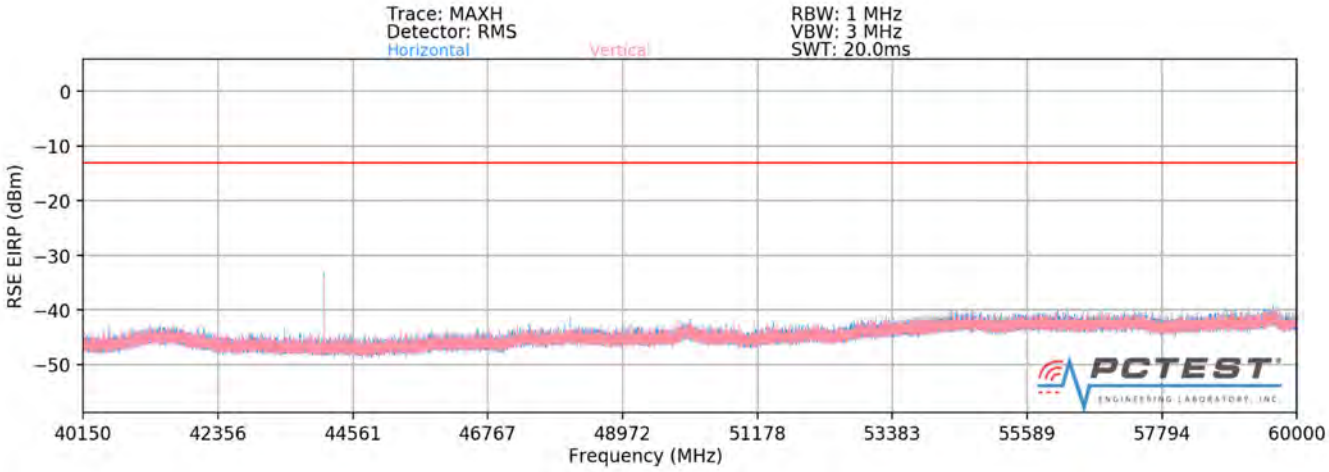
40.15GHz - 60GHz



Plot 7-207. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-208. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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 1.5 meter.

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

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Antenna Height [cm]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
44083.15	Low	50	H	QPSK	H	321	152	-31.06	-13.00	-18.06
44082.98	Low	50	V	QPSK	V	345	150	-33.62	-13.00	-20.62
44083.16	Mid	50	H	QPSK	H	316	155	-32.56	-13.00	-19.56
44083.15	Mid	50	V	QPSK	V	346	150	-34.47	-13.00	-21.47
44083.11	High	50	H	QPSK	H	320	150	-30.65	-13.00	-17.65
44083.16	High	50	V	QPSK	V	346	150	-31.55	-13.00	-18.55

Table 7-145. Ant4 - SISO -Spurious Emissions Table (40.15GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-29.14	-13.00	-16.14
Mid	50	QPSK	-30.40	-13.00	-17.40
High	50	QPSK	-28.06	-13.00	-15.06

Table 7-146. Ant4 - MIMO -Spurious Emissions Table (40.15GHz - 60GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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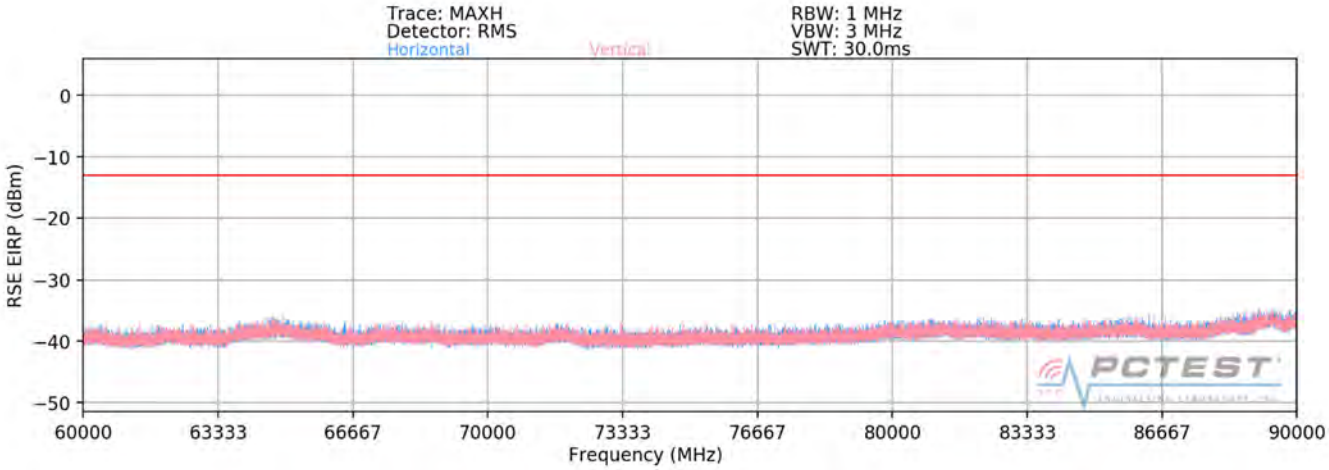
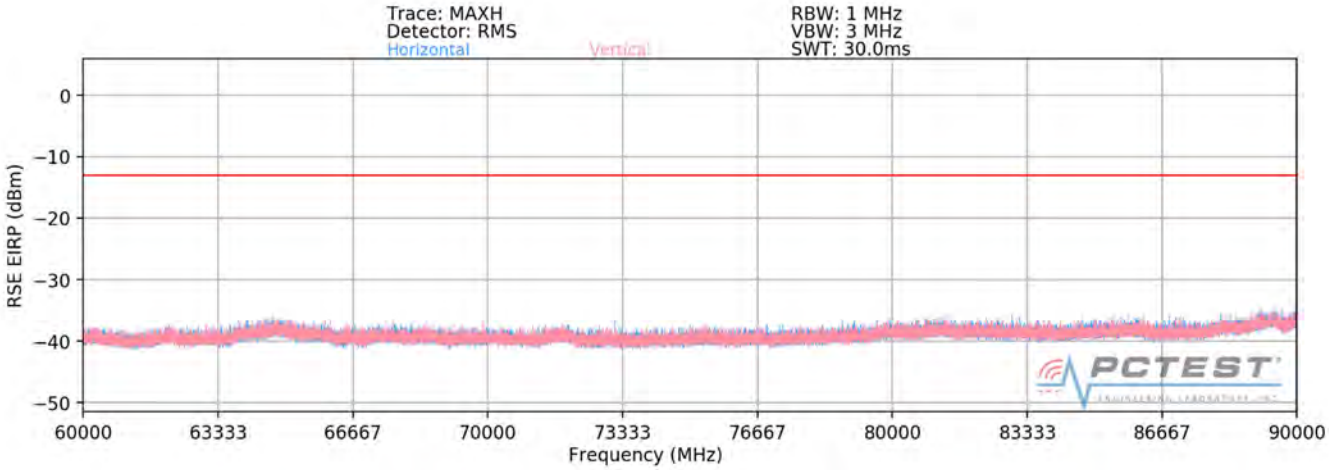
60GHz - 90GHz



Plot 7-209. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-210. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74043.72	Low	50	H	QPSK	H	-	-	-55.06	-13.00	-42.06
74055.84	Low	50	V	QPSK	V	142	293	-50.94	-13.00	-37.94
76995.63	Mid	50	H	QPSK	H	240	18	-49.98	-13.00	-36.98
76996.08	Mid	50	V	QPSK	V	195	111	-52.01	-13.00	-39.01
79936.68	High	50	H	QPSK	H	-	-	-53.86	-13.00	-40.86
79924.44	High	50	V	QPSK	V	-	-	-53.86	-13.00	-40.86

Table 7-147. Ant4 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-49.52	-13.00	-36.52
Mid	50	QPSK	-47.86	-13.00	-34.86
High	50	QPSK	-50.85	-13.00	-37.85

Table 7-148. Ant4 - MIMO -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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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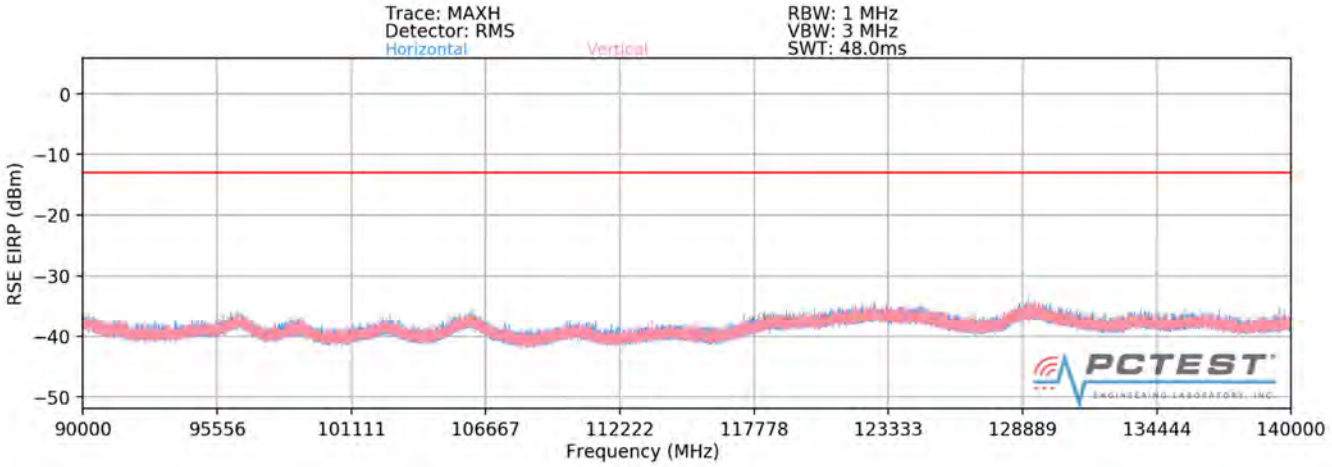
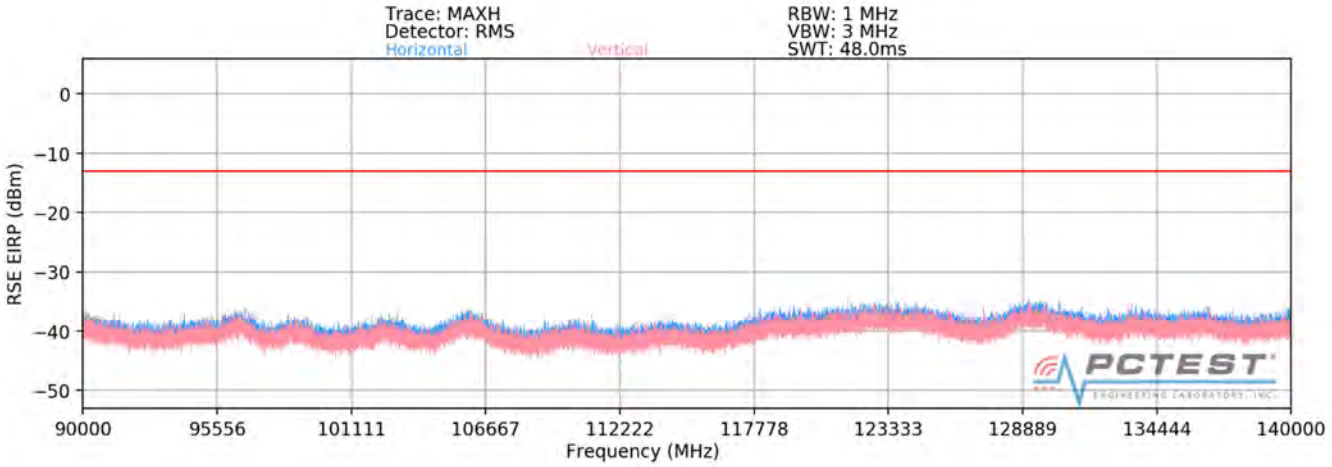
90GHz - 140GHz



Plot 7-211. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-212. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
111084.06	Low	50	H	QPSK	H	275	8	-45.63	-13.00	-32.63
111084.03	Low	50	V	QPSK	V	132	237	-46.95	-13.00	-33.95
115494.33	Mid	50	H	QPSK	H	252	18	-47.58	-13.00	-34.58
115498.02	Mid	50	V	QPSK	V	-	-	-51.39	-13.00	-38.39
119895.27	High	50	H	QPSK	H	-	-	-49.15	-13.00	-36.15
119900.73	High	50	V	QPSK	V	198	131	-48.67	-13.00	-35.67

Table 7-149. Ant4 - SISO -Spurious Emissions Table (90GHz - 140GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-43.23	-13.00	-30.23
Mid	50	QPSK	-46.07	-13.00	-33.07
High	50	QPSK	-45.89	-13.00	-32.89

Table 7-150. Ant4 - MIMO -Spurious Emissions Table (90GHz - 140GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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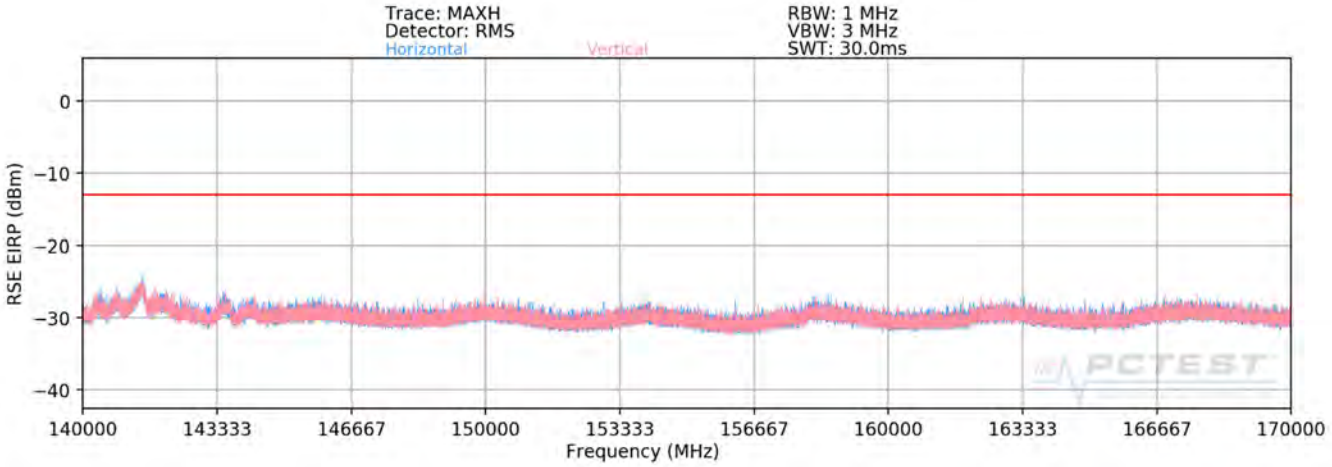
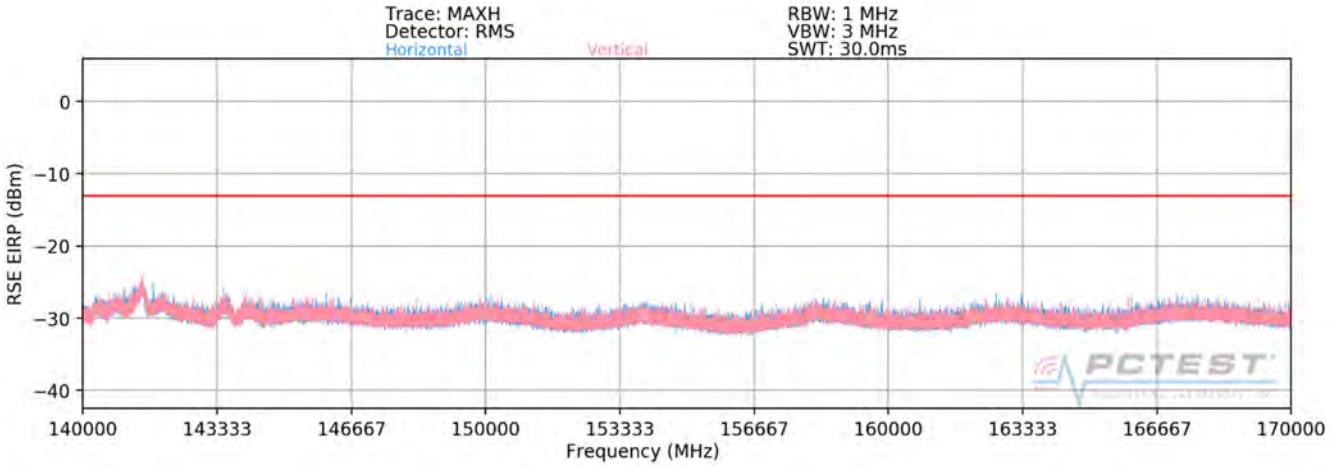
140GHz - 170GHz



Plot 7-213. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-214. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
141450.00	Low	50	H	QPSK	H	-	-	-32.57	-13.00	-19.57
141489.50	Low	50	V	QPSK	V	-	-	-32.50	-13.00	-19.50
141470.50	Mid	50	H	QPSK	H	-	-	-32.14	-13.00	-19.14
141436.50	Mid	50	V	QPSK	V	-	-	-32.52	-13.00	-19.52
141432.00	High	50	H	QPSK	H	-	-	-32.30	-13.00	-19.30
141483.50	High	50	V	QPSK	V	-	-	-32.31	-13.00	-19.31

Table 7-151. Ant4 - SISO -Spurious Emissions Table (140GHz - 170GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-29.52	-13.00	-16.52
Mid	50	QPSK	-29.32	-13.00	-16.32
High	50	QPSK	-29.30	-13.00	-16.30

Table 7-152. Ant4 - MIMO -Spurious Emissions Table (140GHz - 170GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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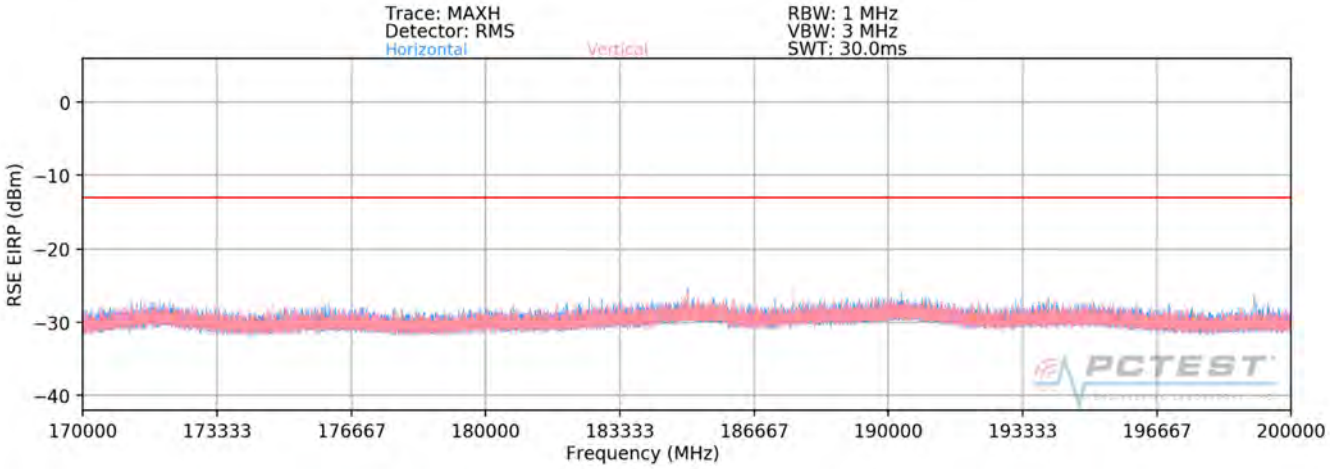
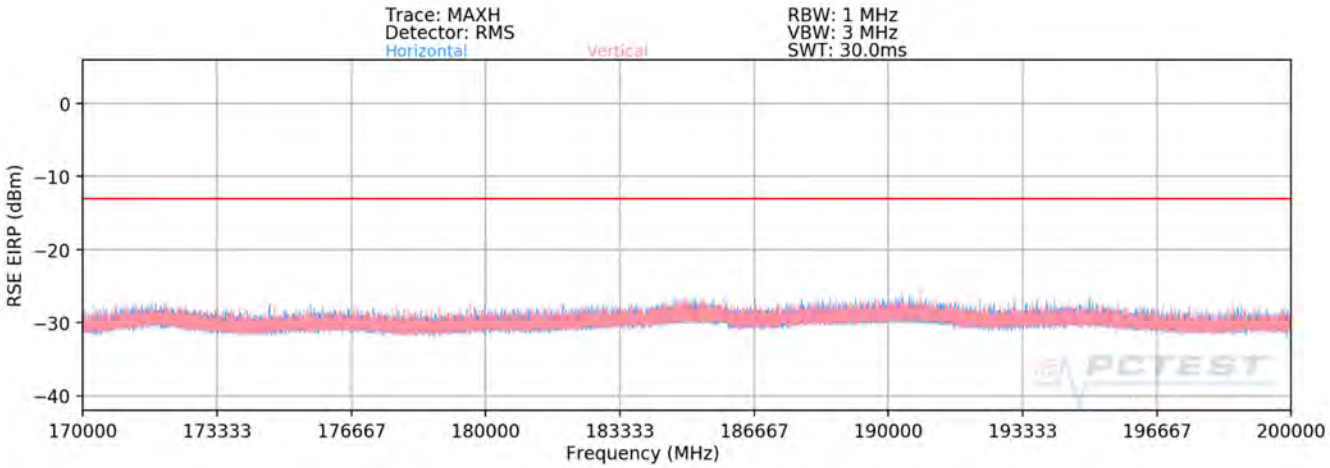
170GHz - 200GHz



Plot 7-215. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam – ENDC)



Plot 7-216. Ant4-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam – ENDC)

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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]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
191037.00	Low	50	H	QPSK	H	-	-	-35.09	-13.00	-22.09
172008.00	Low	50	V	QPSK	V	-	-	-35.05	-13.00	-22.05
172002.50	Mid	50	H	QPSK	H	-	-	-34.99	-13.00	-21.99
171998.00	Mid	50	V	QPSK	V	-	-	-35.05	-13.00	-22.05
171997.50	High	50	H	QPSK	H	-	-	-35.09	-13.00	-22.09
172016.50	High	50	V	QPSK	V	-	-	-34.96	-13.00	-21.96

Table 7-153. Ant4 - SISO -Spurious Emissions Table (170GHz - 200GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-32.06	-13.00	-19.06
Mid	50	QPSK	-32.01	-13.00	-19.01
High	50	QPSK	-32.01	-13.00	-19.01

Table 7-154. Ant4 - MIMO -Spurious Emissions Table (170GHz - 200GHz)

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. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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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 v01 Section 4.4.2.5

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 ≥ 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x 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 measurements in this section are shown as equivalent conductive powers for direct comparison to the 30.203 limit. The condutive power at the band edge is calculated by subtracting the gain of the EUT's antenna from the measured EIRP level. Antenna Gain information is shown on the following page.
3) Band Edge emissions were measured at a 1 meter distance.
4) The spectrum analyzer for each measurement shows an offset value that was determined using the measurement antenna factor, cable loss, far field measurement distance, and EUT antenna gain. A sample calculation is shown on the following page.
5) The antenna gains applied to the measurements in the plots shown in this section are accurate for the displayed spectrum.
6) MIMO Band Edge plots shown below are mathematically summed conductive powers between spectrum analyzer measurements on H Beam and V Beam. This MIMO bandedge plot was produced by summing the following two spectrum analyzer traces: (1) the first trace is maximized while the EUT is transmitting in H-beam and (2) the second trace is maximized while the EUT is transmitting in V-beam.
7) The MIMO Band Edges were calculated by using the "measure and sum the spectra across the outputs" technique specified in Section 6.4.3.2.2 of ANSI C63.26-2015. The spectra were summed linearly and converted to dBm for comparison with the limit.

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Antenna Gain Information at the Band Edge

The following antenna gain information is provided to demonstrate the antenna performance of the 27.5 – 28.35GHz and 37 – 40GHz band. These antenna gains were subtracted from the measured EIRP levels at the lower and upper band edge frequencies to determine an equivalent conductive power that was compared directly with the §30.203 limits.

Antenna	Channel	Beam Polarization	Gain (dBi)
Ant1	Low	H	9.28
		V	10.16
	High	H	8.70
		V	9.16
Ant2	Low	H	6.93
		V	5.62
	High	H	5.75
		V	5.29
Ant3	Low	H	8.73
		V	7.61
	High	H	8.24
		V	8.07
Ant4	Low	H	8.49
		V	7.81
	High	H	8.52
		V	8.01

Table 7-155. Antenna Gains at the Band Edges(n261)

Antenna	Channel	Beam Polarization	Gain (dBi)
Ant1	Low	H	10.81
		V	9.25
	High	H	10.19
		V	10.19
Ant2	Low	H	8.91
		V	7.95
	High	H	7.20
		V	7.61
Ant3	Low	H	9.77
		V	8.90
	High	H	10.01
		V	9.83
Ant4	Low	H	9.29
		V	9.58
	High	H	9.84
		V	10.55

Table 7-156. Antenna Gains at the Band Edges(n260)

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Sample Analyzer Offset Calculation (at 27.5GHz)

Measurement Antenna Factor = 40.70dB/m

Cable Loss = 8.82dB

EUT Antenna Gain = 6.60dBi

Analyzer Offset (dB) = AF (dB/m) + CL (dB) + 107 + $20\log_{10}(D)$ – 104.8dB – Gain (dBi), where D = 1m

= 40.70dB/m + 8.82dB + 107 + $20\log_{10}(1m)$ – 104.8dB – 6.60dBi

= 45.12dB

Note:

While it is allowed to use the antenna gain subtraction method in the band edge as it is defined in Part 30, the device meets the requirements via early exit condition as specified in KDB publication 842590 D01.

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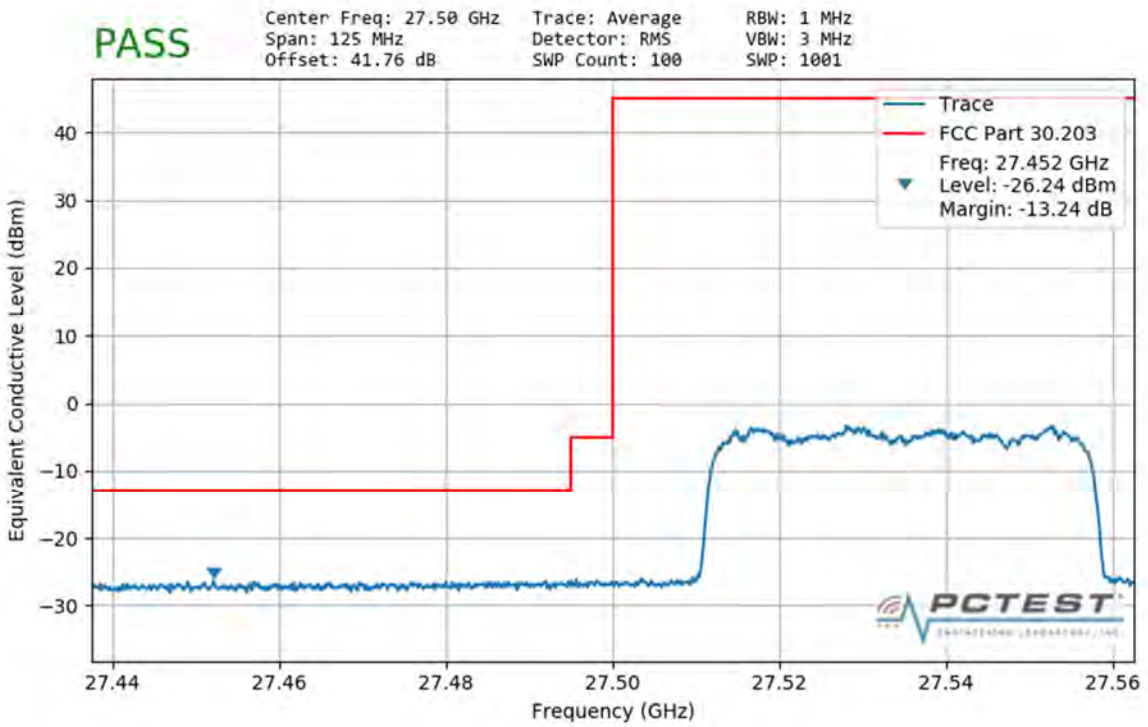
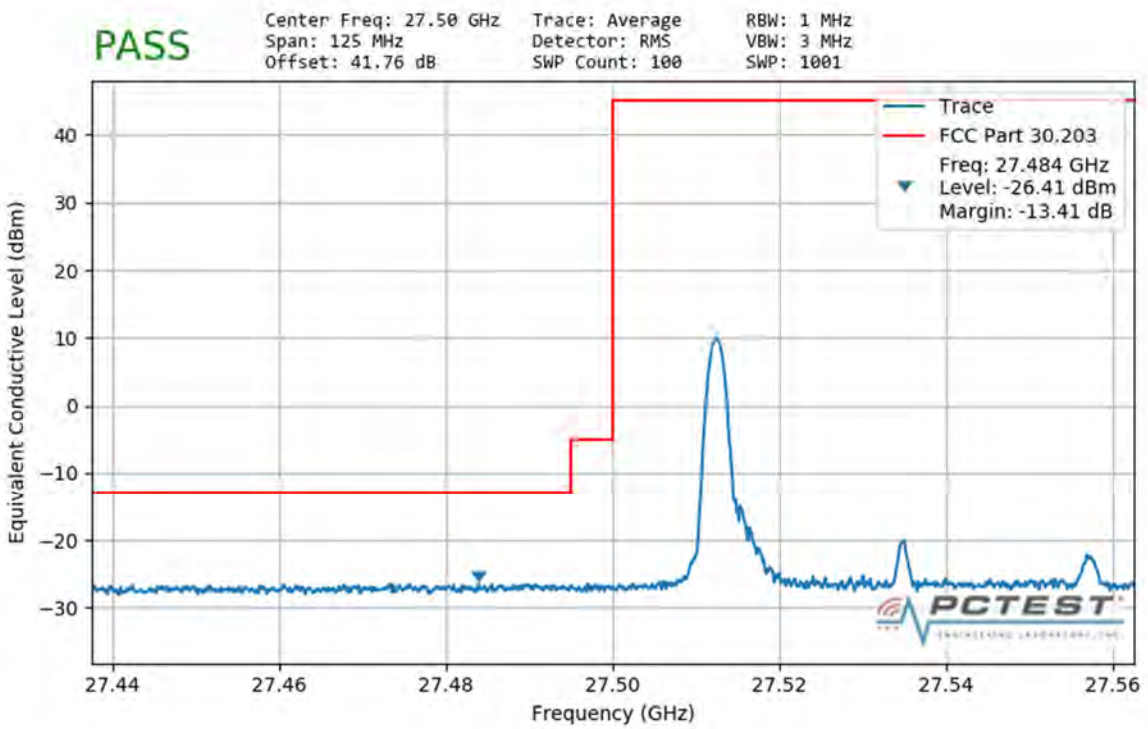
Band n261 - MIMO



Plot 7-217. Ant1 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-218. Ant1 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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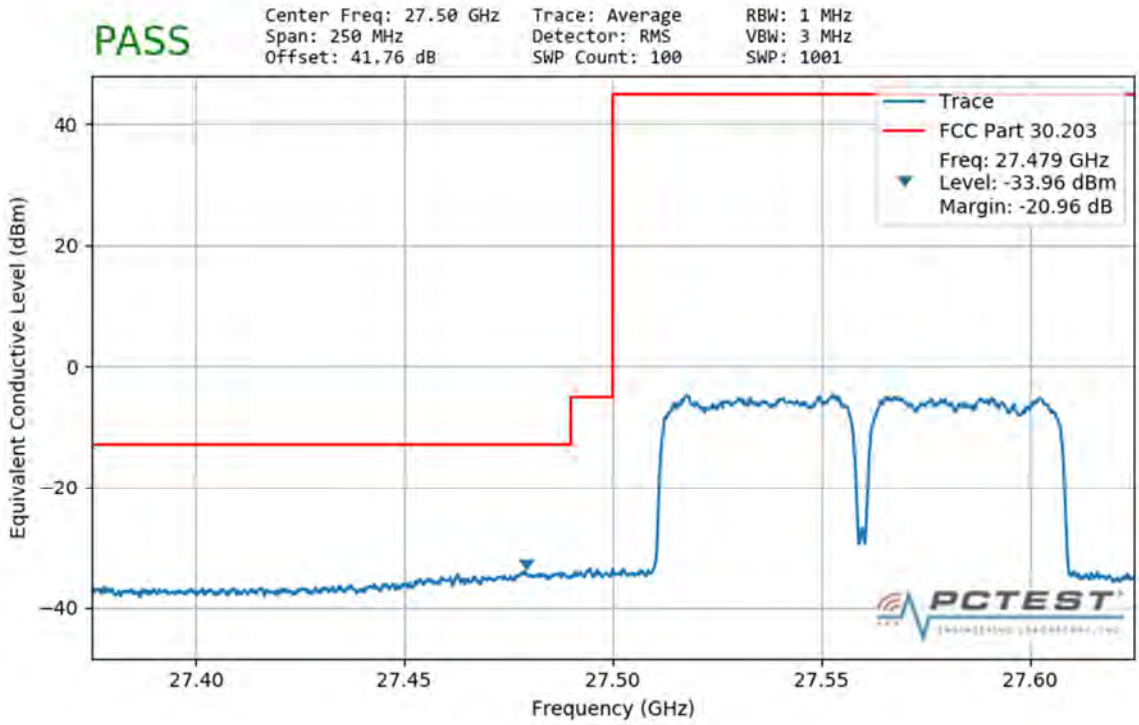
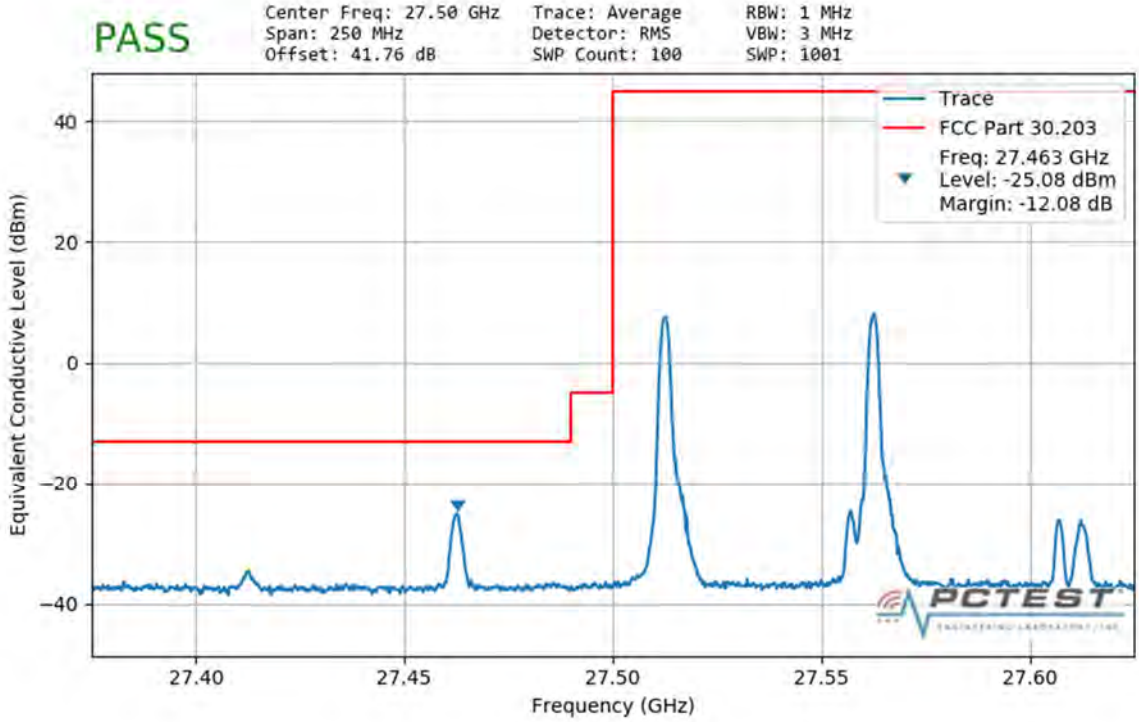


Plot 7-219. Ant1 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-220. Ant1 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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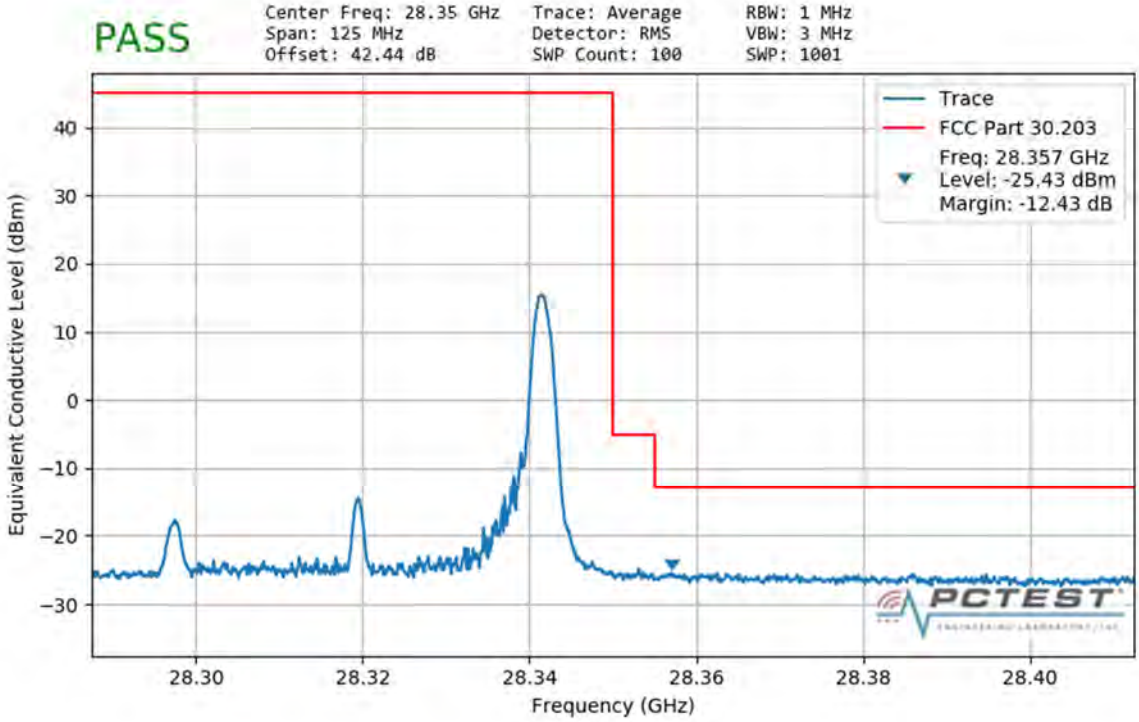
Plot 7-221. Ant1 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-222. Ant1 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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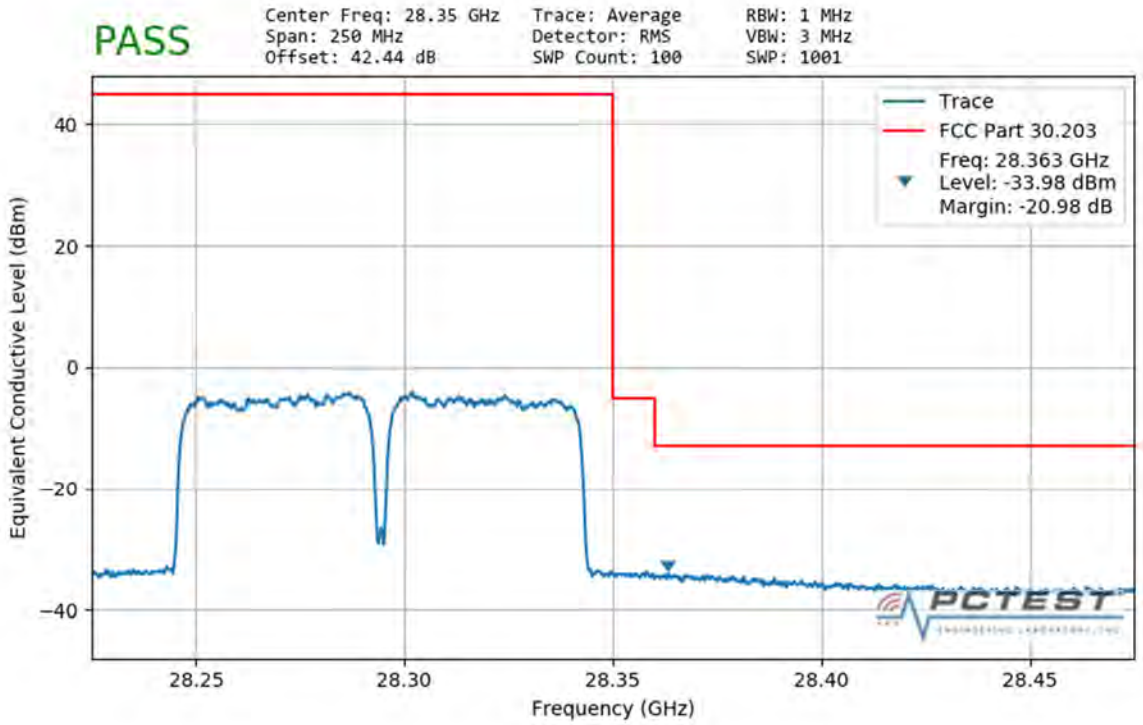
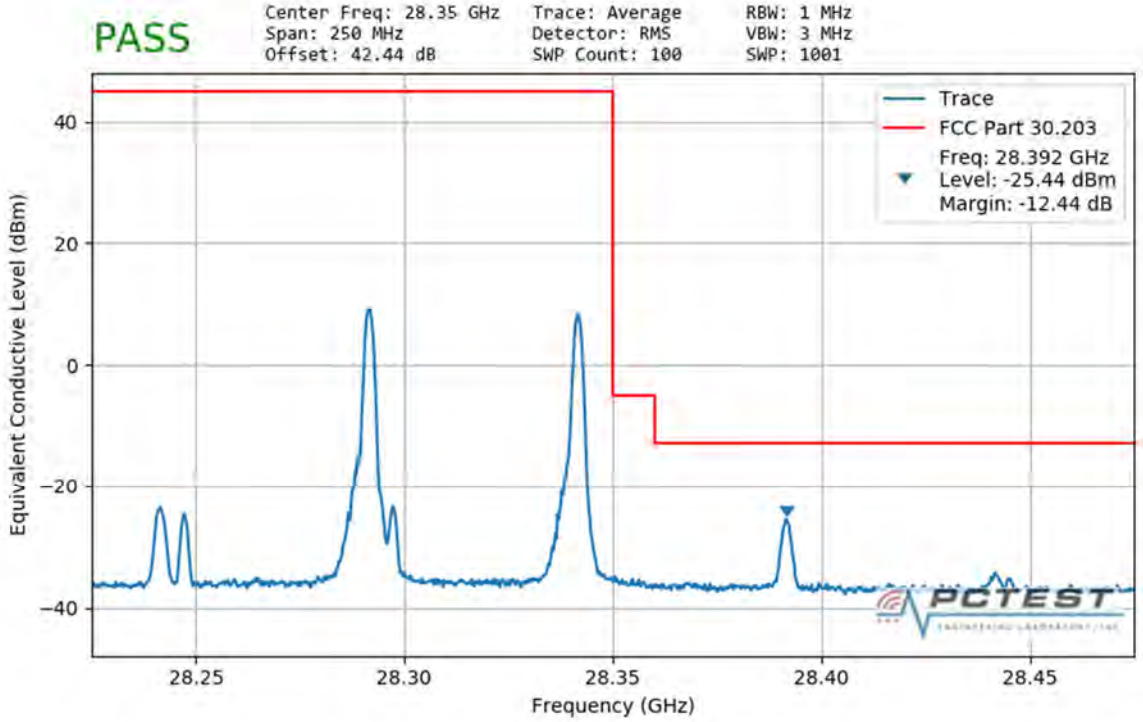


