

8.4. CESSATION TIME

LIMITS

FCC

§15.519(a)(1) A UWB device operating under the provisions of this section shall transmit only when it is sending information to an associated receiver. The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting.

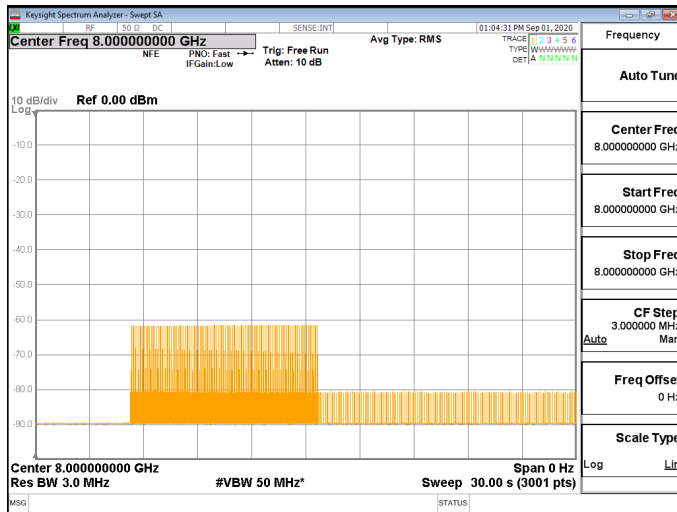
RSS-220

Section 5.3.1 (b) The device is to transmit only when it is sending information to an associated receiver. The device shall cease transmission of information within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB device at least every 10 seconds or the UWB device shall cease transmitting any information other than periodic signals used for the establishment or re-establishment of a communication link with an associated receiver.

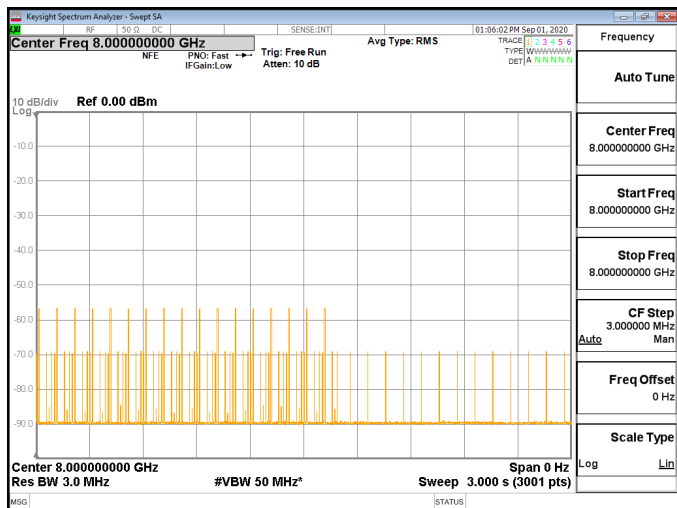
TEST PROCEDURES

Transmissions are monitored for two cases:

1. The smart phone ends the UWB link.
2. The EUT ends the UWB link.

Case 2: EUT ends the UWB linkRESULT

- EUT ends the link, Smart Phone stops Acknowledgements but continues Polling
- EUT ceases transmissions, does not respond to Polling Signals

Zoom-in Plot during On-Off TransitionRESULT

- Shows Link Traffic, Acknowledgements and Polling Signals while Link is established
- Shows Polling Signals after Link has ended

8.5. EMISSIONS BELOW 960 MHz

LIMITS

FCC

§15.519 (c) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in §15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

15.209 (a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
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

RSS-220

Section 3.4 Radiated emissions at or below 960 MHz for all subclasses of UWB device shall not exceed the following limits. Measurements of radiated emissions at and below 960 MHz are to be made using a CISPR quasi-peak detector. CISPR measurement bandwidth specifications are to be used.

Frequency (MHz)	Field Strength (Microvolts/m)	Measurement Distance (Metres)	E.i.r.p. (dBmW)
0.009-0.490	2,400/F (F in kHz)	300	$10 \log (17.28 / F^2)$ (F in kHz)
0.490-1.705	24,000/F (F in kHz)	30	$10 \log (17.28 / F^2)$ (F in kHz)
1.705-30	30	30	-45.7
30-88	100	3	-55.2
88-216	150	3	-51.7
216-960	200	3	-49.2

Note: The emission limits for the bands 9-90 kHz and 110-490 kHz are based on measurements employing an average emissions detector.

TEST PROCEDURE

ANSI C63.10 Clause 10.2 and 10.3.

RSS-220 Annex

PROCEDURE FOR 9 kHz TO 960 MHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 3m from the EUT.

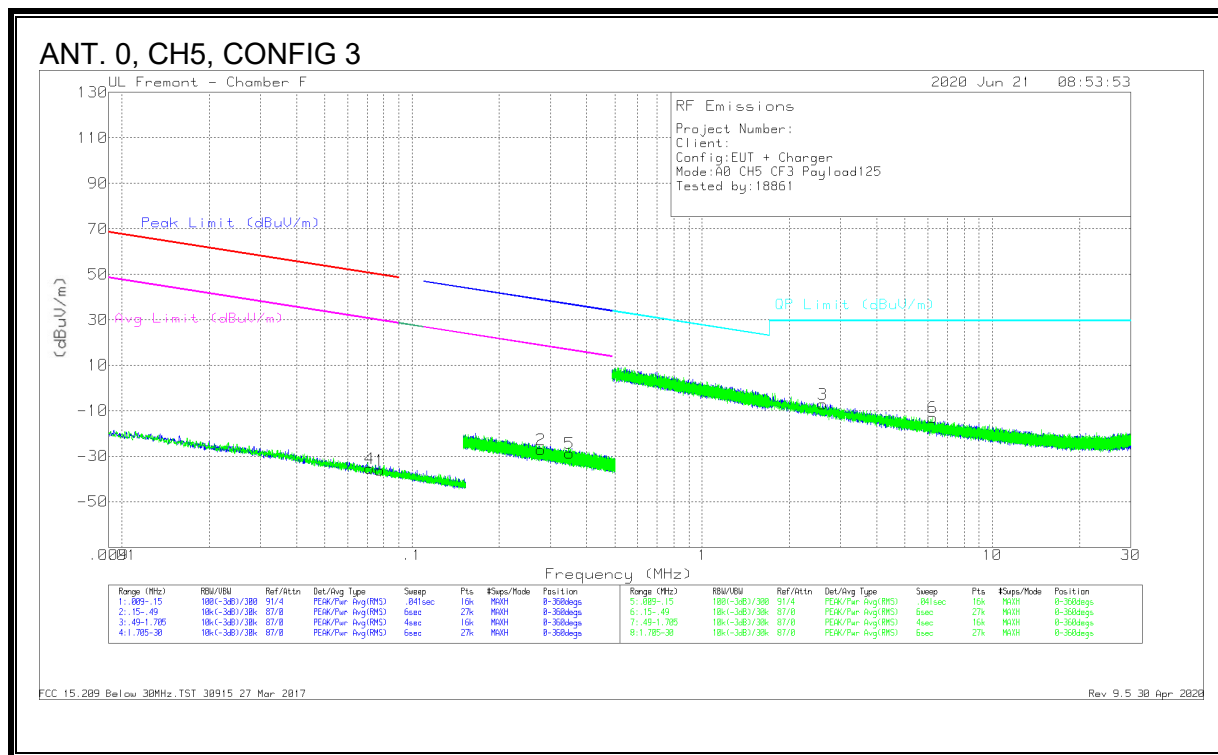
A final test is made at any frequencies at which emissions are found. During this final scan, the antenna is kept no further from the EUT than the maximum distance calculated for each band that yields a minimum system noise floor.

RESULTS

Emissions Summary

Ant	CH	Config	Payload	Power Setting	Frequency Range	
					9 kHz - 30 MHz	30 - 960 MHz
0	5	3	125	Max	PASS	PASS
0	9	3	125	Max	PASS	PASS
1	5	3	125	Max	PASS	PASS
1	9	3	125	Max	PASS	PASS
2	5	3	125	Max	PASS	PASS
2	9	3	125	Max	PASS	PASS

8.5.1. EMISSIONS, 9 kHz – 30 MHz



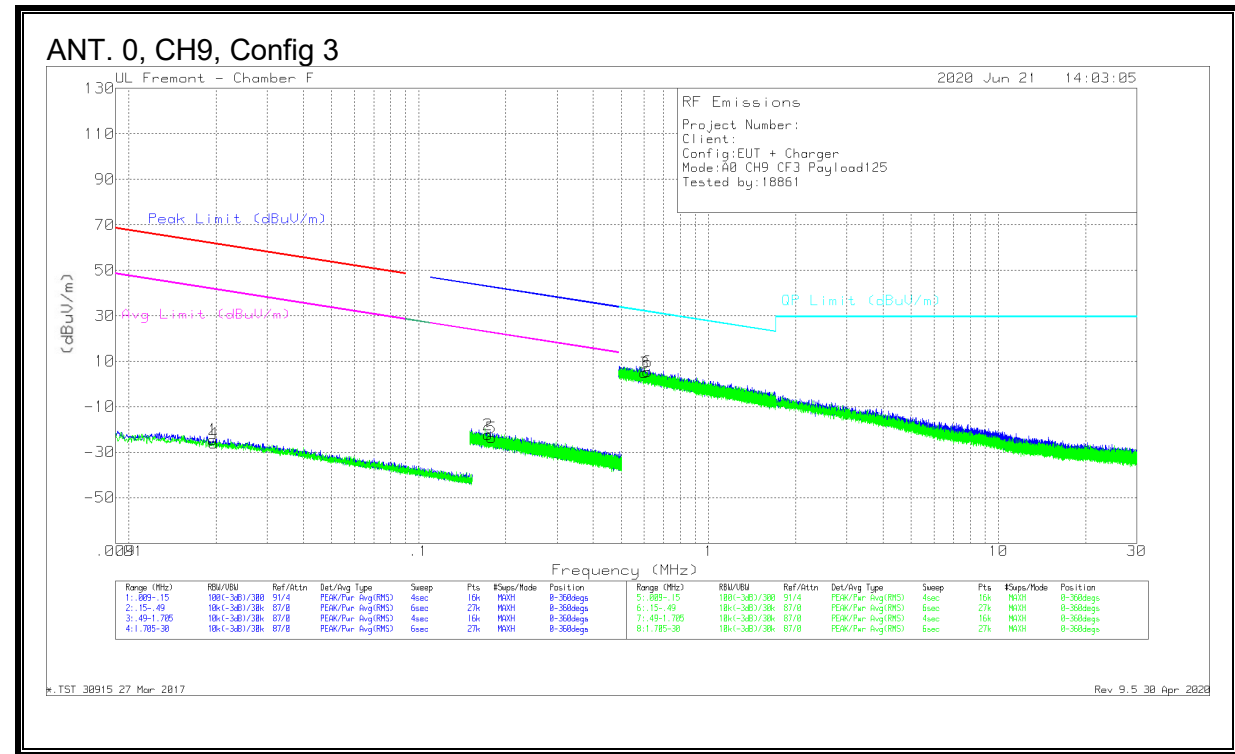
Trace Markers

Marker	Freq. (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	07745	31.59	Pk	12.3	0	-80	-36.11	49.8	-85.91	29.8	-65.91	-	-	-	-	0-360
2	27806	41.62	Pk	11.2	-1	-80	-27.08	-	-	-	-	38.73	-65.81	18.73	-45.81	0-360
4	07151	32.31	Pk	12.4	0	-80	-35.29	50.5	-85.79	30.5	-65.79	-	-	-	-	0-360
5	34919	40.15	Pk	11.1	-1	-80	-28.65	-	-	-	-	36.75	-65.4	16.75	-45.4	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	2.60104	21.83	Pk	10.8	.2	-40	-7.17	29.5	-36.67	0-360
6	6.22922	15.89	Pk	10.8	.3	-40	-13.01	29.5	-42.51	0-360

Pk - Peak detector



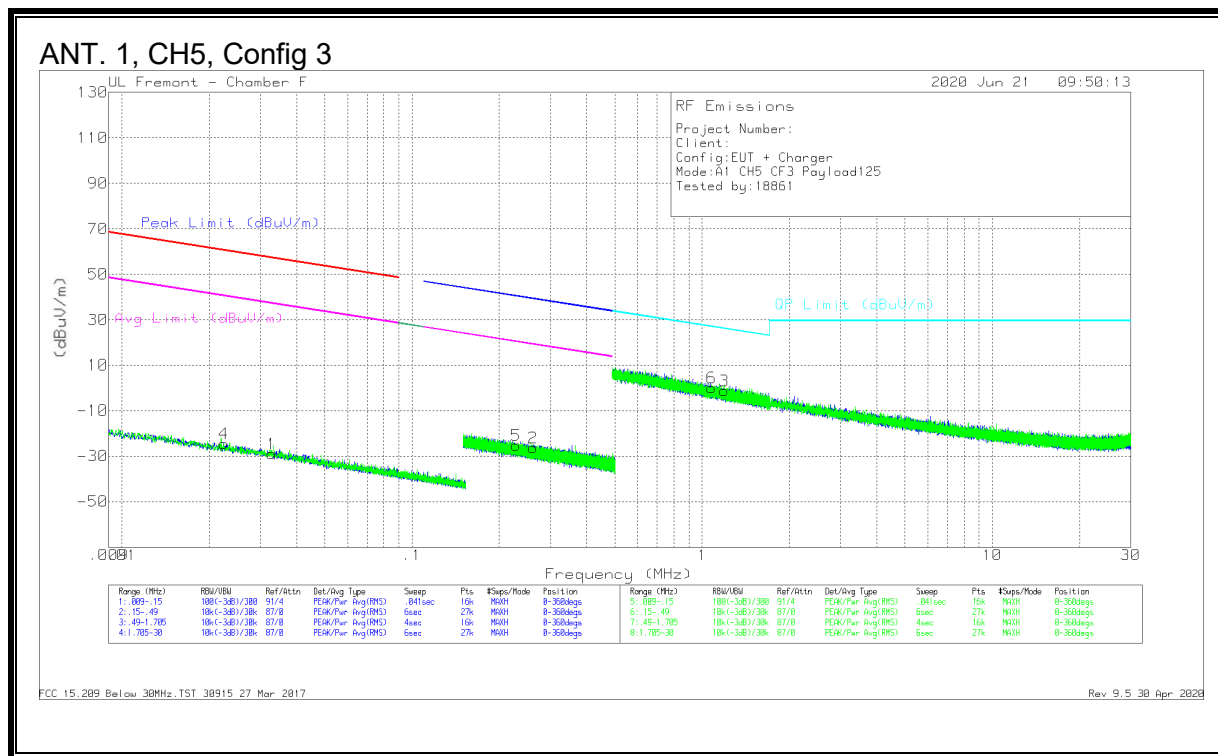
Trace Markers

Marker	Freq. (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01957	40.39	Pk	15.3	0	-80	-24.31	61.75	-86.06	41.75	-66.06	-	-	22.83	-45.11	0-360
2	.17353	46.02	Pk	11.6	.1	-80	-22.28	61.72	-87.67	41.72	-67.67	-	-	-	-	0-360
4	.01964	38.85	Pk	15.2	0	-80	-25.95	61.72	-87.67	41.72	-67.67	-	-	-	-	0-360
5	.17891	44.73	Pk	11.6	.1	-80	-23.57	-	-	-	-	42.57	-66.14	22.57	-46.14	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.60233	33.98	Pk	10.9	.1	-40	4.98	32.01	-27.03	0-360
6	.61548	34.55	Pk	10.9	.1	-40	5.55	31.83	-26.28	0-360

Pk - Peak detector



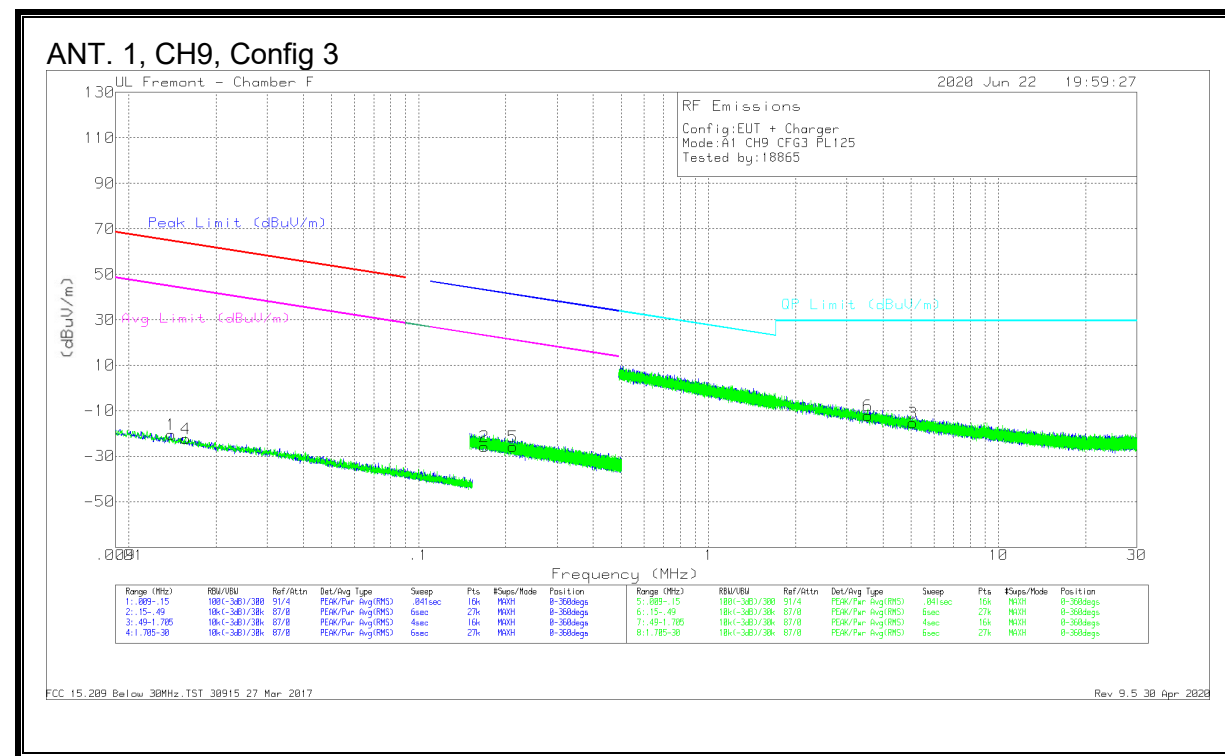
Trace Markers

Marker	Freq. (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	03292	36.83	Pk	14.1	0	-80	-28.97	57.24	-86.21	37.24	-66.21	-	-	19.26	-45.48	0-360
2	2617	42.48	Pk	11.2	1	-80	-26.22	60.56	-85	40.56	-65	-	-	20.46	-45.76	0-360
4	02245	40.66	Pk	14.9	0	-80	-24.44	60.56	-85	40.56	-65	-	-	20.46	-45.76	0-360
5	22805	43.3	Pk	11.3	1	-80	-25.3	-	-	-	-	40.46	-65.76	20.46	-45.76	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	1.19224	27.79	Pk	10.8	.1	-40	-1.31	26.1	-27.41	0-360
6	1.07725	29.24	Pk	10.8	.1	-40	.14	26.98	-26.84	0-360

Pk - Peak detector



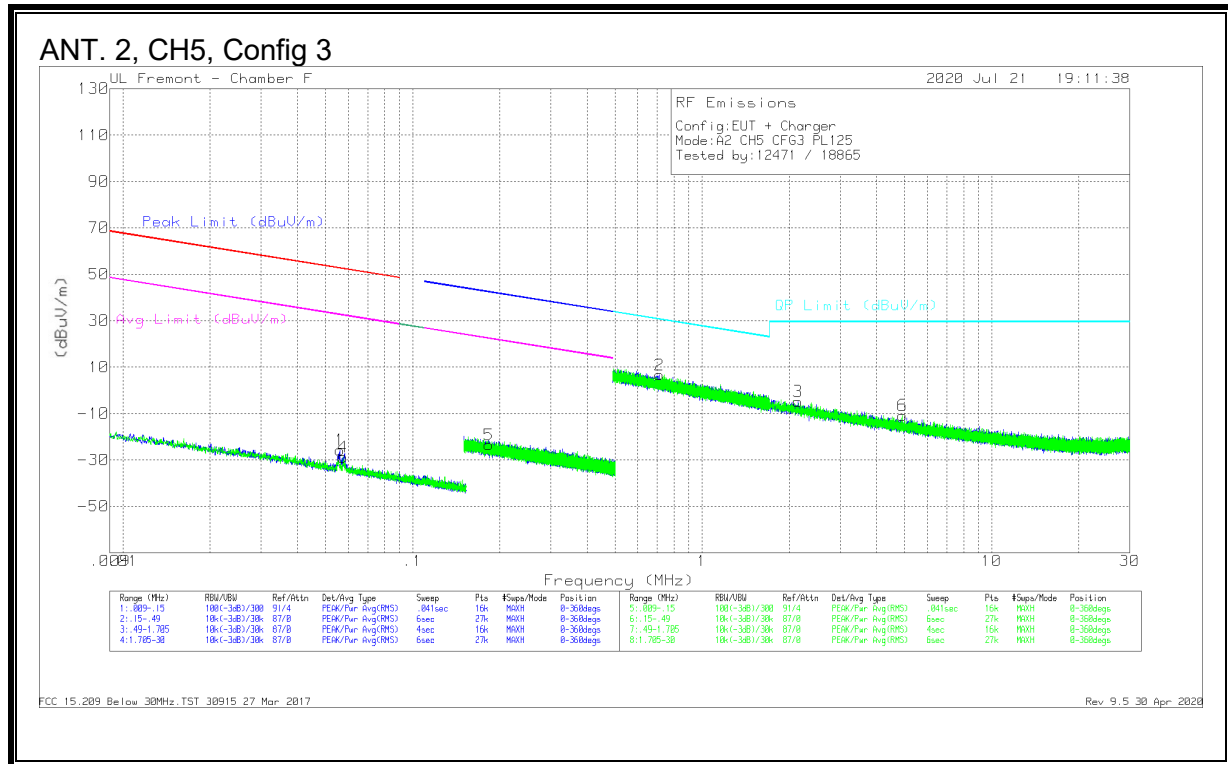
Trace Markers

Marker	Freq. (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	01401	42.16	Pk	17.4	0	-80	-20.44	64.65	-85.09	44.65	-65.09	-	-	23.07	-48.84	0-360
2	1688	42.53	Pk	11.9	1	-80	-25.77	63.66	-85.9	43.66	-65.9	-	-	-	-	0-360
4	01571	40.96	Pk	16.8	0	-80	-22.24	63.66	-85.9	43.66	-65.9	-	-	-	-	0-360
5	21141	42.68	Pk	11.4	1	-80	-25.82	-	-	-	-	41.11	-66.93	21.11	-46.93	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	5.06489	13.7	Pk	10.8	2	-40	-15.3	29.5	-44.8	0-360
6	3.54738	16.86	Pk	10.8	2	-40	-12.14	29.5	-41.64	0-360

