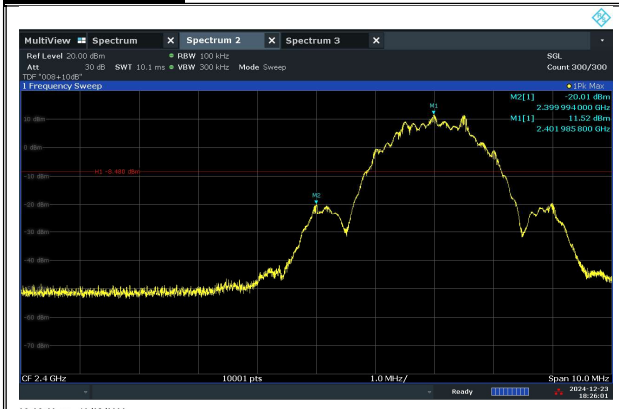
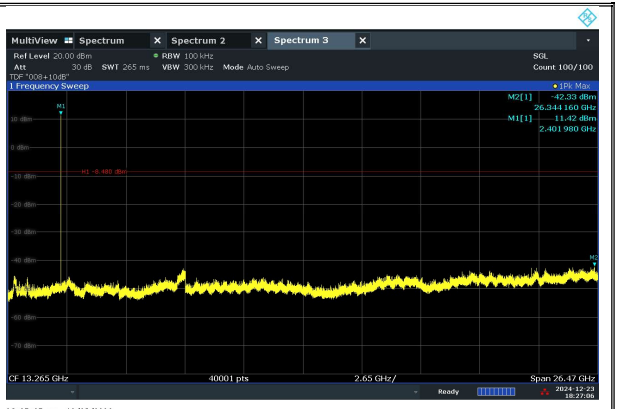
2 Mbps ANT1



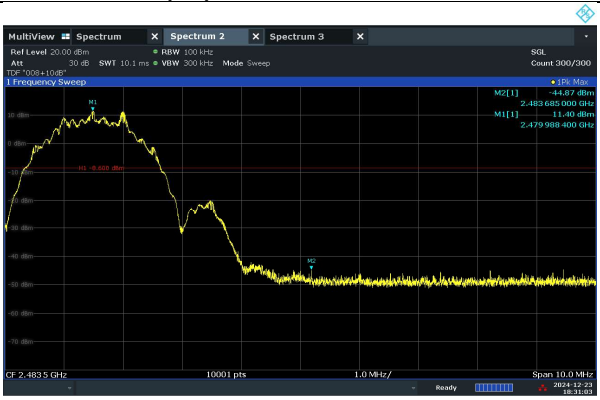
LOW(0) CHANNEL BANDEDGE



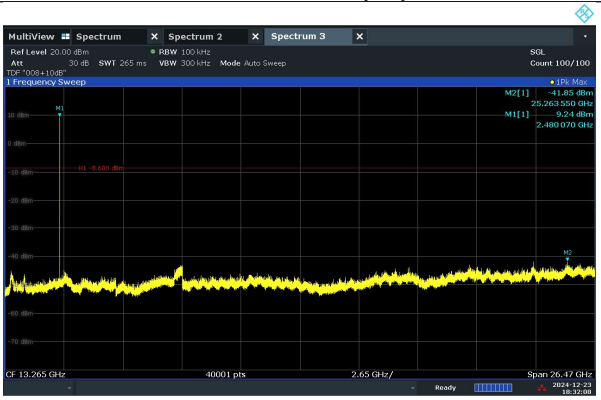
OUT-OF-BAND LOW(0) CHANNEL

MIDDLE(19) CHANNEL REFERENCE

OUT-OF-BAND MIDDLE(19) CHANNEL



HIGH(39) CHANNEL BANDEDGE



OUT-OF-BAND HIGH(39) CHANNEL

11. RADIATED TEST RESULTS

11.1. LIMITS AND PROCEDURE

LIMITS

IC RSS-GEN (8.9) & (8.10) / FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (μV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

RSS-Gen (8.9)

Frequency (MHz)	Field strength (μV/m at 3 m)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

Frequency (MHz)	Magnetic field strength (H-Field) (μA/m)	Measurement Distance (m)
0.009–0.490 Note 1	6.37/F (F in kHz)	300
0.490–1.705	63.7/F (F in kHz)	30
1.705–30.0	0.08	30
Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.		

Note: The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X kHz resulted in a

level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

RSS-Gen (8.10) / FCC Part 15.205 (a): Restricted frequency bands

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.52525	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	156.7 ~ 156.9	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	162.0125 ~	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	167.17	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	167.72 ~ 173.2	2655 ~ 2900		
8.291 ~ 8.294	37.5 ~ 38.25	240 ~ 285	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	322 ~ 335.4	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	399.90 ~ 410	3345.8 ~ 3358		
		608 ~ 614	3600 ~ 4400		
		960 ~ 1240			

▪ RSS-Gen 8.10 : Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.
▪ FCC Part 15.205(b) : The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150 cm for 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. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. (Restricted band-edge, Final detection of spurious harmonic emissions)
Duty cycle factor = 10 log (1/x). For this sample: For 1 Mbps, DCF = 10log(1/0.852)= 0.694 dB (Spectrum Analyzer round it up to 0.69 dB) and for 2 Mbps, DCF = 10log(1/0.571)= 2.436 dB (Spectrum Analyzer round it up to 2.44 dB).

Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

The spectrum from 1 GHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.
(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

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.

Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

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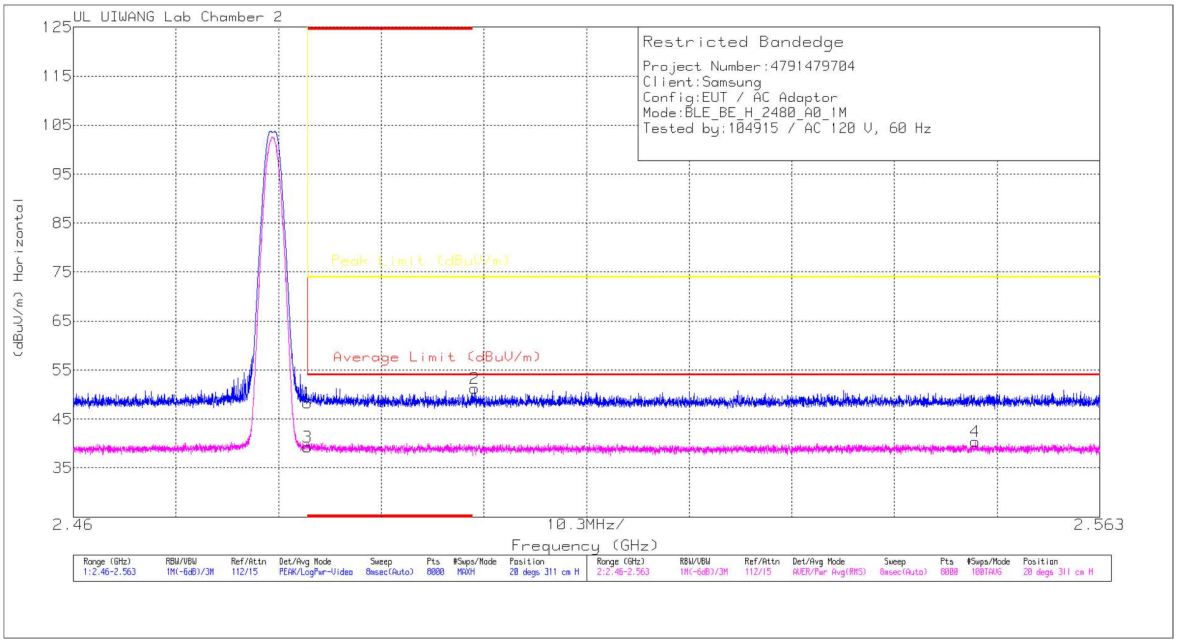
11.2. TRANSMITTER ABOVE 1 GHz

