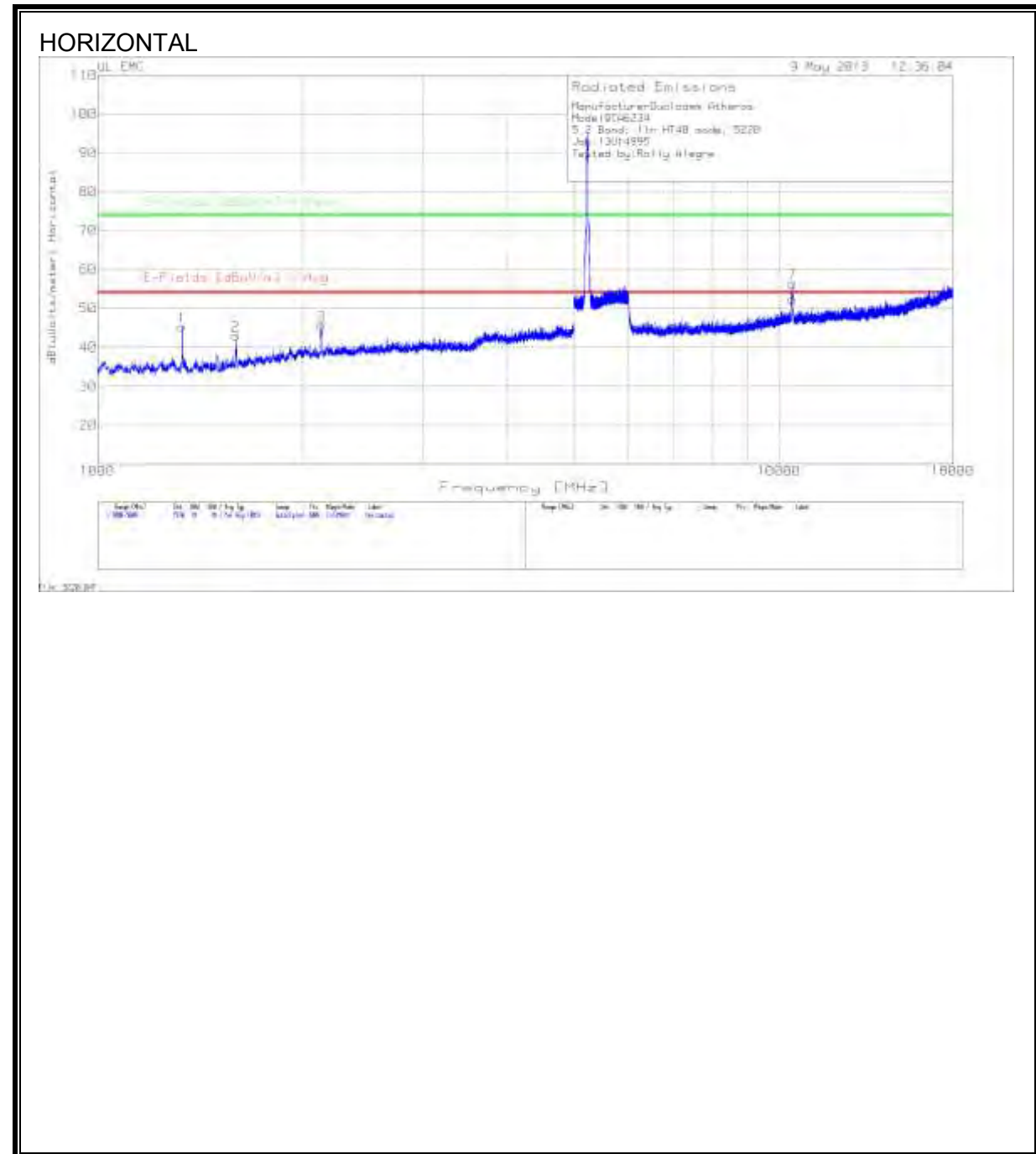
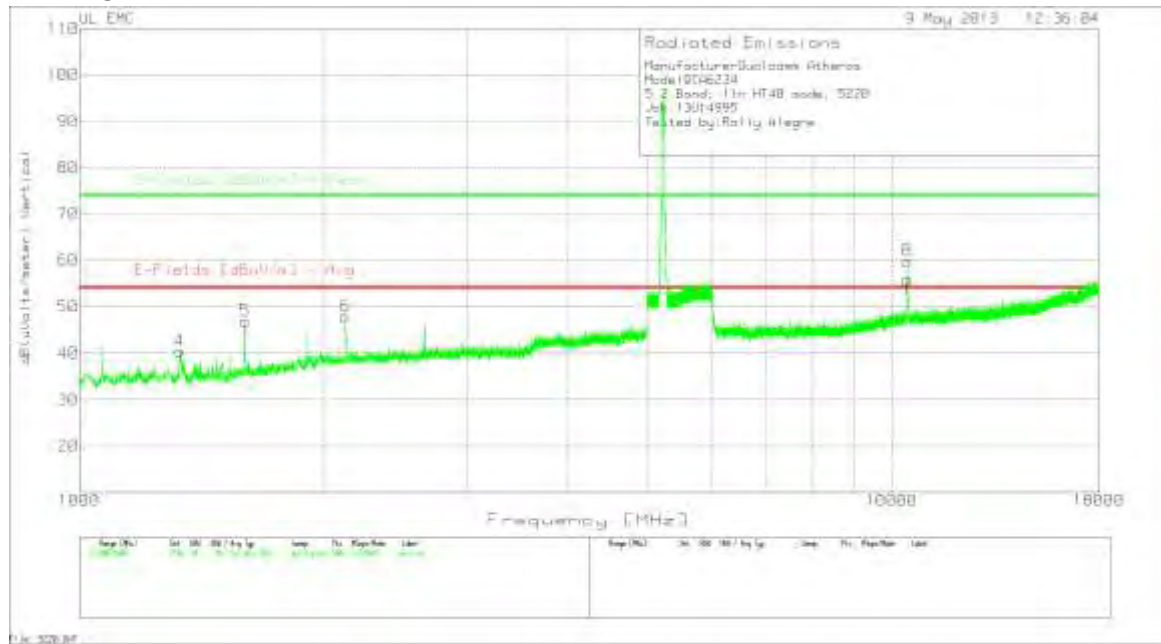


11n HT40 Mode, 5230 MHz



VERTICAL

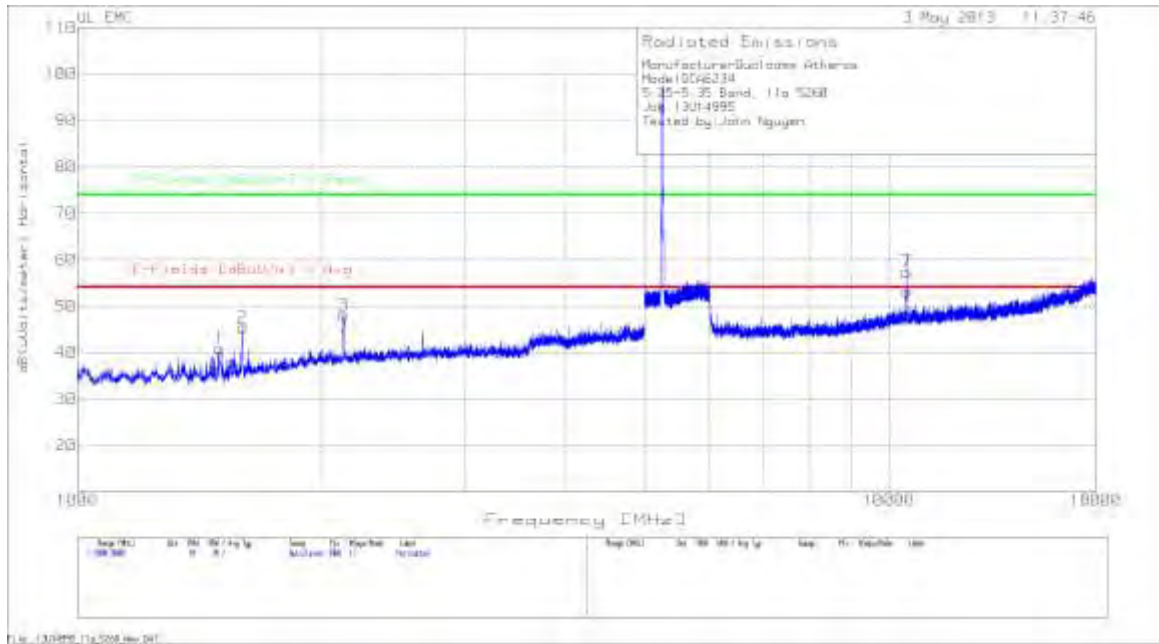


ManufacturerQualcomm Atheros												
ModelQCA6234												
5.2 Band, 11n HT40 mode, 5230												
Job:13U14995												
Tested by:Rolly Alegre												
Horizontal 1000 - 5000MHz												
Marker No.	Frequenc y	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1330	50.86	PK	29.1	-34.7	45.26	53.97	-8.71	74	-28.74	200	Horz
2	1595.333	48.22	PK	29.4	-34.6	43.02	53.97	-10.95	74	-30.98	400	Horz
3	2130	47.81	PK	32.3	-34.4	45.71	53.97	-8.26	74	-28.29	300	Horz
Vertical 1000 - 5000MHz												
Marker No.	Frequenc y	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	1329.333	46.05	PK	29.1	-34.7	40.45	53.97	-13.52	74	-33.55	200	Vert
5	1600	51.89	PK	29.5	-34.4	46.99	53.97	-6.98	74	-27.01	200	Vert
6	2127.333	50.08	PK	32.3	-34.4	47.98	53.97	-5.99	74	-26.02	200	Vert
Horizontal 6015 - 18000MHz												
Marker No.	Frequenc y	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	10467.06	43.35	PK	38.4	-25.3	56.45	53.97	2.48	74	-17.55	300	Horz
Vertical 6015 - 18000MHz												
Marker No.	Frequenc y	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	10461.06	46.87	PK	38.4	-25.3	59.97	53.97	6	74	-14.03	299	Vert
Horizontal 6015 - 18000MHz												
Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
10467.27	35.34	VB1	38.4	-25.3	48.44	53.97	-5.53	74	-25.56	334	274	Horz
Vertical 6015 - 18000MHz												
Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
10467.52	38.88	VB1	38.4	-25.4	51.88	53.97	-2.09	74	-22.12	277	176	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

9.5. TX ABOVE 1 GHz 802.11a MODE, 5.3 GHz BAND, with 50 ohm load

11a Mode, 5260 MHz

HORIZONTAL

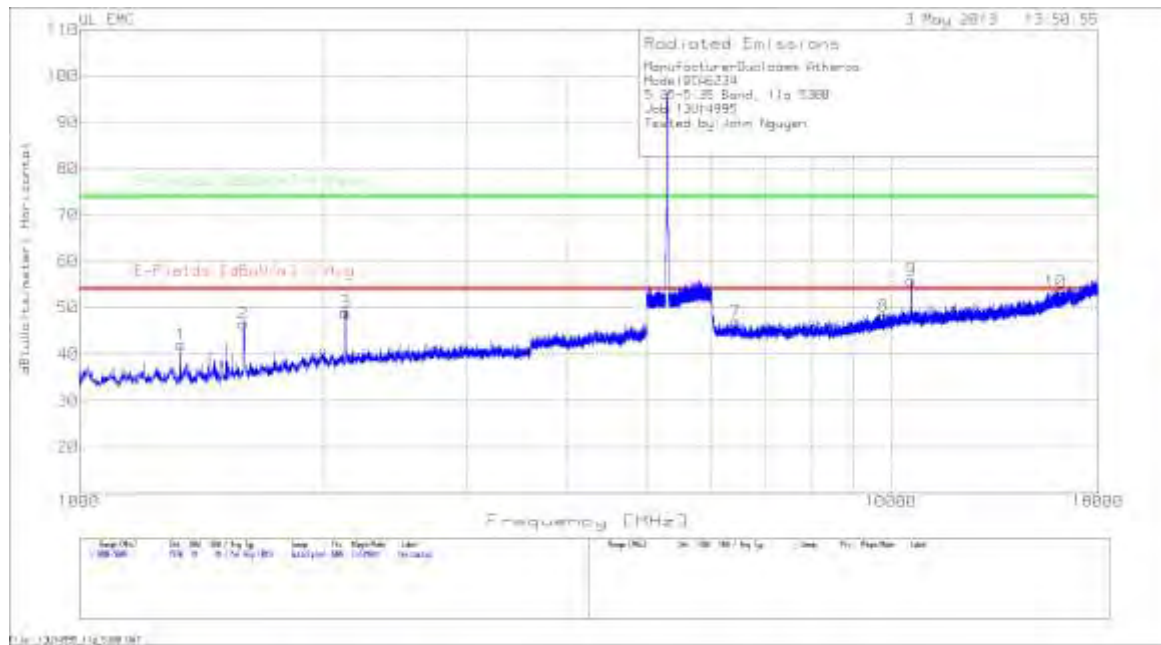


[illegible]

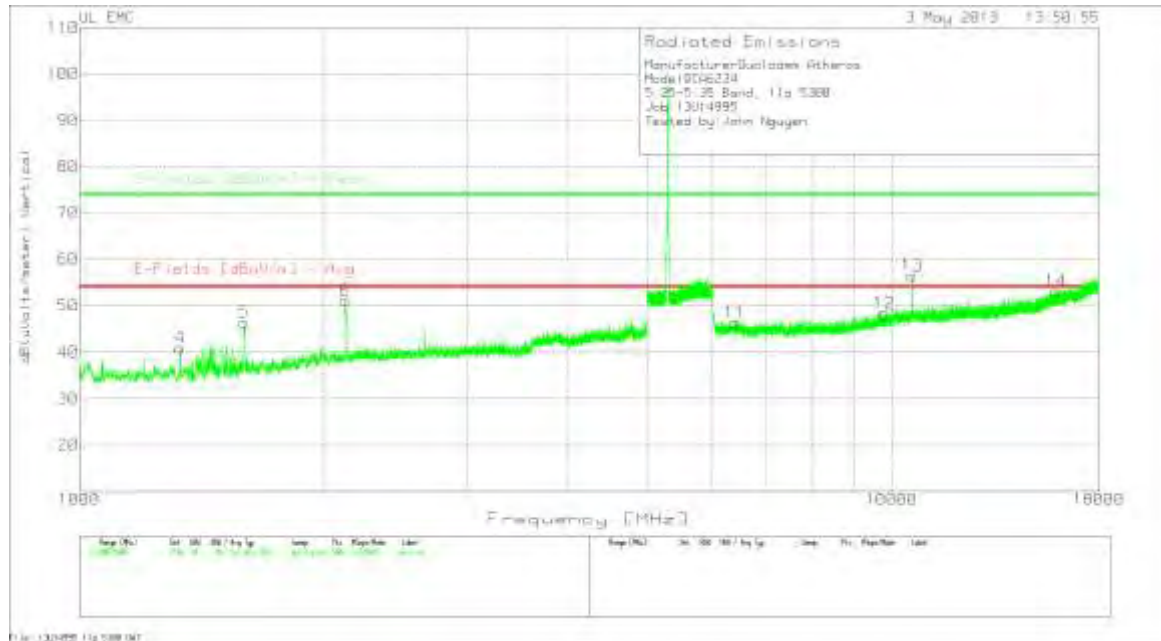
ManufacturerQualcomm Atheros												
ModelQCA6234												
5.25-5.35 Band, 11a 5260												
Job:13U14995												
Tested by:John Nguyen												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1496	47.46	PK	28.8	-35.3	40.96	53.97	-13.01	74	-33.04	400	Horz
2	1599.333	50.37	PK	29.5	-34.4	45.47	53.97	-8.5	74	-28.53	400	Horz
3	*2128	50.24	PK	32.3	-34.4	48.14			68.2	-20.06	300	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
4	1453.333	54.22	PK	28.9	-35.1	48.02	53.97	-5.95	74	-25.98	299	Vert
5	1598	51.85	PK	29.5	-34.5	46.85	53.97	-7.12	74	-27.15	100	Vert
6	*2124.667	52.49	PK	32.2	-34.4	50.29			68.2	-17.91	400	Vert
Horizontal 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	*10525.978	44.57	PK	38.4	-25.6	57.37			68.2	-10.83	400	Horz
Vertical 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
8	*10510.998	48.1	PK	38.4	-25.3	61.2			68.2	-7	299	Vert
Range:7 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
9	*10511.291	36.83	PK	38.4	-25.3	49.93			68.2	-18.27	400	Horz
Range:8 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Preamp/ Cable dB	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
10	*10511.291	39.78	PK	38.4	-25.3	52.88			68.2	-15.32	299	Vert
*=Not in the restricted band												

11a Mode, 5300 MHz

HORIZONTAL



VERTICAL



Manufacturer: Qualcomm Atheros
Model: QCA6234
5.25-5.35 Band, 11a 5300
Job: 13U14995
Tested by: John Nguyen

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1333.333	47.62	PK	29.1	-34.7	42.02	53.97	-11.95	74	-31.98	300	Horz
2	1594.667	51.79	PK	29.4	-34.6	46.59	53.97	-7.38	74	-27.41	400	Horz
3	2125.333	51.11	PK	32.3	-34.4	49.01	53.97	-4.96	74	-24.99	300	Horz
Vertical 1000 - 5000MHz												
4	1330.667	46.57	PK	29.1	-34.7	40.97	53.97	-13	74	-33.03	200	Vert
5	1595.333	51.59	PK	29.4	-34.6	46.39	53.97	-7.58	74	-27.61	300	Vert
6	2125.333	53.19	PK	32.3	-34.4	51.09	53.97	-2.88	74	-22.91	200	Vert

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 6015 - 18000MHz												
7	6441.431	41.55	PK	35.8	-30.3	47.05	53.97	-6.92	74	-26.95	300	Horz
8	9786.964	36.51	PK	37.7	-26	48.21	53.97	-5.76	74	-25.79	400	Horz
9	10598.881	43.29	PK	38.4	-25.8	55.89	53.97	1.92	74	-18.11	300	Horz
Vertical 6015 - 18000MHz												
11	6410.472	40.69	PK	35.8	-30.1	46.39	53.97	-7.58	74	-27.61	300	Vert
12	9795.952	36.53	PK	37.7	-25.9	48.33	53.97	-5.64	74	-25.67	400	Vert
13	10601.377	44.02	PK	38.4	-25.9	56.52	53.97	2.55	74	-17.48	199	Vert

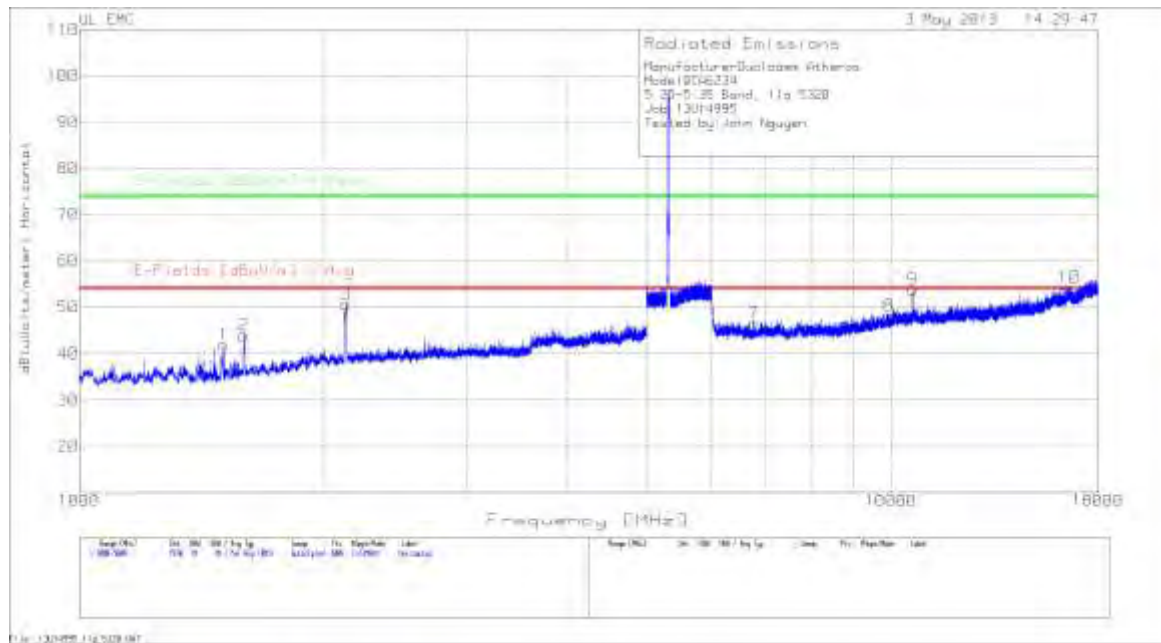
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Range: 710000 - 18000MHz												
15	10601.95	37.56	PK	38.4	-25.9	50.06	53.97	-3.91	74	-23.94	300	Horz
16	15933.506	28.08	PK	41.2	-23.7	45.58	53.97	-8.39	74	-28.42	300	Horz
Range: 810000 - 18000MHz												
17	10602.616	38.32	PK	38.4	-25.9	50.82	53.97	-3.15	74	-23.18	299	Vert
18	15870.844	28.21	PK	41.1	-24	45.31	53.97	-8.66	74	-28.69	299	Vert

Test Frequen	Meter Reading	Detector	T345 Ant Factor	T145 Preamp	Cable Factor	T192 HPF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
Horizontal 7600 - 18000MHz													
10597.34	25.91	VB1	38.2	-34.3	10.8	0.4	43.01	53.97	-12.96	74	-32.99	4	118 Horz
Vertical 7600 - 18000MHz													
10601.66	31.26	VB1	38.2	-34.3	10.8	0.4	46.36	53.97	-7.61	74	-27.64	71	134 Vert
Horizontal 10000 - 18000MHz													
10601.33	28.07	VB1	38.2	-34.3	10.8	0.4	43.17	53.97	-10.8	74	-30.83	9	102 Horz
Vertical 10000 - 18000MHz													
10601.52	31.76	VB1	38.2	-34.3	10.8	0.4	46.86	53.97	-7.11	74	-27.14	68	128 Vert

PK - Peak detector
QP - Quasi-Peak detector
LnAv - Linear Average detector
LgAv - Log Average detector
Av - Average detector

11a Mode, 5320 MHz

HORIZONTAL



[illegible]

Manufacturer: Qualcomm Atheros
Model: QCA6234
5.25-5.35 Band, 11a 5.320
Job: 13U14995
Tested by: John Nguyen

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 3000MHz												
1	1504.667	48.81	PK	28.8	-35.3	41.91	53.97	-12.06	74	-32.09	400	Horz
2	1594	45.21	PK	29.4	-34.6	44.01	53.97	-9.96	74	-29.99	300	Horz
3	*2129.333	52.77	PK	32.3	-34.4	50.67			68.2	-17.51	200	Horz
Vertical 1000 - 3000MHz												
4	1452.667	48.84	PK	28.9	-35.1	42.64	53.97	-11.83	74	-31.86	200	Vert
5	1594.667	56.16	PK	29.4	-34.6	50.86	53.97	-3.01	74	-23.04	300	Vert
6	*2127.333	53.49	PK	32.3	-34.4	50.39			68.2	-17.81	300	Vert

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 8015 - 18000MHz												
7	6780.977	40.58	PK	35.8	-25.8	45.59	53.97	-7.88	74	-27.41	300	Horz
8	9991.744	35.81	PK	38	-25.6	48.21	53.97	-3.76	74	-25.79	200	Horz
9	10639.826	41.12	PK	38.5	-25.8	53.82	53.97	-0.15	74	-30.18	300	Horz
10	*16366.913	35.1	PK	41.3	-22.2	54.2			68.2	-14	100	Horz
Vertical 8015 - 18000MHz												
11	8510.339	40.05	PK	35.8	-25.4	46.45	53.97	-7.52	74	-27.55	199	Vert
12	9901.813	36.31	PK	37.9	-25.8	48.41	53.97	-3.56	74	-25.59	400	Vert
13	10640.825	46.51	PK	38.5	-25.8	59.21	53.97	3.24	74	-14.79	300	Vert
14	*16505.995	35.1	PK	41.3	-23.1	53.3			68.2	-14.9	100	Vert

*=Not in the restricted band

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	5GHz HPF Preamp/ Cable dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Range:7 10000 - 18000MHz												
15	10639.947	36.66	PK	38.5	-25.8	49.36	53.97	-4.61	74	-24.64	300	Horz
16	16627.448	27.17	PK	41.4	-21.6	46.97	53.97	-7	74	-27.03	200	Horz
Range:8 10000 - 18000MHz												
17	10639.947	38.12	PK	38.5	-25.8	50.82	53.97	-3.15	74	-23.18	200	Vert
18	16658.112	27.32	PK	41.4	-22	46.72	53.97	-7.25	74	-27.28	100	Vert

Test Frequency	Meter Reading	Detector	T345 Ant Factor	T145 Preamp	Cable Factor	T192 HPF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
Horizontal 7600 - 18000MHz													
1599.43	34.18	VBI	29	-35.2	3.8	0.1	51.88	53.97	-22.09	74	-42.12	107	Vert
Vertical 7600 - 18000MHz													
10597.34	25.91	VBI	38.2	-34.3	10.8	0.4	41.01	53.97	-12.96	74	-32.99	118	Horz
10641.57	27.24	VBI	38.3	-34.3	10.8	0.2	42.24	53.97	-11.73	74	-31.76	126	Horz
Horizontal 10000 - 18000MHz													
10001.66	11.26	VBI	38.2	-34.3	10.8	0.4	46.36	53.97	-13.61	74	-27.64	134	Vert
Vertical 10000 - 18000MHz													
10601.33	28.07	VBI	38.3	-34.3	10.8	0.4	43.17	53.97	-10.8	74	-30.83	102	Horz
Horizontal 10000 - 18000MHz													
10601.52	31.76	VBI	38.2	-34.3	10.8	0.4	46.86	53.97	-7.11	74	-27.14	128	Vert
10641.51	30.72	VBI	38.3	-34.3	10.8	0.2	45.72	53.97	-8.25	74	-28.28	126	Vert

PK - Peak detector
QP - Quasi-Peak detector
LNAV - Linear Average detector
LgAV - Log Average detector
AV - Average detector

11n HT20 Mode, 5260 MHz

UL EMC

2 May 2013 23:30:53

Radiated Emissions
 Manufacturer: Salscan Athens
 Model: 9006234
 5.25-5.25 Band HT28, 11.65268
 Job: 13014995
 Tested by: John Nguyen

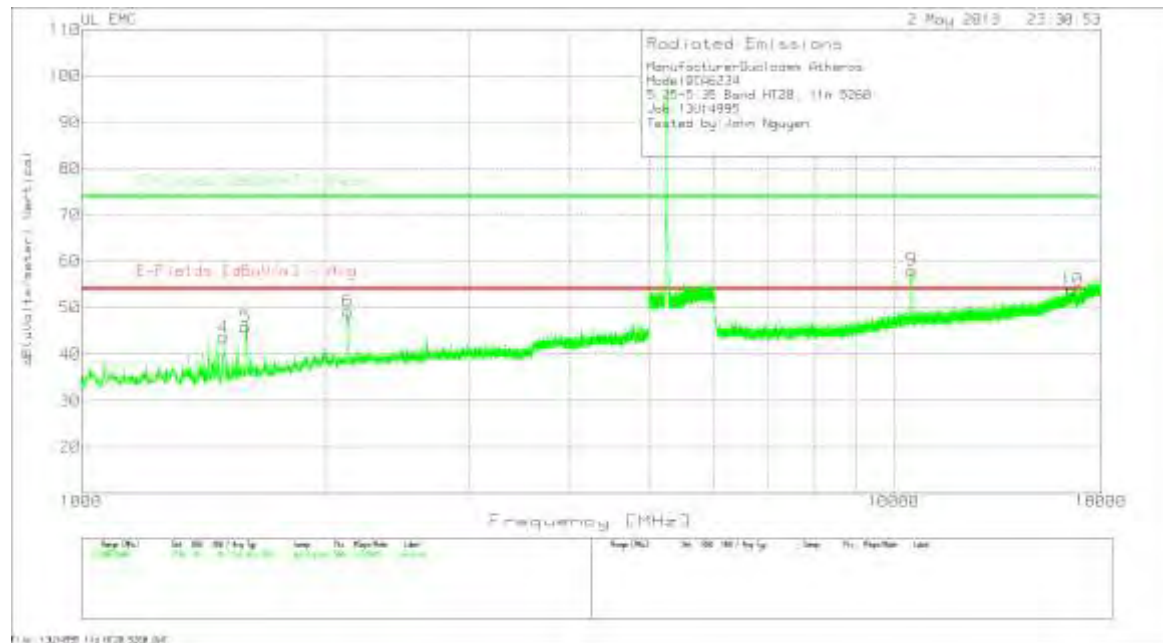
dB(uA/meter) Hor. vertical

E-Fields [dB(uA/meter)]

Frequency [MHz]

Sweep (Hz)	Int. BW	Res. BW	Imp. Imp.	Pre. Amplifier	Date
100 MHz	9 kHz	9 kHz	100 dB	100 dB	10/10/10

