

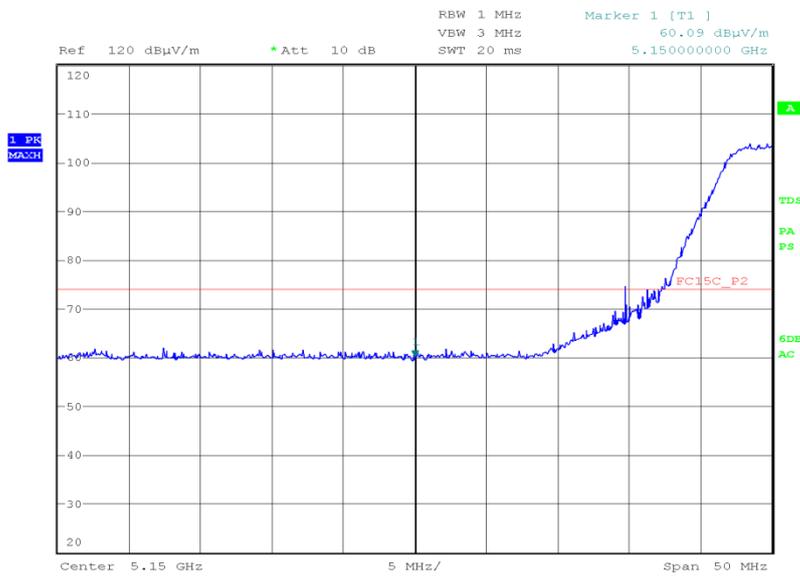


Modulation/Data Rate: OFDM/6 Mbps

Restricted Bands of Operation		
Frequency (MHz)	Final Peak (dBµV/m)	Final Average (dBµV/m)
5150.00	60.09	48.29
5350.00	61.04	49.06
5460.00	61.26	48.99

5150.00 MHz

Final Peak

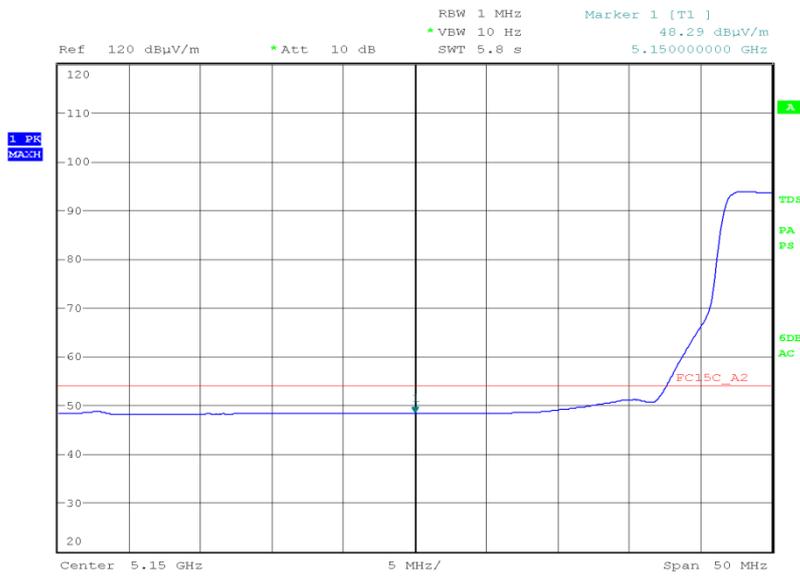


Date: 1.DEC.2014 23:01:09



Product Service

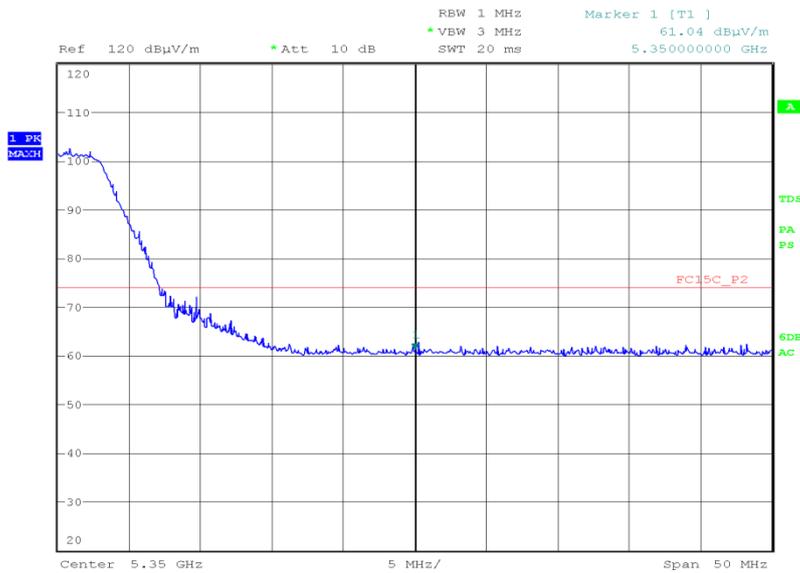
Final Average



Date: 1.DEC.2014 23:03:09

5350.00 MHz

Final Peak

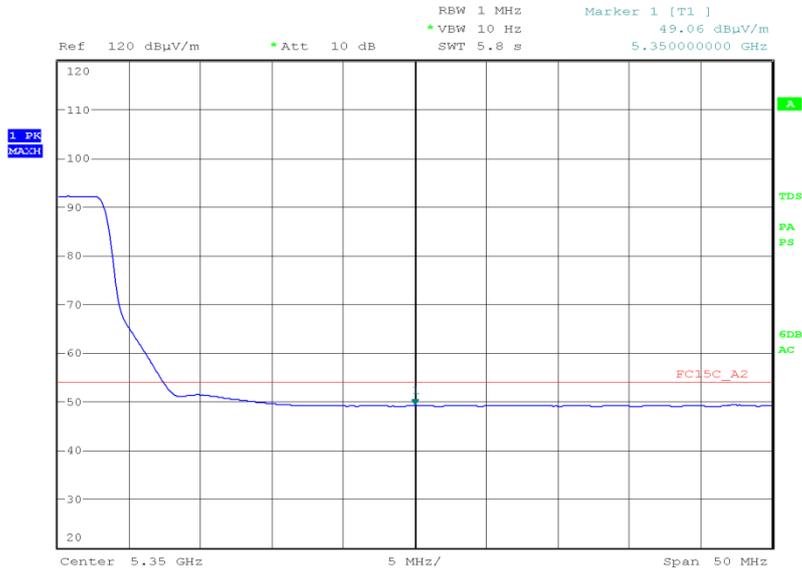


Date: 1.DEC.2014 23:09:28



Product Service

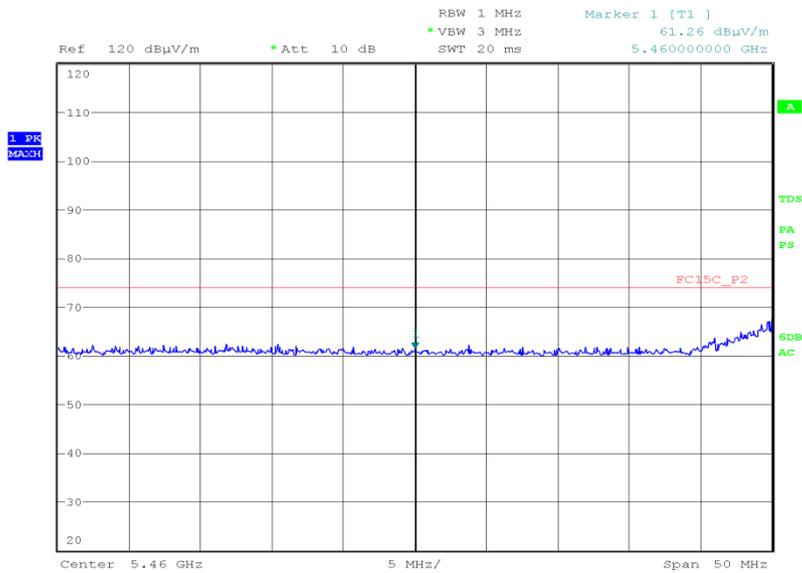
Final Average



Date: 1.DEC.2014 23:08:32

5460.00 MHz

Final Peak

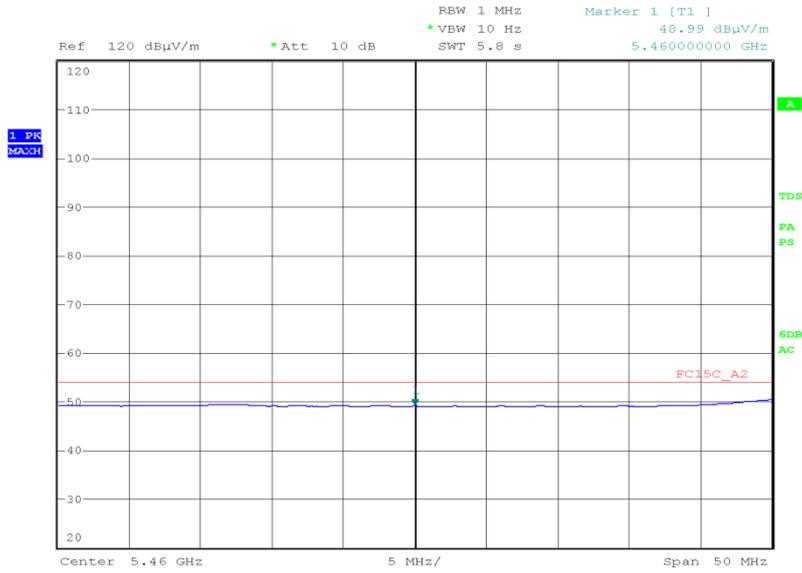


Date: 1.DEC.2014 23:16:41



Product Service

Final Average



Date: 1.DEC.2014 23:17:51

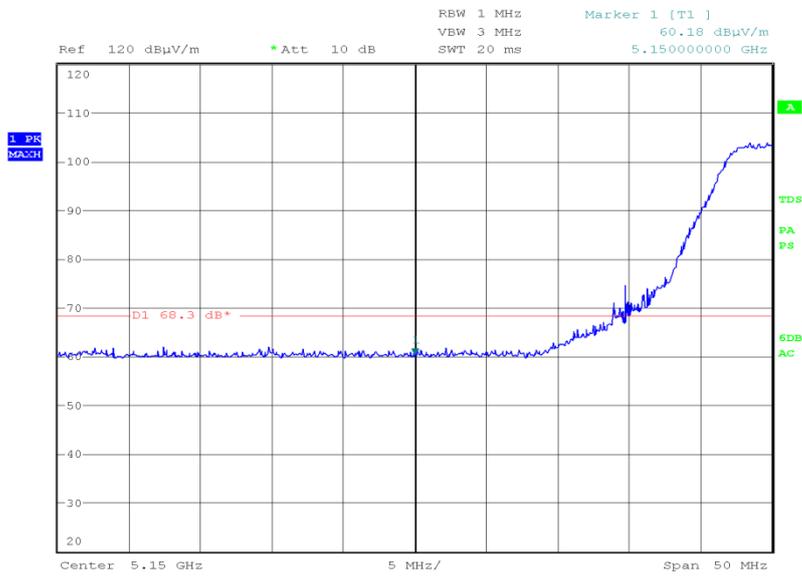


Product Service

Band Edge	
Frequency (MHz)	Final Peak (dBm)
5150.00	-35.02
5350.00	-33.32
5470.00	-35.02
5725.00	-34.36

5150.00 MHz

Final Peak

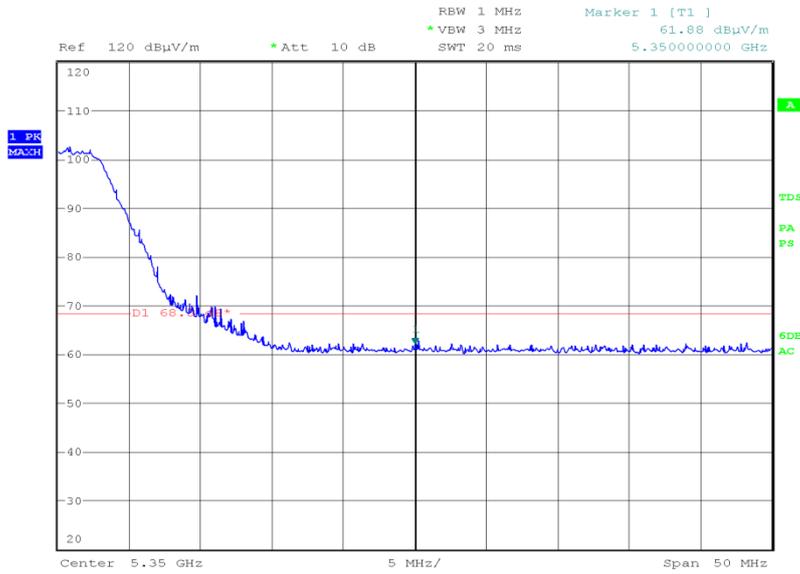


Date: 1.DEC.2014 23:02:13



5350.00 MHz

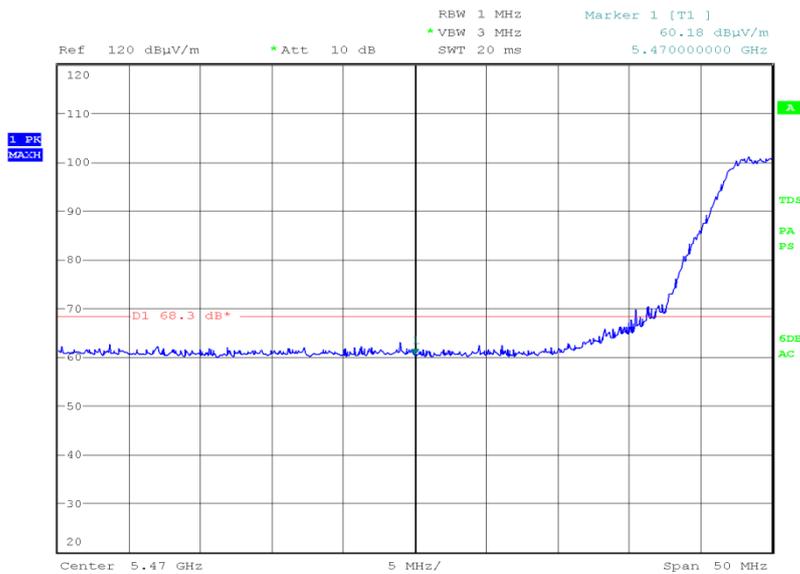
Final Peak



Date: 1.DEC.2014 23:09:57

5470.00 MHz

Final Peak



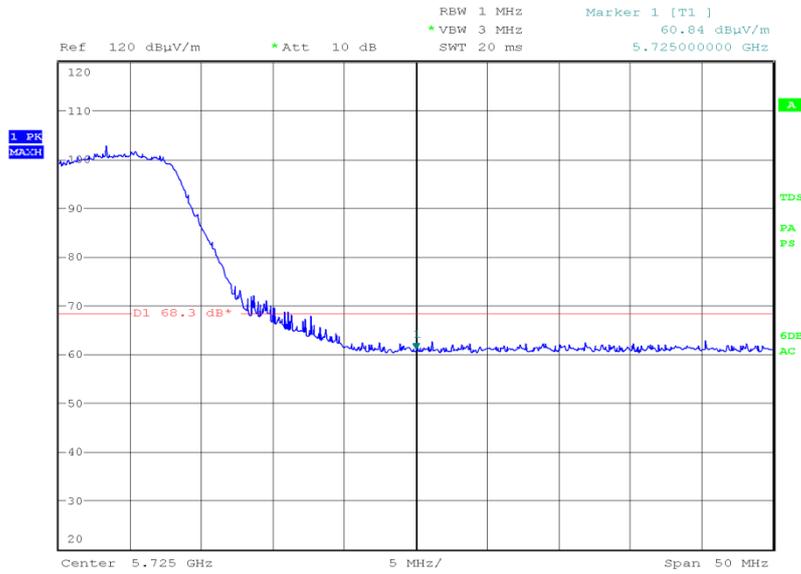
Date: 1.DEC.2014 23:19:05



Product Service

5725.00 MHz

Final Peak



Date: 1.DEC.2014 23:22:53

Remark

The test was performed on 6 Mbps because this was deemed the worst case data rate for 6 dB Bandwidth.

The test was performed on 9 Mbps because this was deemed the worst case data rate for Conducted Output Power.

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Product Service

802.11(ac) - 5 GHz 20 MHz BW

4.0 V DC Supply

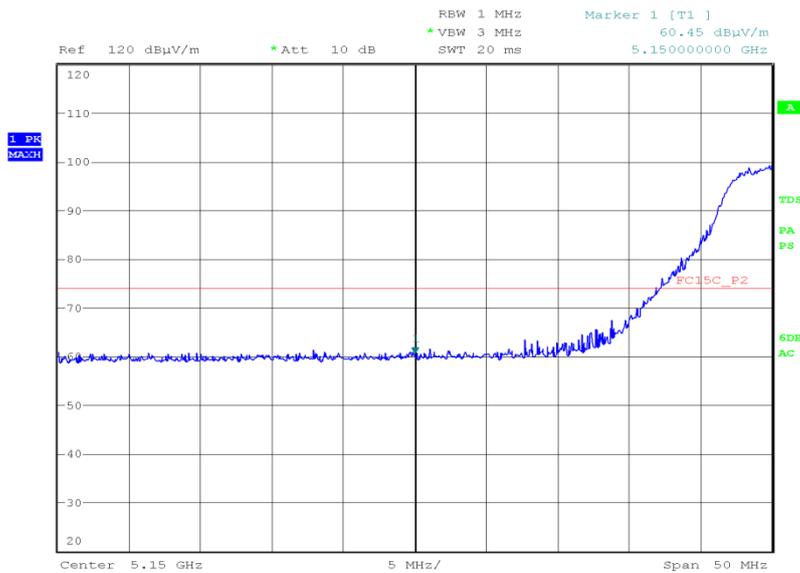
Band Edge

Modulation/Data Rate: OFDM/MCS1

Restricted Bands of Operation		
Frequency (MHz)	Final Peak (dBμV/m)	Final Average (dBμV/m)
5150.00	59.56	48.35
5350.00	60.13	49.01
5460.00	60.64	48.93

5150.00 MHz

Final Peak

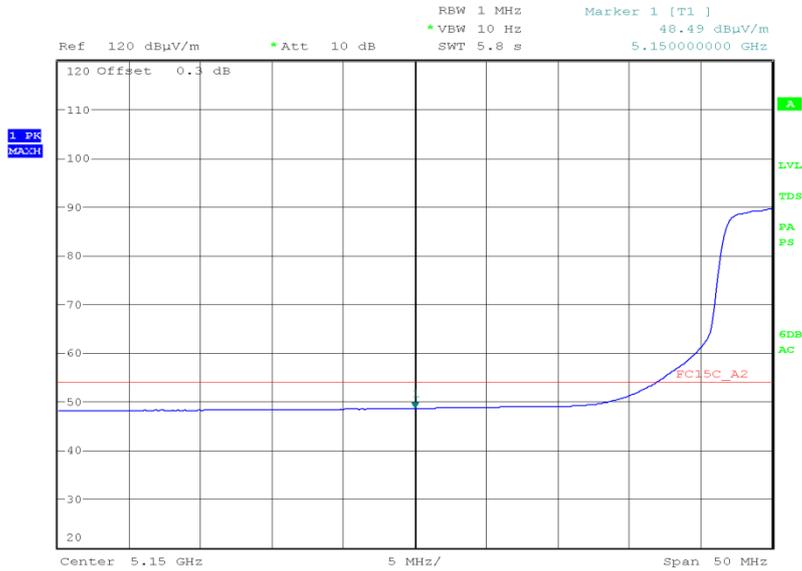


Date: 2.DEC.2014 18:52:12



Product Service

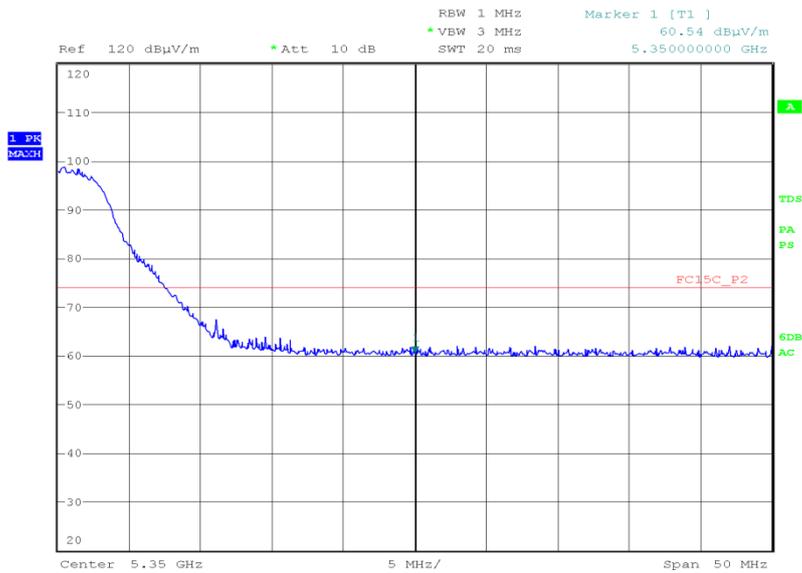
Final Average



Date: 2.DEC.2014 18:51:01

5350.00 MHz

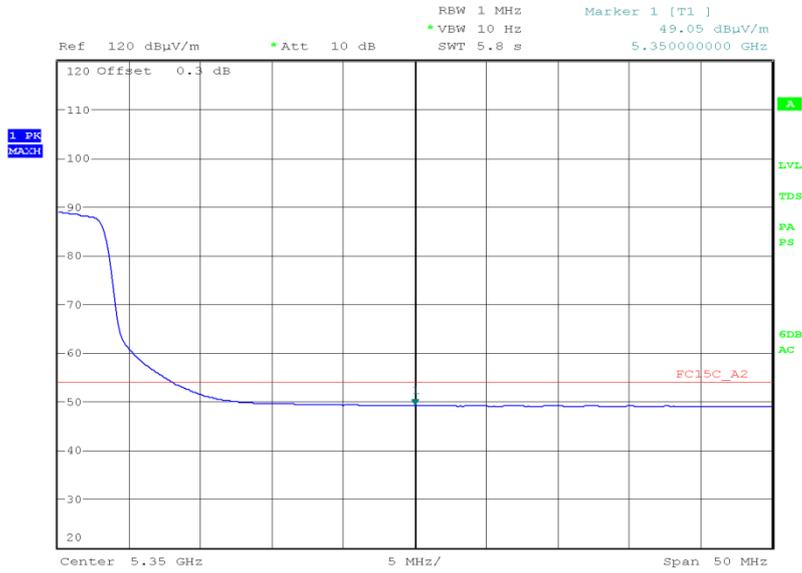
Final Peak



Date: 2.DEC.2014 18:58:52



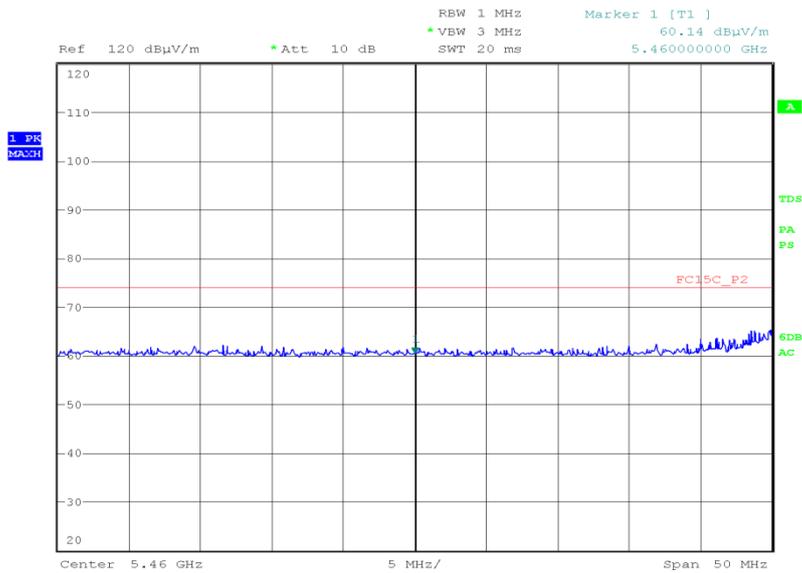
Final Average



Date: 2.DEC.2014 19:00:09

5460.00 MHz

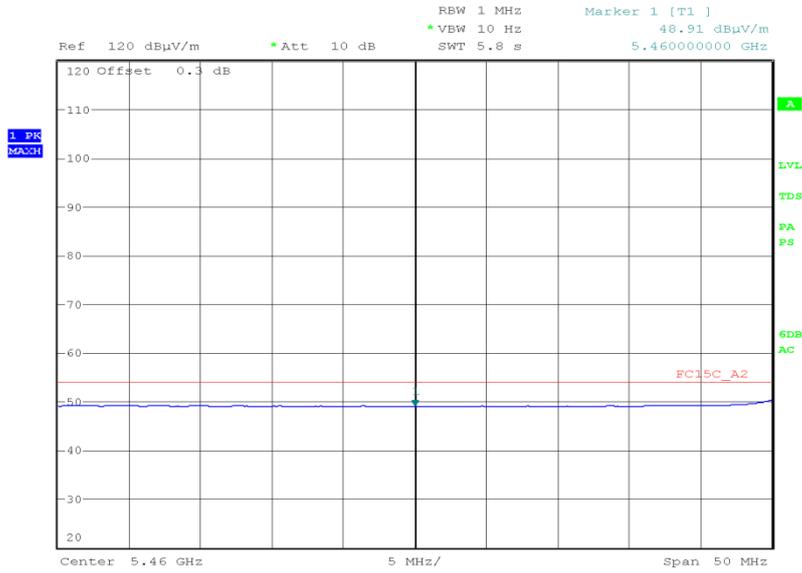
Final Peak



Date: 2.DEC.2014 19:07:08



Final Average



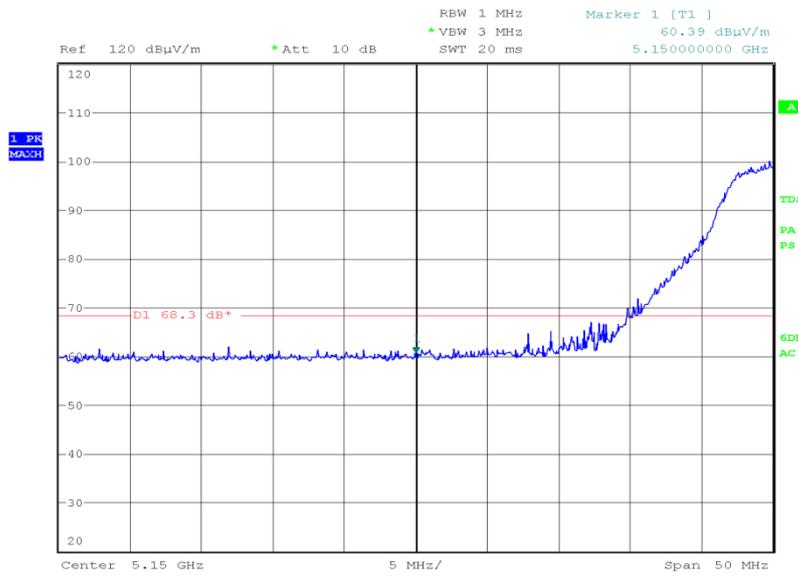
Date: 2.DEC.2014 19:05:11



Band Edge	
Frequency (MHz)	Final Peak (dBm)
5150.00	-36.28
5350.00	-33.86
5470.00	-35.66
5725.00	-34.76

5150.00 MHz

Final Peak

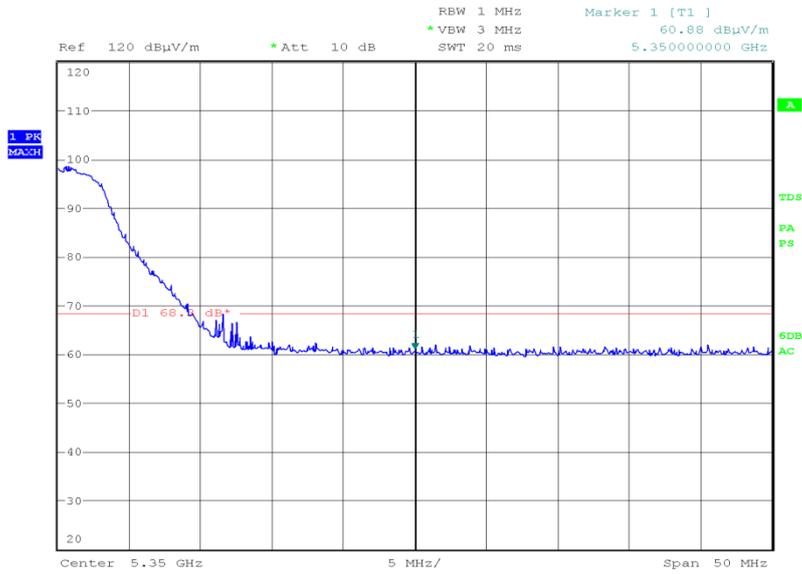


Date: 2.DEC.2014 18:53:21



5350.00 MHz

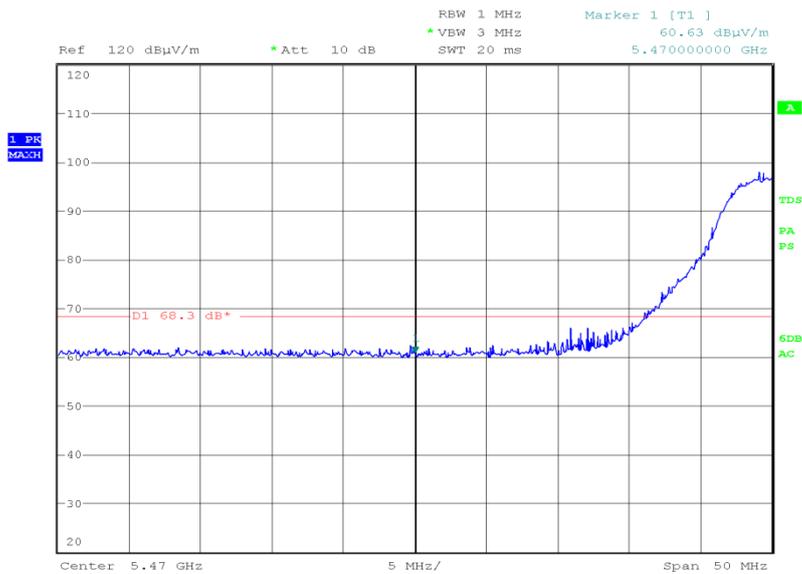
Final Peak



Date: 2.DEC.2014 18:57:21

5470.00 MHz

Final Peak



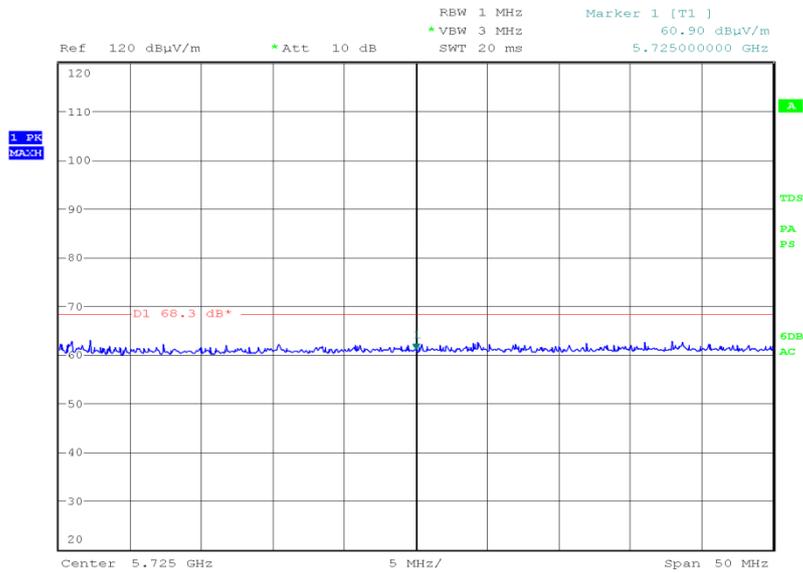
Date: 2.DEC.2014 19:09:09



Product Service

5725.00 MHz

Final Peak



Date: 2.DEC.2014 19:18:50

Remark

The test was performed on MCS1 because this was deemed the worst case data rate for 6 dB Bandwidth and Conducted Output Power.