11.2.1. LE 1Mbps

BANDEDGE (WORST CASE: 2480 MHz, ANT 0)

HORIZONTAL RESULT

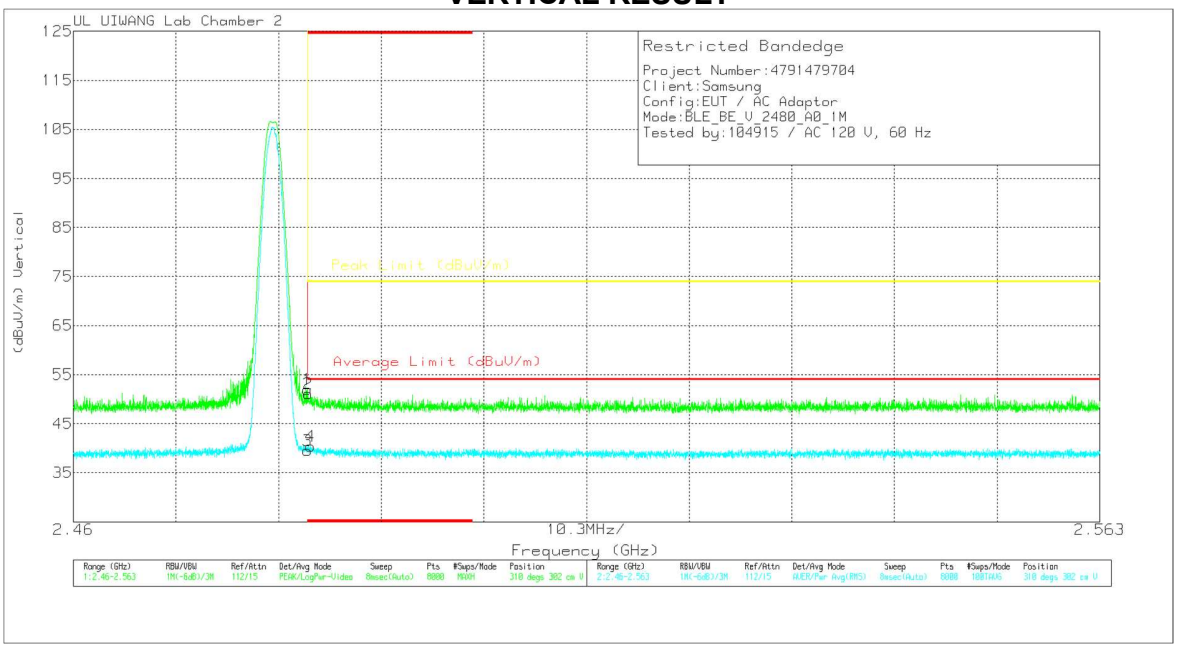


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	CH2_AF_1-18G_3117_240920 (dB/m)	FB2_PL_1-18G_10dB_240409 (dB)	CH2_CL_1-40G_Thru_240617 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2.4835	43.43	Pk	32.2	-34.1	6.7	0	48.23	-	-	74	-25.77	20	311	H
2	2.50029	46.24	Pk	32.2	-34	6.8	0	51.24	-	-	74	-22.76	20	311	H
3	*2.4835	33.78	RMS	32.2	-34.1	6.7	.71	39.29	54	-14.71	-	-	20	311	H
4	2.55051	34.51	RMS	32.2	-33.9	6.9	.71	40.42	54	-13.58	-	-	20	311	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	CH2_AF_1-18G_3117_240 920 (dB/m)	FB2_PL_1-18G_10dB_240 409 (dB)	CH2_CL_1-40G_Thru_240617 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	47.18	Pk	32.2	-34.1	6.7	0	51.98	-	-	74	-22.02	310	302	V
2	* 2.48354	46.36	Pk	32.2	-34.1	6.7	0	51.16	-	-	74	-22.84	310	302	V
3	* 2.4835	34.07	RMS	32.2	-34.1	6.7	.71	39.58	54	-14.42	-	-	310	302	V
4	* 2.48382	34.88	RMS	32.2	-34.1	6.7	.71	40.39	54	-13.61	-	-	310	302	V

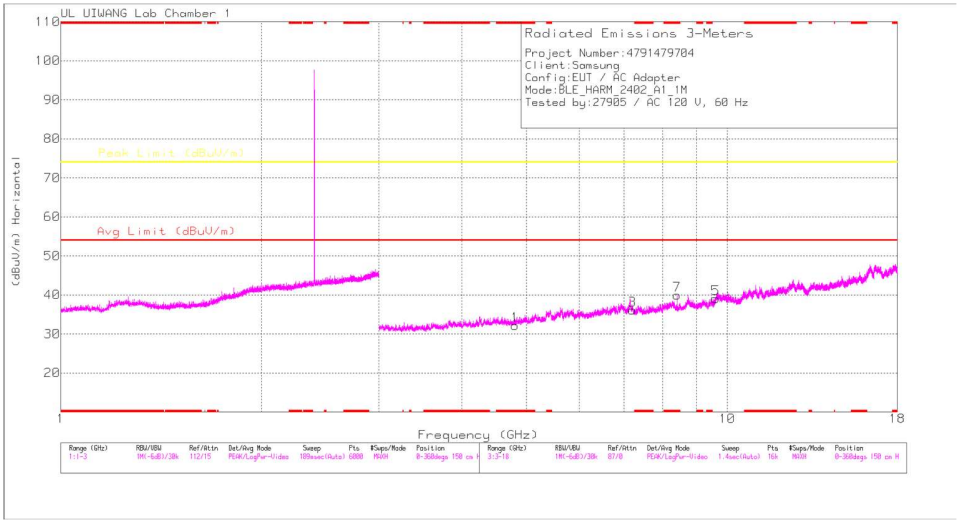
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE TEST DATA