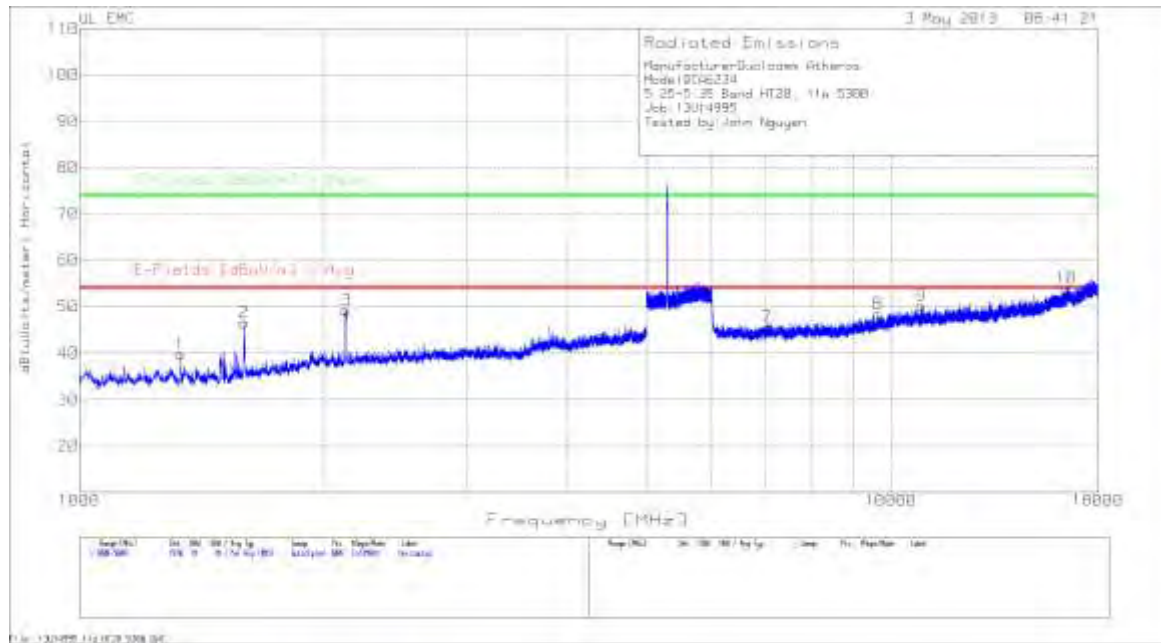
VERTICAL

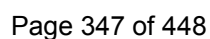


Manufacturer: Qualcomm Atheros												
Model: QCA6234												
5.25-5.35 Band HT20, 11n 5260												
Job: 13U14995												
Tested by: John Nguyen												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1494.667	46.55	PK	28.8	-35.3	40.05	53.97	-13.92	74	-33.95	300	Horz
2	1596.667	52.3	PK	29.5	-34.5	47.3	53.97	-6.67	74	-26.7	400	Horz
3	2126	49.16	PK	32.3	-34.4	47.06	53.97	-6.91	74	-26.94	300	Horz
Vertical 1000 - 5000MHz												
4	1496.667	50.14	PK	28.8	-35.3	43.64	53.97	-10.33	74	-30.36	100	Vert
5	1594	51.08	PK	29.4	-34.6	45.88	53.97	-8.09	74	-28.12	300	Vert
6	2128	51.37	PK	32.3	-34.4	49.27	53.97	-4.7	74	-24.73	300	Vert
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 6015 - 18000MHz												
7	*10506.005	43.42	PK	38.4	-25.4	56.42			68.2	-11.78	400	Horz
8	*16662.785	34.5	PK	41.4	-22.1	53.8			68.2	-14.4	200	Horz
Vertical 6015 - 18000MHz												
9	*10528.974	45.42	PK	38.4	-25.6	58.22			68.2	-9.98	199	Vert
10	*16618.844	34.19	PK	41.3	-21.6	53.89			68.2	-14.31	100	Vert
*=Not in the restricted band												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Range:7 10000 - 18000MHz												
11	*10522.623	39.73	PK	38.4	-25.5	52.63			68.2	-15.57	400	Horz
12	16604.783	27.06	PK	41.3	-21.8	46.56	53.97	-7.41	74	-27.44	400	Horz
Range:8 10000 - 18000MHz												
13	*10523.956	41.53	PK	38.4	-25.5	54.43			68.2	-13.77	300	Vert
14	16571.452	27.23	PK	41.3	-22.1	46.43	53.97	-7.54	74	-27.57	400	Vert
*=Not in the restricted band												
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

11n HT20 Mode, 5300 MHz

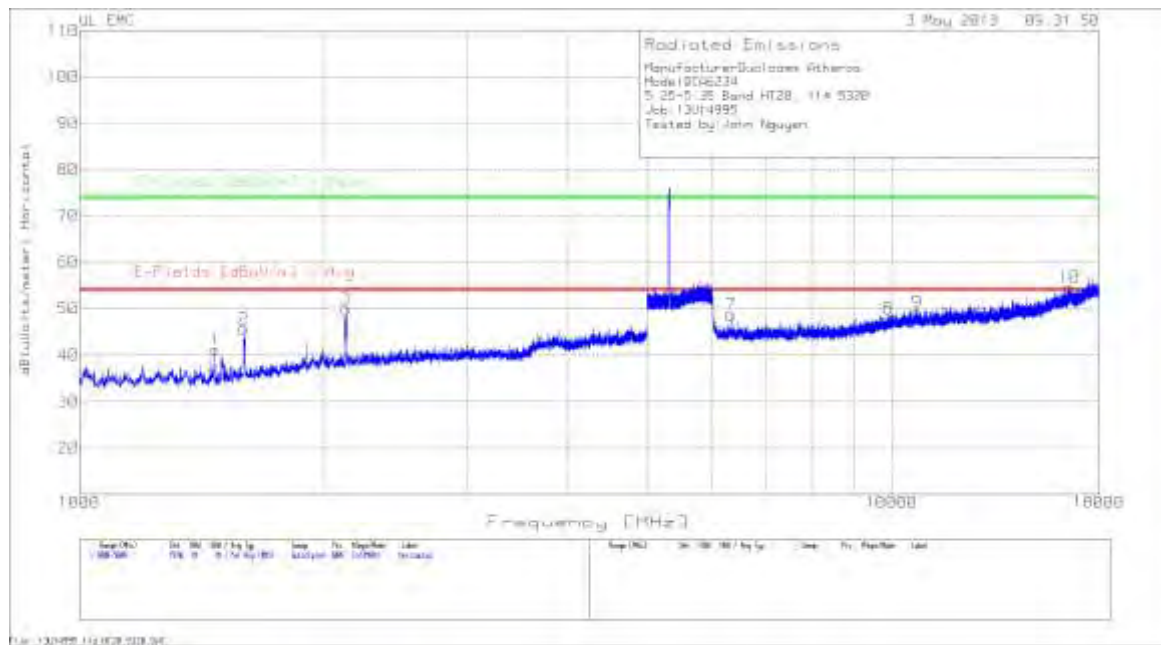
HORIZONTAL



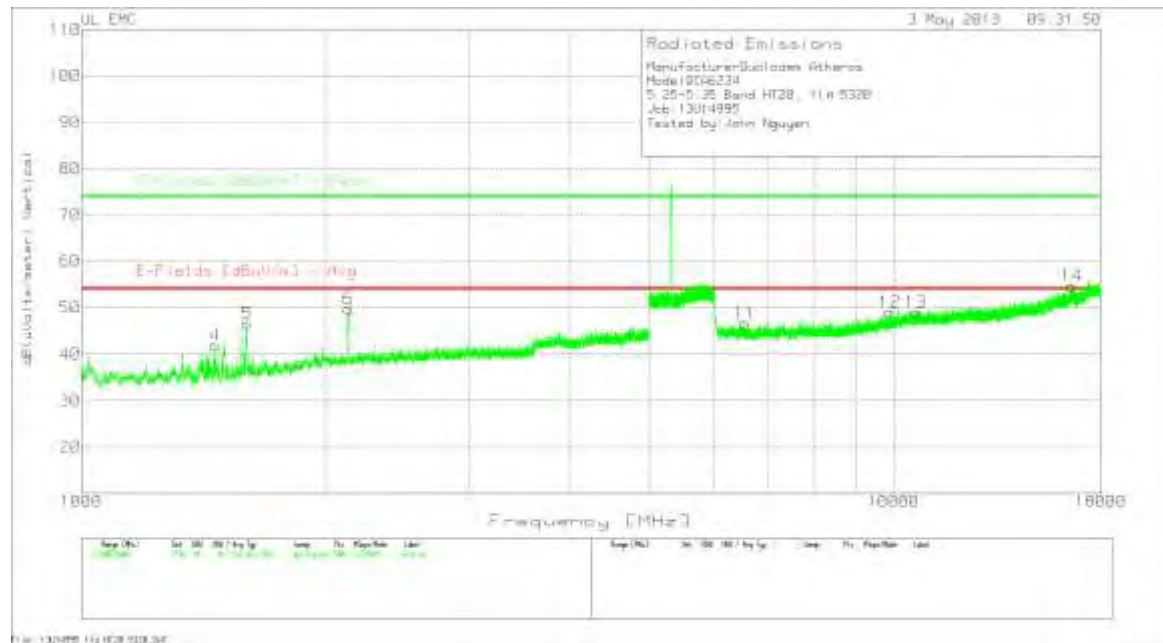


Manufacturer: Qualcomm Atheros													
Model: QCA6234													
5.25-5.35 Band HT20, 11n 5300													
Job: 13U14995													
Tested by: John Nguyen													
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolts/ meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity	
Horizontal 1000 - 5000MHz													
1	1332.667	45.42	PK	29.1	-34.7	39.82	53.97	-14.15	74	-34.18	300	Horz	
2	1596	51.7	PK	29.5	-34.6	46.6	53.97	-7.37	74	-27.4	200	Horz	
3	*2132	51.31	PK	32.3	-34.3	49.31			68.2	-18.89	400	Horz	
Vertical 1000 - 5000MHz													
4	1327.333	48.16	PK	29.1	-34.8	42.46	53.97	-11.51	74	-31.54	100	Vert	
5	1594	51.35	PK	29.4	-34.6	46.15	53.97	-7.82	74	-27.85	300	Vert	
6	*2126	52.24	PK	32.3	-34.4	50.14			68.2	-18.06	200	Vert	
*=Not in the restricted band													
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolts/ meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity	
Horizontal 6015 - 18000MHz													
7	7043.627	38.56	PK	36	-29	45.56	53.97	-8.41	74	-28.44	100	Horz	
8	9640.16	36.86	PK	37.6	-26	48.46	53.97	-5.51	74	-25.54	100	Horz	
9	10904.473	37.54	PK	38.5	-25.8	50.24	53.97	-3.73	74	-23.76	200	Horz	
10	*16447.073	36.22	PK	41.3	-23.6	53.92			68.2	-14.28	400	Horz	
Vertical 6015 - 18000MHz													
11	7034.639	38.56	PK	36	-29.1	45.46	53.97	-8.51	74	-28.54	300	Vert	
12	9606.206	35.84	PK	37.5	-26.5	46.84	53.97	-7.13	74	-27.16	300	Vert	
13	10929.439	35.71	PK	38.5	-25.9	48.31	53.97	-5.66	74	-25.69	100	Vert	
14	*16473.038	34.69	PK	41.3	-23.3	52.69			68.2	-15.51	200	Vert	
*=Not in the restricted band													
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolts/ meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity	
Range:7 10000 - 18000MHz													
15	10875.26	28.46	PK	38.5	-25.8	41.16	53.97	-12.81	74	-32.84	300	Horz	
16	*16571.452	27.41	PK	41.3	-22.1	46.61			68.2	-21.59	200	Horz	
*=Not in the restricted band													
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolts/ meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity	
Range:8 10000 - 18000MHz													
17	10896.592	28.38	PK	38.5	-25.7	41.18	53.97	-12.79	74	-32.82	400	Vert	
18	*16560.787	28.03	PK	41.3	-22.2	47.13			68.2	-21.07	400	Vert	
*=Not in the restricted band													
Horizontal 7600 - 18000MHz													
Test Frequen	Meter Reading	Detector	T345 Ant Factor	T145 Preamp	Cable Factor	T192 HPF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/	Margin (dB)	Height [cm]	Polarity
10908.4	23.48	VB1	38.3	-34	11	0.3	39.08	53.97	-14.89	74	-34.92	216	Horz

HORIZONTAL



VERTICAL



Manufacturer: Qualcomm Atheros
Model: QCA6234
5.25-5.35 Band HT20, 11n 5320
Job: 13U14995
Tested by: John Nguyen

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1469.333	47.73	PK	28.8	-35.2	41.33	53.97	-12.64	74	-32.67	400	Horz
2	1594	50.91	PK	29.4	-34.6	45.71	53.97	-8.26	74	-28.29	300	Horz
3	*2128.667	52.16	PK	32.3	-34.4	50.06			68.2	-18.14	300	Horz
Vertical 1000 - 5000MHz												
4	1462	48.06	PK	28.9	-35.1	41.86	53.97	-12.11	74	-32.14	400	Vert
5	1599.333	51.51	PK	29.5	-34.4	46.61	53.97	-7.36	74	-27.39	300	Vert
6	*2132	51.83	PK	32.3	-34.3	49.83			68.2	-18.37	400	Vert

*=Not in the restricted band

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 6015 - 18000MHz												
7	6349.553	41.95	PK	35.9	-29.1	48.75	53.97	-5.22	74	-25.25	300	Horz
8	9902.81	35.63	PK	37.9	-25.7	47.83	53.97	-6.14	74	-26.17	200	Horz
9	10748.681	35.58	PK	38.5	-24.8	49.28	53.97	-4.69	74	-24.72	400	Horz
10	*16548.937	35.65	PK	41.3	-22.3	54.65			68.2	-13.55	100	Horz
Vertical 6015 - 18000MHz												
11	6556.277	40.08	PK	35.8	-29.2	46.68	53.97	-7.29	74	-27.32	200	Vert
12	*9899.814	36.94	PK	37.9	-25.8	49.04	53.97	-4.93	74	-24.96	100	Vert
13	10656.803	36.34	PK	38.5	-25.8	49.04	53.97	-4.93	74	-24.96	300	Vert
14	*16572.905	35.51	PK	41.3	-22.1	54.71			68.2	-13.49	200	Vert

*=Not in the restricted band

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
Range:7 10000 - 18000MHz												
15	10783.935	28.33	PK	38.5	-25.3	41.53	53.97	-12.44	74	-32.47	300	Horz
16	*16606.116	26.9	PK	41.3	-21.7	46.5			68.2	-21.7	400	Horz
Range:8 10000 - 18000MHz												
17	10752.604	27.97	PK	38.5	-24.9	41.57	53.97	-12.4	74	-32.43	399	Vert
18	*16578.118	27.65	PK	41.3	-22.1	46.85			68.2	-21.35	399	Vert

*=Not in the restricted band

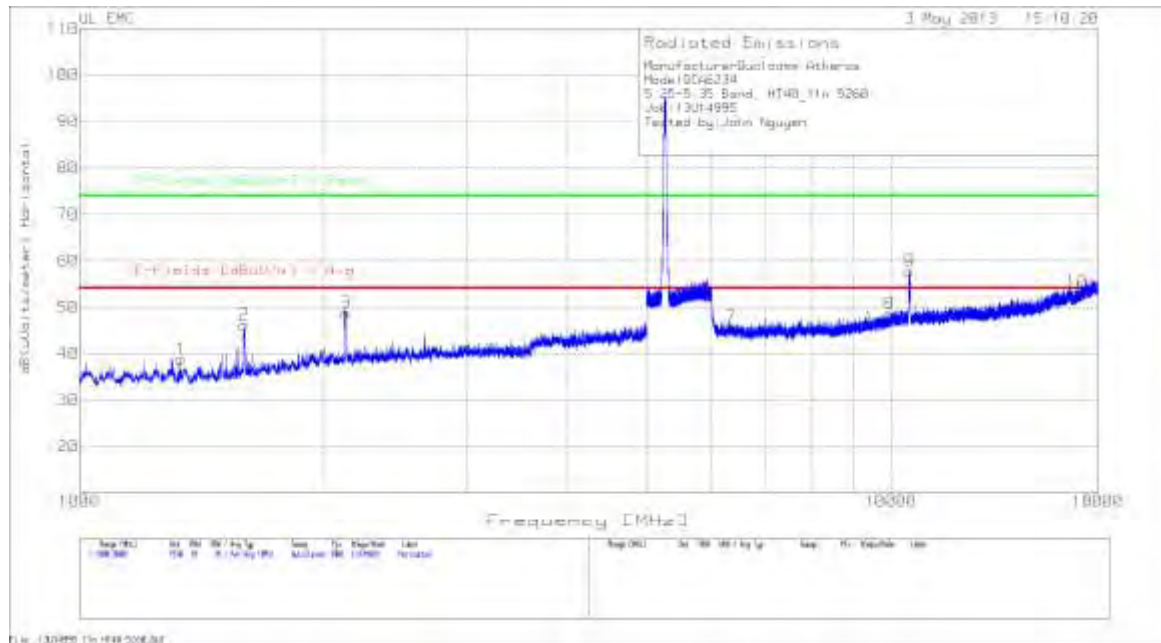
Test Frequency	Meter Reading	Detector	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T162 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
10747.34	23.3	VB1	38.3	-34.2	10.9	0.3	38.6	53.97	-15.37	74	-35.4	392	Horz
Vertical 7600 - 18000MHz													
Test Frequency	Meter Reading	Detector	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
10648.52	24.27	VB1	38.3	-34.2	10.8	0.2	39.37	53.97	-14.6	74	-34.63	396	Vert

PK - Peak detector
QP - Quasi-Peak detector
LnAv - Linear Average detector
LgAv - Log Average detector
Av - Average detector

9.7. TX ABOVE 1 GHz 802.11n HT40 MODE, 5.3 GHz BAND, with 50 ohm load

11n HT40 MODE 5270 MHz

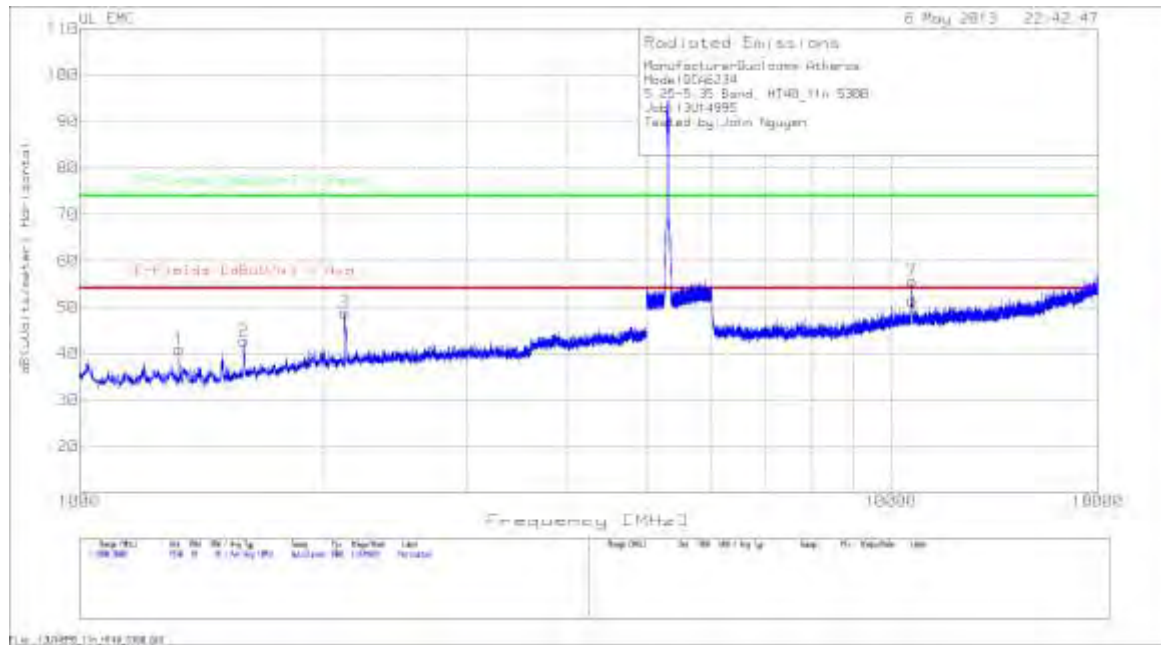
HORIZONTAL



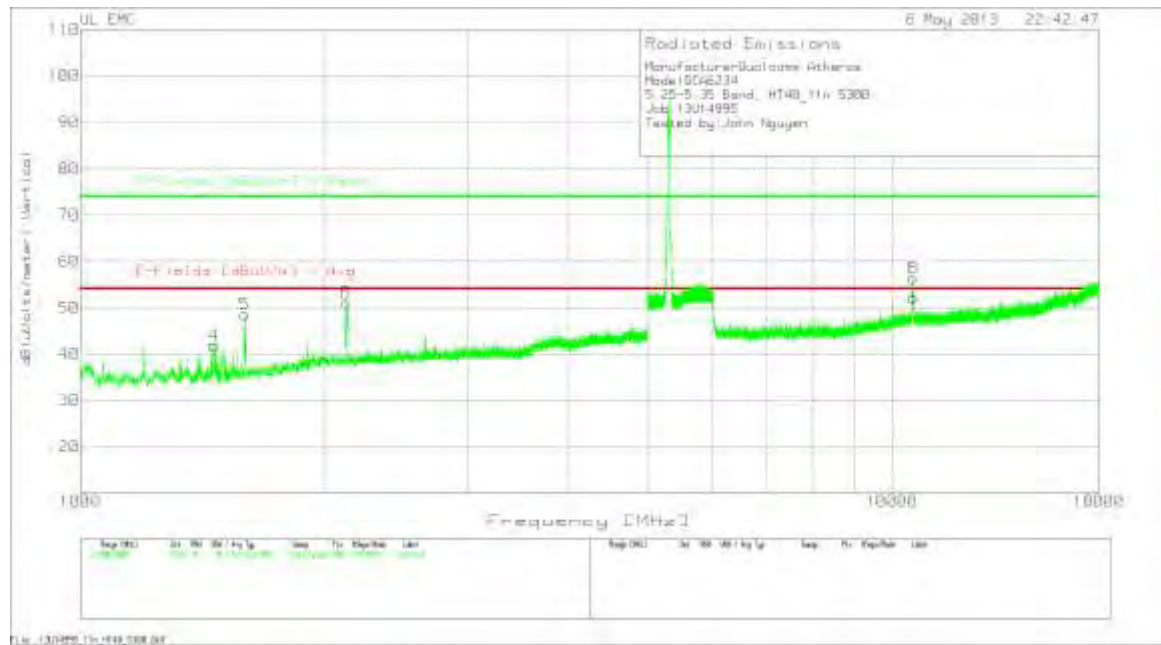
Manufacturer: Qualcomm Atheros												
Model: QCA6234												
5.25-5.35 Band, HT40_11n 5270												
Job: 13U14995												
Tested by: John Nguyen												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1333.333	44.44	PK	29.1	-34.7	38.84	53.97	-15.13	74	-35.16	300	Horz
2	1597.333	51.21	PK	29.5	-34.5	46.21	53.97	-7.76	74	-27.79	100	Horz
3	*2130.667	50.91	PK	32.3	-34.4	48.81			68.2	-19.39	400	Horz
Vertical 1000 - 5000MHz												
4	1330	50.53	PK	29.1	-34.7	44.93	53.97	-9.04	74	-29.07	100	Vert
5	1593.333	58.21	PK	29.4	-34.6	53.01	53.97	-0.96	74	-20.99	299	Vert
6	*2130.667	52.97	PK	32.3	-34.4	50.87			68.2	-17.33	200	Vert
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/cable/6GHz HPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 6015 - 18000MHz												
7	6356.544	38.94	PK	35.9	-29.1	45.74	53.97	-8.23	74	-28.26	300	Horz
8	9961.731	36.08	PK	38	-25.5	48.58	53.97	-5.39	74	-25.42	300	Horz
9	*10546.95	45.04	PK	38.4	-25.7	57.74			68.2	-10.46	400	Horz
10	*16992.345	33.66	PK	41.3	-21.7	53.26			68.2	-14.94	200	Horz
Vertical 6015 - 18000MHz												
11	6514.333	40.28	PK	35.8	-29.3	46.78	53.97	-7.19	74	-27.22	300	Vert
12	*10136.498	35.49	PK	38.2	-25.4	48.29			68.2	-19.91	199	Vert
13	*10543.954	45.2	PK	38.4	-25.6	58			68.2	-10.2	300	Vert
14	*17027.299	34.88	PK	41.3	-21.3	54.88			68.2	-13.32	400	Vert
*=Not in the restricted band												
Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
Vertical 1000 - 5000MHz												
1600.038	33.37	VB1	29.5	-34.4	28.47	53.97	-25.5	74	-45.53	299	123	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

11n HT40 MODE 5310 MHz

HORIZONTAL



VERTICAL



Manufacturer: Qualcomm Atheros
Model: QCA6234
5.25-5.35 Band, HT40 11n 5.10
Job: 13U14995
Tested by: John Nguyen

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts/meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1327.333	46.7	PK	29.1	-34.8	41	53.97	-12.97	74	-33	300	Horz
2	1595.333	47.96	PK	29.4	-34.6	42.76	53.97	-11.21	74	-31.24	300	Horz
3	*2125.333	50.95	PK	32.3	-34.4	48.85	53.97	-5.12	74	-25.15	200	Horz
Vertical 1000 - 5000MHz												
4	1462	48.12	PK	28.9	-35.1	41.92	53.97	-12.05	74	-32.08	300	Vert
5	1595.333	53.82	PK	29.4	-34.6	48.62	53.97	-5.35	74	-25.38	300	Vert
6	*2124.067	53.31	PK	32.2	-34.4	51.11	53.97	-2.86	74	-22.89	200	Vert

*=Not in the restricted band

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/cable/5GHz HPF dB	dB(uVolts/meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 6015 - 18000MHz												
7	10622.849	42.92	PK	38.4	-25.7	55.62	53.97	1.65	74	-16.38	300	Horz
Vertical 6015 - 18000MHz												
8	10616.857	43.77	PK	38.4	-25.8	56.37	53.97	2.4	74	-17.63	300	Vert

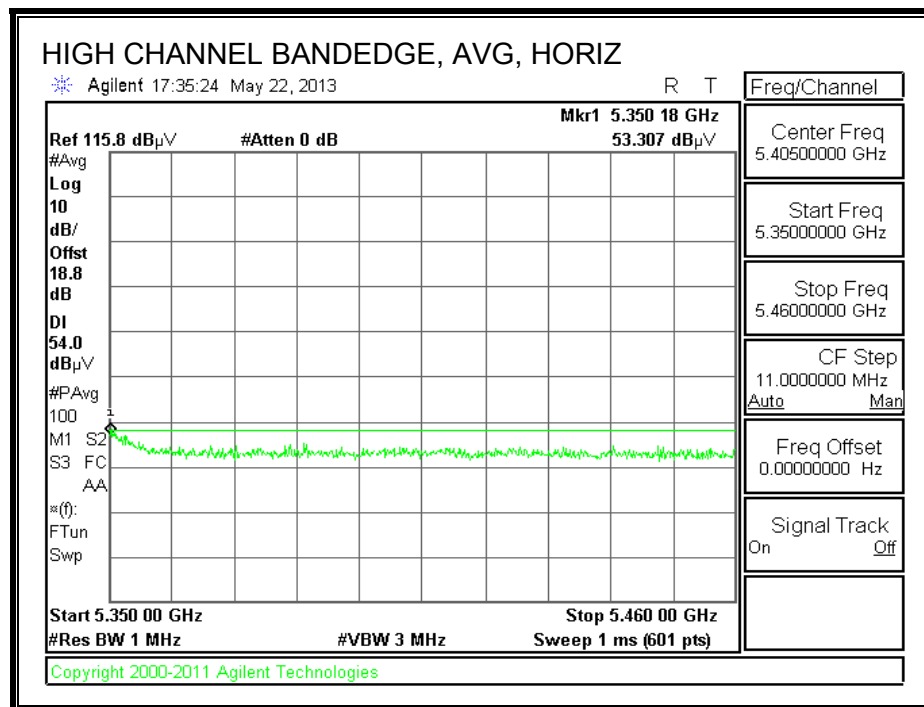
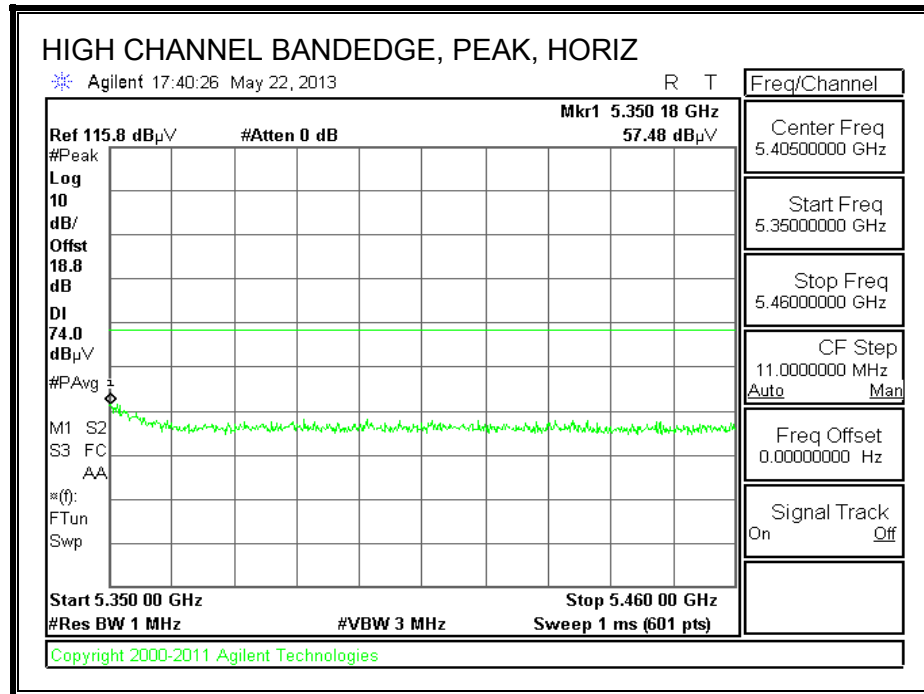
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/Cable dB	dB(uVolts/meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Range:7 10000 - 18000MHz												
9	10639.28	34	PK	38.5	-25.8	46.7	53.97	-7.27	74	-27.3	200	Horz
Range:8 10000 - 18000MHz												
10	10604.616	37.04	PK	38.4	-25.9	49.54	53.97	-4.43	74	-24.46	101	Vert

