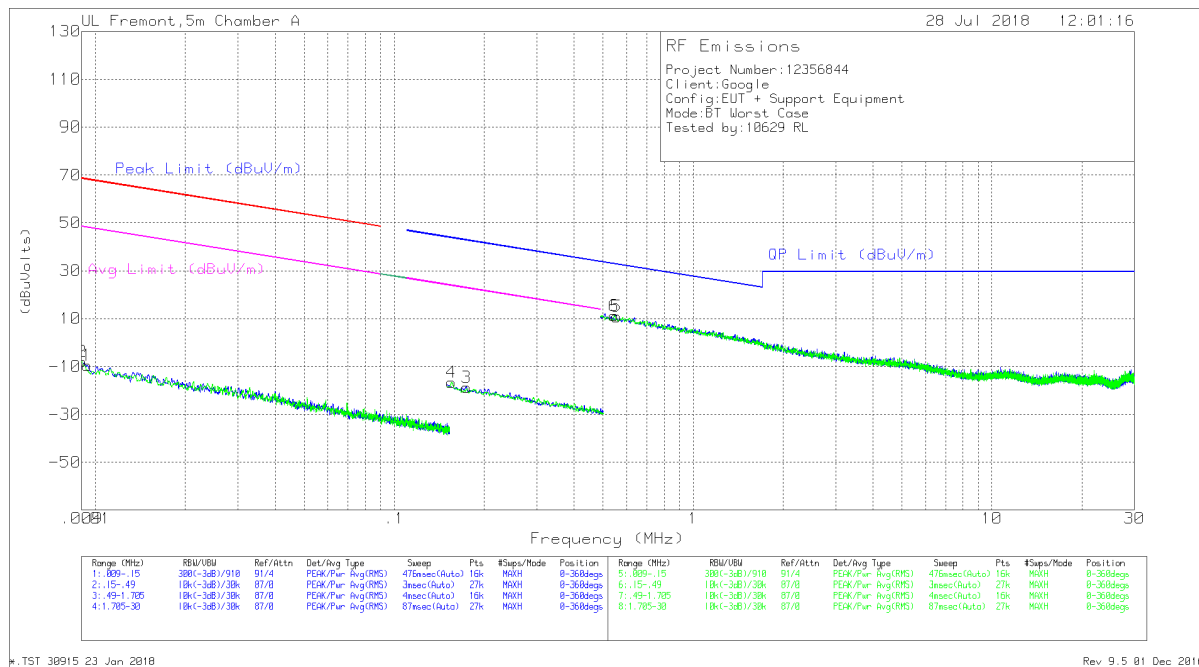


9.1. WORST-CASE BELOW 30 MHz

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

FACE ON AND FACE OFF PLOTS



NOTE: KDB 414788 OATS and Chamber Correlation Justification

- 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.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Trace Markers

Marker	Frequency(MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
2	.00901	56.25	Pk	15.7	.1	-80	-7.95	68.49	-76.44	48.49	-56.44	0-360
1	.00937	54.87	Pk	15.5	.1	-80	-9.53	68.15	-77.68	48.15	-57.68	0-360
4	.15547	49.43	Pk	13.8	.1	-80	-16.67	43.79	-60.46	23.79	-40.46	0-360
3	.17447	47.45	Pk	13.8	.1	-80	-18.65	42.79	-61.44	22.79	-41.44	0-360

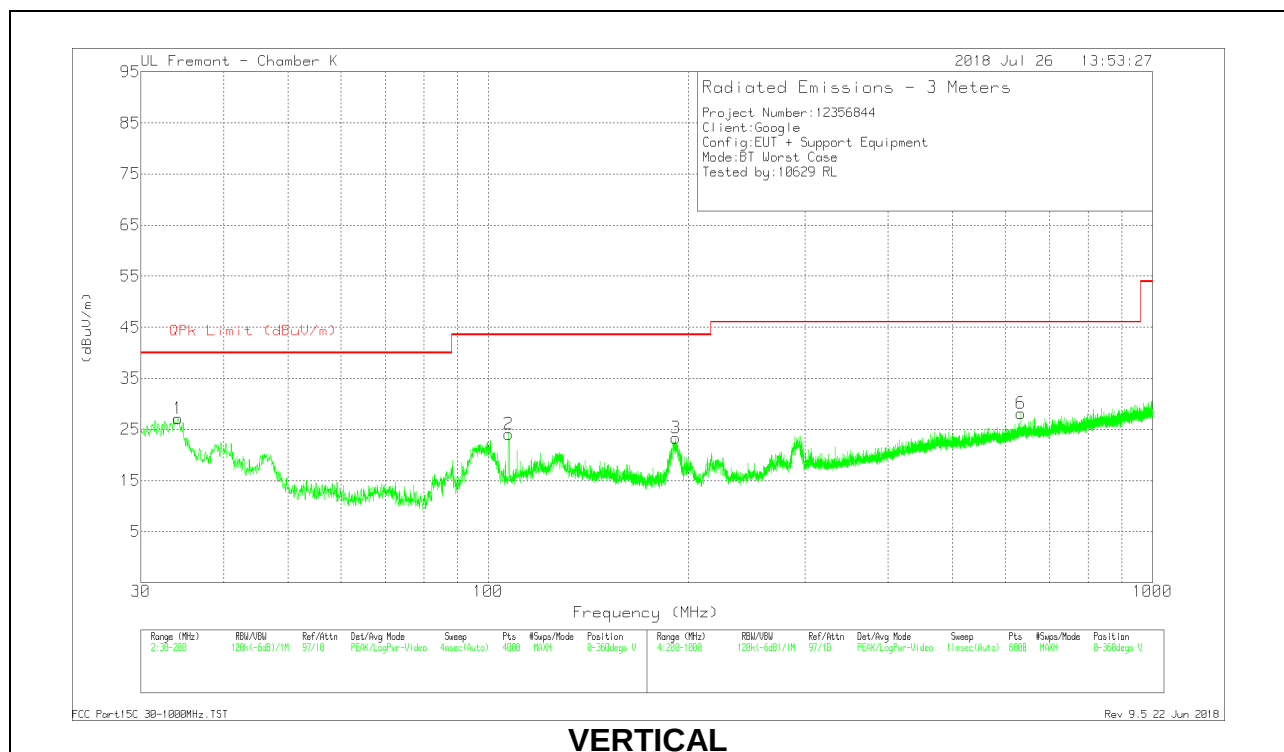
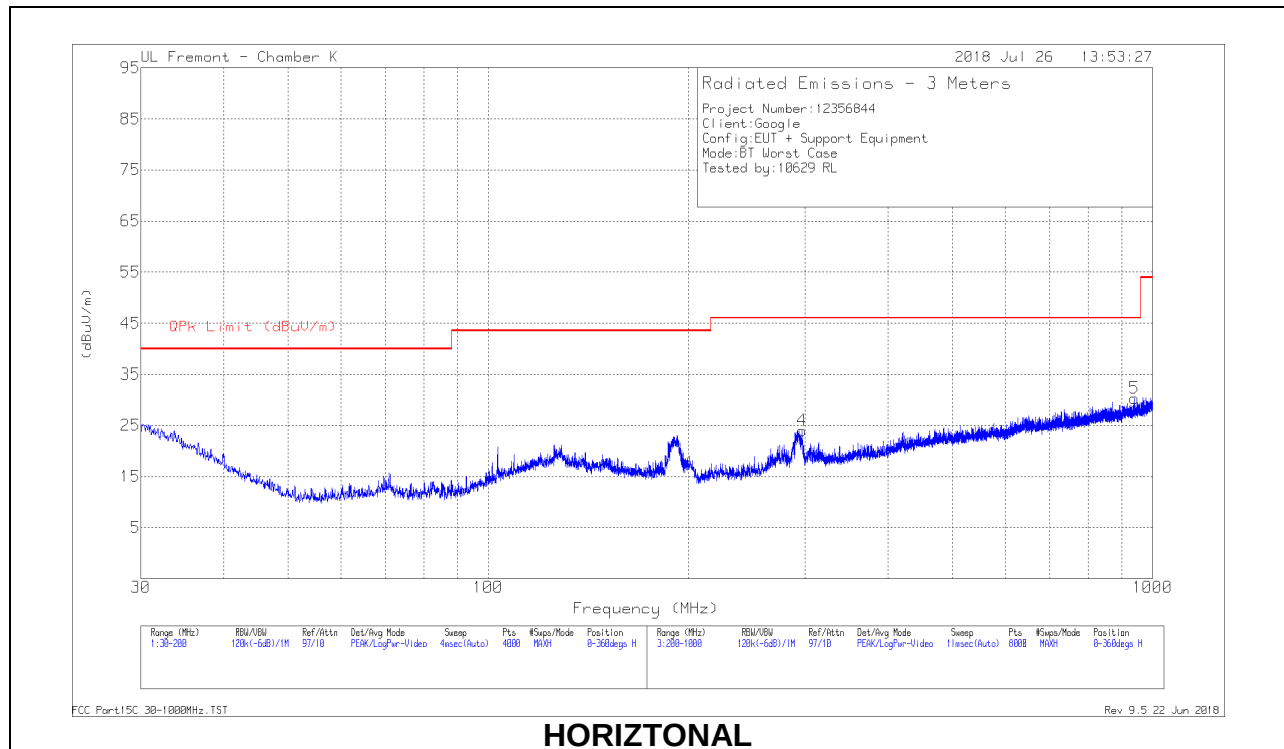
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
6	.54472	37.2	Pk	13.9	.1	-40	11.2	32.88	-21.68	0-360
5	.5546	36.87	Pk	13.9	.1	-40	10.87	32.73	-21.86	0-360