Plot 7-223. Ant1 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-224. Ant1 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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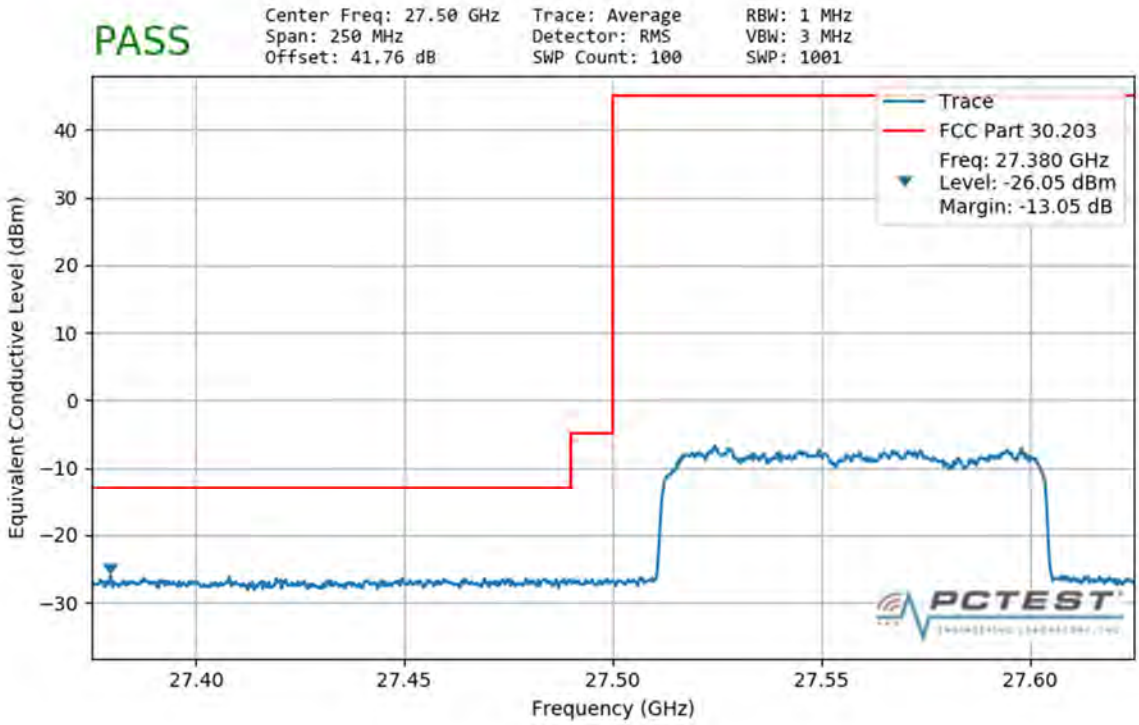
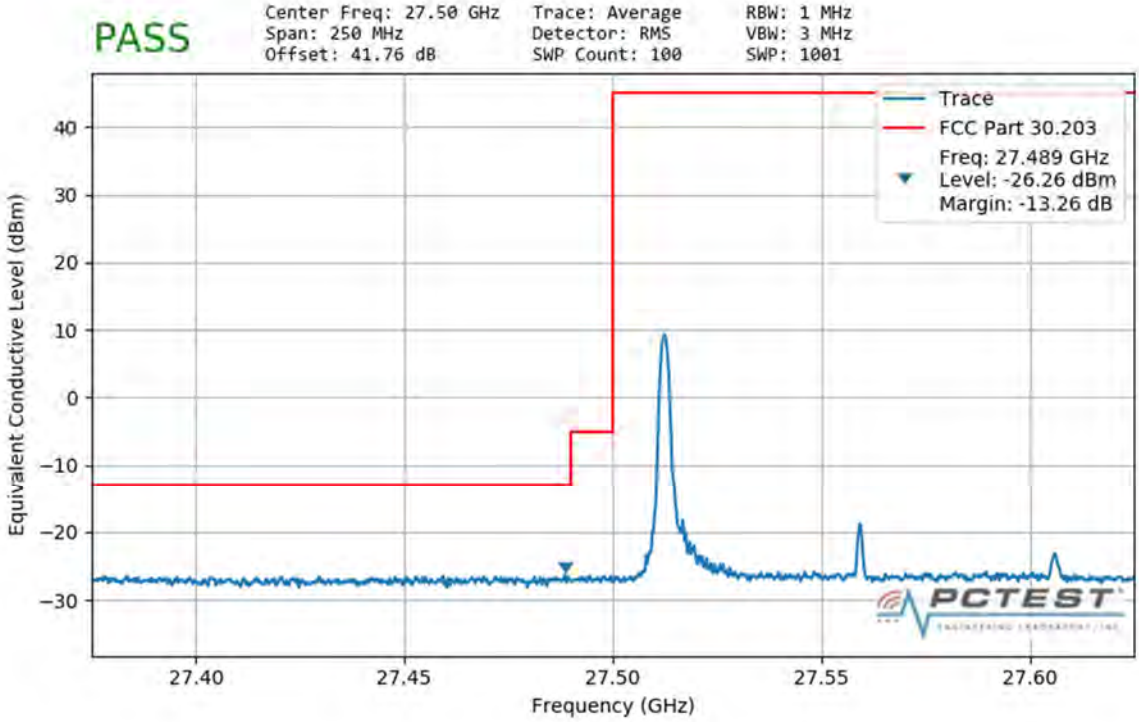


Plot 7-225. Ant1 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-226. Ant1 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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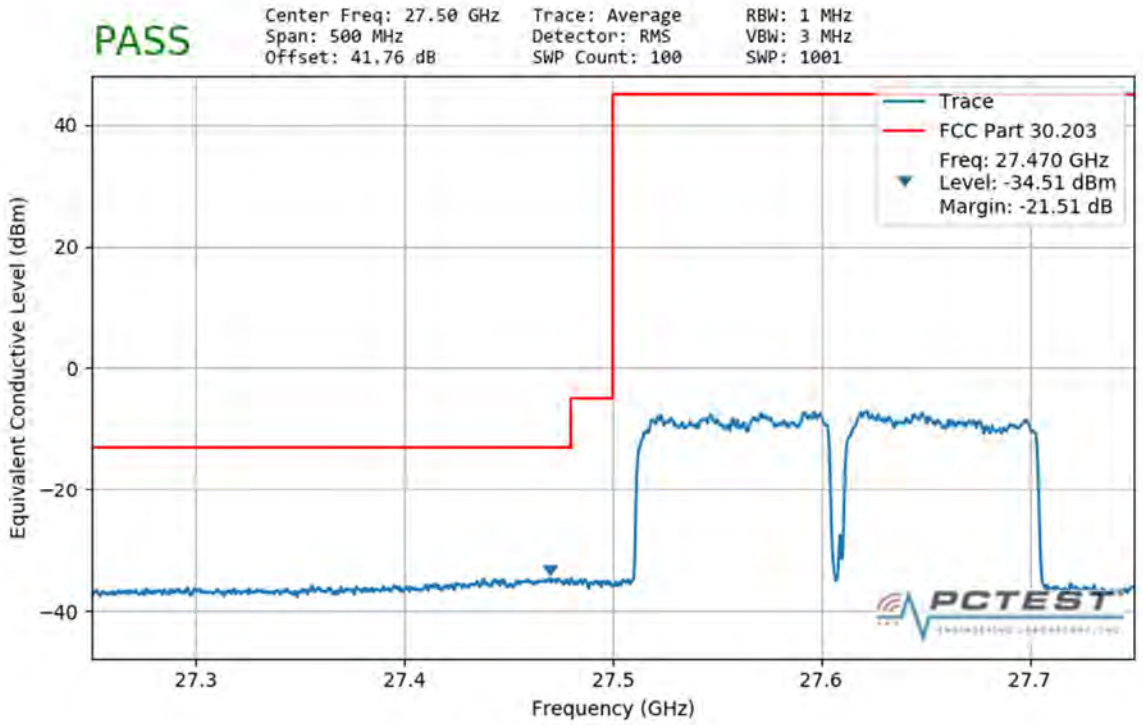
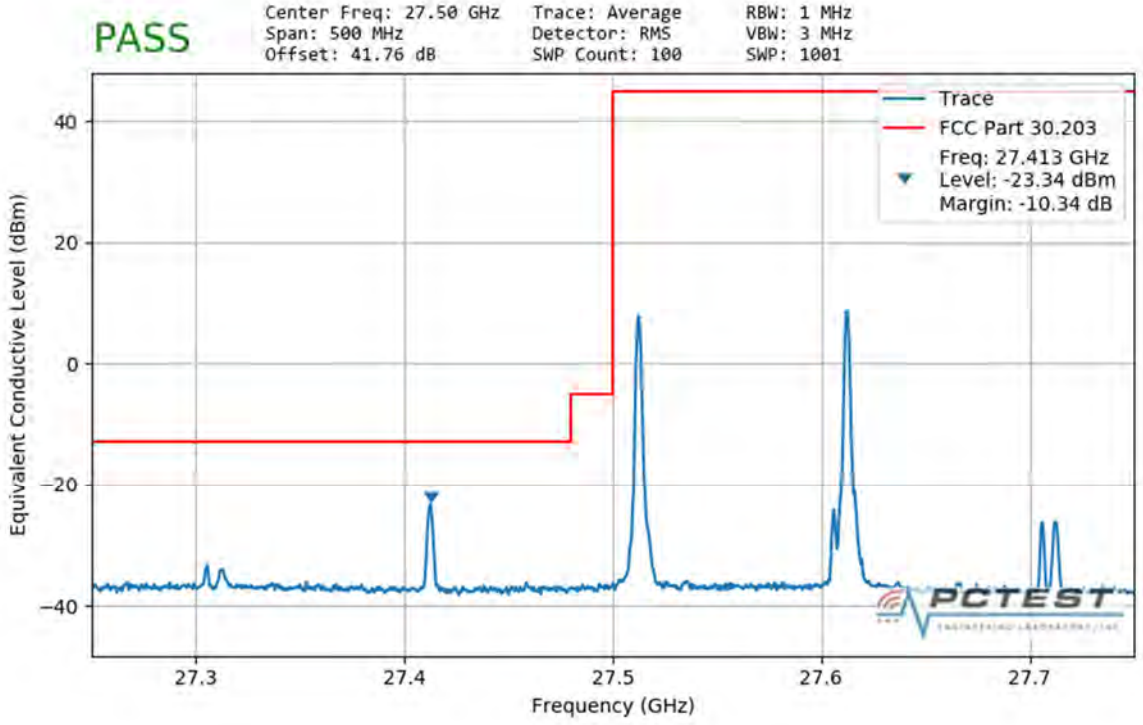


Plot 7-227. Ant1 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-228. Ant1 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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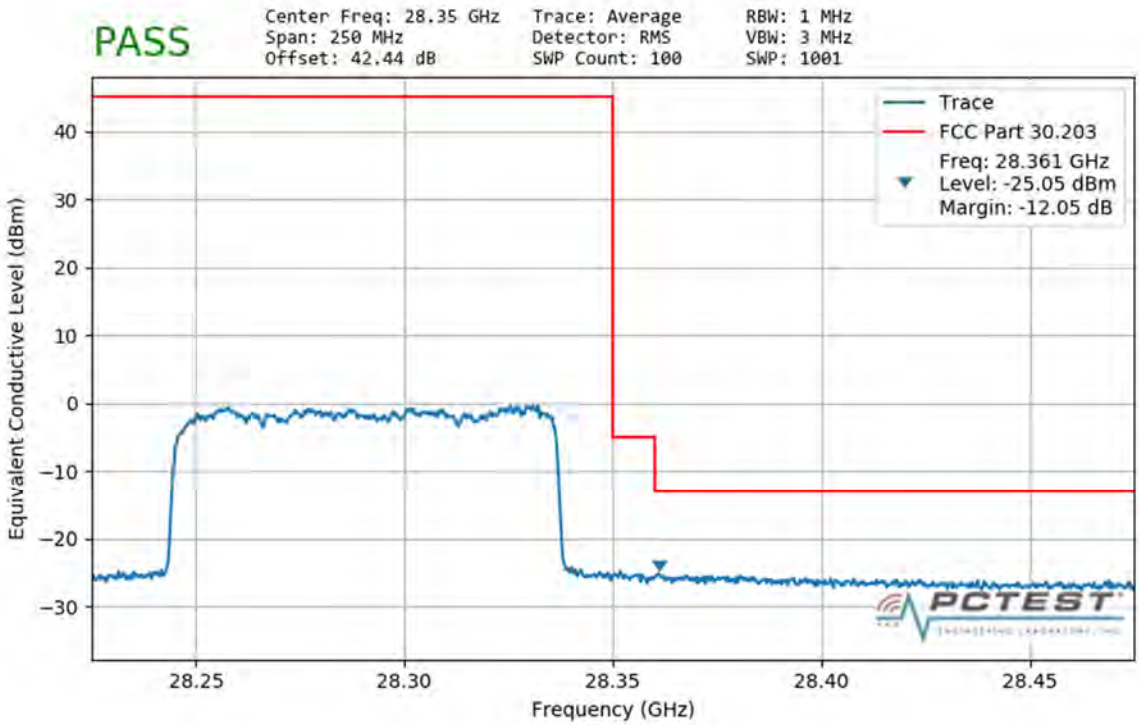
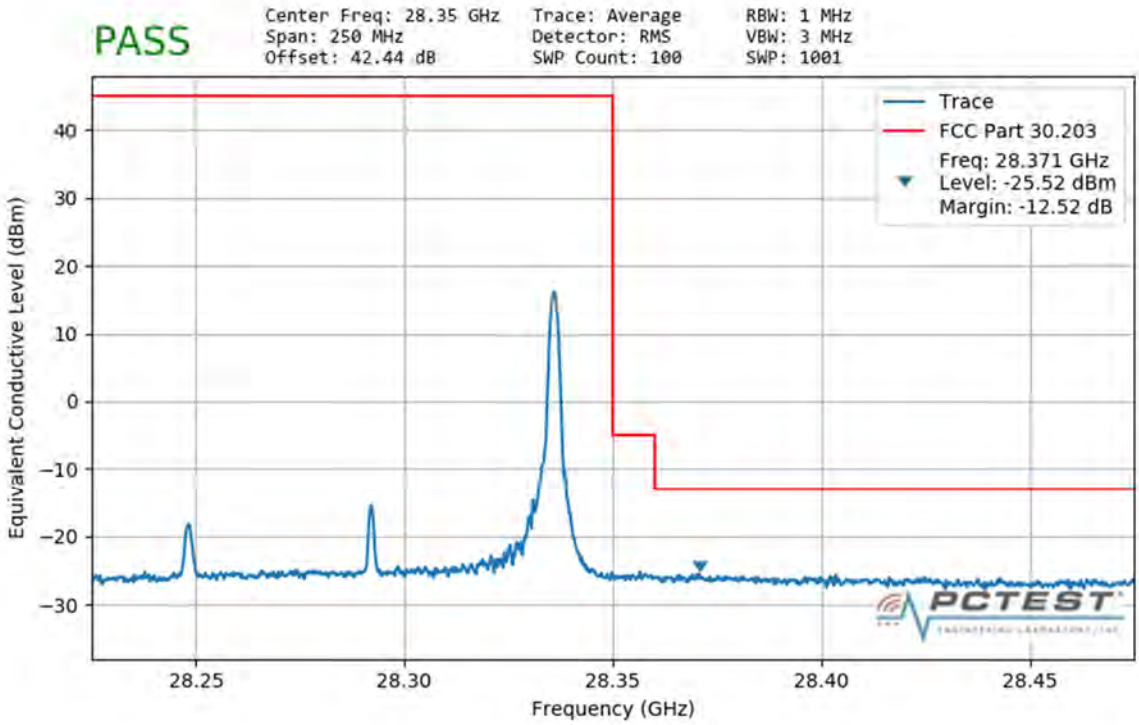


Plot 7-229. Ant1 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-230. Ant1 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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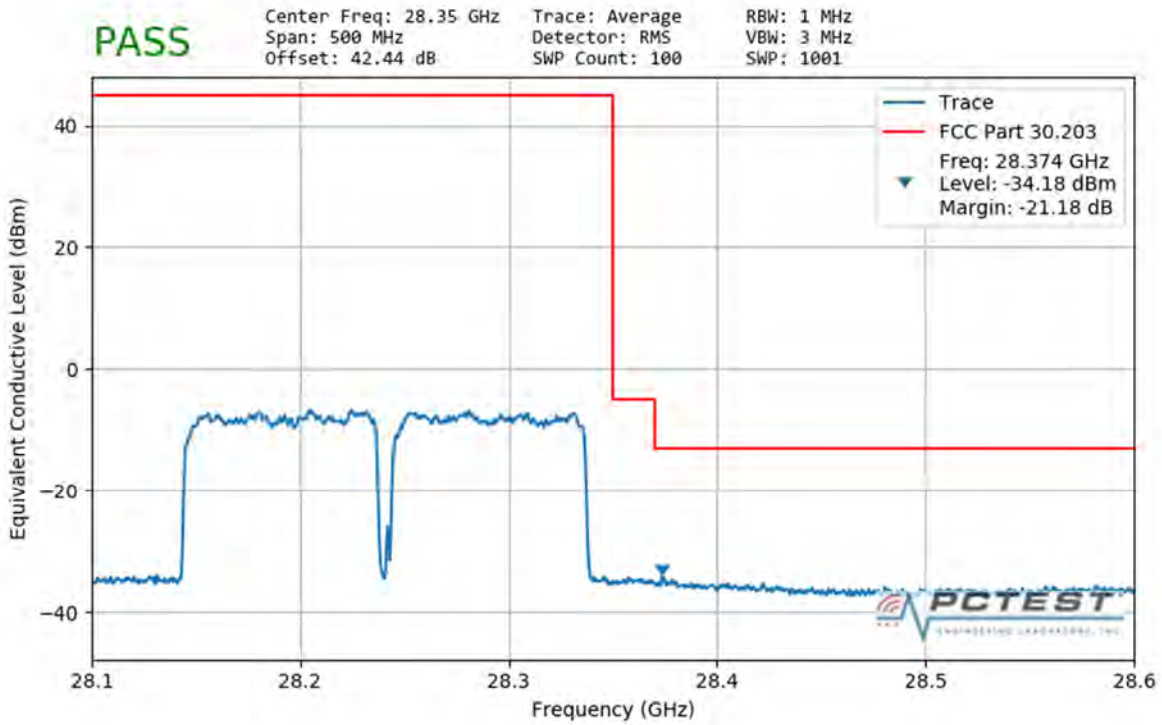
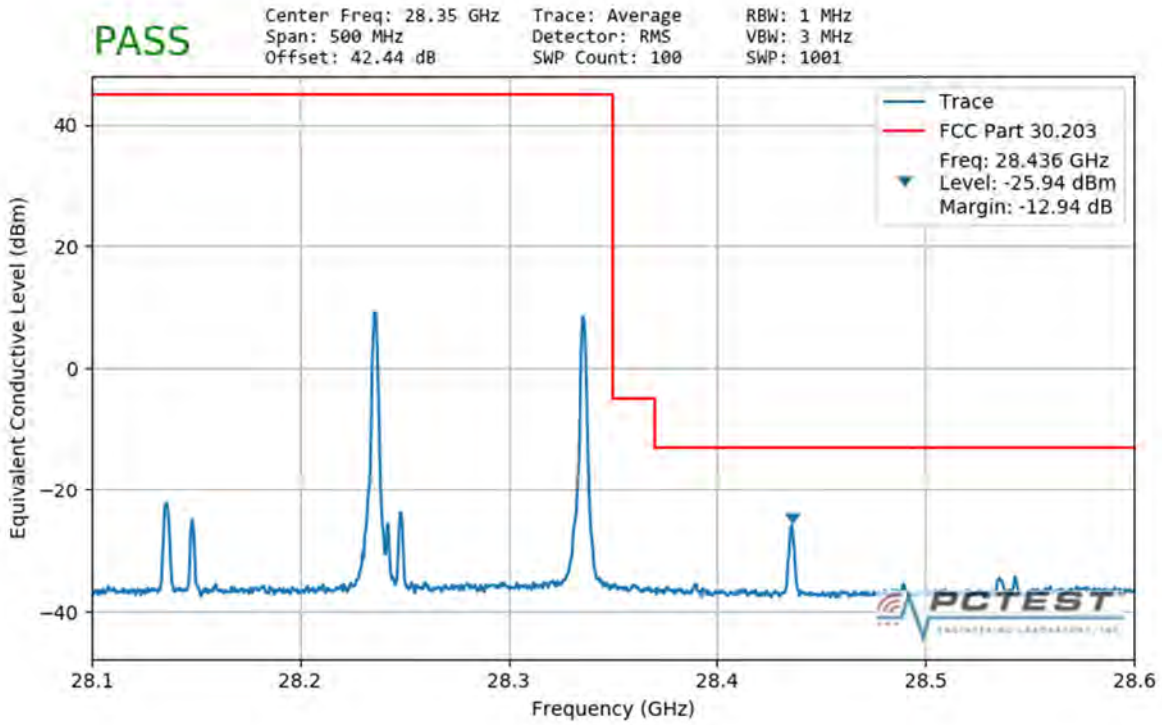


Plot 7-231. Ant1 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-232. Ant1 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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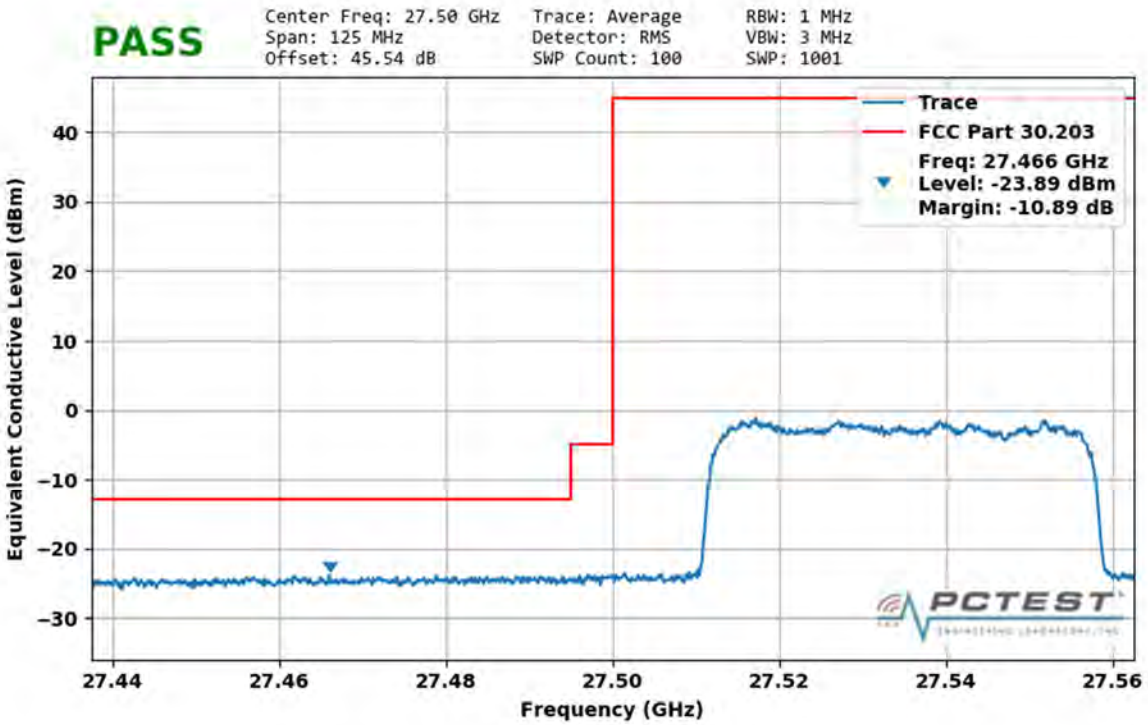
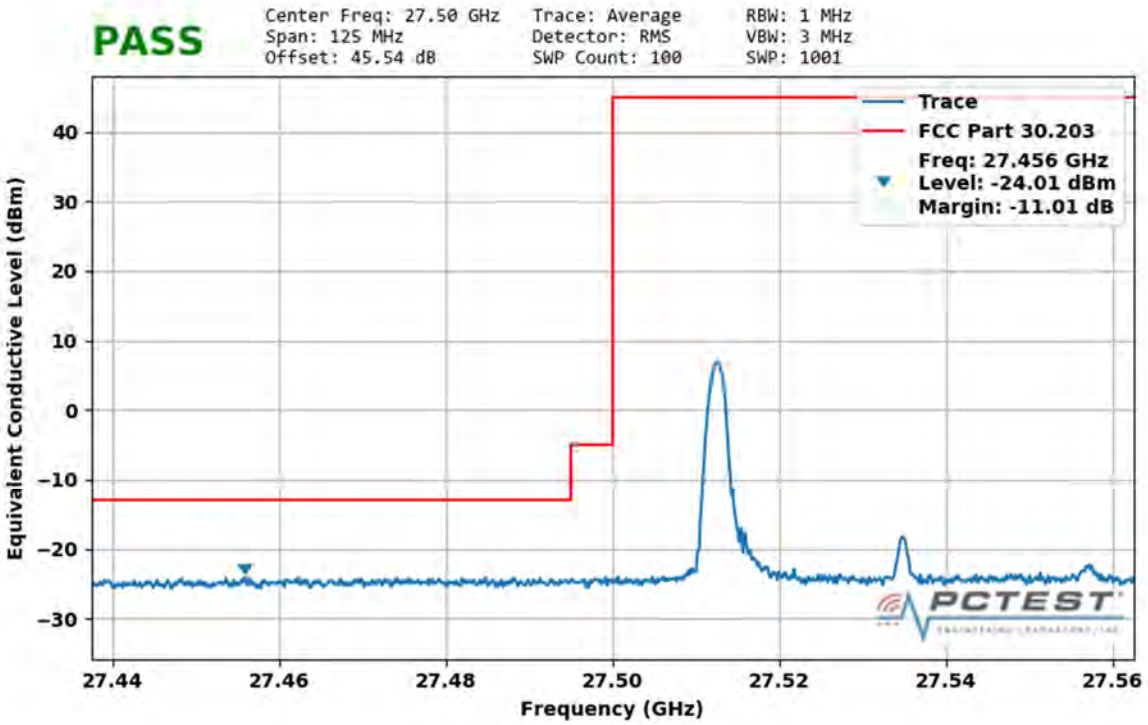


Plot 7-233. Ant2 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-234. Ant2 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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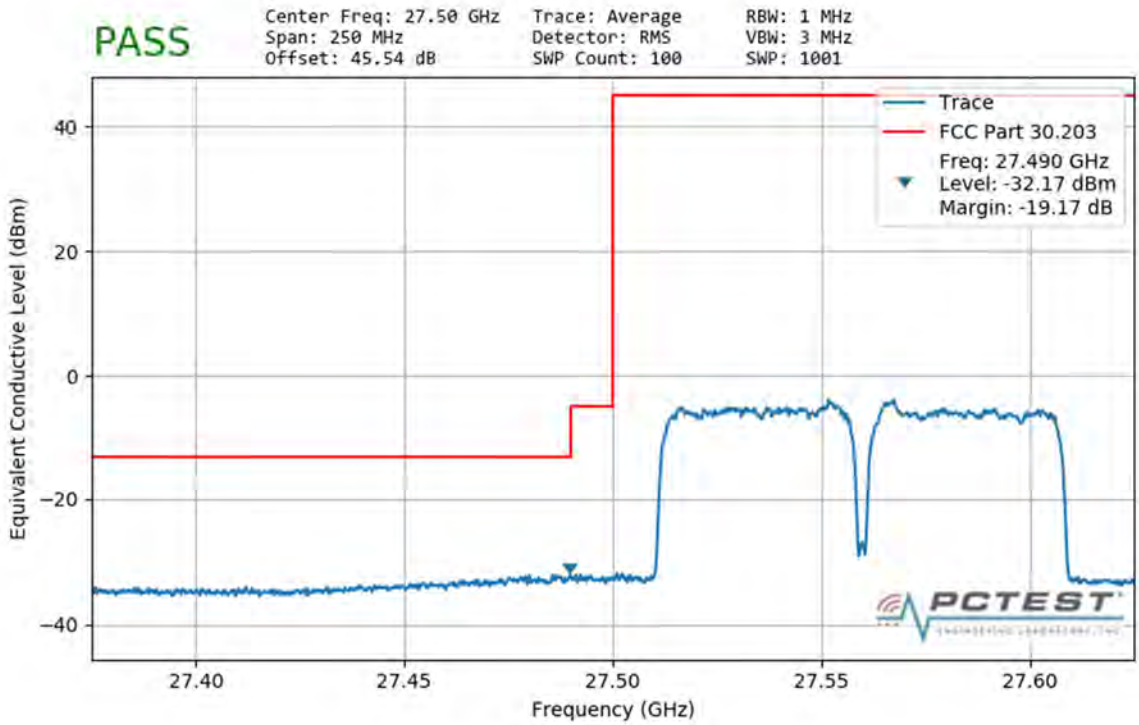
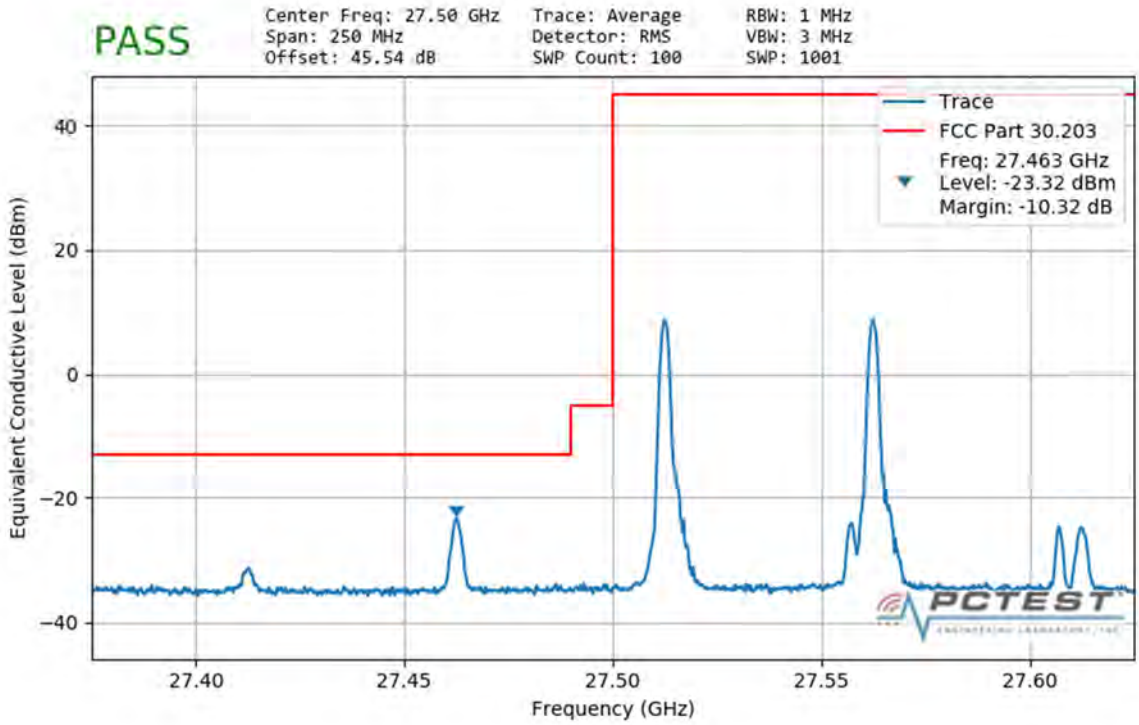


Plot 7-235. Ant2 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-236. Ant2 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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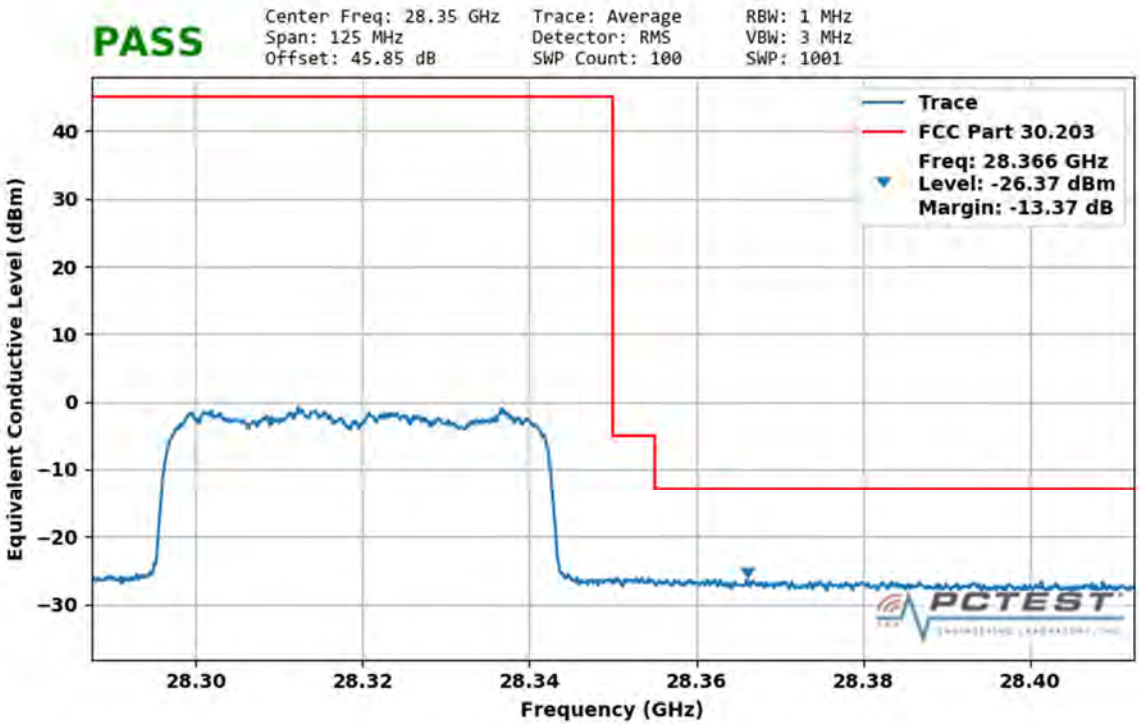
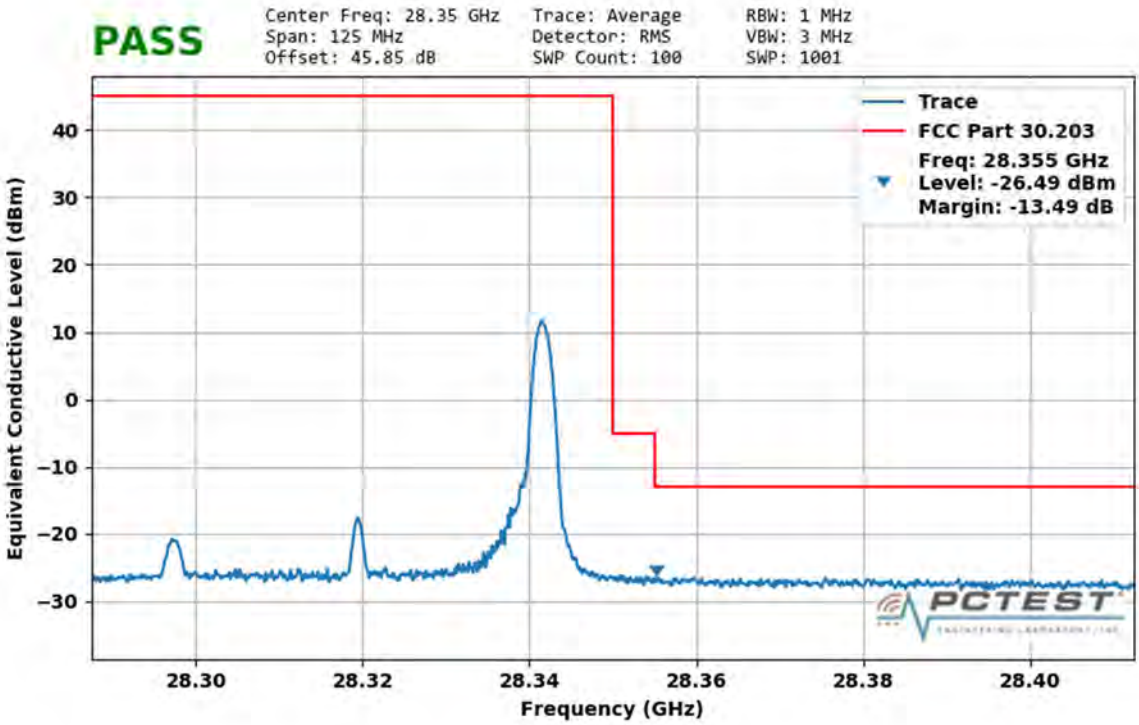


Plot 7-237. Ant2 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-238. Ant2 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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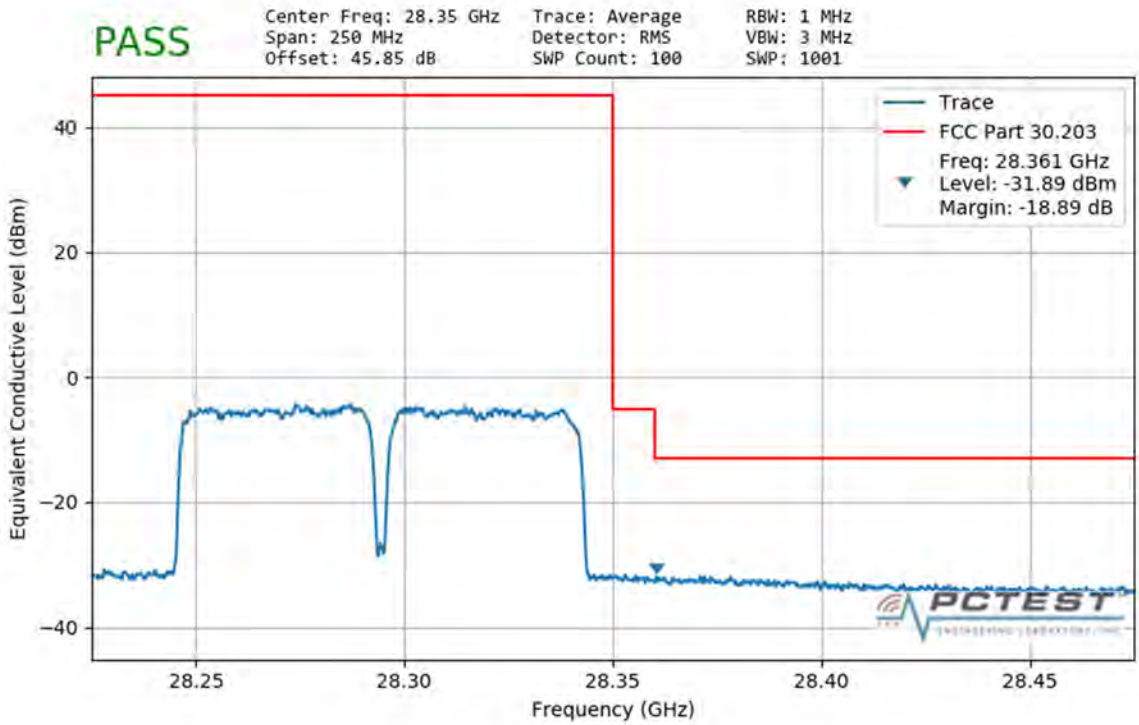
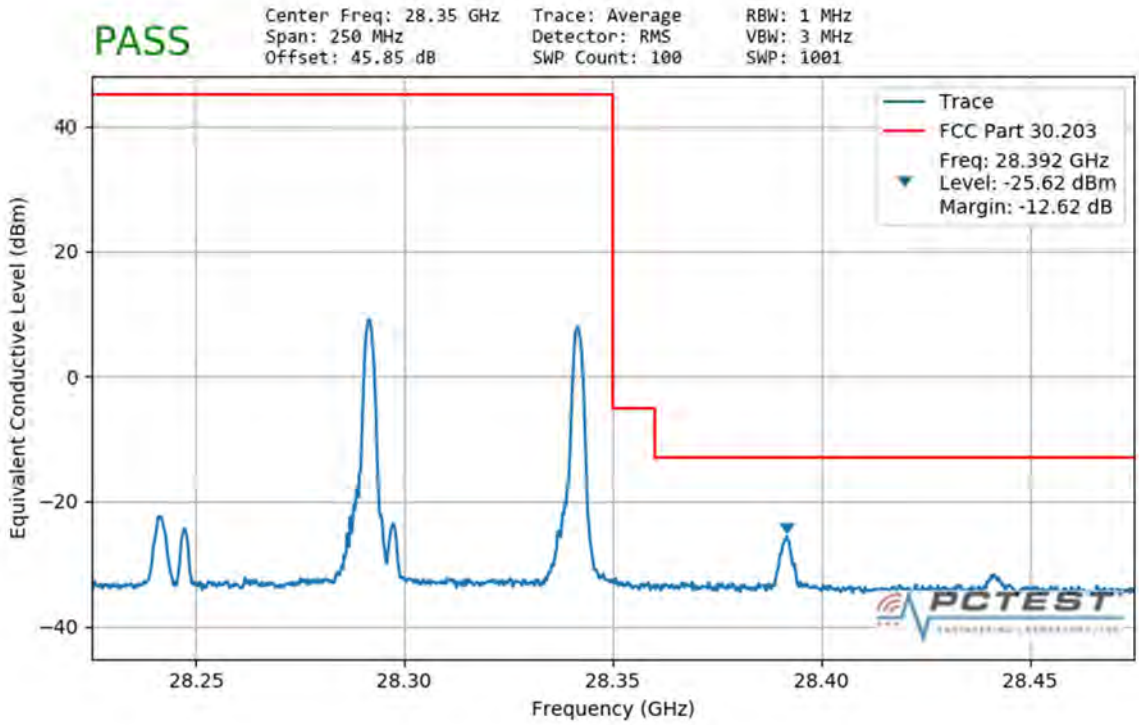


Plot 7-239. Ant2 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-240. Ant2 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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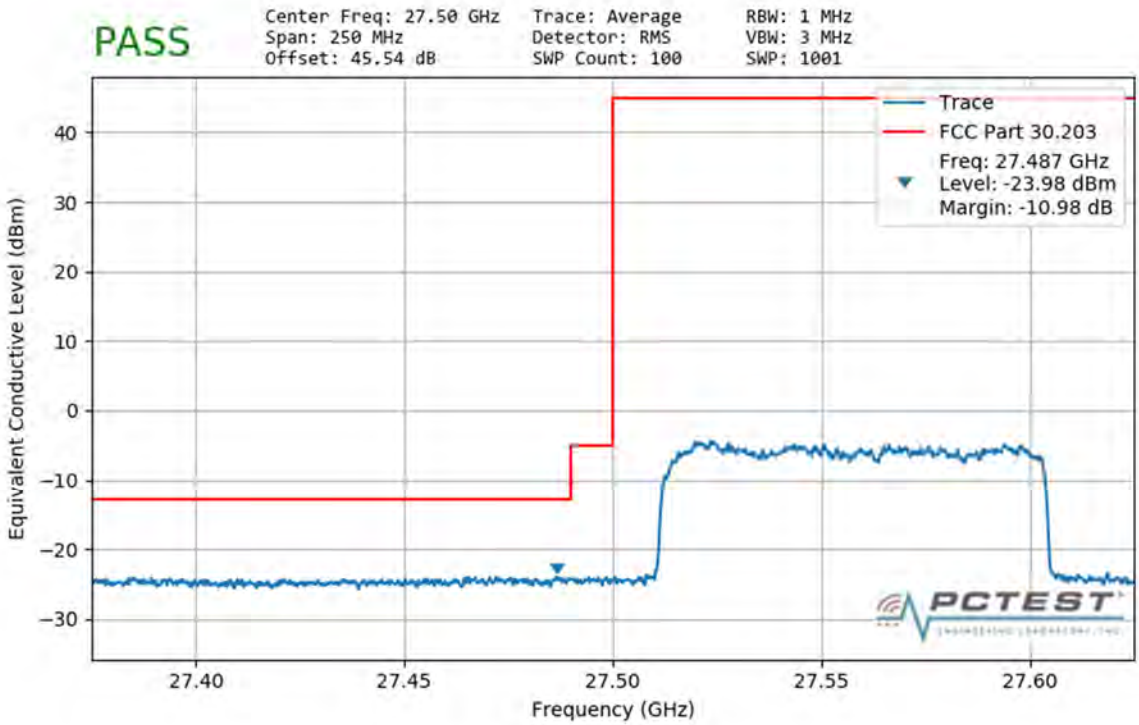
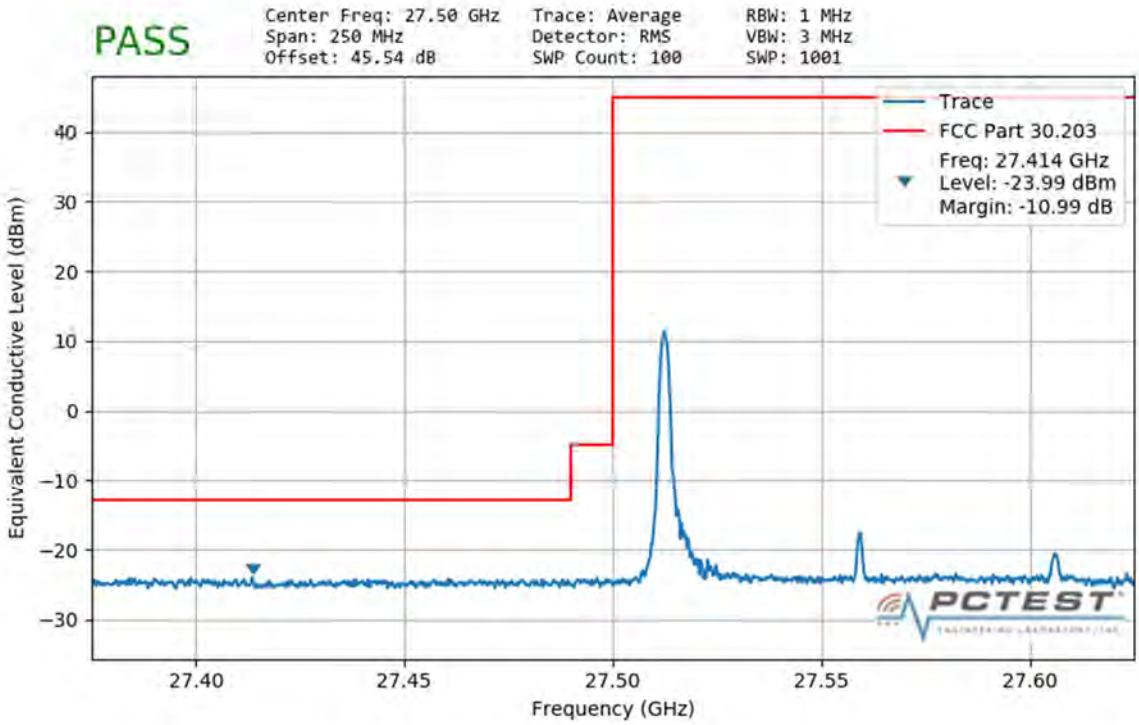