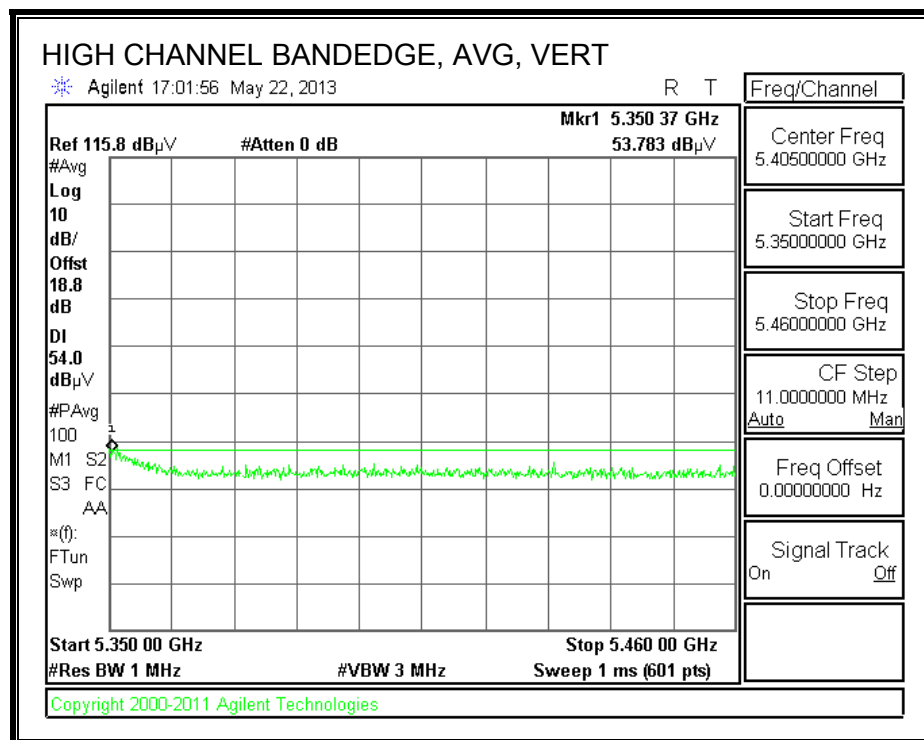
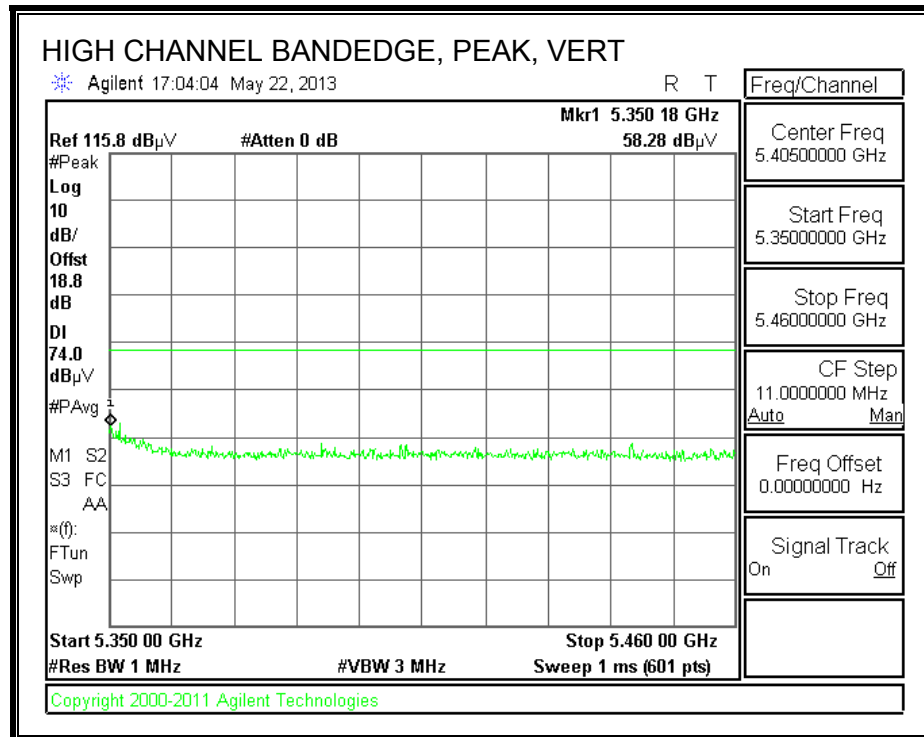
Horizontal 7600 - 18000MHz														
Test Frequency	Meter Reading	Detector	T345 Ant Factor	T145 Preamp	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
10623.25	26.77	VB1	38.2	-34.3	10.8	0.3	41.77	53.97	-12.2	74	-32.23	13	150	Horz
Vertical 7600 - 18000MHz														
Test Frequency	Meter Reading	Detector	Factor [dB/m]	Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] -	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
10601.66	31.26	VB1	38.2	-34.3	10.8	0.4	46.36	53.97	-7.61	74	-27.64	71	134	Vert
Vertical 10000 - 18000MHz														
Test Frequency	Meter Reading	Detector	Factor	Preamp	Cable	T192 HPF	dB(uVolts/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
10601.52	31.76	VB1	38.2	-34.3	10.8	0.4	46.86	53.97	-7.11	74	-27.14	68	128	Vert

PK - Peak detector
QP - Quasi-Peak detector
LNAv - Linear Average detector
lgAv - Log Average detector
Av - Average detector

9.8. TX ABOVE 1 GHz 802.11n HT40 MODE, 5.3 GHz BAND, with EBJ antenna

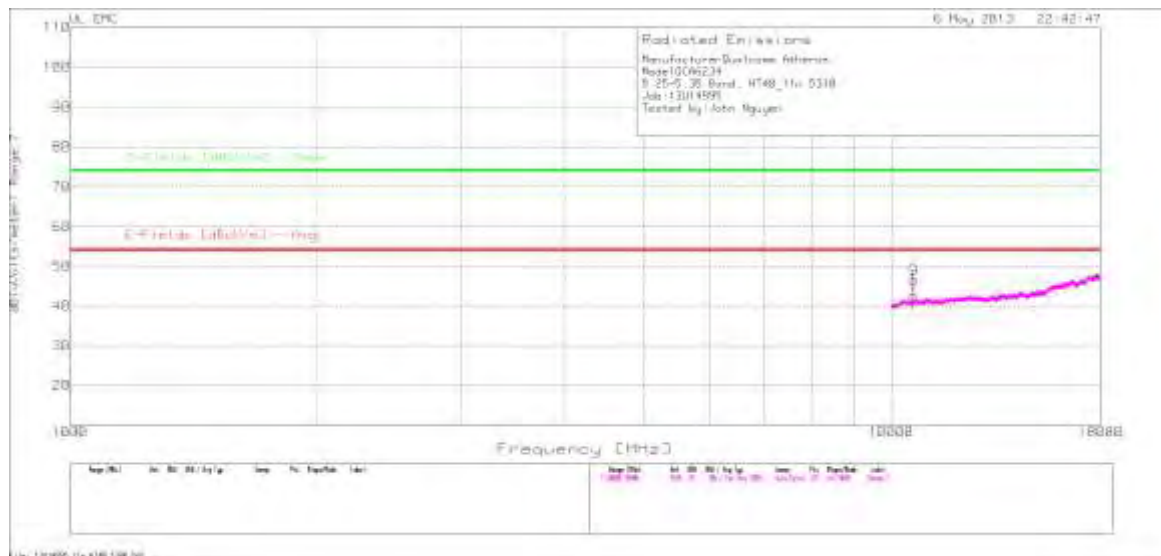
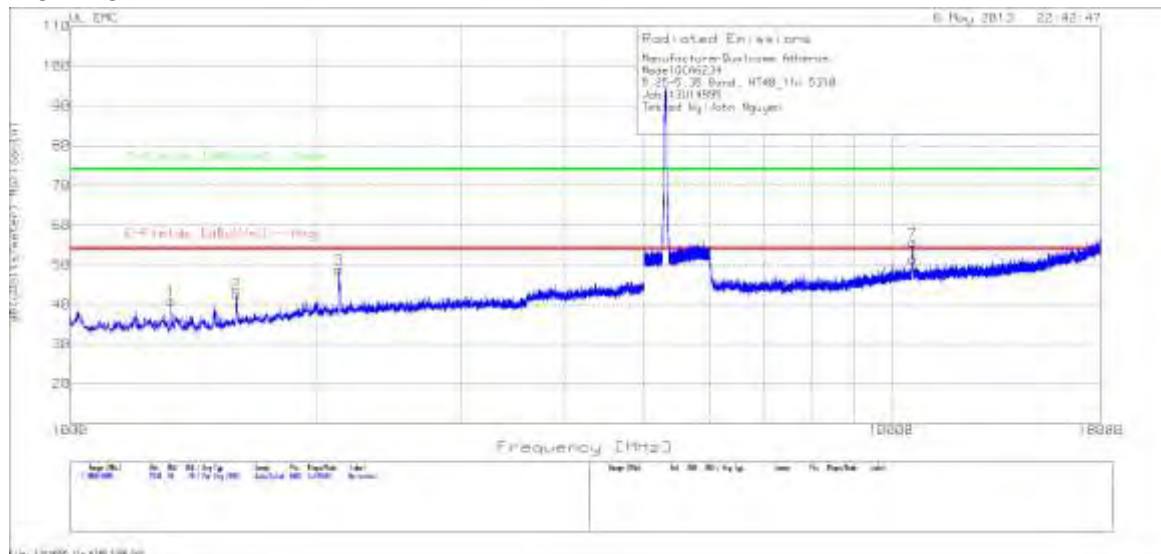
RESTRICTED BANDEDGE (HIGH CHANNEL)



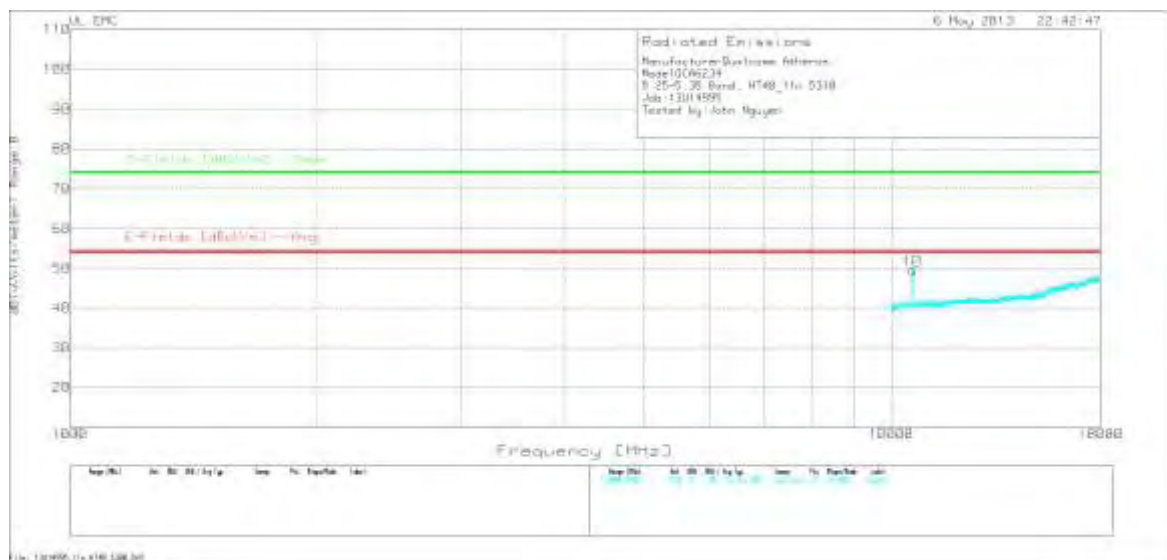
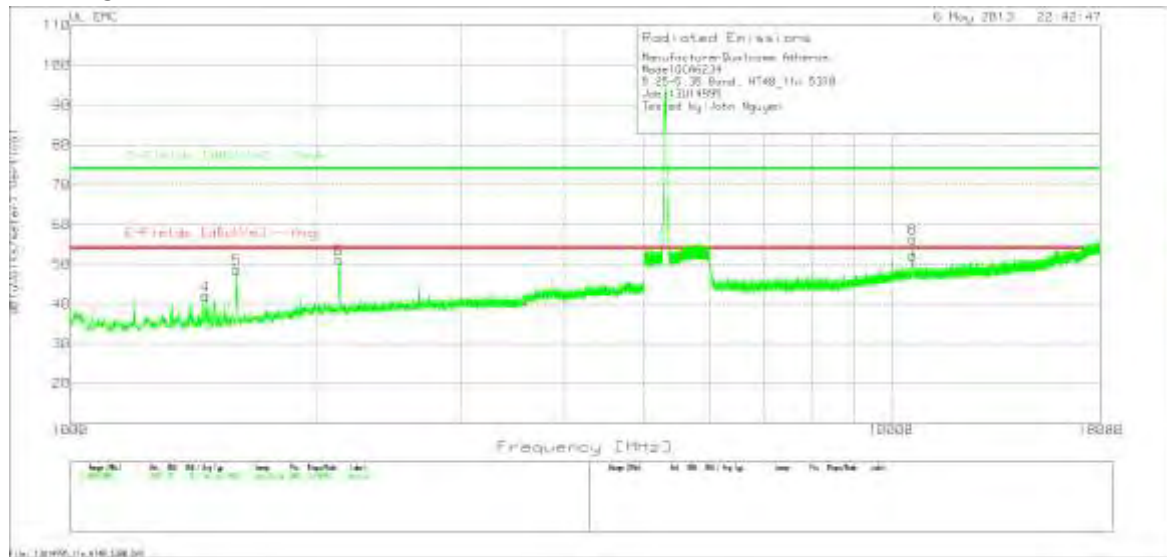


HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL



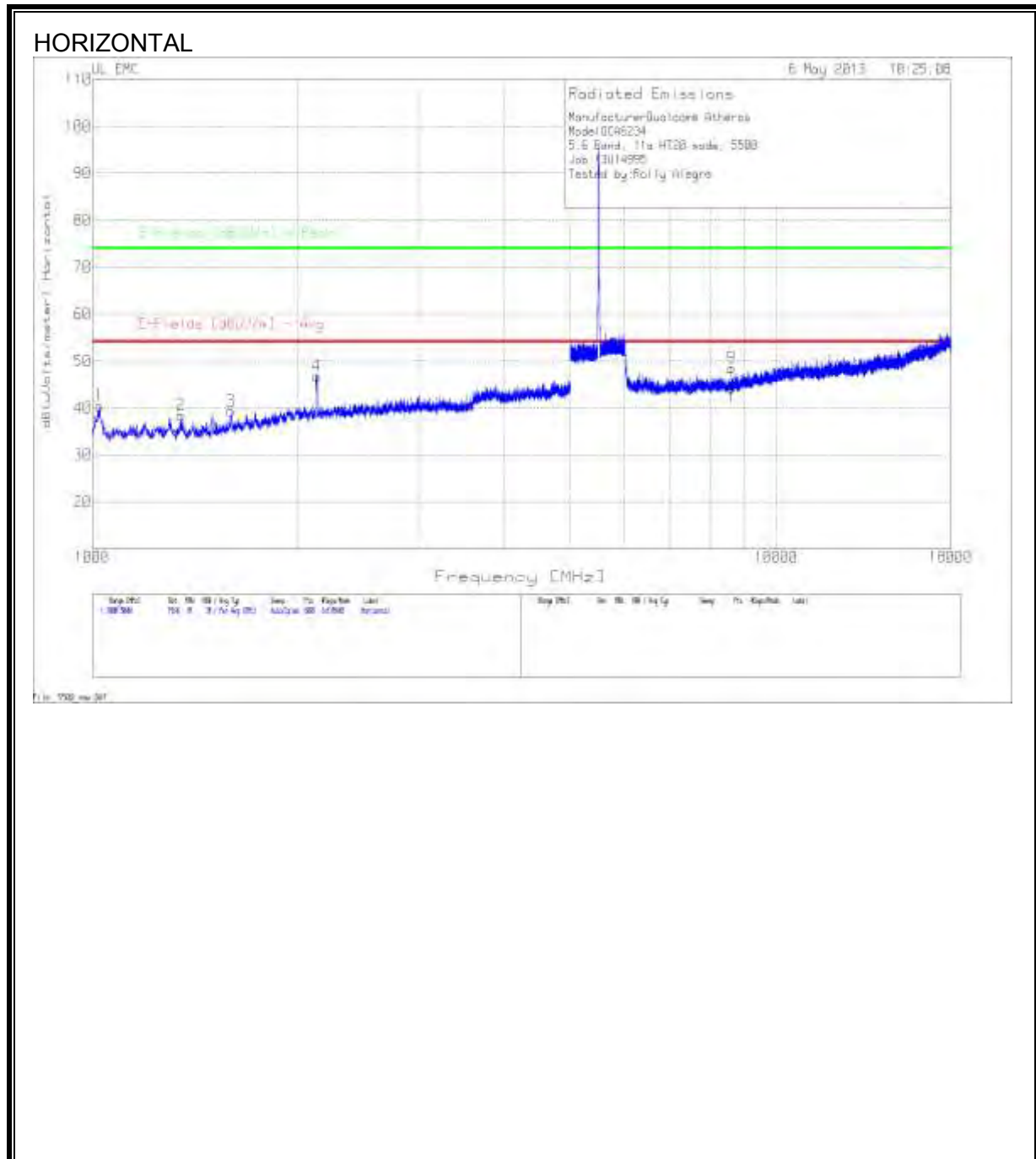
VERTICAL



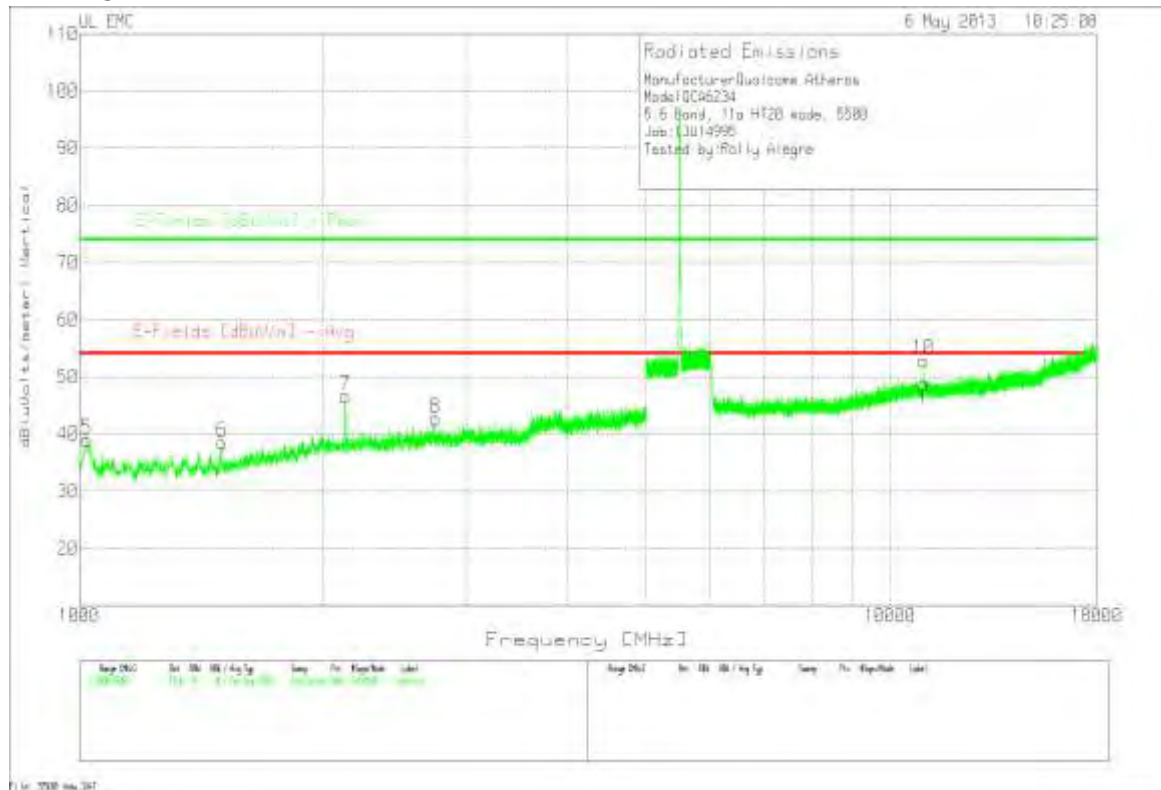
Manufacturer: Qualcomm Atheros Model: QCA6234 5.25-5.35 Band, HT40_11n 5310 Job: 13U14995 Tested by: John Nguyen												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequency MHz	Meter Reading dBuV	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1327.333	46.7	PK	29.1	-34.8	41	53.97	-12.97	74	-33	300	Horz
2	1595.333	47.96	PK	29.4	-34.6	42.76	53.97	-11.21	74	-31.24	300	Horz
3	2125.333	50.95	PK	32.3	-34.4	48.85	53.97	-5.12	74	-25.15	200	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequency MHz	Meter Reading dBuV	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	1462	48.12	PK	28.9	-35.1	41.92	53.97	-12.05	74	-32.08	300	Vert
5	1595.333	53.82	PK	29.4	-34.6	48.62	53.97	-5.35	74	-25.38	300	Vert
6	2124.667	53.31	PK	32.2	-34.4	51.11	53.97	-2.86	74	-22.89	200	Vert
Horizontal 6015 - 18000MHz												
Marker No.	Test Frequency MHz	Meter Reading dBuV	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	10622.849	42.92	PK	38.4	-25.7	55.62	53.97	1.65	74	-18.38	300	Horz
Vertical 6015 - 18000MHz												
Marker No.	Test Frequency MHz	Meter Reading dBuV	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	10616.857	43.77	PK	38.4	-25.8	56.37	53.97	2.4	74	-17.63	300	Vert
Range:7 10000 - 18000MHz												
Marker No.	Test Frequency MHz	Meter Reading dBuV	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
9	10639.28	34	PK	38.5	-25.8	46.7	53.97	-7.27	74	-27.3	200	Horz
Range:8 10000 - 18000MHz												
Marker No.	Test Frequency MHz	Meter Reading dBuV	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
10	10604.616	37.04	PK	38.4	-25.9	49.54	53.97	-4.43	74	-24.46	101	Vert
Test Frequency MHz	Meter Reading dBuV	Detector	T346 Ant Factor [dB/m]	Preamp/Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
Vertical 1000 - 5000MHz												
2130.9737	36.09	VB1	32.3	-34.3	34.09	53.97	-19.88	74	-39.91	220	291	Horz
PK - Peak detector QP - Quasi-Peak detector AD1 - KDB 789033 v01r02 G)6) Method: AD Primary Power Average VB1 - KDB 789033 v01r02 G)6) Method: VB Alternative Reduced Video												

9.9. TX ABOVE 1 GHz 802.11a MODE, 5.6 GHz BAND, with 50 ohm load

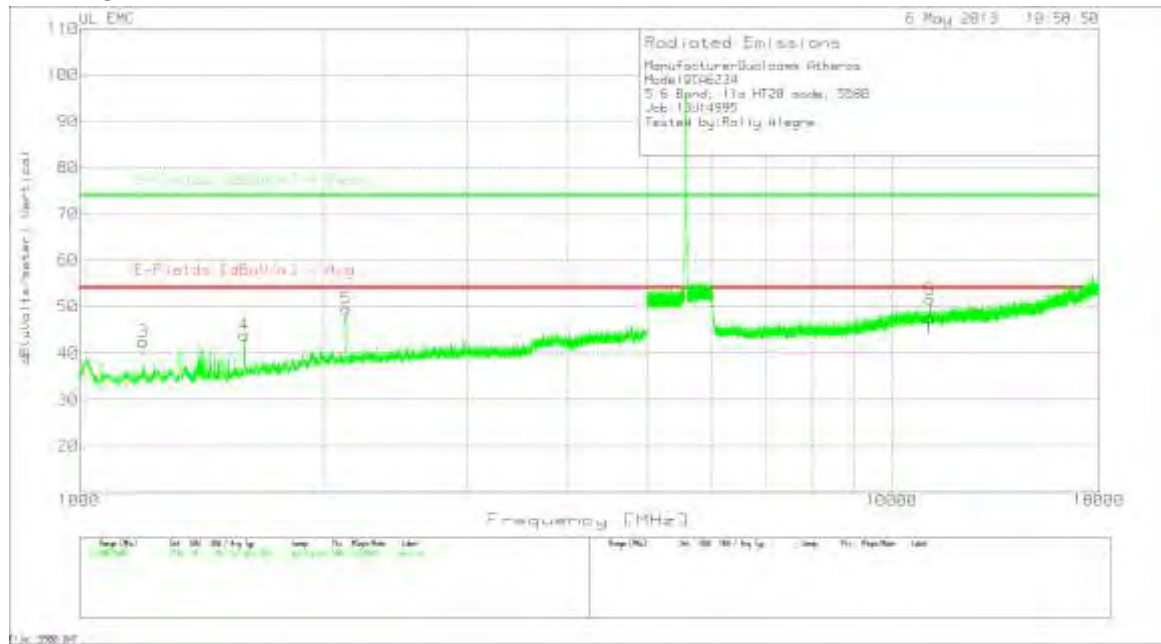
11a Mode, 5500 MHz



VERTICAL



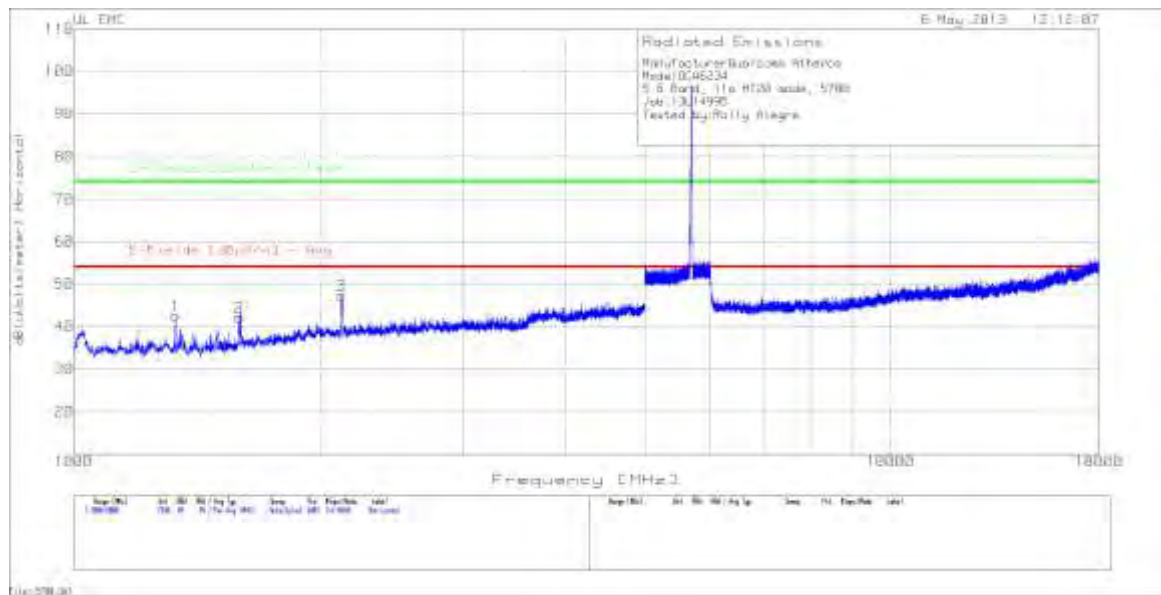
ManufacturerQualcomm Atheros												
ModelQCA6234												
5.6 Band, 11a HT20 mode, 5500												
Job:13U14995												
Tested by:Rolly Alegre												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uV s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
1	1025.333	47.62	PK	28.2	-35.4	40.42	53.97	-13.55	74	-33.58	399	Horz
2	1348.667	44.16	PK	29	-34.7	38.46	53.97	-15.51	74	-35.54	399	Horz
3	1594	44.55	PK	29.4	-34.6	39.35	53.97	-14.62	74	-34.65	399	Horz
4	2128	48.88	PK	32.3	-34.4	46.78	53.97	-7.19	74	-27.22	399	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uV s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
5	1021.333	46.34	PK	28.2	-35.5	39.04	53.97	-14.93	74	-34.96	400	Vert
6	1499.333	45.08	PK	28.8	-35.3	38.58	53.97	-15.39	74	-35.42	400	Vert
7	2128	48.73	PK	32.3	-34.4	46.63	53.97	-7.34	74	-27.37	400	Vert
8	2749.333	42.32	PK	33.2	-32.8	42.72	53.97	-11.25	74	-31.28	400	Vert
Horizontal 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uV s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
9	8602.546	39.73	PK	36.4	-27.6	48.53	53.97	-5.44	74	-25.47	300	Horz
Vertical 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uV s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
10	10991.357	40.18	PK	38.5	-25.8	52.88	53.97	-1.09	74	-21.12	199	Vert
Range:7 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uV s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
11	11001.25	32.62	PK	38.5	-25.4	45.72	53.97	-8.25	74	-28.28	200	Horz
Range:8 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uV s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
12	11001.25	33.84	PK	38.5	-25.4	46.94	53.97	-7.03	74	-27.06	400	Vert
Vertical 6015 - 18000MHz												
Test Frequency	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uV s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
11000.827	28.74	VB1	38.5	-25.4	41.84	53.97	-12.13	74	-32.16	31	371	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												
VB1 - KDB 789033 v01r02 G)6) Method: VB Alternative Reduced Video												