Pk - Peak detector

9.2. WORST CASE BELOW 1 GHZ

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



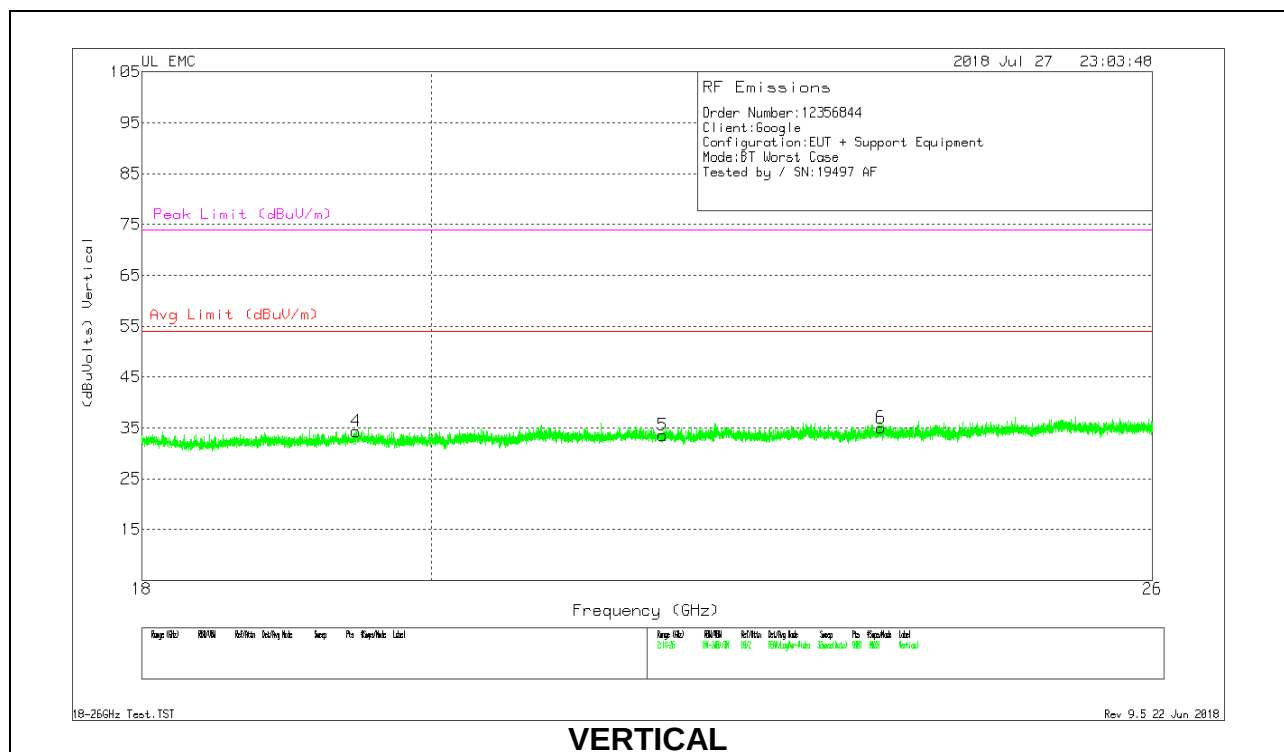
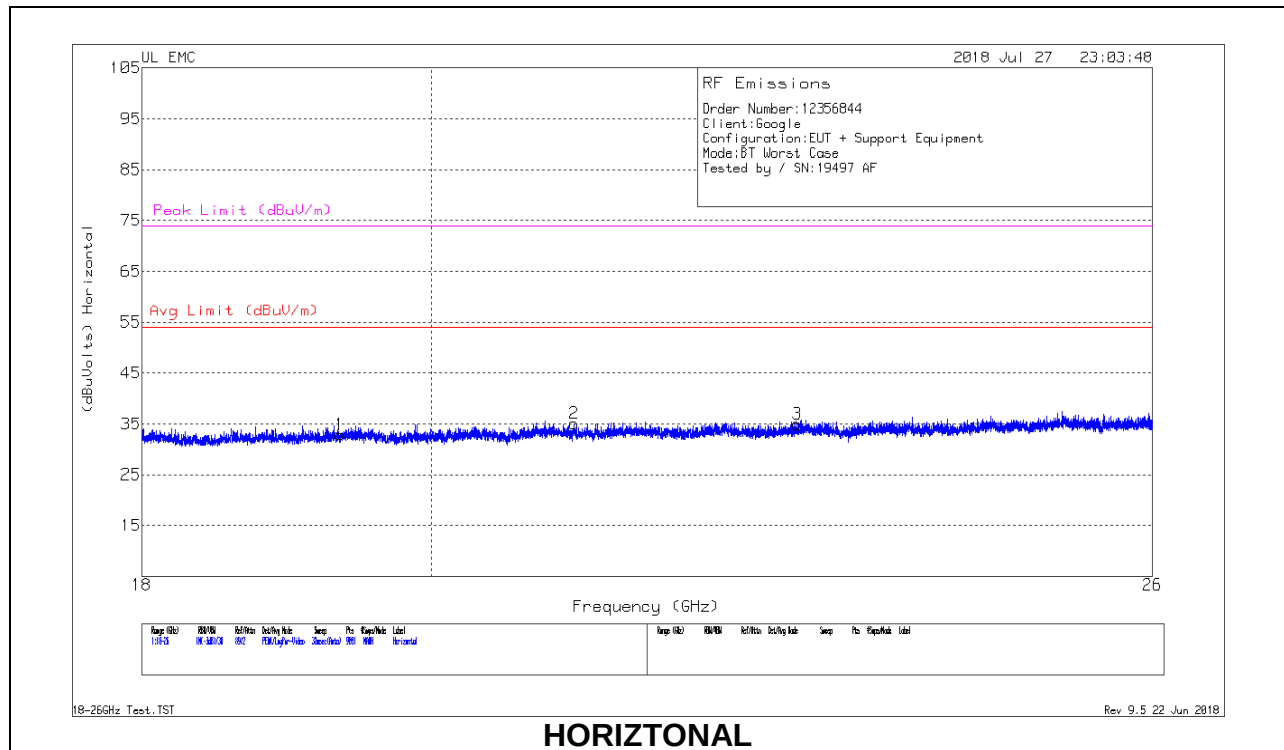
Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	34.1236	32.31	Pk	22.4	-27.6	27.11	40	-12.89	0-360	100	V
2	107.37	34.93	Pk	16.2	-27	24.13	43.52	-19.39	0-360	100	V
3	191.5843	34.07	Pk	15.5	-26.3	23.27	43.52	-20.25	0-360	100	V
4	296.8126	32.35	Pk	17.4	-25.8	23.95	46.02	-22.07	0-360	100	H
5	939.1961	26.86	Pk	26.8	-23.4	30.26	46.02	-15.76	0-360	399	H
6	633.8564	27.99	Pk	23.7	-23.6	28.09	46.02	-17.93	0-360	100	V

