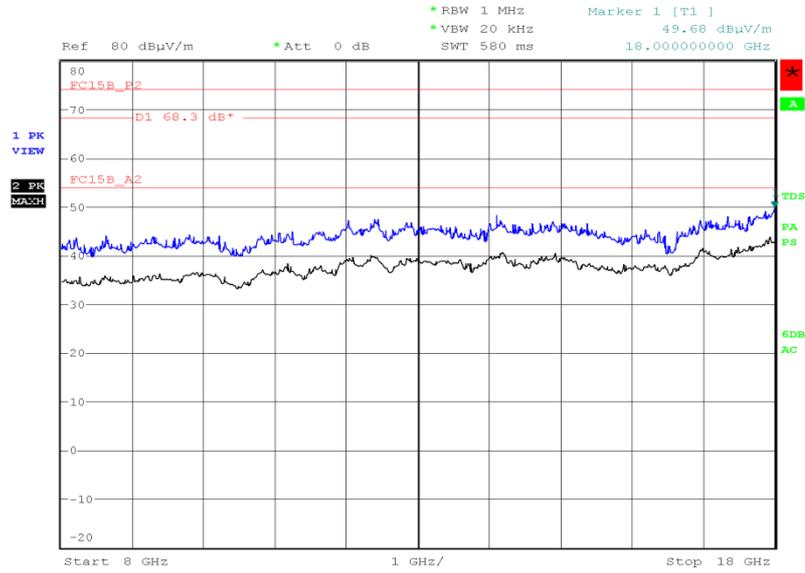


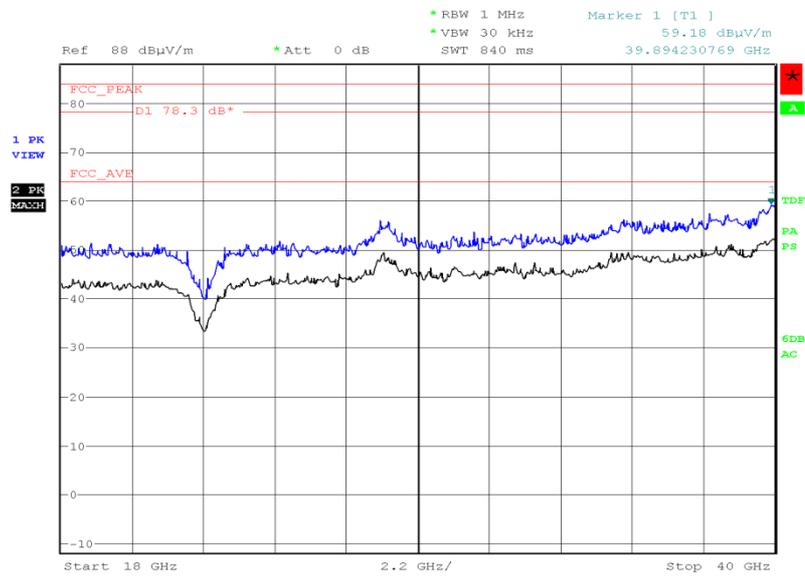


8 GHz to 18 GHz



Date: 18.JAN.2014 13:59:34

18 GHz to 40 GHz

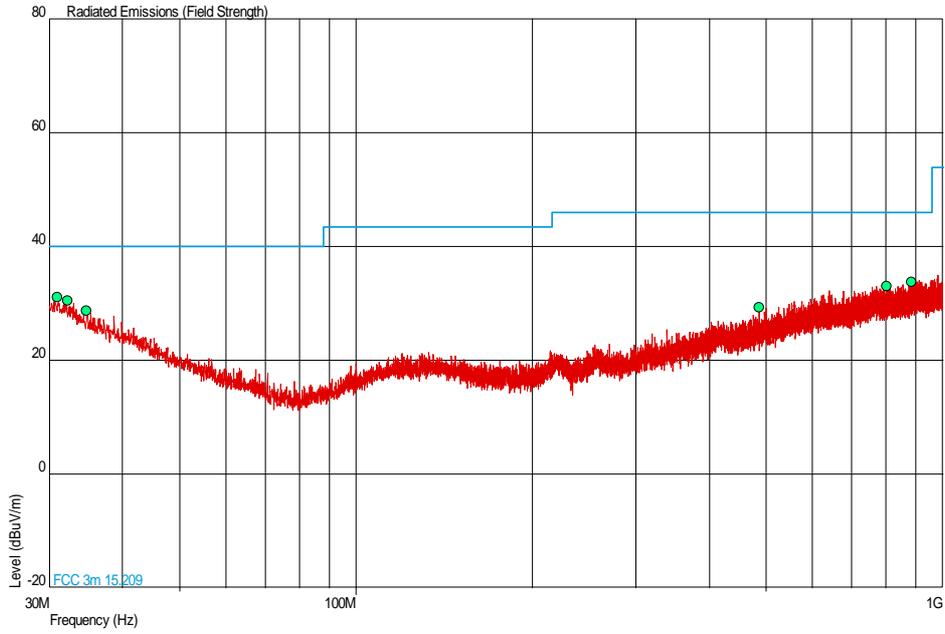


Date: 20.JAN.2014 19:49:09



5600 MHz

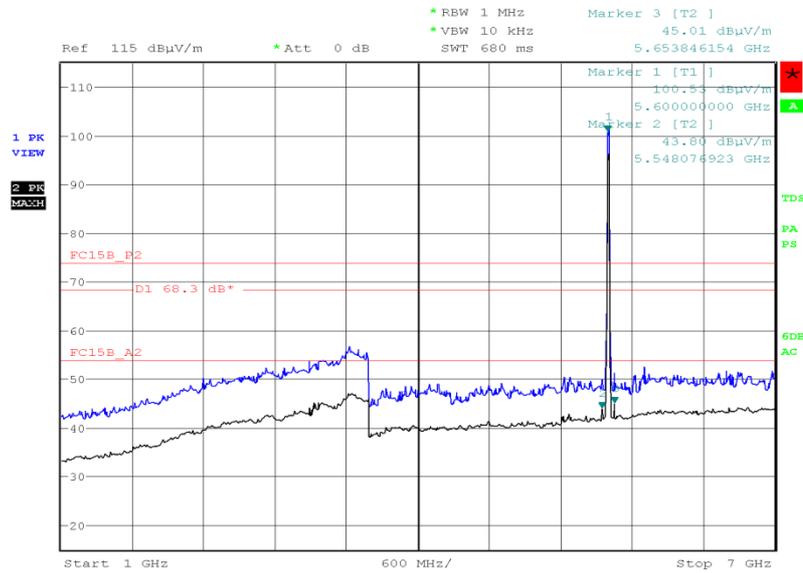
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dB μ V/m)	QP Level (μ V/m)	QP Limit (dB μ V/m)	QP Limit (μ V/m)	QP Margin (dB μ V/m)	QP Margin (μ V/m)	Angle (Deg)	Height (m)	Polarity
30.972	31.1	35.9	40.0	100	-8.9	64.1	0	0.00	Horizontal
32.231	30.5	33.5	40.0	100	-9.5	66.5	0	1.00	Vertical
34.705	28.8	27.5	40.0	100	-11.2	72.5	0	1.00	Vertical
486.143	29.3	29.2	46.0	200	-16.7	170.8	0	1.00	Vertical
801.587	33.0	44.7	46.0	200	-13.0	155.3	0	1.00	Vertical
885.977	33.8	49.0	46.0	200	-12.2	151.0	0	1.00	Vertical

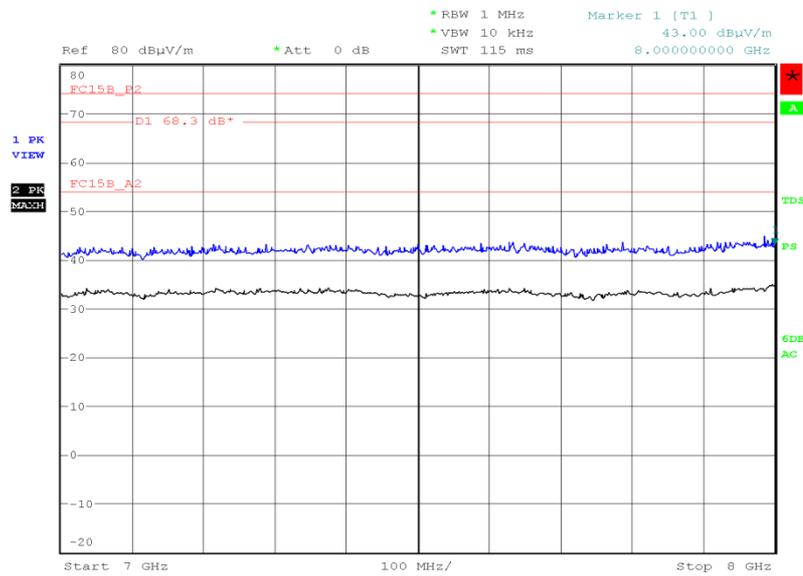


1 GHz to 7 GHz



Date: 15.JAN.2014 16:27:31

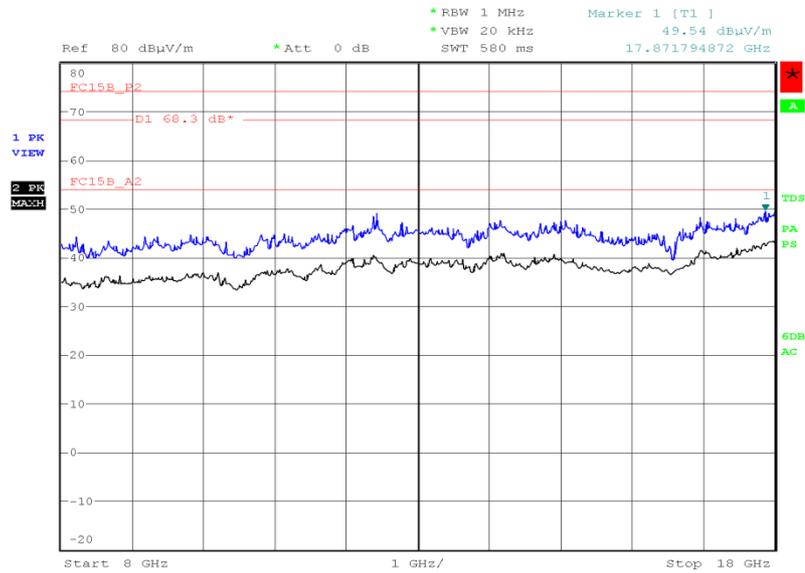
7 GHz to 8 GHz



Date: 18.JAN.2014 11:48:15

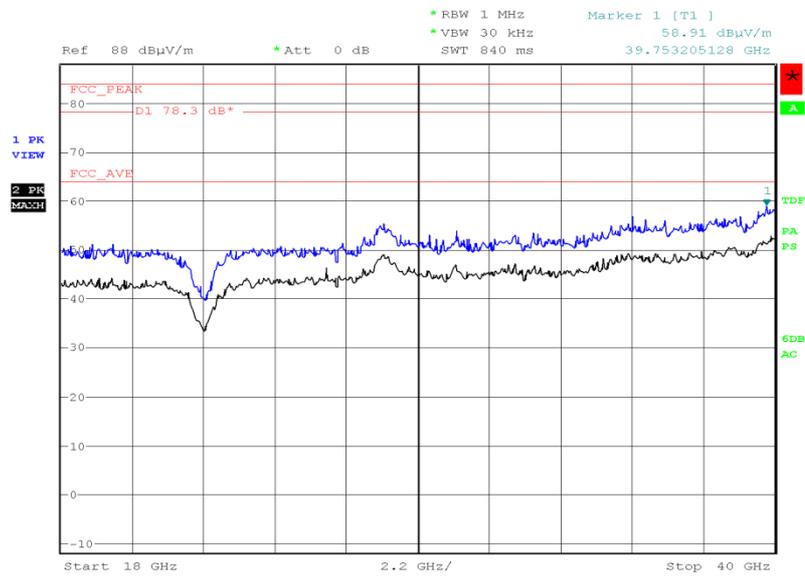


8 GHz to 18 GHz



Date: 18.JAN.2014 14:09:51

18 GHz to 40 GHz

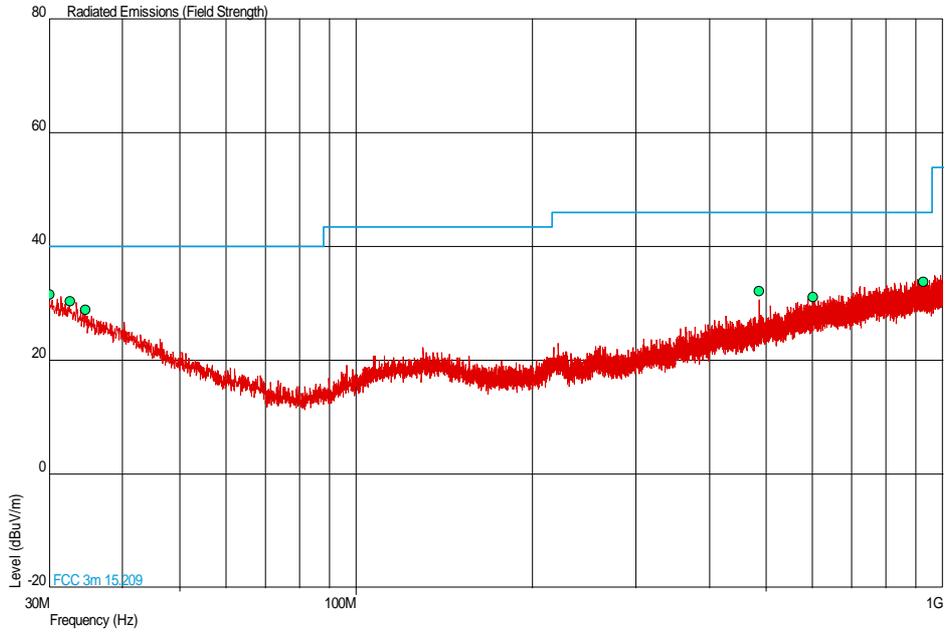


Date: 20.JAN.2014 20:03:25



5700 MHz

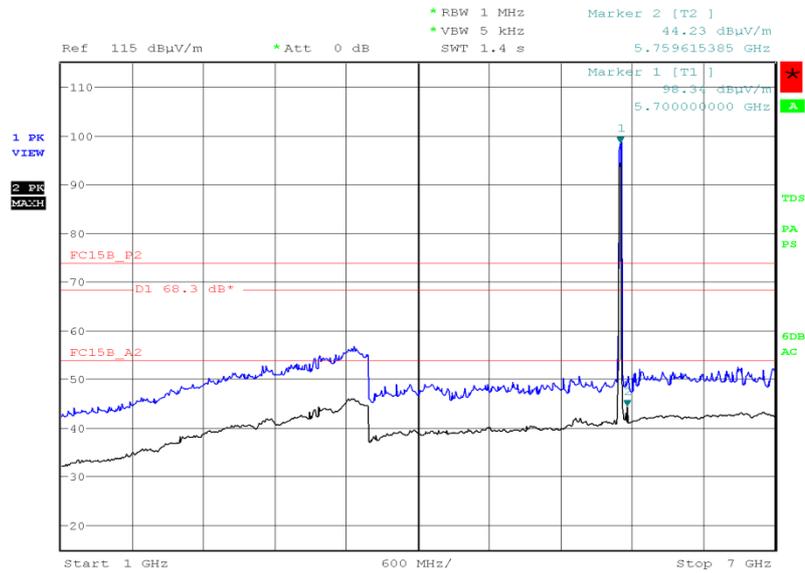
30 MHz to 1 GHz



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
30.049	31.5	37.6	40.0	100	-8.5	62.4	0	1.00	Vertical
32.522	30.4	33.1	40.0	100	-9.6	66.9	0	1.00	Vertical
34.608	28.8	27.5	40.0	100	-11.2	72.5	0	1.00	Vertical
486.191	32.1	40.3	46.0	200	-13.9	159.7	0	1.00	Vertical
601.767	31.1	35.9	46.0	200	-14.9	164.1	0	1.00	Vertical
926.347	33.8	49.0	46.0	200	-12.2	151.0	0	1.00	Vertical

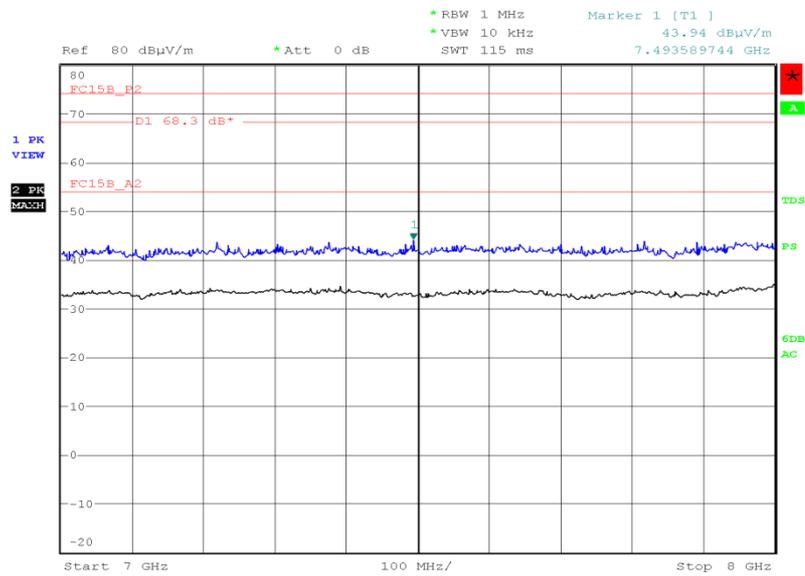


1 GHz to 7 GHz



Date: 15.JAN.2014 16:45:04

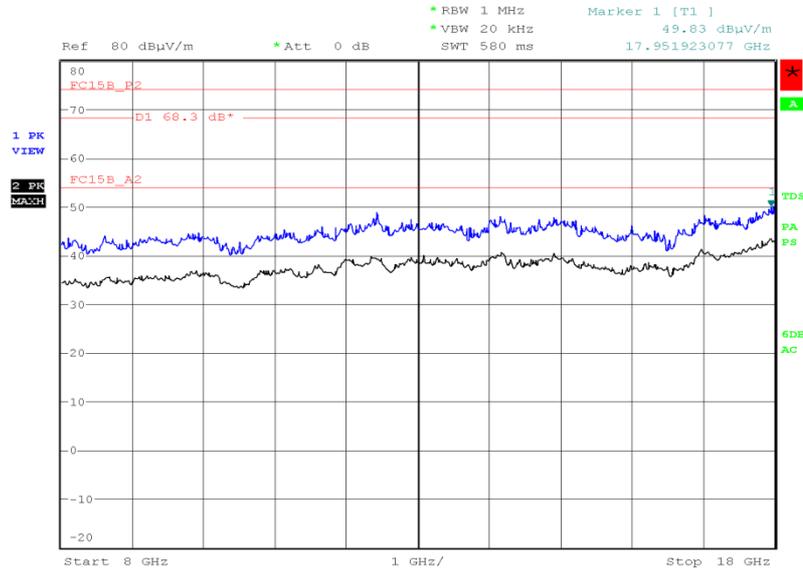
7 GHz to 8 GHz



Date: 18.JAN.2014 11:52:27

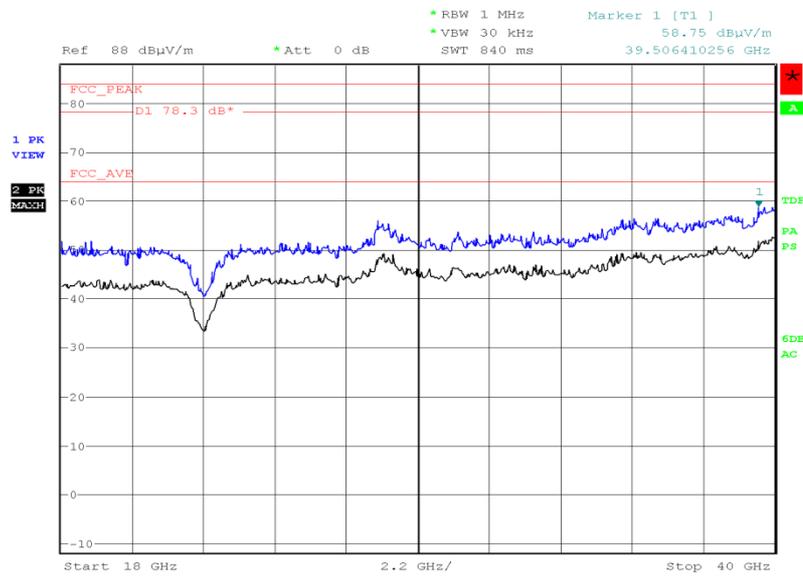


8 GHz to 18 GHz



Date: 18.JAN.2014 14:25:06

18 GHz to 40 GHz



Date: 20.JAN.2014 20:14:58

Limit

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

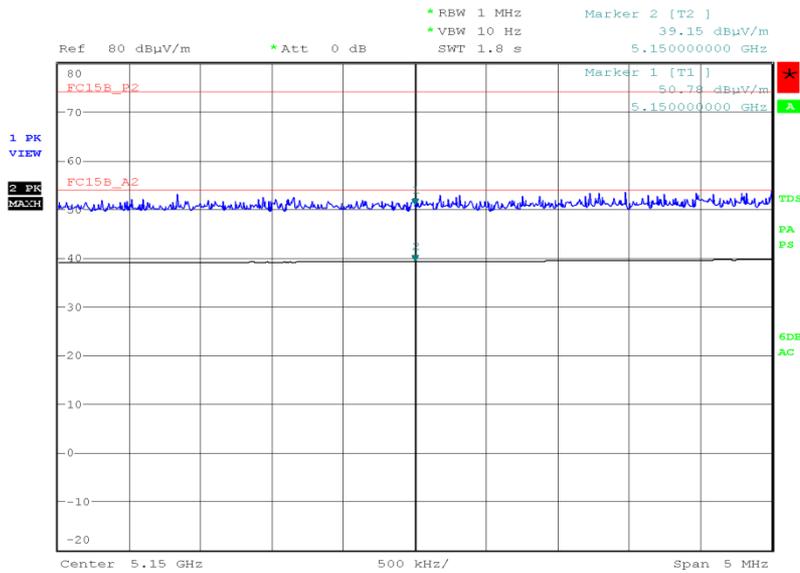


Product Service

Band Edge Emissions

5180 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	50.78	39.15

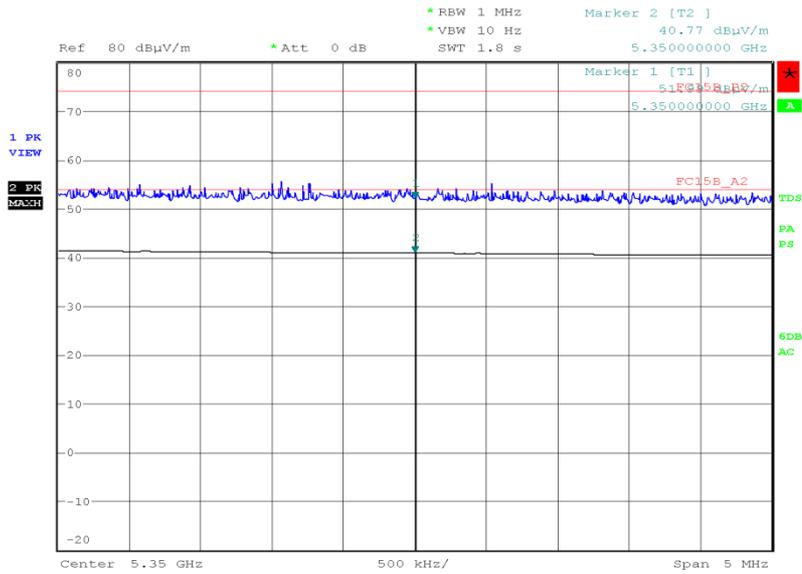


Date: 13.JAN.2014 17:21:58



5320 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	51.99	40.77

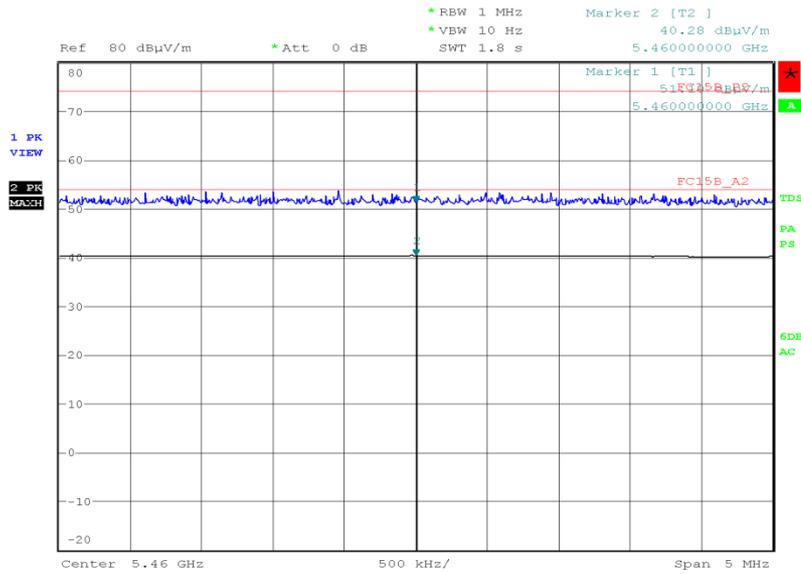


Date: 13.JAN.2014 17:47:04



5500 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	51.10	40.28



Date: 13.JAN.2014 17:56:14

Limit

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

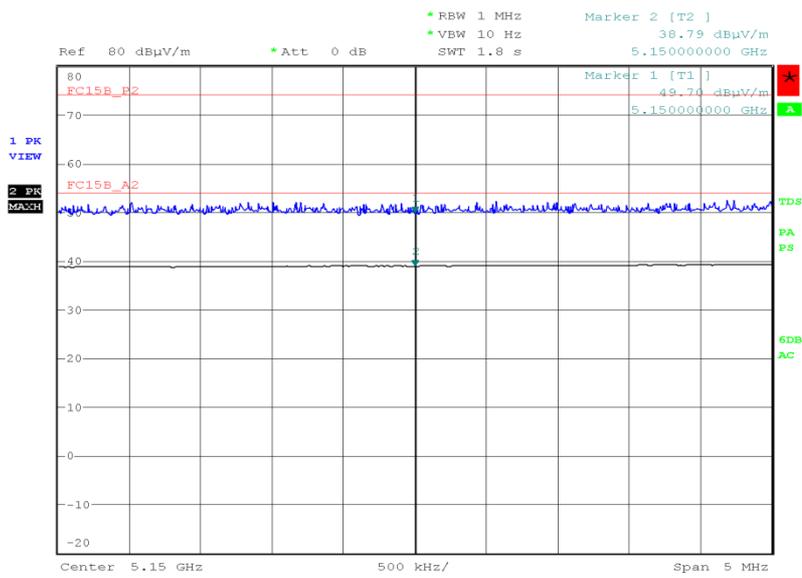


Product Service

Band Edge Emissions

5180 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	49.70	38.79



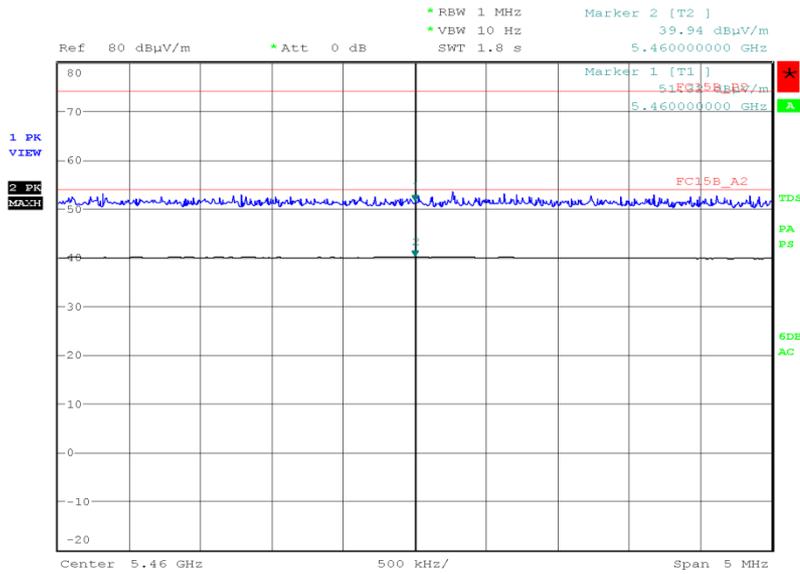
Date: 13.JAN.2014 20:34:53



Product Service

5500 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	51.32	39.94



Date: 13.JAN.2014 21:22:29

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

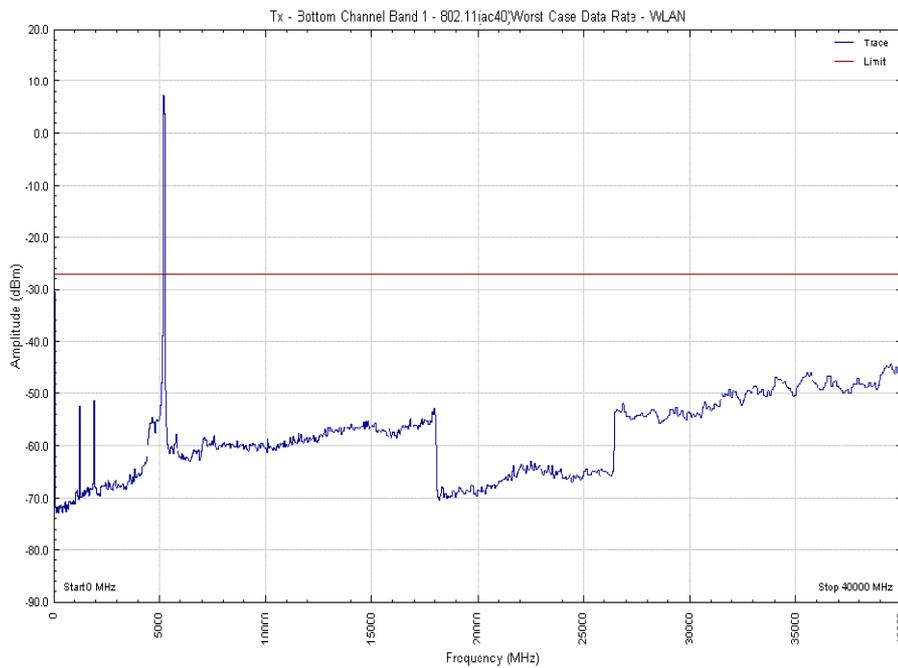
Spurious Conducted Emissions

MCS0

Frequency Band 1

5190 MHz

9 kHz to 40 GHz

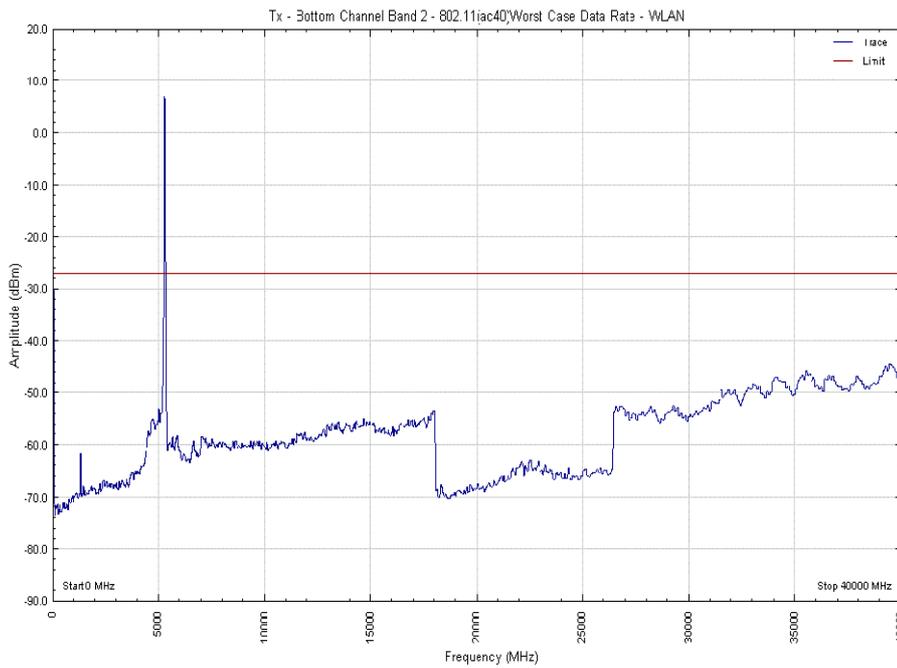




Frequency Band 2

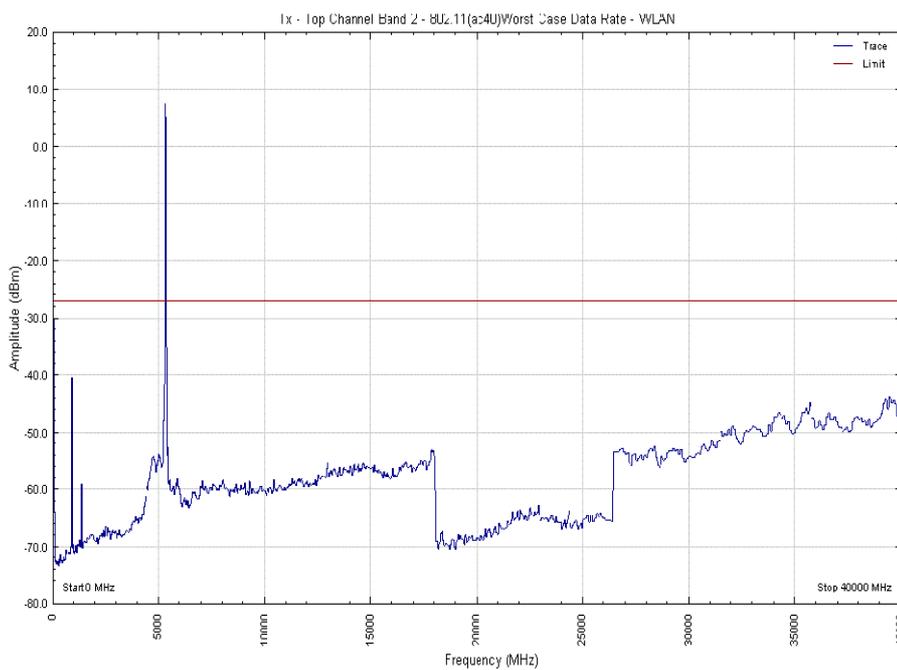
5270 MHz

9 kHz to 40 GHz



5310 MHz

9 kHz to 40 GHz

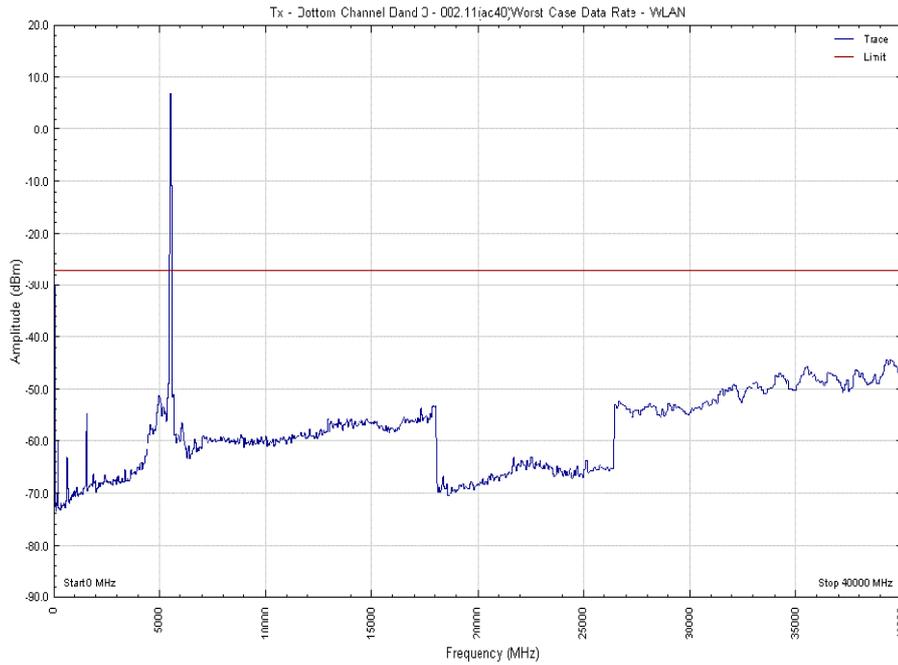




Frequency Band 3

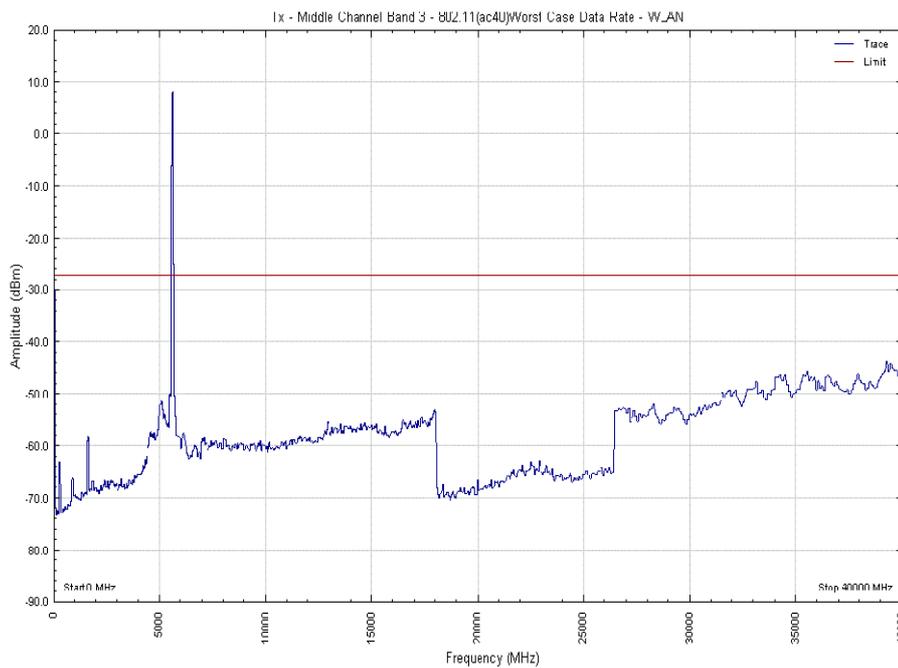
5510 MHz

9 kHz to 40 GHz



5590 MHz

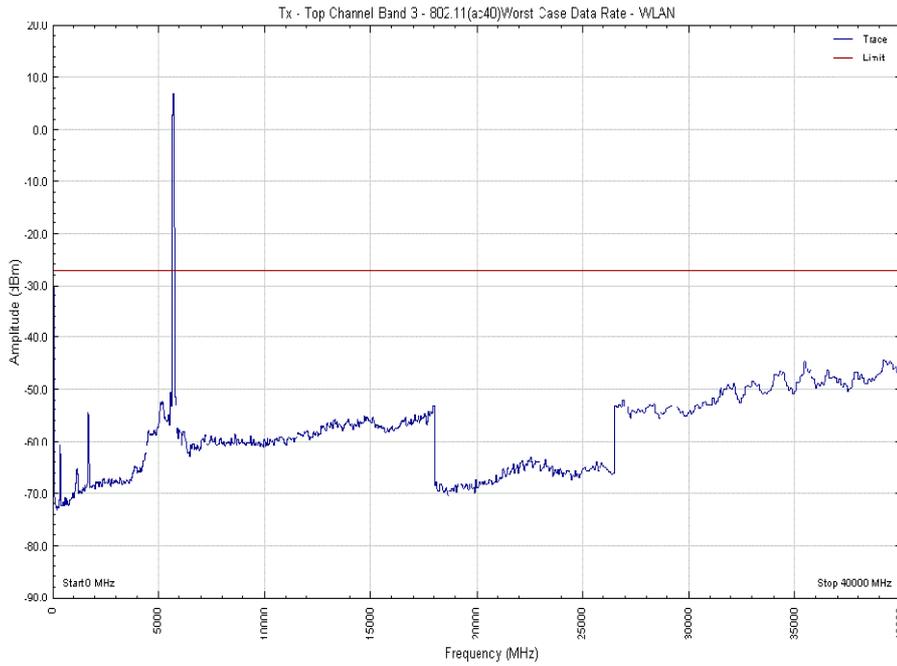
9 kHz to 40 GHz





5670 MHz

9 kHz to 40 GHz



Limit Clause

Band of Operation (MHz)	Limit
5150 to 5250	-27 dBm/MHz
5250 to 5350	-27 dBm/MHz
5470 to 5725	-27 dBm/MHz
5725 to 5825	(5715 to 5725 MHz) -17 dBm/MHz (5825 to 5835 MHz) -17 dBm/MHz (<5715 and > 5835 MHz) -27 dBm/MHz



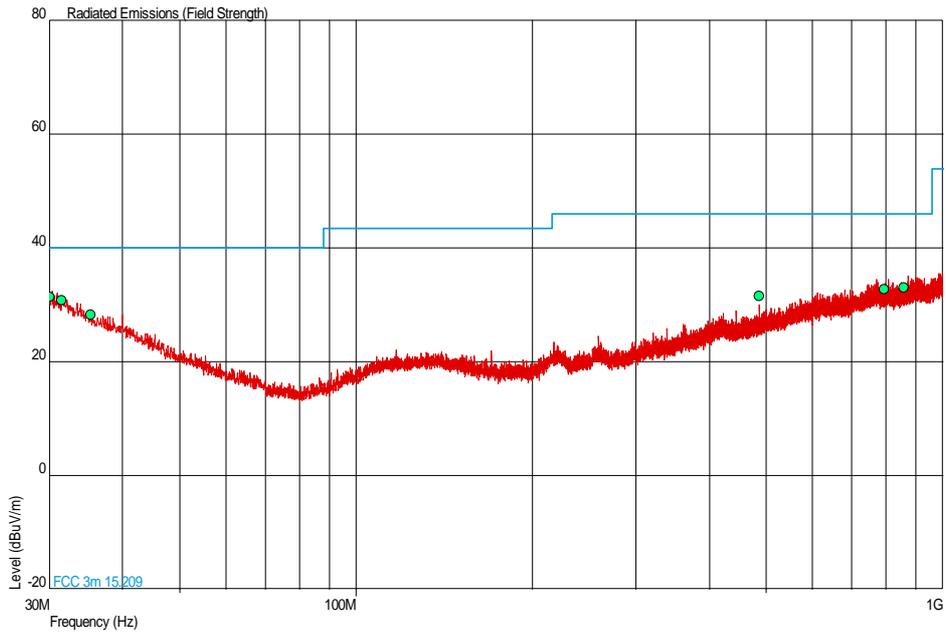
Product Service

Spurious Radiated Emissions

Frequency Band 1

5190 MHz

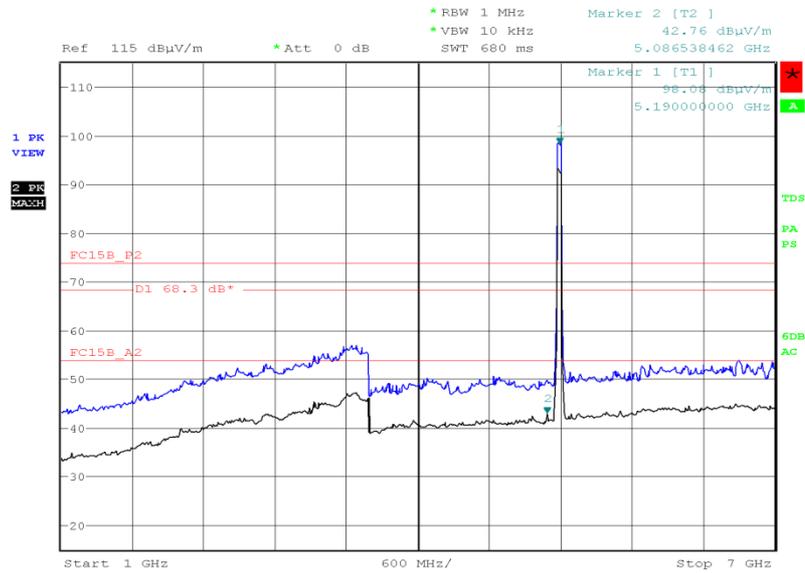
30 MHz to 1 GHz



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
30.048	31.5	37.6	40.0	100	-8.5	62.4	131	1.00	Horizontal
31.456	30.9	35.1	40.0	100	-9.1	64.9	193	1.00	Horizontal
35.249	28.3	26.0	40.0	100	-11.7	74.0	149	1.06	Vertical
486.213	31.6	38.0	46.0	200	-14.4	162.0	360	1.00	Vertical
793.525	32.8	43.7	46.0	200	-13.2	156.3	247	2.23	Vertical
857.763	33.1	45.2	46.0	200	-12.9	154.8	101	1.00	Vertical