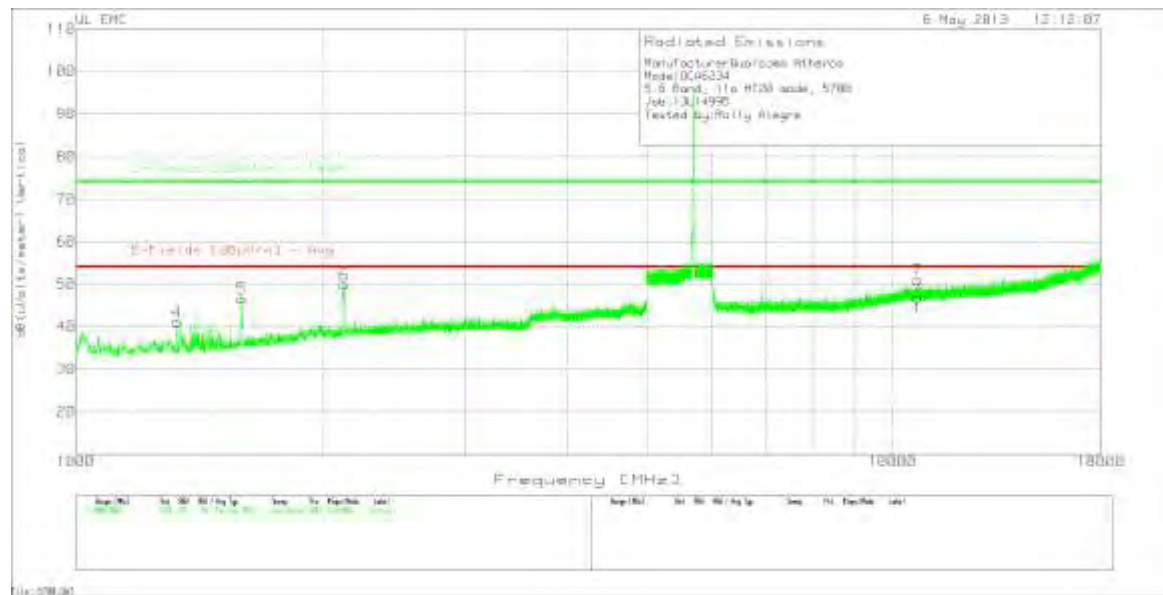
ManufacturerQualcomm Atheros												
ModelQCA6234												
5.6 Band, 11a HT20 mode, 5580												
Job:13U14995												
Tested by:Rolly Alegre												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
1	1599.333	49.94	PK	29.5	-34.4	45.04	53.97	-8.93	74	-28.96	400	Horz
2	2124.667	47.11	PK	32.2	-34.4	44.91	53.97	-9.06	74	-29.09	200	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
3	1198.667	49.04	PK	29	-35.6	42.44	53.97	-11.53	74	-31.56	100	Vert
4	1596	48.98	PK	29.5	-34.6	43.88	53.97	-10.09	74	-30.12	300	Vert
5	2130	51.7	PK	32.3	-34.4	49.6	53.97	-4.37	74	-24.4	199	Vert
Vertical 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
6	11155.138	38.28	PK	38.6	-25.2	51.68	53.97	-2.29	74	-22.32	100	Vert
Range:7 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
8	11159.903	31.74	PK	38.6	-25.2	45.14	53.97	-8.83	74	-28.86	200	Horz
Range:8 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Preamp/ Cable dB	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	11159.903	34.8	PK	38.6	-25.2	48.2	53.97	-5.77	74	-25.8	300	Vert
Vertical 6015 - 18000MHz												
Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
11000.83	28.74	VB1	38.5	-25.4	41.84	53.97	-12.13	74	-32.16	31	371	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												
VB1 - KDB 789033 v01r02 G)6) Method: VB Alternative Reduced Video												

11a Mode, 5700 MHz

HORIZONTAL



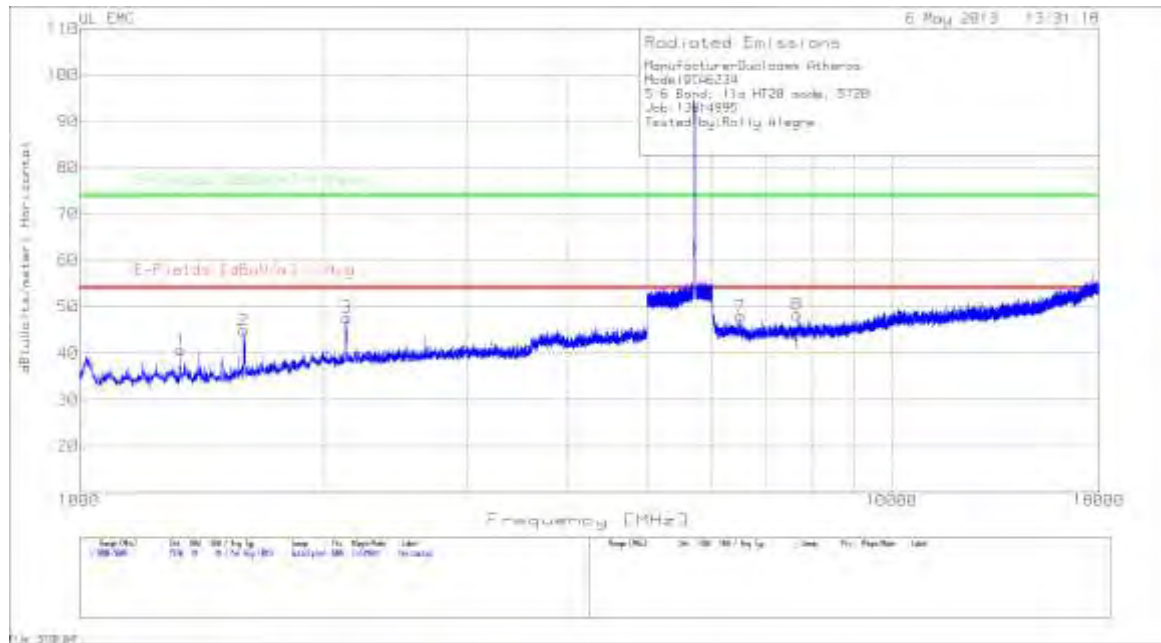
VERTICAL



ManufacturerQualcomm Atheros												
ModelQCA6234												
5.6 Band, 11a HT20 mode, 5700												
Job:13U14995												
Tested by:Rolly Alegre												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1332	48.17	PK	29.1	-34.7	42.57	53.97	-11.4	74	-31.43	300	Horz
2	1594	47.43	PK	29.4	-34.6	42.23	53.97	-11.74	74	-31.77	399	Horz
3	2125.333	49.38	PK	32.3	-34.4	47.28	53.97	-6.69	74	-26.72	399	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	1329.333	46.76	PK	29.1	-34.7	41.16	53.97	-12.81	74	-32.84	400	Vert
5	1597.333	51.58	PK	29.5	-34.5	46.58	53.97	-7.39	74	-27.42	400	Vert
6	2133.333	51.92	PK	32.3	-34.3	49.92	53.97	-4.05	74	-24.08	199	Vert
Vertical 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
7	10724.713	37.3	PK	38.5	-24.9	50.9	53.97	-3.07	74	-23.1	400	Vert
Range:8 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
8	11400.55	31.4	PK	38.7	-25	45.1	53.97	-8.87	74	-28.9	300	Vert
Vertical 6015 - 18000MHz												
Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
10734.98	25.07	VB1	38.5	-24.9	38.67	53.97	-15.3	74	-35.33	296	198	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												
VB1 - KDB 789033 v01r02 G)6) Method: VB Alternative Reduced Video												

11a Mode, 5720 MHz

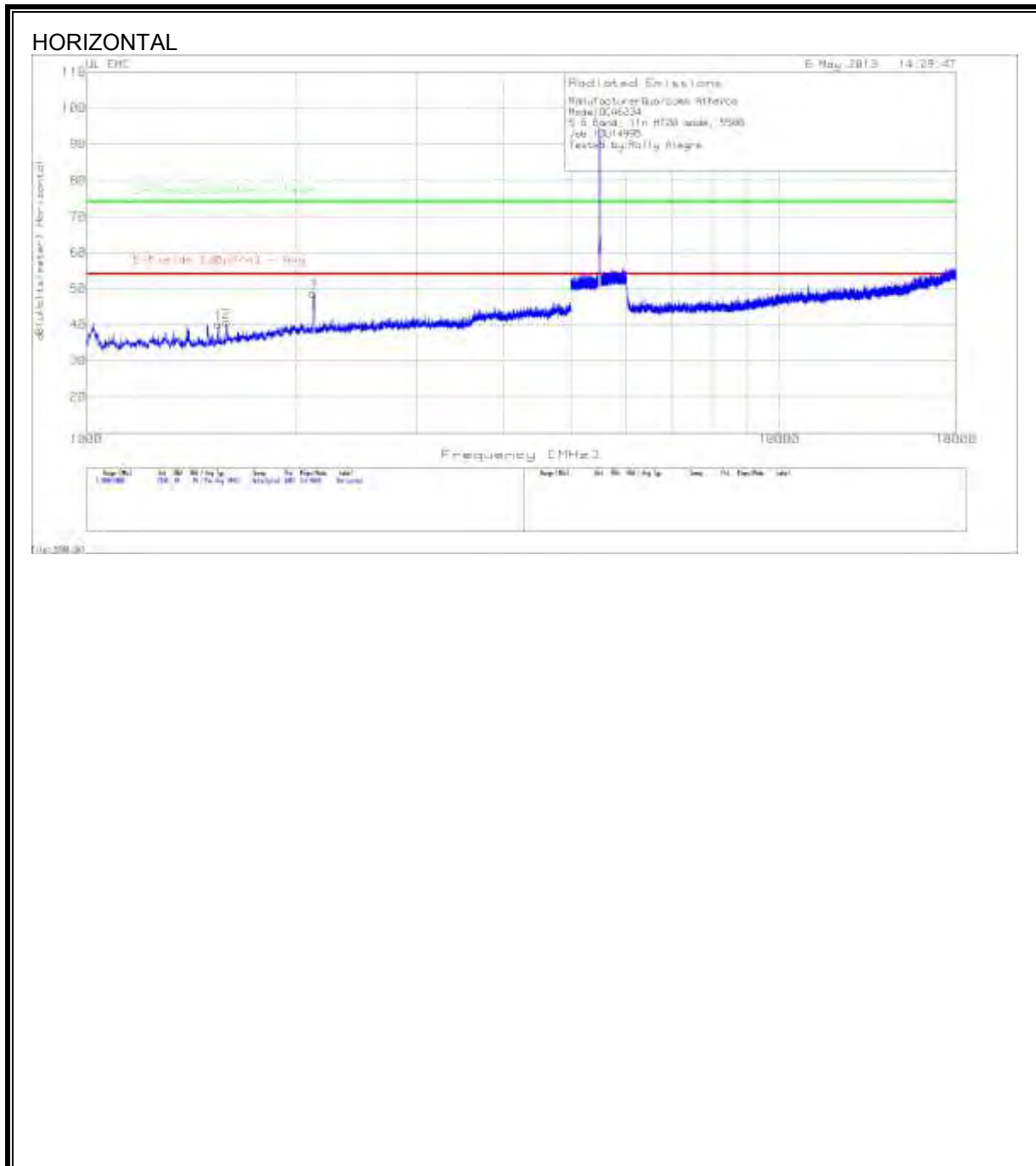
HORIZONTAL



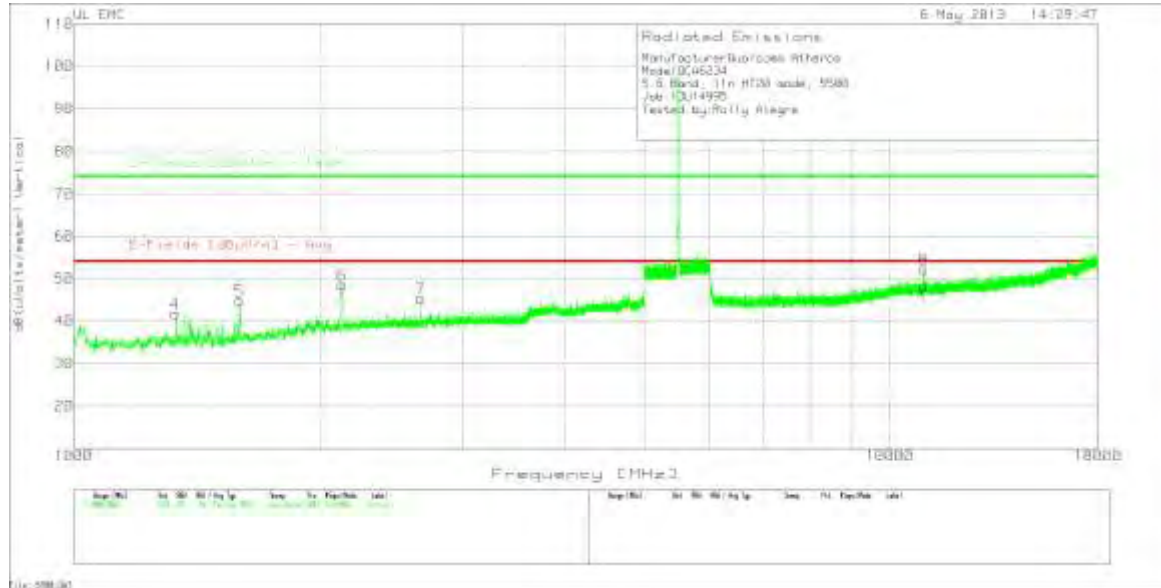
[illegible]

ManufacturerQualcomm Atheros												
ModelQCA6234												
5.6 Band, 11a HT20 mode, 5720												
Job:13U14995												
Tested by:Rolly Alegre												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uV/s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
1	1333.333	46.3	PK	29.1	-34.7	40.7	53.97	-13.27	74	-33.3	300	Horz
2	1593.333	50.16	PK	29.4	-34.6	44.96	53.97	-9.01	74	-29.04	300	Horz
3	2132.667	49.66	PK	32.3	-34.3	47.66	53.97	-6.31	74	-26.34	300	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uV/s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	1332	48.16	PK	29.1	-34.7	42.56	53.97	-11.41	74	-31.44	199	Vert
5	1596.667	51.64	PK	29.5	-34.5	46.64	53.97	-7.33	74	-27.36	300	Vert
6	2126	50	PK	32.3	-34.4	47.9	53.97	-6.07	74	-26.1	199	Vert
Horizontal 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uV/s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
7	6513.335	41.56	PK	35.8	-29.4	47.96	53.97	-6.01	74	-26.04	300	Horz
8	7652.814	40.65	PK	36.2	-28.5	48.35	53.97	-5.62	74	-25.65	100	Horz
Range:8 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uV/s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
9	11443.88	29.75	PK	38.7	-25.6	42.85	53.97	-11.12	74	-31.15	400	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

11n HT20 Mode, 5500 MHz

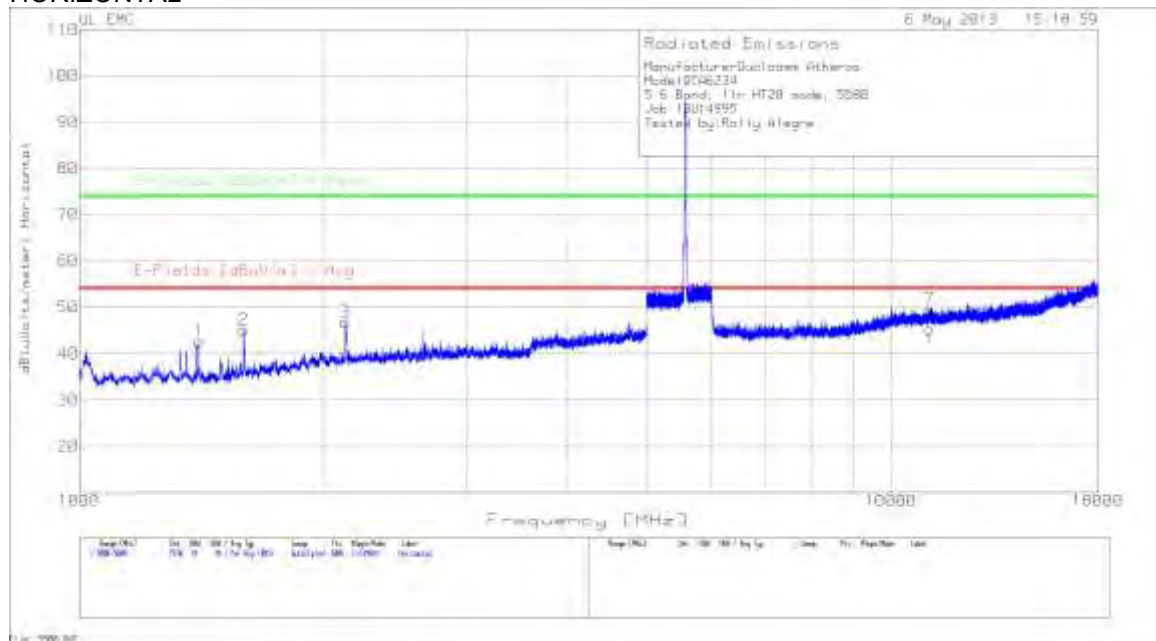


VERTICAL



ManufacturerQualcomm Atheros												
ModelQCA6234												
5.6 Band, 11n HT20 mode, 5500												
Job:13U14995												
Tested by:Rolly Alegre												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
1	1550	45.82	PK	29.1	-34.9	40.02	53.97	-13.95	74	-33.98	400	Horz
2	1593.333	45.91	PK	29.4	-34.6	40.71	53.97	-13.26	74	-33.29	400	Horz
3	2124.667	51.03	PK	32.2	-34.4	48.83	53.97	-5.14	74	-25.17	300	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
4	1332	47.34	PK	29.1	-34.7	41.74	53.97	-12.23	74	-32.26	100	Vert
5	1596	49.86	PK	29.5	-34.6	44.76	53.97	-9.21	74	-29.24	299	Vert
6	2131.333	50.54	PK	32.3	-34.3	48.54	53.97	-5.43	74	-25.46	199	Vert
7	2661.333	46.01	PK	33	-33.6	45.41	53.97	-8.56	74	-28.59	299	Vert
Vertical 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
8	11001.343	39.09	PK	38.5	-25.4	52.19	53.97	-1.78	74	-21.81	199	Vert
Range:7 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
9	11001.25	33.56	PK	38.5	-25.4	46.66	53.97	-7.31	74	-27.34	200	Horz
Range:8 10000 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
10	11002.583	34.44	PK	38.5	-25.4	47.54	53.97	-6.43	74	-26.46	200	Vert
Vertical 6015 - 18000MHz												
Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
11003.027	31.95	VB1	38.5	-25.4	45.05	53.97	-8.92	74	-28.95	56	321	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												
VB1 - KDB 789033 v01r02 G)6) Method: VB Alternative Reduced Video												

HORIZONTAL

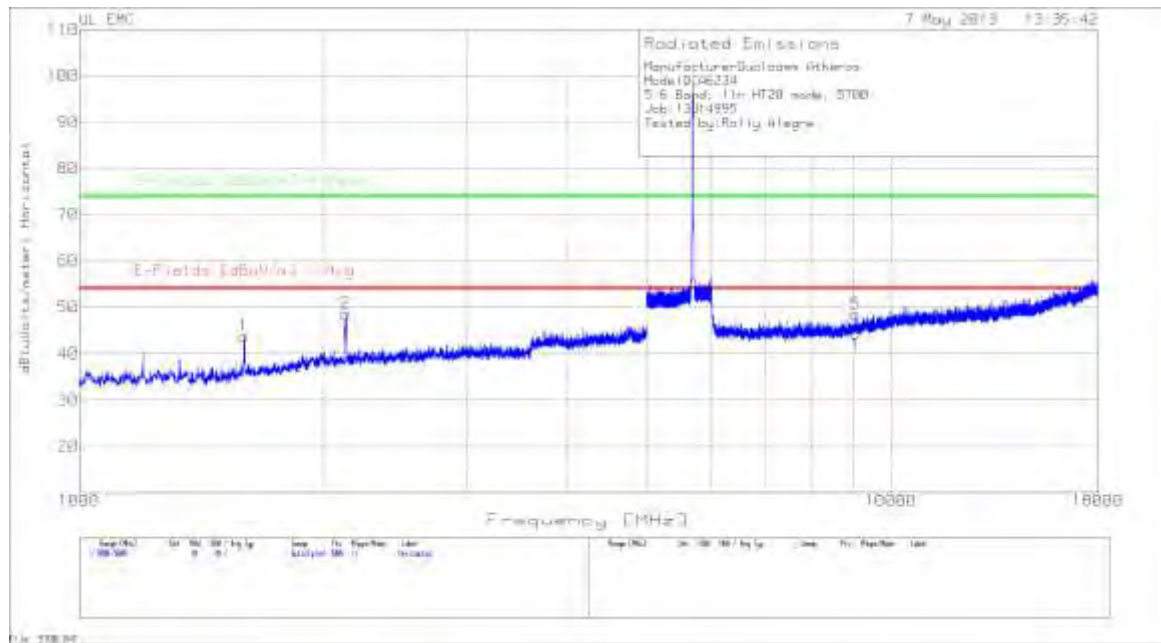


[illegible]

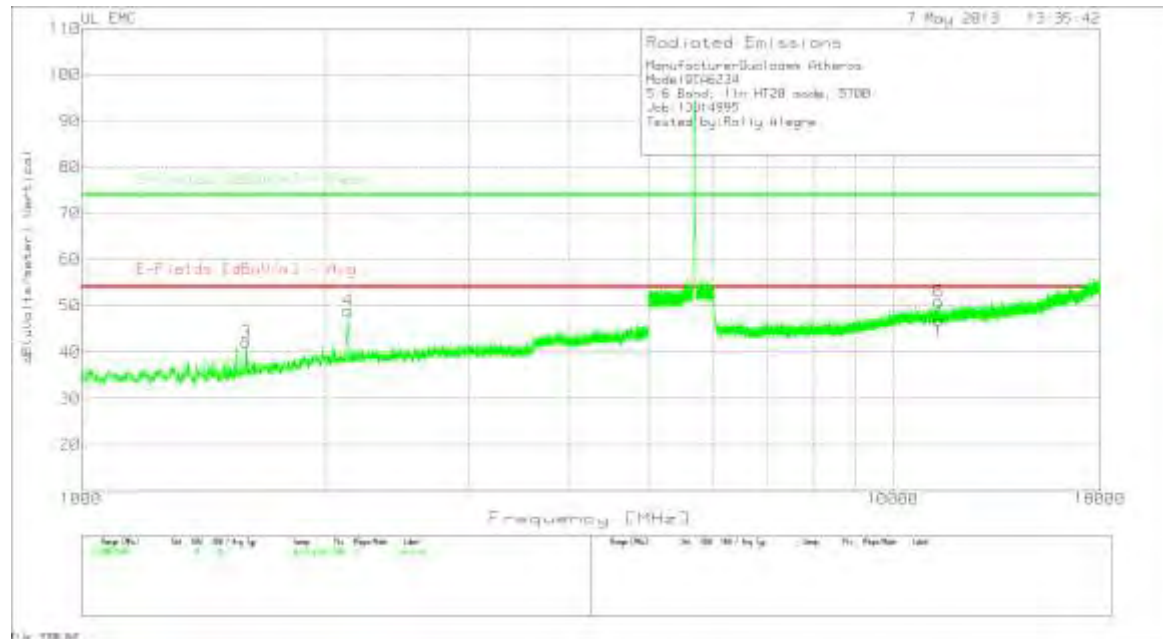
Manufacturer: Qualcomm Atheros												
Model: QCA6234												
5.6 Band, 11n HT20 mode, 5580												
Job: 13U14995												
Tested by: Rolly Alegre												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1404	48.72	PK	29	-35	42.72	53.97	-11.25	74	-31.28	400	Horz
2	1593.333	50.32	PK	29.4	-34.6	45.12	53.97	-8.85	74	-28.88	400	Horz
3	2126.667	48.89	PK	32.3	-34.4	46.79	53.97	-7.18	74	-27.21	400	Horz
Vertical 1000 - 5000MHz												
4	1408.667	46.89	PK	28.9	-35	40.79	53.97	-13.18	74	-33.21	199	Vert
5	1598.667	49.98	PK	29.5	-34.5	44.98	53.97	-8.99	74	-29.02	100	Vert
6	2132.667	53.34	PK	32.3	-34.3	51.34	53.97	-2.63	74	-22.66	199	Vert
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 6015 - 18000MHz												
7	11160.131	36.1	PK	38.6	-25.2	49.5	53.97	-4.47	74	-24.5	200	Horz
Vertical 6015 - 18000MHz												
8	11161.13	40.1	PK	38.6	-25.1	53.6	53.97	-0.37	74	-20.4	300	Vert
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Range:7 10000 - 18000MHz												
9	11159.237	32.62	PK	38.6	-25.2	46.02	53.97	-7.95	74	-27.98	200	Horz
Range:8 10000 - 18000MHz												
10	11159.237	34.57	PK	38.6	-25.2	47.97	53.97	-6	74	-26.03	300	Vert
Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
Vertical 6015 - 18000MHz												
11161.74	33.58	VB1	38.6	-25.1	47.08	53.97	-6.89	74	-26.92	48	330	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

11n HT20 Mode, 5700 MHz

HORIZONTAL



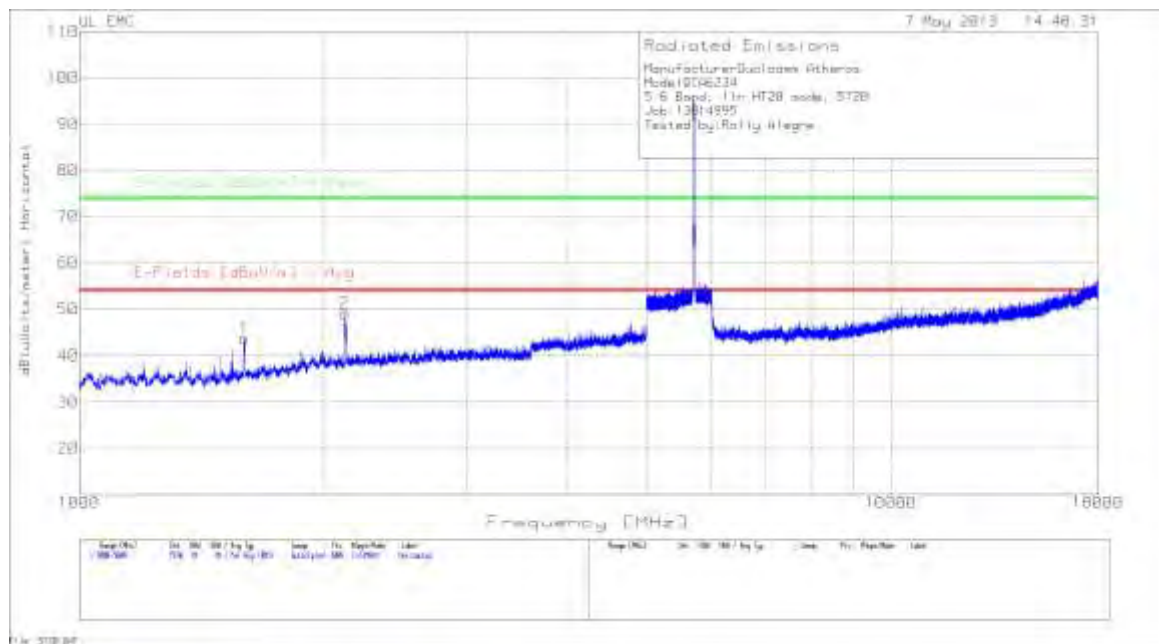
VERTICAL



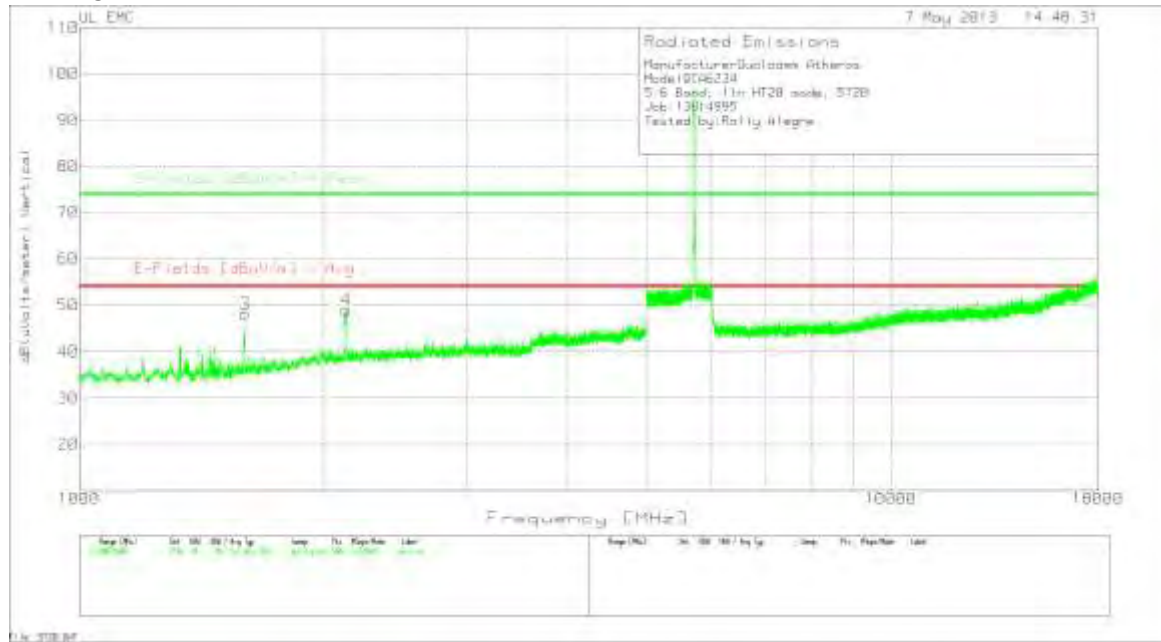
Manufacturer: Qualcomm Atheros												
Model: QCA6234												
5.6 Band, 11n HT20 mode, 5700												
Job: 13U14995												
Tested by: Rolly Alegre												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1596	48.89	PK	29.5	-34.6	43.79	53.97	-10.18	74	-30.21	200	Horz
2	2130.667	50.77	PK	32.3	-34.4	48.67	53.97	-5.3	74	-25.33	400	Horz
Vertical 1000 - 5000MHz												
3	1597.333	47.17	PK	29.5	-34.5	42.17	53.97	-11.8	74	-31.83	300	Vert
4	2132.667	50.99	PK	32.3	-34.3	48.99	53.97	-4.98	74	-25.01	199	Vert
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 6015 - 18000MHz												
5	9053.943	38.61	PK	36.9	-27	48.51	53.97	-5.46	74	-25.49	100	Horz
Vertical 6015 - 18000MHz												
6	11401.809	37.26	PK	38.7	-25	50.96	53.97	-3.01	74	-23.04	199	Vert
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Range:7 10000 - 18000MHz												
7	11400.55	29.05	PK	38.7	-25	42.75	53.97	-11.22	74	-31.25	300	Horz
Range:8 10000 - 18000MHz												
8	11400.55	31.49	PK	38.7	-25	45.19	53.97	-8.78	74	-28.81	200	Vert
Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolt s/meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
Vertical 6015 - 18000MHz												
11400.983	27.25	VB1	38.7	-25	40.95	53.97	-13.02	74	-33.05	328	264	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

