TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Test of: SoftBank 942P

To: FCC Part 15.247: 2009 Subpart C

Test Report Serial No:
RFI-RPT-RP77768JD09A

This Test Report Is Issued Under The Authority Of Brian Watson, COO Payments and Consultancy: 	
Checked By:	A. Henriques
Signature: 	
Date of Issue:	09 June 2010

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1. Customer Information

Company Name:	Panasonic Mobile Communications Development of Europe Ltd
Address:	Panasonic House Willoughby Road Bracknell Berkshire RG12 8FP United Kingdom

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.247
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications) 2009: Part 15 Subpart C (Radio Frequency Devices) - Section 15.247
Specification Reference:	47CFR15.107 and 47CFR15.109
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications) 2009: Part 15 Subpart B (Radio Frequency Devices) - Sections 15.107 and 15.109
Site Registration:	209735
Location of Testing:	RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.
Test Dates:	17 May 2010 to 28 May 2010

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
Part 15.107	Receiver/Idle Mode AC Conducted Emissions	✓
Part 15.109	Receiver/Idle Mode Radiated Spurious Emissions	✓
Part 15.207	Transmitter AC Conducted Emissions	✓
Part 15.247(a)(2)	Transmitter Minimum 6 dB Bandwidth	✓
Part 2.1049	Transmitter 20 dB Bandwidth	✓
Part 15.247(e)	Transmitter Peak Power Spectral Density	✓
Part 15.247(b)(3)	Transmitter Maximum Peak Output Power	✓
Part 15.247(b)(3)	Transmitter Average Output Power	Note 1
Part 15.247(d) & 15.209(a)	Transmitter Radiated Emissions	✓
Part 15.247(d) & 15.209(a)	Transmitter Band Edge Radiated Emissions	✓

Key to Results

✓ = Complied ✗ = Did not comply

Note 1: The measurement was performed to support SAR tests.

2.3. Methods and Procedures

Reference:	ANSI C63.4 (2009)
Title:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
Reference:	ANSI C63.10 (2009)
Title:	American National Standard for Testing Unlicensed Wireless Devices

2.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

Brand Name:	SoftBank
Model Name or Number:	942P
IMEI Number:	004401220967141
Hardware Version Number:	Rev C
Software Version Number:	942PVA15
FCC ID Number:	UCE210030A

Description:	Battery
Brand Name:	Softbank
Model Name or Number:	PMBAY1

Description:	AC Charger
Brand Name:	Softbank
Model Name or Number:	ZTDAA1

Description:	DC Charger
Brand Name:	Softbank
Model Name or Number:	PMJAA1

Description:	USB Data Cable
Brand Name:	Softbank
Model Name or Number:	ZTFE01

Description:	Personal Hands-Free
Brand Name:	Softbank
Model Name or Number:	ZTCK01

Description:	Personal Hands-Free Converter
Brand Name:	Softbank
Model Name or Number:	PMLAJ1

Description:	USB Hub
Brand Name:	Buffalo
Model Name or Number:	BSH3U01

Description:	Micro SD memory card
Brand Name:	Not Stated
Model Name or Number:	Not Stated

3.2. Description of EUT

The equipment under test was a dual mode cellular mobile telephone with Bluetooth, WLAN and RFID

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Technology Tested:	WLAN		
Type of Unit:	Transceiver		
Modulation Type:	BPSK; 64QAM		
Data Rate:	802.11b (DSSS): 11 Mbps; 802.11g (OFDM): 54 Mbps		
Power Supply Requirement:	Nominal	3.7V	
Maximum Peak Power Output (EIRP)	18.2 dBm		
Transmit Frequency Range:	2412 MHz to 2462 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	1	2412
	Middle	6	2437
	Top	11	2462
Receive Frequency Range:	2412 MHz to 2462 MHz		
Receive Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	1	2412
	Middle	6	2437
	Top	11	2462

3.5. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	Laptop PC
Brand Name:	Sony VAIO
Model Name or Number:	PCG-551N
Serial Number:	28350621208763

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

The EUT was tested in the following operating mode(s):

- Continuously transmitting at maximum power on the bottom, centre and top channels as required using the data rates which exhibited the widest spectral bandwidths and highest power levels i.e.:
    - 802.11b 11 Mbps - BPSK
      802.11g 54 Mbps - 64QAM
- Idle Mode

4.2. Configuration and Peripherals

The EUT was tested in the following configuration(s):

- Controlled using a bespoke application on the laptop PC supplied by the client. The application was used to enable continuous transmission and the idle mode (enabled but not transmitting) and to select the test channels, data rates and modulation schemes as required.
- Transmitter spurious emissions were performed with the EUT transmitting with a data rate of 54Mbps, as this was seen to have the highest power level and therefore deemed to be worst case.
- Idle mode and transmitter mode radiated spurious emissions tests were performed with the AC charger connected to the EUT, with the TV antenna extended as this was found to be the worst case during prescans. All accessories were individually connected with the TV antenna extended and retracted during prescan measurements to determine the worst case combination.

5. Measurements, Examinations and Derived Results

5.1. General Comments

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to *Section 6. Measurement Uncertainty* for details.

5.2. Test Results

5.2.1. Receiver/Idle Mode AC Conducted Spurious Emissions

Test Summary:

FCC Part:	15.107
Test Method Used:	As detailed in ANSI C63.10 Section 6.2 referencing ANSI C63.4

Environmental Conditions:

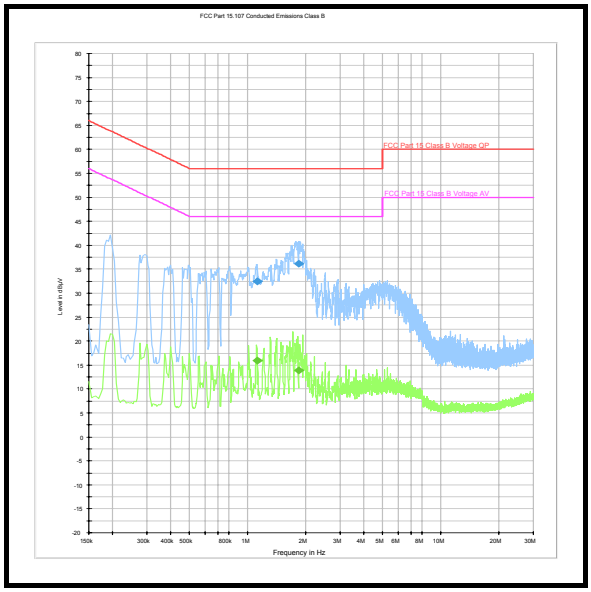
Temperature (°C):	27
Relative Humidity (%):	31