Pk - Peak detector

9.3. WORST CASE 18-26 GHZ

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



18 – 26GHz DATA

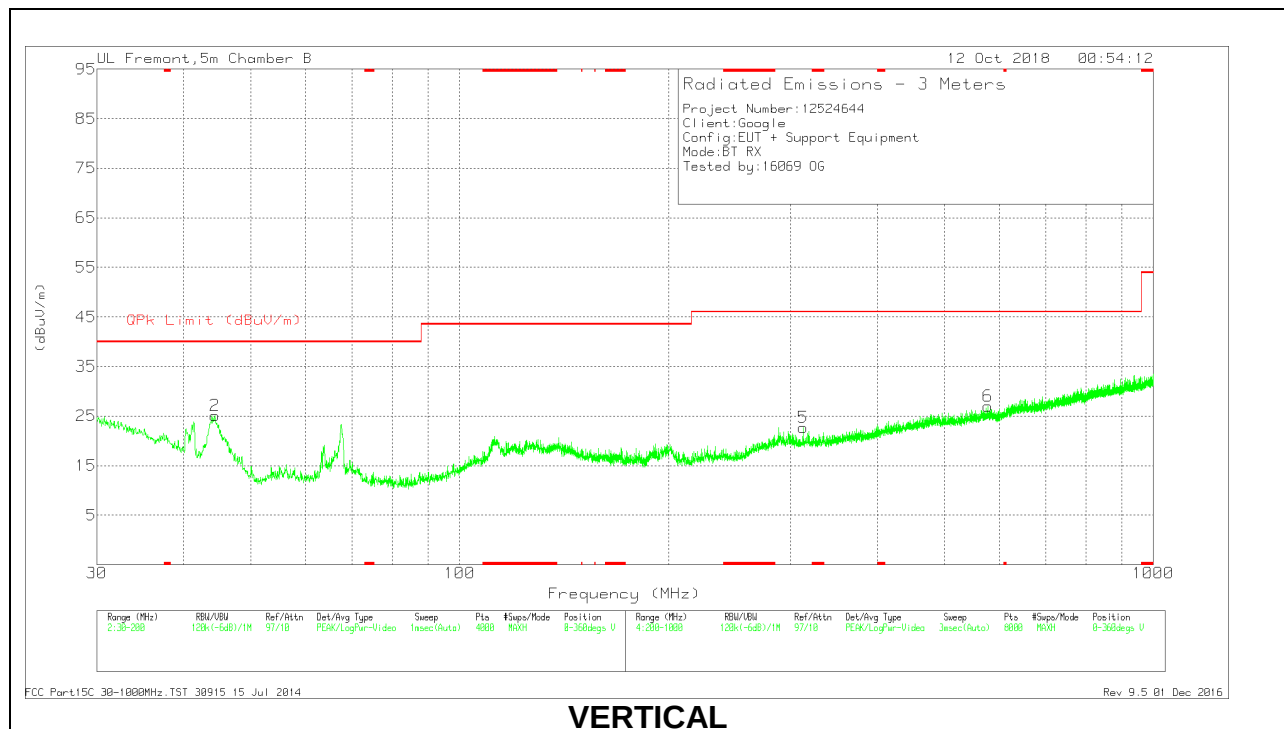
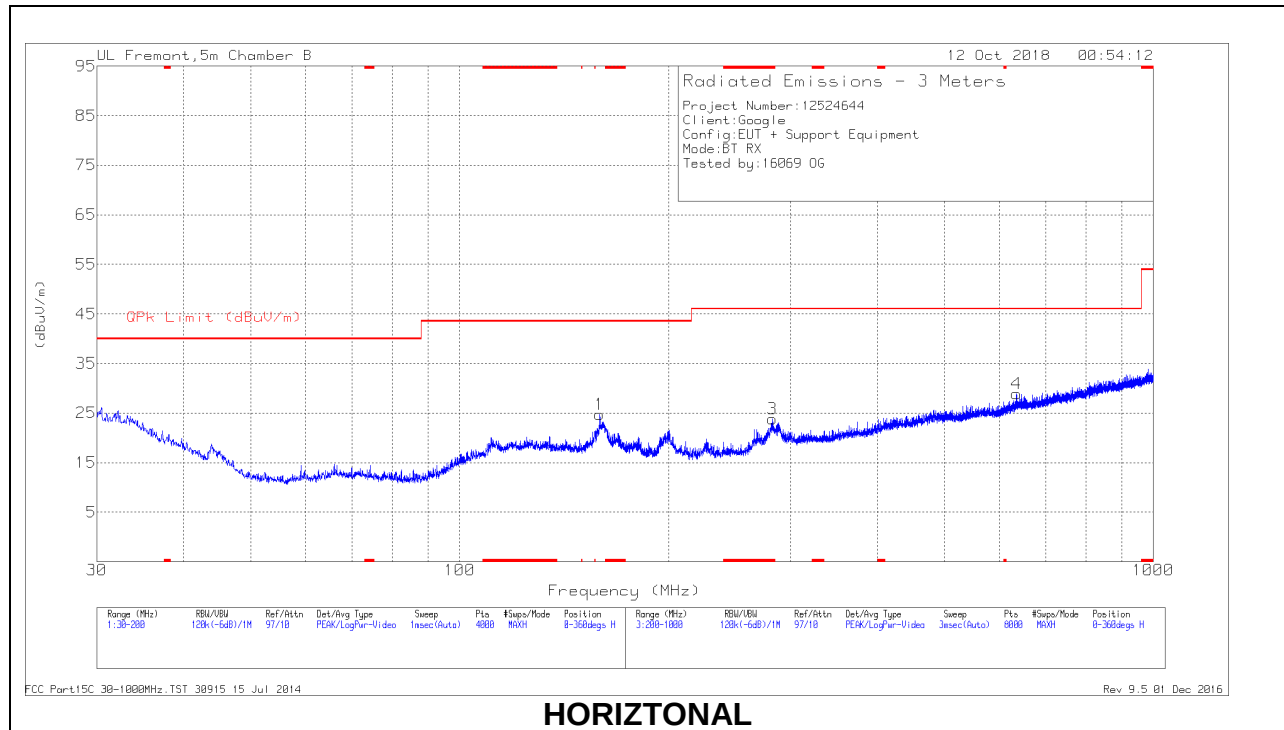
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T448 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.347	66.89	Pk	32.7	-57.2	-9.5	32.89	54	-21.11	74	-41.11
2	21.067	67.93	Pk	33.3	-56.7	-9.5	35.03	54	-18.97	74	-38.97
3	22.849	68.56	Pk	33.5	-57.6	-9.5	34.96	54	-19.04	74	-39.04
4	19.461	68.21	Pk	32.6	-57	-9.5	34.31	54	-19.69	74	-39.69
5	21.756	67.31	Pk	33.2	-57.4	-9.5	33.61	54	-20.39	74	-40.39
6	23.552	67.49	Pk	33.9	-56.9	-9.5	34.99	54	-19.01	74	-39.01