11n HT20 Mode, 5720 MHz

HORIZONTAL



VERTICAL

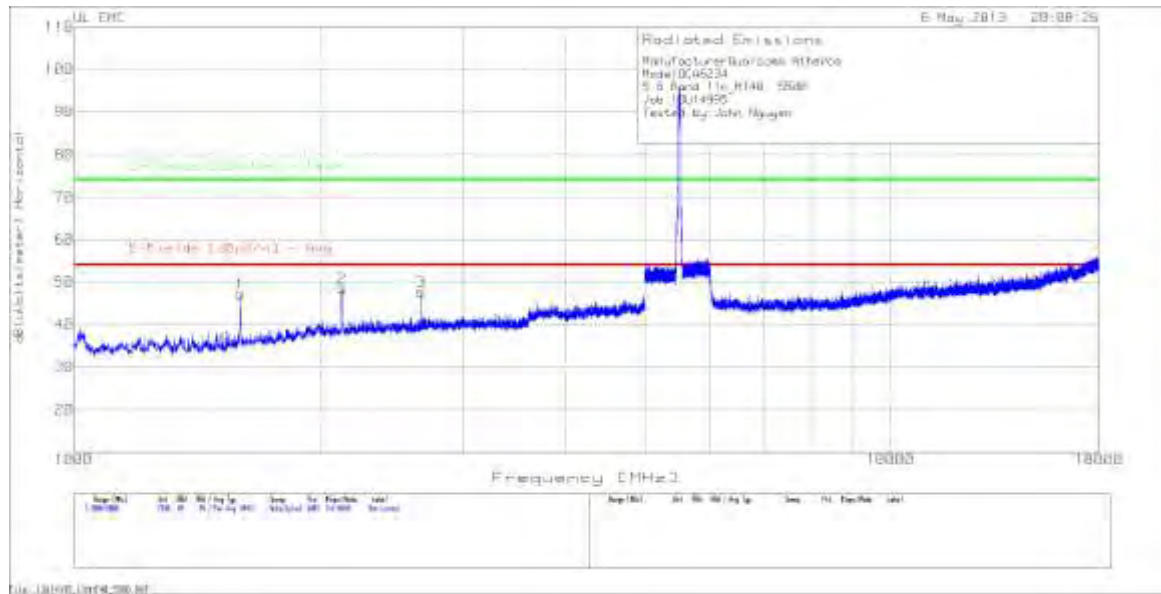


ManufacturerQualcomm Atheros												
ModelQCA6234												
5.6 Band, 11n HT20 mode, 5720												
Job:13U14995												
Tested by:Rolly Alegre												
Horizontal 1000 - 5000MHz												
Marker No.	Frequenc y	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1598.667	48.82	PK	29.5	-34.5	43.82	53.97	-10.15	74	-30.18	400	Horz
2	2124.667	51.31	PK	32.2	-34.4	49.11	53.97	-4.86	74	-24.89	300	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequenc y	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
3	1600	53.1	PK	29.5	-34.4	48.2	53.97	-5.77	74	-25.8	300	Vert
4	2132	51	PK	32.3	-34.3	49	53.97	-4.97	74	-25	199	Vert
Range:7 10000 - 18000MHz												
Marker No.	Test Frequenc y	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
5	11426.55	29.02	PK	38.7	-25.5	42.22	53.97	-11.75	74	-31.78	400	Horz
Range:8 10000 - 18000MHz												
Marker No.	Frequenc y	Meter Reading	Detector	Factor [dB/m]	Preamp/ Cable dB	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
6	11440.55	29.9	PK	38.7	-25.6	43	53.97	-10.97	74	-31	399	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

9.11. TX ABOVE 1 GHz 802.11n HT40 MODE, 5.6 GHz BAND, with 50 ohm load

11n HT40 MODE 5500 MHz

HORIZONTAL



Manufacturer: Qualcomm Atheros
Model: QCA6234
5.6 Band 11n_HT40, 5500
Job: 13U14995
Tested by: John Nguyen

Horizontal 1000 - 5000MHz

Marker No.	Frequency	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1600	52.07	PK	29.5	-34.4	47.17	53.97	-6.8	74	-26.83	400	Horz
2	2130	50.64	PK	32.3	-34.4	48.54	53.97	-5.43	74	-25.46	300	Horz
3	2665.333	48.18	PK	33	-33.5	47.68	53.97	-6.29	74	-26.32	300	Horz

Vertical 1000 - 5000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
4	1600.667	49.85	PK	29.5	-34.4	44.95	53.97	-9.02	74	-29.05	299	Vert
5	2129.333	51.29	PK	32.3	-34.4	49.19	53.97	-4.78	74	-24.81	199	Vert
6	2660.667	46.02	PK	33	-33.6	45.42	53.97	-8.55	74	-28.58	400	Vert

Vertical 6015 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
7	11023.31	38.39	PK	38.5	-25.6	51.29	53.97	-2.68	74	-22.71	300	Vert

Range: 7 10000 - 18000MHz

Marker No.	Frequency	Meter Reading	Detector	Factor [dB/m]	Preamp/ Cable dB	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	11021.92	33.57	PK	38.5	-25.6	46.47	53.97	-7.5	74	-27.53	200	Horz

Range: 8 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
9	11021.25	34.44	PK	38.5	-25.6	47.34	53.97	-6.63	74	-26.66	300	Vert

Vertical 6015 - 18000MHz

Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
11023.82	30.1	VB1	38.5	-25.6	43	53.97	-10.97	74	-31	55	398	Vert

PK - Peak detector

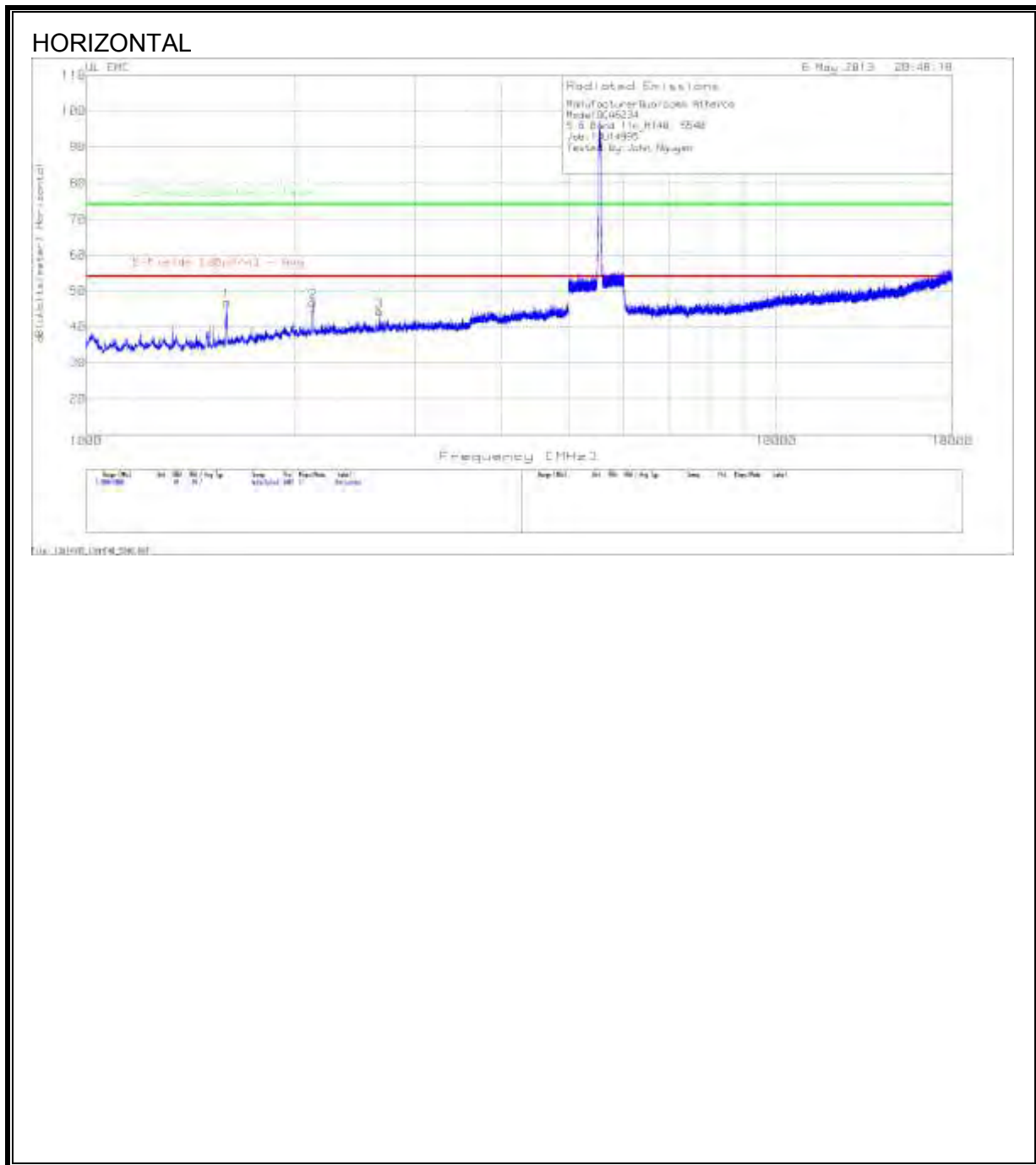
QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Av - Average detector

11n HT40 MODE 5540 MHz



UL EPC

6-May-2013 20:46:18

Radiated Emissions
 Manufacturer: Quorcon Attivo
 Model: QC45234
 S.S. Band 110 MHz, 2548
 Job: 13014950
 Tested by: John Nguyen

dB(μV/m) (vertical)

1200

1000

800

600

400

200

100

0

1000

1200

1400

1600

1800

Frequency (MHz)

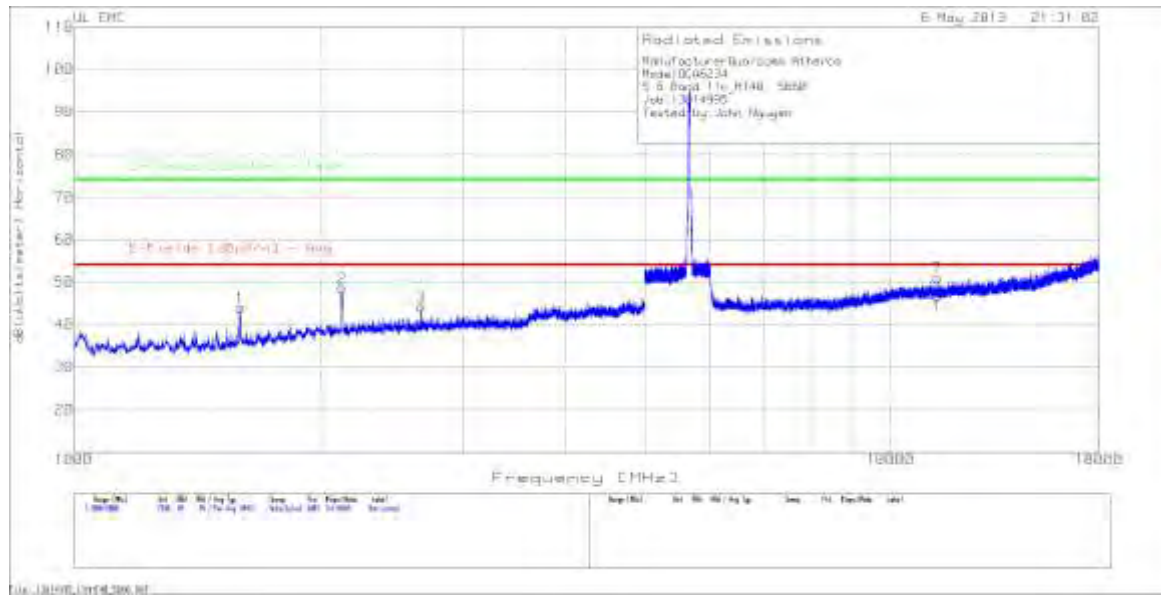
Step	Min	Max	Avg	Unit	Step	Min	Max	Avg	Unit
1	100	100	100	dB(μV/m)	1	100	100	100	dB(μV/m)

File: 13014950.rpt

ManufacturerQualcomm Atheros												
ModelQCA6234												
5.6 Band 11n_HT40, 5540												
Job:13U14995												
Tested by:John Nguyen												
Horizontal 1000 - 5000MHz												
Marker No.	Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
1	1598.667	51.92	PK	29.5	-34.5	46.92	53.97	-7.05	74	-27.08	400	Horz
2	2133.333	48.72	PK	32.3	-34.3	46.72	53.97	-7.25	74	-27.28	400	Horz
3	2660.667	44.87	PK	33	-33.6	44.27	53.97	-9.7	74	-29.73	300	Horz
Vertical 1000 - 5000MHz												
Marker No.	Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
4	1594.667	48.42	PK	29.4	-34.6	43.22	53.97	-10.75	74	-30.78	400	Vert
5	2127.333	52.78	PK	32.3	-34.4	50.68	53.97	-3.29	74	-23.32	200	Vert
6	2662	46.79	PK	33	-33.6	46.19	53.97	-7.78	74	-27.81	200	Vert
Vertical 6015 - 18000MHz												
Marker No.	Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
7	11103.21	39.16	PK	38.5	-25.5	52.16	53.97	-1.81	74	-21.84	300	Vert
Range:7 10000 - 18000MHz												
Marker No.	Test Frequenc	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
8	11102.58	31.52	PK	38.5	-25.5	44.52	53.97	-9.45	74	-29.48	200	Horz
Range:8 10000 - 18000MHz												
Marker No.	Test Frequenc	Meter Reading	Detector	T346 Ant Factor	6GHz HPF Preamp/	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
9	11099.24	33.8	PK	38.5	-25.5	46.8	53.97	-7.17	74	-27.2	300	Vert
Vertical 1000 - 5000MHz												
Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
2129.67	35.88	VB1	32.3	-34.4	33.78	53.97	-20.19	74	-40.22	312	231	Vert
Vertical 6015 - 18000MHz												
Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
11101.4	30.39	VB1	38.5	-25.5	43.39	53.97	-10.58	74	-30.61	127	257	Vert
11101.38	30.4	VB1	38.5	-25.5	43.4	53.97	-10.57	74	-30.6	127	257	Vert
PK - Peak detector												
QP - Quasi-Peak detector												
LnAv - Linear Average detector												
LgAv - Log Average detector												
Av - Average detector												

11n HT40 MODE 5660 MHz

HORIZONTAL



UL EMC

6 May 2013 21:31:02

Radiated Emissions
 Manufacturer: Bosch/Rover
 Model: D45234
 S.S. Band: 114.85MHz
 Job: 1344955
 Tested By: John Nguyen

dB(μV/meter) (vertical axis)

Frequency MHz (horizontal axis)

EUTecda 1.50μV/m limit

Range (MHz): 133.50 to 134.50
 Span: 1.00 MHz
 Res: 100 kHz
 Avg: 10
 Sweep: 100 Hz
 Filter: 12 dB/oct
 Video: 40 dB

File: 1344955.D45234.R06.txt

ManufacturerQualcomm Atheros
ModelQCA6234
5.6 Band 11n_HT40, 5660
Job:13U14995
Tested by:John Nguyen

Horizontal 1000 - 5000MHz

Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Cable 5GHz LPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1600	48.78	PK	29.5	-34.4	43.88	53.97	-10.09	74	-30.12	300	Horz
2	2130.667	50.63	PK	32.3	-34.4	48.53	53.97	-5.44	74	-25.47	200	Horz
3	2663.333	44.81	PK	33	-33.6	44.21	53.97	-9.76	74	-29.79	300	Horz

Vertical 1000 - 5000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor	Preamp/ Cable	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Height [cm]	Polarity
4	1062.667	55.02	PK	28.4	-35.5	47.92	53.97	-6.05	74	-26.08	199	Vert
5	1594.667	48.61	PK	29.4	-34.6	43.41	53.97	-10.56	74	-30.59	100	Vert
6	2132.667	51.03	PK	32.3	-34.3	49.03	53.97	-4.94	74	-24.97	199	Vert

Horizontal 6015 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	cable/6G Hz HPF	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	11405.803	37.11	PK	38.7	-24.9	50.91	53.97	-3.06	74	-23.09	400	Horz

Range:7 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Preamp/ Cable dB	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	11336.555	29.01	PK	38.6	-25	42.61	53.97	-11.36	74	-31.39	300	Horz

Range:8 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	Factor [dB/m]	Preamp/ Cable dB	dB(uVolt s/meter)	[dBuV/m] - Avg	Margin (dB)	[dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
9	11338.555	30.63	PK	38.6	-25	44.23	53.97	-9.74	74	-29.77	400	Vert

Horizontal 6015 - 18000MHz

Test Frequenc	Meter Reading	Detector	T346 Ant Factor	Preamp/ cable/6G	dB(uVolt s/meter)	E-Fields [dBuV/m]	Margin (dB)	E-Fields [dBuV/m]	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
11414.01	25.13	VB1	38.7	-25	38.83	53.97	-15.14	74	-35.17	46	108	Horz

PK - Peak detector

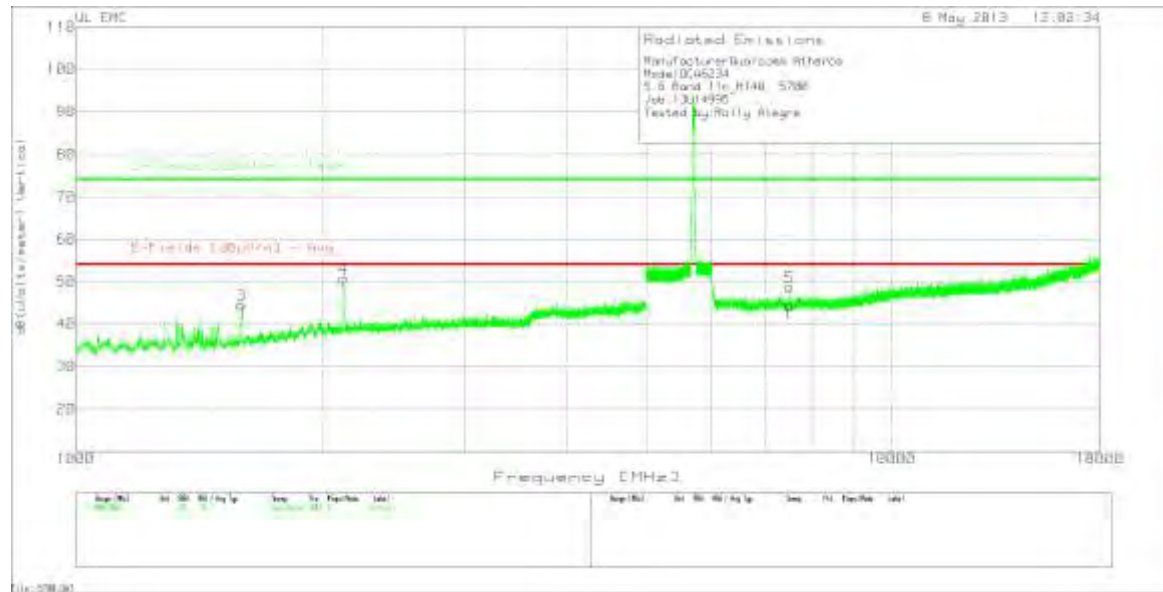
QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Av - Average detector

VERTICAL



Manufacturer: Qualcomm Atheros Model: QCA6234 5.6 Band 11n_HT40, 5700 Job: 13U14995 Tested by: Rolly Alegre												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 5000MHz												
1	1594.667	50.71	PK	29.4	-34.6	45.51	53.97	-8.46	74	-28.49	398	Horz
2	2131.333	49.77	PK	32.3	-34.3	47.77	53.97	-6.2	74	-26.23	300	Horz
Vertical 1000 - 5000MHz												
3	1597.333	49.56	PK	29.5	-34.5	44.56	53.97	-9.41	74	-29.44	199	Vert
4	2128.667	52.82	PK	32.3	-34.4	50.72	53.97	-3.25	74	-23.28	199	Vert
Vertical 6015 - 18000MHz												
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ cable/6G Hz HPF dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
5	7488.033	41.93	PK	36.1	-29.4	48.63	53.97	-5.34	74	-25.37	100	Vert
Marker No.	Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	6GHz HPF Preamp/ Cable dB	dB(uVolts /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Height [cm]	Polarity
Range:7 10000 - 18000MHz												
6	11417.882	28.72	PK	38.7	-25.2	42.22	53.97	-11.75	74	-31.78	300	Horz
Range:8 10000 - 18000MHz												
7	11418.548	30.36	PK	38.7	-25.2	43.86	53.97	-10.11	74	-30.14	300	Vert
Test Frequency	Meter Reading	Detector	T346 Ant Factor [dB/m]	Preamp/ Cable 5GHz LPF dB	dB(uVols /meter)	E-Fields [dBuV/m] Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
Vertical 1000 - 5000MHz												
2131.4837	34.38	VB1	32.3	-34.3	32.38	53.97	-21.59	74	-41.62	325	293	Vert
PK - Peak detector QP - Quasi-Peak detector LnAv - Linear Average detector LgAv - Log Average detector Av - Average detector												

9.12. WORST-CASE BELOW 1 GHz, with 50 ohm load

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

DATA

Manufacturer: Qualcomm Atheros

Model: QCA6234

2X2 MIMO 802.11 abgn+BT4.0

Job: 13U14995

Tested by: John Nguyen

Marker No.	Test Frequency	Meter Reading	Detector	T408 Ant Factor [dB/m]	T285 Preamp [dB]	Cable Factor [dB]	dB(uVolts /meter)	E-Fields [dBuV/m] QPk	Margin (dB)	Height [cm]	Polarity
Horizontal 30 - 1000MHz											
1	35.9405	42.35	PK	16.9	-27.9	0.5	31.85	40	-8.15	300	Horz
2	42.9721	44.66	PK	11.7	-28	0.6	28.96	40	-11.04	400	Horz
3	212.8221	51.86	PK	10.4	-28.8	1.2	34.66	43.52	-8.86	98	Horz
4	391.1586	48.9	PK	15.2	-29.4	1.7	36.4	46.02	-9.62	98	Horz
Vertical 30 - 1000MHz											
5*	35.698	48.54	PK	17.1	-28	0.5	38.14	40	-1.86	201	Vert
6	42.9721	49.1	PK	11.7	-28	0.6	33.4	40	-6.6	201	Vert
7	212.3372	46.65	PK	10.4	-28.8	1.2	29.45	43.52	-14.07	201	Vert

*AC Adapter noise

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Av - Average detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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 C63.4.

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.