Results: Quasi Peak Detector Measurements

Frequency (MHz)	Line	Quasi Peak Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
1.113000	Neutral	32.4	56.0	23.6	Complied
1.833000	Live	36.1	56.0	19.9	Complied

Results: Average Detector Measurements

Frequency (MHz)	Line	Average Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
1.113000	Neutral	15.9	46.0	30.1	Complied
1.833000	Live	13.8	46.0	32.2	Complied



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

5.2.2. Receiver/Idle Mode Radiated Spurious Emissions

Test Summary:

FCC Part:	15.109
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.5 referencing ANSI C63.4
Frequency Range:	30 MHz to 1000 MHz

Environmental Conditions:

Temperature (°C):	26
Relative Humidity (%):	22

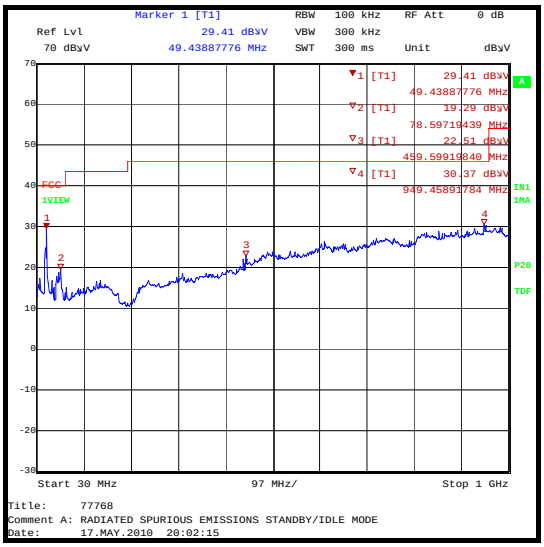
Results:

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
50.114	Vertical	29.3	40.0	10.7	Complied
79.993	Horizontal	17.7	40.0	22.3	Complied
458.785	Vertical	24.4	46.0	21.6	Complied
949.329	Vertical	28.2	46.0	17.8	Complied

Note(s):

1. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.

Receiver/Idle Mode Radiated Spurious Emissions (continued)



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

Receiver/Idle Mode Radiated Spurious Emissions (continued)

Test Summary:

FCC Part:	15.109
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.6 referencing ANSI C63.4
Frequency Range:	1 GHz to 12.75 GHz

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	22

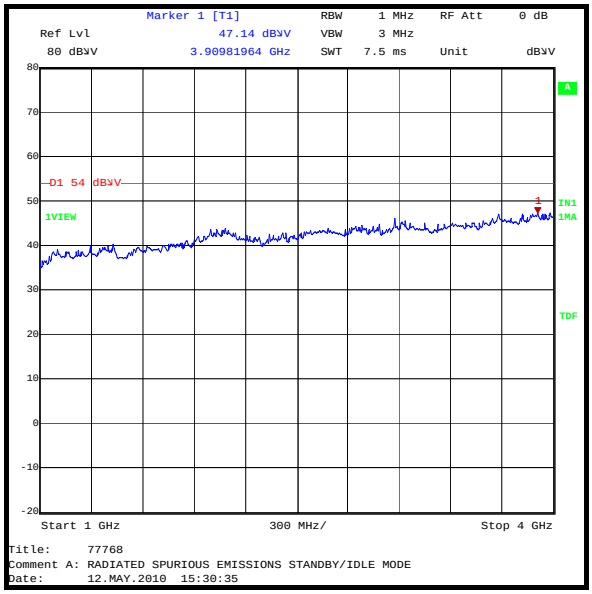
Results:

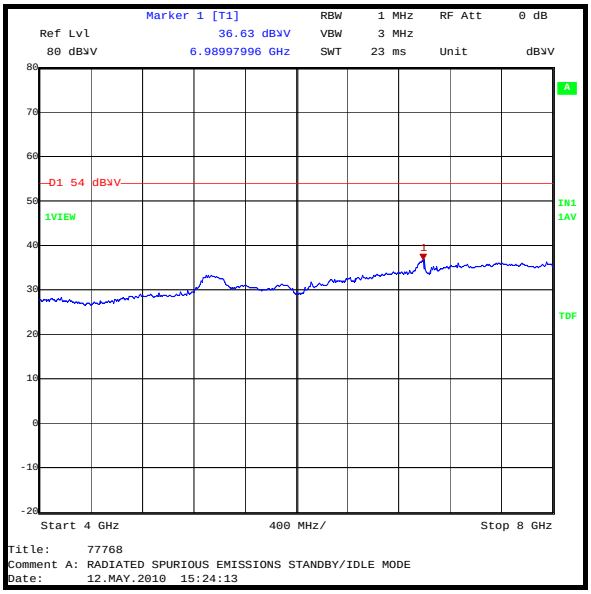
Frequency (MHz)	Antenna Polarity	Peak Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
3909.820	Vertical	47.1	54.0	6.9	Complied

Note(s):

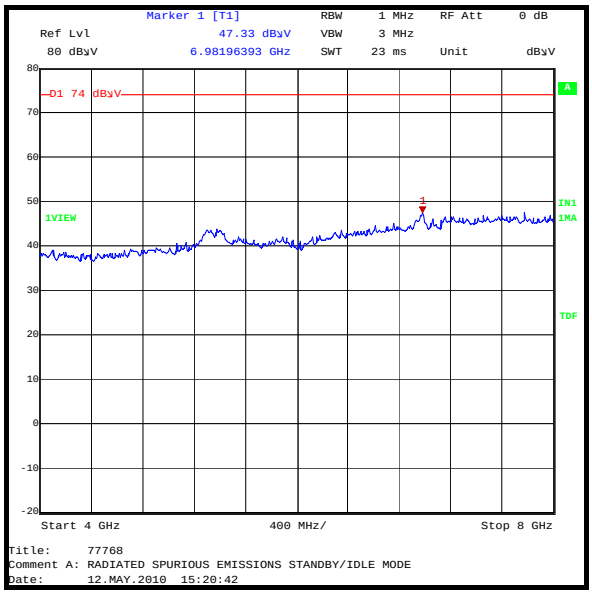
1. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above. The peak level was compared to the average limit as opposed to being compared to the peak limit because this is the more onerous limit.
2. All pre-scans were performed with the peak detector against average limits apart from measurements made in the range 4 GHz to 12.75 GHz where pre-scans were performed with peak and average detector and the applicable limit applied. This was due to the noise floor being close to the average limit when using the peak detector.
3. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.