Pk - Peak detector

9.1. RECEIVER SPURIOUS

9.1.1. Receiver Spurious Below 1 GHz

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

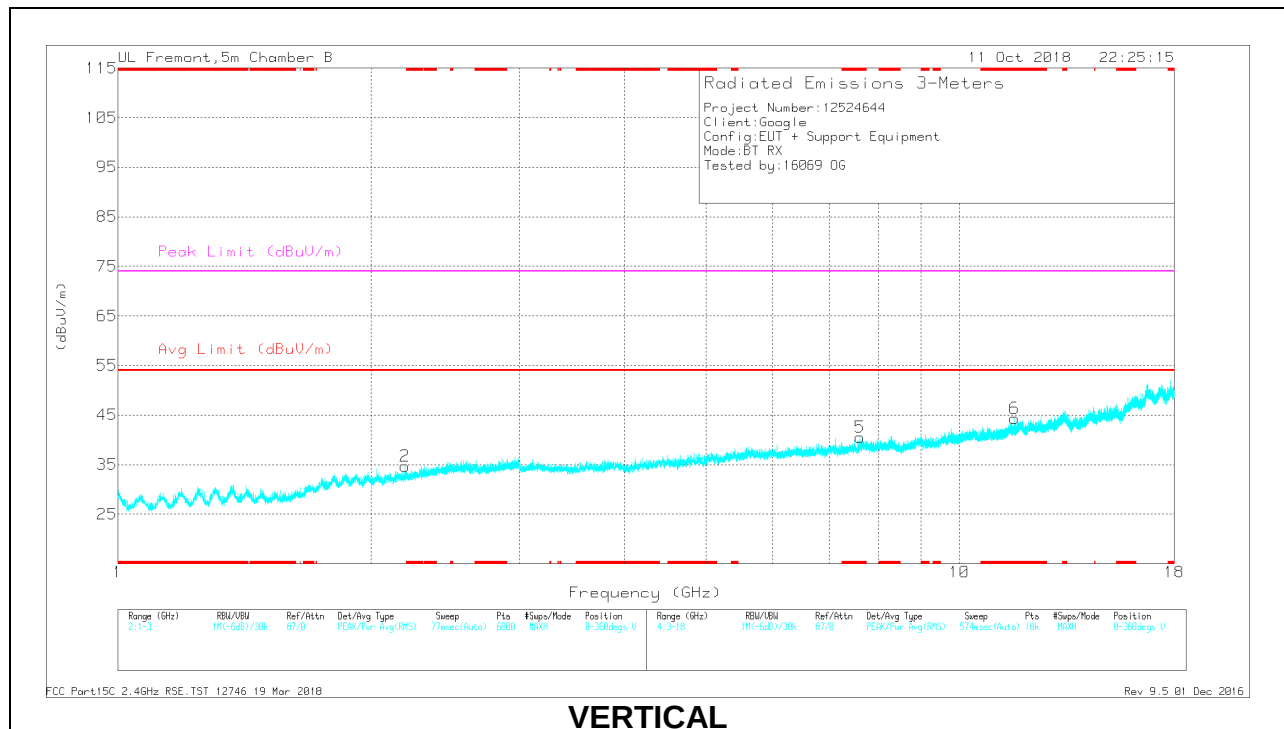
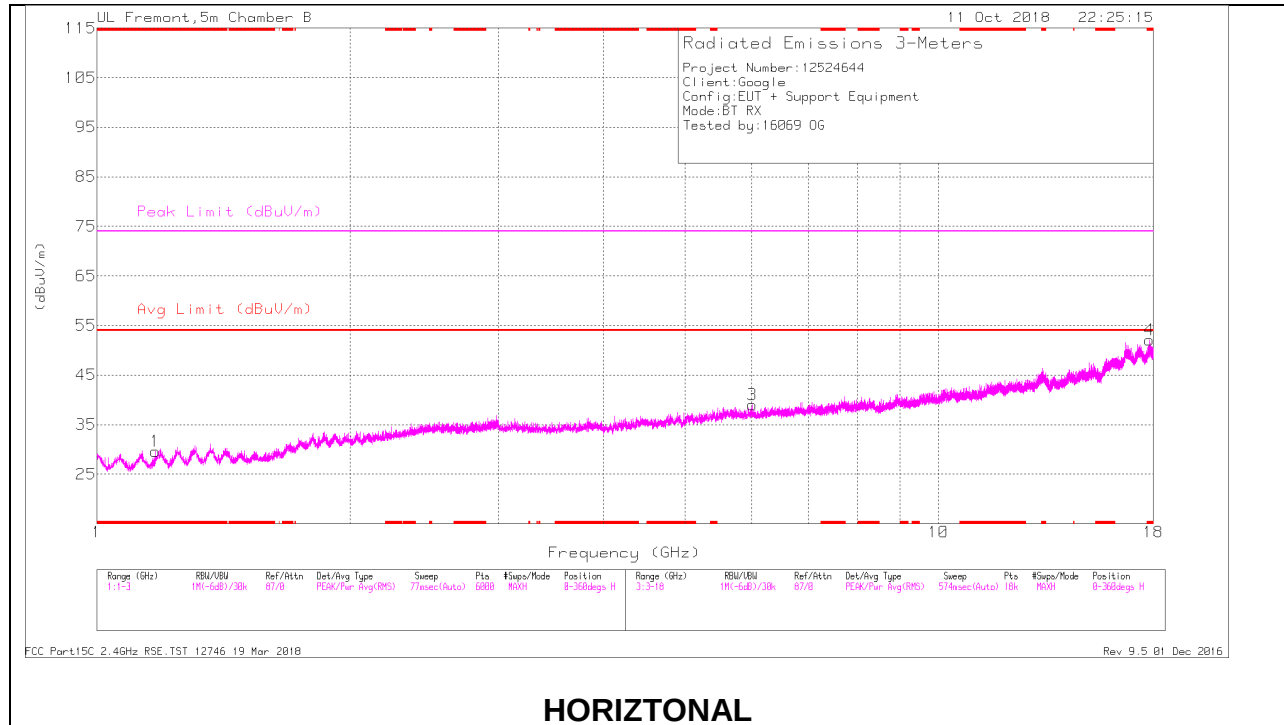


Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AFT407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 282.4107	32.47	Pk	17.4	-26	23.87	46.02	-22.15	0-360	100	H
2	44.3687	38.86	Pk	14.8	-28.6	25.06	40	-14.94	0-360	100	V
1	159.276	35.65	Pk	16.3	-27.2	24.75	43.52	-18.77	0-360	200	H
5	312.6146	30.82	Pk	17.8	-25.9	22.72	46.02	-23.3	0-360	100	V
6	578.0491	29.84	Pk	22.8	-25.7	26.94	46.02	-19.08	0-360	200	V
4	635.0566	30.5	Pk	23.8	-25.4	28.9	46.02	-17.12	0-360	300	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

SPURIOUS EMISSIONS 1-18GHz (WORST-CASE CONFIGURATION)

Test Data

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Ftr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.171	28.17	PKFH	27.9	-22.6	33.47	-	-	74	-40.53	237	152	H
* 1.175	15.82	VA1T	28	-22.6	21.22	54	-32.78	-	-	237	152	H
* 17.821	30.22	PKFH	44.4	-18.1	56.52	-	-	74	-17.48	244	246	H
* 17.82	15.74	VA1T	44.4	-18.1	42.04	54	-11.96	-	-	244	246	H
* 7.618	36.14	PKFH	36.4	-27.4	45.14	-	-	74	-28.86	312	349	V
* 7.618	23.7	VA1T	36.4	-27.4	32.7	54	-21.3	-	-	312	349	V
* 11.632	31.25	PKFH	38.7	-22.5	47.45	-	-	74	-26.55	200	111	V
* 11.631	18.76	VA1T	38.7	-22.5	34.96	54	-19.04	-	-	200	111	V
2.195	27.56	PKFH	31.5	-21.2	37.86	-	-	-	-	90	242	V
2.197	14.67	VA1T	31.5	-21.1	25.07	-	-	-	-	90	242	V
6.002	36.59	PKFH	35.4	-28.8	43.19	-	-	-	-	24	180	H
6.002	24.71	VA1T	35.4	-28.8	31.31	-	-	-	-	24	180	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

NCC LP0002 §2.3

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	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.

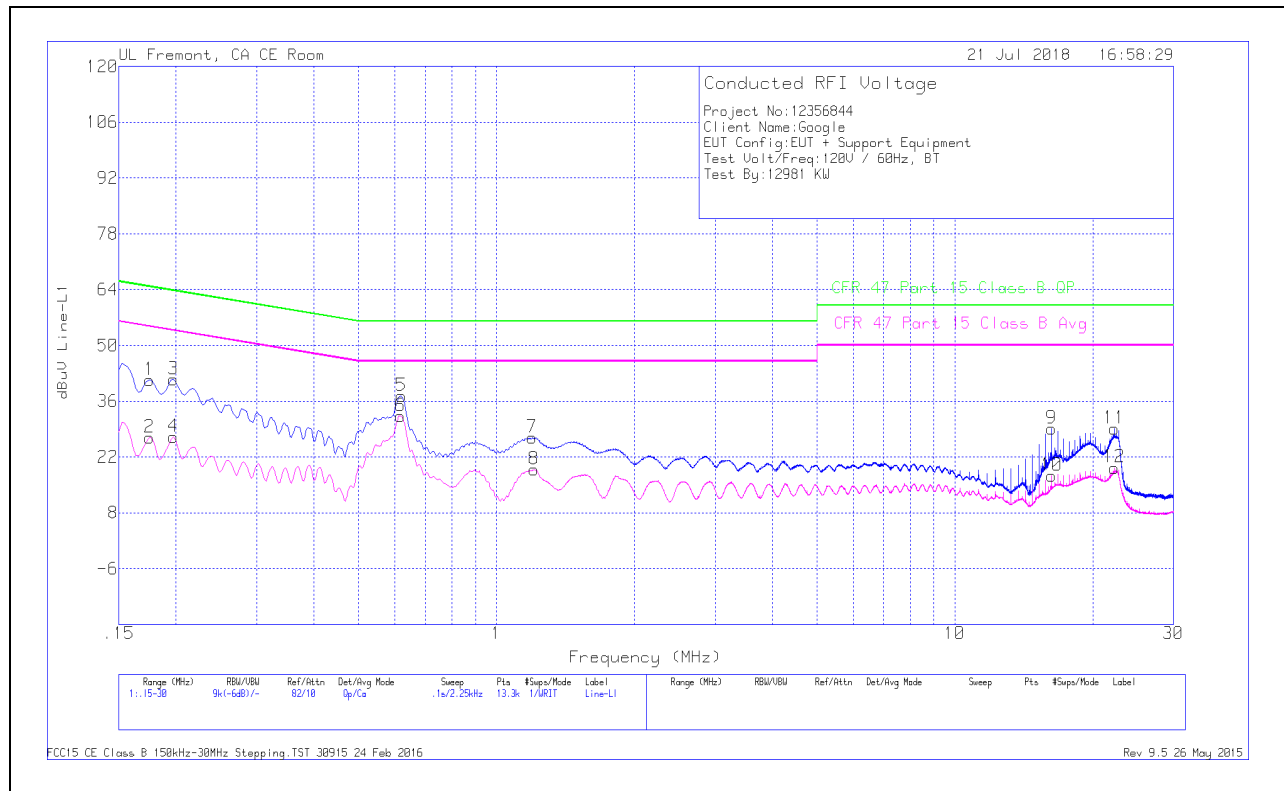
TEST PROCEDURE

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 C63.4.