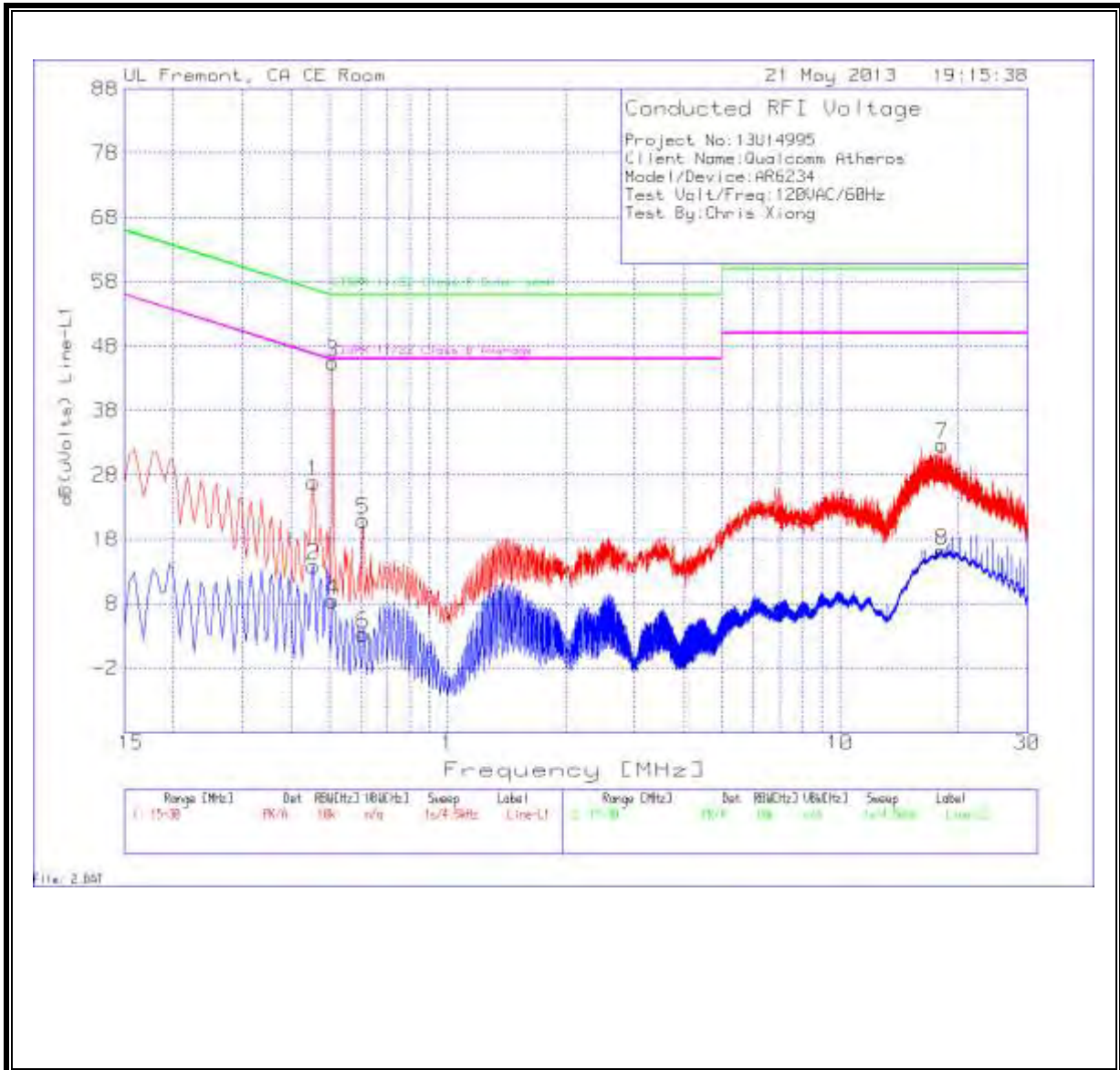
RESULTS

EUT AC/DC adapter connected to LISN

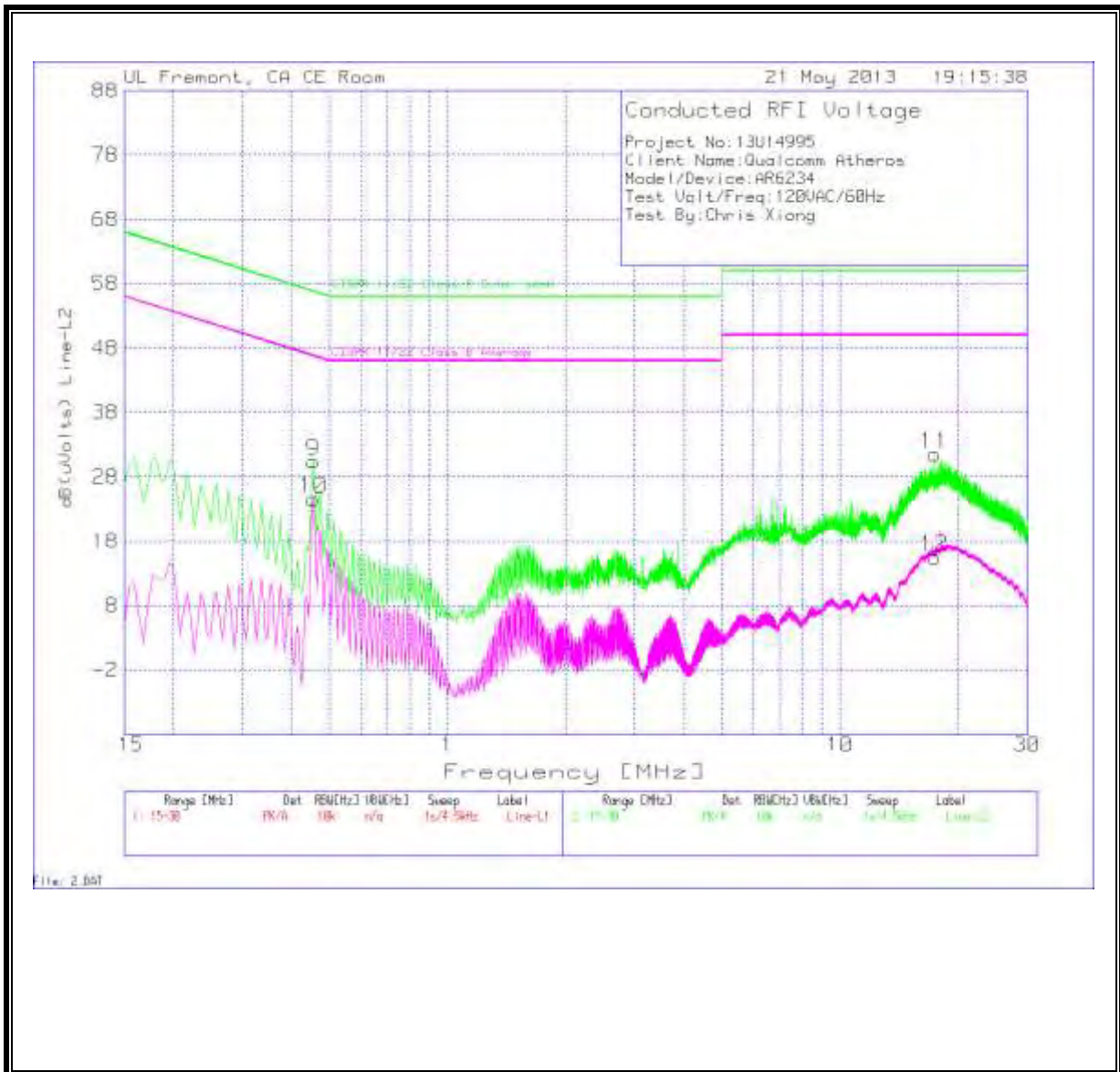
6 WORST EMISSIONS

Project No:13U14995									
Client Name:Qualcomm Atheros									
Model/Device:AR6234									
Test Volt/Freq:120VAC/60Hz									
Test By:Chris Xiong									
Line-L1 .15 - 30MHz									
Test Frequency (MHz)	Meter Reading (dBuV)	Detector	T24 IL L1.TXT (dB)	LC Cables 1&3.TXT (dB)	dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin	CISPR 11/22 Class B Average	Margin
0.456	26.82	PK	0.1	0	26.92	56.8	-29.88	-	-
0.456	13.73	Av	0.1	0	13.83	-	-	46.8	-32.97
0.51	45.34	PK	0.1	0	45.44	56	-10.56	-	-
0.51	8.3	Av	0.1	0	8.4	-	-	46	-37.6
0.609	20.82	PK	0.1	0	20.92	56	-35.08	-	-
0.609	3.2	Av	0.1	0	3.3	-	-	46	-42.7
18.1905	32.27	PK	0.2	0.2	32.67	60	-27.33	-	-
18.1905	15.75	Av	0.2	0.2	16.15	-	-	50	-33.85
Line-L2 .15 - 30MHz									
Test Frequency (MHz)	Meter Reading (dBuV)	Detector	T24 IL L2.TXT (dB)	LC Cables 2&3.TXT (dB)	dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin	CISPR 11/22 Class B Average	Margin
0.456	30.33	PK	0.1	0	30.43	56.8	-26.37	-	-
0.456	24.45	Av	0.1	0	24.55	-	-	46.8	-22.25
17.421	31.13	PK	0.2	0.2	31.53	60	-28.47	-	-
17.421	15.18	Av	0.2	0.2	15.58	-	-	50	-34.42

LINE 1 RESULTS



LINE 2 RESULTS

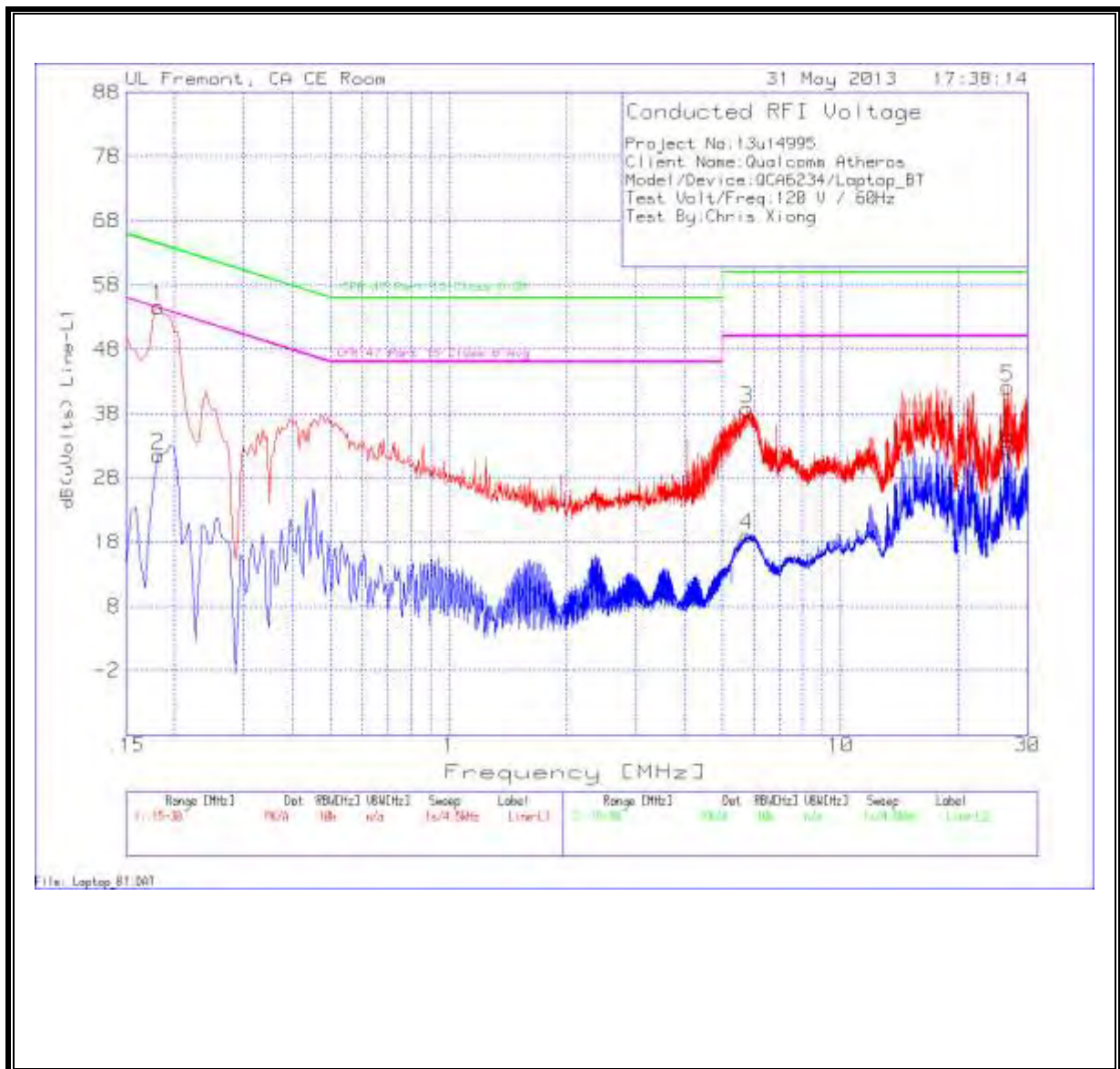


Laptop connected to LISN

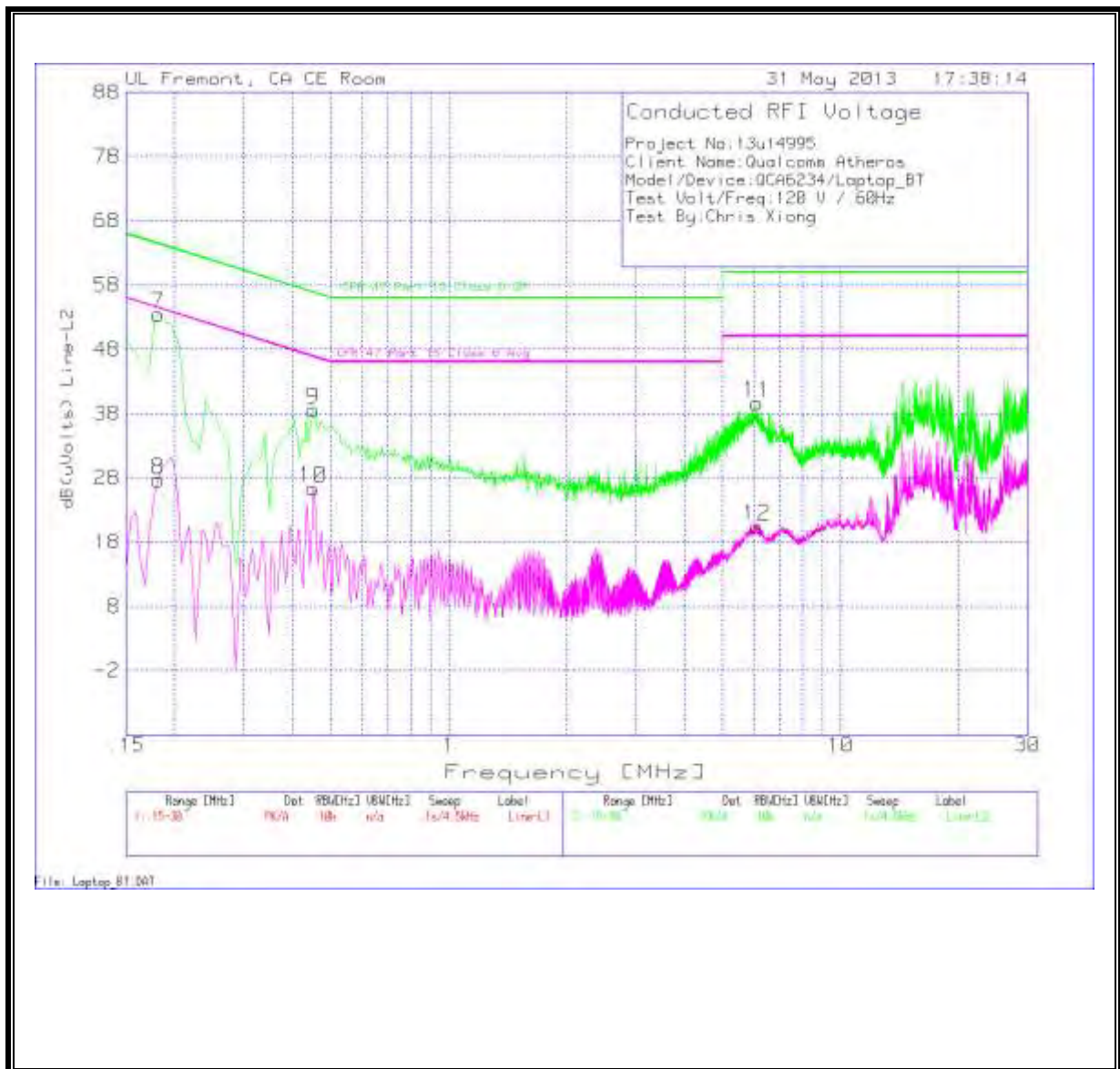
6 WORST EMISSIONS

Project No:	13U14995								
Client Name:	Qualcomm Atheros								
Model/Device:	QCA6234								
Test Volt/Freq:	120VAC/60Hz								
Test By:	Chris Xiong								
Mode:	Bluetooth Worst Case, Laptop with USB cable to Bluetooth adapter board								
Line-L1 .15 - 30MHz									
Test Frequency MHz	Meter Reading dBuv	Detector	T24 IL L1.TXT (dB)	LC Cables 1&3.TXT (dB)	dB(uVols)	CFR 47 Part 15 Class B QP	Margin	CFR 47 Part 15 Class B Avg	Margin
0.1815	54.54	PK	0.1	0	54.64	64.4	-9.76	-	-
0.1815	31.46	Av	0.1	0	31.56	-	-	54.4	-22.84
5.775	38.51	PK	0.1	0.1	38.71	60	-21.29	-	-
5.775	18.79	Av	0.1	0.1	18.99	-	-	50	-31.01
26.7855	41.31	PK	0.5	0.3	42.11	60	-17.89	-	-
26.7855	31.74	Av	0.5	0.3	32.54	-	-	50	-17.46
Line-L2 .15 - 30MHz									
Test Frequency MHz	Meter Reading dBuv	Detector	T24 IL L2.TXT (dB)	LC Cables 2&3.TXT (dB)	dB(uVols)	CFR 47 Part 15 Class B QP	Margin	CFR 47 Part 15 Class B Avg	Margin
0.1815	53.36	PK	0.1	0	53.46	64.4	-10.94	-	-
0.1815	27.58	Av	0.1	0	27.68	-	-	54.4	-26.72
0.4515	38.5	PK	0.1	0	38.6	56.8	-18.2	-	-
0.4515	26.26	Av	0.1	0	26.36	-	-	46.8	-20.44
6.108	39.44	PK	0.1	0.1	39.64	60	-20.36	-	-
6.108	20.19	Av	0.1	0.1	20.39	-	-	50	-29.61
PK - Peak detector									
QP - Quasi-Peak detector									
Av - Average detector									

LINE 1 RESULTS



LINE 2 RESULTS



11. DYNAMIC FREQUENCY SELECTION

11.1. OVERVIEW

11.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 7 A9.4 (b) (ii) **Channel Availability Check Time:** ...

Additional requirements for the band 5600-5650 MHz: Until further notice, devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

RSS-210 Issue 7 A9.4 (b) (iv) **Channel closing time:** the maximum channel closing time is 260 ms.

FCC

§15.407 (h) and FCC 06-96 APPENDIX "COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVCIES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION".

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
Uniform Spreading	Yes	Not required	Not required

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.	

Table 4: DFS Response requirement values

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period
The instant that the <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> begins is as follows: For the Short pulse radar Test Signals this instant is the end of the <i>Burst</i>. For the Frequency Hopping radar Test Signal, this instant is the end of the last radar burst generated. For the Long Pulse radar Test Signal this instant is the end of the 12 second period defining the radar transmission. The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate channel changes (an aggregate of approximately 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (Microseconds)	PRI (Microseconds)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
1	1	1428	18	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Table 6 – Long Pulse Radar Test Signal

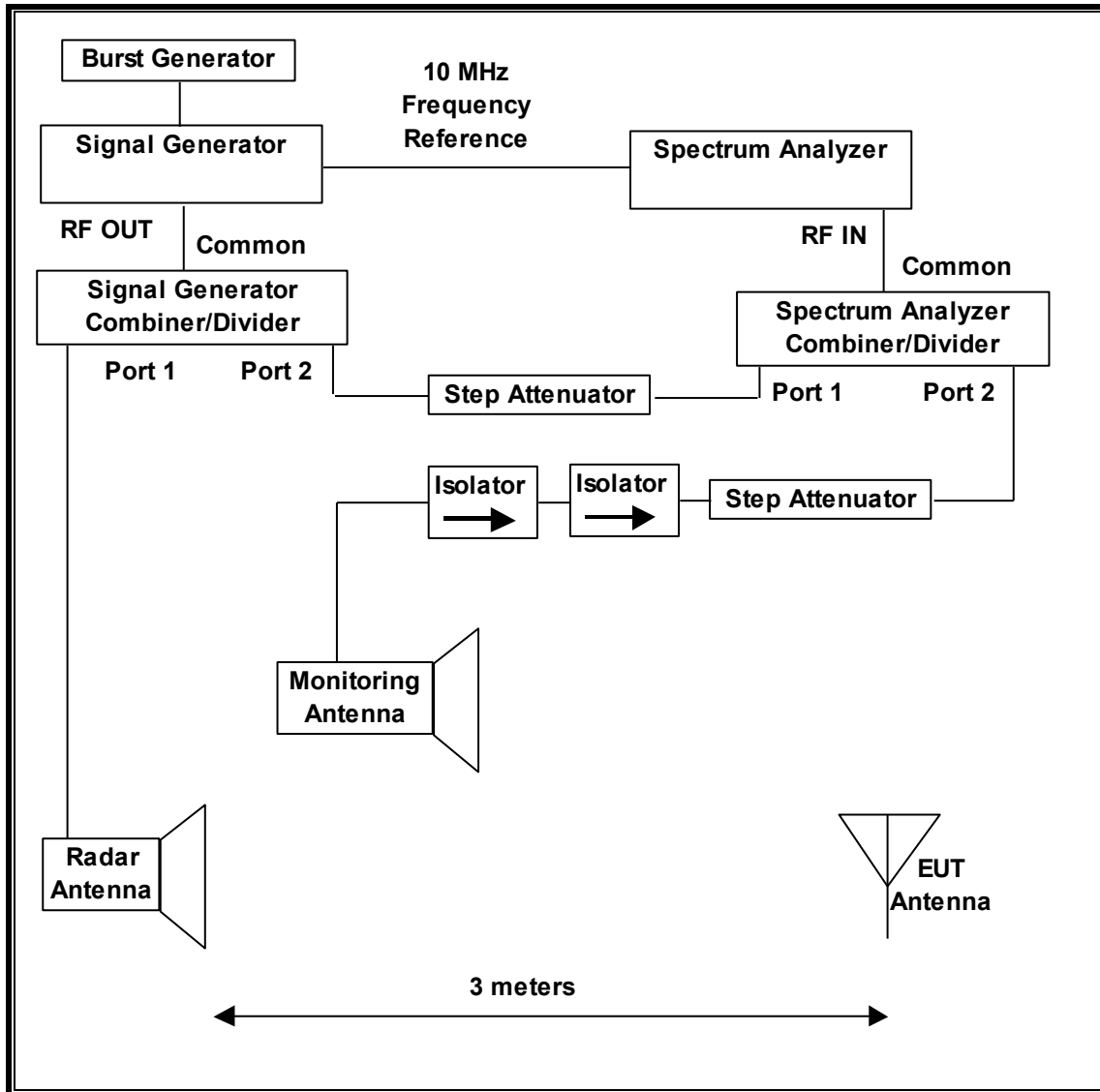
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform	Pulse Width (µsec)	PRI (µsec)	Burst Length (ms)	Pulses per Hop	Hopping Rate (kHz)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	300	9	.333	70%	30

11.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

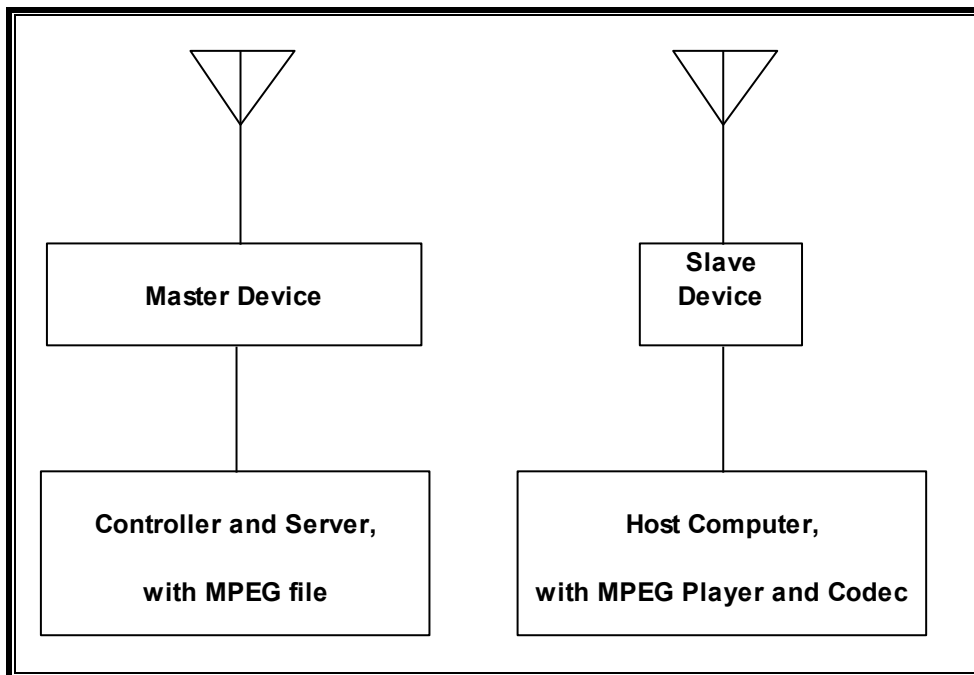
TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the DFS tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset Number	Cal Due
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	08/18/13
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	11/20/13

11.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Wireless Access Point (Master Device)	Cisco	AIR-AP1252AG-A-K9	FTX120690N2	LDK102061
AC Adapter (AP)	Delta Electronics	EADP-45BB B	DTH112490BD	DoC
Notebook PC (Host)	Lenovo	T430	P373207	DoC
AC Adapter (Host PC)	Lite On Technology	40Y7649	670044390K	DoC

11.1.4. DESCRIPTION OF EUT

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 17.21 dBm EIRP in the 5250-5350 MHz band and 16.34 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of 2 dBi in the 5250-5350 MHz band and 2 dBi in the 5470-5725 MHz band

Two identical antennas are utilized to meet the diversity and MIMO operational requirements.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63$ dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides margin to the limit.

The EUT uses two transmitter/receiver chains, each connected to an antenna to perform radiated tests.

WLAN traffic is generated by streaming the compressed video file "6 ½ Magic Hours" from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11a/n architecture. Two nominal channel bandwidths are implemented: 20 MHz and 40 MHz.

The software installed in the access point revision 12.4(25d)JA1

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Cisco Access Point, FCC ID: LDK102061. The minimum antenna gain for the Master Device is 3.5 dBi.

The rated output power of the Master unit is $> 23\text{dBm}$ (EIRP). Therefore the required interference threshold level is -64 dBm . After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63\text{ dBm}$.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm . The tested level is lower than the required level hence it provides margin to the limit.

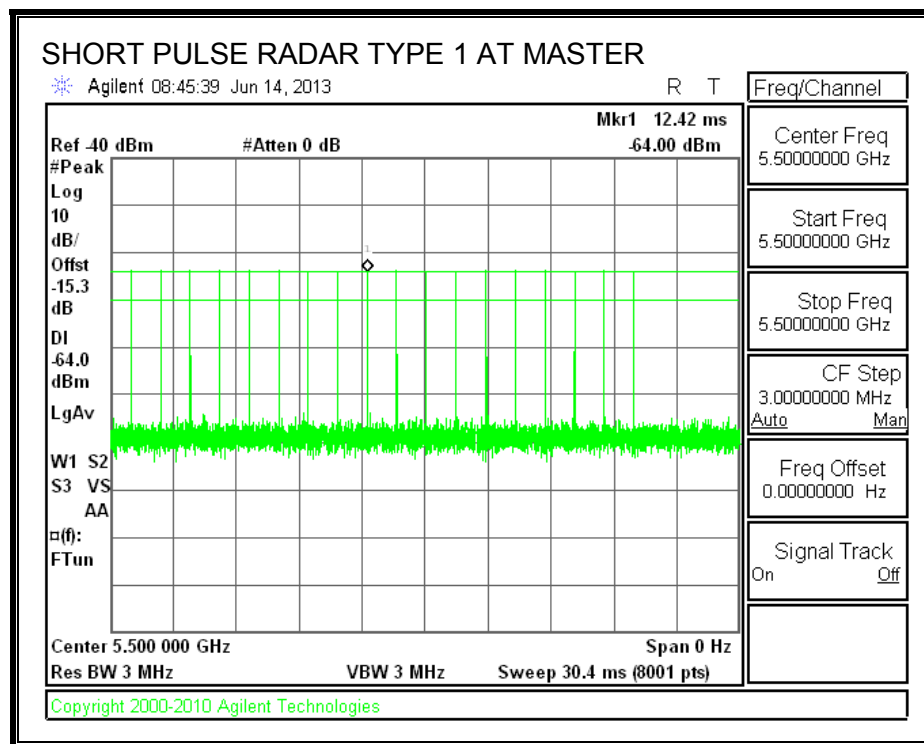
11.2. RESULTS FOR 20 MHz BANDWIDTH

11.2.1. TEST CHANNEL

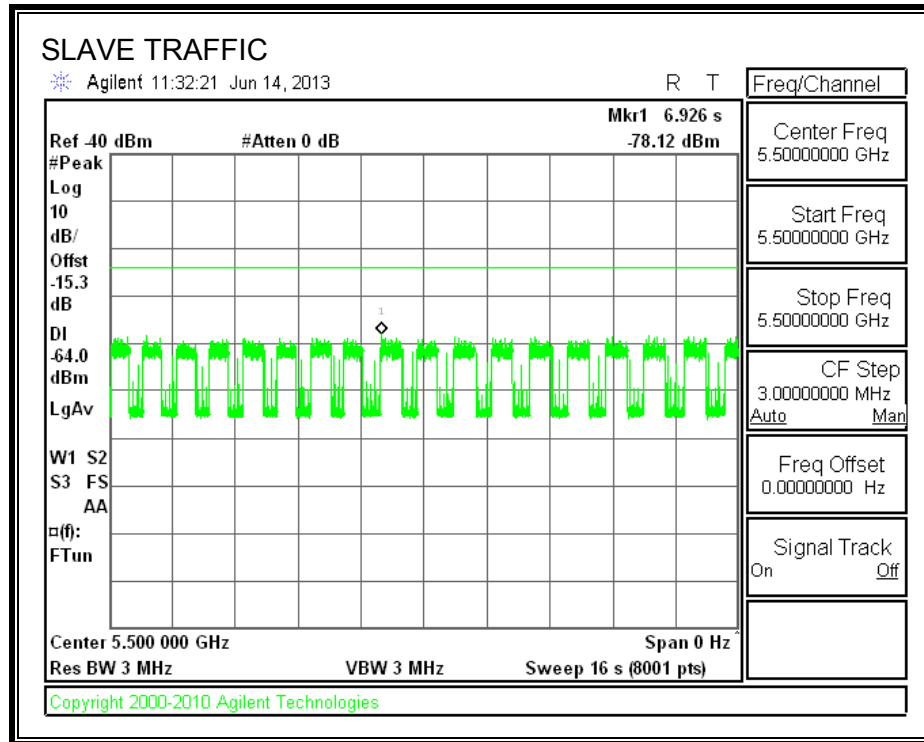
All tests were performed at a channel center frequency of 5500 MHz.