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Product Service

802.11(ac) - 5 GHz 40 MHz BW

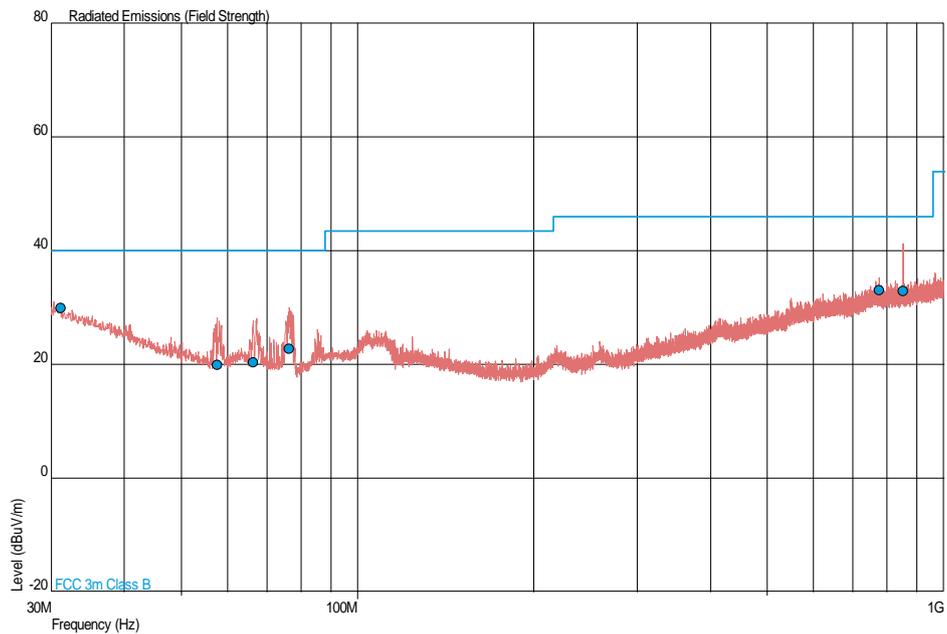
4.0 V DC Supply

Spurious Radiated Emissions

Frequency Band 1

5190 MHz

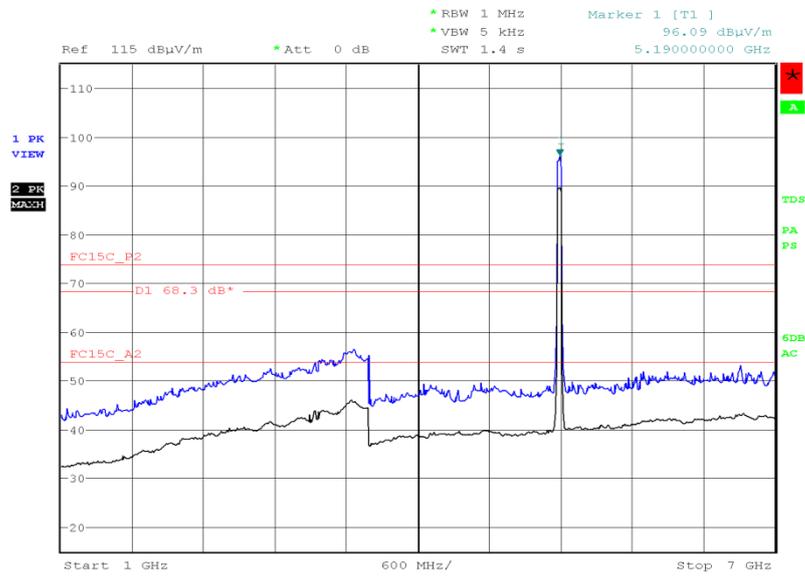
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
31.166	29.9	31.3	40.0	100	-10.1	-68.7	115	1.00	Vertical
57.607	19.9	9.9	40.0	100	-20.1	-90.1	358	1.00	Vertical
66.386	20.3	10.4	40.0	100	-19.7	-89.6	0	1.00	Vertical
76.514	22.8	13.8	40.0	100	-17.2	-86.2	172	1.00	Vertical
777.203	33.0	44.7	46.0	200	-13.0	-155.3	119	1.00	Horizontal
851.437	33.0	44.7	46.0	200	-13.0	-155.3	250	1.00	Vertical

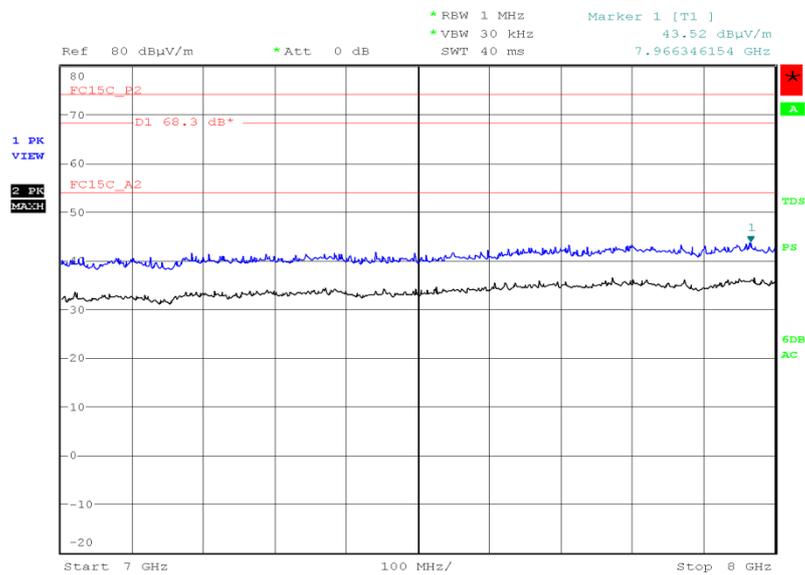


1 GHz to 7 GHz



Date: 24.NOV.2014 21:41:35

7 GHz to 8 GHz

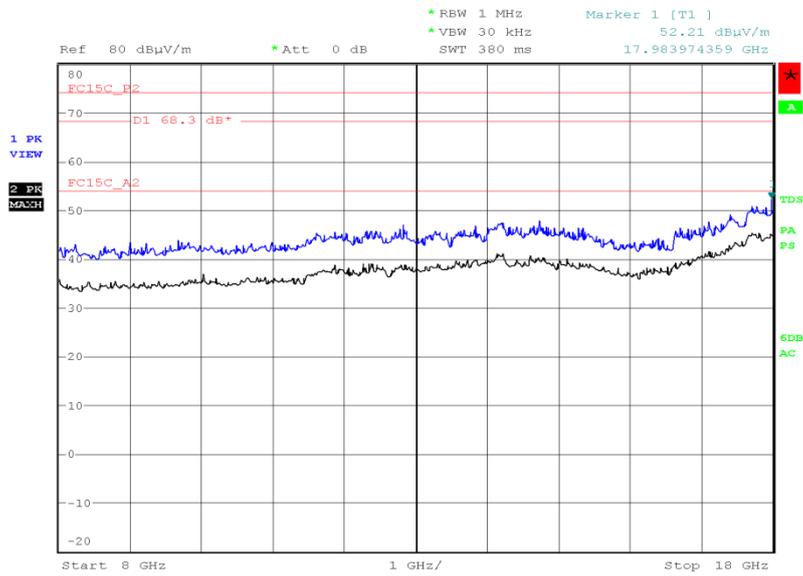


Date: 26.NOV.2014 18:11:42



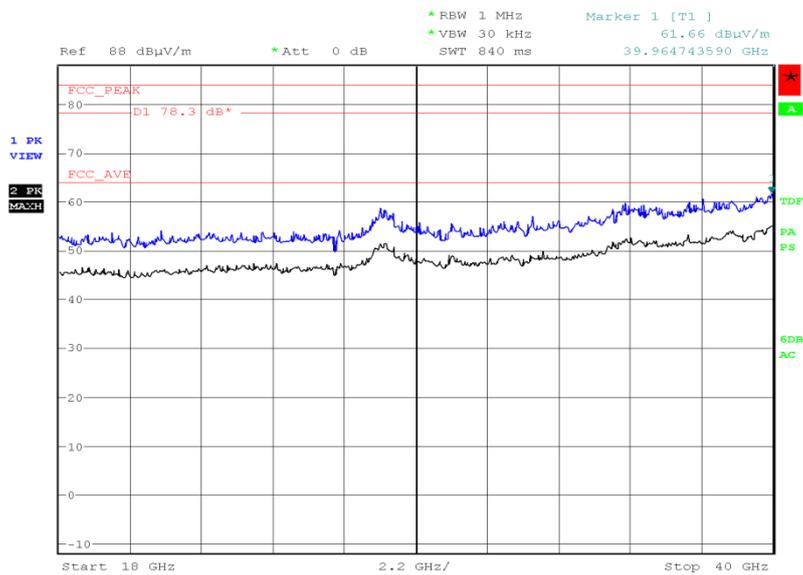
Product Service

8 GHz to 18 GHz



Date: 2.DEC.2014 22:45:59

18 GHz to 40 GHz

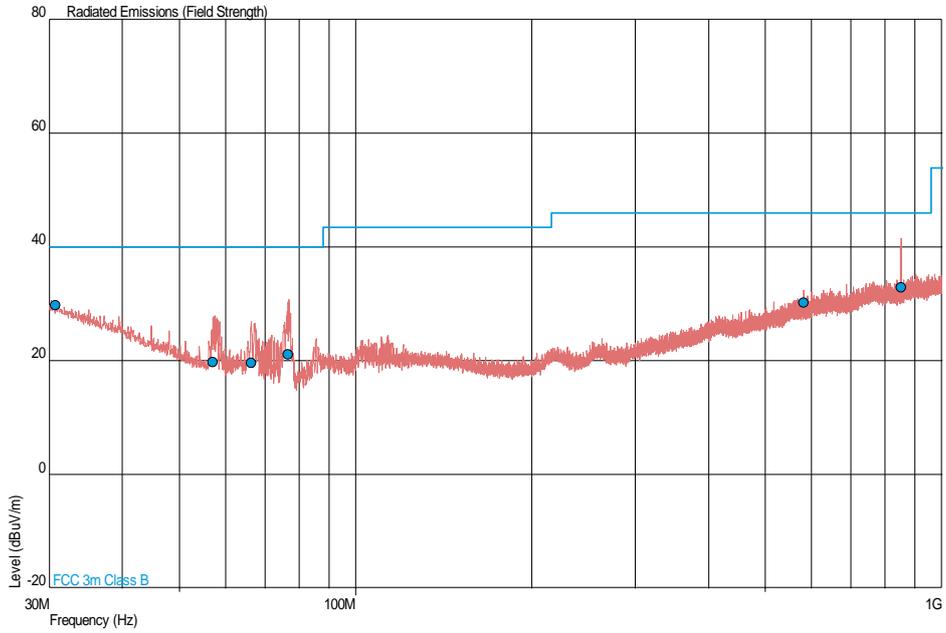


Date: 25.NOV.2014 22:27:56



5230 MHz

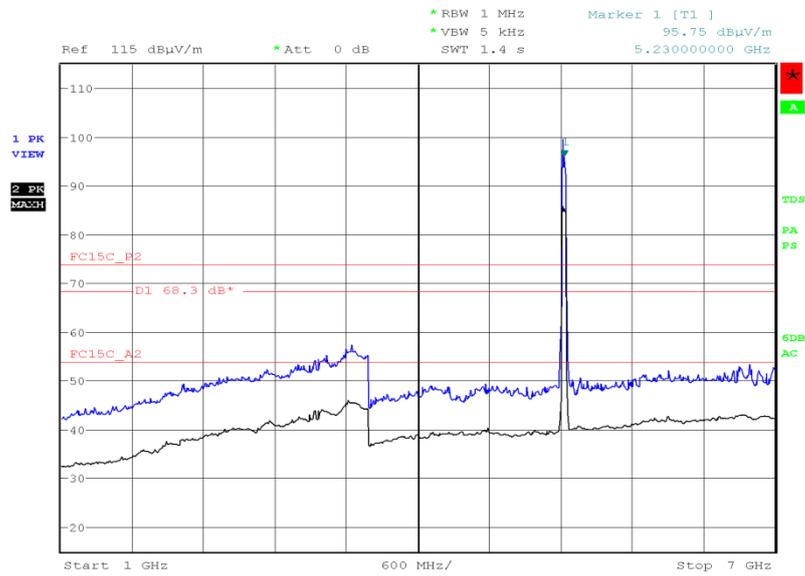
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
30.769	29.7	30.5	40.0	100	-10.3	-69.5	19	1.00	Vertical
57.116	19.7	9.7	40.0	100	-20.3	-90.3	356	1.00	Vertical
66.321	19.6	9.5	40.0	100	-20.4	-90.5	241	1.48	Vertical
76.624	21.2	11.5	40.0	100	-18.8	-88.5	118	1.00	Vertical
581.383	30.2	32.4	46.0	200	-15.8	-167.6	360	1.00	Horizontal
851.369	33.0	44.7	46.0	200	-13.0	-155.3	88	1.00	Horizontal

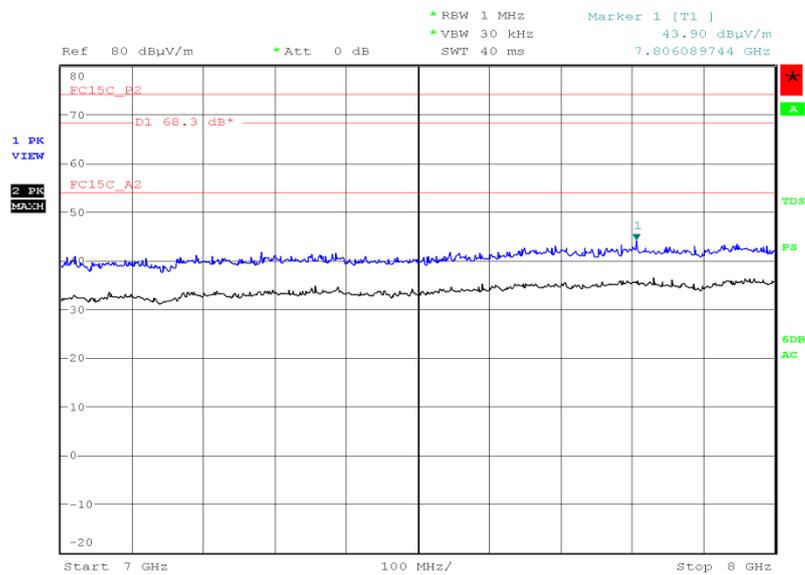


1 GHz to 7 GHz



Date: 24.NOV.2014 22:02:31

7 GHz to 8 GHz

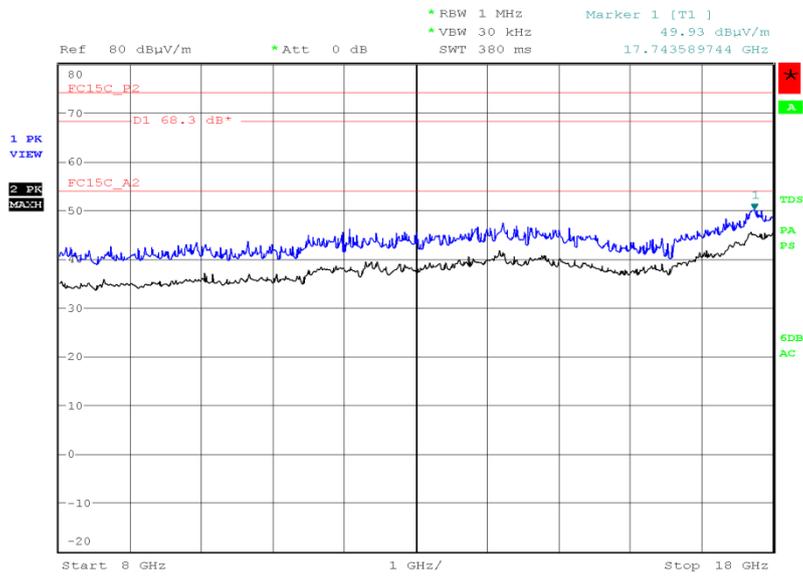


Date: 26.NOV.2014 18:17:10



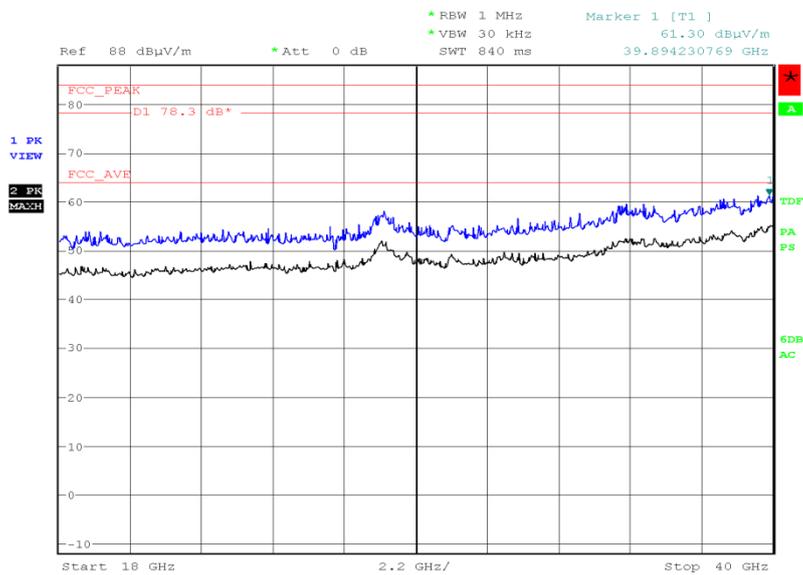
Product Service

8 GHz to 18 GHz



Date: 2.DEC.2014 22:43:15

18 GHz to 40 GHz



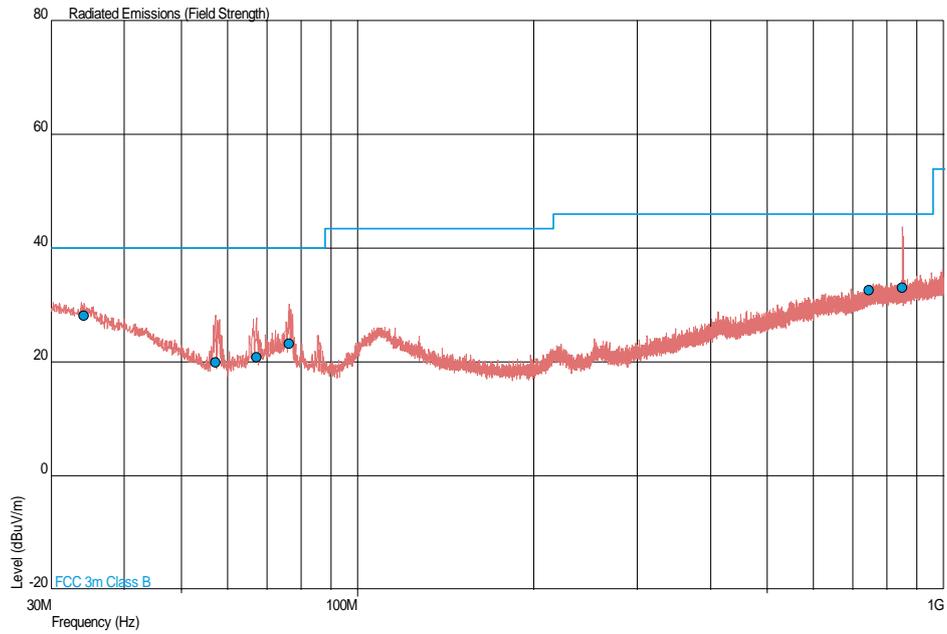
Date: 25.NOV.2014 22:40:05



Frequency Band 2

5270 MHz

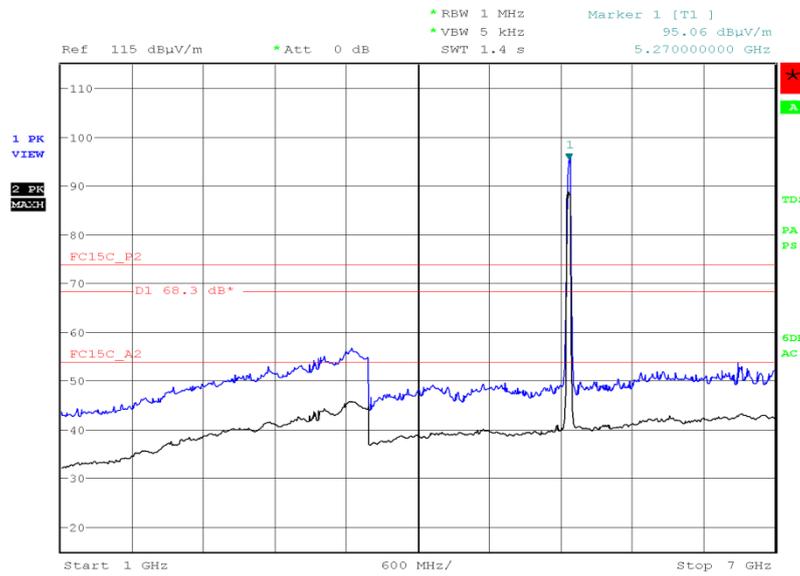
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBuV/m)	QP Level (uV/m)	QP Limit (dBuV/m)	QP Limit (uV/m)	QP Margin (dBuV/m)	QP Margin (uV/m)	Angle (Deg)	Height (m)	Polarity
34.166	28.2	25.7	40.0	100	-11.8	-74.3	139	1.20	Vertical
57.208	19.9	9.9	40.0	100	-20.1	-90.1	212	1.00	Vertical
67.215	20.8	11.0	40.0	100	-19.2	-89.0	197	1.00	Vertical
76.464	23.2	14.5	40.0	100	-16.8	-85.5	169	1.24	Vertical
744.733	32.7	43.2	46.0	200	-13.3	-156.8	353	1.00	Horizontal
850.917	33.0	44.7	46.0	200	-13.0	-155.3	348	3.23	Vertical

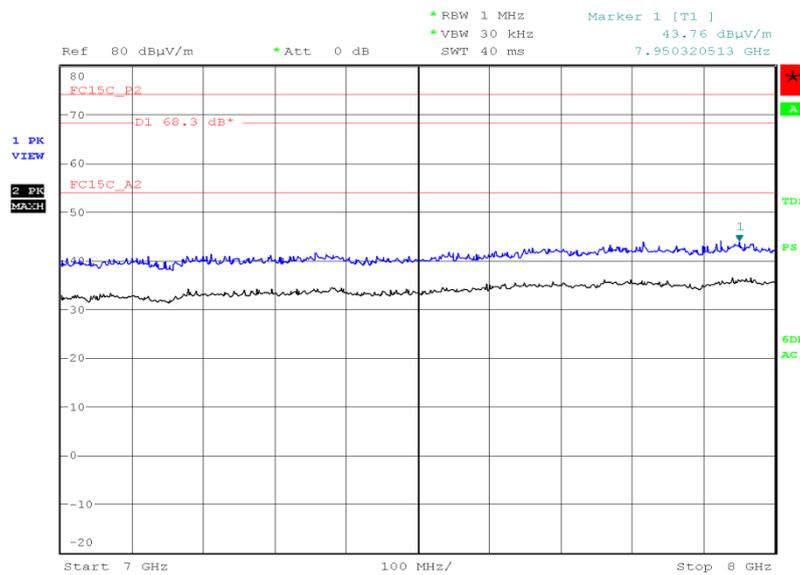


1 GHz to 7 GHz



Date: 24.NOV.2014 22:24:36

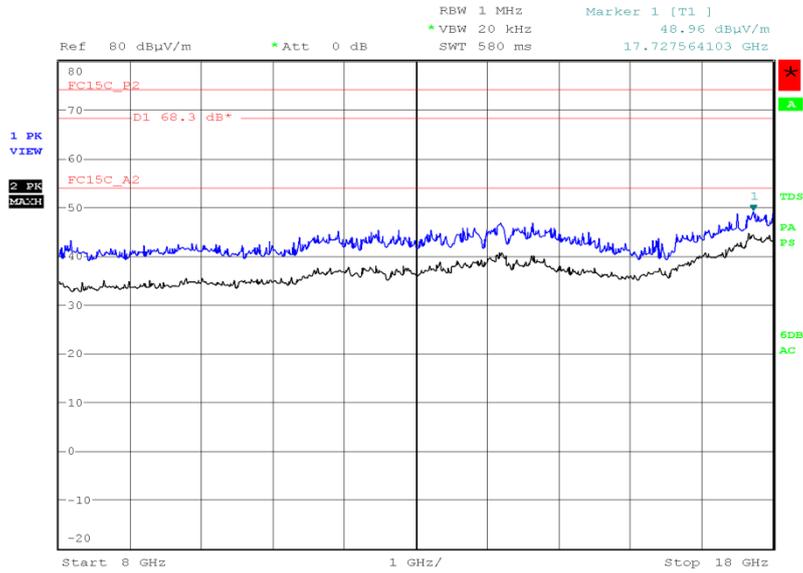
7 GHz to 8 GHz



Date: 26.NOV.2014 18:24:21

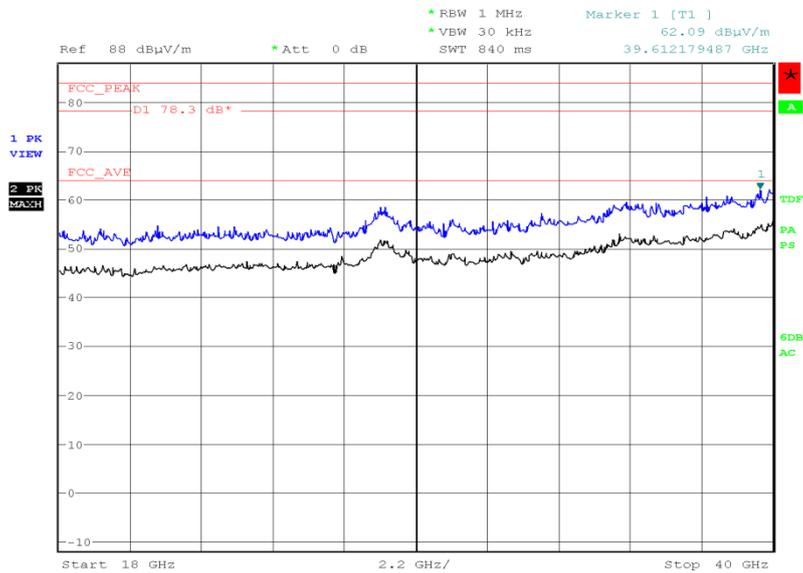


8 GHz to 18 GHz



Date: 26.NOV.2014 19:59:29

18 GHz to 40 GHz

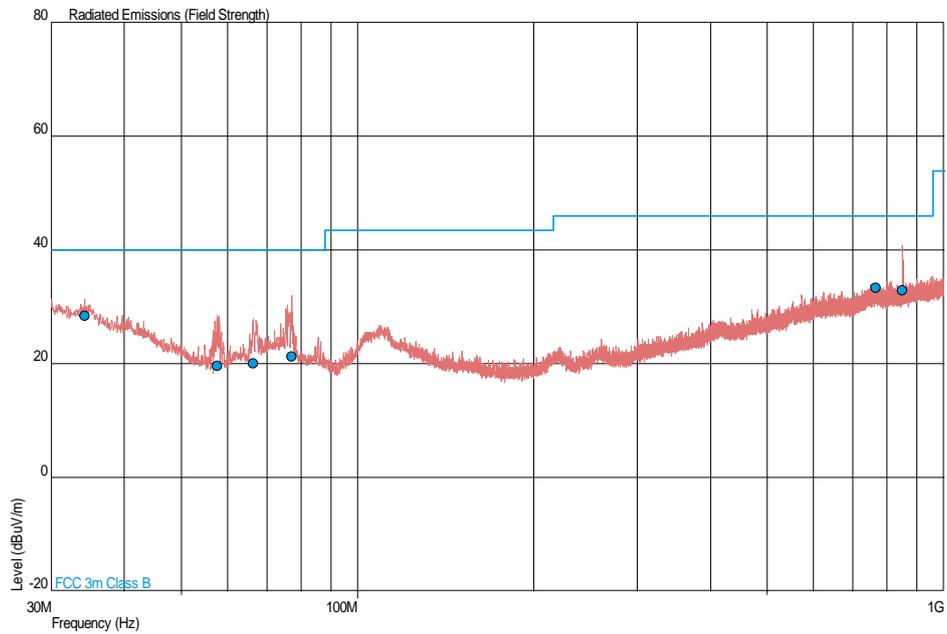


Date: 25.NOV.2014 22:50:05



5310 MHz

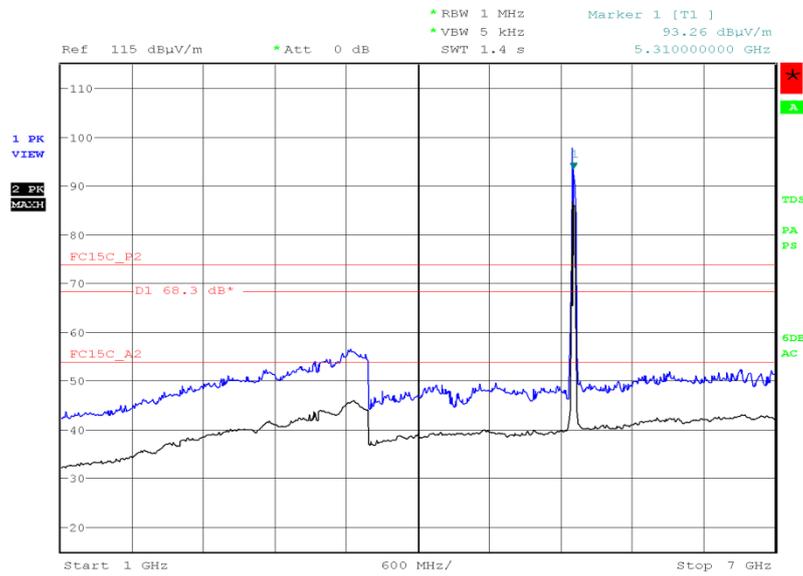
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
34.215	28.4	26.3	40.0	100	-11.6	-73.7	183	1.00	Vertical
57.598	19.6	9.5	40.0	100	-20.4	-90.5	0	1.00	Vertical
66.325	20.0	10.0	40.0	100	-20.0	-90.0	317	1.00	Vertical
77.141	21.2	11.5	40.0	100	-18.8	-88.5	195	1.00	Vertical
765.151	33.3	46.2	46.0	200	-12.7	-153.8	0	1.70	Horizontal
850.505	33.0	44.7	46.0	200	-13.0	-155.3	232	1.00	Horizontal

