

12.1.8. RADIATED EMISSION

LIMITS

FCC §15.205 and §15.209

RSS-247, Section 8.9 and 8.10

Frequency range (MHz)	Field strength limit ($\mu\text{V/m}$)	Field strength limit ($\text{dB}\mu\text{V/m}$) at 3m
0.009-0.490	2400/F(kHz) @ 300 m	128.52 to 93.80 **
0.490-1.705	24000/F(kHz) @ 30 m	73.80 to 62.98 **
1.705 – 30	30 @ 30m	69.54
30 – 88	100	40
88 – 216	150	43.5
216 – 960	200	46
Above 960	500	54

** Logarithmically decreasing.

IC RSS-GEN Clause 8.9 and 8.10.

Frequency range (MHz)	Field strength limit ($\mu\text{A/m}$)	Field strength limit ($\text{dB}\mu\text{A/m}$) at 3m
0.009-0.490	6.37/F(kHz) @ 300 m	76.99 to 42.27 ***
0.490-1.705	63.7/F(kHz) @ 30 m	22.27 to 11.44 ***
1.705 – 30	30 @ 30m	18.062
Frequency range (MHz)	Field strength limit ($\mu\text{V/m}$)	Field strength limit ($\text{dB}\mu\text{V/m}$) at 3m
30 – 88	100	40
88 – 216	150	43.5
216 – 960	200	46
Above 960	500	54

*** Logarithmically decreasing.

PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for average measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak and average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

3D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

KDB 558074 D01 15.247 Meas Guidance v05r02

Use of a duty cycle correction factor (DCCF) is permitted for calculating average radiated field strength emission levels for an FHSS device in 15.247. This DCCF can be applied when the field strength limit (e.g., within a Government Restricted band) and the conditions specified in Section 15.35(c) can be satisfied. The average radiated field strength is calculated by subtracting the DCCF from the maximum radiated field strength level as determined through measurement. The maximum radiated field strength level represents the worst-case (maximum amplitude) RMS measurement of the emission(s) during continuous transmission (i.e., not including any time intervals during which the transmitter is off or is transmitting at a reduced power level). It is also acceptable to apply the DCCF to a measurement performed with a peak detector instead of the specified RMS power averaging detector.

Note that Section 15.35(c) specifies that the DCCF shall represent the worst case (greatest duty cycle) over any 100 msec transmission period.

Prescan

Frequency	RBW	VBW	Sweep time	Sweep points for pre-scan
9 kHz to 150 kHz	200 Hz	3 kHz	Auto \ 700ms	2001
150 kHz to 30 MHz	9 kHz	100 kHz	Auto \ 70ms	2001
30 MHz to 1 GHz	120 kHz	1 MHz	Auto \ 20ms	10001
1 GHz to 18 GHz – Peak	1 MHz	3 MHz	1G to 3G – Auto 4.01ms 3G to 18G – Auto 21ms	1G to 3G - 4001 3G to 18G - 10001
1 GHz to 18 GHz – Average	1 MHz	30 kHz	1G to 3G – Auto 4.01ms 3G to 18G – Auto 21ms	1G to 3G - 4001 3G to 18G - 10001
18 GHz to 26.5 GHz - Peak	1 MHz	3 MHz	Auto \ 50ms	10001
18 GHz to 26.5 GHz – Average	1 MHz	30 kHz	Auto \ 50ms	10001
Band edge	1 MHz	3 MHz	1G to 3G – 4.01ms	2001

Final measurement

Frequency	RBW	VBW	Sweep time
9 kHz to 150 kHz	200 Hz	3 kHz	--
150 kHz to 30 MHz	9 kHz	100 kHz	--
30 MHz to 1 GHz	120 kHz	1 MHz	1sec.
1 GHz to 18 GHz – Peak & Average	1 MHz	3 MHz	1sec.
18 GHz to 26.5 GHz – Peak & Average	1 MHz	3 MHz	1sec.
Band edge	1 MHz	3 MHz	1sec.

Test Setup Diagram

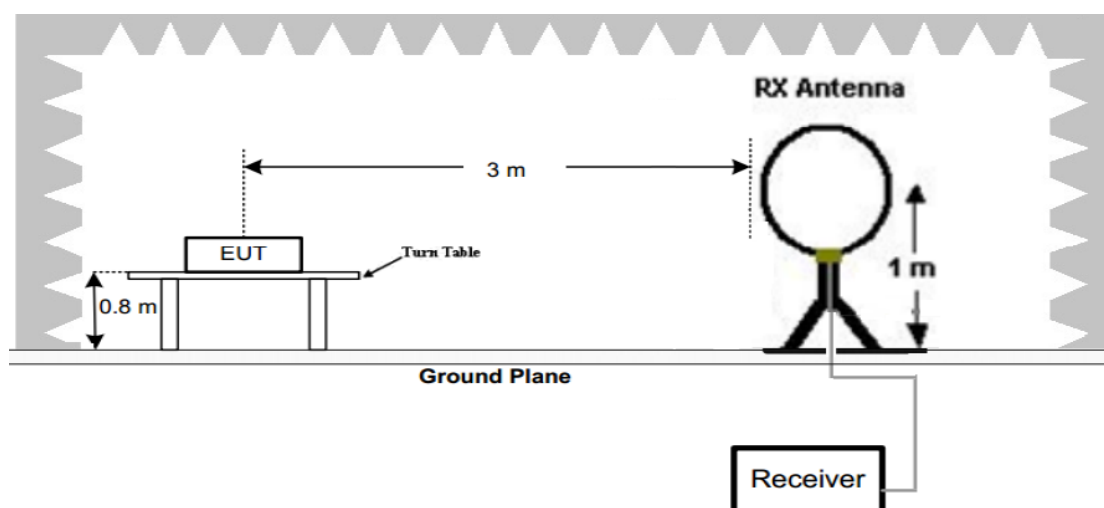


Figure 1 : Radiated_Test Setup_9kHz – 30 MHz.

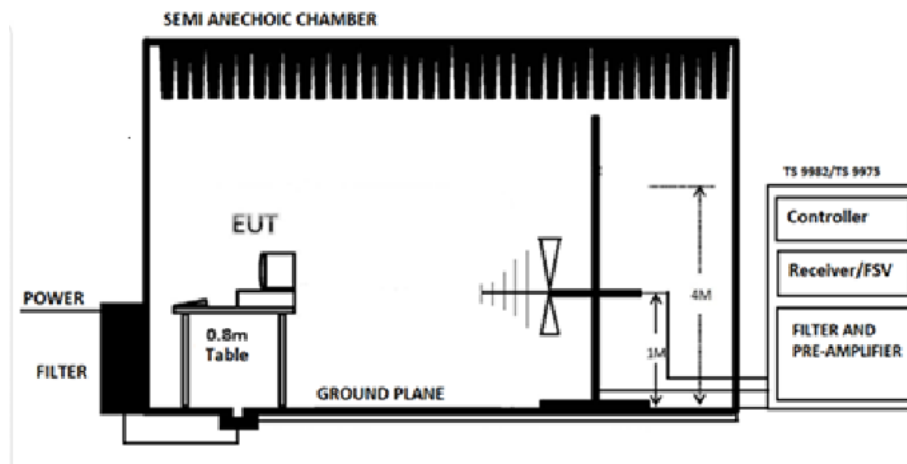


Figure 2 : Radiated_Test Setup_30 MHz to 1 GHz .

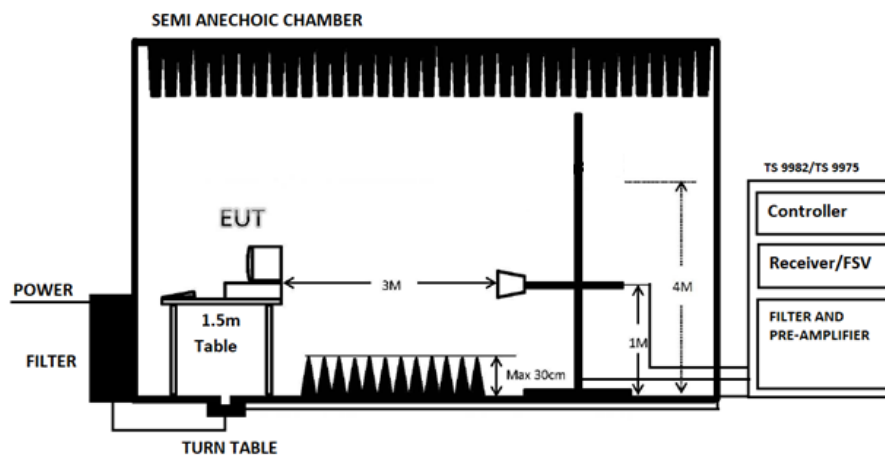


Figure 3 : Radiated_Test Setup_1GHz to 26.5 GHz.

12.1.8.1. Radiated band-edge above 1 GHz.

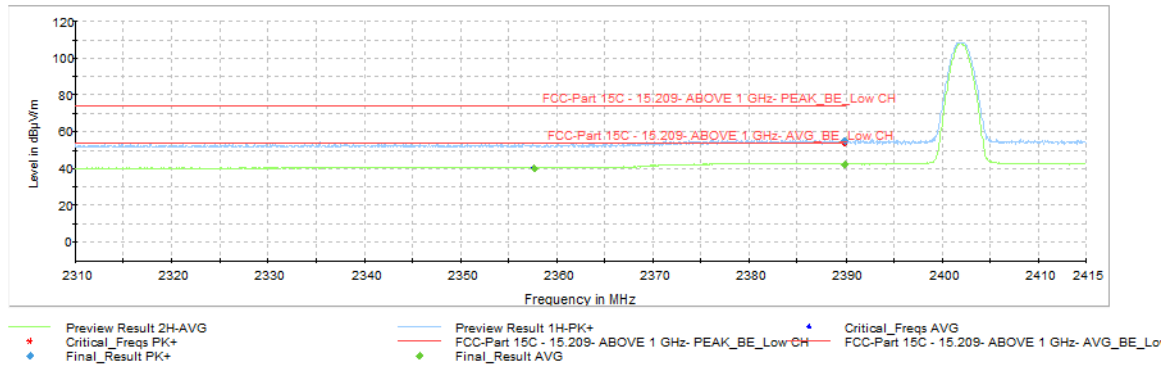


Figure 4 : RBE_Left Cup_BDR_Low channel_2402_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.958	54.87	---	74.00	19.13	115.00	H	93	5.6
2357.67	---	40.08	54.00	13.92	100.00	H	72	3.8
2389.958	---	42.03	54.00	11.97	150.00	H	298	5.6

Table 1: RBE_Left Cup_BDR_Low channel_2402_Final table in Horizontal Polarization

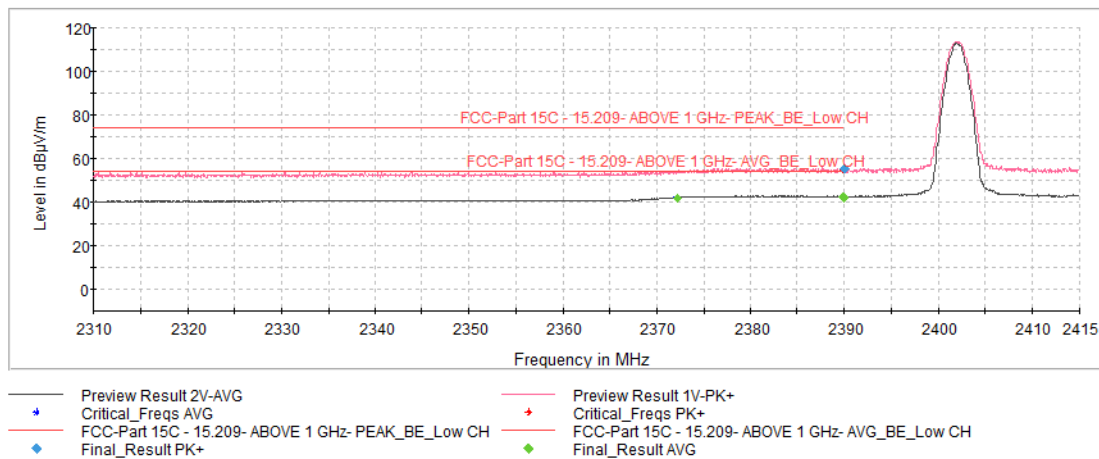


Figure 5 : RBE_Left Cup_BDR_Low channel_2402_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.958	55.61	---	74.00	18.39	100.00	V	91	5.6
2372.213	---	41.51	54.00	12.49	215.00	V	335	5.2
2389.905	---	42.19	54.00	11.81	200.00	V	347	5.6

Table 2: RBE_Left Cup_BDR_Low channel_2402_Final table in Vertical Polarization

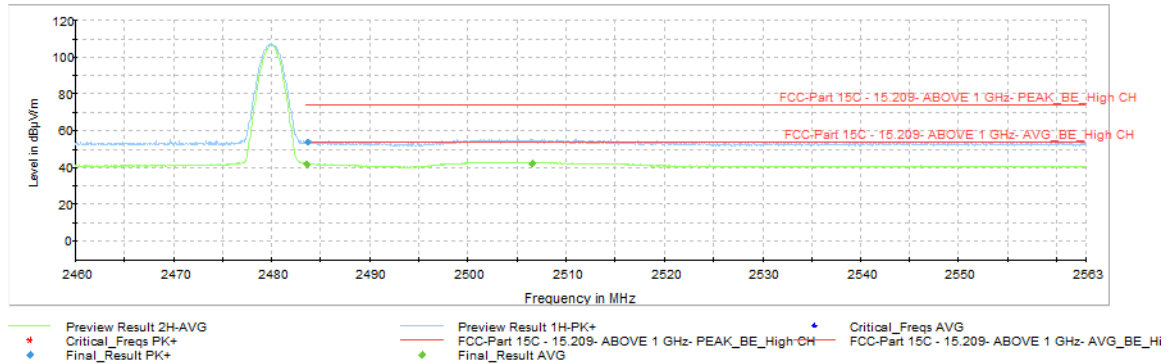


Figure 6 : RBE_Left Cup_BDR_High channel_2480_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.69	53.87	---	74.00	20.13	100.00	H	279	4.5
2483.587	---	41.56	54.00	12.44	115.00	H	249	4.5
2506.556	---	42.05	54.00	11.95	200.00	H	151	5.8

Table 3: RBE_Left Cup_BDR_High channel_2480_Final table in Horizontal Polarization

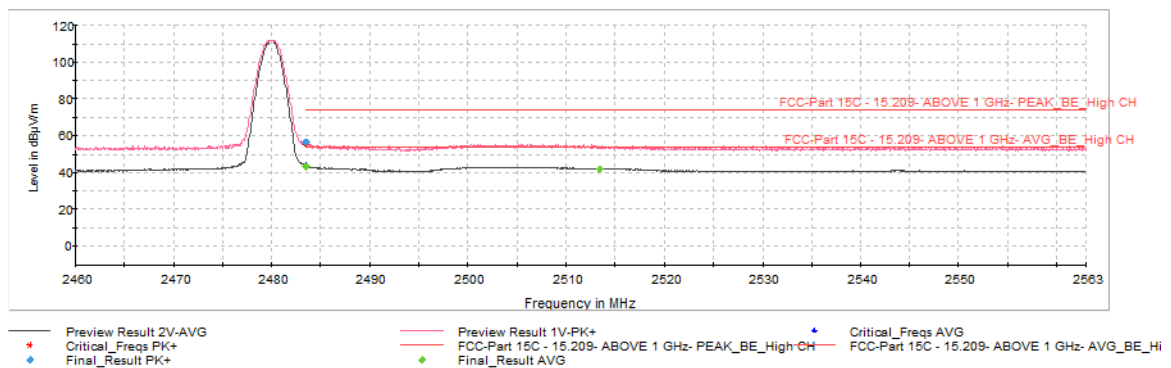


Figure 7 : RBE_Left Cup_BDR_High channel_2480_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.536	56.4	---	74.00	17.6	115.00	V	27	4.5
2483.536	---	43.42	54.00	10.58	165.00	V	352	4.5
2513.406	---	41.56	54.00	12.44	215.00	V	19	5.2

Table 4: RBE_Left Cup_BDR_High channel_2480_Final table in Vertical Polarization

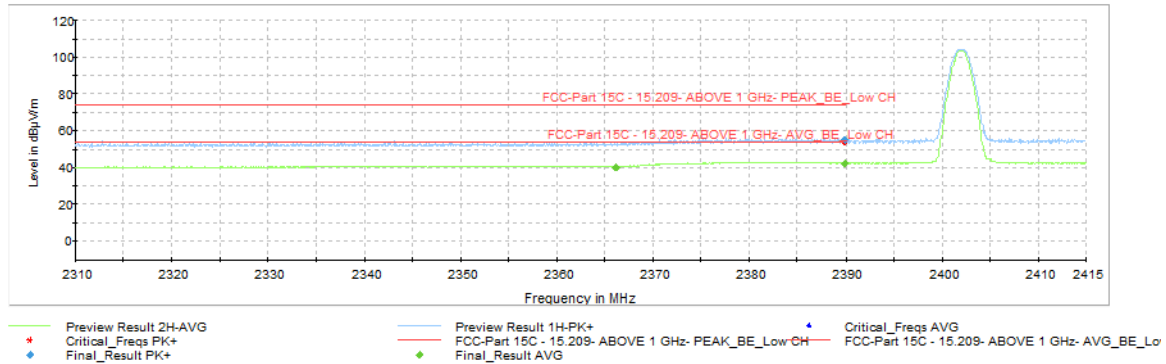


Figure 8 : RBE_Right Cup_BDR_Low channel_2402_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.958	55	---	74.00	19.01	139.00	H	159	5.6
2366.175	---	40.24	54.00	13.76	165.00	H	264	4
2389.958	---	41.89	54.00	12.11	150.00	H	165	5.6

Table 5: RBE_Right Cup_BDR_Low channel_2402_Final table in Horizontal Polarization

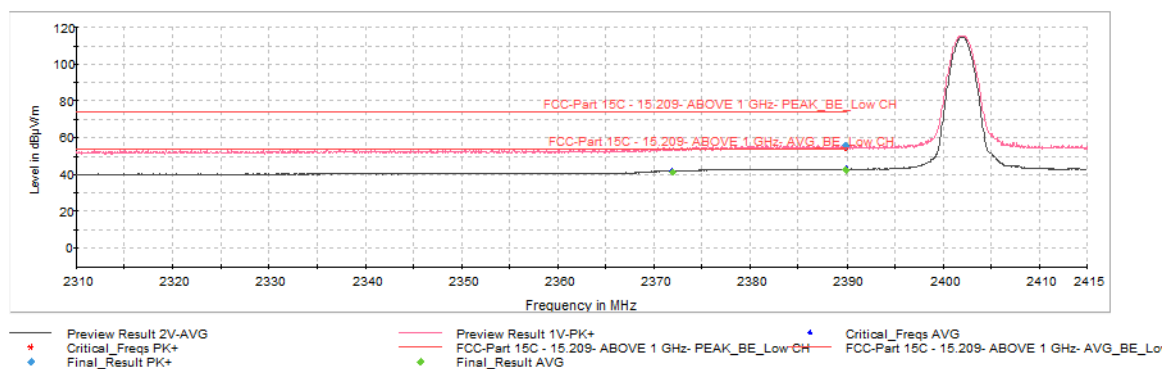


Figure 9 : RBE_Right Cup_BDR_Low channel_2402_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.958	55.63	---	74.00	18.37	165.00	V	64	5.6
2371.95	---	41.40	54	12.60	139.00	V	116	5.1
2389.958	---	42.38	54	11.62	185.00	V	3	5.6

Table 6: RBE_ Right Cup _BDR_Low channel_2402_ Final table in Vertical Polarization

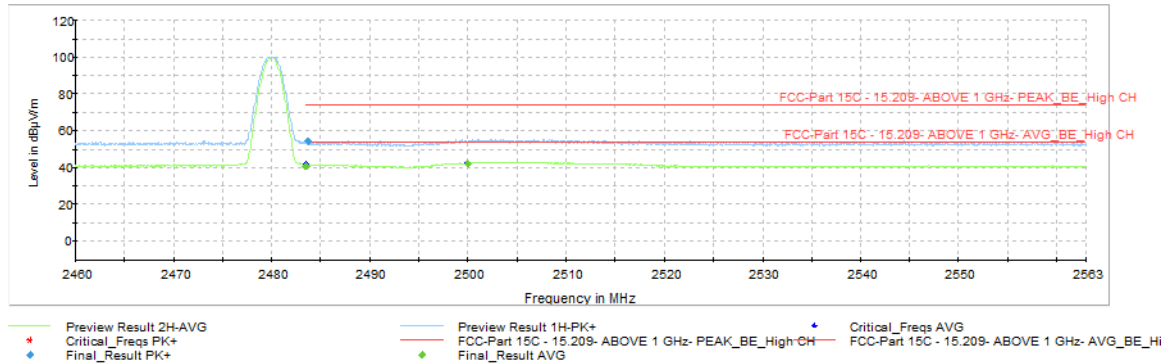


Figure 10 : RBE_ Right Cup_BDR_High channel_2480_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.793	54.06	---	74.00	19.94	100.00	H	195	4.5
2483.536	---	40.99	54.00	13.01	139.00	H	60	4.5
2500.016	---	42.04	54.00	11.96	100.00	H	228	5.8

Table 7: RBE_ Right Cup_BDR_High channel_2480_ Final table in Horizontal Polarization

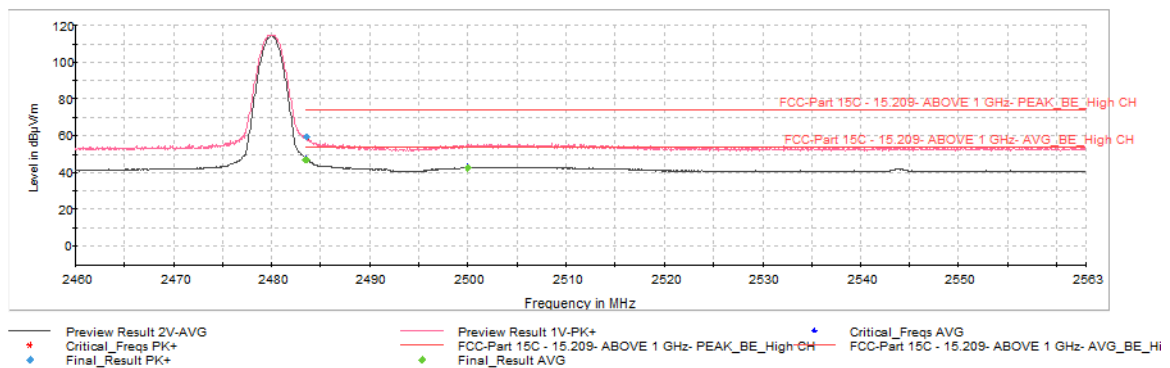


Figure 11 : RBE_ Right Cup_BDR_High channel_2480_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.587	59.38	---	74.00	14.62	165.00	V	20	4.5
2483.536	---	46.62	54.00	7.38	150.00	V	6	4.5
2500.016	---	42.32	54.00	11.68	165.00	V	11	5.8

Table 8: RBE_Right Cup_BDR_High channel_2480_Final table in Vertical Polarization