Plot 7-241. Ant2 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-242. Ant2 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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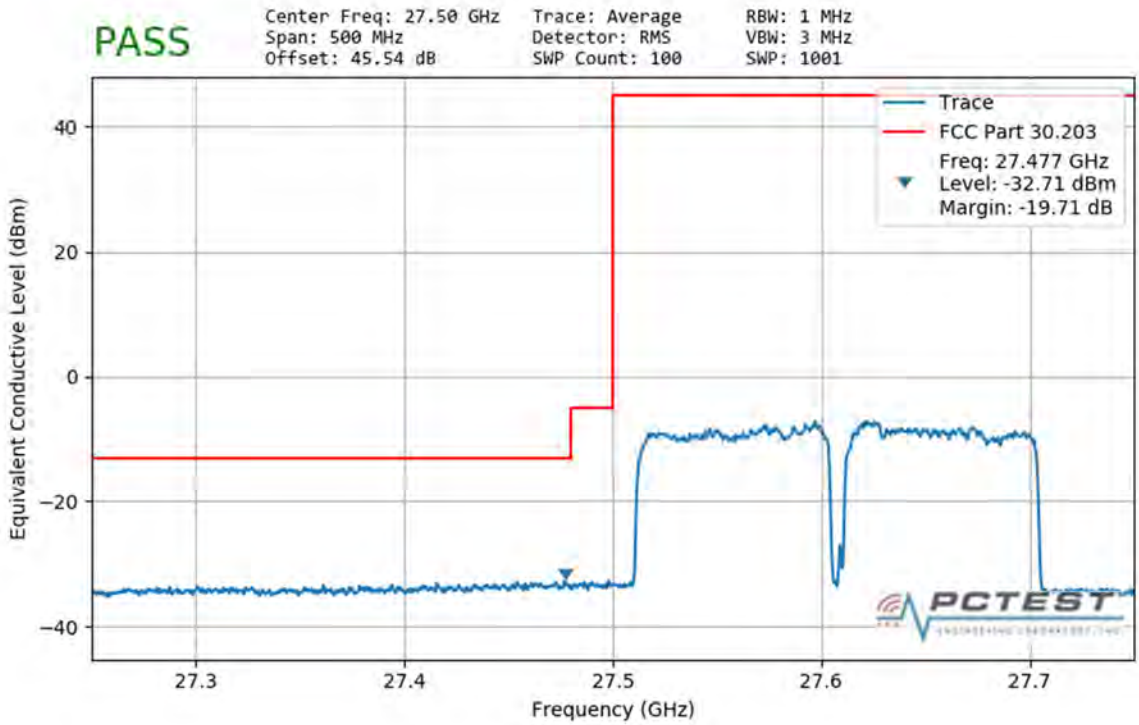
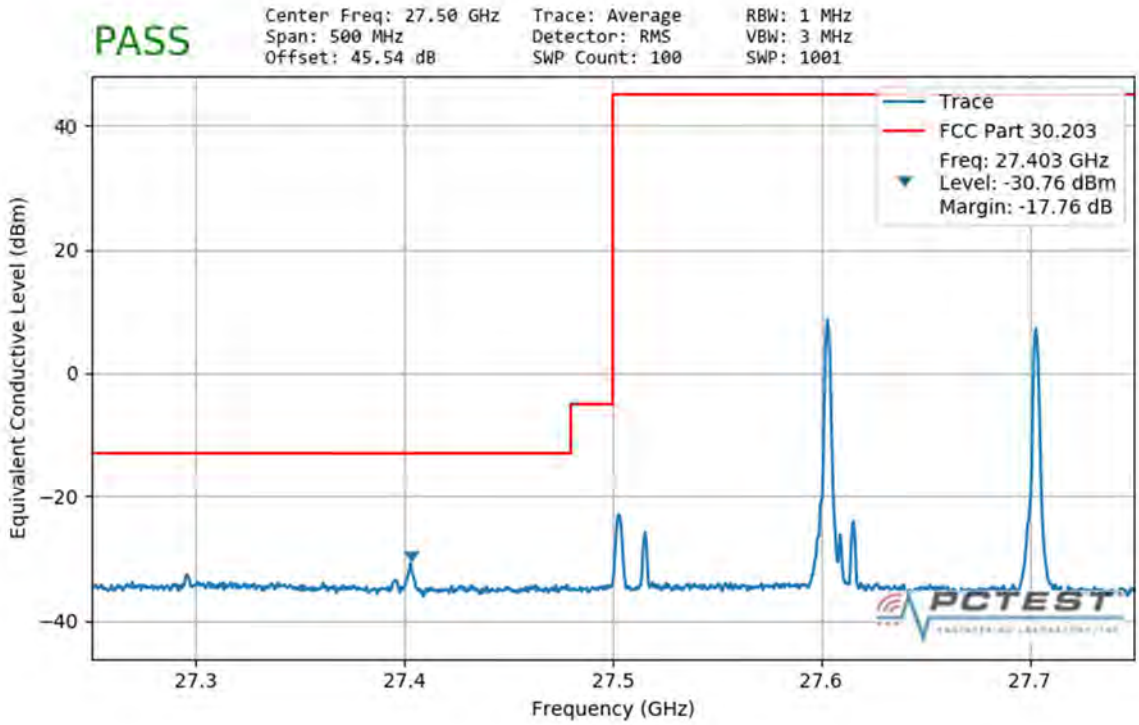


Plot 7-243. Ant2 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-244. Ant2 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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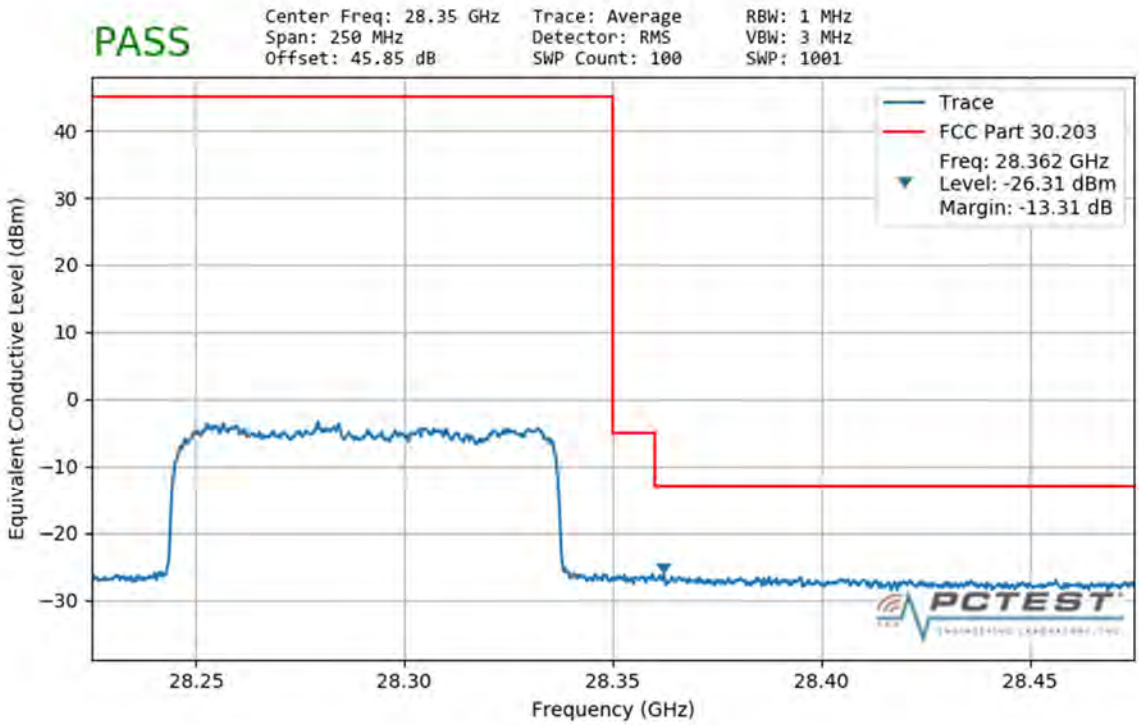
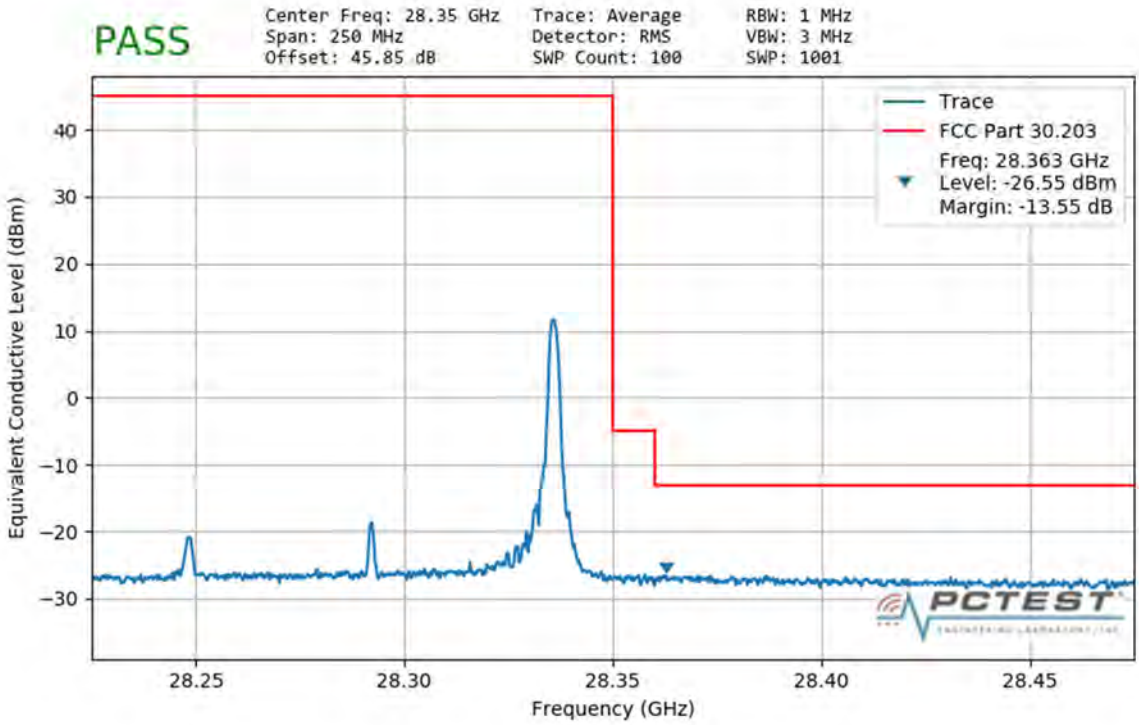


Plot 7-245. Ant2 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-246. Ant2 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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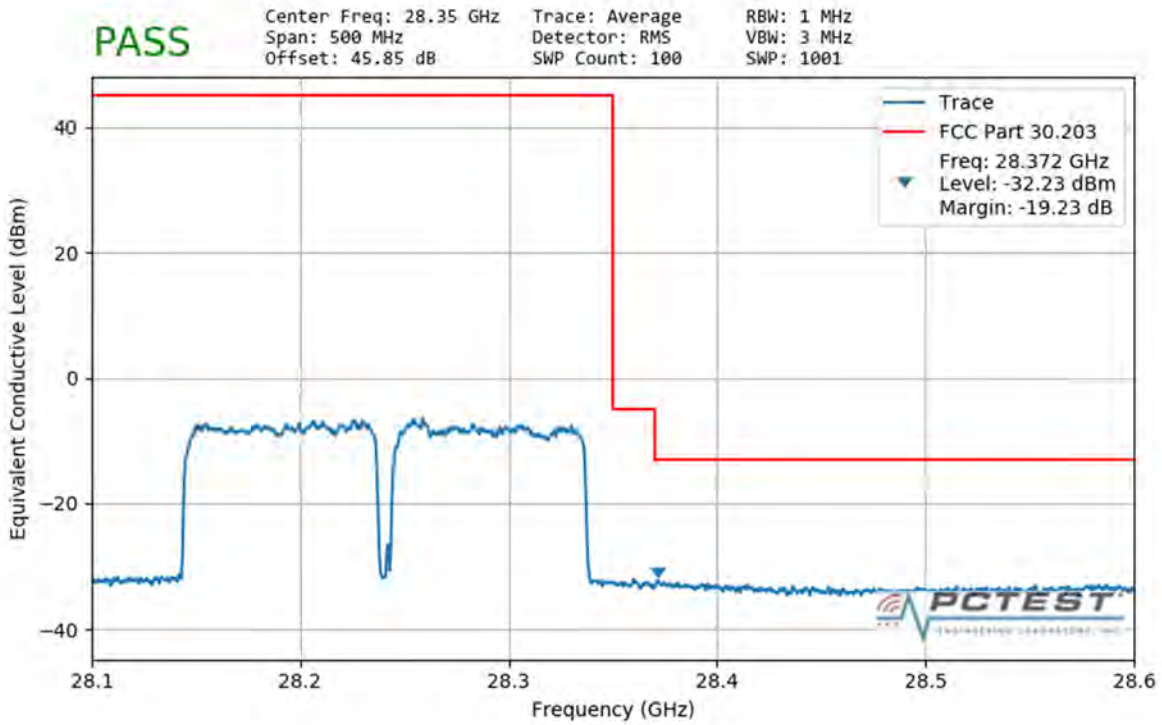
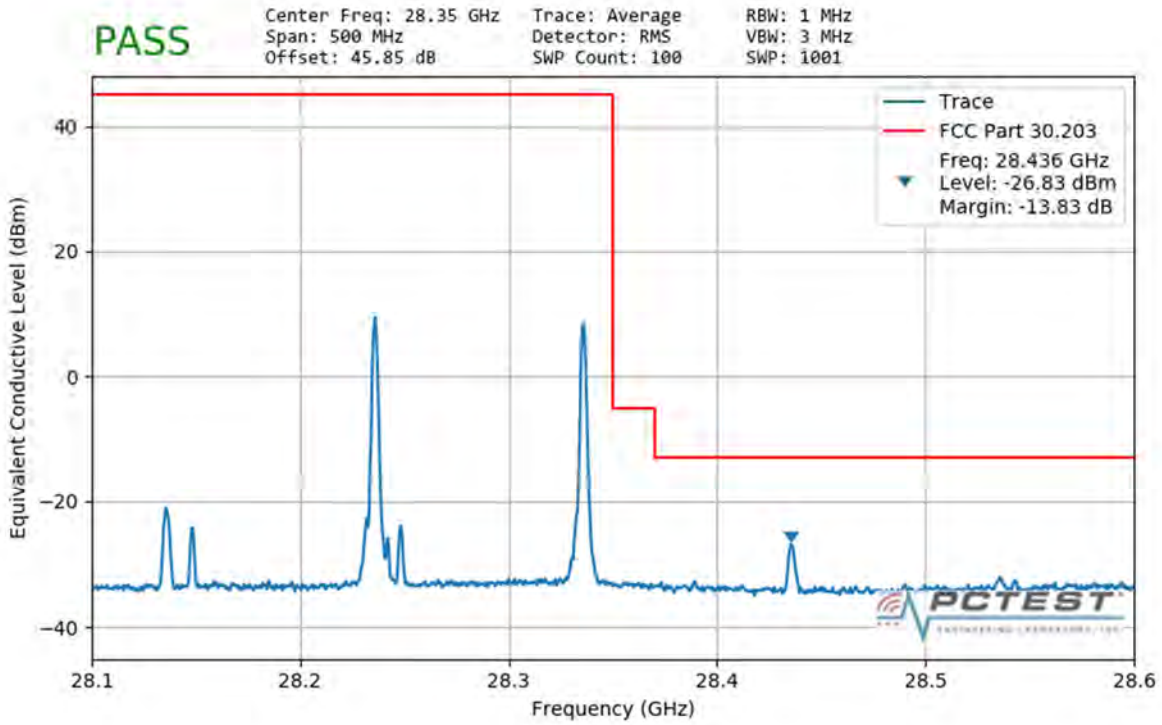


Plot 7-247. Ant2 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-248. Ant2 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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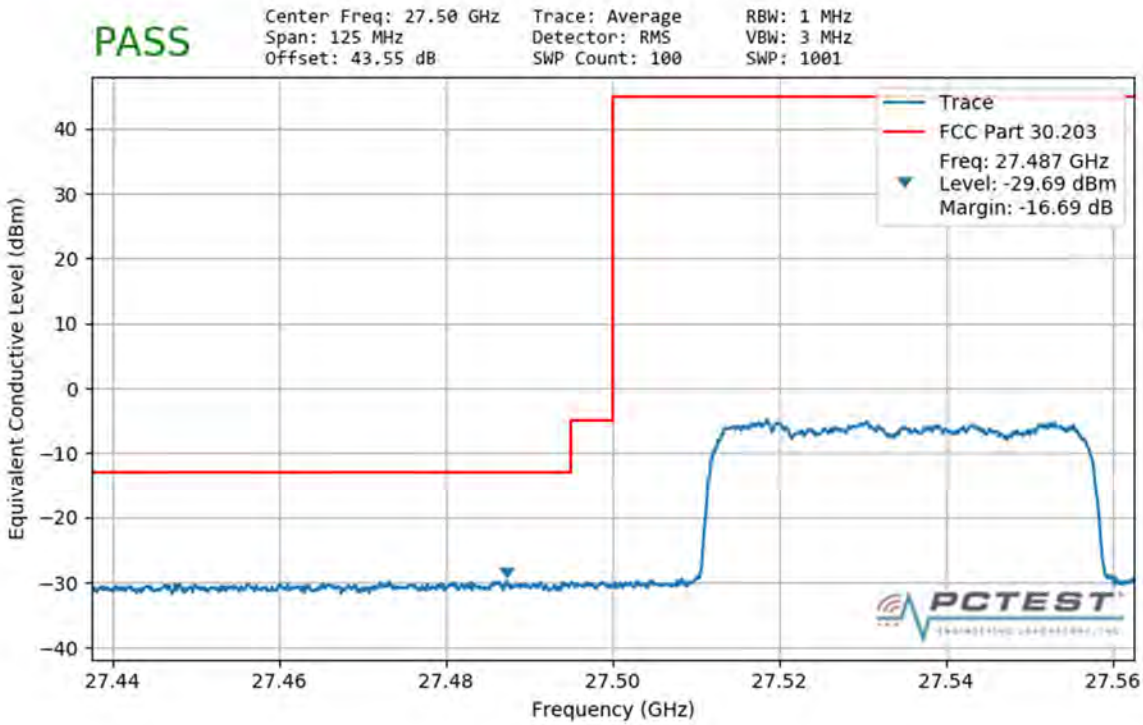
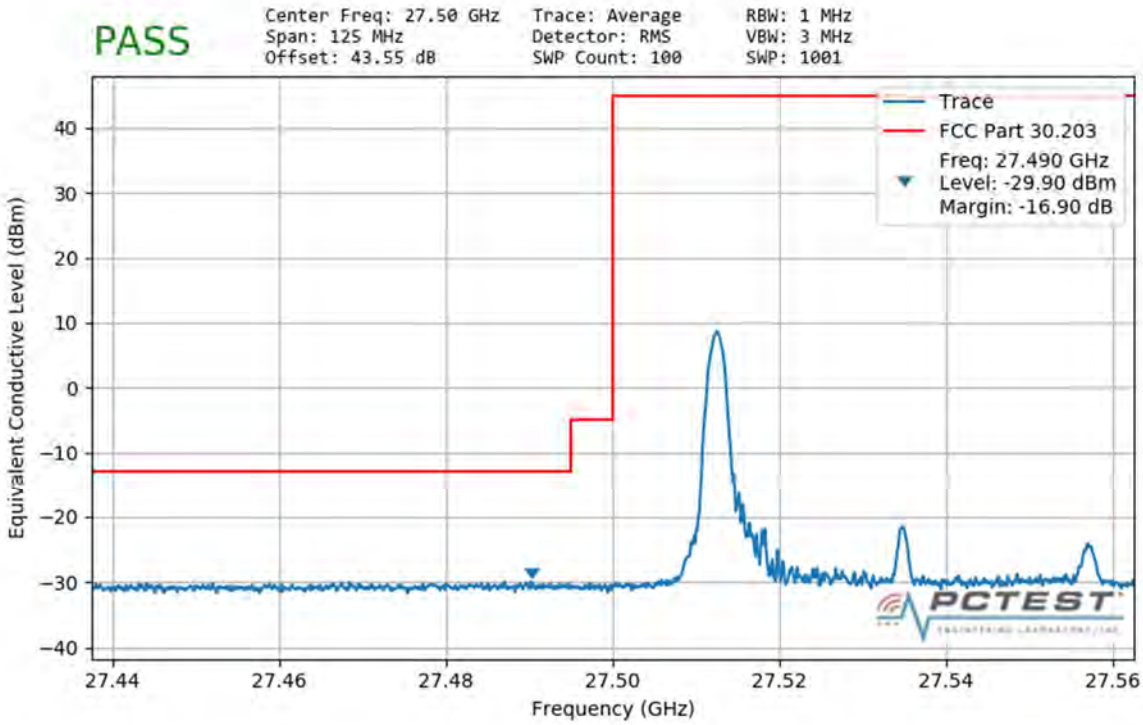


Plot 7-249. Ant3 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-250. Ant3 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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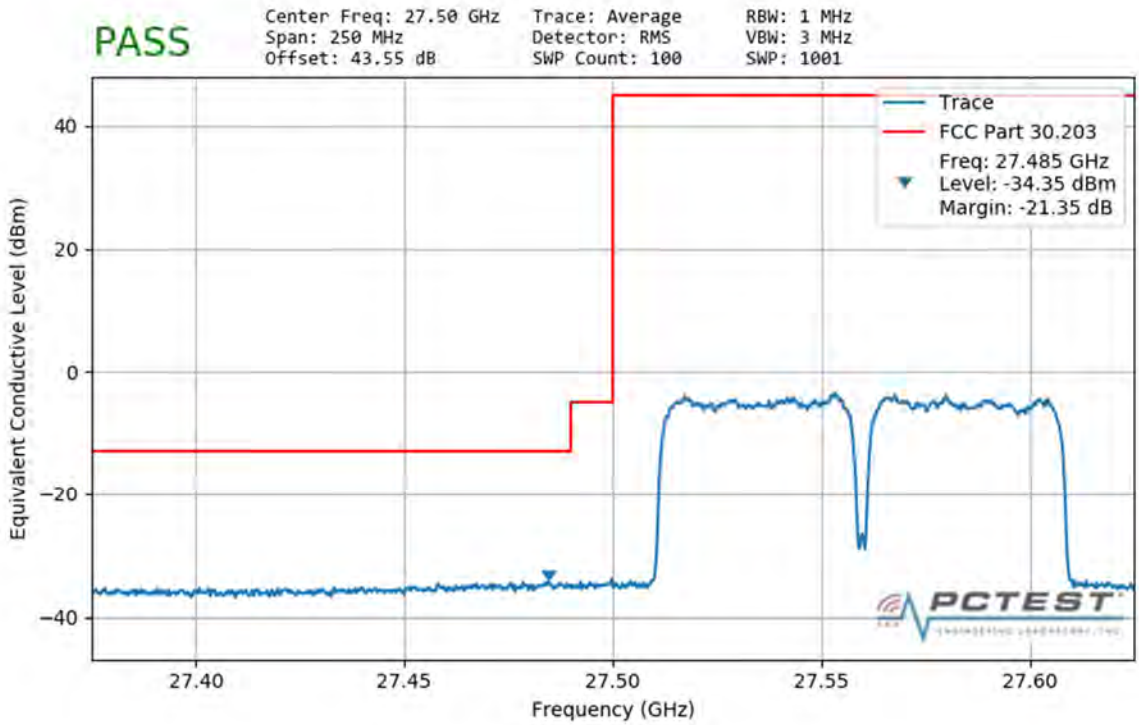
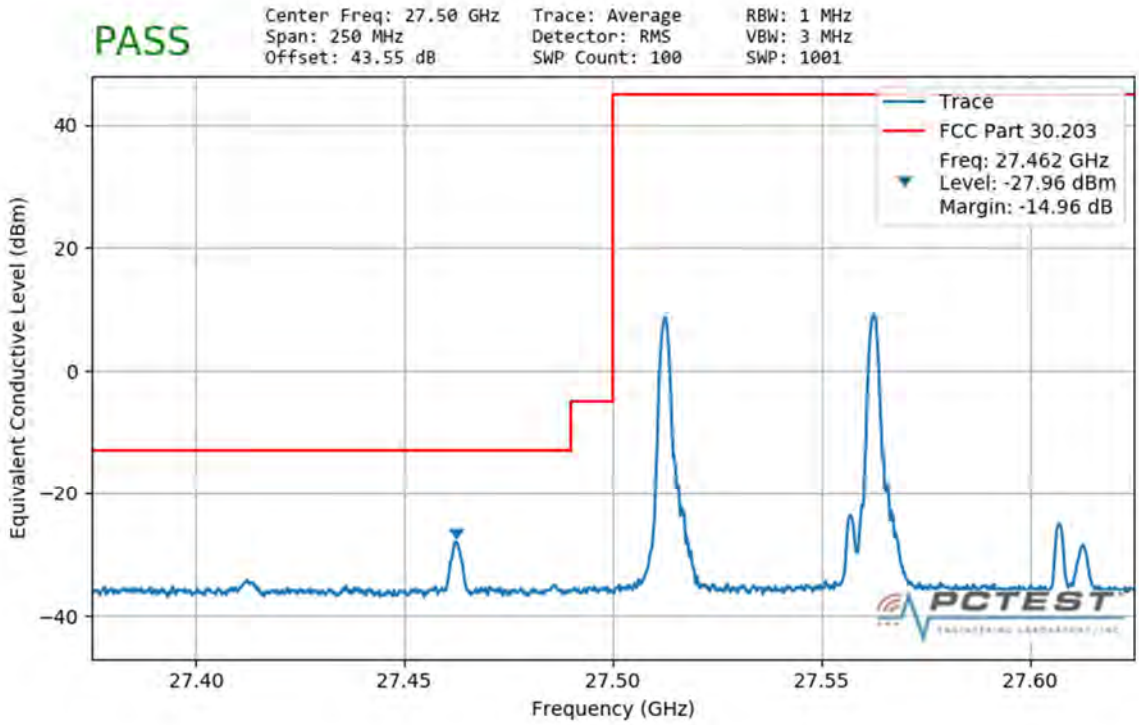


Plot 7-251. Ant3 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-252. Ant3 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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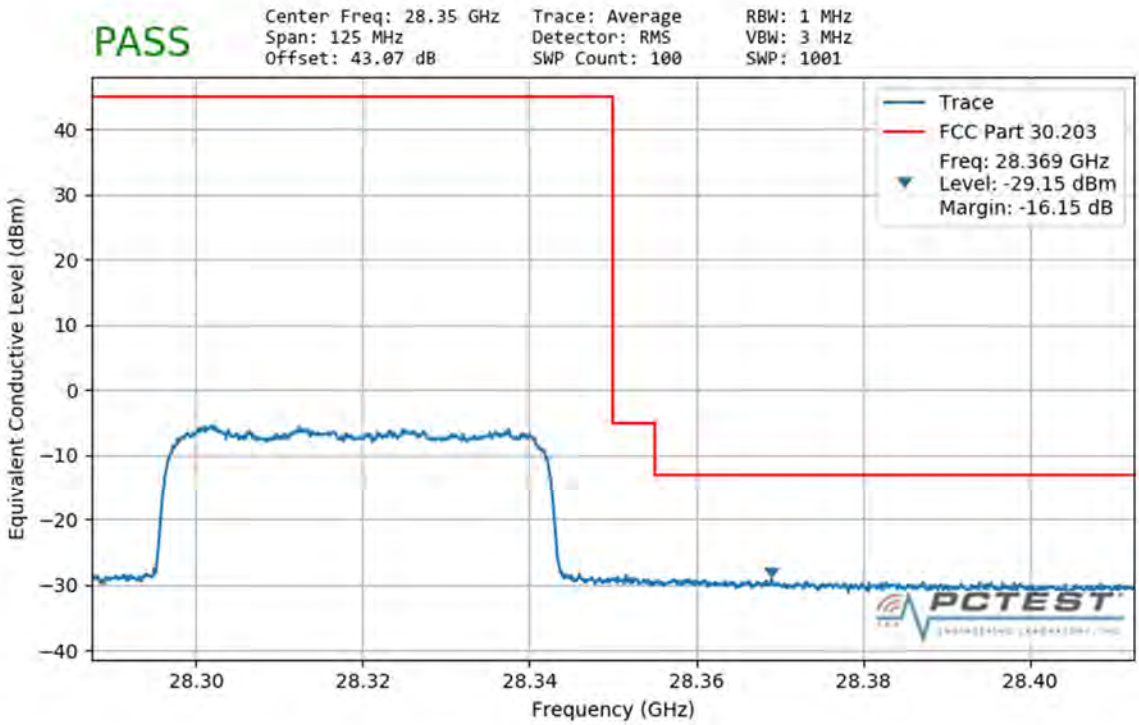
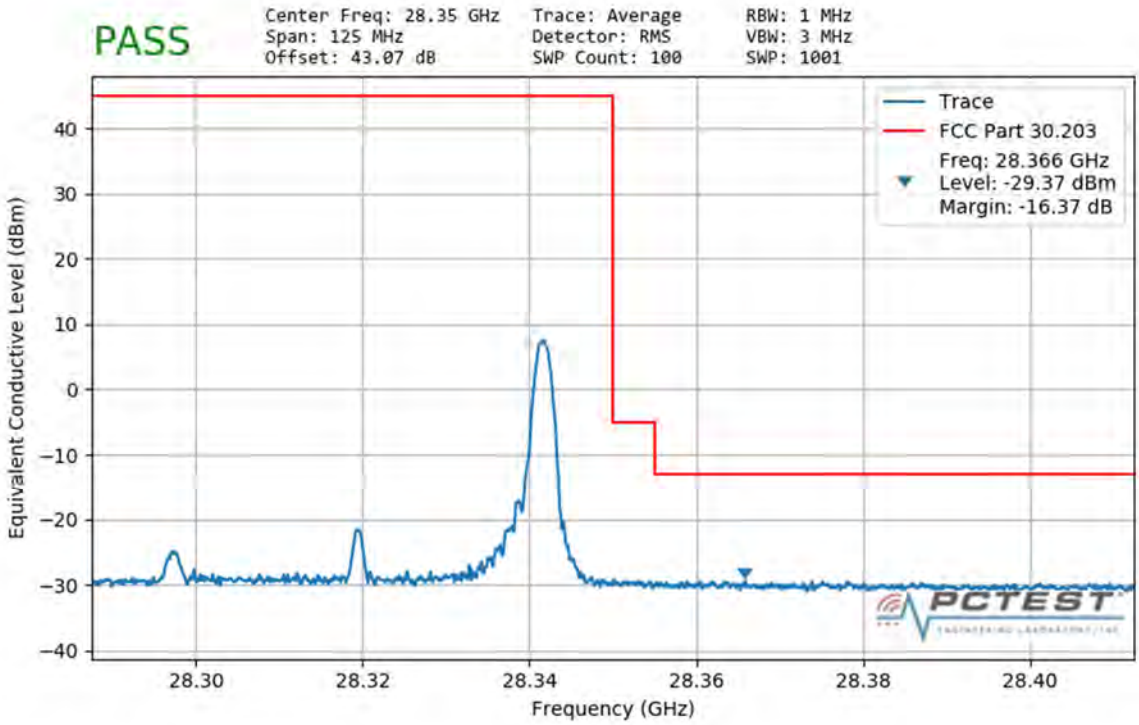


Plot 7-253. Ant3 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-254. Ant3 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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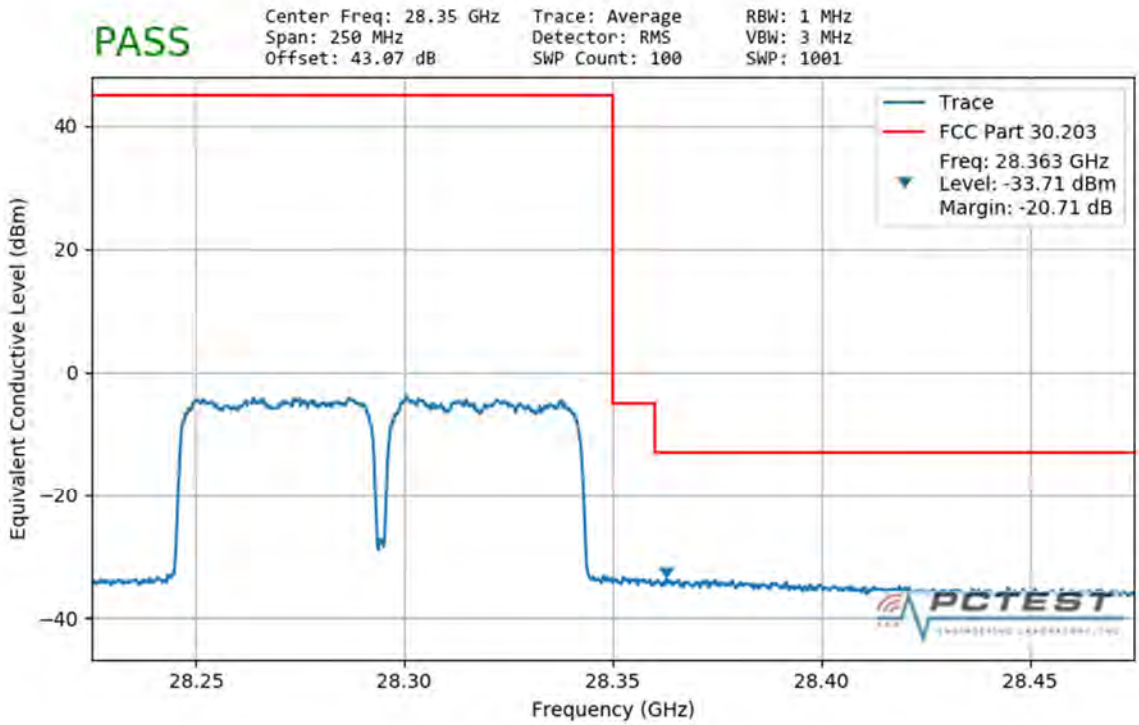
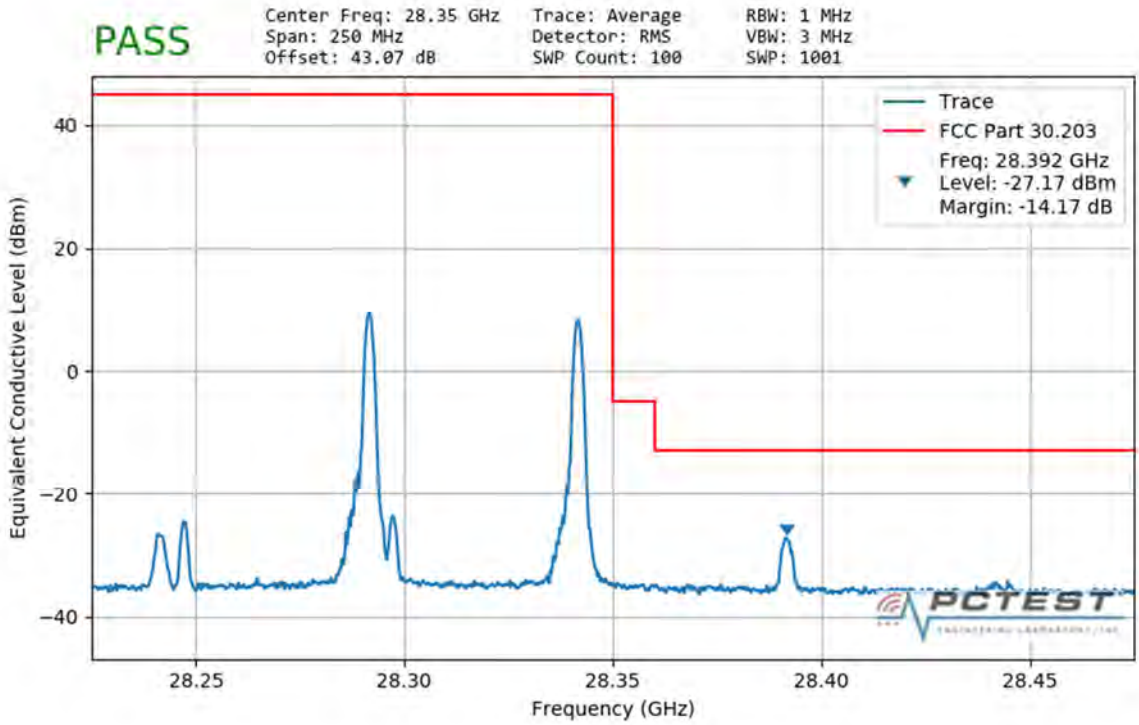


Plot 7-255. Ant3 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-256. Ant3 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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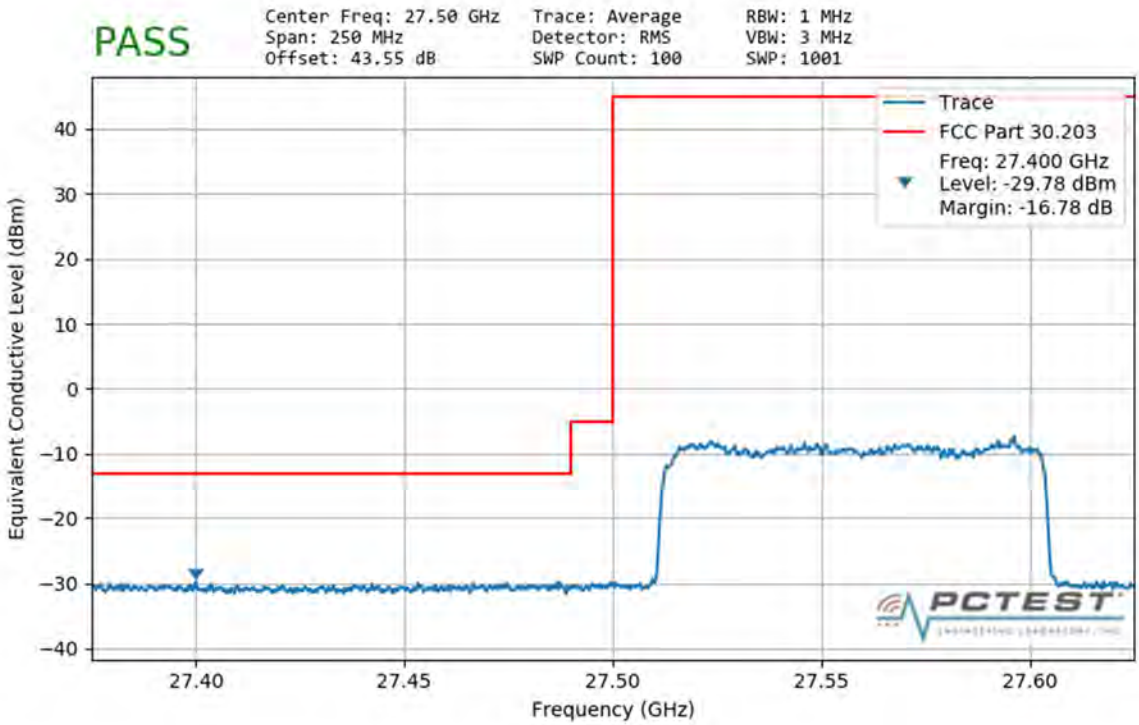
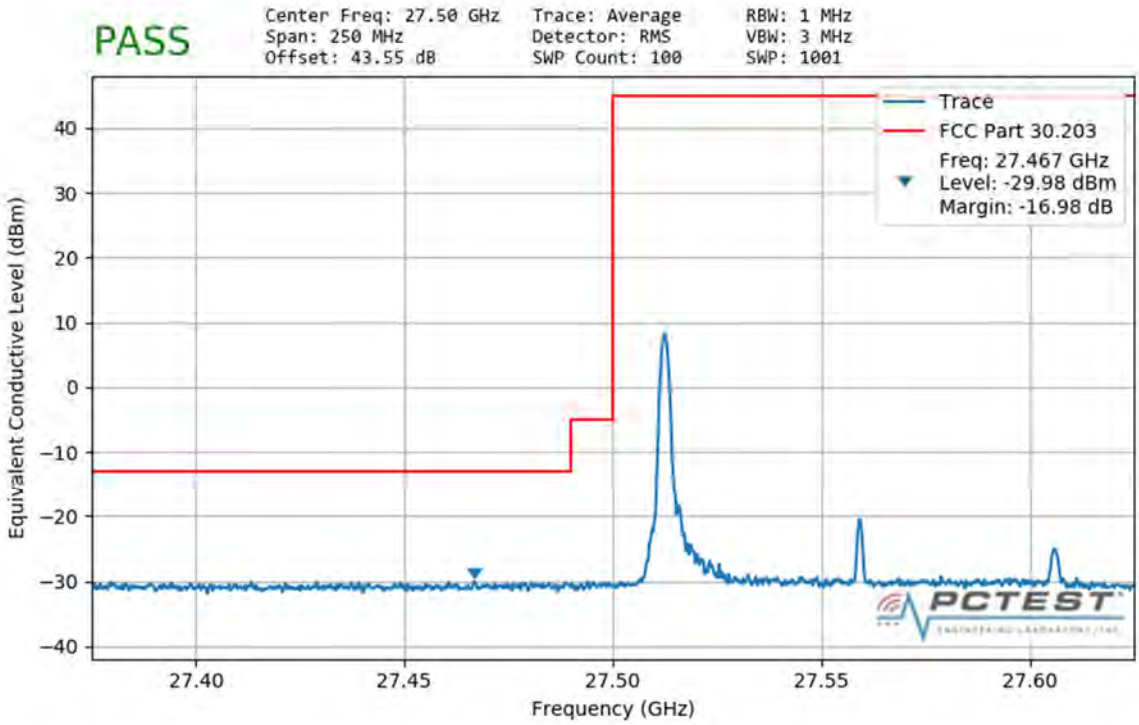


Plot 7-257. Ant3 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-258. Ant3 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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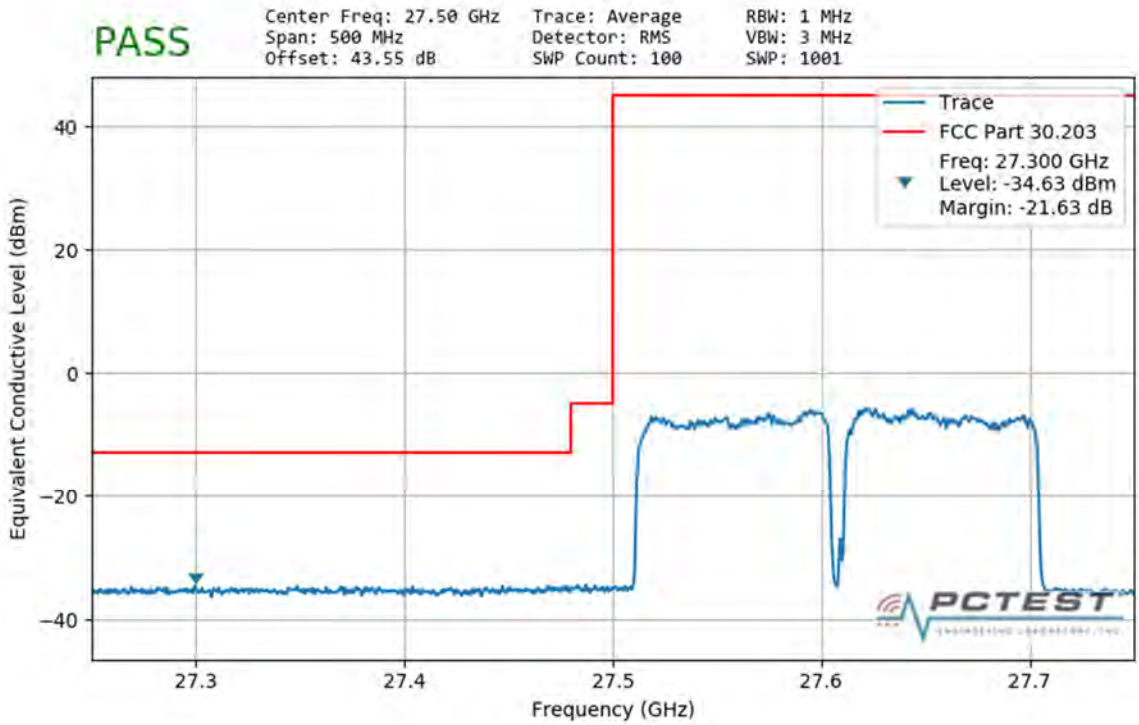
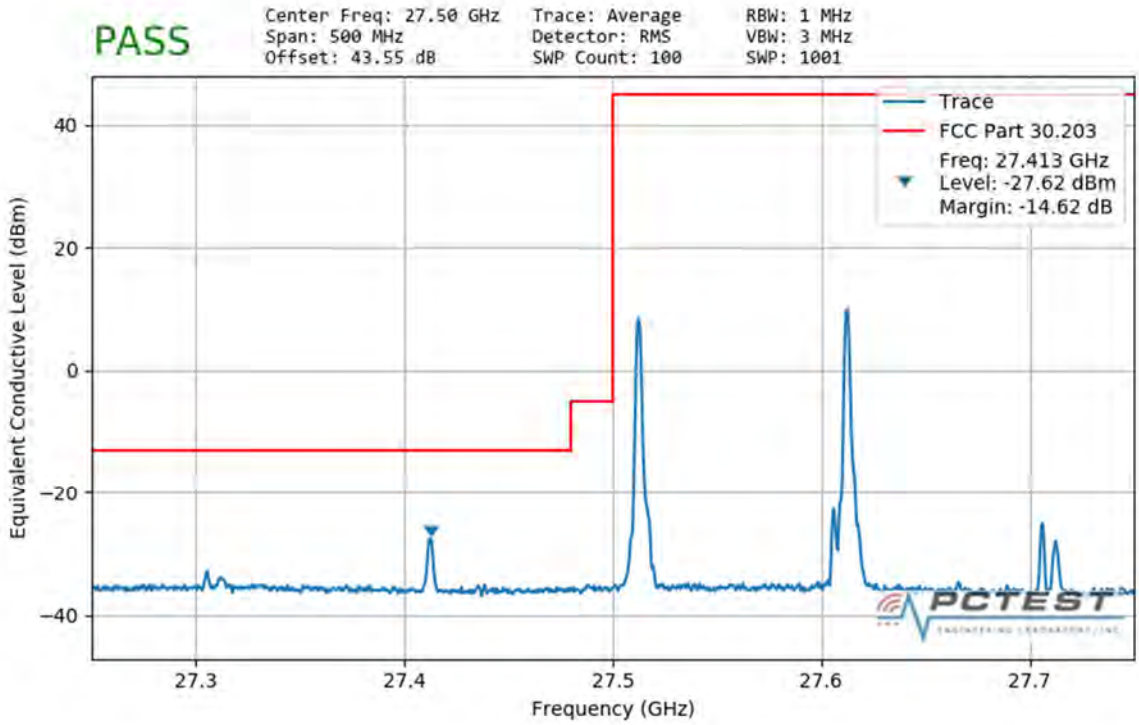