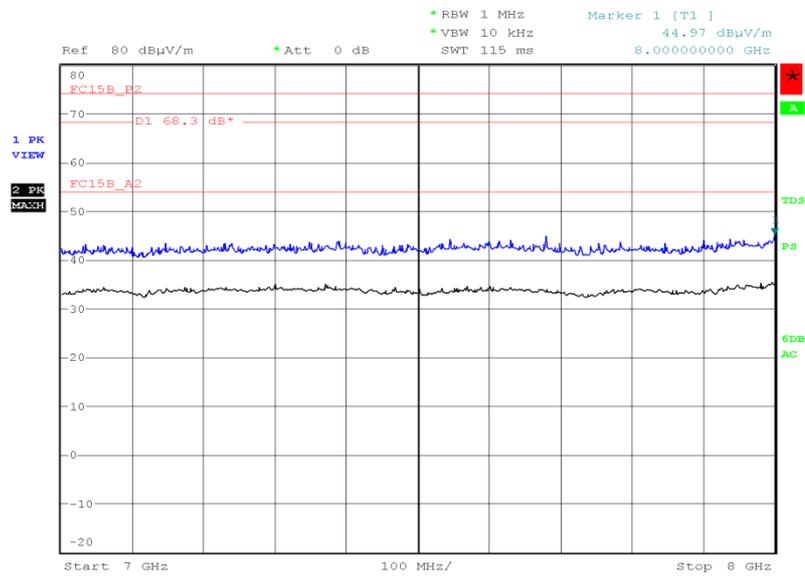


1 GHz to 7 GHz



Date: 18.JAN.2014 08:13:05

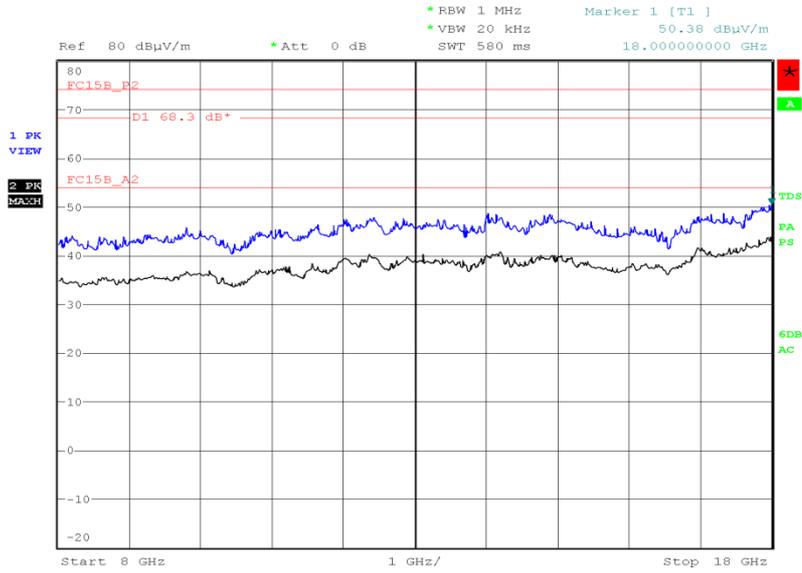
7 GHz to 8 GHz



Date: 18.JAN.2014 10:52:53

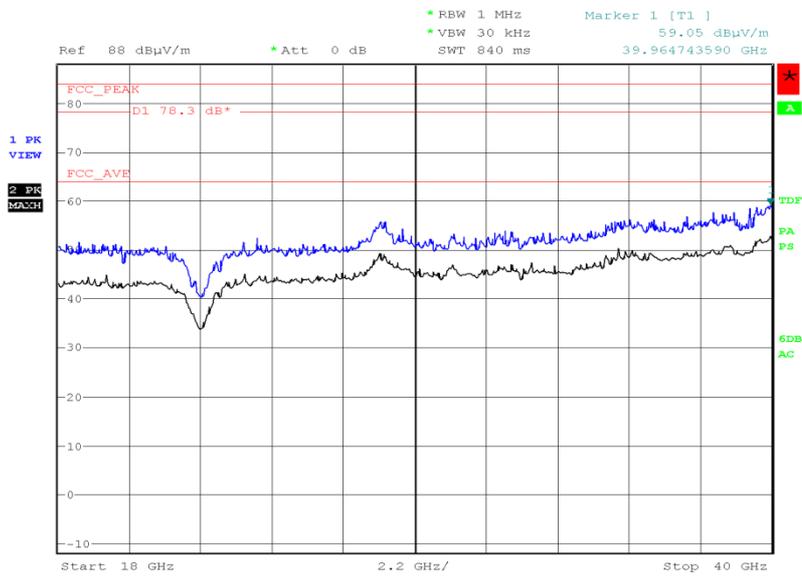


8 GHz to 18 GHz



Date: 18.JAN.2014 16:47:53

18 GHz to 40 GHz

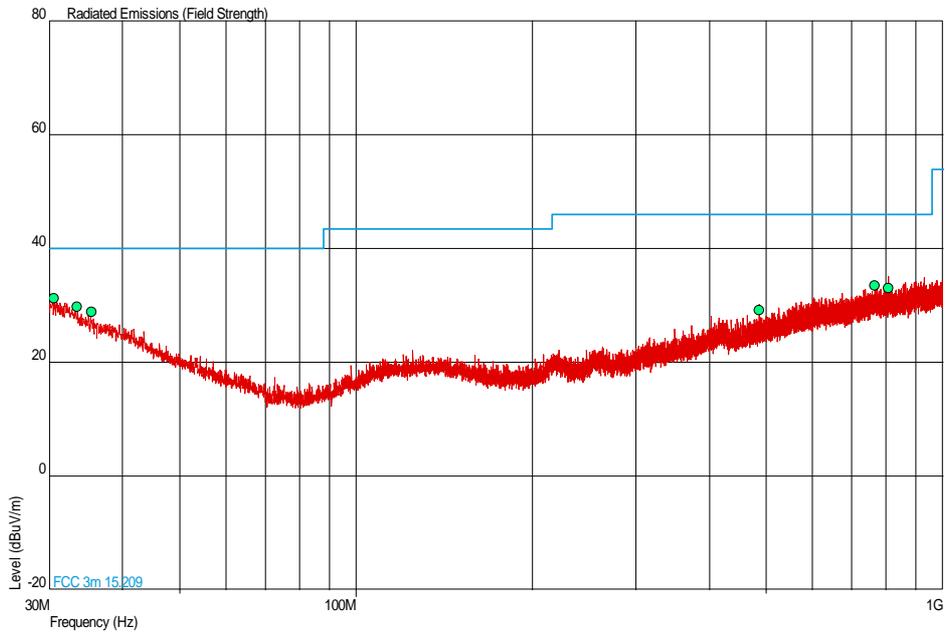


Date: 20.JAN.2014 21:47:57



5230 MHz

30 MHz to 1 GHz



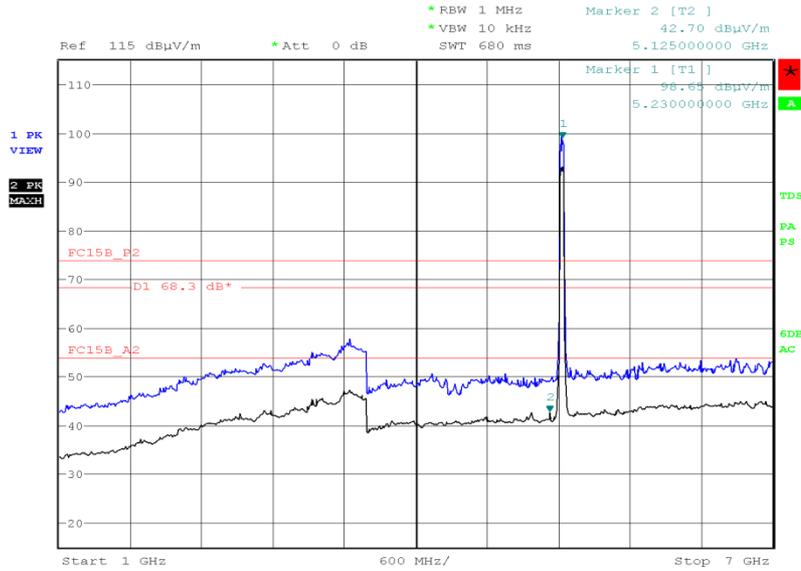
Frequency (MHz)	QP Level (dBuV/m)	QP Level (uV/m)	QP Limit (dBuV/m)	QP Limit (uV/m)	QP Margin (dBuV/m)	QP Margin (uV/m)	Angle (Deg)	Height (m)	Polarity
30.582	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
33.492	29.8	30.9	40.0	100	-10.2	69.1	0	1.00	Horizontal
35.432	28.8	27.5	40.0	100	-11.2	72.5	0	1.00	Vertical
486.143	29.2	28.8	46.0	200	-16.8	171.2	0	1.00	Vertical
765.551	33.5	47.3	46.0	200	-12.5	152.7	0	1.00	Horizontal
807.892	33.1	45.2	46.0	200	-12.9	154.8	0	1.00	Vertical



1GHz to 40GHz

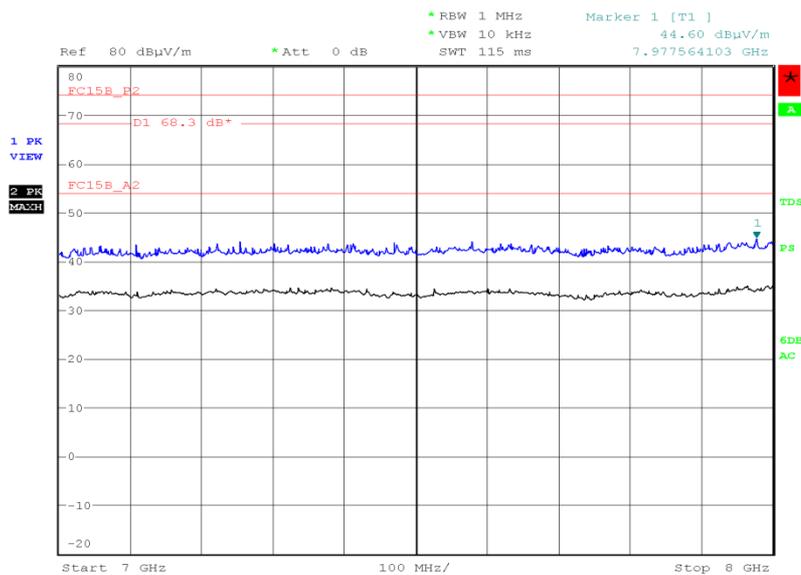
Frequency (GHz)	Antenna Polarisation	Antenna Height (cm)	EUT Arc (degrees)	Final Peak (dBµV/m)	Final Average (dBµV/m)
5.1276	Horizontal	100	155	53.62	41.34

1 GHz to 7 GHz



Date: 18.JAN.2014 08:45:32

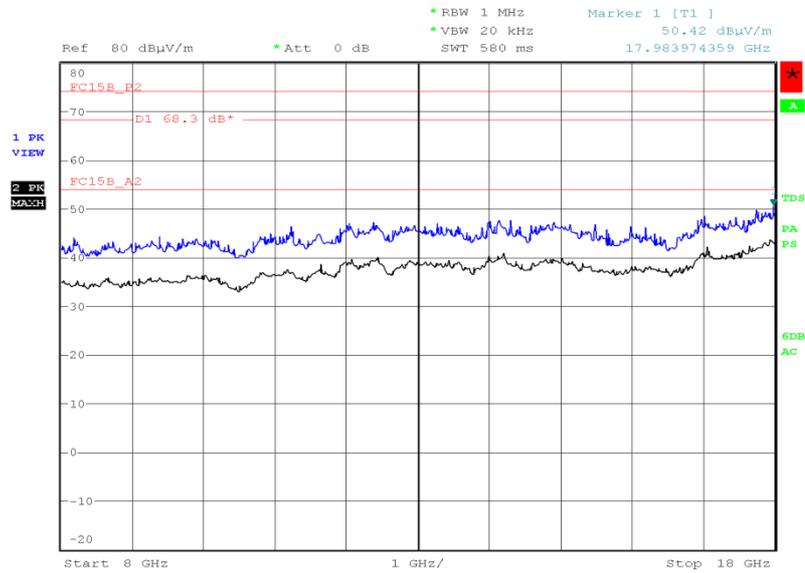
7 GHz to 8 GHz



Date: 18.JAN.2014 10:56:28

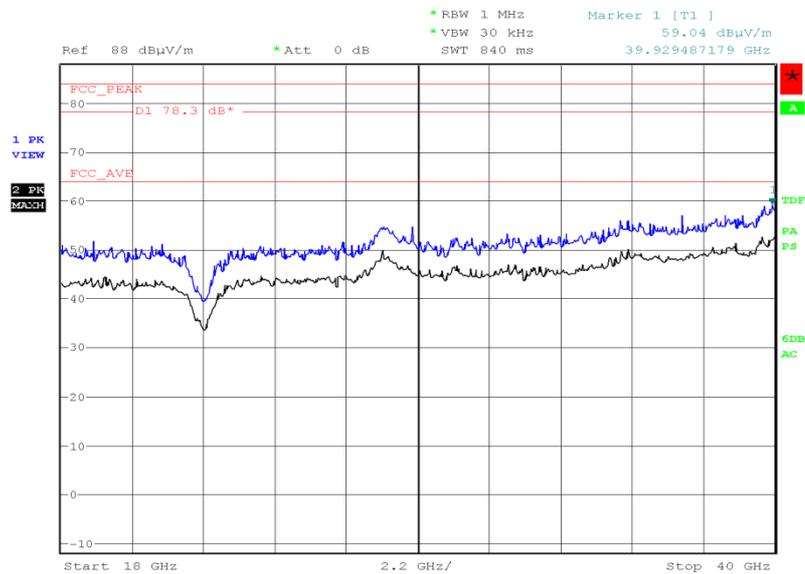


8 GHz to 18 GHz



Date: 19.JAN.2014 09:02:10

18 GHz to 40 GHz



Date: 20.JAN.2014 21:58:33

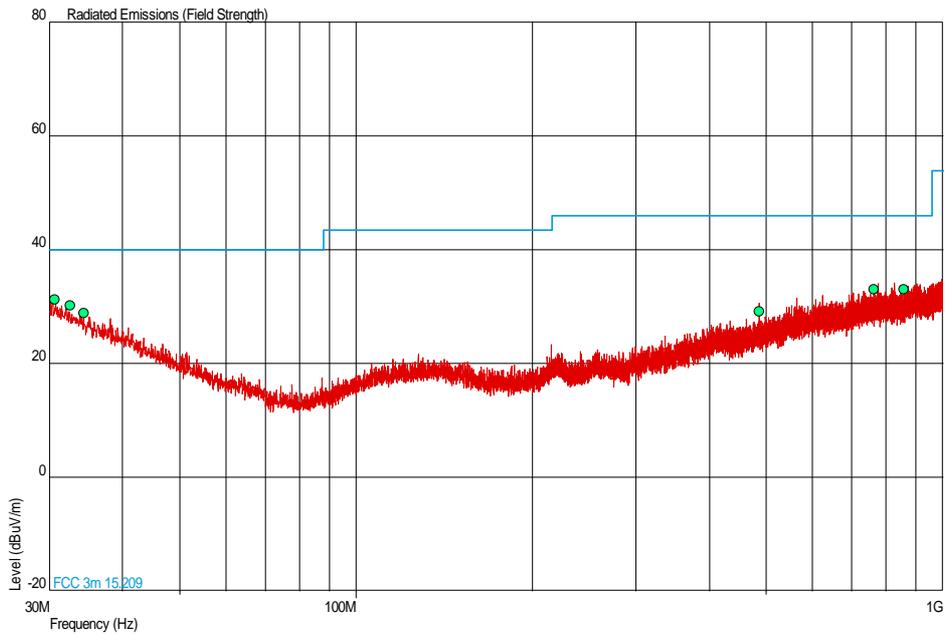


Product Service

Frequency Band 2

5270 MHz

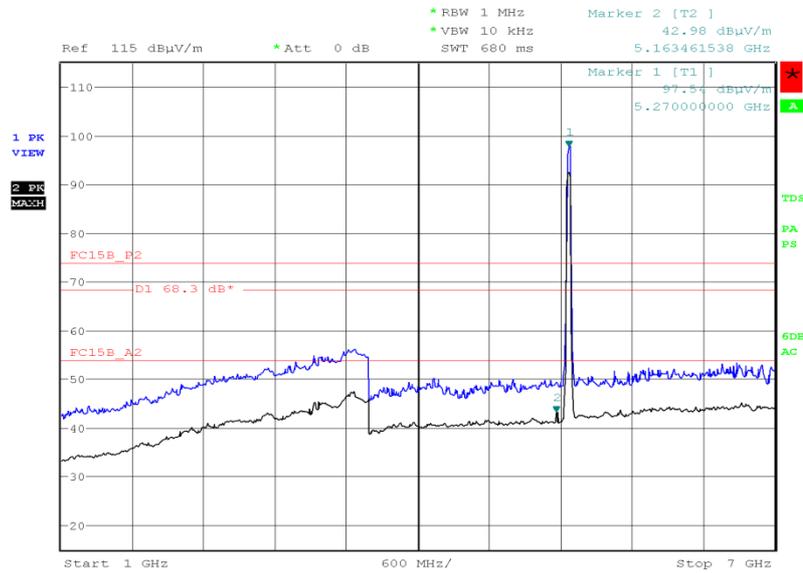
30 MHz to 1 GHz



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
30.631	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
32.619	30.2	32.4	40.0	100	-9.8	67.6	0	1.00	Vertical
34.365	29.0	28.2	40.0	100	-11.0	71.8	0	1.00	Vertical
486.143	29.1	28.5	46.0	200	-16.9	171.5	0	1.00	Vertical
762.447	33.1	45.2	46.0	200	-12.9	154.8	0	1.00	Vertical
858.089	33.1	45.2	46.0	200	-12.9	154.8	0	1.00	Vertical

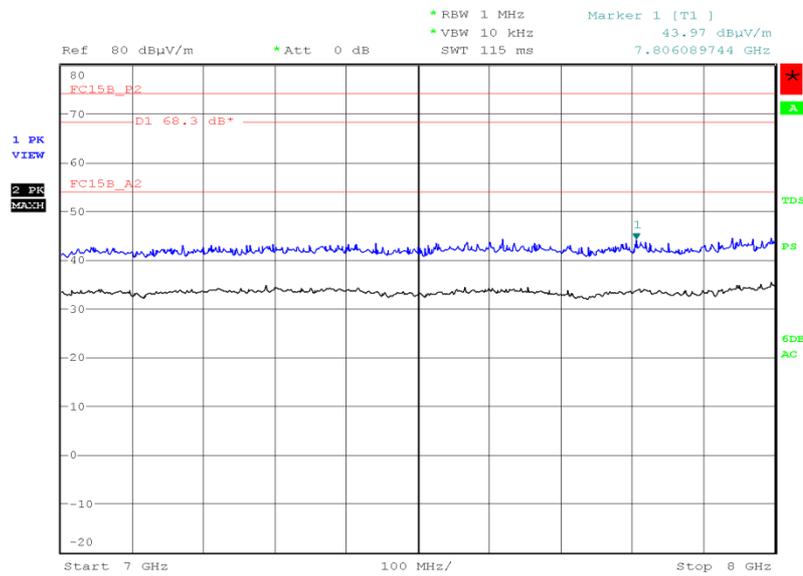


1 GHz to 7 GHz



Date: 18.JAN.2014 09:07:39

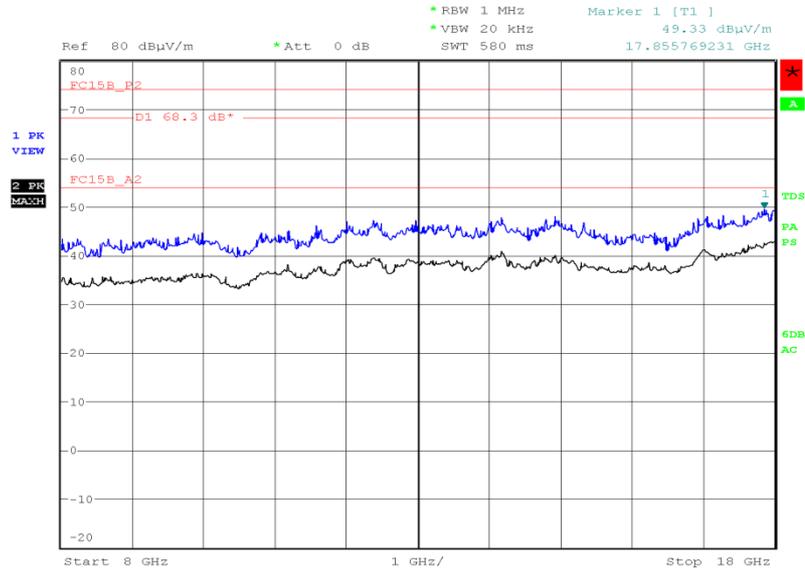
7 GHz to 8 GHz



Date: 18.JAN.2014 10:59:38

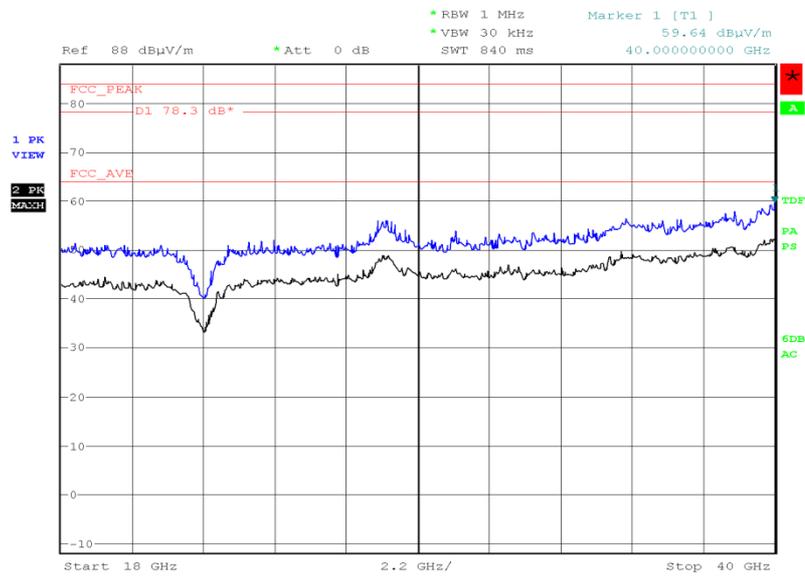


8 GHz to 18 GHz



Date: 19.JAN.2014 08:30:49

18 GHz to 40 GHz

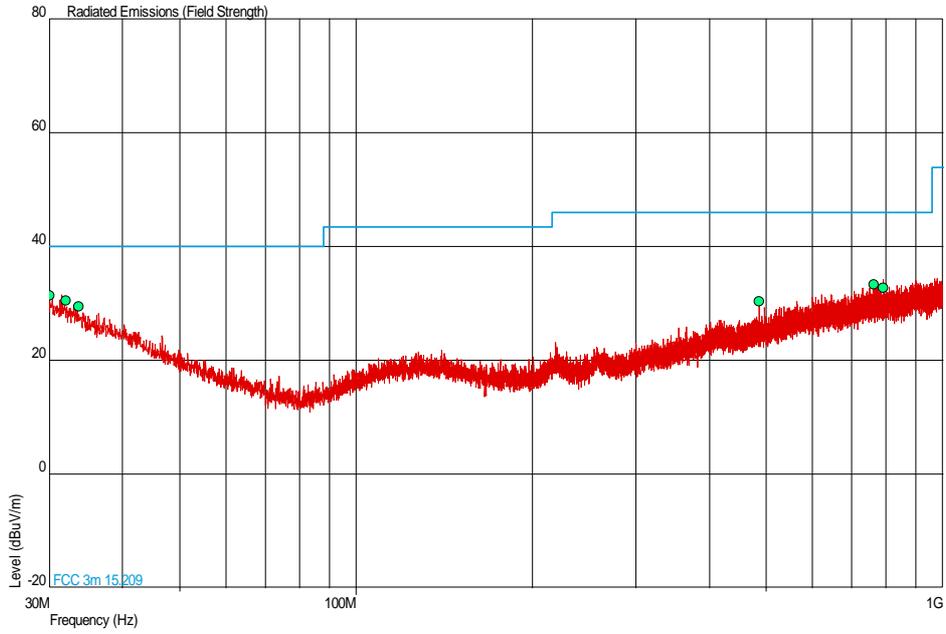


Date: 20.JAN.2014 22:10:09



5310 MHz

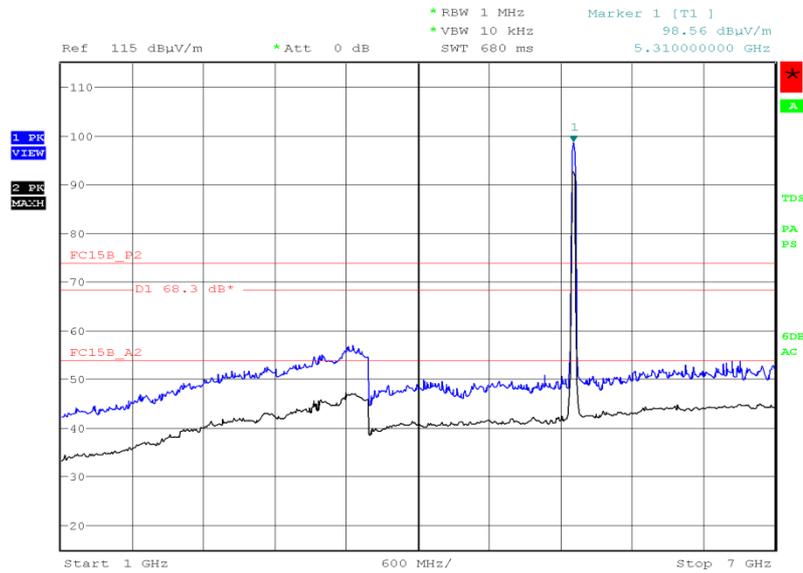
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dB μ V/m)	QP Level (μ V/m)	QP Limit (dB μ V/m)	QP Limit (μ V/m)	QP Margin (dB μ V/m)	QP Margin (μ V/m)	Angle (Deg)	Height (m)	Polarity
30.049	31.5	37.6	40.0	100	-8.5	62.4	0	1.00	Vertical
32.037	30.6	33.9	40.0	100	-9.4	66.1	0	1.00	Vertical
33.686	29.5	29.9	40.0	100	-10.5	70.1	0	1.00	Vertical
486.240	30.3	32.7	46.0	200	-15.7	167.3	0	1.00	Vertical
763.660	33.4	46.8	46.0	200	-12.6	153.2	0	1.00	Vertical
791.499	32.7	43.2	46.0	200	-13.3	156.8	0	1.00	Vertical

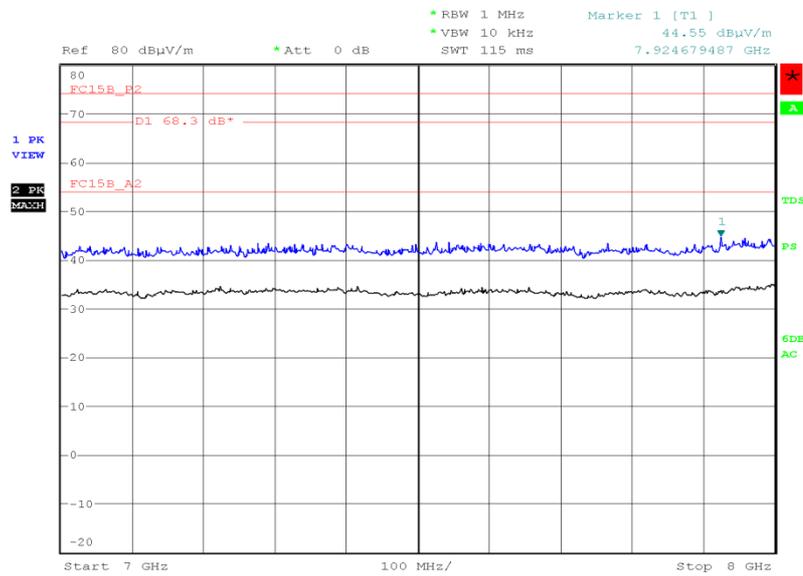


1 GHz to 7 GHz



Date: 18.JAN.2014 09:34:14

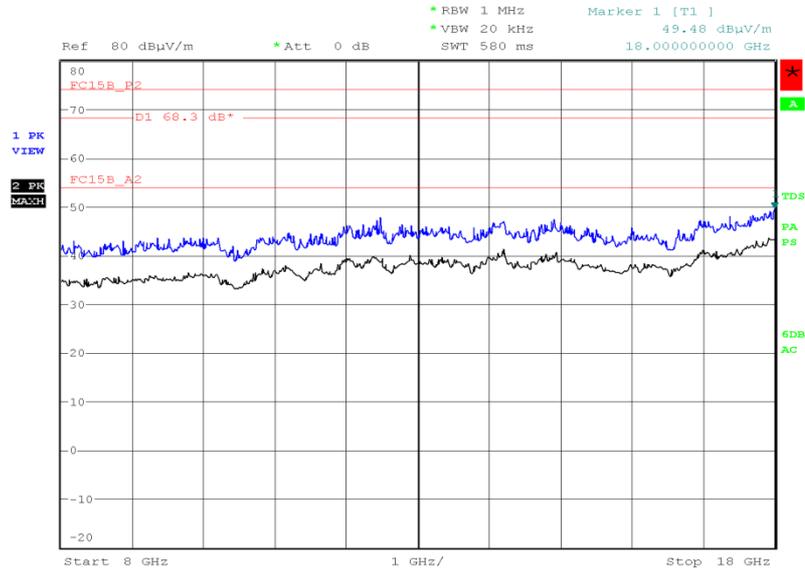
7 GHz to 8 GHz



Date: 18.JAN.2014 11:03:03

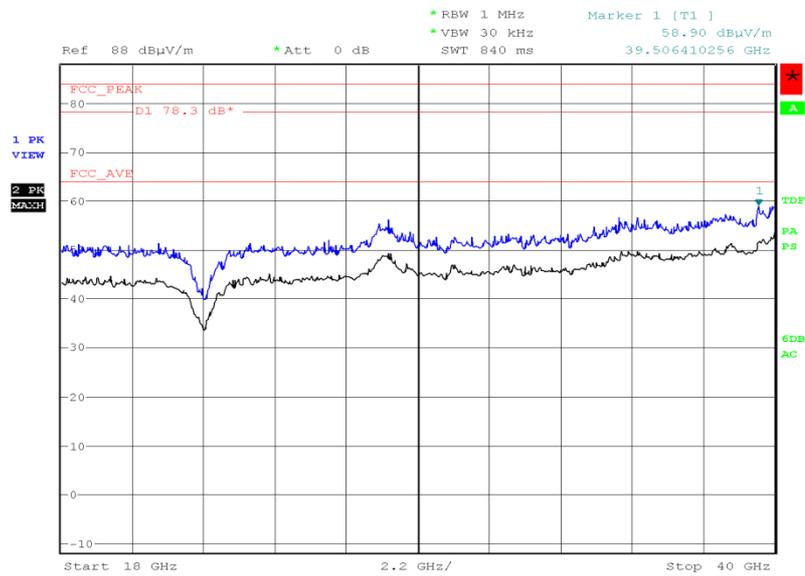


8 GHz to 18 GHz



Date: 19.JAN.2014 08:44:00

18 GHz to 40 GHz



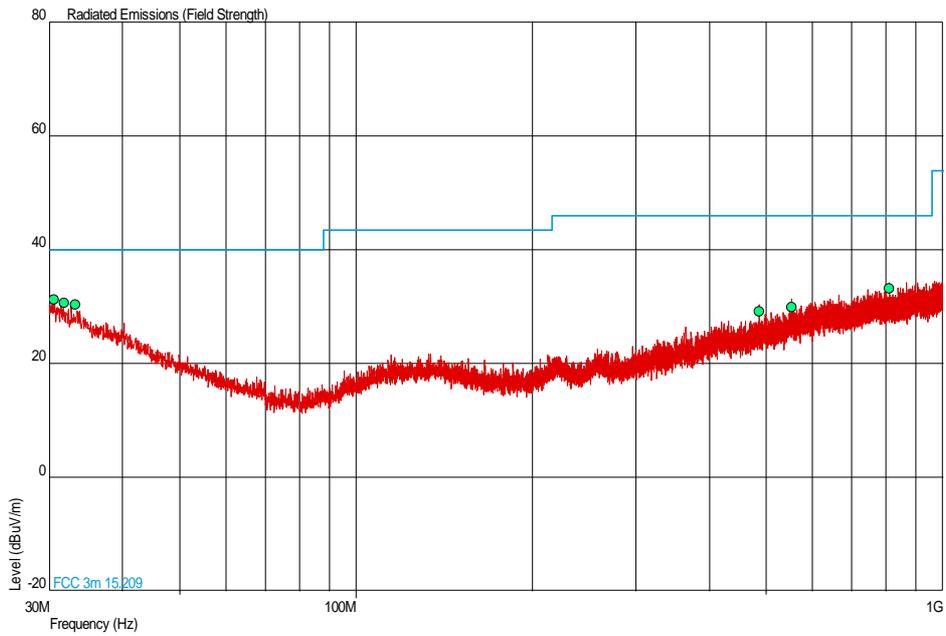
Date: 20.JAN.2014 22:24:25



Frequency Band 3

5510 MHz

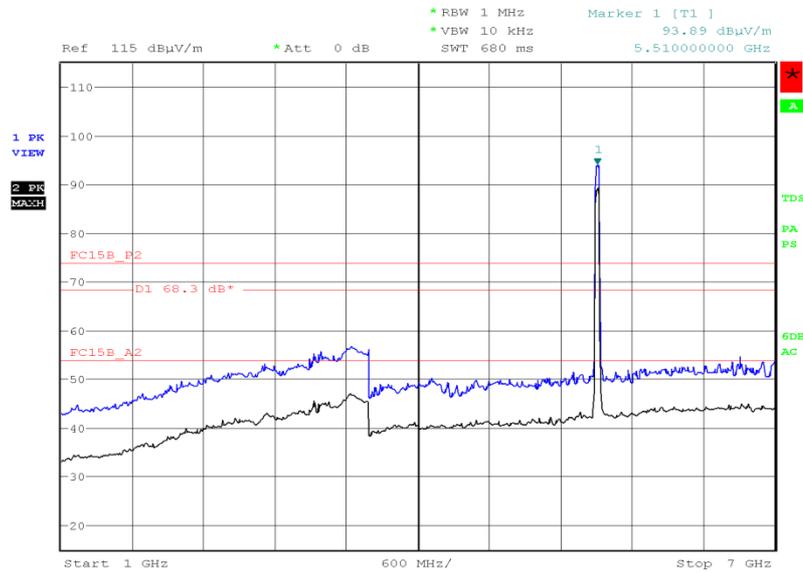
30 MHz to 1 GHz



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
30.582	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
31.843	30.7	34.3	40.0	100	-9.3	65.7	0	1.00	Vertical
33.250	30.4	33.1	40.0	100	-9.6	66.9	0	1.00	Vertical
486.143	29.2	28.8	46.0	200	-16.8	171.2	0	1.00	Vertical
552.103	29.9	31.3	46.0	200	-16.1	168.7	0	1.00	Vertical
811.190	33.2	45.7	46.0	200	-12.8	154.3	0	1.00	Vertical

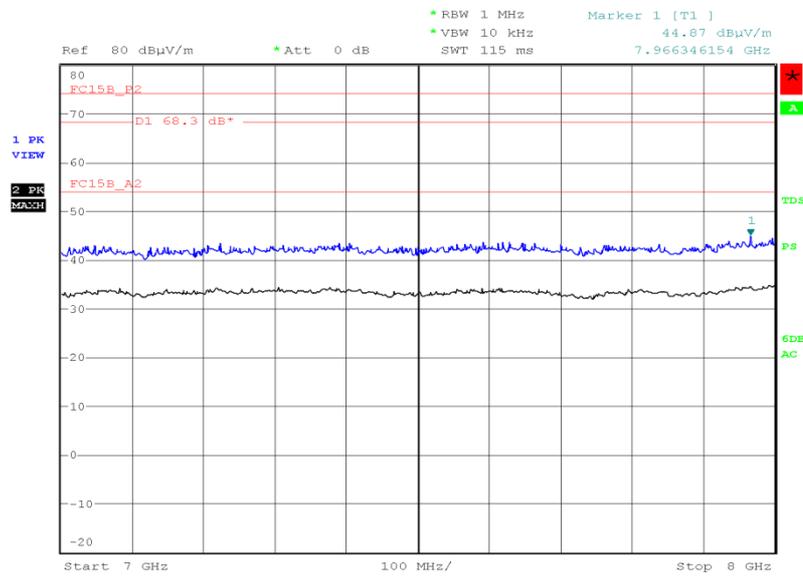


1 GHz to 7 GHz



Date: 18.JAN.2014 09:53:46

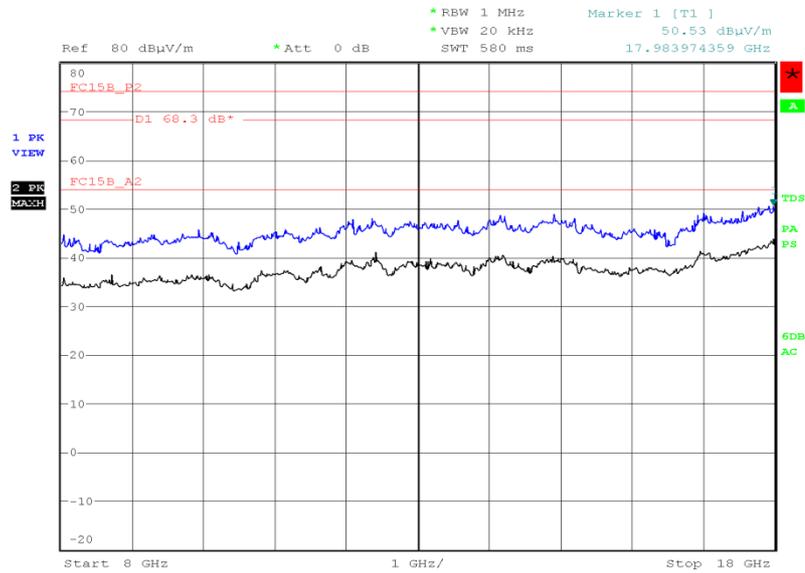
7 GHz to 8 GHz



Date: 18.JAN.2014 11:07:01

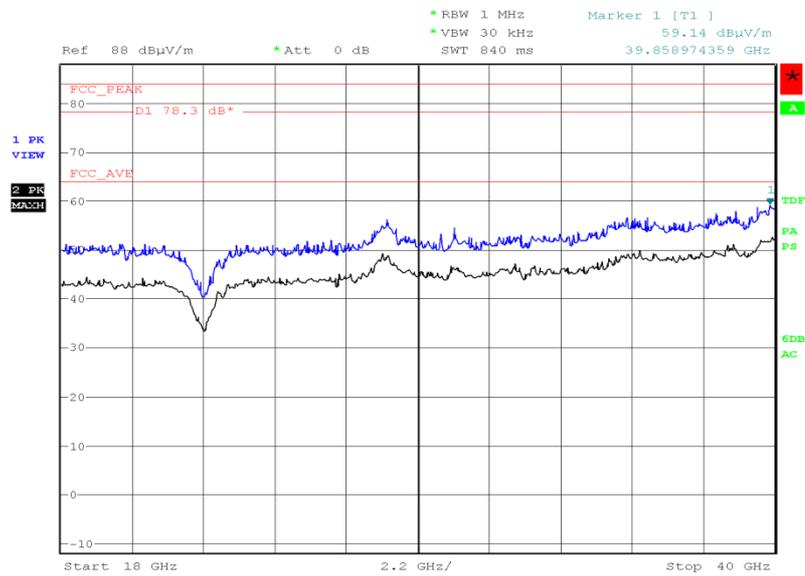


8 GHz to 18 GHz



Date: 19.JAN.2014 08:49:11

18 GHz to 40 GHz

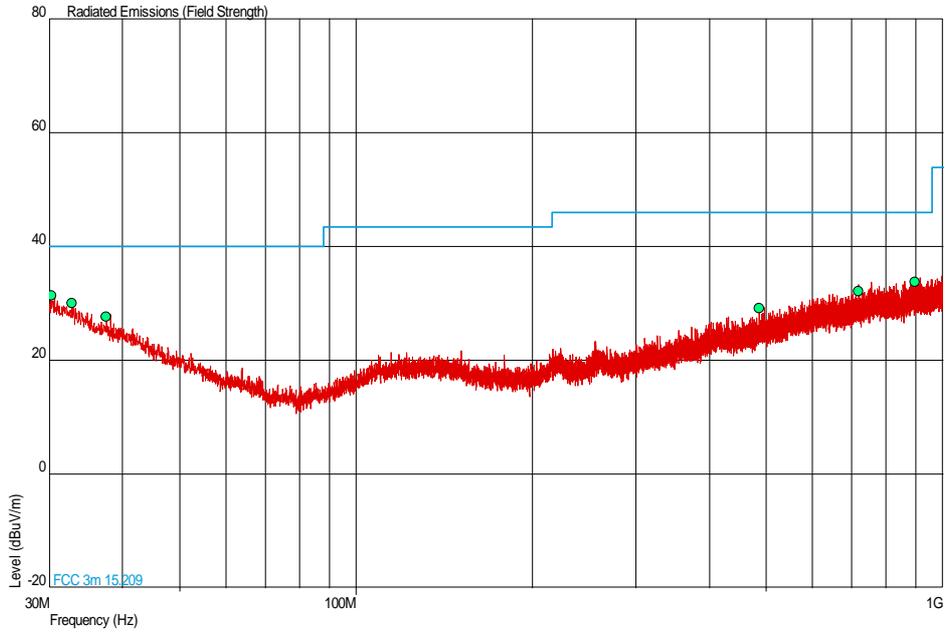


Date: 20.JAN.2014 22:36:04



5590 MHz

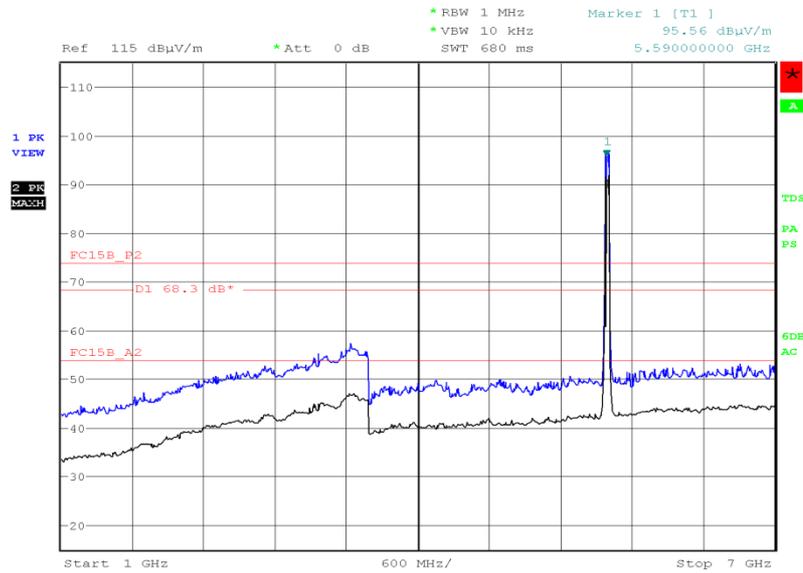
30 MHz to 1 GHz



Frequency (MHz)	QP Level (dB μ V/m)	QP Level (μ V/m)	QP Limit (dB μ V/m)	QP Limit (μ V/m)	QP Margin (dB μ V/m)	QP Margin (μ V/m)	Angle (Deg)	Height (m)	Polarity
30.243	31.5	37.6	40.0	100	-8.5	62.4	0	1.00	Vertical
32.813	30.1	32.0	40.0	100	-9.9	68.0	0	1.00	Vertical
37.518	27.6	24.0	40.0	100	-12.4	76.0	0	1.00	Vertical
486.143	29.2	28.8	46.0	200	-16.8	171.2	0	1.00	Vertical
718.991	32.2	40.7	46.0	200	-13.8	159.3	0	1.00	Vertical
896.113	33.9	49.5	46.0	200	-12.1	150.5	0	1.00	Vertical

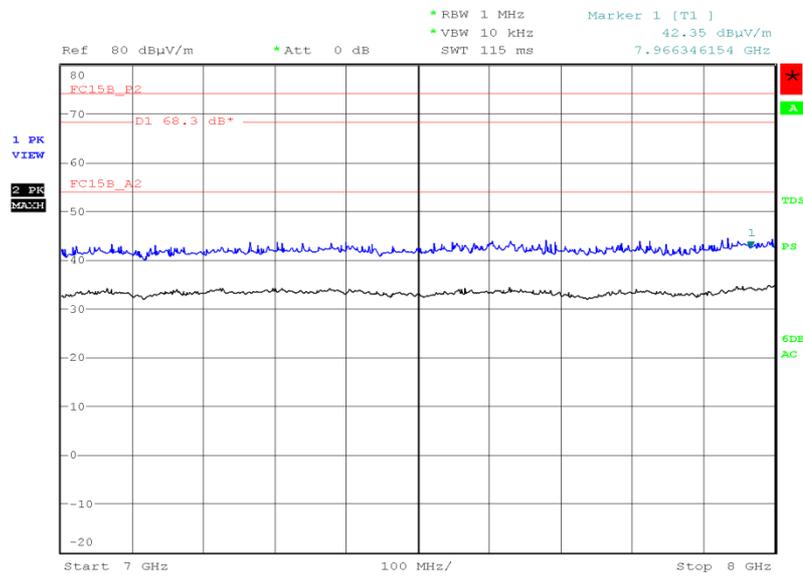


1 GHz to 7 GHz



Date: 18.JAN.2014 10:33:18

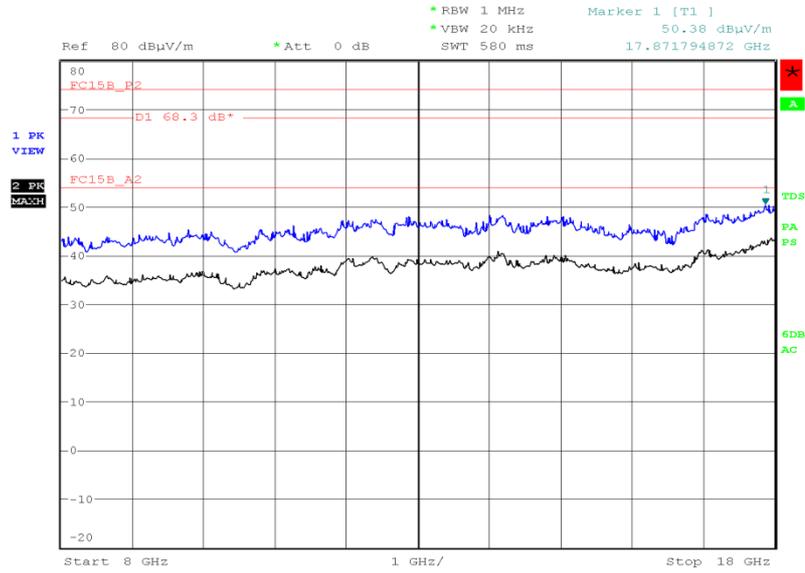
7 GHz to 8 GHz



Date: 18.JAN.2014 11:10:50

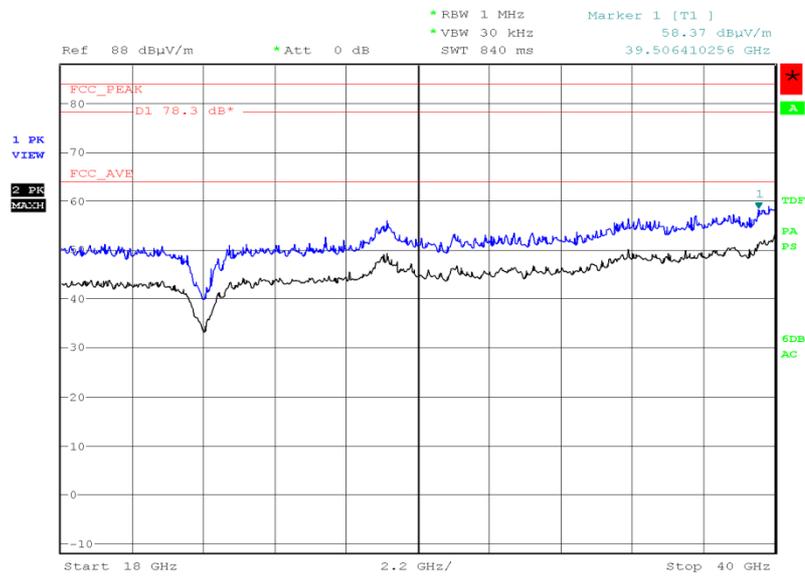


8 GHz to 18 GHz



Date: 19.JAN.2014 08:54:12

18 GHz to 40 GHz

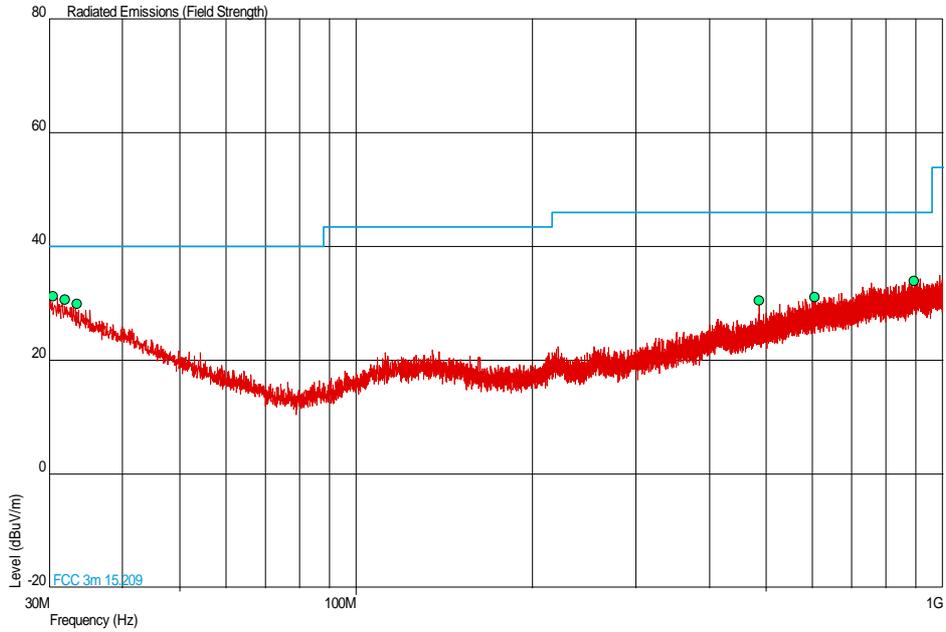


Date: 20.JAN.2014 22:46:35



5670 MHz

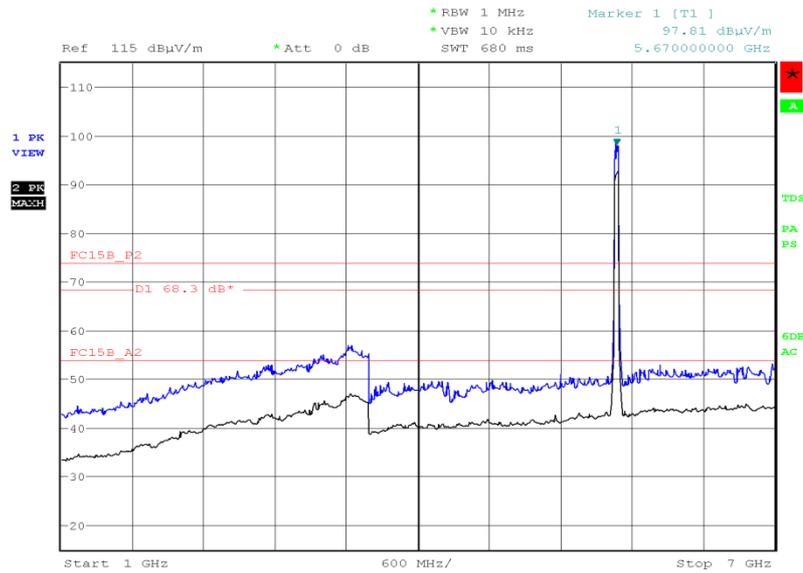
30 MHz to 1 GHz



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
30.437	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
31.940	30.6	33.9	40.0	100	-9.4	66.1	0	1.00	Vertical
33.492	29.9	31.3	40.0	100	-10.1	68.7	0	1.00	Vertical
486.240	30.5	33.5	46.0	200	-15.5	166.5	0	1.00	Vertical
606.132	31.1	35.9	46.0	200	-14.9	164.1	0	1.00	Vertical
894.658	34.0	50.1	46.0	200	-12.0	149.9	0	1.00	Vertical