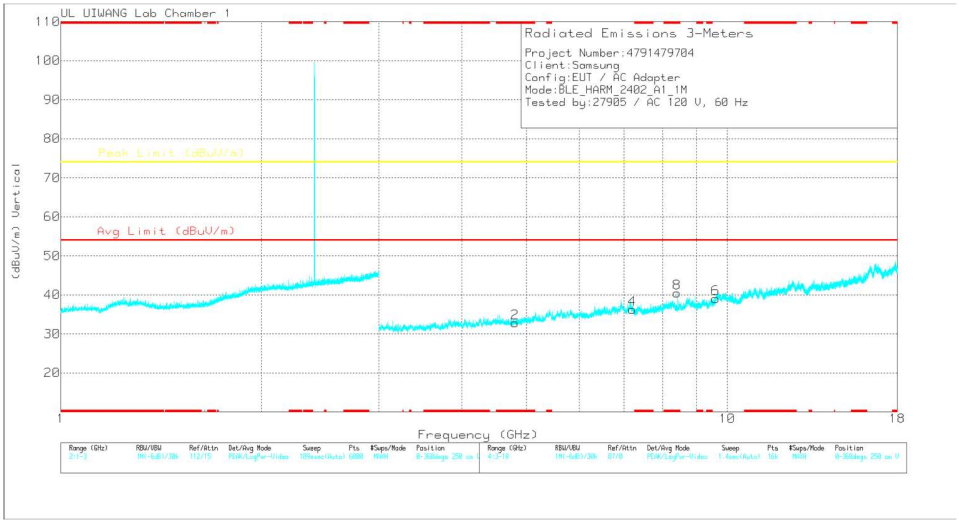
Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2402	ANT0	* 2.39	42.50	Pk	31.90	-34.10	6.60	0.00	46.90	-	-	74.00	-27.10	26	292	H
		* 2.38199	46.82	Pk	31.80	-34.00	6.60	0.00	51.22	-	-	74.00	-22.78	26	292	H
		* 2.39	33.40	RMS	31.90	-34.10	6.60	0.71	38.51	54.00	-15.49	-	-	26	292	H
		* 2.33436	34.69	RMS	31.70	-33.90	6.50	0.71	39.70	54.00	-14.30	-	-	26	292	H
		* 2.39	44.01	Pk	31.90	-34.10	6.60	0.00	48.41	-	-	74.00	-25.59	314	324	V
		* 2.38716	46.30	Pk	31.90	-34.10	6.60	0.00	50.70	-	-	74.00	-23.30	314	324	V
		* 2.39	33.44	RMS	31.90	-34.10	6.60	0.71	38.55	54.00	-15.45	-	-	314	324	V
		* 2.37644	34.70	RMS	31.80	-34.00	6.60	0.71	39.81	54.00	-14.19	-	-	314	324	V
2480	ANT0	* 2.4835	43.43	Pk	32.20	-34.10	6.70	0.00	48.23	-	-	74.00	-25.77	20	311	H
		2.500	46.24	Pk	32.20	-34.00	6.80	0.00	51.24	-	-	74.00	-22.76	20	311	H
		* 2.4835	33.78	RMS	32.20	-34.10	6.70	0.71	39.29	54.00	-14.71	-	-	20	311	H
		2.551	34.51	RMS	32.20	-33.90	6.90	0.71	40.42	54.00	**-13.58**	-	-	20	311	H
		* 2.4835	47.18	Pk	32.20	-34.10	6.70	0.00	51.98	-	-	74.00	**-22.02**	310	302	V
		* 2.48354	46.36	Pk	32.20	-34.10	6.70	0.00	51.16	-	-	74.00	-22.84	310	302	V
		* 2.4835	34.07	RMS	32.20	-34.10	6.70	0.71	39.58	54.00	-14.42	-	-	310	302	V
		* 2.48382	34.88	RMS	32.20	-34.10	6.70	0.71	40.39	54.00	-13.61	-	-	310	302	V
2402	ANT1	* 2.39	43.30	Pk	31.90	-34.10	6.60	0.00	47.70	-	-	74.00	-26.30	24	108	H
		* 2.38952	46.38	Pk	31.90	-34.10	6.60	0.00	50.78	-	-	74.00	-23.22	24	108	H
		* 2.39	33.42	RMS	31.90	-34.10	6.60	0.71	38.53	54.00	-15.47	-	-	24	108	H
		* 2.37385	34.59	RMS	31.80	-34.00	6.60	0.71	39.70	54.00	-14.30	-	-	24	108	H
		* 2.39	44.52	Pk	31.90	-34.10	6.60	0.00	48.92	-	-	74.00	-25.08	59	124	V
		* 2.35936	46.47	Pk	31.80	-34.10	6.60	0.00	50.77	-	-	74.00	-23.23	59	124	V
		* 2.39	33.11	RMS	31.90	-34.10	6.60	0.71	38.22	54.00	-15.78	-	-	59	124	V
		* 2.38787	34.94	RMS	31.90	-34.10	6.60	0.71	40.05	54.00	-13.95	-	-	59	124	V
2480	ANT1	* 2.4835	43.63	Pk	32.20	-34.10	6.70	0.00	48.43	-	-	74.00	-25.57	24	119	H
		2.525	46.31	Pk	32.20	-34.10	6.80	0.00	51.21	-	-	74.00	-22.79	24	119	H
		* 2.4835	33.29	RMS	32.20	-34.10	6.70	0.71	38.80	54.00	-15.20	-	-	24	119	H
		2.540	34.47	RMS	32.20	-34.00	6.80	0.71	40.18	54.00	**-13.82**	-	-	24	119	H
		* 2.4835	44.06	Pk	32.20	-34.10	6.70	0.00	48.86	-	-	74.00	-25.14	78	129	V
		2.552	46.11	Pk	32.20	-33.90	6.90	0.00	51.31	-	-	74.00	**-22.69**	78	129	V
		* 2.4835	34.12	RMS	32.20	-34.10	6.70	0.71	39.63	54.00	-14.37	-	-	78	129	V
		2.557	34.30	RMS	32.20	-34.00	6.90	0.71	40.11	54.00	-13.89	-	-	78	129	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (WORST CASE: 2402 MHz, ANT 1)