Receiver/Idle Mode Radiated Spurious Emissions (continued)

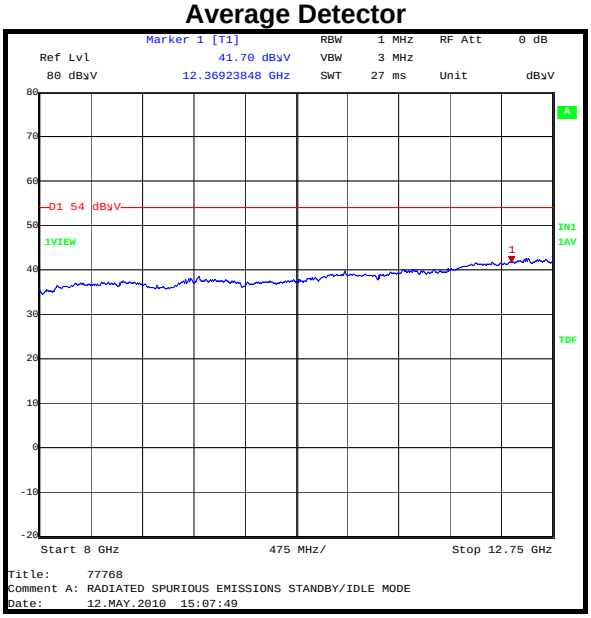




Average Detector

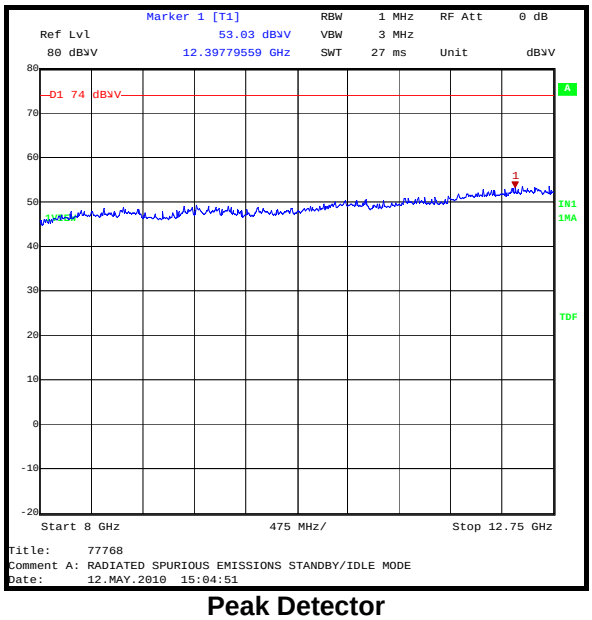


Peak Detector



Average Detector

Receiver/Idle Mode Radiated Spurious Emissions (continued)



Peak Detector

5.2.3. Transmitter AC Conducted Spurious Emissions

Test Summary:

FCC Part:	15.207
Test Method Used:	As detailed in ANSI C63.10 Section 6.2 referencing ANSI C63.4

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	20

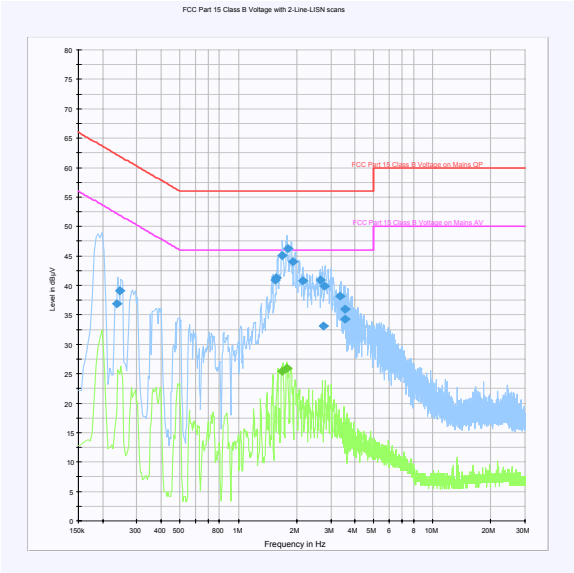
Results: Quasi Peak Detector Measurements

Frequency (MHz)	Line	Quasi Peak Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.235500	Live	36.9	62.3	25.4	Complied
0.244500	Live	39.0	61.9	22.9	Complied
1.549500	Live	40.9	56.0	15.1	Complied
1.558500	Live	41.3	56.0	14.7	Complied
1.675500	Live	45.1	56.0	10.9	Complied
1.792500	Live	46.3	56.0	9.7	Complied
1.914000	Live	44.0	56.0	12.0	Complied
2.152500	Live	40.8	56.0	15.2	Complied
2.638500	Negative	40.9	56.0	15.1	Complied
2.755500	Negative	33.1	56.0	22.9	Complied
2.760000	Live	39.9	56.0	16.1	Complied
3.349500	Live	38.1	56.0	17.9	Complied
3.543000	Live	34.3	56.0	21.7	Complied
3.547500	Live	35.9	56.0	20.1	Complied

Results: Average Detector Measurements

Frequency (MHz)	Line	Average Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
1.671000	Live	25.3	46.0	20.7	Complied
1.788000	Live	25.9	46.0	20.1	Complied

Transmitter AC Conducted Spurious Emissions (continued)



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

5.2.4. Transmitter 6 dB Bandwidth

Test Summary:

FCC Part:	15.247(a)(2)
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.1 (see note below))

Environmental Conditions:

Temperature (°C):	29
Relative Humidity (%):	27

Results: 1 Mbps

Channel	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)	Result
Bottom	8.778	≥0.5	8.278	Complied
Middle	8.657	≥0.5	8.157	Complied
Top	7.812	≥0.5	7.312	Complied

Results: 6 Mbps

Channel	Transmitter 6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)	Result
Bottom	13.106	≥0.5	12.606	Complied
Middle	11.904	≥0.5	11.404	Complied
Top	12.144	≥0.5	11.644	Complied