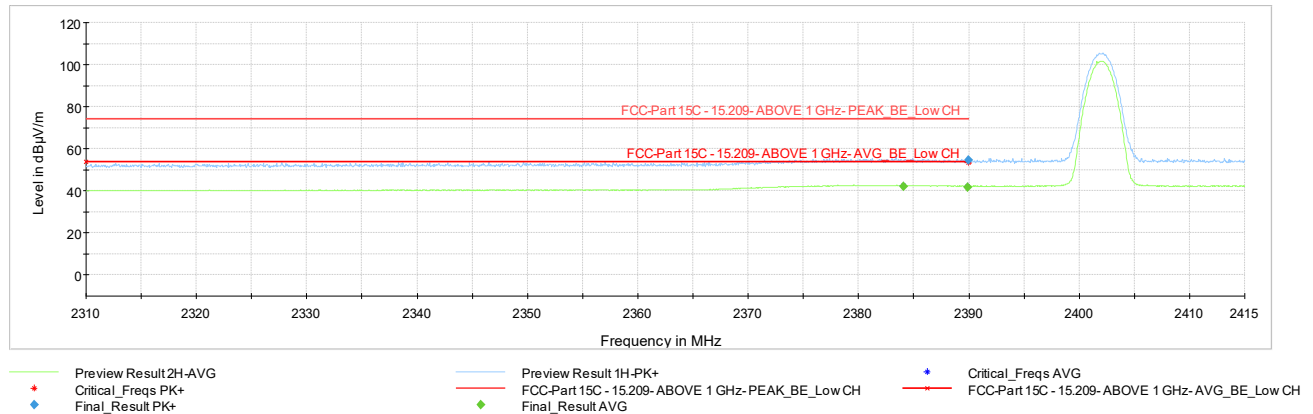


Figure 12 : RBE_Left Cup_EDR_Low channel_2402_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.9575	54.72	---	74.00	19.28	115	H	222	5.6
2384.0775	---	42.07	54.00	11.93	150	H	205	5.9
2389.905	---	41.78	54.00	12.22	189	H	334	5.6

Table 9: RBE_Left Cup_EDR_Low channel_2402_Final table in Horizontal Polarization

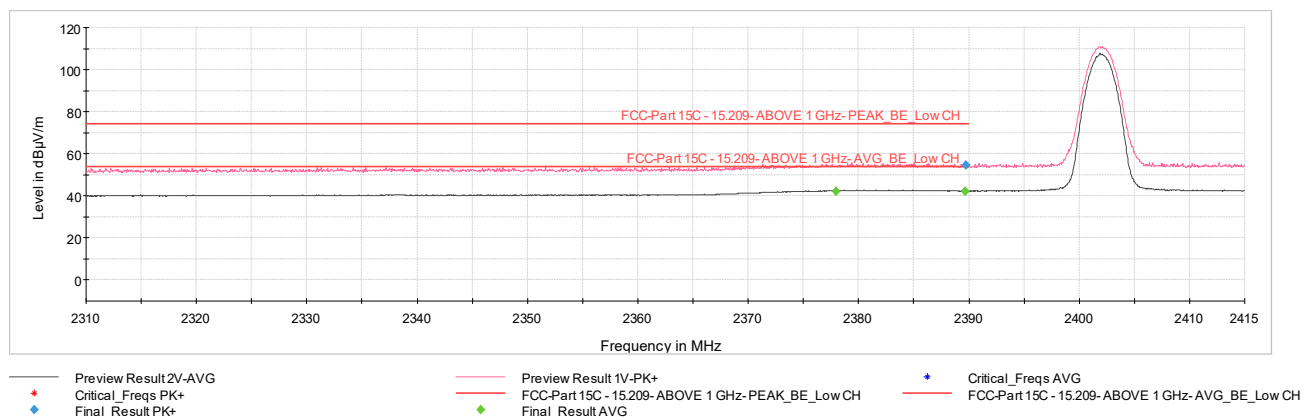
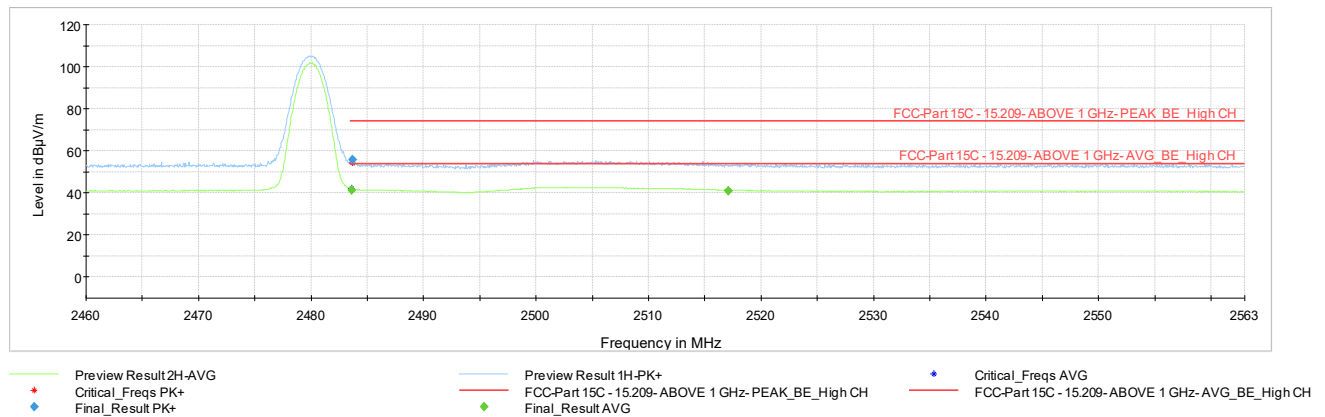


Figure 13 : RBE_Left Cup_EDR_Low channel_2402_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.7475	54.72	---	74	19.28	100.00	V	325	5.60
2377.9875	---	41.98	54	12.02	135.00	V	180	5.80
2389.6425	---	41.89	54	12.11	100.00	V	85	5.60

Table 10: RBE_Left Cup_EDR_Low channel_2402_Final table in Vertical Polarization

Figure 14 : RBE_Left Cup_EDR_High channel_2480_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.69	55.96	---	74	18.04	115.00	H	248.00	4.5
2483.6385	---	41.44	54	12.56	215.00	H	240.00	4.5
2517.1135	---	40.93	54	13.07	135.00	H	128.00	4.7

Table 11: RBE_Left Cup_EDR_High channel_2480_Final table in Horizontal Polarization

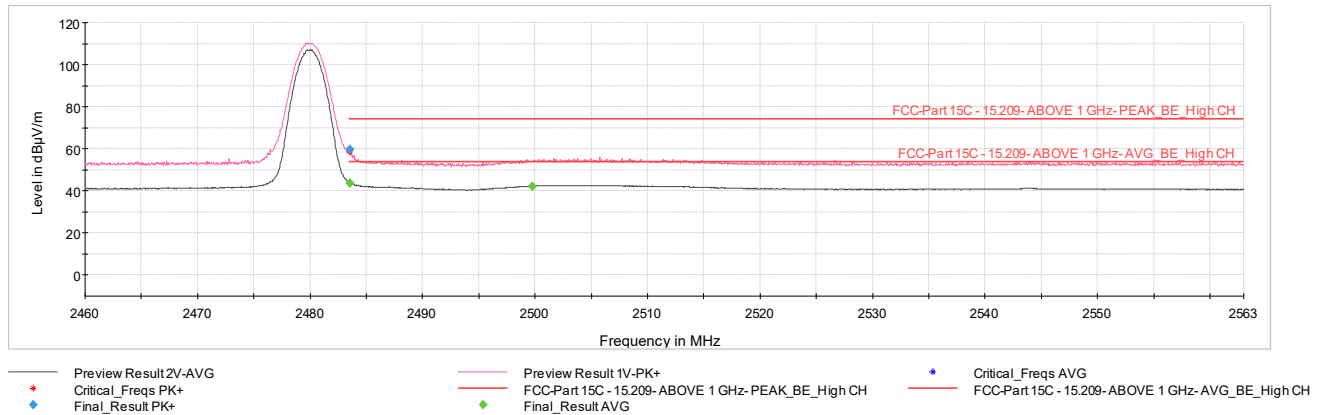


Figure 15 : RBE_Left Cup_EDR_High channel_2480_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.5355	59.64	---	74.00	14.36	215	V	26	4.5
2483.5355	---	43.48	54.00	10.52	165	V	347	4.5
2499.758	---	41.88	54.00	12.12	115	V	236	5.7

Table 12: RBE_Left Cup_EDR_High channel_2480_Final table in Vertical Polarization

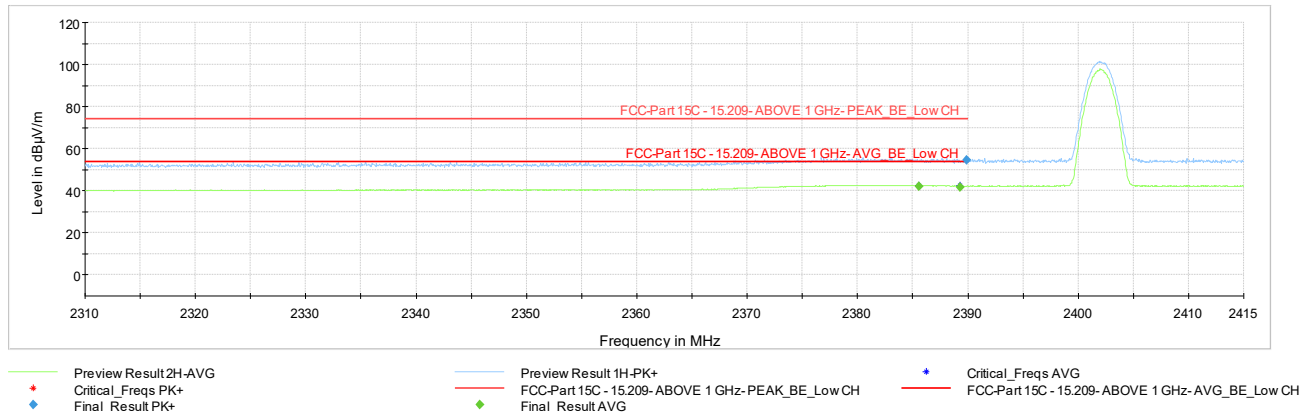


Figure 16 : RBE_Right Cup_EDR_Low channel_2402_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.8525	54.72	---	74	19.28	189.00	H	41.00	5.6
2385.5475	---	42.02	54	11.98	115.00	H	17.00	5.8
2389.275	---	41.86	54	12.14	139.00	H	341.00	5.6

Table 13: RBE_Right Cup_EDR_Low channel_2402_Final table in Horizontal Polarization

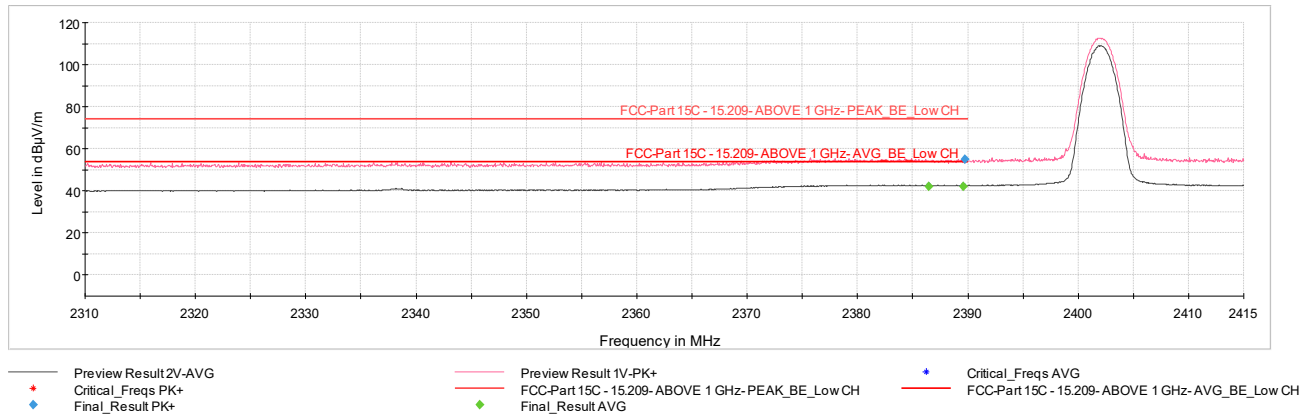


Figure 17 : RBE_Right Cup_EDR_Low channel_2402_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2389.7475	55.04	---	74	18.96	135.00	V	-4	5.60
2386.44	---	42.09	54	11.91	139.00	V	306	5.80
2389.59	---	41.98	54	12.02	189.00	V	271	5.60

Table 14: RBE_Right Cup_EDR_Low channel_2402_Final table in Vertical Polarization

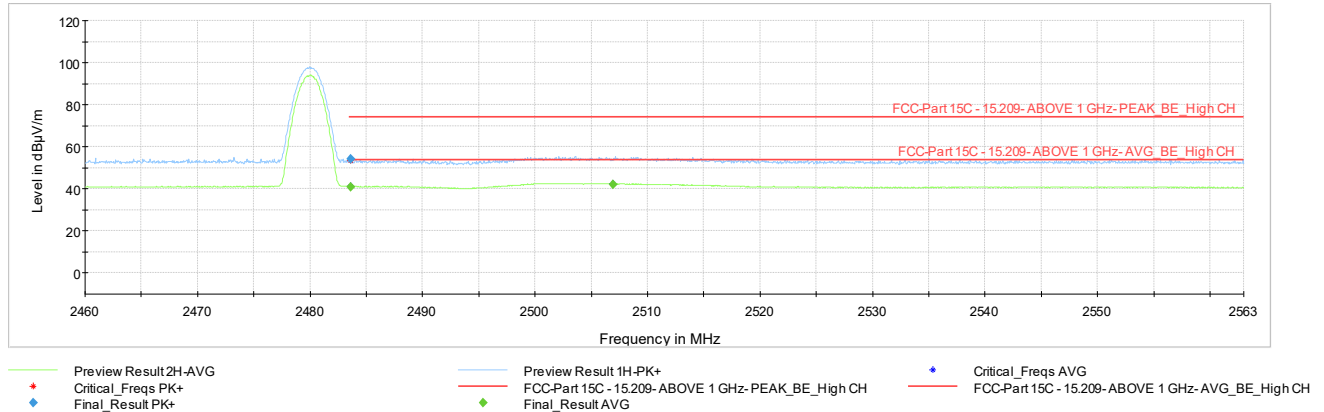


Figure 18 : RBE_Right Cup_EDR_High channel_2480_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.6385	54.32	---	74	19.68	115.00	H	223.00	4.5
2483.587	---	40.82	54	13.18	115.00	H	24.00	4.5
2506.9165	---	41.98	54	12.02	200.00	H	63.00	5.8

Table 15: RBE_Right Cup _EDR_High channel_2480_Final table in Horizontal Polarization

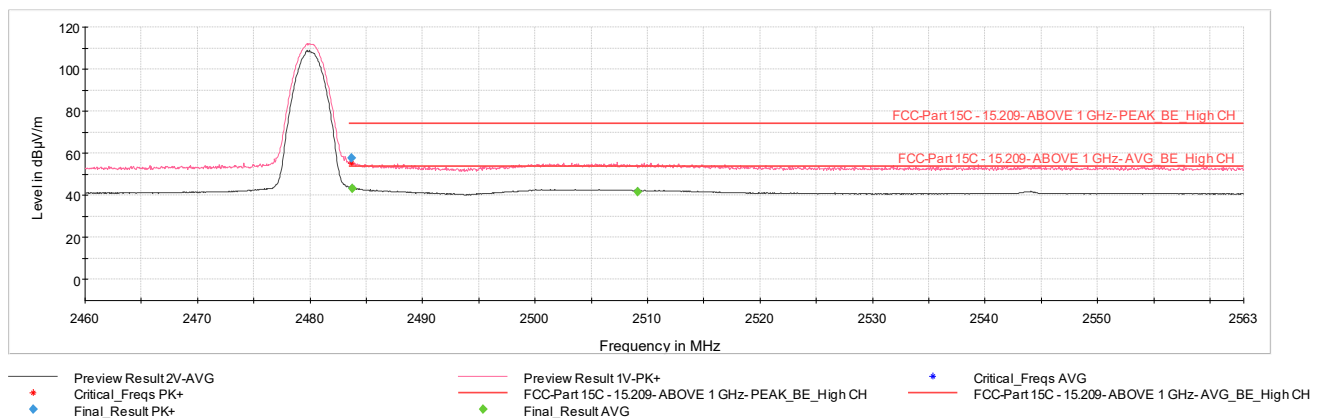


Figure 19 : RBE_ Right Cup _EDR_High channel_2480_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
2483.69	57.74	---	74	16.26	189.00	V	38.00	4.5
2483.7415	---	43.11	54	10.89	165.00	V	6.00	4.5
2509.131	---	41.85	54	12.15	100.00	V	211.00	5.6

Table 16: RBE_ Right Cup _EDR_High channel_2480_ Final table in Vertical Polarization
Calculation:

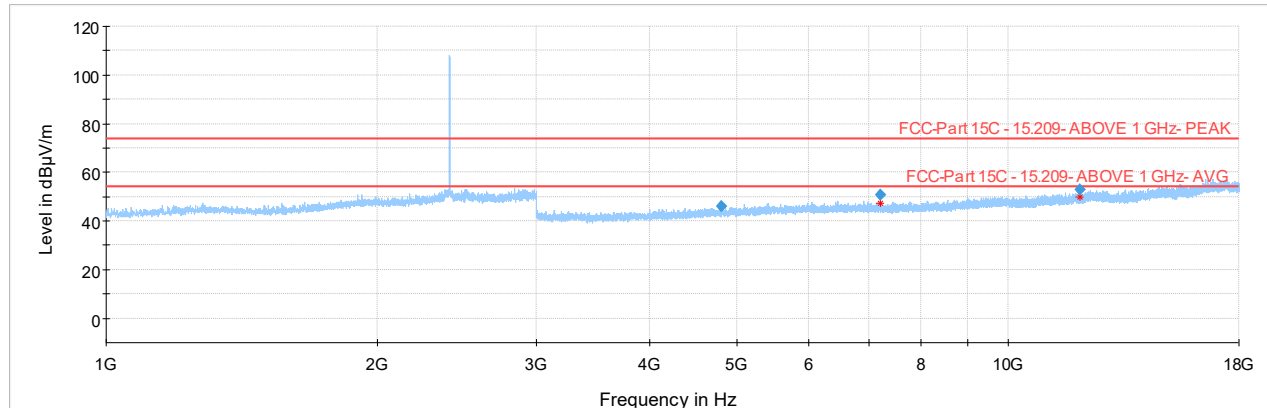
Margin = Avg Final(dBμV/m) – Limit (dBμV/m)., For average limit is 54dBμV/m.

Margin = MaxPeak(dBμV/m) – Limit (dBμV/m)., For Peak limit is 74dBμV/m.

Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Factor (dB).

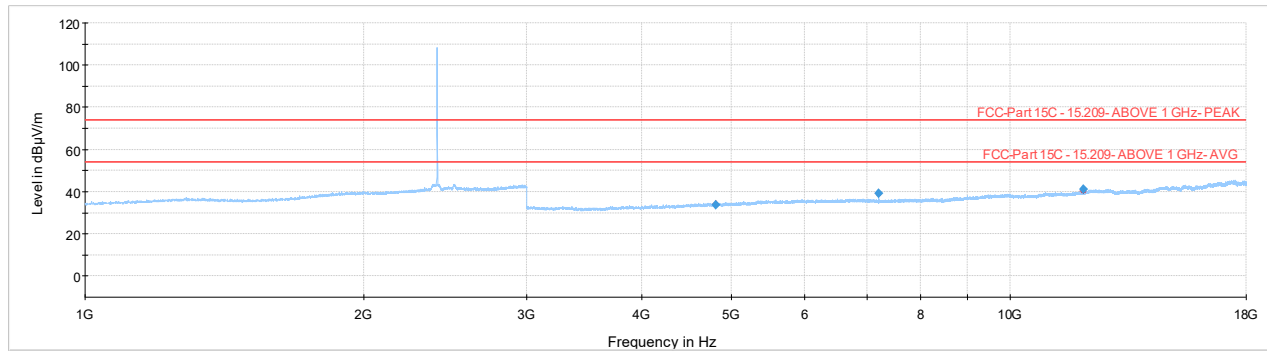
Result value (dBμV/m) = Reading Value (dBμV) + Correction Factor (dB/m).

12.1.8.2. Radiated Spurious emission 1 GHz to 18 GHz.



Preview Result 1H-PK+
 FCC-Part 15C - 15.209- ABOVE 1 GHz- PEAK
 Final_Result PK+

Critical_Freqs PK+
 FCC-Part 15C - 15.209- ABOVE 1 GHz- AVG

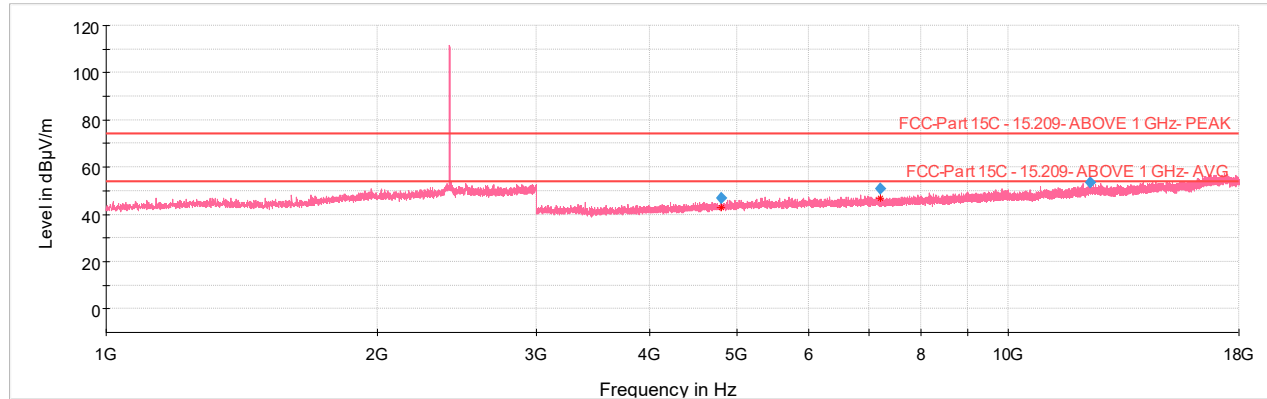


Preview Result 1H-AVG
 Critical_Freqs AVG
 FCC-Part 15C - 15.209- ABOVE 1 GHz- PEAK
 FCC-Part 15C - 15.209- ABOVE 1 GHz- AVG
 Final_Result.