Plot 7-259. Ant3 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-260. Ant3 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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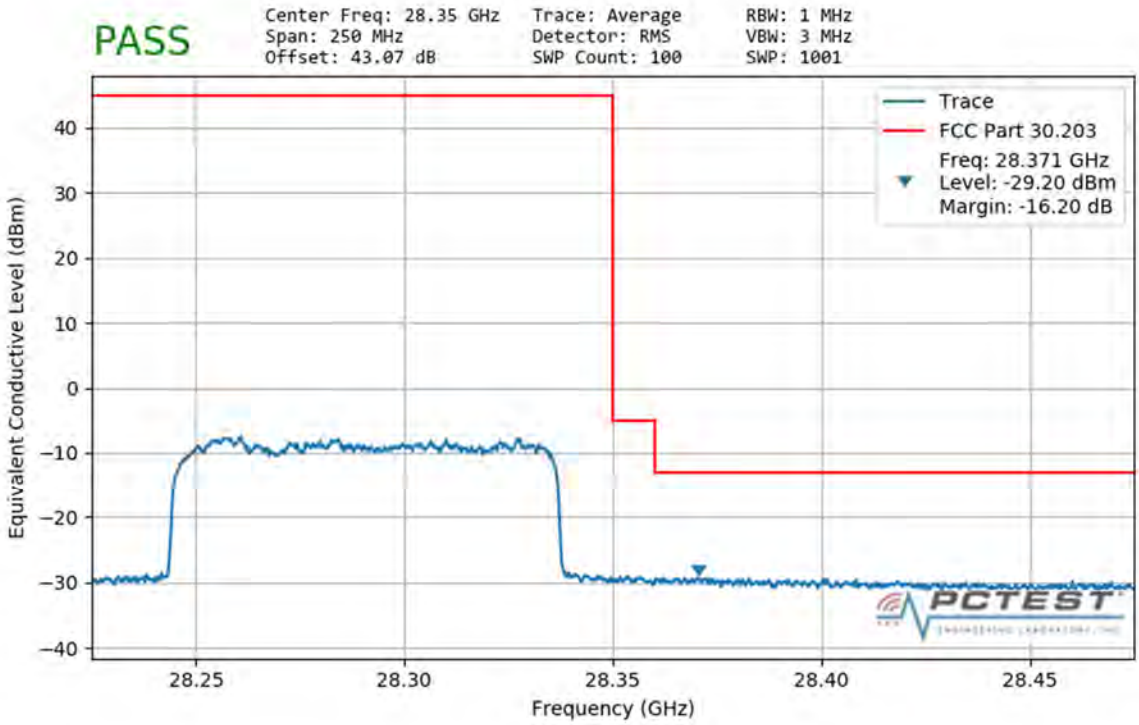
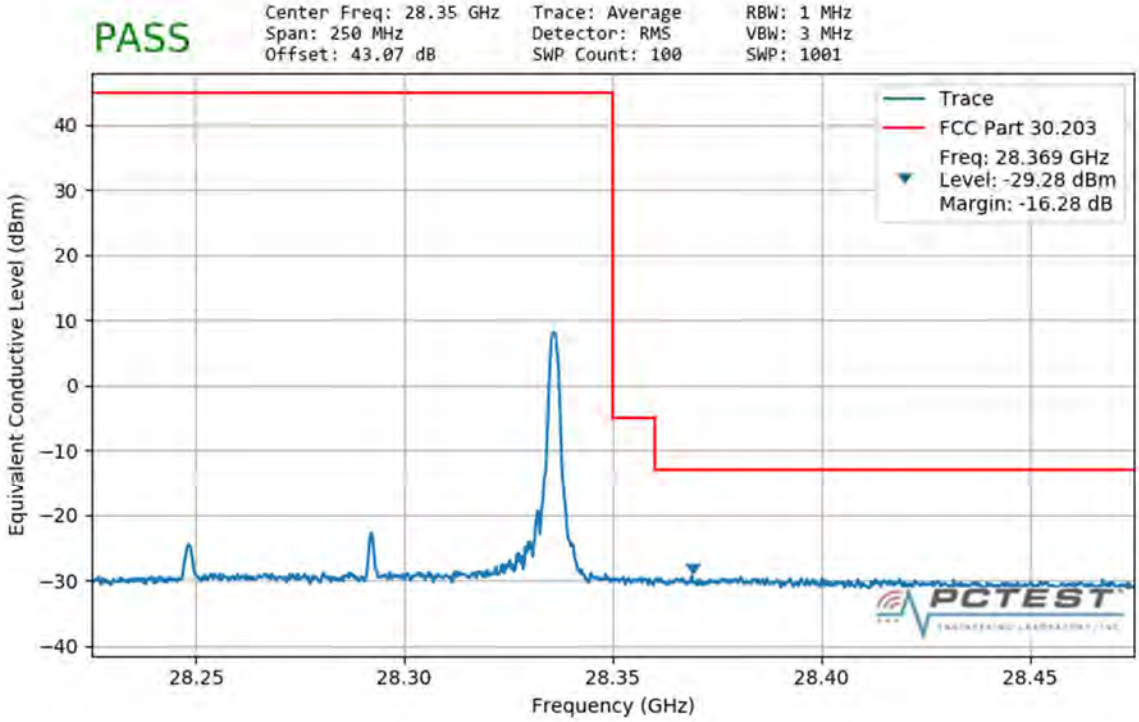


Plot 7-261. Ant3 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-262. Ant3 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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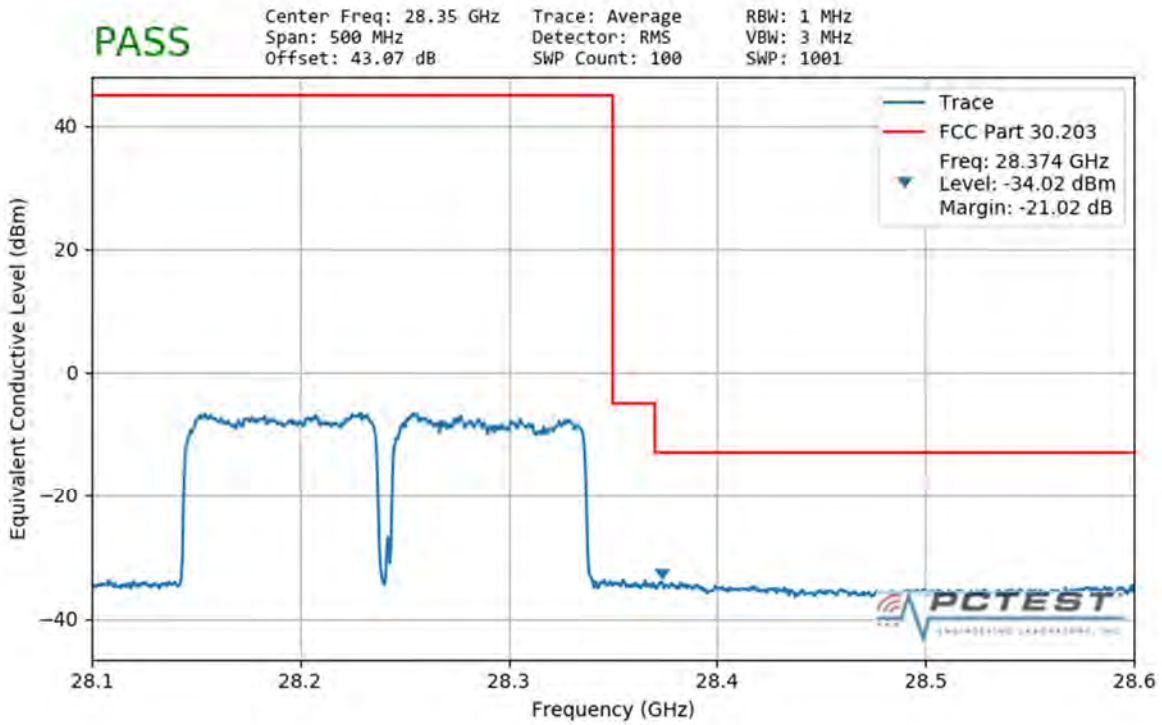
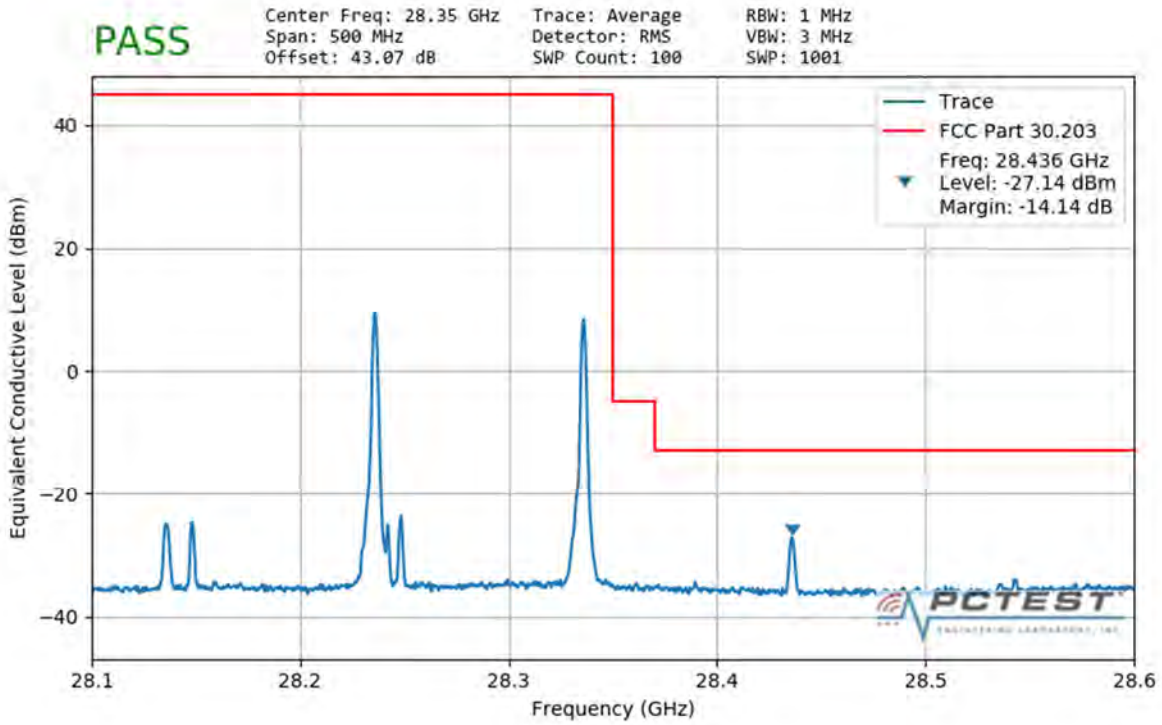


Plot 7-263. Ant3 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-264. Ant3 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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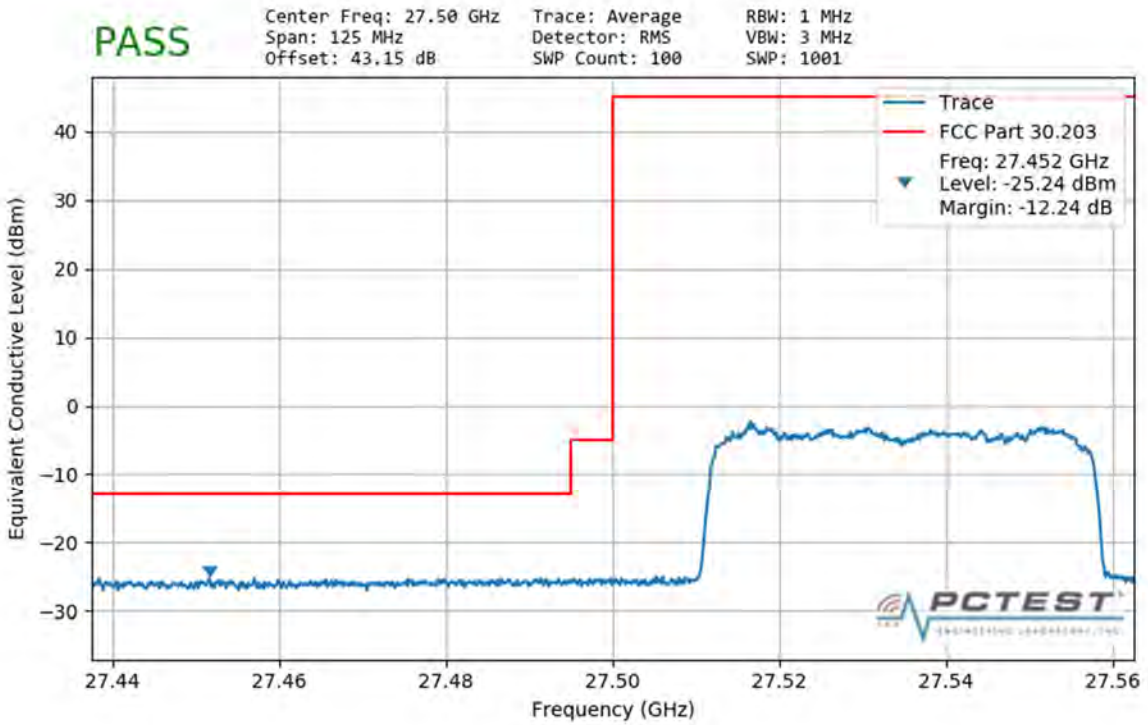
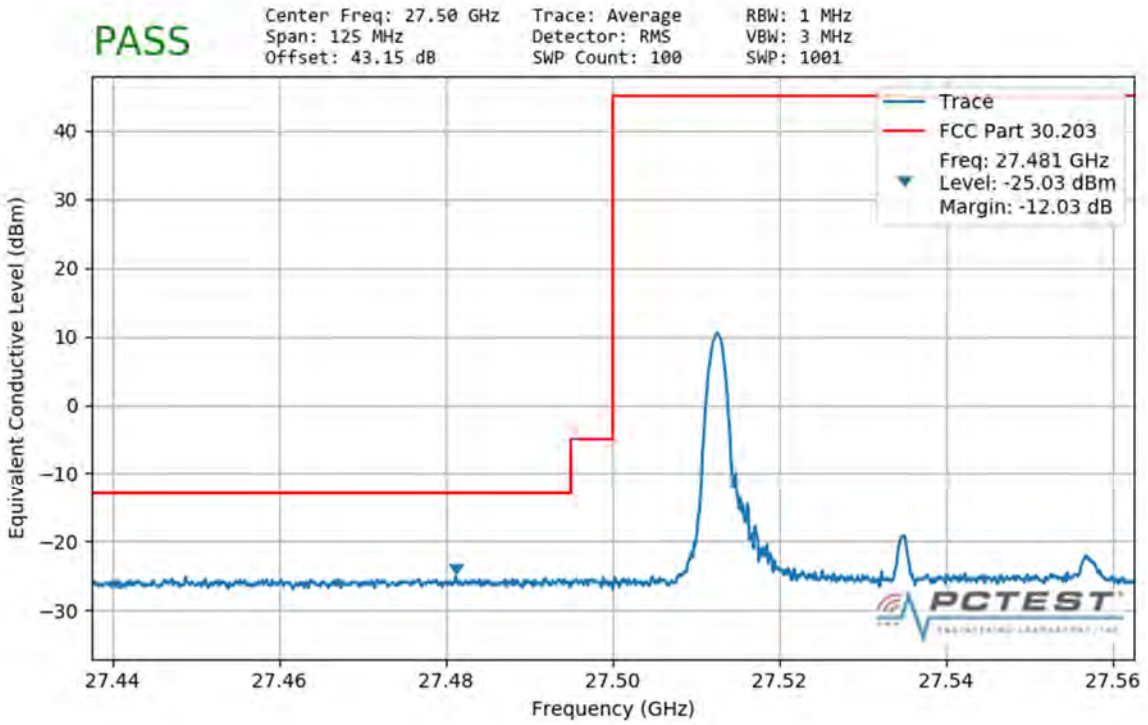


Plot 7-265. Ant4 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-266. Ant4 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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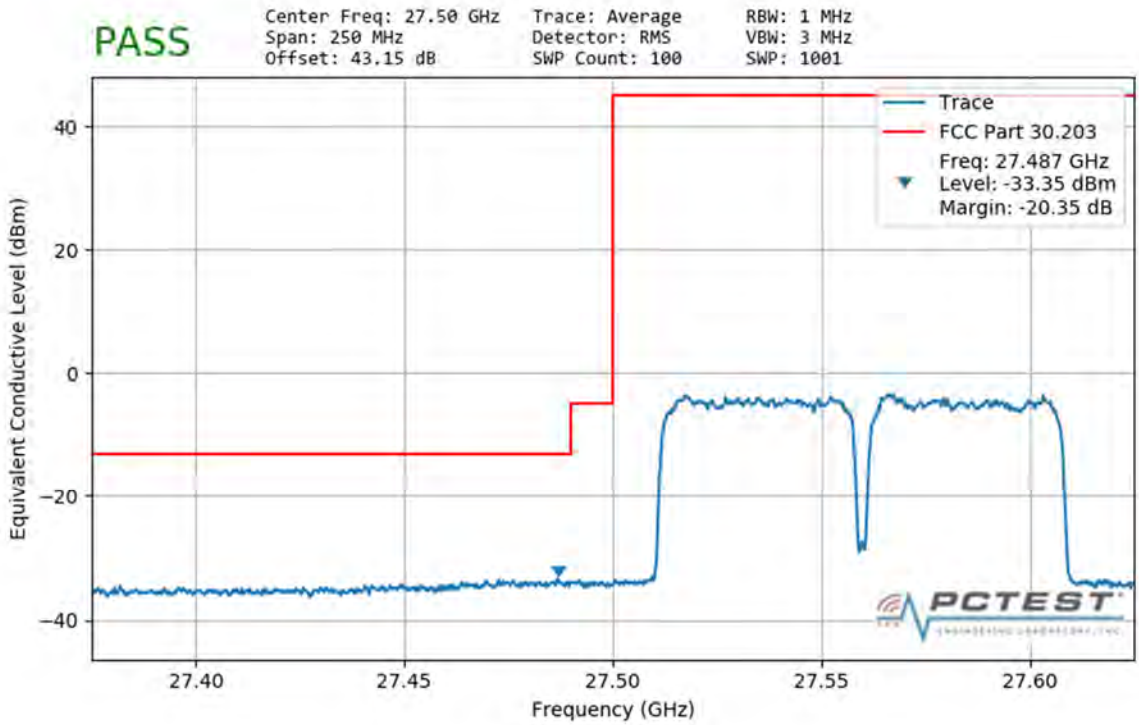
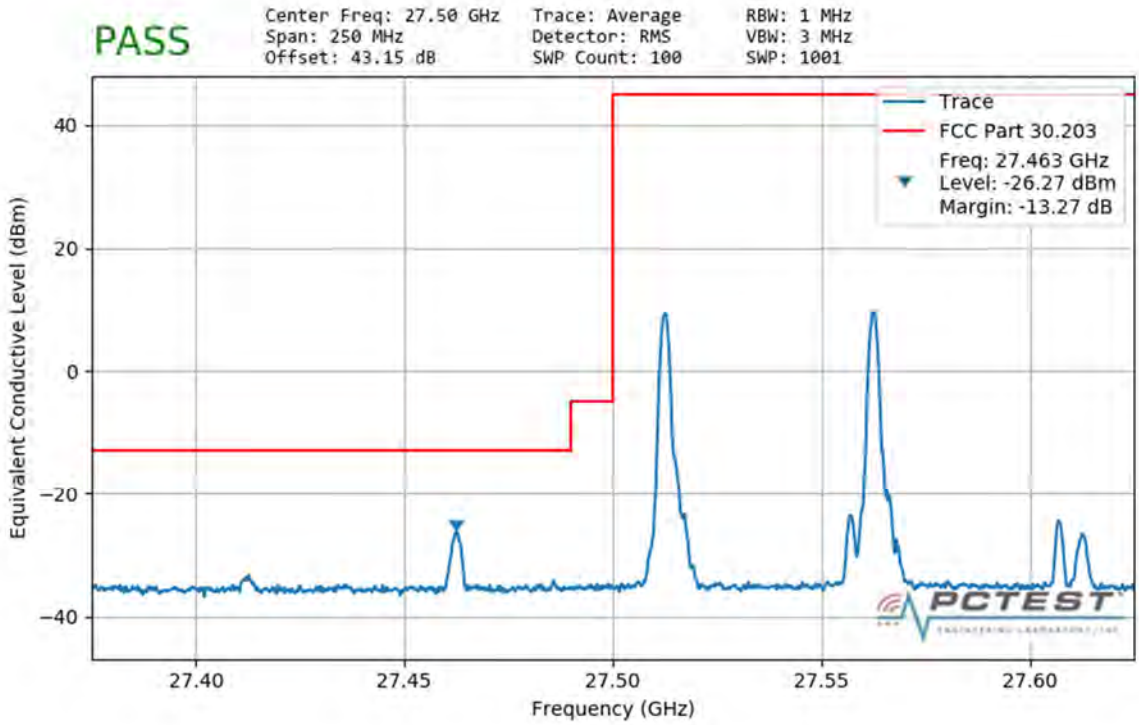


Plot 7-267. Ant4 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-268. Ant4 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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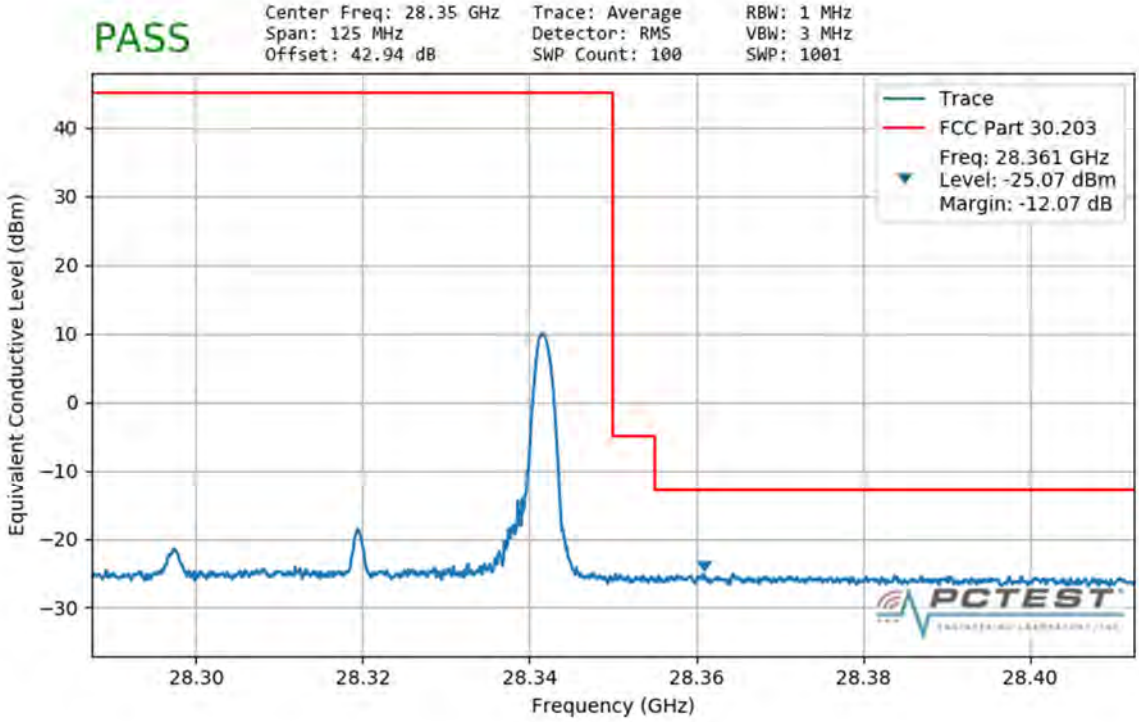
Plot 7-269. Ant4 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-270. Ant4 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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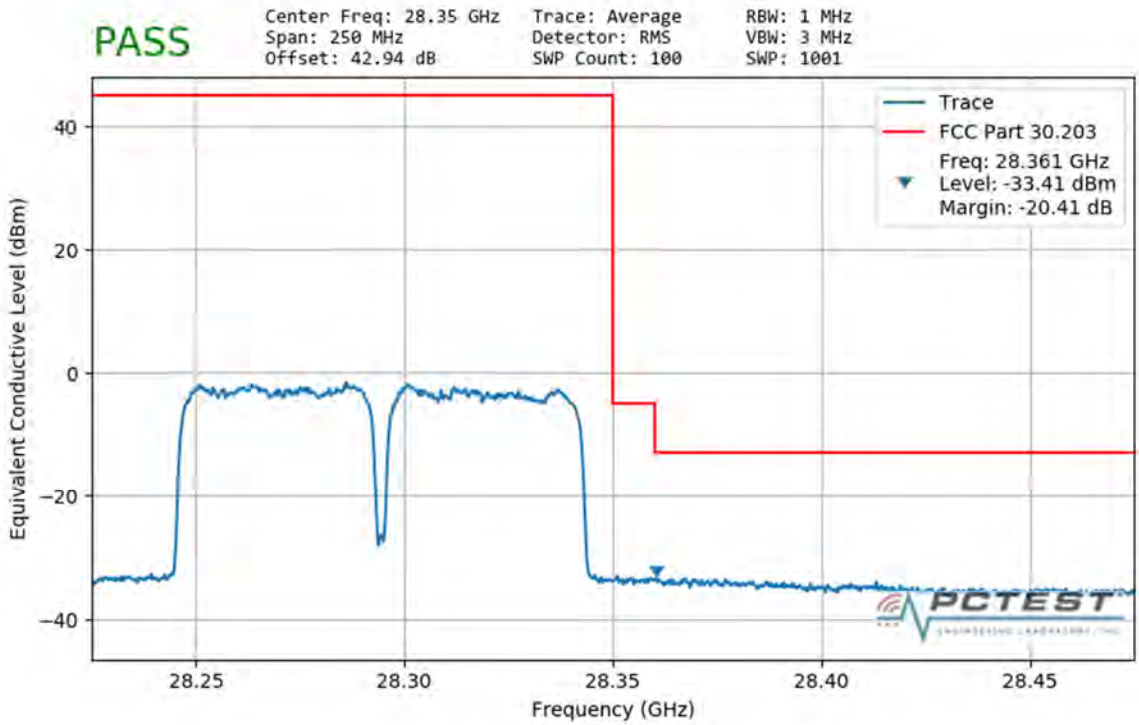
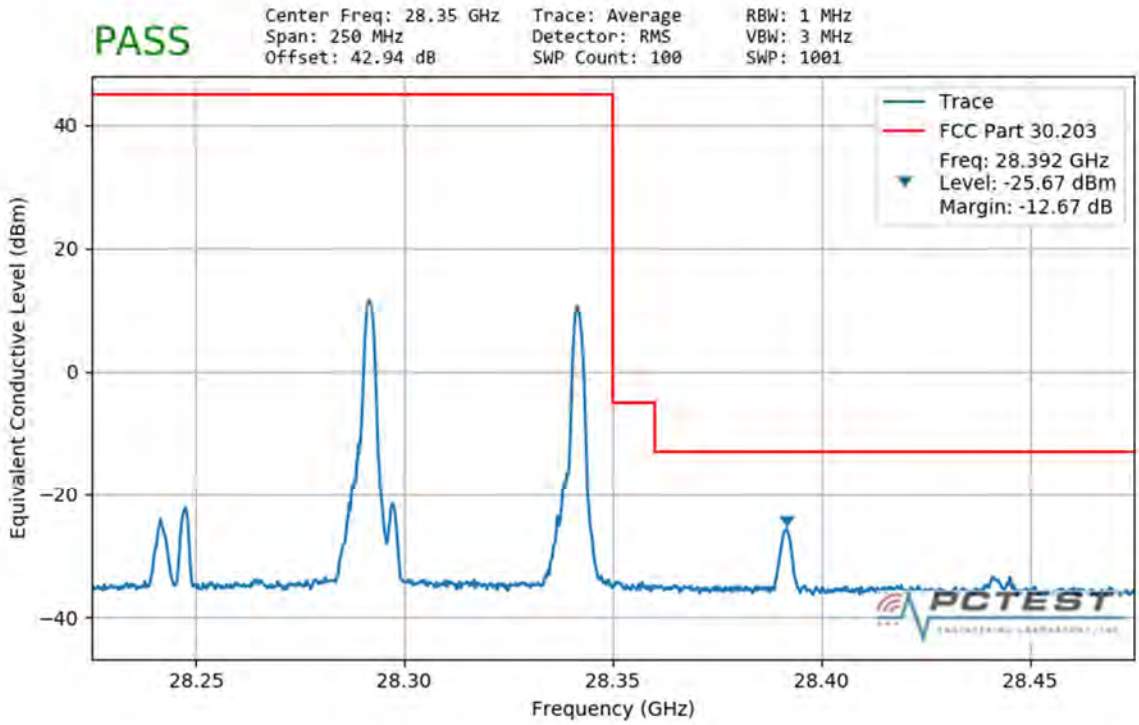


Plot 7-271. Ant4 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-272. Ant4 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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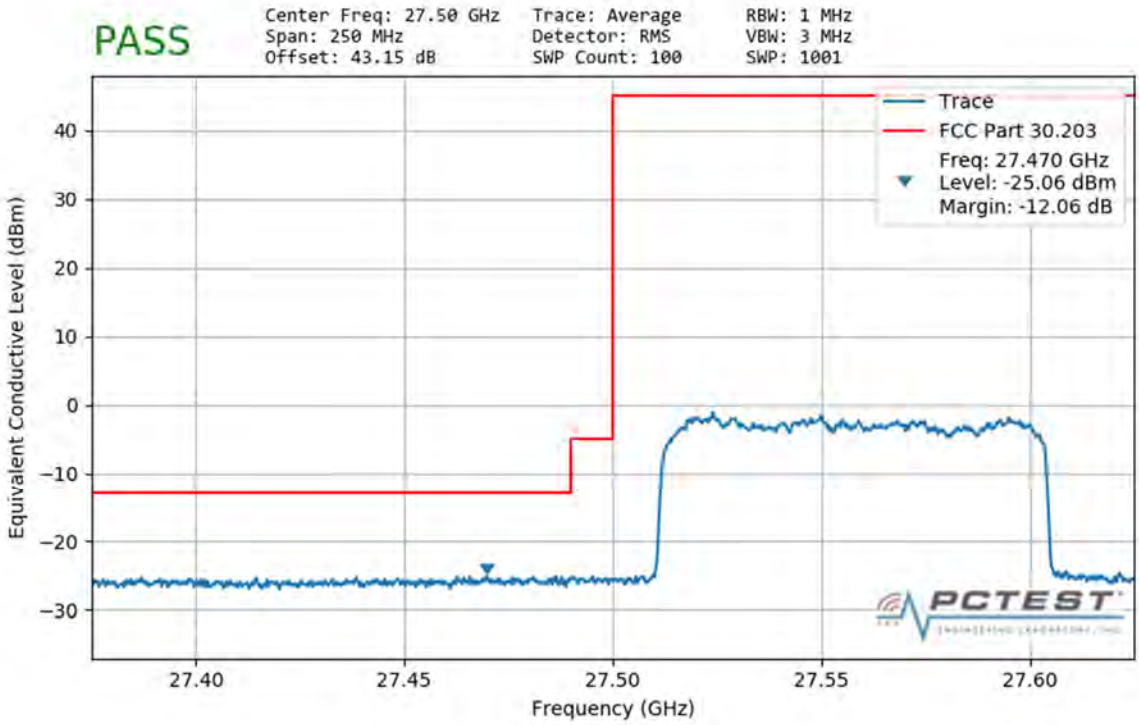
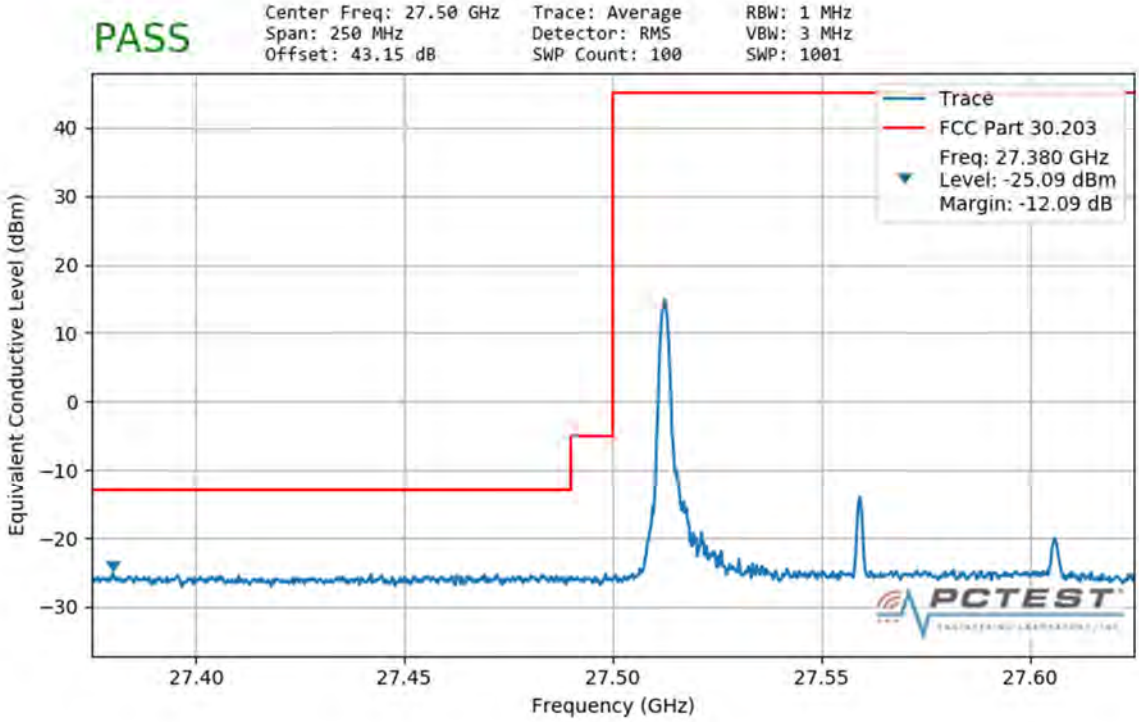


Plot 7-273. Ant4 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-274. Ant4 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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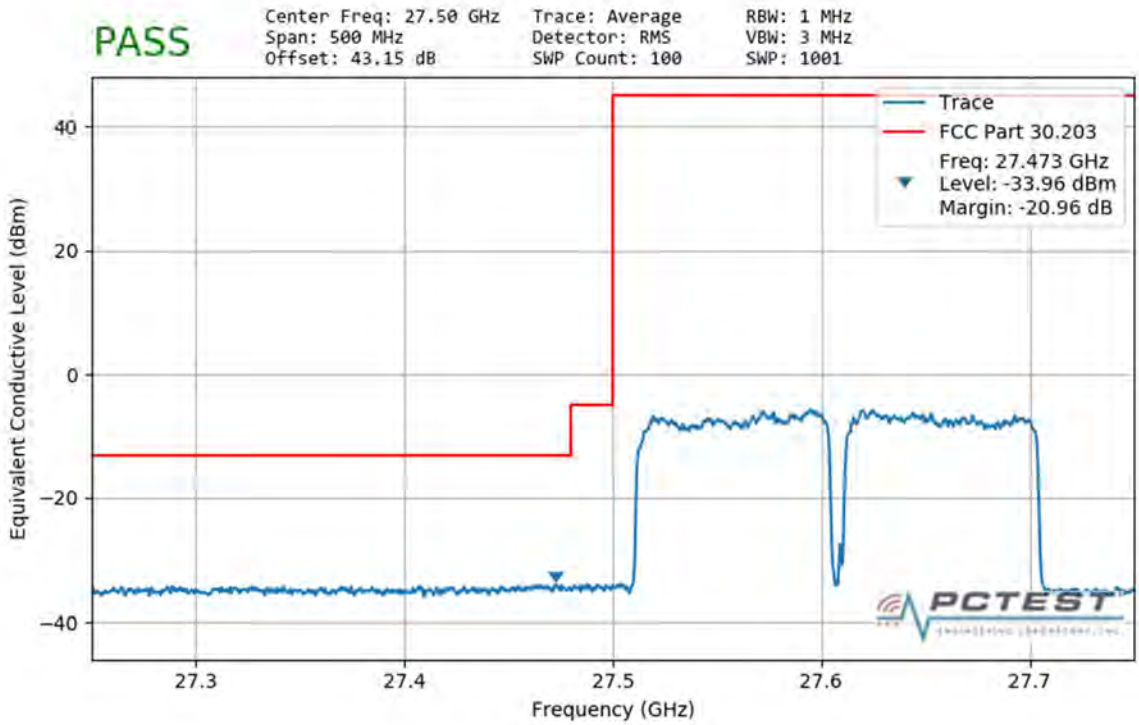
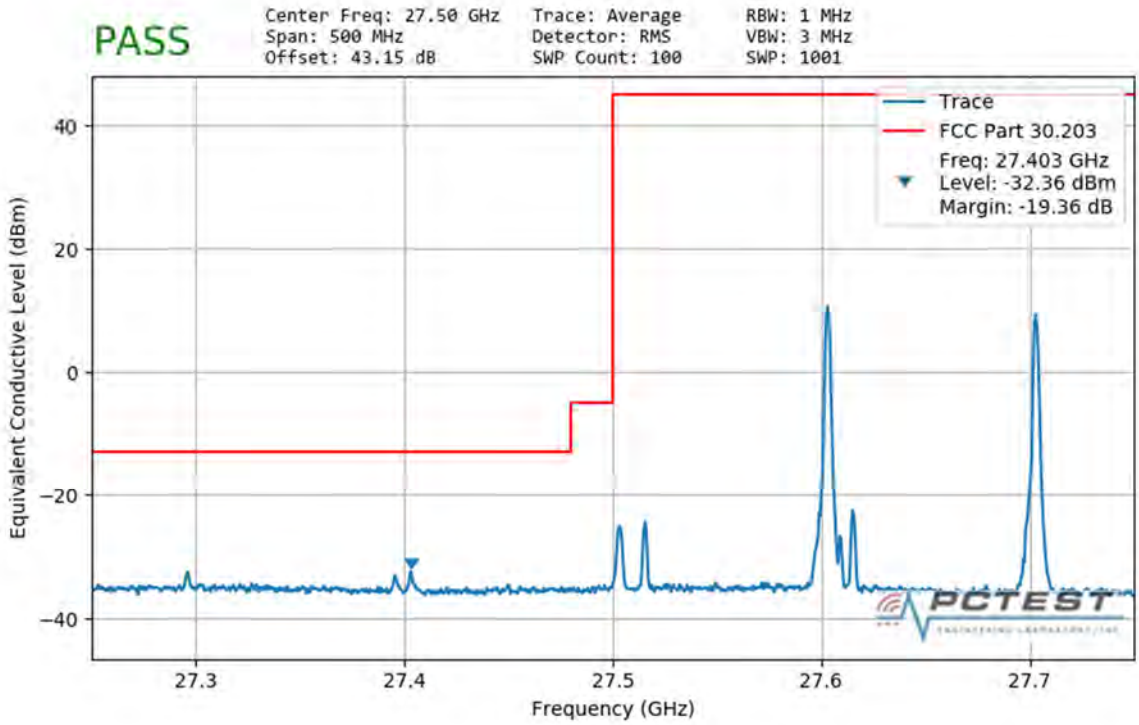


Plot 7-275. Ant4 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-276. Ant4 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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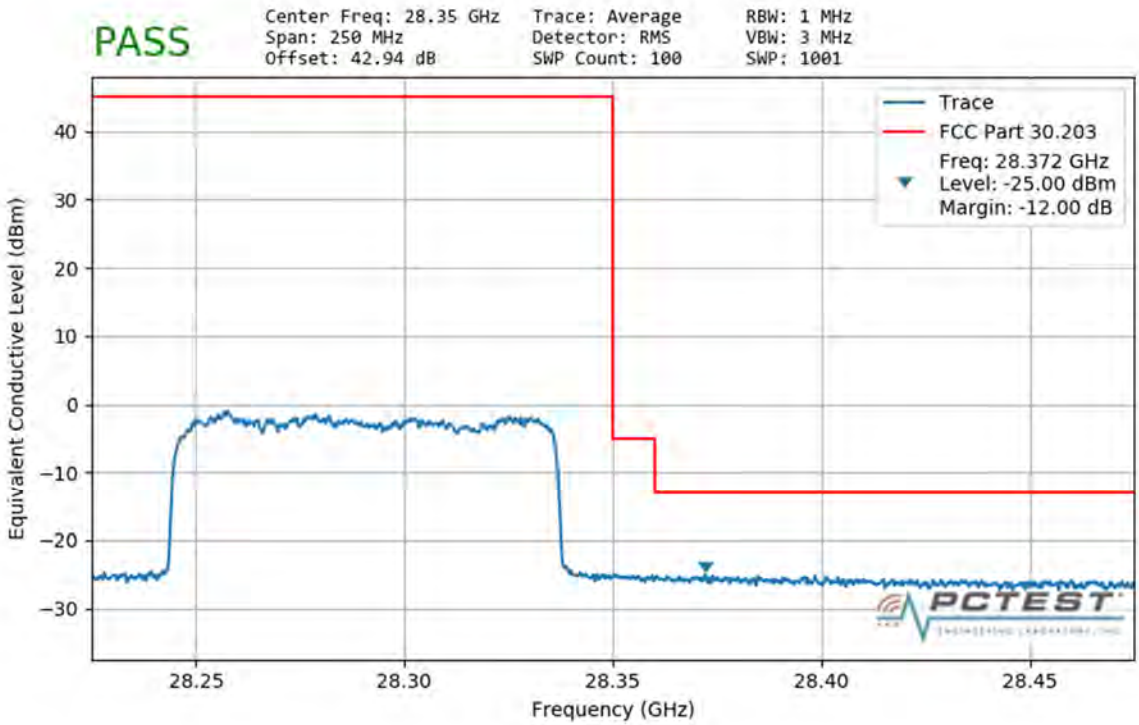
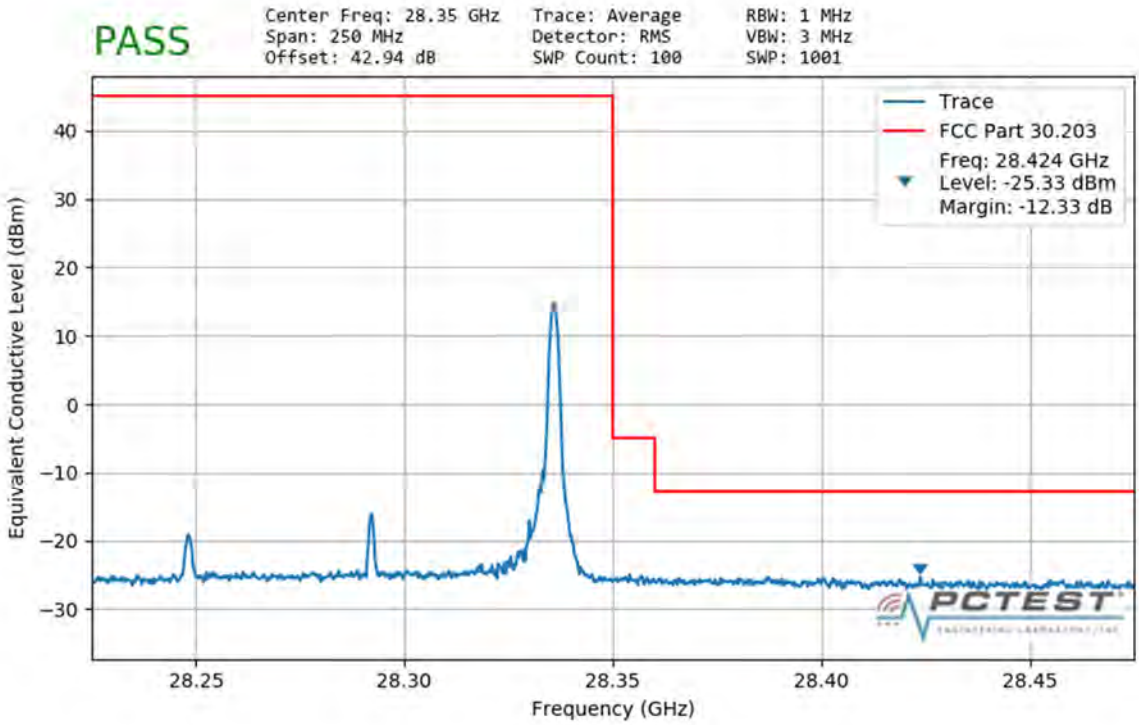