Results: 11 Mbps

Channel	Transmitter 6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)	Result
Bottom	9.018	≥0.5	8.518	Complied
Middle	8.297	≥0.5	7.797	Complied
Top	8.417	≥0.5	7.917	Complied

Results: 54 Mbps

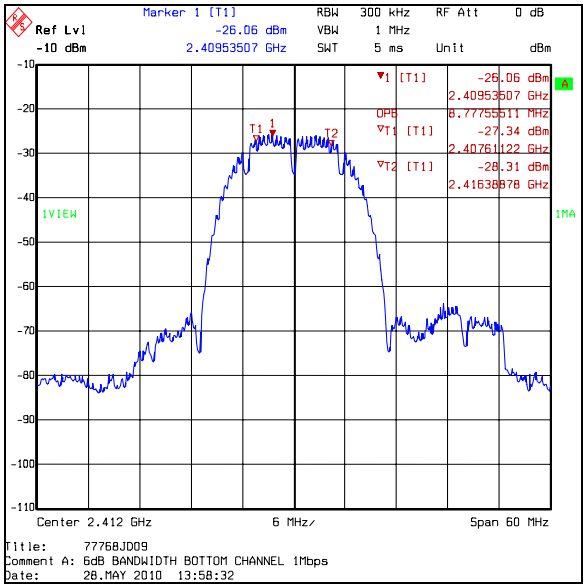
Channel	Transmitter 6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)	Result
Bottom	13.106	≥0.5	12.606	Complied
Middle	12.264	≥0.5	11.764	Complied
Top	12.264	≥0.5	11.764	Complied

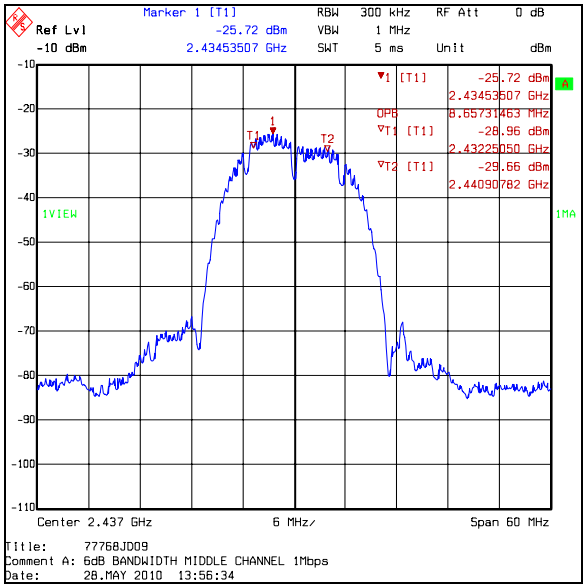
Note(s):

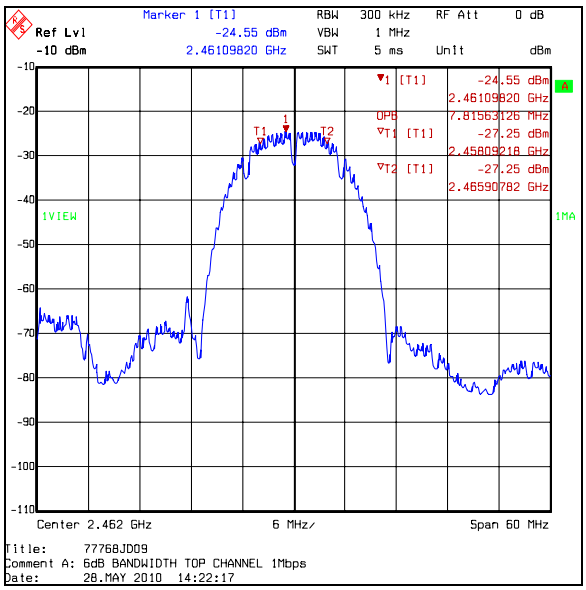
1. In lieu of the test method detailed in ANSI C63.10 Section 6.9.1 the 6 dB (75%) bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser.

Transmitter 6 dB Bandwidth (continued)