Figure 20 : RSE_Left Cup_BDR_Low channel_2402_Pre-scan in Horizontal Polarization

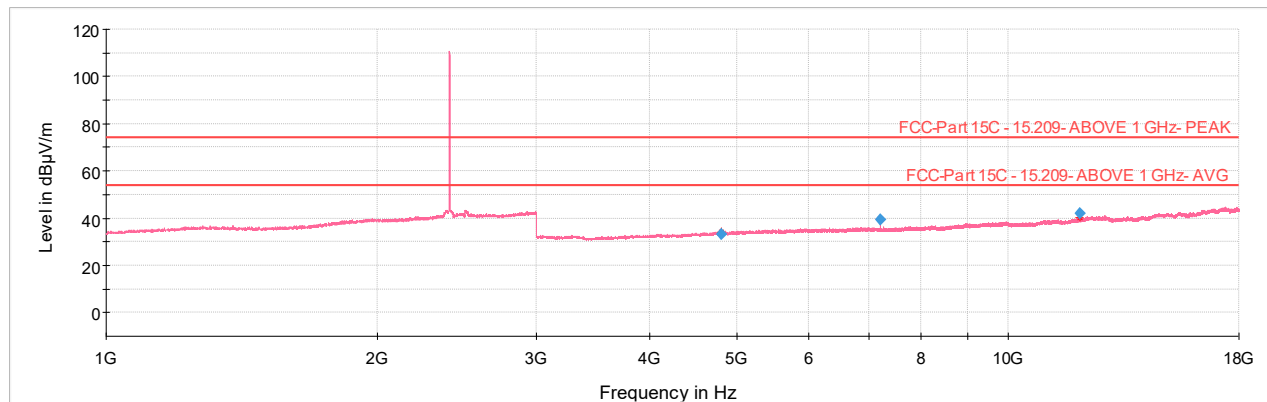
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4804.4	46.2	---	74	27.80	156	H	149	-0.7
7205.6	50.74	---	74	23.26	109	H	327	0.9
12010.2	52.79	---	74	21.21	169	H	104	5.4
4804.6	---	33.84	54	20.16	105	H	293	-0.6
7205.6	---	39.33	54	14.67	109	H	319	0.9
12009.6	---	41.29	54	12.71	180	H	324	5.4

Table 17: RSE_Left Cup_BDR_Low channel_2402_Final table in Horizontal Polarization



Preview Result 1V-PK+
FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
Final_Result PK+

Critical_Freqs PK+
FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG



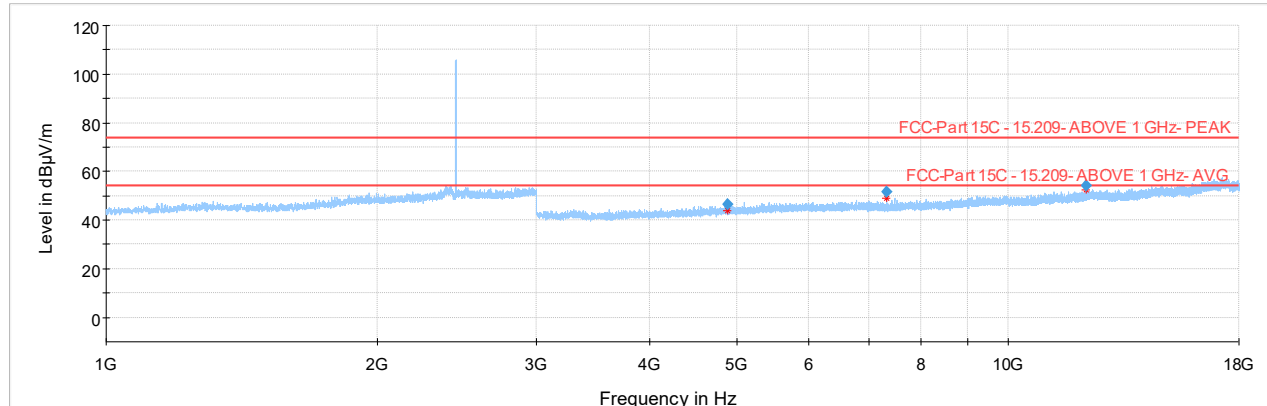
Preview Result 1V-AVG
FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG
Final_Result AVG

Critical_Freqs AVG
FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK

Figure 21 : RSE_Left Cup_BDR_Low channel_2402_Pre-scan in Vertical Polarization

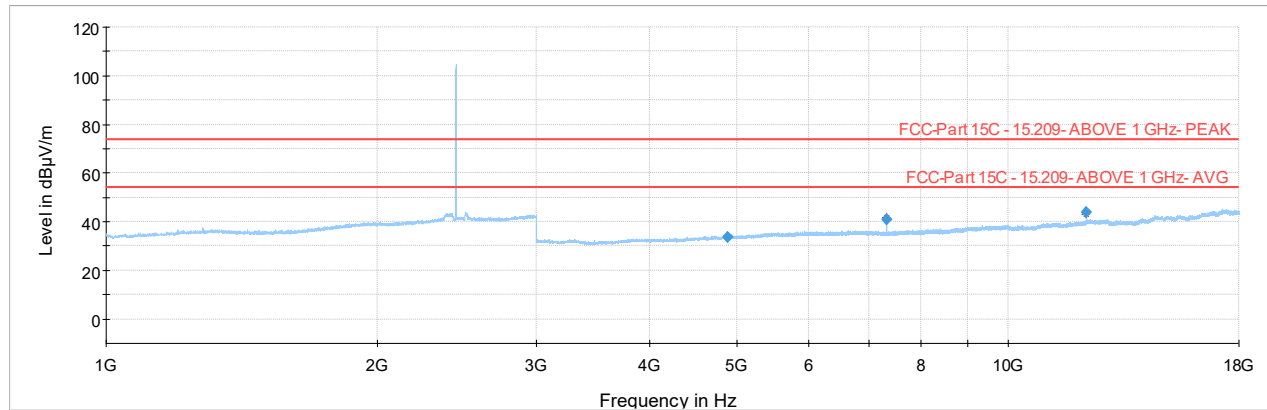
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4803.9	46.87	---	74	27.13	205	V	20	-0.6
7206.3	50.98	---	74	23.02	205	V	308	0.9
12010.5	53.52	---	74	20.48	145	V	289	5.4
4804.5	---	33.28	54	20.72	120	V	-6	-0.6
7206.3	---	39.52	54	14.48	192	V	314	0.9
12009.6	---	41.92	54	12.08	193	V	315	5.5

Table 18: RSE_Left Cup_BDR_Low channel_2402_Final table in Vertical Polarization



Preview Result 1H-PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result PK+

Critical_Freqs PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG



Preview Result 1H-AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result AVG

Critical_Freqs AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG

Figure 22 : RSE_Left Cup_BDR_Mid channel_2441_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4882.3	46.46	---	74	27.54	157	H	326	-0.8
7323.2	51.73	---	74	22.27	193	H	325	0.9
12204.8	54.01	---	74	19.99	120	H	335	5.8
4882.3	---	33.41	54	20.59	105	H	52	-0.8
7323.2	---	40.94	54	13.06	156	H	315	0.9
12204.8	---	43.95	54	10.05	168	H	306	5.8

Table 19: RSE_Left Cup_BDR_Mid channel_2441_Final table in Horizontal Polarization

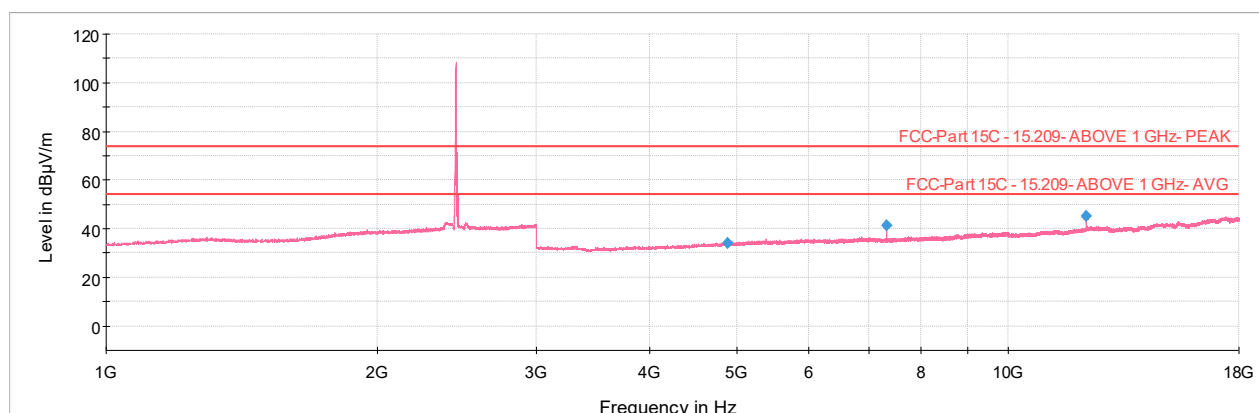
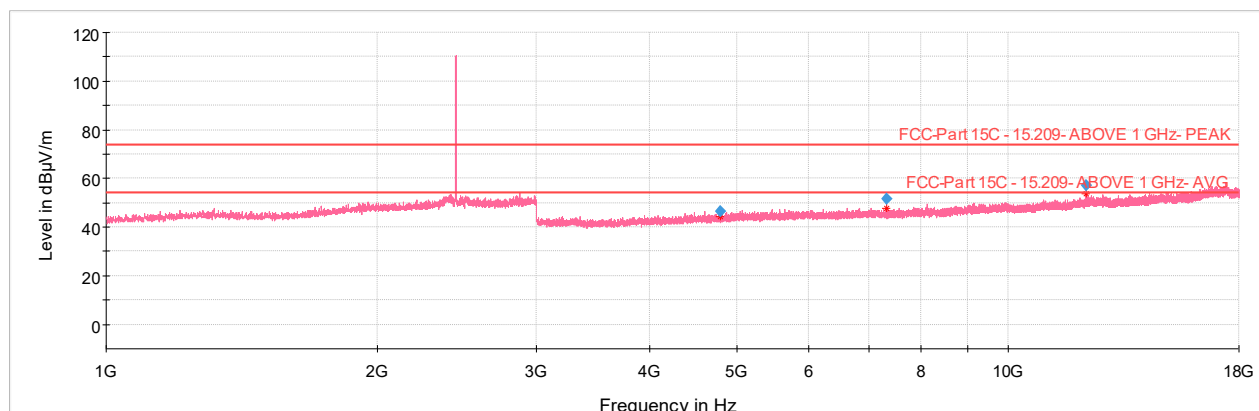
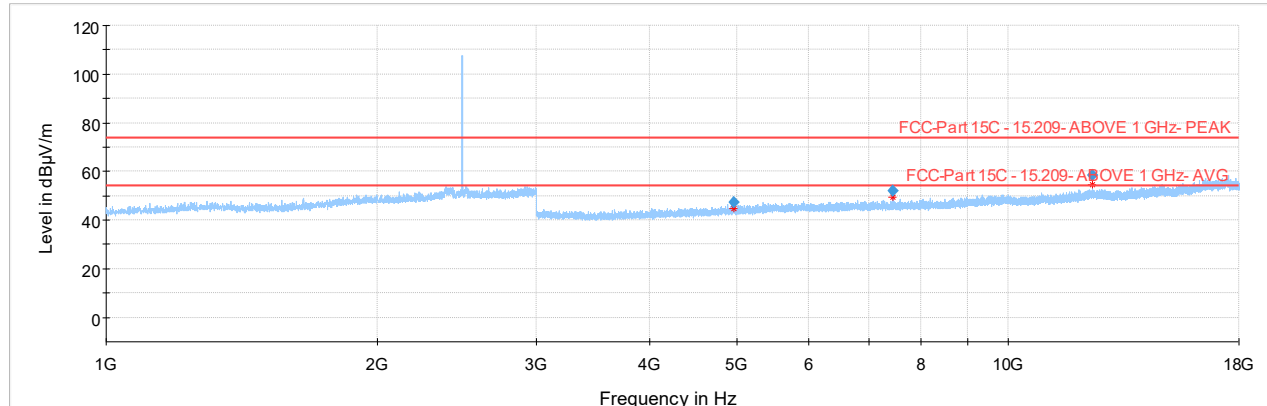


Figure 23 : RSE_Left Cup_BDR_Mid channel_2441_Pre-scan in Vertical Polarization

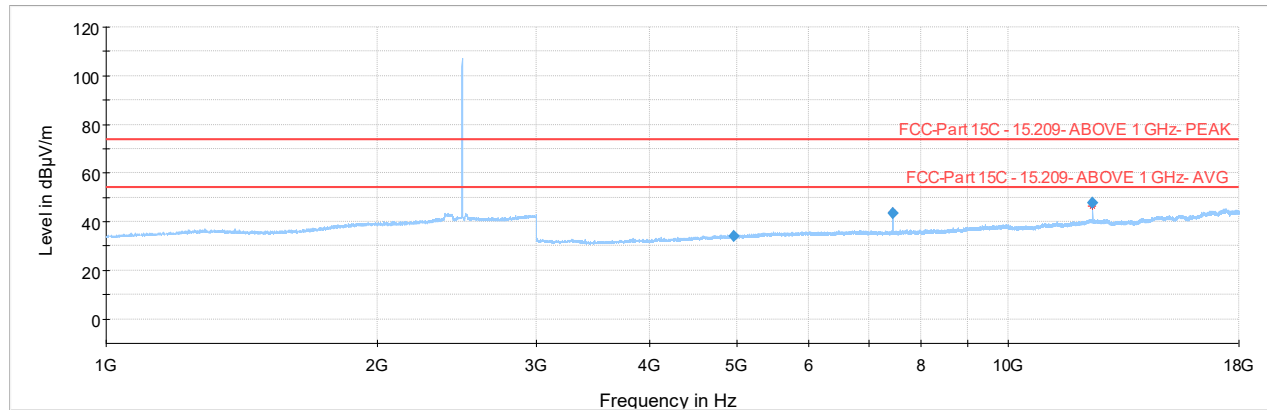
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4882.3	46.3	---	74	27.70	105	V	321	-0.7
7323.2	51.72	---	74	22.28	109	V	219	0.9
12204	57.03	---	74	16.97	205	V	309	6
4882.3	---	33.95	54	20.05	172	V	345	-0.8
7323.2	---	41.12	54	12.88	193	V	305	0.9
12204.8	---	45.32	54	8.68	193	V	308	6

Table 20: RSE_Left Cup_BDR_Mid channel_2441_Final table in Vertical Polarization



Preview Result 1H-PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result PK+

Critical_Freqs PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG



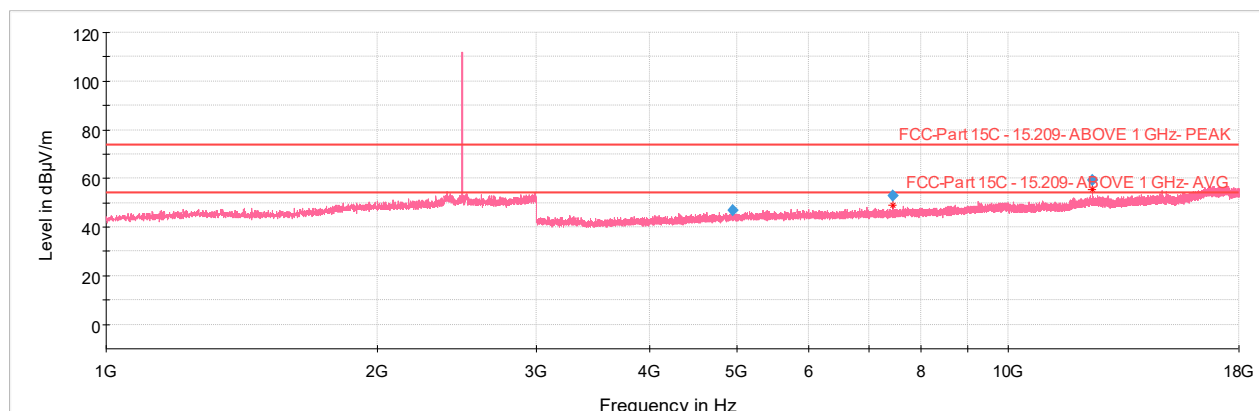
Preview Result 1H-AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result AVG

Critical_Freqs AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG

Figure 24 : RSE_Left Cup_BDR_High channel_2480_Pre-scan in Horizontal Polarization

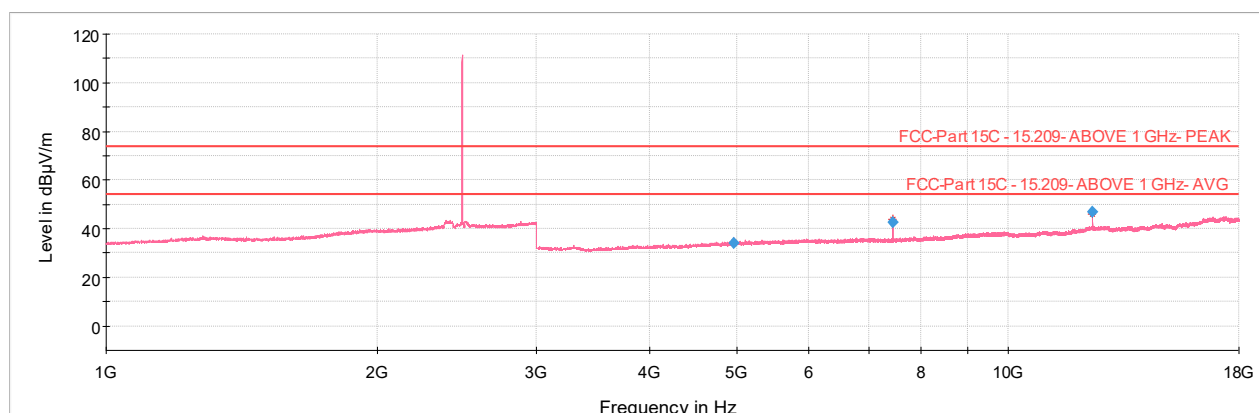
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4966.3	47.34	---	74	26.66	157	H	76	-0.5
7439.4	52.08	---	74	21.92	144	H	340	1
12400	58.29	---	74	15.71	180	H	316	5.8
4959.3	---	34.23	54	19.77	205	H	223	-0.5
7440.1	---	43.37	54	10.63	156	H	314	1
12400	---	47.92	54	6.08	172	H	307	5.8

Table 21: RSE_Left Cup_BDR_High channel_2480_Final table in Horizontal Polarization



Preview Result 1V-PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result PK+

Critical_Freqs PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG



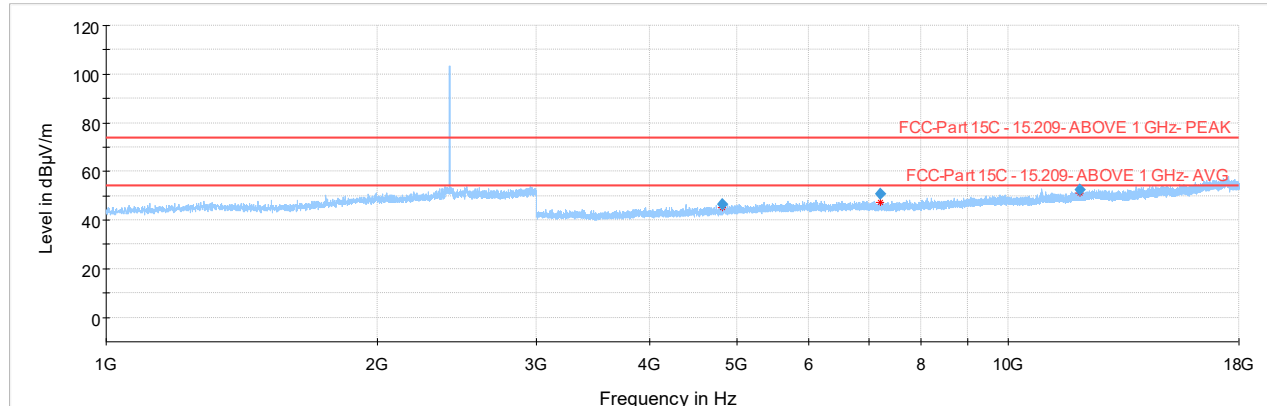
Preview Result 1V-AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result AVG

Critical_Freqs AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG

Figure 25 : RSE_Left Cup_BDR_High channel_2480_Pre-scan in Vertical Polarization

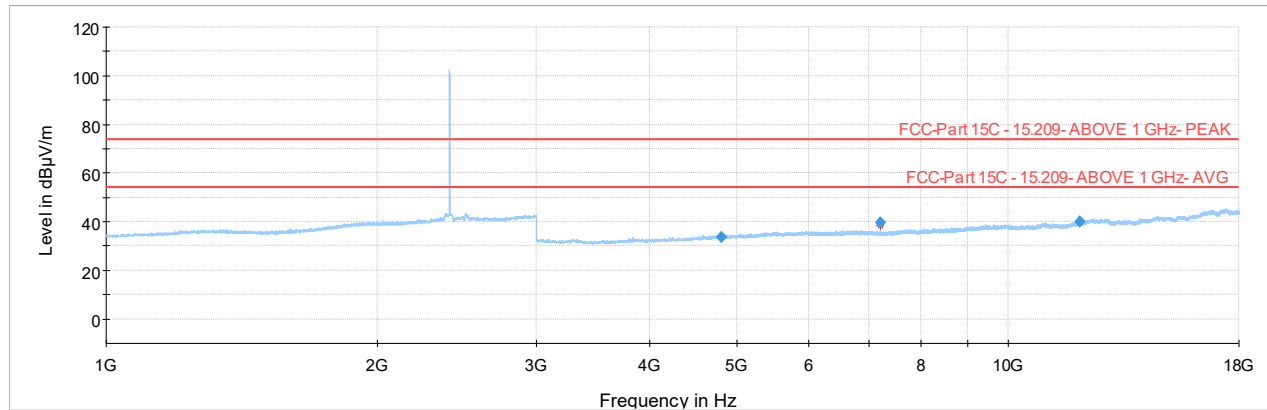
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4948.1	46.79	---	74	27.21	105	V	237	-0.3
7439.4	52.72	---	74	21.28	105	V	216	1
12399.2	59.2	---	74	14.80	180	V	308	6
4960	---	34.19	54	19.81	180	V	90	-0.4
7440.1	---	42.4	54	11.60	180	V	196	1
12399.2	---	46.74	54	7.26	205	V	303	6

Table 22: RSE_Left Cup_BDR_High channel_2480_Final table in Vertical Polarization



Preview Result 1H-PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result PK+

Critical_Freqs PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG



Preview Result 1H-AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK
 Final_Result AVG

Critical_Freqs AVG
 FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG

Figure 26 : RSE_Right Cup_BDR_Low channel_2402_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4804.3	46.44	---	74	27.56	120	H	84	-0.6
7205.6	50.51	---	74	23.49	168	H	148	0.9
12009.6	52.47	---	74	21.53	156	H	214	5.4
4804	---	33.59	54	20.41	168	H	91	-0.6
7206.3	---	39.62	54	14.38	109	H	91	0.9
12009.6	---	39.95	54	14.05	193	H	135	5.4

Table 23: RSE_Right Cup_BDR_Low channel_2402_Final table in Horizontal Polarization