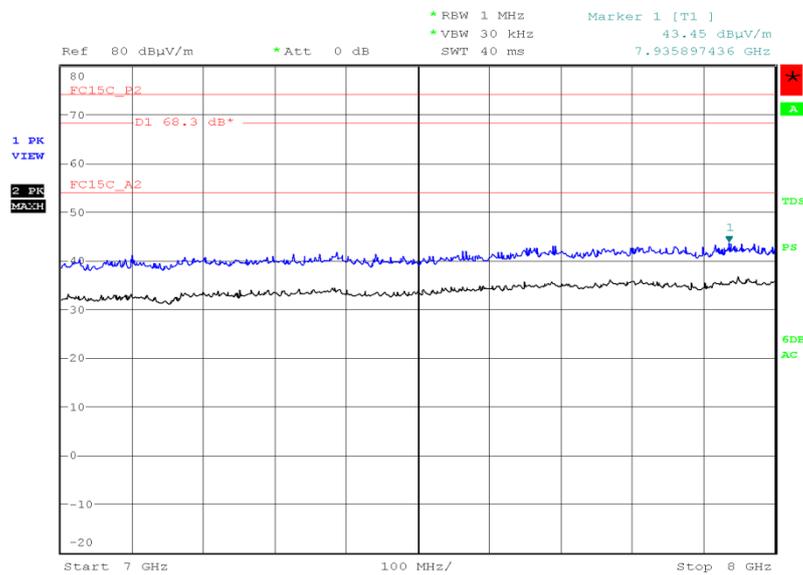


1 GHz to 7 GHz



Date: 24.NOV.2014 22:42:21

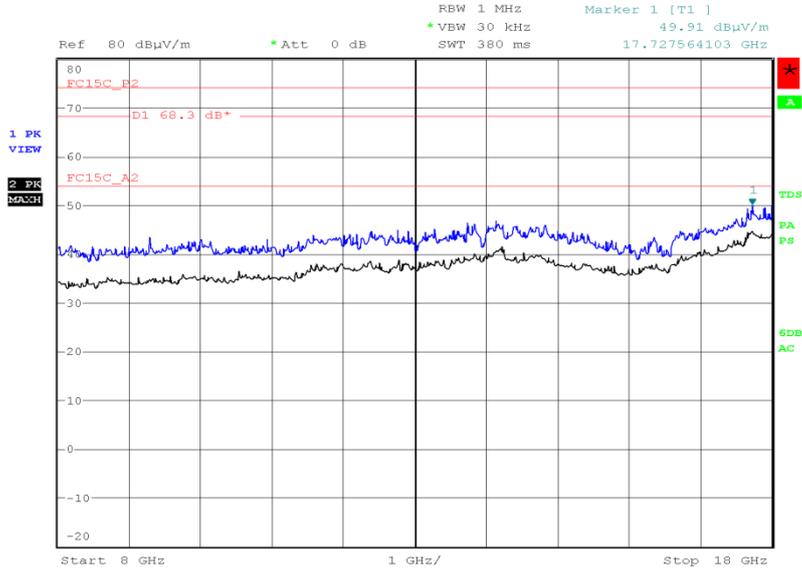
7 GHz to 8 GHz



Date: 26.NOV.2014 18:28:32

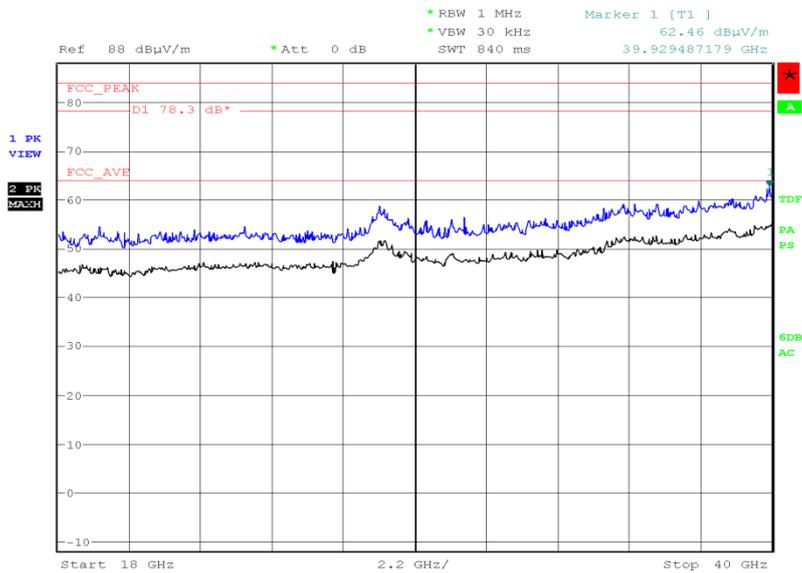


8 GHz to 18 GHz



Date: 26.NOV.2014 19:50:59

18 GHz to 40 GHz



Date: 25.NOV.2014 23:01:32

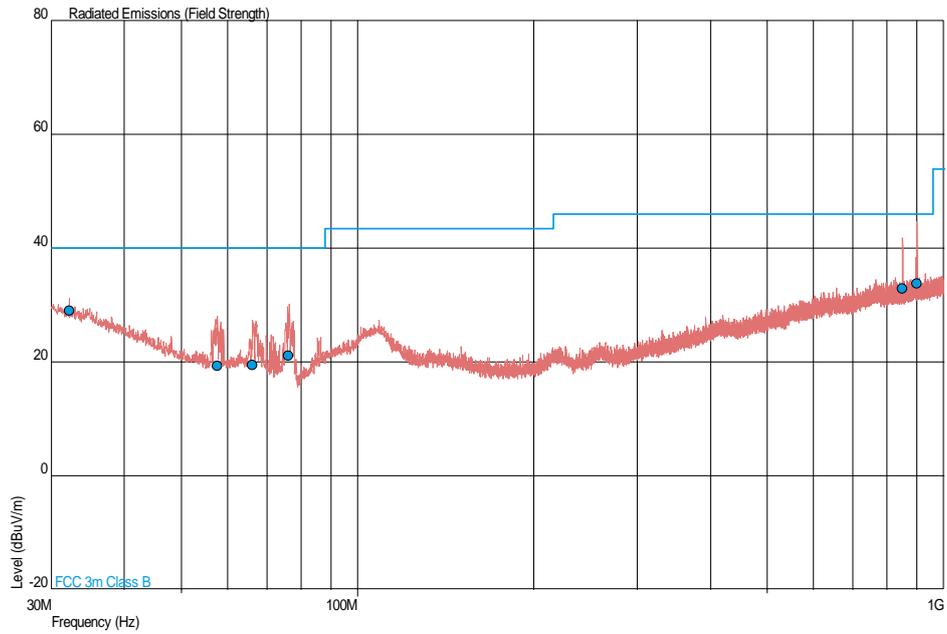


Product Service

Frequency Band 3

5510 MHz

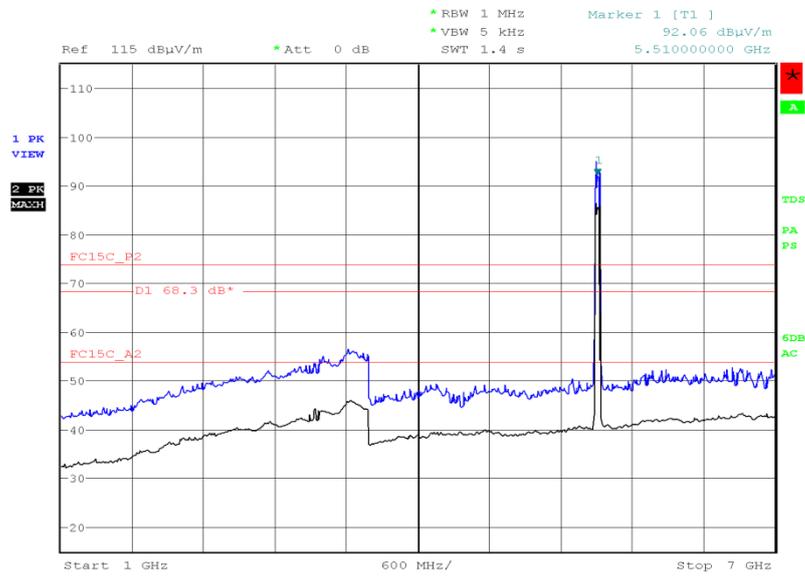
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
32.232	29.1	28.5	40.0	100	-10.9	-71.5	215	3.32	Vertical
57.698	19.3	9.2	40.0	100	-20.7	-90.8	110	1.09	Vertical
66.273	19.5	9.4	40.0	100	-20.5	-90.6	158	2.09	Vertical
76.154	21.2	11.5	40.0	100	-18.8	-88.5	179	1.00	Vertical
850.863	33.0	44.7	46.0	200	-13.0	-155.3	325	3.63	Horizontal
899.833	33.8	49.0	46.0	200	-12.2	-151.0	244	1.00	Horizontal

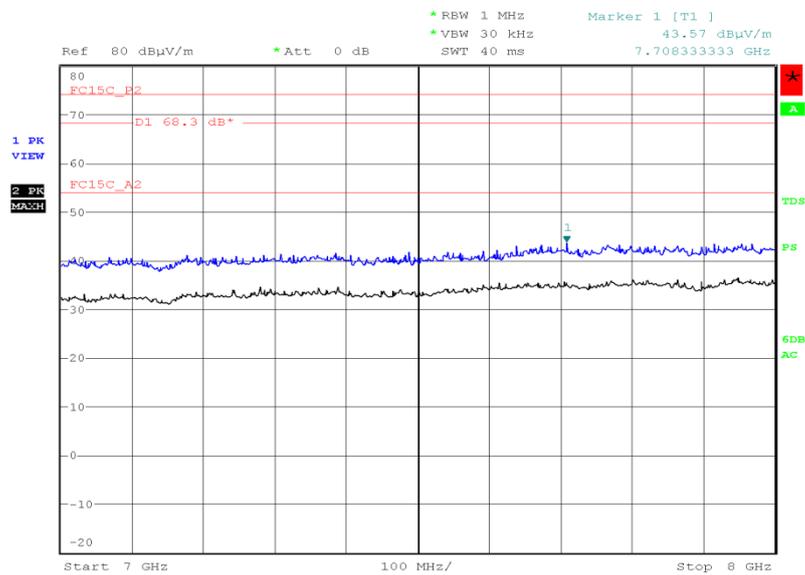


1 GHz to 7 GHz



Date: 24.NOV.2014 22:58:56

7 GHz to 8 GHz

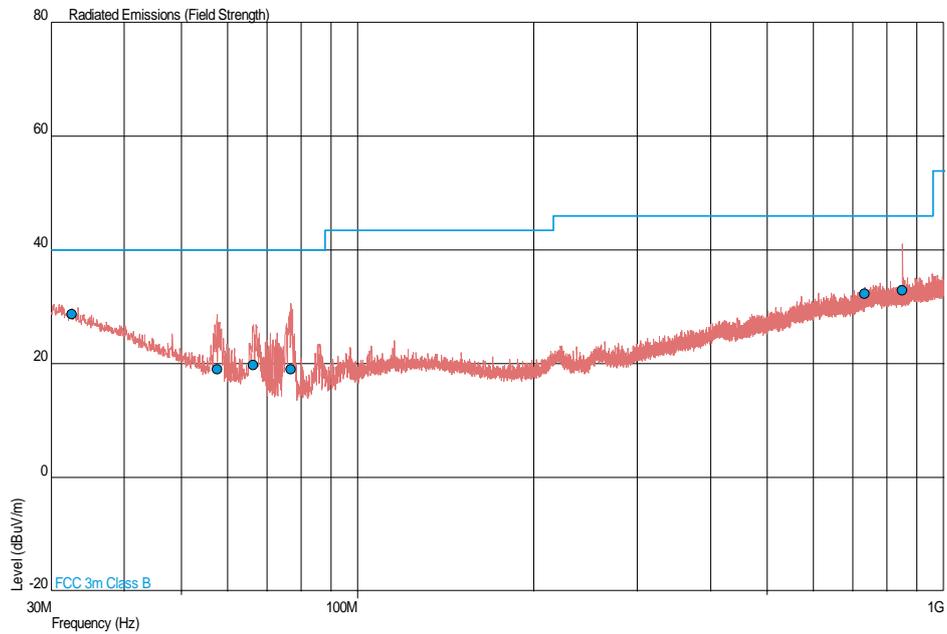


Date: 26.NOV.2014 18:32:41



5590 MHz

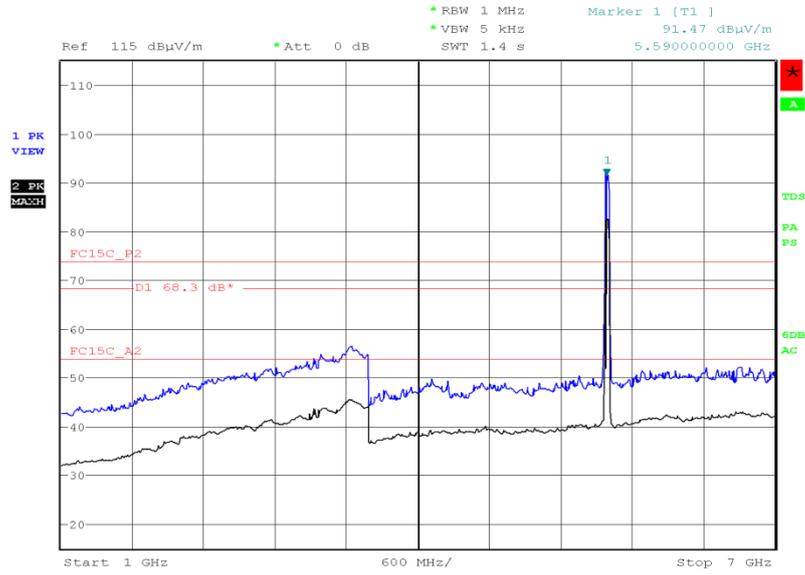
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
32.622	28.7	27.2	40.0	100	-11.3	-72.8	25	1.00	Horizontal
57.607	19.0	8.9	40.0	100	-21.0	-91.1	121	2.10	Vertical
66.302	19.7	9.7	40.0	100	-20.3	-90.3	26	1.82	Vertical
76.993	19.0	8.9	40.0	100	-21.0	-91.1	360	1.00	Vertical
732.094	32.3	41.2	46.0	200	-13.7	-158.8	228	1.00	Vertical
849.719	33.0	44.7	46.0	200	-13.0	-155.3	0	1.00	Horizontal

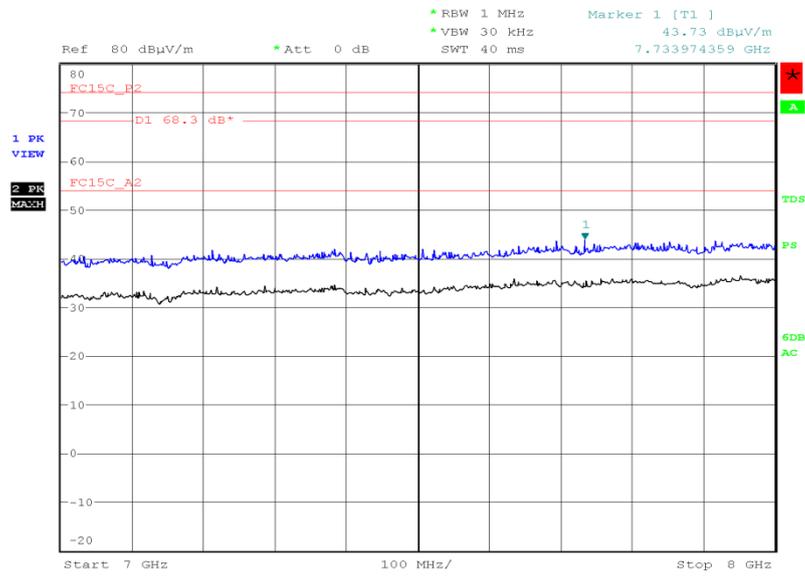


1 GHz to 7 GHz



Date: 24.NOV.2014 23:30:19

7 GHz to 8 GHz

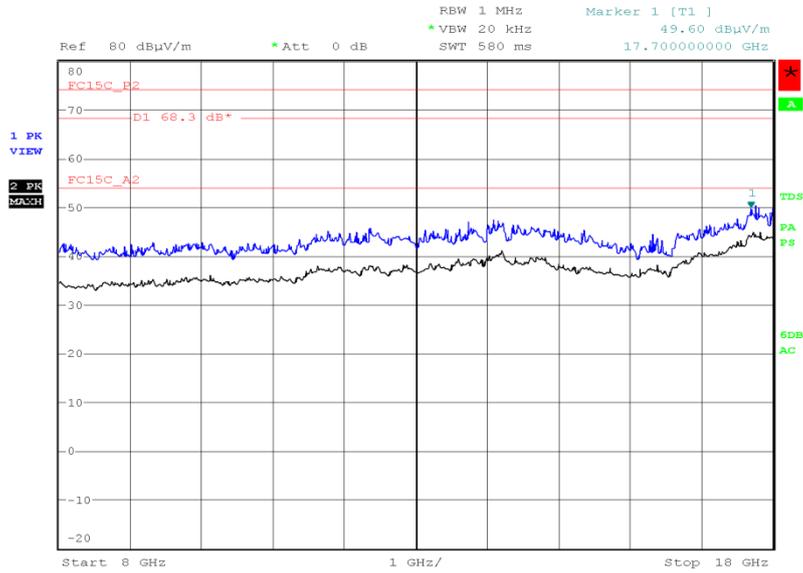


Date: 26.NOV.2014 18:37:42



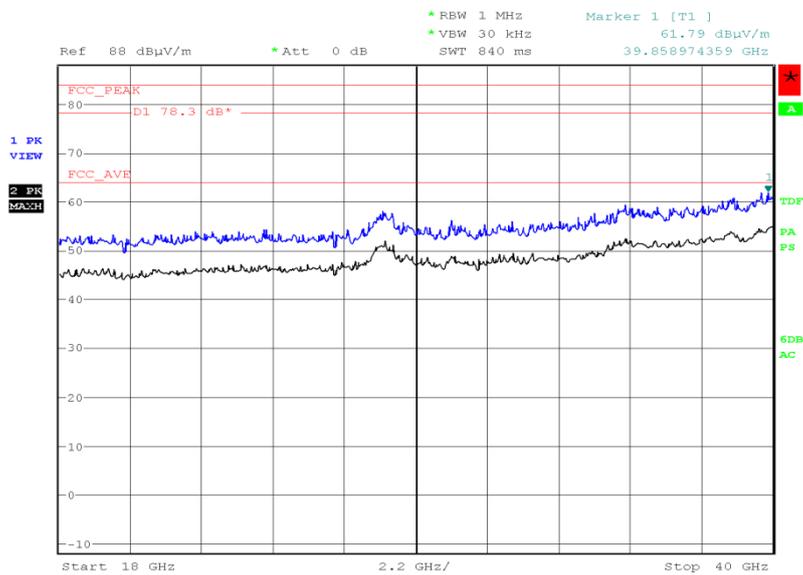
Product Service

8 GHz to 18 GHz



Date: 26.NOV.2014 19:39:35

18 GHz to 40 GHz

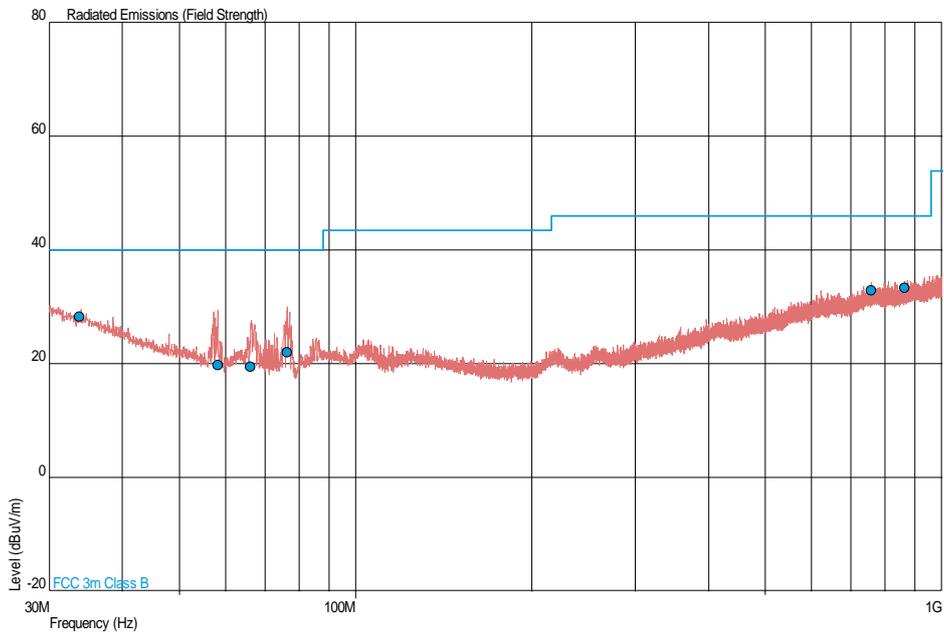


Date: 25.NOV.2014 23:28:05



5670 MHz

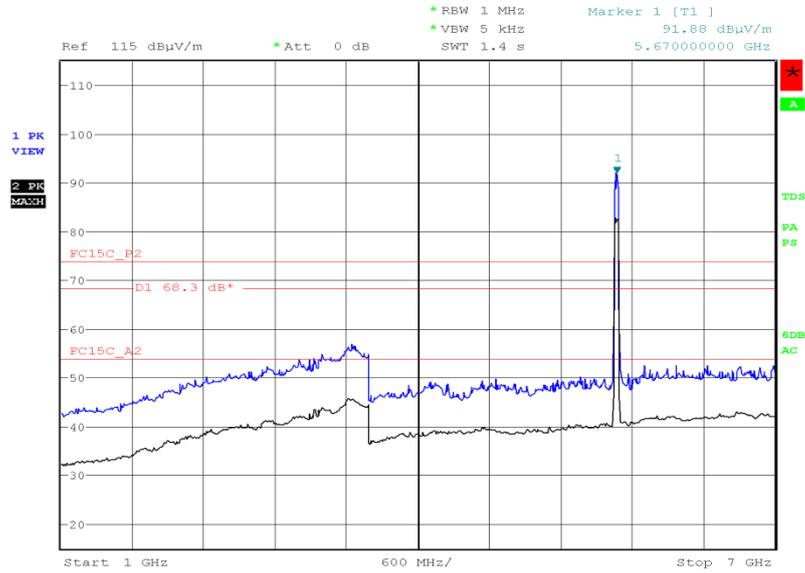
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
33.772	28.2	25.7	40.0	100	-11.8	-74.3	360	1.15	Vertical
58.262	19.8	9.8	40.0	100	-20.2	-90.2	0	1.00	Vertical
66.199	19.4	9.3	40.0	100	-20.6	-90.7	360	1.02	Vertical
76.549	22.1	12.7	40.0	100	-17.9	-87.3	113	1.00	Vertical
759.100	33.0	44.7	46.0	200	-13.0	-155.3	25	1.00	Horizontal
864.477	33.4	46.8	46.0	200	-12.6	-153.2	160	1.00	Horizontal

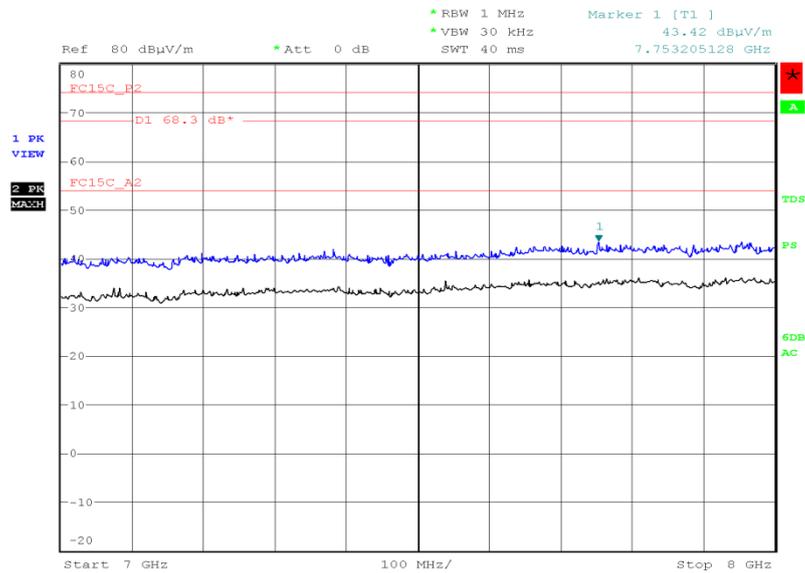


1 GHz to 7 GHz



Date: 24.NOV.2014 23:17:27

7 GHz to 8 GHz

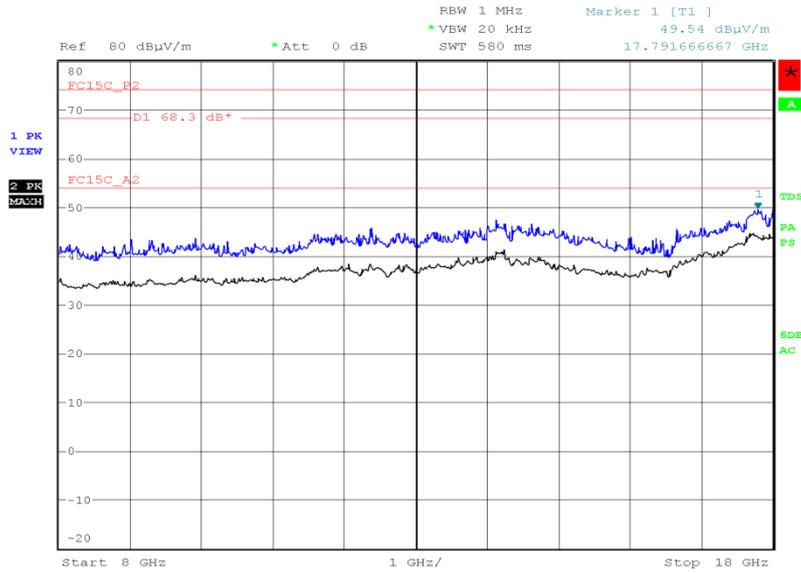


Date: 26.NOV.2014 18:41:20



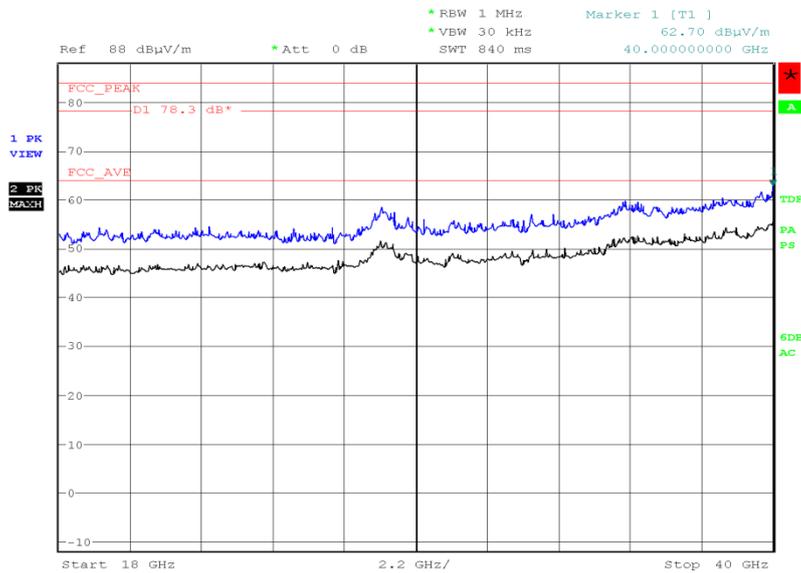
Product Service

8 GHz to 18 GHz



Date: 26.NOV.2014 19:23:37

18 GHz to 40 GHz



Date: 25.NOV.2014 23:48:19

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Product Service

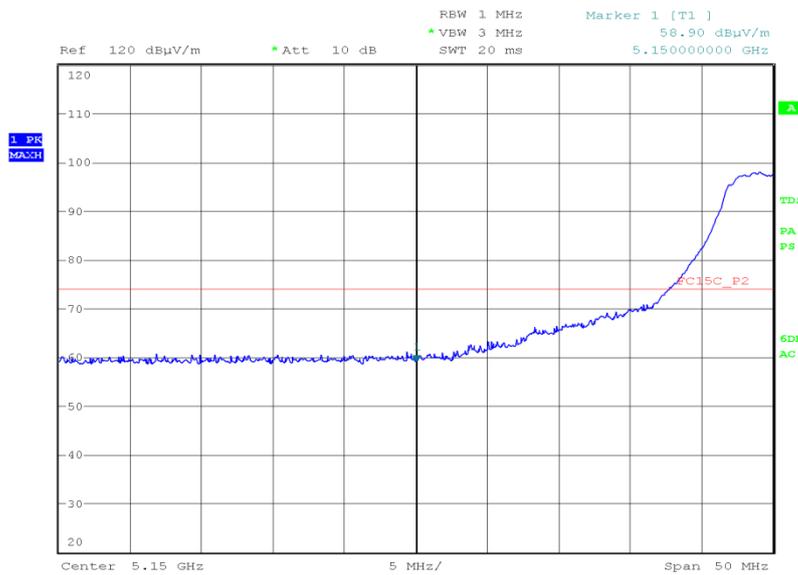
Band Edge

Modulation/Data Rate: OFDM/MCS1

Restricted Bands of Operation		
Frequency (MHz)	Final Peak (dBµV/m)	Final Average (dBµV/m)
5150.00	58.90	49.07
5350.00	61.71	59.57
5460.00	60.09	49.36