1 Mbps

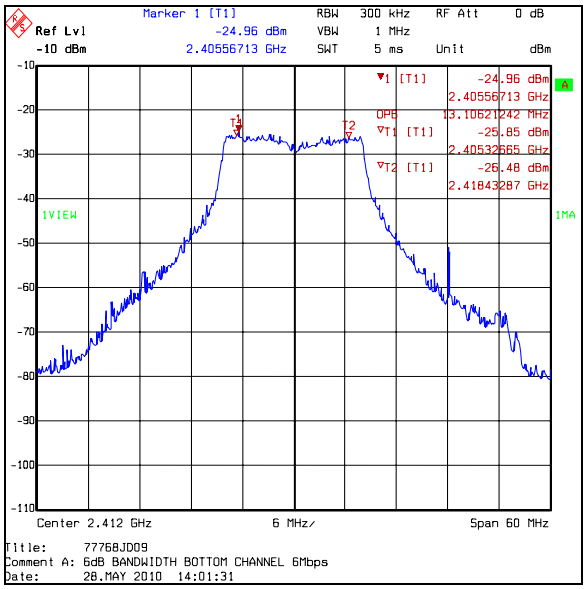


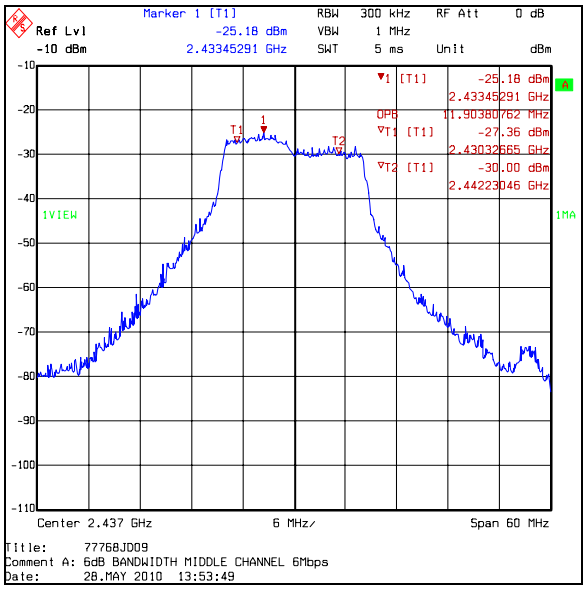


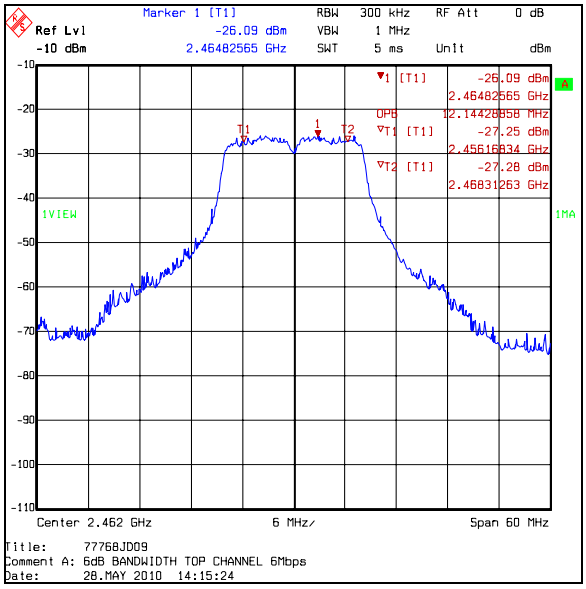


Transmitter Minimum 6 dB Bandwidth (continued)

6 Mbps

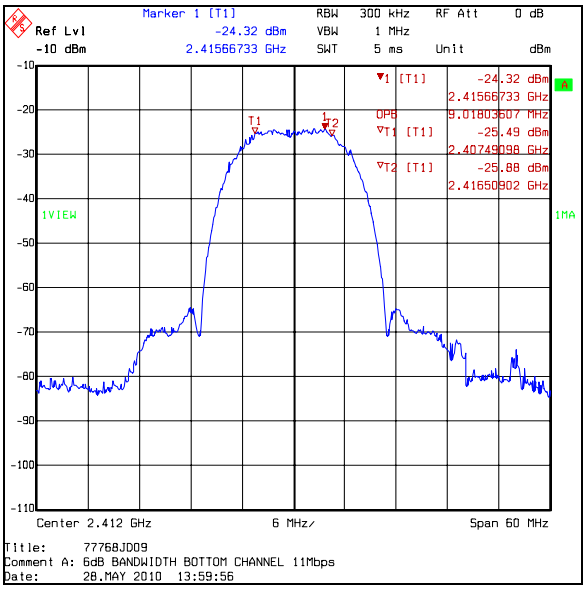


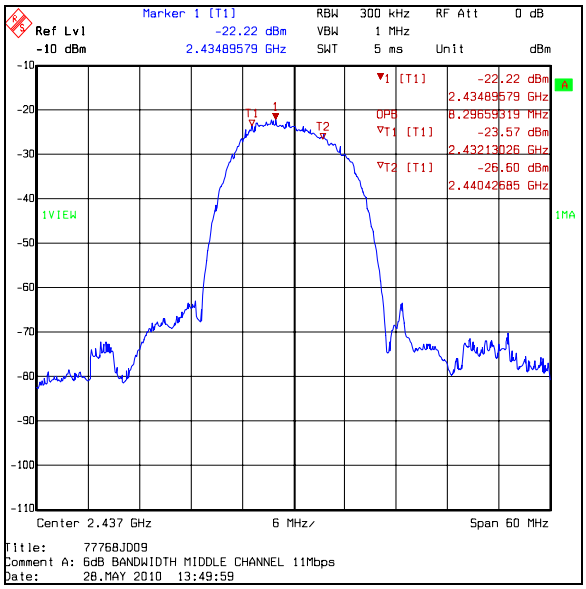


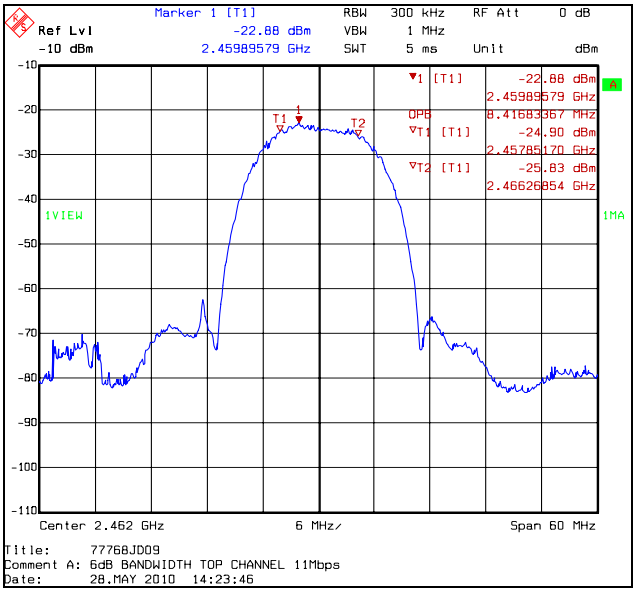


Transmitter Minimum 6 dB Bandwidth (continued)