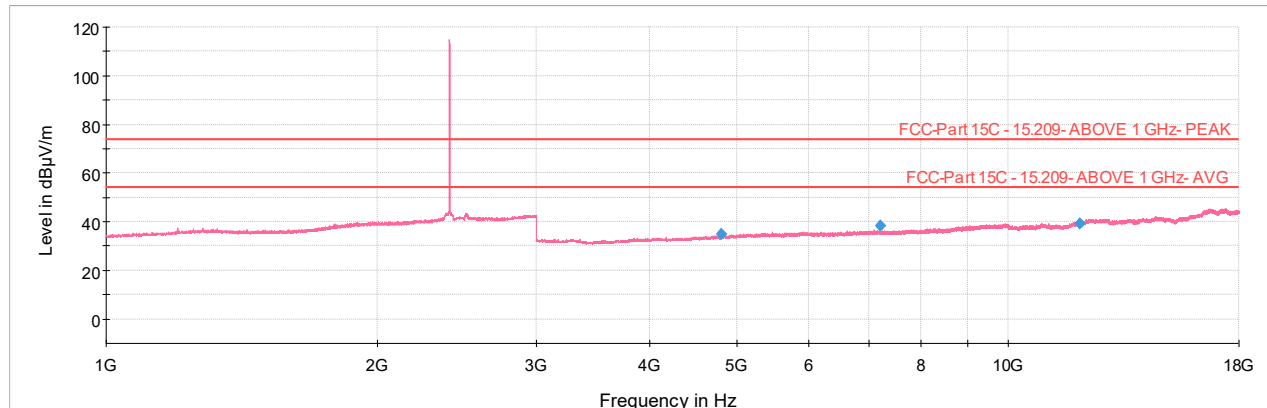
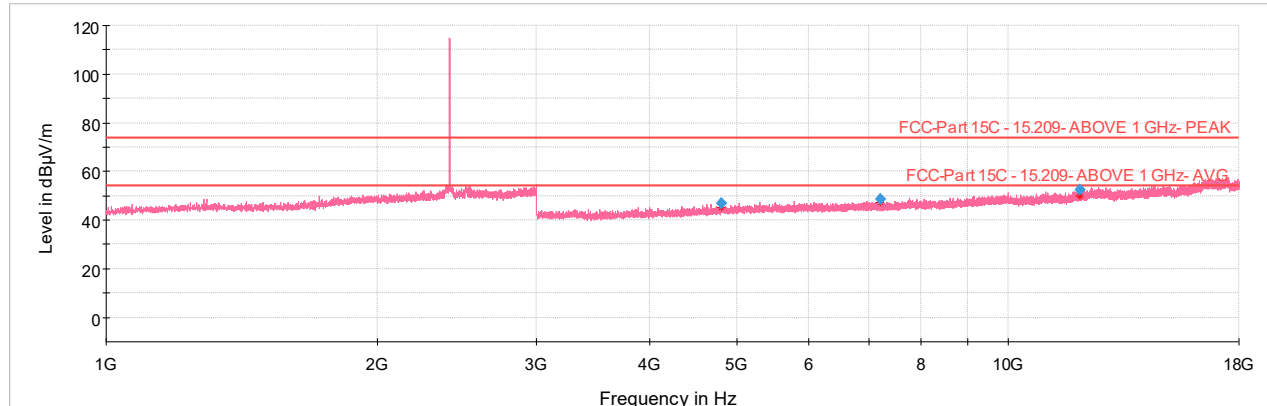
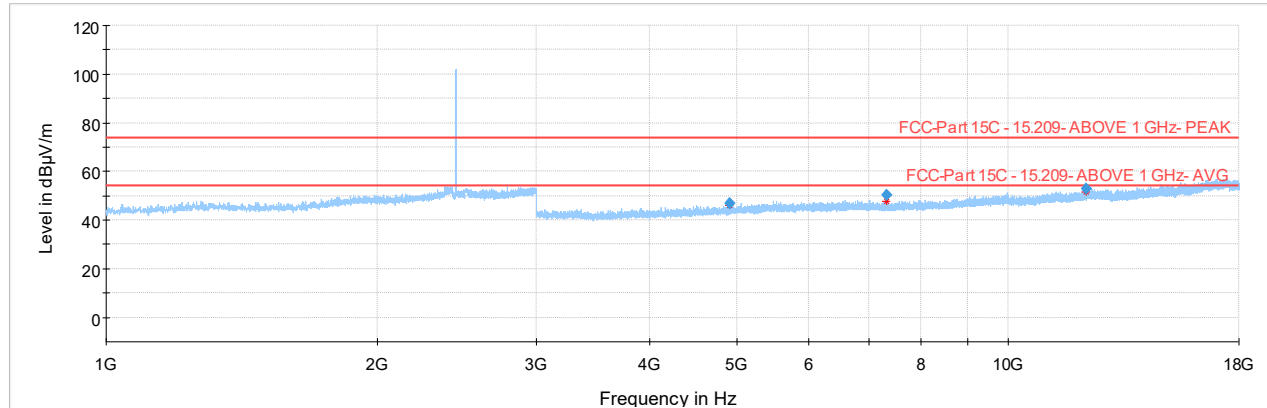


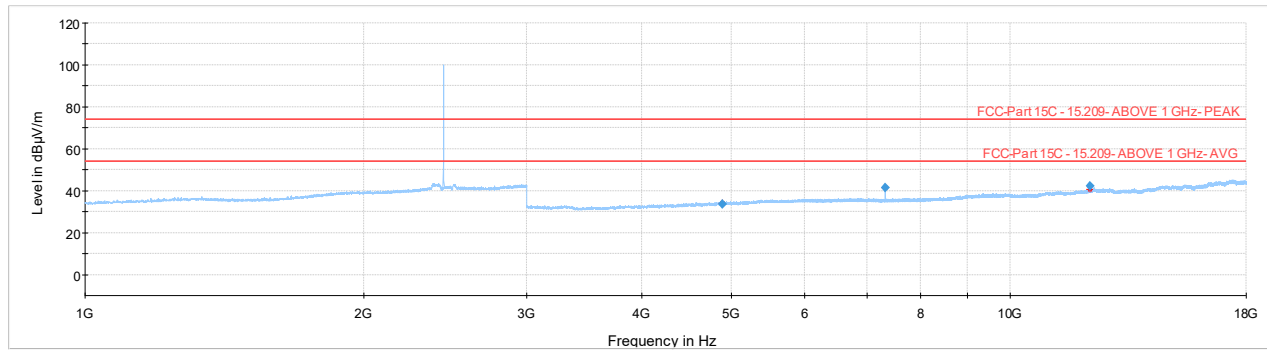
Figure 27 : RSE_Right Cup_BDR_Low channel_2402_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4803.9	47.05	---	74	26.95	145	V	117	-0.6
7206.4	48.39	---	74	25.61	144	V	204	0.9
12010.4	52.56	---	74	21.44	205	V	234	5.5
4803.9	---	34.78	54	19.22	193	V	104	-0.6
7206.3	---	38.14	54	15.86	205	V	49	0.9
12010.2	---	39.37	54	14.63	168	V	337	5.4

Table 24: RSE_Right Cup_BDR_Low channel_2402_Final table in Vertical Polarization



Preview Result 1H-PK+ Critical_Freqs PK+
 FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG
 Final_Result PK+



Preview Result 1H-AVG Critical_Freqs AVG FCC-Part 15C - 15.209-ABOVE 1 GHz- PEAK FCC-Part 15C - 15.209-ABOVE 1 GHz- AVG Final_Result

Figure 28 : RSE_Right Cup_BDR_Mid channel_2441_Preview scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4882.6	46.96	---	74	27.04	192	H	163	-0.6
7323.9	50.17	---	74	23.83	168	H	159	0.9
12204.8	52.9	---	74	21.10	180	H	226	5.8
4882.3	---	33.71	54	20.29	132	H	102	-0.8
7323.2	---	41.37	54	12.63	121	H	86	0.9
12204.8	---	42.08	54	11.92	192	H	135	5.8

Table 25: RSE_Right Cup_BDR_Mid channel_2441_Final table in Horizontal Polarization

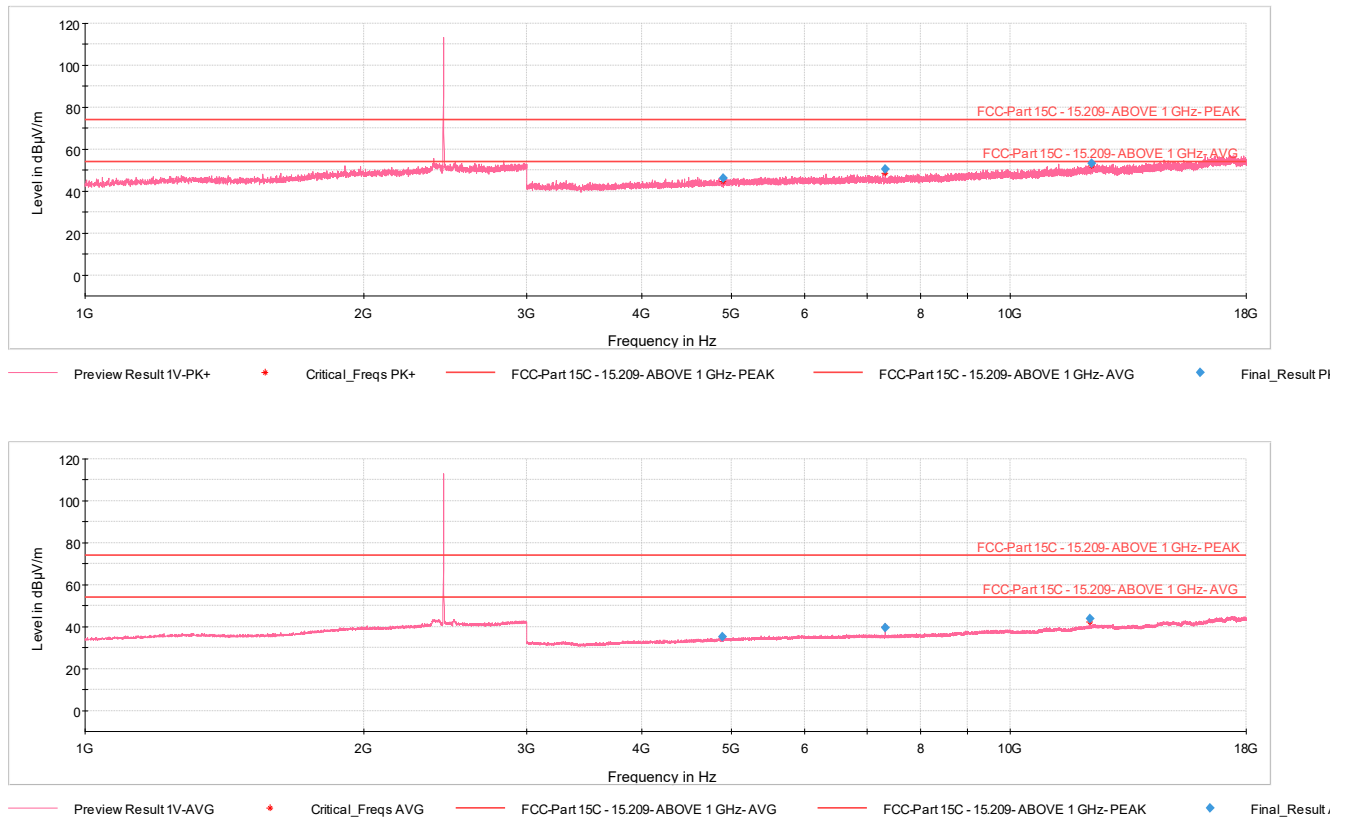


Figure 29 : RSE_Right Cup_BDR_Mid channel_2441_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4881.4	46.29	---	74	27.71	205	V	144	-0.8
7323.9	50.31	---	74	23.69	144	V	98	0.9
12205.2	53.19	---	74	20.81	132	V	39	6
4882.3	---	35.08	54	18.92	181	V	109	-0.8
7323.2	---	39.61	54	14.39	144	V	22	0.9
12204.8	---	43.8	54	10.20	205	V	40	6

Table 26: RSE_Right Cup_BDR_Mid channel_2441_Final table in Vertical Polarization

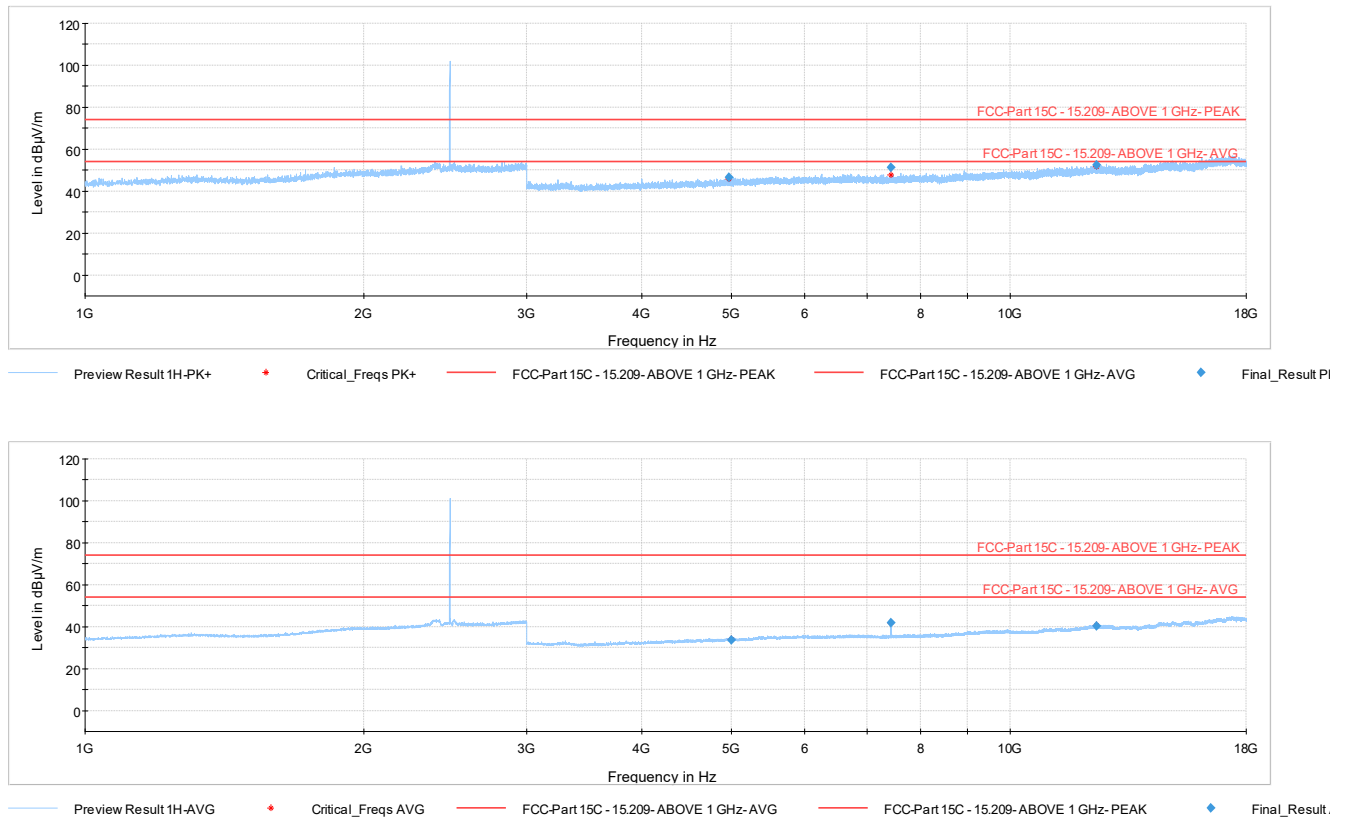


Figure 30 : RSE_ Right Cup_BDR_High channel_2480_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4960.4	46.49	---	74	27.51	109	H	199	-0.5
7440.8	51.32	---	74	22.68	205	H	139	1
12400.4	52.49	---	74	21.51	205	H	236	5.8
4960.6	---	33.65	54	20.35	180	H	116	-0.5
7440.1	---	42	54	12.00	180	H	144	1
12399.2	---	40.44	54	13.56	150	H	106	5.8

Table 27: RSE_ Right Cup_BDR_High channel_2480_Final table in Horizontal Polarization

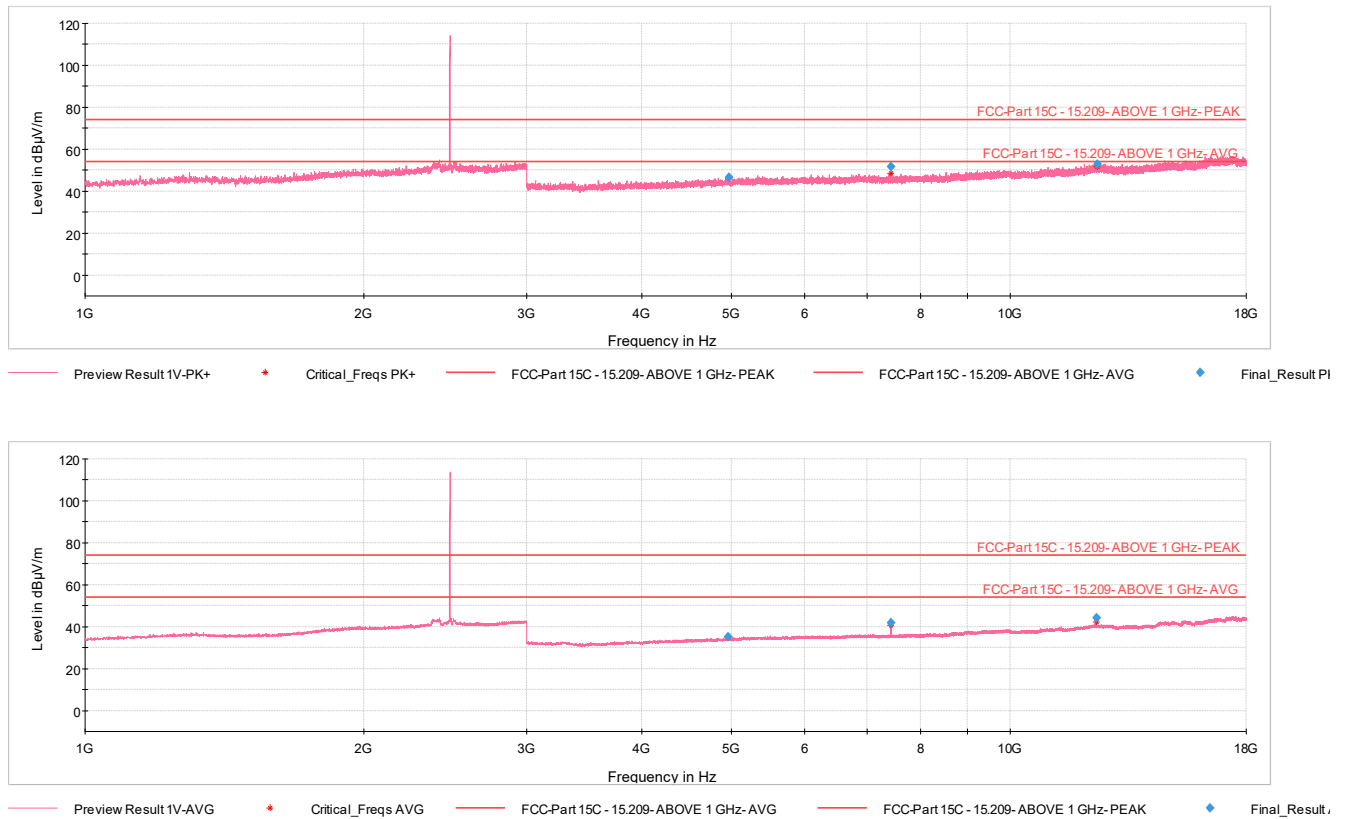


Figure 31 : RSE_ Right Cup_BDR_High channel_2480_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4959.9	46.51	---	74	27.49	109	V	346	-0.4
7440.1	51.73	---	74	22.27	205	V	31	1
12400.8	52.93	---	74	21.07	193	V	105	5.9
4960	---	35.35	54	18.65	132	V	7	-0.4
7440.1	---	41.8	54	12.20	192	V	15	1
12400	---	44.39	54	9.61	205	V	44	6

Table 28: RSE_ Right Cup_BDR_High channel_2480_Final table in Vertical Polarization

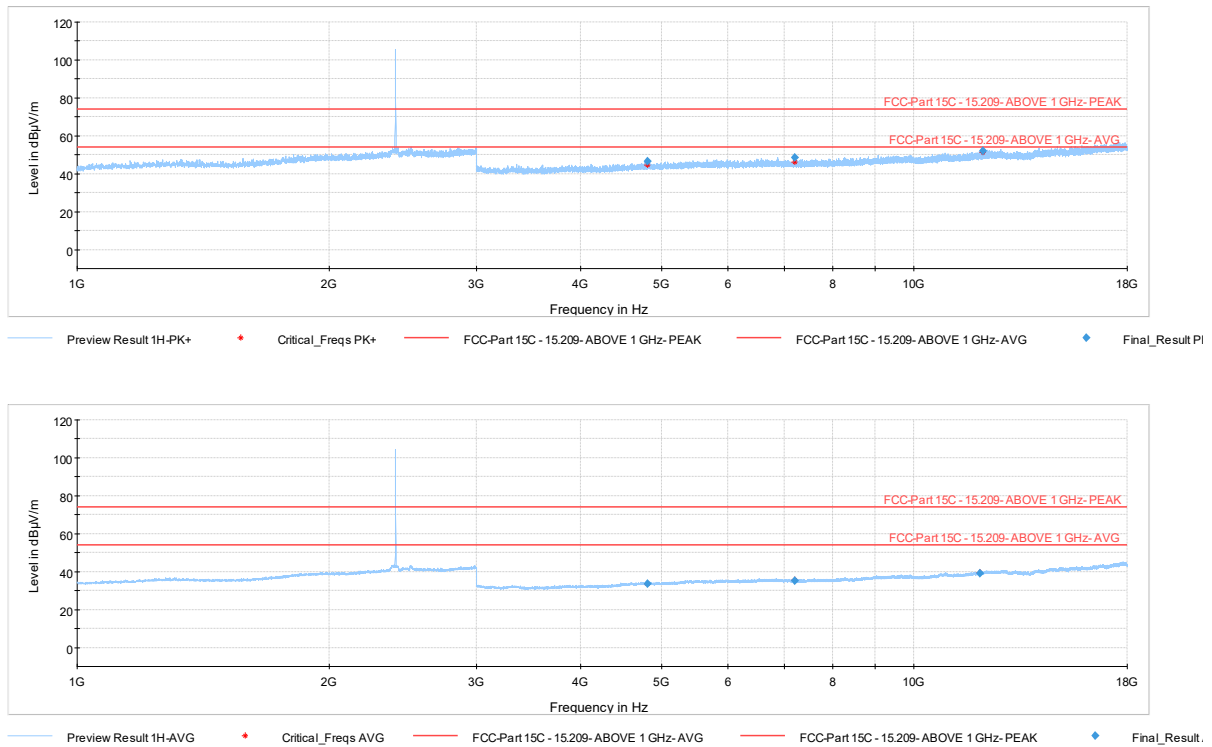


Figure 32 : RSE_Left Cup_EDR_Low channel_2402_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4804.3	46.56	---	74.00	27.44	180	H	57	-0.6
7206.8	48.33	---	74.00	25.67	180	H	124	0.9
12009.2	52.03	---	74.00	21.97	144	H	57	5.5
4804.7	---	33.49	54.00	20.51	157	H	40	-0.6
7205.7	---	35.05	54.00	18.95	158	H	203	0.9
12009.6	---	39.21	54.00	14.79	205	H	73	5.4

Table 29: RSE_Left Cup_EDR_Low channel_2402_Final table in Horizontal Polarization