Plot 7-277. Ant4 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-278. Ant4 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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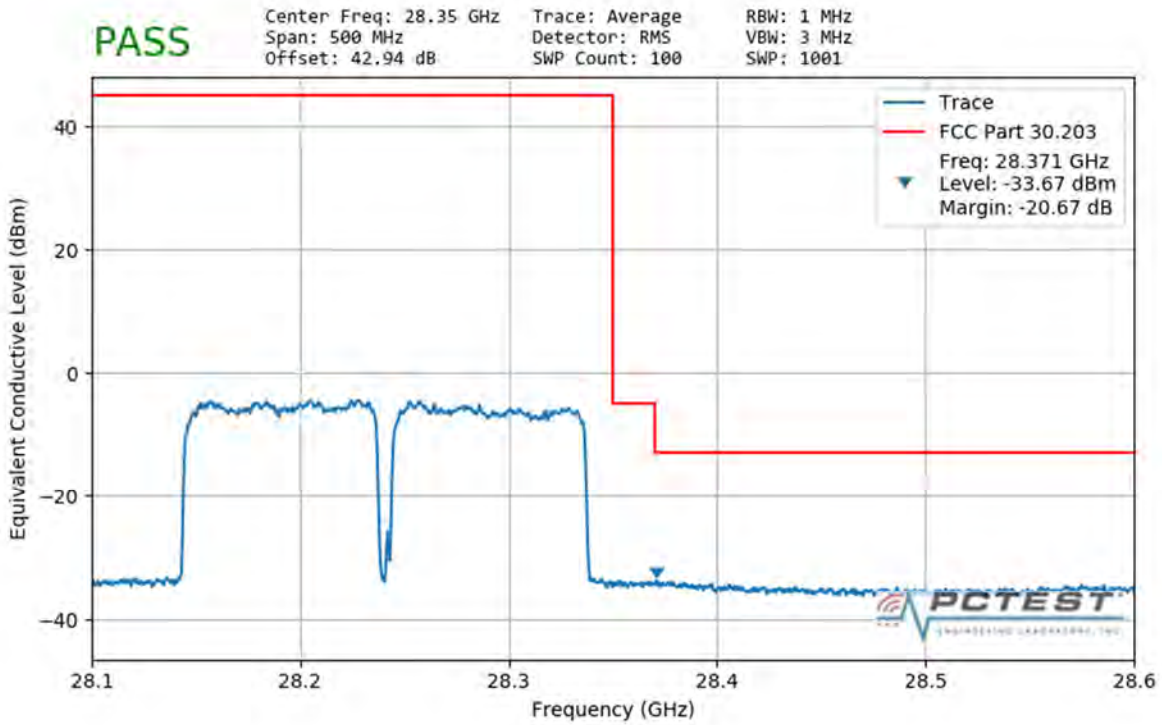
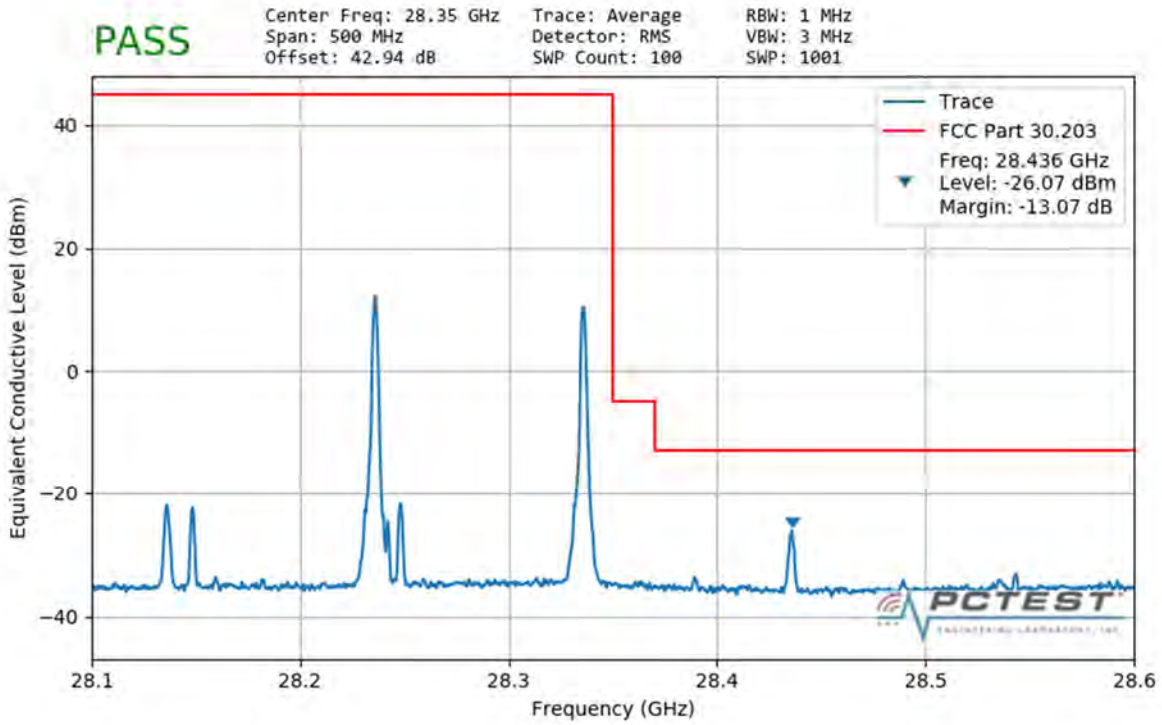


Plot 7-279. Ant4 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-280. Ant4 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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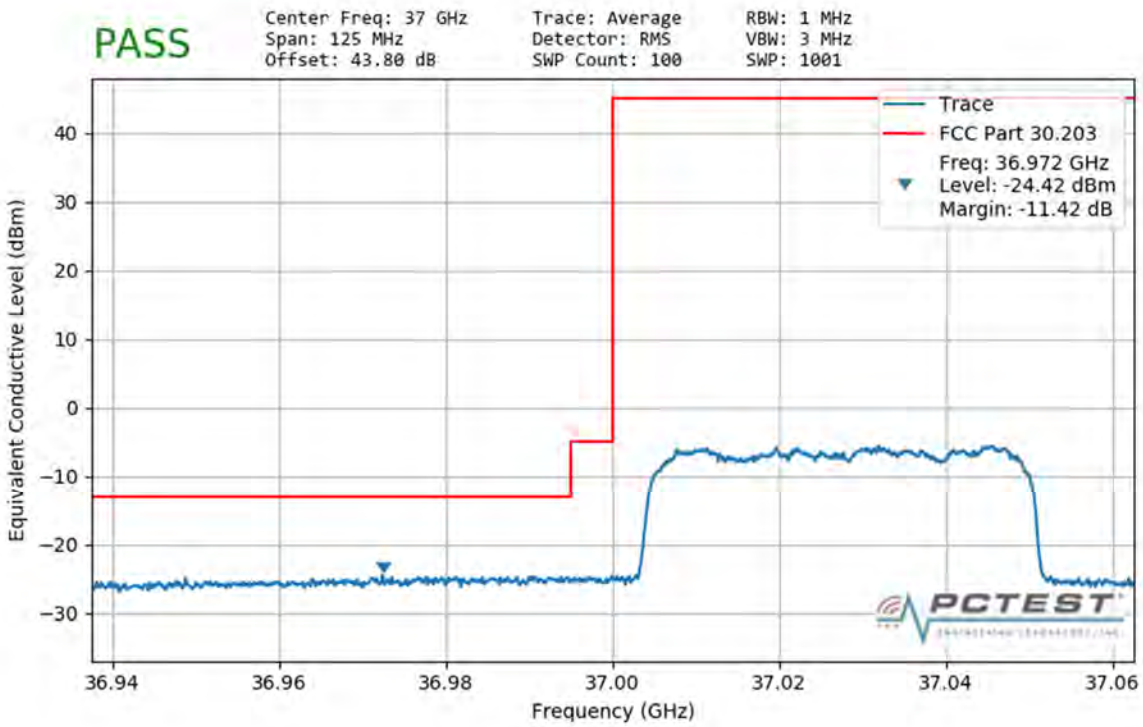
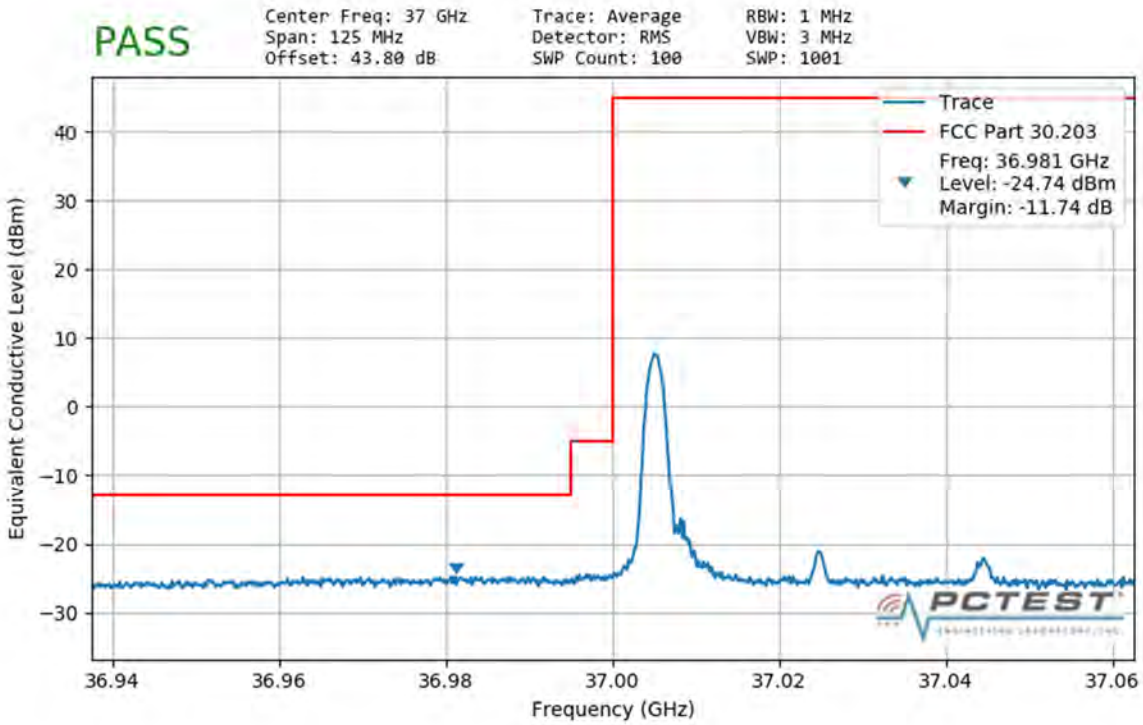
Band n260 - MIMO



Plot 7-281. Ant1 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-282. Ant1 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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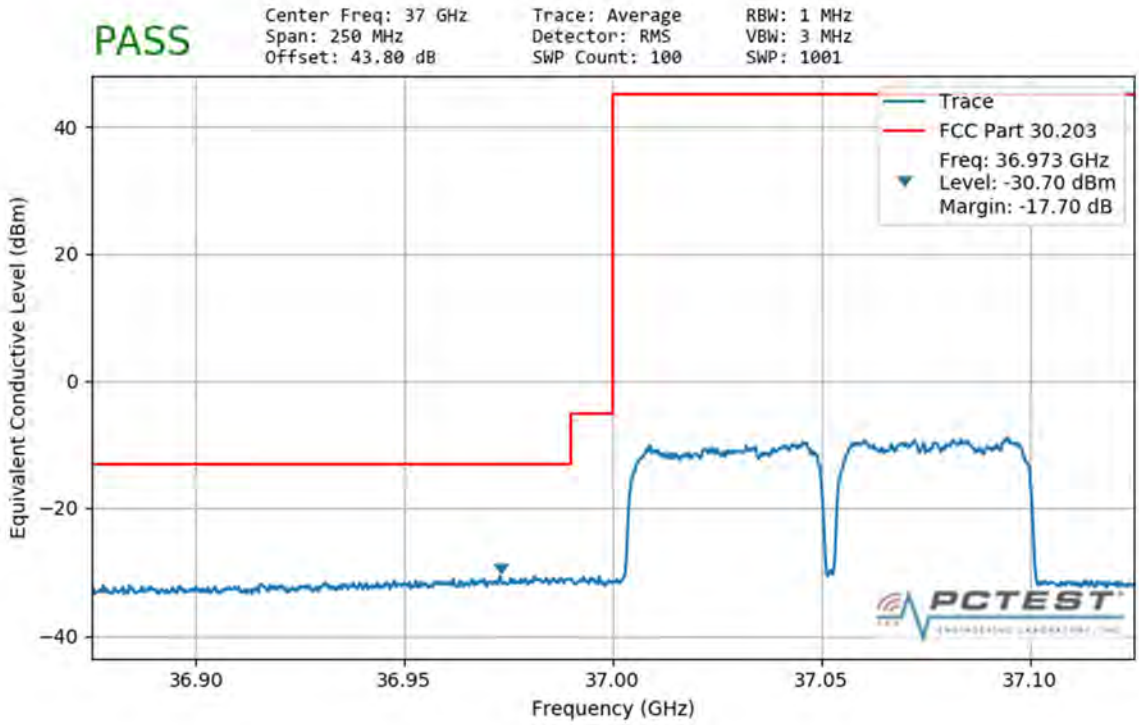
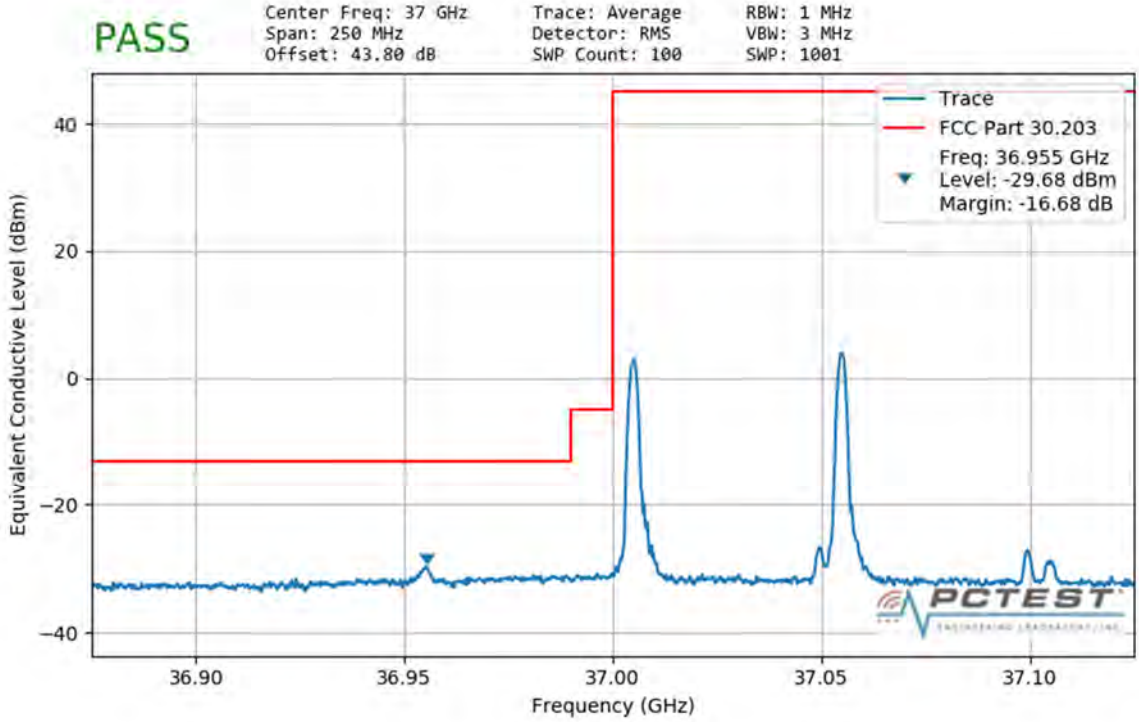


Plot 7-283. Ant1 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-284. Ant1 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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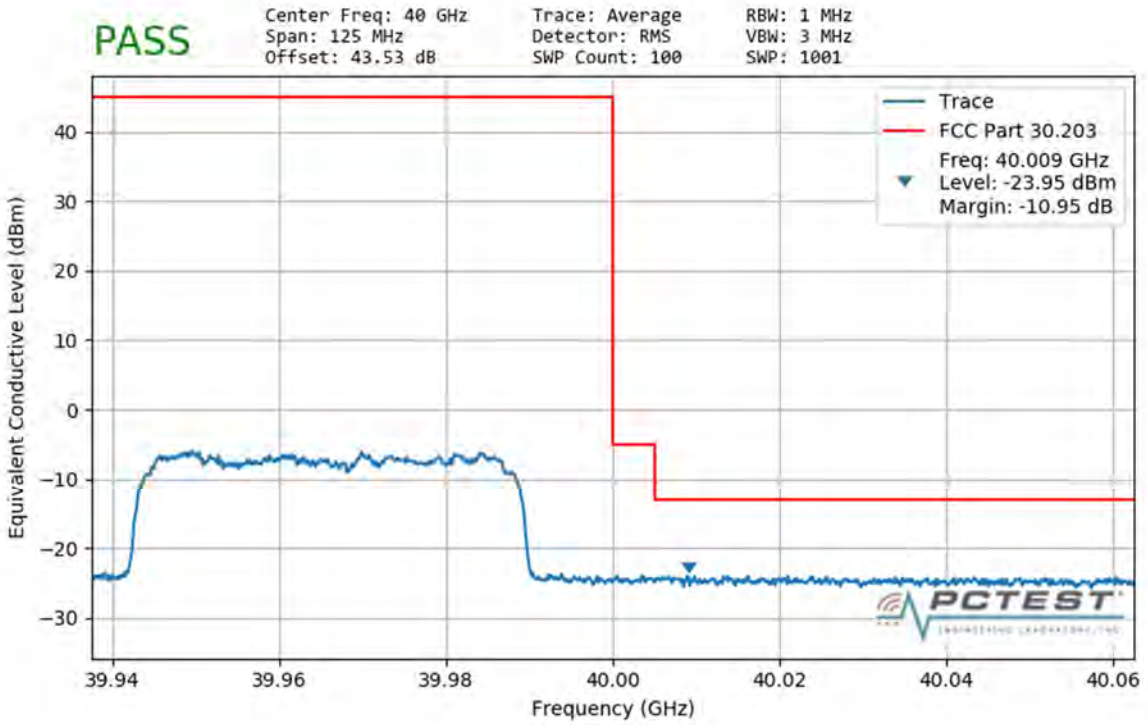
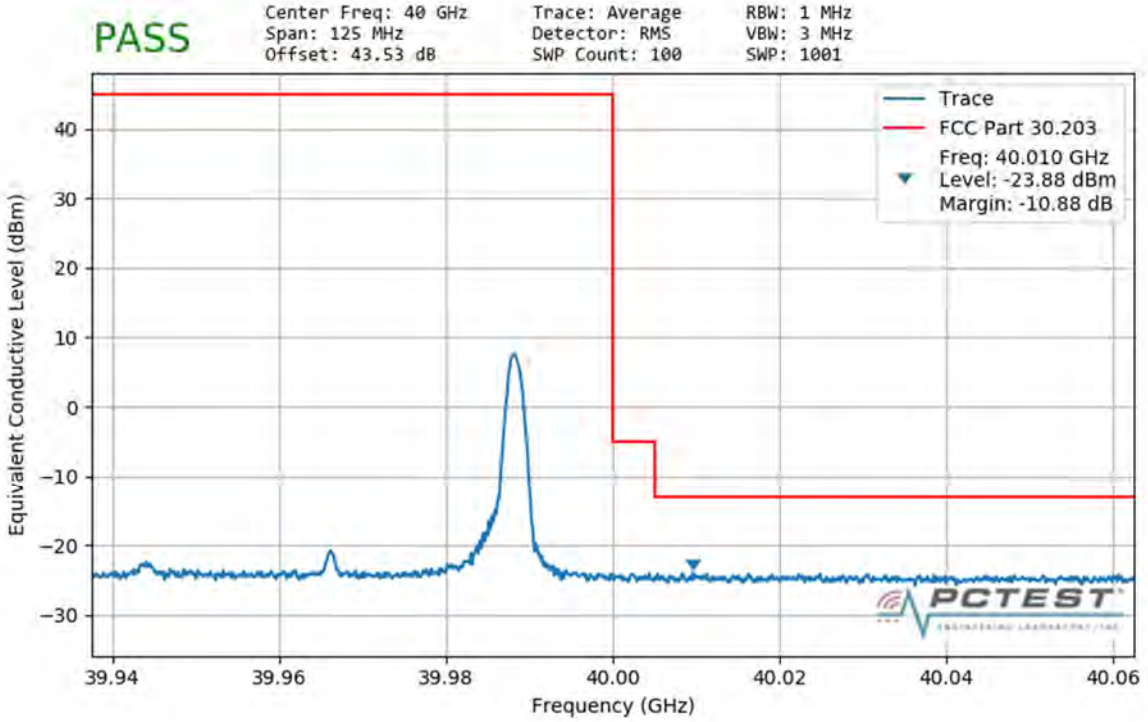


Plot 7-285. Ant1 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-286. Ant1 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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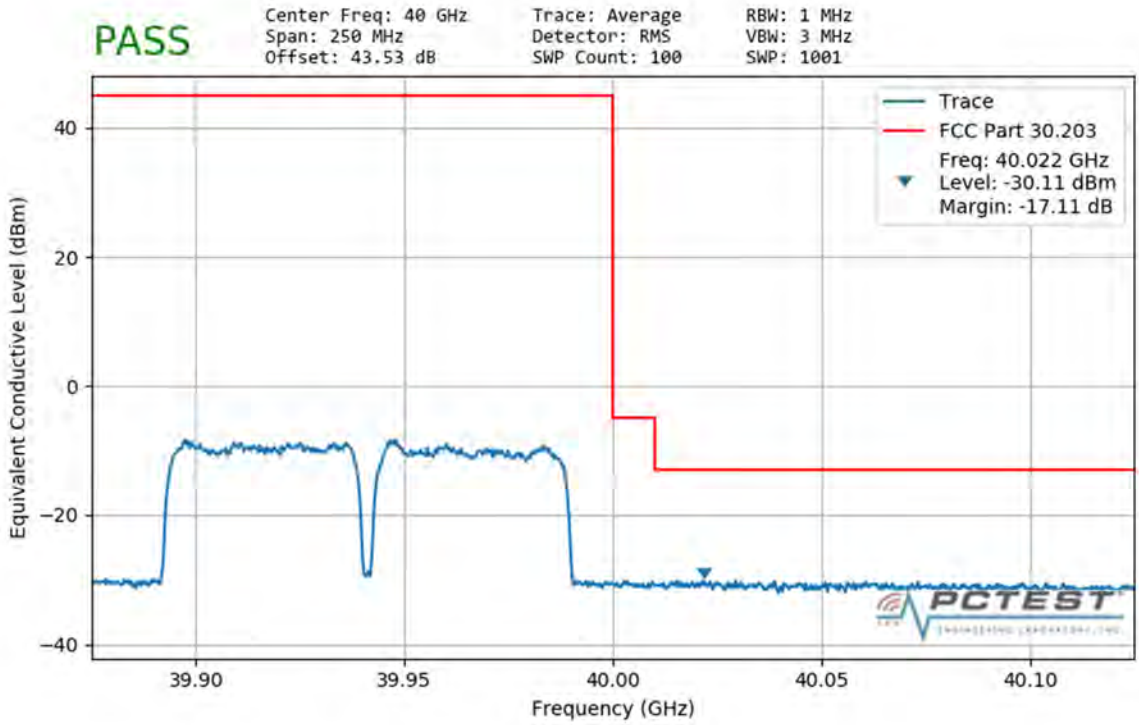
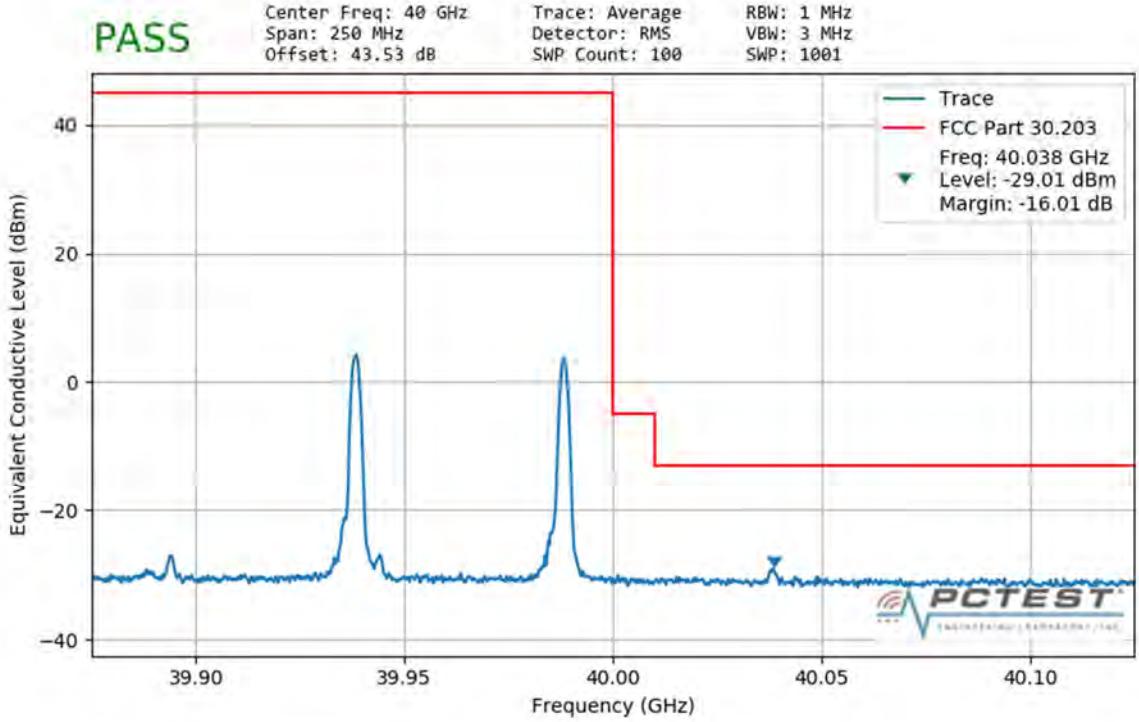


Plot 7-287. Ant1 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-288. Ant1 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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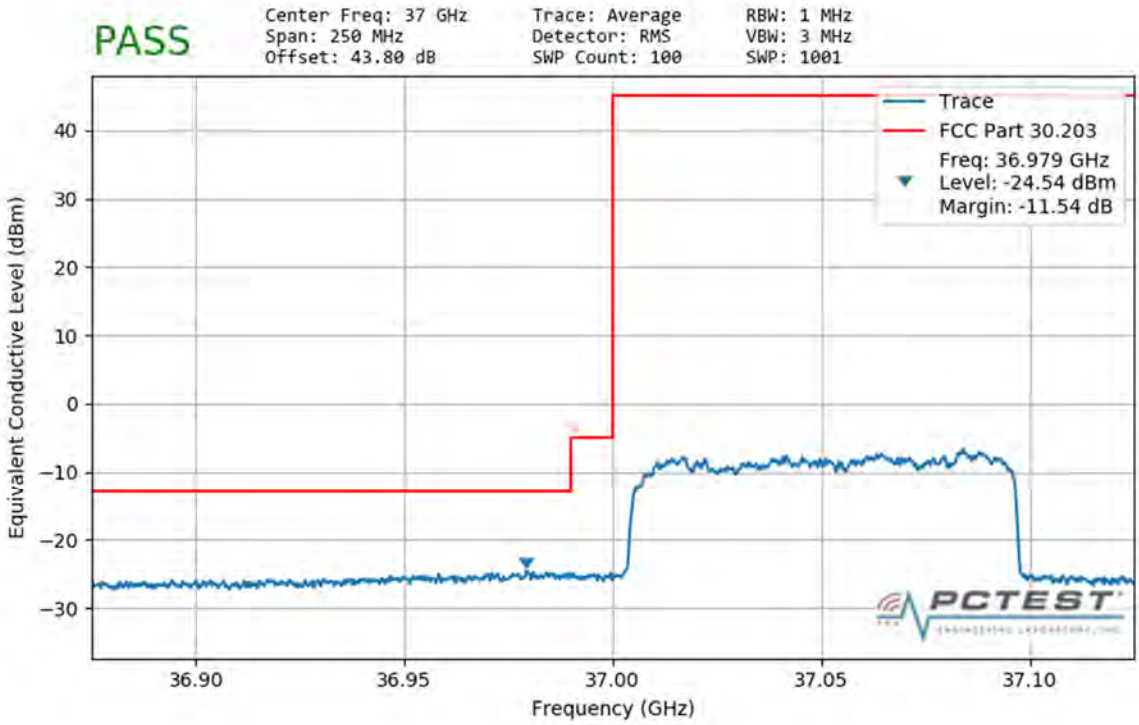
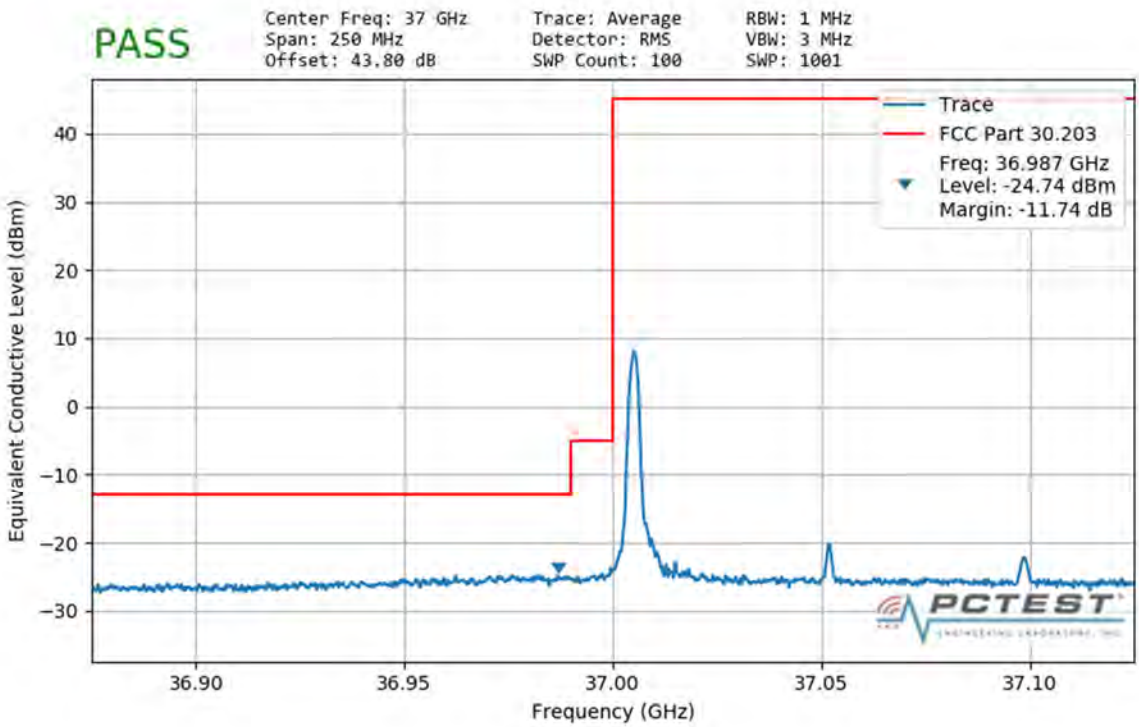


Plot 7-289. Ant1 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-290. Ant1 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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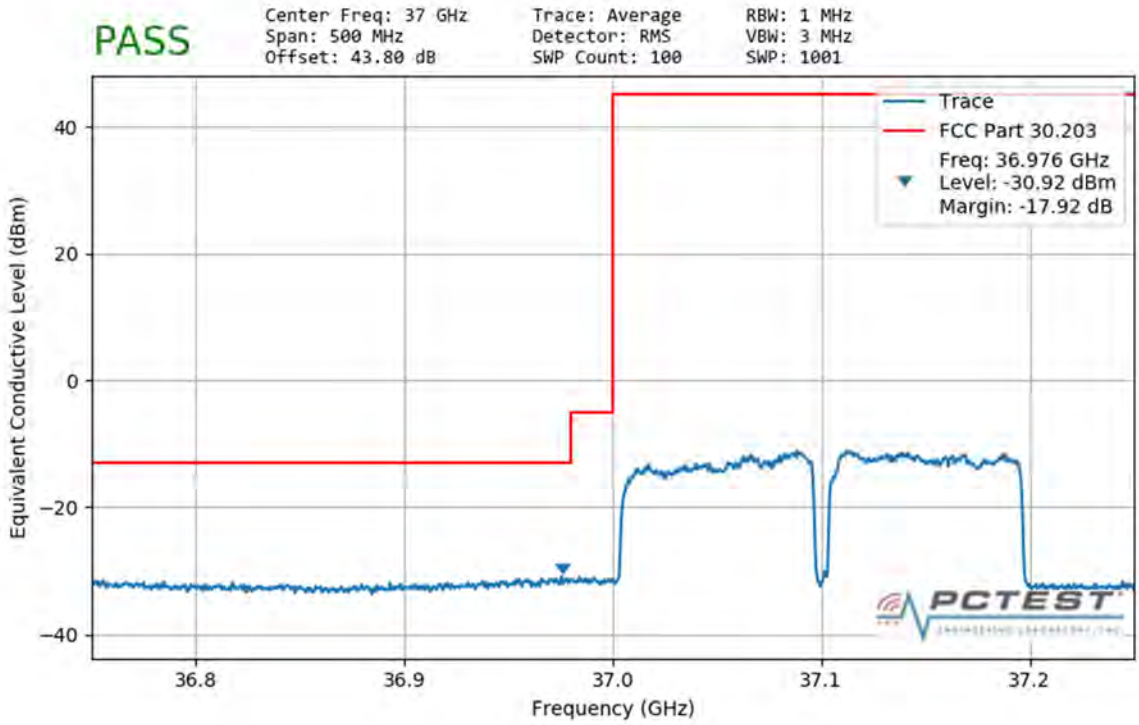
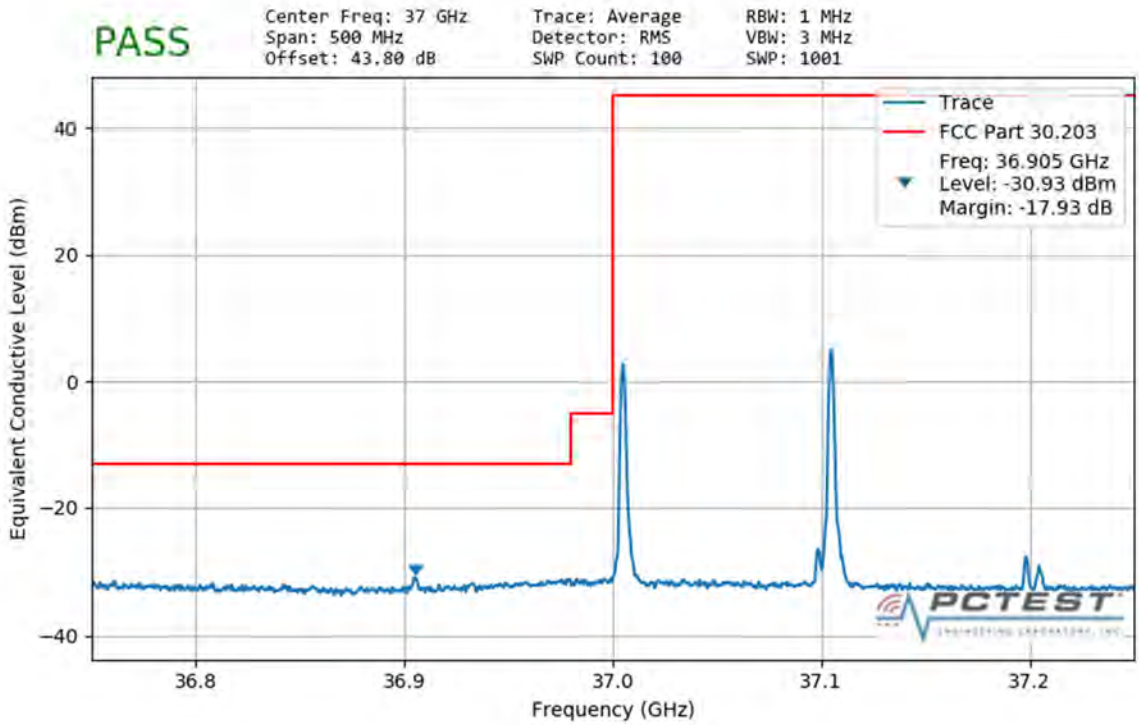


Plot 7-291. Ant1 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-292. Ant1 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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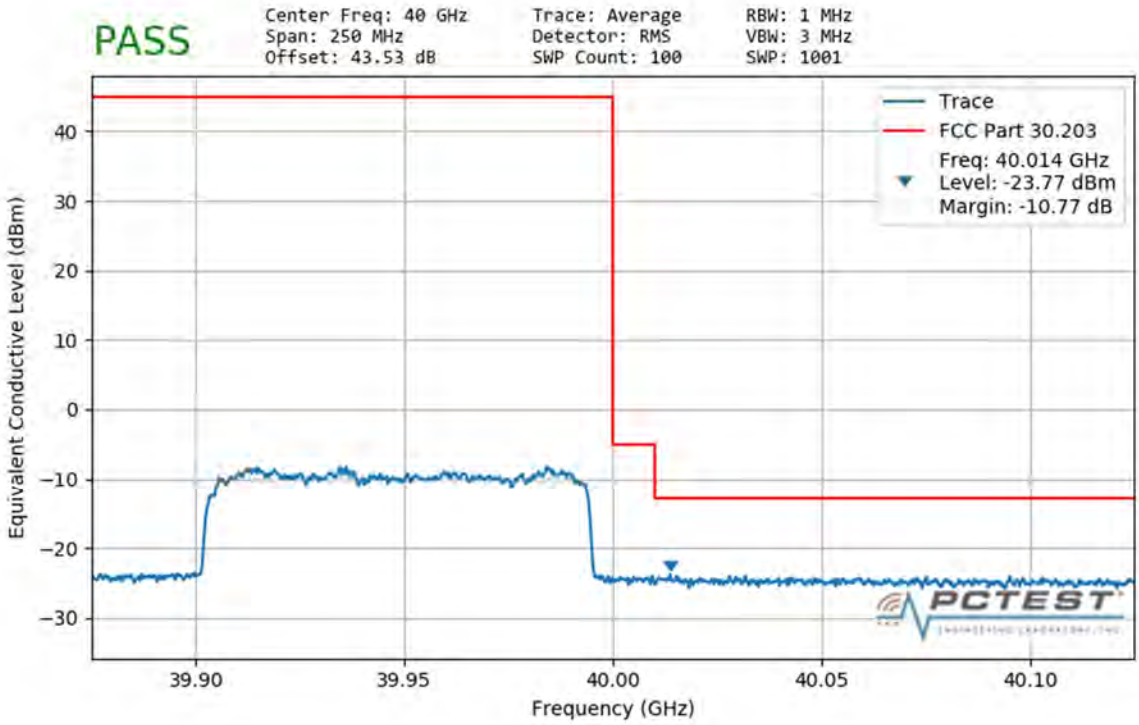
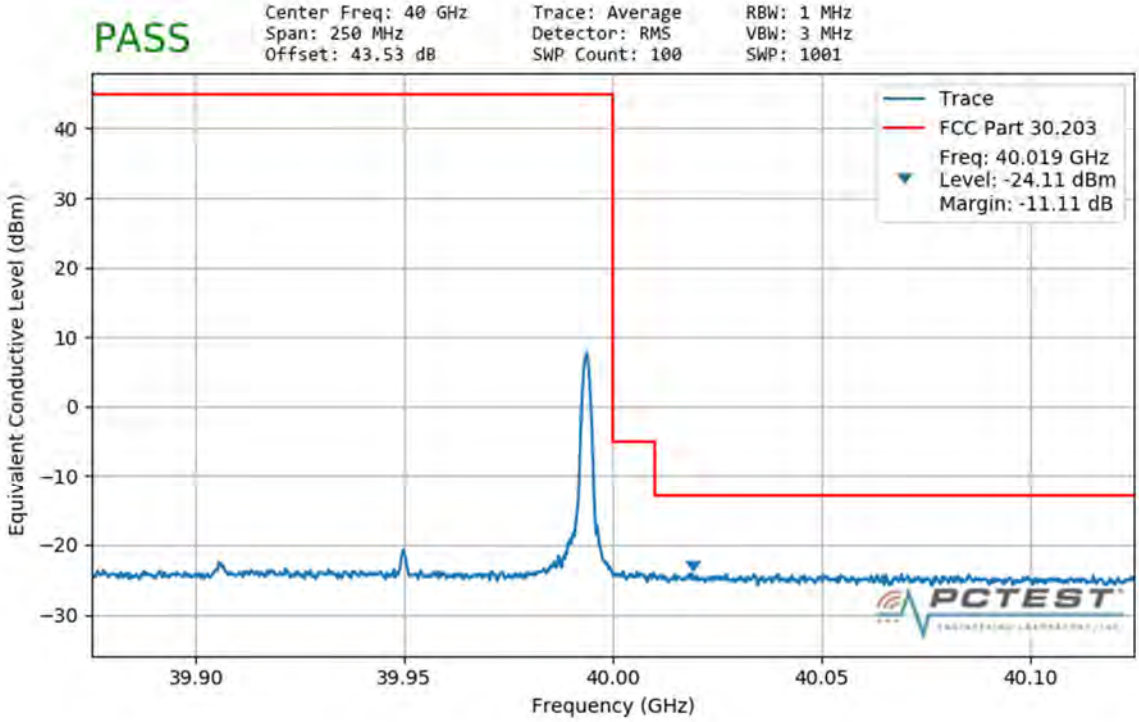


Plot 7-293. Ant1 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-294. Ant1 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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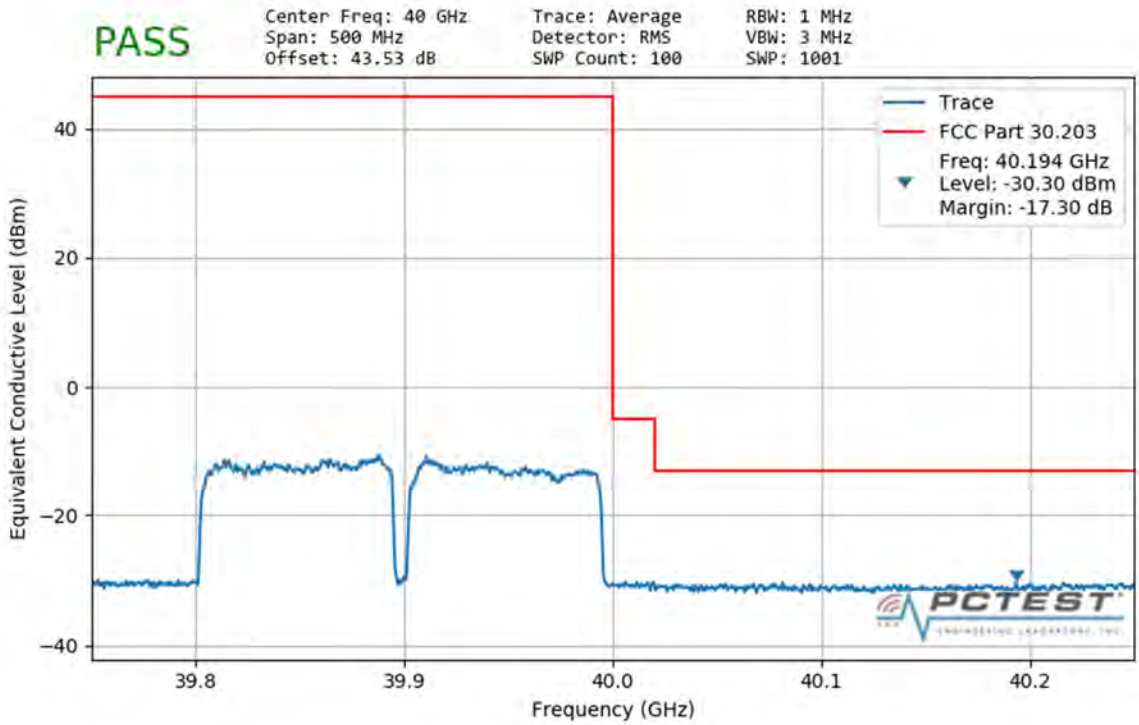
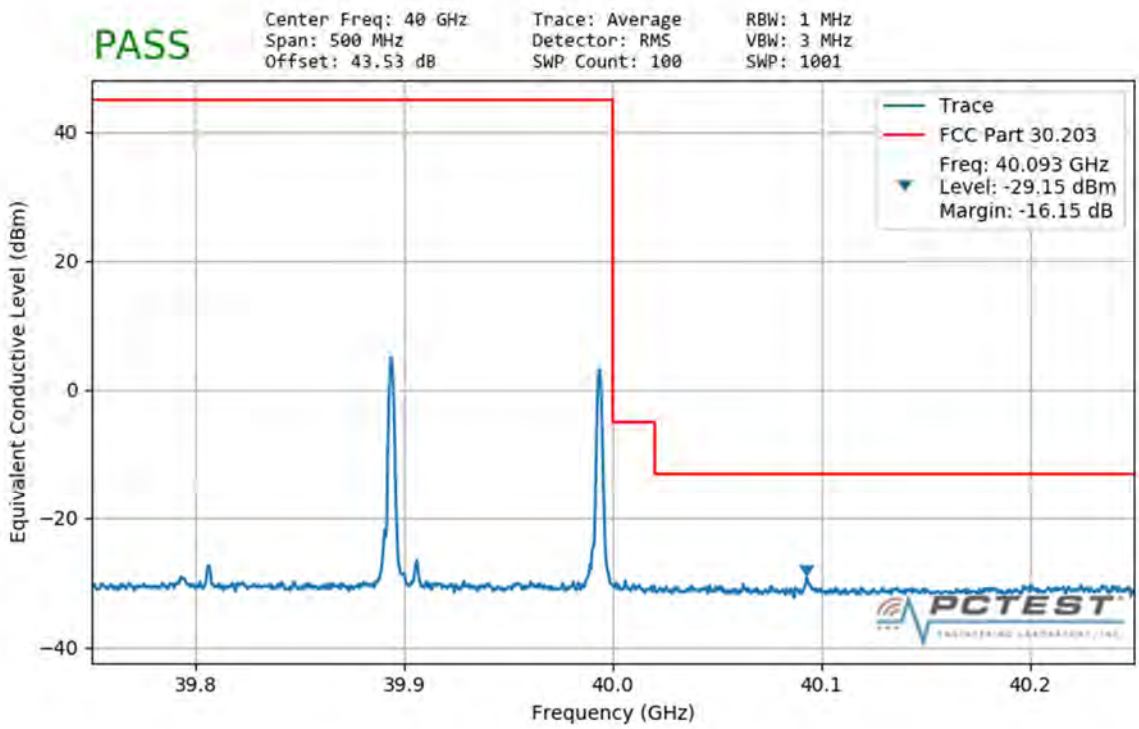