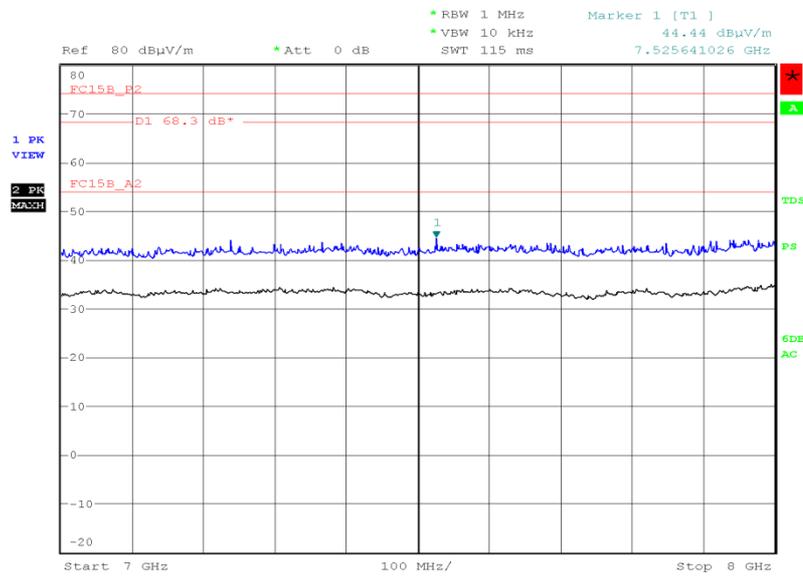


1 GHz to 7 GHz



Date: 18.JAN.2014 10:35:26

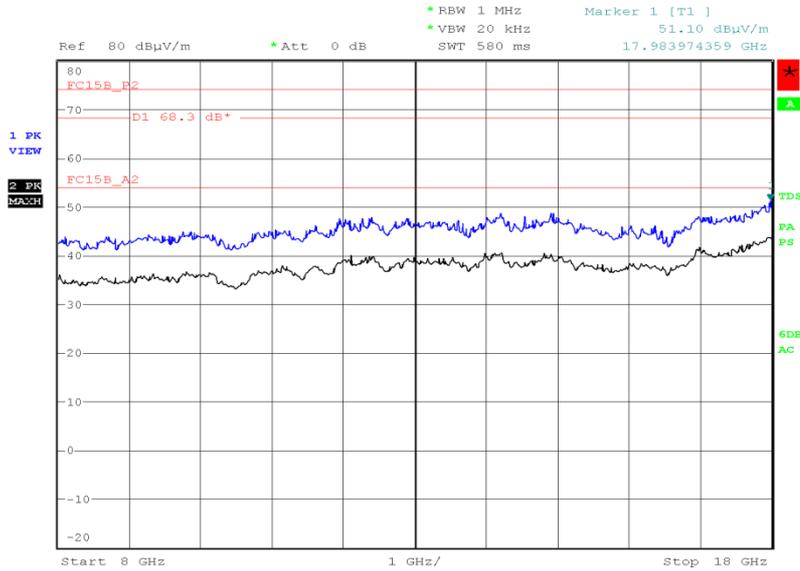
7 GHz to 8 GHz



Date: 18.JAN.2014 11:14:55

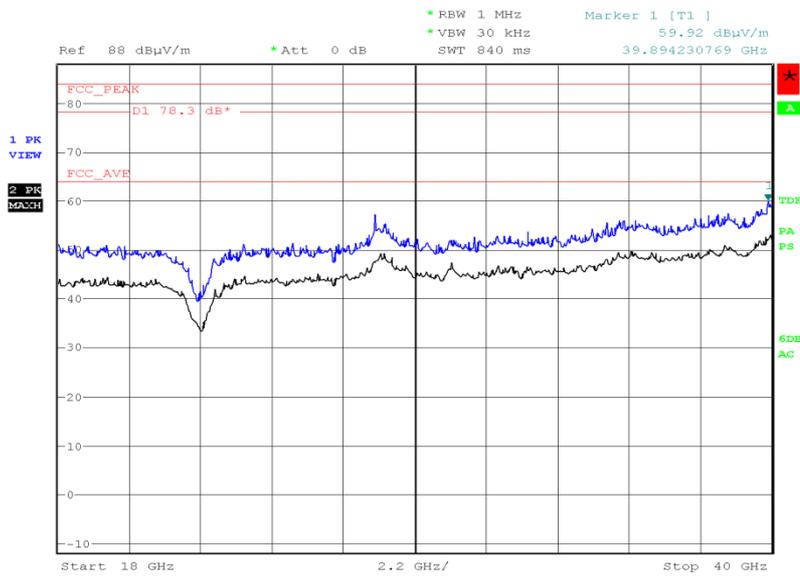


8 GHz to 18 GHz



Date: 19.JAN.2014 09:00:00

18 GHz to 40 GHz



Date: 20.JAN.2014 23:01:25

Limit

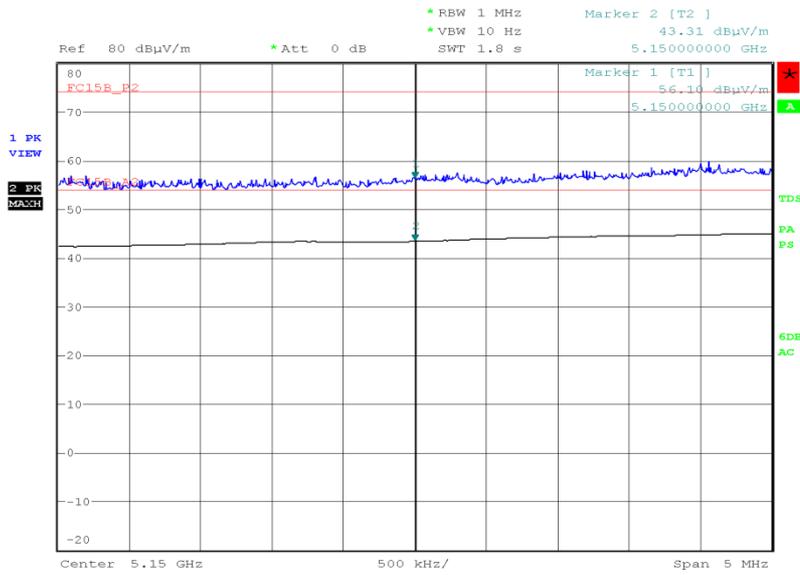
Peak (dBμV/m)	Average (dBμV/m)
74.0	54.0



Band Edge Emissions

5190 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	56.10	43.31

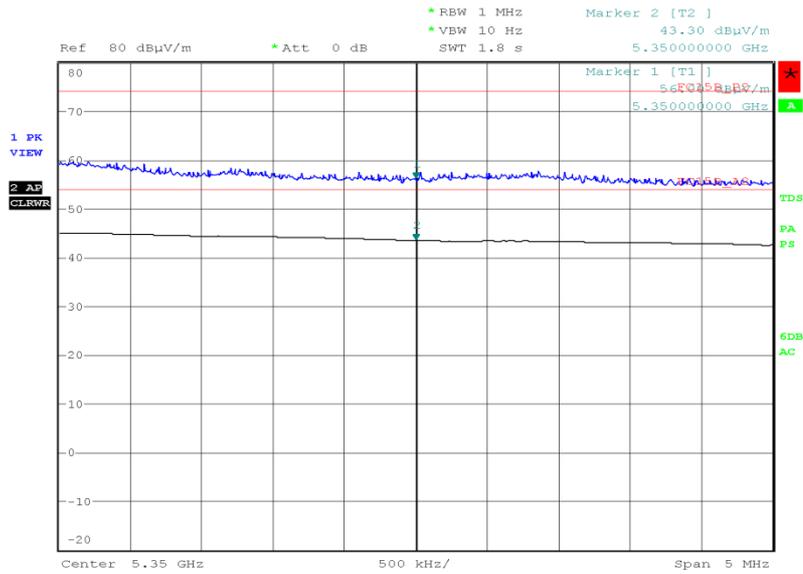


Date: 14.JAN.2014 21:05:15



5310 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	56.00	43.30



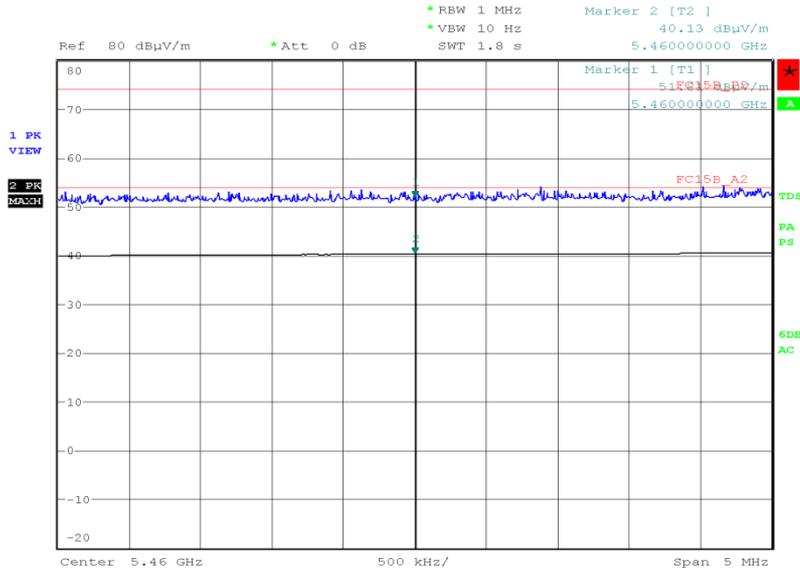
Date: 14.JAN.2014 21:19:48



Product Service

5510 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	51.81	40.13



Date: 14.JAN.2014 21:30:08

Limit

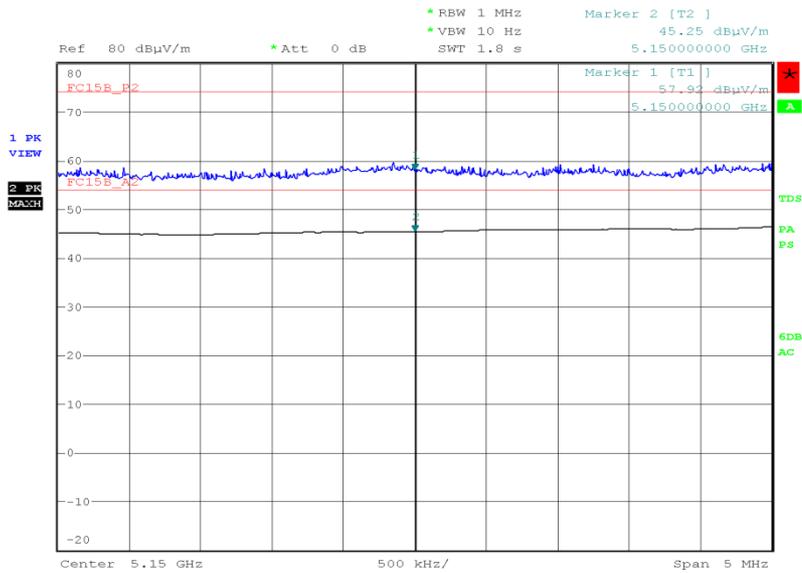
Peak (dBµV/m)	Average (dBµV/m)
74.0	54.0



Band Edge Emissions

5210 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	57.92	45.25

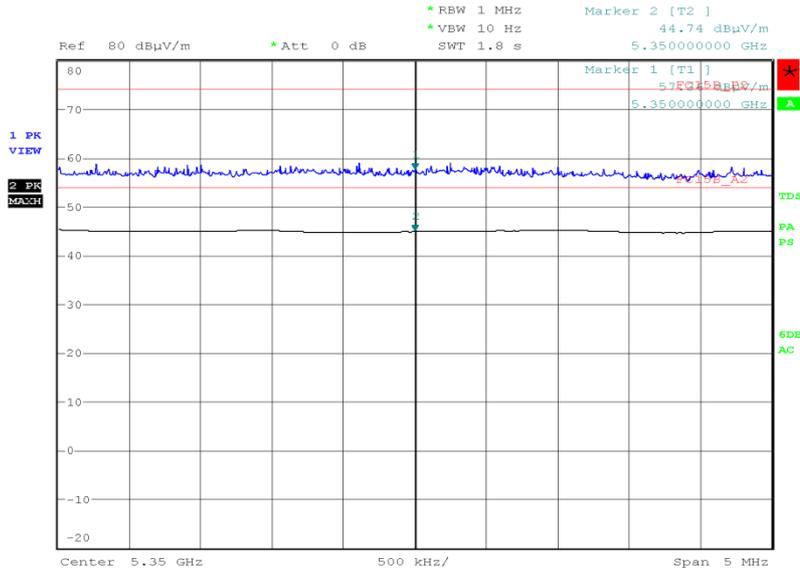


Date: 13.JAN.2014 22:01:38



5290 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	57.36	44.74

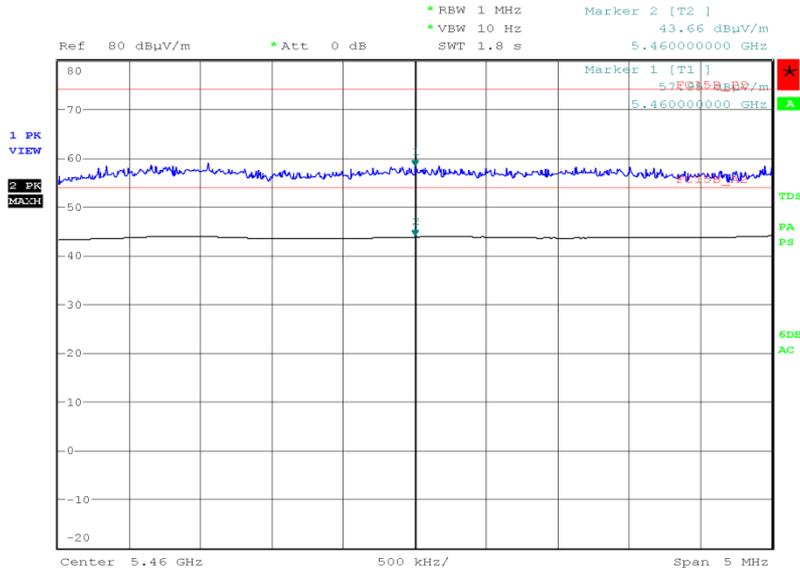


Date: 13.JAN.2014 22:09:40



5530 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	57.95	43.66



Date: 13.JAN.2014 22:15:53

Limit

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

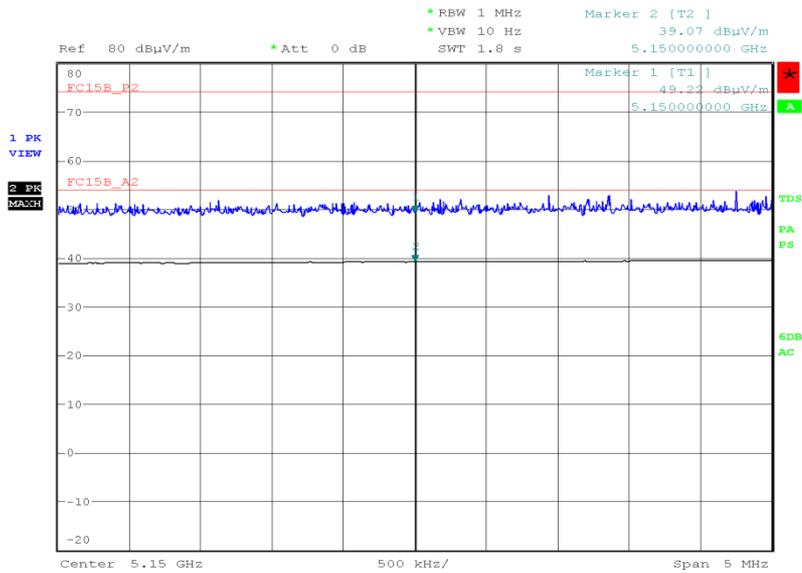


Product Service

Band Edge Emissions

5180 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	49.22	39.07



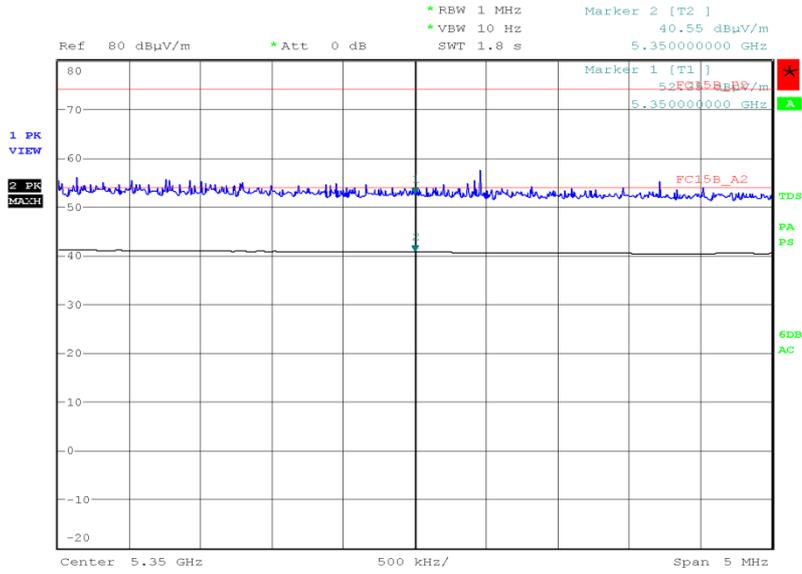
Date: 13.JAN.2014 18:53:40



Product Service

5320 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	52.35	40.55

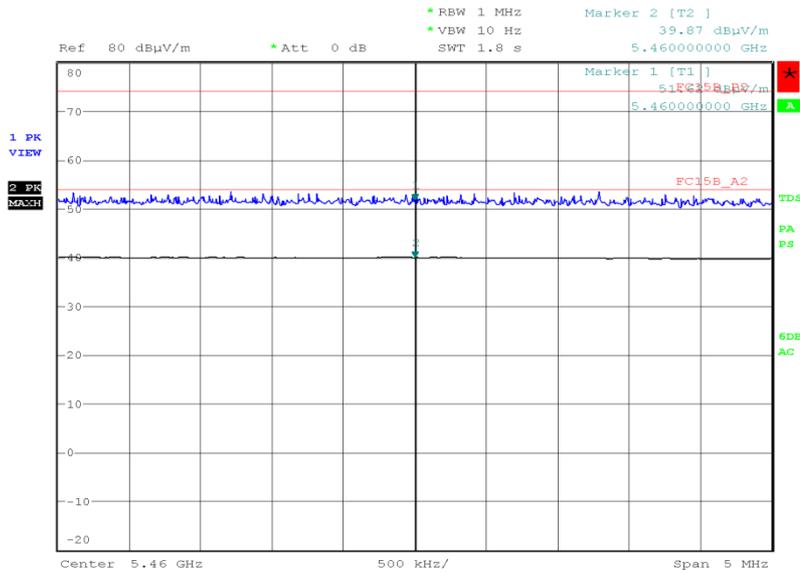


Date: 13.JAN.2014 19:21:05



5500 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	51.62	39.87



Date: 13.JAN.2014 19:28:42

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

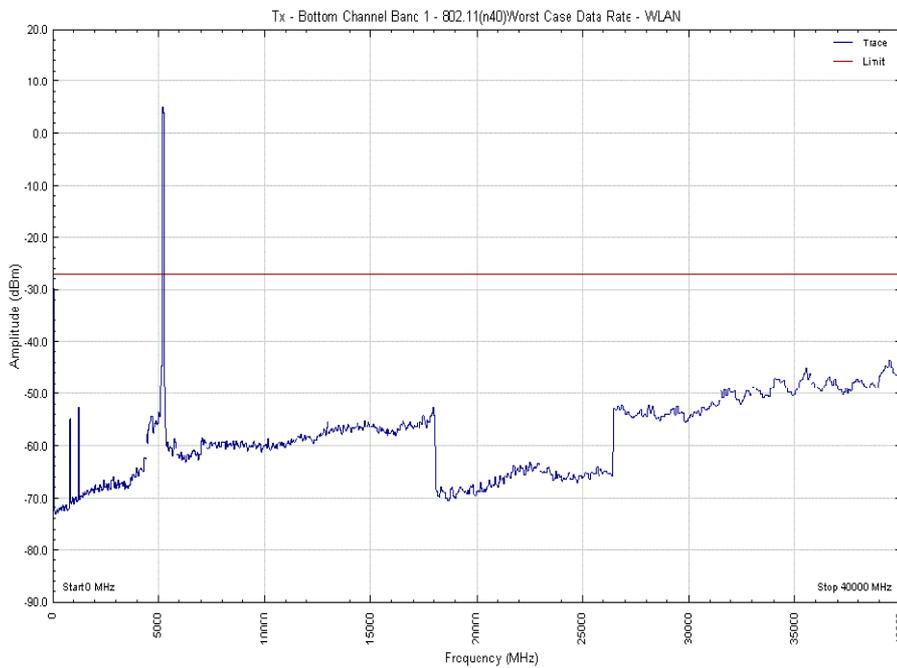
Spurious Conducted Emissions

MCS0

Frequency Band 1

5190 MHz

9 kHz to 40 GHz

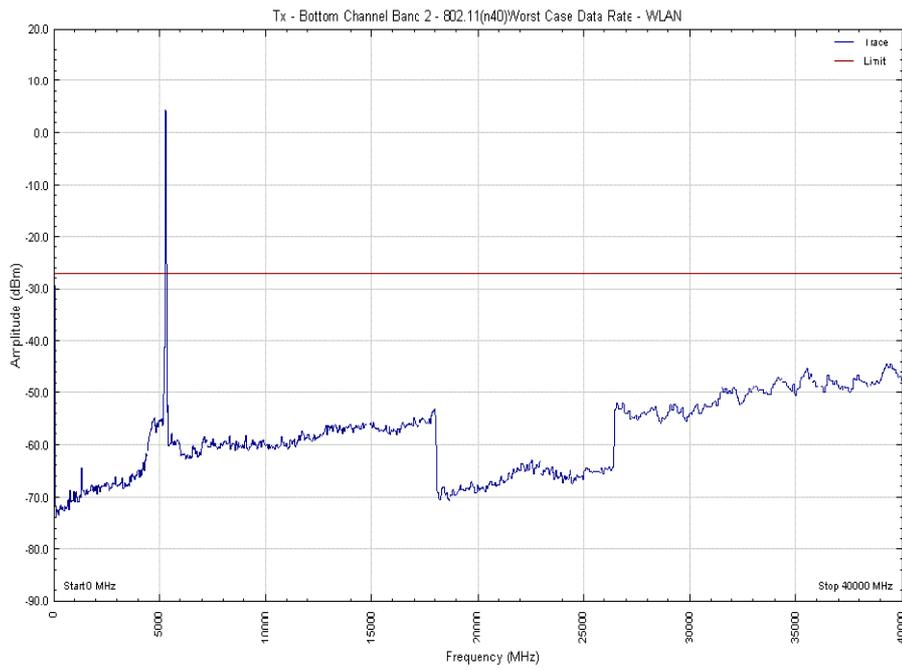




Frequency Band 2

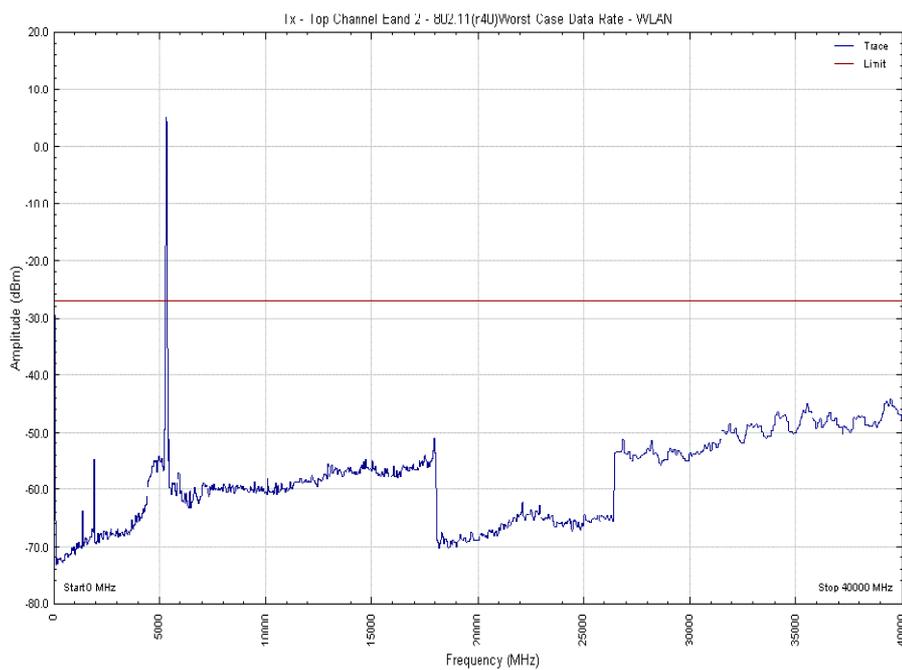
5270 MHz

9 kHz to 40 GHz



310 MHz

9 kHz to 40 GHz

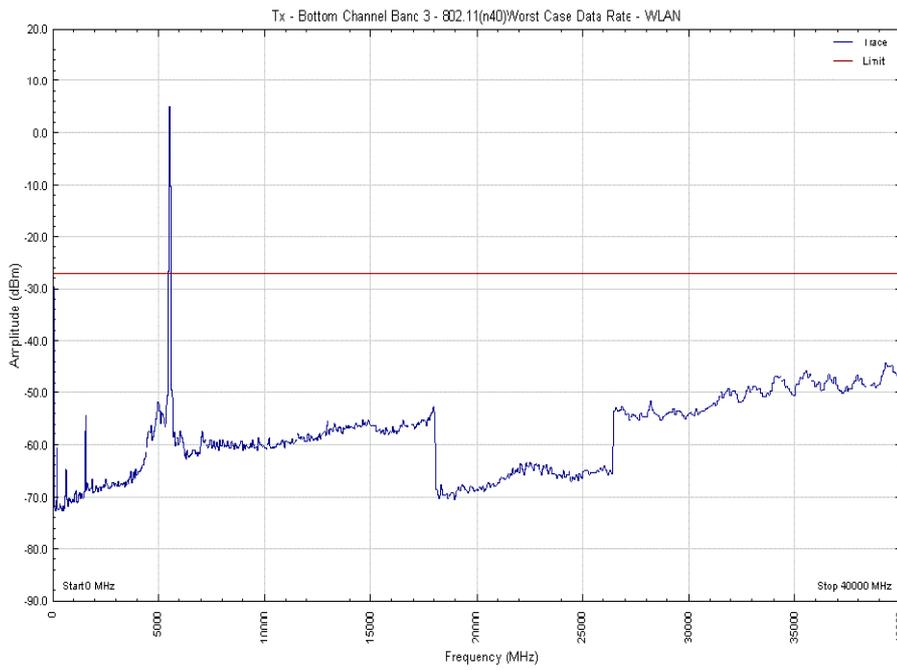




Frequency Band 3

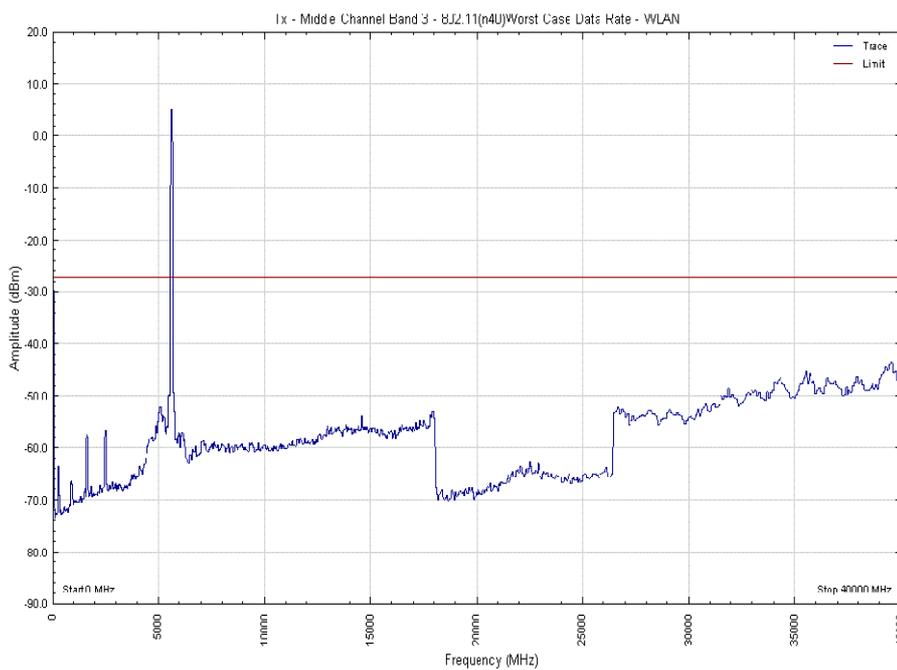
5510 MHz

9 kHz to 40 GHz



5590 MHz

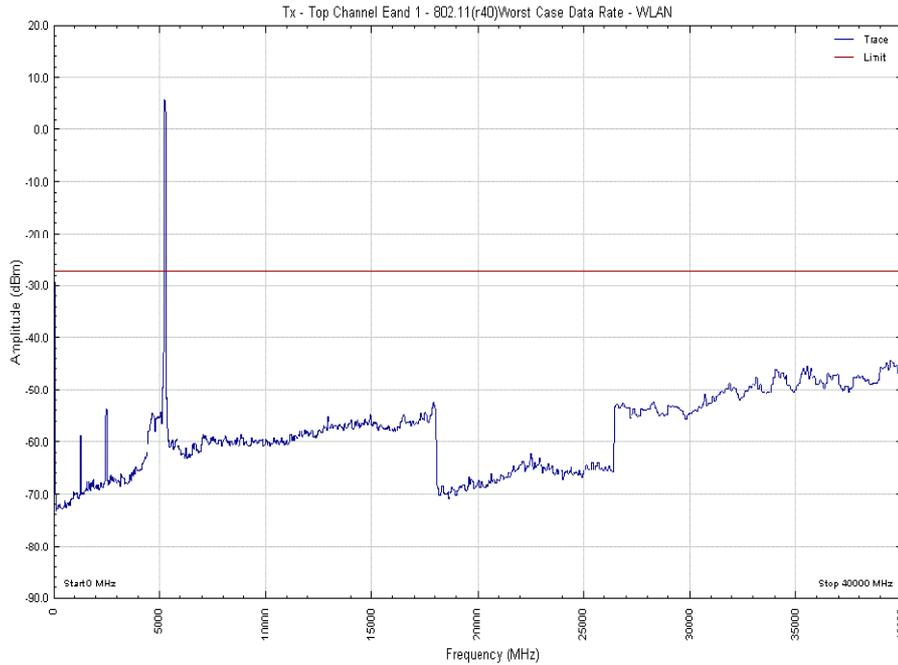
9 kHz to 40 GHz





5670MHz

9 kHz to 40 GHz



Limit Clause

Band of Operation (MHz)	Limit
5150 to 5250	-27 dBm/MHz
5250 to 5350	-27 dBm/MHz
5470 to 5725	-27 dBm/MHz
5725 to 5825	(5715 to 5725 MHz) -17 dBm/MHz (5825 to 5835 MHz) -17 dBm/MHz (<5715 and > 5835 MHz) -27 dBm/MHz

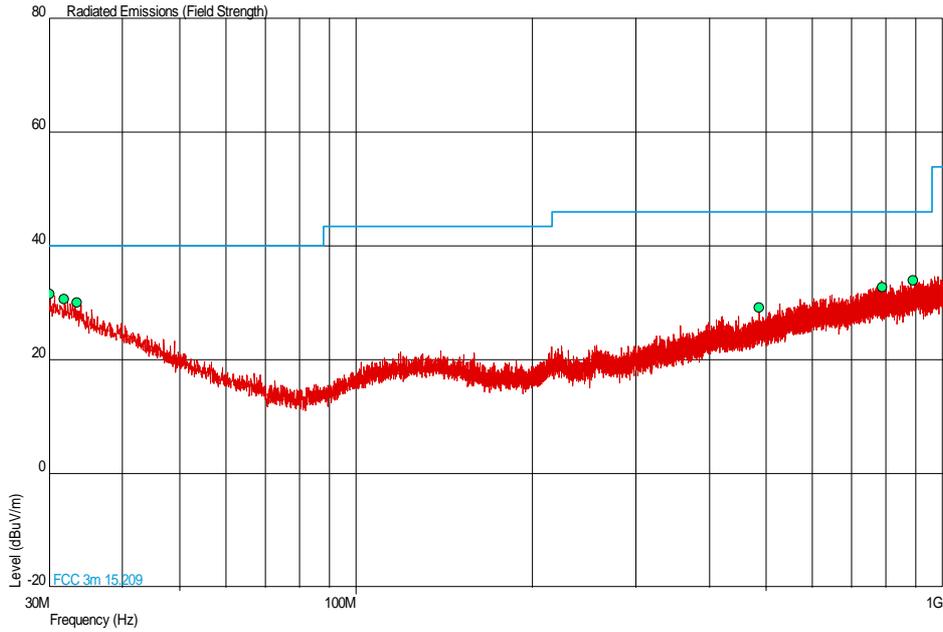


Spurious Radiated Emissions

Frequency Band 1

5190 MHz

30 MHz to 1 GHz



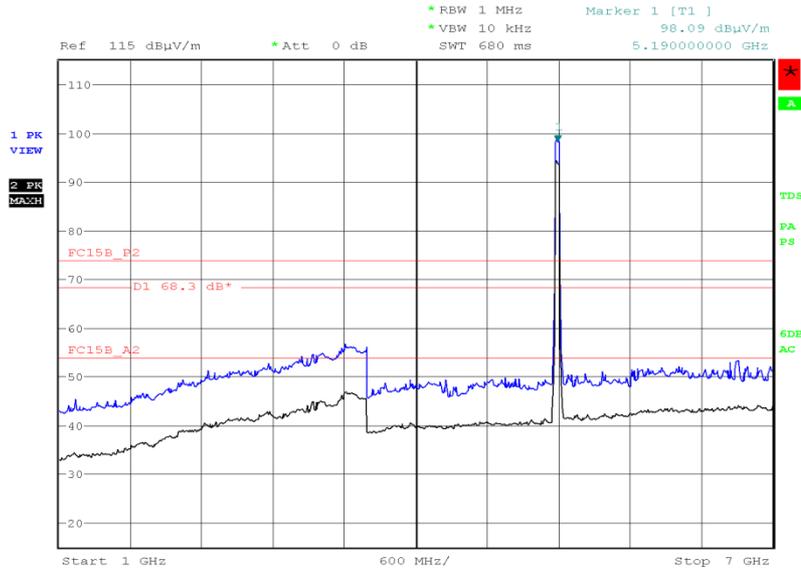
Frequency (MHz)	QP Level (dBuV/m)	QP Level (uV/m)	QP Limit (dBuV/m)	QP Limit (uV/m)	QP Margin (dBuV/m)	QP Margin (uV/m)	Angle (Deg)	Height (m)	Polarity
30.049	31.5	37.6	40.0	100	-8.5	62.4	0	1.00	Vertical
31.843	30.7	34.3	40.0	100	-9.3	65.7	0	1.00	Vertical
33.444	30.1	32.0	40.0	100	-9.9	68.0	0	1.00	Vertical
486.143	29.2	28.8	46.0	200	-16.8	171.2	0	1.00	Vertical
789.850	32.8	43.7	46.0	200	-13.2	156.3	0	1.00	Vertical
891.651	33.9	49.5	46.0	200	-12.1	150.5	0	1.00	Vertical



1 GHz to 40 GHz

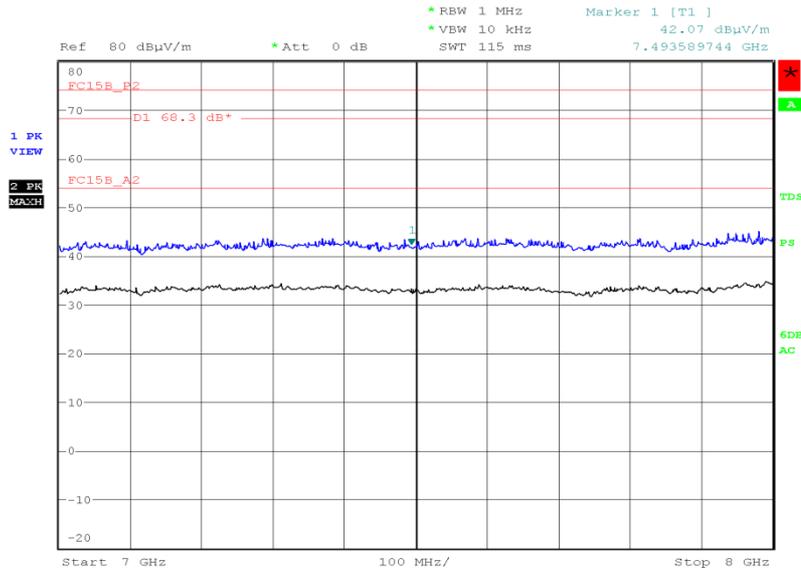
Frequency (GHz)	Antenna Polarisation	Antenna Height (cm)	EUT Arc (degrees)	Final Peak (dBµV/m)	Final Average (dBµV/m)
5.0876	Horizontal	155	160	52.46	40.63

1 GHz to 7 GHz



Date: 15.JAN.2014 17:00:48

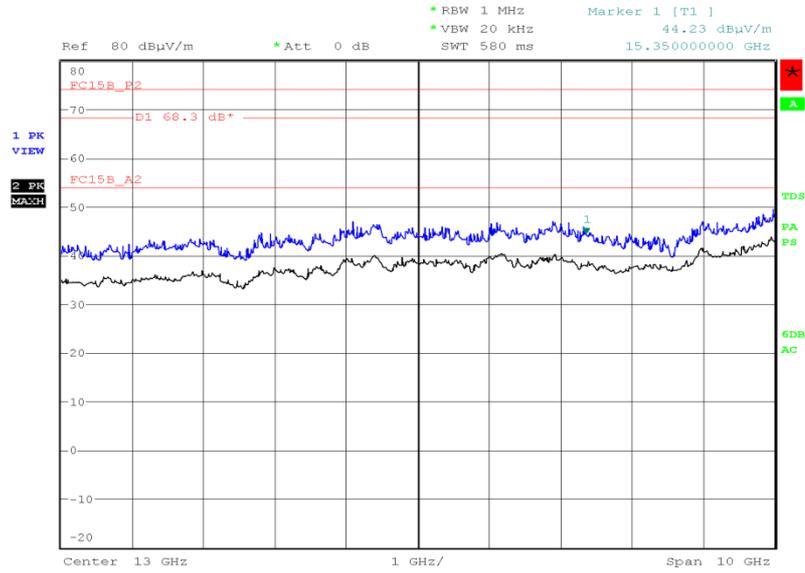
7 GHz to 8 GHz



Date: 18.JAN.2014 11:59:52

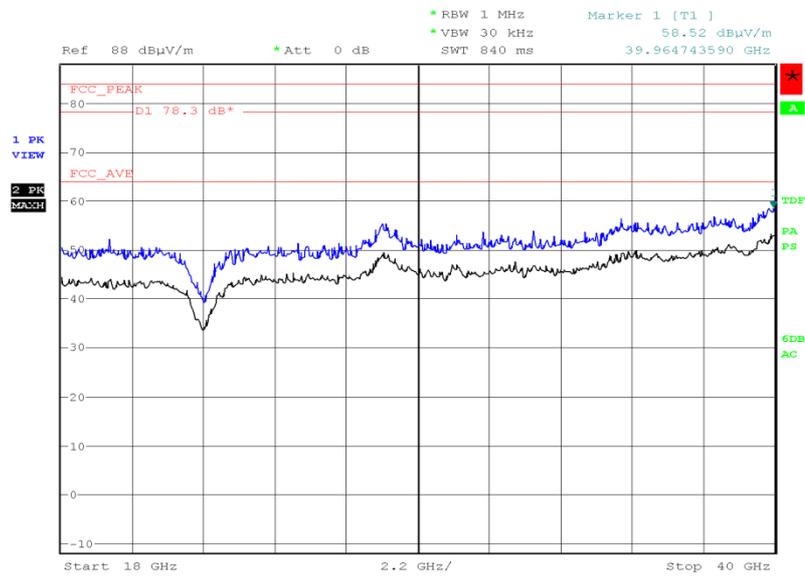


8 GHz to 18 GHz



Date: 18.JAN.2014 15:37:53

18 GHz to 40 GHz

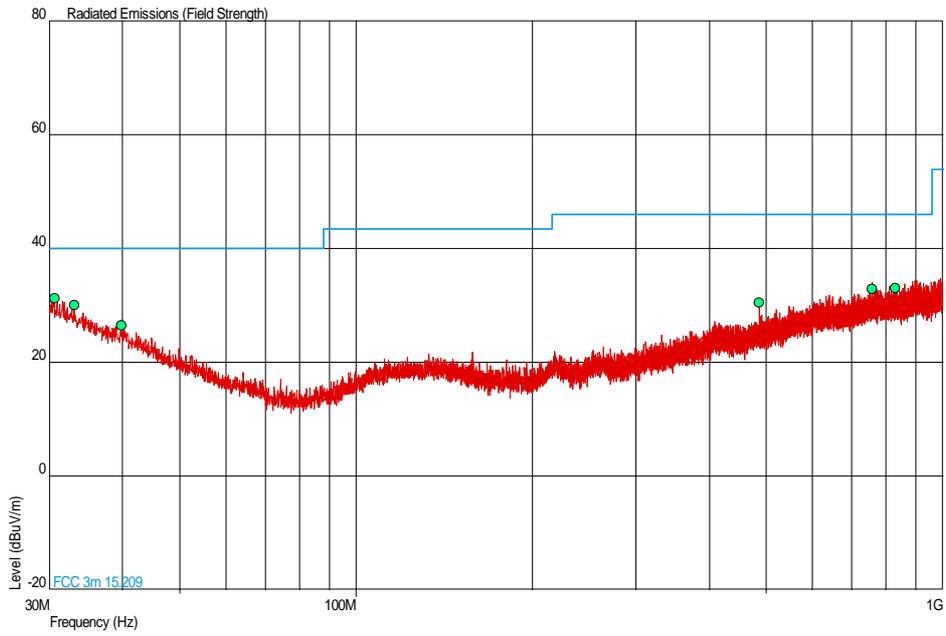


Date: 20.JAN.2014 20:35:55



5230 MHz

30 MHz to 1 GHz



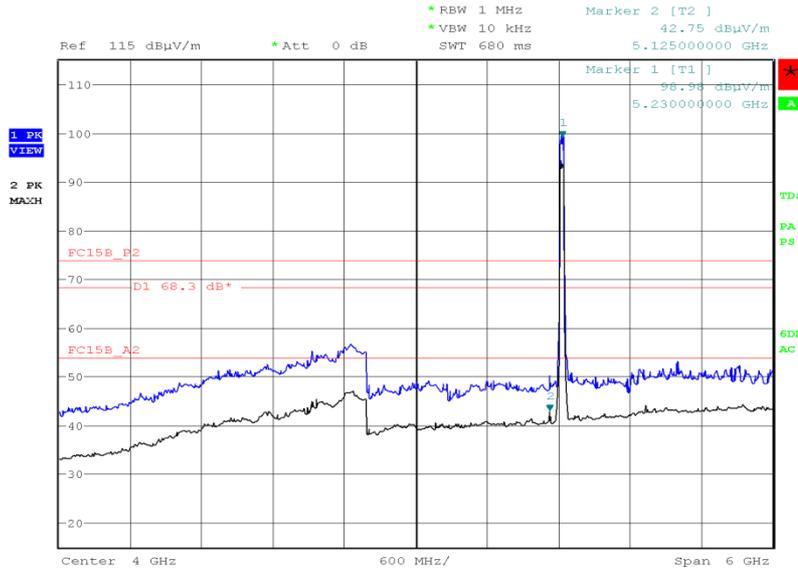
Frequency (MHz)	QP Level (dBuV/m)	QP Level (uV/m)	QP Limit (dBuV/m)	QP Limit (uV/m)	QP Margin (dBuV/m)	QP Margin (uV/m)	Angle (Deg)	Height (m)	Polarity
30.631	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
33.104	30.0	31.6	40.0	100	-10.0	68.4	0	1.00	Vertical
39.797	26.5	21.1	40.0	100	-13.5	78.9	0	1.00	Vertical
486.240	30.5	33.5	46.0	200	-15.5	166.5	0	1.00	Vertical
758.325	33.0	44.7	46.0	200	-13.0	155.3	0	1.00	Vertical
830.735	33.1	45.2	46.0	200	-12.9	154.8	0	1.00	Vertical



1GHz to 40GHz

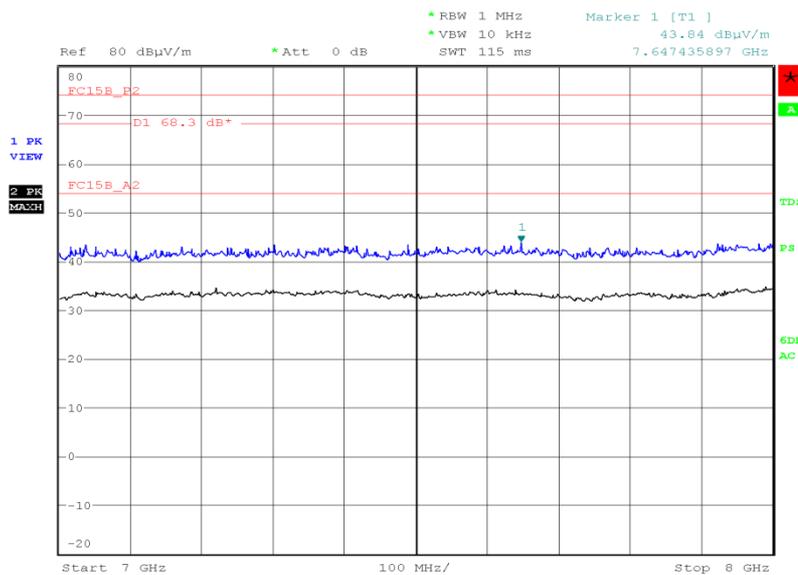
Frequency (GHz)	Antenna Polarisation	Antenna Height (cm)	EUT Arc (degrees)	Final Peak (dBµV/m)	Final Average (dBµV/m)
5.1274	Horizontal	100	154	53.53	41.04