11.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



11.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

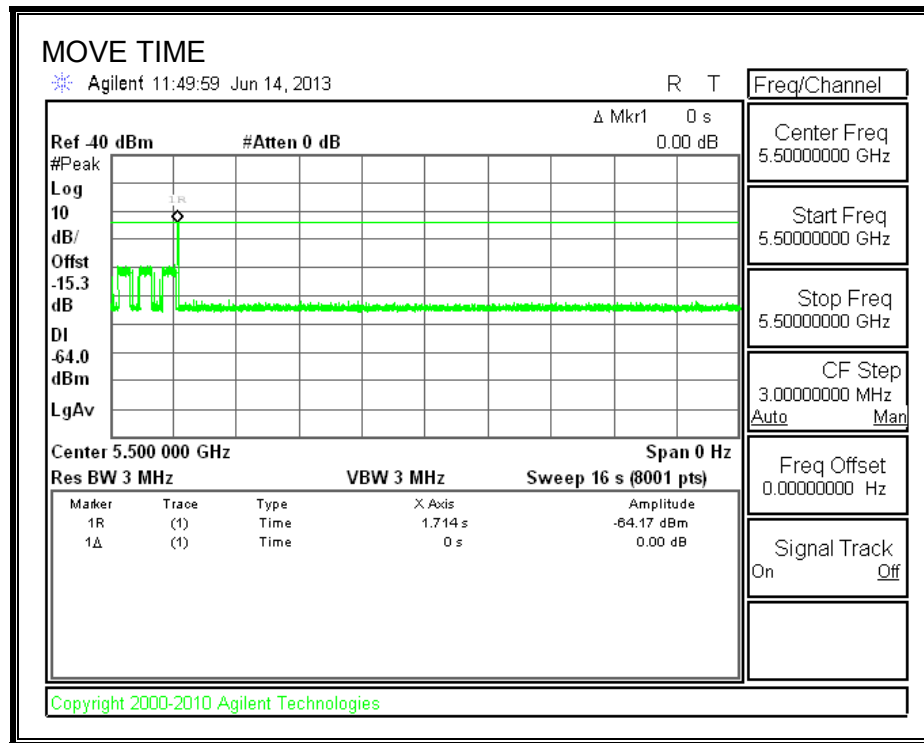
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

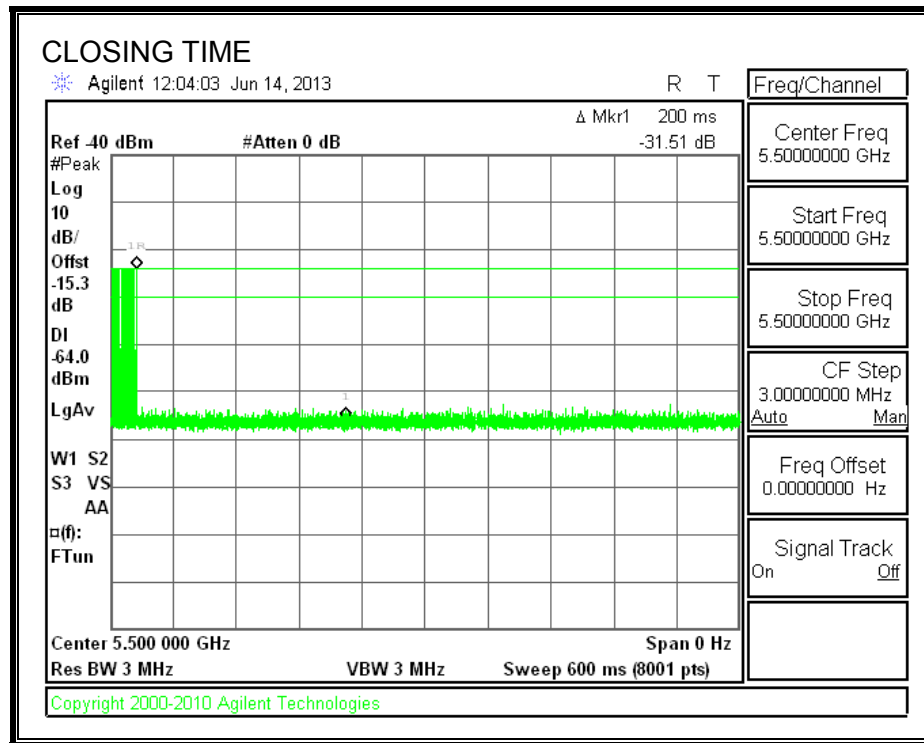
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.000	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	0.0	260

MOVE TIME

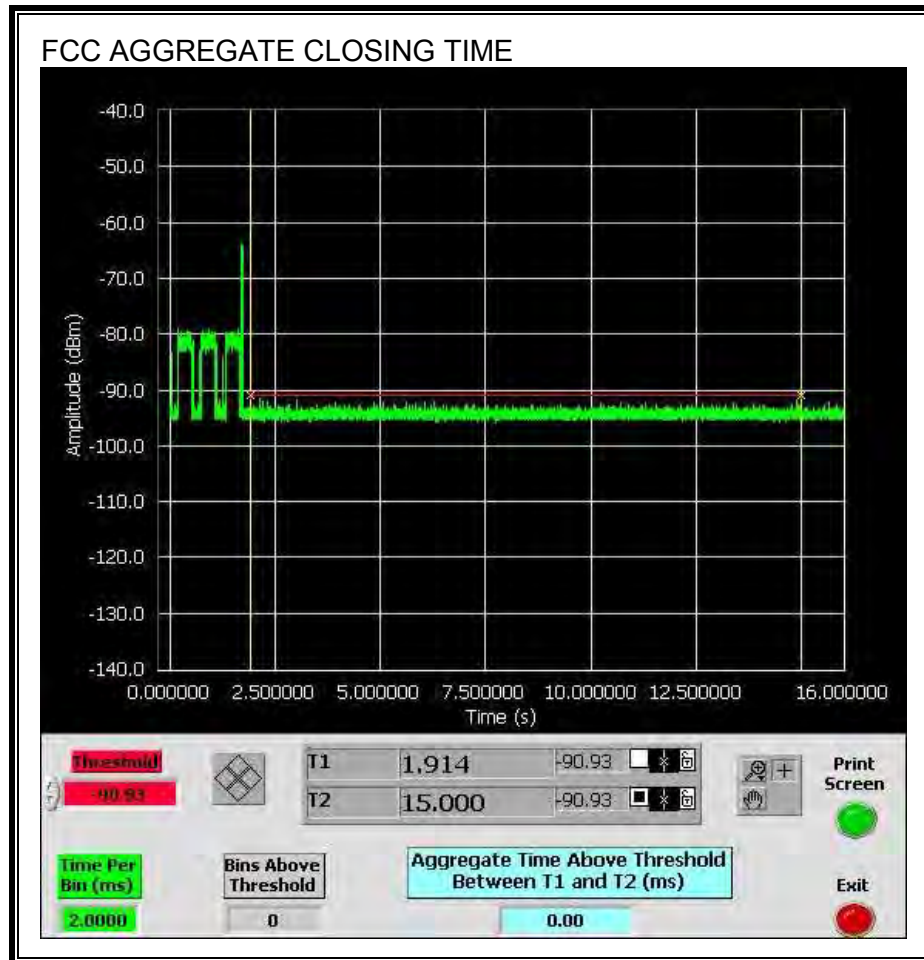


CHANNEL CLOSING TIME

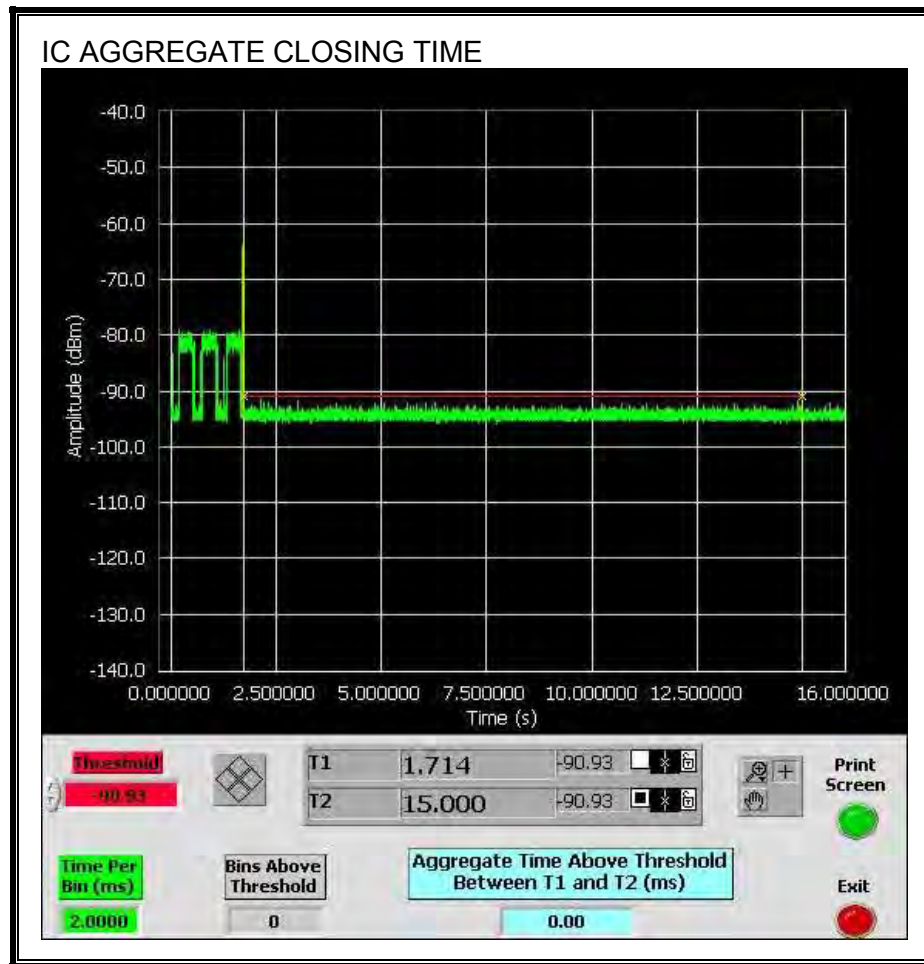


AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the FCC aggregate monitoring period.



No transmissions are observed during the IC aggregate monitoring period.



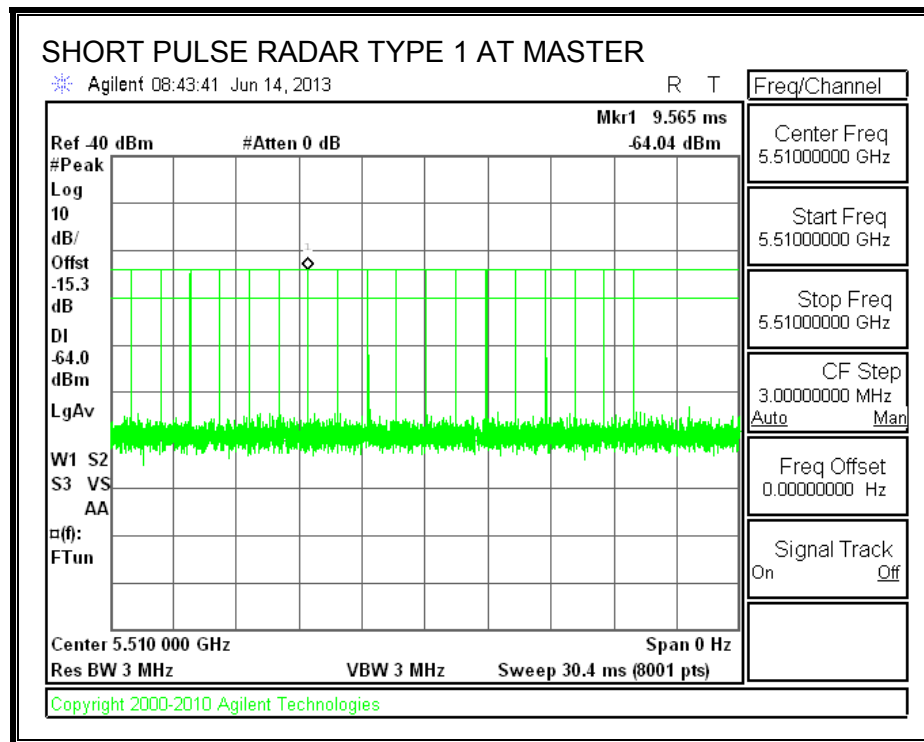
11.3. RESULTS FOR 40 MHz BANDWIDTH

11.3.1. TEST CHANNEL

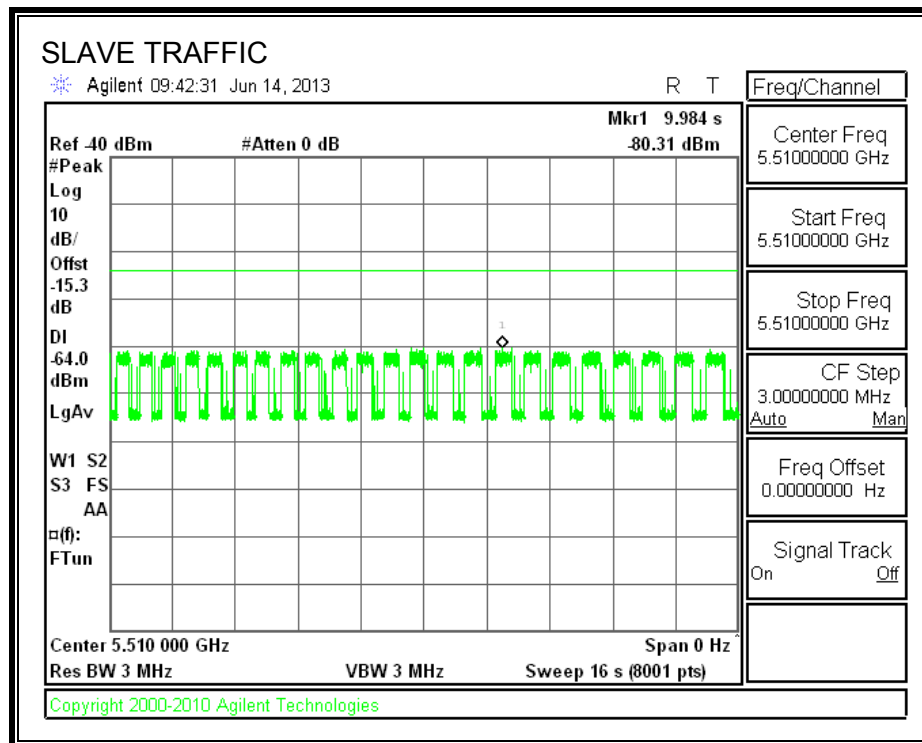
All tests were performed at a channel center frequency of 5510 MHz.

11.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



11.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

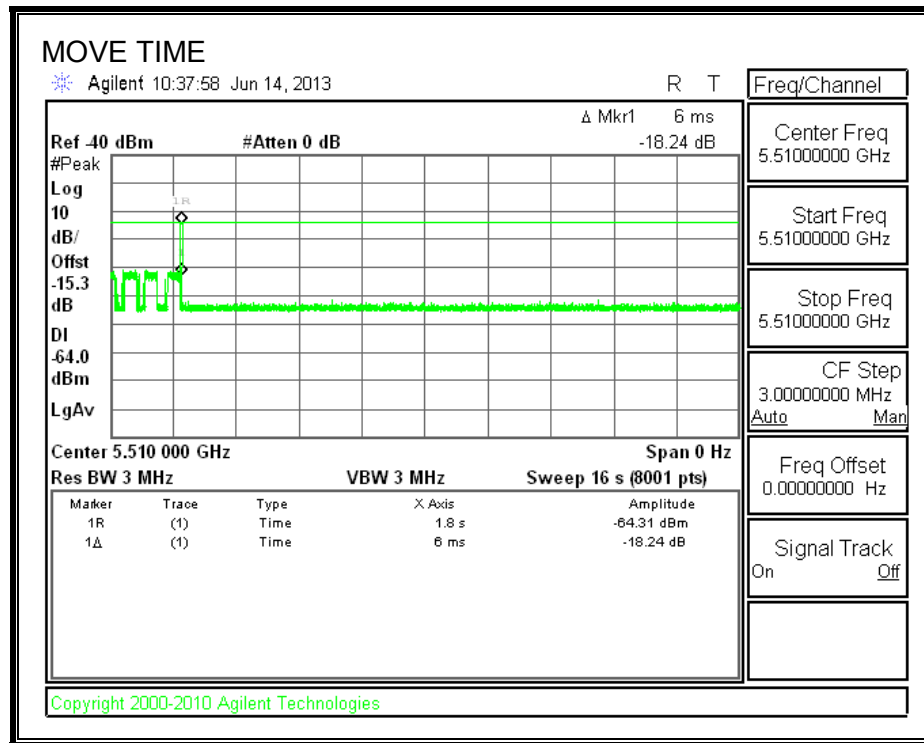
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

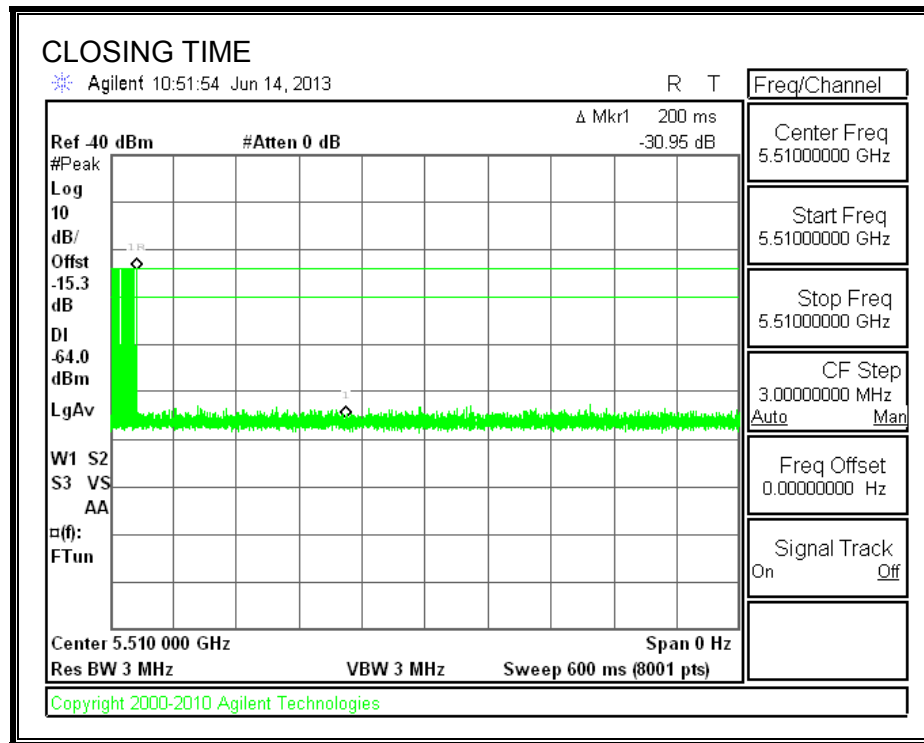
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.006	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	2.0	260

MOVE TIME

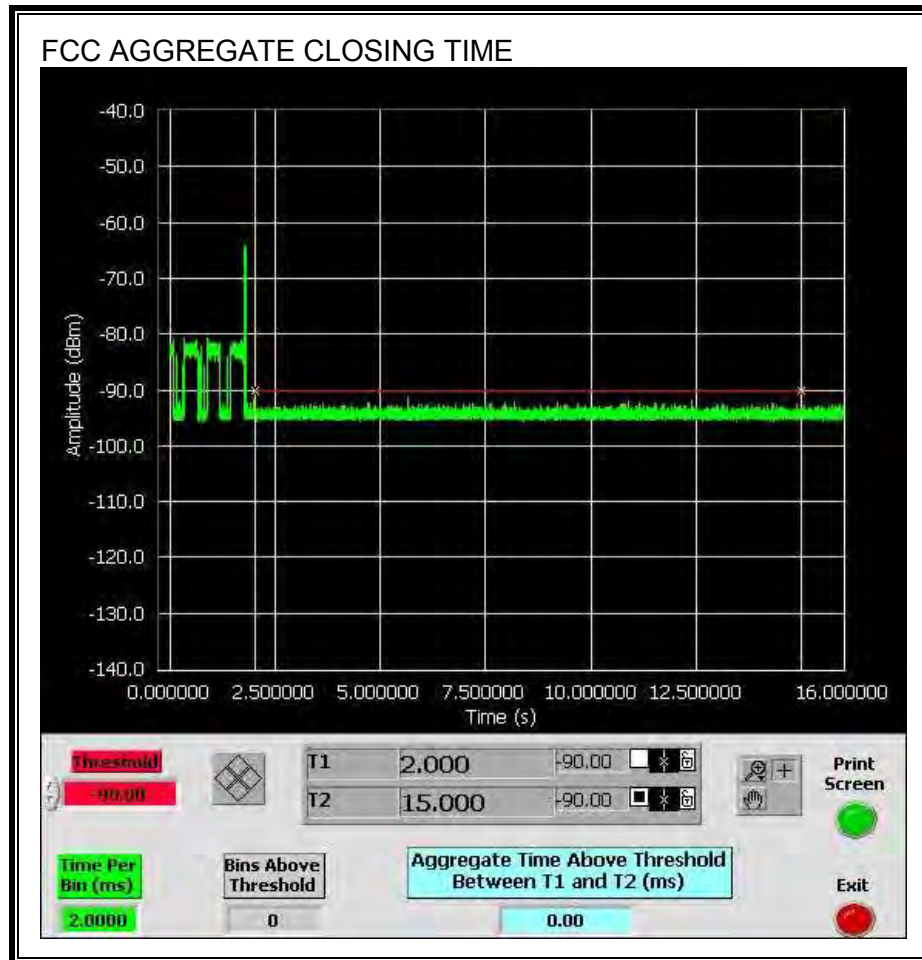


CHANNEL CLOSING TIME

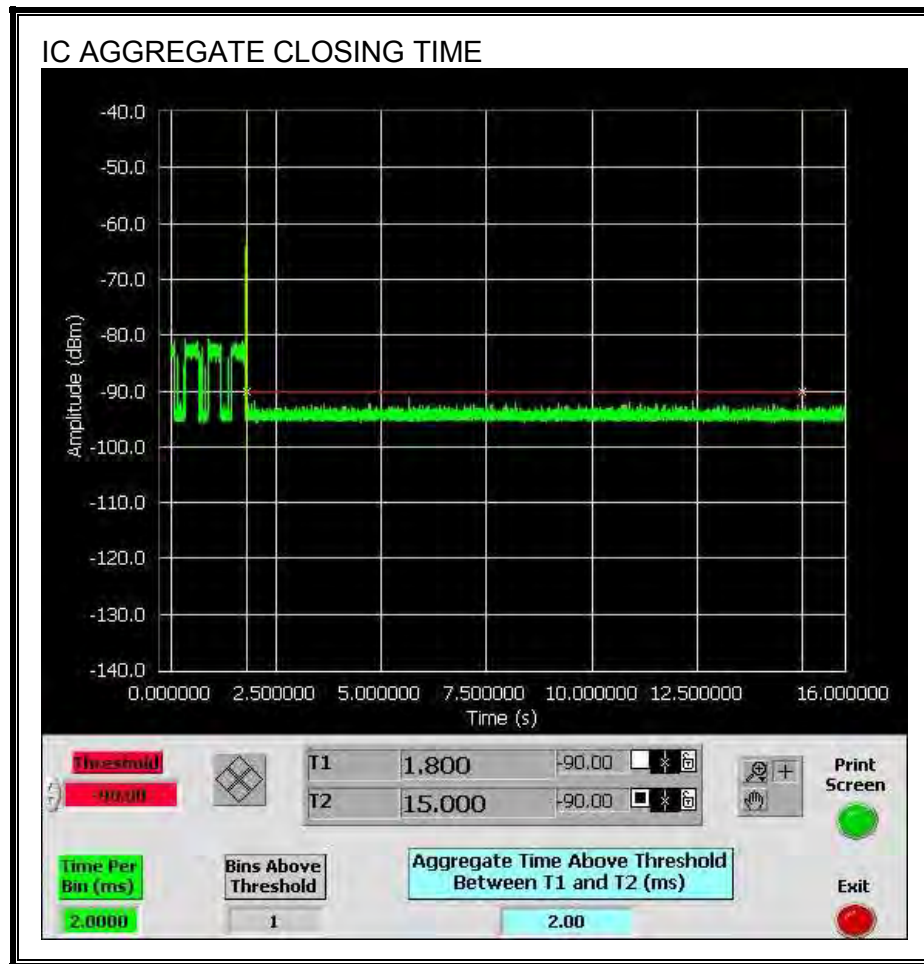


AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the FCC aggregate monitoring period.



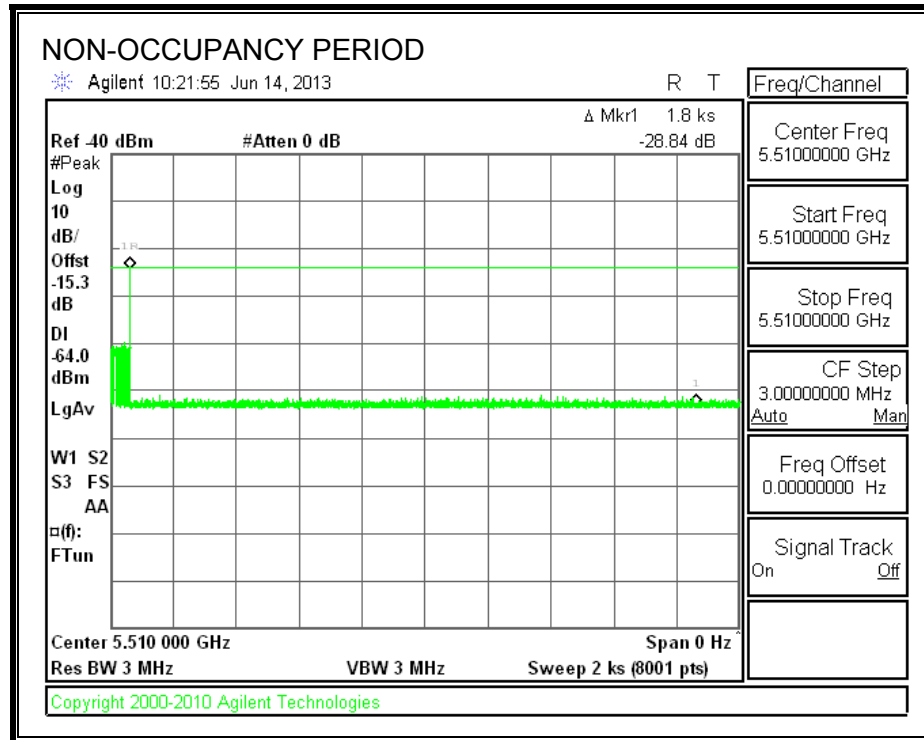
Only intermittent transmissions are observed during the IC aggregate monitoring period.



11.3.5. NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 30-minute observation time.



13. Appendix A

Colocation Data:

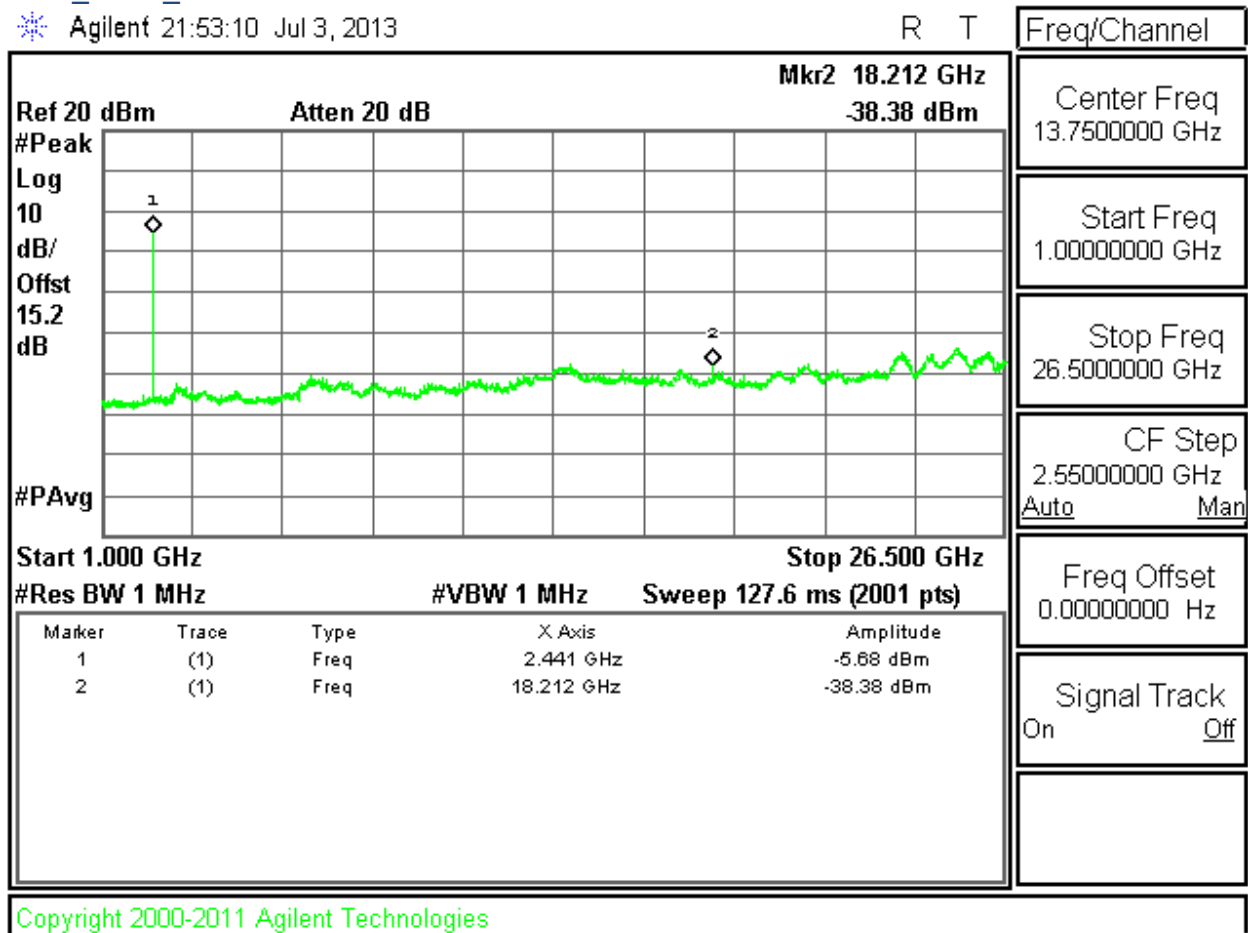
Results:

Based on our investigation, no intermodulation products were found from colocation of BT and 5 GHz WiFi radios. The plots below support this statement.