Plot 7-295. Ant1 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-296. Ant1 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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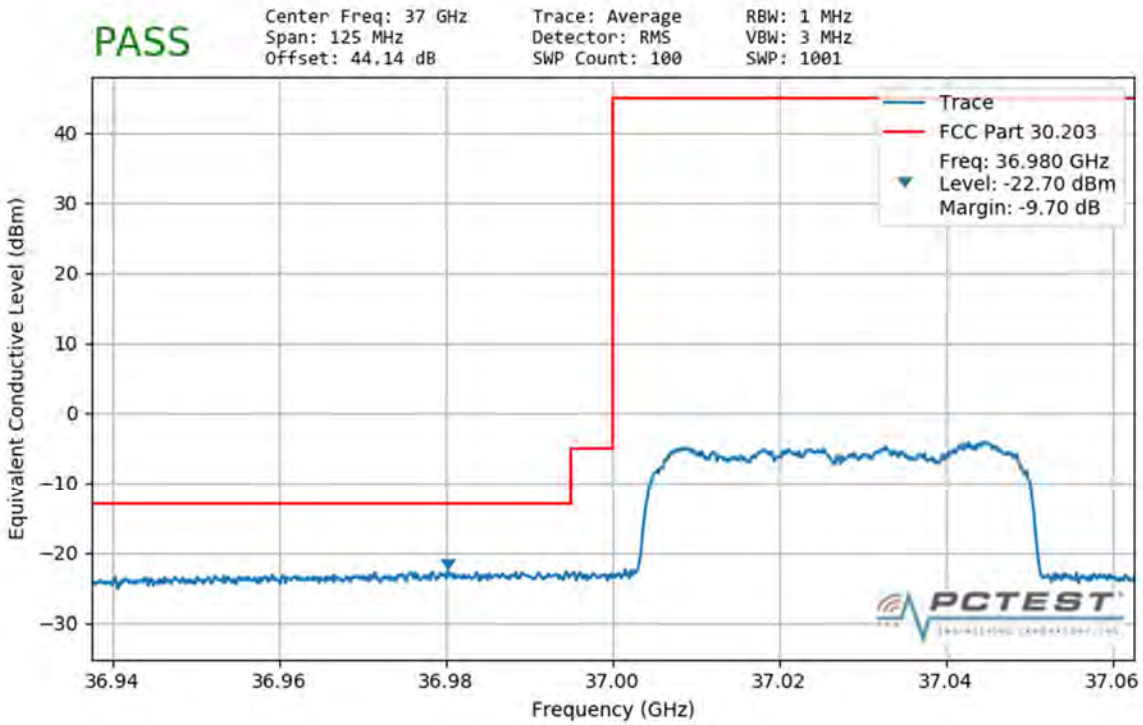
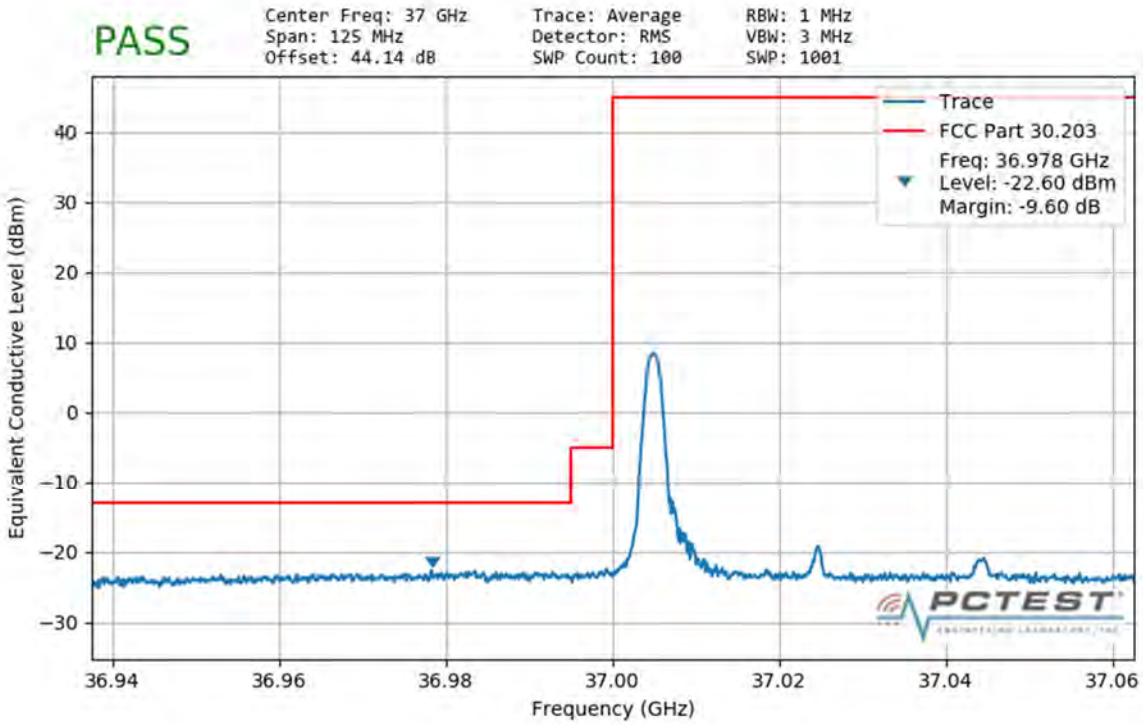


Plot 7-297. Ant2 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-298. Ant2 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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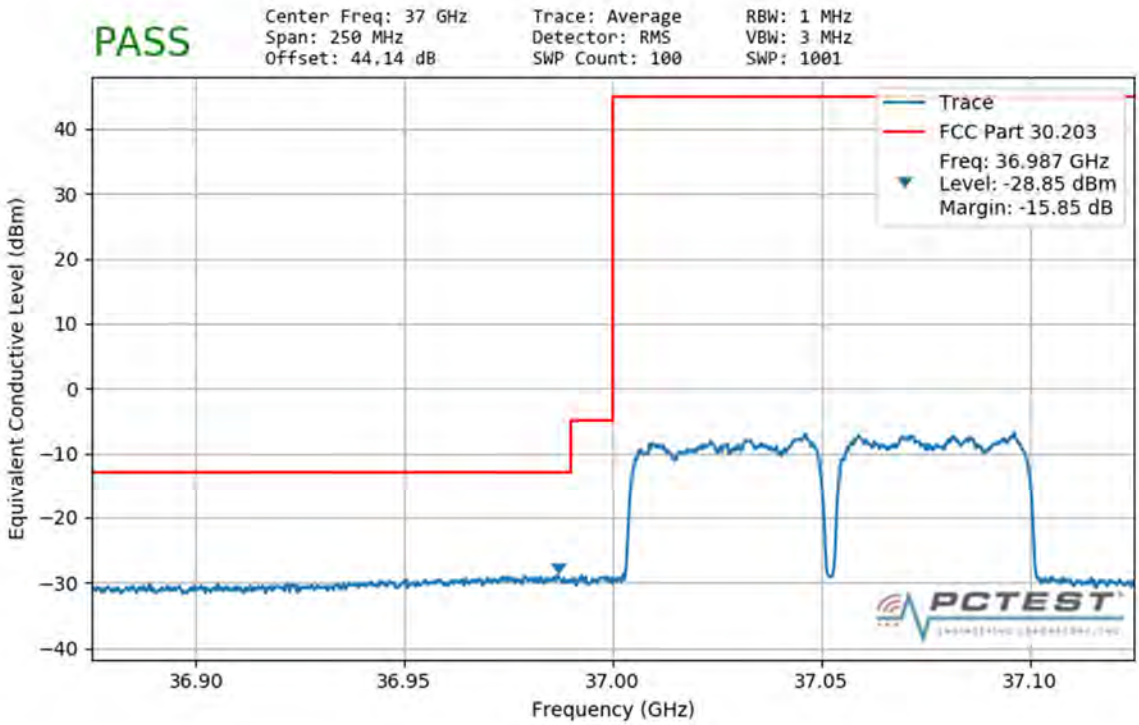
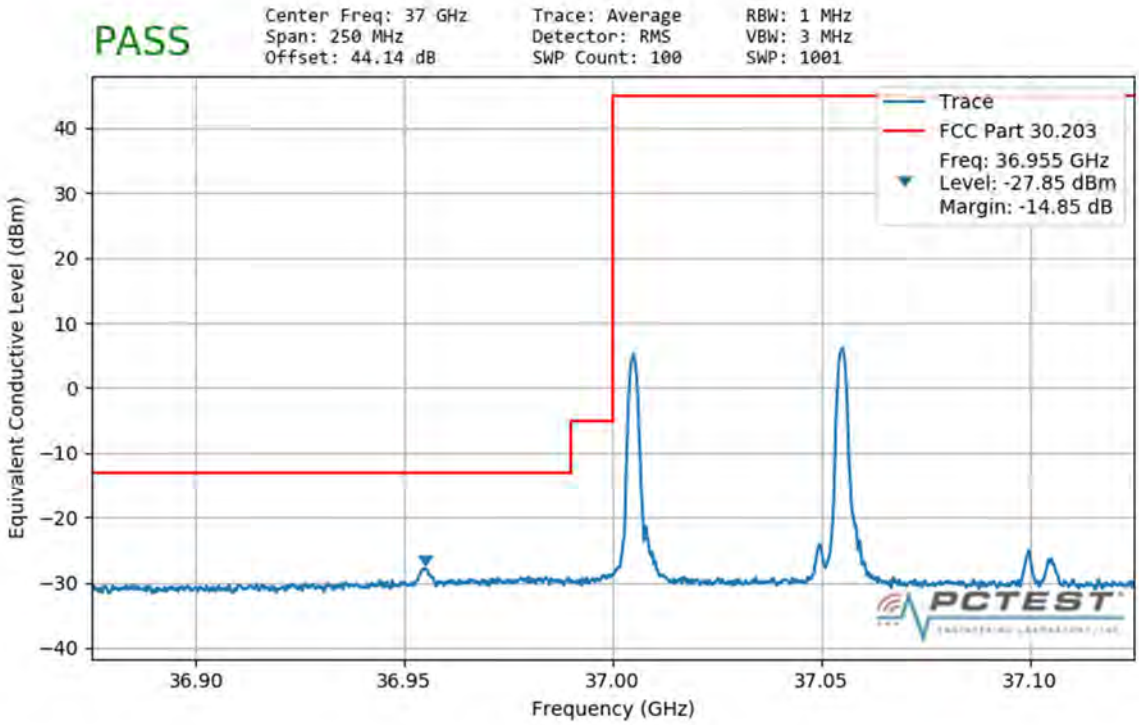


Plot 7-299. Ant2 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-300. Ant2 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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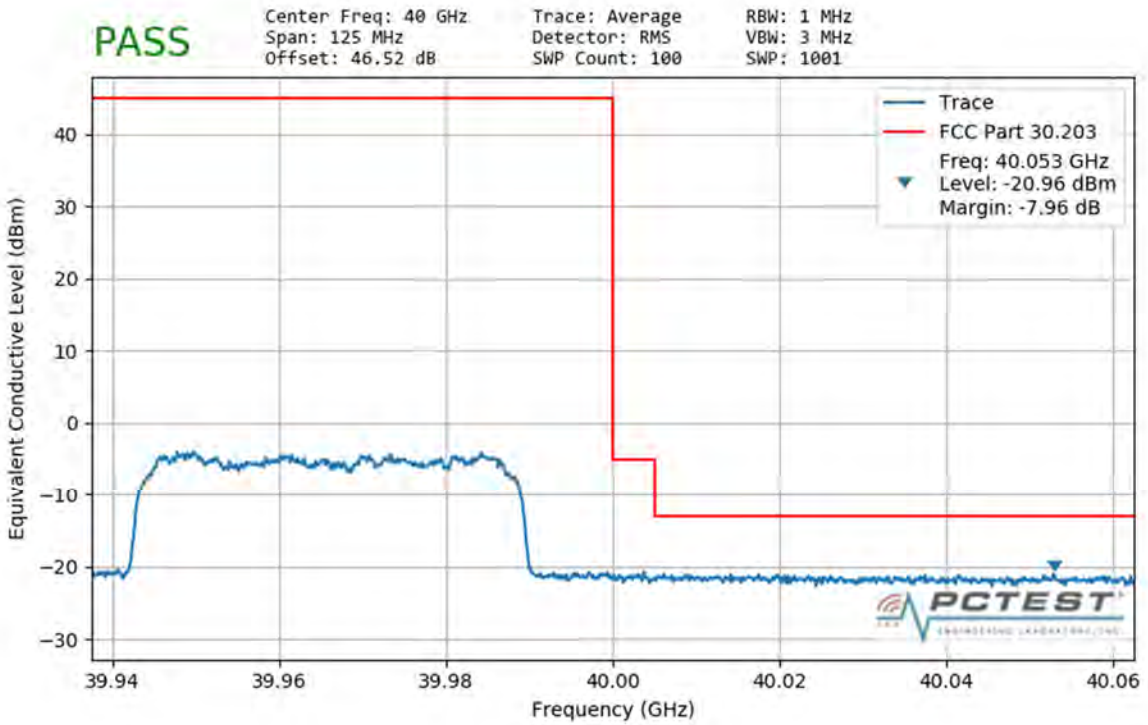
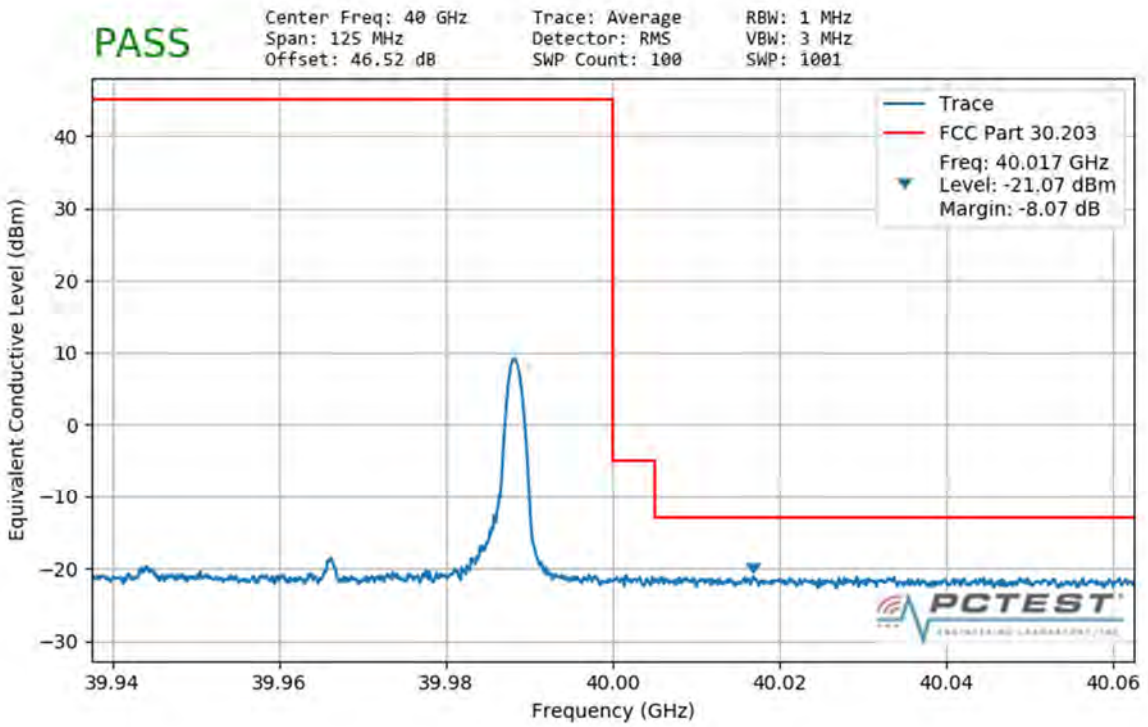


Plot 7-301. Ant2 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-302. Ant2 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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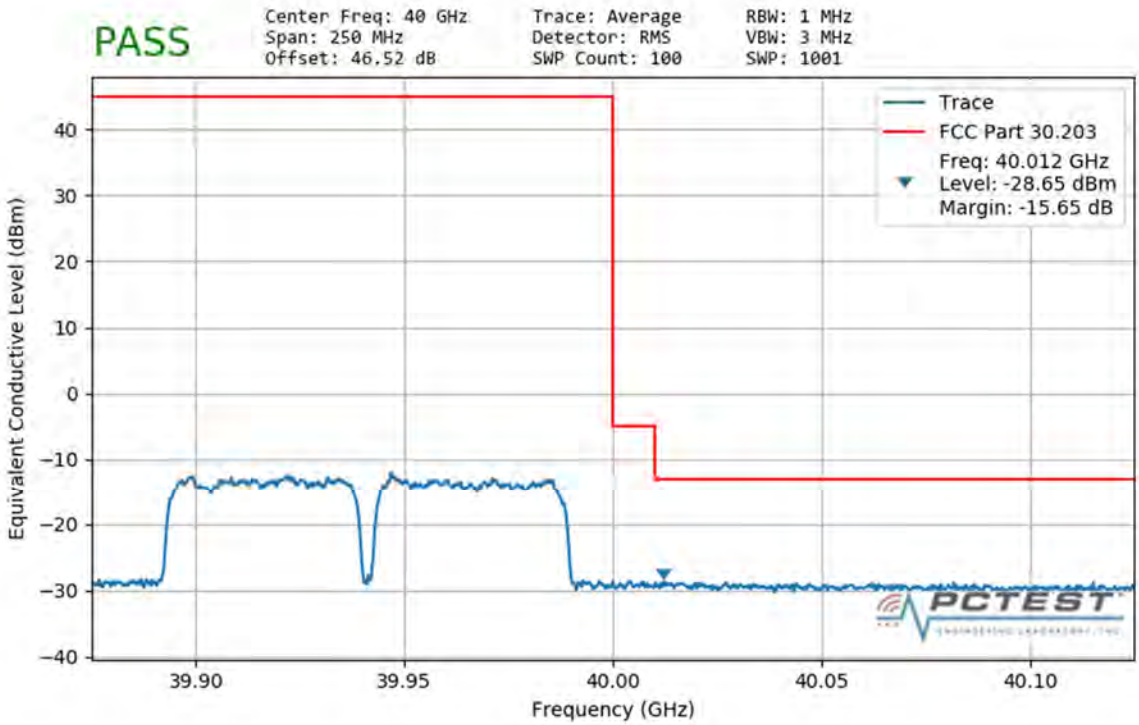
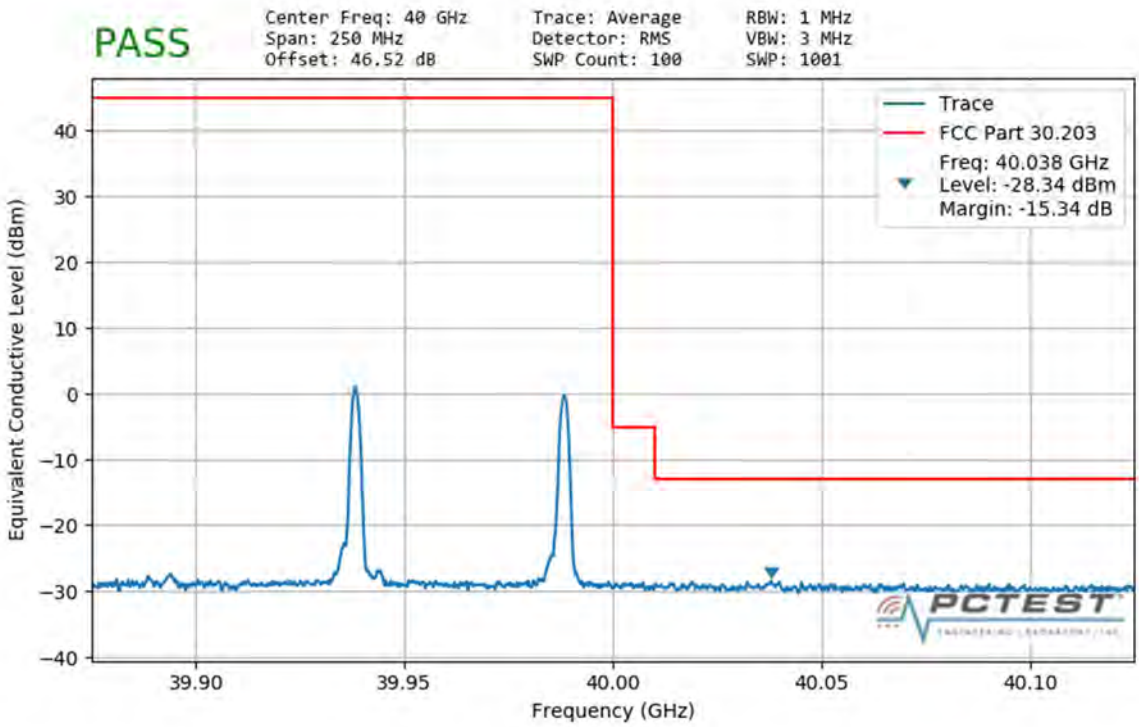


Plot 7-303. Ant2 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-304. Ant2 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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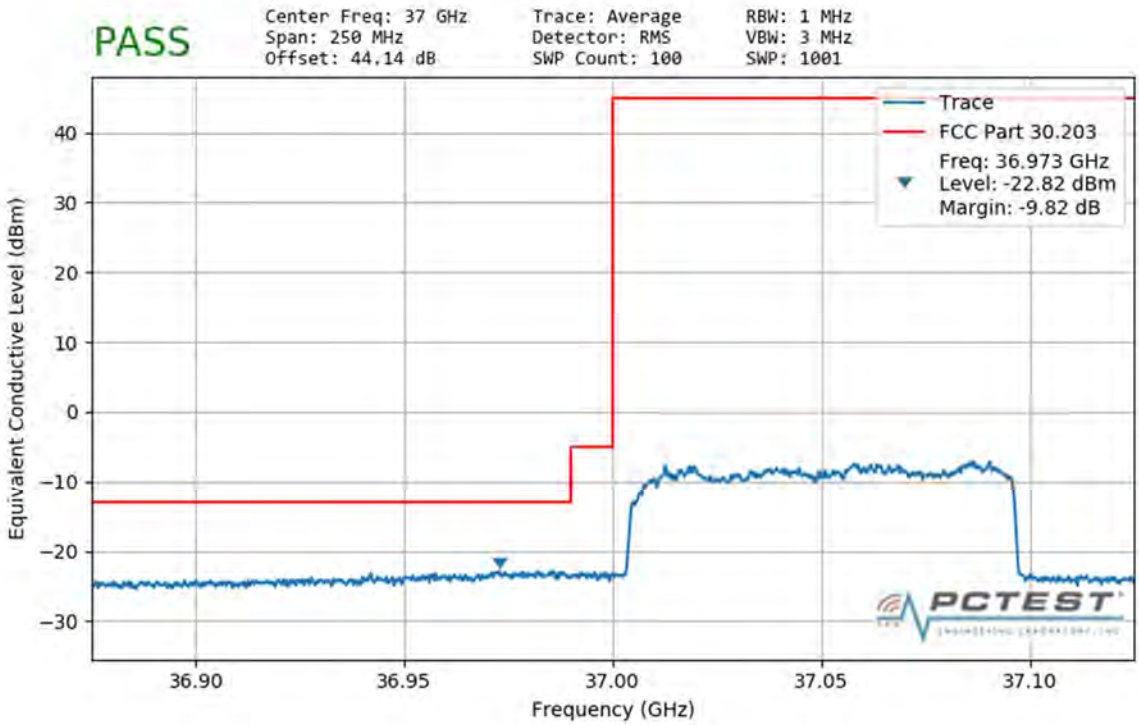
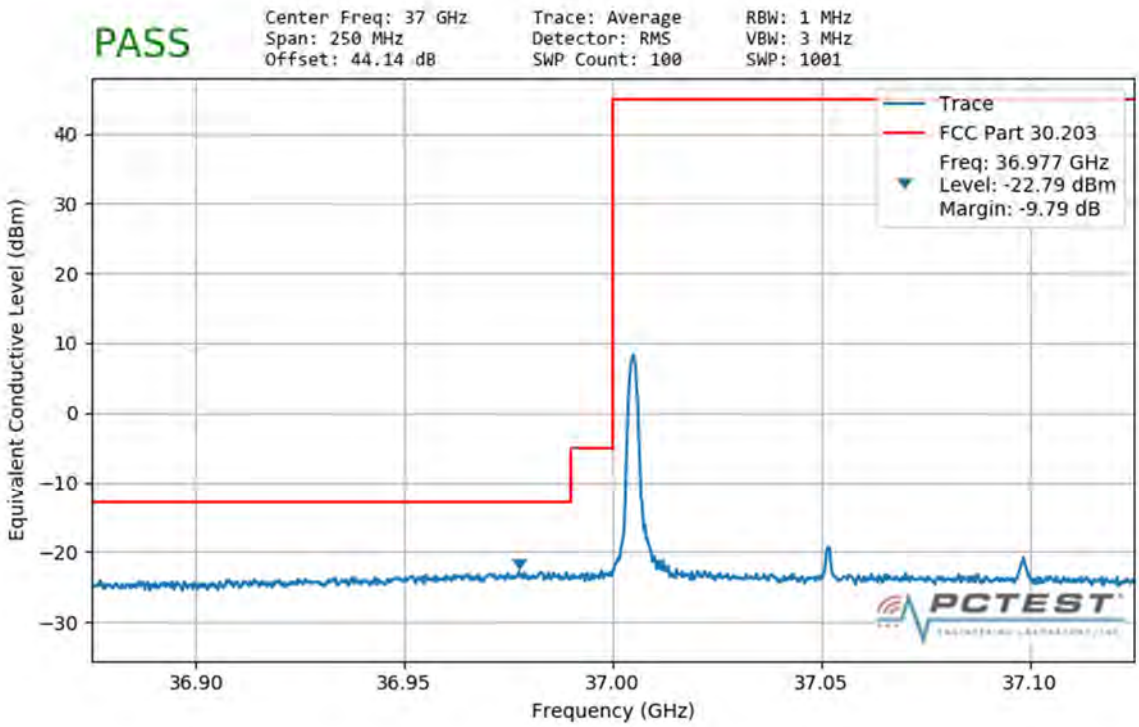


Plot 7-305. Ant2 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-306. Ant2 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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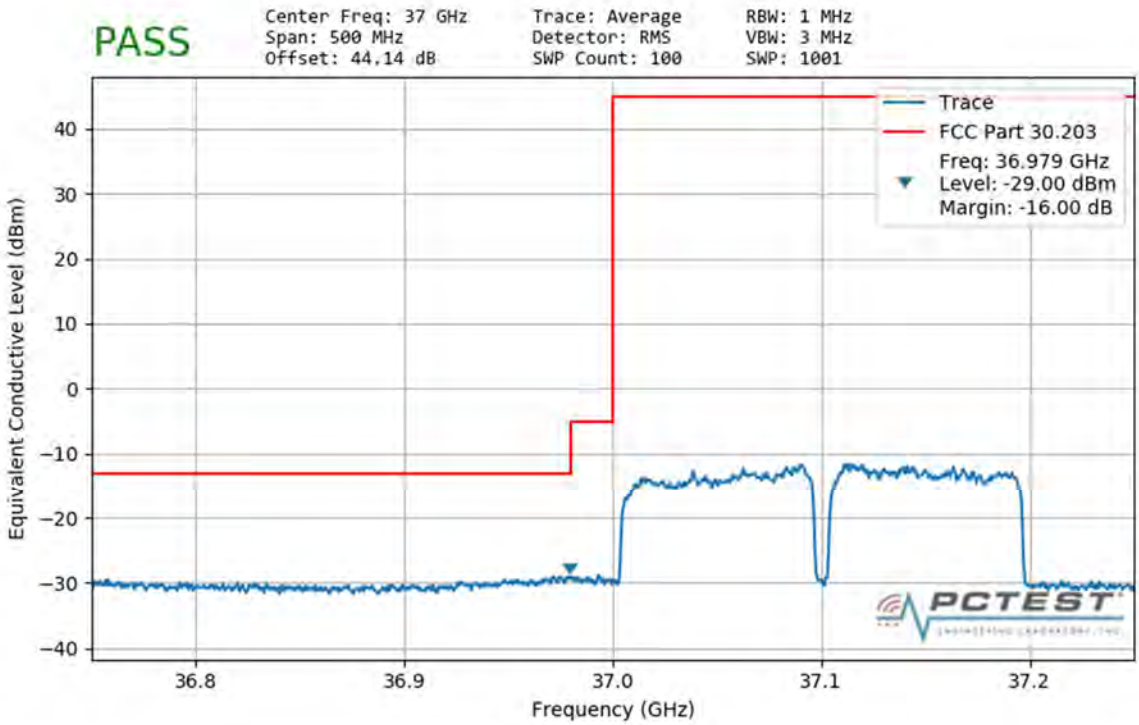
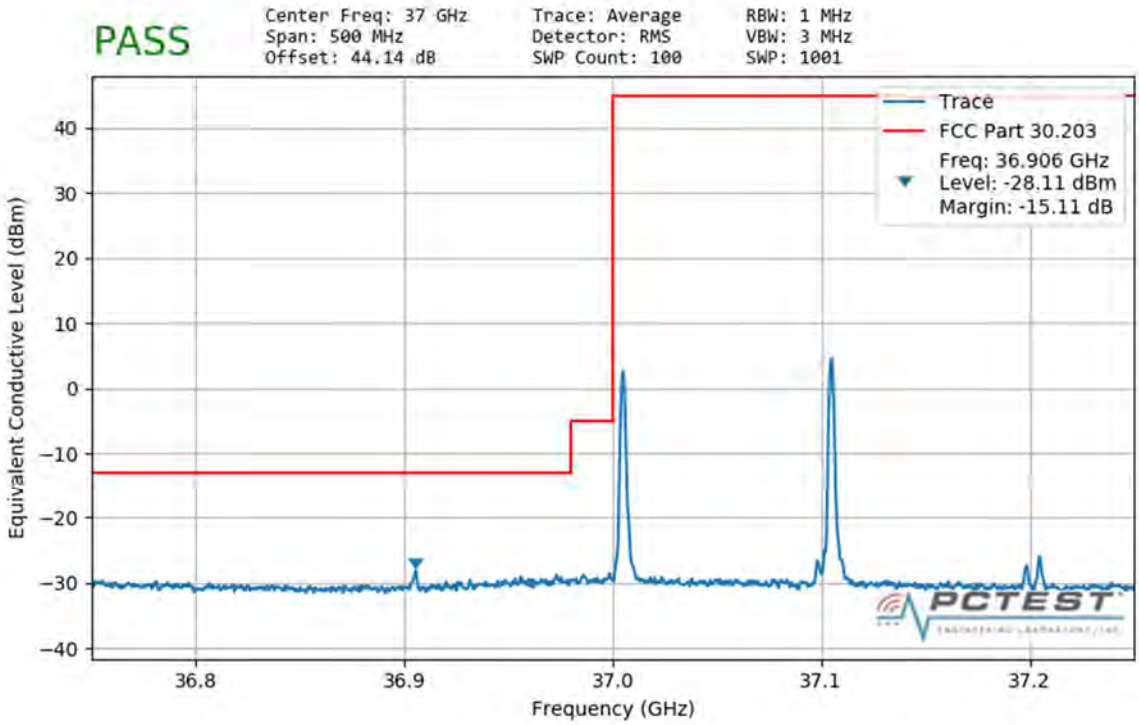


Plot 7-307. Ant2 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-308. Ant2 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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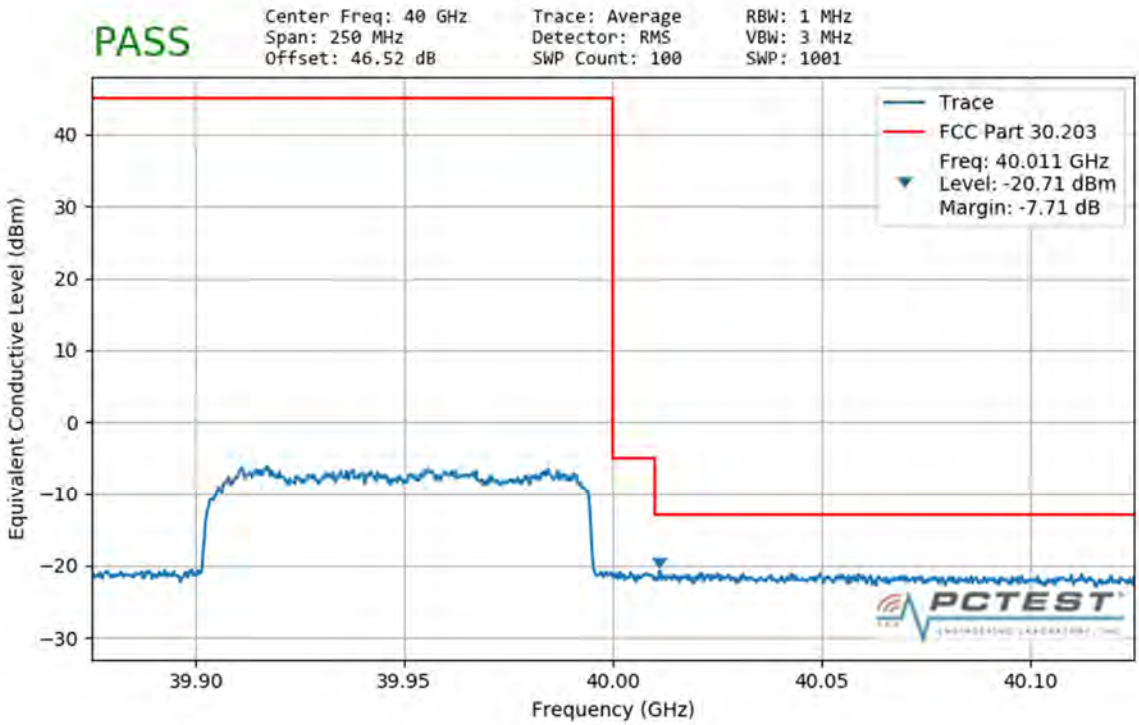
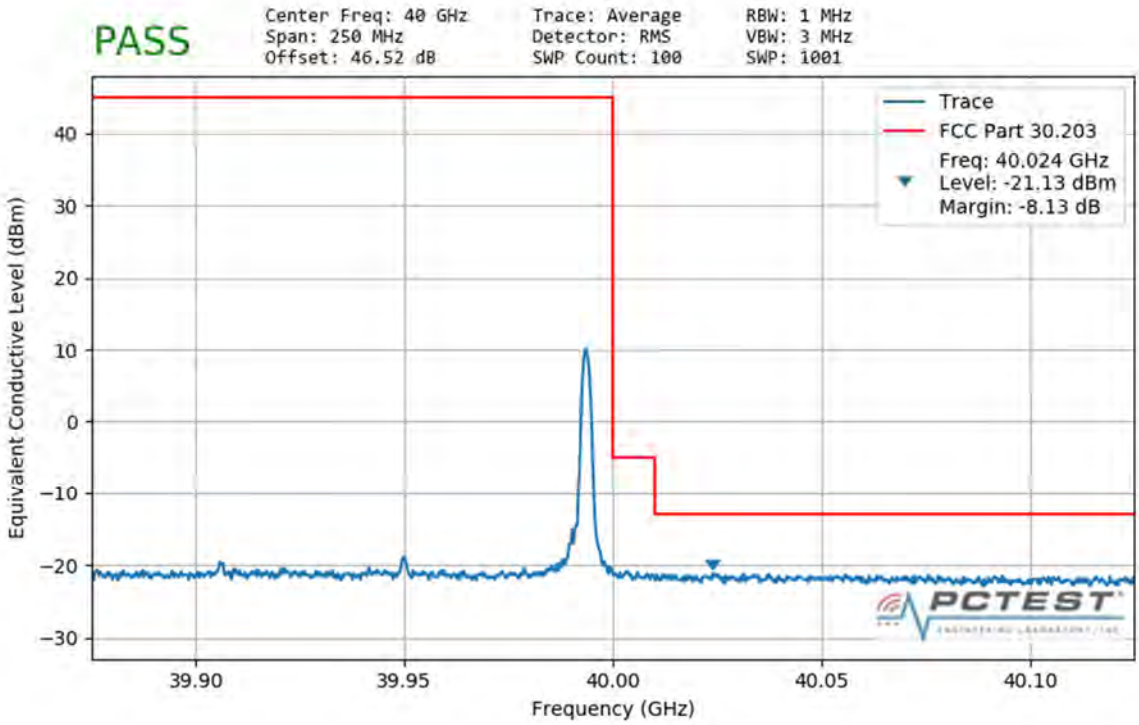


Plot 7-309. Ant2 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-310. Ant2 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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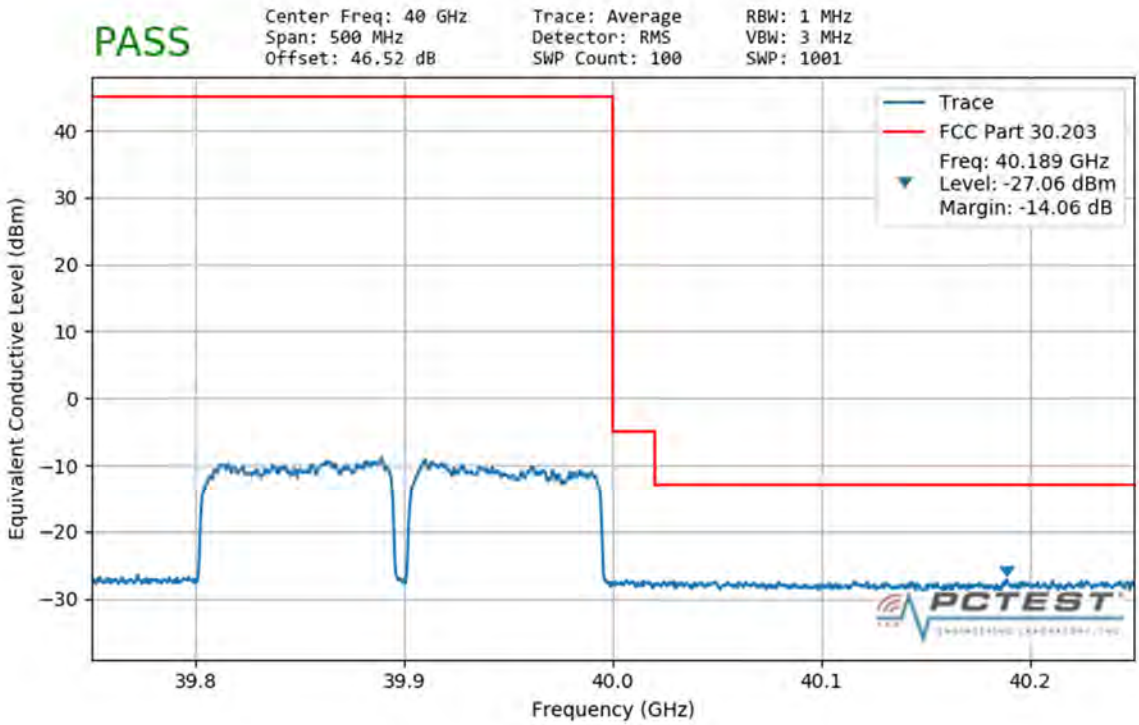
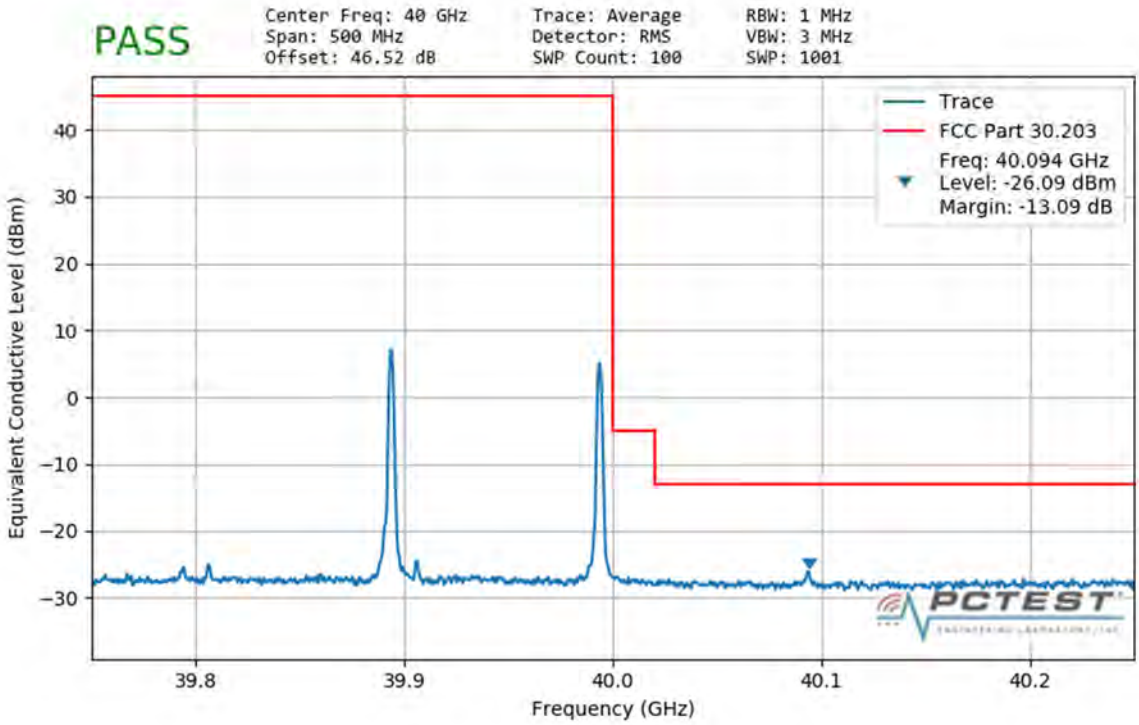


Plot 7-311. Ant2 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-312. Ant2 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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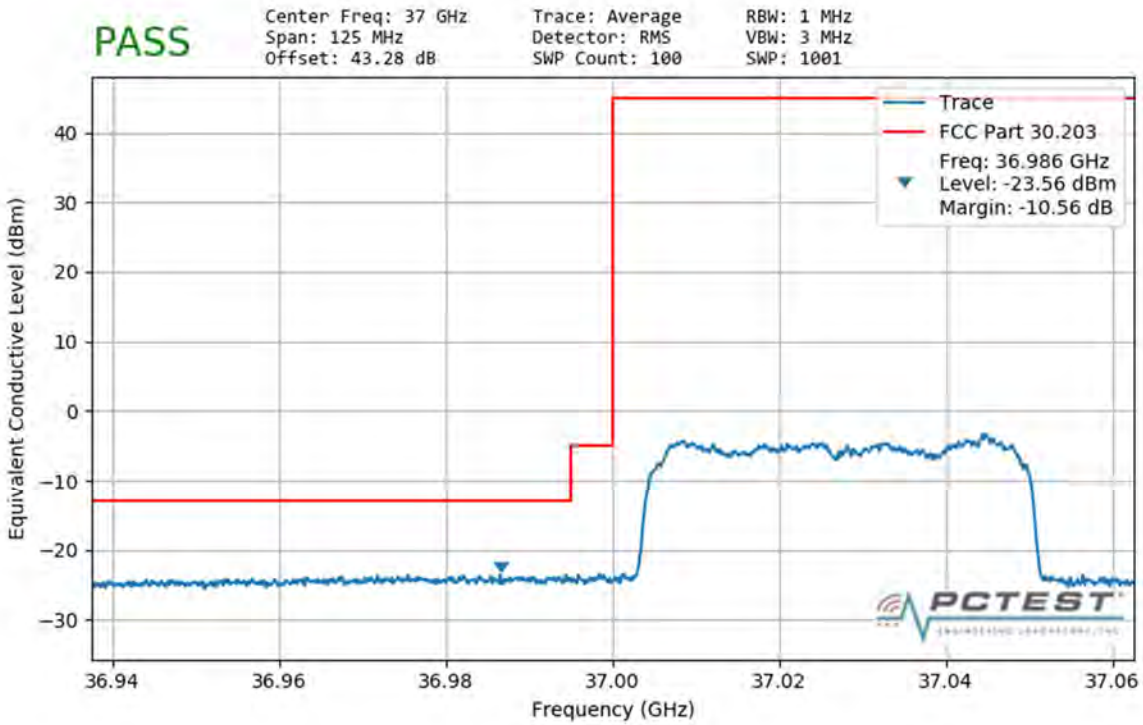
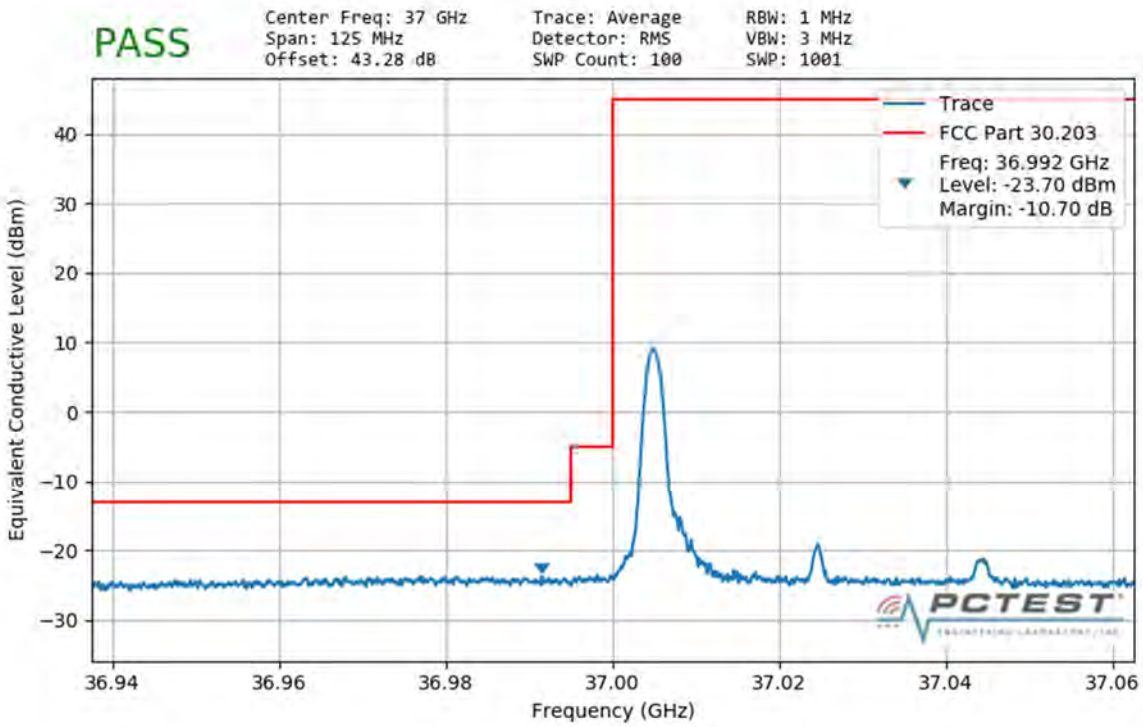