1 GHz to 7 GHz



Date: 15.JAN.2014 17:27:28

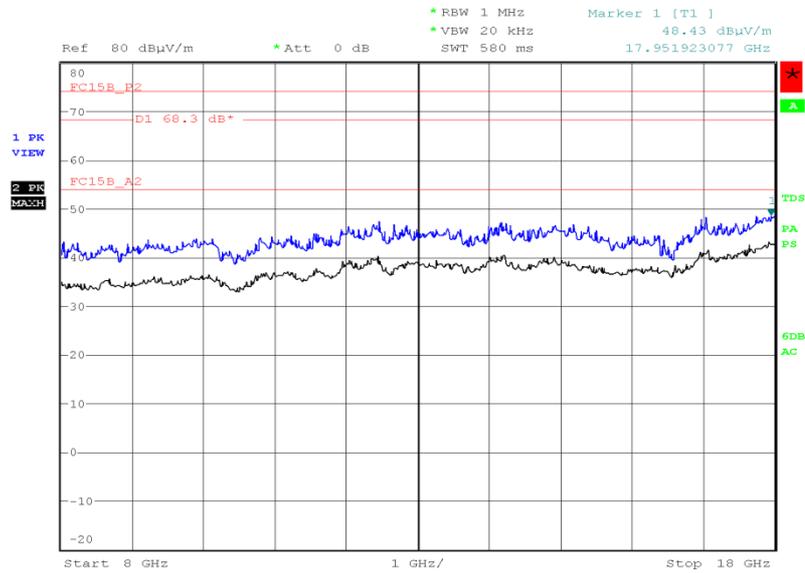
7 GHz to 8 GHz



Date: 18.JAN.2014 12:03:32

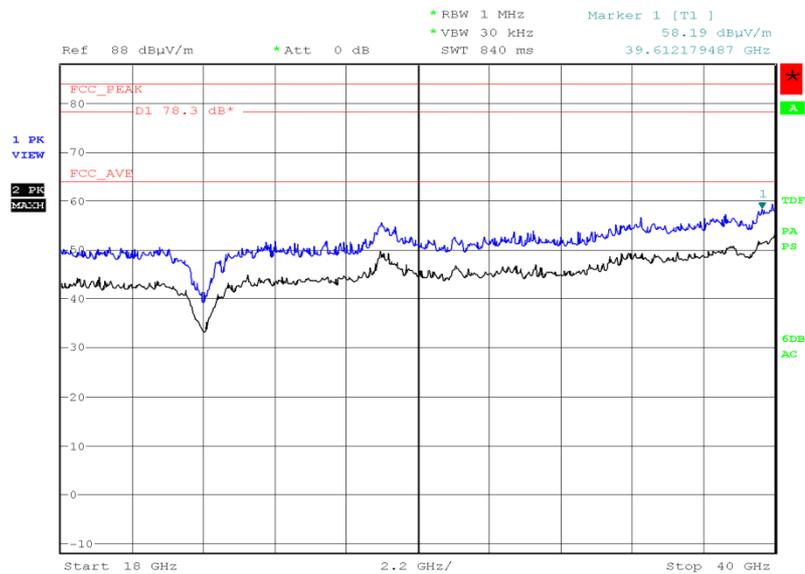


8 GHz to 18 GHz



Date: 18.JAN.2014 16:37:04

18 GHz to 40 GHz



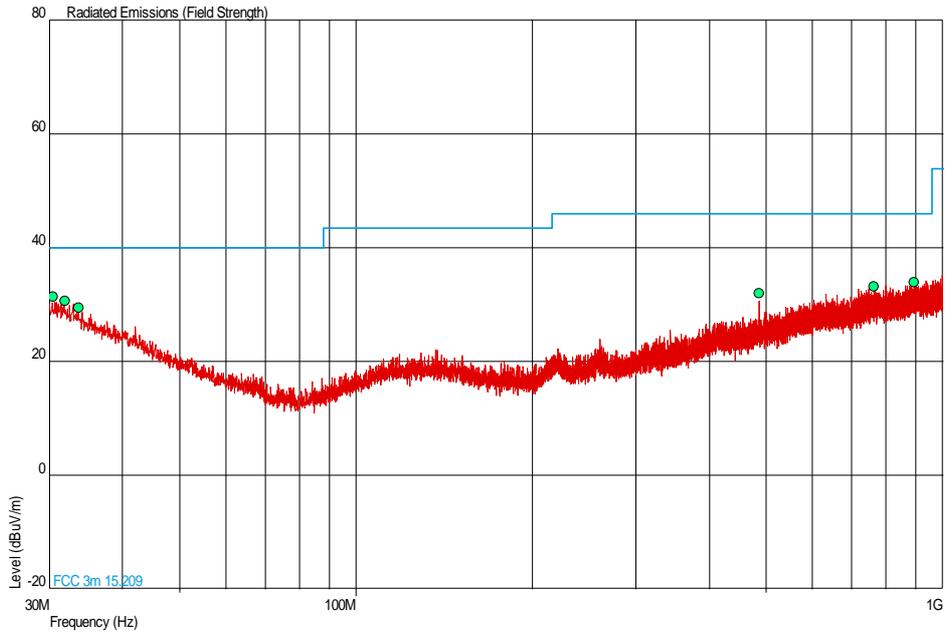
Date: 20.JAN.2014 20:46:01



Frequency Band 2

5270 MHz

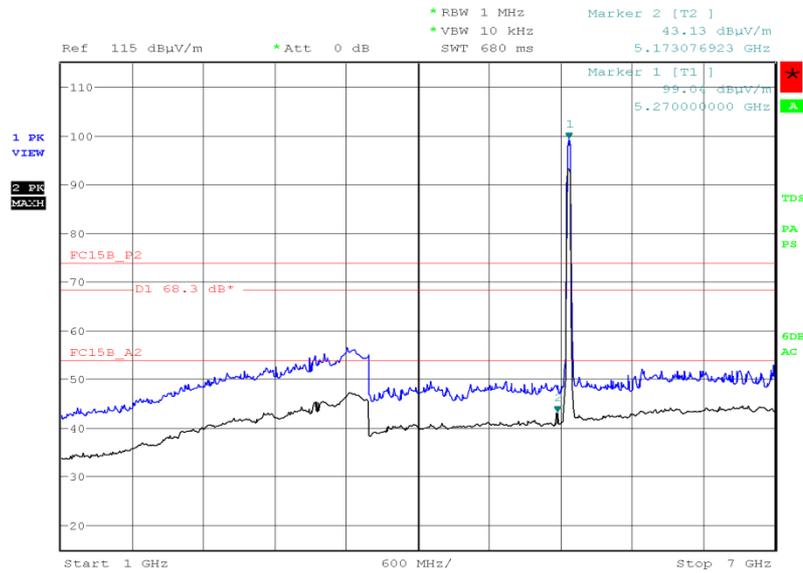
30 MHz to 1 GHz



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
30.437	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
31.892	30.6	33.9	40.0	100	-9.4	66.1	0	1.00	Vertical
33.735	29.4	29.5	40.0	100	-10.6	70.5	0	1.00	Vertical
486.191	32.0	39.8	46.0	200	-14.0	160.2	0	1.00	Vertical
762.835	33.3	46.2	46.0	200	-12.7	153.8	0	1.00	Vertical
893.446	34.0	50.1	46.0	200	-12.0	149.9	0	1.00	Vertical

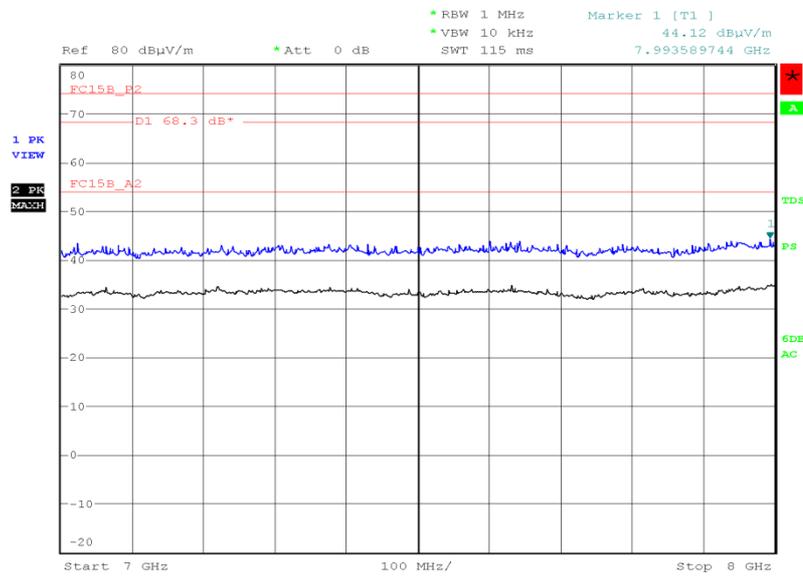


1 GHz to 7 GHz



Date: 15.JAN.2014 17:55:43

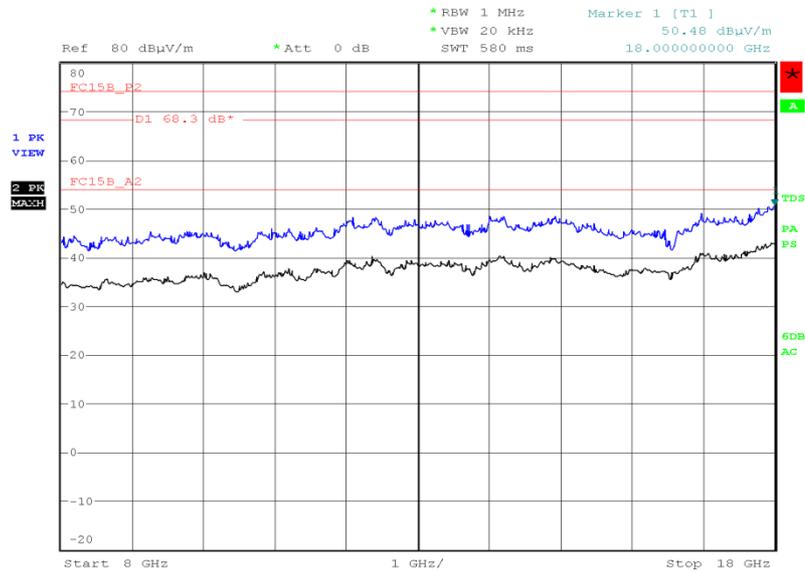
7 GHz to 8 GHz



Date: 18.JAN.2014 12:08:15

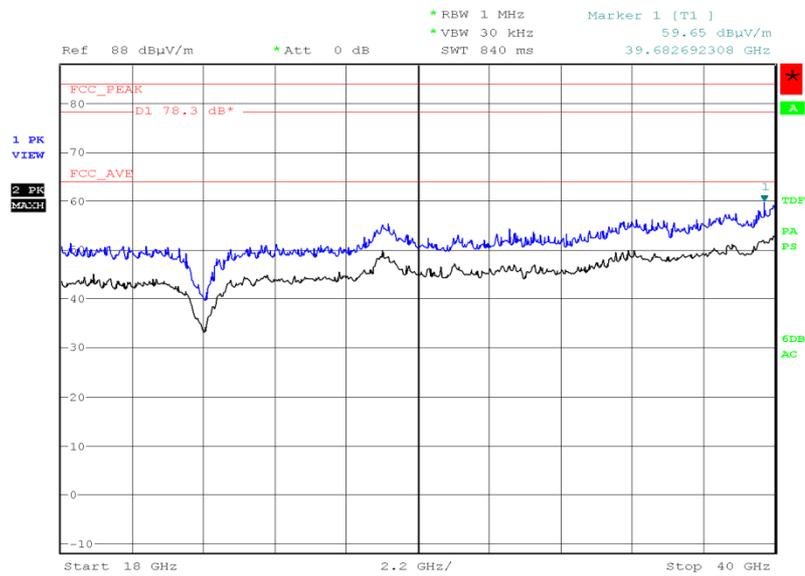


8 GHz to 18 GHz



Date: 18.JAN.2014 15:56:19

18 GHz to 40 GHz

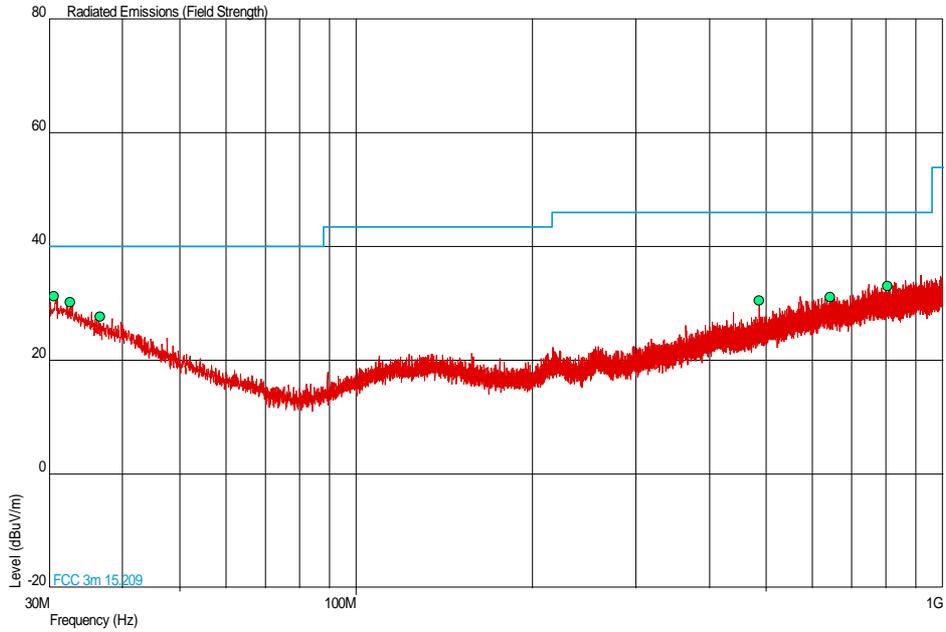


Date: 20.JAN.2014 20:56:42



5310 MHz

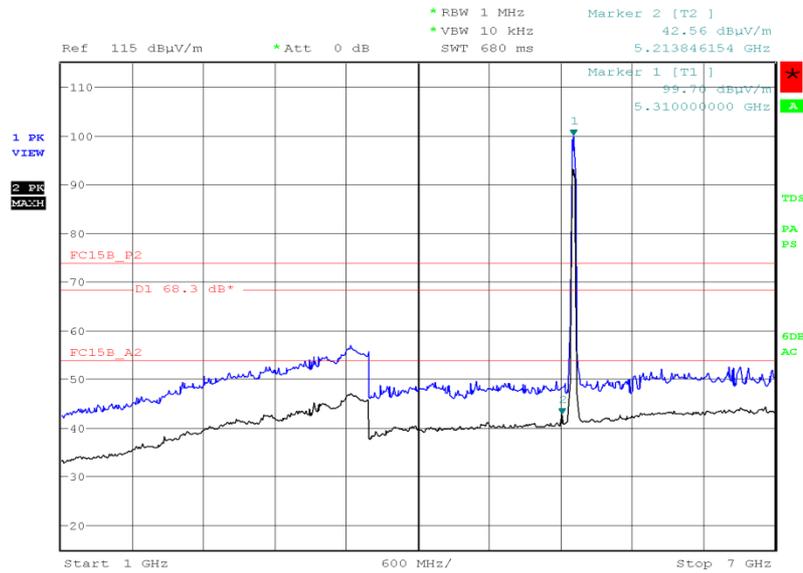
30 MHz to 1 GHz



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
30.582	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
32.619	30.2	32.4	40.0	100	-9.8	67.6	0	1.00	Vertical
36.693	27.6	24.0	40.0	100	-12.4	76.0	0	1.00	Vertical
486.240	30.5	33.5	46.0	200	-15.5	166.5	0	1.00	Vertical
643.380	31.2	36.3	46.0	200	-14.8	163.7	0	1.00	Vertical
805.224	33.0	44.7	46.0	200	-13.0	155.3	0	1.00	Vertical

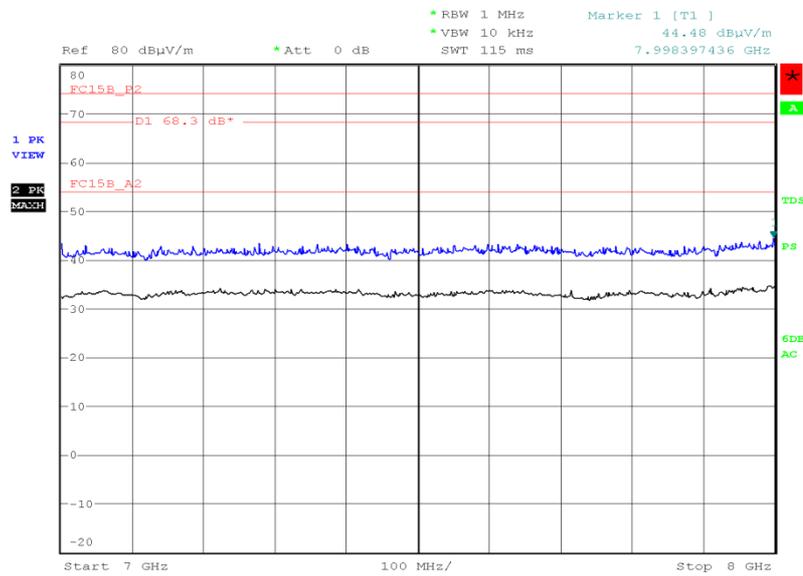


1 GHz to 7 GHz



Date: 15.JAN.2014 18:09:43

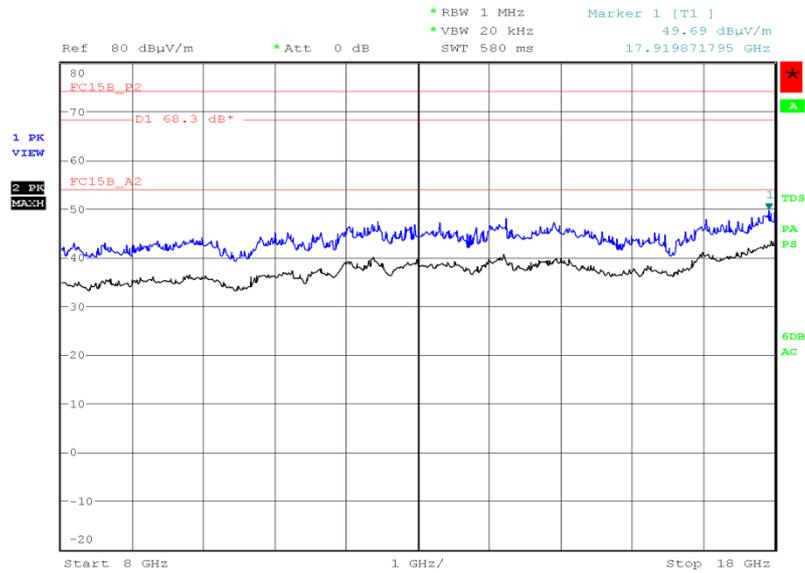
7 GHz to 8 GHz



Date: 18.JAN.2014 12:10:53

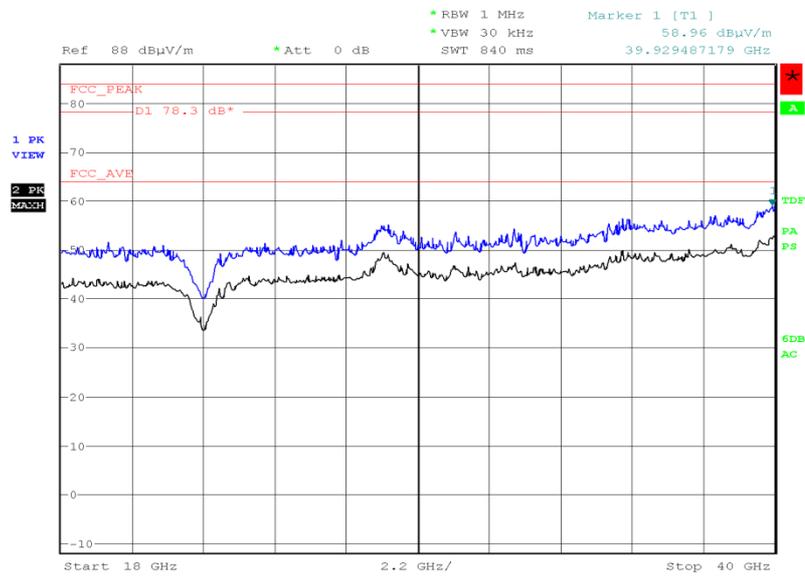


8 GHz to 18 GHz



Date: 18.JAN.2014 16:04:37

18 GHz to 40 GHz



Date: 20.JAN.2014 21:07:17

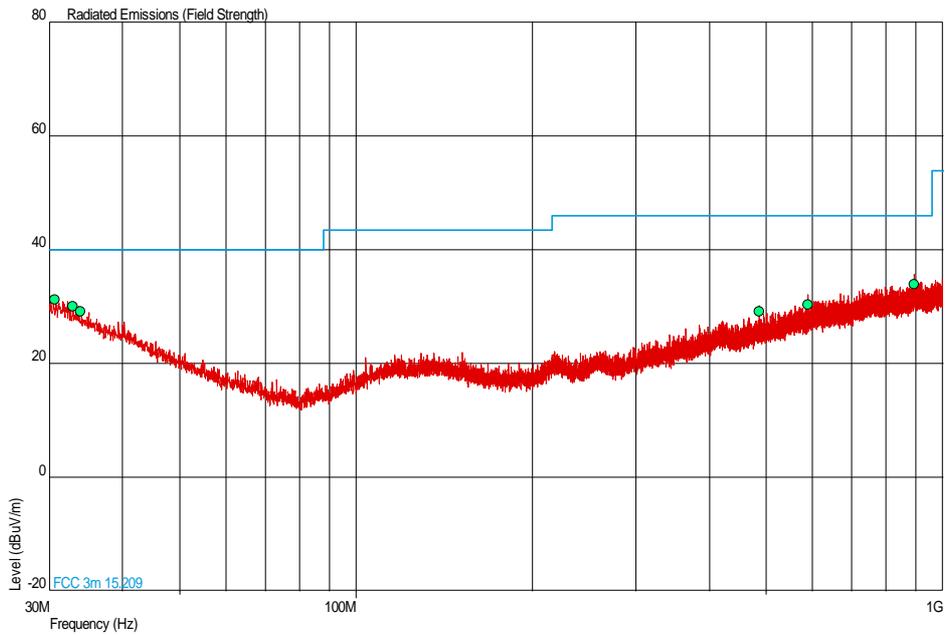


Product Service

Frequency Band 3

5510 MHz

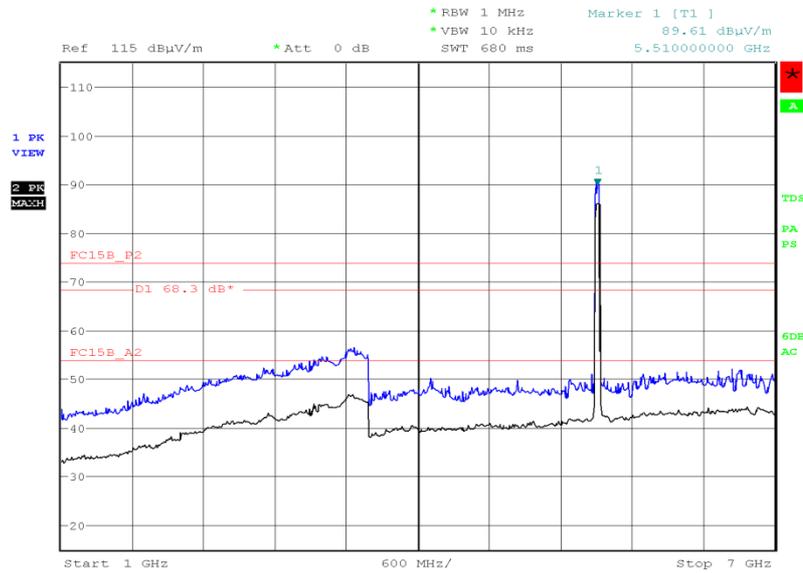
30 MHz to 1 GHz



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
30.679	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Vertical
32.862	30.1	32.0	40.0	100	-9.9	68.0	0	1.00	Horizontal
33.929	29.2	28.8	40.0	100	-10.8	71.2	0	1.00	Horizontal
486.143	29.1	28.5	46.0	200	-16.9	171.5	0	1.00	Vertical
589.399	30.3	32.7	46.0	200	-15.7	167.3	0	1.00	Vertical
894.949	33.9	49.5	46.0	200	-12.1	150.5	0	1.00	Vertical

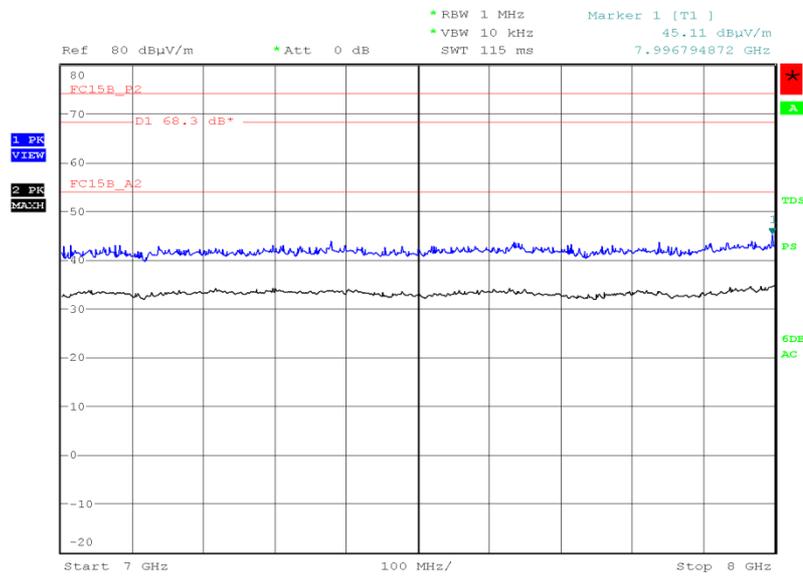


1 GHz to 7 GHz



Date: 15.JAN.2014 18:38:29

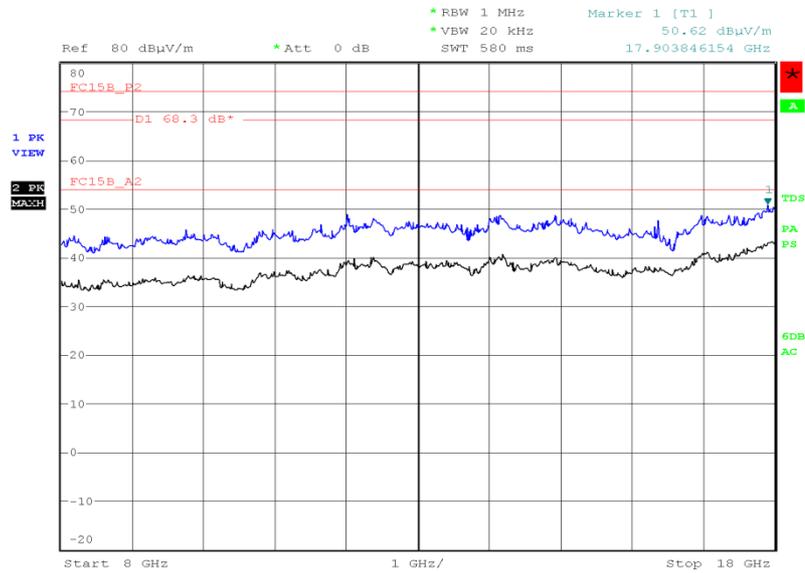
7 GHz to 8 GHz



Date: 18.JAN.2014 12:14:29

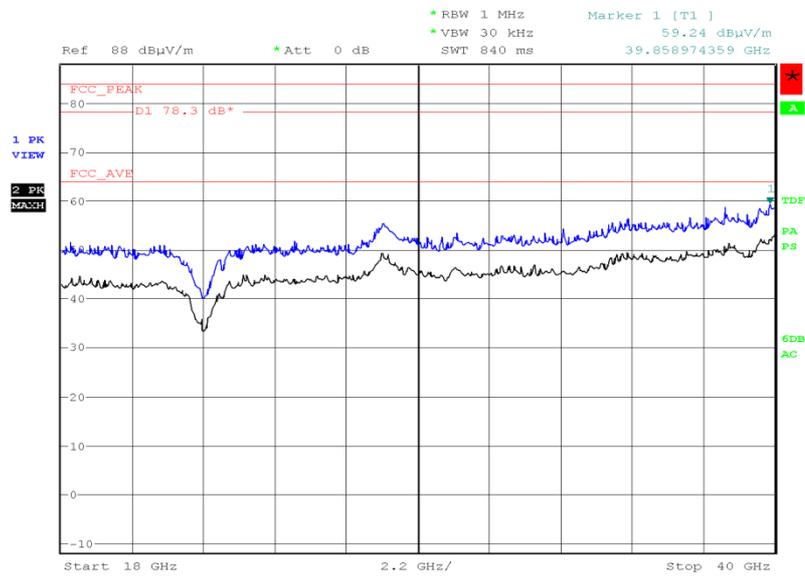


8 GHz to 18 GHz



Date: 18.JAN.2014 16:13:17

18 GHz to 40 GHz

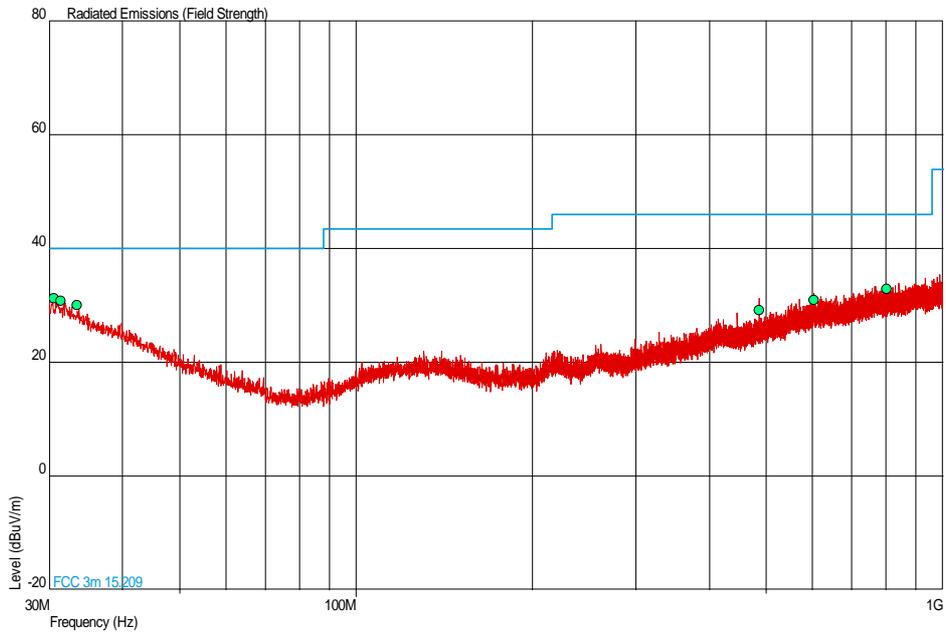


Date: 20.JAN.2014 21:20:17



5590 MHz

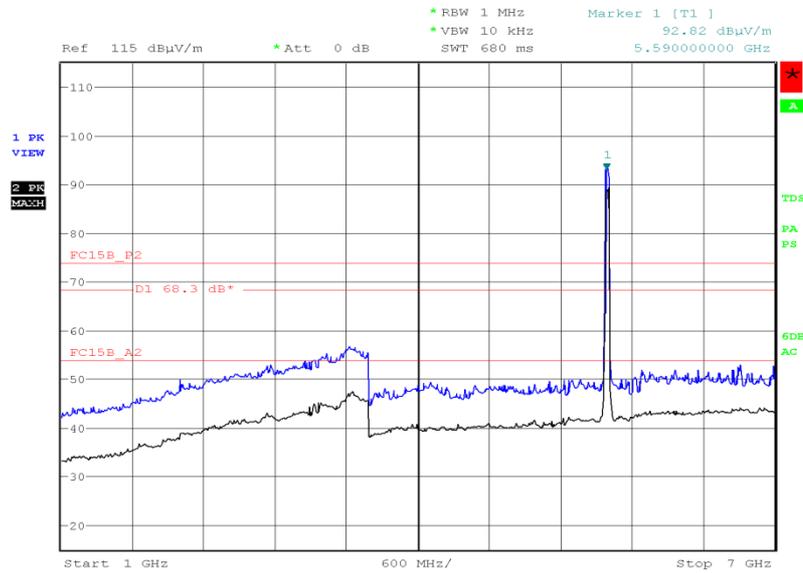
30 MHz to 1 GHz



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
30.534	31.3	36.7	40.0	100	-8.7	63.3	0	1.00	Horizontal
31.407	30.9	35.1	40.0	100	-9.1	64.9	0	1.00	Horizontal
33.444	30.0	31.6	40.0	100	-10.0	68.4	0	1.00	Vertical
486.143	29.1	28.5	46.0	200	-16.9	171.5	0	1.00	Vertical
602.543	31.0	35.5	46.0	200	-15.0	164.5	0	1.00	Vertical
801.635	32.9	44.2	46.0	200	-13.1	155.8	0	1.00	Vertical

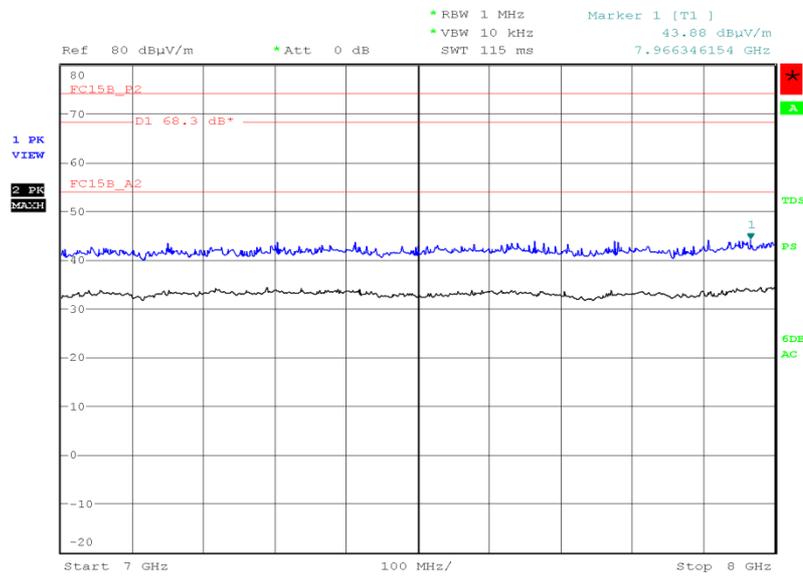


1 GHz to 7 GHz



Date: 15.JAN.2014 18:53:20

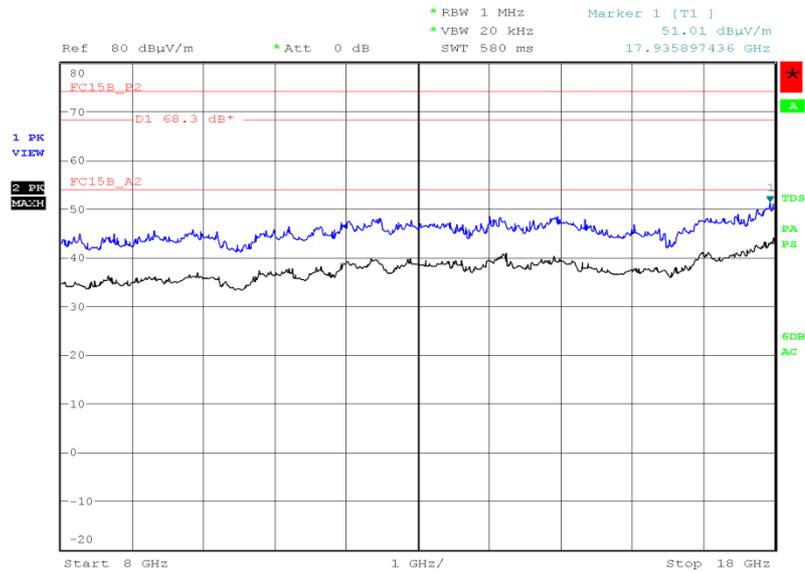
7 GHz to 8 GHz



Date: 18.JAN.2014 12:17:00

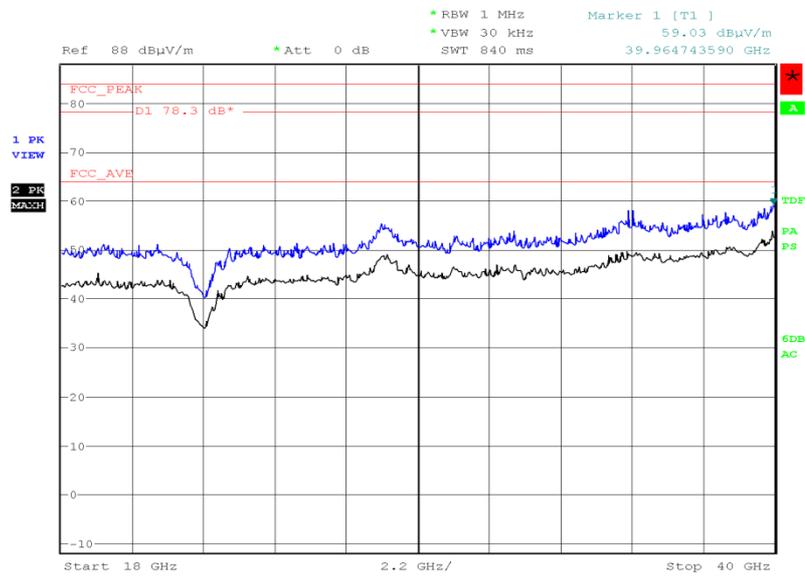


8 GHz to 18 GHz



Date: 18.JAN.2014 16:26:18

18 GHz to 40 GHz

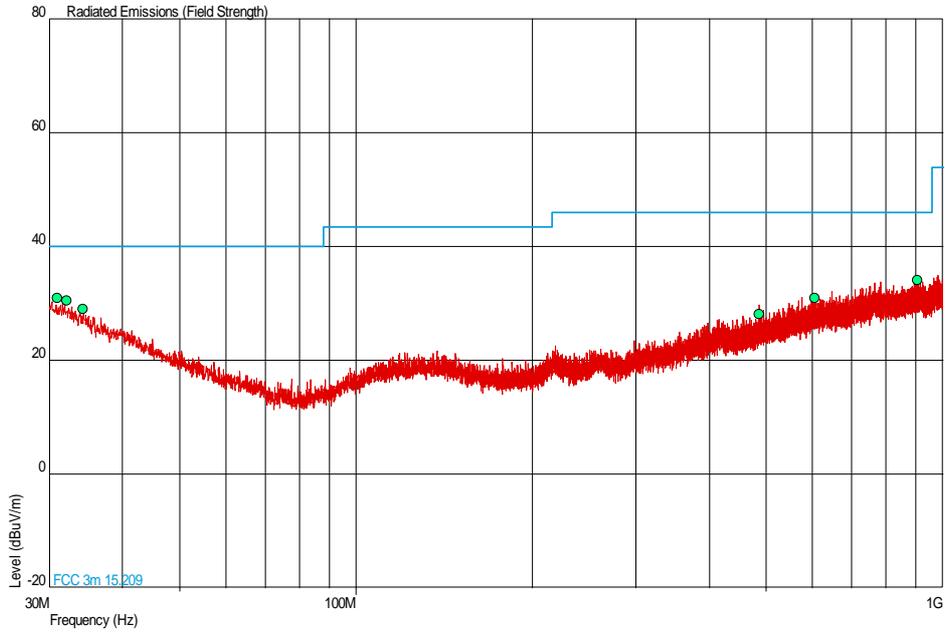


Date: 20.JAN.2014 21:25:57



5670MHz

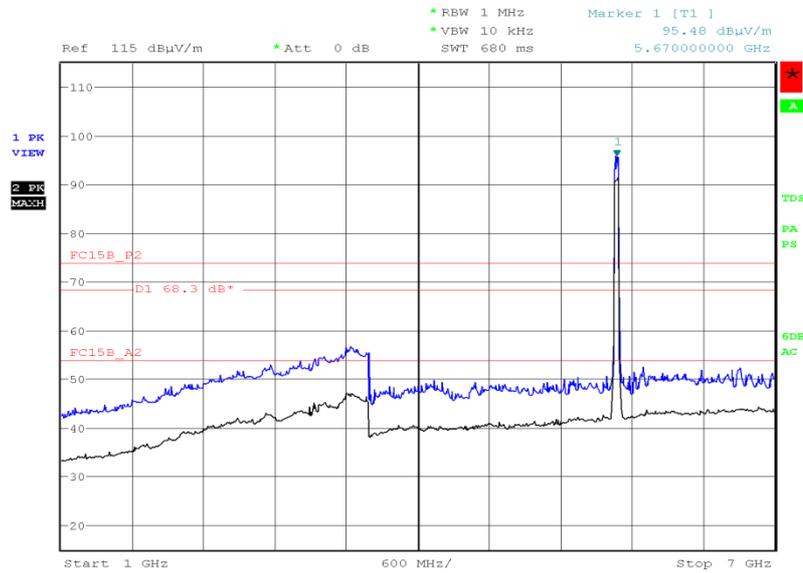
30 MHz to 1 GHz



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
31.019	31.0	35.5	40.0	100	-9.0	64.5	0	1.00	Vertical
32.183	30.5	33.5	40.0	100	-9.5	66.5	0	1.00	Vertical
34.220	29.0	28.2	40.0	100	-11.0	71.8	0	1.00	Vertical
486.094	28.1	25.4	46.0	200	-17.9	174.6	0	1.00	Vertical
604.309	31.0	35.5	46.0	200	-15.0	164.5	0	1.00	Vertical
904.358	34.1	50.7	46.0	200	-11.9	149.3	0	1.00	Vertical

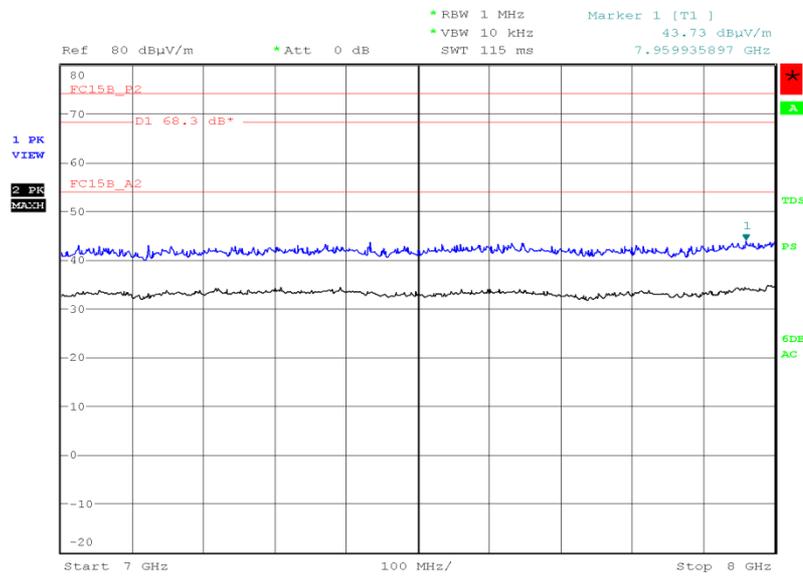


1 GHz to 7 GHz



Date: 15.JAN.2014 19:07:19

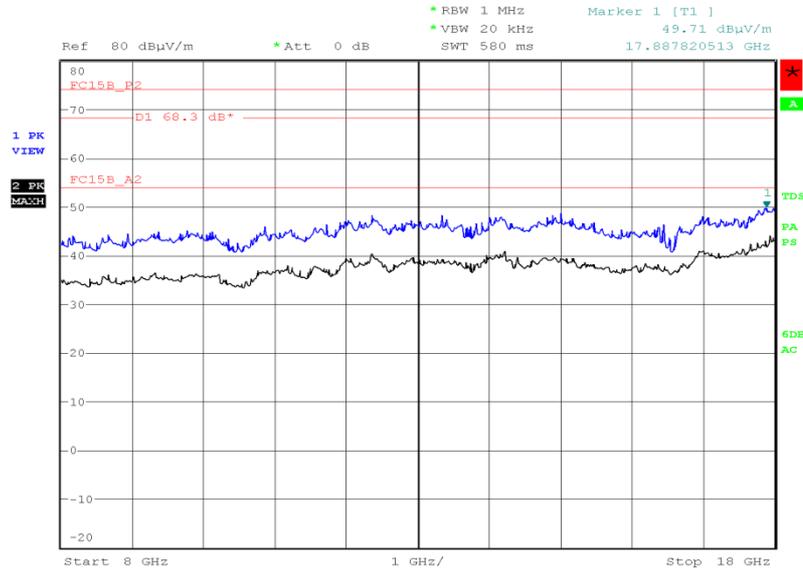
7 GHz to 8 GHz



Date: 18.JAN.2014 12:20:30

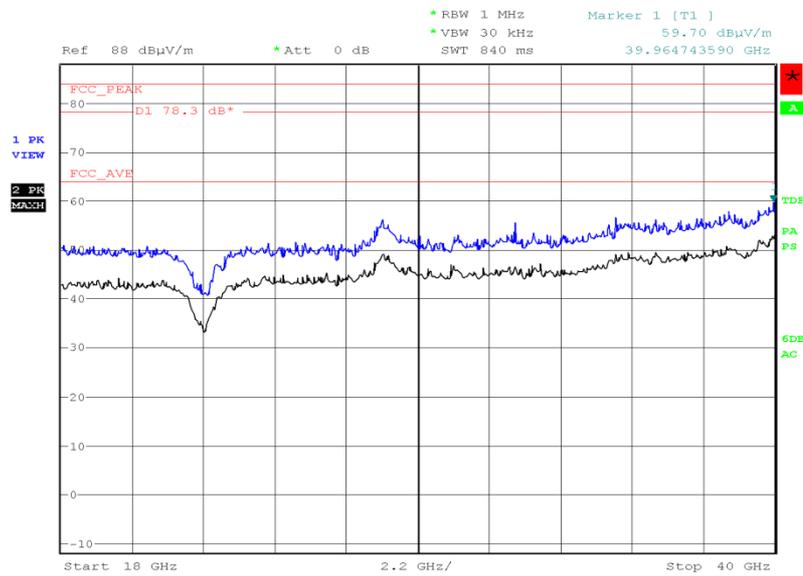


8 GHz to 18 GHz



Date: 18.JAN.2014 16:35:19

18 GHz to 40 GHz



Date: 20.JAN.2014 21:36:05

Limit

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

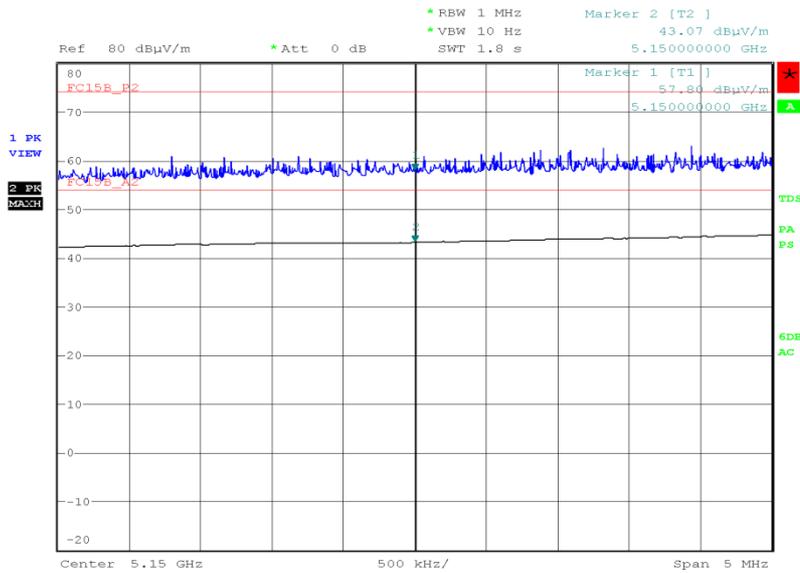


Product Service

Band Edge Emissions

5190 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	57.80	43.07

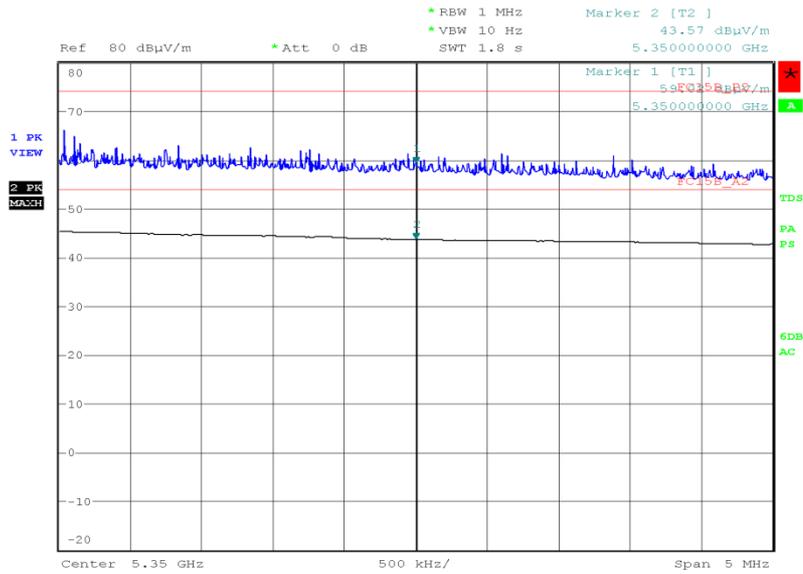


Date: 14.JAN.2014 18:48:58



5310 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	59.02	43.57

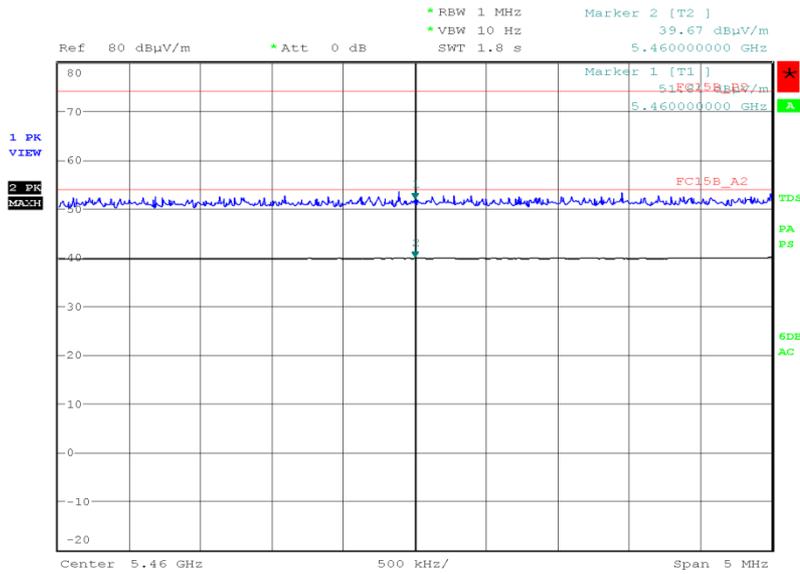


Date: 14.JAN.2014 19:08:47



5510 MHz

Polarisation	Final Peak (dBµV/m)	Final Average (dBµV/m)
Horizontal	51.84	39.67



Date: 14.JAN.2014 19:17:19

Limit

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



Product Service

2.4 FREQUENCY STABILITY

2.4.1 Specification Reference

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

2.4.2 Equipment Under Test and Modification State

SHT22 S/N: IMEI 004401115013365 - Modification State 0

2.4.3 Date of Test

22 January 2014

2.4.4 Test Equipment Used

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

2.4.5 Test Procedure

The UUT was set to transmit and a spectrum analyser was used to measure emissions at the operating band edges with an emissions 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 UUT was stabilised at each temperature variation prior to measurements being made.