Pk - Peak detector



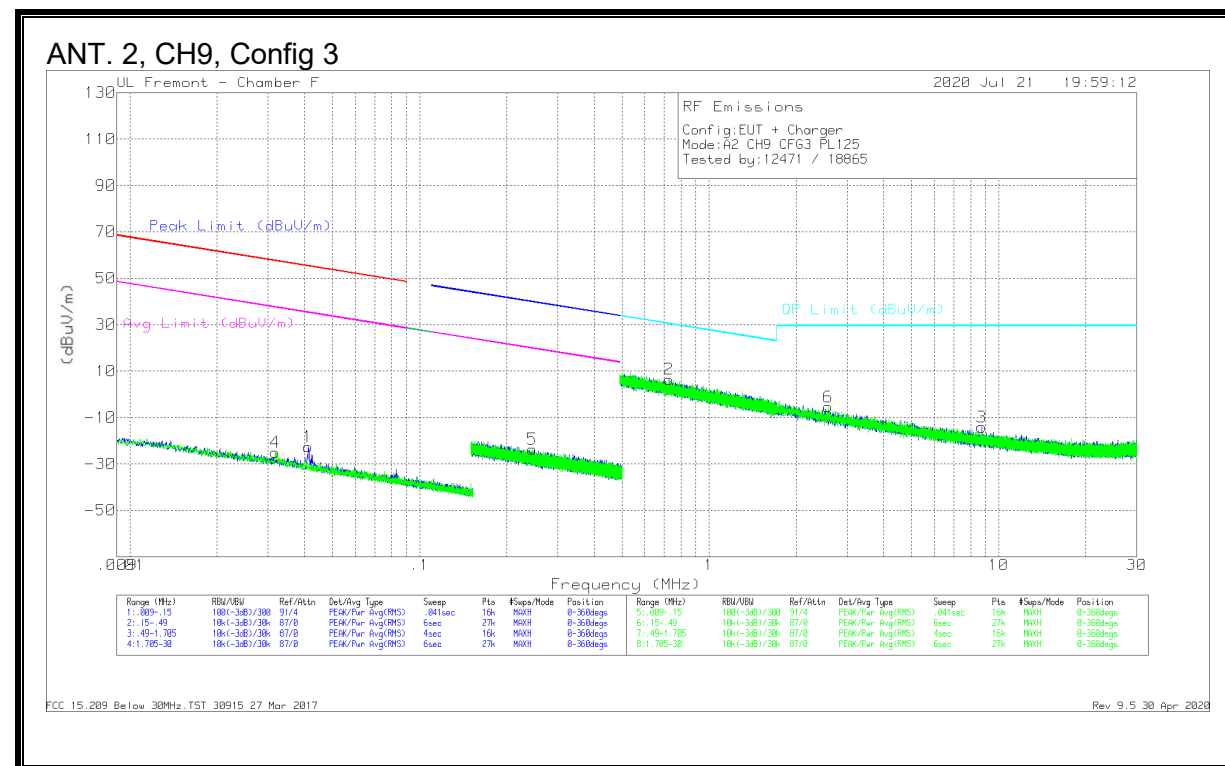
Trace Markers

Marker	Freq. (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.05604	41.7	Pk	12.6	0	-80	-25.7	52.61	-78.31	32.61	-58.31	-	-	-	-	0-360
4	.05751	38.67	Pk	12.6	0	-80	-28.73	52.39	-81.12	32.39	-61.12	-	-	-	-	0-360
5	.18362	44.94	Pk	11.5	.1	-80	-23.46	-	-	-	-	42.34	-65.8	22.34	-45.8	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
2	.71169	35.75	Pk	10.8	.1	-40	6.65	30.57	-23.92	0-360
3	2.14516	24.21	Pk	10.8	.2	-40	-4.79	29.5	-34.29	0-360
6	4.92446	18.23	Pk	10.8	.2	-40	-10.77	29.5	-40.27	0-360

Pk - Peak detector



Trace Markers

Marker	Freq. (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.04124	44.01	Pk	13.4	0	-80	-22.58	55.28	-77.87	35.28	-57.87	-	-	-	-	0-360
4	.03177	40.83	Pk	14.2	0	-80	-24.97	57.54	-82.51	37.54	-62.51	-	-	-	-	0-360
5	.24456	45.07	Pk	11.2	1	-80	-23.63	-	-	-	-	39.85	-63.48	19.85	-43.48	0-360

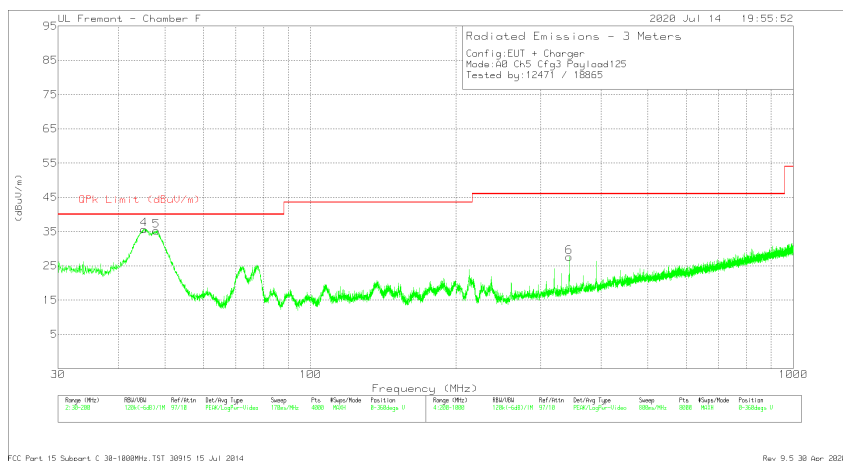
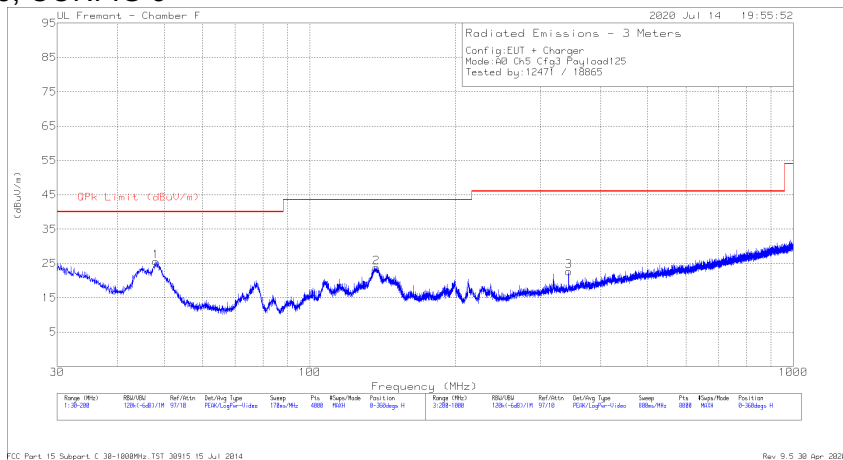
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV/m)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
2	.72666	35.63	Pk	10.8	.1	-40	6.53	30.39	-23.86	0-360
3	8.72974	14.93	Pk	10.7	.3	-40	-14.07	29.5	-43.57	0-360
6	2.57274	23.58	Pk	10.8	.2	-40	-5.42	29.5	-34.92	0-360

Pk - Peak detector

8.5.2. EMISSIONS, 30 - 960 MHz

ANT. 0, CH5, CONFIG 3



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	AF T243 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBUV/m)	QPk Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	48.0672	42.05	Pk	15.2	-31.7	25.55	40	-14.45	0-360	400	H
2	137.2978	35.15	Pk	19.5	-30.9	23.75	43.52	-19.77	0-360	201	H
4	45.2189	50.71	Pk	16.7	-31.7	35.71	40	-4.29	0-360	100	V
5	47.8971	51.77	Pk	15.2	-31.7	35.27	40	-4.73	0-360	100	V
3	343.0186	31.72	Pk	20.7	-29.7	22.72	46.02	-23.3	0-360	99	H
6	343.4186	36.62	Pk	20.7	-29.7	27.62	46.02	-18.4	0-360	99	V

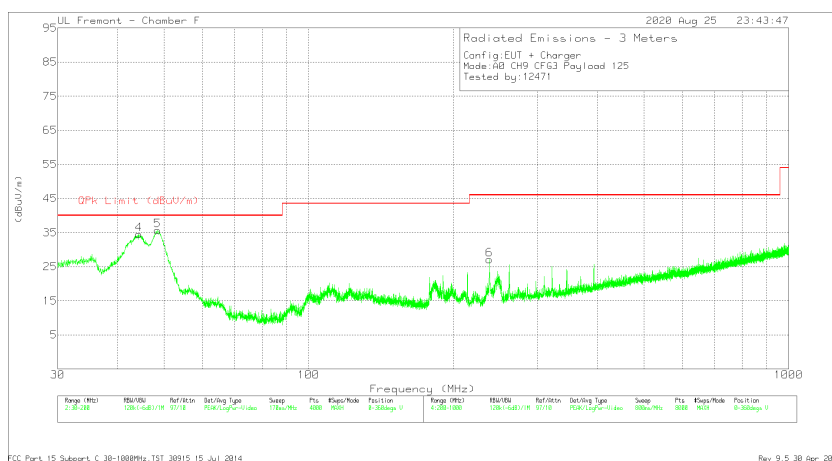
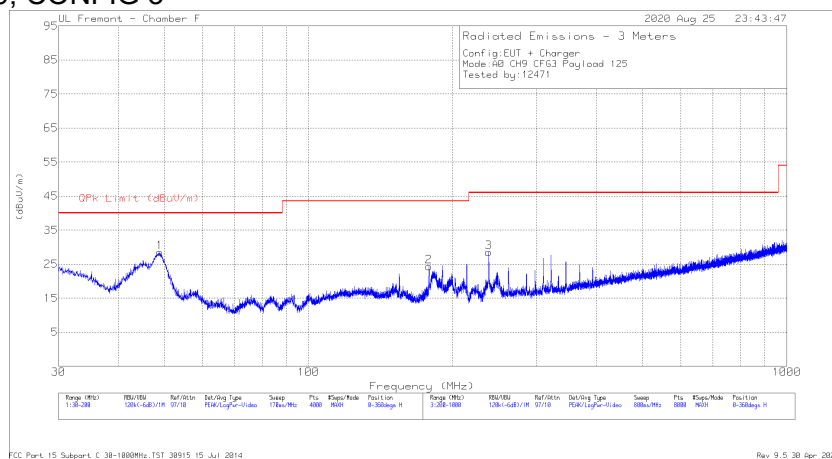
Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBUV/m)	QPk Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	45.4306	44.7	Qp	16.5	-31.7	29.5	40	-10.5	169	100	V
5	47.8702	45.63	Qp	15.3	-31.7	29.23	40	-10.77	284	110	V

Qp - Quasi-Peak detector

ANT. 0, CH9, CONFIG 3



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	48.7899	45.37	Pk	14.9	-31.7	28.57	40	-11.43	0-360	400	H
2	178.4484	37.48	Pk	17.4	-30.6	24.28	43.52	-19.24	0-360	201	H
4	44.3262	49.03	Pk	17.2	-31.7	34.53	40	-5.47	0-360	100	V
5	48.4498	52.38	Pk	15	-31.7	35.68	40	-4.32	0-360	100	V
3	238.0049	40.67	Pk	18	-30.2	28.47	46.02	-17.55	0-360	99	H
6	237.9049	39.37	Pk	18	-30.2	27.17	46.02	-18.85	0-360	201	V

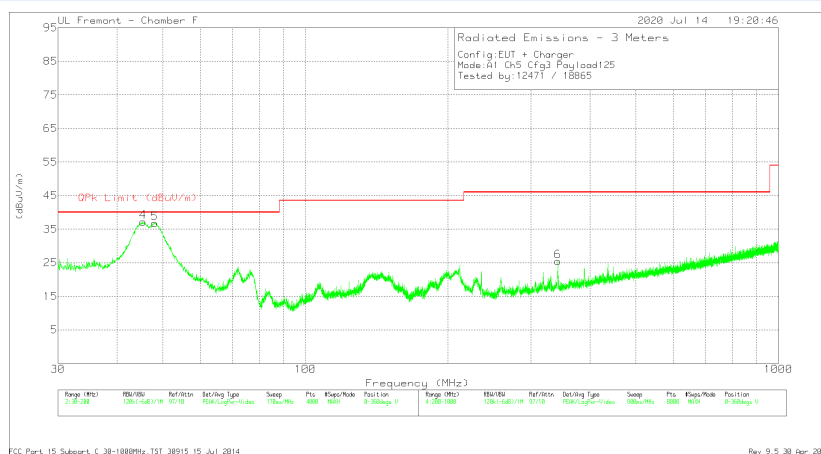
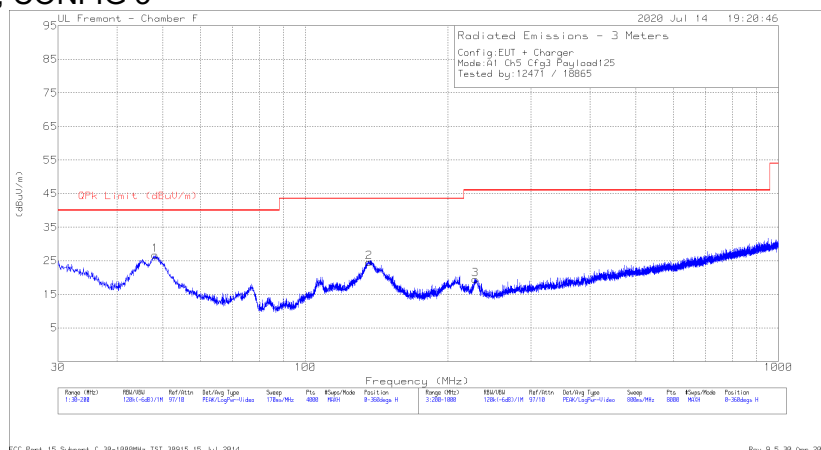
Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	44.3152	44.56	Qp	17.2	-31.7	30.06	40	-9.94	81	102	V
5	48.3941	49.16	Qp	15	-31.7	32.46	40	-7.54	299	100	V

Qp - Quasi-Peak detector

ANT.1, CH5, CONFIG 3



Trace Markers

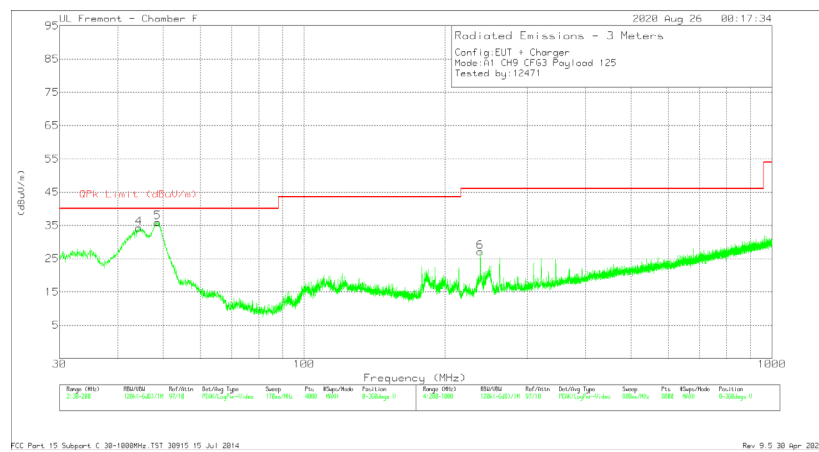
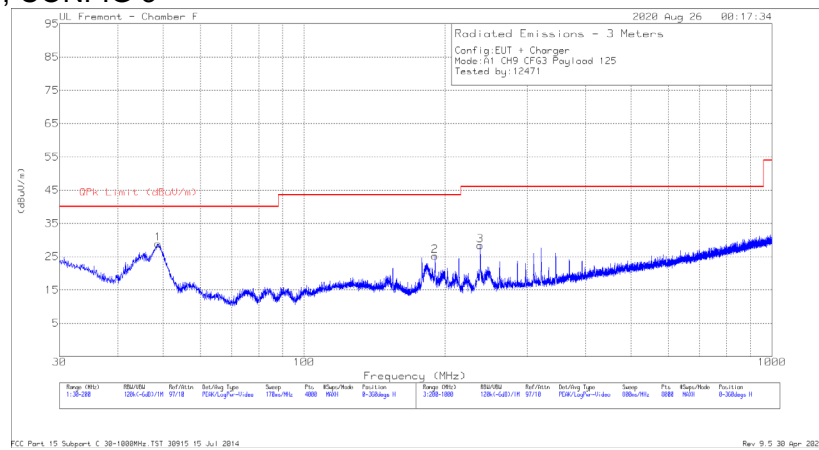
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	48.1522	43.3	Pk	15.1	-31.7	26.7	40	-13.3	0-360	400	H
2	136.4475	35.9	Pk	19.6	-30.9	24.6	43.52	-18.92	0-360	201	H
4	45.4315	52.44	Pk	16.5	-31.7	37.24	40	-2.76	0-360	100	V
5	48.0247	53.31	Pk	15.2	-31.7	36.81	40	-3.19	0-360	100	V
3	228.8037	32.05	Pk	17.6	-30.2	19.45	46.02	-26.57	0-360	99	H
6	342.0185	34.57	Pk	20.6	-29.7	25.47	46.02	-20.55	0-360	99	V

Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	45.4541	49.44	Qp	16.5	-31.7	34.24	40	-5.76	141	103	V
5	48.2522	49.61	Qp	15.1	-31.7	33.01	40	-6.99	306	100	V

Qp - Quasi-Peak detector



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	48.7048	45.69	Pk	14.9	-31.7	28.89	40	-11.11	0-360	400	H
2	190.3515	38.08	Pk	17.7	-30.6	25.18	43.52	-18.34	0-360	99	H
4	44.4112	48.7	Pk	17.2	-31.7	34.2	40	-5.8	0-360	100	V
5	48.6198	52.67	Pk	15	-31.7	35.97	40	-4.03	0-360	100	V
3	237.9049	40.59	Pk	18	-30.2	28.39	46.02	-17.63	0-360	99	H
6	238.0049	39.31	Pk	18	-30.2	27.11	46.02	-18.91	0-360	200	V

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	44.513	44.53	Qp	17.1	-31.7	29.93	40	-10.07	80	106	V
5	48.3928	49.6	Qo	15	-31.7	32.9	40	-7.1	316	100	V

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UL Fremont - Chamber F 2020 Jul 14 20:41:48

Radiated Emissions - 3 Meters
 Config: EUT + Charger
 Mode: AC ON5 (Frag Payload) 25
 Tested by: 12471 / 18865

(dBμV/m)

40PK Limit: (dBμV/m)

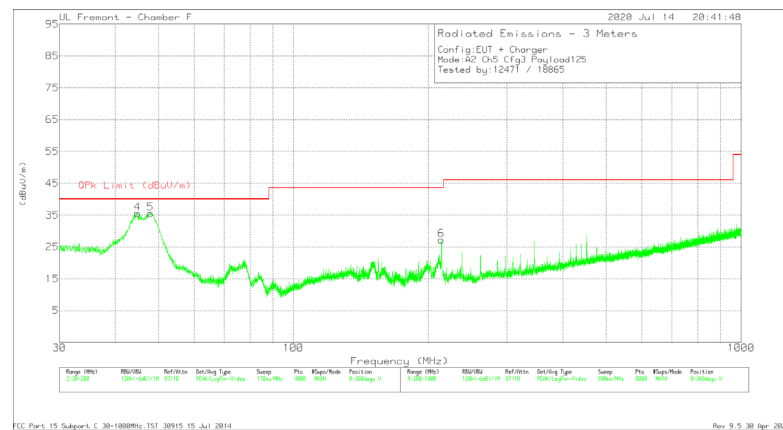
1 2 3

Frequency (MHz)

Span (MHz)	RBW (MHz)	Ref (dBm)	Ref (dBμV/m)	Ref (dBμV/m)	Span	Pls	Flare Mode	Pls (dBm)	Flare Mode	Pls (dBm)	Flare Mode	Pls (dBm)
1.00 MHz	100 kHz	100 dBμV/m	100 dBμV/m	100 dBμV/m	100 MHz	100	None	100 dBμV/m	100	None	100 dBμV/m	100