5150.00 MHz

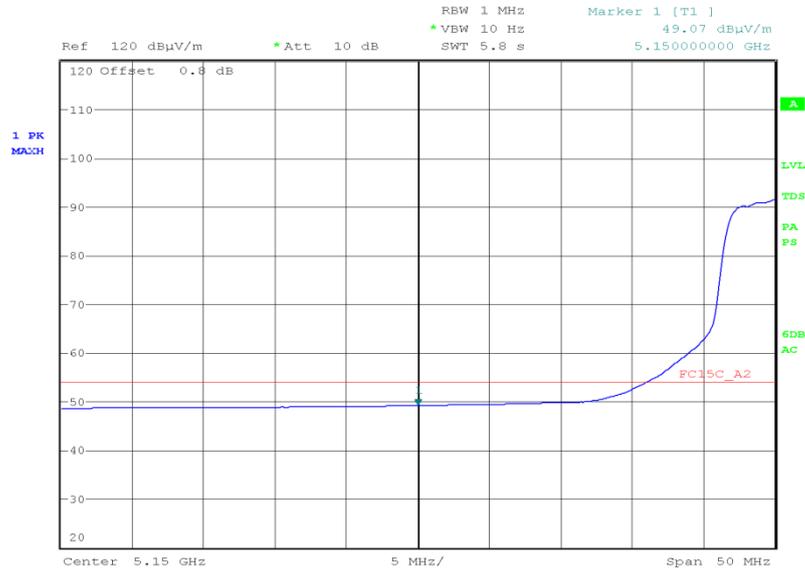
Final Peak



Date: 30.NOV.2014 14:12:19



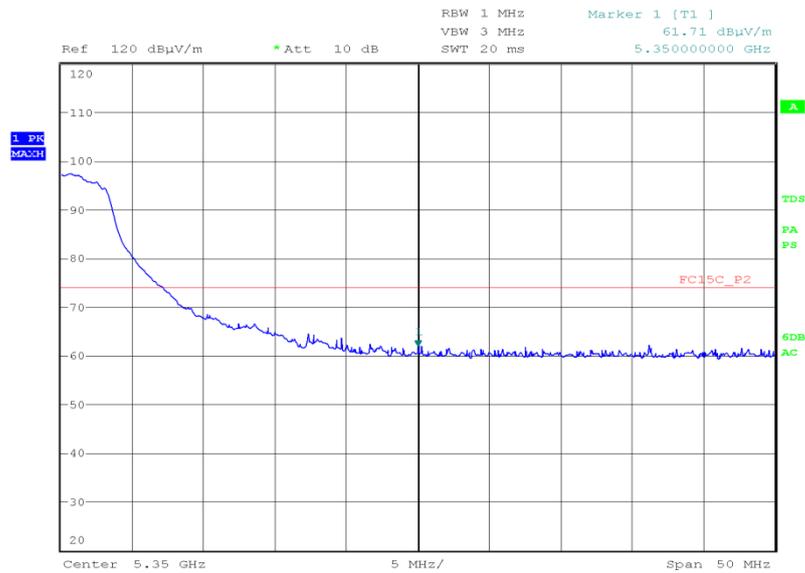
Final Average



Date: 2.DEC.2014 20:17:49

5350.00 MHz

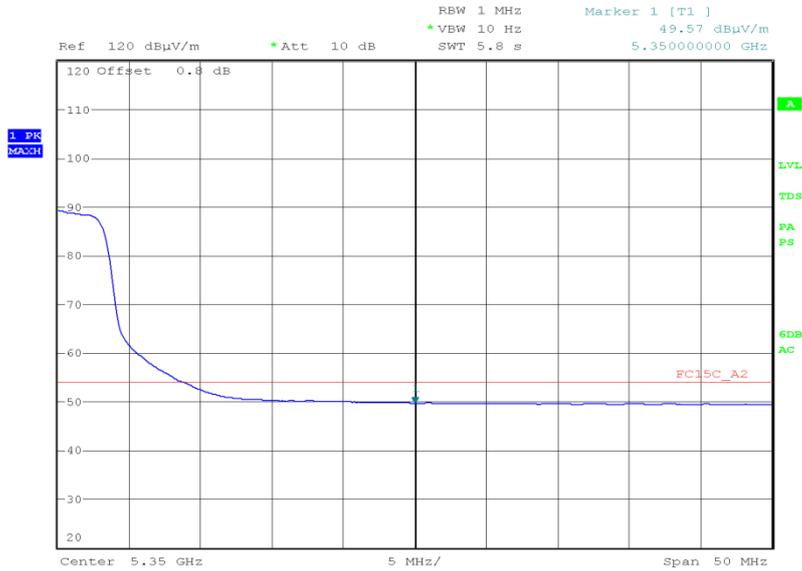
Final Peak



Date: 30.NOV.2014 14:36:48



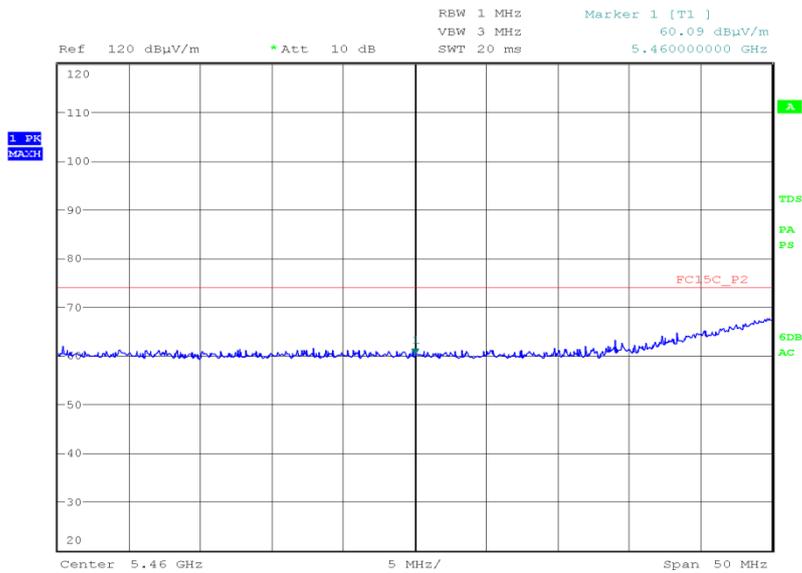
Final Average



Date: 2.DEC.2014 20:20:50

5460.00 MHz

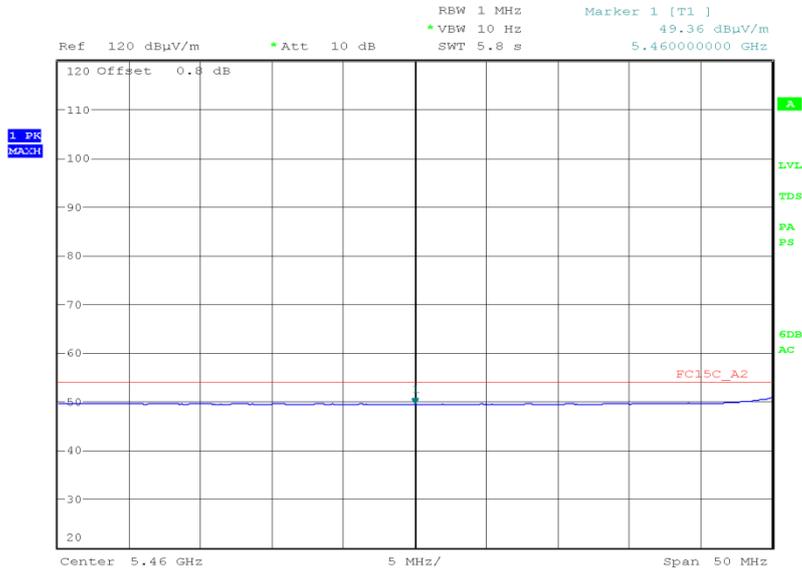
Final Peak



Date: 30.NOV.2014 14:58:45



Final Average



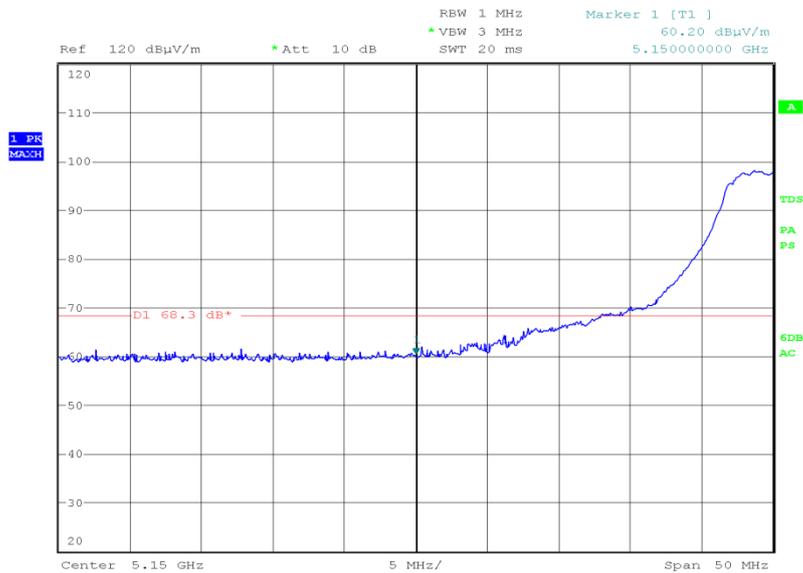
Date: 2.DEC.2014 20:24:35



Band Edge	
Frequency (MHz)	Final Peak (dBm)
5150.00	-35.00
5350.00	-35.09
5470.00	-35.50
5725.00	-35.95

5150.00 MHz

Final Peak

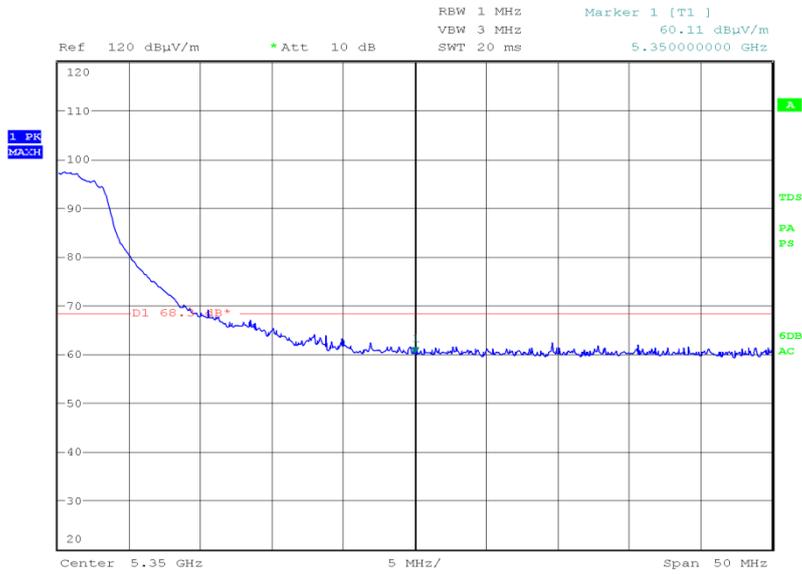


Date: 30.NOV.2014 14:11:18



5350.00 MHz

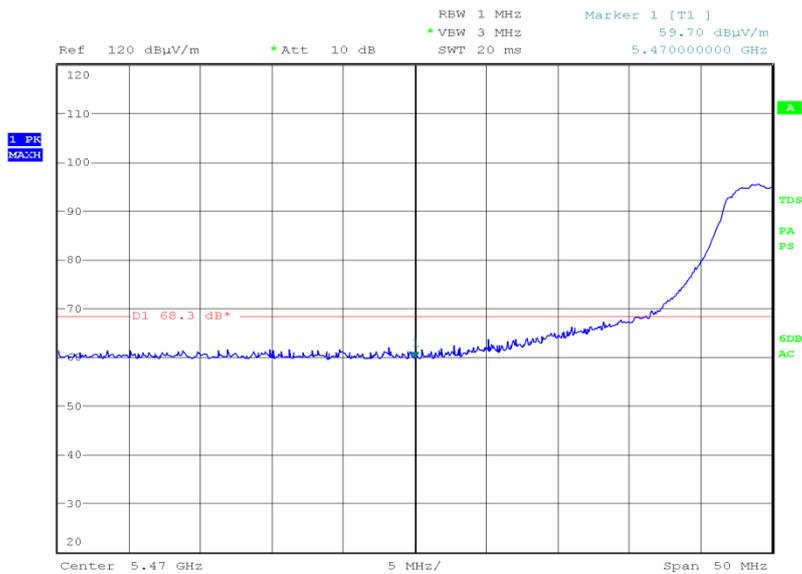
Final Peak



Date: 30.NOV.2014 14:38:06

5470.00 MHz

Final Peak



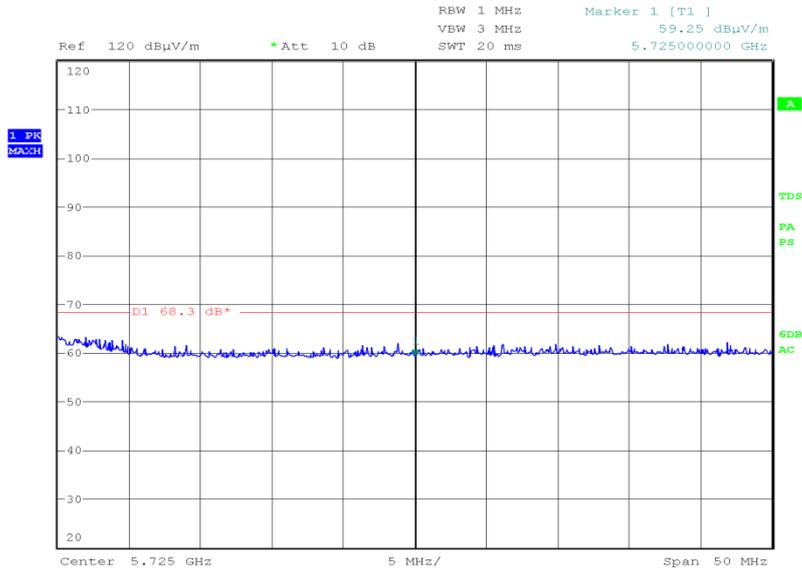
Date: 30.NOV.2014 15:02:04



Product Service

5725.00 MHz

Final Peak



Date: 30.NOV.2014 15:14:15

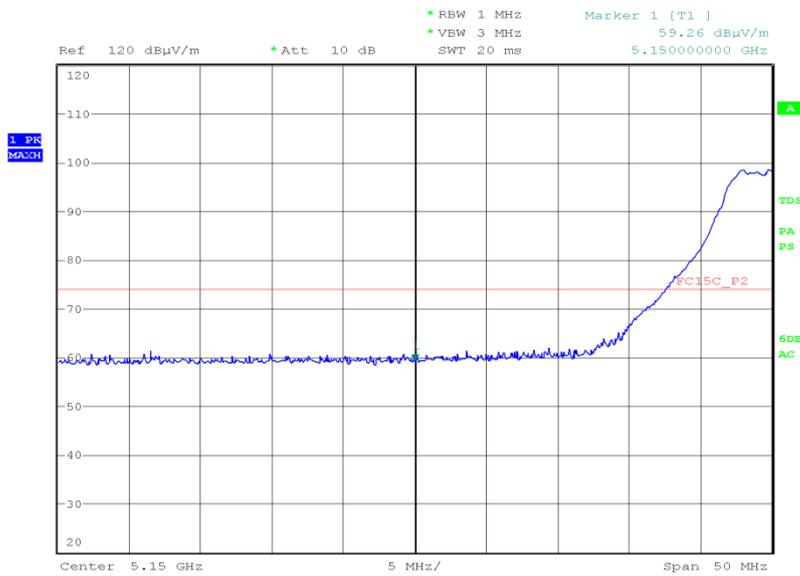


Modulation/Data Rate: OFDM/MCS6

Restricted Bands of Operation		
Frequency (MHz)	Final Peak (dBμV/m)	Final Average (dBμV/m)
5150.00	59.26	49.07
5350.00	61.71	49.57
5460.00	60.09	49.36

5150.00 MHz

Final Peak

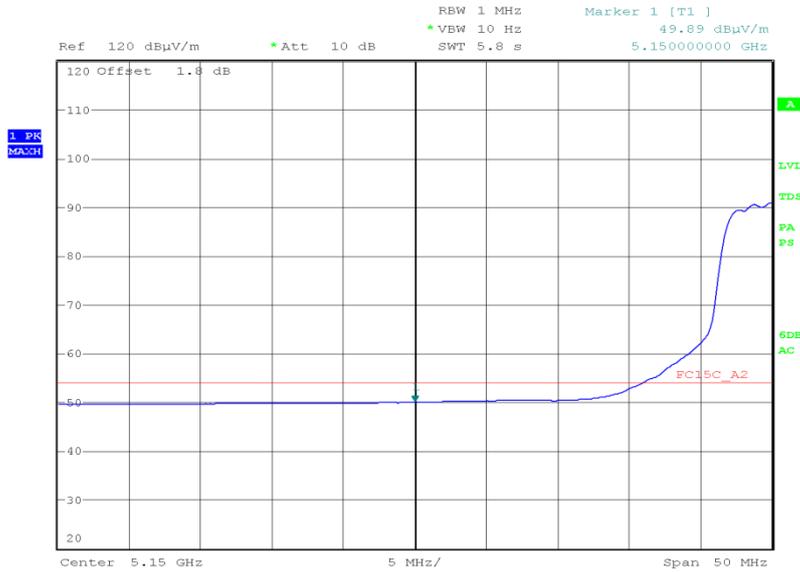


Date: 2.DEC.2014 20:53:04



Product Service

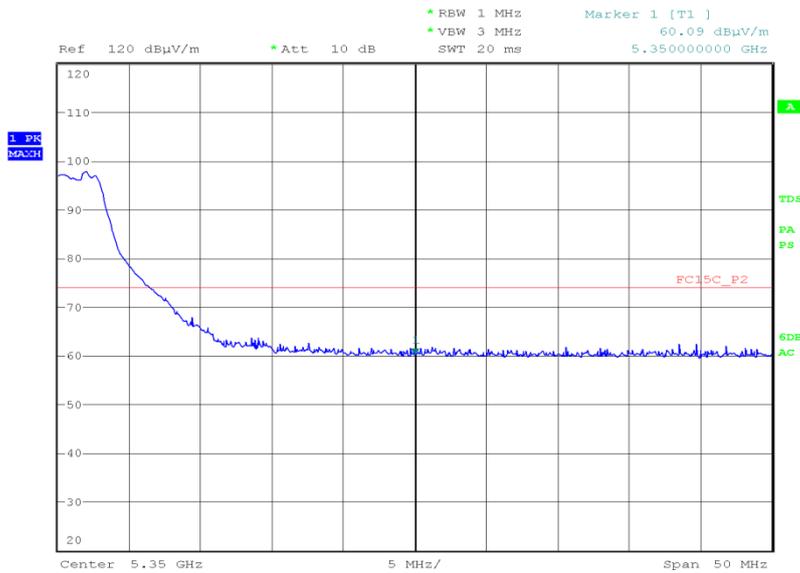
Final Average



Date: 2.DEC.2014 20:52:14

5350.00 MHz

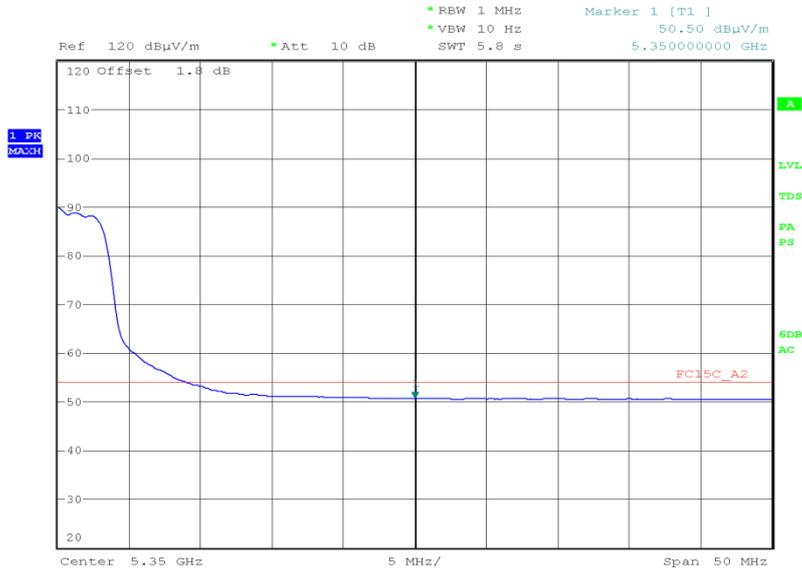
Final Peak



Date: 2.DEC.2014 20:58:11



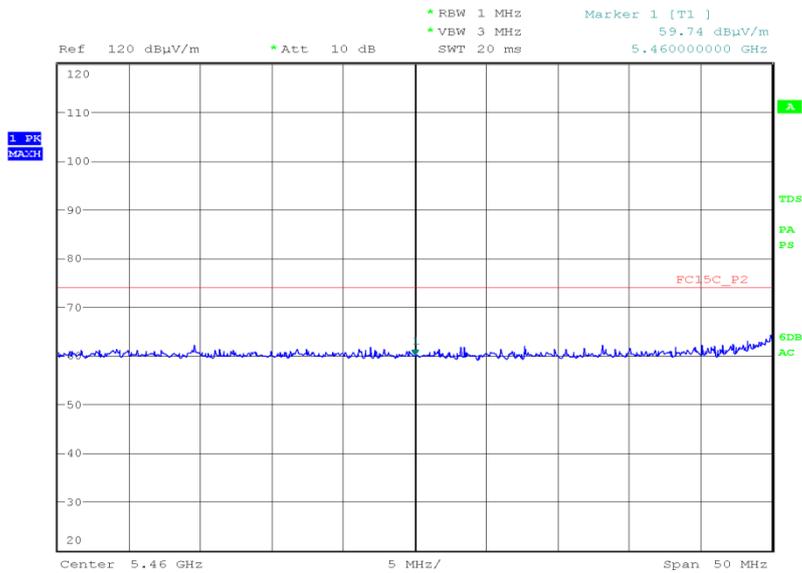
Final Average



Date: 2.DEC.2014 21:00:19

5460.00 MHz

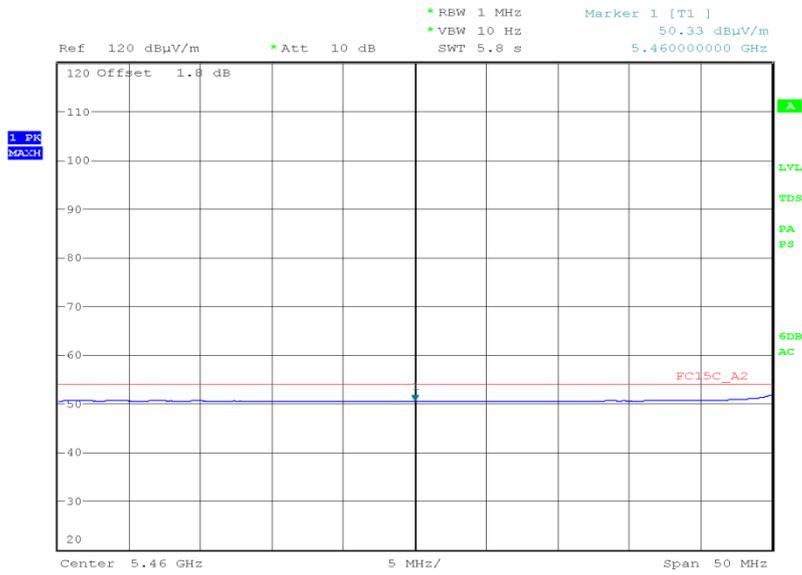
Final Peak



Date: 2.DEC.2014 21:05:33



Final Average



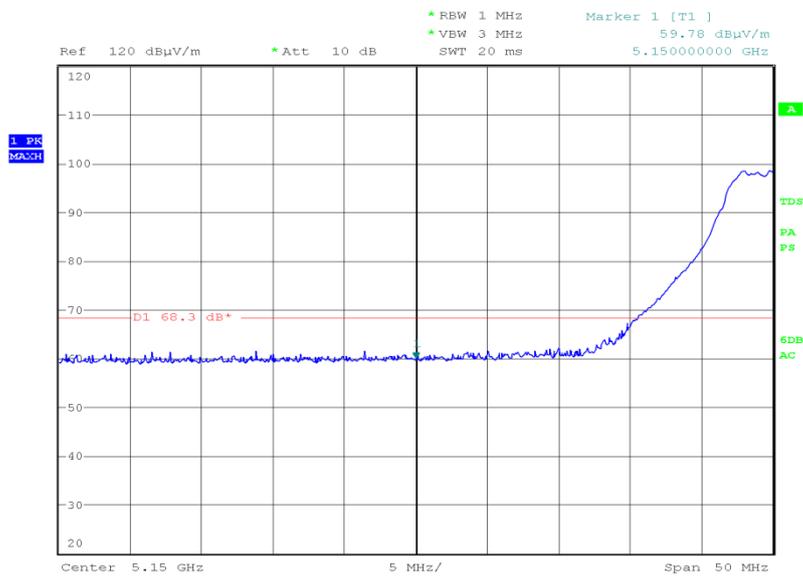
Date: 2.DEC.2014 21:04:41



Band Edge	
Frequency (MHz)	Final Peak (dBm)
5150.00	-35.09
5350.00	-34.18
5470.00	-34.99
5725.00	-34.63

5150.00 MHz

Final Peak

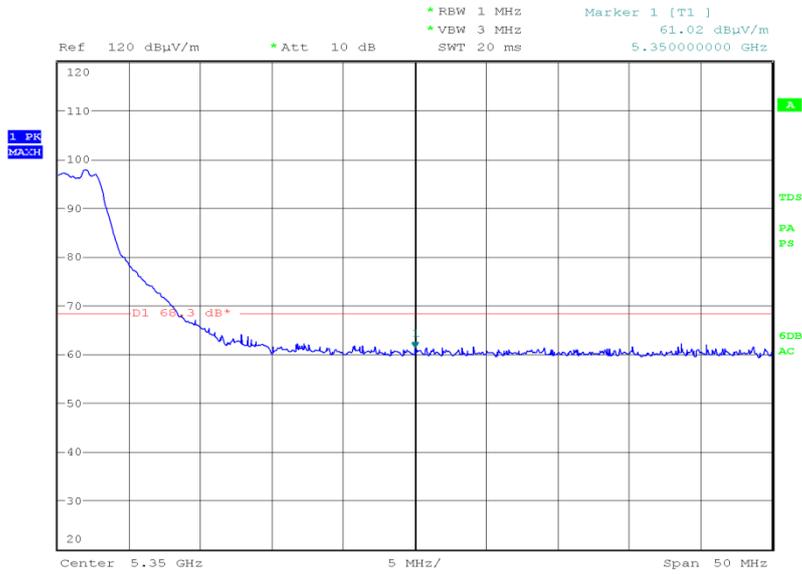


Date: 2.DEC.2014 20:53:39



5350.00 MHz

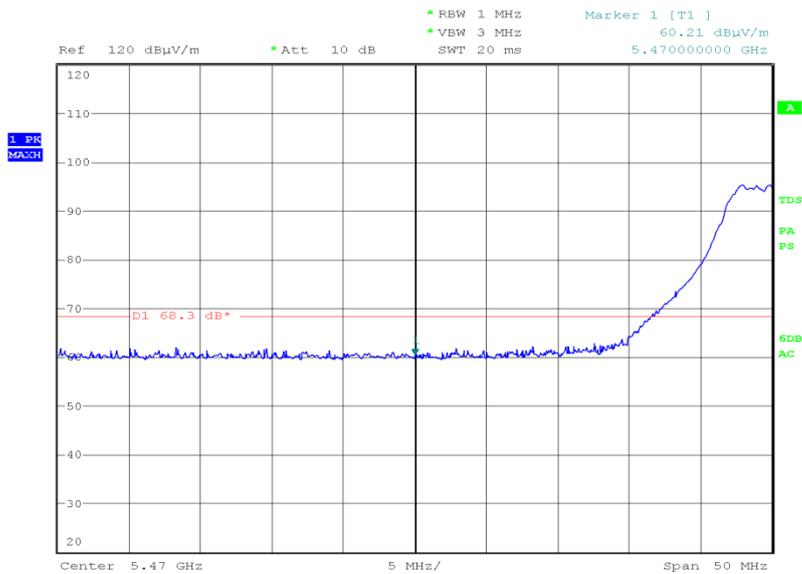
Final Peak



Date: 2.DEC.2014 20:56:51

5470.00 MHz

Final Peak



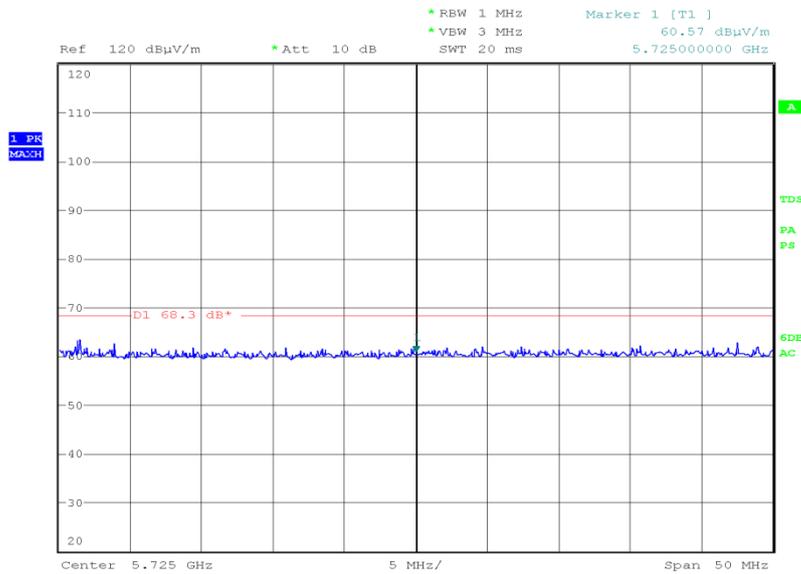
Date: 2.DEC.2014 21:06:17



Product Service

5725.00 MHz

Final Peak



Date: 2.DEC.2014 21:10:43

Remark

The test was performed on MCS1 because this was deemed the worst case data rate for 6 dB Bandwidth.