2.4.6 Environmental Conditions

Ambient Temperature	21.8°C
Relative Humidity	35.3%



Product Service

2.4.7 Test Results

802.11(a)

4.0 V DC Supply

Frequency Band 1

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)	
		5180 MHz	5240 MHz
-10°C	4.0 V DC	Pass	N/A
	3.7 V DC	Pass	N/A
+20°C	4.0 V DC	Pass	N/A
	3.7 V DC	Pass	N/A
	4.0 V DC	Pass	Pass
+55°C	4.0 V DC	Pass	N/A
	3.7 V DC	Pass	N/A
Maximum Frequency Error (Hz)		Pass	N/A

Frequency Band 2

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5320 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass



Product Service

Frequency Band 3

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)	
		5500 MHz	5700 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+20°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
	4.0 V DC	Pass	Pass
+55°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
Maximum Frequency Error (Hz)		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

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5180 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass

Frequency Band 2

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5320 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass



Product Service

Frequency Band 3

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)	
		5500 MHz	5700 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+20°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
	4.0 V DC	Pass	Pass
+55°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
Maximum Frequency Error (Hz)		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

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5190 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass

Frequency Band 2

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5310 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass



Product Service

Frequency Band 3

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)	
		5510 MHz	5670 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+20°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
	4.0 V DC	Pass	Pass
+55°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
Maximum Frequency Error (Hz)		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

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5210 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass

Frequency Band 2

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5290 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+10°C	4.0 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass



Product Service

Frequency Band 3

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)	
		5530 MHz	5610 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+20°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
	4.0 V DC	Pass	N/A
+55°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
Maximum Frequency Error (Hz)		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

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5180 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass

Frequency Band 2

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5320 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass



Product Service

Frequency Band 3

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)	
		5500 MHz	5700 MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+20°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
	4.0 V DC	Pass	Pass
+55°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
Maximum Frequency Error (Hz)		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

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5190 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass

Frequency Band 2

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)
		5310 MHz
-10°C	4.0 V DC	Pass
	3.7 V DC	Pass
+20°C	4.0 V DC	Pass
	3.7 V DC	Pass
	4.0 V DC	Pass
+55°C	4.0 V DC	Pass
	3.7 V DC	Pass
Maximum Frequency Error (Hz)		Pass



Product Service

Frequency Band 3

Hand Carried Battery Powered

Temperature Interval	Supply Voltage	Frequency Error (ppm)	
		5510 MHz	5670MHz
-10°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
+20°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
	4.0 V DC	Pass	Pass
+55°C	4.0 V DC	Pass	Pass
	3.7 V DC	Pass	Pass
Maximum Frequency Error (Hz)		Pass	Pass

Limit

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



Product Service

2.5 26 dB BANDWIDTH**2.5.1 Specification Reference**

FCC CFR 47 Part 15E, Clause 15.407 (a)

2.5.2 Equipment Under Test and Modification State

SHT22 S/N: IMEI 004401115013365 - Modification State 0

2.5.3 Date of Test

15 January 2014 & 16 January 2014

2.5.4 Test Equipment Used

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

2.5.5 Test Procedure

The EUT was transmitted at maximum power via an attenuator and cable to the Spectrum Analyser. The Analyser settings were adjusted in accordance with KDB 789033. The resultant trace was displayed on the screen and the resolution bandwidth was adjusted to approximately 1% of the emission bandwidth. A video bandwidth 3 times the resolution bandwidth was used and the trace was set to max hold using a peak detector.

2.5.6 Environmental Conditions

Ambient Temperature	21.4 - 23.8°C
Relative Humidity	35.3 - 40.7%



Product Service

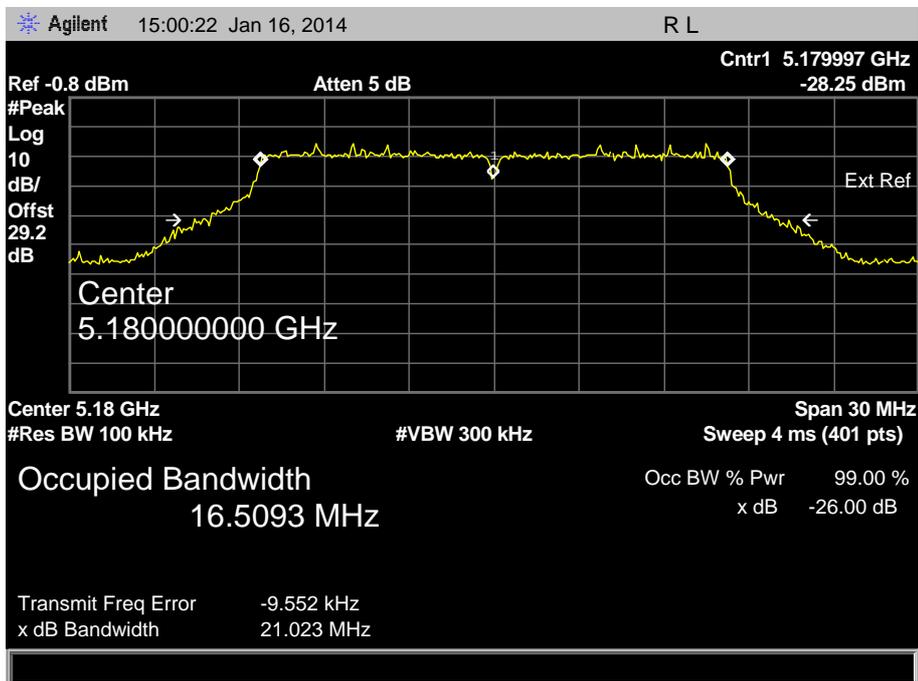
2.5.7 Test Results

802.11(a)

Frequency Band 1

5180 MHz

26 dB Bandwidth (MHz)	21.023
-----------------------	--------

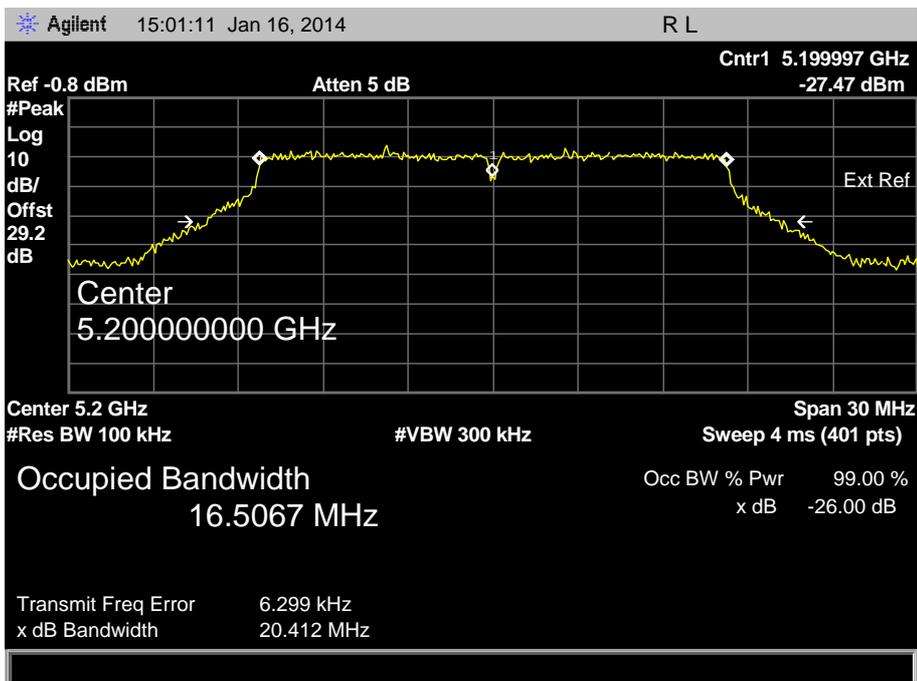




Product Service

5200 MHz

26 dB Bandwidth (MHz)	20.412
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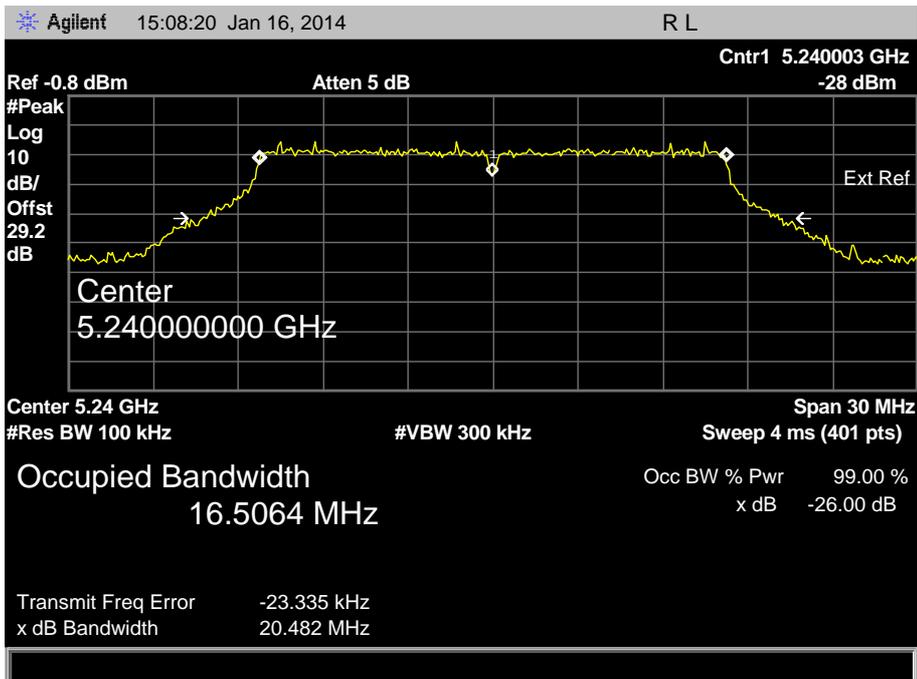




Product Service

5240 MHz

26 dB Bandwidth (MHz)	20.482
-----------------------	--------



The test was performed on the worst case data rate for 802.11(a) modulation. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

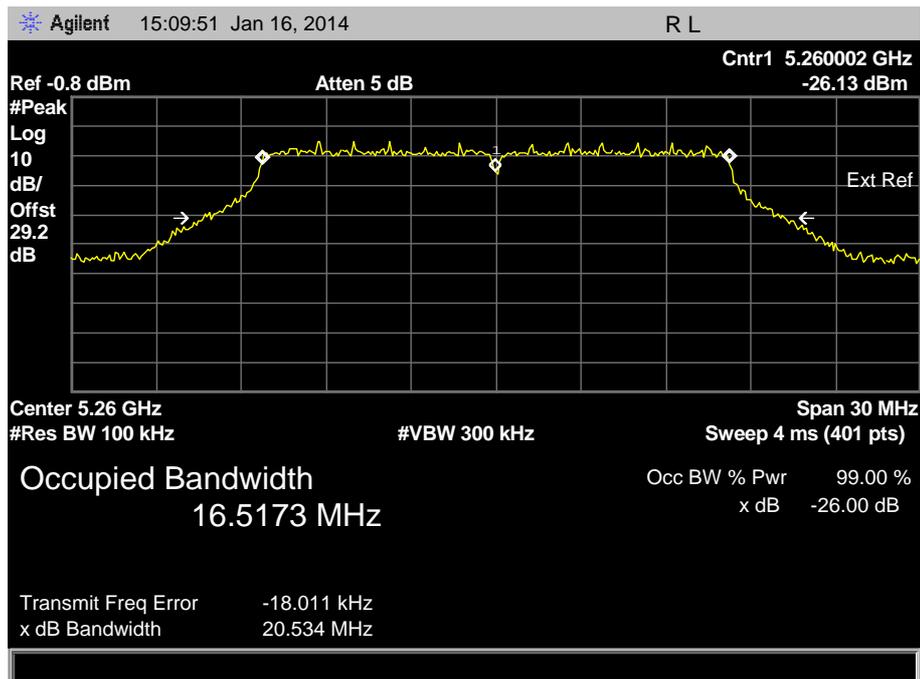


Product Service

Frequency Band 2

5260 MHz

26 dB Bandwidth (MHz)	20.534
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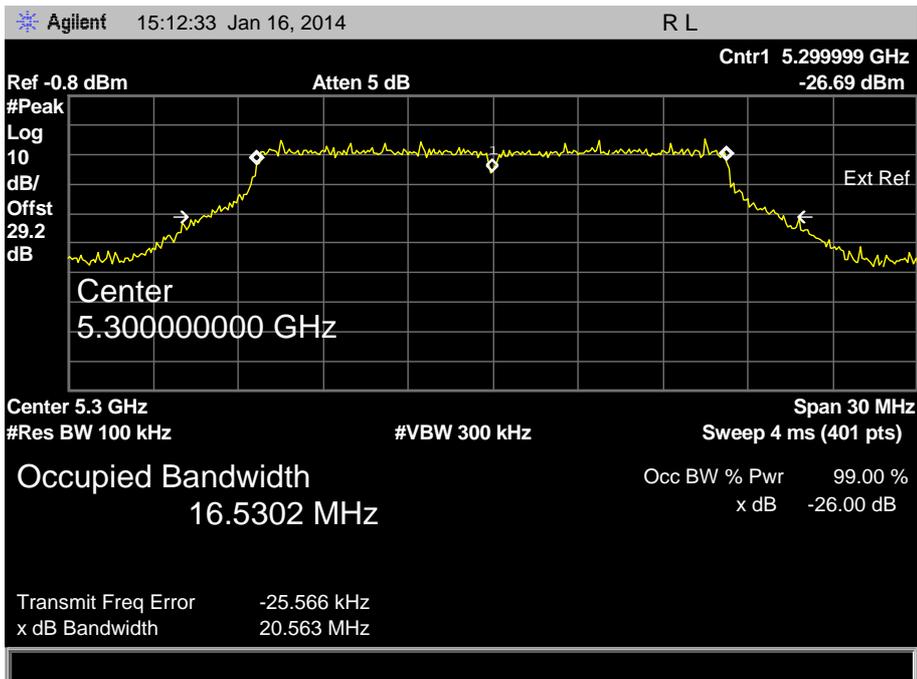




Product Service

5300 MHz

26 dB Bandwidth (MHz)	20.563
-----------------------	--------

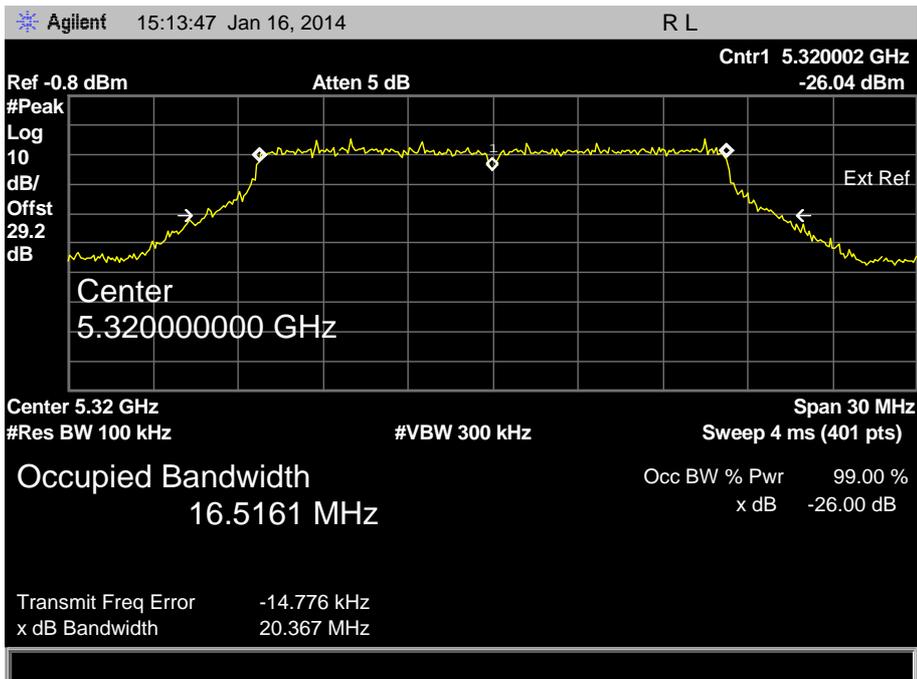




Product Service

5320 MHz

26 dB Bandwidth (MHz)	20.367
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The test was performed on the worst case data rate for 802.11(a) modulation. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

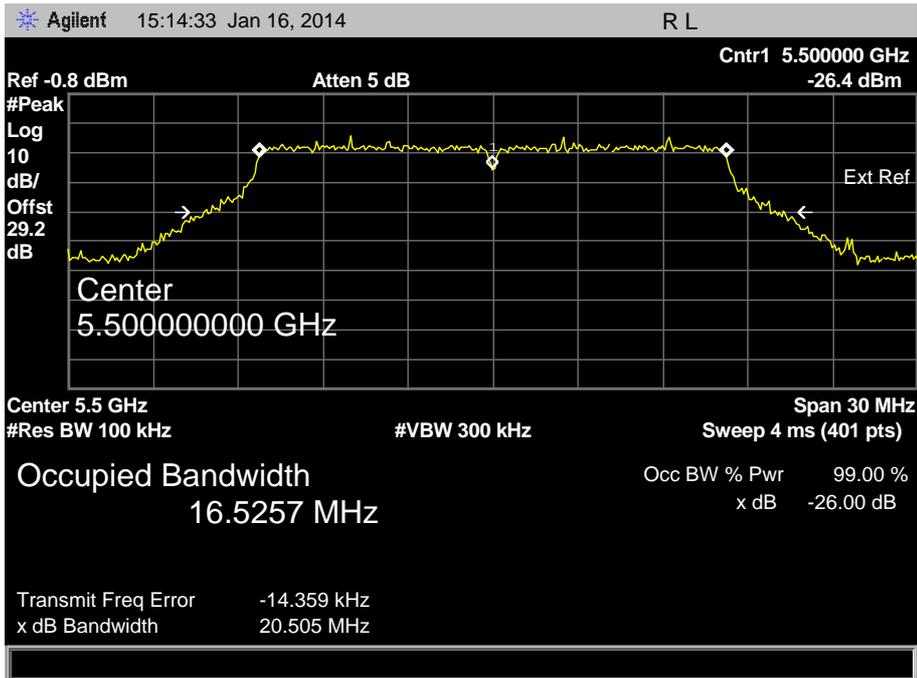


Product Service

Frequency Band 3

5500 MHz

26 dB Bandwidth (MHz)	20.505
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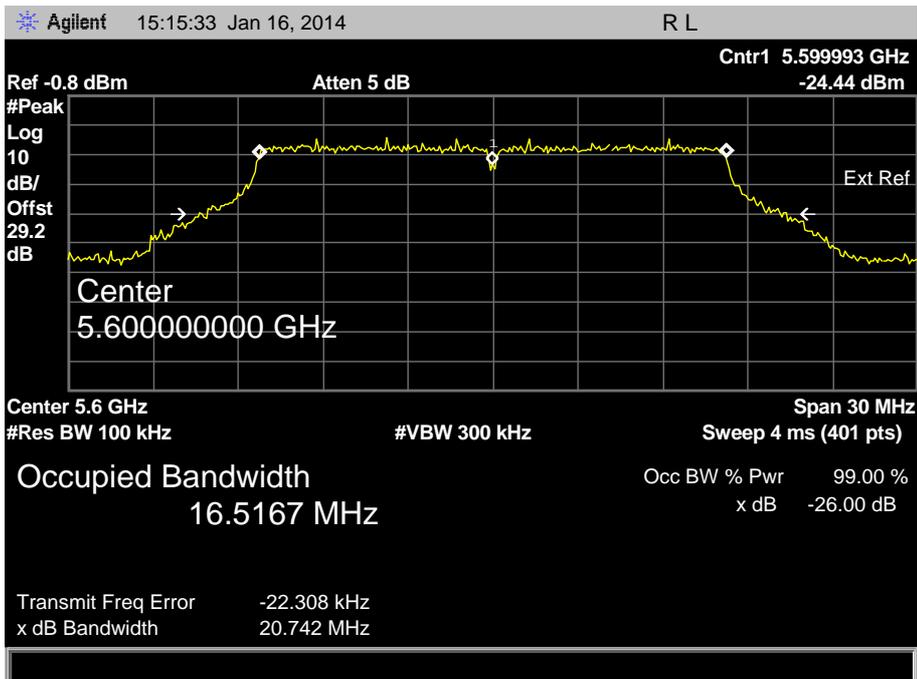




Product Service

5600 MHz

26 dB Bandwidth (MHz)	20.742
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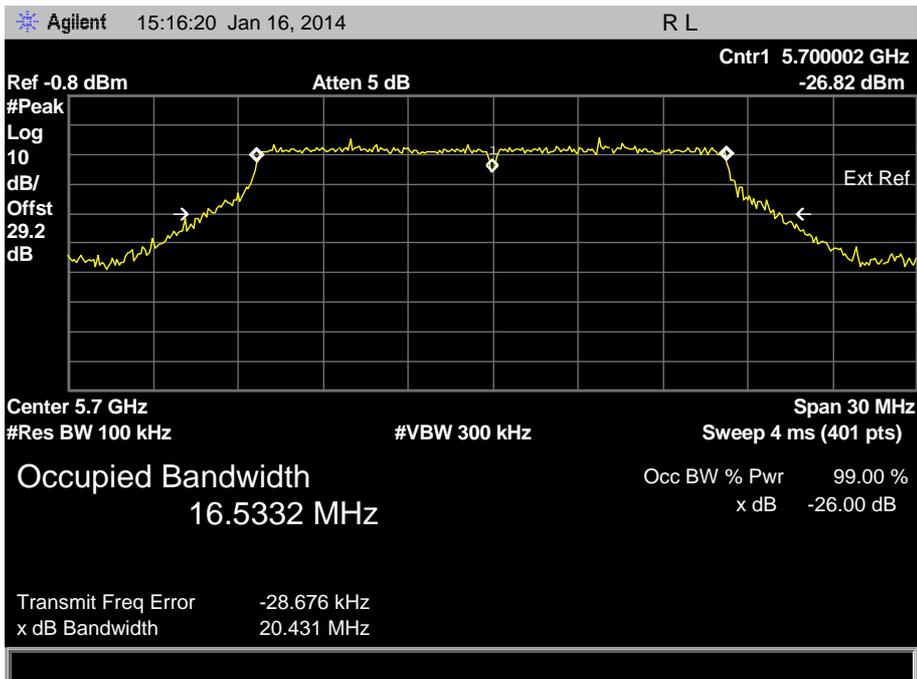




Product Service

5700 MHz

26 dB Bandwidth (MHz)	20.431
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The test was performed on the worst case data rate for 802.11(a) modulation. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

Limit

Not specified.



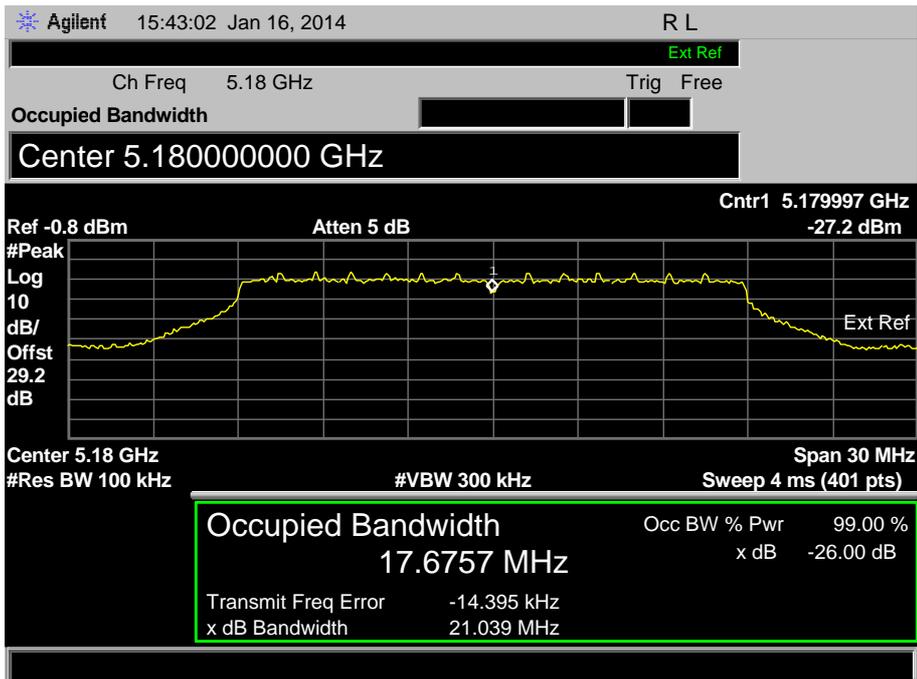
Product Service

802.11(ac) - 5 GHz 20 MHz BW

Frequency Band 1

5180 MHz

26 dB Bandwidth (MHz)	20.625
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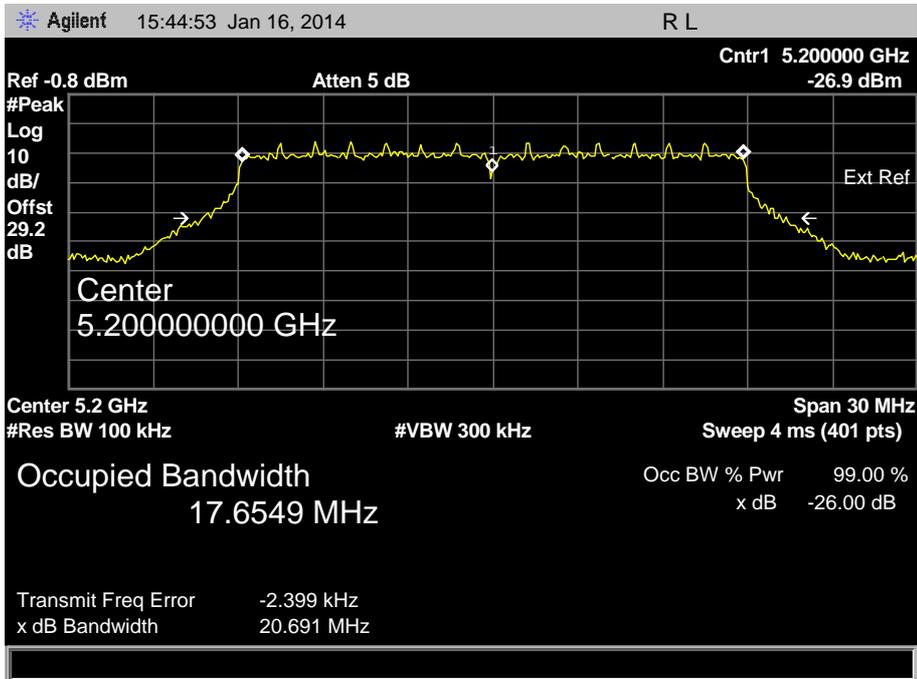




Product Service

5200 MHz

26 dB Bandwidth (MHz)	20.550
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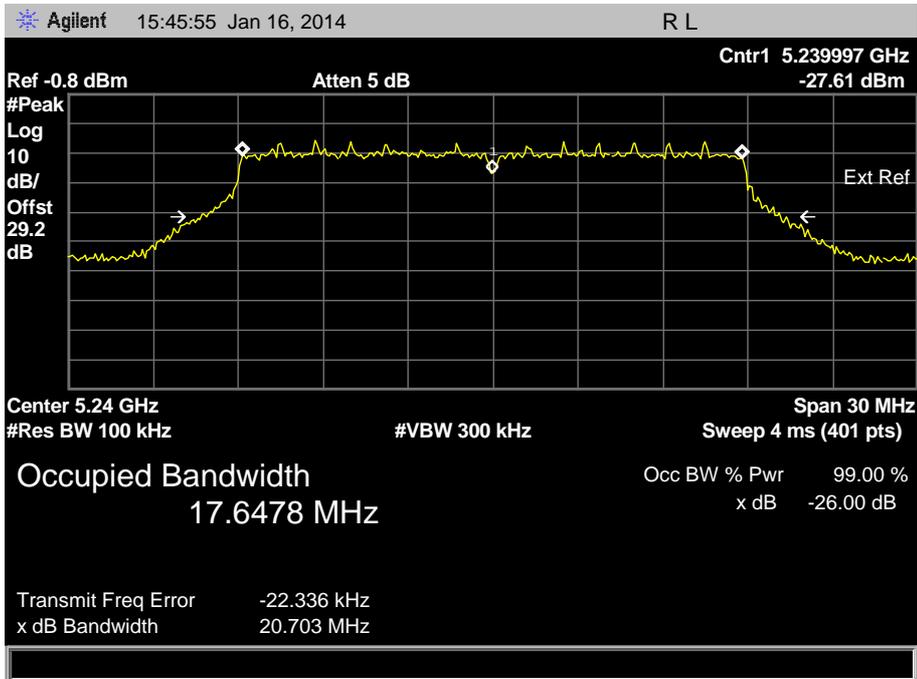




Product Service

5240 MHz

26 dB Bandwidth (MHz)	20.775
-----------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW modulation. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

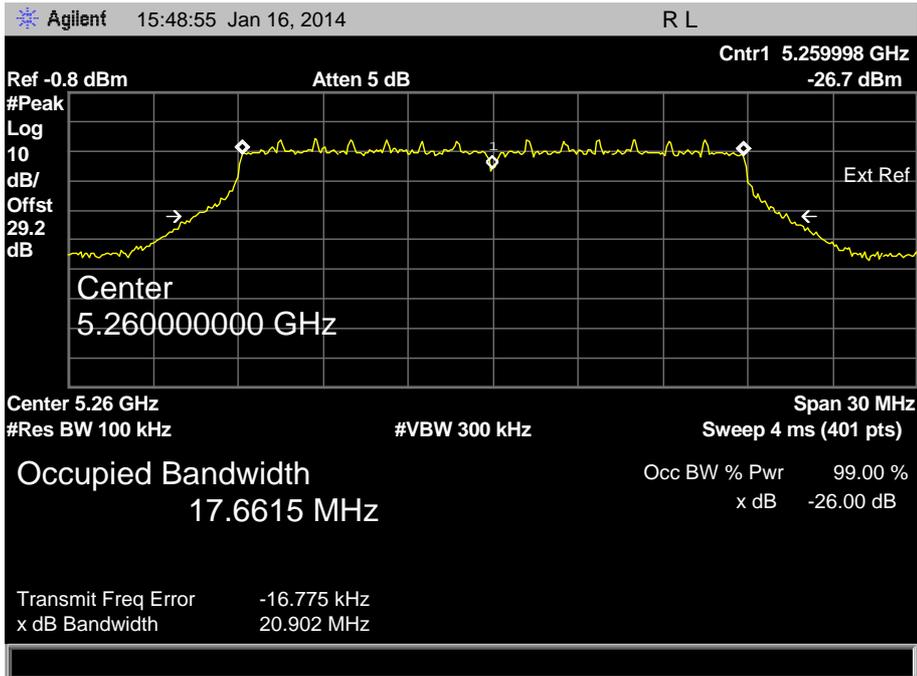


Product Service

Frequency Band 2

5260 MHz

26 dB Bandwidth (MHz)	20.775
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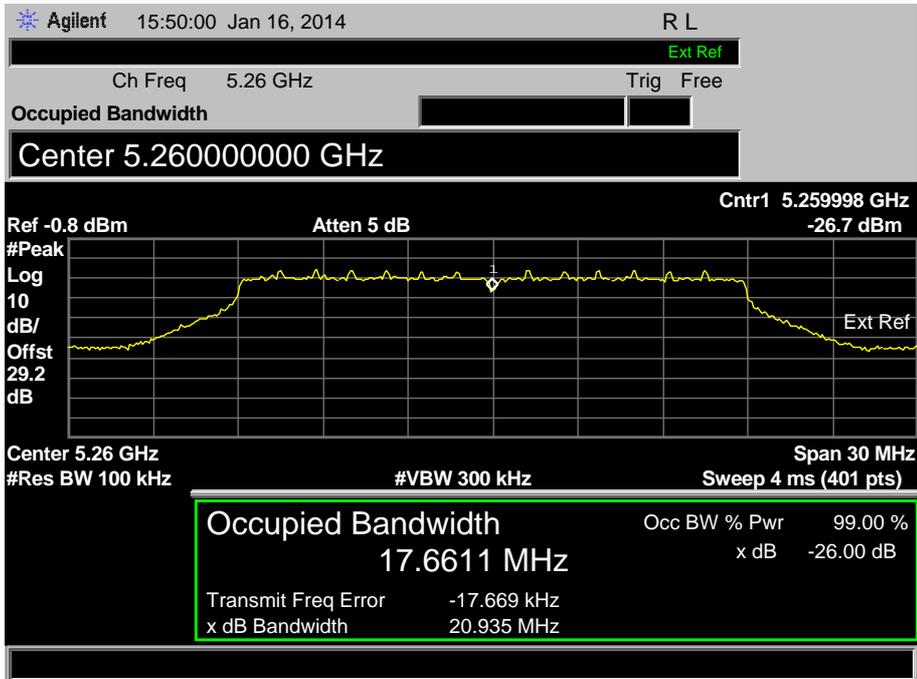




Product Service

5300 MHz

26 dB Bandwidth (MHz)	20.550
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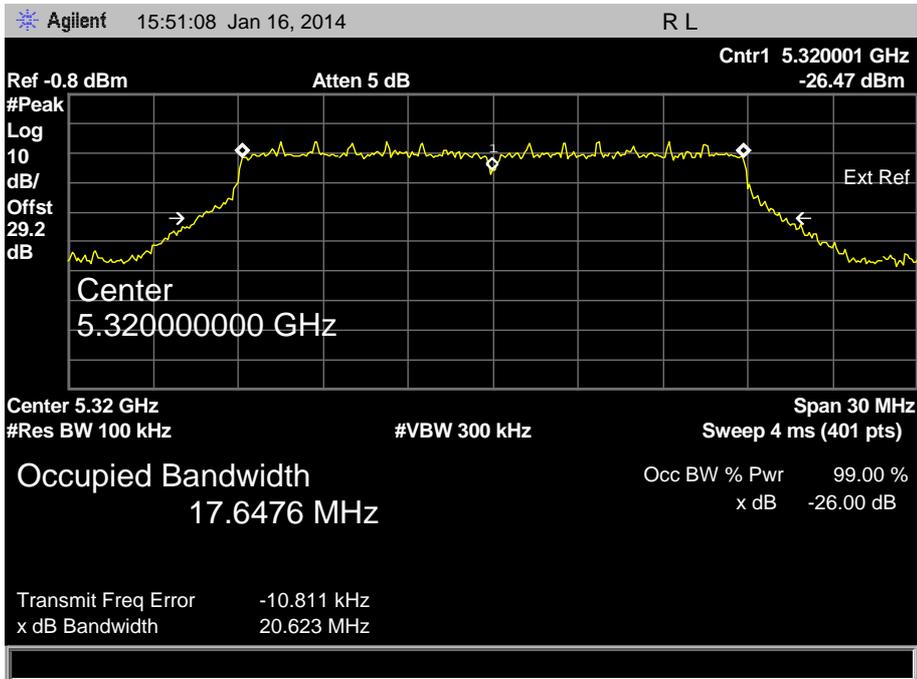




Product Service

5320 MHz

26 dB Bandwidth (MHz)	20.550
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The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW modulation. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

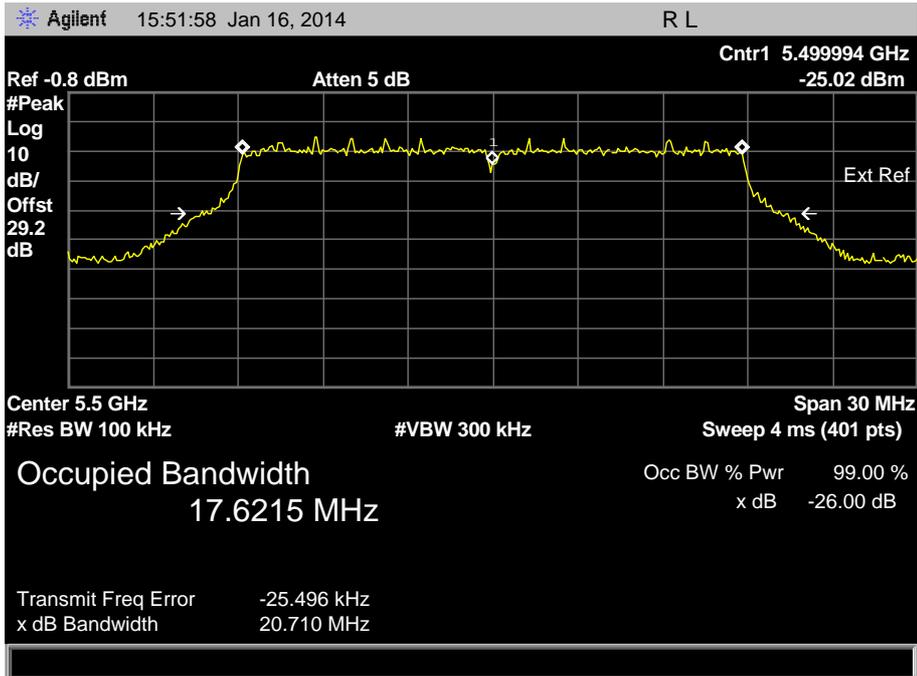


Product Service

Frequency Band 3

5500 MHz

26 dB Bandwidth (MHz)	20.625
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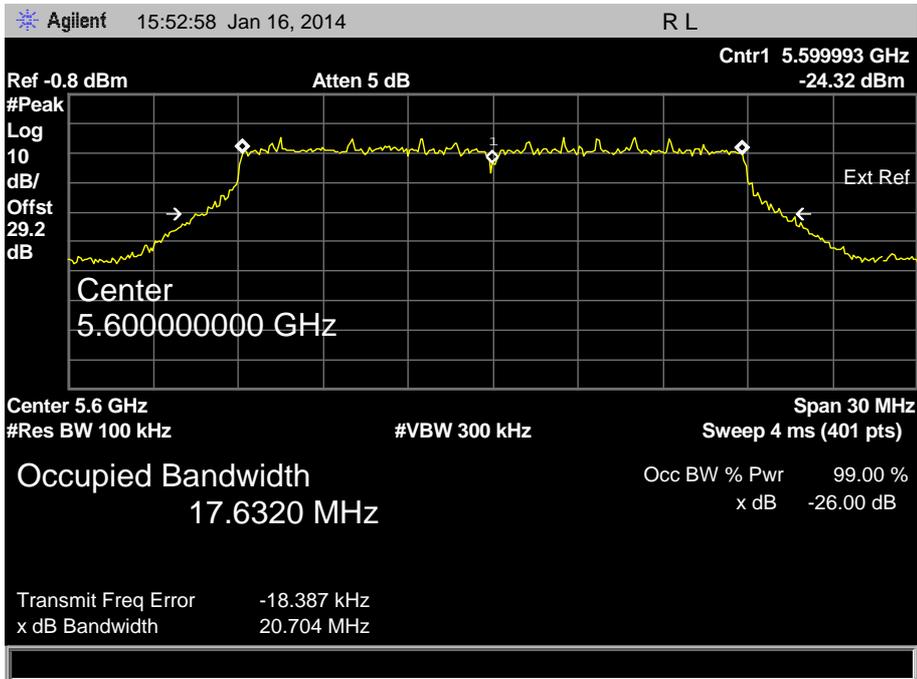




Product Service

5600 MHz

26 dB Bandwidth (MHz)	20.625
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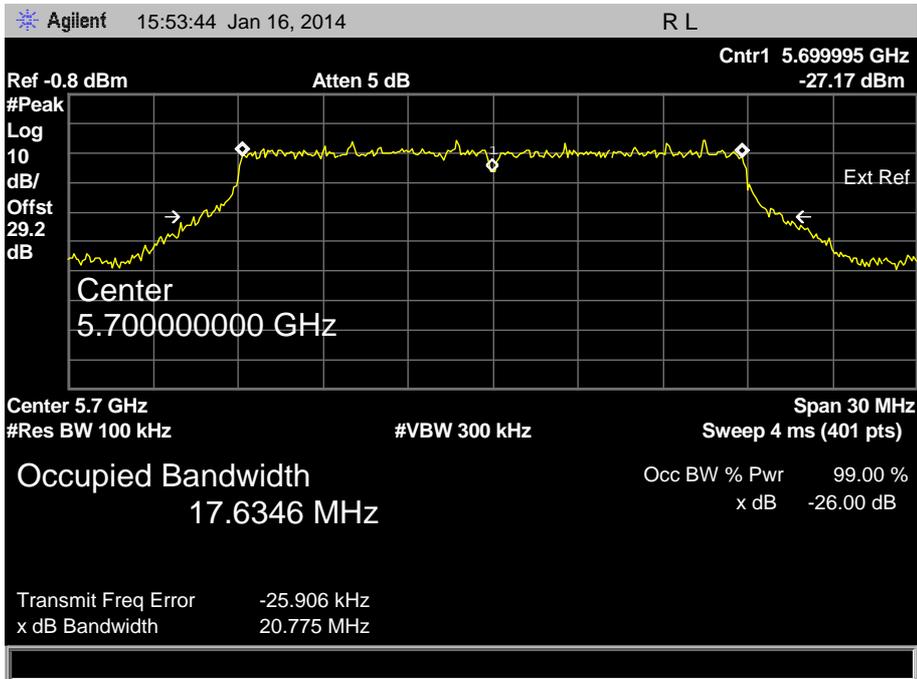




Product Service

5700 MHz

26 dB Bandwidth (MHz)	20.550
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The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW modulation. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

Limit

Not specified.