FCC Part 15 Subpart C 30-1000MHz, TST 30915 15 Jul 2014

Rev. 9.5.30 Apr. 2014

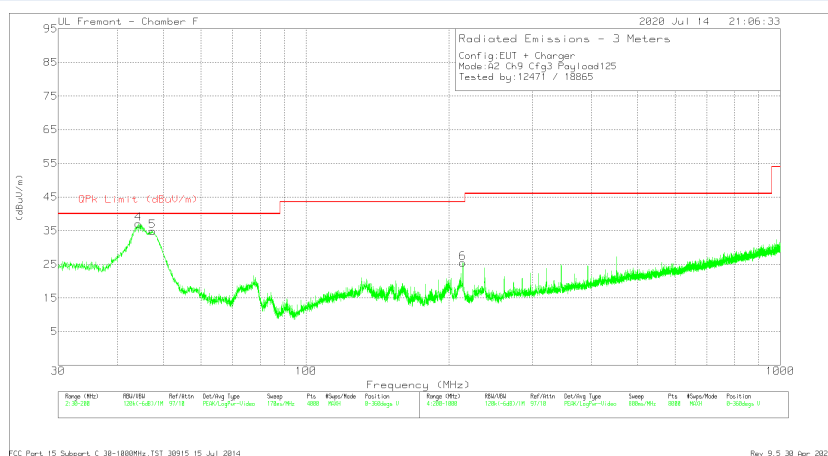
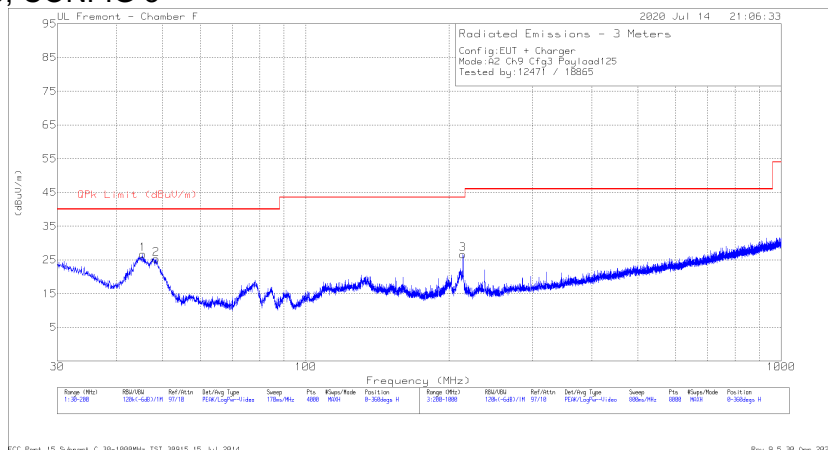


Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	44.8363	40.2	Pk	16.9	-31.7	25.4	40	-14.6	0-360	401	H
2	48.4923	42.52	Pk	15	-31.7	25.82	40	-14.18	0-360	401	H
4	44.8789	50.3	Pk	16.9	-31.7	35.5	40	-4.5	0-360	100	V
5	47.8971	52.01	Pk	15.2	-31.7	35.51	40	-4.49	0-360	100	V
3	214.0018	40.95	Pk	17.1	-30.4	27.65	43.52	-15.87	0-360	99	H
6	214.0018	40.5	Pk	17.1	-30.4	27.2	43.52	-16.32	0-360	99	V

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	45.116	46.28	Qp	16.7	-31.7	31.28	40	-8.72	81	104	V
5	47.8529	48.71	Qp	15.3	-31.7	32.31	40	-7.69	320	100	V

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ANT. 2, CH9, CONFIG 3



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	45.389	41.89	Pk	16.6	-31.7	26.79	40	-13.21	0-360	400	H
2	48.4073	42.04	Pk	15	-31.7	25.34	40	-14.66	0-360	400	H
4	44.3262	51.53	Pk	17.2	-31.7	37.03	40	-2.97	0-360	100	V
5	47.387	51.15	Pk	15.4	-31.7	34.85	40	-5.15	0-360	100	V
3	214.1018	39.97	Pk	17.1	-30.4	26.67	43.52	-16.85	0-360	201	H
6	214.1018	38.74	Pk	17.1	-30.4	25.44	43.52	-18.08	0-360	200	V

Pk - Peak detector

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	44.3593	47.14	Qp	17.2	-31.7	32.64	40	-7.36	62	110	V
5	47.3448	47.95	Qp	15.5	-31.7	31.75	40	-8.25	43	100	V

Qp - Quasi-Peak detector

8.6. AVERAGE EMISSIONS ABOVE 960 MHz

LIMITS

FCC

15.519 (c)

Frequency in MHz	EIRP in dBm
960-1610	-75.3
1610-1990	-63.3
1990-3100	-61.3
3100-10600	-41.3
Above 10600	-61.3

§15.519 (d) In addition to the radiated emission limits specified in the table in paragraph (c) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164-1240	-85.3
1559-1610	-85.3

RSS-220

Section 5.3.1 (d) Radiated emissions above 960 MHz from a device shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz.

Hand-held (Outdoor) Communication, Measurement, Location Sensing, and Tracking Devices	
Frequency	E.i.r.p. in a Resolution Bandwidth of 1 MHz
960-1 610 MHz	-75.3 dBm
1.61-4.75 GHz	-70.0 dBm
4.75-10.6 GHz	-41.3 dBm
Above 10.6 GHz	-61.3 dBm

Section 5.3.1 (e) In addition to the limits specified in paragraph (d) of this section, radiated emissions shall not exceed the following average limits when measured using a resolution bandwidth greater than or equal to 1 kHz. The measurements shall demonstrate compliance with the stated limits at whatever resolution bandwidth is used.

Frequency	E.i.r.p. in a Resolution Bandwidth of no less than 1 kHz
1 164-1 240 MHz	-85.3 dBm
1 559-1 610 MHz	-85.3 dBm

TEST PROCEDURE

ANSI C63.10 Clause 10.2 and 10.3.

RSS-220 Annex

PROCEDURE FOR 0.96 TO 6 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

A low pass filter with a cut off frequency of 6 GHz is used to suppress the fundamental and perform measurement for 0.96 - 6 GHz.

RESULTS FOR 6 GHz TO 9 GHz

The 6 - 9 GHz frequency band is covered in Section 8.2.

PROCEDURE FOR 9 GHz TO 18 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

A high pass filter with pass band frequency beyond 9 GHz is used to suppress the fundamental and perform measurement for 9 - 18 GHz.

PROCEDURE FOR 1.164 TO 1.240 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

RBW = 120 kHz & VBW = 360 kHz were used at pre-scan.

A low pass filter with a cut off frequency of 6 GHz is used to suppress the fundamental and perform measurement for 1.164 – 1.240 GHz.

PROCEDURE FOR 1.559 TO 1.610 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

RBW = 120 kHz & VBW = 360 kHz were used at pre-scan.

A low pass filter with a cut off frequency of 6 GHz is used to suppress the fundamental and perform measurement for 1.559 – 1.610 GHz.

PROCEDURE FOR 18 GHz TO 40 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

A final test is made at any frequencies at which emissions are found. During this final scan, the antenna is kept no further from the EUT than the maximum distance calculated for each band that yields a minimum system noise floor.

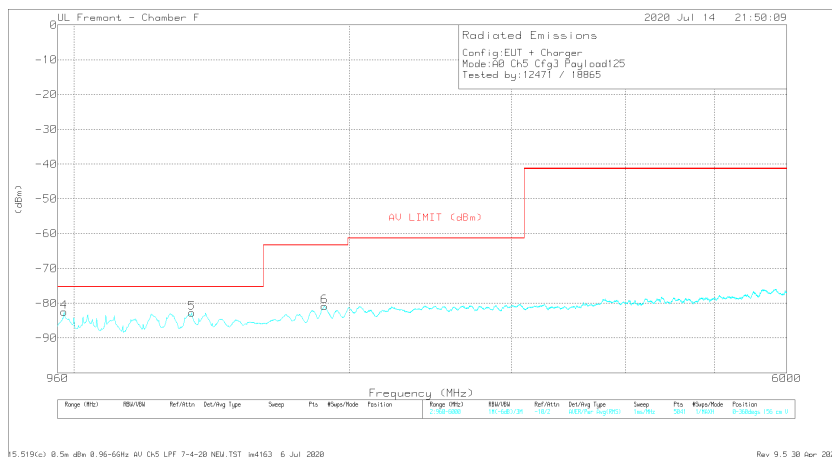
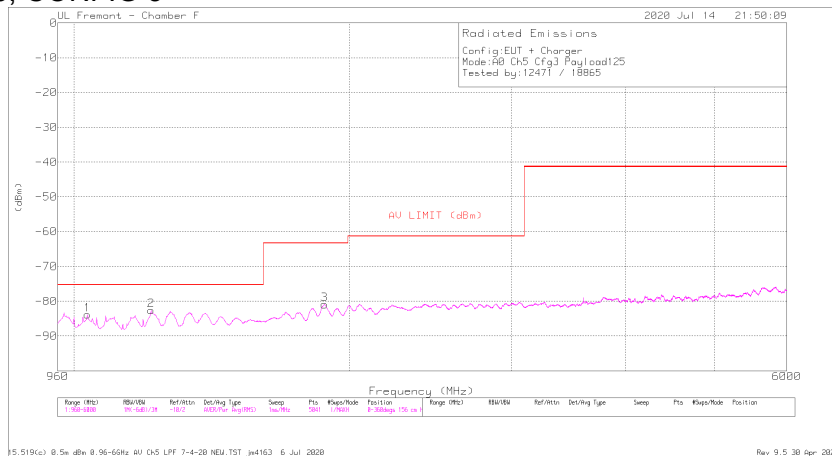
Distance Correction Factor from 3m to 0.5m = $20 \cdot \log(0.5\text{m}/3\text{m}) = -15.56 \text{ dB}$

RESULTS

8.6.1. AVERAGE EMISSIONS, 0.96 – 6 GHz

8.6.1.1. FCC15.519 (C)

ANT. 0, CH5, CONFIG 3



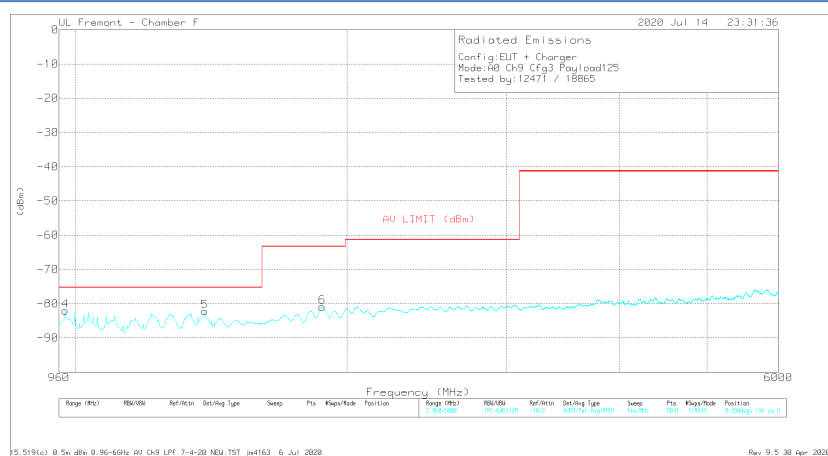
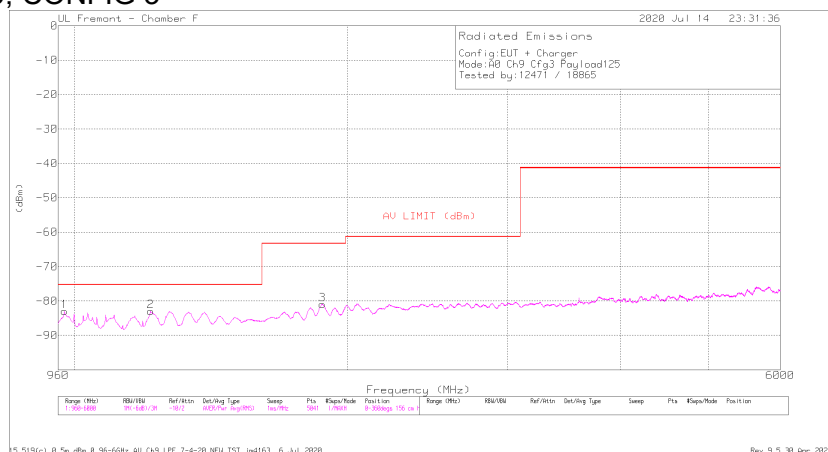
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_LPF (dB)	EIRP (dBm)	FCC15.519(c) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1035	-62.01	RMS	27	-45.2	-15.6	11.8	.2	-83.81	-75.3	-8.51	308	156	H
2	1214	-62.24	RMS	28.4	-45.2	-15.6	11.8	.2	-82.64	-75.3	-7.34	198	156	H
3	1878	-63.11	RMS	30.7	-45	-15.6	11.8	.3	-80.91	-63.3	-17.61	110	156	H
4	976	-61.57	RMS	27.8	-45.1	-15.6	11.8	.2	-82.47	-75.3	-7.17	185	156	V
5	1345	-62.95	RMS	29.1	-45.2	-15.6	11.8	.1	-82.75	-75.3	-7.45	185	156	V
6	1877	-63.13	RMS	30.8	-45	-15.6	11.8	.3	-80.83	-63.3	-17.53	118	156	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

ANT. 0, CH9, CONFIG 3



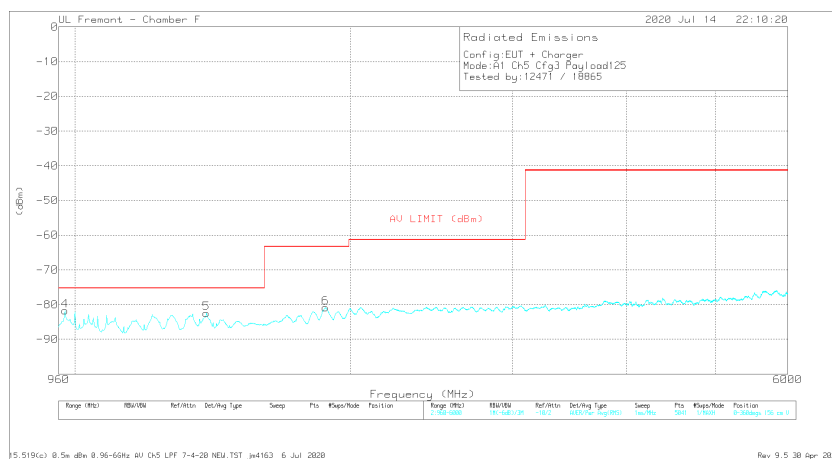
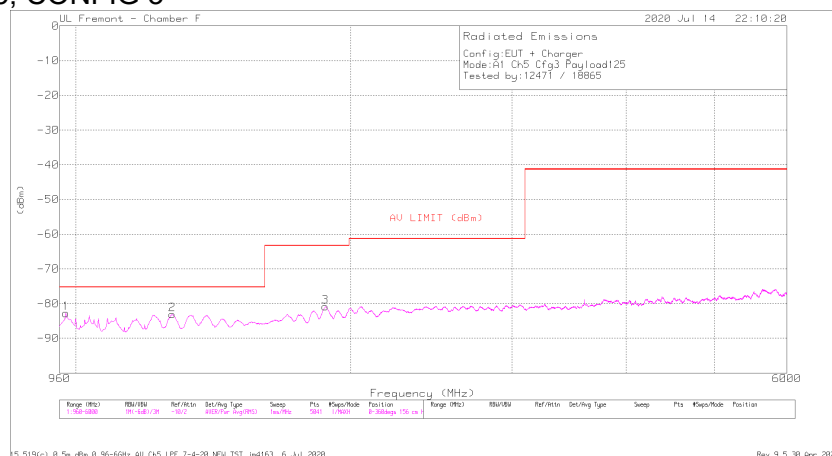
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9 LPF (dB)	EIRP (dBm)	FCC15.519(c) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	976	-62.12	RMS	27.8	-45.1	-15.6	11.8	.2	-83.02	-75.3	-7.72	228	156	H
2	1214	-62.52	RMS	28.4	-45.2	-15.6	11.8	.2	-82.92	-75.3	-7.62	207	156	H
3	1878	-63.13	RMS	30.7	-45	-15.6	11.8	.3	-80.93	-63.3	-17.63	119	156	H
4	976	-61.13	RMS	27.8	-45.1	-15.6	11.8	.2	-82.03	-75.3	-6.73	176	156	V
5	1392	-62.06	RMS	28.7	-45.2	-15.6	11.8	.1	-82.26	-75.3	-6.96	197	156	V
6	1877	-63.21	RMS	30.8	-45	-15.6	11.8	.3	-80.91	-63.3	-17.61	220	156	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

ANT. 1, CH5, CONFIG 3



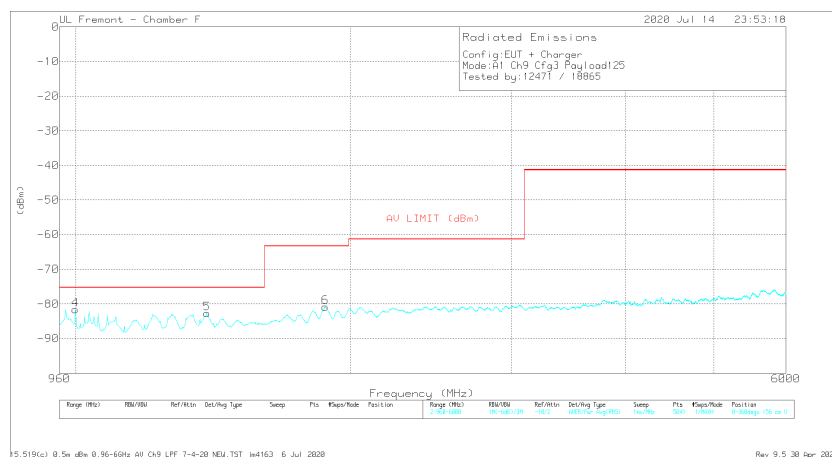
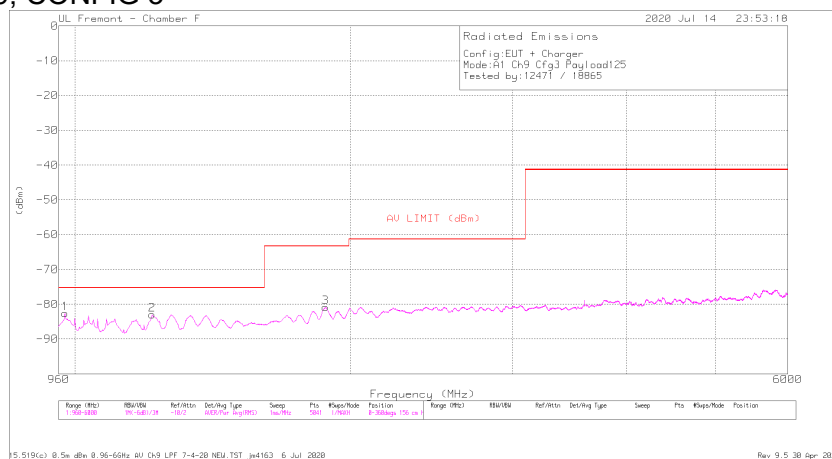
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_LPF (dB)	EIRP (dBm)	FCC15.519(c) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	976	-61.88	RMS	27.8	-45.1	-15.6	11.8	.2	-82.78	-75.3	-7.48	229	156	H
2	1275	-63.12	RMS	29	-45.3	-15.6	11.8	.1	-83.12	-75.3	-7.82	316	156	H
3	1876	-63.16	RMS	30.8	-45	-15.6	11.8	.3	-80.86	-63.3	-17.56	316	156	H
4	976	-60.83	RMS	27.8	-45.1	-15.6	11.8	.2	-81.73	-75.3	-6.43	198	156	V
5	1392	-62.28	RMS	28.7	-45.2	-15.6	11.8	.1	-82.48	-75.3	-7.18	198	156	V
6	1877	-63.2	RMS	30.8	-45	-15.6	11.8	.3	-80.9	-63.3	-17.6	198	156	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

ANT. 1, CH9, CONFIG 3



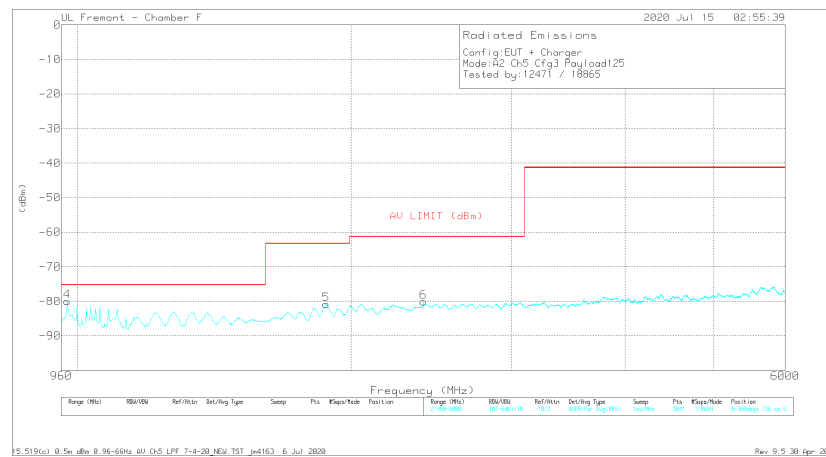
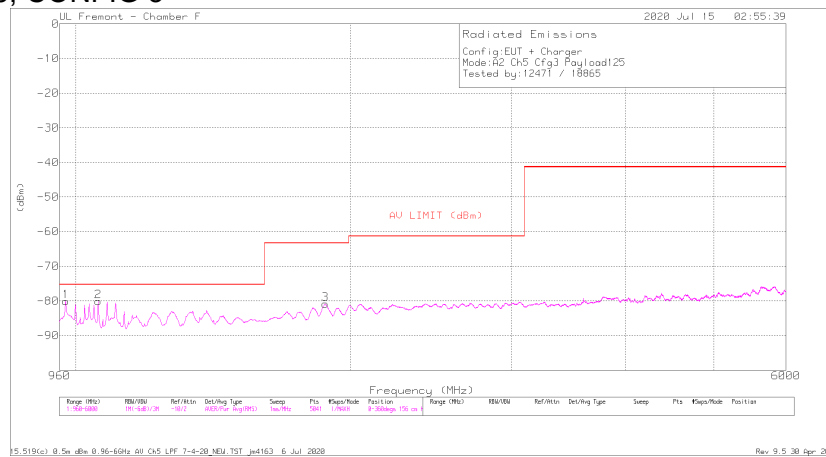
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9_LPF (dB)	EIRP (dBm)	FCC15.519(c) ERP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	976	-61.71	RMS	27.8	-45.1	-15.6	11.8	.2	-82.61	-75.3	-7.31	220	156	H
2	1214	-62.62	RMS	28.4	-45.2	-15.6	11.8	.2	-83.02	-75.3	-7.72	220	156	H
3	1878	-63.08	RMS	30.7	-45	-15.6	11.8	.3	-80.88	-63.3	-17.58	110	156	H
4	999	-60.7	RMS	27.8	-45.1	-15.6	11.8	.2	-81.6	-75.3	-6.3	185	156	V
5	1393	-62.52	RMS	28.7	-45.2	-15.6	11.8	.1	-82.72	-75.3	-7.42	207	156	V
6	1878	-63.05	RMS	30.7	-45	-15.6	11.8	.3	-80.85	-63.3	-17.55	295	156	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