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

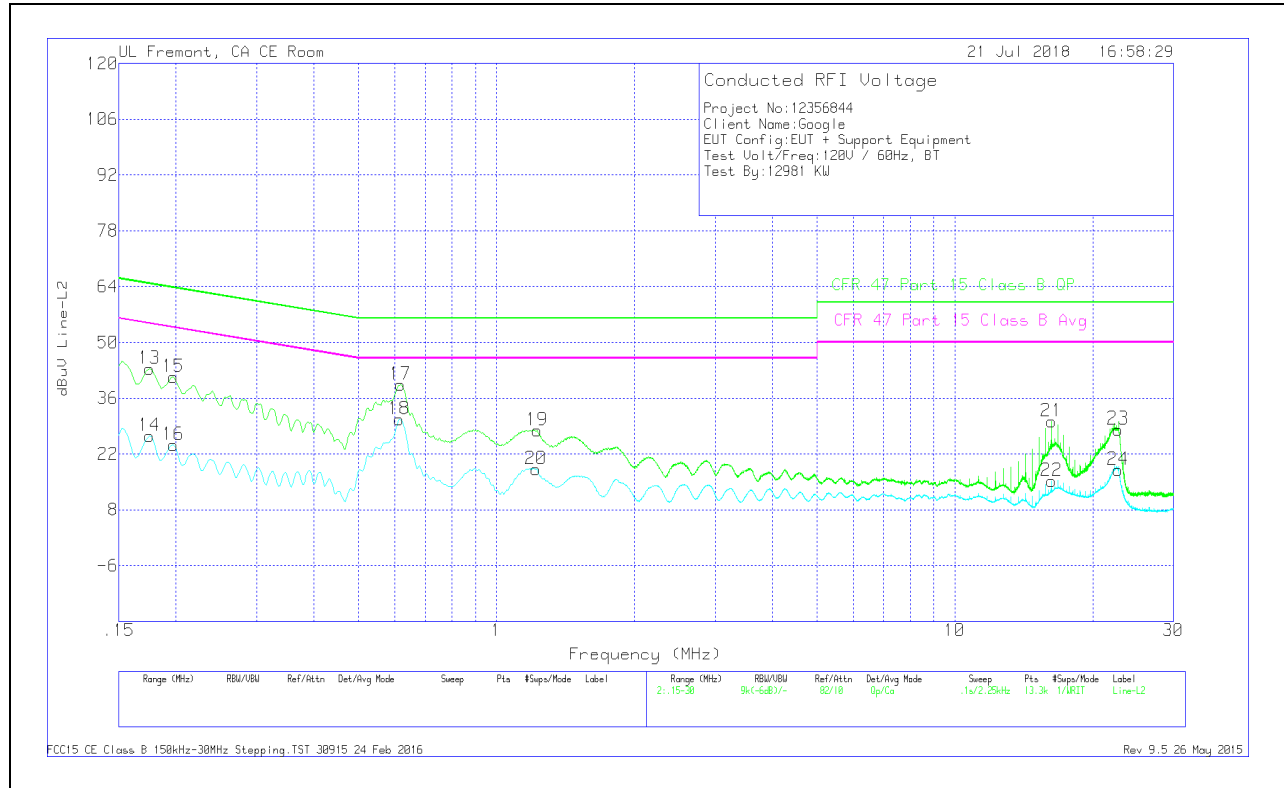
10.1.1. EUT POWERED BY AC/DC ADAPTER**LINE 1 RESULTS**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.17475	31.25	Qp	0	0	10.1	41.35	64.73	-23.38	-	-
2	.17475	16.83	Ca	0	0	10.1	26.93	-	-	54.73	-27.8
3	.19725	31.34	Qp	0	0	10.1	41.44	63.73	-22.29	-	-
4	.19725	16.88	Ca	0	0	10.1	26.98	-	-	53.73	-26.75
5	.62025	27.23	Qp	0	0	10.1	37.33	56	-18.67	-	-
6	.618	22.18	Ca	0	0	10.1	32.28	-	-	46	-13.72
7	1.1985	16.61	Qp	0	.1	10.1	26.81	56	-29.19	-	-
8	1.2075	8.63	Ca	0	.1	10.1	18.83	-	-	46	-27.17
9	16.2712	18.39	Qp	.1	.3	10.3	29.09	60	-30.91	-	-
10	16.2712	6.63	Ca	.1	.3	10.3	17.33	-	-	50	-32.67
11	22.2787	18.4	Qp	.1	.3	10.4	29.2	60	-30.8	-	-
12	22.2787	8.52	Ca	.1	.3	10.4	19.32	-	-	50	-30.68