HORIZONTAL



VERTICAL

Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1-18G_3177_240924 (dB/m)	FB1_PL_1-18G_3G HP_240718 (dB)	CH1_CL_1-40G_Thru_241104 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80467	39.18	PK2	33.9	-39.4	9.6	0	43.28	-	-	74	-30.72	0	100	H
* 4.80479	38.92	PK2	33.9	-39.4	9.6	0	43.02	-	-	74	-30.98	0	100	V
7.20552	37.53	PK2	35.6	-39	12.6	0	46.73	-	-	74	-27.27	0	100	H
7.2007	37.45	PK2	35.6	-39	12.7	0	46.75	-	-	74	-27.25	0	100	V
* 8.40675	36.38	PK2	35.7	-39	13.4	0	48.48	-	-	74	-25.52	78	191	H
* 8.40698	29.87	MAv1	35.7	-39	13.4	.71	40.68	54	-13.32	-	-	78	191	H
* 8.40696	38.15	PK2	35.7	-39	13.4	0	48.25	-	-	74	-25.75	69	200	V
* 8.40702	29.71	MAv1	35.7	-39	13.4	.71	40.52	54	-13.48	-	-	69	200	V
9.60332	35.79	PK2	36.5	-38	14.4	0	48.69	-	-	74	-25.31	0	100	H
9.61068	35.52	PK2	36.5	-37.9	14.5	0	48.62	-	-	74	-25.38	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2402	ANT0	* 4.79891	39.95	PK2	33.90	-39.40	9.60	0.00	44.05	-	-	74.00	-29.95	0	100	H
		* 4.80567	39.17	PK2	33.90	-39.40	9.60	0.00	43.27	-	-	74.00	-30.73	0	100	V
		6.405	40.28	PK2	35.50	-39.30	11.10	0.00	47.58	-	-	74.00	-26.42	348	249	H
		6.406	39.46	PK2	35.50	-39.30	11.10	0.00	46.76	-	-	74.00	-27.24	343	295	V
		7.205	38.25	PK2	35.60	-39.00	12.60	0.00	47.45	-	-	74.00	-26.55	0	100	H
		7.205	37.79	PK2	35.60	-39.00	12.60	0.00	46.99	-	-	74.00	-27.01	0	100	V
		9.607	36.52	PK2	36.50	-38.00	14.40	0.00	49.42	-	-	74.00	-24.58	0	100	H
		9.606	35.92	PK2	36.50	-38.00	14.40	0.00	48.82	-	-	74.00	-25.18	0	100	V
2440	ANT0	* 4.88562	39.07	PK2	33.90	-39.40	9.70	0.00	43.27	-	-	74.00	-30.73	0	100	H
		* 4.88348	38.87	PK2	33.90	-39.40	9.70	0.00	43.07	-	-	74.00	-30.93	0	100	V
		* 7.3256	37.83	PK2	35.60	-39.30	12.30	0.00	46.43	-	-	74.00	-27.57	0	100	H
		* 7.31614	37.42	PK2	35.60	-39.40	12.20	0.00	45.82	-	-	74.00	-28.18	0	100	V
		6.507	37.83	PK2	35.50	-38.90	11.60	0.00	46.03	-	-	74.00	-27.97	320	204	H
		6.507	37.82	PK2	35.50	-38.90	11.60	0.00	46.02	-	-	74.00	-27.98	318	275	V
		9.756	35.64	PK2	36.70	-37.60	14.40	0.00	49.14	-	-	74.00	-24.86	0	100	H
		9.757	35.14	PK2	36.70	-37.60	14.40	0.00	48.64	-	-	74.00	-25.36	0	100	V
2480	ANT0	* 4.96445	39.66	PK2	33.90	-39.50	9.90	0.00	43.96	-	-	74.00	-30.04	0	100	H
		* 4.96055	39.41	PK2	33.90	-39.60	9.90	0.00	43.61	-	-	74.00	-30.39	0	100	V
		6.613	39.55	PK2	35.50	-38.90	11.50	0.00	47.65	-	-	74.00	-26.35	14	279	H
		6.613	39.36	PK2	35.50	-38.90	11.50	0.00	47.46	-	-	74.00	-26.54	345	301	V
		* 7.43951	37.39	PK2	35.60	-39.10	12.30	0.00	46.19	-	-	74.00	-27.81	0	100	H
		* 7.4394	37.35	PK2	35.60	-39.10	12.30	0.00	46.15	-	-	74.00	-27.85	0	100	V
		9.919	36.54	PK2	36.90	-37.80	14.50	0.00	50.14	-	-	74.00	**-23.86**	0	100	H
		9.916	35.85	PK2	36.90	-37.80	14.50	0.00	49.45	-	-	74.00	-24.55	0	100	V
2402	ANT1	* 4.80467	39.18	PK2	33.90	-39.40	9.60	0.00	43.28	-	-	74.00	-30.72	0	100	H
		* 4.80479	38.92	PK2	33.90	-39.40	9.60	0.00	43.02	-	-	74.00	-30.98	0	100	V
		7.206	37.53	PK2	35.60	-39.00	12.60	0.00	46.73	-	-	74.00	-27.27	0	100	H
		7.201	37.45	PK2	35.60	-39.00	12.70	0.00	46.75	-	-	74.00	-27.25	0	100	V
		* 8.40675	38.38	PK2	35.70	-39.00	13.40	0.00	48.48	-	-	74.00	-25.52	78	191	H
		* 8.40698	29.87	MAv1	35.70	-39.00	13.40	0.71	40.68	54.00	**-13.32**	-	-	78	191	H
		* 8.40696	38.15	PK2	35.70	-39.00	13.40	0.00	48.25	-	-	74.00	-25.75	69	200	V
		* 8.40702	29.71	MAv1	35.70	-39.00	13.40	0.71	40.52	54.00	-13.48	-	-	69	200	V
		9.603	35.79	PK2	36.50	-38.00	14.40	0.00	48.69	-	-	74.00	-25.31	0	100	H
		9.611	35.52	PK2	36.50	-37.90	14.50	0.00	48.62	-	-	74.00	-25.38	0	100	V
2440	ANT1	* 4.88461	39.34	PK2	33.90	-39.40	9.70	0.00	43.54	-	-	74.00	-30.46	0	100	H
		* 4.88245	39.20	PK2	33.90	-39.40	9.70	0.00	43.40	-	-	74.00	-30.60	0	100	V
		* 7.32021	37.63	PK2	35.60	-39.30	12.20	0.00	46.13	-	-	74.00	-27.87	0	100	H
		* 7.32416	37.28	PK2	35.60	-39.30	12.30	0.00	45.88	-	-	74.00	-28.12	0	100	V
		8.540	38.56	PK2	35.70	-38.70	13.20	0.00	48.76	-	-	74.00	-25.24	37	103	H
		8.540	37.62	PK2	35.70	-38.70	13.20	0.00	47.82	-	-	74.00	-26.18	37	105	V
		9.758	35.65	PK2	36.70	-37.60	14.40	0.00	49.15	-	-	74.00	-24.85	0	100	H
		9.758	36.36	PK2	36.70	-37.60	14.40	0.00	49.86	-	-	74.00	**-24.14**	0	100	V
2480	ANT1	* 4.96356	39.51	PK2	33.90	-39.50	9.90	0.00	43.81	-	-	74.00	-30.19	0	100	H
		* 4.962	40.26	PK2	33.90	-39.60	9.90	0.00	44.46	-	-	74.00	-29.54	0	100	V
		* 7.43539	37.55	PK2	35.60	-39.10	12.30	0.00	46.35	-	-	74.00	-27.65	0	100	H
		* 7.43911	37.37	PK2	35.60	-39.10	12.30	0.00	46.17	-	-	74.00	-27.83	0	100	V
		9.918	36.07	PK2	36.90	-37.80	14.50	0.00	49.67	-	-	74.00	-24.33	0	100	H
		9.922	35.60	PK2	36.90	-37.70	14.50	0.00	49.30	-	-	74.00	-24.70	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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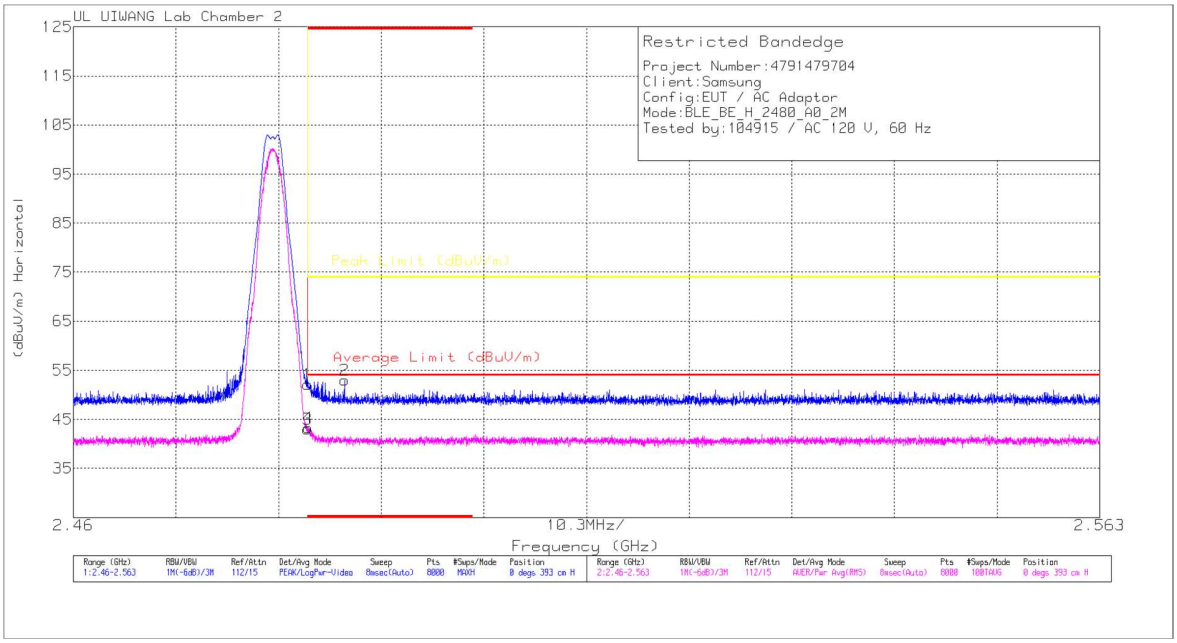
11.2.2. LE 2Mbps

BANDEDGE (WORST CASE: 2480 MHz, ANT 0)