ANT. 2, CH5, CONFIG 3



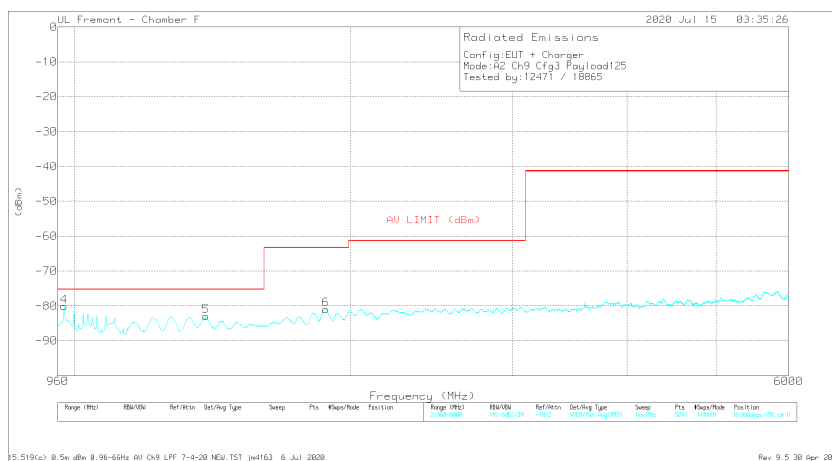
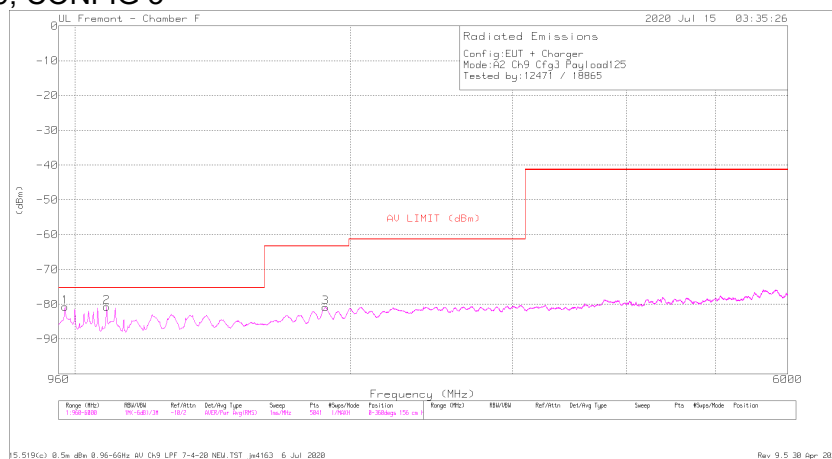
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_LPF (dB)	EIRP (dBm)	FCC15.518(c) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	976	-59.24	RMS	27.8	-45.1	-15.6	11.8	.2	-80.14	-75.3	-4.84	88	156	H
2	1059	-57.83	RMS	26.8	-45.4	-15.6	11.8	.1	-80.13	-75.3	-4.83	88	156	H
3	1878	-63.04	RMS	30.7	-45	-15.6	11.8	.3	-80.84	-63.3	-17.54	1	156	H
4	975	-59.06	RMS	27.8	-45.1	-15.6	11.8	.2	-79.96	-75.3	-4.66	118	156	V
5	1878	-63.09	RMS	30.7	-45	-15.6	11.8	.3	-80.89	-63.3	-17.59	31	156	V
6	2400	-63.2	RMS	32	-45.3	-15.6	11.8	.2	-80.1	-61.3	-18.8	118	156	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

ANT. 2, CH9, CONFIG 3



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9_LFF (dB)	EIRP (dBm)	FCC15.519(c) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	976	-59.84	RMS	27.8	-45.1	-15.6	11.8	.2	-80.74	-75.3	-5.44	132	156	H
2	1083	-59.1	RMS	27.4	-45.4	-15.6	11.8	.2	-80.7	-75.3	-5.4	88	156	H
3	1878	-63.03	RMS	30.7	-45	-15.6	11.8	.3	-80.83	-63.3	-17.53	43	156	H
4	976	-59.19	RMS	27.8	-45.1	-15.6	11.8	.2	-80.09	-75.3	-4.79	118	156	V
5	1392	-62.81	RMS	28.7	-45.2	-15.6	11.8	.1	-83.01	-75.3	-7.71	118	156	V
6	1879	-63.15	RMS	30.7	-45	-15.6	11.8	.3	-80.95	-63.3	-17.65	31	156	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

UL Fremont - Chamber F

2020 Jun 19 22:07:20

Project Number:
Client:
Config: EUT + Charger
Mode: RQ CH5 CF3 PL125
Tested by: 19019

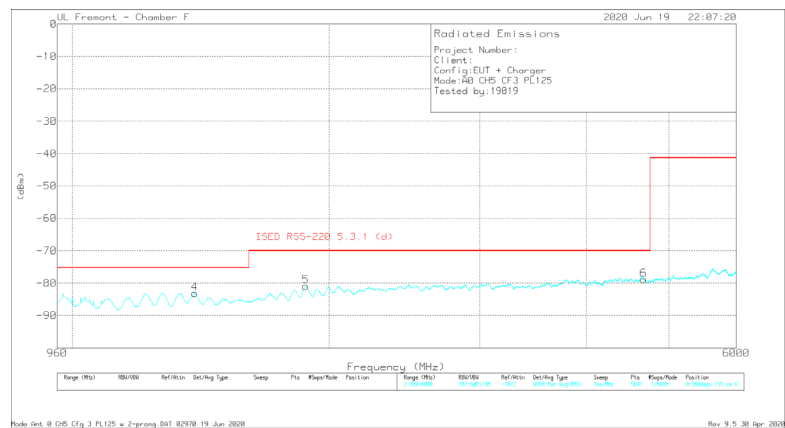
ISD RSS-228 5.3.1 (d)

Frequency (MHz)

Range (MHz)	RIS/ISD	Reference	Detuning Type	Sweep	Pre	Flags/Mode	Pass/Fail	Range (MHz)	RIS/ISD	Reference	Detuning Type	Sweep	Pre	Flags/Mode	Pass/Fail
1-500 MHz	91-140 dBm	1012	ISD/CF3 Avg/PL125	100 Hz	5001	1-140dB	P-300Range 125 dB								

Mode: RQ CH5 CF3 PL125 w/2-prong GBT R2070 19 Jun 2020

Rev: 9.5 30 Apr 2020



Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_LPF (dB)	Corrected Reading (dBm)	ISED RSS-220 5.3.1 (dB)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1392	-82.53	RMS	28.7	-45.2	-15.6	11.8	2	-82.63	-75.3	-7.33	198	155	H
2	1877	-63.11	RMS	30.8	-45	-15.6	11.8	3	-80.81	-70	-10.81	176	155	H
3	4655	-65.25	RMS	34.2	-43.9	-15.6	11.8	7	-78.05	-70	-8.05	1	155	H
4	1392	-62.99	RMS	28.7	-45.2	-15.6	11.8	2	-83.09	-75.3	-7.79	317	155	V
5	1877.5	-63.11	RMS	30.7	-45	-15.6	11.8	3	-80.91	-70	-10.91	339	155	V
6	4673	-65.72	RMS	34.2	-44.1	-15.6	11.8	6	-78.82	-70	-8.82	294	155	V

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

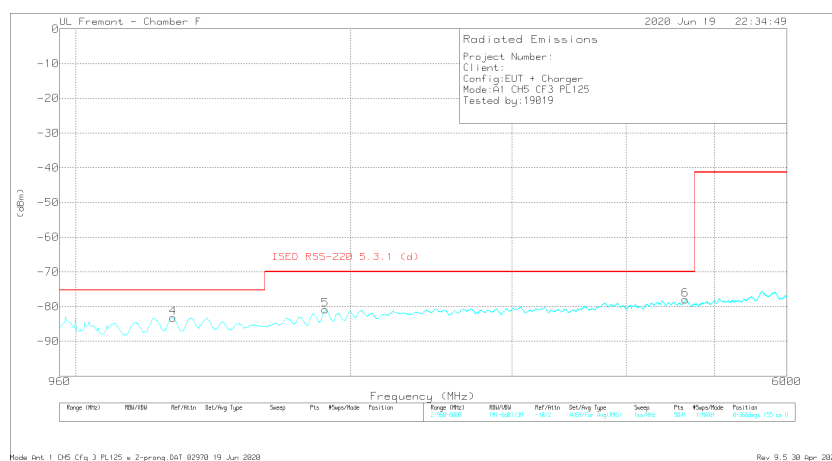
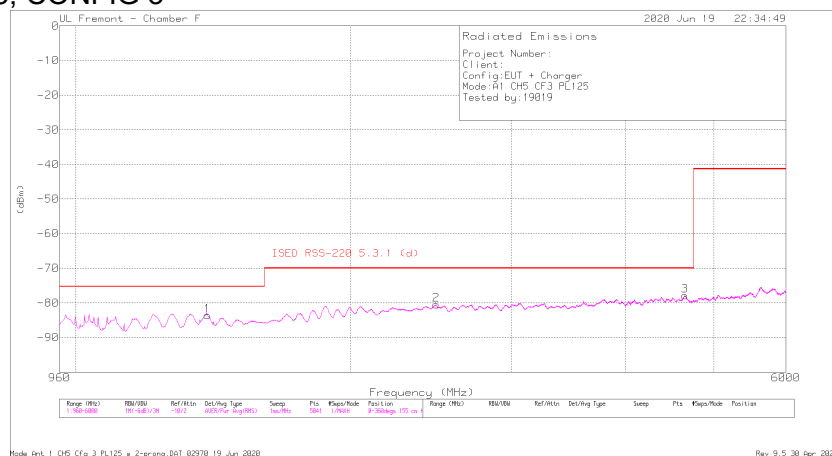


Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF 1345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CHS_LPF (dB)	Corrected Reading (dBm)	ISED RSS-228 3.3.1 (dB)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1216	-62.97	RMS	28.5	-45.2	-15.6	11.8	2	-83.27	-75.3	-7.97	219	155	H
2	1866	-63.98	RMS	30.7	-45.2	-15.6	11.8	3	-81.98	-70	-11.98	286	155	H
3	4658	-64.99	RMS	34.2	-43.9	-15.6	11.8	6	-77.8	-70	-7.8	44	155	H
4	1036	-60.95	RMS	27.7	-45.2	-15.6	11.8	2	-83.27	-75.3	-7.97	156	185	V
5	8777	-63.18	RMS	30.8	-45.2	-15.6	11.8	3	-80.68	-70	-10.68	35	155	V
6	1677	-64.92	RMS	34.2	-43.9	-15.6	11.8	6	-77.82	-70	-7.82	360	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

ANT. 1, CH5, CONFIG 3



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_LPF (dB)	Corrected Reading (dBm)	ISSED RSS-220 5.3.1 (d)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1395	-63.46	RMS	28.7	-45.2	-15.6	11.8	.2	-83.56	-75.3	-8.26	198	155	H
2	2483	-64.47	RMS	32.4	-44.9	-15.6	11.8	.3	-80.47	-70	-10.47	88	155	H
3	4650	-64.84	RMS	34.2	-44	-15.6	11.8	.6	-77.84	-70	-7.84	264	155	H
4	1278	-63.31	RMS	29.1	-45.4	-15.6	11.8	.2	-83.21	-75.3	-7.91	96	155	V
5	1876	-63.17	RMS	30.8	-45	-15.6	11.8	.3	-80.87	-70	-10.87	163	155	V
6	4646	-64.95	RMS	34.2	-44	-15.6	11.8	.6	-77.95	-70	-7.95	184	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

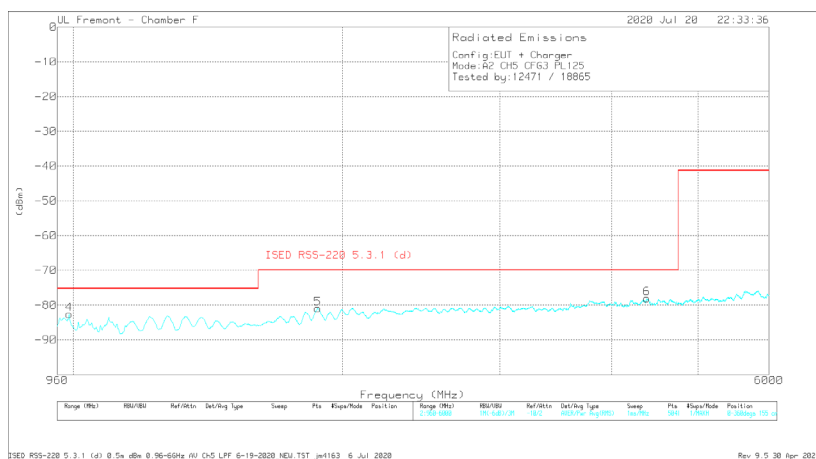
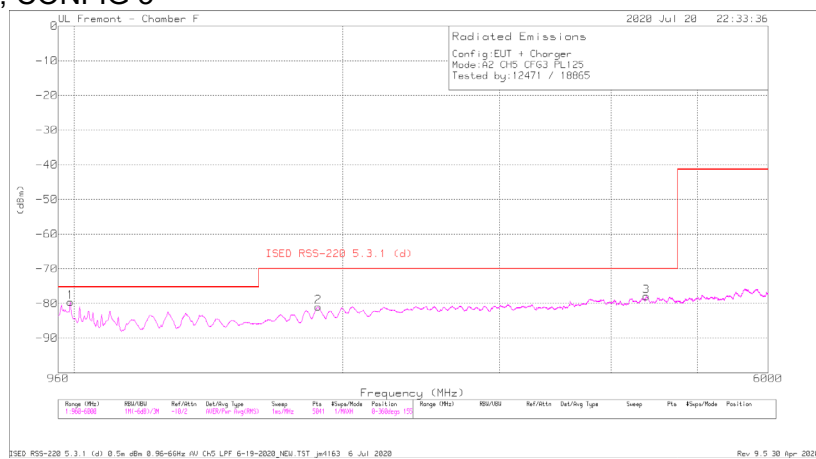


Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF 1345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9_LPF (dB)	Corrected Reading (dBm)	ISED RSS-228 3.3.1 (dB)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1391.5	-62.91	RMS	28.7	-45.2	-15.6	11.8	2	-83.01	-75.3	-7.71	197	155	H
2	1877	-63.15	RMS	30.8	-44	-15.6	11.8	3	-80.85	-70	-10.85	43	155	H
3	4650	-64.87	RMS	34.2	-44	-15.6	11.8	6	-77.87	-70	-7.87	1	155	H
4	1392	-62.47	RMS	28.7	-45.2	-15.6	11.8	2	-82.57	-75.3	-7.27	185	155	V
5	1877	-63.21	RMS	30.8	-44	-15.6	11.8	3	-80.91	-70	-10.91	75	155	V
6	1675	-65	RMS	34.2	-43.9	-15.6	11.8	2	-77.3	-70	-7.8	96	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

ANT. 2, CH5, CONFIG 3



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_LPF (dB)	Corrected Reading (dBm)	ISED RSS-220 5.3.1 (d)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	991	-58.76	RMS	27.9	-45.1	-15.6	11.8	.2	-79.56	-75.3	-4.26	87	155	H
2	1878	-63.12	RMS	30.7	-45	-15.6	11.8	.3	-80.92	-70	-10.92	66	155	H
3	4381	-65.14	RMS	33.9	-43.2	-15.6	11.8	.3	-77.94	-70	-7.94	1	155	H
4	990	-61.69	RMS	27.8	-45.1	-15.6	11.8	.2	-82.59	-75.3	-7.29	119	155	V
5	1877	-63.25	RMS	30.8	-45	-15.6	11.8	.3	-80.95	-70	-10.95	185	155	V
6	4382	-65.27	RMS	33.9	-43.2	-15.6	11.8	.3	-78.07	-70	-8.07	141	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.



Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AF T345 (dBm)	Amp/Cnt (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9_LPF (dB)	Corrected Reading (dBm)	ISED RSS-220 5.3.1 (µ)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	974	-56.57	RMS	27.8	-45.1	-15.6	11.8	2	-77.57	-75.3	-2.27	97	155	H
2	1105	-59.64	RMS	27.5	-45.4	-15.6	11.8	2	-81.14	-75.3	-5.84	119	155	H
3	3781	-66.12	RMS	33.6	-43.1	-15.6	11.8	5	-78.92	-70	-8.92	119	155	H
4	987	-58.33	RMS	27.9	-45.1	-15.6	11.8	2	-79.13	-75.3	-3.83	110	155	V
5	1877	-62.92	RMS	30.8	-45	-15.6	11.8	3	-80.62	-70	-10.62	110	155	V
6	3794	-65.89	RMS	33.6	-43.4	-15.6	11.8	6	-78.89	-70	-8.89	1	155	V

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

UL Fremont - Chamber F

2020 Jun 20 19:07:32

Radiated Emissions

Project Number:
Client:
Config:EUT+Charger
Mode:A0 CH5 CF3 PL125
Tested By:15015

(dBm)

RMS LIMIT (dBm)

4 5 6

Frequency (GHz)

Range (GHz)	RIS/REU	Ref/Int	Det/Int Type	Sweep	Fls	Expts/Mode	Position	Range (GHz)	RIS/REU	Ref/Int	Det/Int Type	Sweep	Fls	Expts/Mode	Position
2-18	101	400/1/20	-40dB	10000/1/1	avg(100)			2-18	101	400/1/20	-40dB	10000/1/1	avg(100)		

Mode A0 CH5 CF3 PL125_Phone Ext_Fortrait.DAT J410646 2 Jun 2020

Rev: 9.5.30 Apr 2002

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	A1 F119 (dBm)	Amp/Cbit (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_HPF (dB)	EIRP (dBm)	FCC15.576(C) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.81	-70.9	RMS	37.9	-37.1	-15.6	11.8	6	-73.3	-61.3	-12	30	155	H
2	13.282	-71.83	RMS	39.1	-36.8	-15.6	6	-72.73	-61.3	-11.43	163	155	H	
3	14.656	-71.3	RMS	40.2	-36.4	-15.6	11.8	7	-70.6	-61.3	-9.3	30	155	H
4	10.828	-70.97	RMS	37.9	-37.9	-15.6	11.8	6	-74.17	-61.3	-12.87	154	155	V
5	12.952	-71.54	RMS	39.2	-36.9	-15.6	11.8	5	-72.54	-61.3	-11.24	21	155	V
6	14.644	-71.25	RMS	40.1	-36.2	-15.6	11.8	7	-70.45	-61.3	-9.15	330	155	V

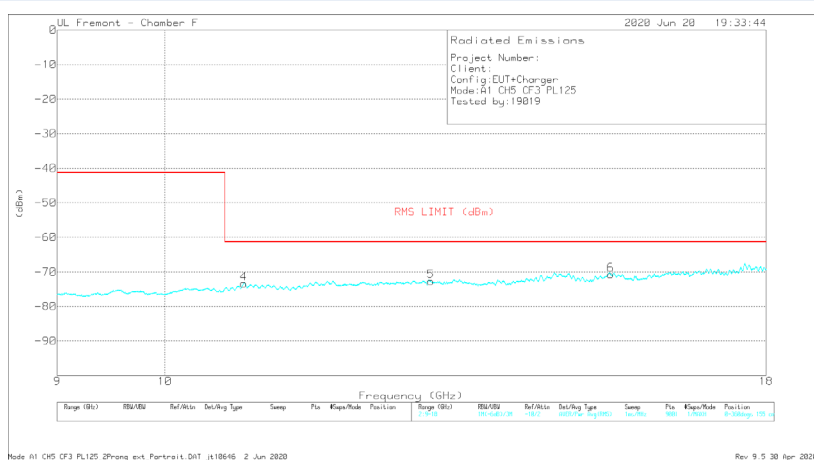
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47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF 119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9_HPF (dB)	EIRP (dBm)	FC15.519C EIRP (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	9.608	-69.81	RMS	36.6	-38.9	-15.6	11.8	0	-75.91	-41.3	-34.61	251	155	H
2	12.586	-70.63	RMS	39.2	-38.2	-15.6	11.8	3	-75.13	-61.3	-1.93	185	155	H
3	16.8165	-70.91	RMS	41.5	-37.5	-15.6	11.8	4	-75.81	-61.3	-9.01	317	155	H
4	10.612	-71.98	RMS	37.7	-37.8	-15.6	11.8	0	-75.88	-61.3	-14.58	119	155	H
5	14.027	-71.37	RMS	38.9	-37.5	-15.6	11.8	3	-73.47	-61.3	-12.17	242	155	V
6	17.39	-71.26	RMS	41.4	-36.8	-15.6	11.8	4	-70.06	-61.3	-8.76	264	155	V

*Note: Test was performed with a high-pass filter with pass-band frequency starting at 9 GHz to suppress CH9 fundamental signal.