The test was performed on MCS6 because this was deemed the worst case data rate for Conducted Output Power.

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Product Service

802.11(ac) - 5 GHz 80 MHz BW

4.0 V DC Supply

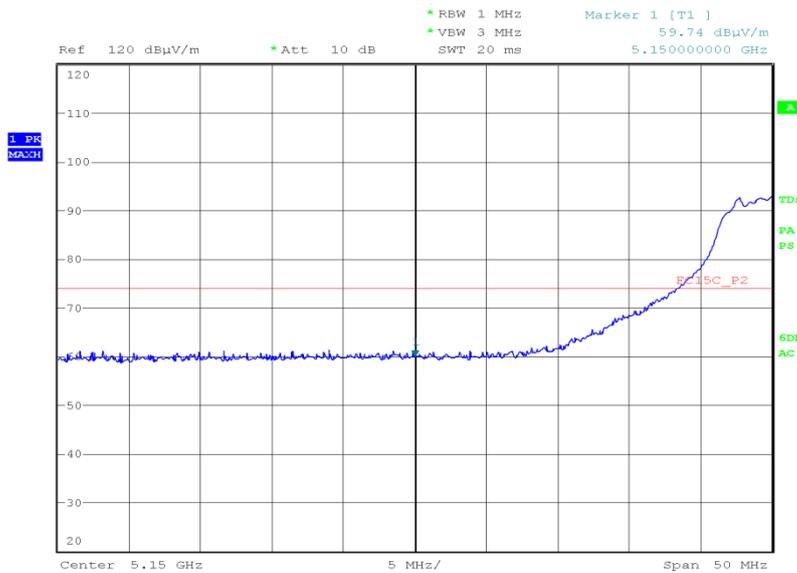
Band Edge

Modulation/Data Rate: OFDM/MCS1

Restricted Bands of Operation		
Frequency (MHz)	Final Peak (dBμV/m)	Final Average (dBμV/m)
5150.00	59.74	49.65
5350.00	60.17	50.12
5460.00	60.14	49.88

5150.00 MHz

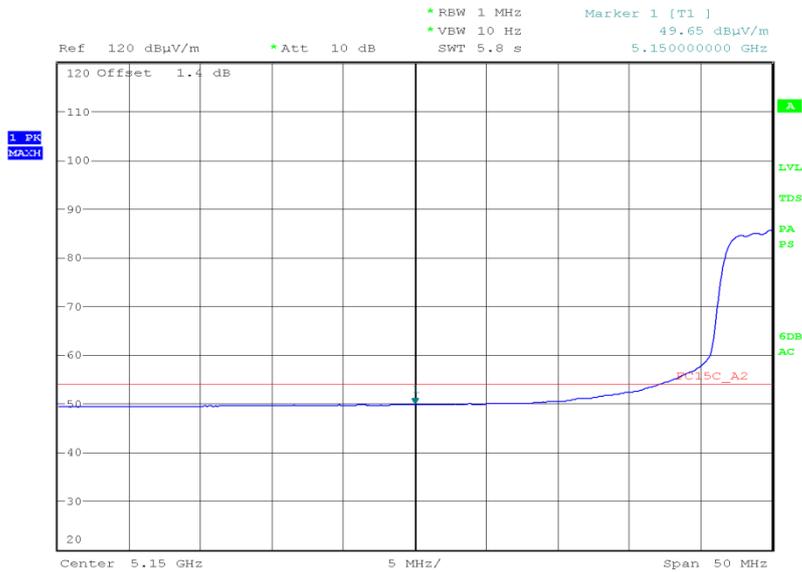
Final Peak



Date: 2.DEC.2014 21:30:50



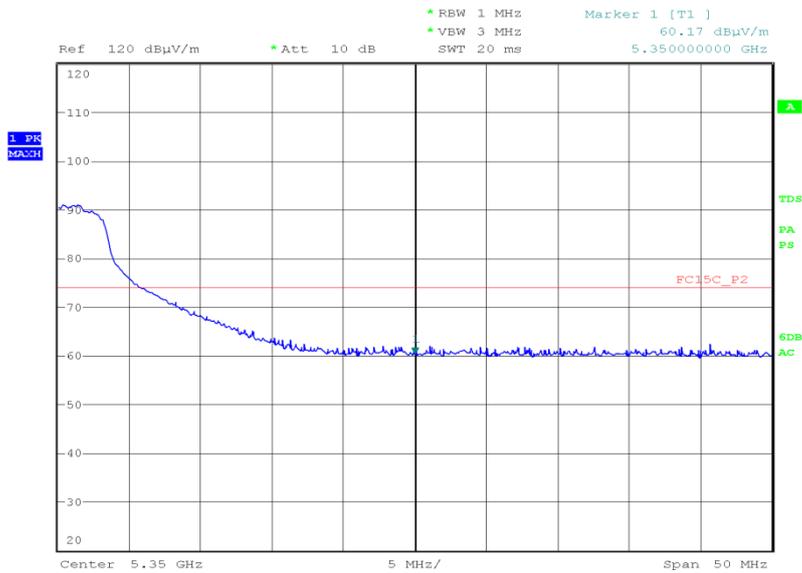
Final Average



Date: 2.DEC.2014 21:29:58

5350.00 MHz

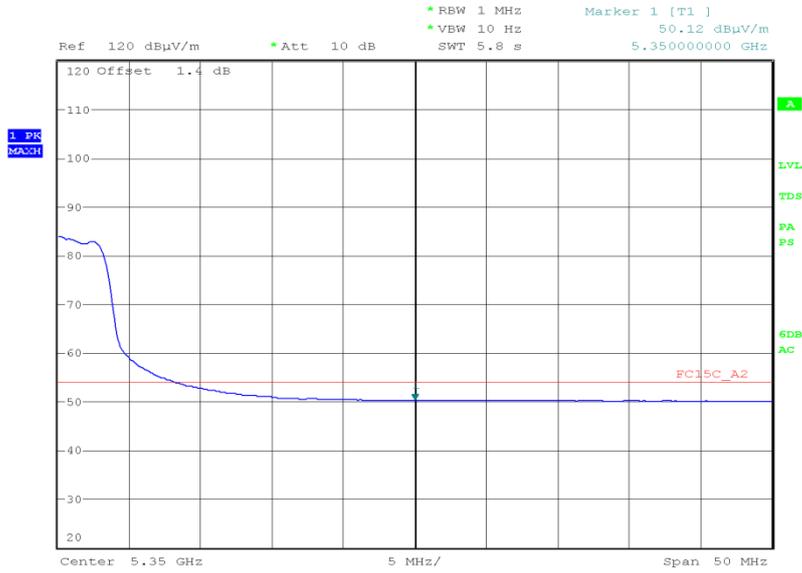
Final Peak



Date: 2.DEC.2014 21:35:20



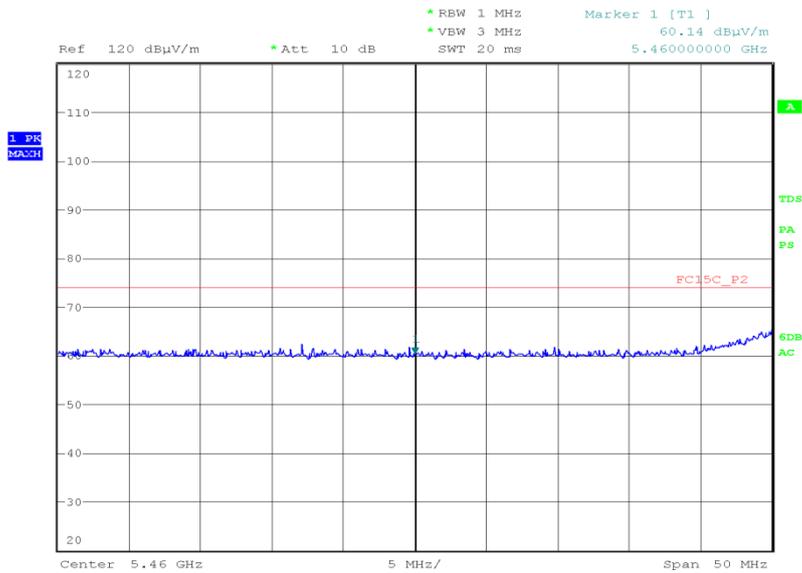
Final Average



Date: 2.DEC.2014 21:38:05

5460.00 MHz

Final Peak

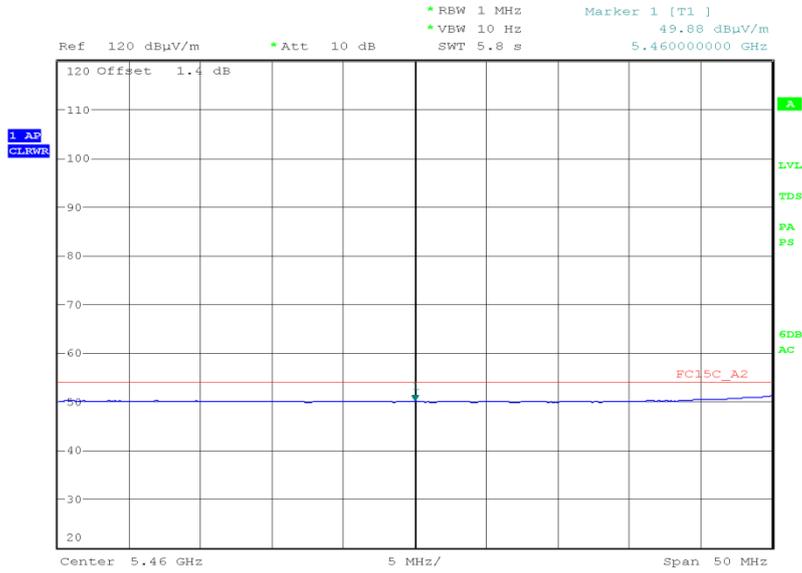


Date: 2.DEC.2014 21:44:46



Product Service

Final Average



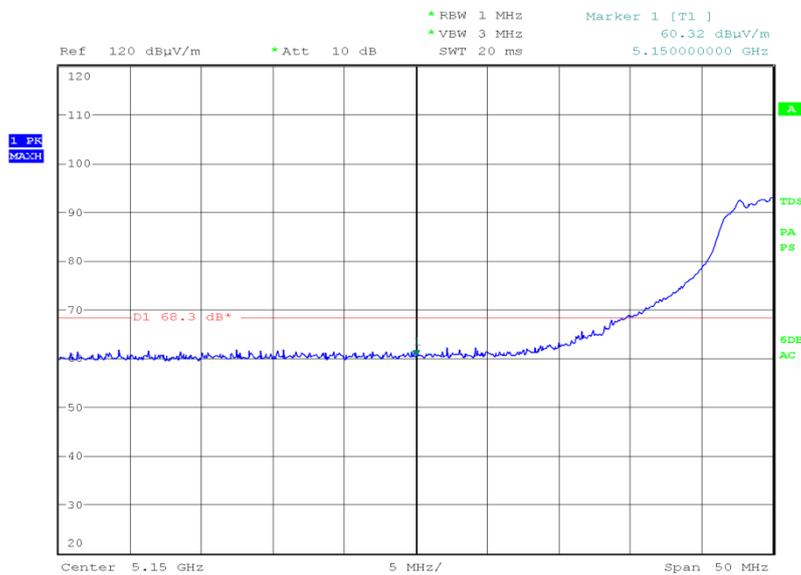
Date: 2.DEC.2014 21:43:32



Band Edge	
Frequency (MHz)	Final Peak (dBm)
5150.00	-34.88
5350.00	-35.36
5470.00	-35.38
5725.00	-35.06

5150.00 MHz

Final Peak



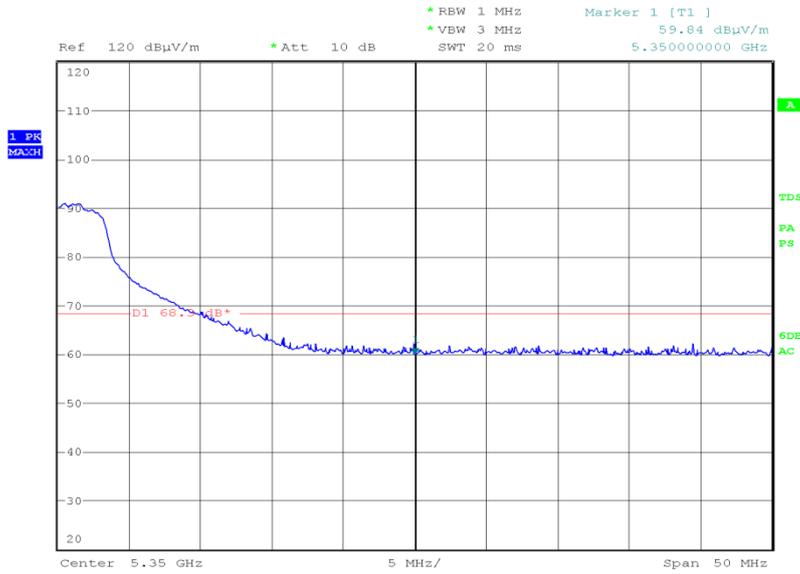
Date: 2.DEC.2014 21:28:02



Product Service

5350.00 MHz

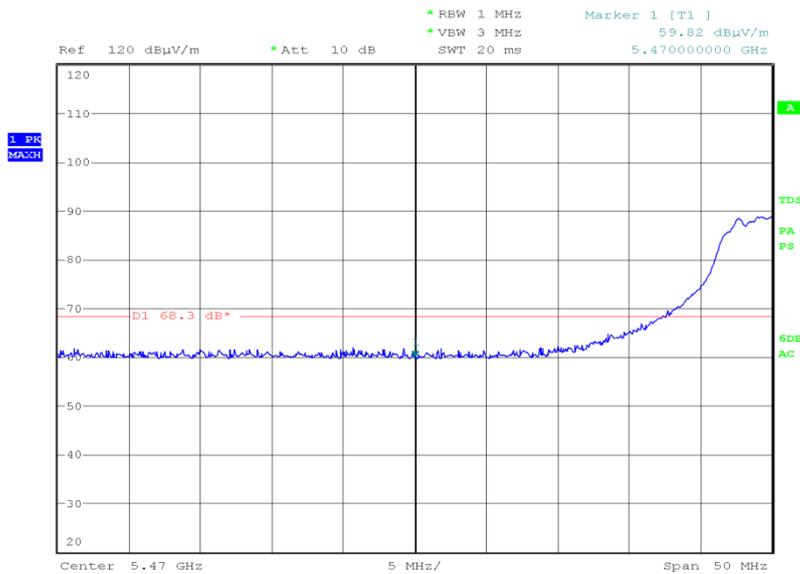
Final Peak



Date: 2.DEC.2014 21:36:34

5470.00 MHz

Final Peak



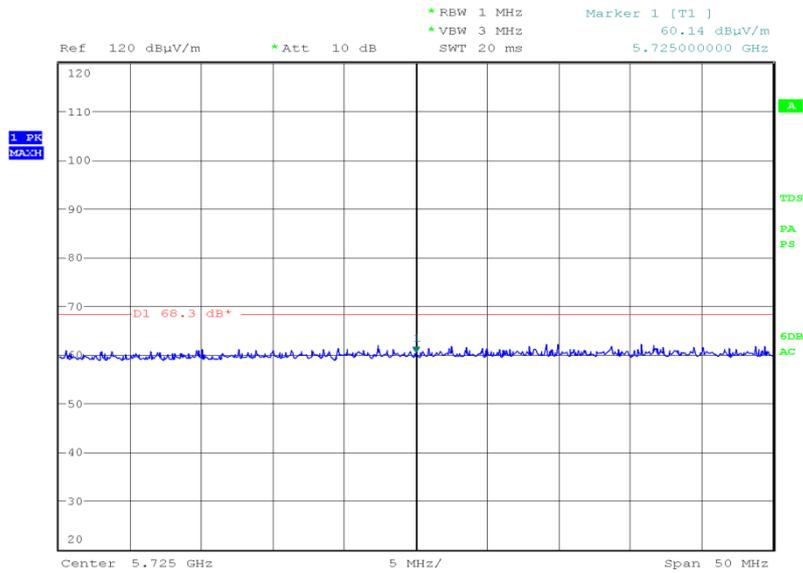
Date: 2.DEC.2014 21:45:48



Product Service

5725.00 MHz

Final Peak



Date: 2.DEC.2014 21:51:13

Remark

The test was performed on MCS1 because this was deemed the worst case data rate for 6 dB Bandwidth and Conducted Output Power.

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Product Service

802.11(n) - 5 GHz 20 MHz BW

4.0 V DC Supply

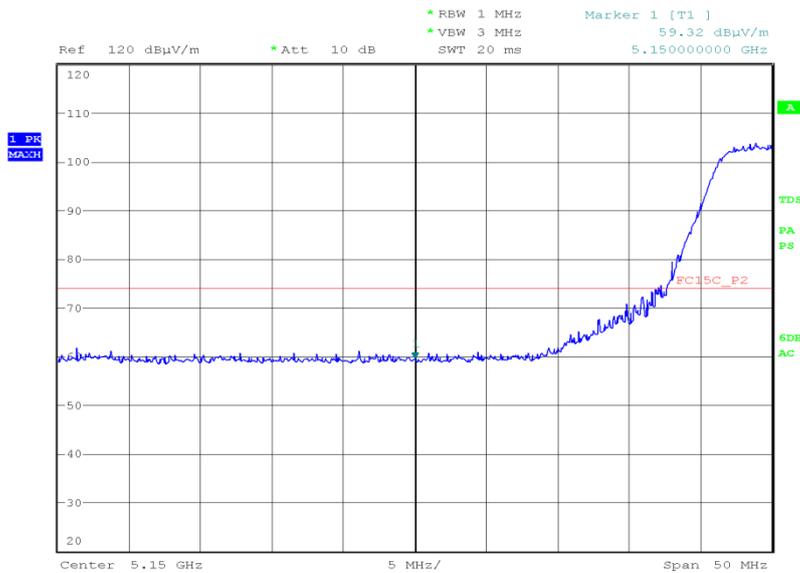
Band Edge

Modulation/Data Rate: OFDM/MCS0

Restricted Bands of Operation		
Frequency (MHz)	Final Peak (dBμV/m)	Final Average (dBμV/m)
5150.00	59.32	47.98
5350.00	60.41	48.68
5460.00	60.02	48.65

5150.00 MHz

Final Peak

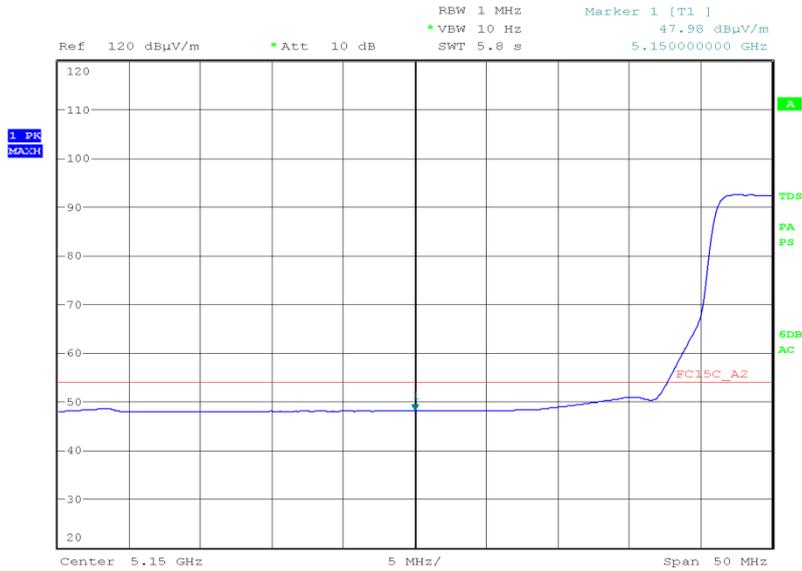


Date: 30.NOV.2014 11:08:38



Product Service

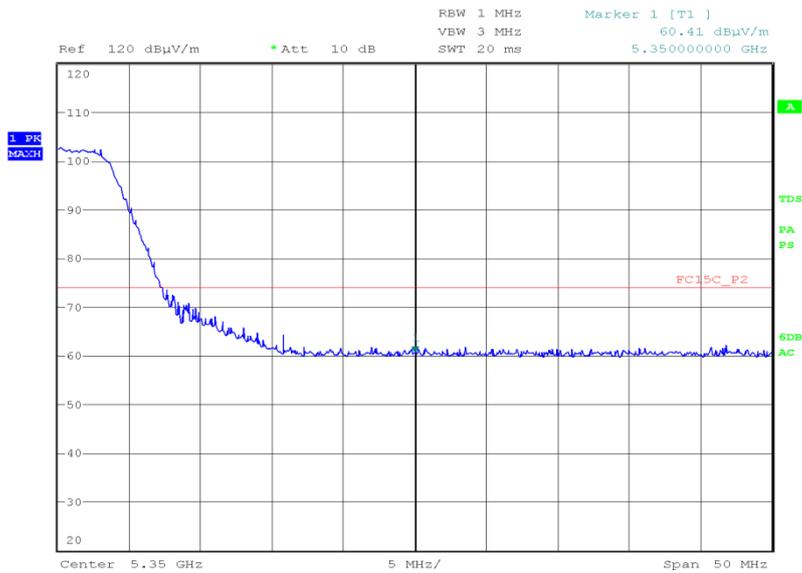
Final Average



Date: 2.DEC.2014 18:11:52

5350.00 MHz

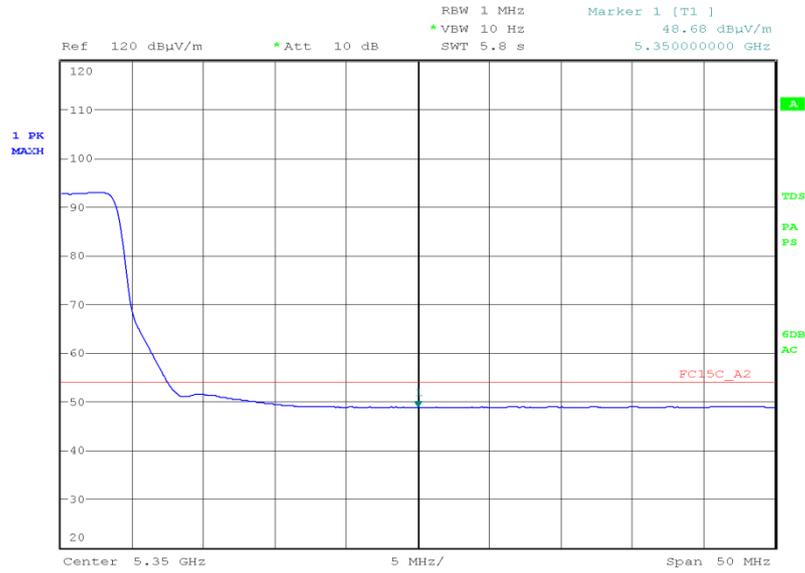
Final Peak



Date: 30.NOV.2014 11:40:56



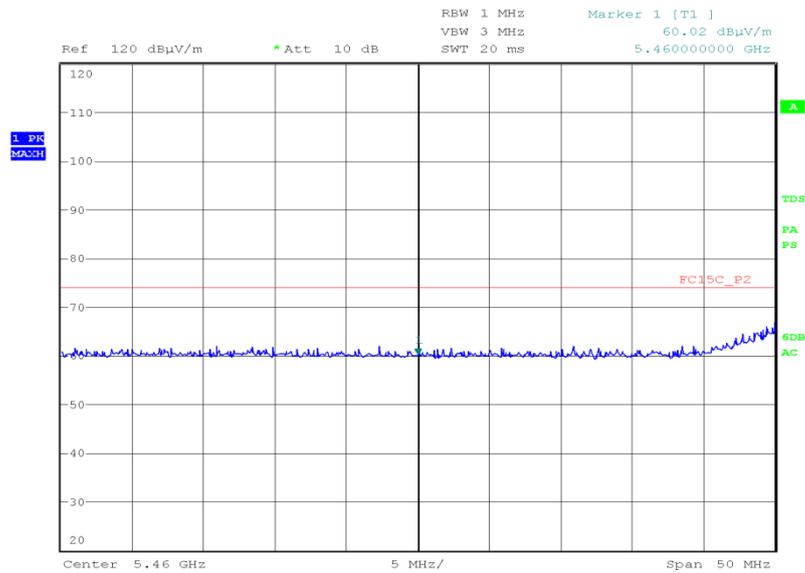
Final Average



Date: 2.DEC.2014 18:16:04

5460.00 MHz

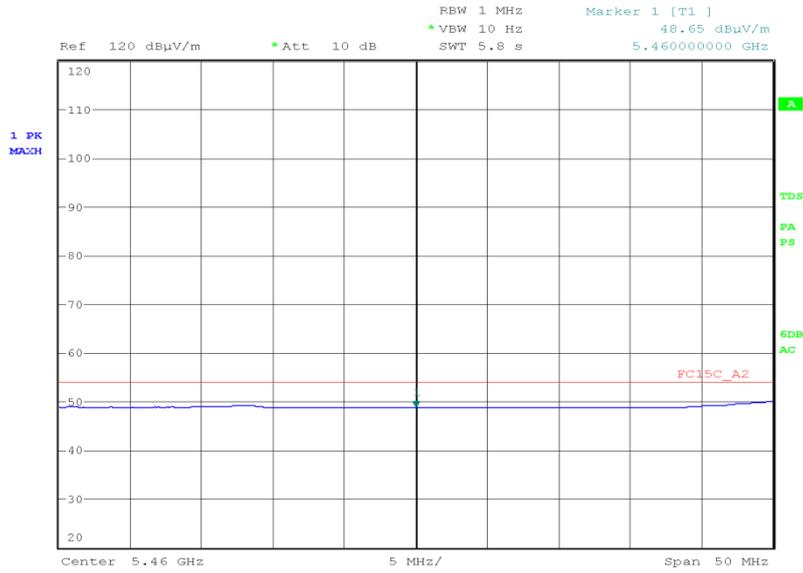
Final Peak



Date: 30.NOV.2014 11:55:31



Final Average



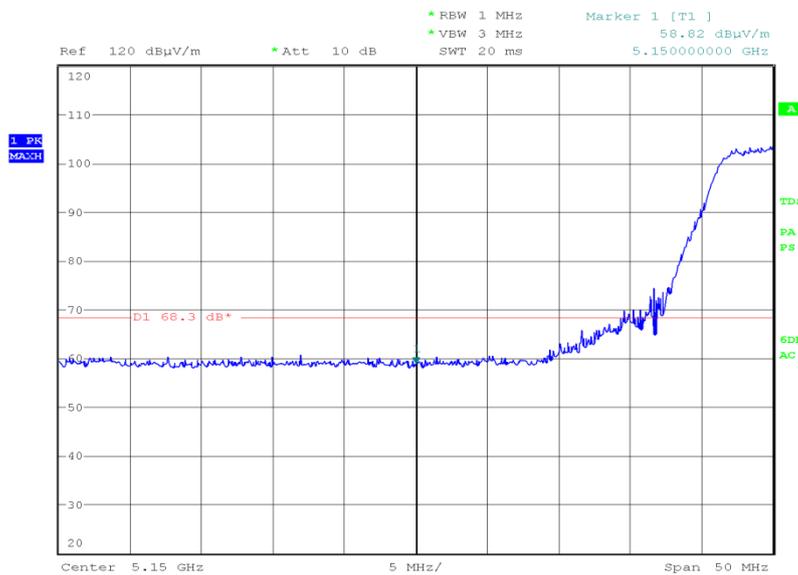
Date: 2.DEC.2014 18:20:45



Band Edge	
Frequency (MHz)	Final Peak (dBm)
5150.00	-36.38
5350.00	-36.38
5470.00	-34.96
5725.00	-35.61

5150.00 MHz

Final Peak

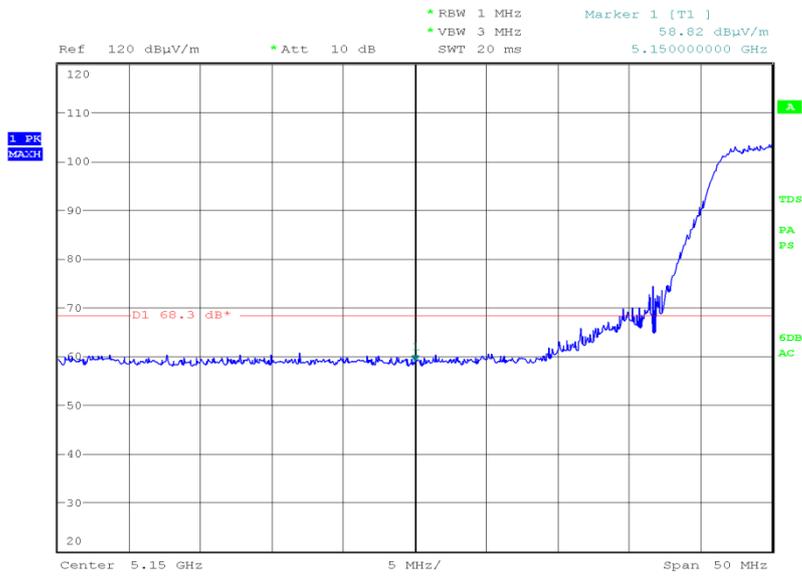


Date: 30.NOV.2014 11:10:30



5350.00 MHz

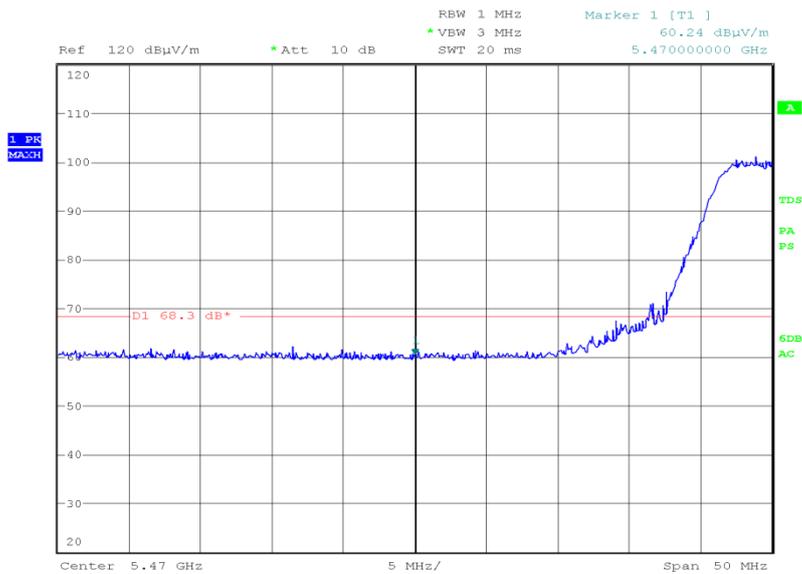
Final Peak



Date: 30.NOV.2014 11:10:30

5470.00 MHz

Final Peak



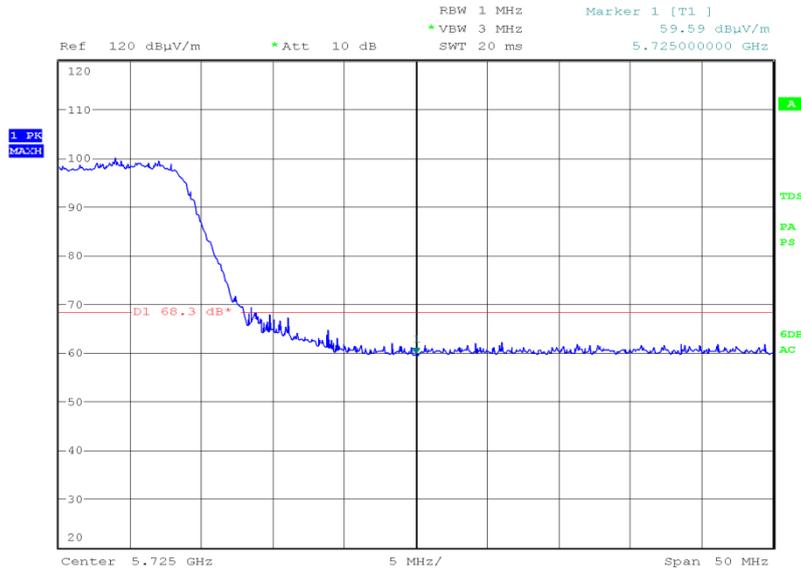
Date: 30.NOV.2014 11:58:43



Product Service

5725.00 MHz

Final Peak



Date: 30.NOV.2014 12:03:55

Remark

The test was performed on MCS0 because this was deemed the worst case data rate for 6 dB Bandwidth and Conducted Output Power.