HORIZONTAL RESULT

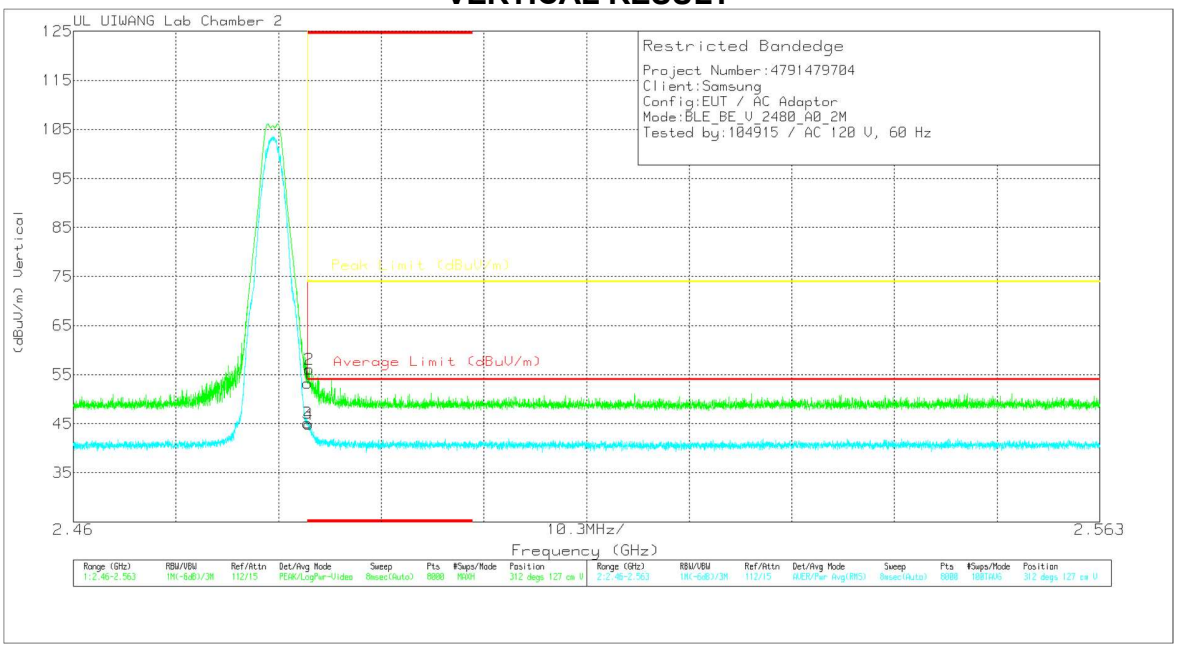


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	CH2_AF_1-18G_3117_240 920 (dB/m)	FB2_PL_1-18G_10dB_240 409 (dB)	CH2_CL_1-40G_Thru_240617 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2.4835	47.35	Pk	32.2	-34.1	6.7	0	52.15	-	-	74	-21.85	0	393	H
2	*2.48721	48.24	Pk	32.2	-34.1	6.7	0	53.04	-	-	74	-20.96	0	393	H
3	*2.4835	35.76	RMS	32.2	-34.1	6.7	2.44	43	54	-11	-	-	0	393	H
4	*2.48355	36.05	RMS	32.2	-34.1	6.7	2.44	43.29	54	-10.71	-	-	0	393	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	CH2_AF_1-18G_3117_240 920 (dB/m)	FB2_PL_1-18G_10dB_240 409 (dB)	CH2_CL_1-40G_Thru_240617 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*2.4835	48.44	Pk	32.2	-34.1	6.7	0	53.24	-	-	74	-20.76	312	127	V
2	*2.48368	51.36	Pk	32.2	-34.1	6.7	0	56.16	-	-	74	-17.84	312	127	V
3	*2.4835	37.85	RMS	32.2	-34.1	6.7	2.44	45.09	54	-8.91	-	-	312	127	V
4	*2.48363	37.62	RMS	32.2	-34.1	6.7	2.44	44.86	54	-9.14	-	-	312	127	V

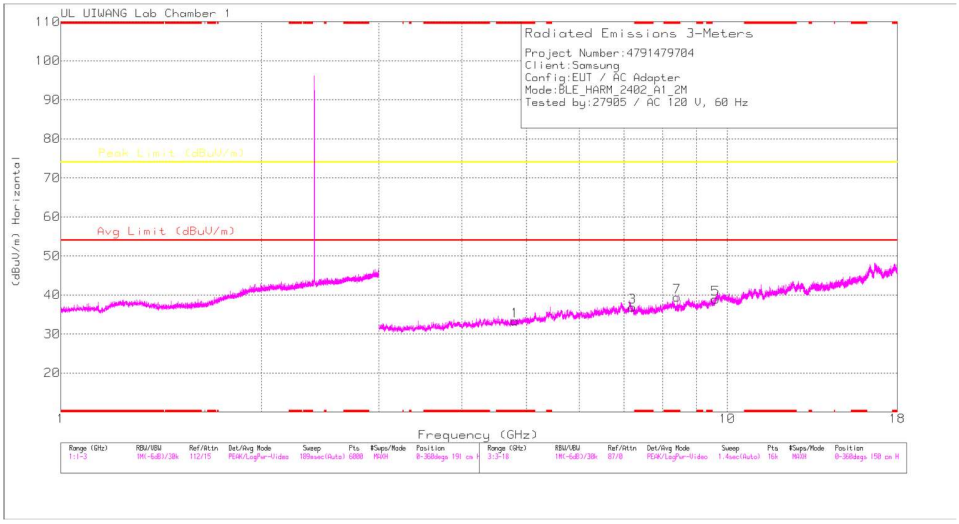
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE TEST DATA