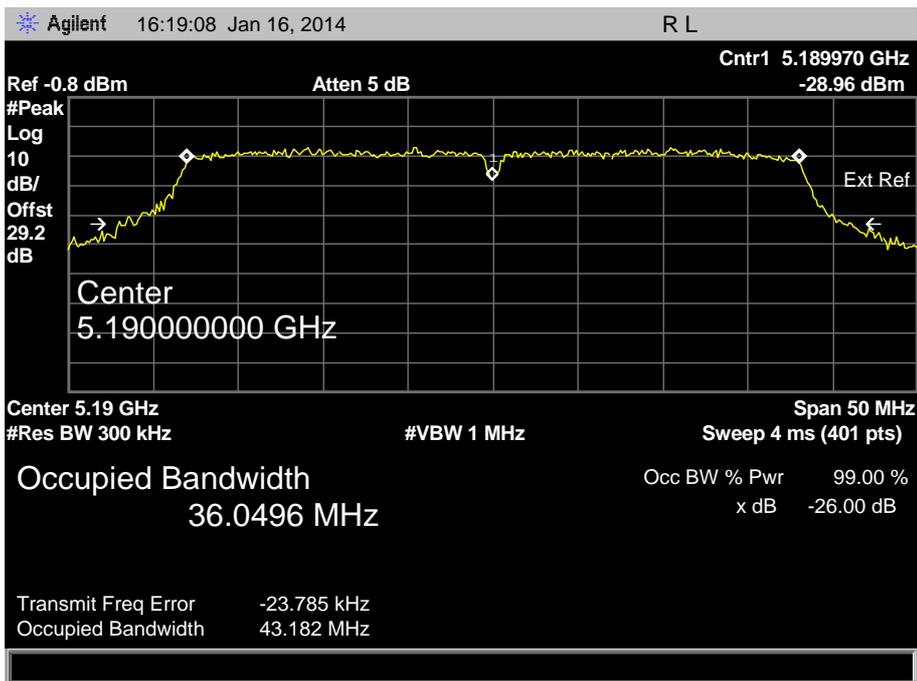
Product Service

802.11(ac) - 5 GHz 40 MHz BW

Frequency Band 1

5190 MHz

26 dB Bandwidth (MHz)	43.182
-----------------------	--------

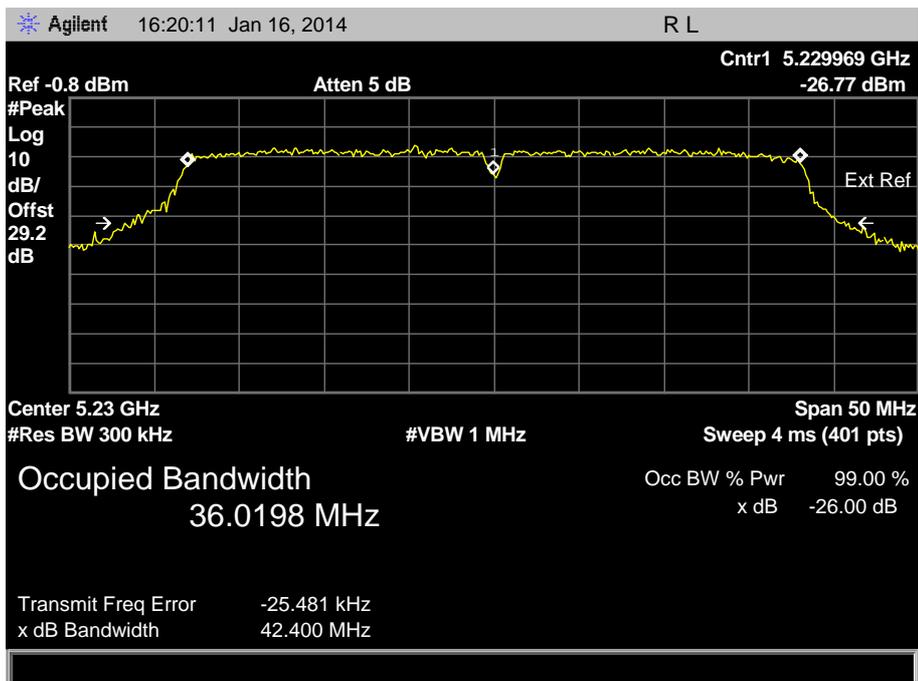




Product Service

5230 MHz

26 dB Bandwidth (MHz)	42.400
-----------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

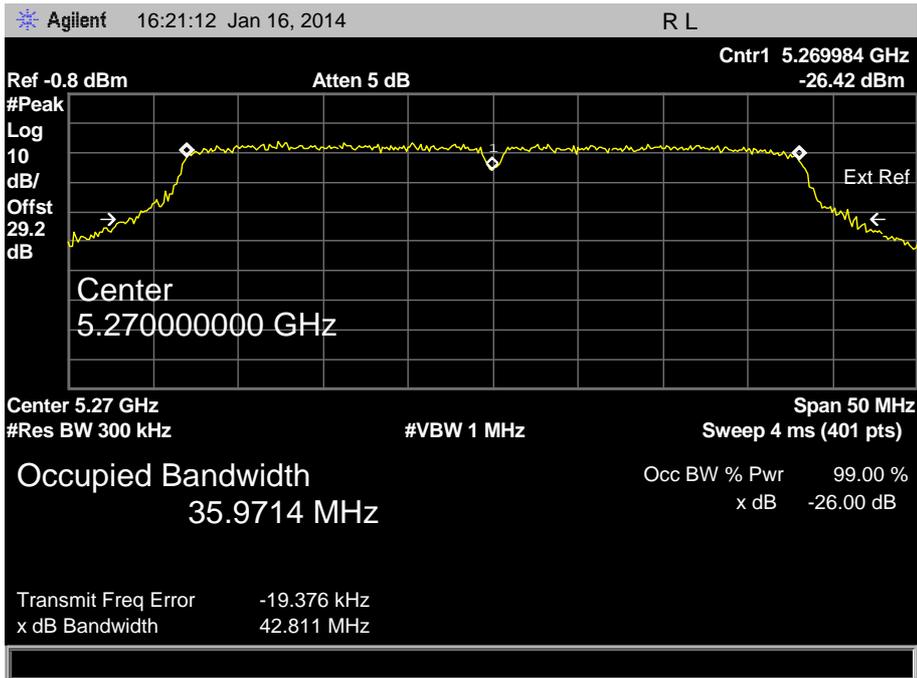


Product Service

Frequency Band 2

5270 MHz

26 dB Bandwidth (MHz)	42.811
-----------------------	--------

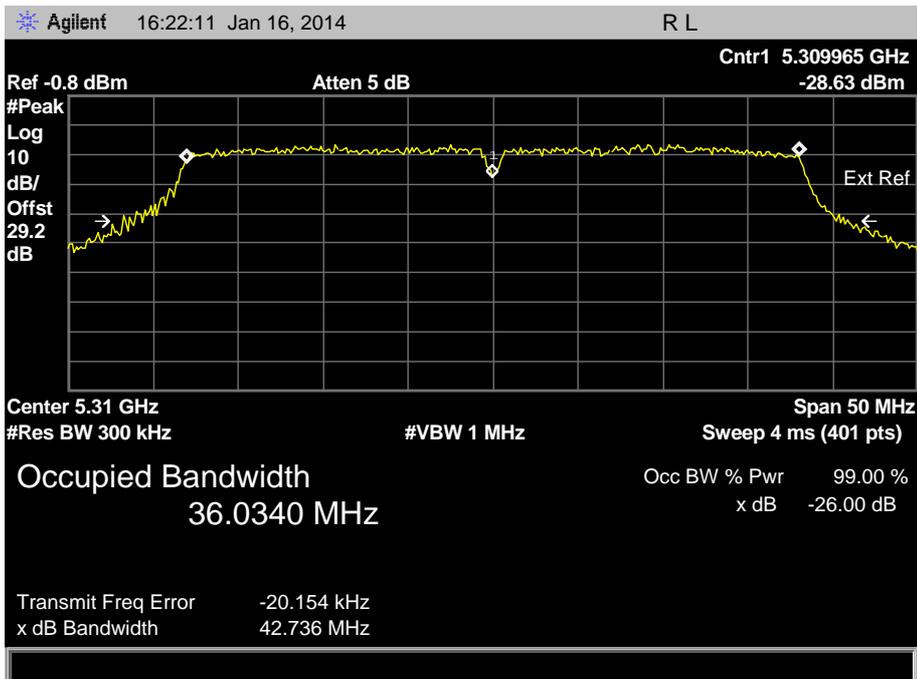




Product Service

5310 MHz

26 dB Bandwidth (MHz)	42.736
-----------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

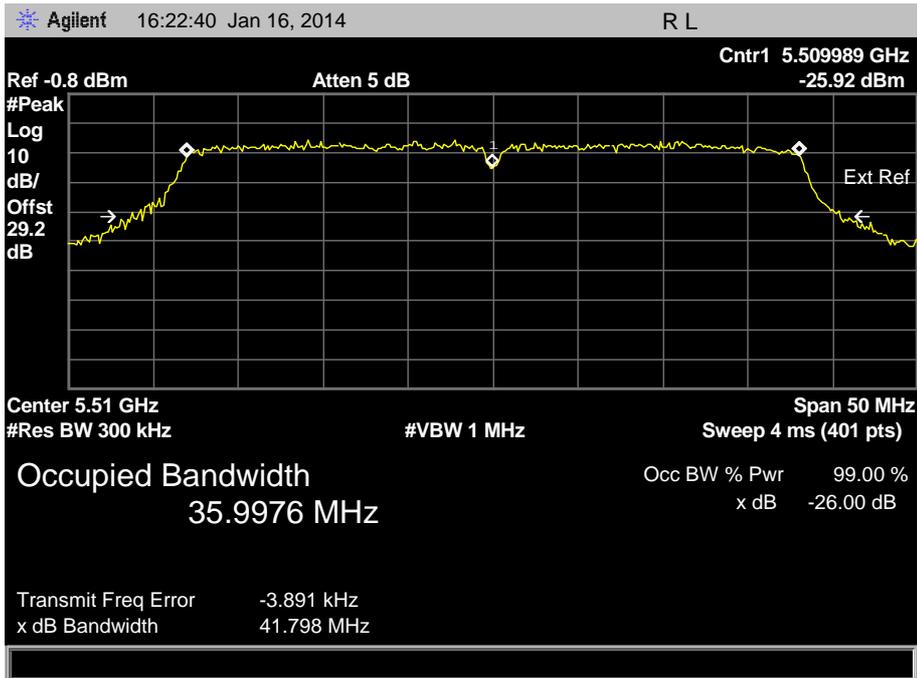


Product Service

Frequency Band 3

5510 MHz

26 dB Bandwidth (MHz)	41.798
-----------------------	--------

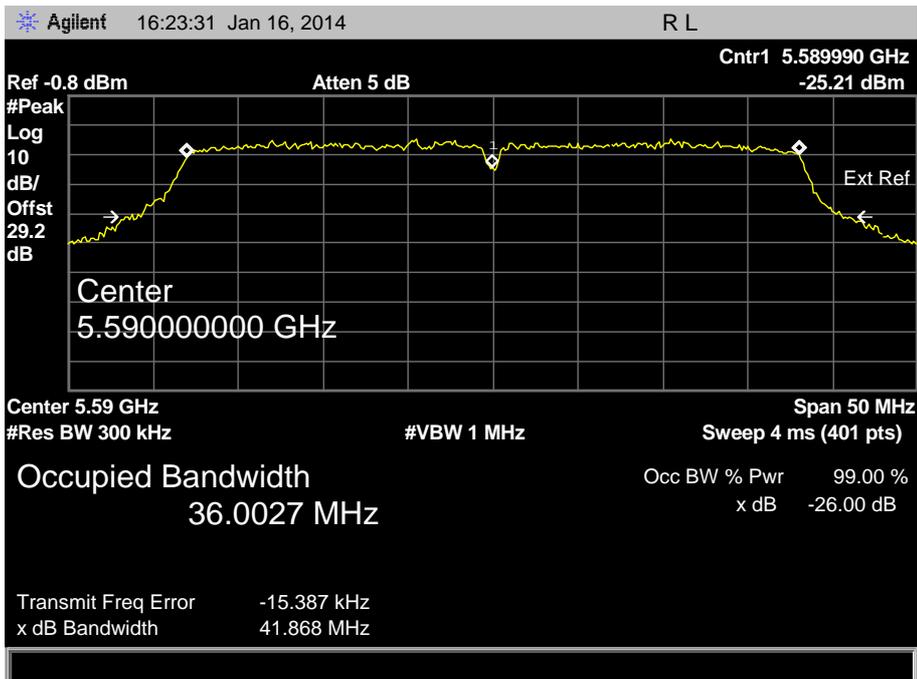




Product Service

5590 MHz

26 dB Bandwidth (MHz)	41.868
-----------------------	--------

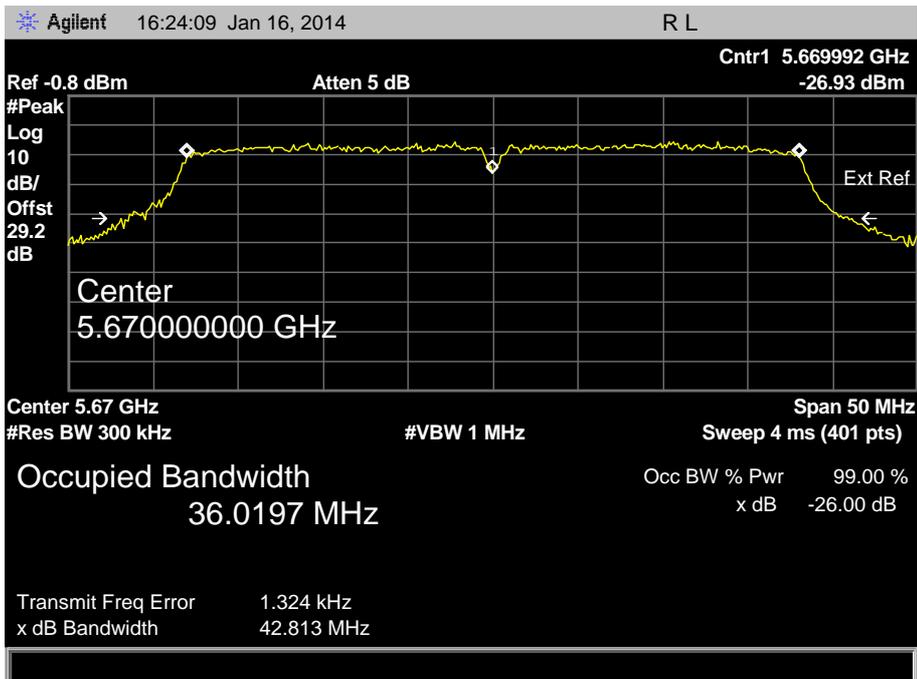




Product Service

5670 MHz

26 dB Bandwidth (MHz)	42.813
-----------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Not specified.



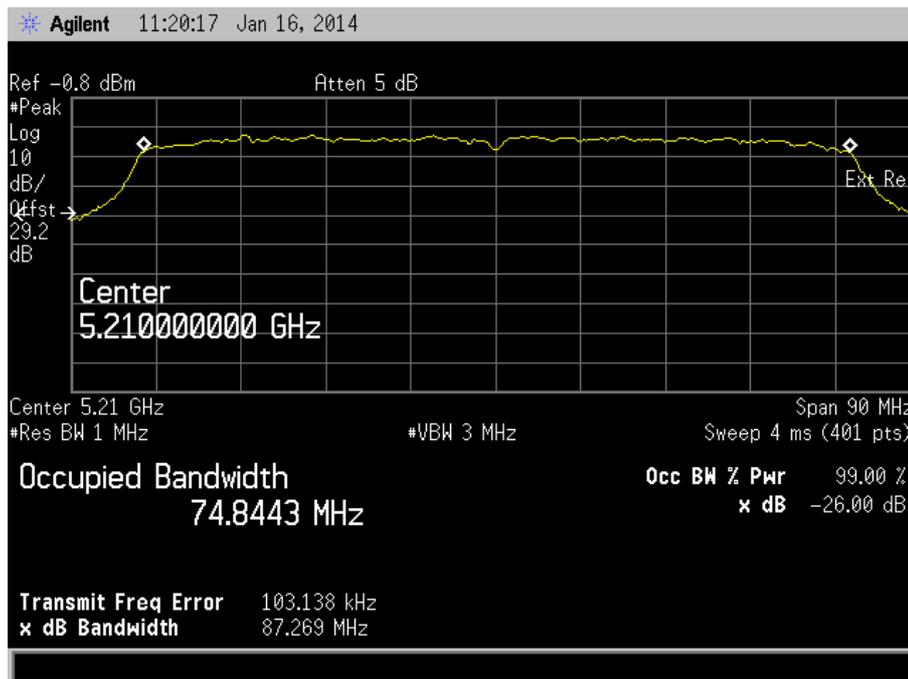
Product Service

802.11(ac) - 5 GHz 80 MHz BW

Frequency Band 1

5210 MHz

26 dB Bandwidth (MHz)	87.269
-----------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

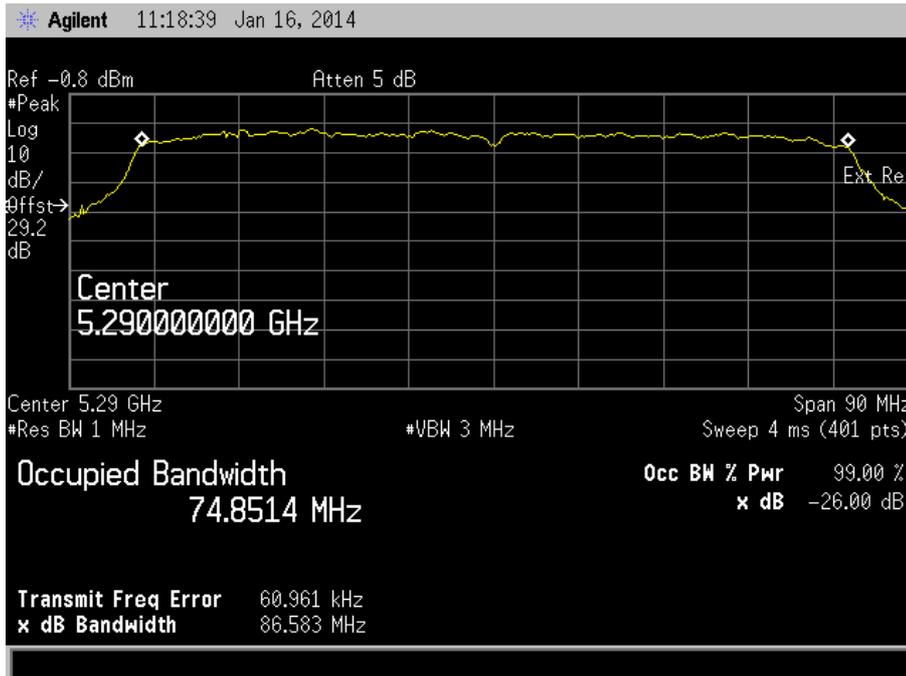


Product Service

Frequency Band 2

5290 MHz

26 dB Bandwidth (MHz)	86.583
-----------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

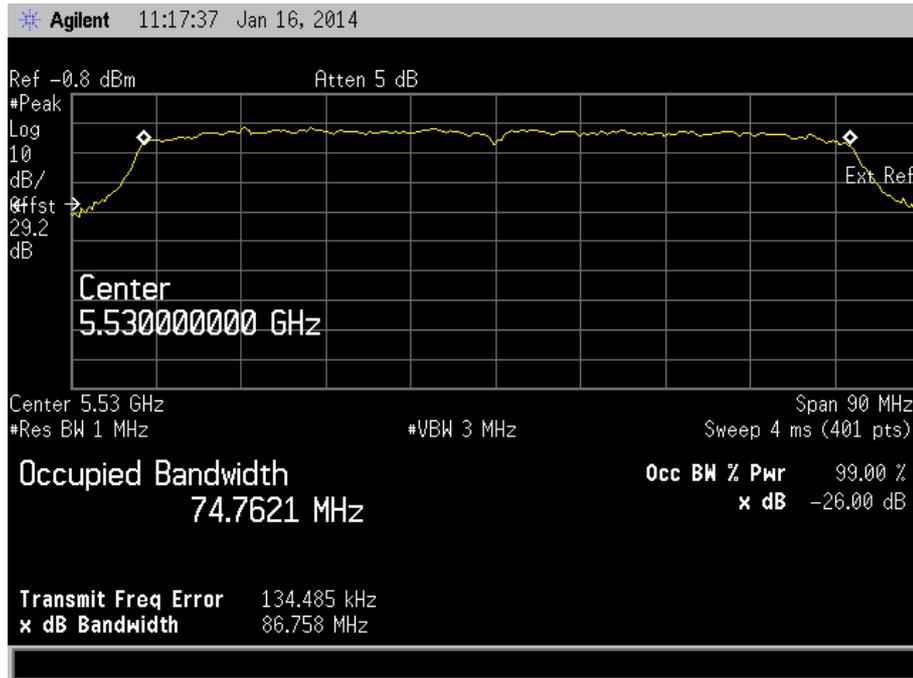


Product Service

Frequency Band 3

5530 MHz

26 dB Bandwidth (MHz)	86.758
-----------------------	--------

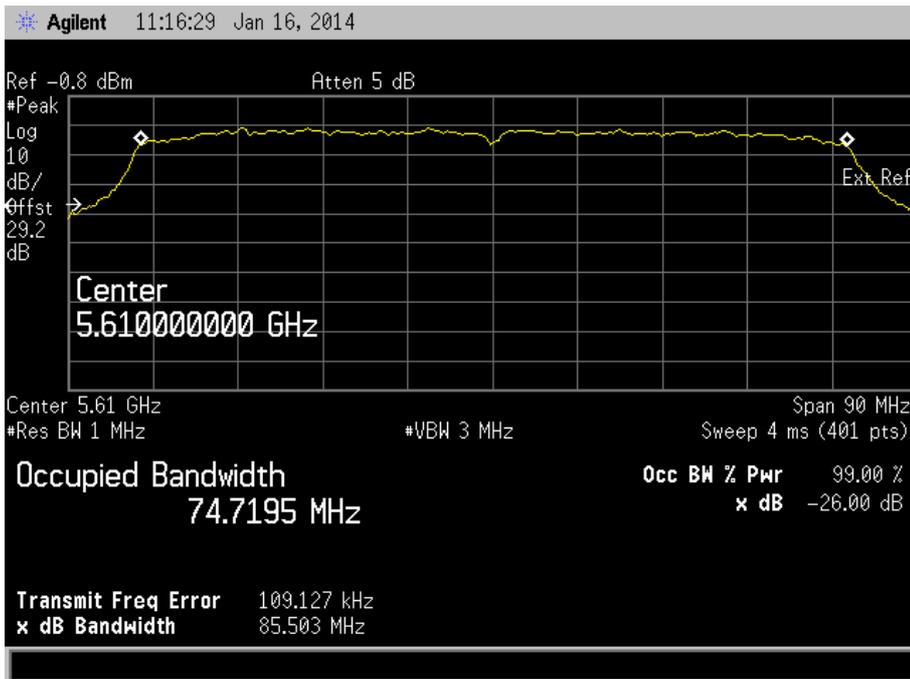




Product Service

5610 MHz

26 dB Bandwidth (MHz)	85.503
-----------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Not specified.



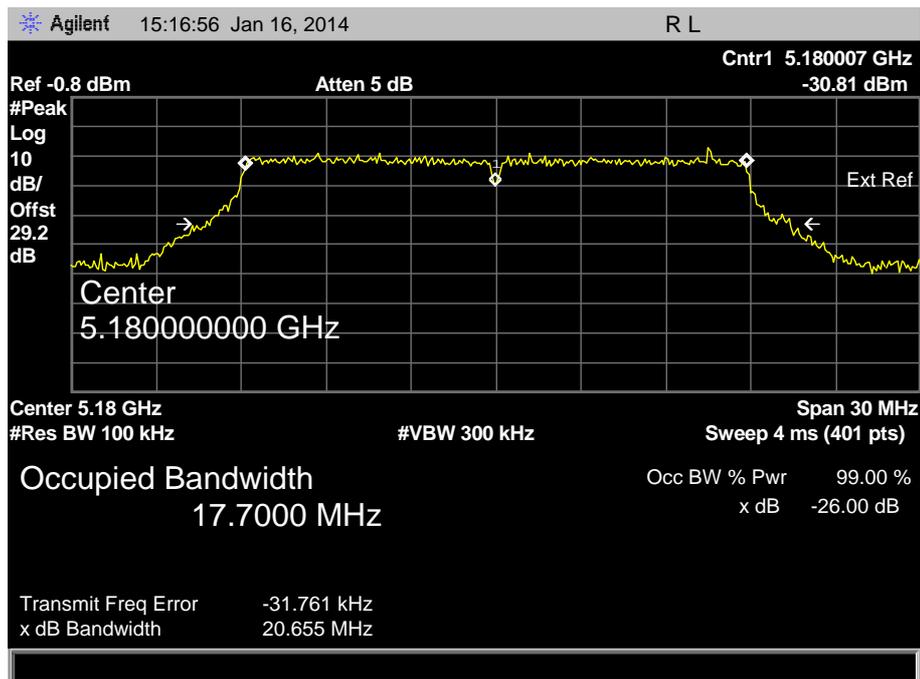
Product Service

802.11(n) - 5 GHz 20 MHz BW

Frequency Band 1

5180 MHz

26 dB Bandwidth (MHz)	20.655
-----------------------	--------

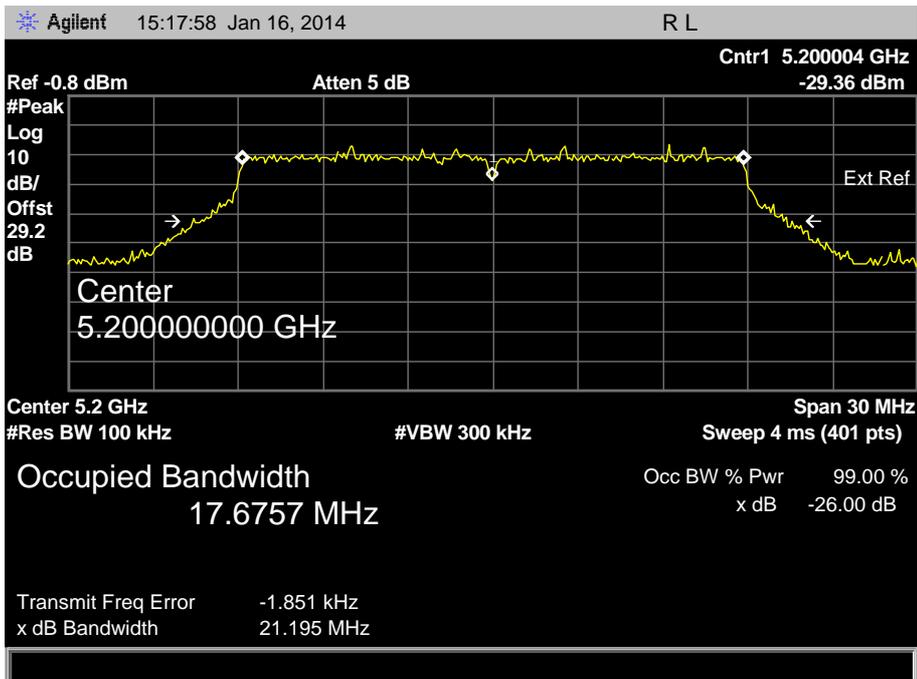




Product Service

5200 MHz

26 dB Bandwidth (MHz)	21.195
-----------------------	--------

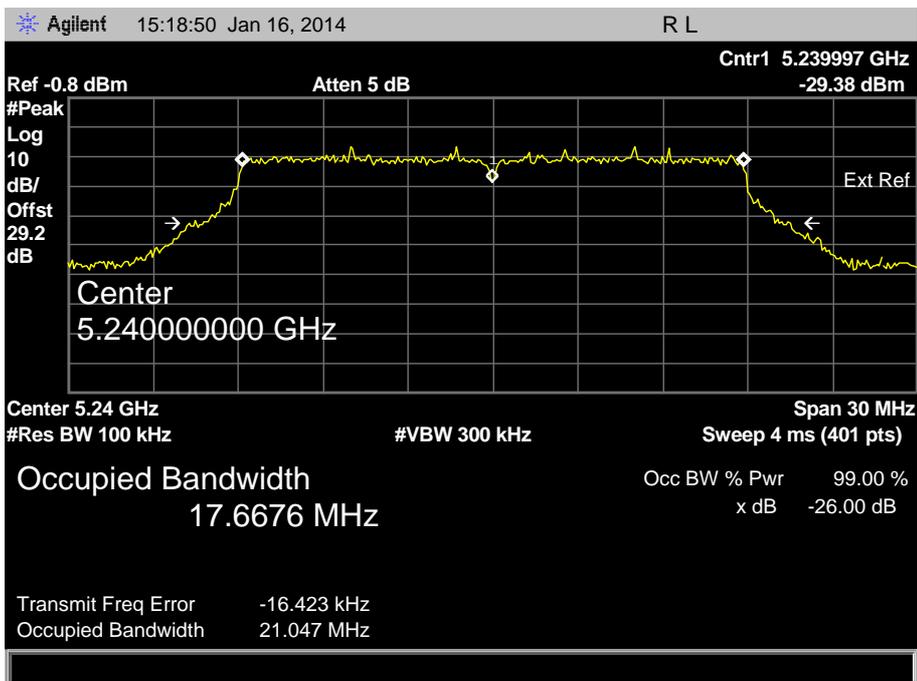




Product Service

5240 MHz

26 dB Bandwidth (MHz)	21.047
-----------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

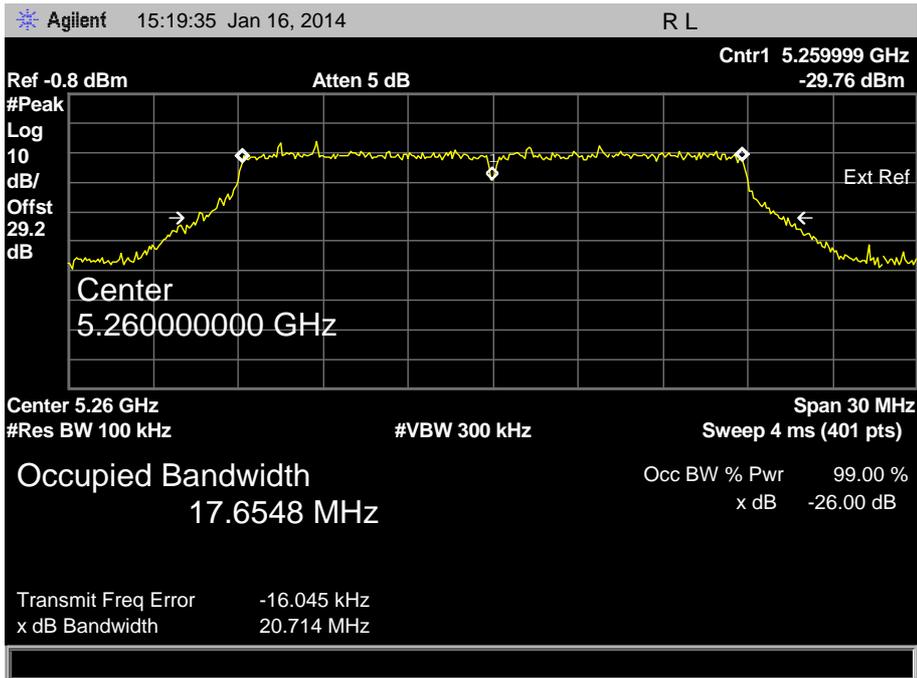


Product Service

Frequency Band 2

5260 MHz

26 dB Bandwidth (MHz)	20.714
-----------------------	--------

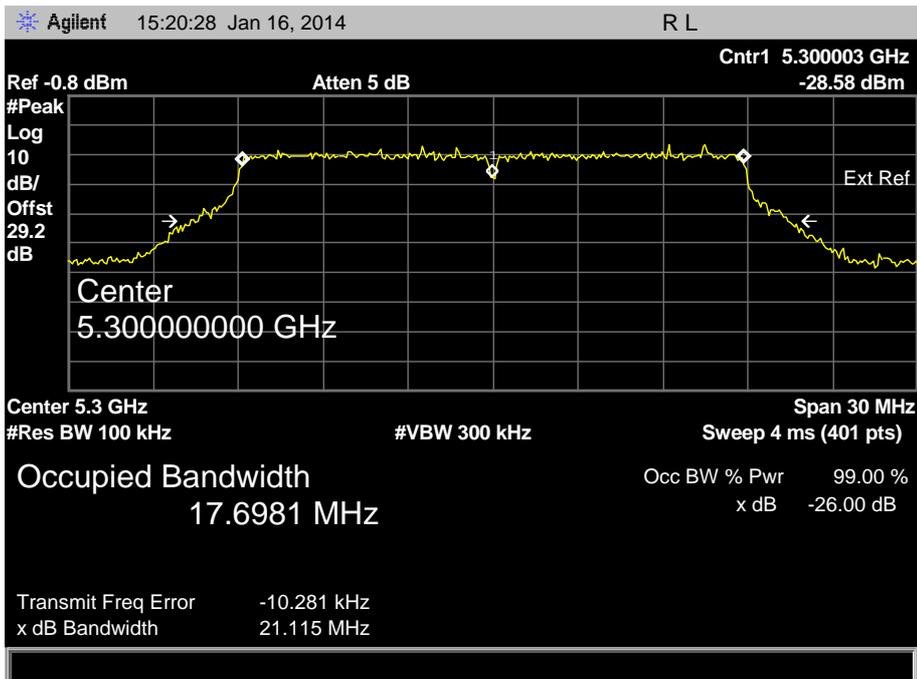




Product Service

5300 MHz

26 dB Bandwidth (MHz)	21.115
-----------------------	--------

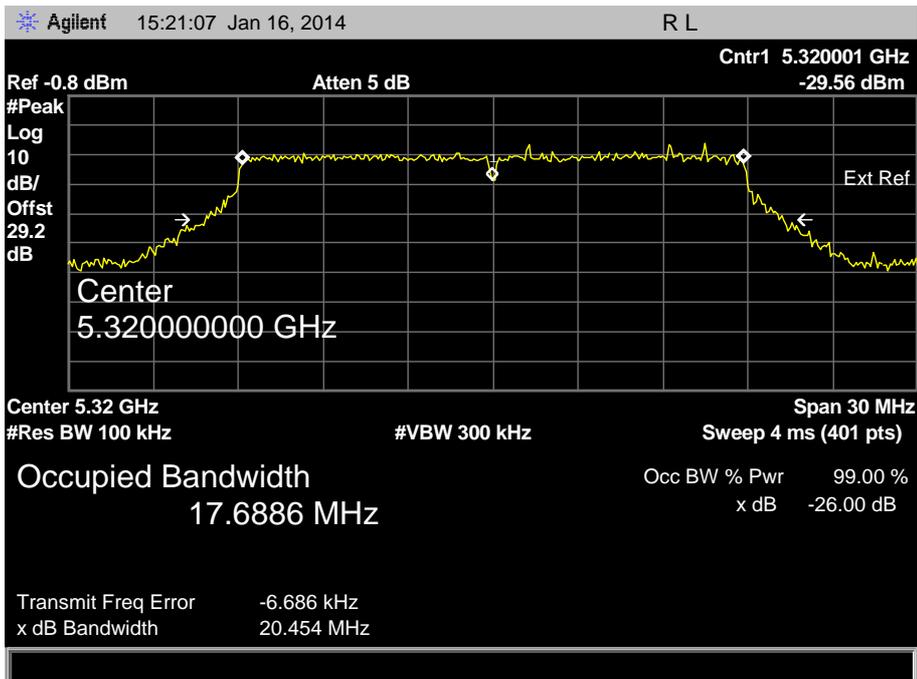




Product Service

5320 MHz

26 dB Bandwidth (MHz)	20.454
-----------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

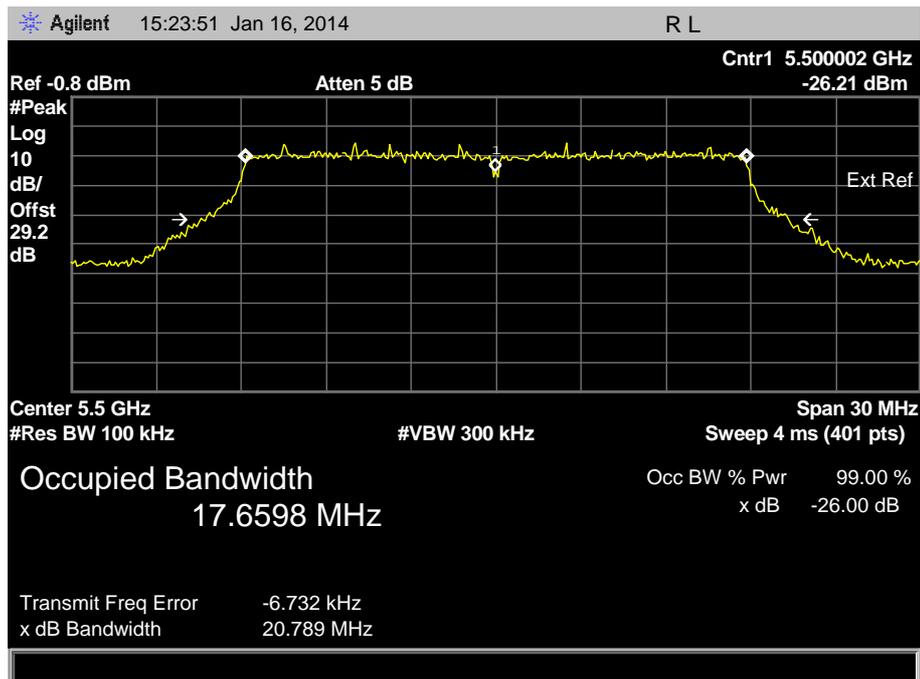


Product Service

Frequency Band 3

5500 MHz

26 dB Bandwidth (MHz)	20.789
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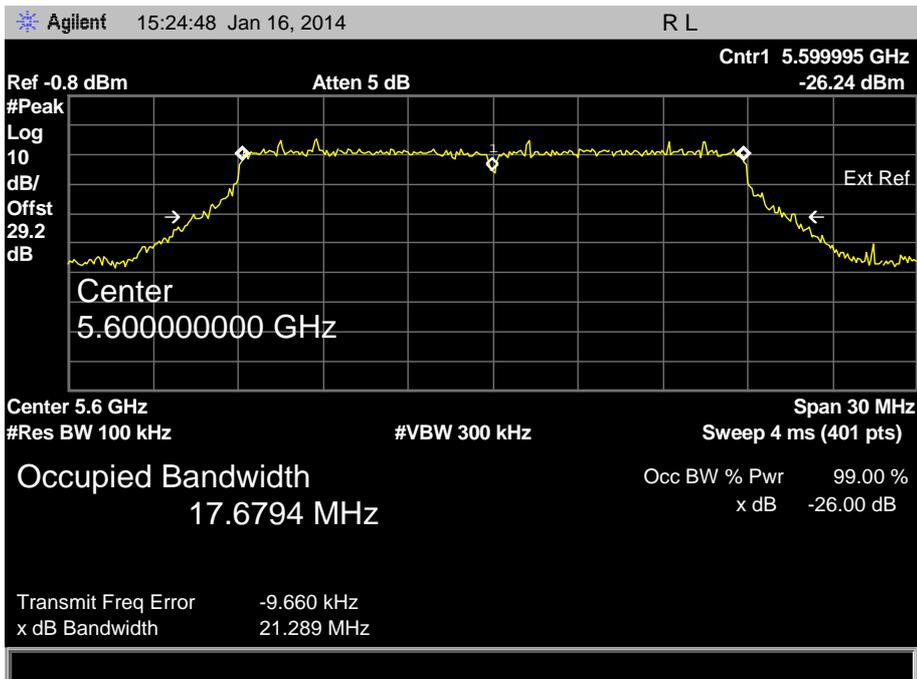




Product Service

5600 MHz

26 dB Bandwidth (MHz)	21.289
-----------------------	--------

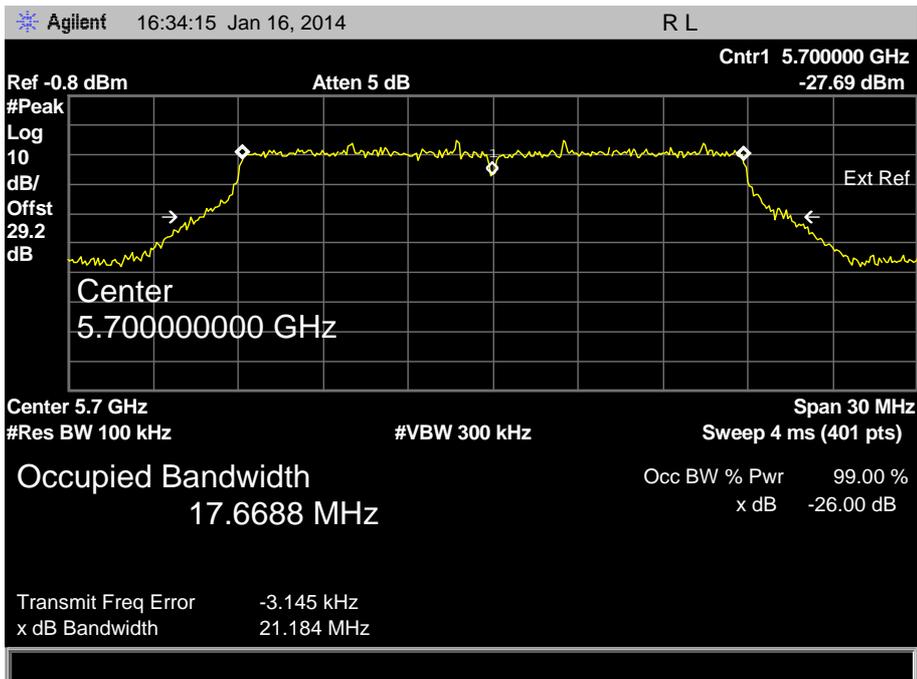




Product Service

5700 MHz

26 dB Bandwidth (MHz)	21.184
-----------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Not specified.



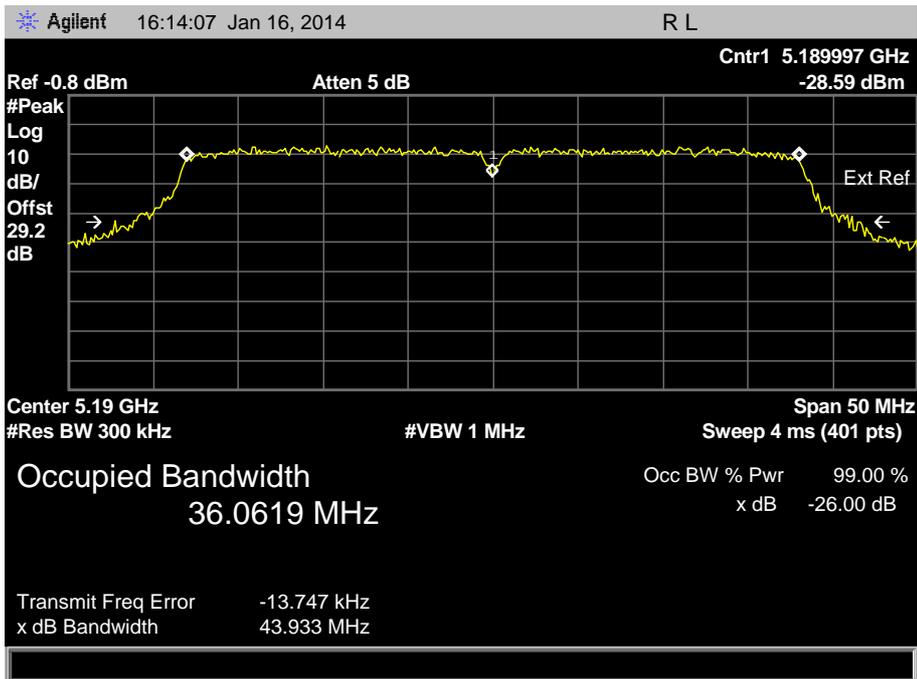
Product Service

802.11(n) - 5 GHz 40 MHz BW

Frequency Band 1

5190 MHz

26 dB Bandwidth (MHz)	43.933
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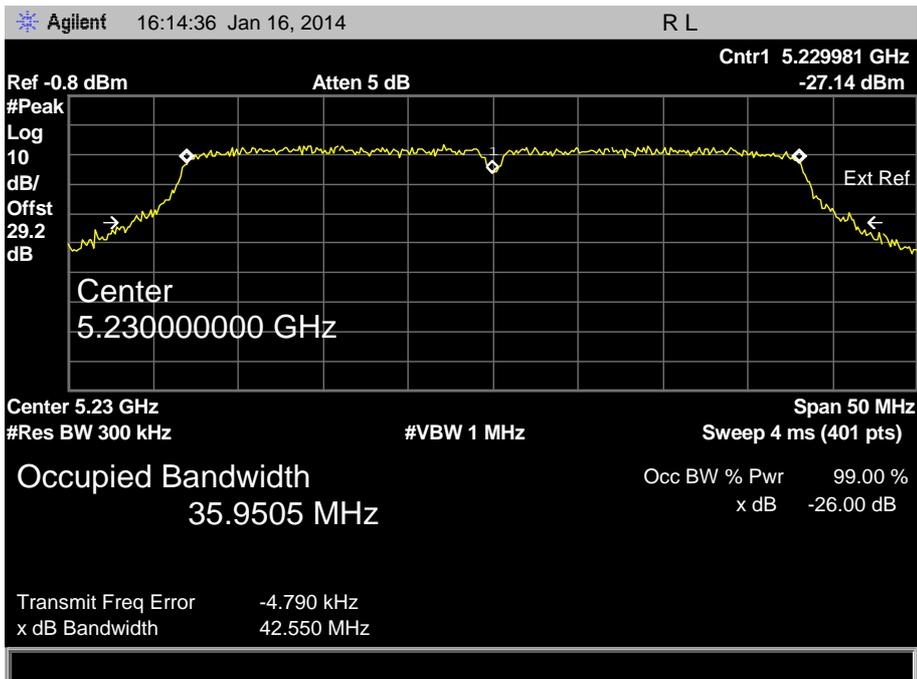




Product Service

5230 MHz

26 dB Bandwidth (MHz)	42.550
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The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

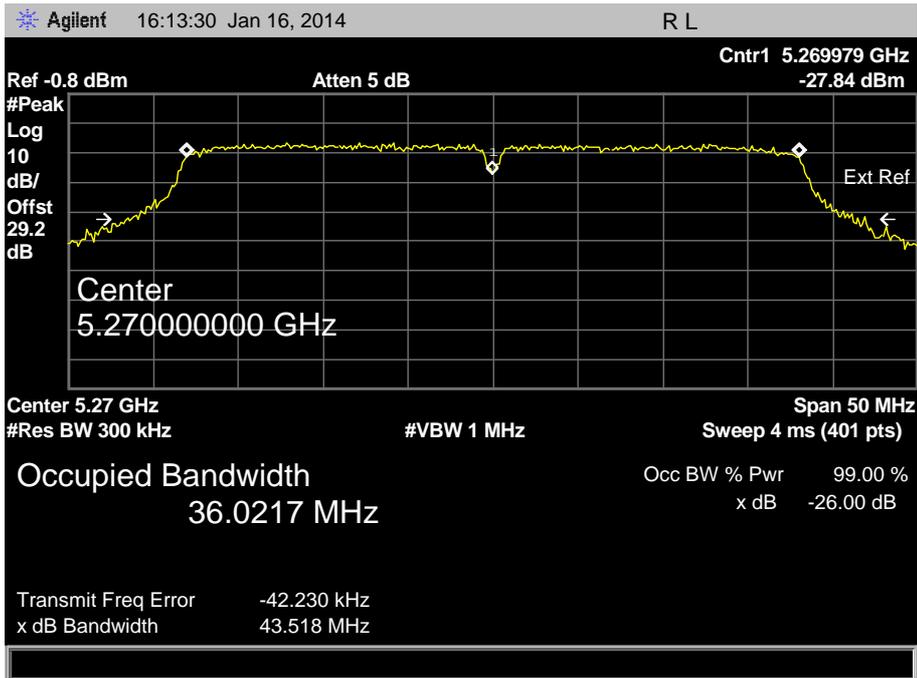


Product Service

Frequency Band 2

5270 MHz

26 dB Bandwidth (MHz)	43.518
-----------------------	--------

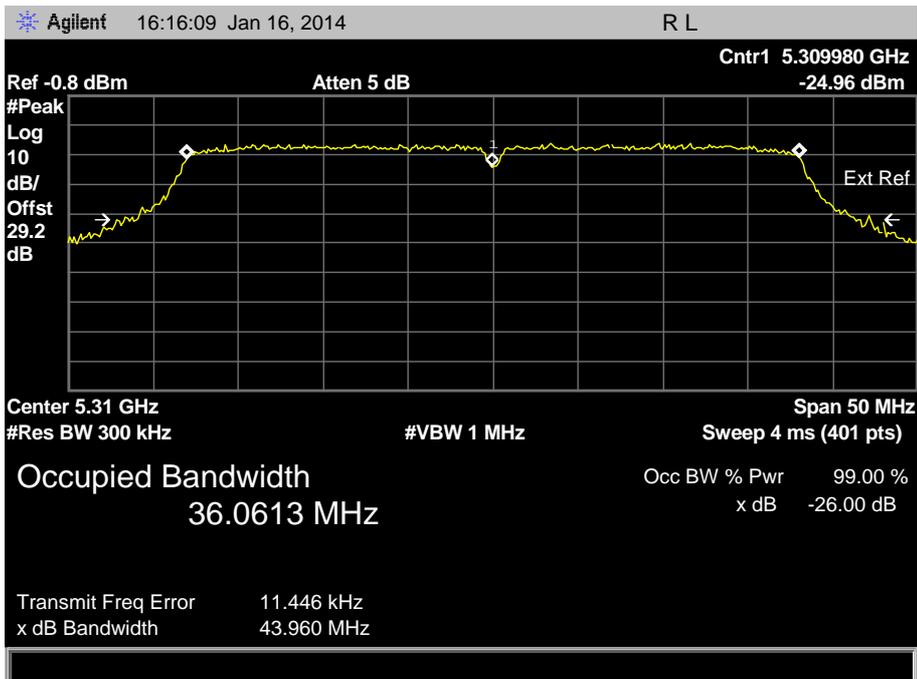




Product Service

5310 MHz

26 dB Bandwidth (MHz)	43.960
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The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

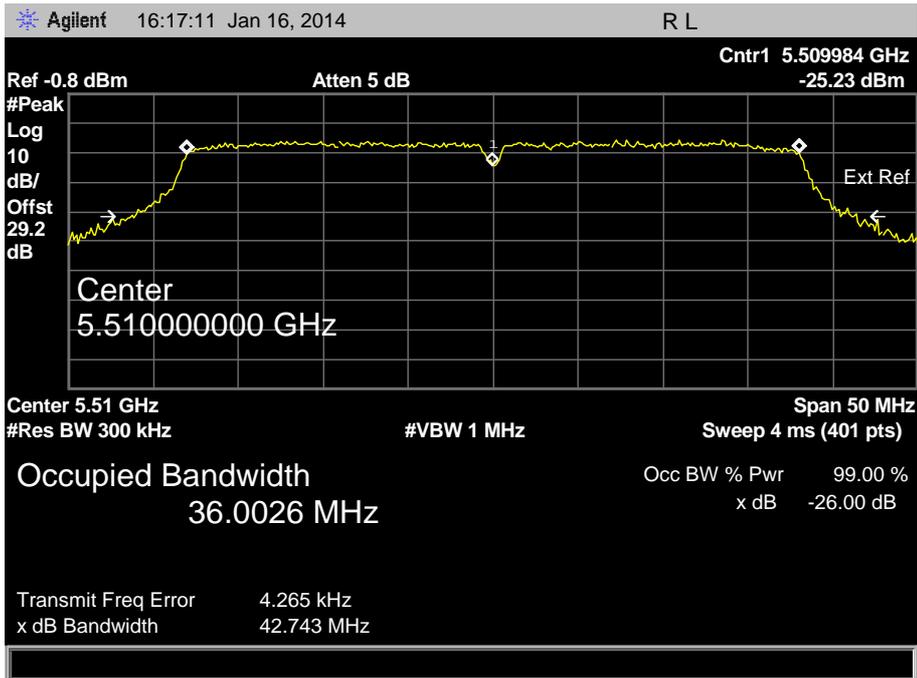


Product Service

Frequency Band 3

5510 MHz

26 dB Bandwidth (MHz)	42.743
-----------------------	--------

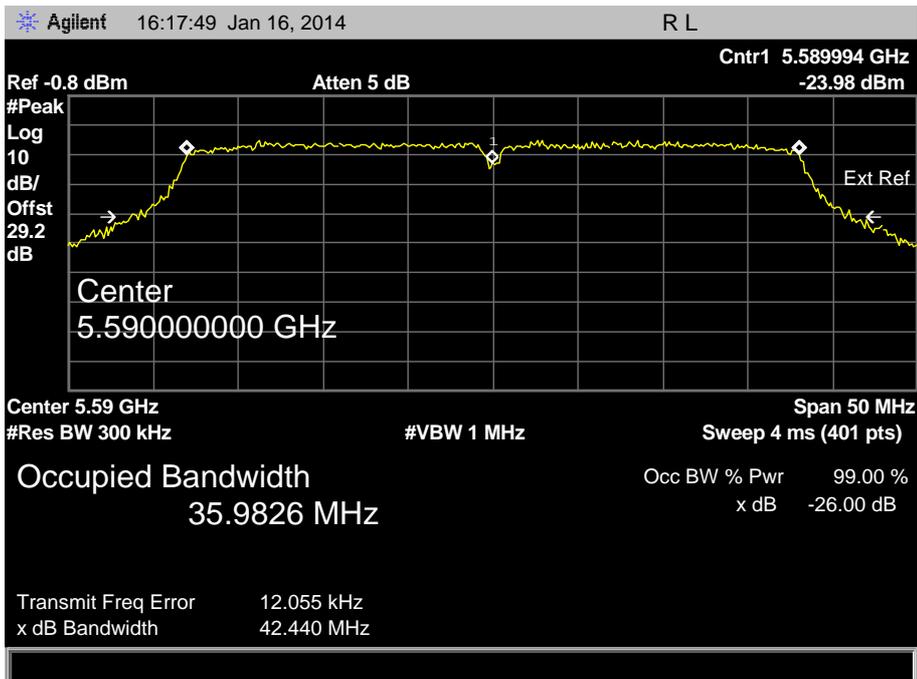




Product Service

5590 MHz

26 dB Bandwidth (MHz)	42.440
-----------------------	--------

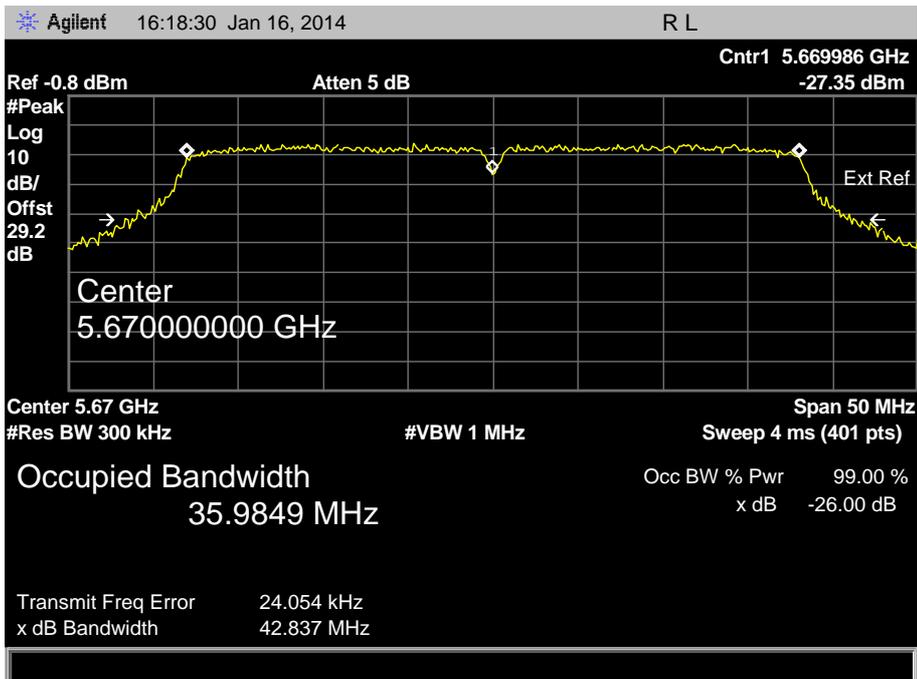




Product Service

5670MHz

26 dB Bandwidth (MHz)	42.837
-----------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Not specified.