ANT. 1, CH5, CONFIG 3



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_HPF (dB)	EIRP (dBm)	FCC15.519(c) ERP RMS (dBm)	Margin (dB)	Altitude (Meters)	Height (cm)	Polarity
1	10.819	-70.87	RMS	37.8	-37.5	-15.6	11.8	.6	-73.77	-61.3	-12.47	97	155	H
2	13.276	-71.55	RMS	39	-36.8	-15.6	11.8	.6	-72.55	-61.3	-11.25	251	155	H
3	15.449	-70.3	RMS	40.3	-37	-15.6	11.8	.6	-70.2	-61.3	-8.9	272	155	H
4	10.801	-70.77	RMS	37.8	-37.2	-15.6	11.8	.6	-73.37	-61.3	-12.07	220	155	V
5	12.968	-71.35	RMS	39.2	-37.3	-15.6	11.8	.6	-72.65	-61.3	-11.35	285	155	V
6	15.462	-70.24	RMS	40.4	-37.7	-15.6	11.8	.6	-70.74	-61.3	-9.44	43	155	V

RMS - RMS detection

*Note: Test was performed with a high-pass filter with pass-band frequency starting at 9 GHz to suppress CH5 fundamental signal.

ANT. 1, CH9, CONFIG 3



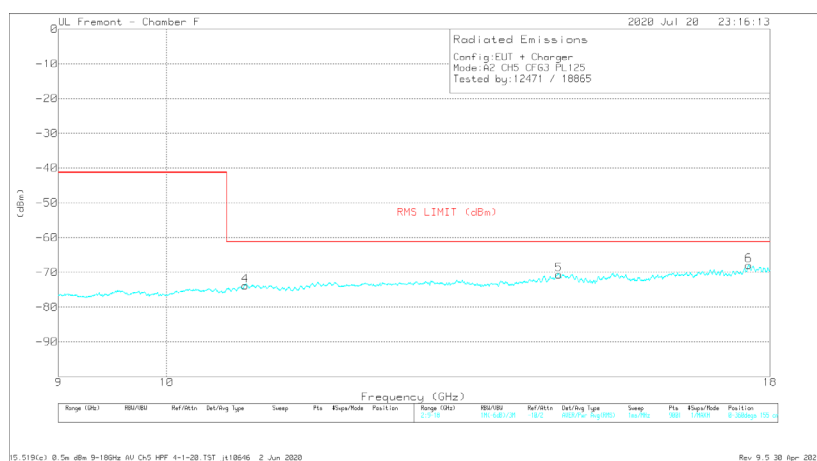
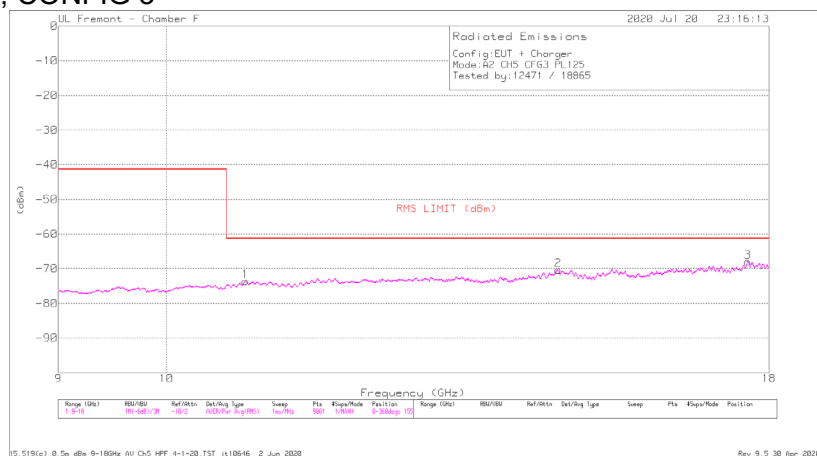
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9_HPF (dB)	EIRP (dBm)	FCC15.519(c) ERP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.873	-69.7	RMS	37.8	-37.7	-15.6	11.8	0	-73.4	-61.3	-12.1	228	155	H
2	13.354	-71.6	RMS	39.1	-36.6	-15.6	11.8	.4	-72.5	-61.3	-11.2	207	155	H
3	14.849	-70.75	RMS	40	-36.6	-15.6	11.8	.7	-70.45	-61.3	-9.15	317	155	H
4	10.873	-69.71	RMS	37.8	-37.7	-15.6	11.8	0	-73.41	-61.3	-12.11	132	155	V
5	13.354	-71.64	RMS	39.1	-36.6	-15.6	11.8	.4	-72.54	-61.3	-11.24	88	155	V
6	14.837	-70.66	RMS	40.1	-36.4	-15.6	11.8	.7	-70.06	-61.3	-8.76	88	155	V

RMS - RMS detection

*Note: Test was performed with a high-pass filter with pass-band frequency starting at 9 GHz to suppress CH9 fundamental signal.

ANT. 2, CH5, CONFIG 3



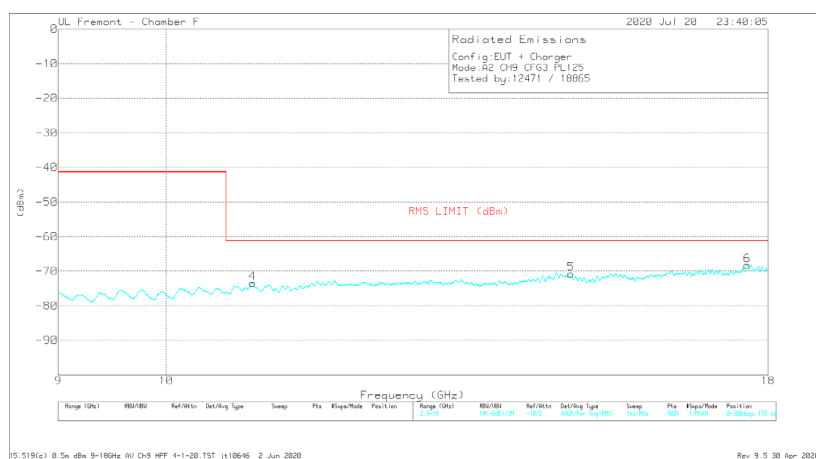
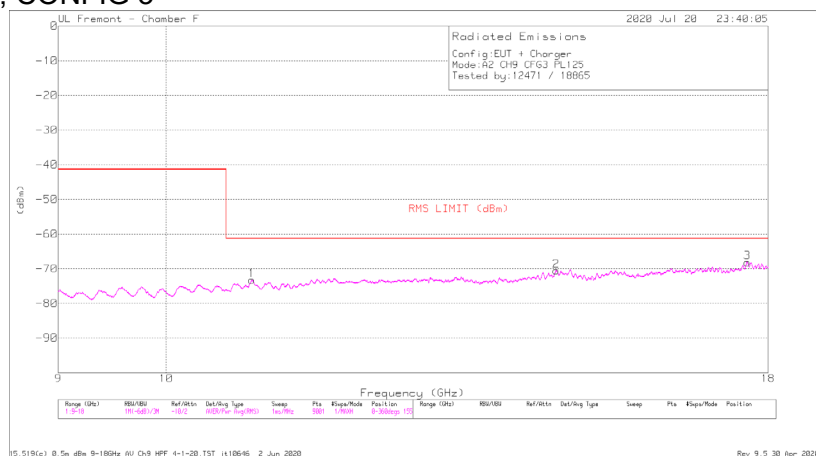
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5_HPF (dB)	EIRP (dBm)	FCC15.519(c) ERP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.801	-71	RMS	37.8	-37.2	-15.6	11.8	.6	-73.6	-61.3	-12.3	250	155	H
2	14.654	-71.07	RMS	40.2	-36.4	-15.6	11.8	.7	-70.37	-61.3	-9.07	31	155	H
3	17.631	-71.65	RMS	41.5	-34.6	-15.6	11.8	.6	-67.95	-61.3	-6.65	141	155	H
4	10.796	-71.11	RMS	37.8	-37.3	-15.6	11.8	.6	-73.81	-61.3	-12.51	1	155	V
5	14.654	-71.31	RMS	40.2	-36.4	-15.6	11.8	.7	-70.61	-61.3	-9.31	176	155	V
6	17.631	-71.65	RMS	41.5	-34.6	-15.6	11.8	.6	-67.95	-61.3	-6.65	66	155	V

RMS - RMS detection

*Note: Test was performed with a high-pass filter with pass-band frequency starting at 9 GHz to suppress CH5 fundamental signal.

ANT. 2, CH9, CONFIG 3



Trace Markers

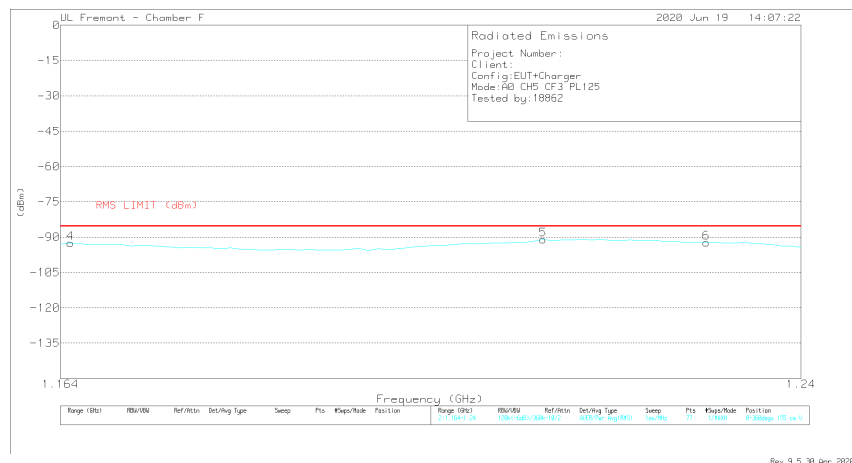
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9_HPF (dB)	Corrected Reading (dBm)	FCC15.519(c) ERP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.873	-69.57	RMS	37.8	-37.7	-15.6	11.8	0	-73.27	-61.3	-11.97	308	155	H
2	14.636	-71.09	RMS	40.1	-36.2	-15.6	11.8	.4	-70.59	-61.3	-9.29	21	155	H
3	17.639	-71.47	RMS	41.4	-34.8	-15.6	11.8	.5	-68.17	-61.3	-6.87	21	155	H
4	10.882	-69.65	RMS	37.8	-37.8	-15.6	11.8	0	-73.45	-61.3	-12.15	316	155	V
5	14.849	-71.04	RMS	40	-36.6	-15.6	11.8	.7	-70.74	-61.3	-9.44	251	155	V
6	17.639	-71.55	RMS	41.4	-34.8	-15.6	11.8	.5	-68.25	-61.3	-6.95	229	155	V

RMS - RMS detection

*Note: Test was performed with a high-pass filter with pass-band frequency starting at 9 GHz to suppress CH9 fundamental signal.

8.6.3. AVERAGE EMISSIONS, 1.164 – 1.240 GHz

ANT. 0, CH5, CONFIG 3



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5 LP Filter	EIRP (dBm)	FCC15.119(d) EIRP RMS (dBm)	Margin (dB)	Altitude (Dega)	Height (cm)	Polarity
1	1.165	-72.31	RMS	28.5	-45.4	-15.6	11.8	.2	-92.81	-85.3	-7.51	154	155	H
2	1.2	-74.52	RMS	29.6	-45.1	-15.6	11.8	.2	-93.62	-85.3	-8.32	198	155	H
3	1.229	-72.76	RMS	29.8	-45.4	-15.6	11.8	.3	-91.86	-85.3	-6.56	264	155	H
4	1.165	-71.96	RMS	28.5	-45.4	-15.6	11.8	.2	-92.46	-85.3	-7.16	273	155	V
5	1.213	-71.97	RMS	29.7	-45.2	-15.6	11.8	.2	-91.07	-85.3	-5.77	163	155	V
6	1.23	-73.16	RMS	29.8	-45.4	-15.6	11.8	.3	-92.26	-85.3	-6.96	273	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.



Marker	Frequency (GHz)	Measuring Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9 LP Filter	EIRP (dBm)	FC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.168	-72.58	RMS	28.6	-45.4	-15.6	11.8	2	-92.98	-85.3	-7.68	131	155	H
2	1.206	-73.48	RMS	28.6	-45.2	-15.6	11.8	2	-92.66	-85.3	-7.38	66	155	H
3	1.2155	-72.25	RMS	29.9	-45.2	-15.6	11.8	2	-91.16	-85.15	-5.95	241	155	H
4	1.169	-72.12	RMS	28.6	-45.1	-15.6	11.8	2	-92.52	-85.3	-7.22	141	155	V
5	1.202	-74.17	RMS	29.6	-45.1	-15.6	11.8	2	-93.27	-85.3	-7.97	119	155	V
6	1.218	-72.06	RMS	29.9	-45.2	-15.6	11.8	2	-90.96	-85.3	-5.66	185	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

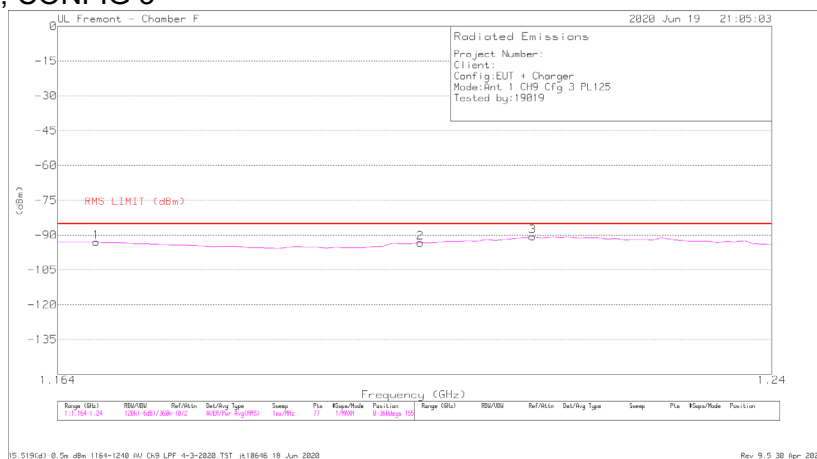


Marker	Frequency (GHz)	Measuring Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5 LP Filter	ERP (dBm)	FC15.519(d) ERP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.178	-73.77	RMS	28.7	-45.4	-15.6	11.8	2	-94.07	-85.3	-8.77	06	155	H
2	1.184	-75.85	RMS	29.3	-45.1	-15.6	11.8	2	-95.25	-85.3	-9.95	132	155	H
3	1.214	-72.18	RMS	29.8	-45.2	-15.6	11.8	2	-91.18	-85.3	-5.88	220	155	H
4	1.181	-74.42	RMS	28.9	-45.2	-15.6	11.8	2	-94.52	-85.3	-9.22	339	155	V
5	1.202	-74.34	RMS	29.6	-45.1	-15.6	11.8	2	-93.44	-85.3	-8.14	295	155	V
6	1.218	-72.26	RMS	29.9	-45.2	-15.6	11.8	2	-91.16	-85.3	-5.86	118	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

ANT. 1, CH9, CONFIG 3



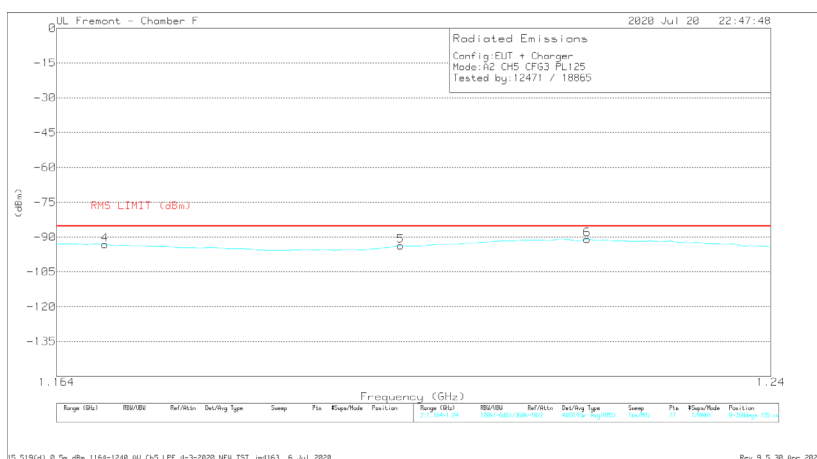
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9 LP Filter	EIRP (dBm)	FCC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.168	-72.55	RMS	28.6	-45.4	-15.6	11.8	2	-92.95	-85.3	-7.65	330	155	H
2	1.202	-74.16	RMS	29.6	-45.1	-15.6	11.8	2	-93.26	-85.3	-7.96	241	155	H
3	1.214	-71.53	RMS	29.8	-45.2	-15.6	11.8	2	-90.53	-85.3	-5.23	198	155	H
4	1.17	-72.73	RMS	28.6	-45.4	-15.6	11.8	2	-93.13	-85.3	-7.83	75	155	V
5	1.204	-73.96	RMS	29.6	-45.2	-15.6	11.8	2	-93.16	-85.3	-7.86	31	155	V
6	1.216	-71.91	RMS	29.9	-45.2	-15.6	11.8	2	-90.81	-85.3	-5.51	96	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

ANT. 2, CH5, CONFIG 3

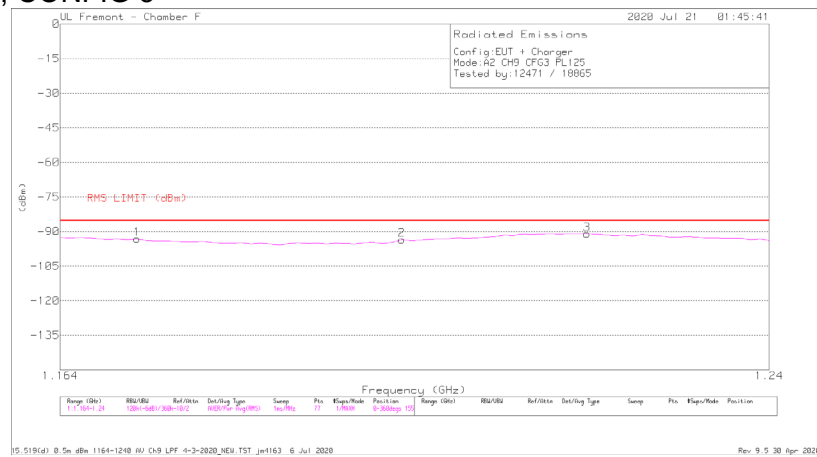


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5 LP Filter	EIRP (dBm)	FCC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.17	-72.35	RMS	28.6	-45.4	-15.6	11.8	.1	-92.85	-85.3	-7.55	96	155	H
2	1.2	-73.29	RMS	29.6	-45.1	-15.6	11.8	.1	-92.49	-85.3	-7.19	96	155	H
3	1.214	-71.74	RMS	29.8	-45.2	-15.6	11.8	.2	-90.74	-85.3	-5.44	96	155	H
4	1.169	-72.68	RMS	28.6	-45.4	-15.6	11.8	.1	-93.18	-85.3	-7.88	264	155	V
5	1.2	-74.55	RMS	29.6	-45.1	-15.6	11.8	.1	-93.75	-85.3	-8.45	66	155	V
6	1.22	-71.91	RMS	29.9	-45.3	-15.6	11.8	.2	-90.91	-85.3	-5.61	286	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.



Marker	Frequency (GHz)	Mezter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9 LP Filter	EIRP (dBm)	FC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Dega)	Height (cm)	Polarity
1	1.172	-72.66	RMS	28.6	-45.4	-15.6	11.8	1	-93.16	-85.3	-7.86	176	155	H
2	1.172	-74.32	RMS	29.6	-45.1	-15.6	11.8	2	-93.56	-85.3	-8.22	220	155	H
3	1.22	-72.02	RMS	29.9	-45.3	-15.6	11.8	2	-91.02	-85.3	-5.72	220	155	H
4	1.168	-71.99	RMS	28.5	-45.4	-15.6	11.8	1	-92.59	-85.3	-7.29	360	155	V
5	1.19	-74.2	RMS	29.1	-45.2	-15.6	11.8	1	-.94	-85.3	-8.7	97	155	V
6	1.213	-72.13	RMS	29.7	-45.2	-15.6	11.8	2	-91.23	-85.3	-5.93	75	155	V

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

UL Fremant - Chamber F

2020 Jun 20 13:09:51

Radiated Emissions

Project Number:

Client:

Config: EUT+Charger

Mode: A0 CH5 CF3 PL125

Tested by: 19220

(dBm)

RMS LIMIT (-90dBm)

Frequency (GHz)

Range (dB)	dBu/dB	Ref/Att	Det/Int Type	Sweep	Freq	KHzs/Sec	Position
21.559-1.61	120/-60/-30/-10/-0	100/10/0/0/0	100/10/0/0/0	100/10	50	100	100/10/0/0/0

AB CH5 CF3 PL125.Dat J110646 10 Jun 2020

Rev: 9.5.30 Apr 2020

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5 LP Filter	EIRP (dBm)	FCC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.571	-73.11	RMS	28	-45.2	-15.6	11.8	2	-93.91	-85.3	-8.61	31	155	H
2	1.578	-74.08	RMS	28	-45.3	-15.6	11.8	2	-95.08	-85.3	-9.78	140	155	H
3	1.596	-74.35	RMS	28	-45.2	-15.6	11.8	3	-95.05	-85.3	-9.75	360	155	H
4	1.571	-73.56	RMS	28	-45.2	-15.6	11.8	2	-94.36	-85.3	-9.06	263	155	V
5	1.584	-73.85	RMS	27.9	-45.2	-15.6	11.8	3	-94.65	-85.3	-9.35	132	155	V
6	1.597	-74.33	RMS	28	-45.2	-15.6	11.8	3	-95.03	-85.3	-9.73	330	155	V

UL VERIFICATION SERVICES INC FORM NO: CCSUP47011
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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ANT. 0, CH9, CONFIG 3



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbt (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9 LP Filter	EIRP (dBm)	FCC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.569	-73.2	RMS	27.9	-45.2	-15.6	11.8	2	-94.1	-85.3	-8.8	163	155	H
2	1.579	-73.58	RMS	28	-45.3	-15.6	11.8	2	-94.48	-85.3	-9.18	75	155	H
3	1.591	-74.41	RMS	28	-45.3	-15.6	11.8	3	-95.21	-85.3	-9.91	295	155	H
4	1.57	-73.51	RMS	28	-45.2	-15.6	11.8	2	-94.31	-85.3	-9.01	242	155	V
5	1.579	-73.84	RMS	28	-45.3	-15.6	11.8	2	-94.74	-85.3	-9.44	242	155	V
6	1.591	-73.76	RMS	28	-45.3	-15.6	11.8	3	-94.56	-85.3	-9.26	308	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.