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Product Service

802.11(n) - 5 GHz 40 MHz BW

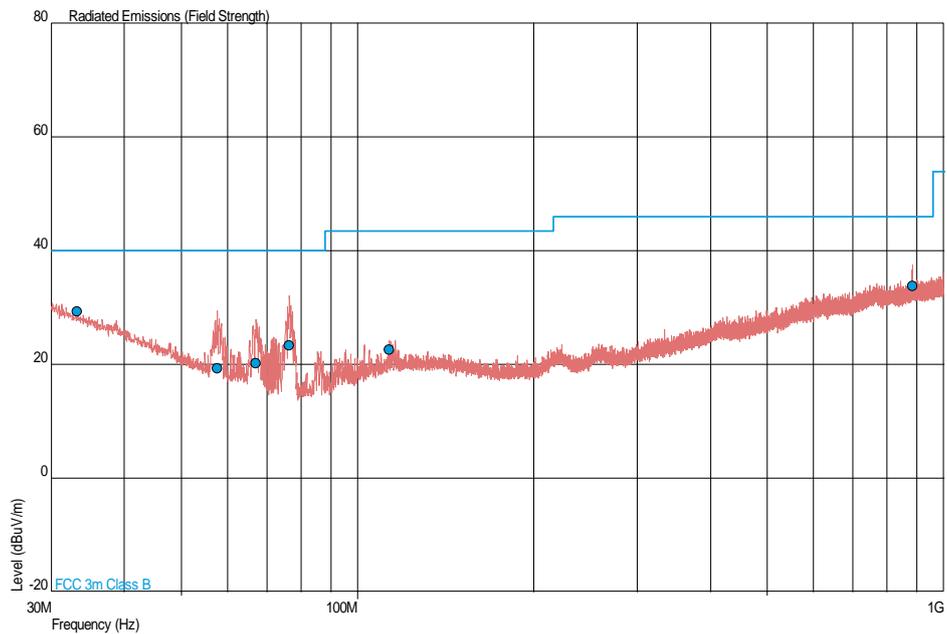
4.0 V DC Supply

Spurious Radiated Emissions

Frequency Band 1

5190 MHz

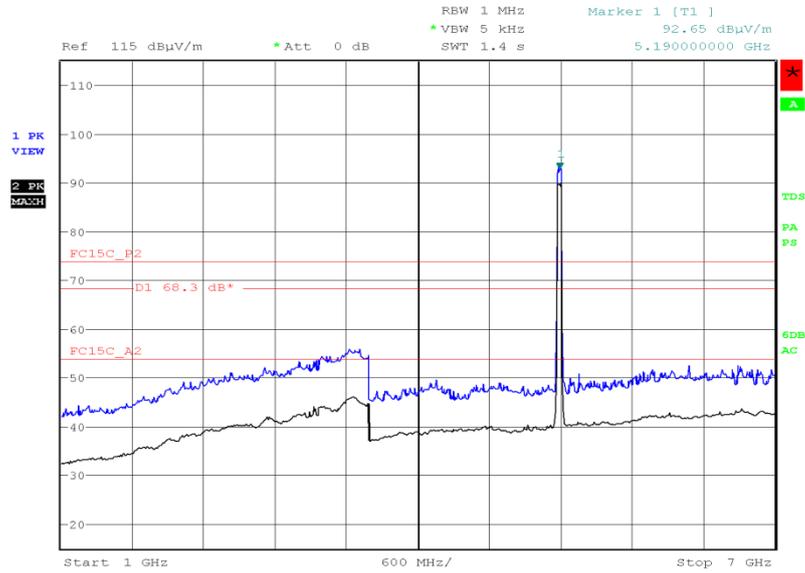
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
33.250	29.3	29.2	40.0	100	-10.7	-70.8	118	1.00	Vertical
57.651	19.4	9.3	40.0	100	-20.6	-90.7	275	1.00	Vertical
67.083	20.3	10.4	40.0	100	-19.7	-89.6	146	1.00	Vertical
76.508	23.4	14.8	40.0	100	-16.6	-85.2	195	1.00	Vertical
113.181	22.6	13.5	43.5	150	-20.9	-136.5	71	1.02	Vertical
884.487	33.8	49.0	46.0	200	-12.2	-151.0	101	2.29	Horizontal

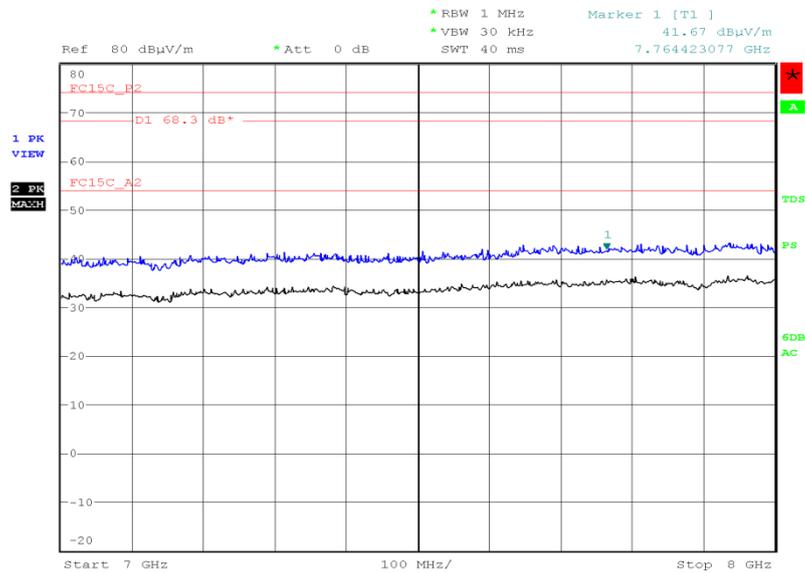


1 GHz to 7 GHz



Date: 24.NOV.2014 18:41:43

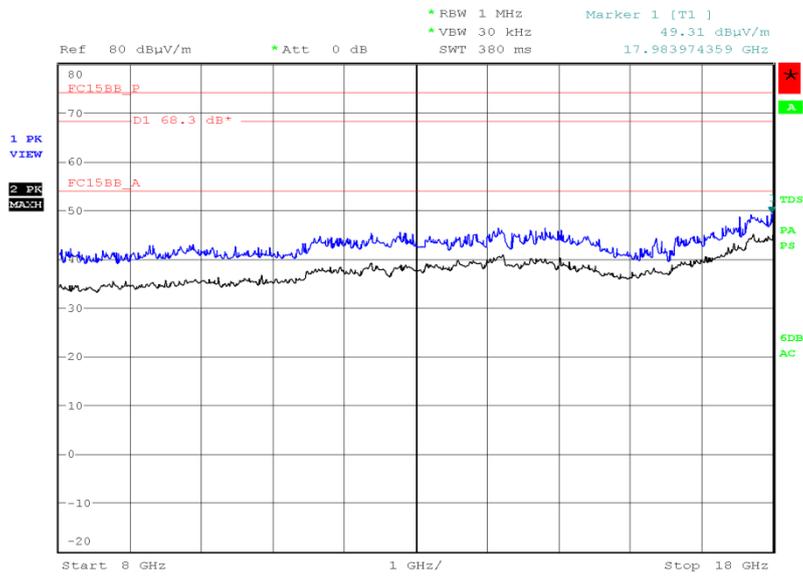
7 GHz to 8 GHz



Date: 26.NOV.2014 17:38:29

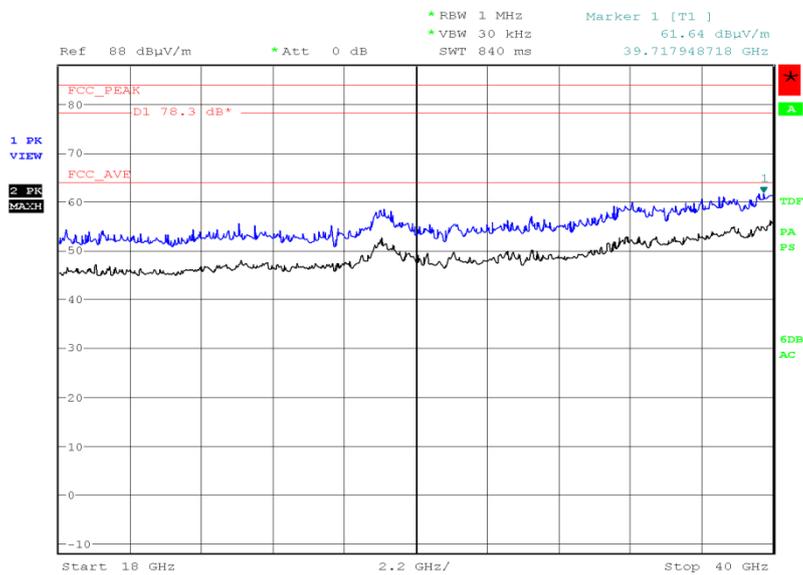


8 GHz to 18 GHz



Date: 3.DEC.2014 17:44:54

18 GHz to 40 GHz

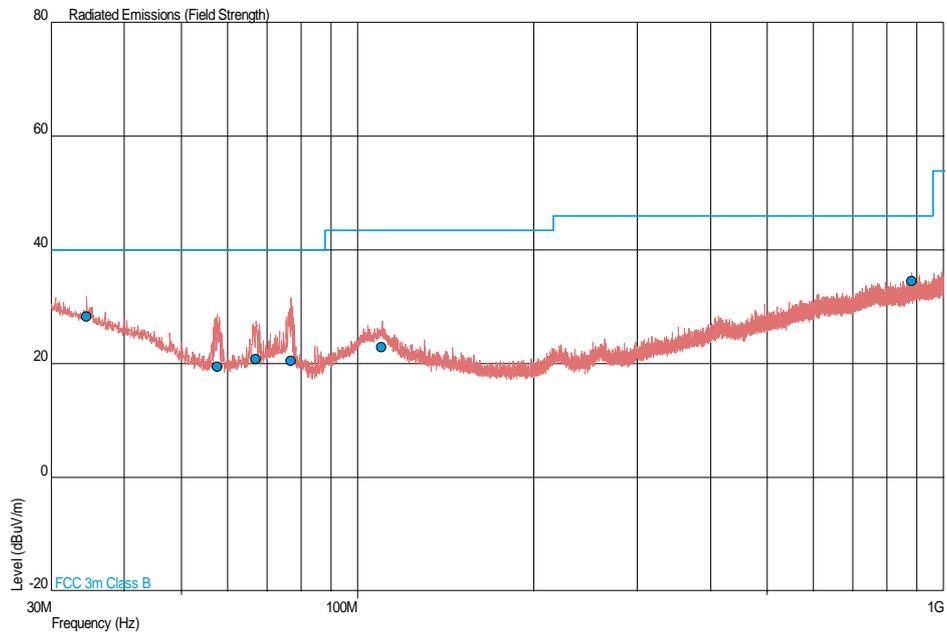


Date: 25.NOV.2014 20:50:27



5230 MHz

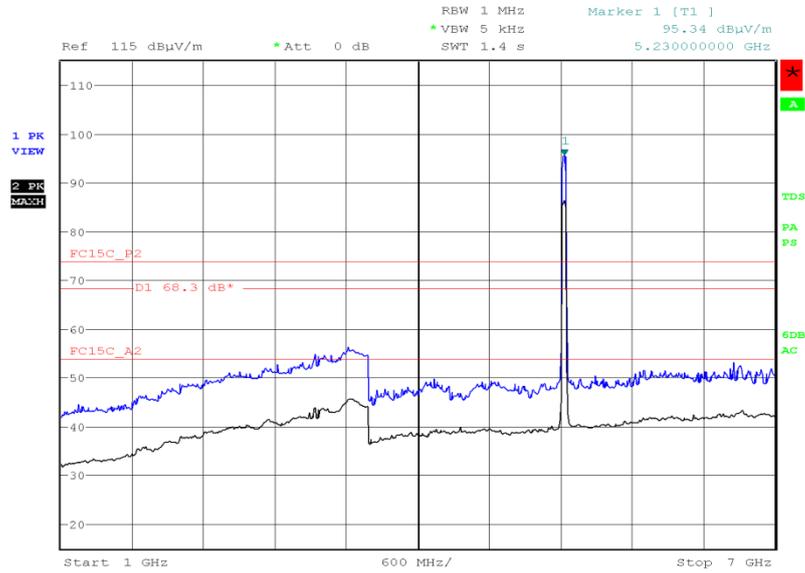
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
34.507	28.3	26.0	40.0	100	-11.7	-74.0	42	1.00	Vertical
57.601	19.5	9.4	40.0	100	-20.5	-90.6	255	1.49	Vertical
67.150	20.8	11.0	40.0	100	-19.2	-89.0	90	1.00	Vertical
77.006	20.5	10.6	40.0	100	-19.5	-89.4	219	1.00	Vertical
109.984	23.0	14.1	43.5	150	-20.5	-135.9	118	1.00	Vertical
881.965	34.5	53.1	46.0	200	-11.5	-146.9	359	1.64	Vertical

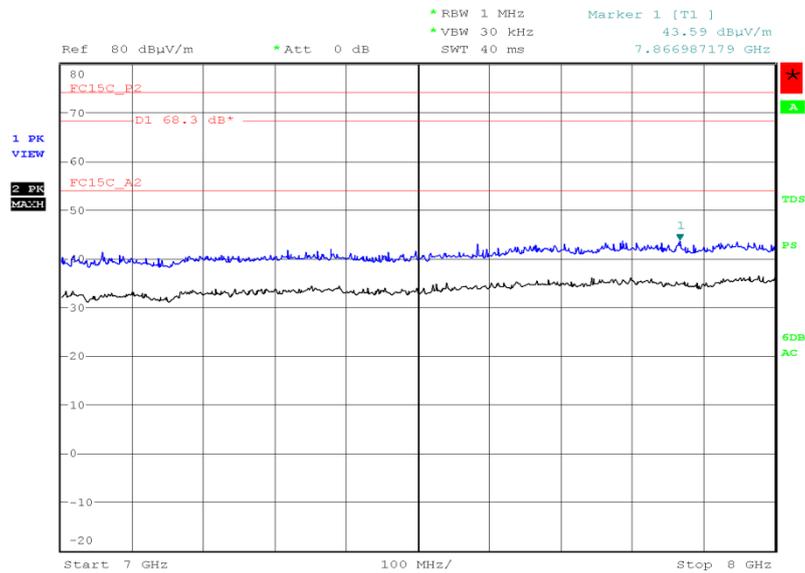


1 GHz to 7 GHz



Date: 24.NOV.2014 19:32:10

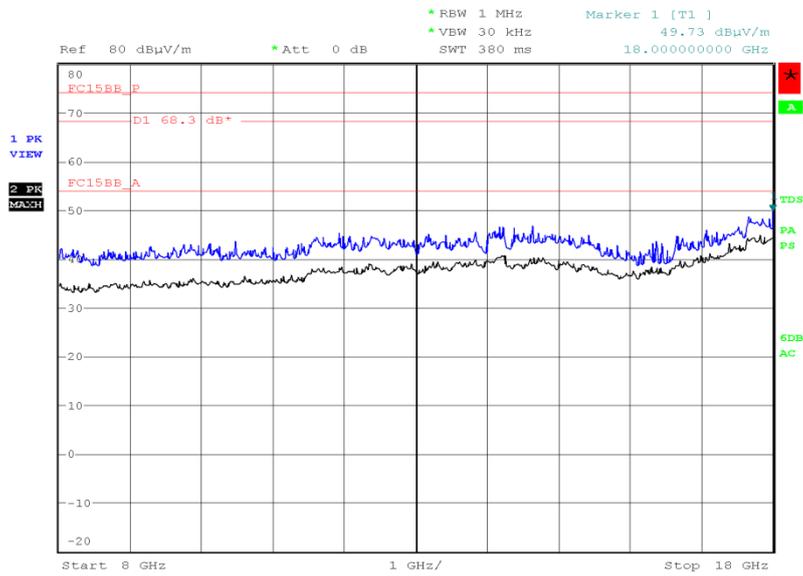
7 GHz to 8 GHz



Date: 26.NOV.2014 17:43:03

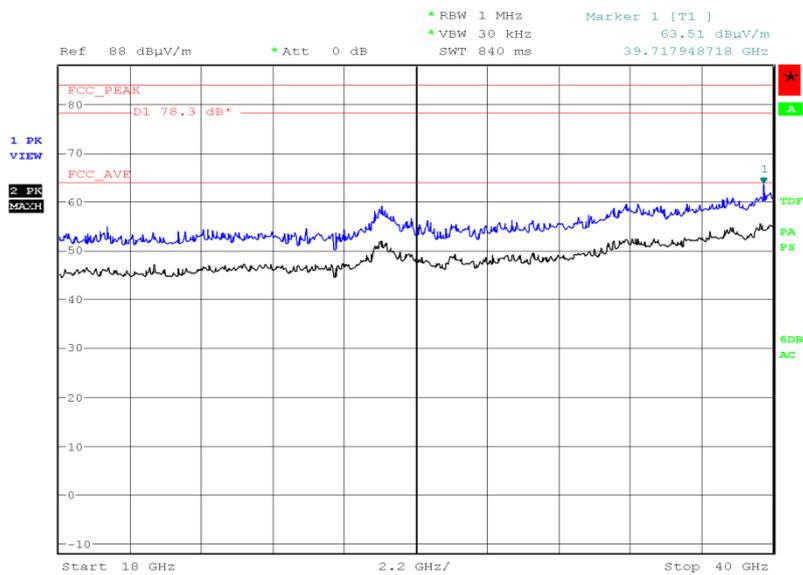


8 GHz to 18 GHz



Date: 3.DEC.2014 17:55:42

18 GHz to 40 GHz



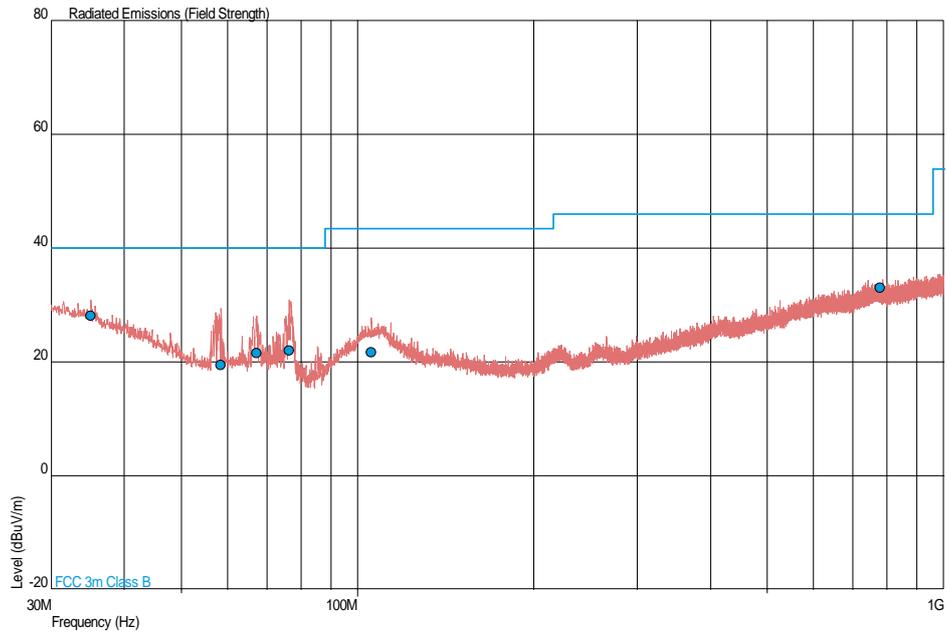
Date: 25.NOV.2014 21:07:04



Frequency Band 2

5270 MHz

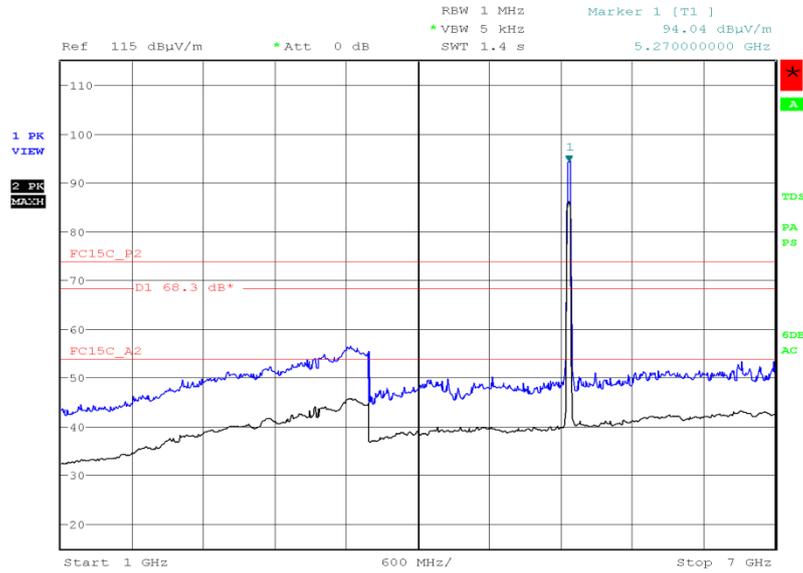
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBuV/m)	QP Level (uV/m)	QP Limit (dBuV/m)	QP Limit (uV/m)	QP Margin (dBuV/m)	QP Margin (uV/m)	Angle (Deg)	Height (m)	Polarity
35.094	28.1	25.4	40.0	100	-11.9	-74.6	303	1.00	Vertical
58.507	19.4	9.3	40.0	100	-20.6	-90.7	217	1.02	Vertical
67.299	21.6	12.0	40.0	100	-18.4	-88.0	223	1.00	Vertical
76.509	22.0	12.6	40.0	100	-18.0	-87.4	262	1.00	Vertical
105.454	21.8	12.3	43.5	150	-21.7	-137.7	118	1.00	Vertical
779.893	33.0	44.7	46.0	200	-13.0	-155.3	336	1.00	Vertical

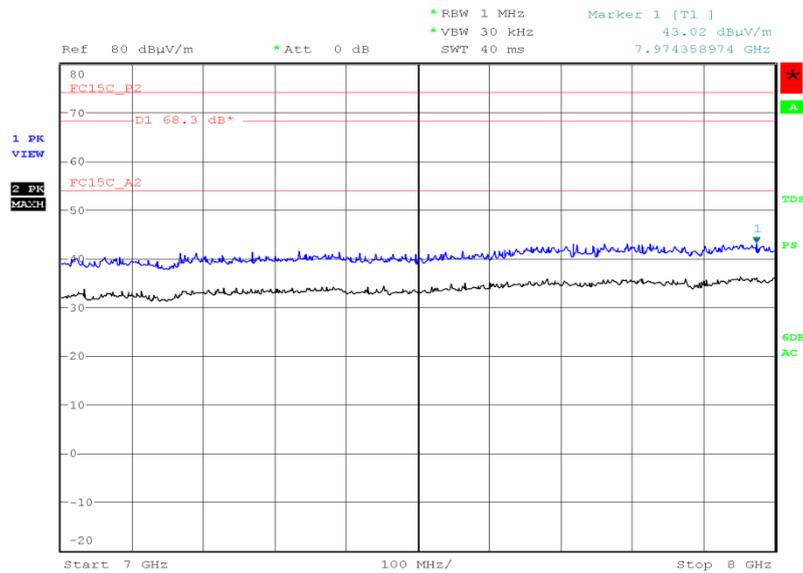


1 GHz to 7 GHz



Date: 24.NOV.2014 19:51:49

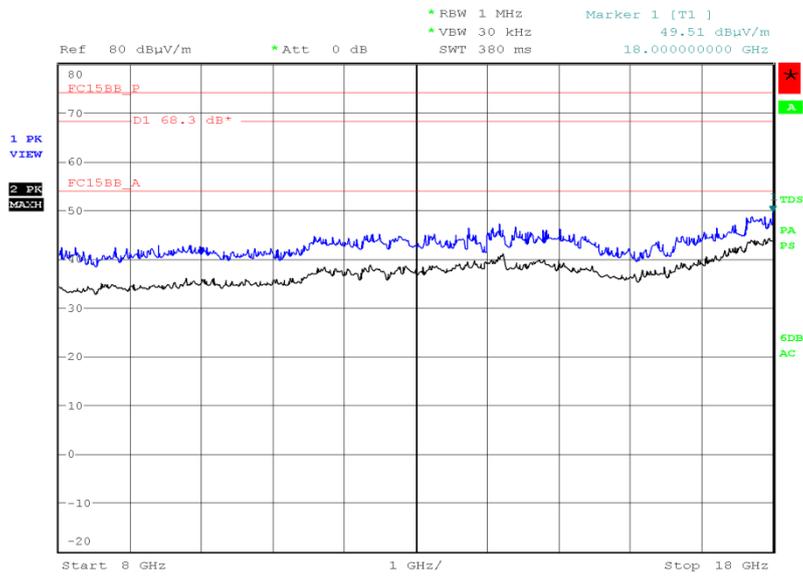
7 GHz to 8 GHz



Date: 26.NOV.2014 17:46:52

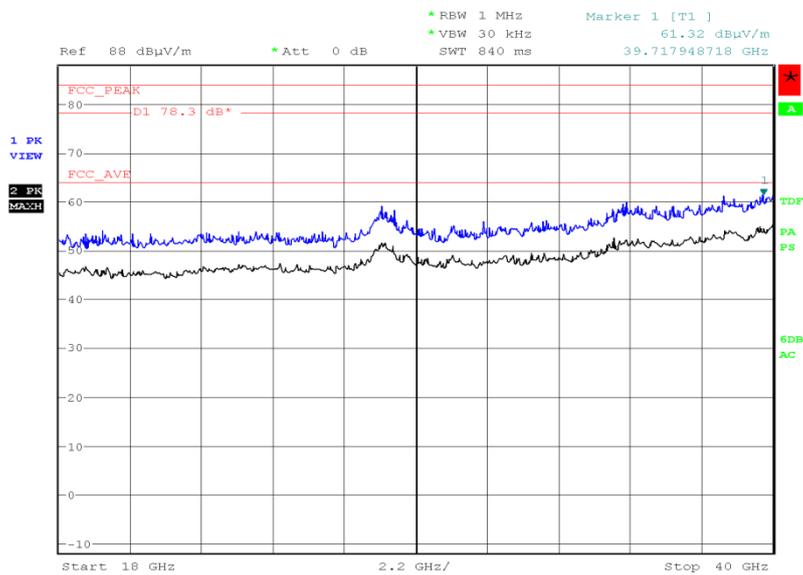


8 GHz to 18 GHz



Date: 3.DEC.2014 18:10:43

18 GHz to 40 GHz

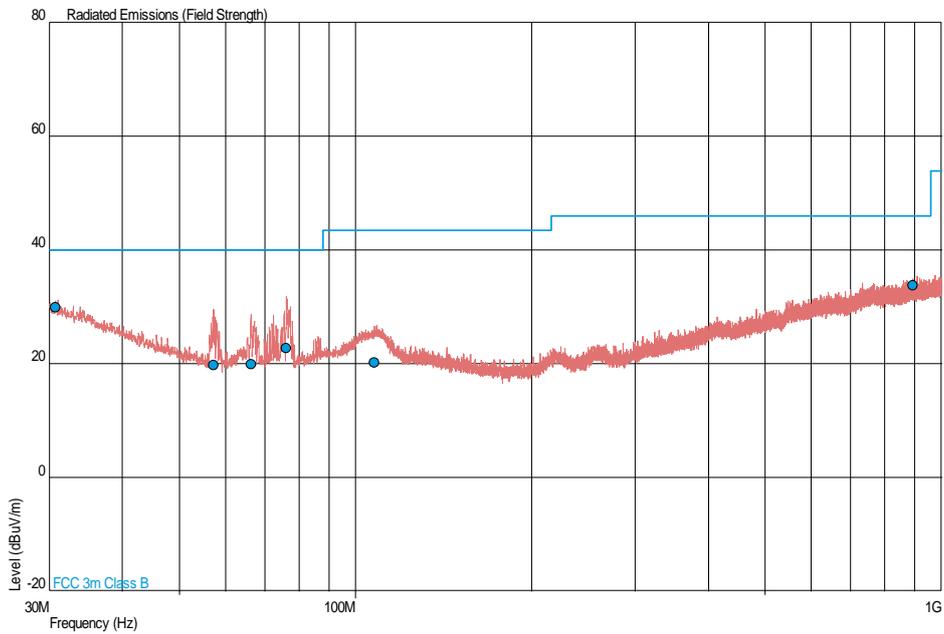


Date: 25.NOV.2014 21:24:53



5310 MHz

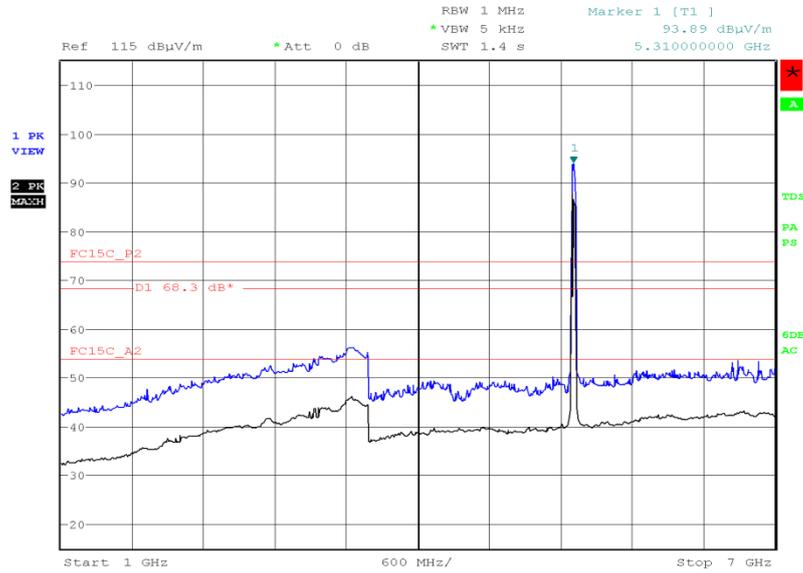
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
30.724	29.9	31.3	40.0	100	-10.1	-68.7	223	1.00	Horizontal
57.259	19.7	9.7	40.0	100	-20.3	-90.3	0	1.97	Vertical
66.321	20.0	10.0	40.0	100	-20.0	-90.0	145	1.00	Vertical
76.213	22.8	13.8	40.0	100	-17.2	-86.2	147	1.00	Vertical
107.706	20.3	10.4	43.5	150	-23.2	-139.6	313	1.00	Vertical
894.687	33.8	49.0	46.0	200	-12.2	-151.0	0	1.90	Horizontal