Product Service

2.6 PEAK POWER SPECTRAL DENSITY

2.6.1 Specification Reference

FCC CFR 47 Part 15E, Clause 15.407 (a)(5)

2.6.2 Equipment Under Test and Modification State

SHT22 S/N: IMEI 004401115013365 - Modification State 0

2.6.3 Date of Test

20 January 2014 & 21 January 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 transmitted at maximum power via an attenuator and cable to the Spectrum Analyser. The Analyser settings were adjusted to display the resultant trace on screen. The resolution bandwidth and video bandwidth were set to 1 MHz and 3 MHz respectively. The trace was set to Average using an RMS detector and the maximum value was recorded.

2.6.6 Environmental Conditions

Ambient Temperature	24.1°C
Relative Humidity	32.0%



Product Service

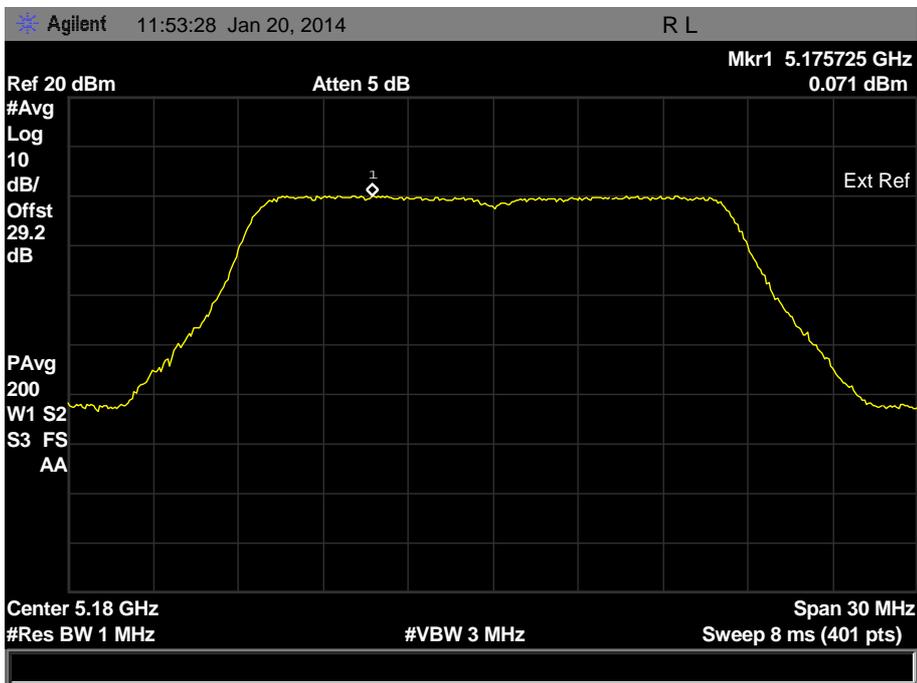
2.6.7 Test Results

802.11(a)

Frequency Band 1

5180 MHz

Peak Power Spectral Density (dBm)	0.071
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Product Service

5200 MHz

Peak Power Spectral Density (dBm)	0.773
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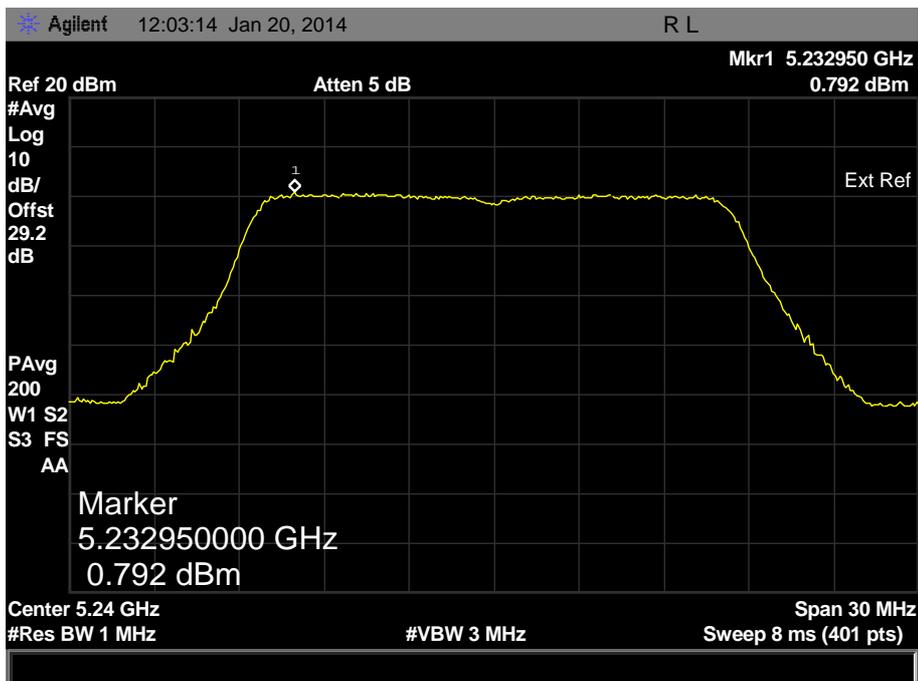




Product Service

5240 MHz

Peak Power Spectral Density (dBm)	0.792
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The test was performed on the worst case data rate for 802.11(a). The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

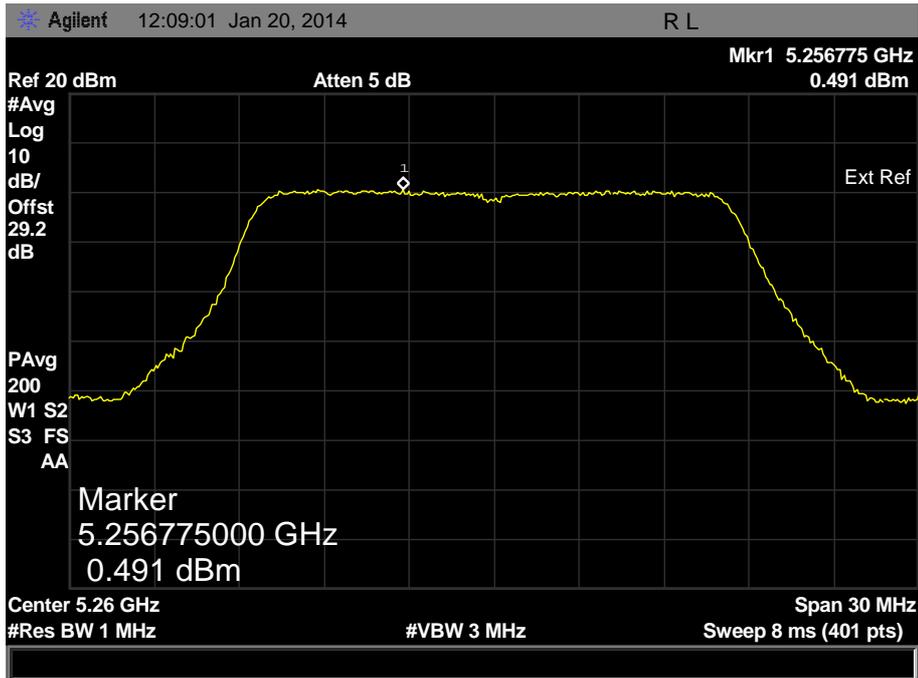


Product Service

Frequency Band 2

5260 MHz

Peak Power Spectral Density (dBm)	0.491
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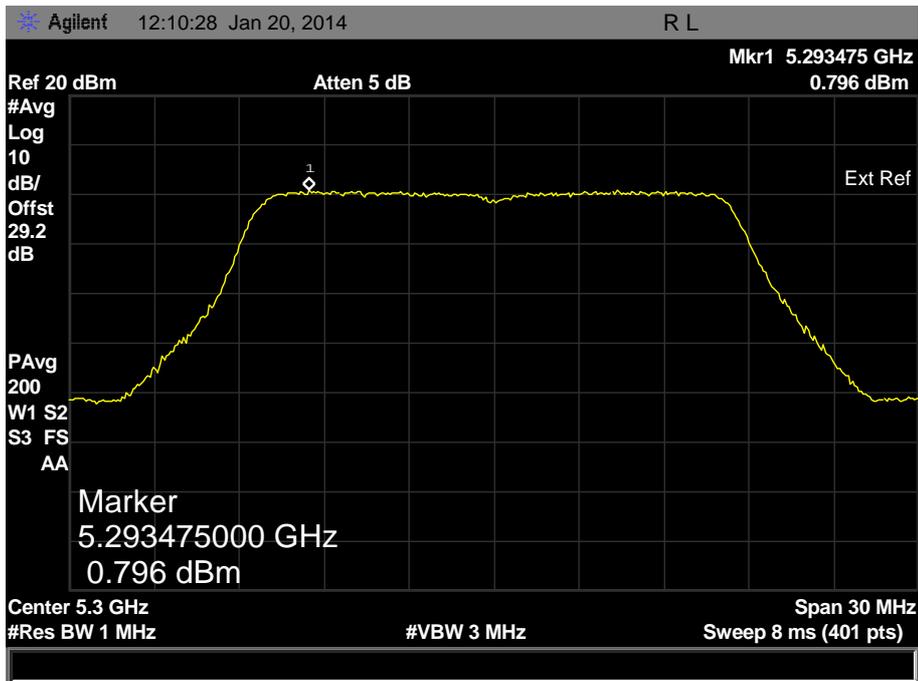




Product Service

5300 MHz

Peak Power Spectral Density (dBm)	0.796
-----------------------------------	-------

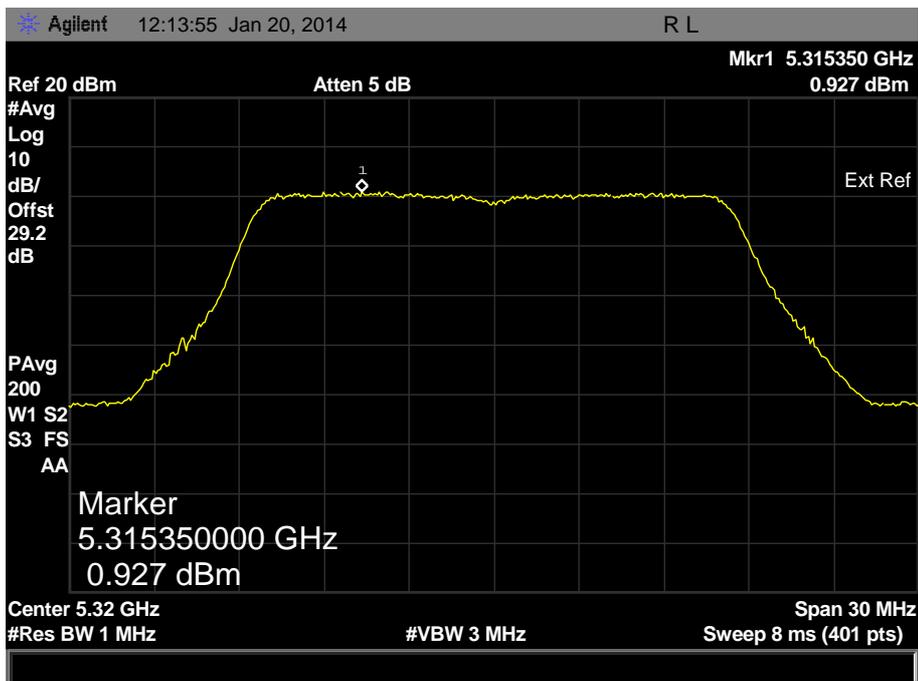




Product Service

5320 MHz

Peak Power Spectral Density (dBm)	0.927
-----------------------------------	-------



The test was performed on the worst case data rate for 802.11(a). The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

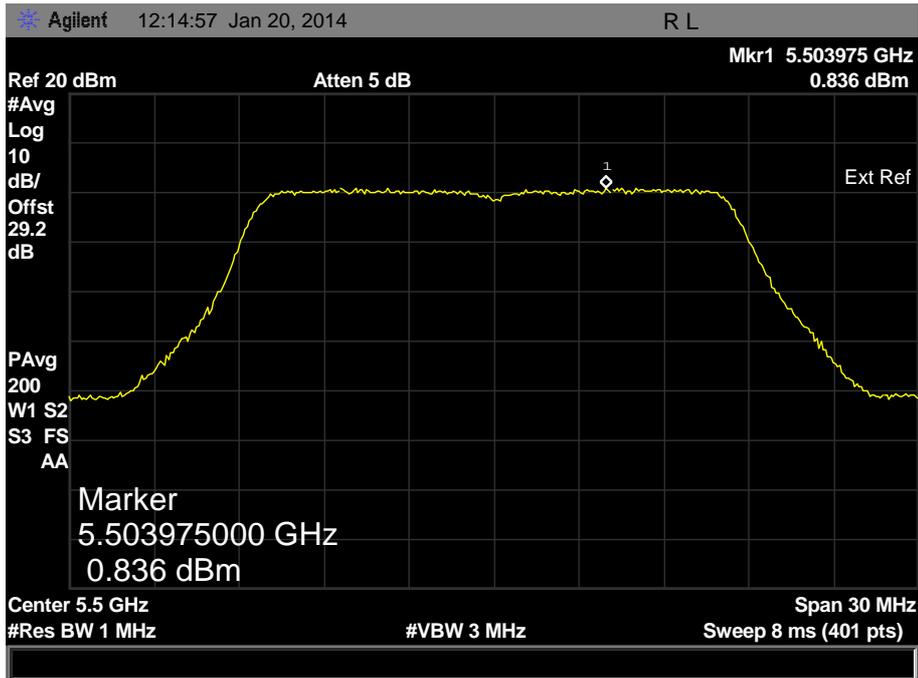


Product Service

Frequency Band 3

5500 MHz

Peak Power Spectral Density (dBm)	0.836
-----------------------------------	-------





Product Service

5600 MHz

Peak Power Spectral Density (dBm)	1.071
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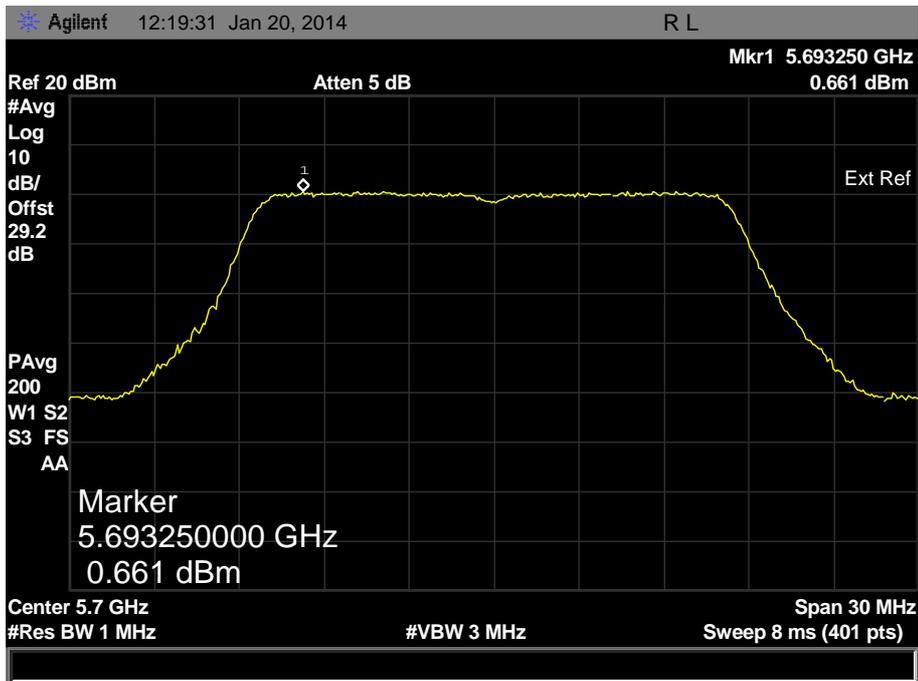




Product Service

5700 MHz

Peak Power Spectral Density (dBm)	0.661
-----------------------------------	-------



The test was performed on the worst case data rate for 802.11(a). The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

Limit

Frequency Band (MHz)	FCC Limit	IC Limit
5150 to 5250	<4 dBm / 1 MHz	<10 dBm / 1 MHz
5250 to 5350	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5470 to 5725	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5725 to 5825	<17 dBm / 1 MHz	<17 dBm / 1 MHz



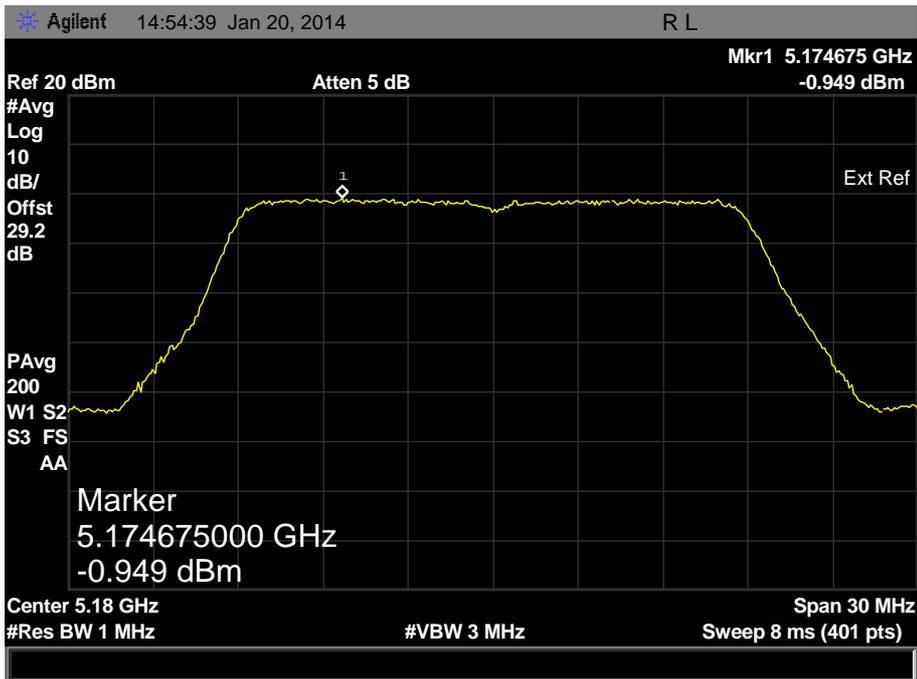
Product Service

802.11(ac) - 5 GHz 20 MHz BW

Frequency Band 1

5180 MHz

Peak Power Spectral Density (dBm)	-0.949
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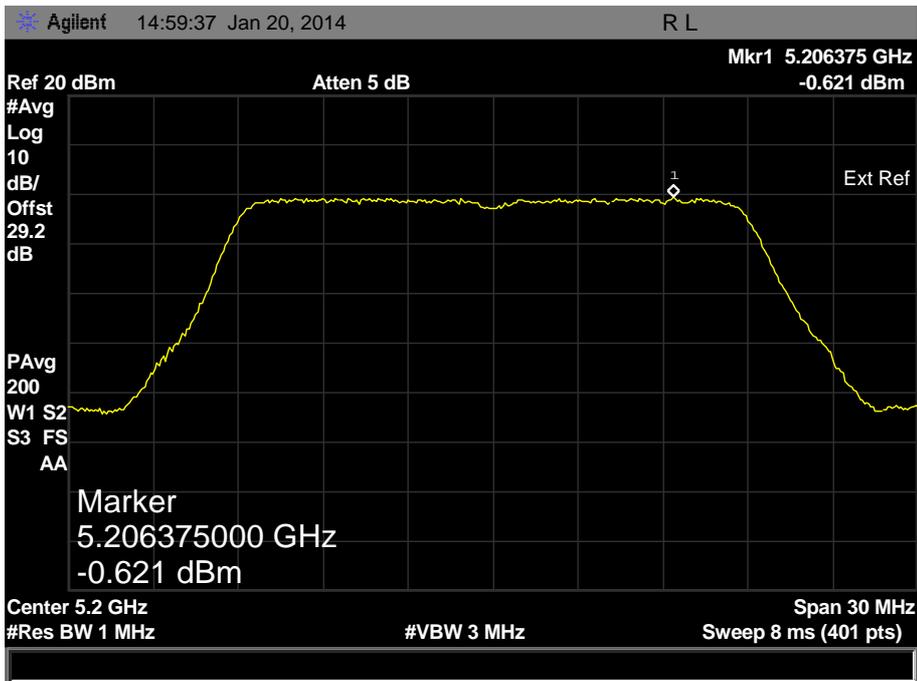




Product Service

5200 MHz

Peak Power Spectral Density (dBm)	-0.621
-----------------------------------	--------

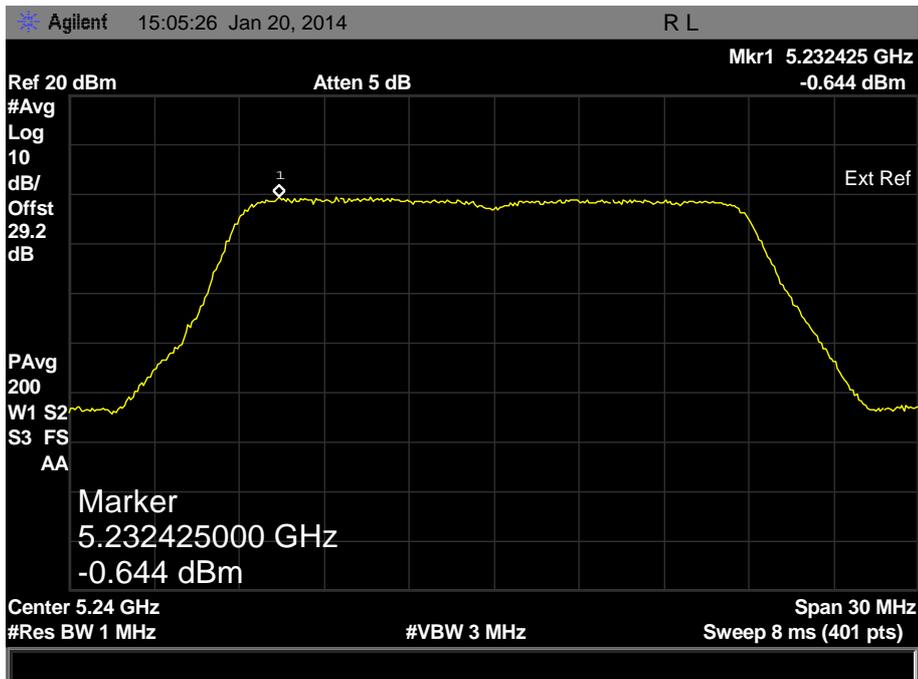




Product Service

5240 MHz

Peak Power Spectral Density (dBm)	-0.644
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW modulation. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

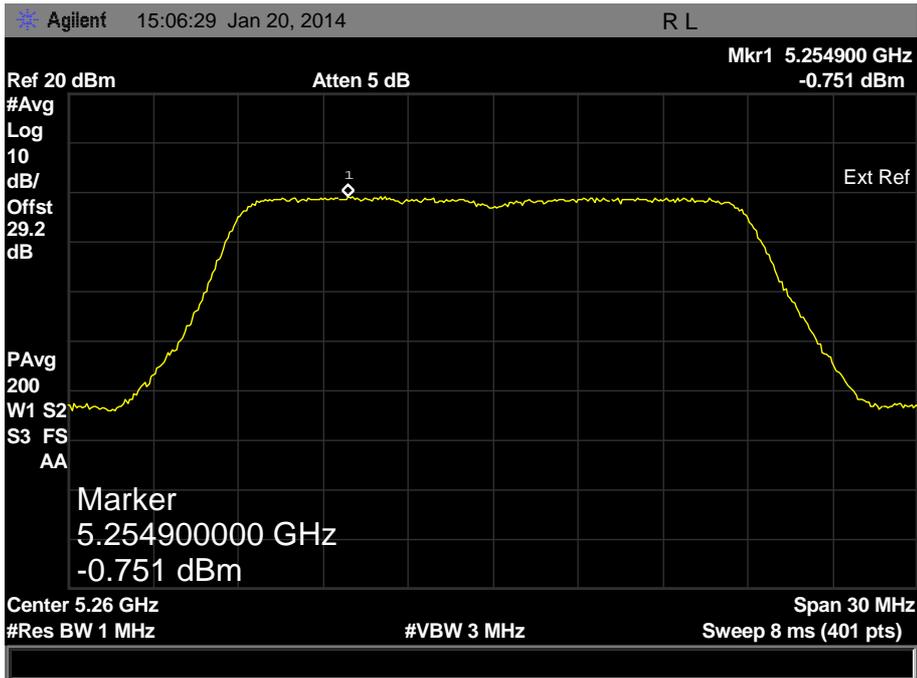


Product Service

Frequency Band 2

5260 MHz

Peak Power Spectral Density (dBm)	-0.751
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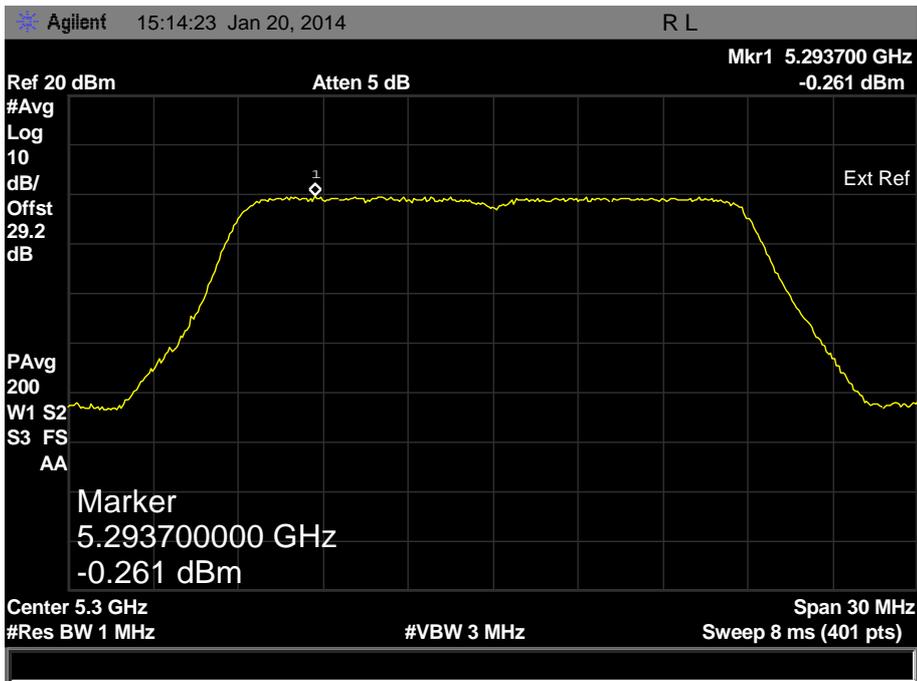




Product Service

5300 MHz

Peak Power Spectral Density (dBm)	-0.261
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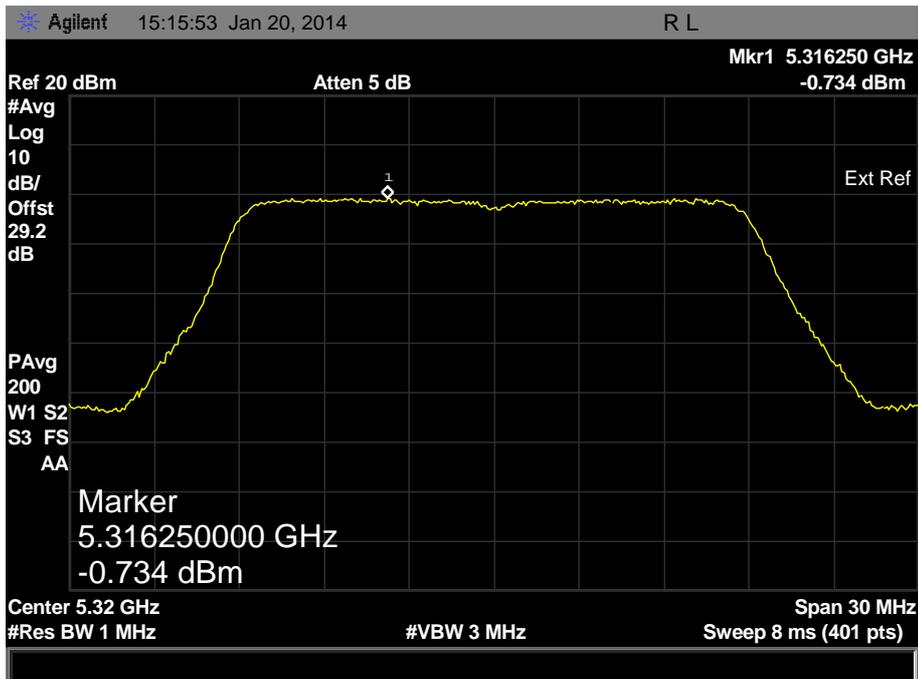




Product Service

5320 MHz

Peak Power Spectral Density (dBm)	-0.734
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

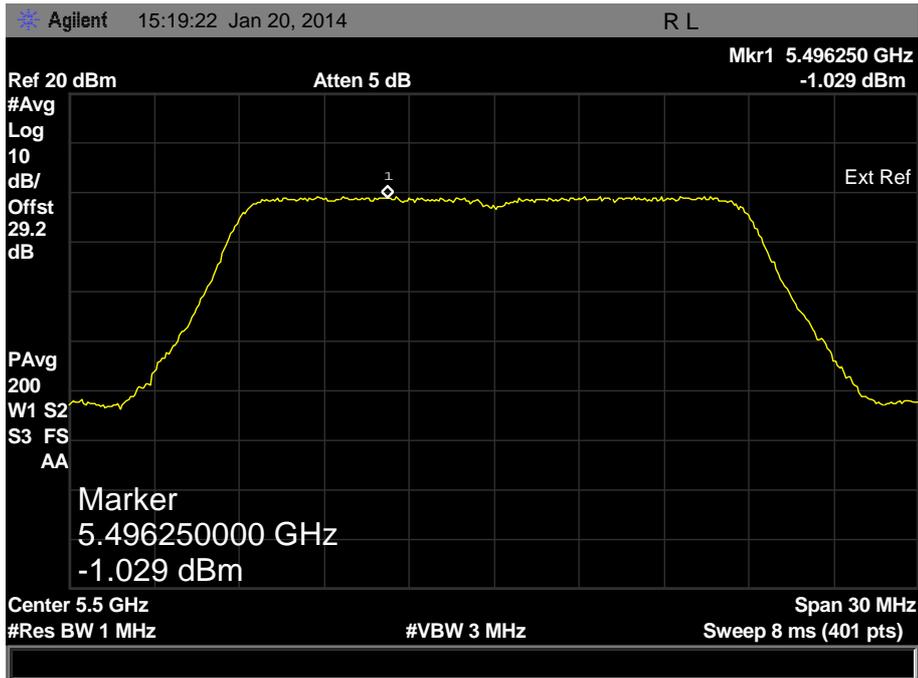


Product Service

Frequency Band 3

5500 MHz

Peak Power Spectral Density (dBm)	-1.029
-----------------------------------	--------

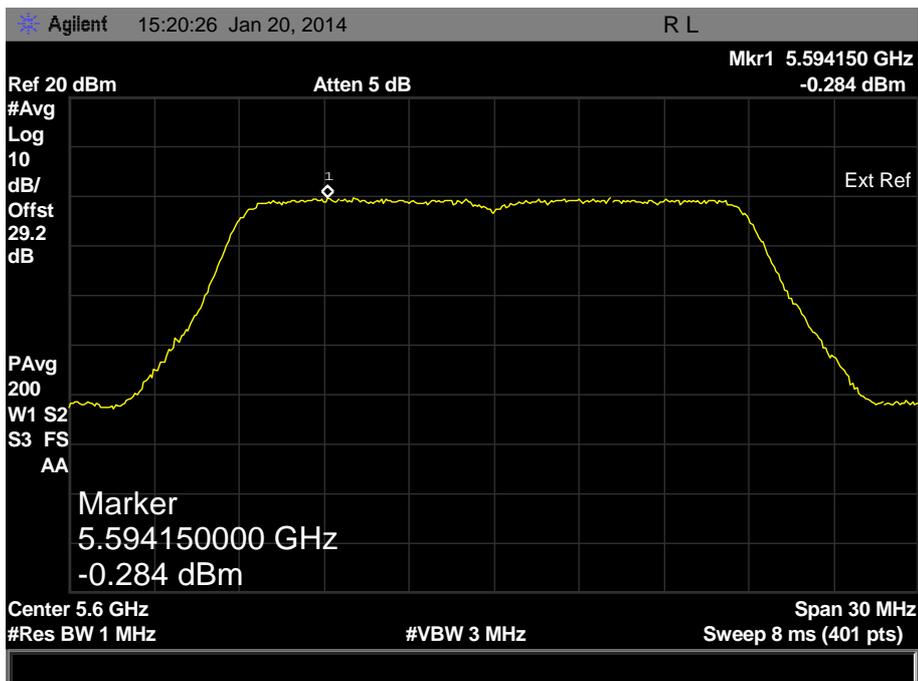




Product Service

5600 MHz

Peak Power Spectral Density (dBm)	-0.284
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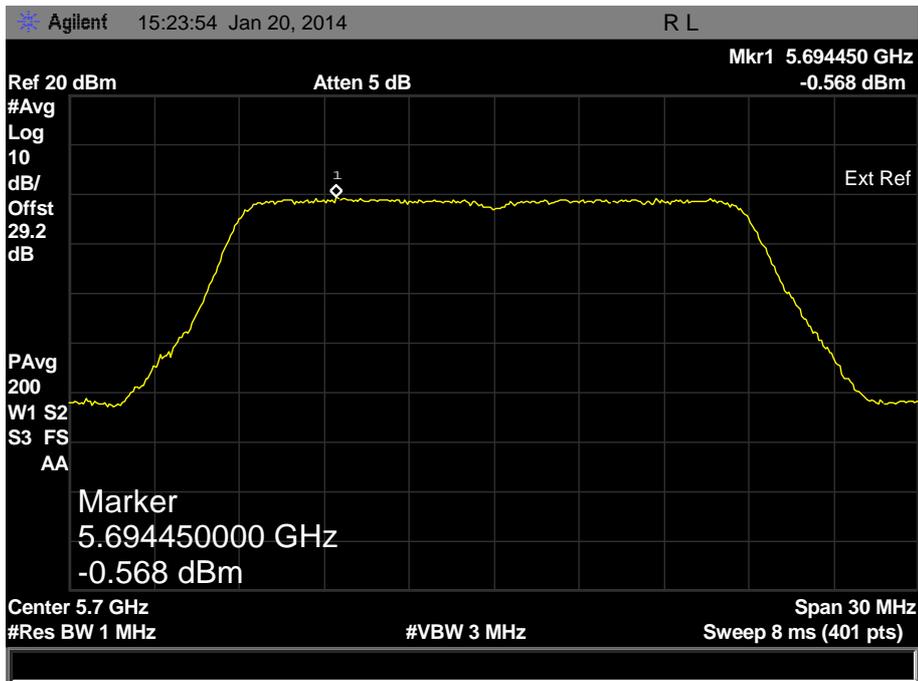




Product Service

5700 MHz

Peak Power Spectral Density (dBm)	-0.568
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The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

Limit

Frequency Band (MHz)	FCC Limit	IC Limit
5150 to 5250	<4 dBm / 1 MHz	<10 dBm / 1 MHz
5250 to 5350	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5470 to 5725	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5725 to 5825	<17 dBm / 1 MHz	<17 dBm / 1 MHz



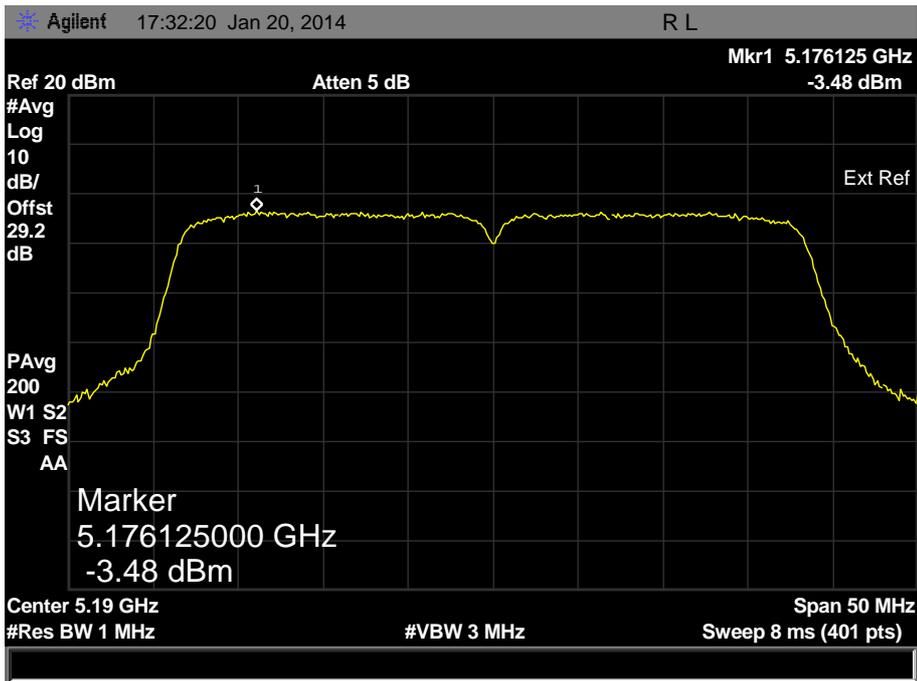
Product Service

802.11(ac) - 5 GHz 40 MHz BW

Frequency Band 1

5190 MHz

Peak Power Spectral Density (dBm)	-3.480
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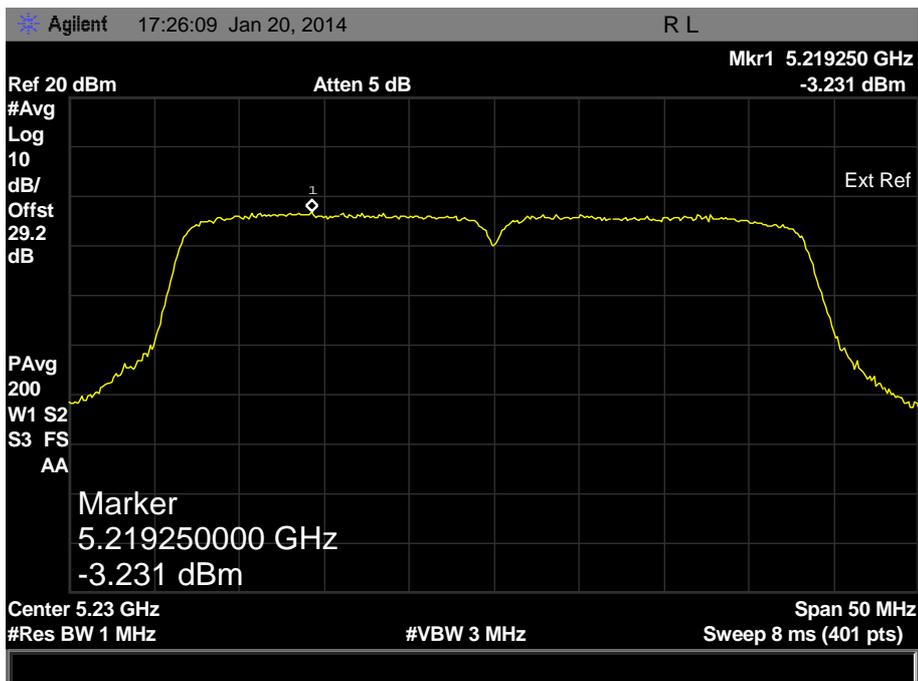




Product Service

5230 MHz

Peak Power Spectral Density (dBm)	-3.231
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

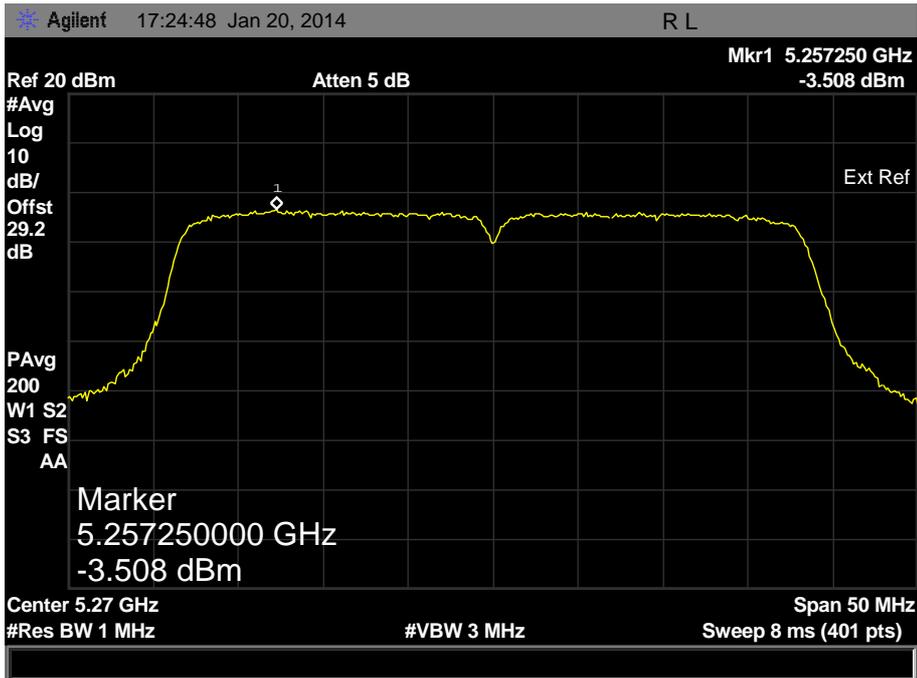


Product Service

Frequency Band 2

5270 MHz

Peak Power Spectral Density (dBm)	-3.508
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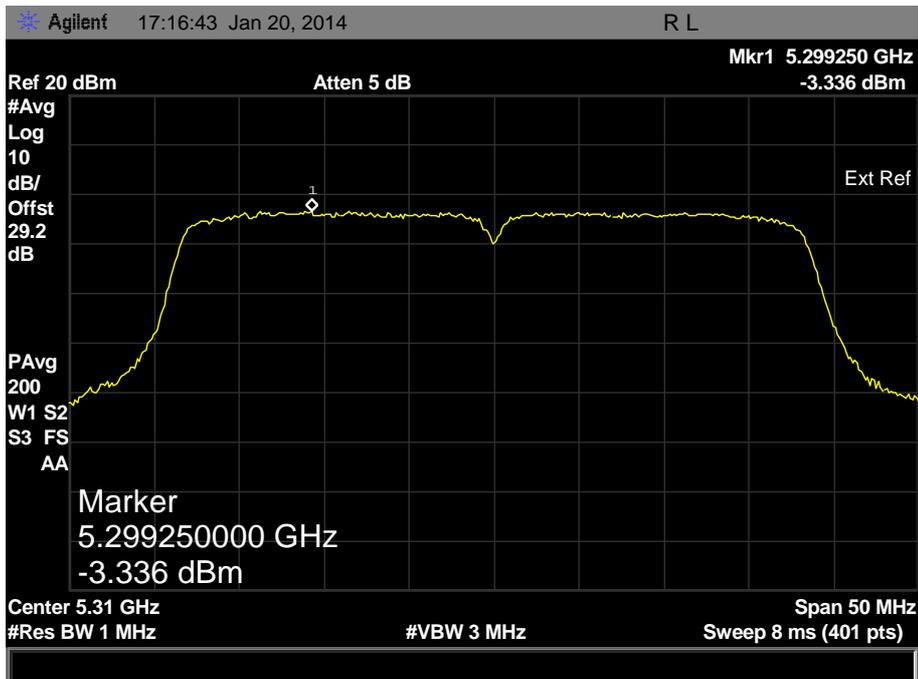




Product Service

5310 MHz

Peak Power Spectral Density (dBm)	-3.336
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

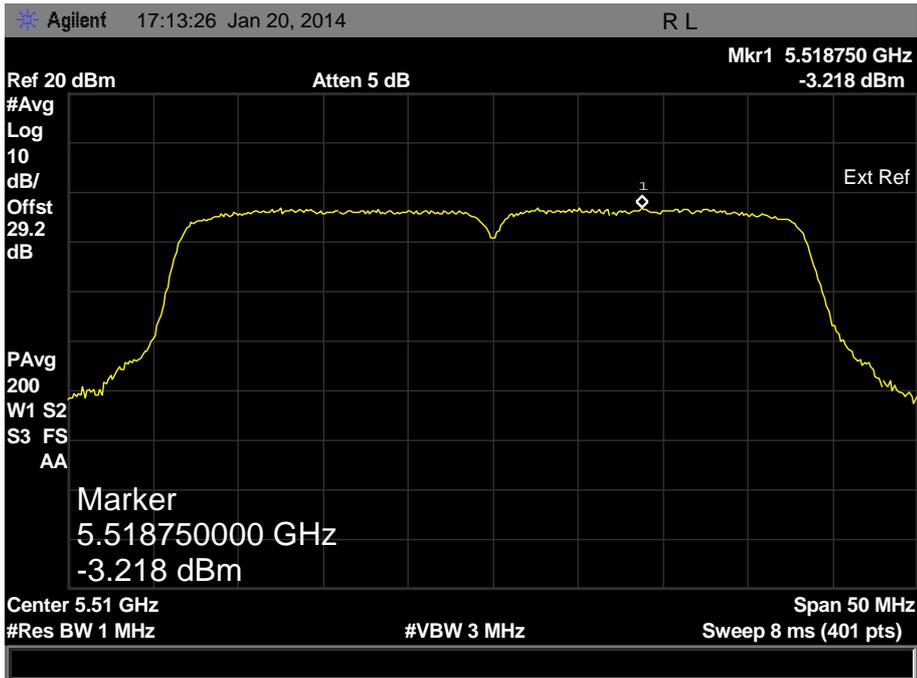


Product Service

Frequency Band 3

5510 MHz

Peak Power Spectral Density (dBm)	-3.218
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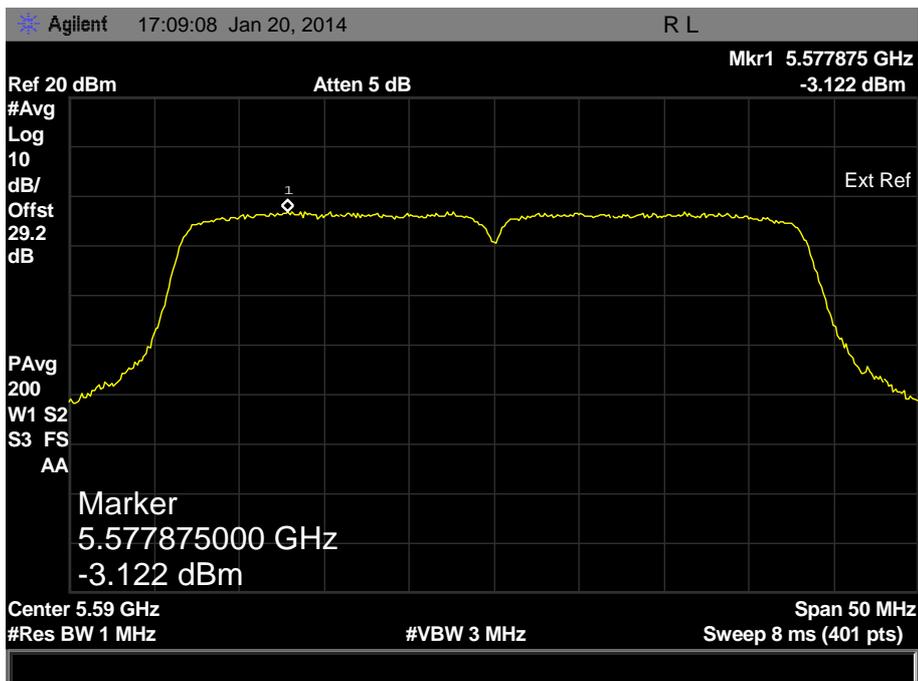