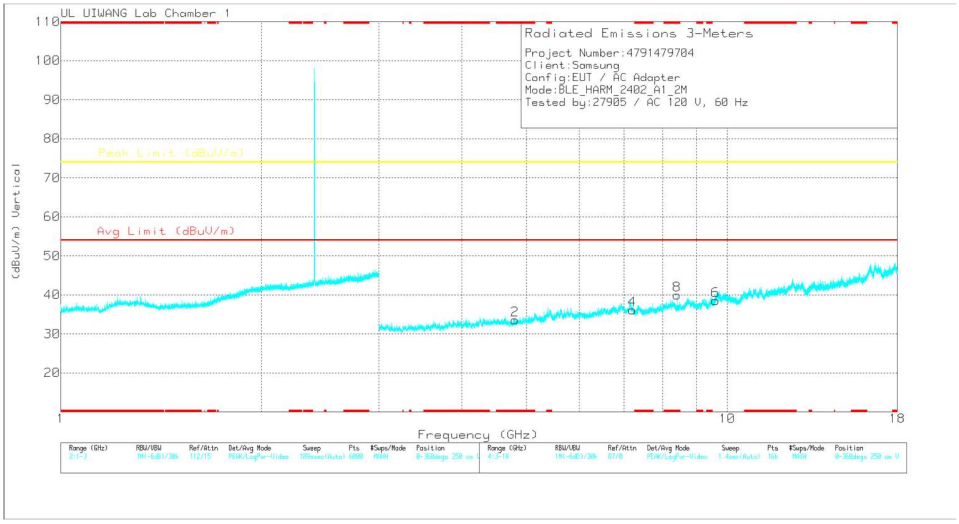
Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2402	ANT0	* 2.39	43.00	Pk	31.90	-34.10	6.60	0.00	47.40	-	-	74.00	-26.60	9	183	H
		* 2.36865	46.50	Pk	31.80	-34.00	6.60	0.00	50.90	-	-	74.00	-23.10	9	183	H
		* 2.39	34.07	RMS	31.90	-34.10	6.60	2.44	40.91	54.00	-13.09	-	-	9	183	H
		* 2.38794	34.76	RMS	31.90	-34.10	6.60	2.44	41.60	54.00	-12.40	-	-	9	183	H
		* 2.39	44.44	Pk	31.90	-34.10	6.60	0.00	48.84	-	-	74.00	-25.16	315	322	V
		* 2.36924	46.38	Pk	31.80	-34.00	6.60	0.00	50.78	-	-	74.00	-23.22	315	322	V
		* 2.39	33.37	RMS	31.90	-34.10	6.60	2.44	40.21	54.00	-13.79	-	-	315	322	V
		* 2.37285	34.74	RMS	31.80	-34.00	6.60	2.44	41.58	54.00	-12.42	-	-	315	322	V
2480	ANT0	* 2.4835	47.35	Pk	32.20	-34.10	6.70	0.00	52.15	-	-	74.00	-21.85	0	393	H
		* 2.48721	48.24	Pk	32.20	-34.10	6.70	0.00	53.04	-	-	74.00	-20.96	0	393	H
		* 2.4835	35.76	RMS	32.20	-34.10	6.70	2.44	43.00	54.00	-11.00	-	-	0	393	H
		* 2.48355	36.05	RMS	32.20	-34.10	6.70	2.44	43.29	54.00	-10.71	-	-	0	393	H
		* 2.4835	48.44	Pk	32.20	-34.10	6.70	0.00	53.24	-	-	74.00	-20.76	312	127	V
		* 2.48368	51.36	Pk	32.20	-34.10	6.70	0.00	56.16	-	-	74.00	**-17.84**	312	127	V
		* 2.4835	37.85	RMS	32.20	-34.10	6.70	2.44	45.09	54.00	**-8.91**	-	-	312	127	V
		* 2.48363	37.62	RMS	32.20	-34.10	6.70	2.44	44.86	54.00	-9.14	-	-	312	127	V
2402	ANT1	* 2.39	44.55	Pk	31.90	-34.10	6.60	0.00	48.95	-	-	74.00	-25.05	21	292	H
		* 2.36512	46.44	Pk	31.80	-34.00	6.60	0.00	50.84	-	-	74.00	-23.16	21	292	H
		* 2.39	32.93	RMS	31.90	-34.10	6.60	2.44	39.77	54.00	-14.23	-	-	21	292	H
		* 2.34168	34.57	RMS	31.80	-33.90	6.50	2.44	41.41	54.00	-12.59	-	-	21	292	H
		* 2.39	43.85	Pk	31.90	-34.10	6.60	0.00	48.25	-	-	74.00	-25.75	258	279	V
		* 2.33373	46.90	Pk	31.70	-33.90	6.50	0.00	51.20	-	-	74.00	-22.80	258	279	V
		* 2.39	33.32	RMS	31.90	-34.10	6.60	2.44	40.16	54.00	-13.84	-	-	258	279	V
		* 2.38489	34.87	RMS	31.80	-34.10	6.60	2.44	41.61	54.00	-12.39	-	-	258	279	V
2480	ANT1	* 2.4835	44.48	Pk	32.20	-34.10	6.70	0.00	49.28	-	-	74.00	-24.72	19	120	H
		2.544	46.09	Pk	32.20	-33.90	6.90	0.00	51.29	-	-	74.00	-22.71	19	120	H
		* 2.4835	35.14	RMS	32.20	-34.10	6.70	2.44	42.38	54.00	**-11.62**	-	-	19	120	H
		2.505	34.40	RMS	32.20	-34.00	6.80	2.44	41.84	54.00	-12.16	-	-	19	120	H
		* 2.4835	45.76	Pk	32.20	-34.10	6.70	0.00	50.56	-	-	74.00	-23.44	74	126	V
		* 2.48371	46.63	Pk	32.20	-34.10	6.70	0.00	51.43	-	-	74.00	**-22.57**	74	126	V
		* 2.4835	32.79	RMS	32.20	-34.10	6.70	2.44	40.03	54.00	-13.97	-	-	74	126	V
		2.500	32.81	RMS	32.20	-34.00	6.80	2.44	40.25	54.00	-13.75	-	-	74	126	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (WORST CASE: 2402 MHz, ANT 1)



HORIZONTAL



VERTICAL

Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1-18G_3117_240924 (dB/m)	FB1_PL_1-18G_3G HP_240718 (dB)	CH1_CL_1-40G_Thru_241104 (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.80711	39.46	PK2	33.9	-39.4	9.6	0	43.56	-	-	74	-30.44	0	100	H
* 4.80793	39.06	PK2	33.9	-39.4	9.6	0	43.16	-	-	74	-30.84	0	100	V
7.20513	37.54	PK2	35.6	-39	12.6	0	46.74	-	-	74	-27.26	0	100	H
7.21004	37.08	PK2	35.6	-39.1	12.6	0	46.18	-	-	74	-27.82	0	100	V
* 8.40697	38.44	PK2	35.7	-39	13.4	0	48.54	-	-	74	-25.46	77	205	H
* 8.40697	29.2	MAv1	35.7	-39	13.4	2.44	41.74	54	-12.26	-	-	77	205	H
* 8.40683	37.97	PK2	35.7	-39	13.4	0	48.07	-	-	74	-25.93	67	200	V
* 8.40689	28.2	MAv1	35.7	-39	13.4	2.44	40.74	54	-13.26	-	-	67	200	V
9.61062	35.76	PK2	36.5	-37.9	14.5	0	48.86	-	-	74	-25.14	0	100	H
9.61178	36.31	PK2	36.5	-37.9	14.5	0	49.41	-	-	74	-24.59	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