Results: 11 Mbps

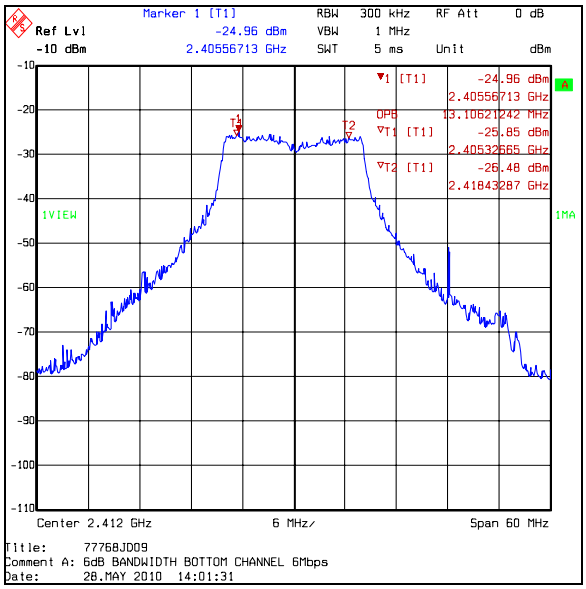


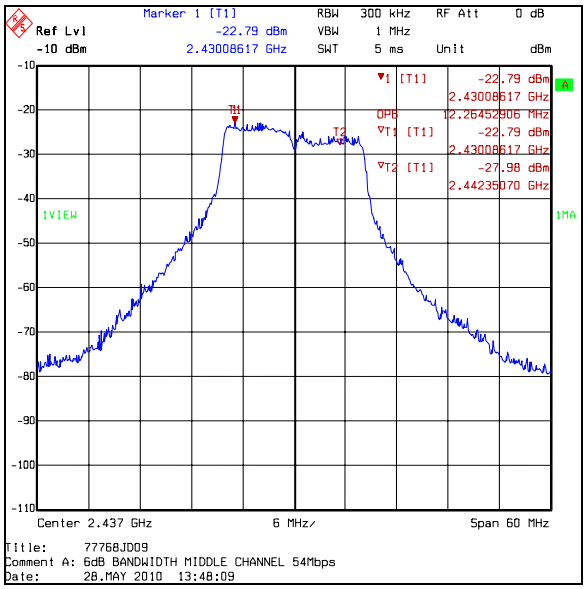


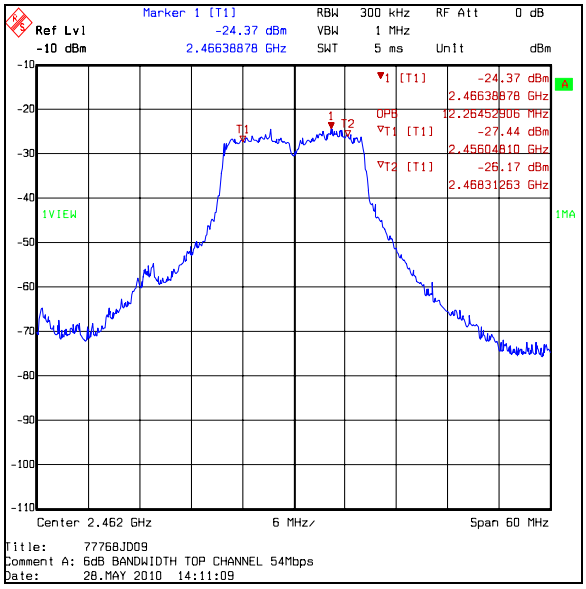


Transmitter Minimum 6 dB Bandwidth (continued)

Results: 54 Mbps







5.2.5. Transmitter 20 dB Bandwidth

Test Summary:

FCC Part:	2.1049
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.1 (see note below)

Environmental Conditions:

Temperature (°C):	29
Relative Humidity (%):	27

Results: 1Mbps

Channel	20 dB Bandwidth (MHz)
Bottom	15.511
Middle	15.030
Top	15.752

Results: 6Mbps

Channel	20 dB Bandwidth (MHz)
Bottom	18.036
Middle	18.036
Top	17.194

Results: 11Mbps

Channel	20 dB Bandwidth (MHz)
Bottom	15.752
Middle	15.391
Top	15.391

Results: 54Mbps

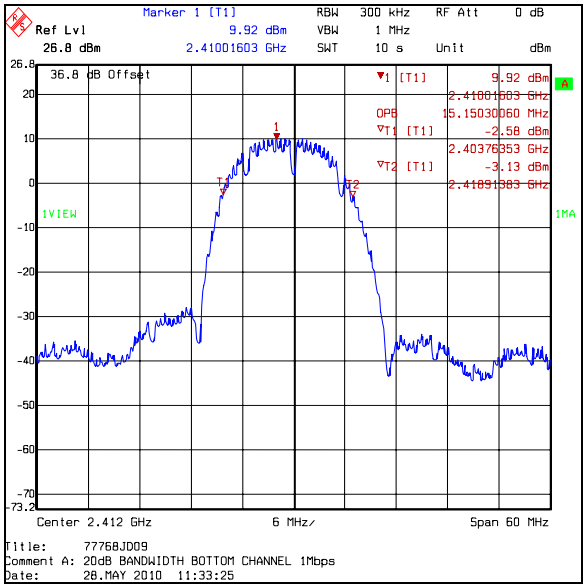
Channel	20 dB Bandwidth (MHz)
Bottom	17.074
Middle	17.074
Top	16.834

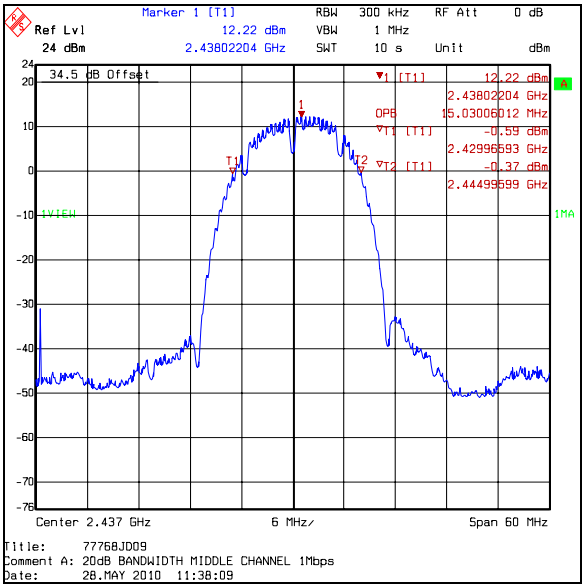
Note(s):

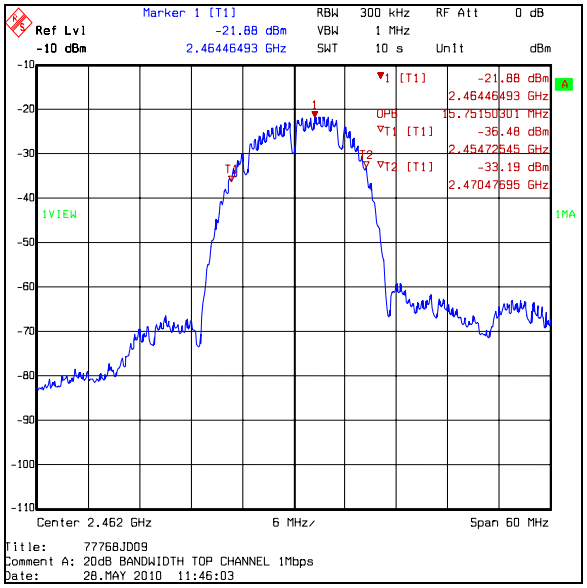
1. In lieu of the test method detailed in ANSI C63.10 Section 6.9.1 the 20 dB bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser.