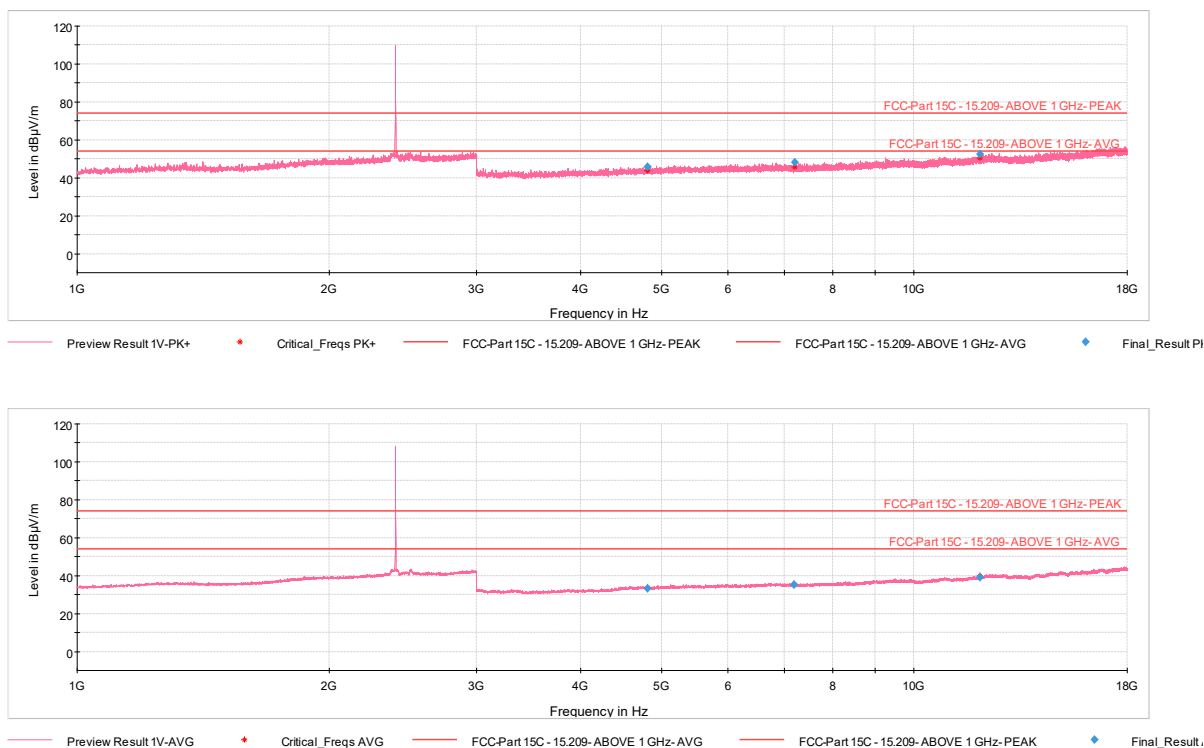


Figure 33 : RSE_Left Cup_EDR_Low channel_2402_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4803.9	45.82	---	74.00	28.18	172	V	352	-0.6
7206.8	48.2	---	74.00	25.80	205	V	10	0.9
12009.8	52.53	---	74.00	21.47	168	V	178	5.4
4804.2	---	33.37	54.00	20.63	205	V	332	-0.6
7206.4	---	34.98	54.00	19.02	205	V	125	0.9
12010.2	---	39.08	54.00	14.92	156	V	60	5.4

Table 30: RSE_Left Cup_EDR_Low channel_2402_Final table in Vertical Polarization

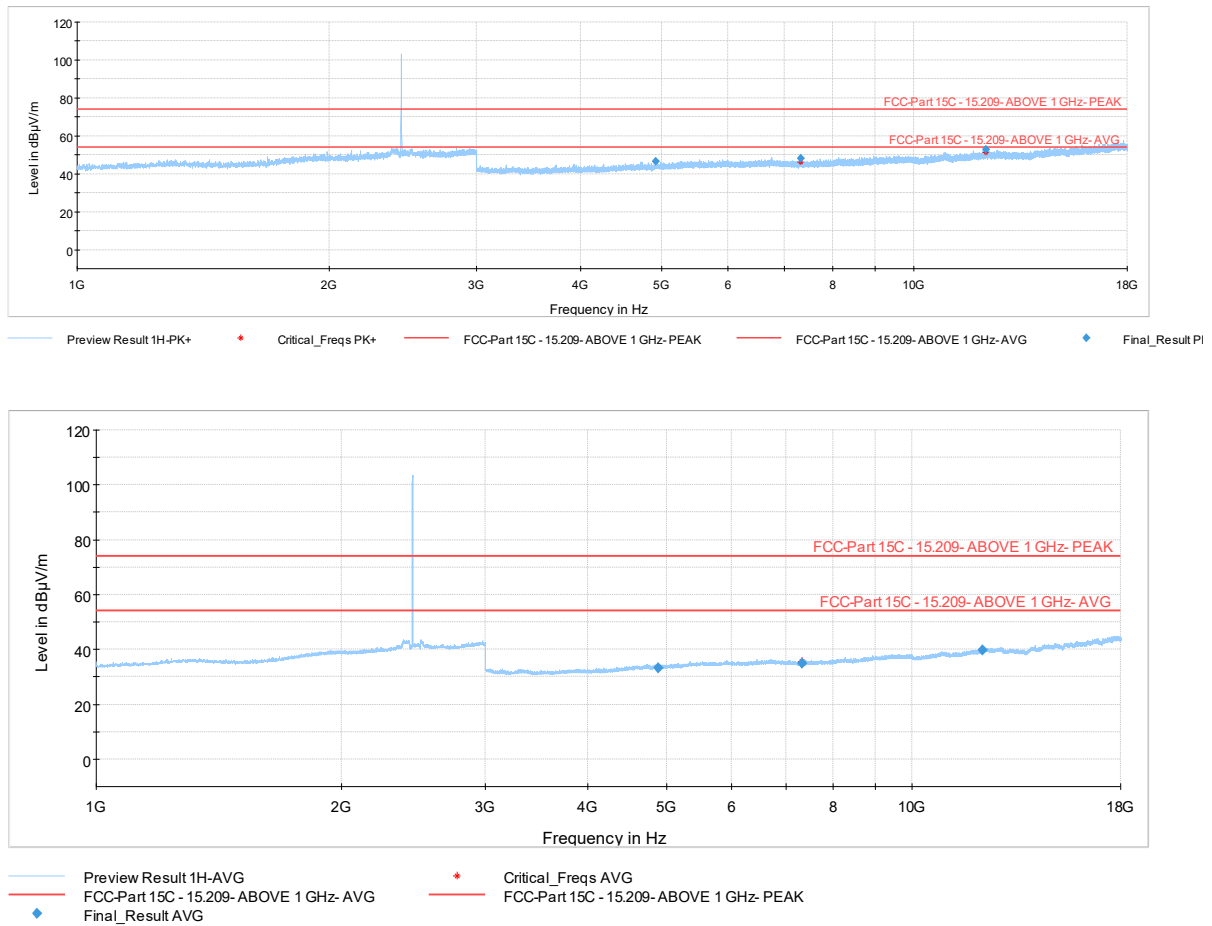


Figure 34 : RSE_Left Cup_EDR_Mid channel_2441_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4882.5	46.45	---	74.00	27.55	180	H	291	-0.5
7322.5	48.12	---	74.00	25.88	120	H	53	0.9
12204.8	52.71	---	74.00	21.29	120	H	118	5.8
4882.1	---	33.32	54.00	20.68	132	H	248	-0.8
7332.3	---	35.09	54.00	18.91	205	H	112	0.9
12205.4	---	39.81	54.00	14.19	144	H	270	5.8

Table 31:: RSE_Left Cup_EDR_Mid channel_2441_Final table in Horizontal Polarization

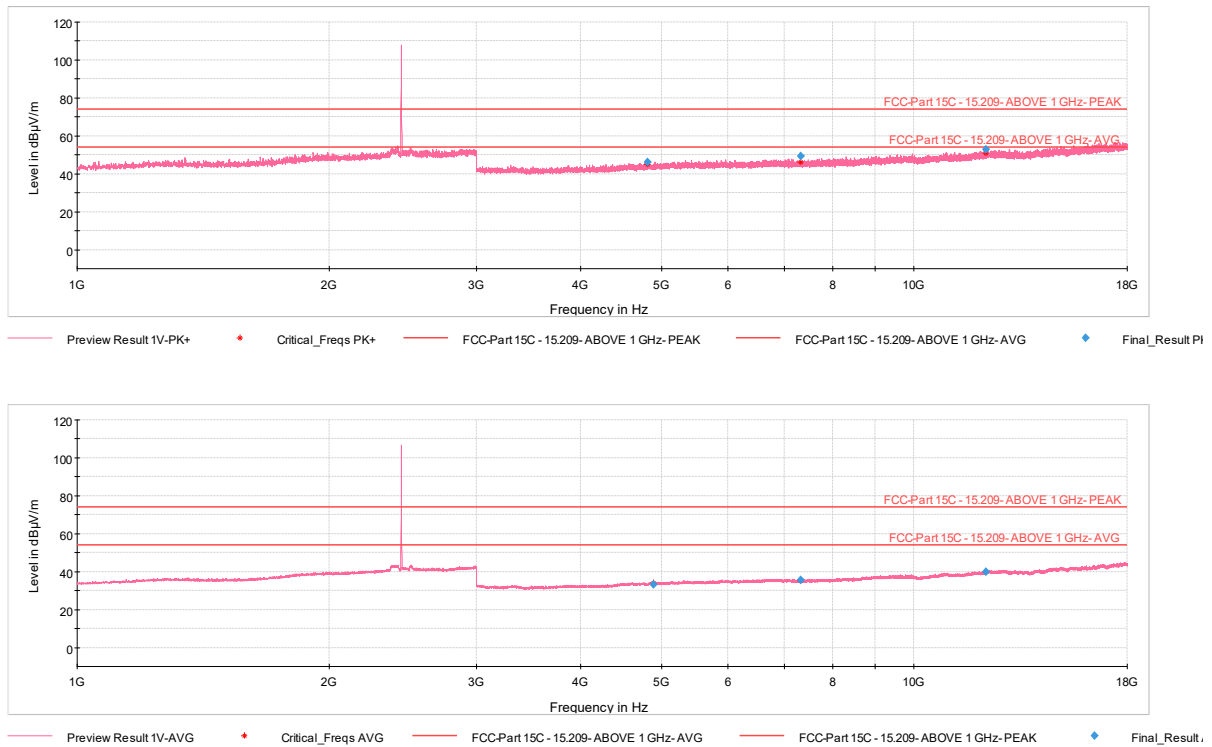
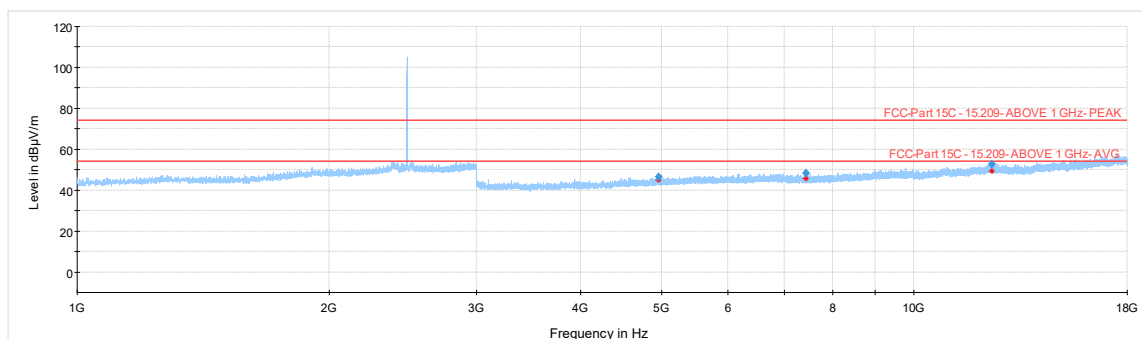


Figure 35 : RSE_Left Cup_EDR_Mid channel_2441_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4882.2	46.11	---	74.00	27.89	205	V	188	-0.6
7328.1	49.27	---	74.00	24.73	109	V	24	0.9
12205.6	52.83	---	74.00	21.17	133	V	63	6
4882.3	---	33.33	54.00	20.67	181	V	130	-0.8
7323	---	35.45	54.00	18.55	120	V	269	0.9
12205.2	---	39.74	54.00	14.26	132	V	56	6

Table 32:: RSE_Left Cup_EDR_Mid channel_2441_Final table in Vertical Polarization



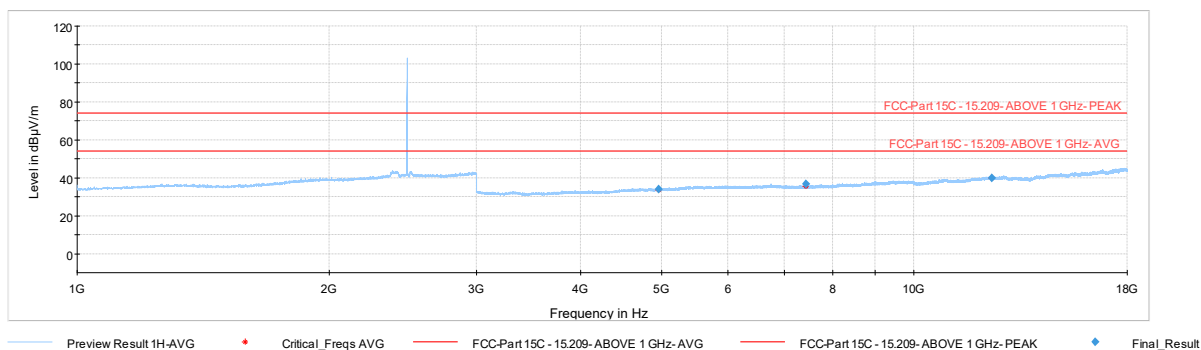


Figure 36 : RSE_Left Cup_EDR_High channel_2480_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4960	46.46	---	74.00	27.54	183	H	52	-0.5
7440.1	48.31	---	74.00	25.69	205	H	261	1
12400	52.79	---	74.00	21.21	192	H	302	5.8
4960	---	33.81	54.00	20.19	132	H	201	-0.5
7440.1	---	36.61	54.00	17.39	169	H	325	1
12400	---	40.05	54.00	13.95	205	H	211	5.8

Table 33: RSE_Left Cup_EDR_High channel_2480_Final table in Horizontal Polarization

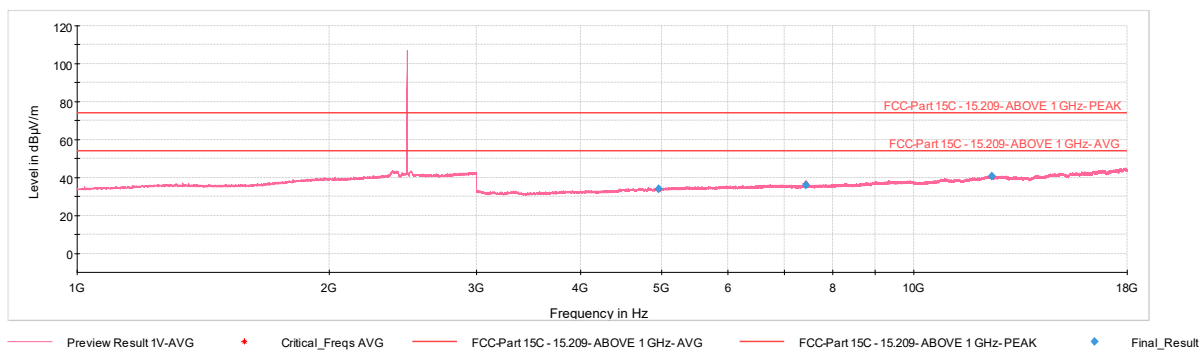
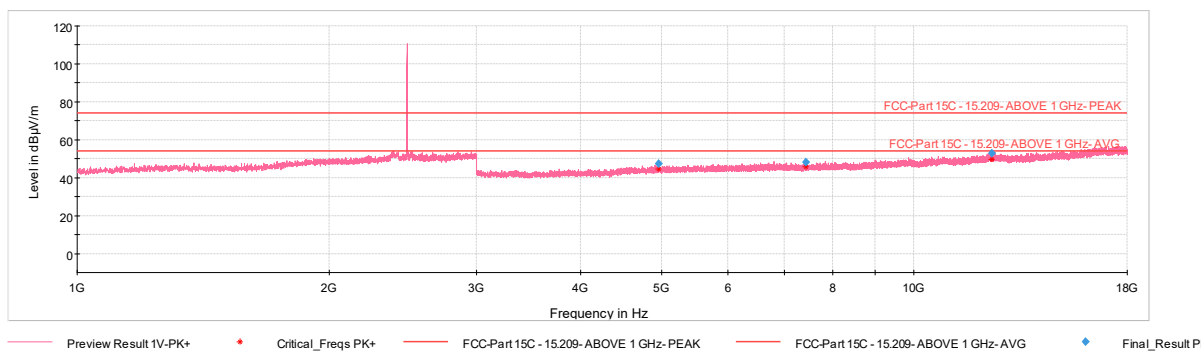
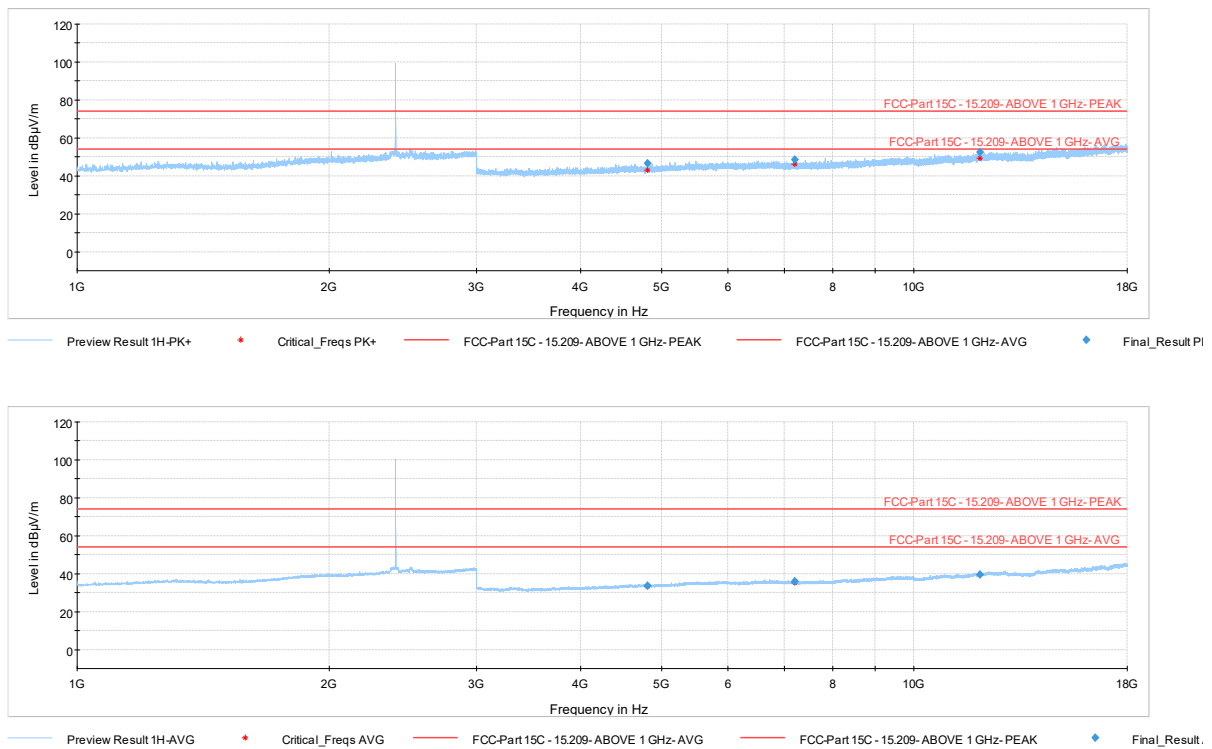


Figure 37 : RSE_Left Cup_EDR_High channel_2480_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4960	47.51	---	74.00	26.49	120	V	81	-0.4
7440.1	48.18	---	74.00	25.82	205	V	254	1
12400.8	52.95	---	74.00	21.05	205	V	210	6
4960	---	33.8	54.00	20.20	193	V	50	-0.4
7440.1	---	36.08	54.00	17.92	180	V	297	1
12400	---	40.51	54.00	13.49	205	V	305	6

Table 34: RSE_Left Cup_EDR_High channel_2480_Final table in Vertical Polarization

Figure 38 : RSE_Right Cup_EDR_Low channel_2402_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4803.90	46.51	---	74.00	27.49	120	H	196	-0.6
7206.30	48.63	---	74.00	25.37	109	H	270	0.9
12009.60	52.31	---	74.00	21.69	205	H	196	5.4
4803.9	---	33.53	54.00	20.47	105	H	292	-0.6
7206.3	---	36.07	54.00	17.93	105	H	258	0.9
12010.4	---	39.64	54.00	14.36	120	H	319	5.4

Table 35: RSE_ Right Cup_EDR_Low channel_2402_Final table in Horizontal Polarization

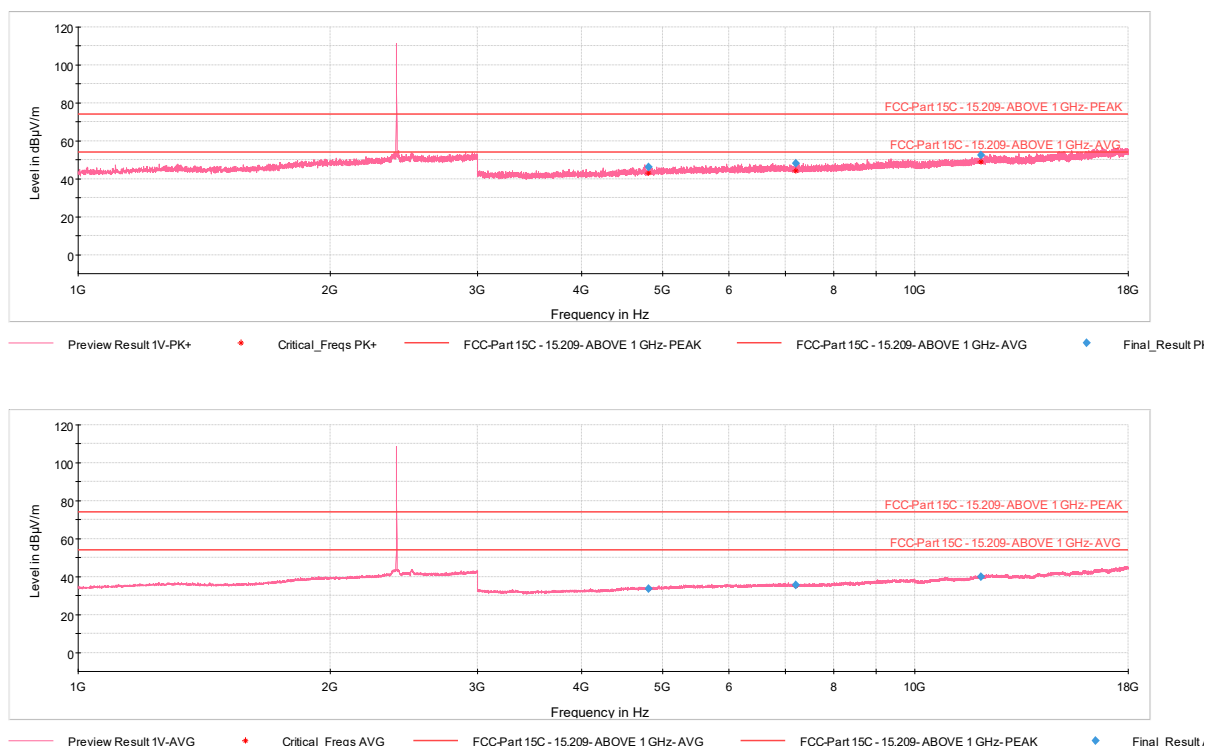
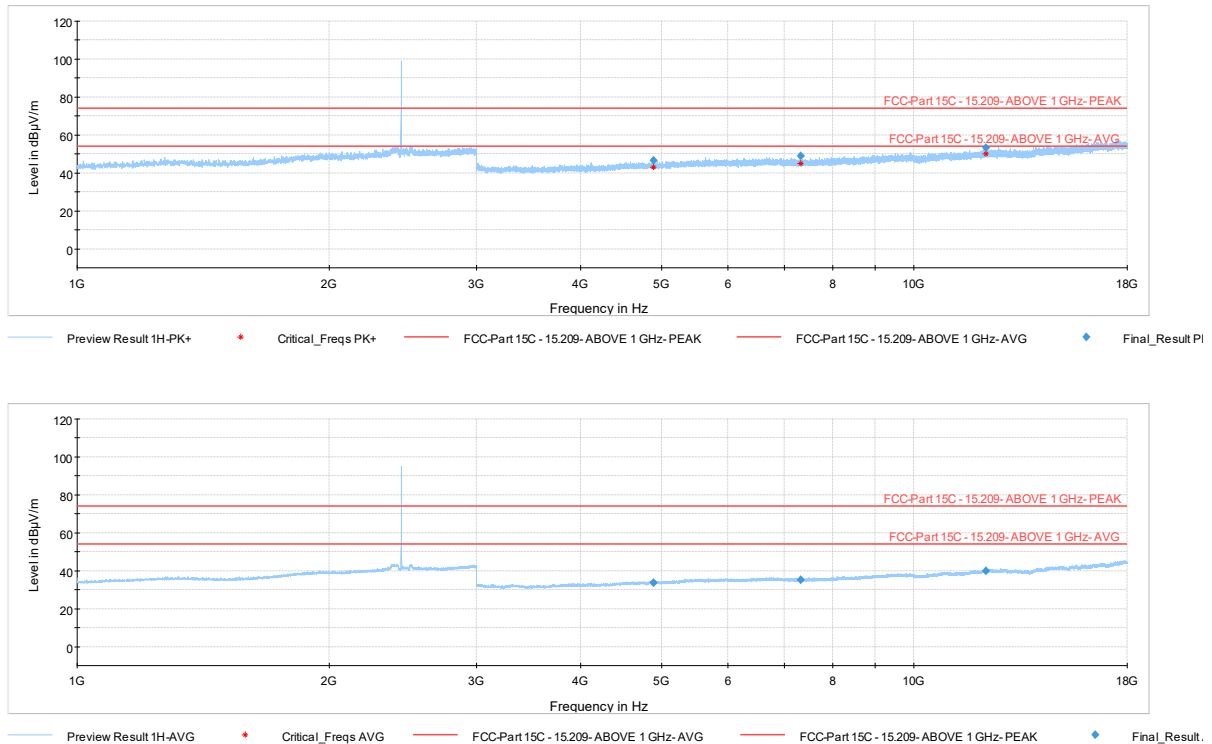