Marker	Frequency (GHz)	Measuring Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5 LP Filter	EIRP (dBm)	FC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.566	-73.8	RMS	27.9	-45.2	-15.6	11.8	2	-94.7	-85.3	-9.4	185	155	H
2	1.58	-73.51	RMS	28	-45.3	-15.6	11.8	2	-94.41	-85.3	-9.11	97	155	H
3	1.589	-74.09	RMS	28	-45.2	-15.6	11.8	3	-94.79	-85.3	-9.49	185	155	H
4	1.567	-73.2	RMS	27.9	-45.2	-15.6	11.8	2	-94.1	-85.3	-8.8	0	155	V
5	1.58	-73.64	RMS	28	-45.3	-15.6	11.8	2	-94.54	-85.3	-9.24	88	155	V
6	1.593	-73.39	RMS	28	-45.2	-15.6	11.8	3	-94.09	-85.3	-8.79	198	155	V

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

ANT. 1, CH9, CONFIG 3



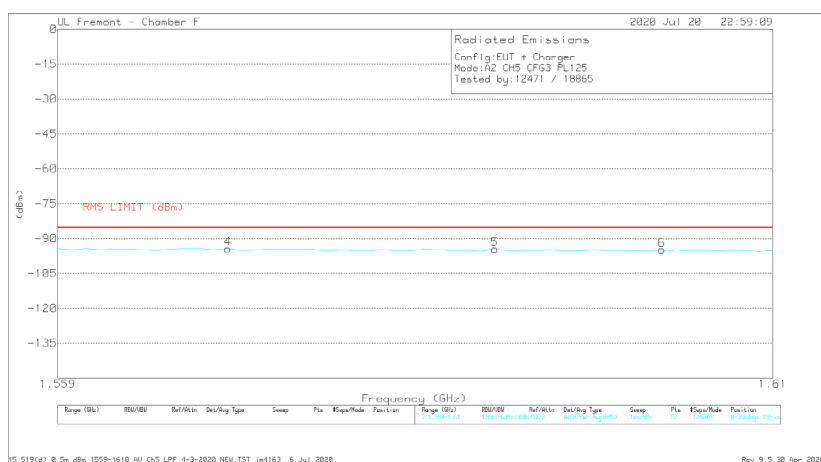
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9 LP Filter	EIRP (dBm)	FCC15.519(d) ERP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.567	-73.23	RMS	27.9	-45.2	-15.6	11.8	.2	-94.13	-85.3	-8.83	96	155	H
2	1.582	-74.47	RMS	27.9	-45.2	-15.6	11.8	.3	-95.27	-85.3	-9.97	141	155	H
3	1.594	-74.08	RMS	28	-45.2	-15.6	11.8	.3	-94.78	-85.3	-9.48	273	155	H
4	1.568	-73.18	RMS	27.9	-45.2	-15.6	11.8	.2	-94.08	-85.3	-8.78	110	155	V
5	1.583	-73.62	RMS	27.9	-45.2	-15.6	11.8	.3	-94.42	-85.3	-9.12	21	155	V
6	1.594	-74.25	RMS	28	-45.2	-15.6	11.8	.3	-94.95	-85.3	-9.65	88	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

ANT. 2, CH5, CONFIG 3



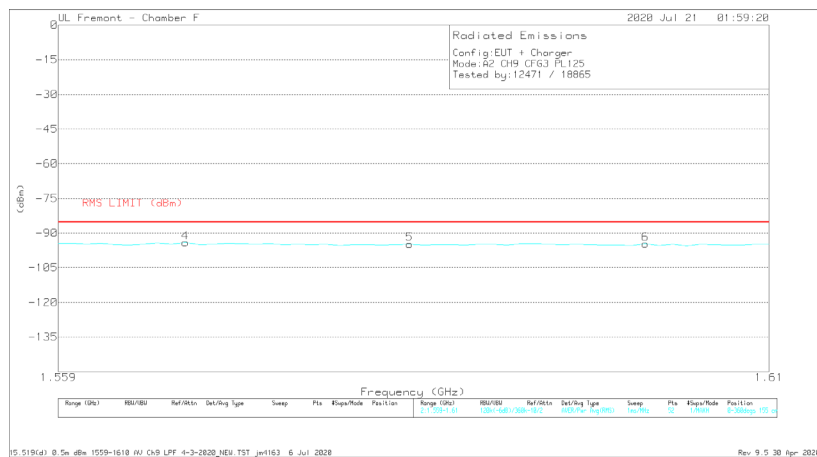
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH5 LP Filter	EIRP (dBm)	FCC15.519(d) EIRP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.572	-73.43	RMS	28	-45.2	-15.6	11.8	.2	-94.23	-85.3	-8.93	176	155	H
2	1.589	-73.76	RMS	28	-45.3	-15.6	11.8	.2	-94.66	-85.3	-9.36	88	155	H
3	1.606	-73.21	RMS	28	-45.3	-15.6	11.8	.2	-94.11	-85.3	-8.81	44	155	H
4	1.571	-73.59	RMS	28	-45.2	-15.6	11.8	.2	-94.39	-85.3	-9.09	207	155	V
5	1.59	-73.74	RMS	28	-45.3	-15.6	11.8	.3	-94.54	-85.3	-9.24	295	155	V
6	1.602	-73.91	RMS	28	-45.3	-15.6	11.8	.2	-94.81	-85.3	-9.51	97	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH5 fundamental signal.

ANT. 2, CH9, CONFIG 3



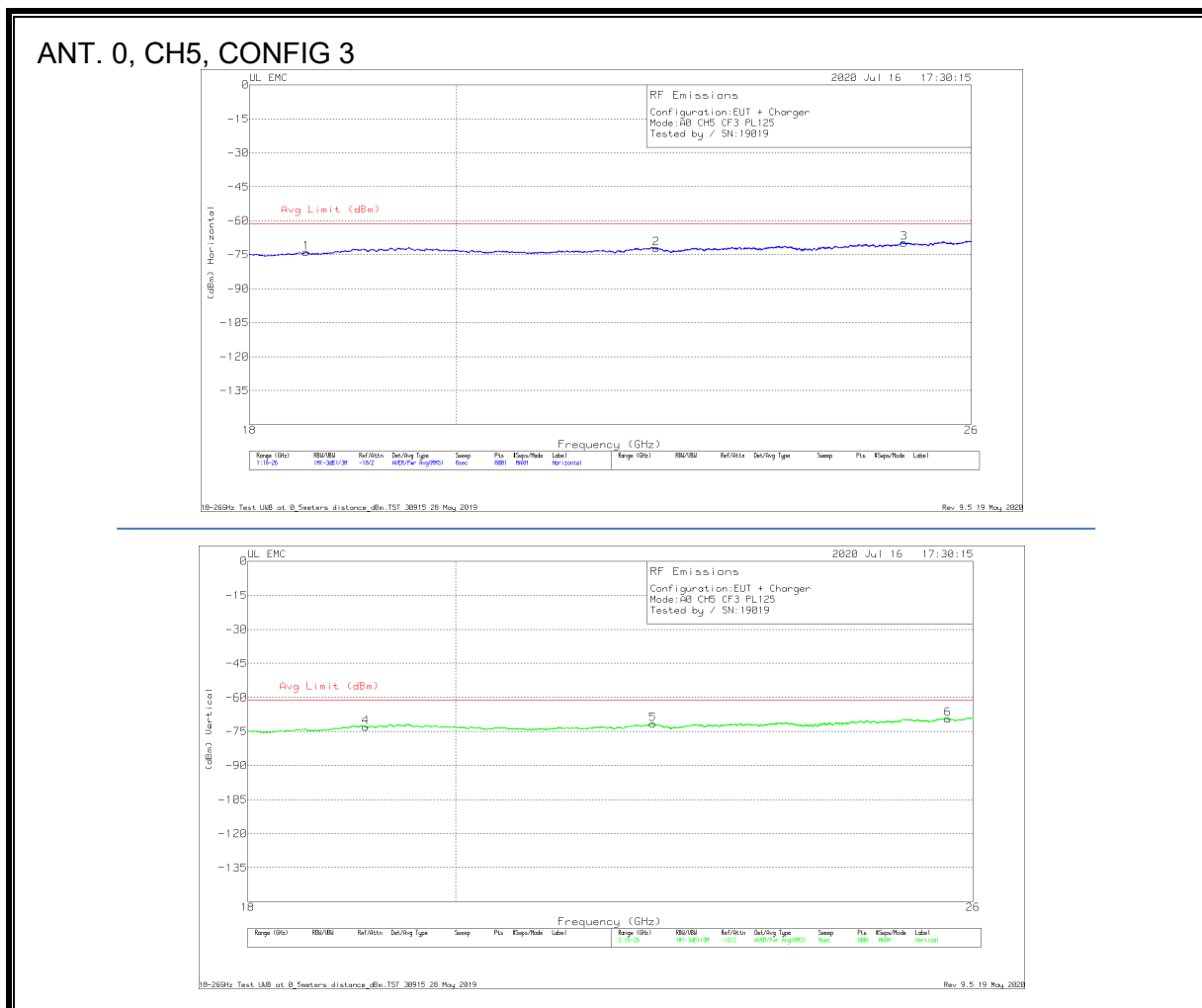
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dBm)	Amp/Cbl (dB)	Dist Correction (dB)	Conversion Factor (dB)	CH9 LP Filter	EIRP (dBm)	FCC15.519(d) ERP RMS (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.566	-73.74	RMS	27.9	-45.2	-15.6	11.8	.2	-94.64	-85.3	-9.34	119	155	H
2	1.581	-73.74	RMS	27.9	-45.3	-15.6	11.8	.2	-94.74	-85.3	-9.44	119	155	H
3	1.594	-73.83	RMS	28	-45.2	-15.6	11.8	.3	-94.53	-85.3	-9.23	359	155	H
4	1.568	-73.23	RMS	27.9	-45.2	-15.6	11.8	.2	-94.13	-85.3	-8.83	176	155	V
5	1.584	-73.84	RMS	27.9	-45.2	-15.6	11.8	.2	-94.74	-85.3	-9.44	131	155	V
6	1.601	-73.79	RMS	28	-45.3	-15.6	11.8	.2	-94.69	-85.3	-9.39	264	155	V

RMS - RMS detection

*Note: Test was performed with a low-pass filter with cutoff frequency at 6 GHz to suppress CH9 fundamental signal.

8.6.5. AVERAGE EMISSIONS, 18 – 26 GHz

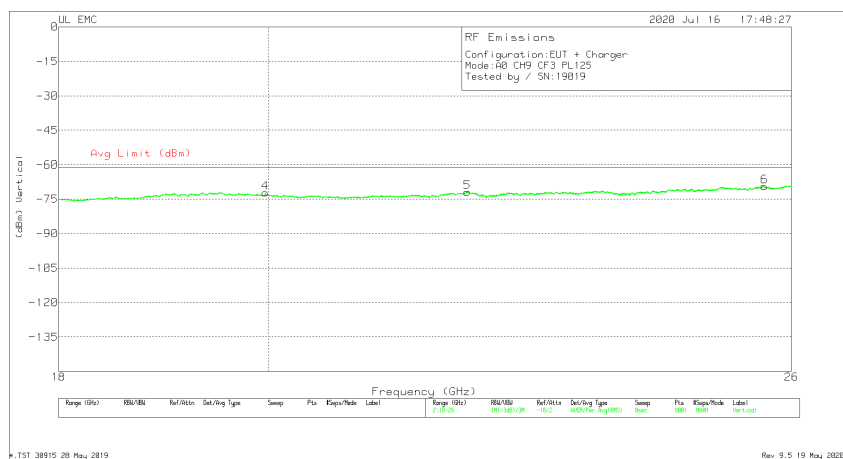
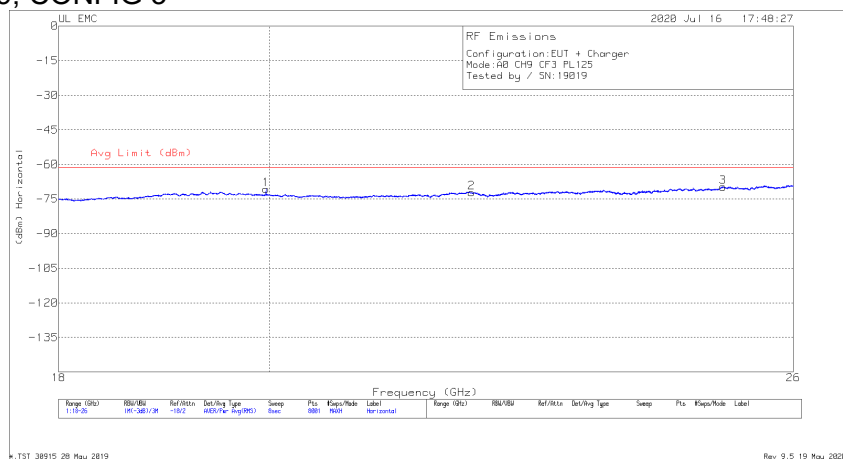


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	18.527	-81.67	RMS	32.6	-21	-15.6	11.8	-73.87	-61.3	-12.57
2	22.145	-81.56	RMS	33.4	-20.2	-15.6	11.8	-72.16	-61.3	-10.86
3	25.121	-80.92	RMS	34.3	-19.3	-15.6	11.8	-69.72	-61.3	-8.42
4	19.109	-81.73	RMS	32.6	-20.1	-15.6	11.8	-73.03	-61.3	-11.73
5	22.105	-81.25	RMS	33.4	-20	-15.6	11.8	-71.65	-61.3	-10.35
6	25.67	-79.83	RMS	34.2	-20	-15.6	11.8	-69.43	-61.3	-8.13

RMS - RMS detection

ANT. 0, CH9, CONFIG 3



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	19.968	-79.42	RMS	32.8	-20.3	-15.6	11.8	-70.72	-61.3	-9.42
2	22.132	-81.61	RMS	33.4	-20.2	-15.6	11.8	-72.21	-61.3	-10.91
3	25.1	-81.15	RMS	34.3	-19.1	-15.6	11.8	-69.75	-61.3	-8.45
4	19.968	-80.84	RMS	32.8	-20.3	-15.6	11.8	-72.14	-61.3	-10.84
5	22.095	-81.56	RMS	33.4	-19.9	-15.6	11.8	-71.86	-61.3	-10.56
6	25.647	-80.1	RMS	34.2	-19.7	-15.6	11.8	-69.4	-61.3	-8.1

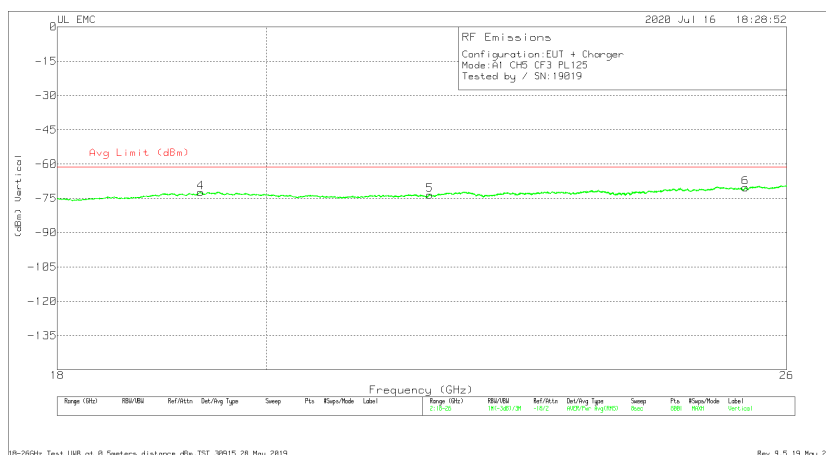
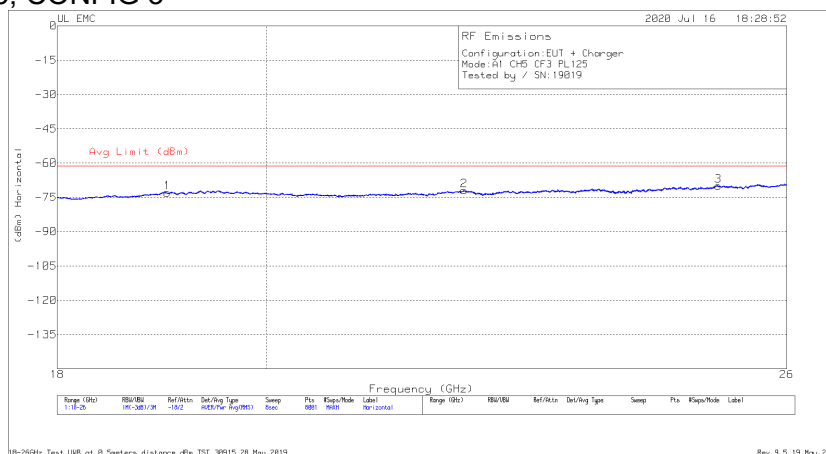
RMS - RMS detection

Radiated Emissions

Marker	Freq (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)
1	19.968	-80.2	RMS	32.8	-20.3	-15.6	11.8	-71.5	-61.3	-10.2

RMS - RMS detection

ANT. 1, CH5, CONFIG 3

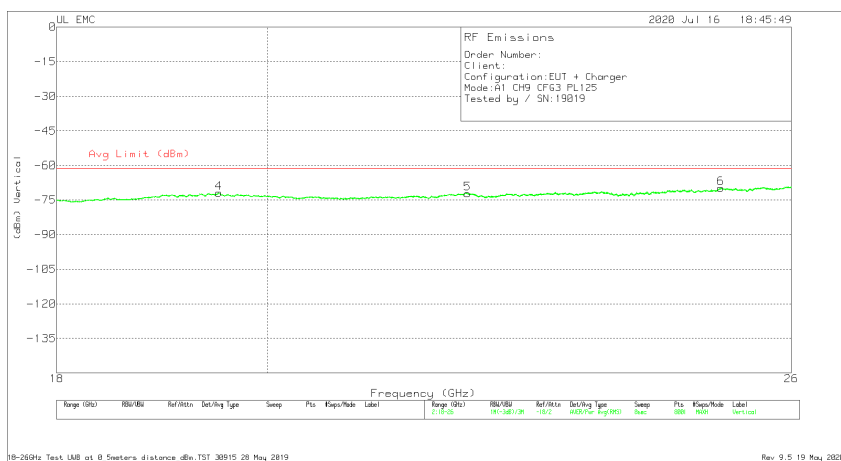
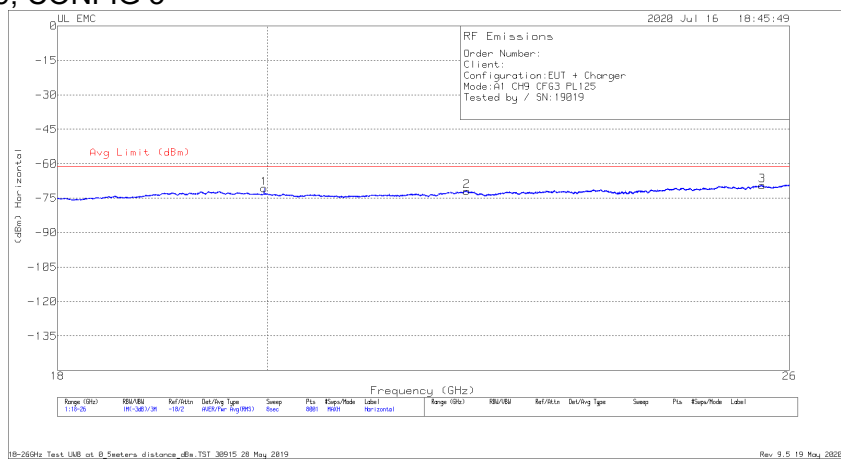


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	19.025	-81.83	RMS	32.7	-20	-15.6	11.8	-72.93	-61.3	-11.63
2	22.096	-81.64	RMS	33.4	-19.9	-15.6	11.8	-71.94	-61.3	-10.64
3	25.117	-81.24	RMS	34.3	-19.2	-15.6	11.8	-69.94	-61.3	-8.64
4	19.347	-82.43	RMS	32.6	-18.7	-15.6	11.8	-72.33	-61.3	-11.03
5	21.717	-82.27	RMS	33.2	-20.6	-15.6	11.8	-73.47	-61.3	-12.17
6	25.465	-81.12	RMS	34.1	-19.4	-15.6	11.8	-70.22	-61.3	-8.92

RMS - RMS detection

ANT. 1, CH9, CONFIG 3



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	19.968	-79.36	RMS	32.8	-20.3	-15.6	11.8	-70.66	-61.3	-9.36
2	22.107	-81.47	RMS	33.4	-20	-15.6	11.8	-71.87	-61.3	-10.57
3	25.645	-80.13	RMS	34.2	-19.7	-15.6	11.8	-69.43	-61.3	-8.13
4	19.521	-81.76	RMS	32.8	-19.1	-15.6	11.8	-71.86	-61.3	-10.56
5	22.109	-81.71	RMS	33.4	-20.1	-15.6	11.8	-72.21	-61.3	-10.91
6	25.096	-81.2	RMS	34.3	-19.1	-15.6	11.8	-69.8	-61.3	-8.5