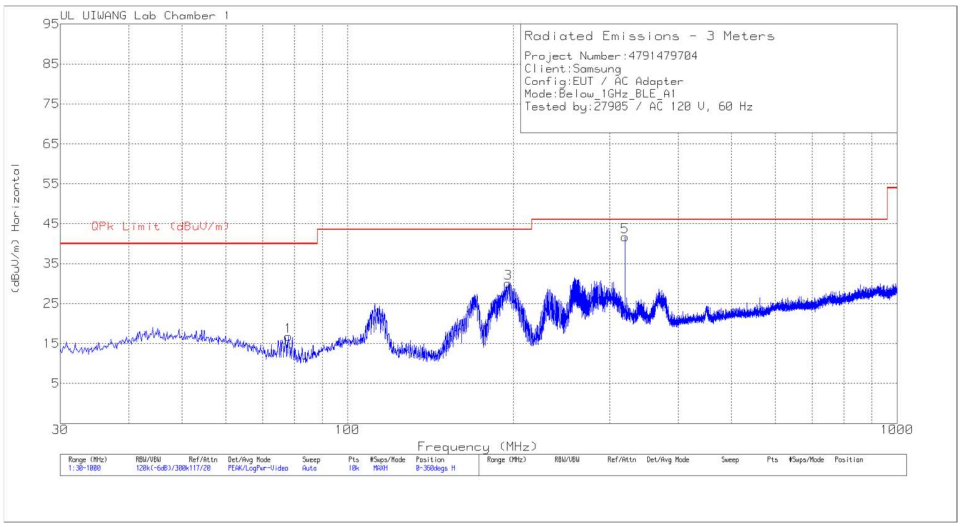
HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2402	ANT0	* 4.80448	42.28	PK2	33.90	-42.60	9.70	0.00	43.28	-	-	74.00	-30.72	338	100	H
		* 4.80477	42.96	PK2	33.90	-42.60	9.70	0.00	43.96	-	-	74.00	-30.04	129	100	V
		6.405	40.68	PK2	35.50	-40.70	11.10	0.00	46.58	-	-	74.00	-27.42	112	104	H
		6.405	41.07	PK2	35.50	-40.70	11.10	0.00	46.97	-	-	74.00	-27.03	25	223	V
		7.204	38.72	PK2	35.70	-40.90	11.60	0.00	45.12	-	-	74.00	-28.88	136	100	H
		7.204	38.62	PK2	35.70	-40.90	11.60	0.00	45.02	-	-	74.00	-28.98	2	100	V
		9.608	36.84	PK2	36.70	-39.30	13.60	0.00	47.84	-	-	74.00	-26.16	124	100	H
		9.608	36.85	PK2	36.70	-39.30	13.60	0.00	47.85	-	-	74.00	-26.15	217	100	V
2440	ANT0	* 4.87755	41.96	PK2	33.90	-42.40	9.70	0.00	43.16	-	-	74.00	-30.84	349	100	H
		* 4.87743	41.95	PK2	33.90	-42.40	9.70	0.00	43.15	-	-	74.00	-30.85	137	100	V
		6.506	40.51	PK2	35.60	-41.30	11.10	0.00	45.91	-	-	74.00	-28.09	114	104	H
		6.507	41.38	PK2	35.60	-41.30	11.10	0.00	46.78	-	-	74.00	-27.22	25	193	V
		* 7.31886	38.22	PK2	35.60	-40.40	11.70	0.00	45.12	-	-	74.00	-28.88	357	100	H
		* 7.32123	38.56	PK2	35.60	-40.40	11.70	0.00	45.46	-	-	74.00	-28.54	78	100	V
		9.758	36.11	PK2	36.80	-38.20	13.60	0.00	48.31	-	-	74.00	-25.69	358	100	H
		9.761	35.84	PK2	36.80	-38.20	13.60	0.00	48.04	-	-	74.00	-25.96	132	100	V
2480	ANT0	* 4.96018	42.09	PK2	33.90	-42.60	9.80	0.00	43.19	-	-	74.00	-30.81	227	100	H
		* 4.95989	42.15	PK2	33.90	-42.60	9.80	0.00	43.25	-	-	74.00	-30.75	142	100	V
		6.613	40.89	PK2	35.60	-41.20	11.10	0.00	46.39	-	-	74.00	-27.61	113	113	H
		6.613	41.14	PK2	35.60	-41.20	11.10	0.00	46.64	-	-	74.00	-27.36	54	399	V
		* 7.43781	38.46	PK2	35.70	-40.60	11.80	0.00	45.36	-	-	74.00	-28.64	292	100	H
		* 7.43989	38.30	PK2	35.70	-40.60	11.80	0.00	45.20	-	-	74.00	-28.80	22	100	V
		9.920	34.86	PK2	36.90	-38.50	13.90	0.00	47.16	-	-	74.00	-26.84	124	100	H
		9.920	34.82	PK2	36.90	-38.50	13.90	0.00	47.12	-	-	74.00	-26.88	277	100	V
2402	ANT1	* 4.80711	39.46	PK2	33.90	-39.40	9.60	0.00	43.56	-	-	74.00	-30.44	0	100	H
		* 4.80793	39.06	PK2	33.90	-39.40	9.60	0.00	43.16	-	-	74.00	-30.84	0	100	V
		7.205	37.54	PK2	35.60	-39.00	12.60	0.00	46.74	-	-	74.00	-27.26	0	100	H
		7.210	37.08	PK2	35.60	-39.10	12.60	0.00	46.18	-	-	74.00	-27.82	0	100	V
		* 8.40697	38.44	PK2	35.70	-39.00	13.40	0.00	48.54	-	-	74.00	-25.46	77	205	H
		* 8.40697	29.20	MAv1	35.70	-39.00	13.40	2.44	41.74	54.00	-12.26	-	-	77	205	H
		* 8.40683	37.97	PK2	35.70	-39.00	13.40	0.00	48.07	-	-	74.00	-25.93	67	200	V
		* 8.40689	28.20	MAv1	35.70	-39.00	13.40	2.44	40.74	54.00	-13.26	-	-	67	200	V
		9.611	35.76	PK2	36.50	-37.90	14.50	0.00	48.86	-	-	74.00	-25.14	0	100	H
		9.612	36.31	PK2	36.50	-37.90	14.50	0.00	49.41	-	-	74.00	-24.59	0	100	V
2440	ANT1	* 4.8791	38.93	PK2	33.90	-39.40	9.70	0.00	43.13	-	-	74.00	-30.87	0	100	H
		* 4.87954	39.60	PK2	33.90	-39.40	9.70	0.00	43.80	-	-	74.00	-30.20	0	100	V
		* 7.32501	37.33	PK2	35.60	-39.30	12.30	0.00	45.93	-	-	74.00	-28.07	0	100	H
		* 7.31736	37.57	PK2	35.60	-39.30	12.20	0.00	46.07	-	-	74.00	-27.93	0	100	V
		8.540	38.97	PK2	35.70	-38.70	13.20	0.00	49.17	-	-	74.00	-24.83	36	103	H
		8.540	37.18	PK2	35.70	-38.70	13.20	0.00	47.38	-	-	74.00	-26.62	39	109	V
		9.755	36.05	PK2	36.70	-37.60	14.40	0.00	49.55	-	-	74.00	-24.45	0	100	H
		9.760	35.66	PK2	36.70	-37.70	14.40	0.00	49.06	-	-	74.00	-24.94	0	100	V
2480	ANT1	* 4.95734	40.32	PK2	33.90	-39.60	9.90	0.00	44.52	-	-	74.00	-29.48	0	100	H
		* 4.95615	39.84	PK2	33.90	-39.60	9.90	0.00	44.04	-	-	74.00	-29.96	0	100	V
		* 7.44293	37.51	PK2	35.60	-39.10	12.20	0.00	46.21	-	-	74.00	-27.79	0	100	H
		* 7.43918	36.92	PK2	35.60	-39.10	12.30	0.00	45.72	-	-	74.00	-28.28	0	100	V
		8.680	38.27	PK2	35.90	-38.60	13.80	0.00	49.37	-	-	74.00	-24.63	45	198	H
		8.680	37.20	PK2	35.90	-38.60	13.70	0.00	48.20	-	-	74.00	-25.80	38	195	V
		9.923	35.76	PK2	36.90	-37.70	14.50	0.00	49.46	-	-	74.00	-24.54	0	100	H
		9.916	35.63	PK2	36.90	-37.80	14.50	0.00	49.23	-	-	74.00	-24.77	0	100	V

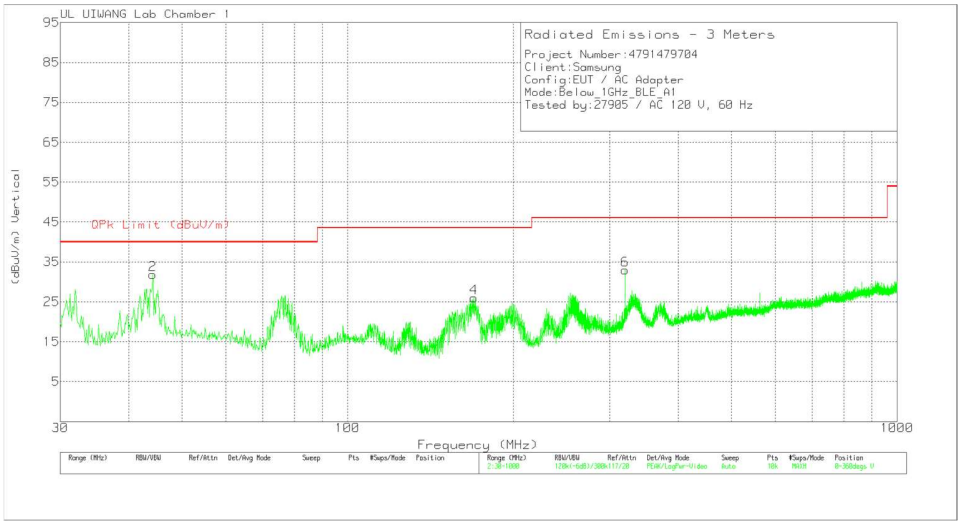
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