Product Service

5590 MHz

Peak Power Spectral Density (dBm)	-3.122
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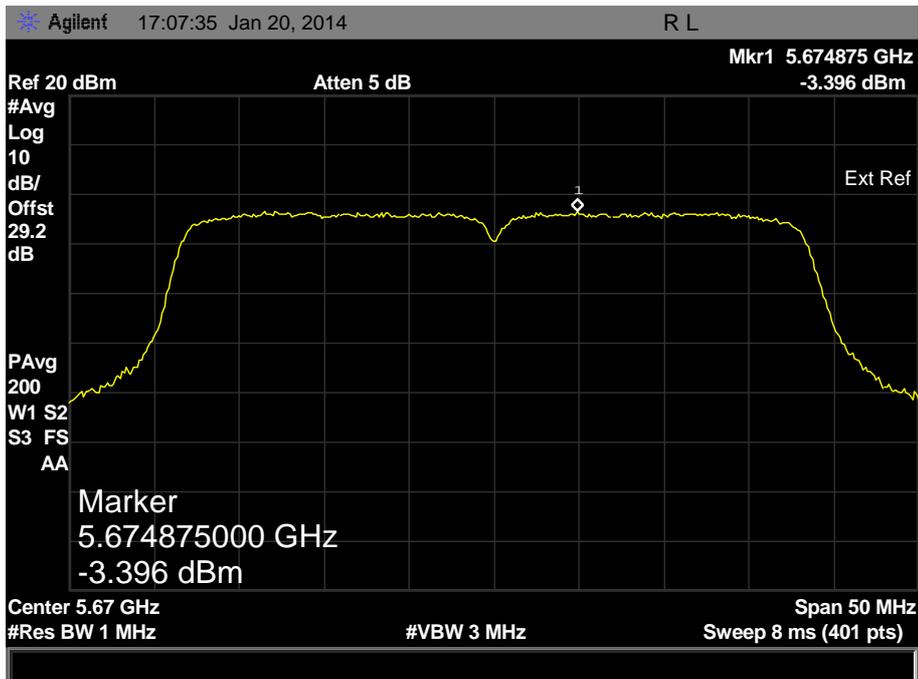




Product Service

5670 MHz

Peak Power Spectral Density (dBm)	-3.396
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Frequency Band (MHz)	FCC Limit	IC Limit
5150 to 5250	<4 dBm / 1 MHz	<10 dBm / 1 MHz
5250 to 5350	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5470 to 5725	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5725 to 5825	<17 dBm / 1 MHz	<17 dBm / 1 MHz



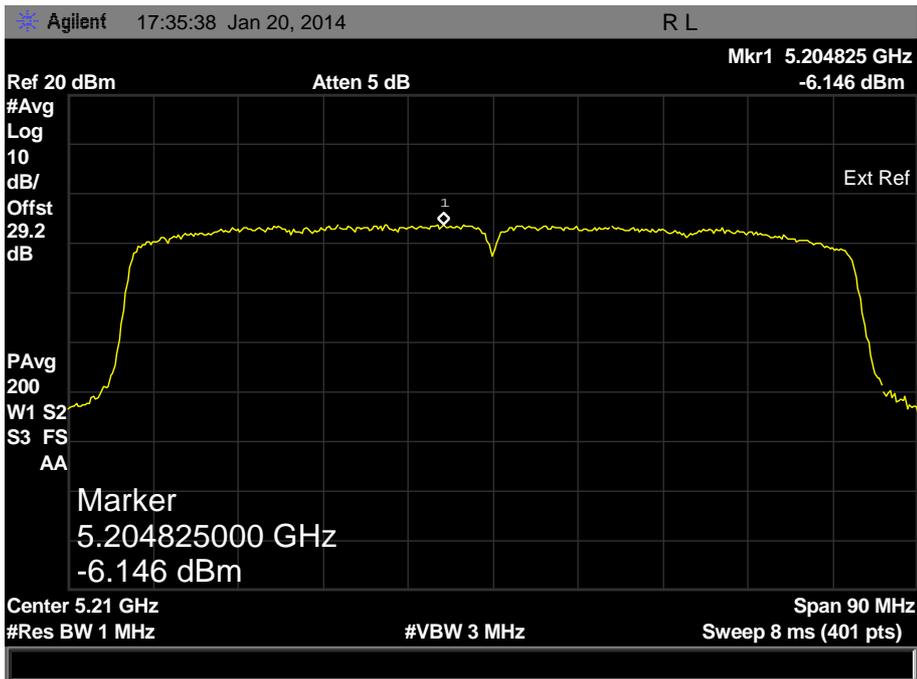
Product Service

802.11(ac) - 5 GHz 80 MHz BW

Frequency Band 1

5210 MHz

Peak Power Spectral Density (dBm)	-6.146
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

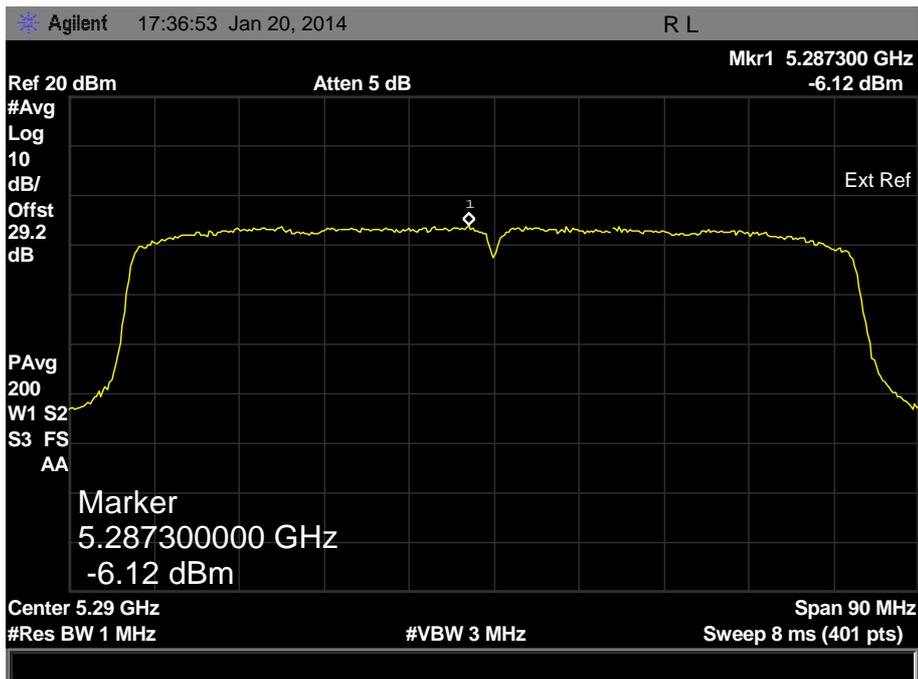


Product Service

Frequency Band 2

5290 MHz

Peak Power Spectral Density (dBm)	-6.120
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

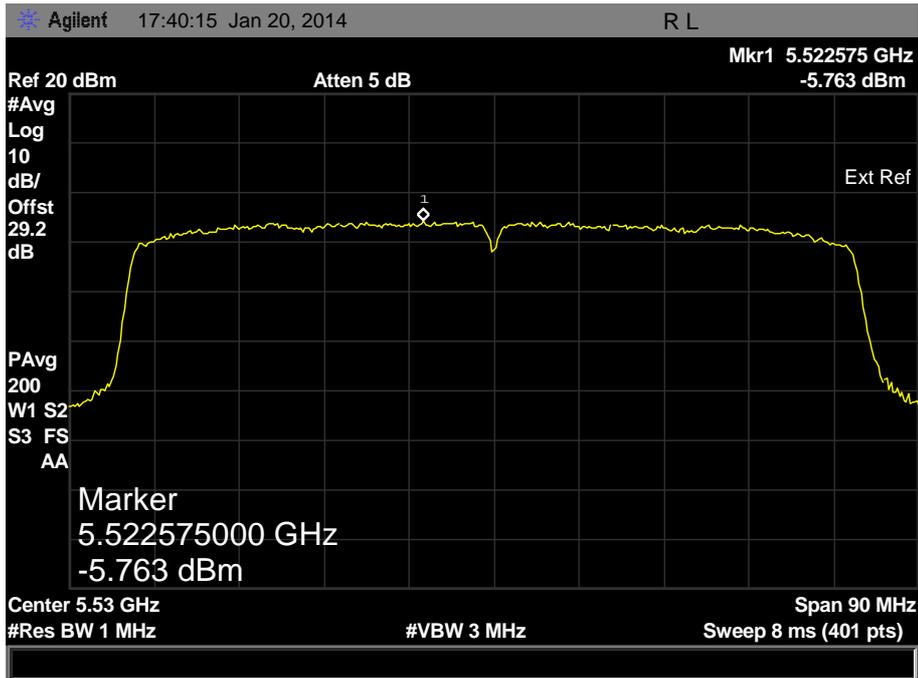


Product Service

Frequency Band 3

5530 MHz

Peak Power Spectral Density (dBm)	-5.763
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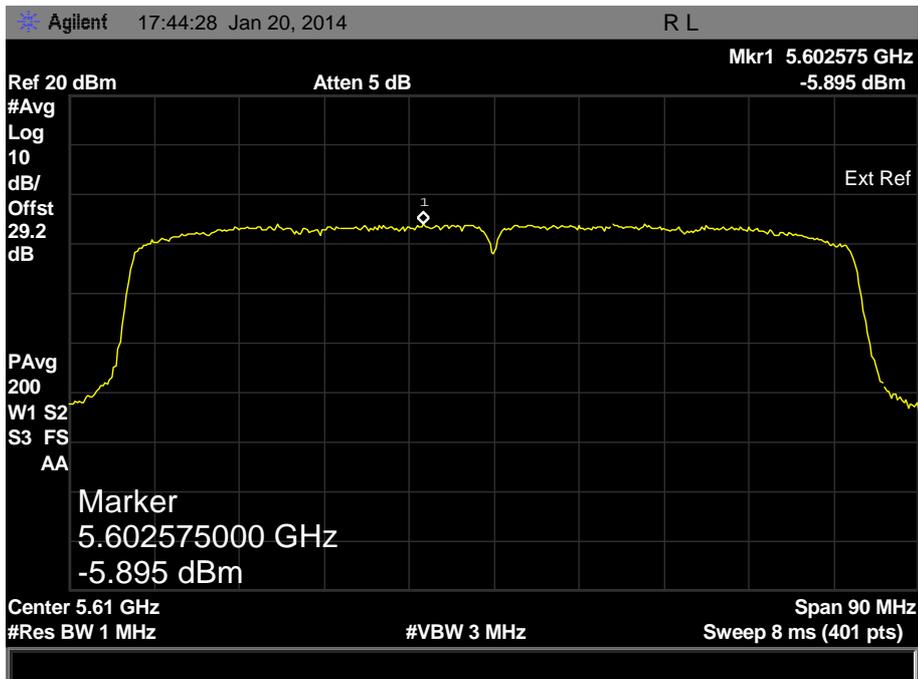




Product Service

5610 MHz

Peak Power Spectral Density (dBm)	-5.895
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Frequency Band (MHz)	FCC Limit	IC Limit
5150 to 5250	<4 dBm / 1 MHz	<10 dBm / 1 MHz
5250 to 5350	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5470 to 5725	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5725 to 5825	<17 dBm / 1 MHz	<17 dBm / 1 MHz



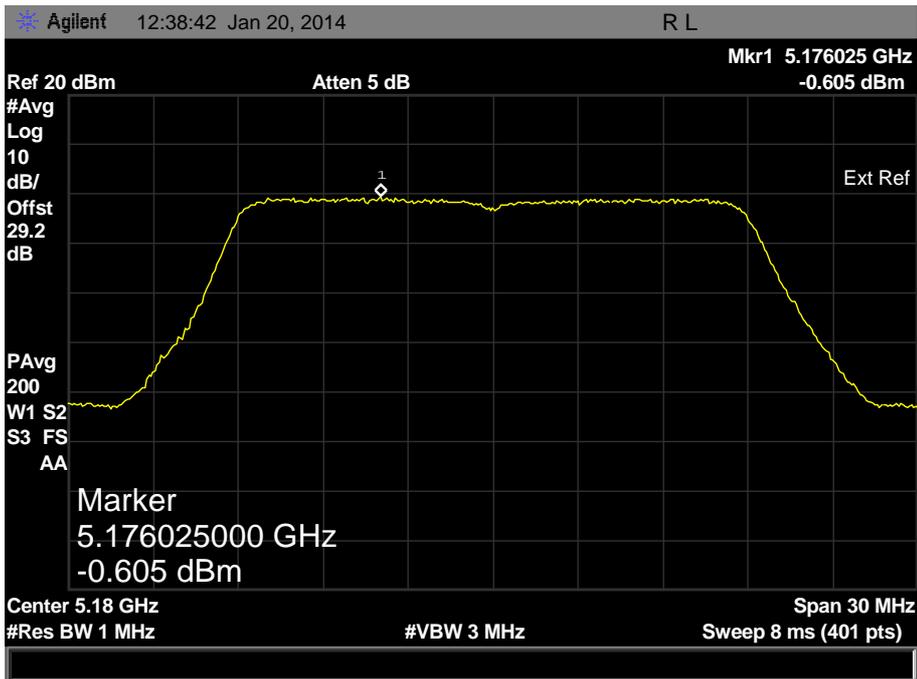
Product Service

802.11(n) - 5 GHz 20 MHz BW

Frequency Band 1

5180 MHz

Peak Power Spectral Density (dBm)	-0.605
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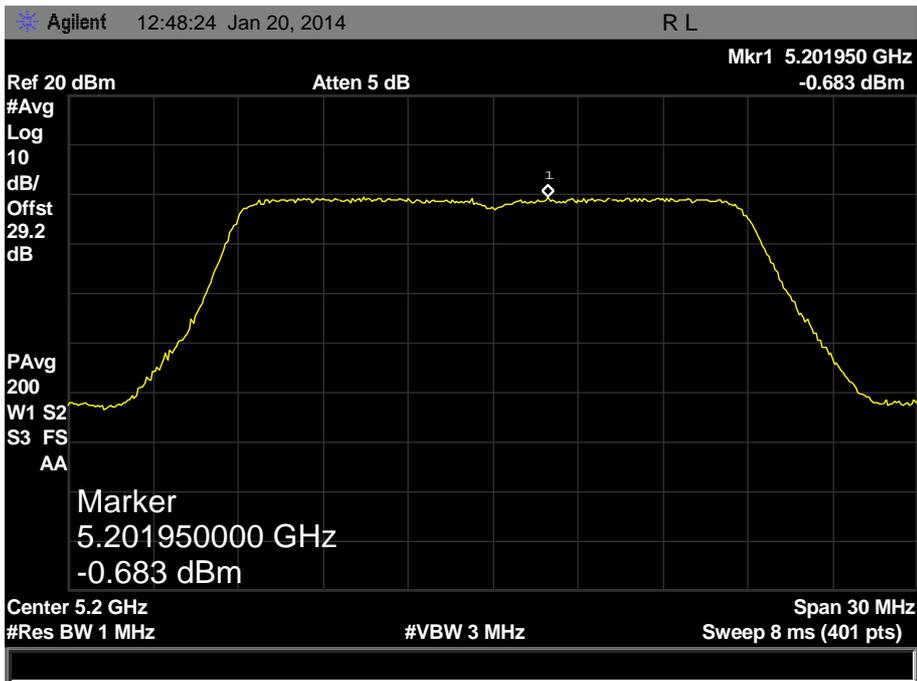




Product Service

5200 MHz

Peak Power Spectral Density (dBm)	-0.683
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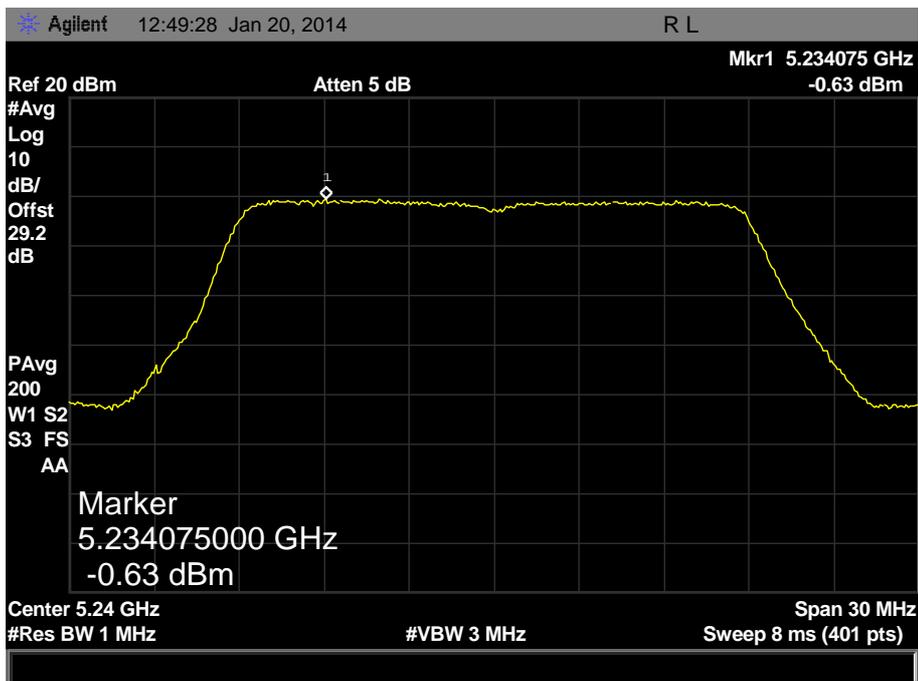




Product Service

5240 MHz

Peak Power Spectral Density (dBm)	-0.630
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The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.



Product Service

Frequency Band 2

5260 MHz

Peak Power Spectral Density (dBm)	-0.714
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Product Service

5300 MHz

Peak Power Spectral Density (dBm)	-0.525
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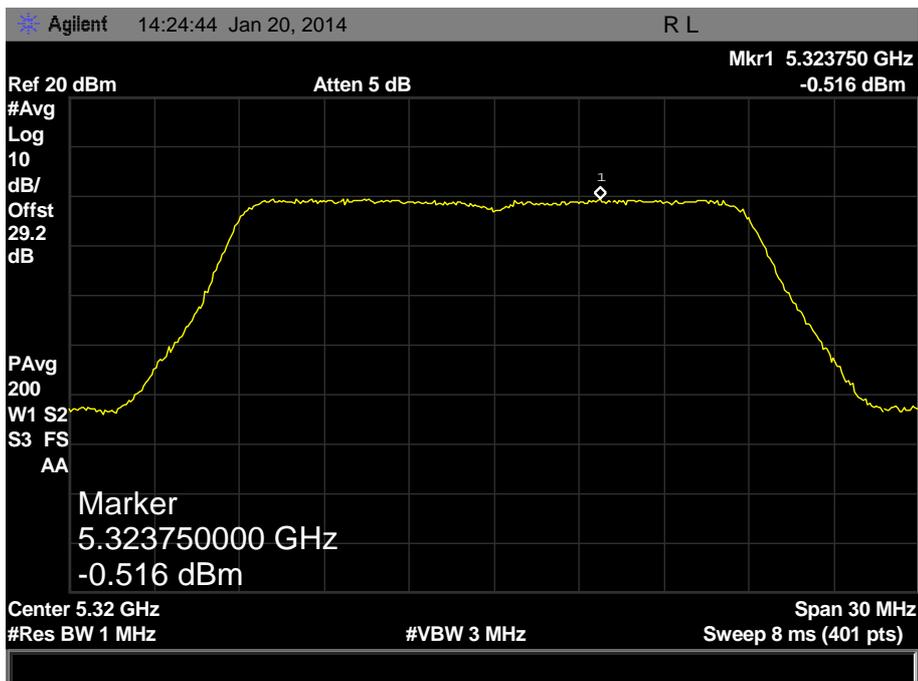




Product Service

5320 MHz

Peak Power Spectral Density (dBm)	-0.516
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.



Product Service

Frequency Band 3

5500 MHz

Peak Power Spectral Density (dBm)	-0.536
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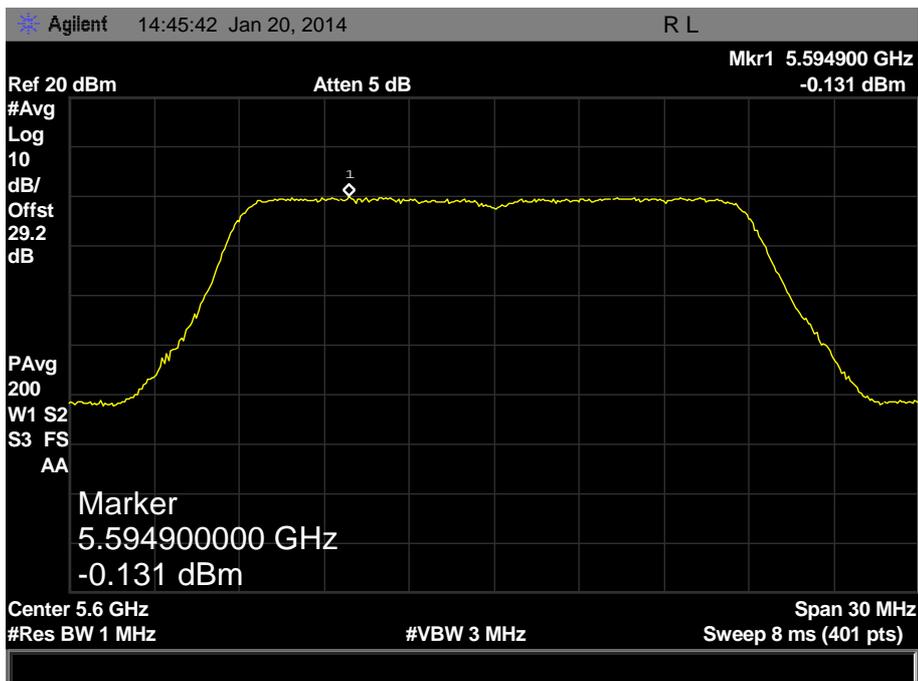




Product Service

5600 MHz

Peak Power Spectral Density (dBm)	-0.131
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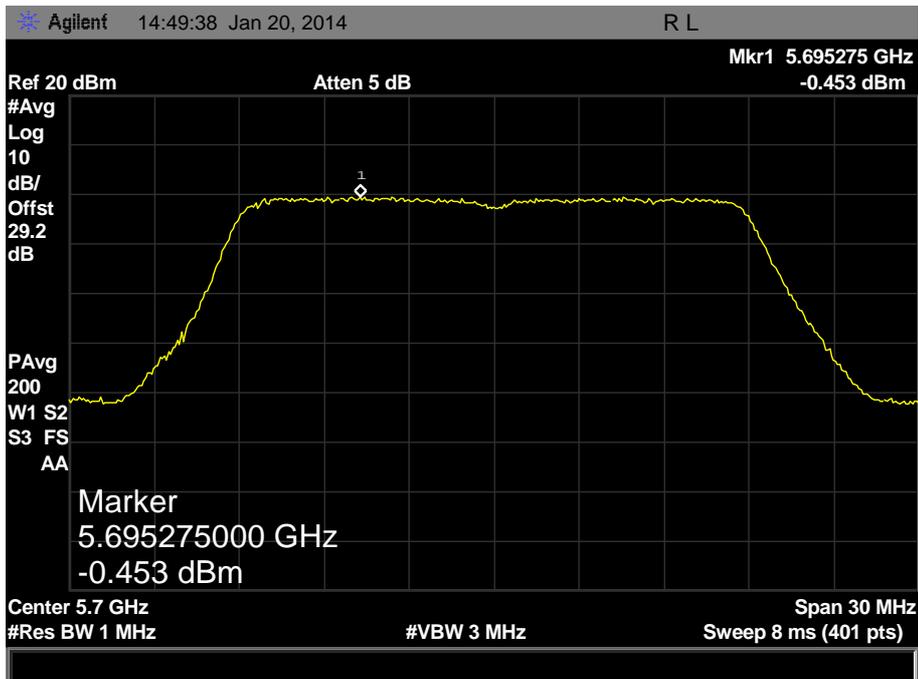




Product Service

5700 MHz

Peak Power Spectral Density (dBm)	-0.453
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Frequency Band (MHz)	FCC Limit	IC Limit
5150 to 5250	<4 dBm / 1 MHz	<10 dBm / 1 MHz
5250 to 5350	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5470 to 5725	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5725 to 5825	<17 dBm / 1 MHz	<17 dBm / 1 MHz



Product Service

802.11(n) - 5 GHz 40 MHz BW

Frequency Band 1

5190 MHz

Peak Power Spectral Density (dBm)	-3.779
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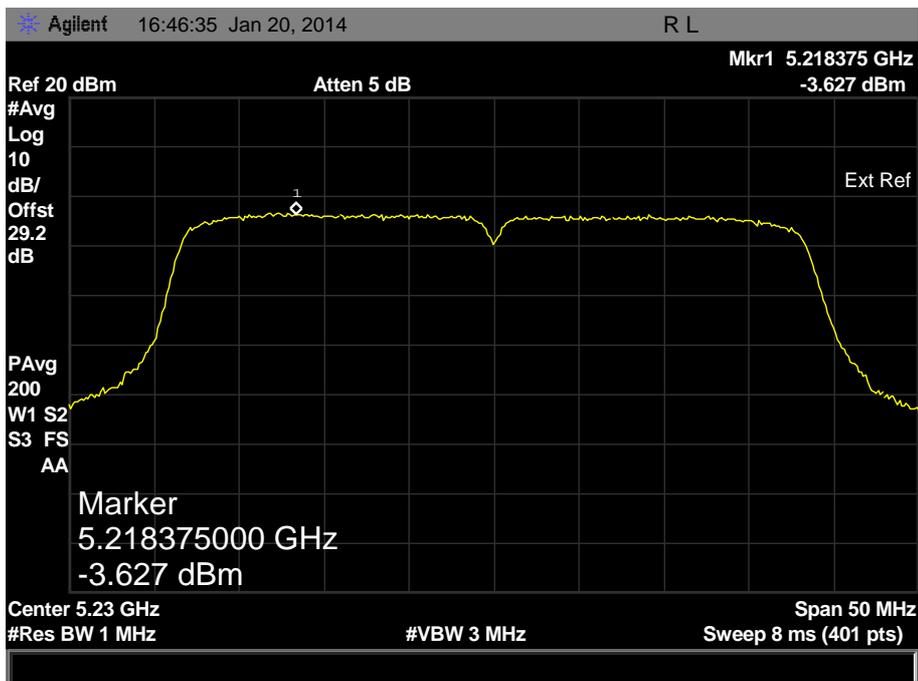




Product Service

5230 MHz

Peak Power Spectral Density (dBm)	-3.627
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The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

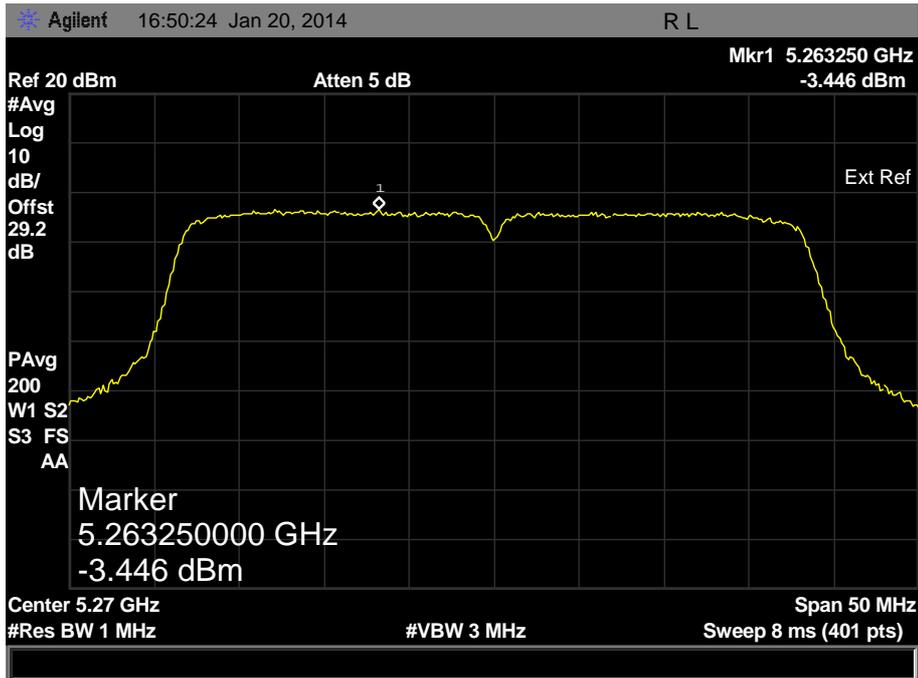


Product Service

Frequency Band 2

5270 MHz

Peak Power Spectral Density (dBm)	-3.446
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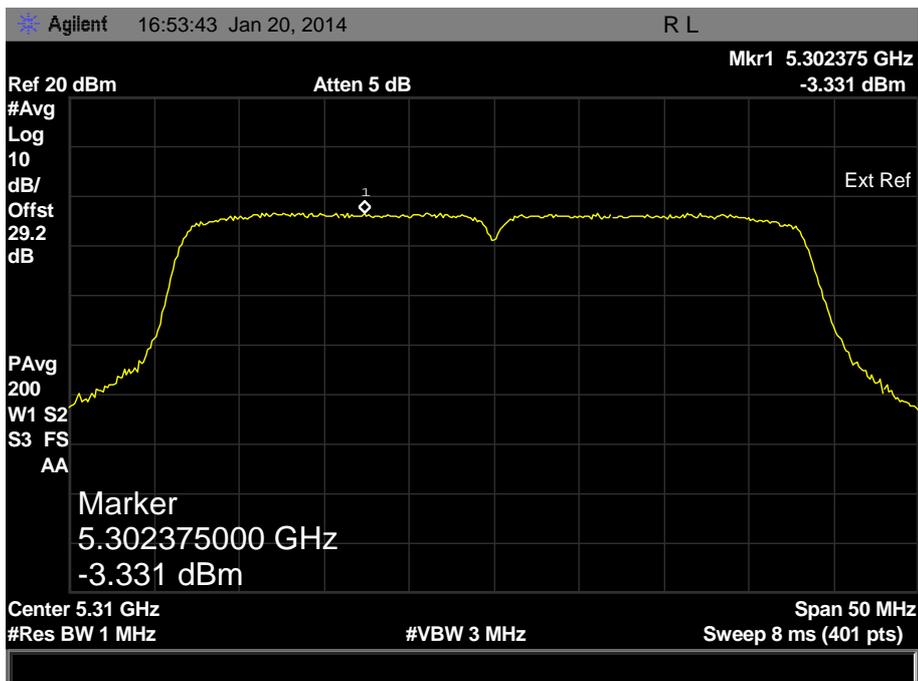




Product Service

5310 MHz

Peak Power Spectral Density (dBm)	-3.331
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

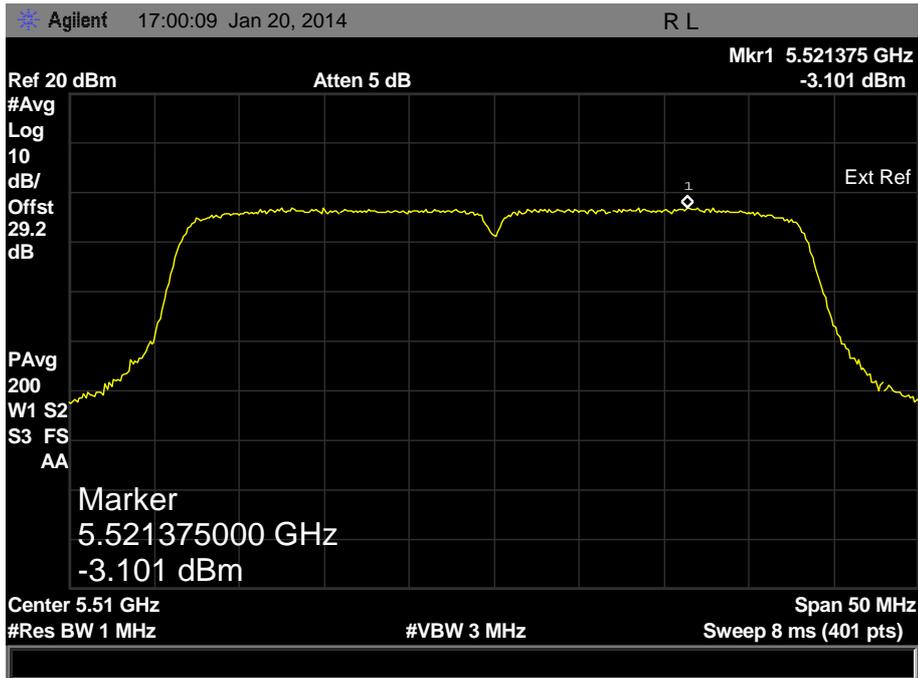


Product Service

Frequency Band 3

5510 MHz

Peak Power Spectral Density (dBm)	-3.101
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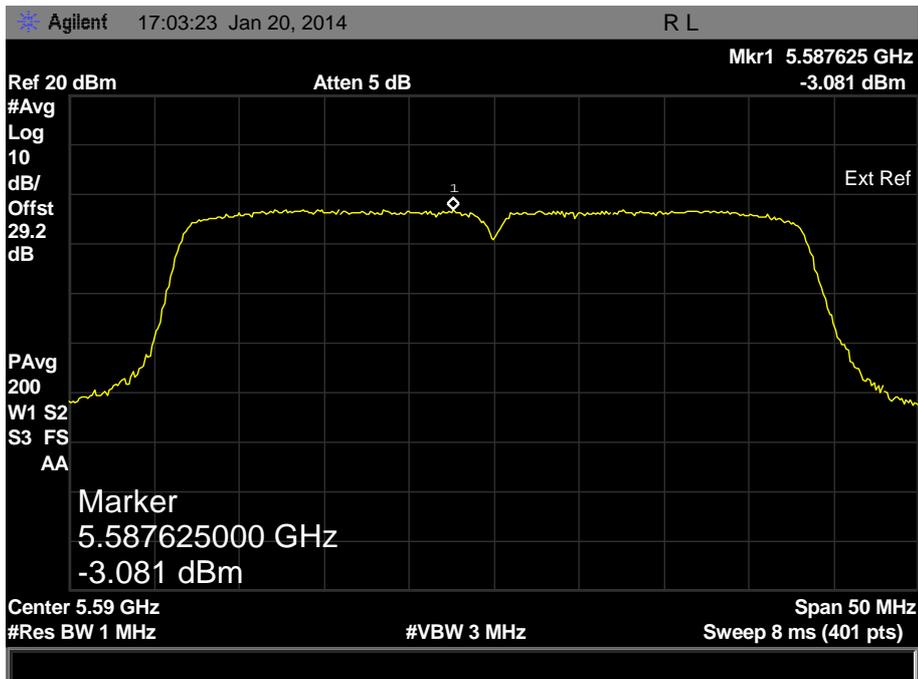




Product Service

5590 MHz

Peak Power Spectral Density (dBm)	-3.081
-----------------------------------	--------





Product Service

5670MHz

Peak Power Spectral Density (dBm)	-3.416
-----------------------------------	--------



The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

Frequency Band (MHz)	FCC Limit	IC Limit
5150 to 5250	<4 dBm / 1 MHz	<10 dBm / 1 MHz
5250 to 5350	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5470 to 5725	<11 dBm / 1 MHz	<11 dBm / 1 MHz
5725 to 5825	<17 dBm / 1 MHz	<17 dBm / 1 MHz



Product Service

2.7 RATIO OF THE PEAK EXCURSION OF THE MODULATION ENVELOPE**2.7.1 Specification Reference**

FCC CFR 47 Part 15E, Clause 15.407 (a)(6)

2.7.2 Equipment Under Test and Modification State

SHT22 S/N: IMEI 004401115013365 - Modification State 0

2.7.3 Date of Test

20 January 2014 & 21 January 2014

2.7.4 Test Equipment Used

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

2.7.5 Test Procedure

The EUT was transmitted at maximum power via an attenuator and cable to the Spectrum Analyser. The Analyser settings were adjusted to display the resultant trace on screen. The resolution bandwidth and video bandwidth were set to 1 MHz and 3 MHz respectively. The trace was set to Max Hold and the peak excursion of the modulation envelope was measured. The ratio of this measurement to the peak power spectral density was calculated and recorded.

2.7.6 Environmental Conditions

Ambient Temperature	24.1°C
Relative Humidity	32.0%



Product Service

2.7.7 Test Results

802.11(a)

Frequency Band 1

5180 MHz

Ratio (dB)	10.11
------------	-------

5200 MHz

Ratio (dB)	9.75
------------	------

5240 MHz

Ratio (dB)	9.79
------------	------

The test was performed on the worst case data rate for 802.11(a). The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

Frequency Band 2

5260 MHz

Ratio (dB)	9.59
------------	------

5300 MHz

Ratio (dB)	9.55
------------	------

5320 MHz

Ratio (dB)	8.99
------------	------

The test was performed on the worst case data rate for 802.11(a). The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.



Product Service

Frequency Band 35500 MHz

Ratio (dB)	9.62
------------	------

5600 MHz

Ratio (dB)	9.61
------------	------

5700 MHz

Ratio (dB)	8.99
------------	------

The test was performed on the worst case data rate for 802.11(a). The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was 6 Mbps.

Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.



Product Service

802.11(ac) - 5 GHz 20 MHz BW

Frequency Band 1

5180 MHz

Ratio (dB)	9.38
------------	------

5200 MHz

Ratio (dB)	9.41
------------	------

5240 MHz

Ratio (dB)	9.35
------------	------

The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

Frequency Band 2

5260 MHz

Ratio (dB)	9.31
------------	------

5300 MHz

Ratio (dB)	9.17
------------	------

5320 MHz

Ratio (dB)	9.48
------------	------

The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.



Product Service

Frequency Band 3

5500 MHz

Ratio (dB)	9.78
------------	------

5600 MHz

Ratio (dB)	9.44
------------	------

5700 MHz

Ratio (dB)	9.43
------------	------

The test was performed on the worst case data rate for 802.11(ac) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS1.

Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.



Product Service

802.11(ac) - 5 GHz 40 MHz BWFrequency Band 15190 MHz

Ratio (dB)	11.34
------------	-------

5230 MHz

Ratio (dB)	11.37
------------	-------

The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Frequency Band 25270 MHz

Ratio (dB)	11.41
------------	-------

5310 MHz

Ratio (dB)	11.56
------------	-------

The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.



Product Service

Frequency Band 3

5510 MHz

Ratio (dB)	11.36
------------	-------

5590 MHz

Ratio (dB)	11.59
------------	-------

5670 MHz

Ratio (dB)	11.34
------------	-------

The test was performed on the worst case data rate for 802.11(ac) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.



Product Service

802.11(ac) - 5 GHz 80 MHz BW

Frequency Band 1

5210 MHz

Ratio (dB)	9.46
------------	------

The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Frequency Band 2

5290 MHz

Ratio (dB)	9.92
------------	------

The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Frequency Band 3

5530 MHz

Ratio (dB)	9.52
------------	------

5610 MHz

Ratio (dB)	9.43
------------	------

The test was performed on the worst case data rate for 802.11(ac) - 80 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.



Product Service

802.11(n) - 5 GHz 20 MHz BW

Frequency Band 1

5180 MHz

Ratio (dB)	9.13
------------	------

5200 MHz

Ratio (dB)	9.99
------------	------

5240 MHz

Ratio (dB)	9.62
------------	------

The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Frequency Band 2

5260 MHz

Ratio (dB)	9.93
------------	------

5300 MHz

Ratio (dB)	9.73
------------	------

5320 MHz

Ratio (dB)	9.81
------------	------

The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.



Product Service

Frequency Band 3

5500 MHz

Ratio (dB)	10.66
------------	-------

5600 MHz

Ratio (dB)	10.14
------------	-------

5700 MHz

Ratio (dB)	9.65
------------	------

The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

802.11(n) - 5 GHz 40 MHz BW

Frequency Band 1

5190 MHz

Ratio (dB)	9.77
------------	------

5230 MHz

Ratio (dB)	10.11
------------	-------

The test was performed on the worst case data rate for 802.11(n) - 20 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.



Product Service

Frequency Band 25270 MHz

Ratio (dB)	9.26
------------	------

5310 MHz

Ratio (dB)	9.86
------------	------

The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Frequency Band 35510 MHz

Ratio (dB)	10.32
------------	-------

5590 MHz

Ratio (dB)	9.66
------------	------

5670MHz

Ratio (dB)	9.04
------------	------

The test was performed on the worst case data rate for 802.11(n) - 40 MHz BW. The worst case was deemed as the data rate which produced the highest level of conducted average power. This data rate was MCS0.

Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.



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					
LISN (1 Phase)	Chase	MN 2050	336	12	28-Mar-2014
Screened Room (5)	Rainford	Rainford	1545	24	25-Jan-2014
Transient Limiter	Hewlett Packard	11947A	2377	12	13-Feb-2014
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	22-Oct-2014
7m Armoured RF Cable	SSI Cable Corp.	1501-13-13-7m WA(-)	3600	-	TU
Section 2.2 - Power Limits					
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	234	12	3-Apr-2014
RF Coupler	TUV SUD Product Service	RFC1	414	-	TU
Spectrum Analyser	Agilent Technologies	E4407B	1154	12	13-Aug-2014
Screened Room (5)	Rainford	Rainford	1545	24	25-Jan-2014
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Multimeter	Iso-tech	IDM101	2424	12	12-Sep-2014
Antenna (DRG Horn)	ETS-LINDGREN	3115	3125	12	17-Jul-2014
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	3171	12	10-Sep-2014
8m Cable for 8950 Vibration Testing	Rhophase	NPS-2302-8000- NPS	3248	-	TU
Power Divider (N) 1W	Weinschel	1506A	3344	12	28-Jun-2014
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	22-Oct-2014
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	13-Sep-2014
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	matur GmbH	TAM 4.0-P	3916	-	TU
Mast Controller	matur GmbH	NCD	3917	-	TU
DC - 8 GHz Attenuator	Lucas Weinschel	24-30-33	3963	12	27-Jun-2014
P-Series Power Meter	Agilent Technologies	N1911A	3980	12	18-Sep-2014
50 MHz-18 GHz Wideband Power Sensor	Agilent Technologies	N1921A	3982	12	18-Sep-2014
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	18-Sep-2014



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.3 - 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	3-Apr-2014
Power Supply Unit	Hewlett Packard	6253A	441	-	O/P Mon
Pre-Amplifier	Phase One	PS04-0086	1533	12	19-Dec-2014
Pre-Amplifier	Phase One	PS04-0087	1534	12	30-Sep-2014
Screened Room (5)	Rainford	Rainford	1545	24	25-Jan-2014
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Test Receiver	Rohde & Schwarz	ESIB40	1934	12	13-Jan-2015
Multimeter	Iso-tech	IDM101	2424	12	12-Sep-2014
High Pass Filter (4GHz)	RLC Electronics	F-100-4000-5-R	2773	12	1-Feb-2014
Filter (Hi Pass)	Lorch	9HP7-7000-SR	2833	12	1-Feb-2014
Antenna (Bilog)	Chase	CBL6143	2904	24	10-Jun-2015
Attenuator (10dB, 50W)	Aeroflex / Weinschel	47-10-34	3166	12	12-Sep-2014
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	3171	12	10-Sep-2014
Hygrometer	Rotronic	I-1000	3220	12	16-Jul-2014
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	22-Oct-2014
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	13-Sep-2014
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	maturio GmbH	TAM 4.0-P	3916	-	TU
Mast Controller	maturio GmbH	NCD	3917	-	TU
2 Metre N Type Cable	Rhophase	NPS-1601A-2000-NPS	4110	12	11-Jun-2014
Cable 1503 2M 2.92(P)m 2.92(P)m	Rhophase	KPS-1503A-2000-KPS	4293	12	20-Apr-2014
1503 2M 2.92(P)m 2.92(P)m	Rhophase	KPS-1503A-2000-KPS	4358	12	5-Sep-2014
1GHz to 8GHz Low Noise Amplifier	Wright Technologies	APS04-0085	4365	12	1-Oct-2014
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	18-Sep-2014
Section 2.4 - Frequency Stability					
Climatic Chamber	Votsch	VT4002	161	-	O/P Mon
Power Supply Unit	Hewlett Packard	6253A	441	-	O/P Mon
Spectrum Analyser	Agilent Technologies	E4407B	1154	12	13-Aug-2014
GPS Frequency Standard	Rapco	GPS-804/3	1312	6	24-Jan-2014
Digital Multimeter	Fluke	75 Series II	2360	12	30-Apr-2014
Attenuator (10dB, 50W)	Aeroflex / Weinschel	47-10-34	3166	12	12-Sep-2014
Thermocouple Thermometer	Fluke	51	3174	12	3-Dec-2014
Hygrometer	Rotronic	I-1000	3220	12	16-Jul-2014
2 Metre N Type Cable	Rhophase	NPS-1601A-2000-NPS	4110	12	11-Jun-2014
Section 2.5 - 26 dB Bandwidth					
Power Supply Unit	Hewlett Packard	6253A	441	-	O/P Mon
Attenuator (10dB, 10W)	Texscan	HFP-50N	468	12	27-Jun-2014
Spectrum Analyser	Agilent Technologies	E4407B	1154	12	13-Aug-2014
GPS Frequency Standard	Rapco	GPS-804/3	1312	6	24-Jan-2014
Multimeter	Iso-tech	IDM101	2424	12	12-Sep-2014
Hygrometer	Rotronic	I-1000	3220	12	16-Jul-2014
Combiner/Splitter	Weinschel	1506A	3878	12	19-Mar-2014
P-Series Power Meter	Agilent Technologies	N1911A	3980	12	18-Sep-2014
50 MHz-18 GHz Wideband Power Sensor	Agilent Technologies	N1921A	3982	12	18-Sep-2014



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.6 - Peak Power Spectral Density					
Power Supply Unit	Hewlett Packard	6253A	441	-	O/P Mon
Broadband Resistive Power Divider	Weinschel	1506A	601	12	19-Mar-2014
Spectrum Analyser	Agilent Technologies	E4407B	1154	12	13-Aug-2014
GPS Frequency Standard	Rapco	GPS-804/3	1312	6	24-Jan-2014
Multimeter	Iso-tech	IDM101	2424	12	12-Sep-2014
Attenuator (10dB, 50W)	Aeroflex / Weinschel	47-10-34	3166	12	12-Sep-2014
Hygrometer	Rotronic	I-1000	3220	12	16-Jul-2014
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	13-Sep-2014
2 Metre N Type Cable	Rhophase	NPS-1601A-2000-NPS	4110	12	11-Jun-2014
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	18-Sep-2014
Section 2.7- Ratio of the Peak Excursion of the Modulation Envelope					
Power Supply Unit	Hewlett Packard	6253A	441	-	O/P Mon
Broadband Resistive Power Divider	Weinschel	1506A	601	12	19-Mar-2014
Spectrum Analyser	Agilent Technologies	E4407B	1154	12	13-Aug-2014
GPS Frequency Standard	Rapco	GPS-804/3	1312	6	24-Jan-2014
Multimeter	Iso-tech	IDM101	2424	12	12-Sep-2014
Attenuator (10dB, 50W)	Aeroflex / Weinschel	47-10-34	3166	12	12-Sep-2014
Hygrometer	Rotronic	I-1000	3220	12	16-Jul-2014
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	13-Sep-2014
2 Metre N Type Cable	Rhophase	NPS-1601A-2000-NPS	4110	12	11-Jun-2014
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	18-Sep-2014

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
Ratio of the Peak Excursion of the Modulation Envelope	± 0.70 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.

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