Figure 39 : RSE_ Right Cup_EDR_Low channel_2402_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4804.6	46.22	---	74.00	27.78	132	V	354	-0.6
7206.3	48.17	---	74.00	25.83	168	V	218	0.9
12010.4	52.29	---	74.00	21.71	120	V	344	5.5
4803.9	---	33.65	54.00	20.35	180	V	162	-0.6
7206.3	---	35.6	54.00	18.40	132	V	13	0.9
12010.4	---	39.74	54.00	14.26	205	V	282	5.5

Table 36: RSE_Right Cup_EDR_Low channel_2402_Final table in Vertical Polarization

Figure 40 : RSE_Right Cup_EDR_Mid channel_2441_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4882.3	46.6	---	74.00	27.40	205	H	90	-0.8
7323.2	49.05	---	74.00	24.95	181	H	230	0.9
12205.6	53.05	---	74.00	20.95	180	H	71	5.8
4882.3	---	33.55	54.00	20.45	109	H	122	-0.8
7323.2	---	35.32	54.00	18.68	193	H	44	0.9
12205.6	---	39.95	54.00	14.05	136	H	63	5.8

Table 37: RSE_Right Cup_EDR_Mid channel_2441_Final table in Horizontal Polarization

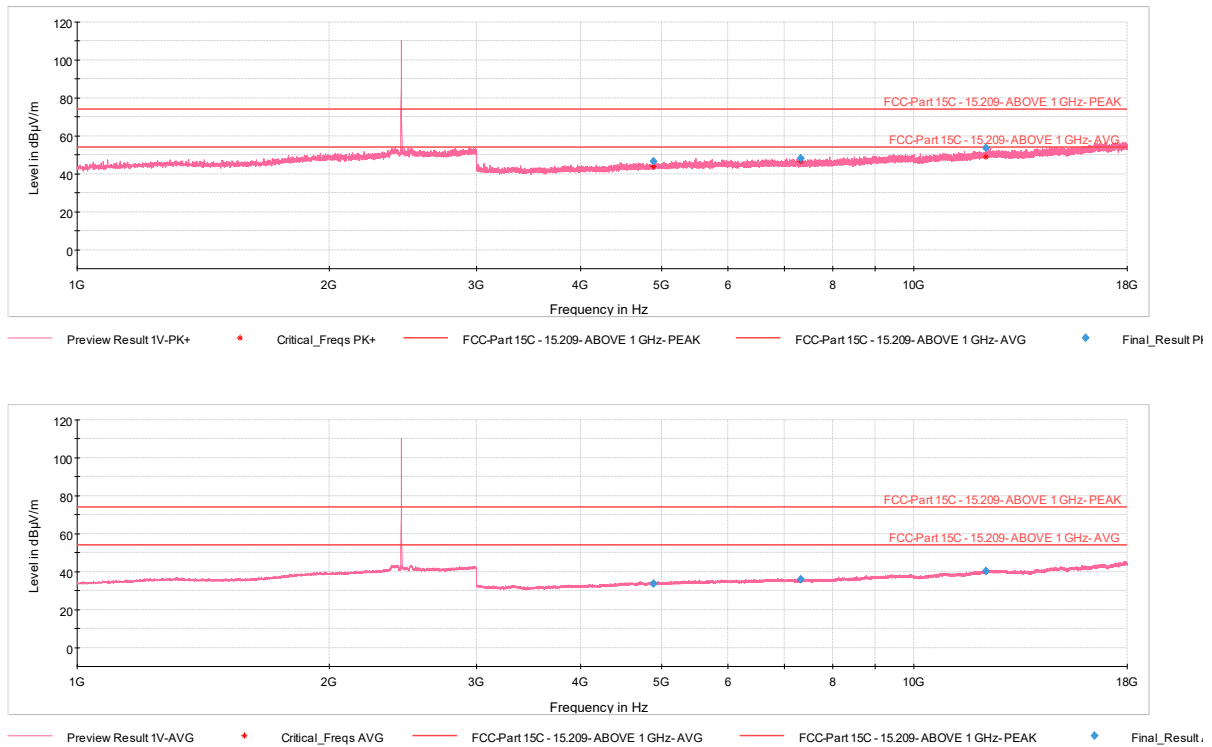
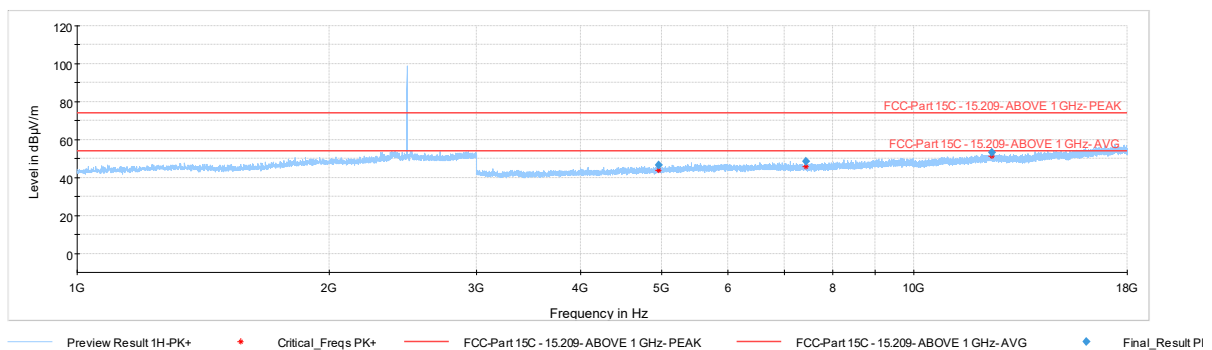


Figure 41 : RSE_Right Cup_EDR_Mid channel_2441_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4882.3	46.56	---	74.00	27.44	105	V	171	-0.8
7323.2	48.02	---	74.00	25.98	109	V	167	0.9
12205.6	53.63	---	74.00	20.37	205	V	332	6
4882.3	---	33.53	54.00	20.47	132	V	144	-0.8
7323.2	---	35.85	54.00	18.15	205	V	25	0.9
12204.8	---	40.23	54.00	13.77	205	V	44	6

Table 38: RSE_Right Cup_EDR_Mid channel_2441_Final table in Vertical Polarization



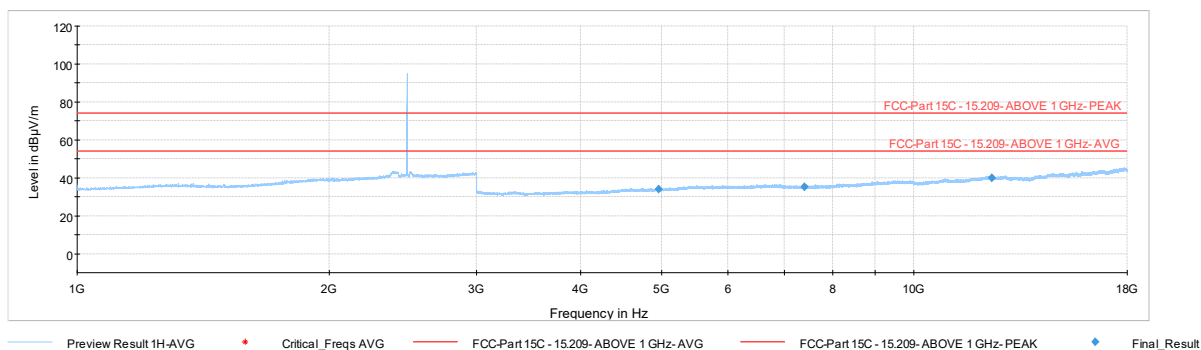


Figure 42 : RSE_Right Cup_EDR_High channel_2480_Pre-scan in Horizontal Polarization

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4960.7	46.66	---	74.00	27.34	205	H	178	-0.5
7440.1	48.34	---	74.00	25.66	205	H	26	1
12400	53.35	---	74.00	20.65	168	H	189	5.8
4960	---	33.88	54.00	20.12	132	H	125	-0.5
7400.9	---	35.29	54.00	18.71	156	H	153	0.9
12400	---	40.03	54.00	13.97	147	H	98	5.8

Table 39: RSE_Right Cup_EDR_High channel_2480_Final table in Horizontal Polarization

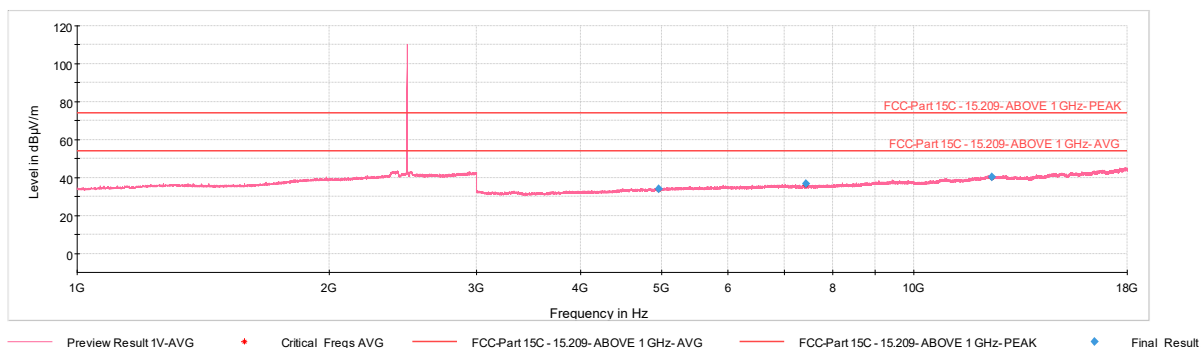
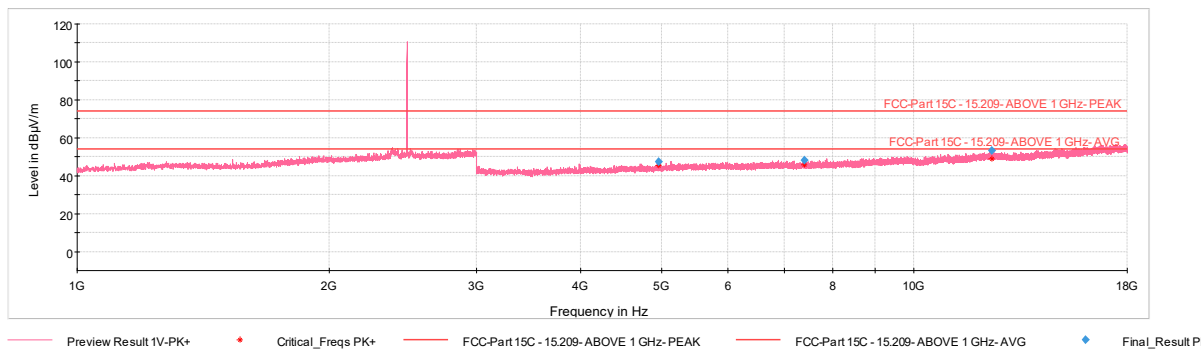


Figure 43 : RSE_Right Cup_EDR_High channel_2480_Pre-scan in Vertical Polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
4960	47.38	---	74.00	26.62	109	V	330	-0.4
7399.5	48.21	---	74.00	25.79	192	V	192	1
12400	53.33	---	74.00	20.67	105	V	4	6
4960	---	33.92	54.00	20.08	168	V	149	-0.4
7440.1	---	36.7	54.00	17.30	192	V	33	1
12400	---	40.3	54.00	13.70	192	V	43	6

Table 40: RSE_Right Cup_EDR_High channel_2480_Final table in Vertical Polarization

12.1.8.3. Radiated Spurious emission 18 GHz – 26.5 GHz.

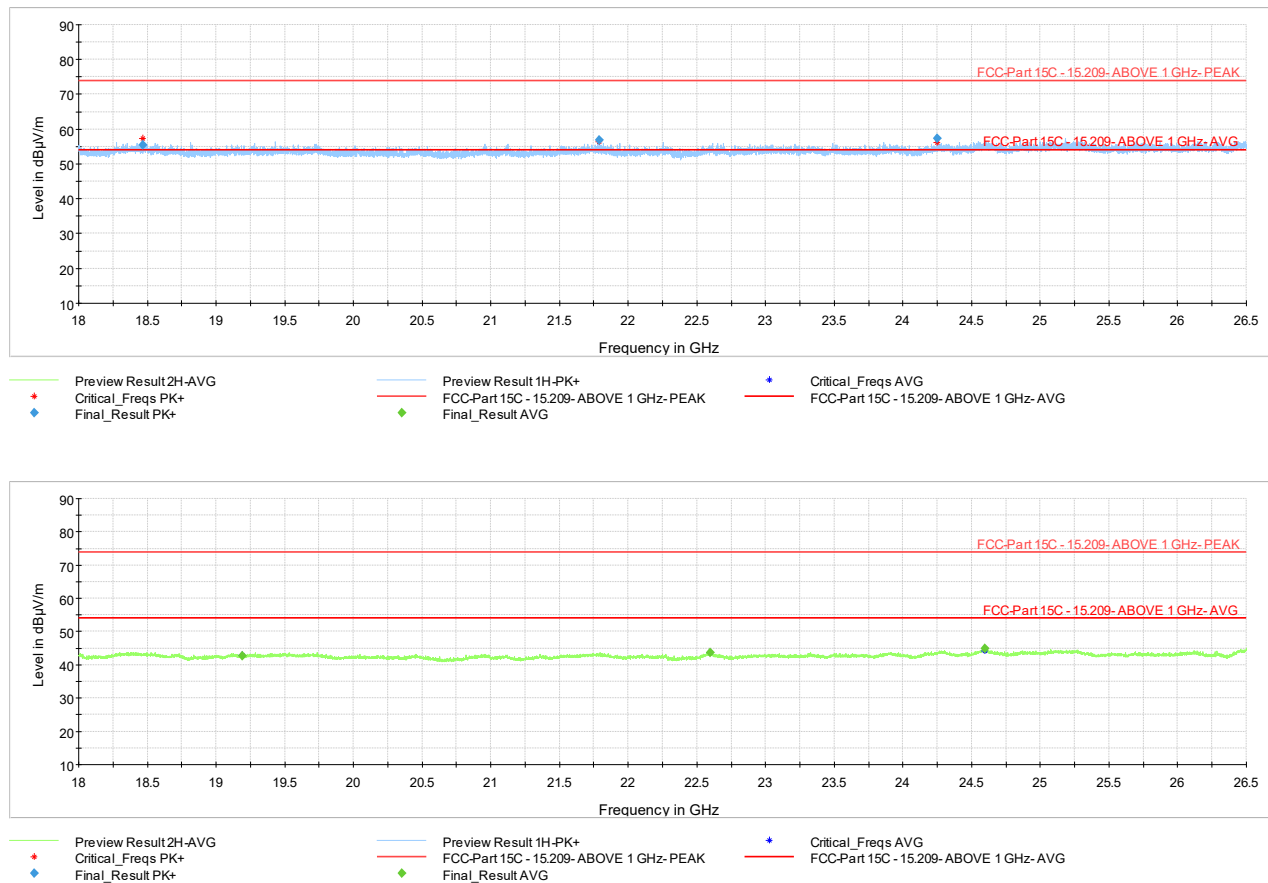


Figure 44 : RSE_18 GHz to 26.5 GHz_ Left Cup_BDR_ High channel_2480_Pre-scan_ Horizontal polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
18467.5	55.42	---	74.00	18.58	210.00	H	18.00	-2
21788.45	56.89	---	74.00	17.11	104.00	H	244.00	-0.8
24247.5	57.37	---	74.00	16.63	104.00	H	199.00	0.6
19191.7	---	42.7	54.00	11.30	116.00	H	19.00	-2.6
22598.5	---	43.75	54.00	10.25	125.00	H	65.00	0
24596.85	---	44.83	54.00	9.17	214.00	H	288.00	1.5

Table 41: RSE_18 GHz to 26.5 GHz_ Left Cup_ BDR_High channel_2480_ Final table_Horizontal polarization

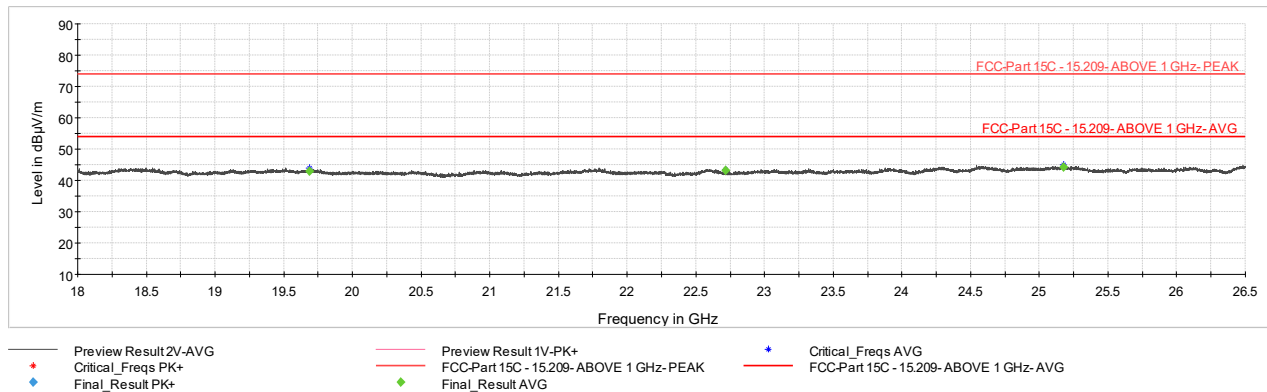
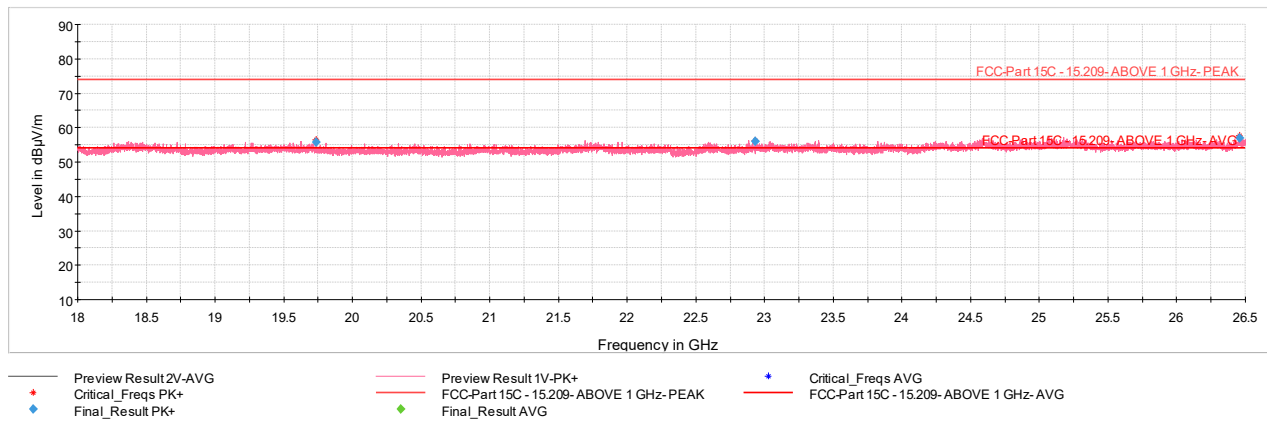


Figure 45 : RSE_18 GHz to 26.5 GHz_ BDR_Left Cup_ High channel_2480_Pre-scan_ Vertical polarization

Frequency	MaxPeak	Average	Limit	Margin	Height	Pol	Azimuth	Corr.
(MHz)	(dBμV/m)	(dBμV/m)	(dBμV/m)	(dB)	(cm)	V/H	(deg)	(dB/m)
19734.85	55.75	---	74.00	18.25	104.00	V	236.00	-2.4
22935.1	56.05	---	74.00	17.95	100.00	V	97.00	-0.4
26460.9	57.05	---	74.00	16.95	104.00	V	37.00	1
19688.95	---	42.83	54.00	11.17	225.00	V	214.00	-2.4
22719.2	---	43.15	54.00	10.85	125.00	V	124.00	-0.8
25179.1	---	44.32	54.00	9.68	125.00	V	134.00	0.8

Table 42: RSE_18 GHz to 26.5 GHz_ Left Cup_ BDR_High channel_2480_ Final table_Vertical polarization