Transmitter 20 dB Bandwidth (continued)

1Mbps

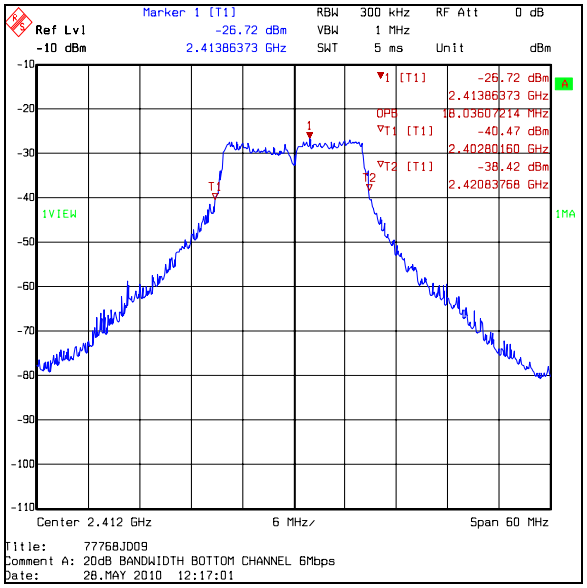


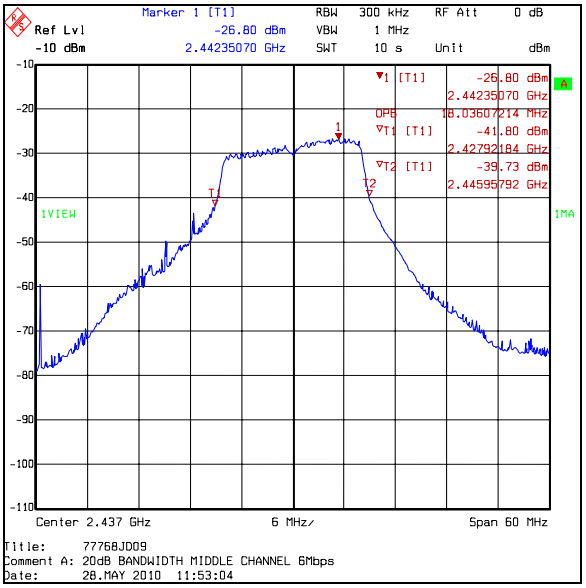


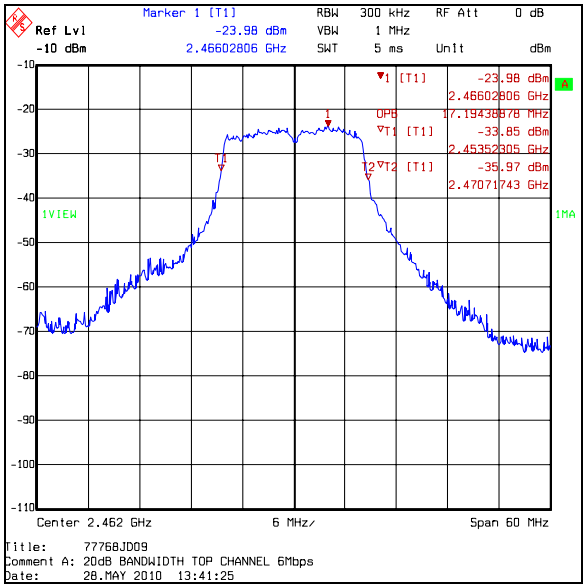


Transmitter 20 dB Bandwidth (continued)

6Mbps

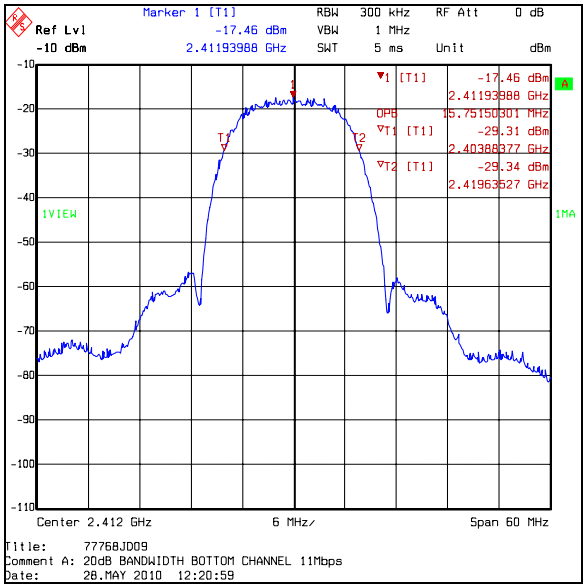


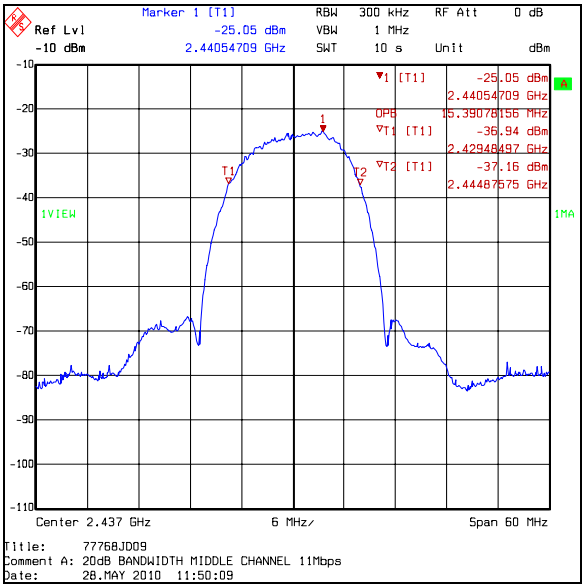


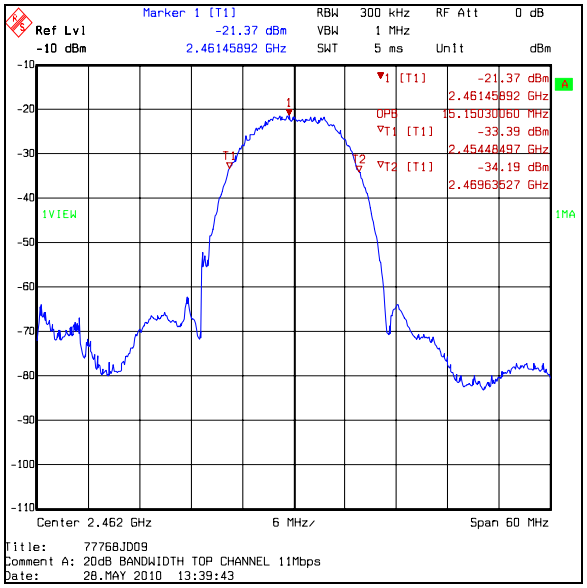


Transmitter 20 dB Bandwidth (continued)