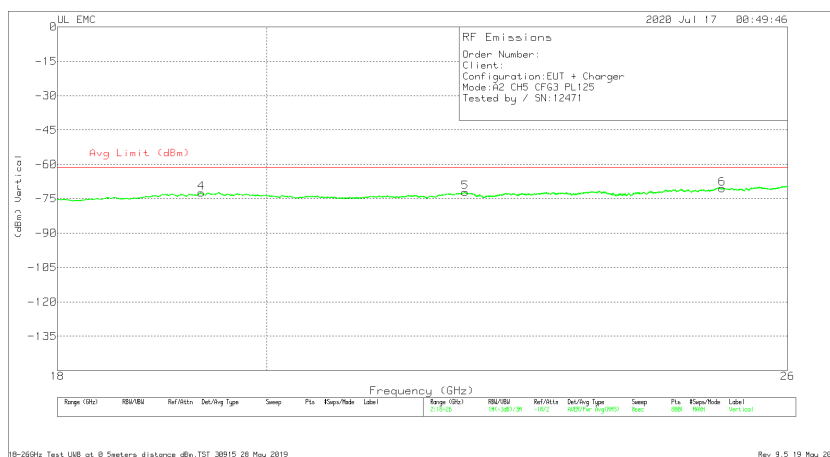
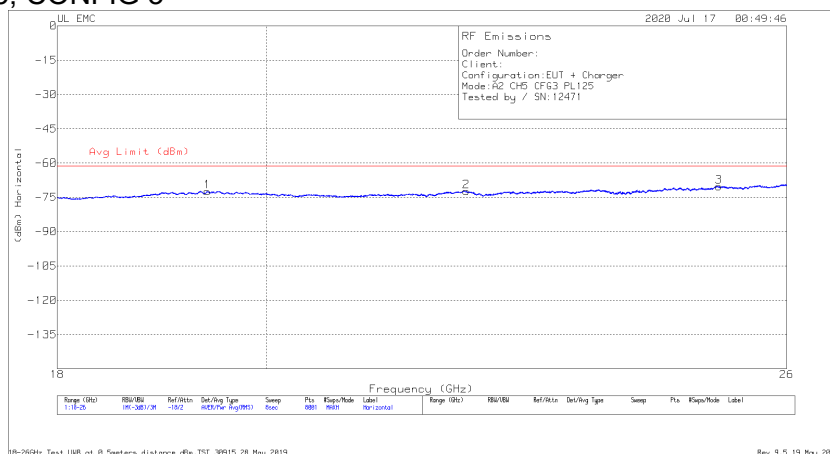
RMS - RMS detection

Radiated Emissions

Marker	Freq (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)
1	19.968	-80.23	RMS	32.8	-20.3	-15.6	11.8	-71.53	-61.3	-10.23

RMS - RMS detection

ANT. 2, CH5, CONFIG 3

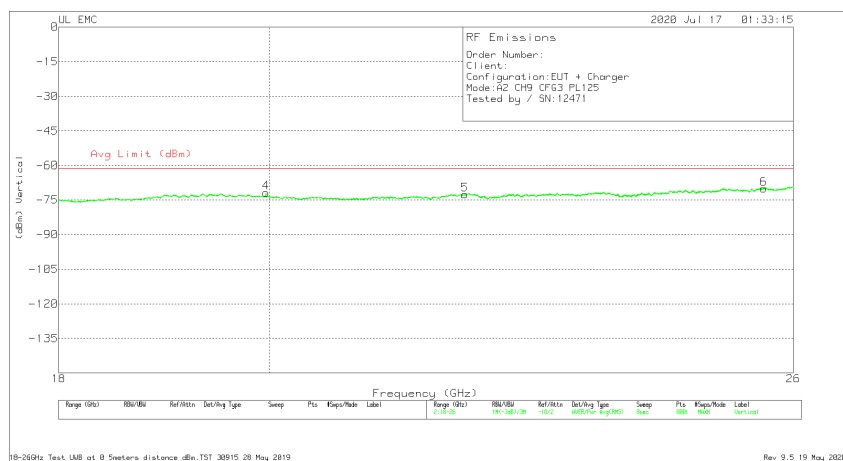
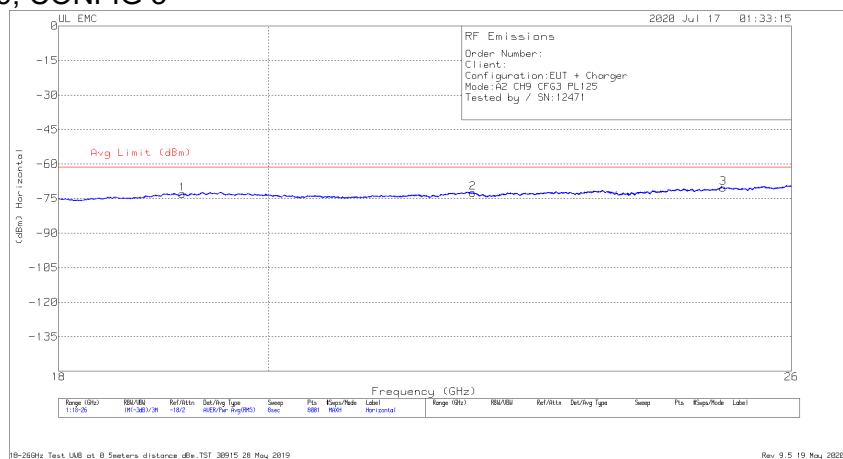


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	19.414	-82.51	RMS	32.6	-18.7	-15.6	11.8	-72.41	-61.3	-11.11
2	22.123	-81.78	RMS	33.4	-20.1	-15.6	11.8	-72.28	-61.3	-10.98
3	25.124	-81.47	RMS	34.3	-19.3	-15.6	11.8	-70.27	-61.3	-8.97
4	19.352	-82.46	RMS	32.6	-18.7	-15.6	11.8	-72.36	-61.3	-11.06
5	22.102	-81.67	RMS	33.4	-20	-15.6	11.8	-72.07	-61.3	-10.77
6	25.156	-81.37	RMS	34.2	-19.5	-15.6	11.8	-70.47	-61.3	-9.17

RMS - RMS detection

ANT. 2, CH9, CONFIG 3



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	19.153	-82.35	RMS	32.7	-19.5	-15.6	11.8	-72.95	-61.3	-11.65
2	22.158	-81.99	RMS	33.4	-20.1	-15.6	11.8	-72.49	-61.3	-11.19
3	25.123	-81.55	RMS	34.3	-19.3	-15.6	11.8	-70.35	-61.3	-9.05
4	19.968	-80.48	RMS	32.8	-20.3	-15.6	11.8	-71.78	-61.3	-10.48
5	22.059	-81.8	RMS	33.4	-20.4	-15.6	11.8	-72.6	-61.3	-11.3
6	25.615	-80.87	RMS	34.3	-19.7	-15.6	11.8	-70.07	-61.3	-8.77

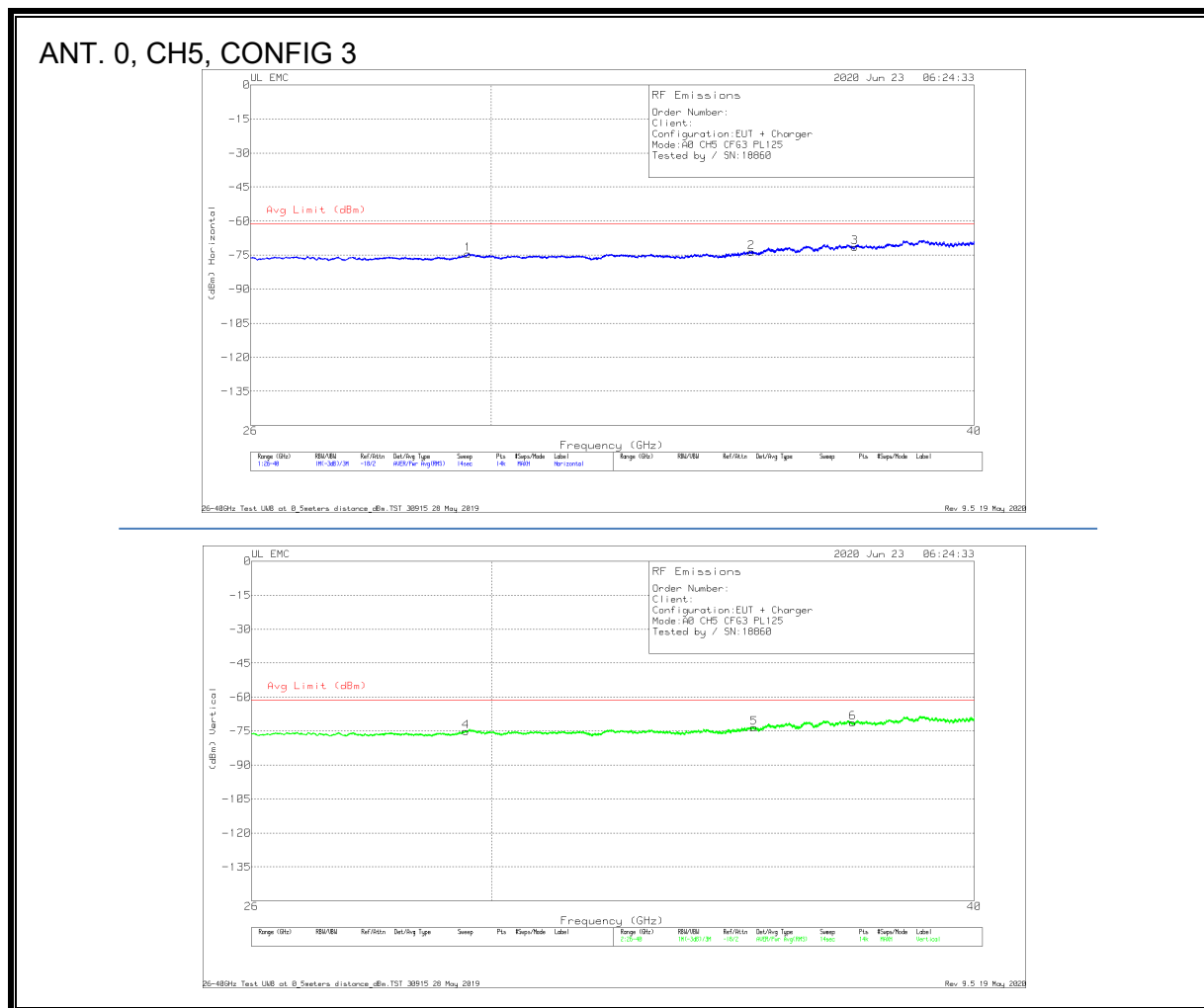
RMS - RMS detection

Radiated Emissions

Marker	Freq (GHz)	Meter Reading (dBm)	Det	PRE0079280 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)
4	19.968	-79.12	RMS	32.8	-20.3	-15.6	11.8	-70.42	-61.3	-9.12

RMS - RMS detection

8.6.6. AVERAGE EMISSIONS, 26 – 40 GHz

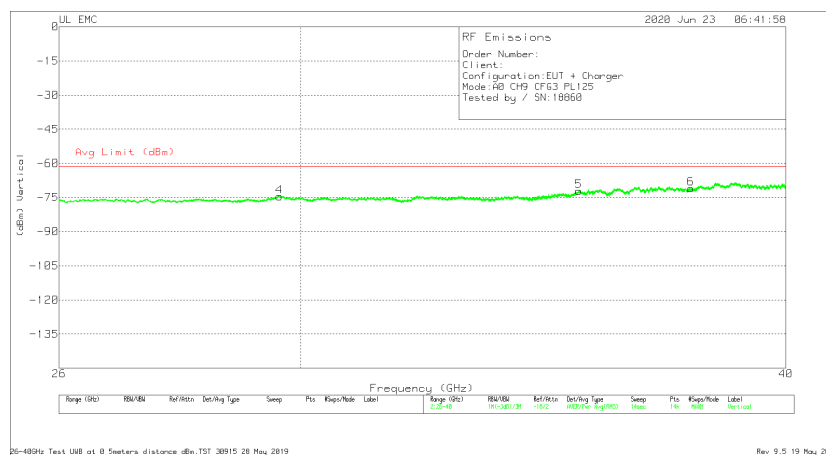
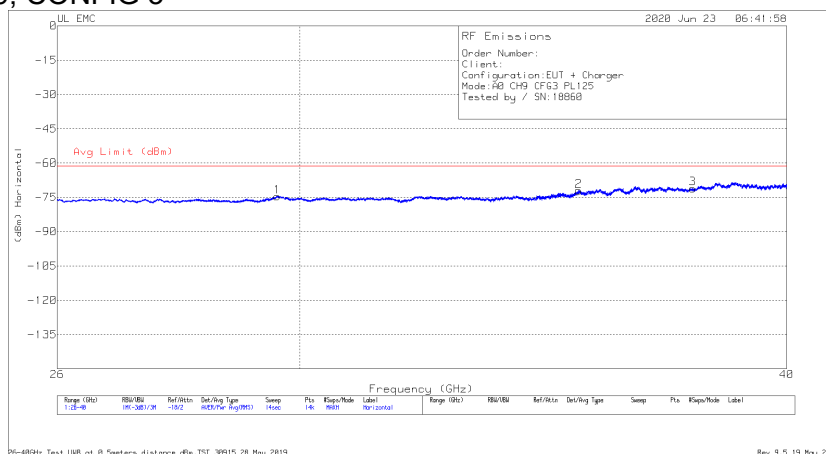


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0182203 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	29.59	-80.72	RMS	37.2	-27.2	-15.6	11.8	-74.52	-61.3	-13.22
2	35.026	-80.51	RMS	37.4	-26.7	-15.6	11.8	-73.61	-61.3	-12.31
3	37.252	-79.39	RMS	37.8	-26	-15.6	11.8	-71.39	-61.3	-10.09
4	29.545	-80.75	RMS	37	-27.5	-15.6	11.8	-75.05	-61.3	-13.75
5	35.079	-80.12	RMS	37.4	-26.9	-15.6	11.8	-73.42	-61.3	-12.12
6	37.203	-79.46	RMS	37.8	-25.8	-15.6	11.8	-71.26	-61.3	-9.96

RMS - RMS detection

ANT. 0, CH9, CONFIG 3

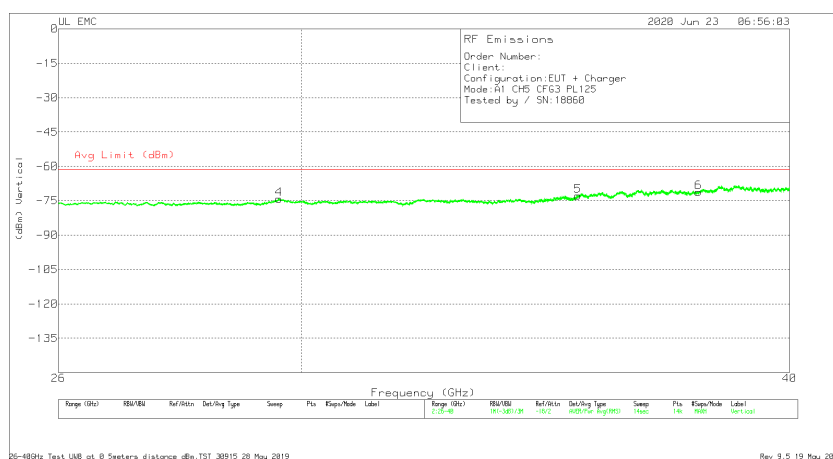
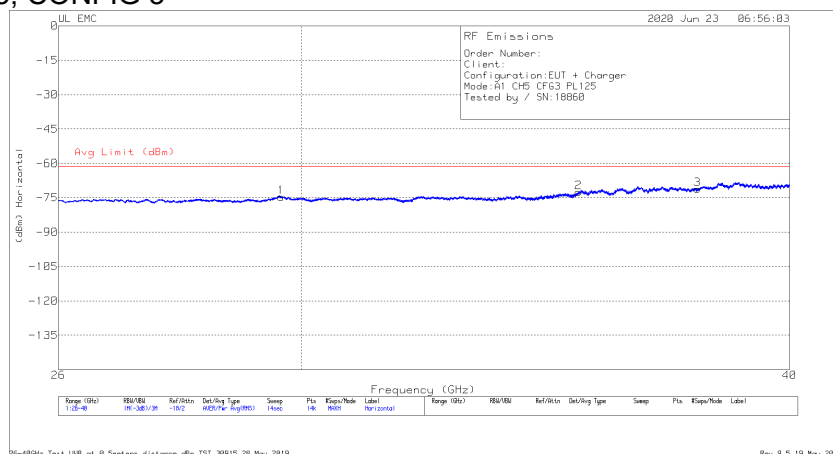


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0182203 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	29.602	-81.01	RMS	37.3	-27.1	-15.6	11.8	-74.61	-61.3	-13.31
2	35.372	-79.55	RMS	37.7	-26.4	-15.6	11.8	-72.05	-61.3	-10.75
3	37.839	-79.89	RMS	37.8	-25.2	-15.6	11.8	-71.09	-61.3	-9.79
4	29.627	-80.65	RMS	37.3	-27.4	-15.6	11.8	-74.55	-61.3	-13.25
5	35.379	-79.72	RMS	37.7	-26.3	-15.6	11.8	-72.12	-61.3	-10.82
6	37.808	-79.64	RMS	37.9	-25.5	-15.6	11.8	-71.04	-61.3	-9.74

RMS - RMS detection

ANT. 1, CH5, CONFIG 3

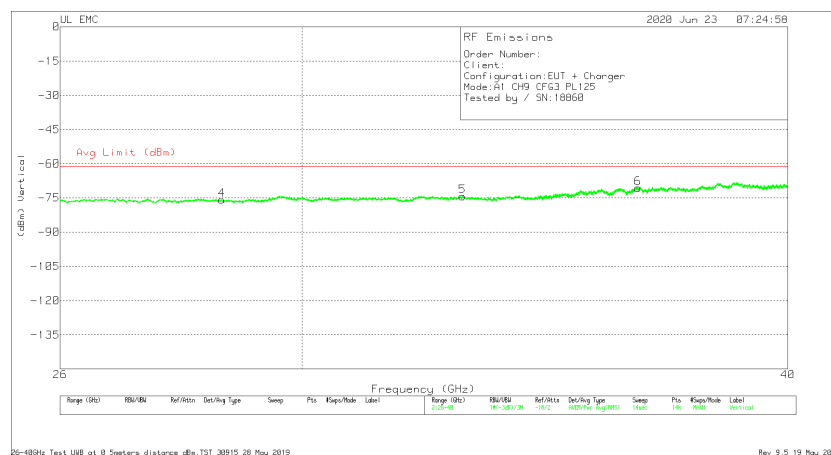
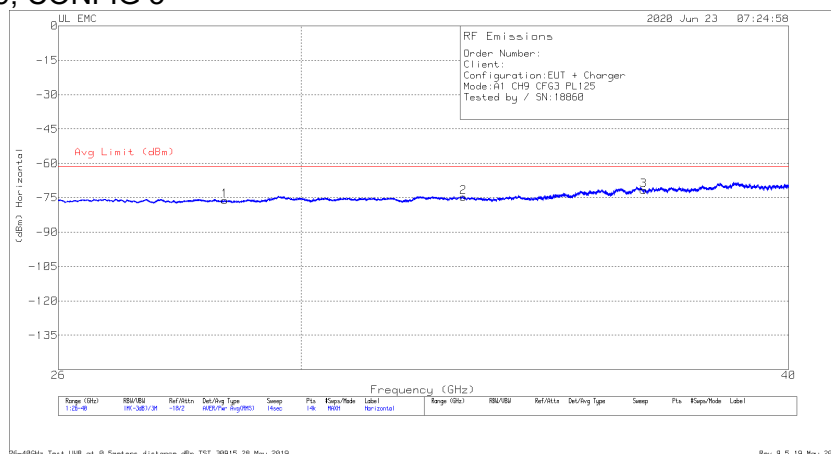


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0182203 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	29.645	-80.73	RMS	37.4	-27.5	-15.6	11.8	-74.63	-61.3	-13.33
2	35.316	-79.35	RMS	37.4	-26.8	-15.6	11.8	-72.55	-61.3	-11.25
3	37.884	-79.51	RMS	37.8	-25.7	-15.6	11.8	-71.21	-61.3	-9.91
4	29.608	-80.56	RMS	37.3	-27.1	-15.6	11.8	-74.16	-61.3	-12.86
5	35.306	-79.7	RMS	37.4	-26.7	-15.6	11.8	-72.8	-61.3	-11.5
6	37.904	-79.34	RMS	37.8	-25.8	-15.6	11.8	-71.14	-61.3	-9.84

RMS - RMS detection

ANT. 1, CH9, CONFIG 3

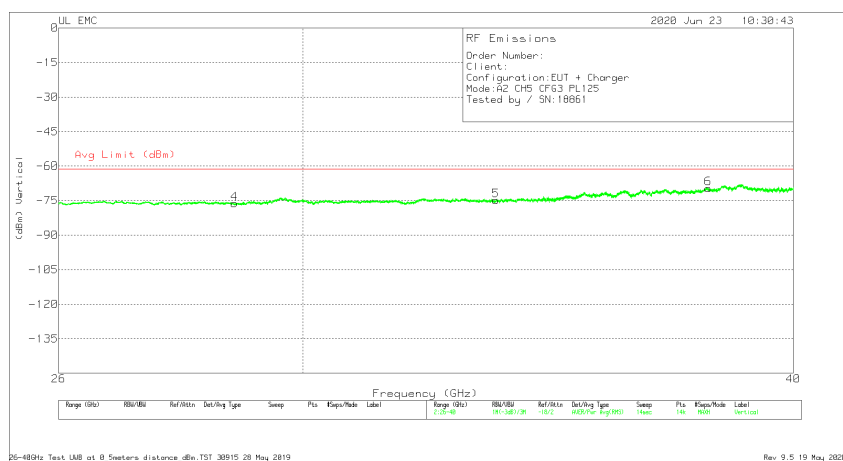
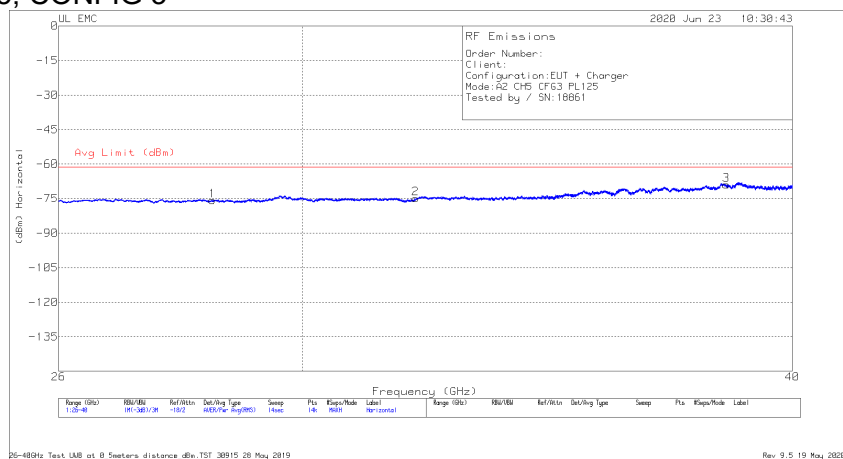