Plot 7-313. Ant3 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-314. Ant3 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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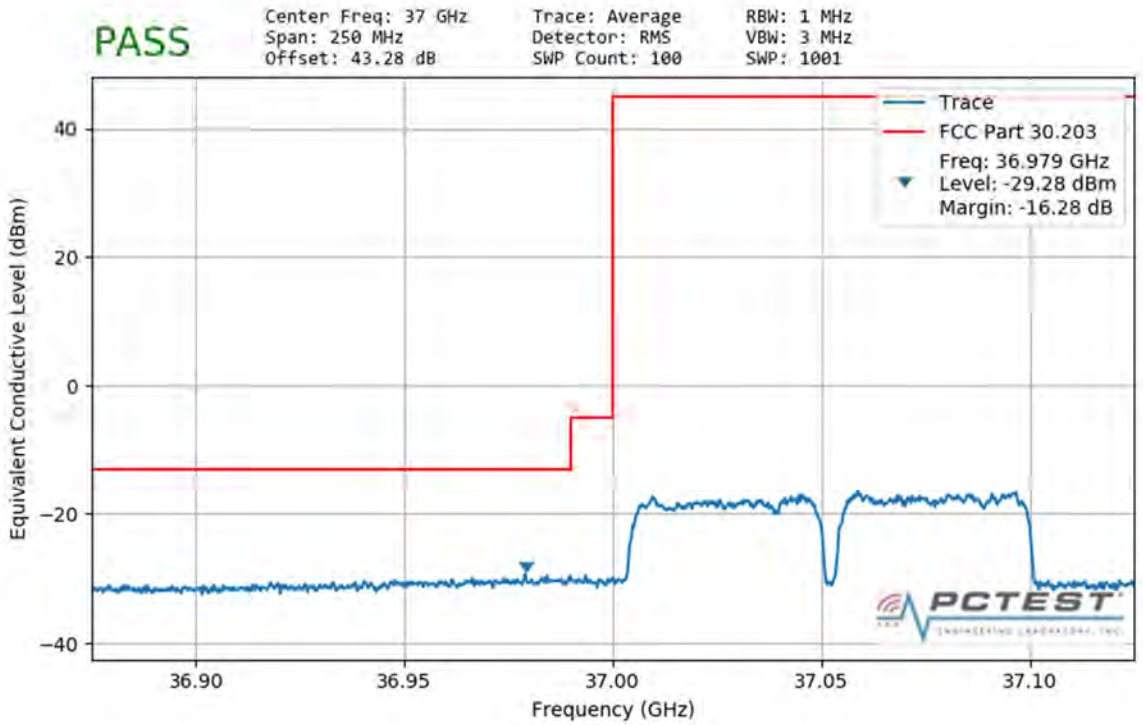
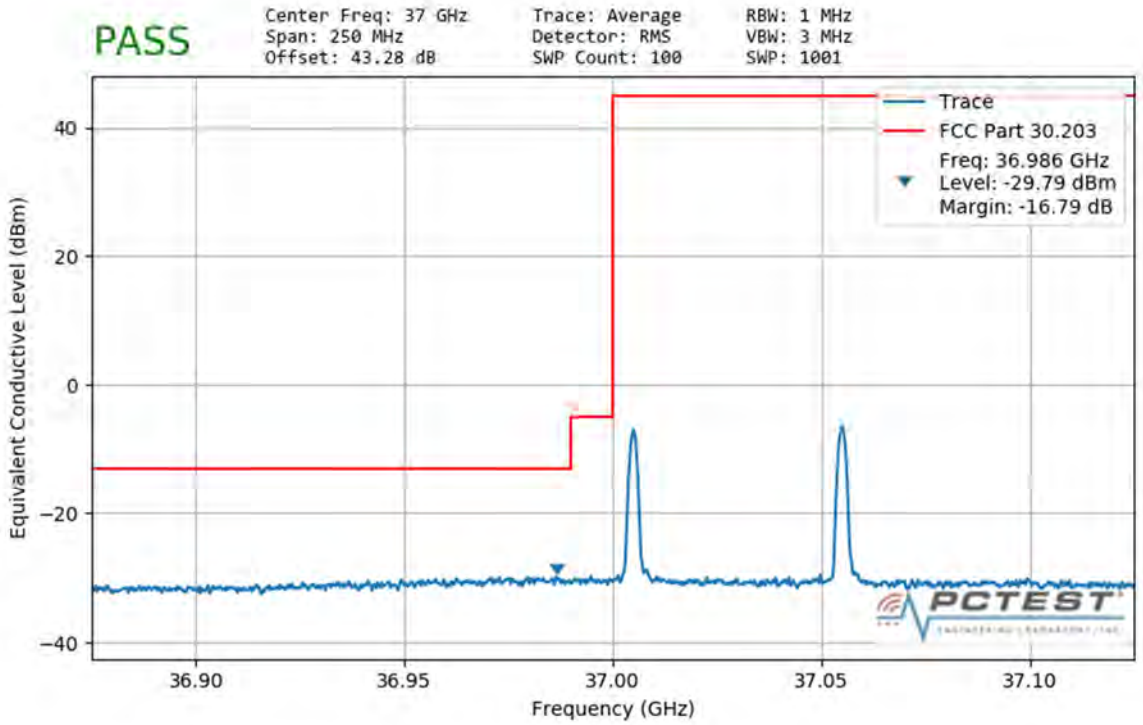


Plot 7-315. Ant3 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-316. Ant3 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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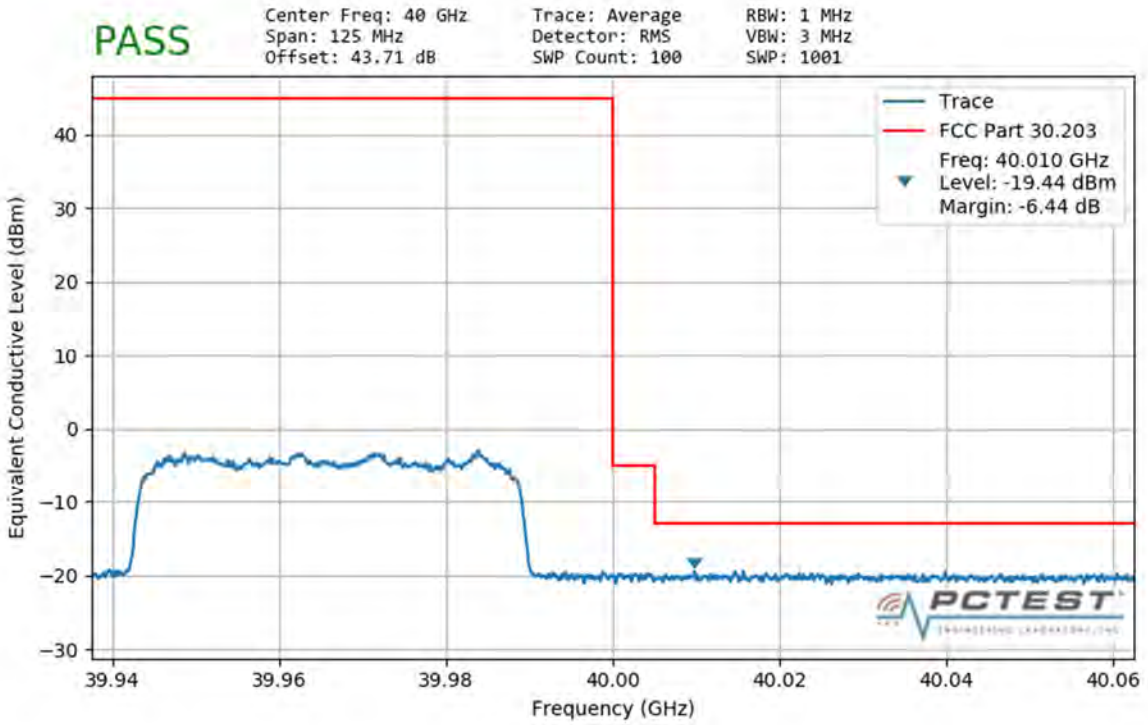
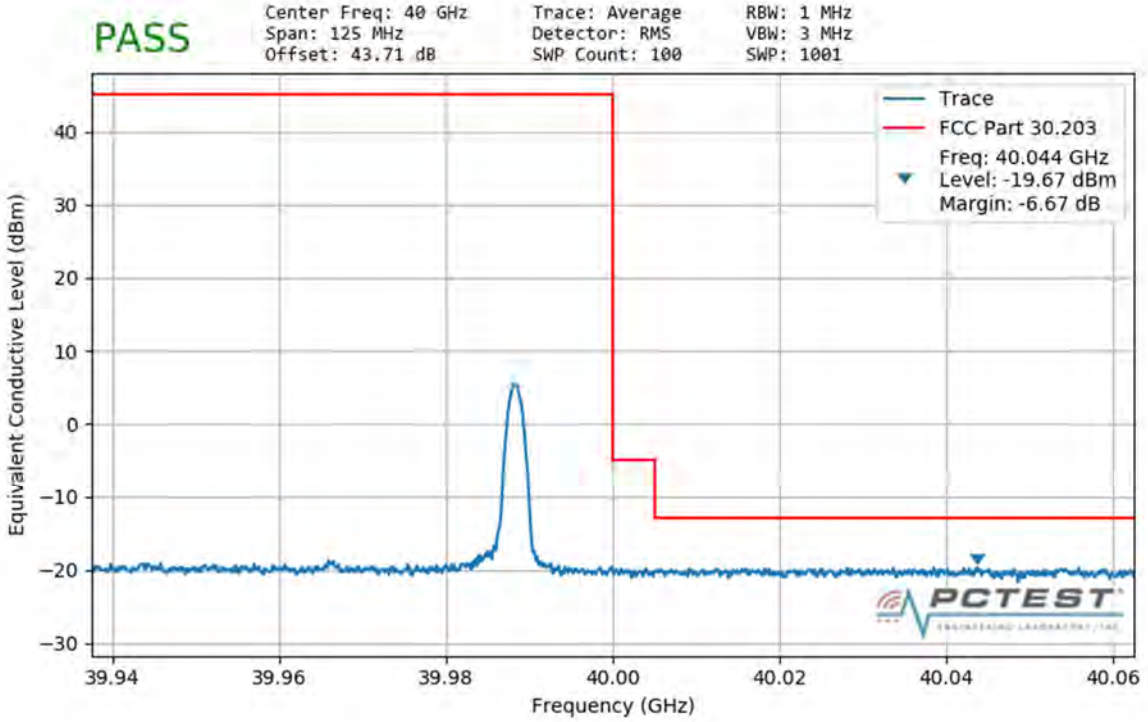


Plot 7-317. Ant3 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-318. Ant3 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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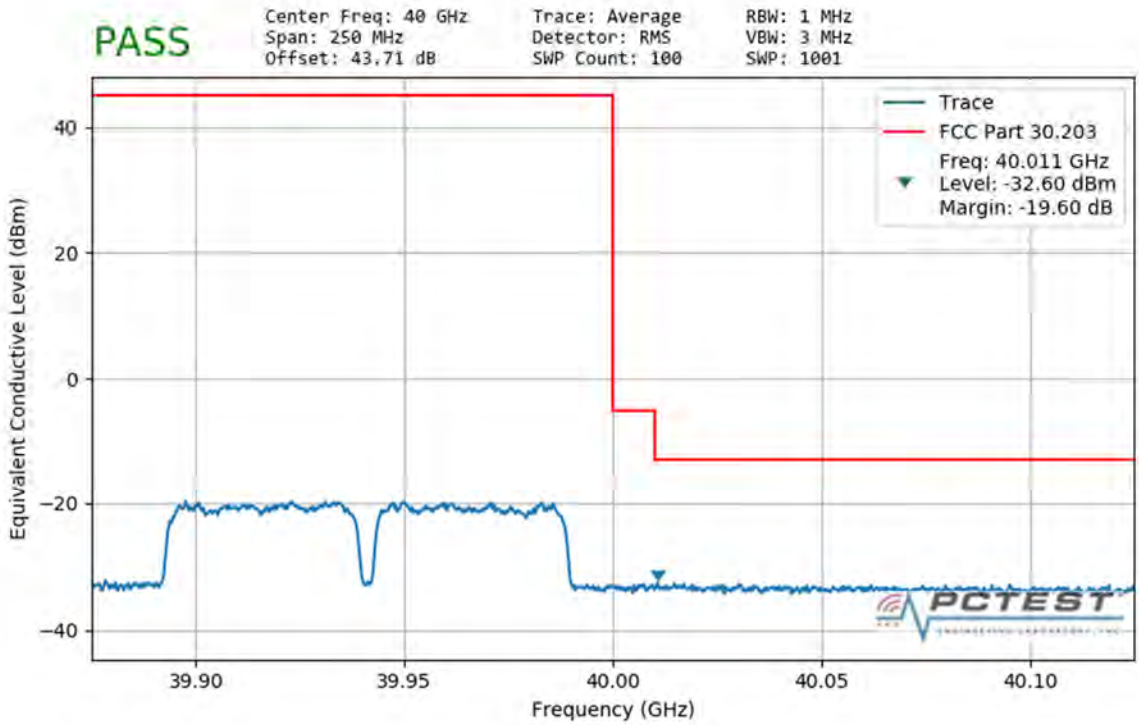
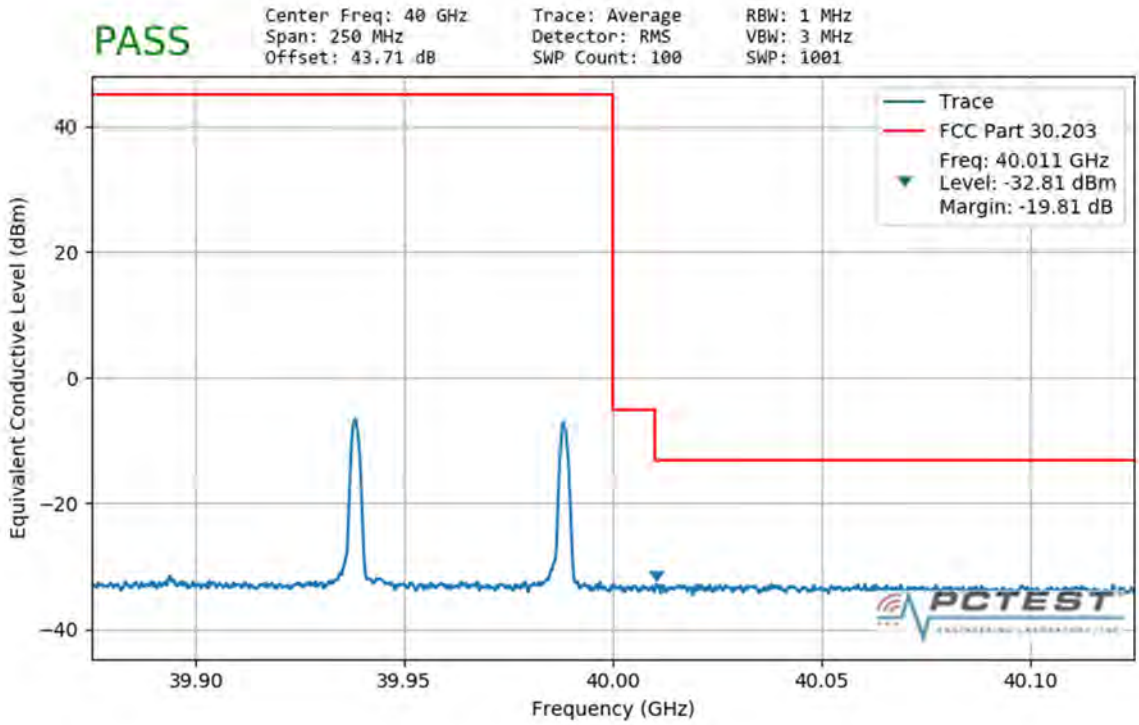


Plot 7-319. Ant3 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-320. Ant3 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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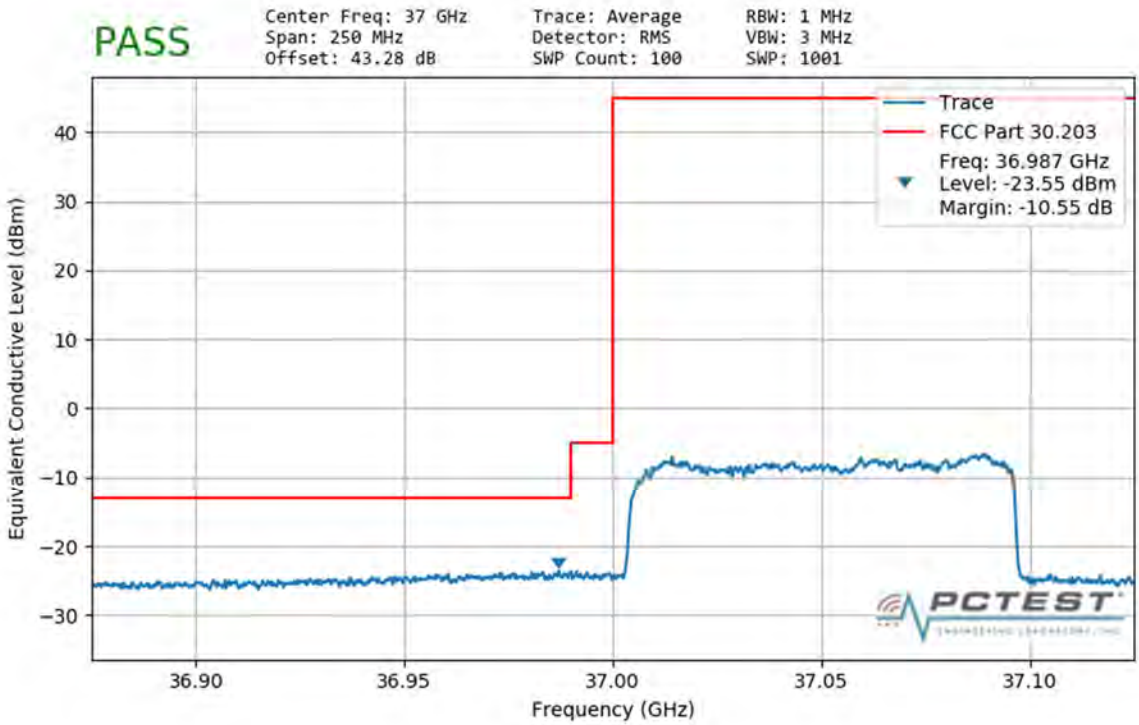
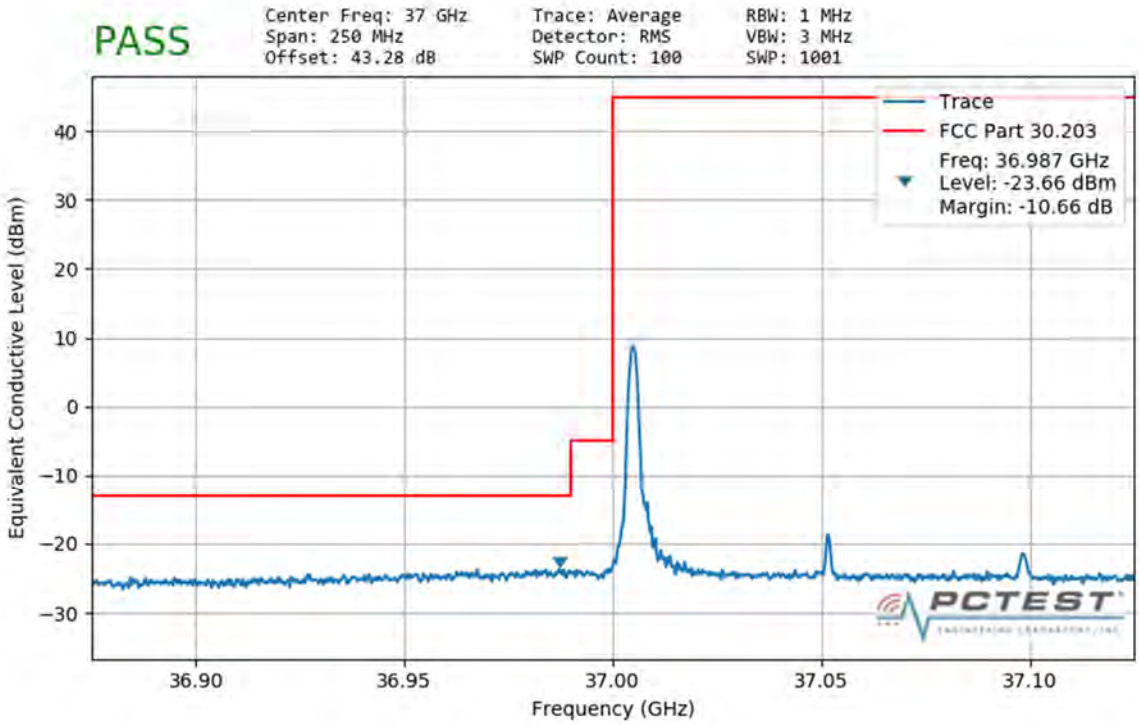


Plot 7-321. Ant3 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-322. Ant3 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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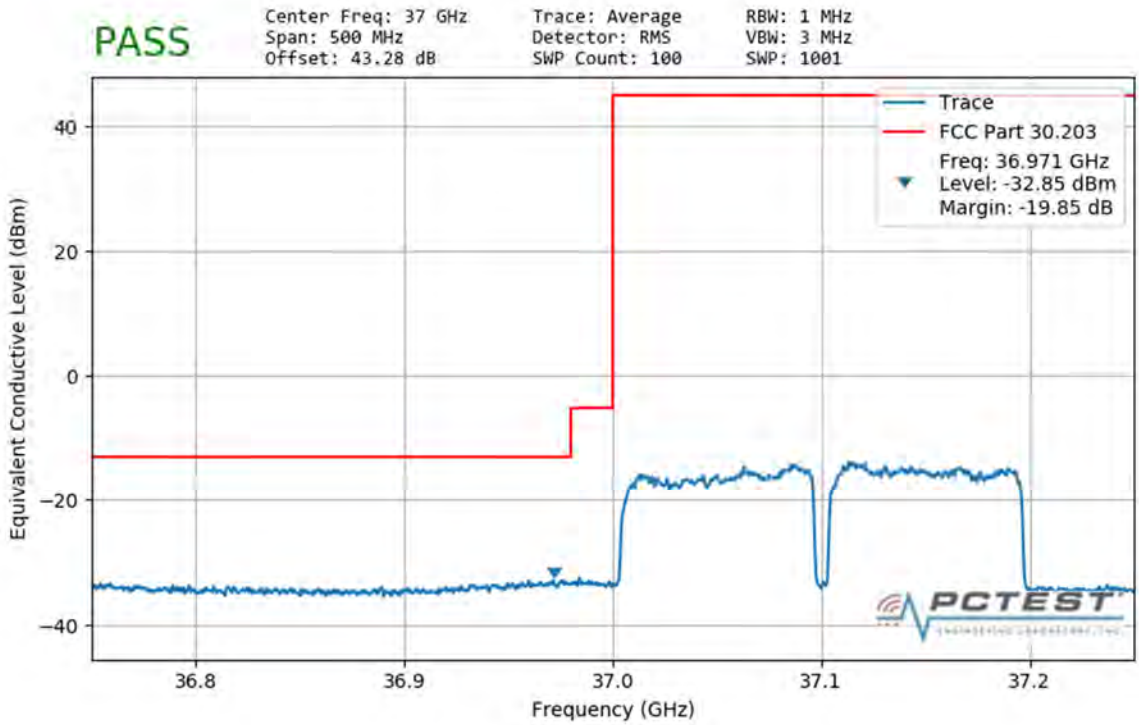
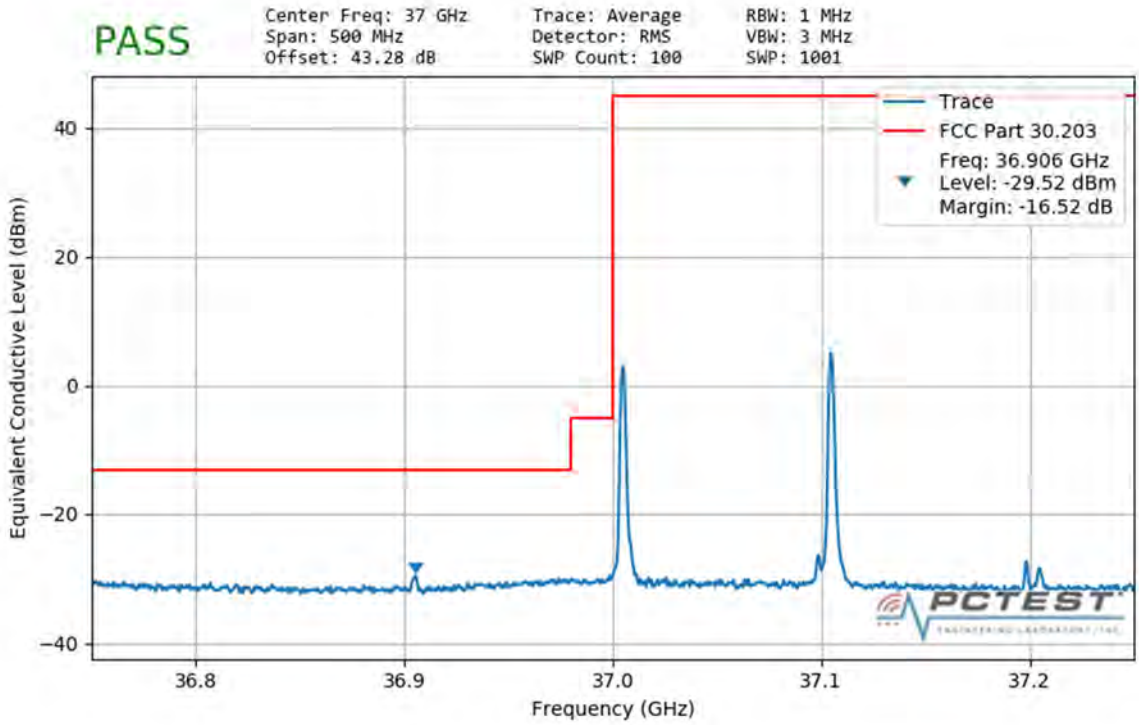


Plot 7-323. Ant3 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-324. Ant3 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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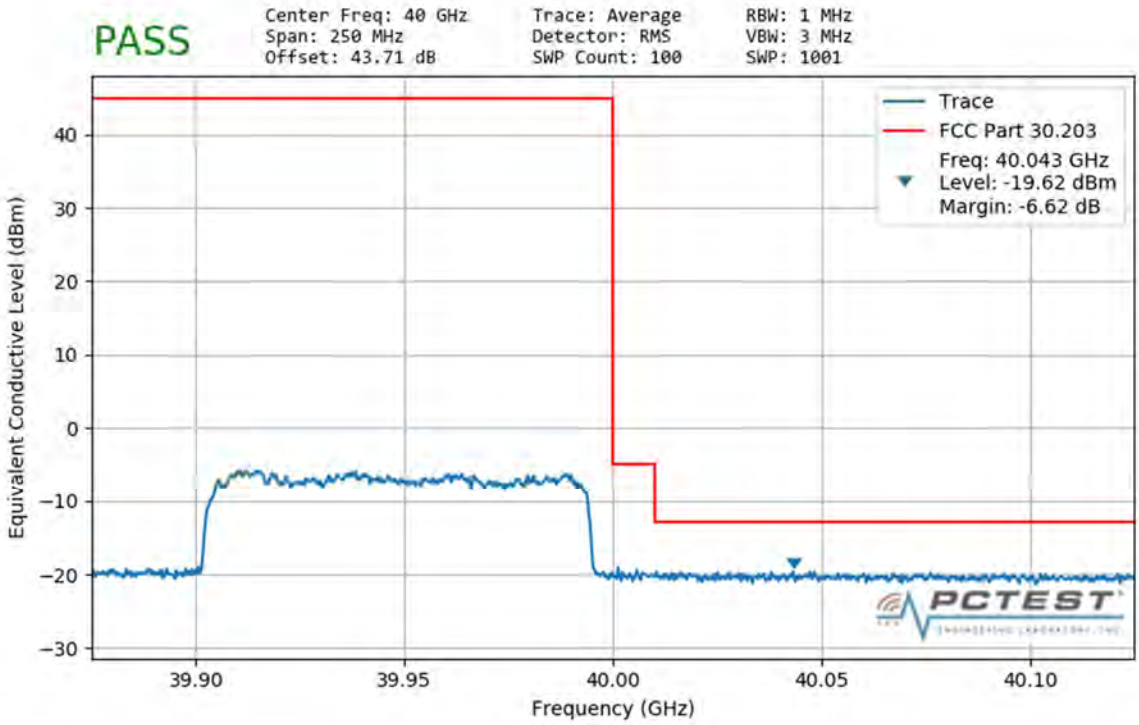
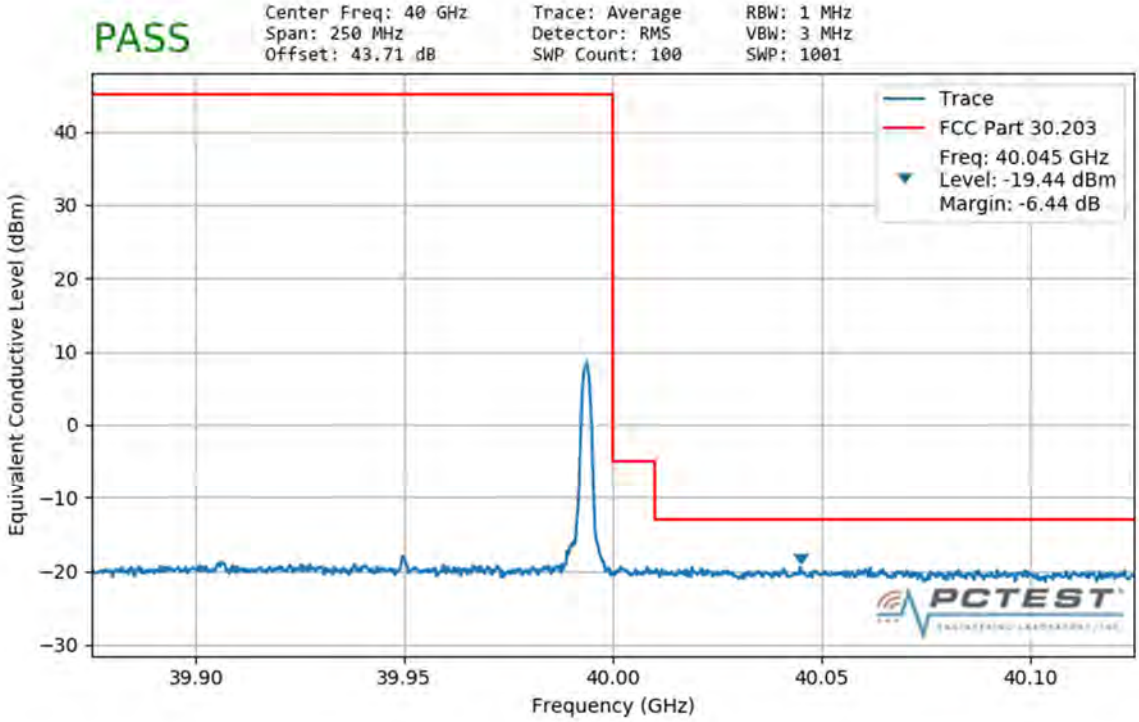


Plot 7-325. Ant3 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-326. Ant3 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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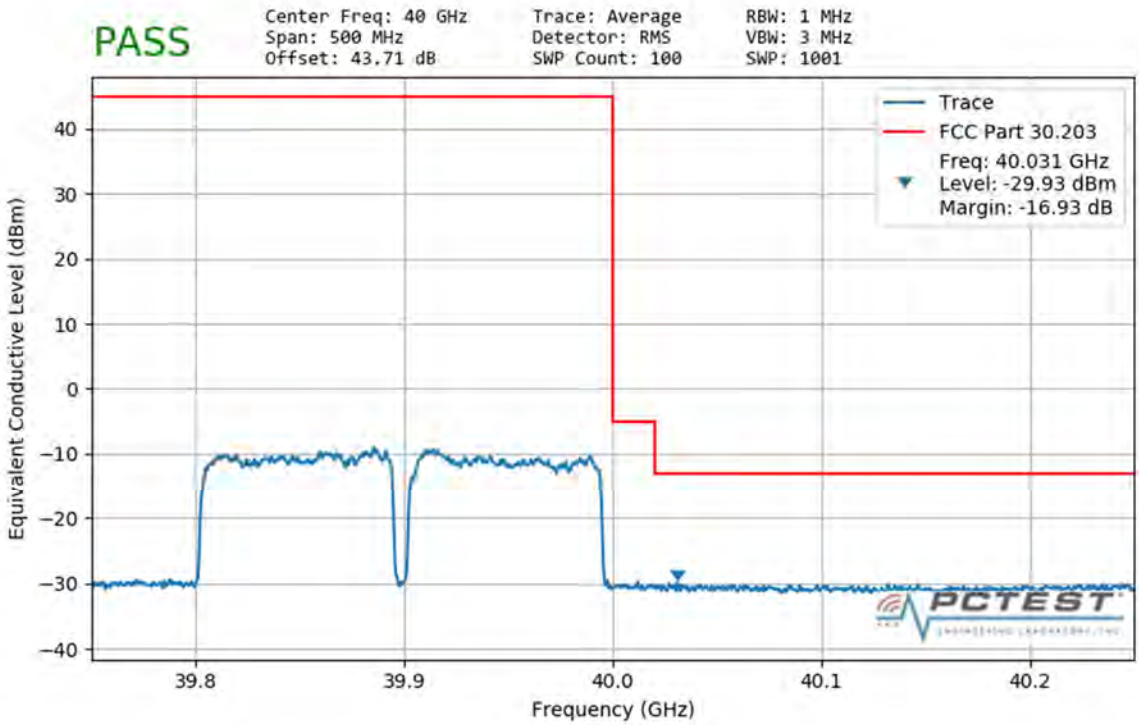
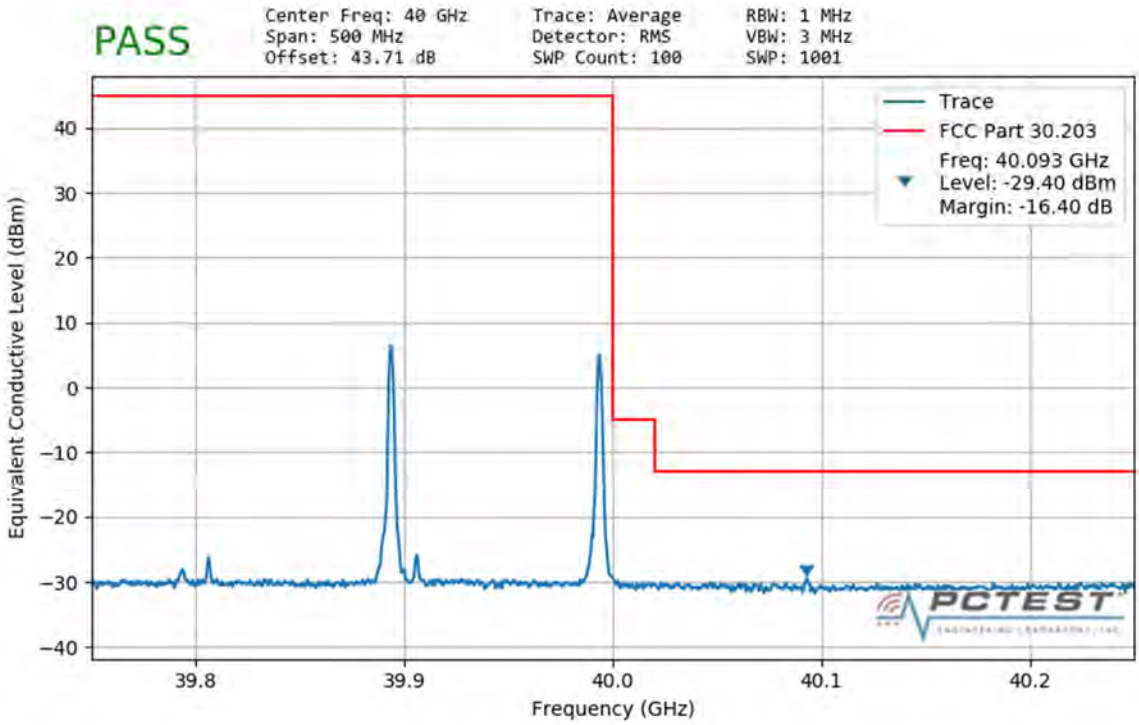


Plot 7-327. Ant3 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-328. Ant3 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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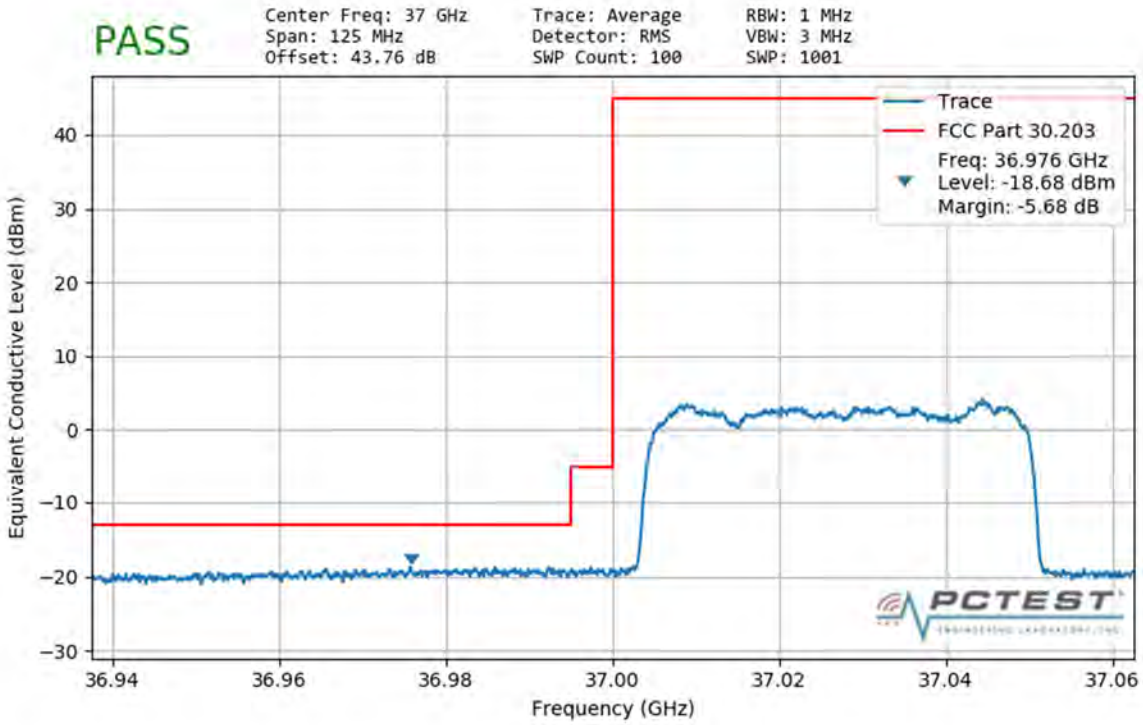
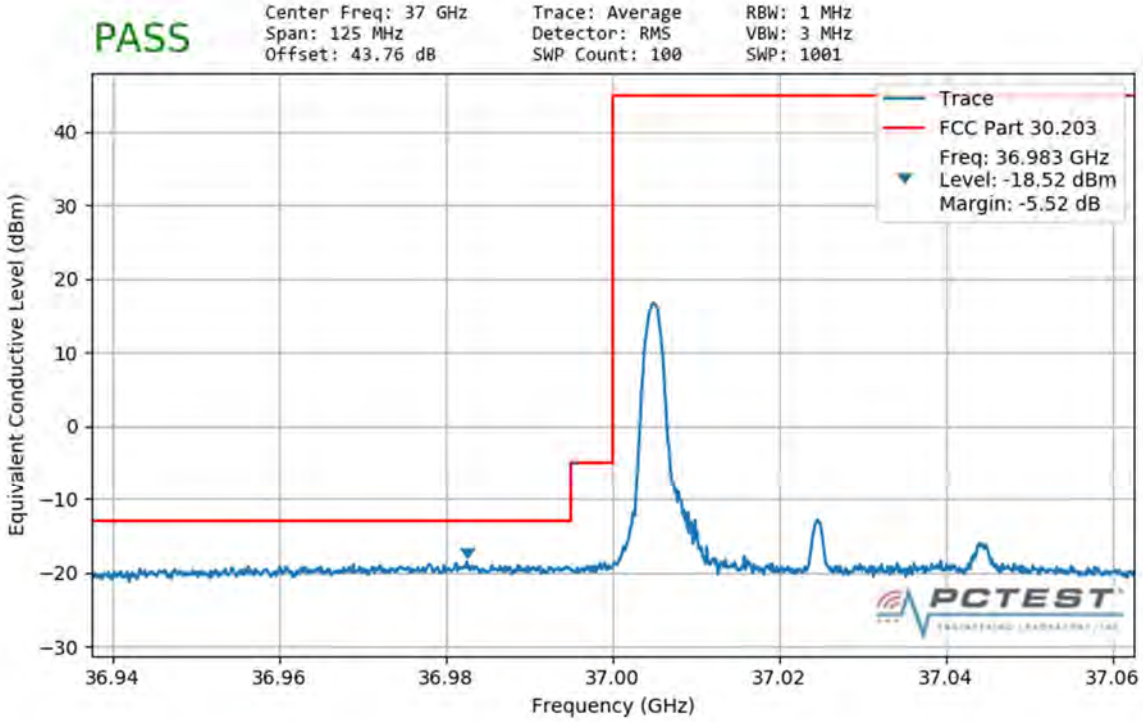


Plot 7-329. Ant4 Lower Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-330. Ant4 Lower Band Edge (50MHz-1CC – QPSK 1 RB)

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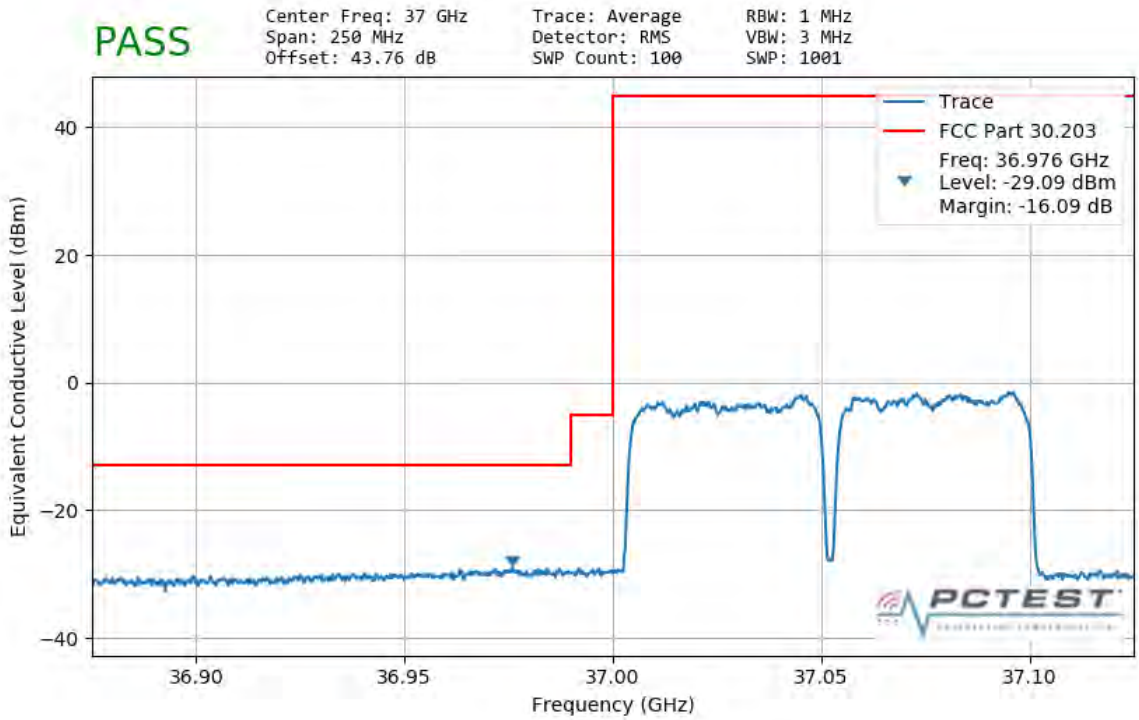
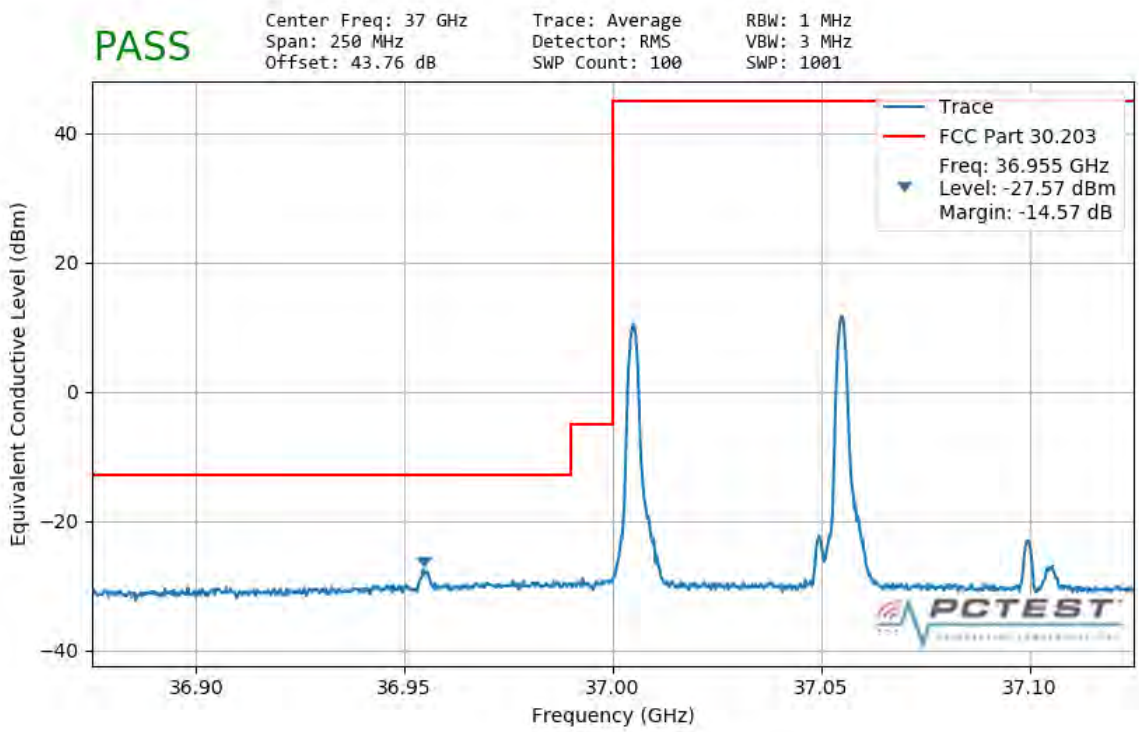