5.3GHz BAND

1/ BT_8PSK_2440MHz

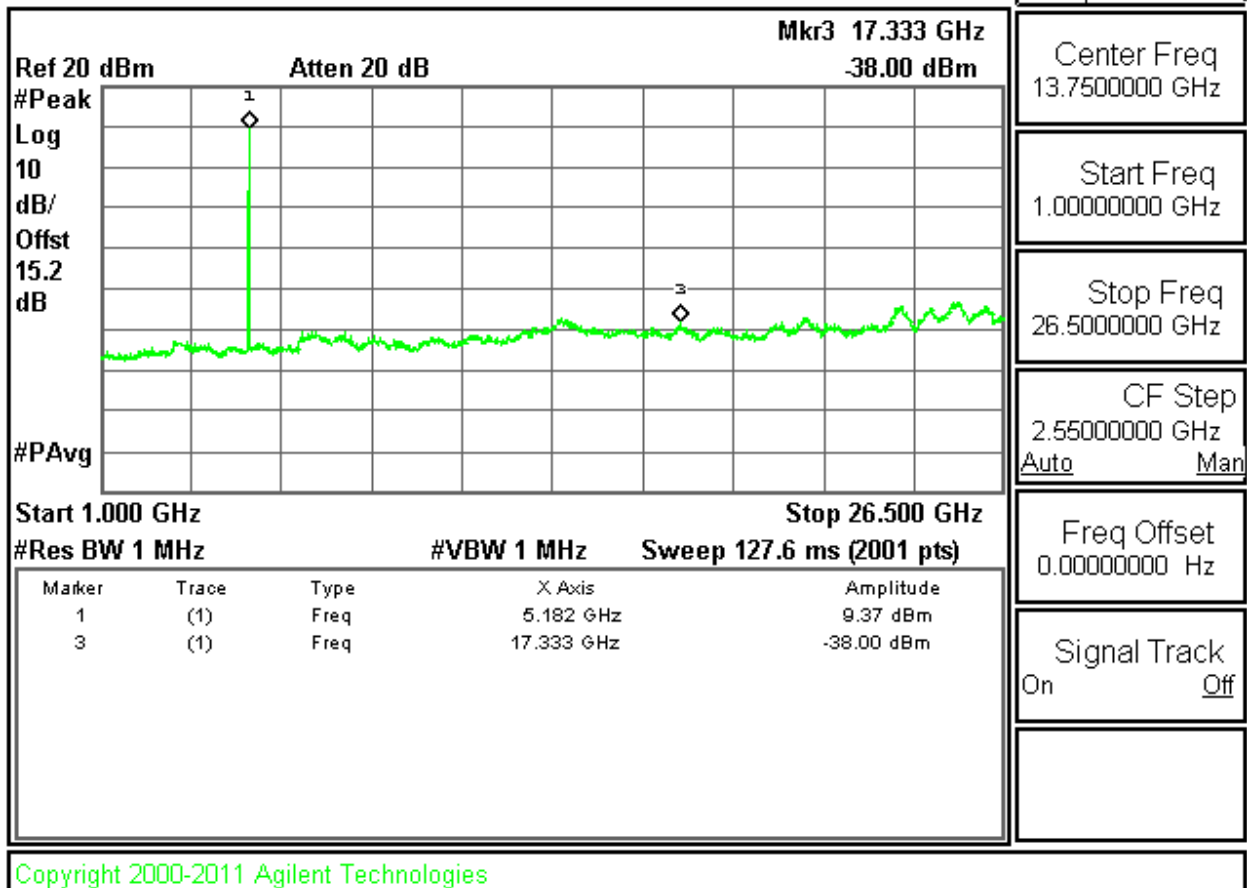
Agilent 21:53:10 Jul 3, 2013



2/ WLAN_5182MHz

* Agilent 21:50:18 Jul 3, 2013

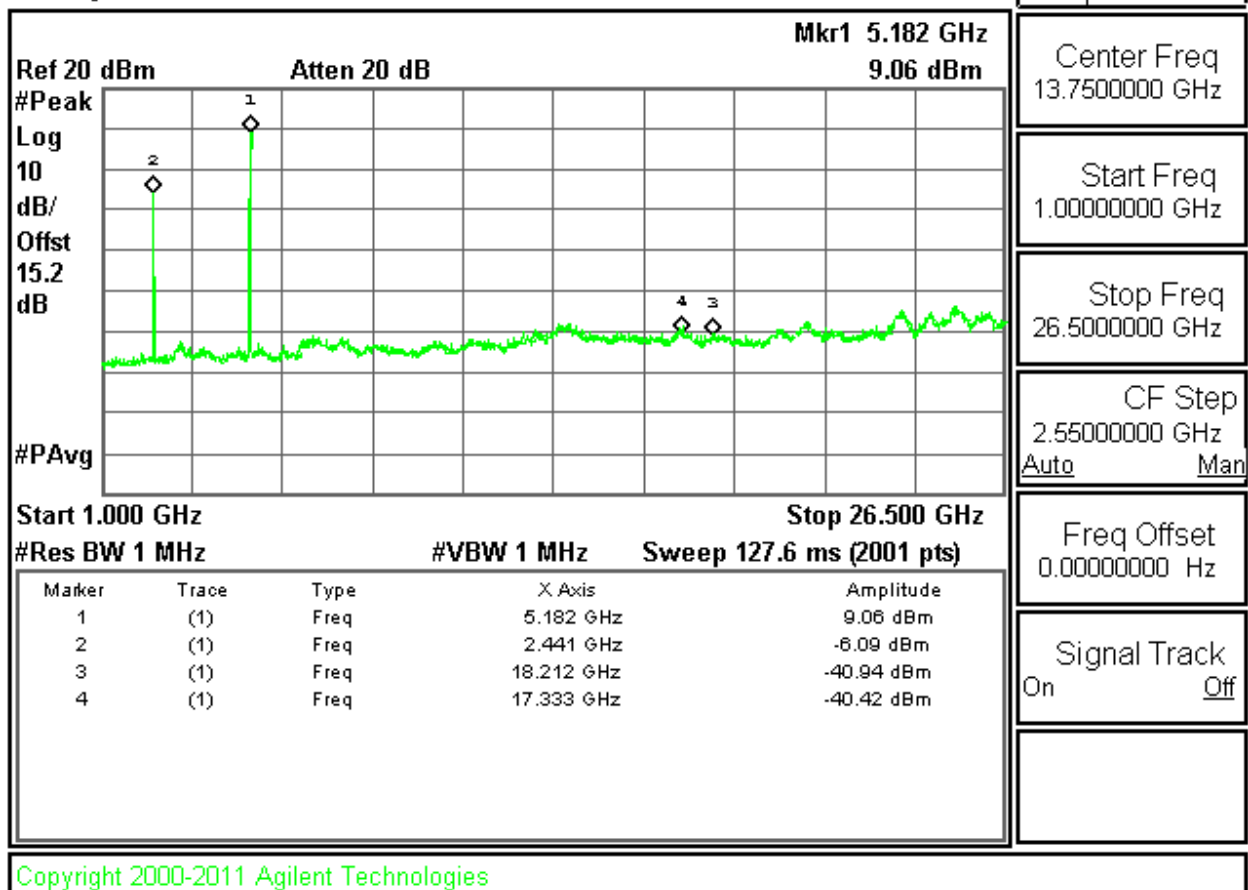
R T



3/ COLOCATION 2440 MHz & 5182MHz

Agilent 21:56:18 Jul 3, 2013

R T

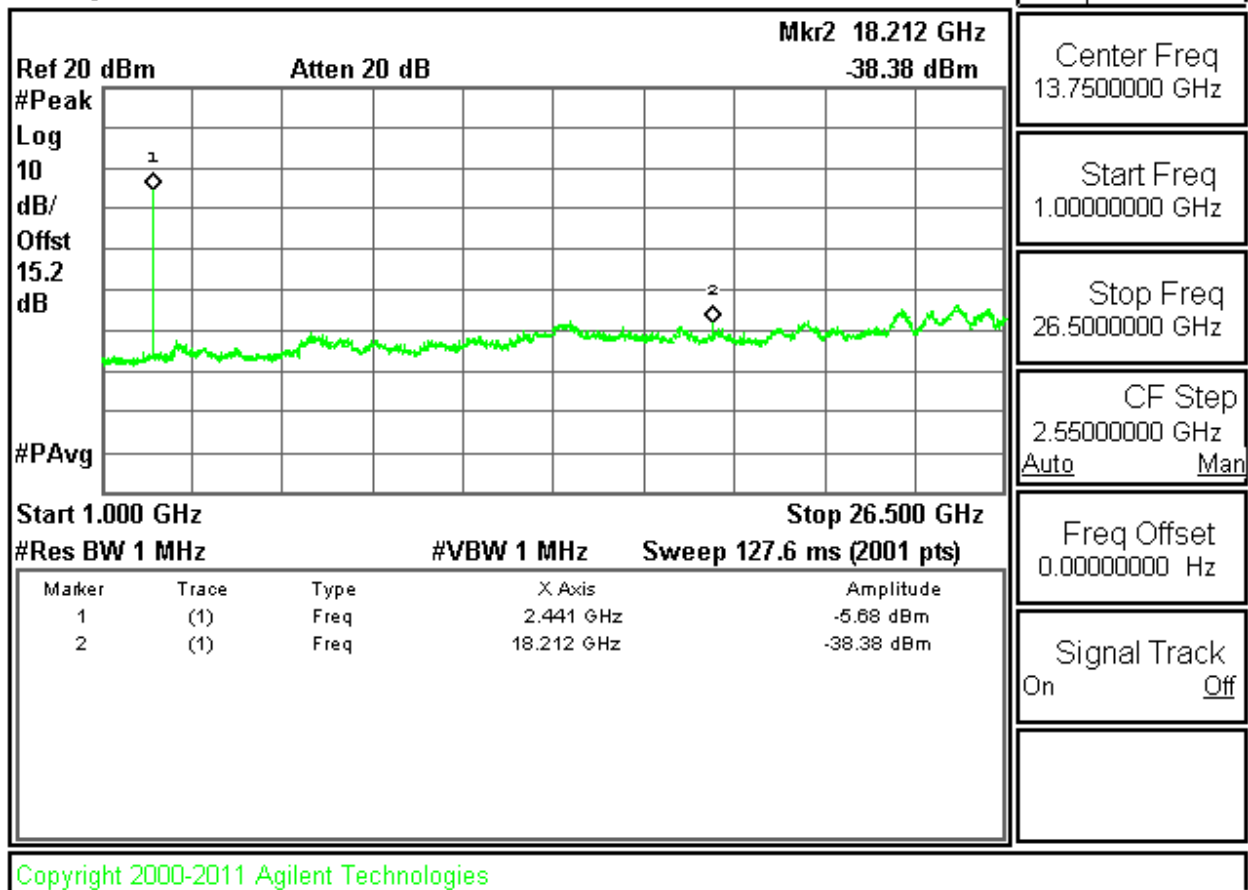


5.3GHz BAND

1/ BT_8PSK_2440MHz

Agilent 21:53:10 Jul 3, 2013

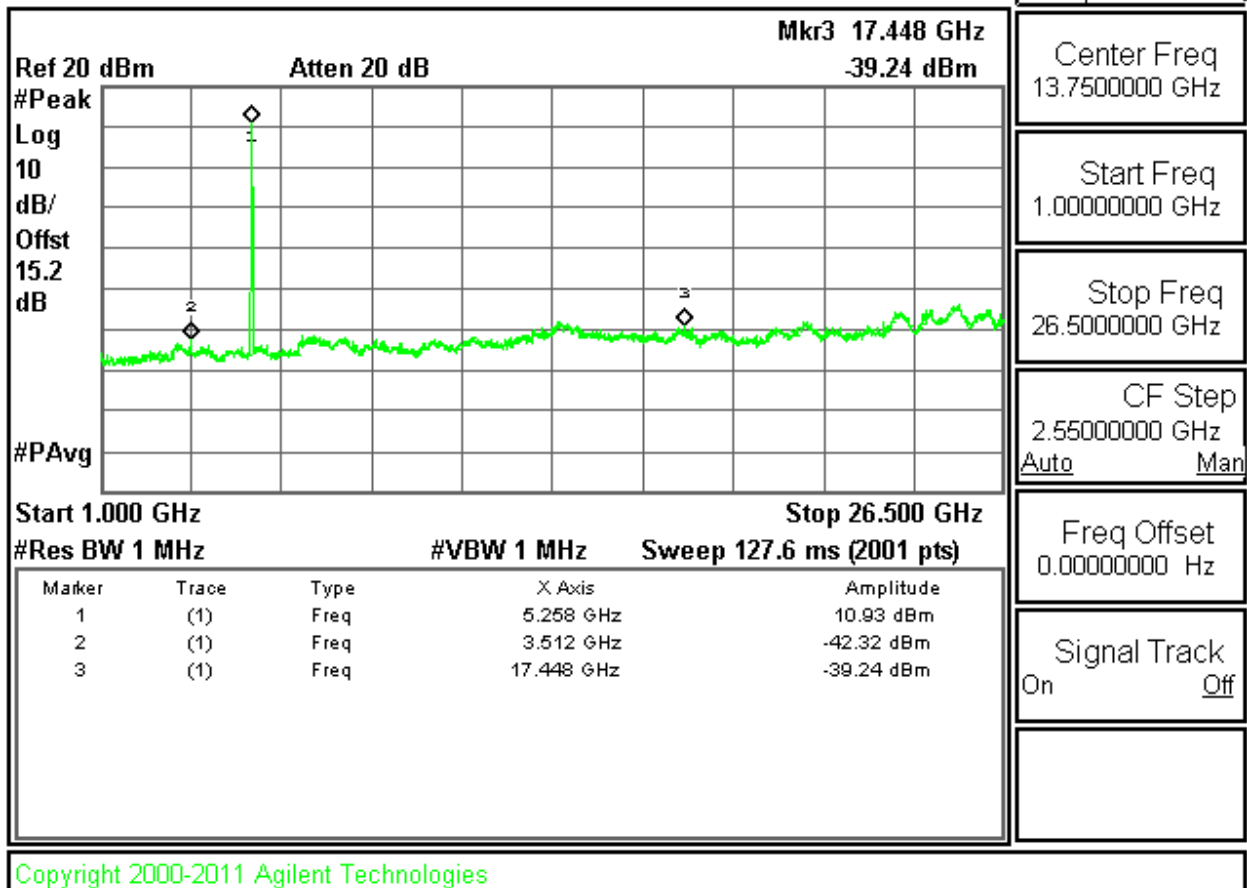
R T



2/ WLAN_5260MHz

Agilent 22:03:13 Jul 3, 2013

R T

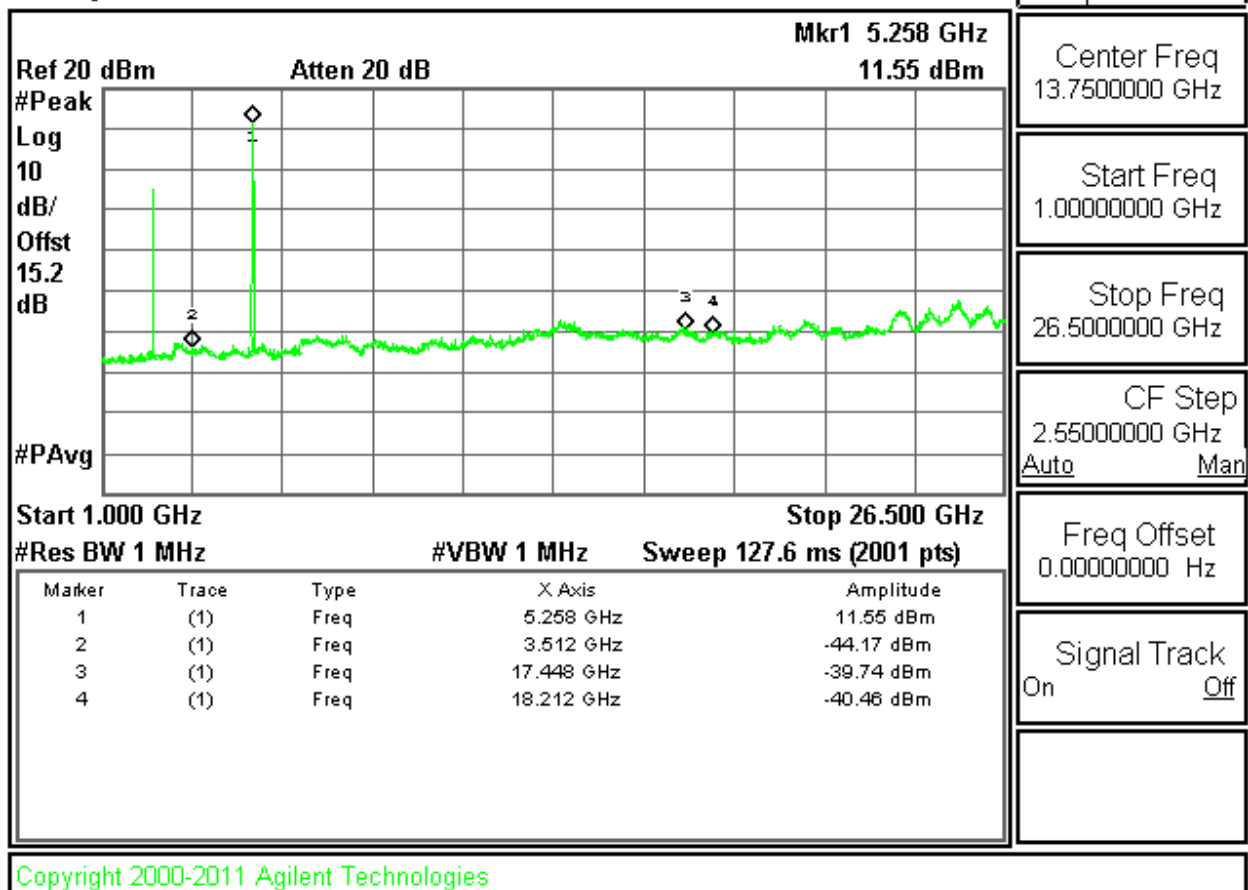


Copyright 2000-2011 Agilent Technologies

3/ COLOCATION 2440 MHz & 5260MHz

Agilent 22:10:01 Jul 3, 2013

R T

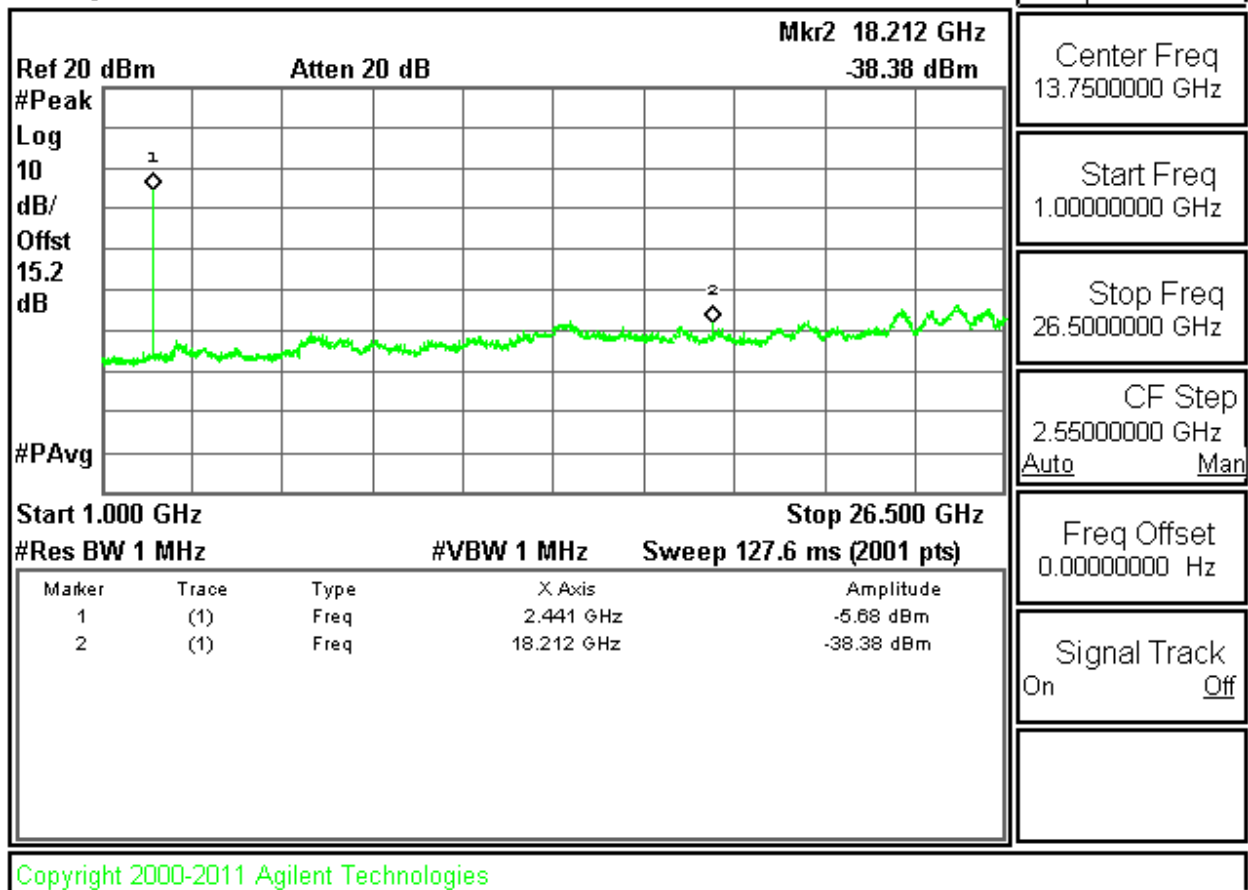


5.6GHz BAND

1/ BT_8PSK_2440MHz

Agilent 21:53:10 Jul 3, 2013

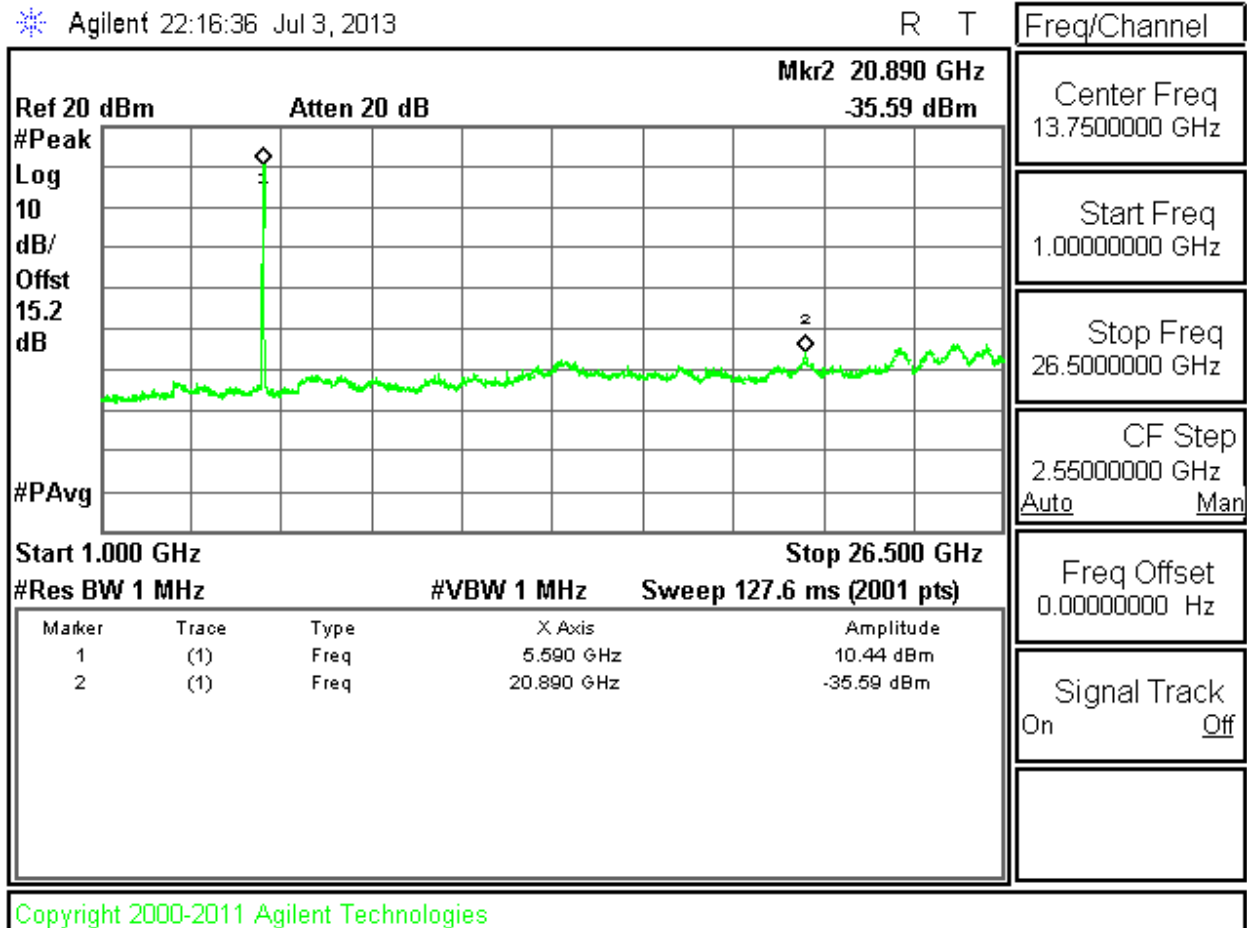
R T



2/ WLAN_5580MHz

* Agilent 22:16:36 Jul 3, 2013

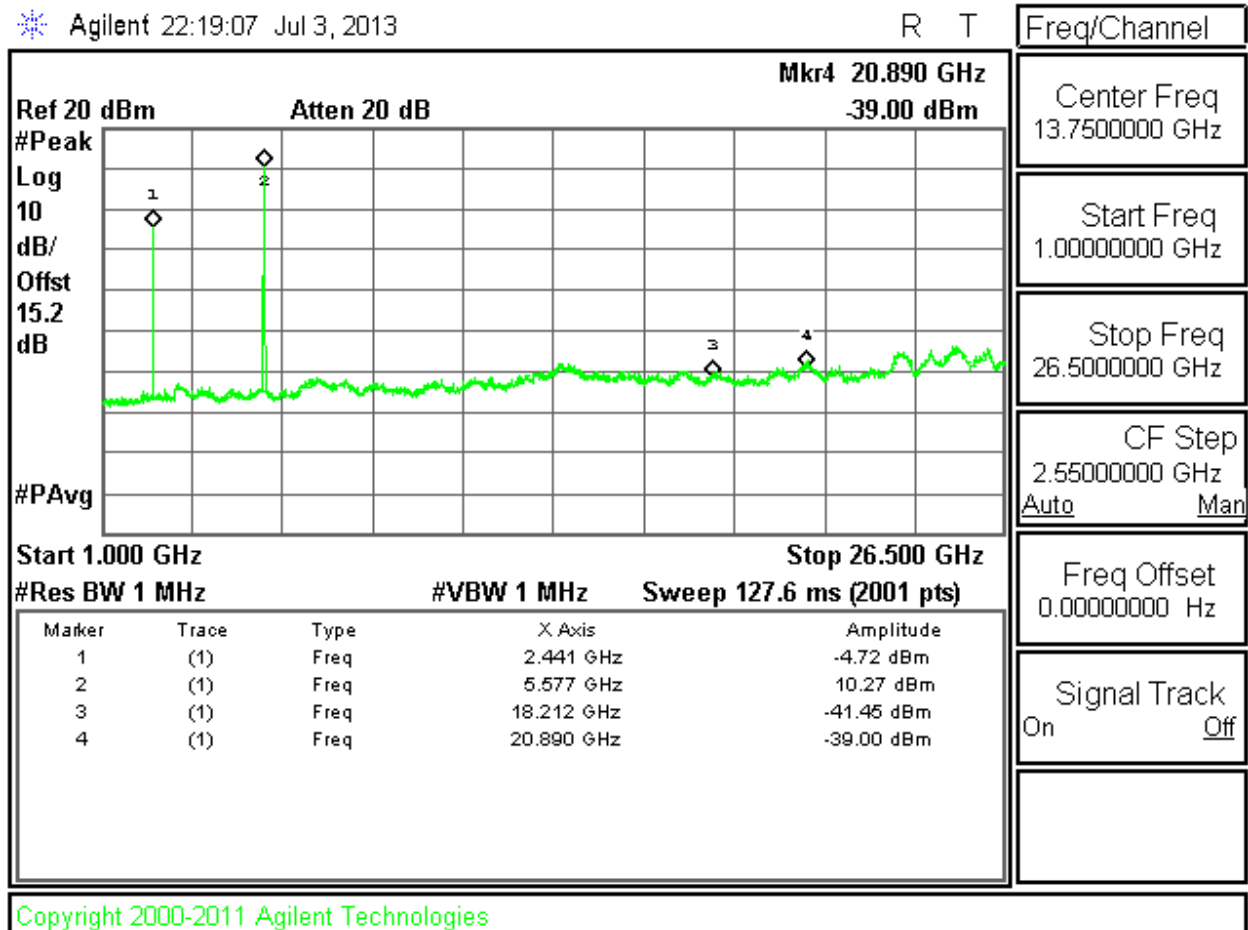
R T



3/ COLOCATION 2440MHz & 5580MHz

* Agilent 22:19:07 Jul 3, 2013

R T



END OF REPORT