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



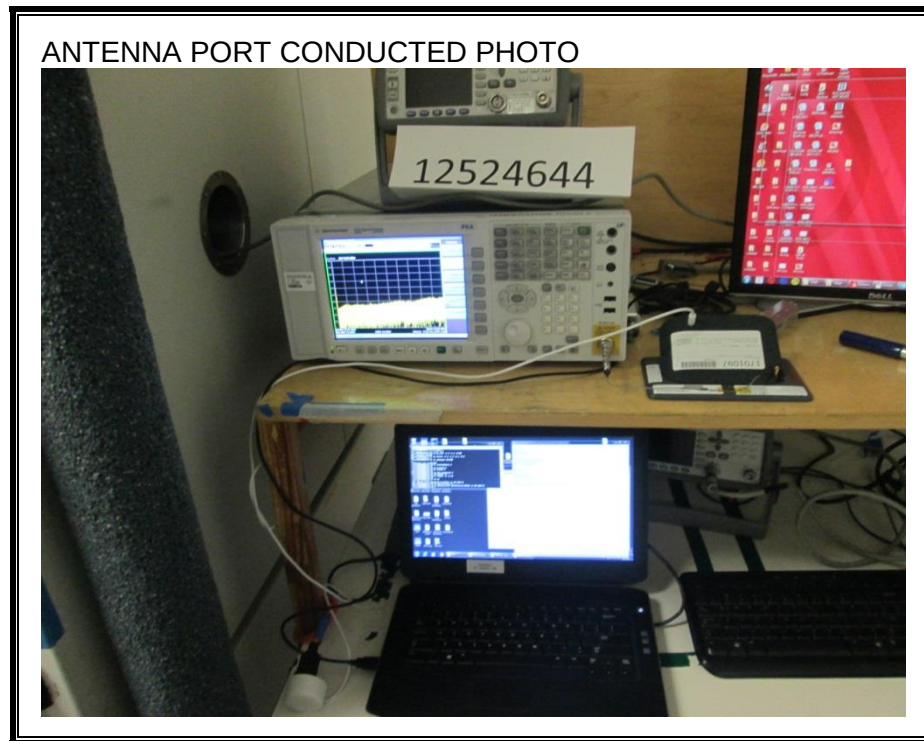
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.17475	33.34	Qp	0	0	10.1	43.44	64.73	-21.29	-	-
14	.17475	16.44	Ca	0	0	10.1	26.54	-	-	54.73	-28.19
15	.19725	31.19	Qp	0	0	10.1	41.29	63.73	-22.44	-	-
16	.19725	14.24	Ca	0	0	10.1	24.34	-	-	53.73	-29.39
17	.618	29.35	Qp	0	0	10.1	39.45	56	-16.55	-	-
18	.6135	20.59	Ca	0	0	10.1	30.69	-	-	46	-15.31
19	1.2255	17.68	Qp	0	.1	10.1	27.88	56	-28.12	-	-
20	1.221	8.01	Ca	0	.1	10.1	18.21	-	-	46	-27.79
21	16.2712	19.41	Qp	.1	.3	10.3	30.11	60	-29.89	-	-
22	16.2712	4.58	Ca	.1	.3	10.3	15.28	-	-	50	-34.72
23	22.7332	17.38	Qp	.1	.3	10.4	28.18	60	-31.82	-	-
24	22.7096	7.28	Ca	.1	.3	10.4	18.08	-	-	50	-31.92

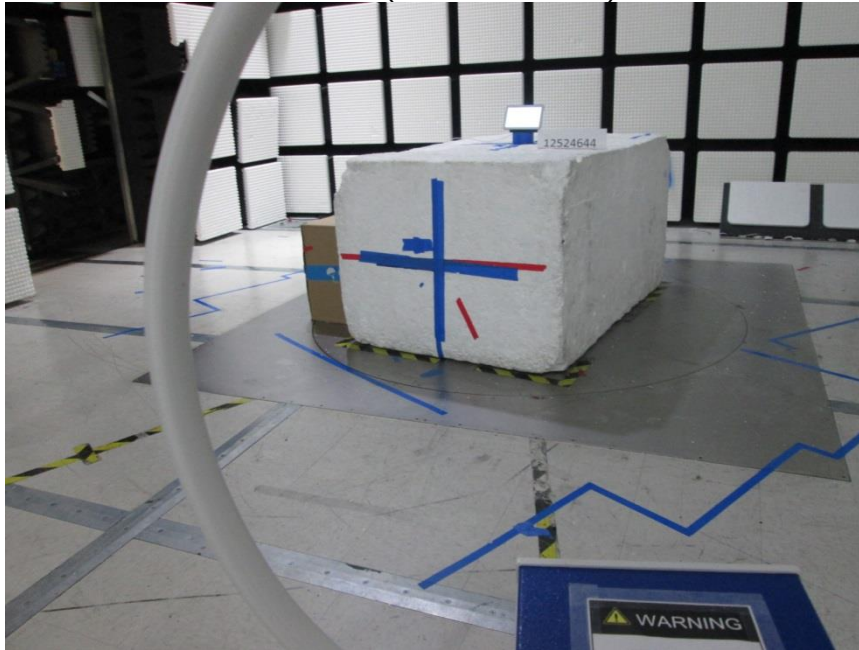
Qp - Quasi-Peak detector

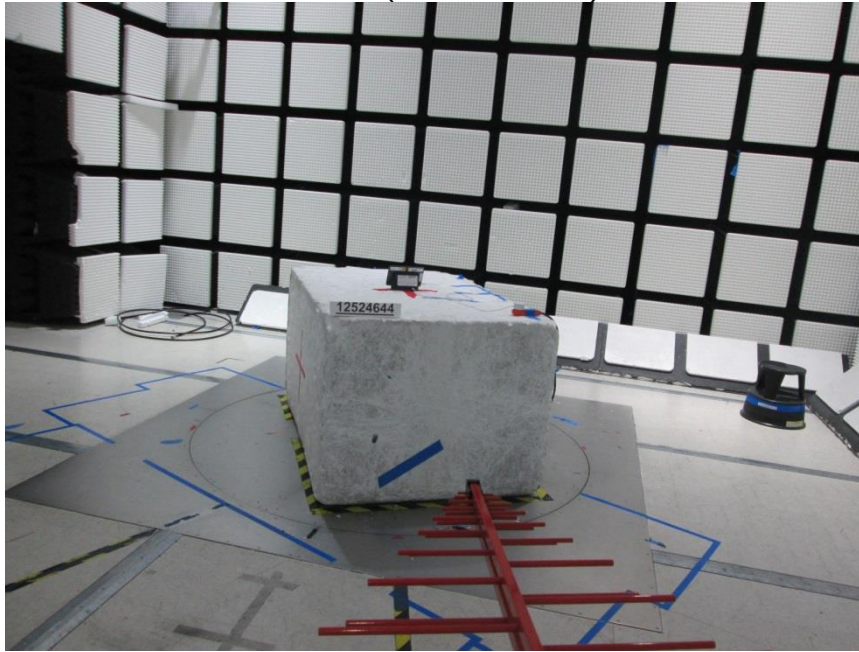
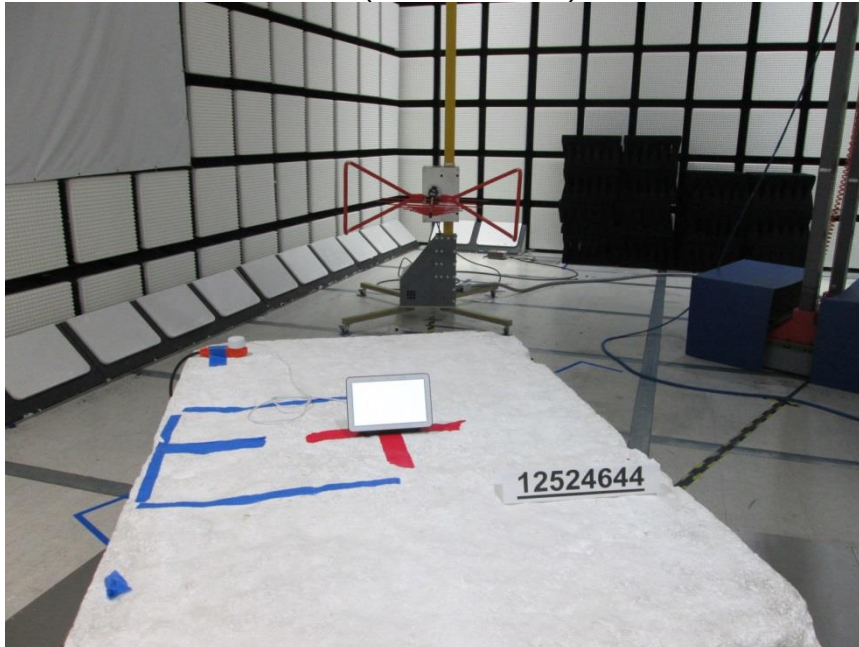
Ca - CISPR average detection

11. SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP

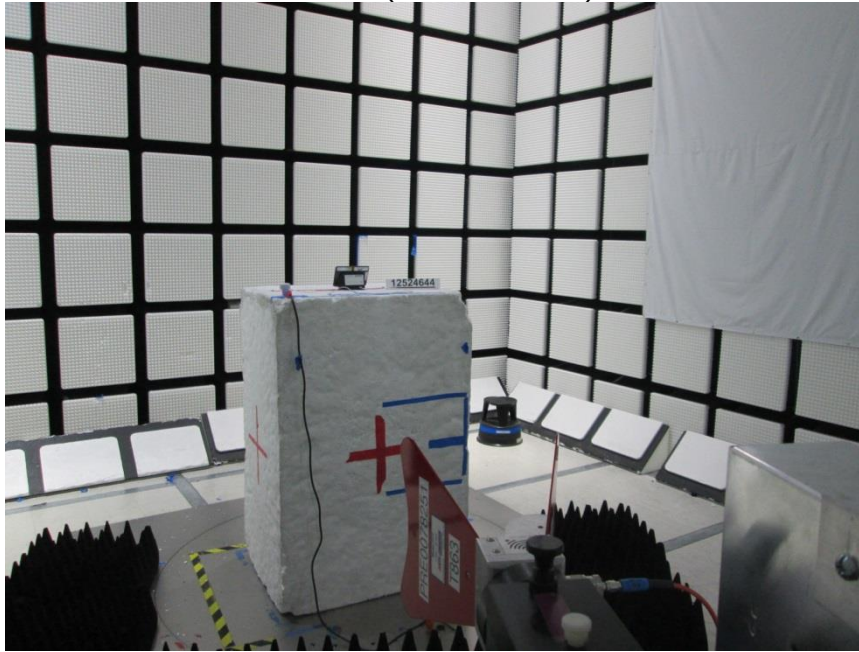


RADIATED RF MEASUREMENT SETUP (BELOW 30 MHz)**RADIATED FRONT PHOTO (BELOW 30 MHz)****RADIATED BACK PHOTO (BELOW 30 MHz)**

RADIATED RF MEASUREMENT SETUP (BELOW 1 GHz)**RADIATED FRONT PHOTO (BELOW 1 GHz)****RADIATED BACK PHOTO (BELOW 1 GHz)**

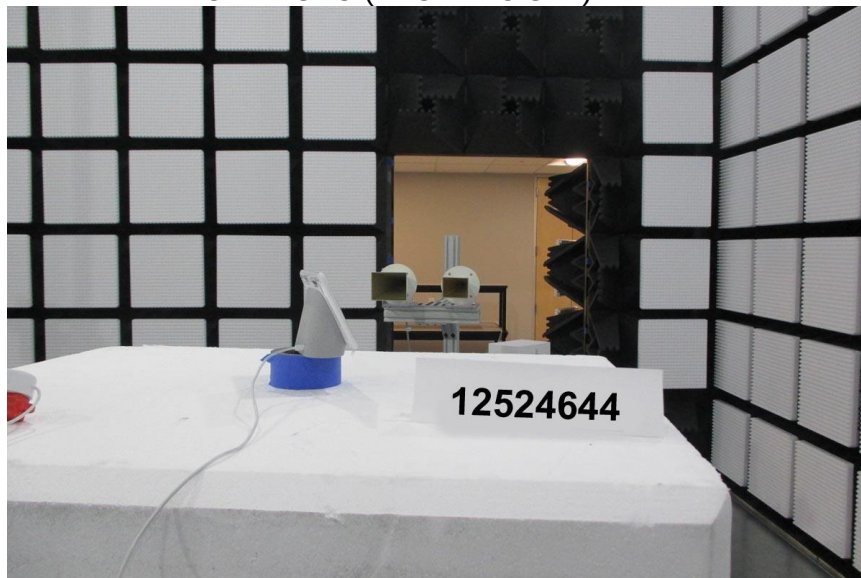
RADIATED RF MEASUREMENT SETUP (1-18 GHz)

RADIATED FRONT PHOTO (ABOVE 1 GHz)



RADIATED BACK PHOTO (ABOVE 1 GHz)



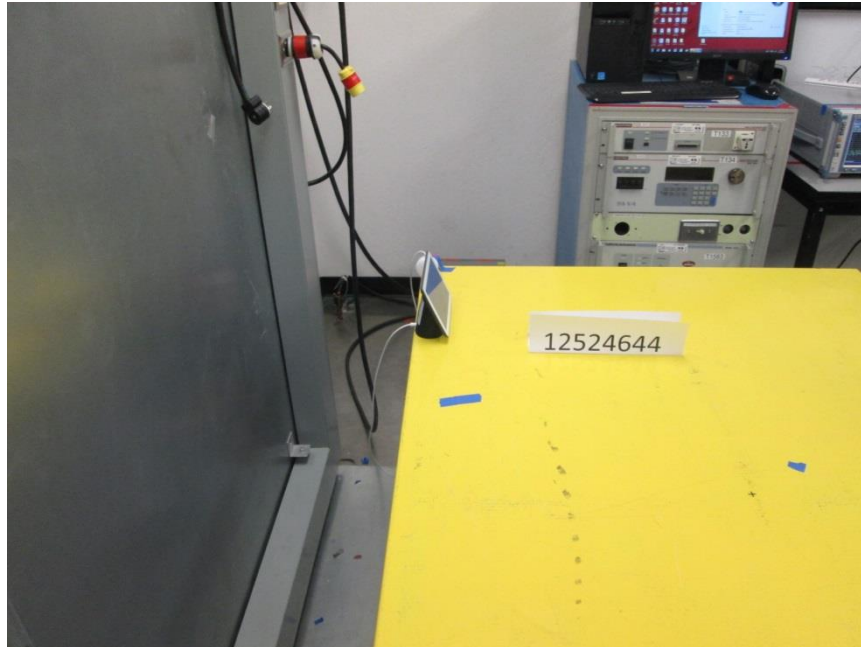
RADIATED RF MEASUREMENT SETUP (Above 18 GHz)**RADIATED FRONT PHOTO (ABOVE 18 GHz)****RADIATED BACK PHOTO (ABOVE 18 GHz)**

POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP

LINE CONDUCTED FRONT PHOTO



LINE CONDUCTED BACK PHOTO



END OF REPORT