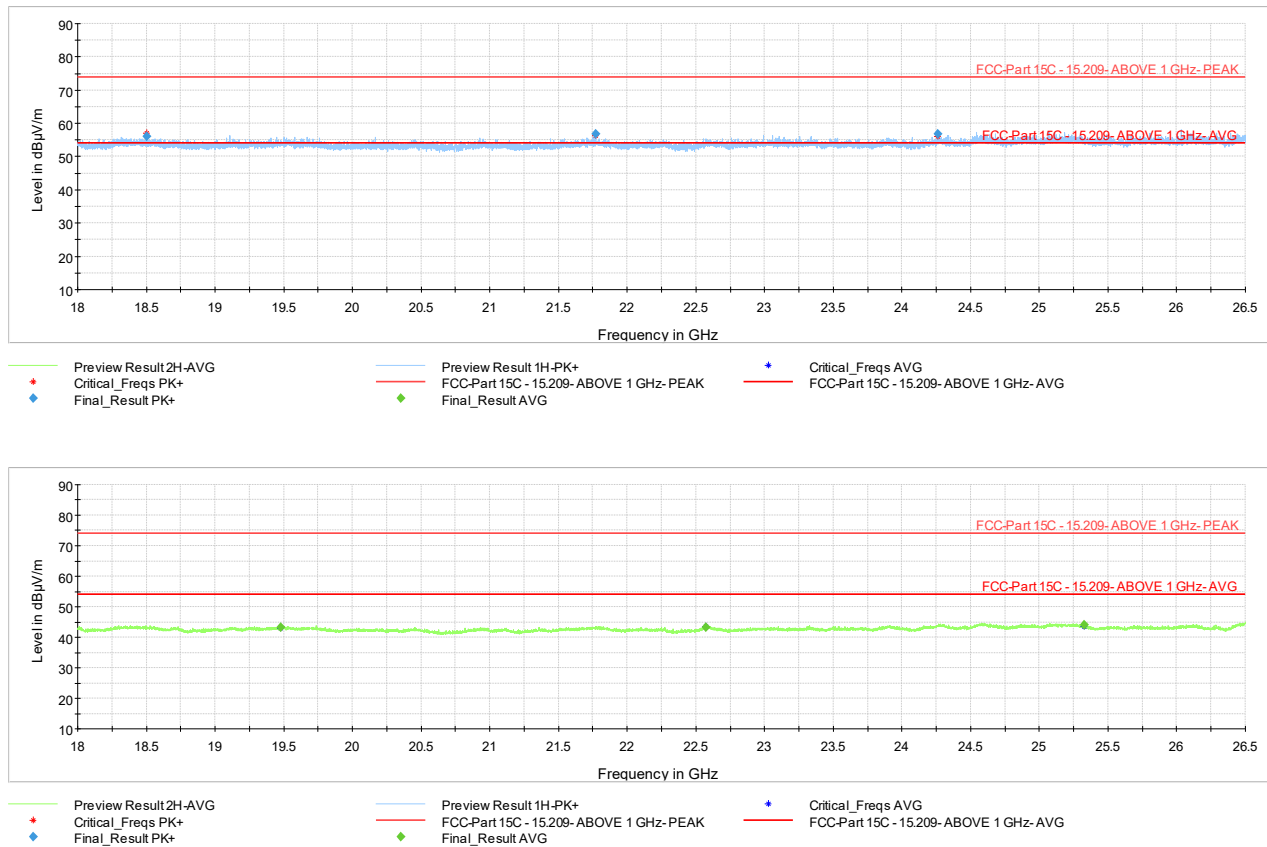


Figure 46 : RSE_18 GHz to 26.5 GHz_ BDR_Right Cup_ High channel_2480_ Pre-scan_ Horizontal polarization

Frequency	MaxPeak	Average	Limit	Margin	Height	Pol	Azimuth	Corr.
(MHz)	(dBμV/m)	(dBμV/m)	(dBμV/m)	(dB)	(cm)	V/H	(deg)	(dB/m)
18501.5	56.03	---	74.00	17.97	104.00	H	45.00	-1.8
21772.3	56.86	---	74.00	17.14	100.00	H	310.00	-0.8
24258.55	56.84	---	74.00	17.16	190.00	H	34.00	0.7
19479	---	43.12	54.00	10.88	225.00	H	39.00	-1.9
22570.45	---	43.36	54.00	10.64	104.00	H	102.00	-0.3
25327	---	44.03	54.00	9.97	191.00	H	294.00	0.7

Table 43: RSE_18 GHz to 26.5 GHz_ BDR_Right Cup_ High channel_2480_ Final table_Horizontal polarization

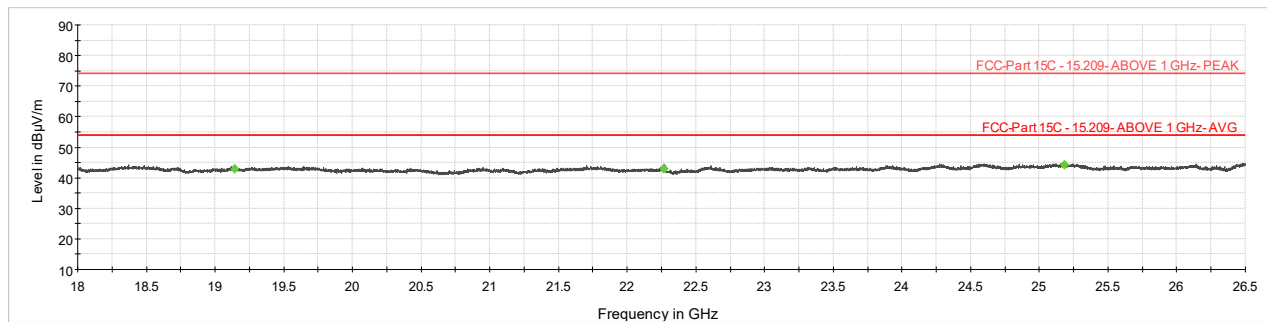
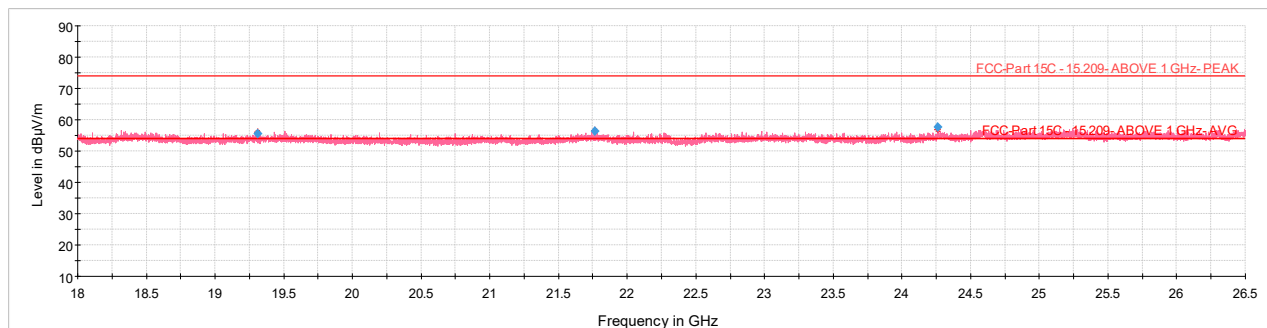


Figure 47 : RSE_18 GHz to 26.5 GHz_ BDR_Right Cup_ High channel_2480_ Pre-scan_ Vertical polarization

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
19313.25	55.43	---	74.00	18.57	100.00	V	245.00	-2.3
21763.8	56.29	---	74.00	17.71	100.00	V	344.00	-0.8
24258.55	57.51	---	74.00	16.49	194.00	V	183.00	0.7
19144.95	---	42.87	54.00	11.13	125.00	V	83.00	-2.5
22270.4	---	42.77	54.00	11.23	202.00	V	335.00	-1.2
25180.8	---	44.29	54.00	9.71	191.00	V	213.00	0.8

Table 44: RSE_18 GHz to 26.5 GHz_ BDR_Right Cup_ High channel_2480_ Final table_Vertical polarization

Calculation:

Margin = Avg Final(dBμV/m) – Limit (dBμV/m)., For average limit is 54dBμV/m.

Margin = MaxPeak(dBμV/m) – Limit (dBμV/m)., For Peak limit is 74dBμV/m.

Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Factor (dB).

Result value (dBμV/m) = Reading Value (dBμV) + Correction Factor (dB/m).

Note: No major emissions observed in the range of 18 GHz to 26.5 GHz.

12.1.8.4. Radiated Spurious emission 30 MHz to 1 GHz.

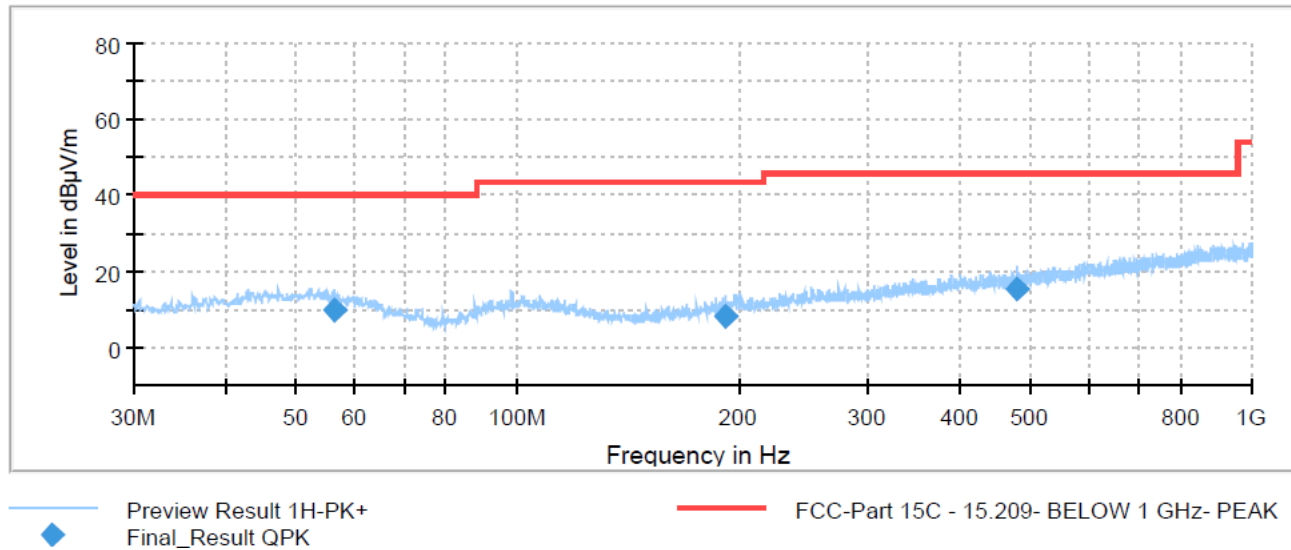


Figure 48 : RSE_30 MHz to 1 GHz_ Left Cup_High channel_2480_Pre-scan_ Horizontal polarization

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
56.384	10.12	40	29.88	290.00	H	86	-30.70
191.796	8.41	43.52	35.11	190.00	H	42	-32.50
480.177	15.16	46.02	30.86	290.00	H	242	-25.60

Table 45: RSE_30 MHz to 1 GHz _ Left Cup_Hgh channel_2480_Final table_ Horizontal polarization

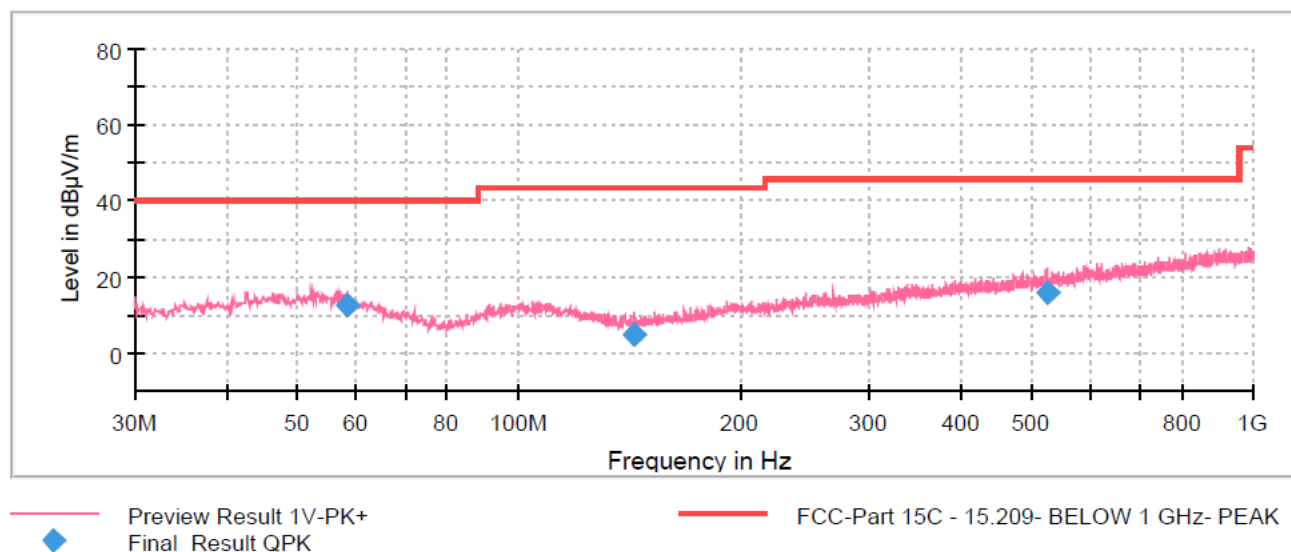


Figure 49 : RSE_30 MHz to 1 GHz_Left Cup_High channel_2480_Pre-scan_Vertical polarization

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
58.421	12.44	40	27.56	190.00	V	160	-31.20
143.393	4.91	43.52	38.61	100.00	V	320	-35.90
524.7	15.74	46.02	30.28	190.00	V	285	-24.80

Table 46: RSE_30 MHz to 1 GHz _Left Cup_High channel_2480_Final table_Vertical polarization

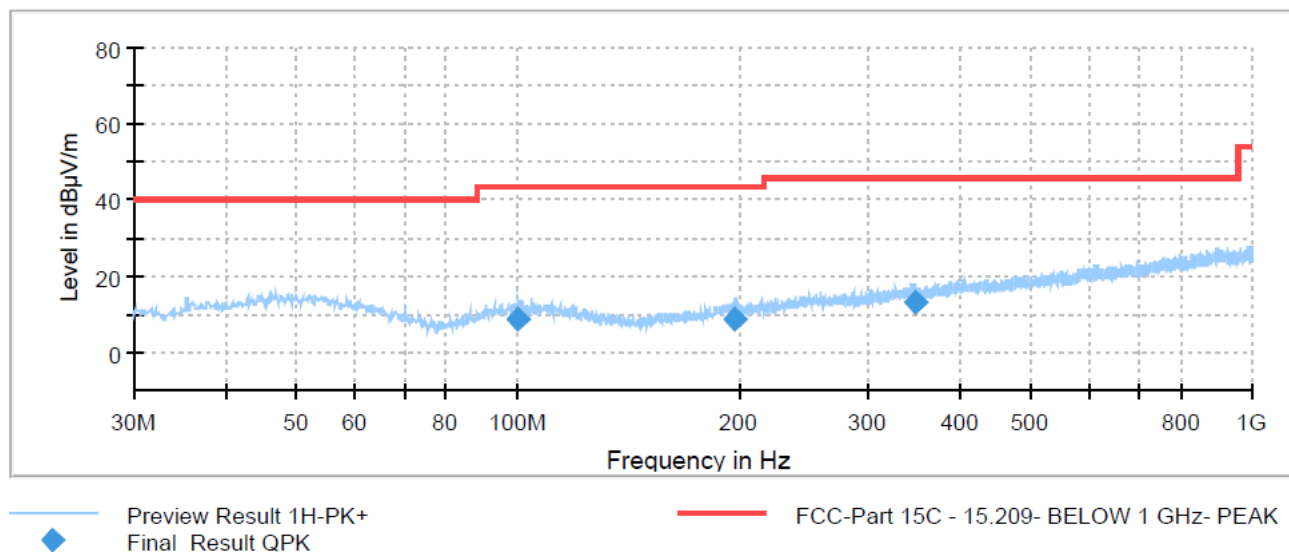
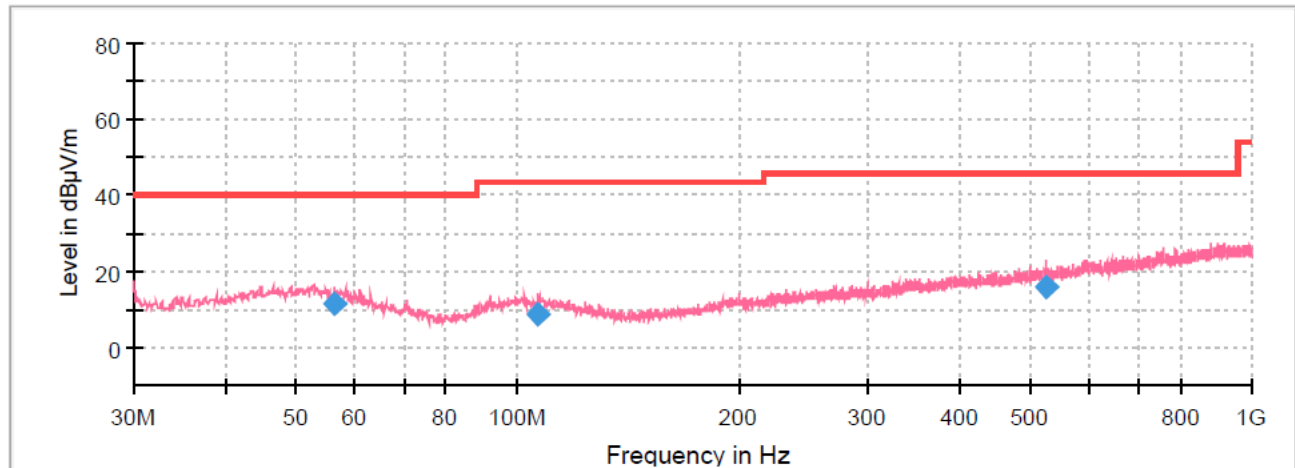


Figure 50 : RSE_30 MHz to 1 GHz_Right Cup_High channel_2480_Pre-scan_Horizontal polarization

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
100.325	8.95	43.52	34.57	294.00	H	83	-32.20
197.131	8.89	43.52	34.63	100.00	H	170	-32.10
348.839	12.94	46.02	33.08	294.00	H	207	-27.80

Table 47: RSE_30 MHz to 1 GHz_Right Cup_High channel_2480_Final table_Horizontal polarization



Preview Result 1V-PK+
Final_Result QPK

FCC-Part 15C - 15.209- BELOW 1 GHz- PEAK

Figure 51 : RSE_30 MHz to 1 GHz_Right Cup_High channel_2480_Pre-scan_Vertical polarization

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol V/H	Azimuth (deg)	Corr. (dB/m)
56.384	11.5	40	28.5	105.00	V	257	-30.70
106.727	8.75	43.52	34.77	390.00	V	70	-32.30
525.573	15.82	46.02	30.2	194.00	V	165	-24.80

Table 48: RSE_30 MHz to 1 GHz_Right Cup_High channel_2480_Final table_Vertical polarization

12.1.8.5. Radiated Spurious emission 9kHz to 30 MHz- FCC.

Frequency (MHz)	Meter Reading (dBuV)	Detector	ANT (dB/m)	Cable Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dBuV/m	QP/AV Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Antenna Orientation
0.018	50.510	Peak	14.40	0.09	-80	-15.00	42.52	-57.52	0-360	Parallel
0.854	31.460	Peak	11.60	0.31	-40	3.37	28.98	-25.61	0-360	Parallel
21.007	24.810	Peak	8.80	0.60	-40	-5.79	29.54	-35.33	0-360	Parallel
0.028	46.850	Peak	12.10	0.09	-80	-20.96	38.75	-59.71	0-360	Perpendicular
0.056	41.890	Peak	11.70	0.09	-80	-26.32	32.79	-59.11	0-360	Perpendicular
21.007	23.580	Peak	8.80	0.60	-40	-7.02	29.54	-36.56	0-360	Perpendicular
0.018	48.660	Peak	14.40	0.09	-80	-16.85	42.55	-59.40	0-360	Ref to ground
8.060	19.330	Peak	10.80	0.47	-40	-9.40	29.54	-38.94	0-360	Ref to ground
20.640	27.180	Peak	8.80	0.60	-40	-3.42	29.54	-32.96	0-360	Ref to ground

Table 49: RSE_FCC_9kHz to 30 MHz_Worst case_loop antenna results

Note: For 9kHz to 30MHz radiated emission have performed for the maximum operating channel power. The amplitude of spurious emission attenuated more than 20dB below the permissible value is not required to be reported.

12.1.8.6. Radiated Spurious emission 9kHz to 30 MHz- ISED

Frequency (MHz)	Meter Reading (dBuA)	Detector	ANT (dB/m)	Cable Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uAmps/meter)	QP/AV Limit (dBuA/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
0.018	49.480	Peak	-37.10	0.09	-80	-67.53	-8.96	-58.57	0-360	Parallel
3.267	19.150	Peak	-39.90	0.42	-40	-60.33	-21.93	-38.40	0-360	Parallel
18.367	17.690	Peak	-41.30	0.52	-40	-63.09	-21.93	-41.16	0-360	Parallel
0.028	47.980	Peak	-39.50	0.09	-80	-71.43	-12.76	-58.67	0-360	Perpendicular
16.960	14.960	Peak	-41.90	0.52	-40	-66.42	-21.93	-44.49	0-360	Perpendicular
18.367	13.680	Peak	-41.90	0.52	-40	-67.70	-21.93	-45.77	0-360	Perpendicular
0.028	47.200	Peak	-39.50	0.09	-80	-72.21	-12.76	-59.45	0-360	Ref to ground
5.514	16.810	Peak	-40.70	0.54	-40	-63.35	-21.93	-41.42	0-360	Ref to ground
18.243	22.220	Peak	-41.30	0.52	-40	-58.56	-21.93	-36.63	0-360	Ref to ground

Table 50: RSE_ISED_9kHz to 30 MHz_Worst case_loop antenna results

Note: For 9kHz to 30MHz radiated emission have performed for the maximum operating channel power. The amplitude of spurious emission attenuated more than 20dB below the permissible value is not required to be reported.

12.1.9. AC POWER LINE CONDUCTED EMISSION.

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency (MHz)	Conducted emission (dBμV)	
	Quasi-Peak	Average
0.15 – 0.5	66-56	56-46
0.5 - 5.0	56	46
5.0 – 30	60	50

Note:

1. The Lower limit applies at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequencies in the range 0.15 to 0.50 MHz

Test Procedure

- a. The EUT was located 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). The LISN's provide 50 ohms/ 50μH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency ranges from 150kHz to 30 MHz was searched. Emission levels under (Limit -20dB) were not recorded.