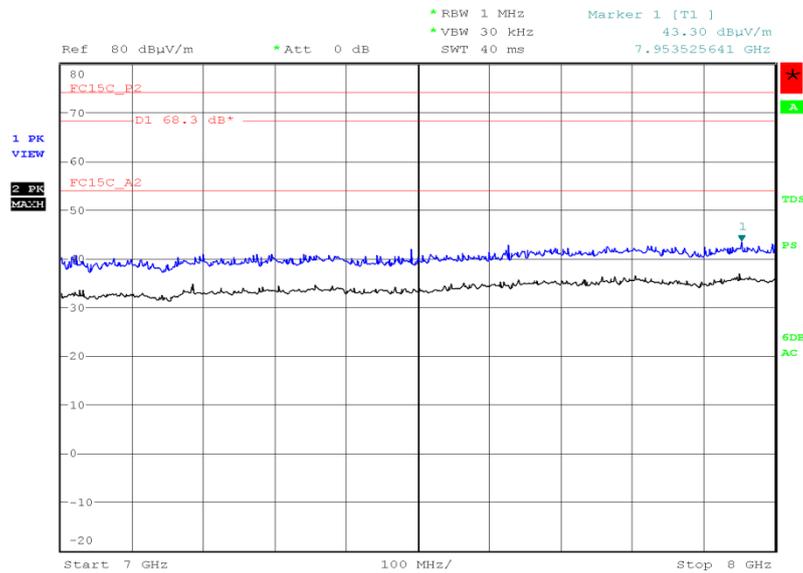


1 GHz to 7 GHz



Date: 24.NOV.2014 20:29:05

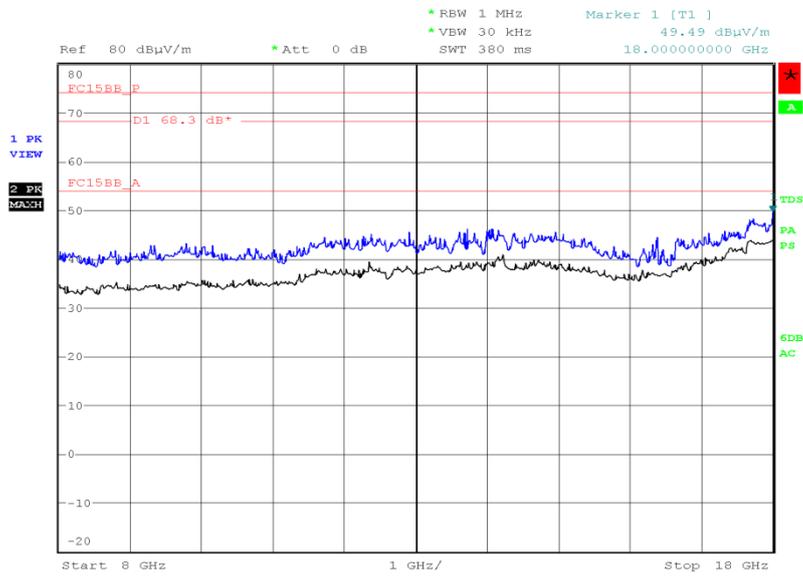
7 GHz to 8 GHz



Date: 26.NOV.2014 17:51:40

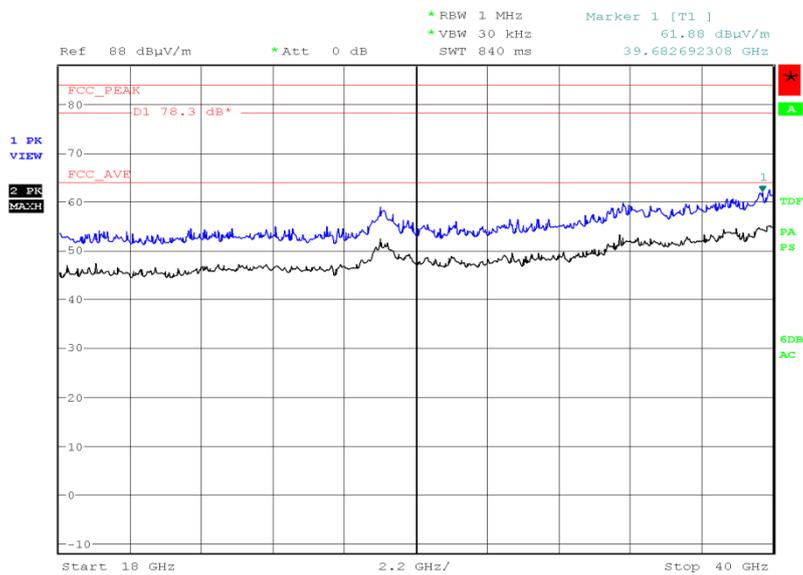


8 GHz to 18 GHz



Date: 3.DEC.2014 18:27:21

18 GHz to 40 GHz



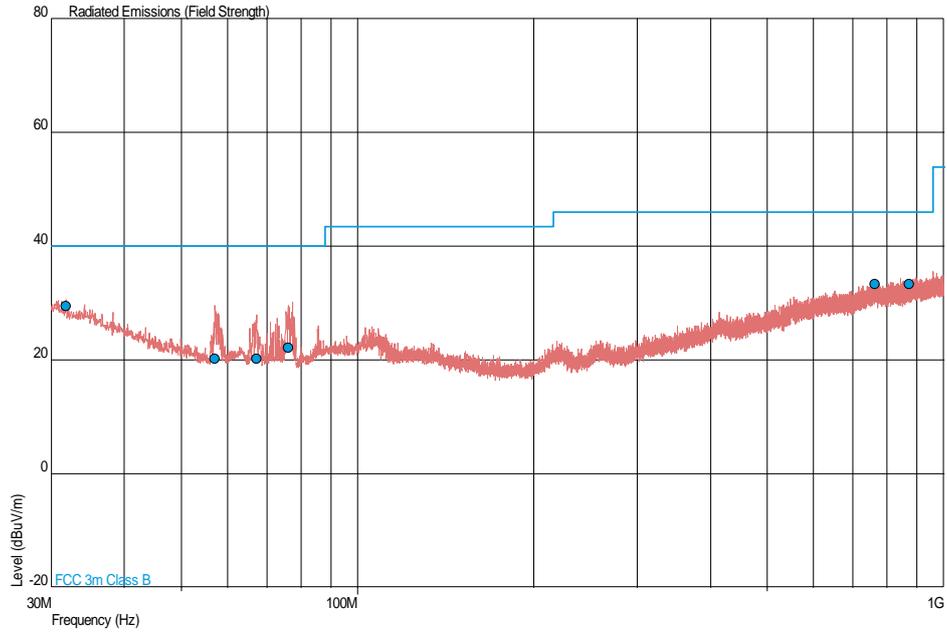
Date: 25.NOV.2014 21:39:58



Frequency Band 3

5510 MHz

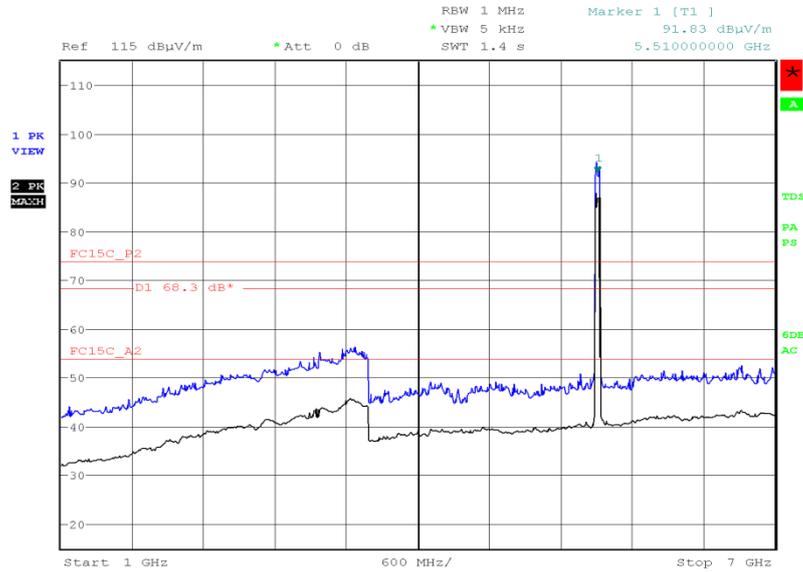
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBuV/m)	QP Level (uV/m)	QP Limit (dBuV/m)	QP Limit (uV/m)	QP Margin (dBuV/m)	QP Margin (uV/m)	Angle (Deg)	Height (m)	Polarity
31.795	29.4	29.5	40.0	100	-10.6	-70.5	249	1.00	Vertical
57.106	20.2	10.2	40.0	100	-19.8	-89.8	110	1.00	Vertical
67.243	20.2	10.2	40.0	100	-19.8	-89.8	359	1.00	Vertical
76.068	22.1	12.7	40.0	100	-17.9	-87.3	139	1.00	Vertical
762.264	33.3	46.2	46.0	200	-12.7	-153.8	325	1.00	Vertical
871.932	33.3	46.2	46.0	200	-12.7	-153.8	15	1.00	Vertical

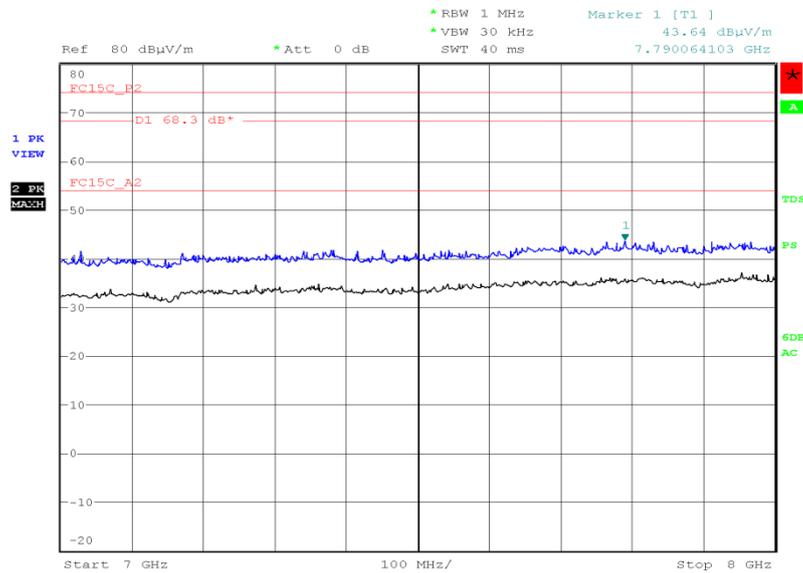


1 GHz to 7 GHz



Date: 24.NOV.2014 20:42:11

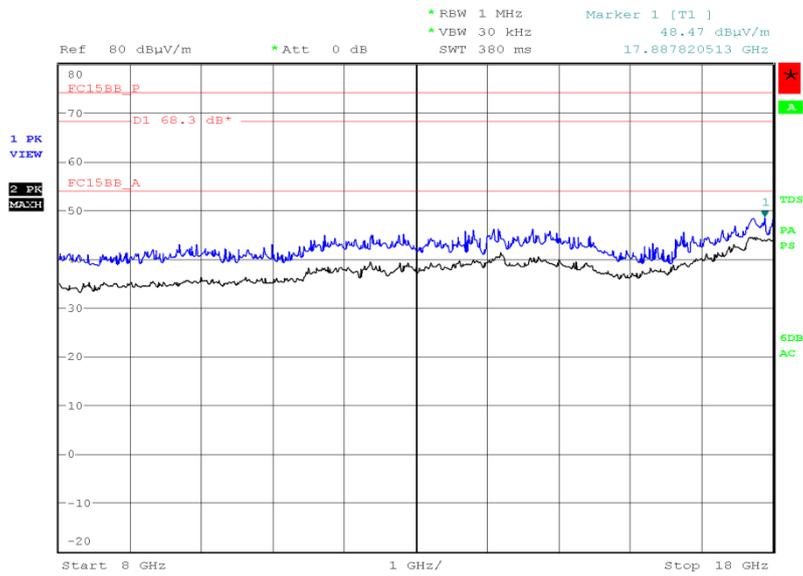
7 GHz to 8 GHz



Date: 26.NOV.2014 17:58:01

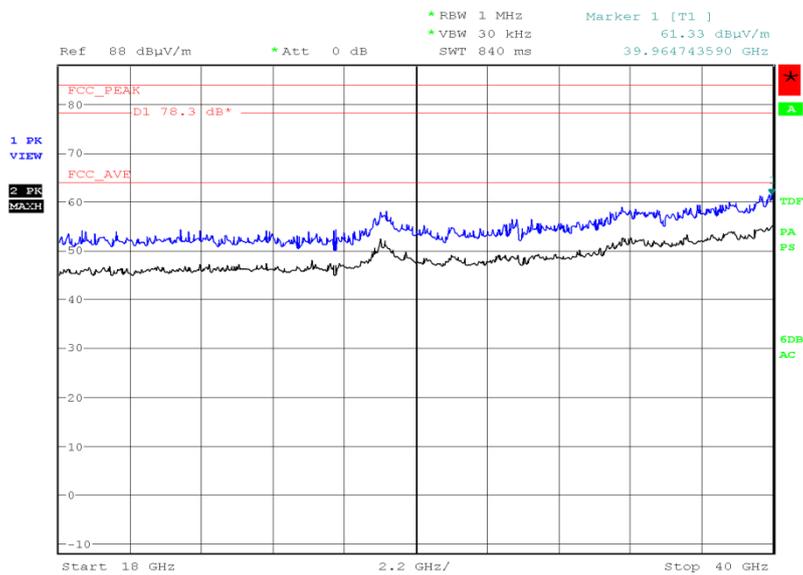


8 GHz to 18 GHz



Date: 3.DEC.2014 18:43:59

18 GHz to 40 GHz

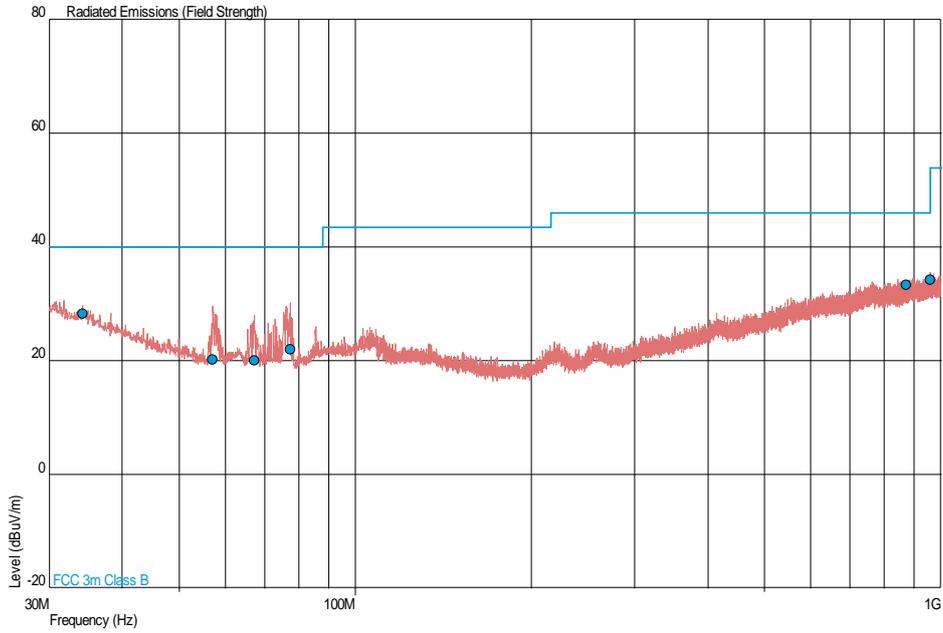


Date: 25.NOV.2014 23:51:50



5590 MHz

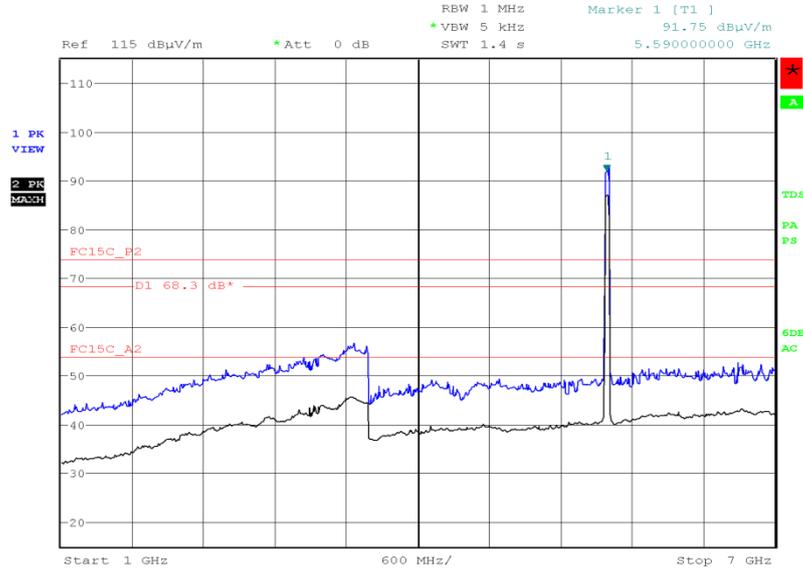
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
34.216	28.3	26.0	40.0	100	-11.7	-74.0	113	1.00	Vertical
57.116	20.3	10.4	40.0	100	-19.7	-89.6	350	1.00	Vertical
67.240	20.1	10.1	40.0	100	-19.9	-89.9	102	2.29	Vertical
77.437	22.1	12.7	40.0	100	-17.9	-87.3	109	1.00	Vertical
872.058	33.4	46.8	46.0	200	-12.6	-153.2	350	1.00	Vertical
958.338	34.2	51.3	46.0	200	-11.8	-148.7	43	1.00	Vertical

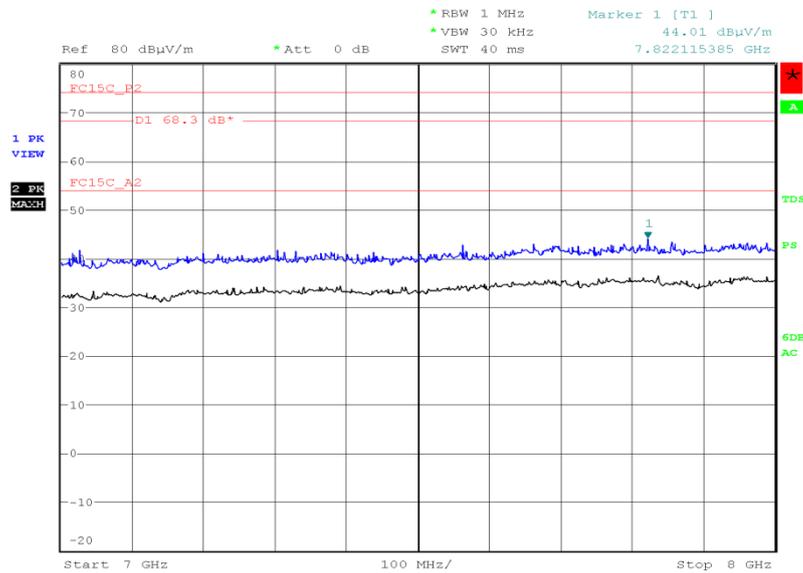


1 GHz to 7 GHz



Date: 24.NOV.2014 20:58:45

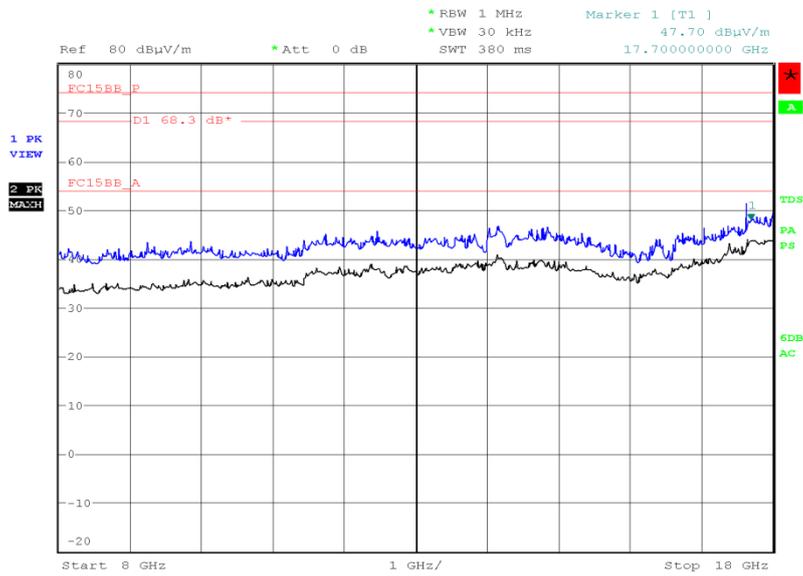
7 GHz to 8 GHz



Date: 26.NOV.2014 18:02:10

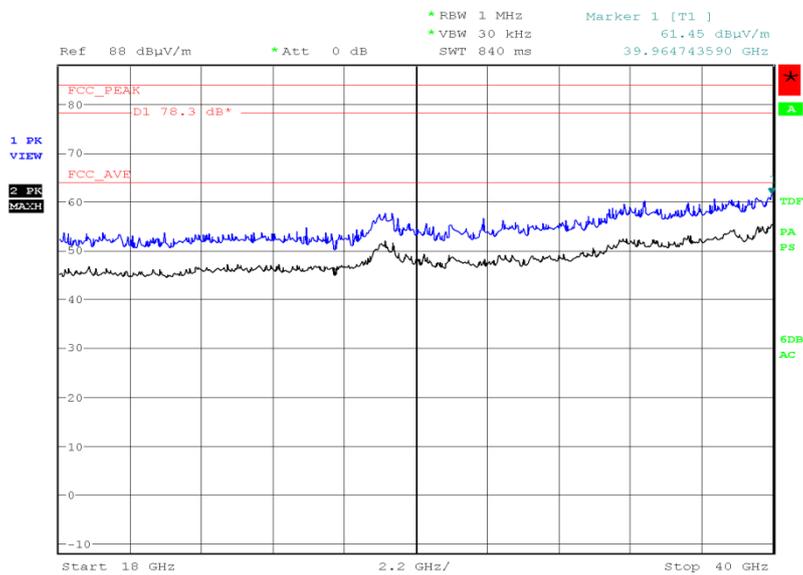


8 GHz to 18 GHz



Date: 3.DEC.2014 18:55:07

18 GHz to 40 GHz

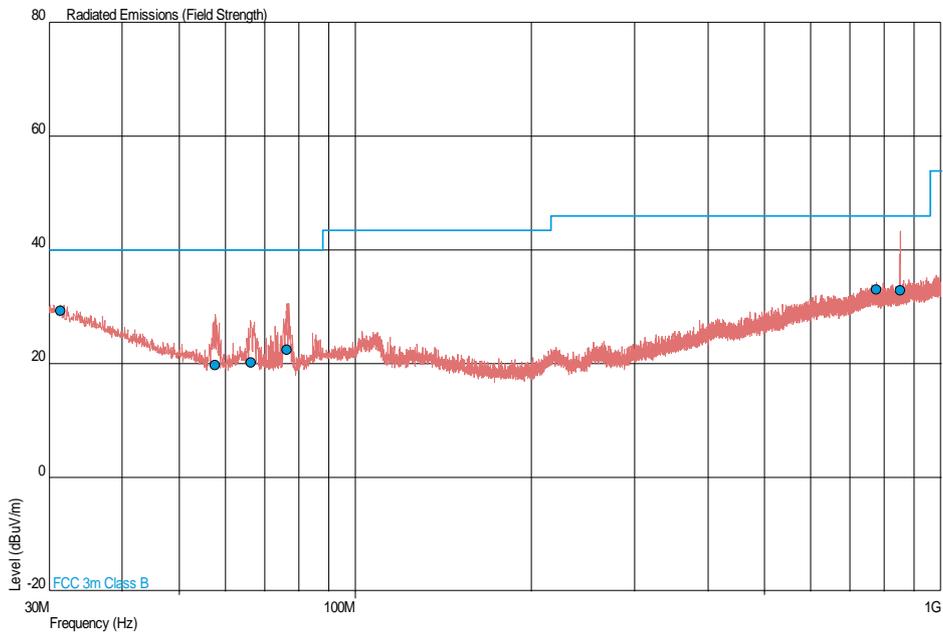


Date: 25.NOV.2014 22:08:46



5670 MHz

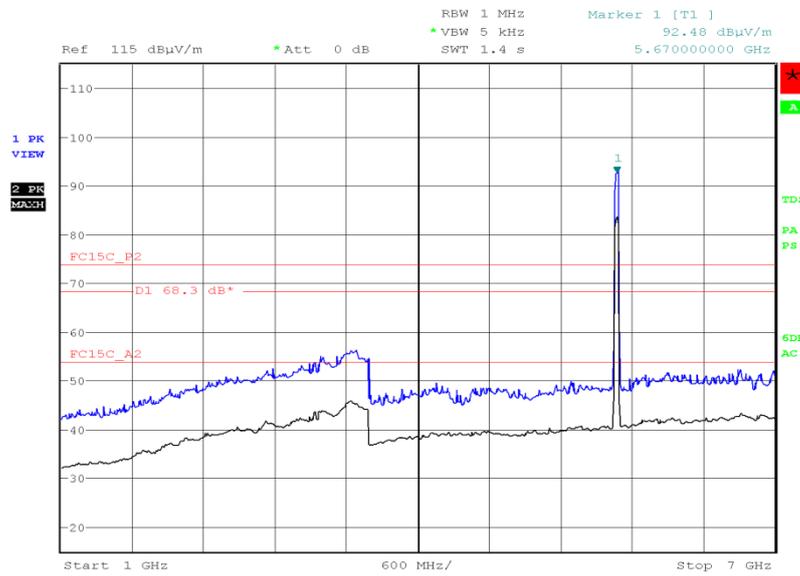
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dBµV/m)	QP Level (µV/m)	QP Limit (dBµV/m)	QP Limit (µV/m)	QP Margin (dBµV/m)	QP Margin (µV/m)	Angle (Deg)	Height (m)	Polarity
31.407	29.4	29.5	40.0	100	-10.6	-70.5	141	3.32	Vertical
57.605	19.7	9.7	40.0	100	-20.3	-90.3	360	1.00	Vertical
66.296	20.2	10.2	40.0	100	-19.8	-89.8	180	1.00	Vertical
76.525	22.5	13.3	40.0	100	-17.5	-86.7	119	1.15	Vertical
776.135	33.0	44.7	46.0	200	-13.0	-155.3	284	1.00	Horizontal
851.202	32.9	44.2	46.0	200	-13.1	-155.8	328	2.23	Vertical