11.3. WORST CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB 9163 (dB/m)	1Cham_30M-1000M_AMP(ELNA 03-40D) (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	78.117	43.94	Pk	12.5	-39.7	16.74	40	-23.26	0-360	200	H
2	44.1635	52.52	Pk	19.2	-39.9	31.82	40	-8.18	0-360	100	V
3	196.1781	51.58	Pk	17.6	-39.1	30.08	43.52	-13.44	0-360	100	H
4	169.6944	50.84	Pk	14.5	-39.3	26.04	43.52	-17.48	0-360	100	V
5	319.9629	60.95	Pk	19.4	-38.6	41.75	46.02	-4.27	0-360	100	H
6	319.9974	60.71	Qp	19.4	-38.6	41.51	46.02	-4.51	285	100	H
7	319.9629	52.13	Pk	19.4	-38.6	32.93	46.02	-13.09	0-360	100	V

Pk - Peak detector
Qp - Quasi-Peak detector

12. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a), RSS-GEN Clause 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

See the following pages.

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12.1. AC Power Line

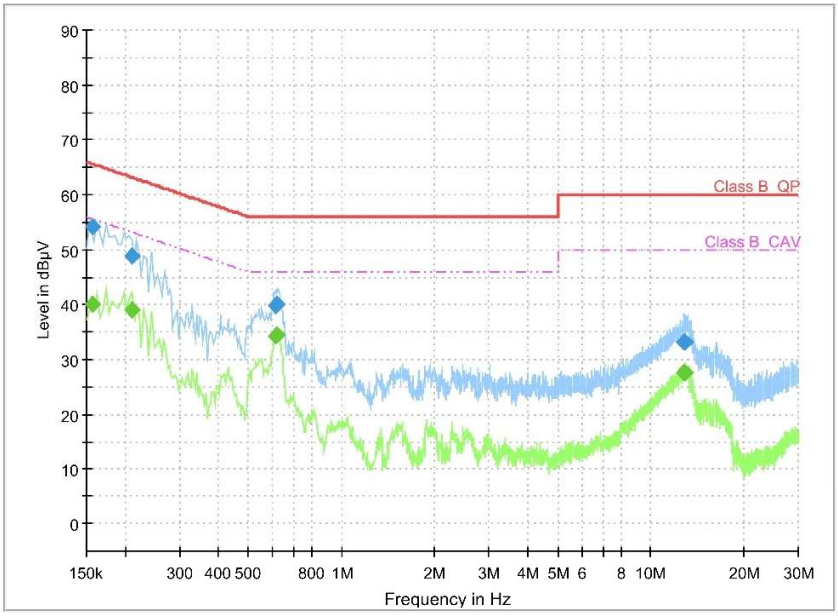
LINE 1 RESULTS

AC LINE BLE A1-L 1 / 1

Test Report

Common Information

Project No:	4791479704
Test Description:	Shielded Room#1, Conducted Emission
Test Standard:	FCC Part 15 Subpart C
Model Name:	WCF933M
Test Voltage:	AC 120 V, 60 Hz
Test Mode:	AC Line BLE A1
Opeartor:	27905
Line:	LINE
Remark:	



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.157570	54.05	---	65.59	11.54	9.000	L1	ON	9.8
0.157570	---	40.15	55.59	15.44	9.000	L1	ON	9.8
0.211280	49.00	---	63.16	14.16	9.000	L1	ON	9.8
0.211280	---	38.95	53.16	14.20	9.000	L1	ON	9.8
0.613310	39.75	---	56.00	16.25	9.000	L1	ON	9.8
0.613310	---	34.32	46.00	11.68	9.000	L1	ON	9.8
0.621980	40.04	---	56.00	15.96	9.000	L1	ON	9.8
0.621980	---	34.61	46.00	11.39	9.000	L1	ON	9.8
12.814350	33.14	---	60.00	26.86	9.000	L1	ON	10.0
12.814350	---	27.66	50.00	22.34	9.000	L1	ON	10.0
12.927970	33.24	---	60.00	26.76	9.000	L1	ON	10.0
12.927970	---	27.74	50.00	22.26	9.000	L1	ON	10.0

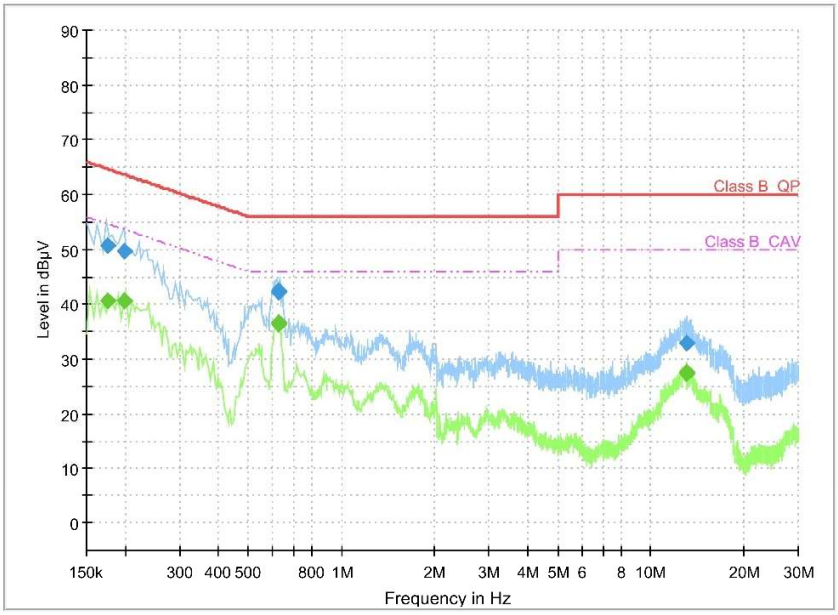
LINE 2 RESULTS

AC LINE BLE A1-N 1 / 1

Test Report

Common Information

Project No:	4791479704
Test Description:	Shielded Room#1, Conducted Emission
Test Standard:	FCC Part 15 Subpart C
Model Name:	WCF933M
Test Voltage:	AC 120 V, 60 Hz
Test Mode:	AC Line BLE A1
Opeartor:	27905
Line:	NEUTRAL
Remark:	



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.176370	50.81	---	64.66	13.85	9.000	N	ON	9.9
0.176370	---	40.61	54.66	14.04	9.000	N	ON	9.9
0.199260	49.78	---	63.64	13.87	9.000	N	ON	9.8
0.199260	---	40.64	53.64	13.00	9.000	N	ON	9.8
0.624130	42.39	---	56.00	13.61	9.000	N	ON	9.8
0.624130	---	36.74	46.00	9.26	9.000	N	ON	9.8
0.626120	42.30	---	56.00	13.70	9.000	N	ON	9.8
0.626120	---	36.47	46.00	9.53	9.000	N	ON	9.8
12.985940	32.99	---	60.00	27.01	9.000	N	ON	10.0
12.985940	---	27.50	50.00	22.50	9.000	N	ON	10.0
13.011640	33.06	---	60.00	26.94	9.000	N	ON	10.0
13.011640	---	27.55	50.00	22.45	9.000	N	ON	10.0

END OF TEST REPORT

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