NOTE:

1. The RBW and VBW are set as below for Quasi-peak detector and Average detector.

Frequency	Resolution bandwidth	Video bandwidth	Sweep time (Prescan)	Sweep Time (Final measurement)
150 kHz to 30 MHz	9 kHz	30 kHz	20ms	1 second

RESULTS

12.1.9.1. AC Power line on Adaptor.

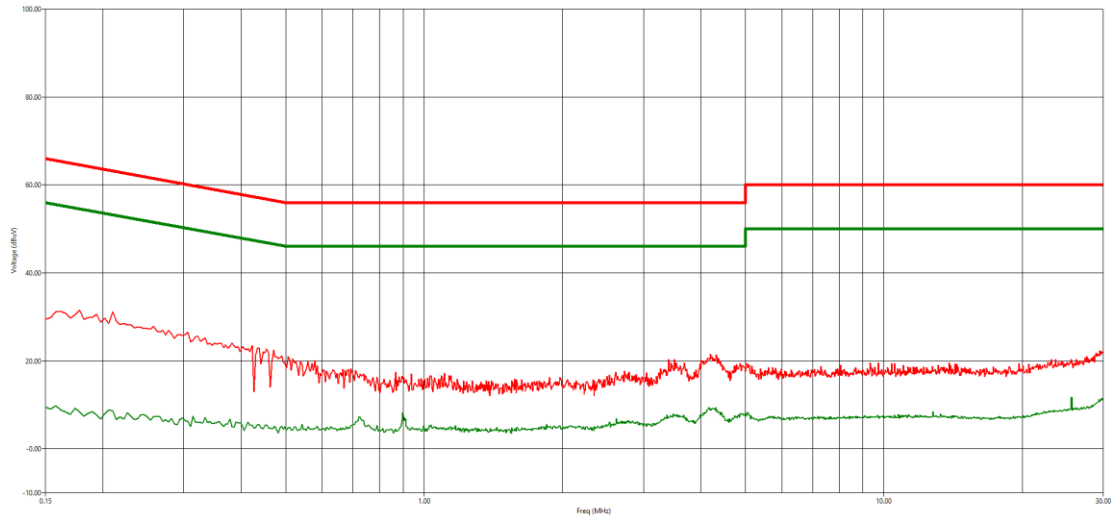


Figure 52 : CE_150kHz to 30MHz_Left Cup_BDR_2480_Prescan_Neutral

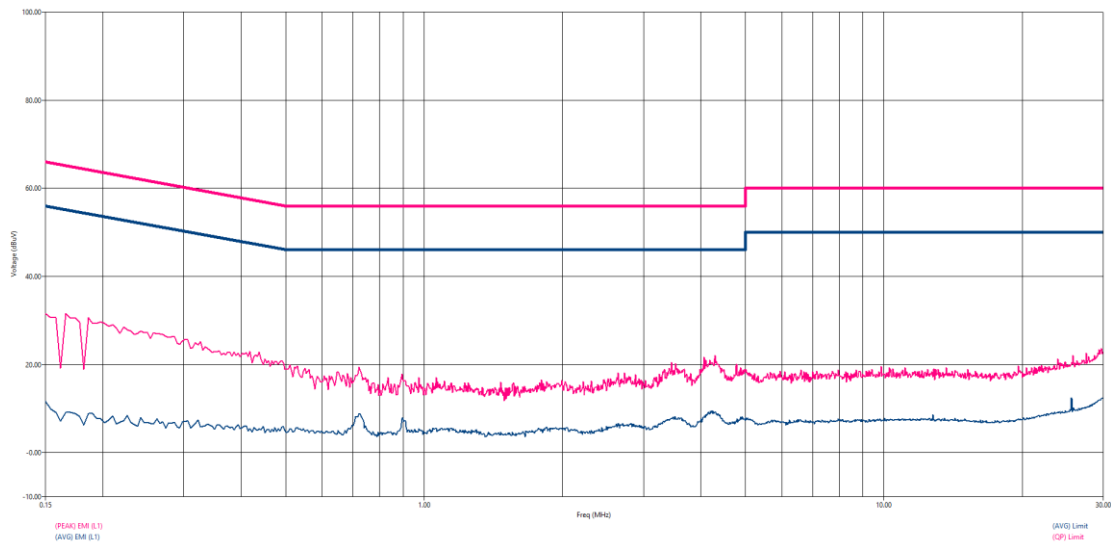


Figure 53 : CE_150kHz to 30MHz_Left Cup_BDR_2480_Prescan_Line

Freq (MHz)	Freq (Max) (MHz)	Line	(AVG) Trace (dBuV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(AVG) EMI (dBuV)	(AVG) Limit (dBuV)	(AVG) Margin (dB)
0.190	0.1794	L	13.21	0.04	9.96	0	0.02	23.23	54.51	-31.28
0.720	0.7261	L	2.3	0.07	9.96	0	0.05	12.38	46	-33.62
4.310	4.3109	L	2.59	0.15	9.78	0	0.26	12.78	46	-33.22
0.210	0.1987	N	11.52	0.04	9.96	0.08	0	21.59	53.66	-32.07
3.390	3.3996	N	-0.56	0.13	9.9	0.26	0	9.72	46	-36.28
13.800	13.7918	N	-3.57	0.27	9.98	1.18	0	7.86	50	-42.14

Freq (MHz)	Freq (Max) (MHz)	Line	(AVG) Trace (dBuV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(AVG) EMI (dBuV)	(AVG) Limit (dBuV)	(AVG) Margin (dB)
0.190	0.1794	L	13.21	0.04	9.96	0	0.02	23.23	54.51	-31.28
0.720	0.7261	L	2.3	0.07	9.96	0	0.05	12.38	46	-33.62
4.310	4.3109	L	2.59	0.15	9.78	0	0.26	12.78	46	-33.22
0.210	0.1987	N	11.52	0.04	9.96	0.08	0	21.59	53.66	-32.07
3.390	3.3996	N	-0.56	0.13	9.9	0.26	0	9.72	46	-36.28
13.800	13.7918	N	-3.57	0.27	9.98	1.18	0	7.86	50	-42.14

Table 51: CE_150kHz to 30MHz_Left Cup_BDR_2480_Final table_Line and Neutral

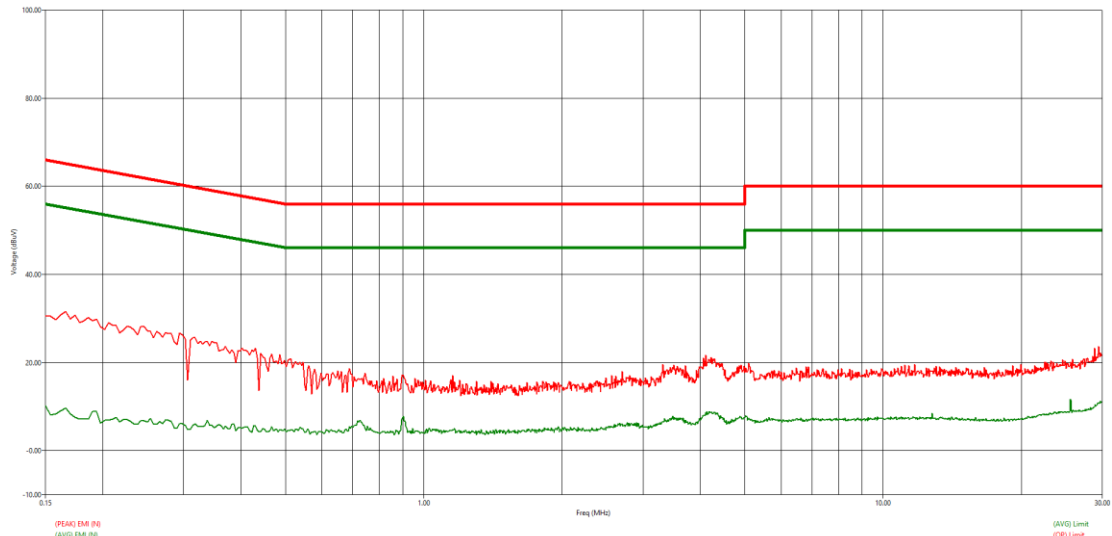


Figure 54 : CE_150kHz to 30MHz_Right Cup_BDR_2480_Prescan_Neutral

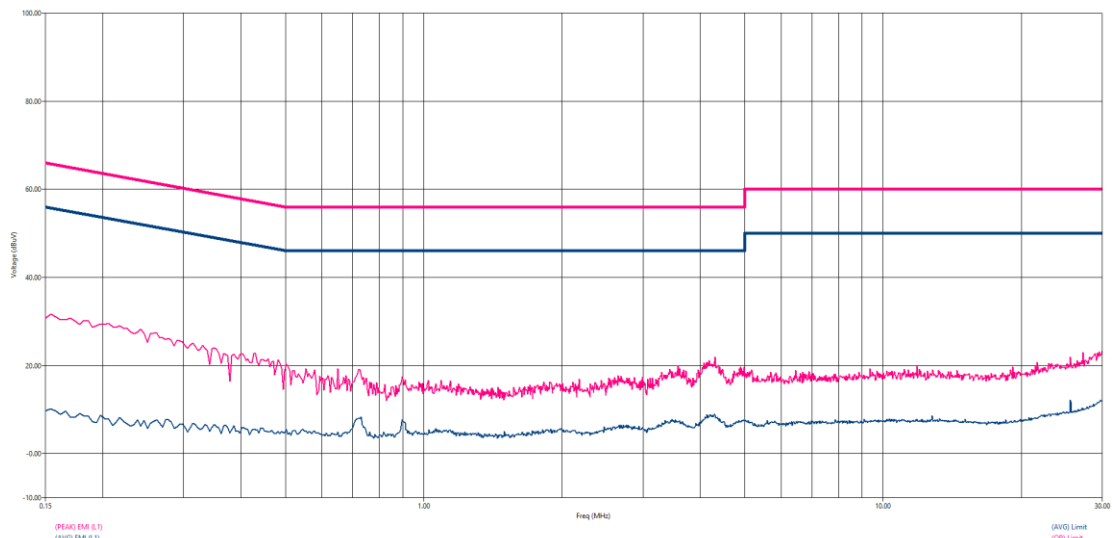


Figure 55 : CE_150kHz to 30MHz_Right Cup_BDR_2480_Prescan_Line

Freq (MHz)	Freq (Max) (MHz)	Line	(AVG) Trace (dBuV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(AVG) EMI (dBuV)	(AVG) Limit (dBuV)	(AVG) Margin (dB)
0.240	0.2263	L	10.79	0.04	9.96	0	0.03	20.81	52.59	-31.78
0.720	0.7213	L	2.16	0.07	9.96	0	0.05	12.24	46	-33.76
4.300	4.3014	L	2.44	0.15	9.78	0	0.26	12.63	46	-33.37
0.290	0.2899	N	8.84	0.04	9.96	0.09	0	18.93	50.53	-31.6
3.320	3.3173	N	-1.59	0.13	9.91	0.25	0	8.7	46	-37.3
4.140	4.1328	N	2.67	0.15	9.8	0.3	0	12.91	46	-33.09

Freq (MHz)	Freq (Max) (MHz)	Line	(QP) Trace (dBuV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(QP) EMI (dBuV)	(QP) Limit (dBuV)	(QP) Margin (dB)
0.240	0.2263	L	16.47	0.04	9.96	0	0.03	26.49	62.59	-36.1
0.720	0.7213	L	8.02	0.07	9.96	0	0.05	18.1	56	-37.9
4.300	4.3014	L	9.18	0.15	9.78	0	0.26	19.36	56	-36.64
0.290	0.2899	N	14.94	0.04	9.96	0.09	0	25.03	60.53	-35.5
3.320	3.3173	N	6.92	0.13	9.91	0.25	0	17.21	56	-38.79
4.140	4.1328	N	9.1	0.15	9.8	0.3	0	19.35	56	-36.65

Table 52: CE_150kHz to 30MHz_Right Cup_BDR_2480_Final table_Line and Neutral

12.1.9.2. AC Power line on Laptop – EUT powered through USB

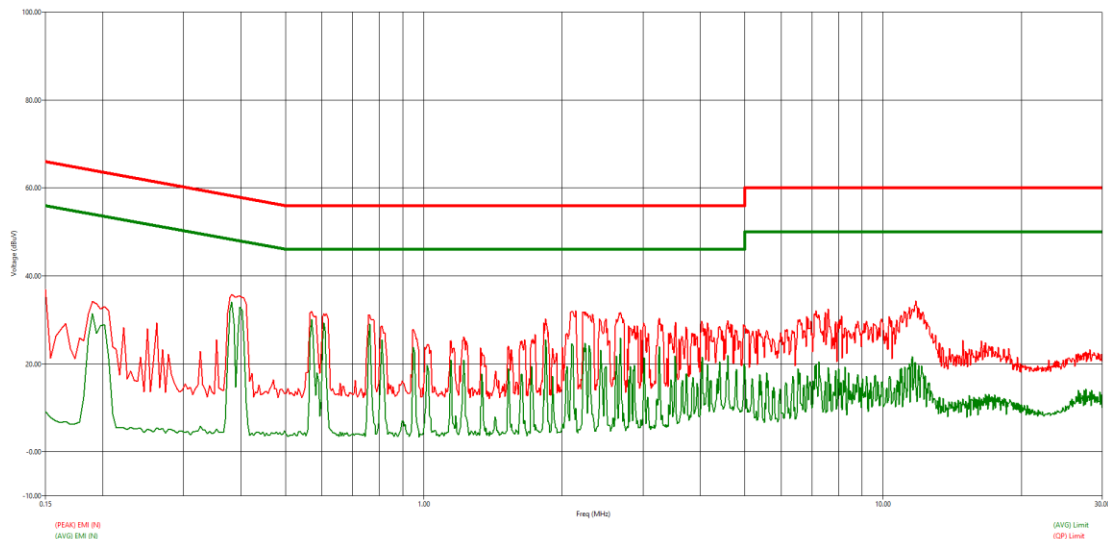


Figure 56 : CE_150kHz to 30MHz_Left Cup_BDR_2480_Prescan_Neutral

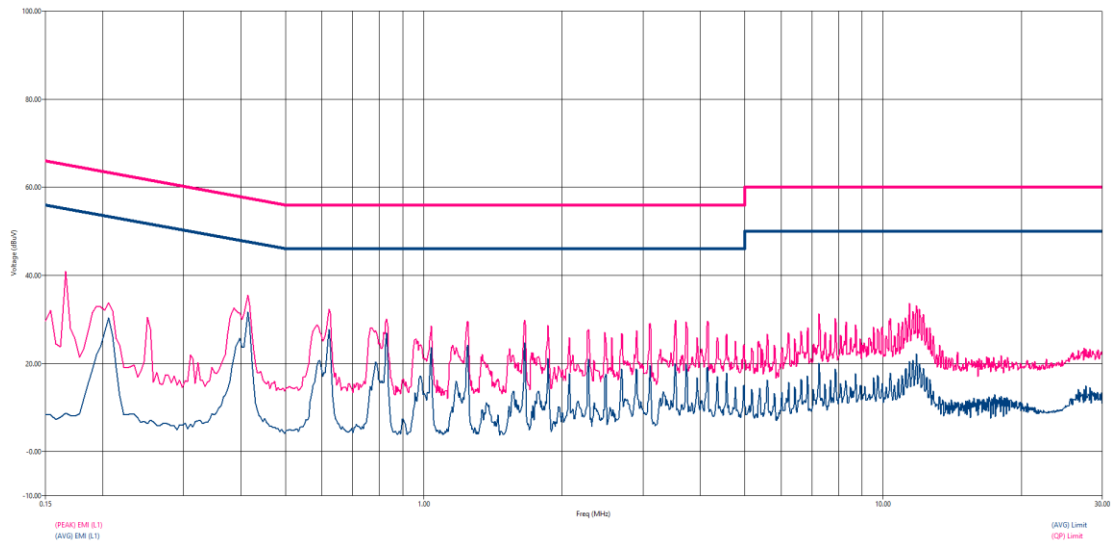


Figure 57 : CE_150kHz to 30MHz_Left Cup_BDR_2480_Prescan_Line

Freq (MHz)	Freq (Max) (MHz)	Line	(AVG) Trace (dBuV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(AVG) EMI (dBuV)	(AVG) Limit (dBuV)	(AVG) Margin (dB)
0.170	0.1589	L	12.63	0.04	9.95	0	0.01	22.64	55.52	-32.88
0.420	0.4048	L	14.93	0.05	9.96	0	0.04	24.98	47.75	-22.77
1.660	1.6562	L	8.83	0.09	9.96	0	0.1	18.98	46	-27.02
11.390	11.4001	L	7.25	0.24	9.98	0	1.06	18.53	50	-31.47
0.190	0.1771	N	13.8	0.04	9.96	0.08	0	23.88	54.62	-30.74
0.380	0.3814	N	3.8	0.04	9.96	0.1	0	13.9	48.25	-34.35
2.150	2.1494	N	-3.24	0.1	9.96	0.19	0	7.01	46	-38.99
11.806	11.8138	N	8.75	0.25	9.98	1.03	0	20.01	50	-29.99

Freq (MHz)	Freq (Max) (MHz)	Line	(QP) Trace (dBuV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(QP) EMI (dBuV)	(QP) Limit (dBuV)	(QP) Margin (dB)
0.170	0.1589	L	19.72	0.04	9.95	0	0.01	29.73	65.52	-35.79
0.420	0.4048	L	19.73	0.05	9.96	0	0.04	29.77	57.75	-27.98
1.660	1.6562	L	11.32	0.09	9.96	0	0.1	21.47	56	-34.53
11.390	11.4001	L	12.6	0.24	9.98	0	1.06	23.88	60	-36.12
0.190	0.1771	N	26.97	0.04	9.96	0.08	0	37.05	64.62	-27.57
0.380	0.3814	N	12.28	0.04	9.96	0.1	0	22.38	58.25	-35.87
2.150	2.1494	N	5.94	0.1	9.96	0.19	0	16.2	56	-39.8
11.806	11.8138	N	13.1	0.25	9.98	1.03	0	24.36	60	-35.64

Table 53: CE_150kHz to 30MHz_Left Cup_BDR_2480_Final table_Line and Neutral

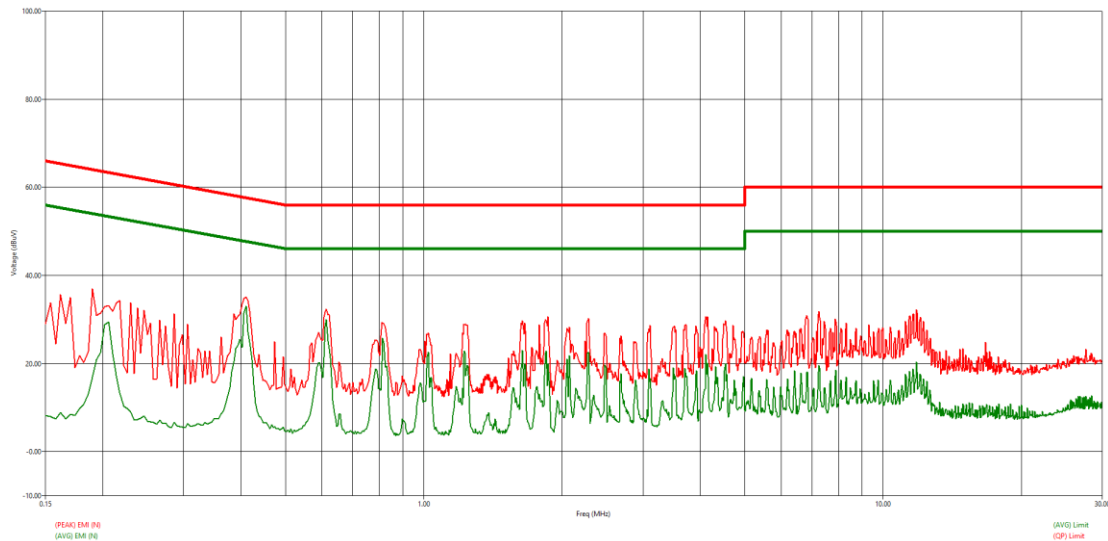


Figure 58 : CE_150kHz to 30MHz_Right Cup_BDR_2480_Prescan_Neutral

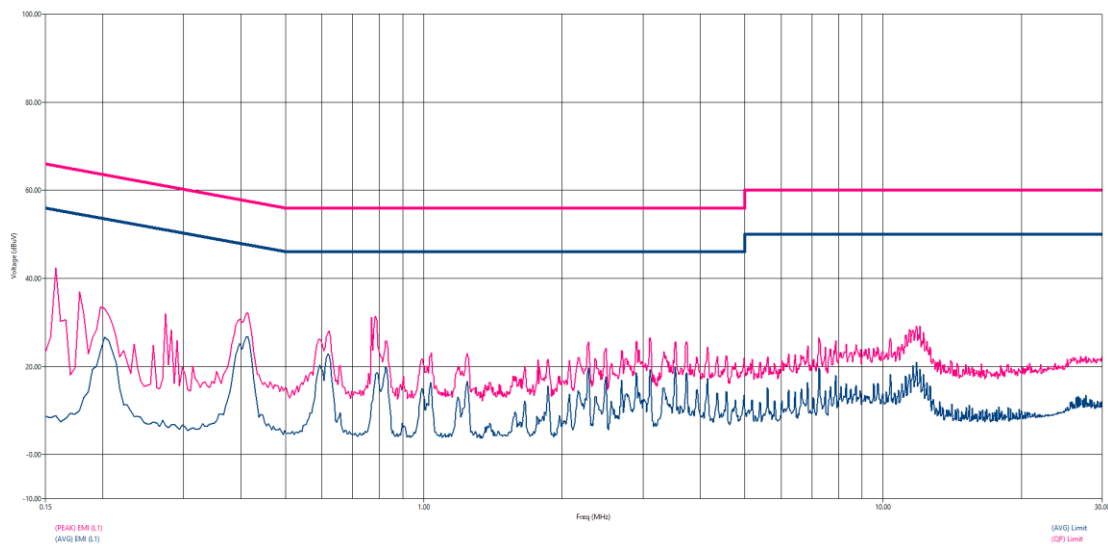


Figure 59 : CE_150kHz to 30MHz_Right Cup_BDR_2480_Prescan_Line

Freq (MHz)	Freq (Max) (MHz)	Line	(AVG) Trace (dBuV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(AVG) EMI (dBuV)	(AVG) Limit (dBuV)	(AVG) Margin (dB)
0.158	0.1557	L	19.03	0.04	9.95	0	0.01	29.04	55.69	-26.65
0.410	0.4121	L	16.81	0.05	9.96	0	0.04	26.85	47.61	-20.76
0.790	0.7934	L	0.73	0.07	9.96	0	0.06	10.82	46	-35.18
12.140	12.1324	L	3.57	0.25	9.98	0	1.14	14.94	50	-35.06
0.190	0.192	N	10.67	0.04	9.96	0.08	0	20.75	53.95	-33.2
0.410	0.4135	N	16.86	0.05	9.96	0.1	0	26.97	47.58	-20.61
1.870	1.8618	N	8.87	0.1	9.96	0.18	0	19.11	46	-26.89
11.820	11.8245	N	9.46	0.25	9.98	1.03	0	20.72	50	-29.28

Freq (MHz)	Freq (Max) (MHz)	Line	(QP) Trace (dBμV)	Cable loss (dB)	Pulse Limiter Loss (dB)	LISN N Loss (dB)	LISN L Loss (dB)	(QP) EMI (dBμV)	(QP) Limit (dBμV)	(QP) Margin (dB)
0.158	0.1557	L	34.66	0.04	9.95	0	0.01	44.67	65.69	-21.02
0.410	0.4121	L	18.19	0.05	9.96	0	0.04	28.24	57.61	-29.37
0.790	0.7934	L	6.81	0.07	9.96	0	0.06	16.9	56	-39.1
12.140	12.1324	L	8.74	0.25	9.98	0	1.14	20.1	60	-39.9
0.190	0.192	N	30.49	0.04	9.96	0.08	0	40.57	63.95	-23.38
0.410	0.4135	N	18.09	0.05	9.96	0.1	0	28.19	57.58	-29.39
1.870	1.8618	N	11.72	0.1	9.96	0.18	0	21.95	56	-34.05
11.820	11.8245	N	13.39	0.25	9.98	1.03	0	24.65	60	-35.35

Table 54: CE_150kHz to 30MHz_Right Cup_BDR_2480_Final table_Line and Neutral

Calculation:

Avg EMI (dBμV) = Avg Trace (dBμV) + Cable Loss (dB) + Pulse limiter Loss (dB) + LISN Loss (dB).

Avg Margin (dB) = Avg EMI (dBμV) – Limit (dBμV).

QP EMI (dBμV) = QP Trace (dBμV) + Cable Loss (dB) + Pulse limiter Loss (dB) + LISN Loss (dB).

QP Margin (dB) = QP EMI (dBμV) – Limit (dBμV).

***** END OF THE REPORT *****