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0182203 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	28.683	-80.66	RMS	36.1	-27.7	-15.6	11.8	-76.06	-61.3	-14.76
2	33.015	-79.89	RMS	37	-27.9	-15.6	11.8	-74.59	-61.3	-13.29
3	36.72	-79.52	RMS	37.8	-26.1	-15.6	11.8	-71.62	-61.3	-10.32
4	28.61	-80.35	RMS	36.1	-27.8	-15.6	11.8	-75.85	-61.3	-14.55
5	32.994	-79.87	RMS	37	-27.6	-15.6	11.8	-74.27	-61.3	-12.97
6	36.603	-78.43	RMS	37.6	-26	-15.6	11.8	-70.63	-61.3	-9.33

RMS - RMS detection

ANT. 2, CH5, CONFIG 3

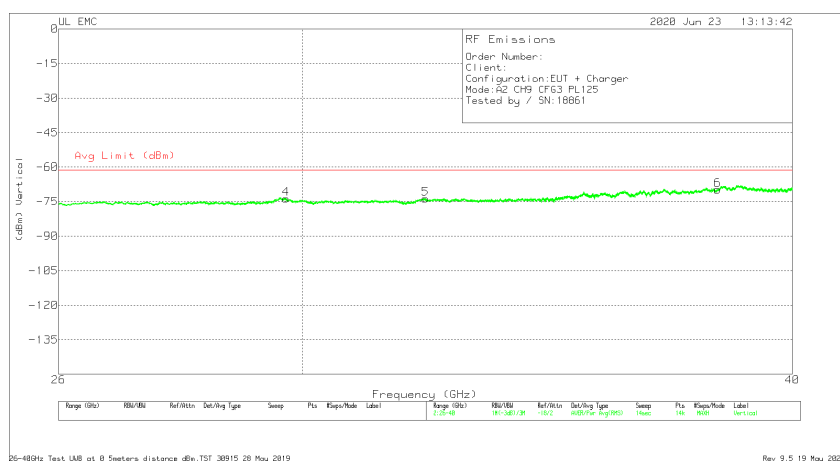
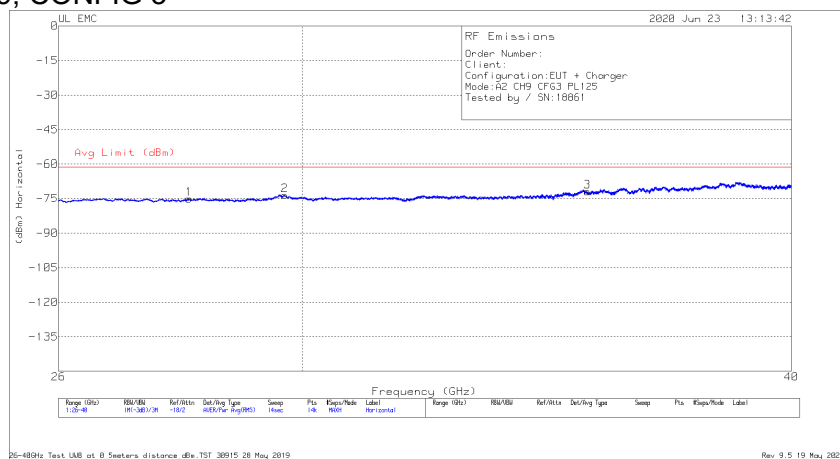


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0182203 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	28.456	-79.94	RMS	36.2	-28.2	-15.6	11.8	-75.74	-61.3	-14.44
2	32.06	-80.34	RMS	36.8	-27.6	-15.6	11.8	-74.94	-61.3	-13.64
3	38.476	-78.01	RMS	38.2	-25.4	-15.6	11.8	-69.01	-61.3	-7.71
4	28.82	-80.49	RMS	35.9	-27.8	-15.6	11.8	-76.19	-61.3	-14.89
5	33.597	-80.46	RMS	36.9	-27.5	-15.6	11.8	-74.86	-61.3	-13.56
6	38.053	-78.44	RMS	38	-25.4	-15.6	11.8	-69.64	-61.3	-8.34

RMS - RMS detection

ANT. 2, CH9, CONFIG 3



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	PRE0182203 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	EIRP (dBm)	Avg Limit (dBm)	Margin (dB)
1	28.071	-78.67	RMS	36.1	-28.7	-15.6	11.8	-75.07	-61.3	-13.77
2	29.696	-79.97	RMS	37.5	-27.3	-15.6	11.8	-73.57	-61.3	-12.27
3	35.478	-79.42	RMS	37.6	-26.3	-15.6	11.8	-71.92	-61.3	-10.62
4	29.711	-79.96	RMS	37.5	-27.4	-15.6	11.8	-73.66	-61.3	-12.36
5	32.245	-79.06	RMS	37	-27.8	-15.6	11.8	-73.66	-61.3	-12.36
6	38.28	-78.57	RMS	38.1	-25.5	-15.6	11.8	-69.77	-61.3	-8.47

RMS - RMS detection

8.7. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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.

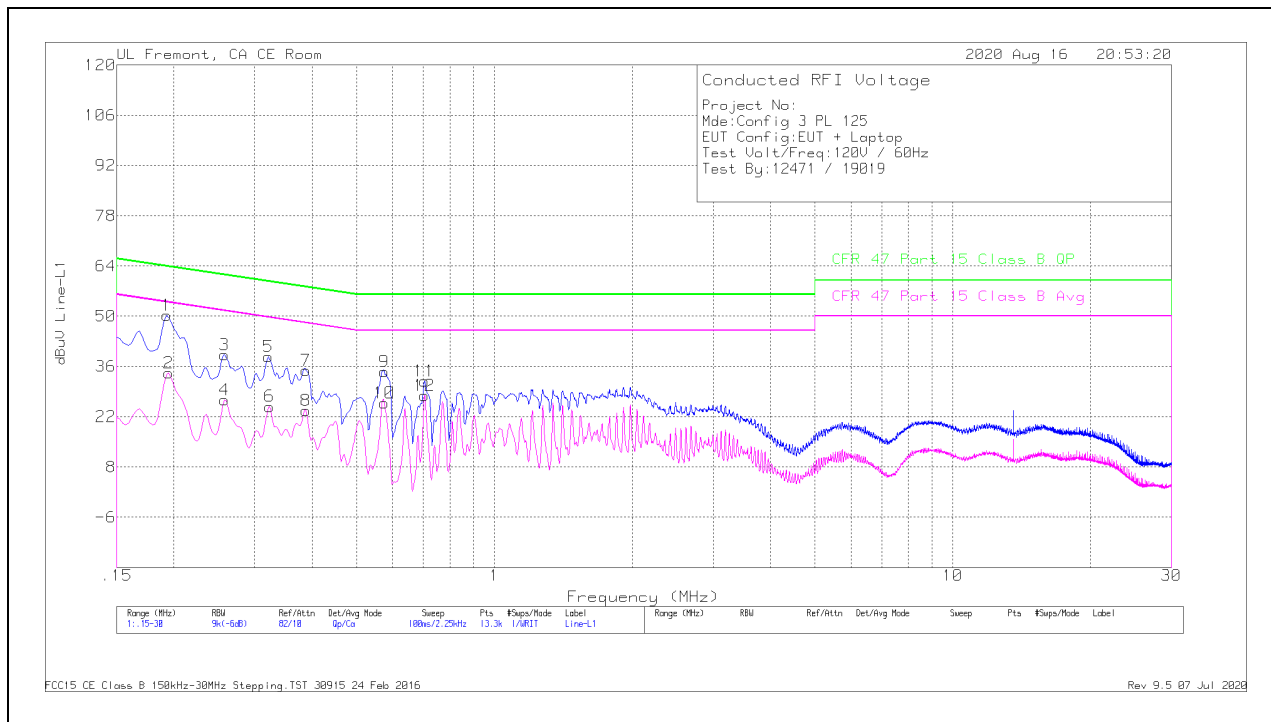
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

8.7.1. AC Power Line With Laptop

LINE 1 RESULTS



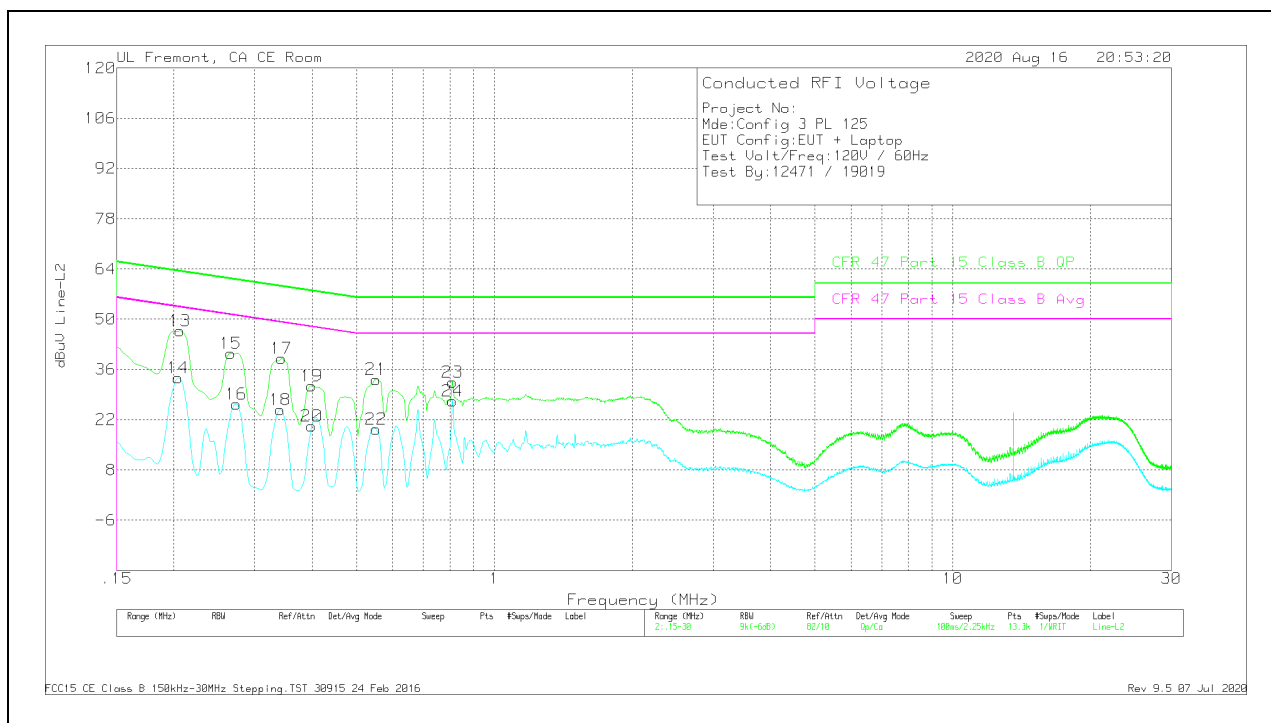
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 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)M argin (dB)
1	.19275	40.21	Qp	0	0	10	50.21	63.92	-13.71	-	-
2	.195	24.23	Ca	0	0	10	34.23	-	-	53.82	-19.59
3	.258	29.2	Qp	0	0	10	39.2	61.5	-22.3	-	-
4	.258	16.76	Ca	0	0	10	26.76	-	-	51.5	-24.74
5	.321	28.67	Qp	0	0	10	38.67	59.68	-21.01	-	-
6	.32325	14.87	Ca	0	0	10	24.87	-	-	49.62	-24.75
7	.3885	24.91	Qp	0	0	10	34.91	58.1	-23.19	-	-
8	.3885	13.68	Ca	0	0	10	23.68	-	-	48.1	-24.42
9	.57525	24.5	Qp	0	0	10	34.5	56	-21.5	-	-
10	.57525	15.76	Ca	0	0	10	25.76	-	-	46	-20.24
11	.7035	21.94	Qp	0	0	10	31.94	56	-24.06	-	-
12	.7035	17.99	Ca	0	0	10	27.99	-	-	46	-18.01

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

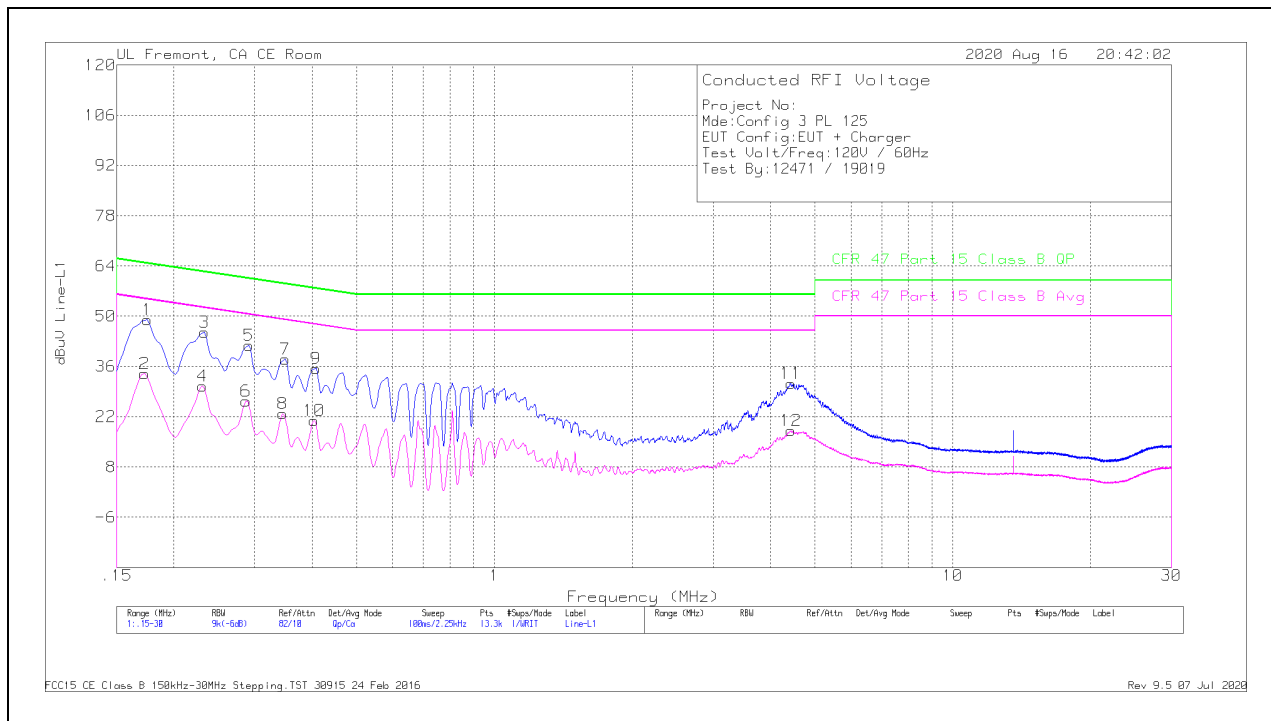
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
13	.20625	36.71	Qp	0	0	10	46.71	63.35	-16.64	-	-
14	.204	23.6	Ca	0	0	10	33.6	-	-	53.45	-19.85
15	.26588	30.56	Qp	0	0	10	40.56	61.25	-20.69	-	-
16	.27375	16.36	Ca	0	0	10	26.36	-	-	51	-24.64
17	.3435	29.09	Qp	0	0	10	39.09	59.12	-20.03	-	-
18	.34125	14.8	Ca	0	0	10	24.8	-	-	49.17	-24.37
19	.39975	21.35	Qp	0	0	10	31.35	57.86	-26.51	-	-
20	.39975	10.29	Ca	0	0	10	20.29	-	-	47.86	-27.57
21	.55275	23.24	Qp	0	0	10	33.24	56	-22.76	-	-
22	.55275	9.36	Ca	0	0	10	19.36	-	-	46	-26.64
23	.8115	22.42	Qp	0	0	10	32.42	56	-23.58	-	-
24	.8115	17.2	Ca	0	0	10	27.2	-	-	46	-18.8

Qp - Quasi-Peak detector

Ca - CISPR average detection

8.7.2. AC Power Line With AC/DC Adapter

LINE 1 RESULTS



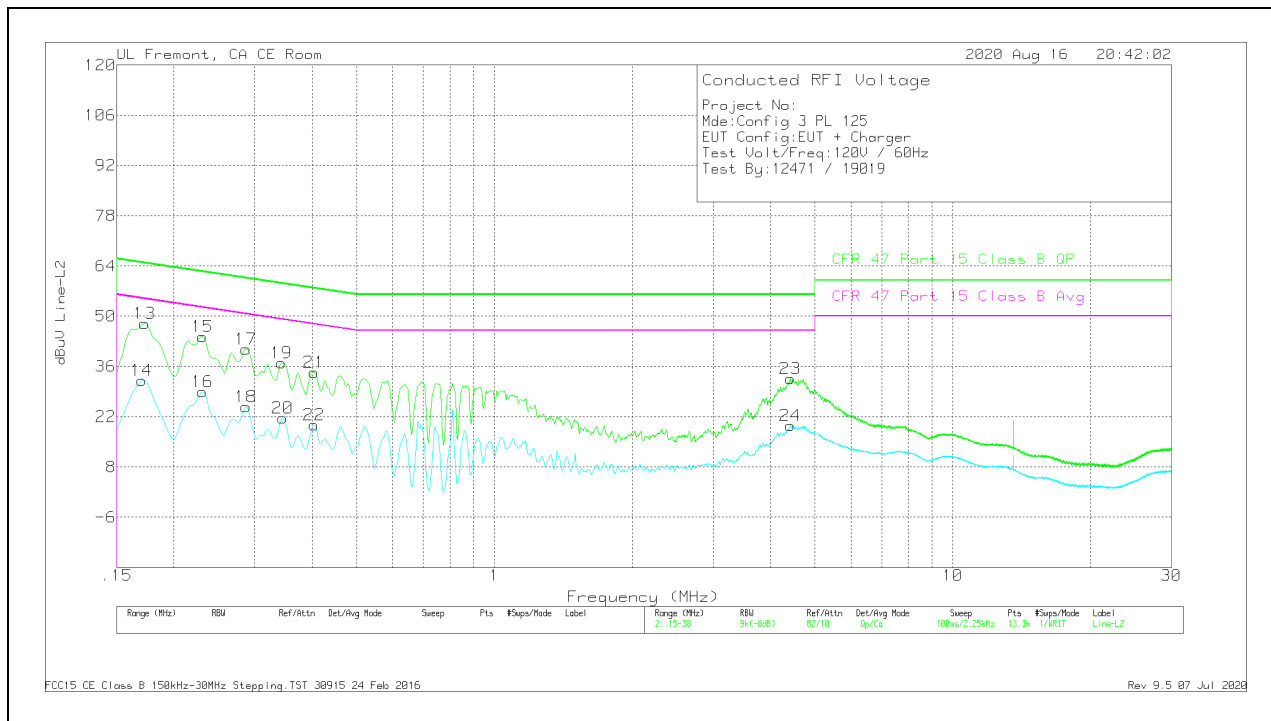
Range 1: Line-L1 0.15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 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)M argin (dB)
1	.17475	38.97	Qp	0	0	10	48.97	64.73	-15.76	-	-
2	.1725	23.96	Ca	0	0	10	33.96	-	-	54.84	-20.88
3	.23325	35.49	Qp	0	0	10	45.49	62.33	-16.84	-	-
4	.231	20.54	Ca	0	0	10	30.54	-	-	52.41	-21.87
5	.29175	31.92	Qp	0	0	10	41.92	60.47	-18.55	-	-
6	.28725	16.43	Ca	0	0	10	26.43	-	-	50.6	-24.17
7	.35025	28.08	Qp	0	0	10	38.08	58.96	-20.88	-	-
8	.34575	12.82	Ca	0	0	10	22.82	-	-	49.06	-26.24
9	.40763	25.45	Qp	0	0	10	35.45	57.7	-22.25	-	-
10	.40425	10.89	Ca	0	0	10	20.89	-	-	47.77	-26.88
11	4.43175	21.12	Qp	0	.1	10.1	31.32	56	-24.68	-	-
12	4.43175	7.88	Ca	0	.1	10.1	18.08	-	-	46	-27.92

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 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)M argin (dB)
13	.1725	38.01	Qp	0	0	10	48.01	64.84	-16.83	-	-
14	.17025	22.15	Ca	0	0	10	32.15	-	-	54.95	-22.8
15	.231	34.39	Qp	0	0	10	44.39	62.41	-18.02	-	-
16	.231	19.03	Ca	0	0	10	29.03	-	-	52.41	-23.38
17	.28725	30.78	Qp	0	0	10	40.78	60.6	-19.82	-	-
18	.28725	14.86	Ca	0	0	10	24.86	-	-	50.6	-25.74
19	.3435	26.92	Qp	0	0	10	36.92	59.12	-22.2	-	-
20	.34575	11.58	Ca	0	0	10	21.58	-	-	49.06	-27.48
21	.40425	24.39	Qp	0	0	10	34.39	57.77	-23.38	-	-
22	.40425	9.71	Ca	0	0	10	19.71	-	-	47.77	-28.06
23	4.425	22.4	Qp	0	.1	10.1	32.6	56	-23.4	-	-
24	4.42275	9.42	Ca	0	.1	10.1	19.62	-	-	46	-26.38

Qp - Quasi-Peak detector

Ca - CISPR average detection

END OF REPORT

9. SETUP PHOTOS

Please refer to 13335182-EP2V1 for setup photos.