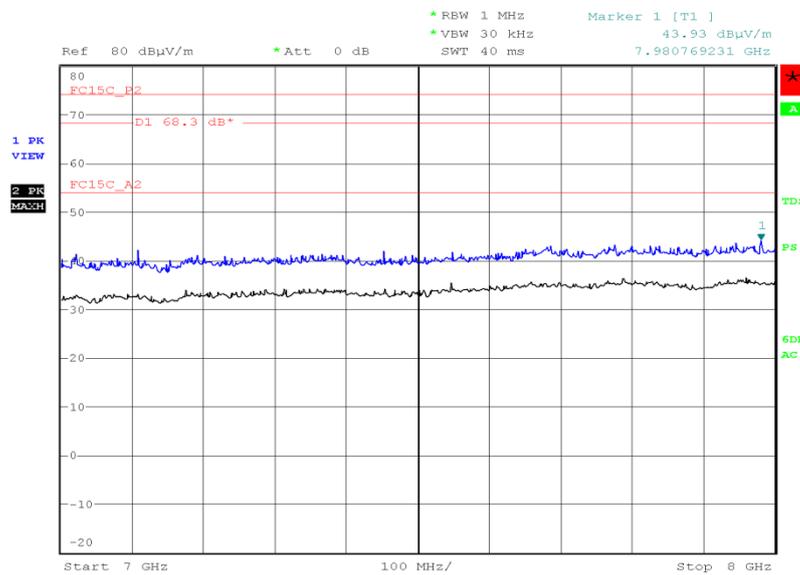


1 GHz to 7 GHz



Date: 24.NOV.2014 21:08:55

7 GHz to 8 GHz

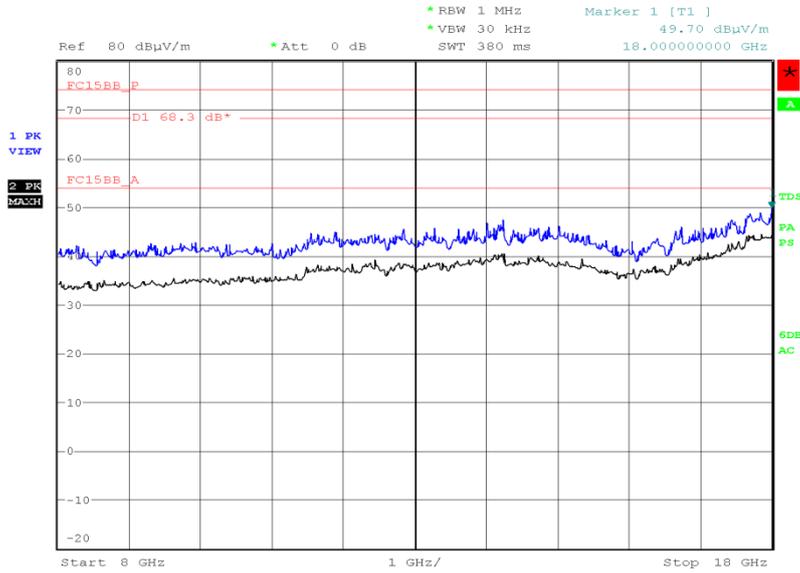


Date: 26.NOV.2014 18:06:12



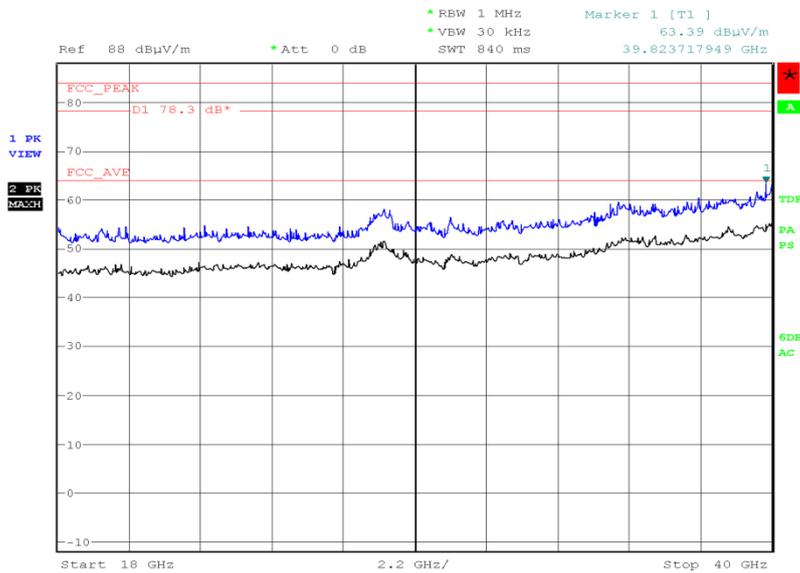
Product Service

8 GHz to 18 GHz



Date: 3.DEC.2014 19:05:48

18 GHz to 40 GHz



Date: 25.NOV.2014 22:17:54

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Product Service

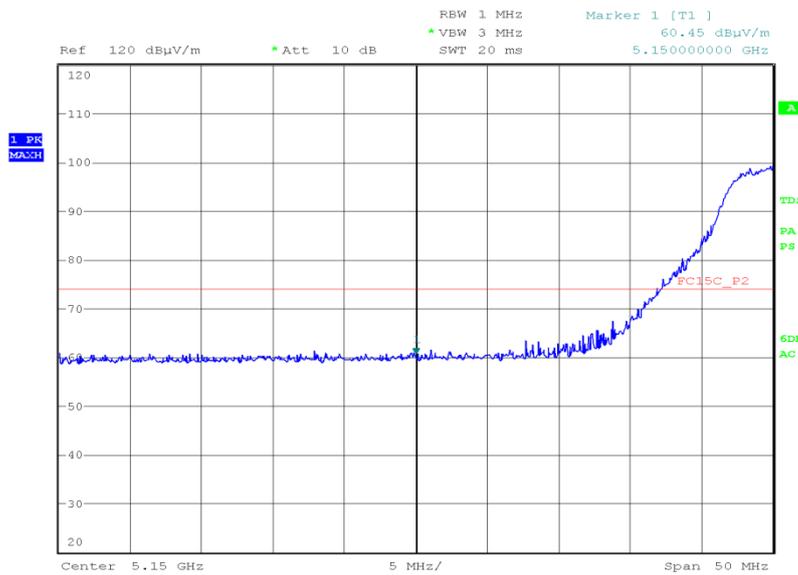
Band Edge

Modulation/Data Rate: OFDM/MCS0

Restricted Bands of Operation		
Frequency (MHz)	Final Peak (dBµV/m)	Final Average (dBµV/m)
5150.00	60.45	48.49
5350.00	60.54	49.05
5460.00	60.14	48.91

5150.00 MHz

Final Peak

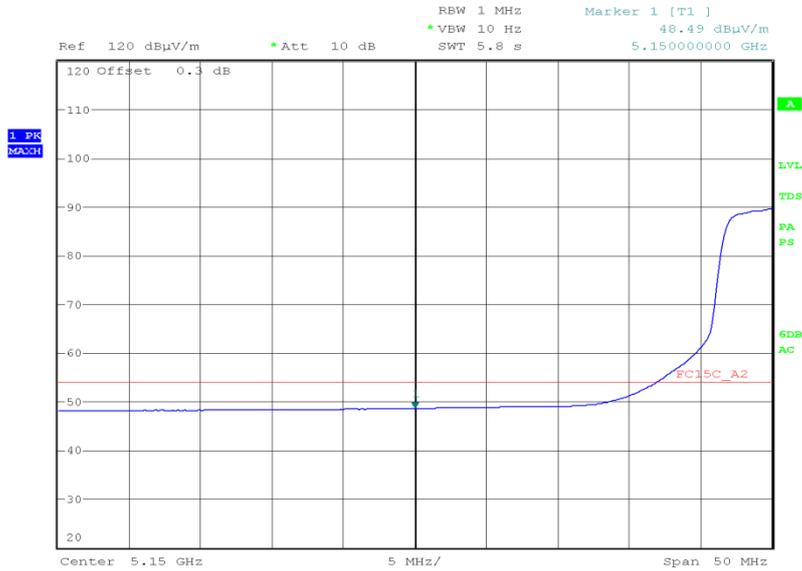


Date: 2.DEC.2014 18:52:12



Product Service

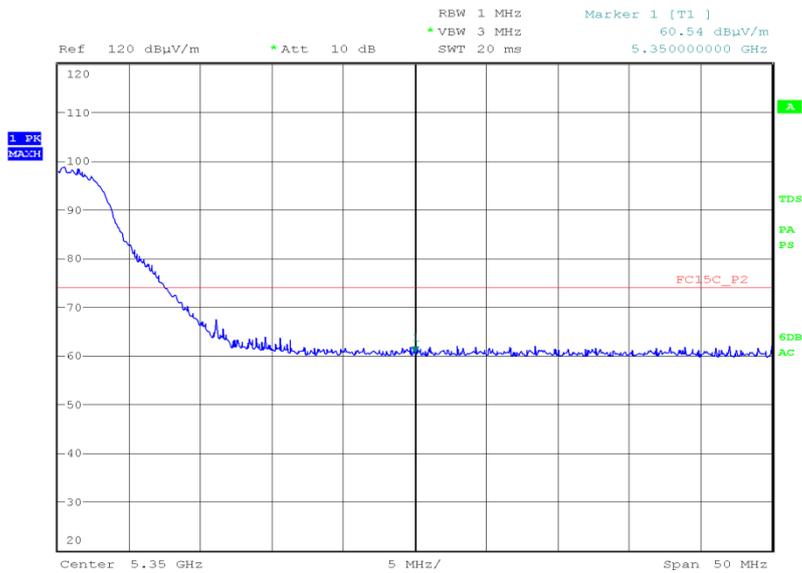
Final Average



Date: 2.DEC.2014 18:51:01

5350.00 MHz

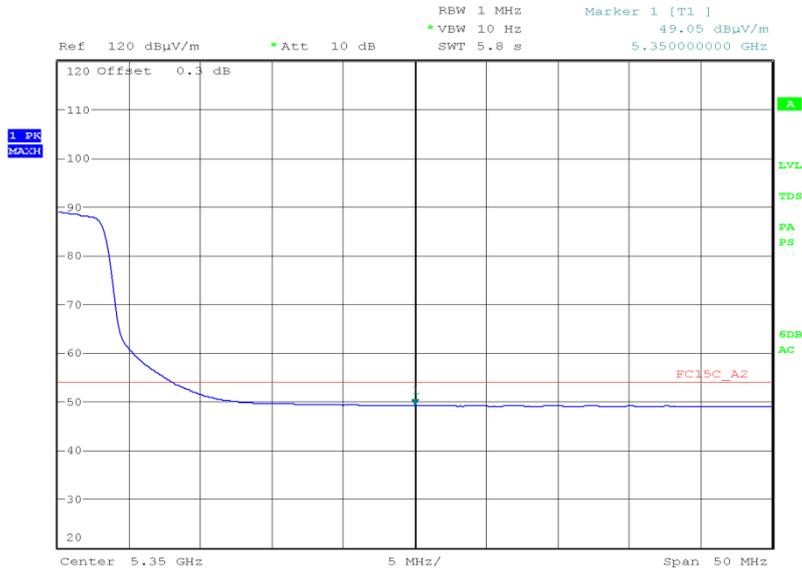
Final Peak



Date: 2.DEC.2014 18:58:52



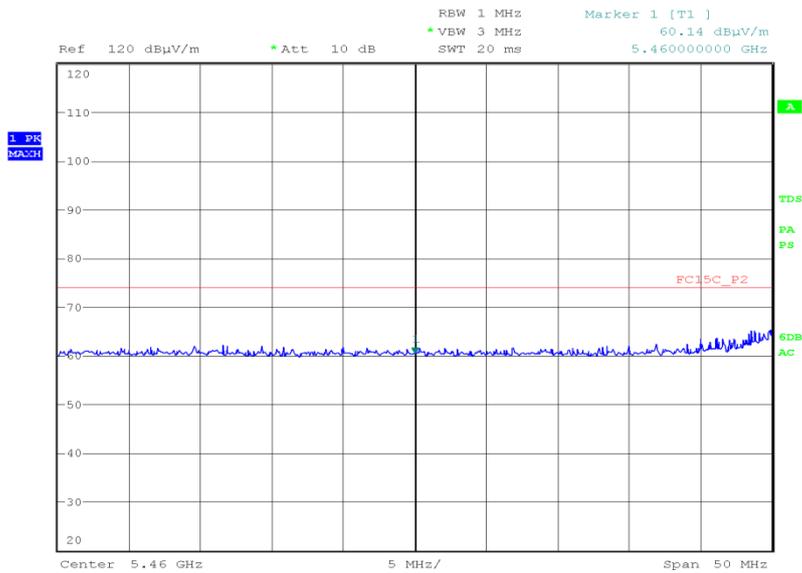
Final Average



Date: 2.DEC.2014 19:00:09

5460.00 MHz

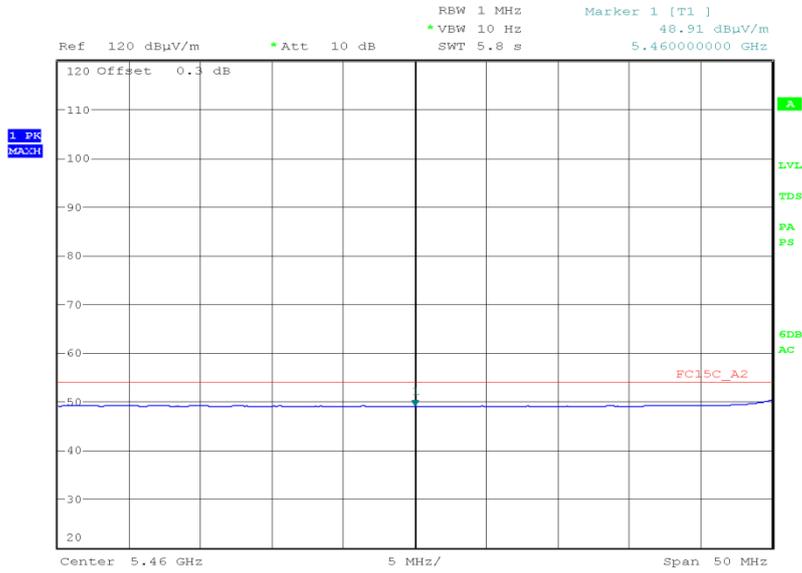
Final Peak



Date: 2.DEC.2014 19:07:08



Final Average



Date: 2.DEC.2014 19:05:11

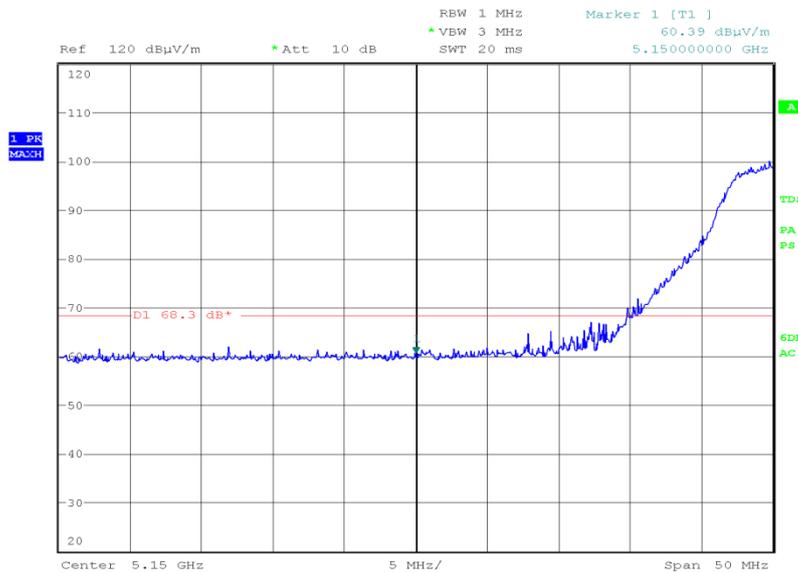


Product Service

Band Edge	
Frequency (MHz)	Final Peak (dBm)
5150.00	34.81
5350.00	34.32
5470.00	34.57
5725.00	34.30

5150.00 MHz

Final Peak

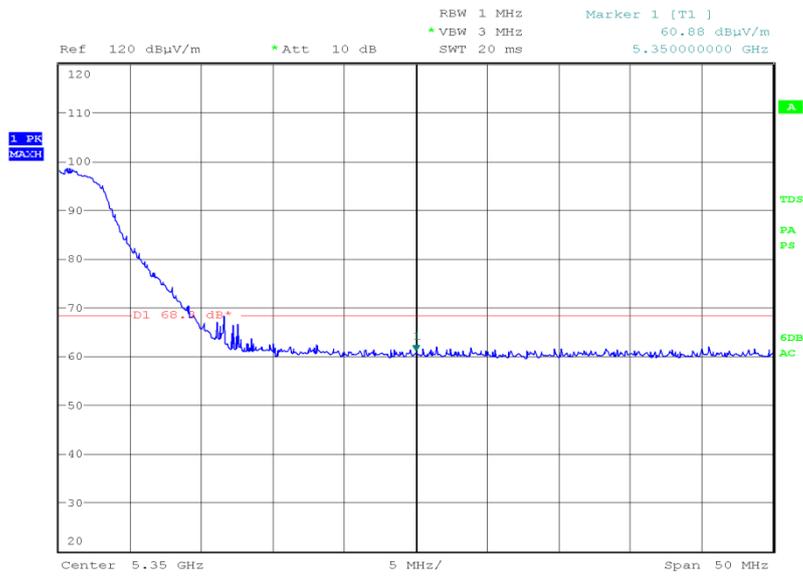


Date: 2.DEC.2014 18:53:21



5350.00 MHz

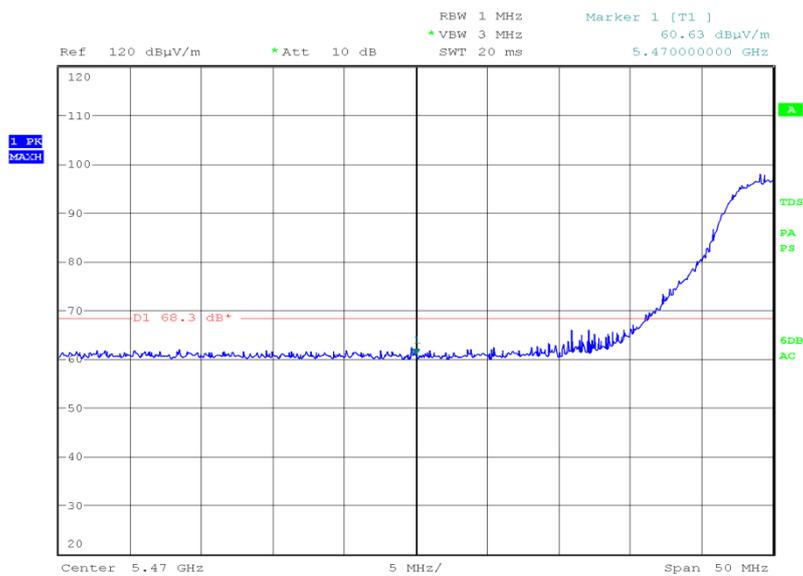
Final Peak



Date: 2.DEC.2014 18:57:21

5470.00 MHz

Final Peak



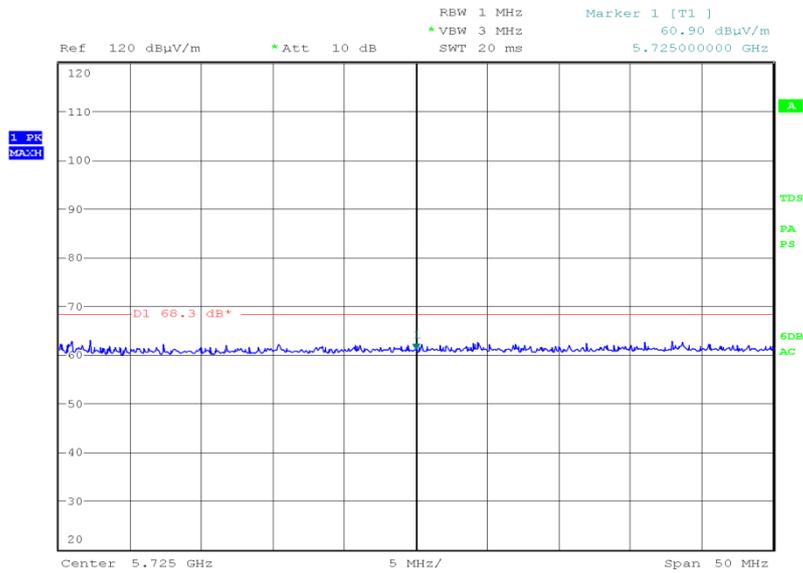
Date: 2.DEC.2014 19:09:09



Product Service

5725.00 MHz

Final Peak



Date: 2.DEC.2014 19:18:50

Remark

The test was performed on MCS0 because this was deemed the worst case data rate for 6 dB Bandwidth and Conducted Output Power.

Limit

Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



2.6 FREQUENCY STABILITY

2.6.1 Specification Reference

FCC CFR 47 Part 15E, Clause 2.1055 and 15.407 (g)

2.6.2 Equipment Under Test and Modification State

S/N: IMEI 004401115303360 - Modification State 0

2.6.3 Date of Test

1 December 2014

2.6.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.6.5 Test Procedure

The EUT was set to transmit at maximum power on bottom and/or top channels in the band of operation on the data rate pre-determined to give the highest level of average output power.

The EUT was connected to a spectrum analyser via a cable and attenuator and the resultant trace was displayed on screen with the operating band edges shown as an emission limit of -27dBm/MHz to ensure the emission is maintained with the band of operation.

Measurements were made at ambient and extremes of the manufacturer declared temperature range with the maximum and minimum end point battery supply voltages declared by the manufacturer.

The EUT was stabilised at each temperature variation prior to measurements being made.

2.6.6 Environmental Conditions

Ambient Temperature	21.9°C
Relative Humidity	33.1%



Product Service

2.6.7 Test Results

802.11(a)

4.0 V DC Supply

Frequency Band 1

Temperature Interval	Supply Voltage	Frequency Stability
		5180 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+50°C	4.0 V DC	Pass
	3.7 V DC	Pass

Frequency Band 2

Temperature Interval	Supply Voltage	Frequency Stability
		5320 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+50°C	4.0 V DC	Pass
	3.7 V DC	Pass

Frequency Band 3

Temperature Interval	Supply Voltage	Frequency Stability	
		5500 MHz	5700 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+50°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass

Limit

Maintained within the band of operation under all conditions of normal operations as specified in the user's manual.
--



Product Service

802.11(ac) - 5 GHz 20 MHz BW

4.0 V DC Supply

Frequency Band 1

Temperature Interval	Supply Voltage	Frequency Stability	
		5180 MHz	
-10°C	4.0 V DC	Pass	
	3.7 V DC	Pass	
+50°C	4.0 V DC	Pass	
	3.7 V DC	Pass	

Frequency Band 2

Temperature Interval	Supply Voltage	Frequency Stability	
		5320 MHz	
-10°C	4.0 V DC	Pass	
	3.7 V DC	Pass	
+50°C	4.0 V DC	Pass	
	3.7 V DC	Pass	

Frequency Band 3

Temperature Interval	Supply Voltage	Frequency Stability	
		5500 MHz	5700 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+50°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass

Limit

Maintained within the band of operation under all conditions of normal operations as specified in the user's manual.
--



Product Service

802.11(ac) - 5 GHz 40 MHz BW

4.0 V DC Supply

Frequency Band 1

Temperature Interval	Supply Voltage	Frequency Stability
		5190 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+50°C	4.0 V DC	Pass
	3.7 V DC	Pass

Frequency Band 2

Temperature Interval	Supply Voltage	Frequency Stability
		5310 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+50°C	4.0 V DC	Pass
	3.7 V DC	Pass

Frequency Band 3

Temperature Interval	Supply Voltage	Frequency Stability	
		5510 MHz	5670 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+50°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass

Limit

Maintained within the band of operation under all conditions of normal operations as specified in the user's manual.
--



Product Service

802.11(ac) - 5 GHz 80 MHz BW

4.0 V DC Supply

Frequency Band 1

Temperature Interval	Supply Voltage	Frequency Stability	
		5210 MHz	
-10°C	4.0 V DC	Pass	
	3.7 V DC	Pass	
+50°C	4.0 V DC	Pass	
	3.7 V DC	Pass	

Frequency Band 2

Temperature Interval	Supply Voltage	Frequency Stability	
		5290 MHz	
-10°C	4.0 V DC	Pass	
	3.7 V DC	Pass	
+50°C	4.0 V DC	Pass	
	3.7 V DC	Pass	

Frequency Band 3

Temperature Interval	Supply Voltage	Frequency Stability	
		5530 MHz	5610 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+50°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass

Limit

Maintained within the band of operation under all conditions of normal operations as specified in the user's manual.
--



Product Service

802.11(n) - 5 GHz 20 MHz BW

4.0 V DC Supply

Frequency Band 1

Temperature Interval	Supply Voltage	Frequency Stability	
		5180 MHz	
-10°C	4.0 V DC	Pass	
	3.7 V DC	Pass	
+50°C	4.0 V DC	Pass	
	3.7 V DC	Pass	

Frequency Band 2

Temperature Interval	Supply Voltage	Frequency Stability	
		5320 MHz	
-10°C	4.0 V DC	Pass	
	3.7 V DC	Pass	
+50°C	4.0 V DC	Pass	
	3.7 V DC	Pass	

Frequency Band 3

Temperature Interval	Supply Voltage	Frequency Stability	
		5500 MHz	5700 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+50°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass

Limit

Maintained within the band of operation under all conditions of normal operations as specified in the user's manual.
--



Product Service

802.11(n) - 5 GHz 40 MHz BW

4.0 V DC Supply

Frequency Band 1

Temperature Interval	Supply Voltage	Frequency Stability
		5190 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+50°C	4.0 V DC	Pass
	3.7 V DC	Pass

Frequency Band 2

Temperature Interval	Supply Voltage	Frequency Stability
		5310 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+50°C	4.0 V DC	Pass
	3.7 V DC	Pass

Frequency Band 3

Temperature Interval	Supply Voltage	Frequency Stability	
		5510 MHz	5670 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+50°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass

Limit

Maintained within the band of operation under all conditions of normal operations as specified in the user's manual.
--



Product Service

SECTION 3

TEST EQUIPMENT USED



3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.1- AC Line Conducted Emissions					
Transient Limiter	Hewlett Packard	11947A	15	12	10-Dec-2014
3 phase LISN	Rohde & Schwarz	ESH2-Z5	323	12	16-Jan-2015
Screened Room (5)	Rainford	Rainford	1545	24	10-Jan-2015
Compliance 5 Emissions	Schaffner	C5e Software V.5.00.00	3275	-	N/A - Software
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	27-Oct-2015
Section 2.2 - 26 dB Bandwidth					
20dB/2W Attenuator	Narda	4772-20	462	-	TU
Power Supply Unit	Farnell	D302T	609	-	O/P Mon
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	18-Jan-2015
Hygrometer	Rotronic	I-1000	3220	12	24-Jul-2015
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	3-Sep-2015
True RMS Multimeter	Fluke	179	4007	12	31-Jul-2015
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	24-Sep-2015
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	18-Jan-2015
PXA Signal Analyser	Agilent Technologies	N9030A PXA	4409	12	27-Feb-2015
Section 2.3 - Power Limits					
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	234	12	2-May-2015
20dB/2W Attenuator	Narda	4772-20	462	-	TU
Power Supply Unit	Farnell	D302T	609	-	O/P Mon
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	1002	12	19-Sep-2015
Screened Room (5)	Rainford	Rainford	1545	24	10-Jan-2015
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Antenna (DRG Horn)	ETS-LINDGREN	3115	3125	12	16-Jul-2015
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	3171	12	18-Sep-2015
Hygrometer	Rotronic	I-1000	3220	12	24-Jul-2015
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	27-Oct-2015
7m Armoured RF Cable	SSI Cable Corp.	1501-13-13-7m WA(-)	3600	-	TU
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	mature GmbH	TAM 4.0-P	3916	-	TU
Mast Controller	mature GmbH	NCD	3917	-	TU
P-Series Power Meter	Agilent Technologies	N1911A	3980	12	22-Sep-2015
50 MHz-18 GHz Wideband Power Sensor	Agilent Technologies	N1921A	3982	12	22-Sep-2015
True RMS Multimeter	Fluke	179	4007	12	31-Jul-2015
Section 2.4- Peak Power Spectral Density					
20dB/2W Attenuator	Narda	4772-20	462	-	TU
Power Supply Unit	Farnell	D302T	609	-	O/P Mon
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	18-Jan-2015
Hygrometer	Rotronic	I-1000	3220	12	24-Jul-2015
True RMS Multimeter	Fluke	179	4007	12	31-Jul-2015
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	18-Jan-2015
PXA Signal Analyser	Agilent Technologies	N9030A PXA	4409	12	27-Feb-2015



Product Service

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.5 - Undesirable Emission Limits					
Antenna (Double Ridge Guide)	Link Microtek Ltd	AM180HA-K-TU2	230	24	26-Nov-2015
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	234	12	2-May-2015
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	1002	12	19-Sep-2015
Pre-Amplifier	Phase One	PSO4-0087	1534	12	1-Oct-2015
Screened Room (5)	Rainford	Rainford	1545	24	10-Jan-2015
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Filter (Hi Pass)	Lorch	9HP7-7000-SR	2833	12	4-Feb-2015
Antenna (Bilog)	Chase	CBL6143	2904	24	10-Jun-2015
Antenna (DRG Horn)	ETS-LINDGREN	3115	3125	12	16-Jul-2015
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	3171	12	18-Sep-2015
Amplifier (8 - 18GHz)	Phase One	PS06-0061	3176	12	11-Aug-2015
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	27-Oct-2015
7m Armoured RF Cable	SSI Cable Corp.	1501-13-13-7m WA(-)	3600	-	TU
'3.5mm' - '3.5mm' RF Cable (1m)	Rhophase	3PS-1803-1000-3PS	3697	12	28-Feb-2015
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	maturu GmbH	TAM 4.0-P	3916	-	TU
Mast Controller	maturu GmbH	NCD	3917	-	TU
1 Metre K Type Cable	Rhophase	KPS-1501A-1000-KPS	4105	12	7-Nov-2015
Cable 1503 2M 2.92(P)m 2.92(P)m	Rhophase	KPS-1503A-2000-KPS	4293	12	3-Jun-2015
1GHz to 8GHz Low Noise Amplifier	Wright Technologies	APS04-0085	4365	12	1-Oct-2015
Section 2.6 - Frequency Stability					
Digital Temperature Indicator + T/C	Fluke	51	412	12	12-Feb-2015
20dB/2W Attenuator	Narda	4772-20	462	-	TU
Temperature Chamber	Montford	2F3	467	-	O/P Mon
Power Supply Unit	Farnell	D302T	609	-	O/P Mon
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	18-Jan-2015
Hygrometer	Rotronic	I-1000	3220	12	24-Jul-2015
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	3-Sep-2015
True RMS Multimeter	Fluke	179	4007	12	31-Jul-2015
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	24-Sep-2015
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	18-Jan-2015
PXA Signal Analyser	Agilent Technologies	N9030A PXA	4409	12	27-Feb-2015

TU – Traceability Unscheduled

O/P MON – Output Monitored with Calibrated Equipment



3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	MU
Frequency Stability	± 90.32 Hz
Power Limits	Conducted: ± 0.70 dB Radiated: 30MHz to 1GHz: ± 5.1 dB Radiated: 1GHz to 40GHz: ± 6.3 dB
26 dB Bandwidth	± 5.72 kHz
Undesirable Emission Limits	Conducted: ± 3.454 dB Radiated: ± 3.08 dB
AC Line Conducted Emissions	± 3.2 dB
Peak Power Spectral Density	± 3.0 dB



Product Service

SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT



Product Service

4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT



This report relates only to the actual item/items tested.

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

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