Plot 7-331. Ant4 Lower Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-332. Ant4 Lower Band Edge (50MHz-2CC – QPSK 1 RB)

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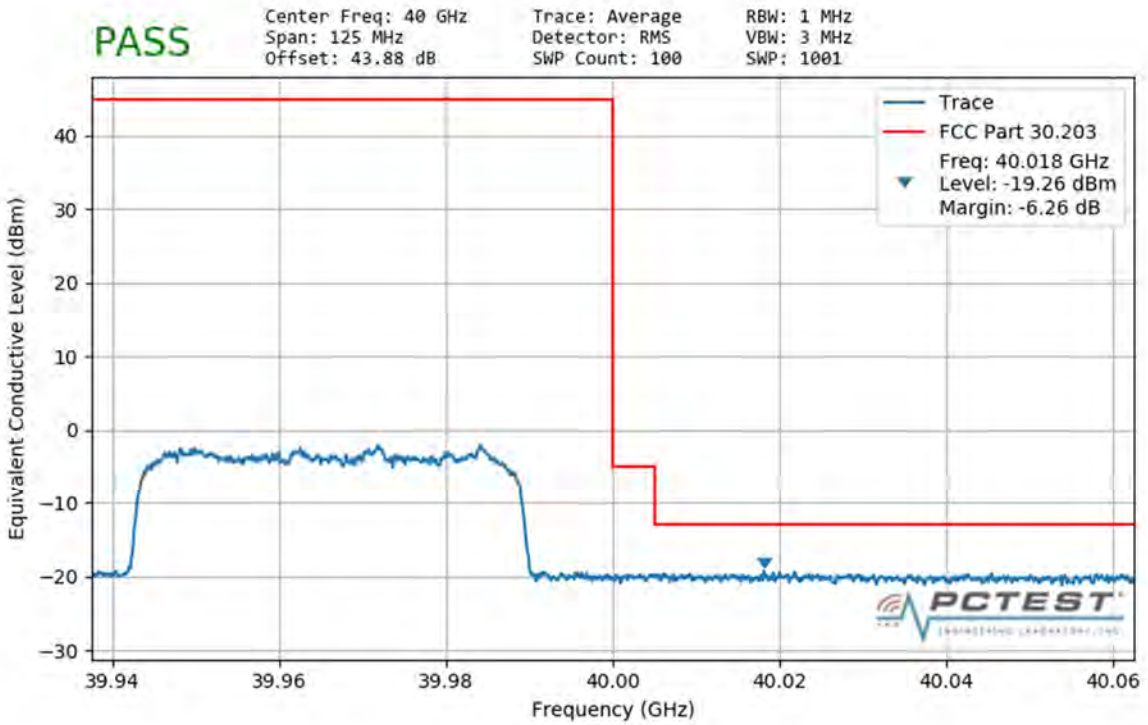
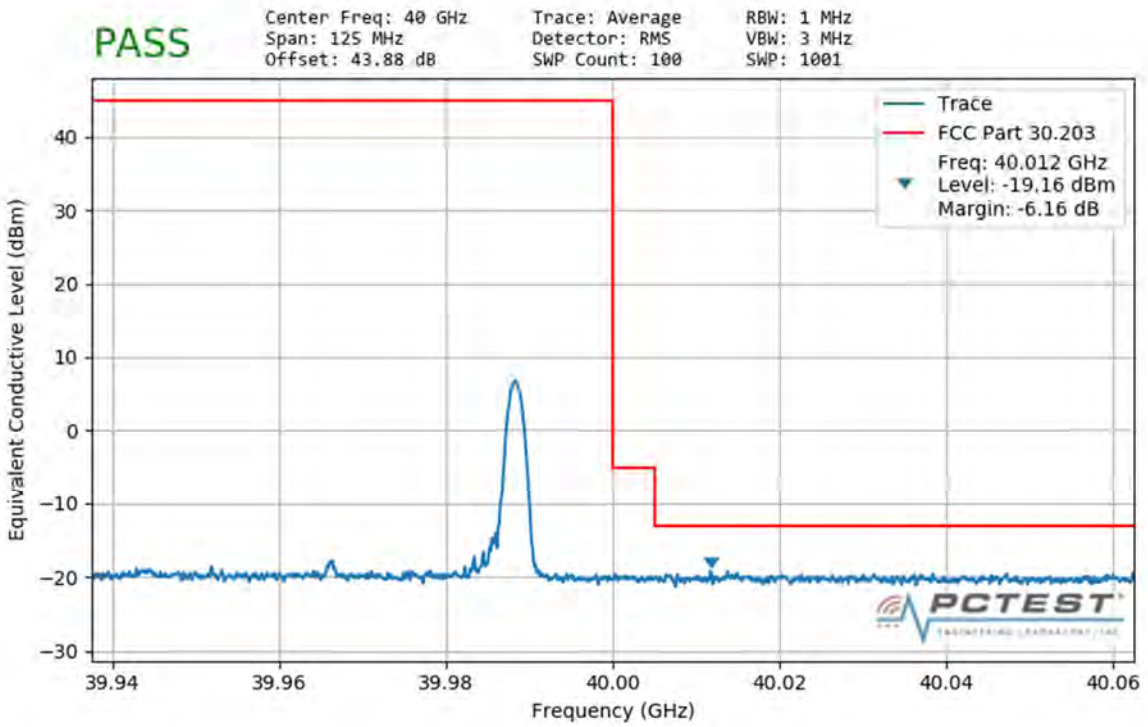


Plot 7-333. Ant4 Upper Band Edge (50MHz-1CC – QPSK Full RB)



Plot 7-334. Ant4 Upper Band Edge (50MHz-1CC – QPSK 1 RB)

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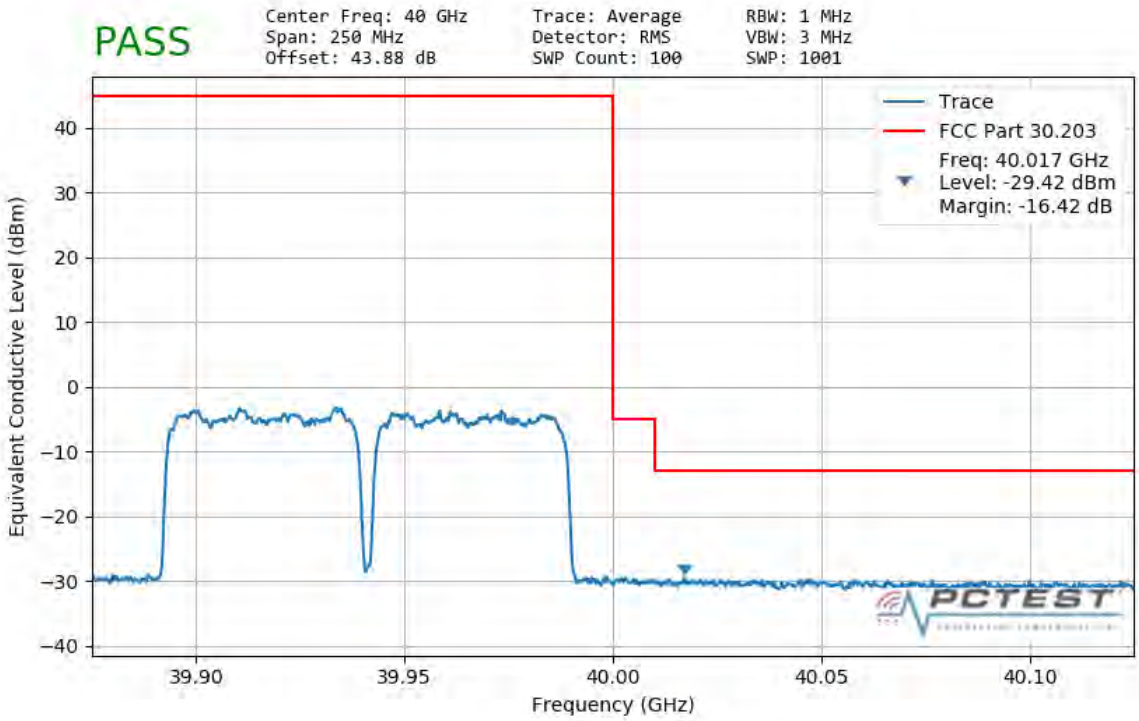
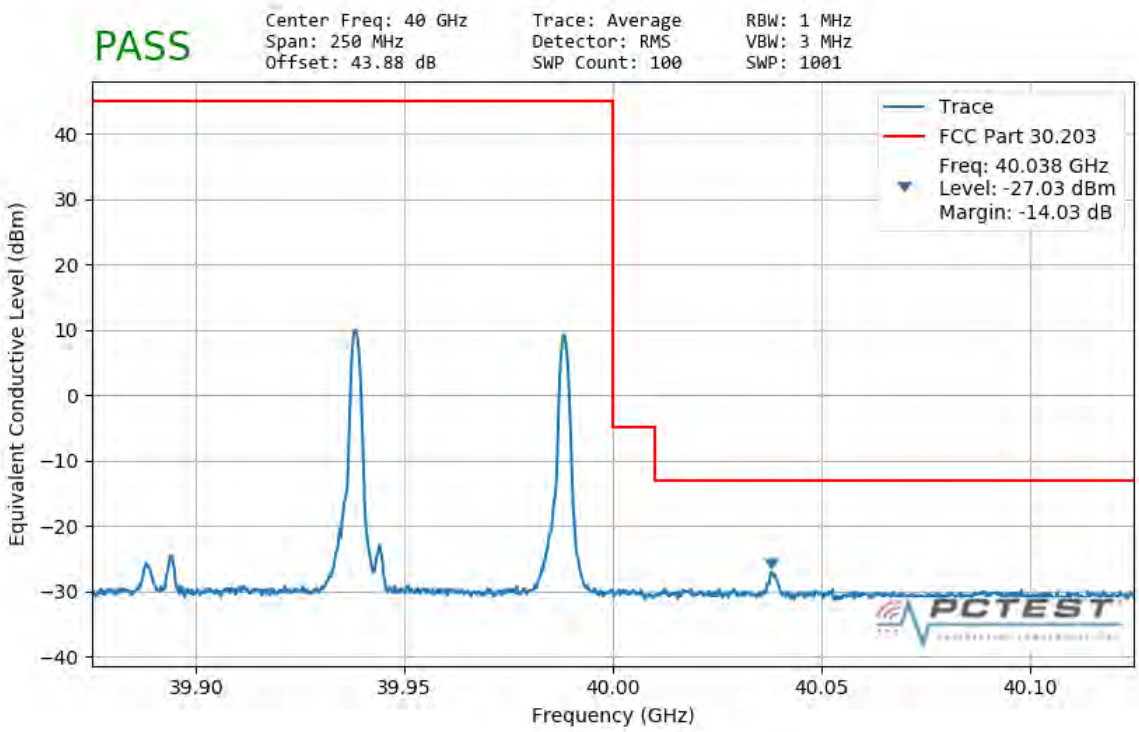


Plot 7-335. Ant4 Upper Band Edge (50MHz-2CC – QPSK Full RB)



Plot 7-336. Ant4 Upper Band Edge (50MHz-2CC – QPSK 1 RB)

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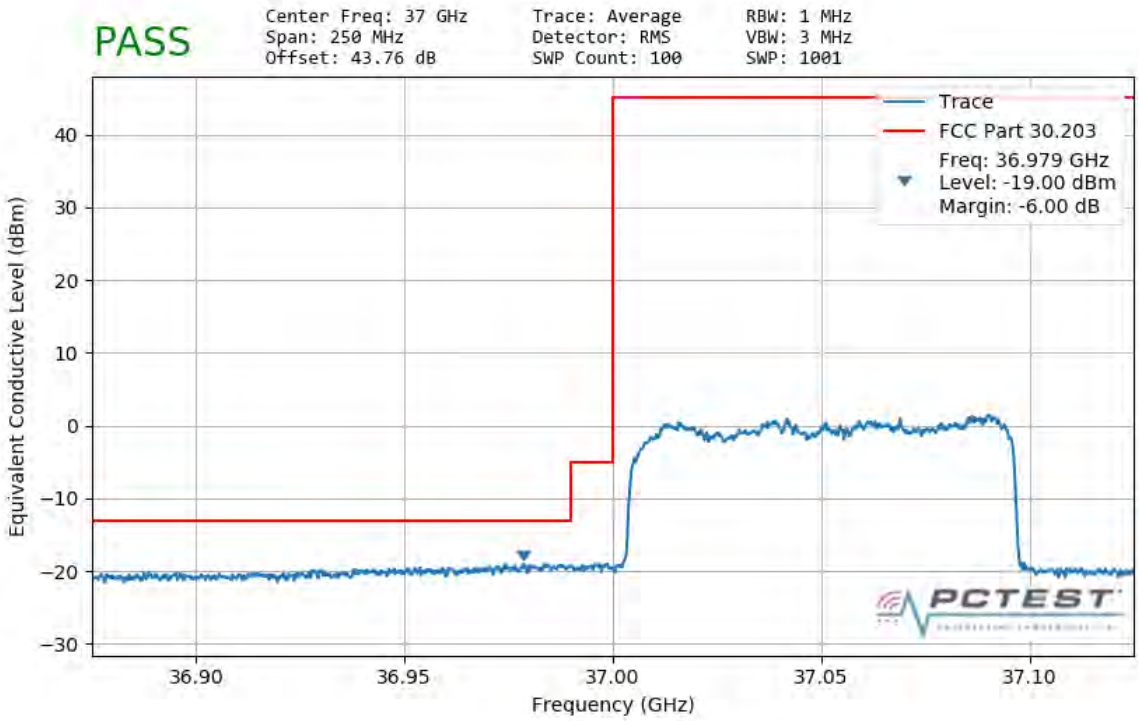
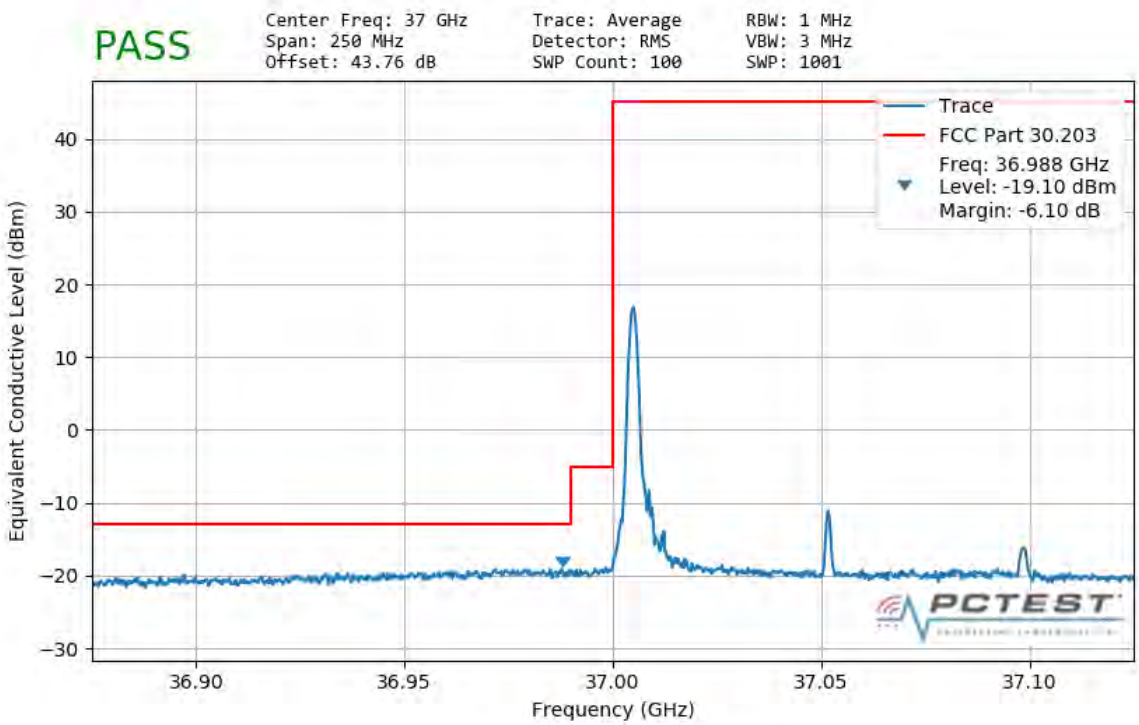


Plot 7-337. Ant4 Lower Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-338. Ant4 Lower Band Edge (100MHz-1CC – QPSK 1 RB)

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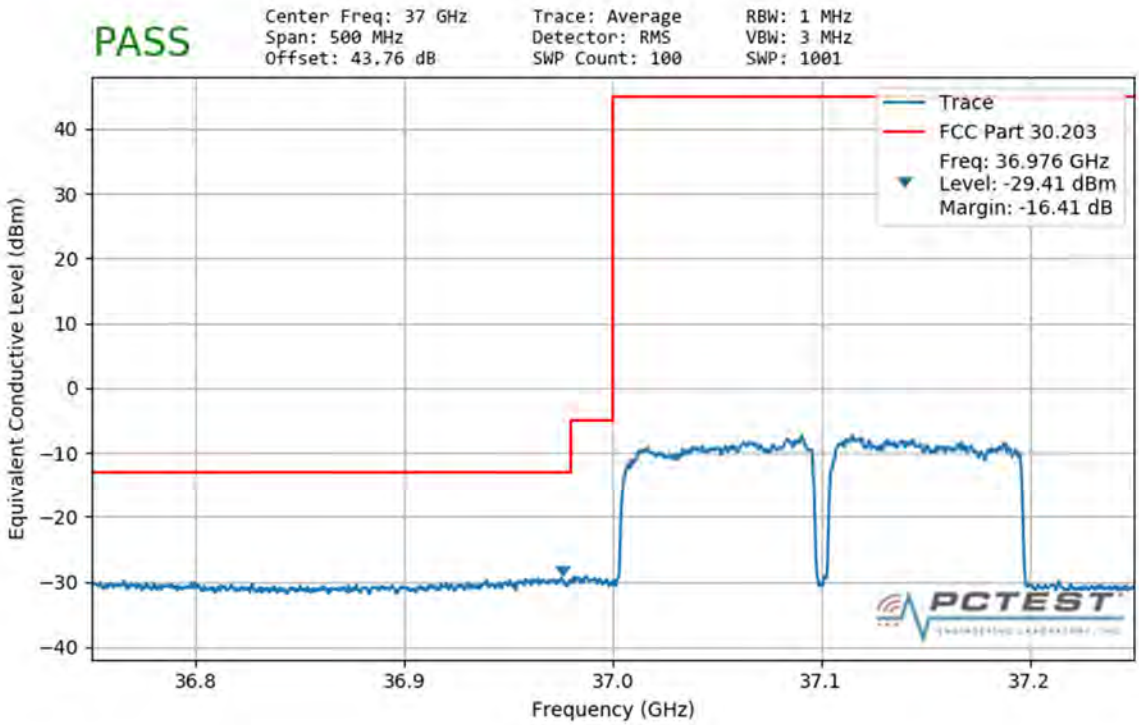
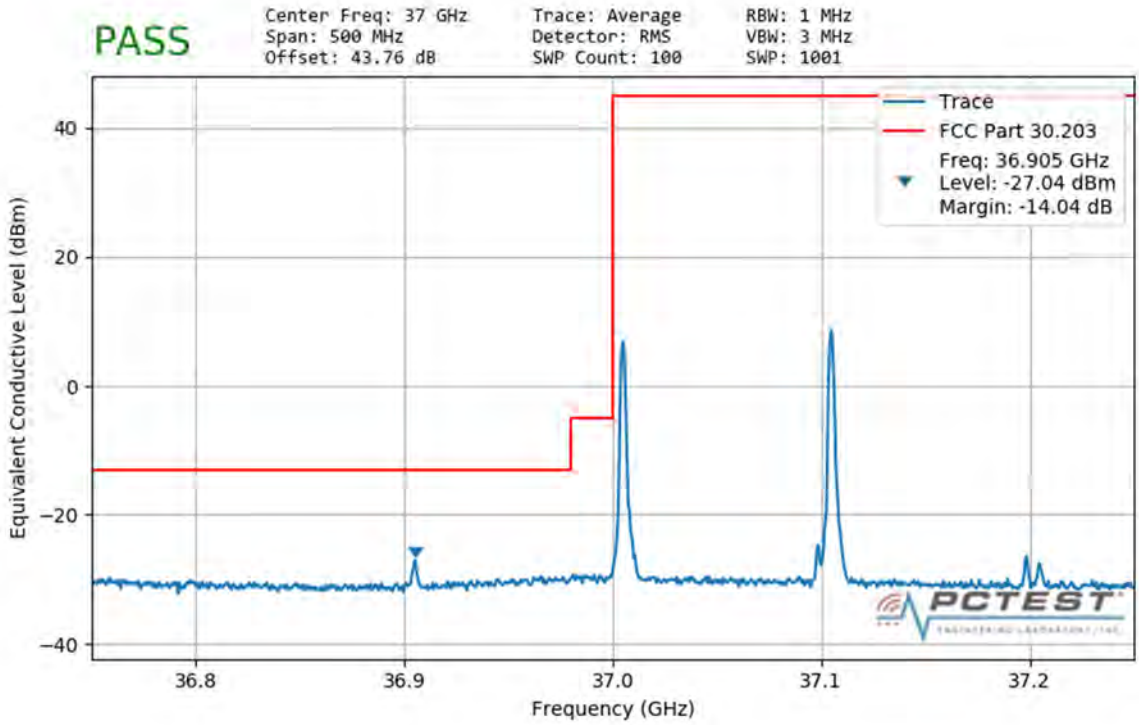


Plot 7-339. Ant4 Lower Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-340. Ant4 Lower Band Edge (100MHz-2CC – QPSK 1 RB)

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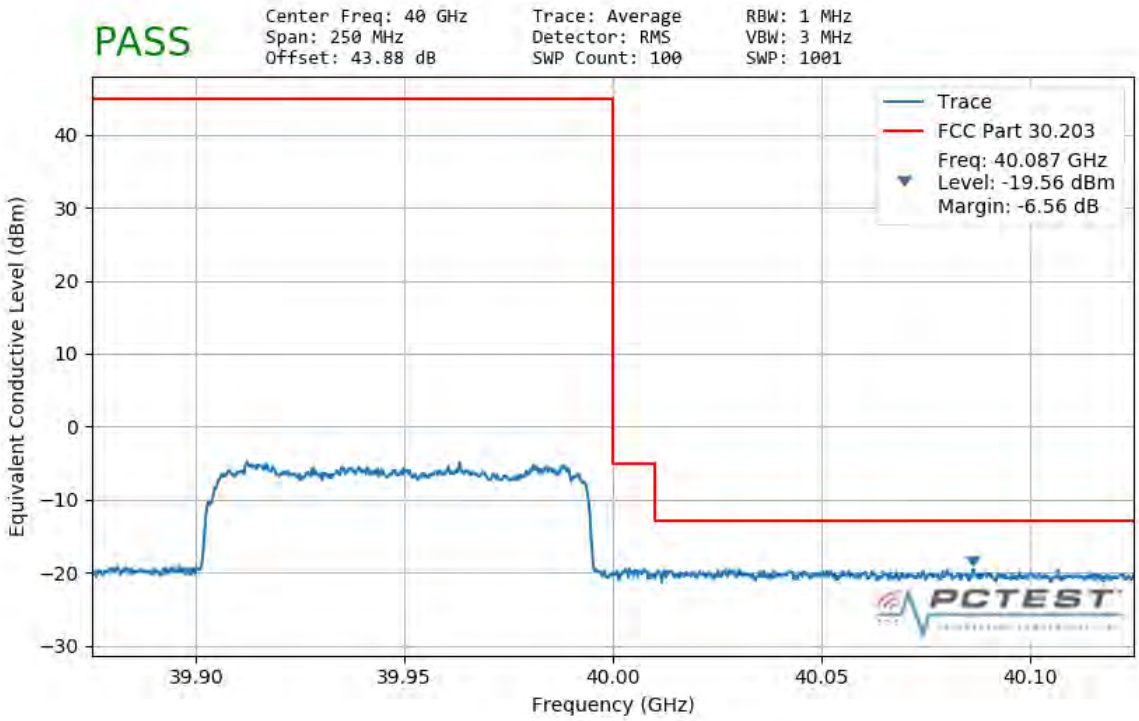
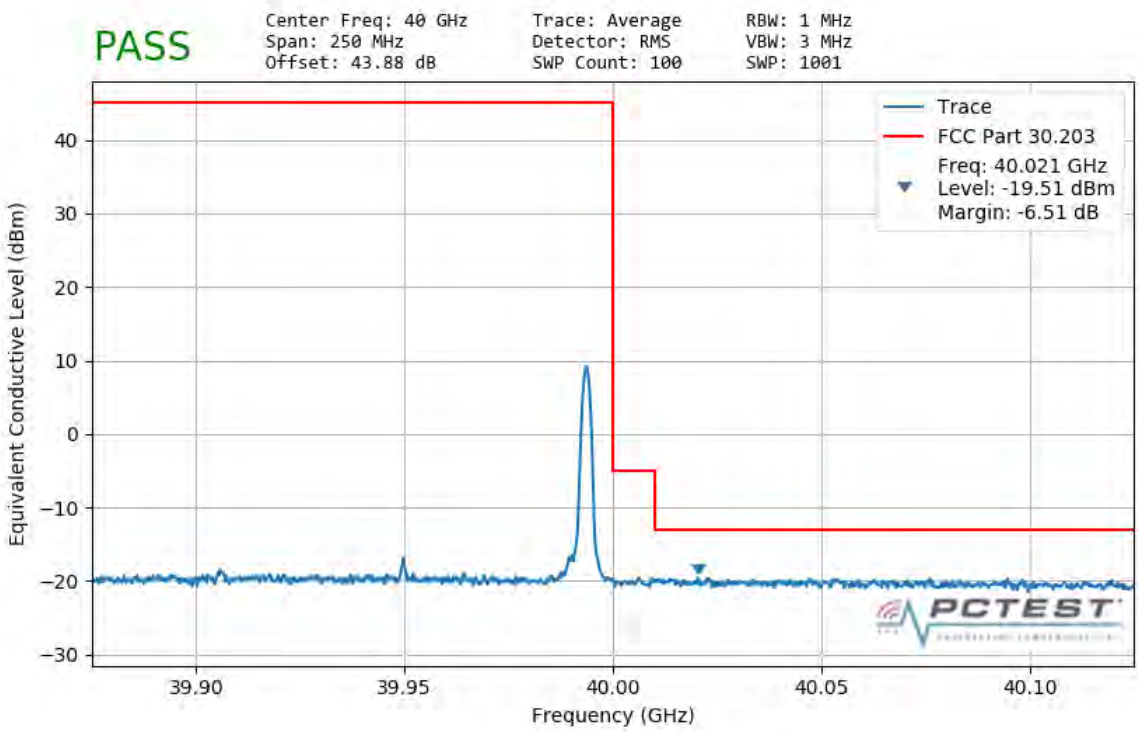


Plot 7-341. Ant4 Upper Band Edge (100MHz-1CC – QPSK Full RB)



Plot 7-342. Ant4 Upper Band Edge (100MHz-1CC – QPSK 1 RB)

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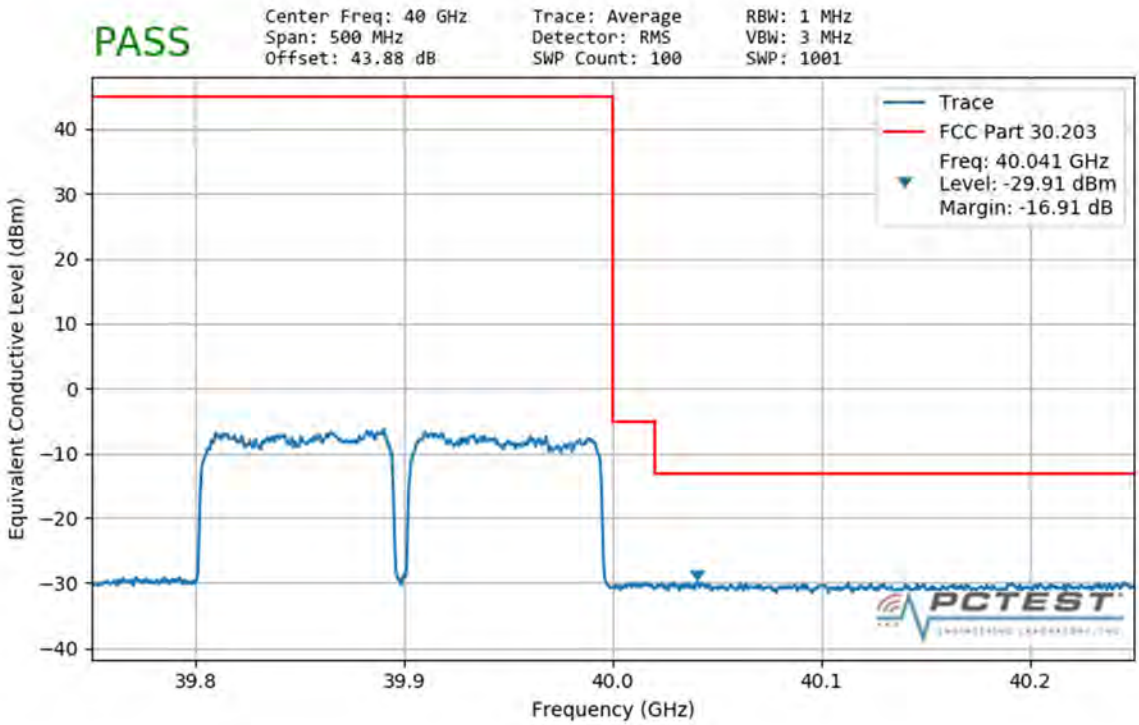
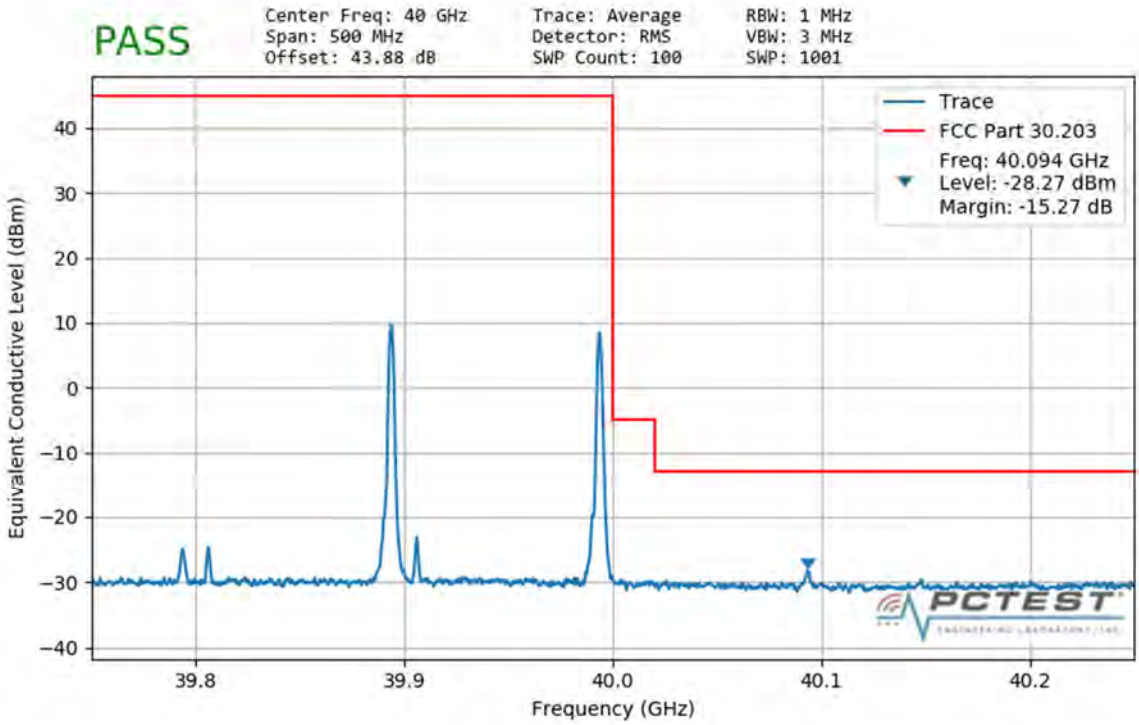


Plot 7-343. Ant4 Upper Band Edge (100MHz-2CC – QPSK Full RB)



Plot 7-344. Ant4 Upper Band Edge (100MHz-2CC – QPSK 1 RB)

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7.6 Frequency Stability / Temperature Variation
§2.1055

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. The frequency stability of the transmitter is measured by:

a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Test Procedure Used

ANSI C63.5-2015 Section 5.6
KDB 842590 D01 v01 Section 4.5

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

The EUT was measured using horn antenna connected to a spectrum analyzer. The EUT was placed inside an environmental chamber. Using a foam plug, the horn antenna measured the frequency of the fundamental signal.

Test Notes

The Frequency Deviation column in the table below is the amount of deviation measured from the center frequency of the Reference measurement (first row).

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Frequency Stability Measurements (Band n261)
§2.1055

OPERATING FREQUENCY:	27,922,080,000	Hz
CHANNEL:	2077867	
REFERENCE VOLTAGE:	4.19	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (^{o}C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.19	+ 20 (Ref)	28,107,080,000	0	0.0000000
100 %		- 30	27,705,080,000	402,000,000	1.4397208
100 %		- 20	28,218,080,000	-111,000,000	-0.3975349
100 %		- 10	27,866,080,000	241,000,000	0.8631162
100 %		0	27,737,080,000	370,000,000	1.3251162
100 %		+ 10	27,979,080,000	128,000,000	0.4584186
100 %		+ 20	28,065,080,000	42,000,000	0.1504186
100 %		+ 30	27,782,080,000	325,000,000	1.1639534
100 %		+ 40	28,031,080,000	76,000,000	0.2721860
100 %		+ 50	27,671,080,000	436,000,000	1.5614883
BATT. ENDPOINT	3.79	+ 20	27,816,080,000	291,000,000	1.0421860

Table 7-157. Frequency Stability Data (n261)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Frequency Stability Measurements (Band n261)
§2.1055

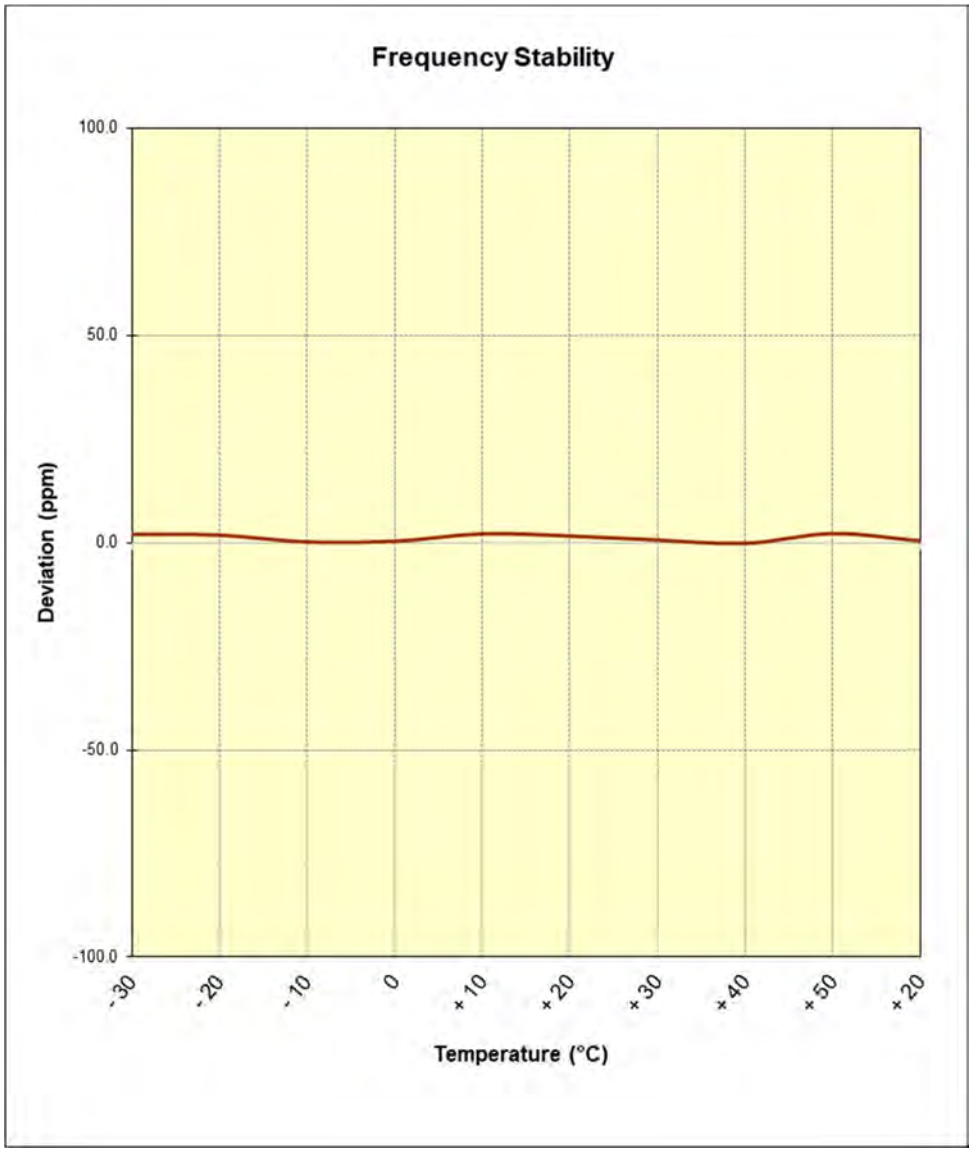

Table 7-158. Frequency Stability Graph (n261)

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Frequency Stability Measurements (Band n260)
§2.1055

OPERATING FREQUENCY:	38,495,520,000	Hz
CHANNEL:	2254091	
REFERENCE VOLTAGE:	4.19	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (^{o}C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.19	+ 20 (Ref)	38,522,520,000	0	0.0000000
100 %		- 30	38,317,520,000	205,000,000	0.5325295
100 %		- 20	38,630,520,000	-108,000,000	-0.2805521
100 %		- 10	38,752,520,000	-230,000,000	-0.5974721
100 %		0	38,669,520,000	-147,000,000	-0.3818626
100 %		+ 10	38,739,520,000	-217,000,000	-0.5637020
100 %		+ 20	38,614,520,000	-92,000,000	-0.2389888
100 %		+ 30	38,303,520,000	219,000,000	0.5688974
100 %		+ 40	38,453,520,000	69,000,000	0.1792416
100 %		+ 50	38,637,520,000	-115,000,000	-0.2987361
BATT. ENDPOINT	3.79	+ 20	38,747,520,000	-225,000,000	-0.5844836

Table 7-159. Frequency Stability Data (n260)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Frequency Stability Measurements (Band n260)
§2.1055

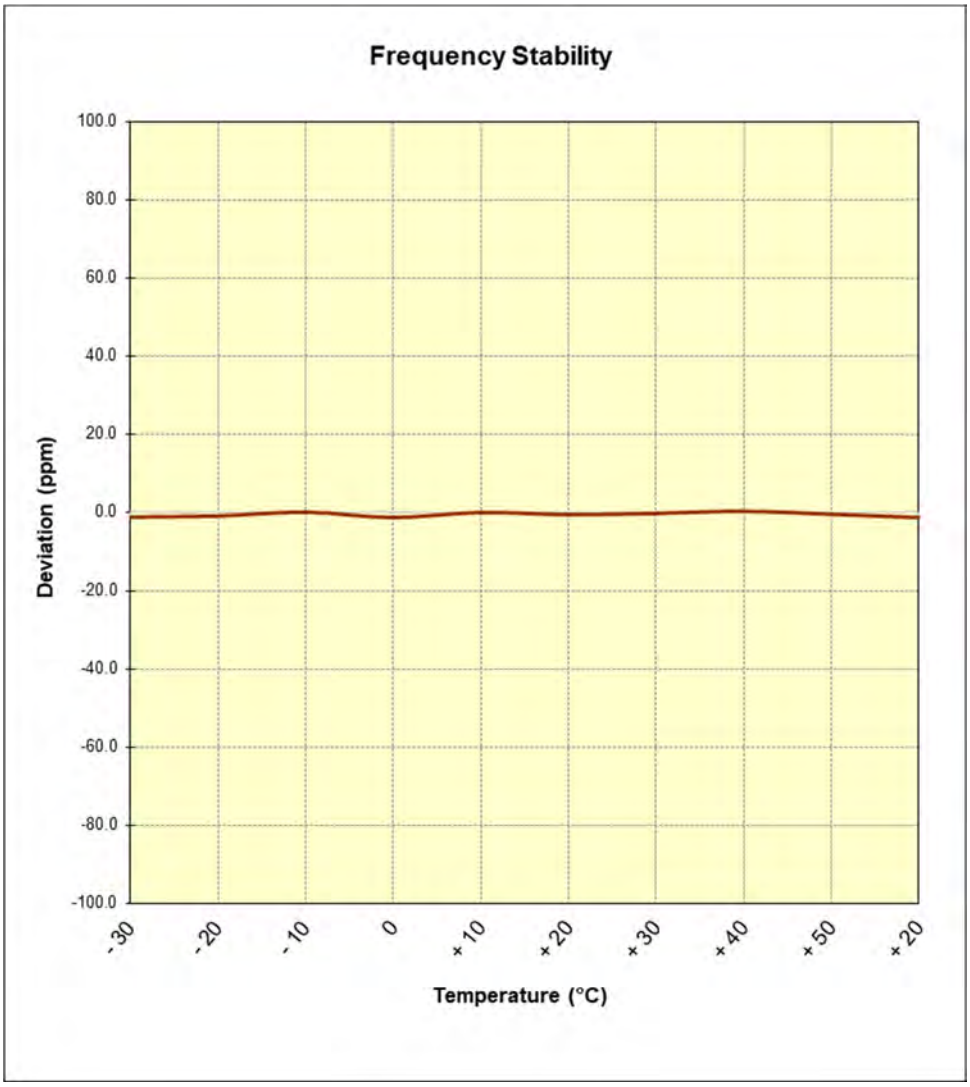

Table 7-160. Frequency Stability Graph (n260)

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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMG986U** complies with all the requirements of Part 30.

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9.0 APPENDIX A

9.1 VDI Mixer Verification Certificate

Virginia Diodes, Inc.

Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902
Phone: 434-297-3257
Fax: 434-297-3258

Certificate of Conformance

To: PCTEST Engineering Laboratory
7185 Oakland Mills Road
Columbia, MD 21046
United States

From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Packing List No: 193065 **Today's Date:** 10/02/19

Quantity Shipped	Unit	Description	Order-Job Number
1	EA	VDIWR19.0SAX WR19SAX / SN: SAX 411	19329-01

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).

Authorized Signature
Virginia Diodes, Inc

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Fax: 434-297-3258

Certificate of Conformance

To: PCTEST Engineering Laboratory
6660-B Dobbin Road
Columbia, MD 21045
United States

From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Shipping Date: 05/14/18 **Today's Date:** 05/14/18

Quantity Shipped	Unit	Description
1	EA	VDIWR12.0SAX WR12SAX - Spectrum Analyzer Extension Module / SN: SAX 252

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).

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United States

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979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Shipping Date: 05/08/18 **Today's Date:** 05/08/18

Quantity Shipped	Unit	Description
1	EA	VDIWR8.0SAX WR8.0SAX - Spectrum Analyzer Extension Module; SN: SAX 253.

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From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Shipping Date: 05/21/18 **Today's Date:** 05/22/18

Quantity Shipped	Unit	Description
1	EA	VDIWR5.1SAX WR5.1SAX - Spectrum Analyzer Extension Module; SN: SAX 254.

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