11Mbps

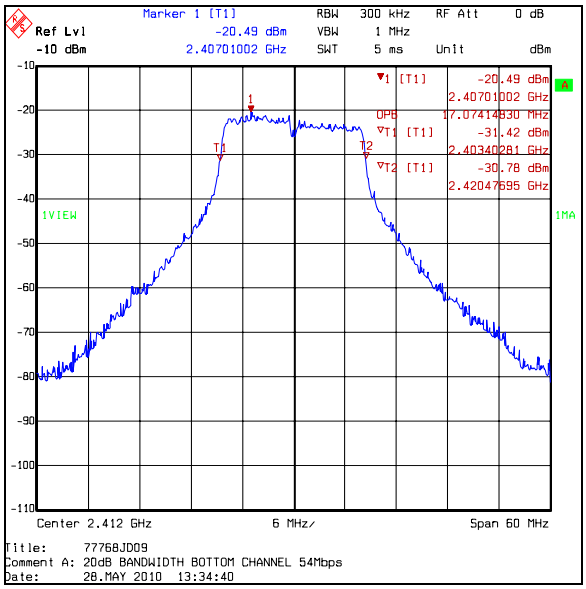


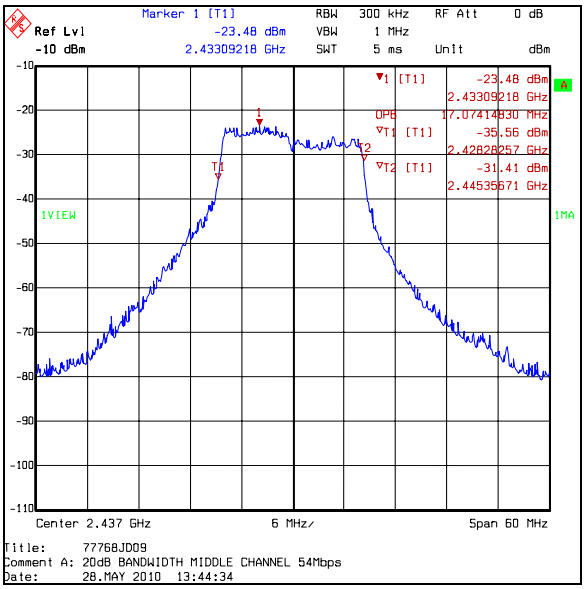


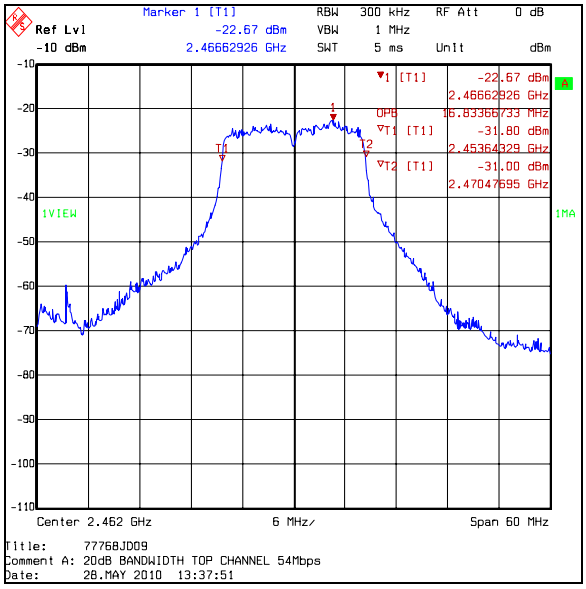


Transmitter 20 dB Bandwidth (continued)

54Mbps







5.2.6. Transmitter Peak Power Spectral Density

Test Summary:

FCC Part:	15.247(e)
Test Method Used:	As detailed in ANSI C63.10 Section 6.11.2

Environmental Conditions:

Temperature (°C):	29
Relative Humidity (%):	27

Results: 1Mbps

Channel	Output Power (dBm/3 kHz)	Limit (dBm/3 kHz)	Margin (dB)	Result
Bottom	-15.4	8.0	23.4	Complied
Middle	-15.3	8.0	23.3	Complied
Top	-13.4	8.0	21.4	Complied

Results: 6Mbps

Channel	Output Power (dBm/3 kHz)	Limit (dBm/3 kHz)	Margin (dB)	Result
Bottom	-15.2	8.0	23.2	Complied
Middle	-18.0	8.0	26.0	Complied
Top	-15.4	8.0	23.4	Complied

Results: 11Mbps

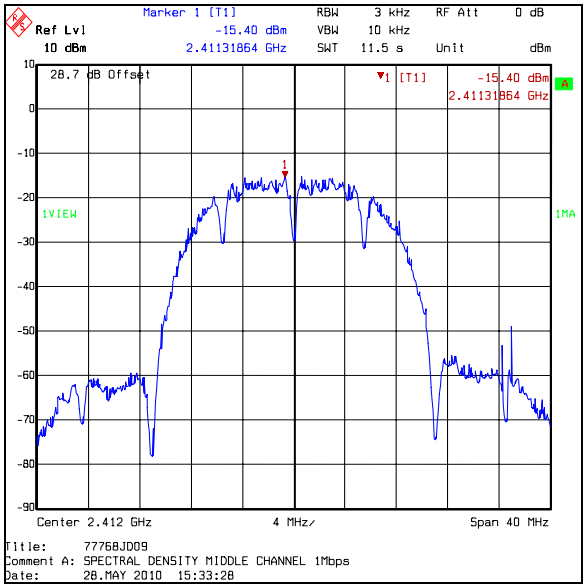
Channel	Output Power (dBm/3 kHz)	Limit (dBm/3 kHz)	Margin (dB)	Result
Bottom	-17.2	8.0	25.2	Complied
Middle	-17.5	8.0	25.5	Complied
Top	-14.4	8.0	22.0	Complied

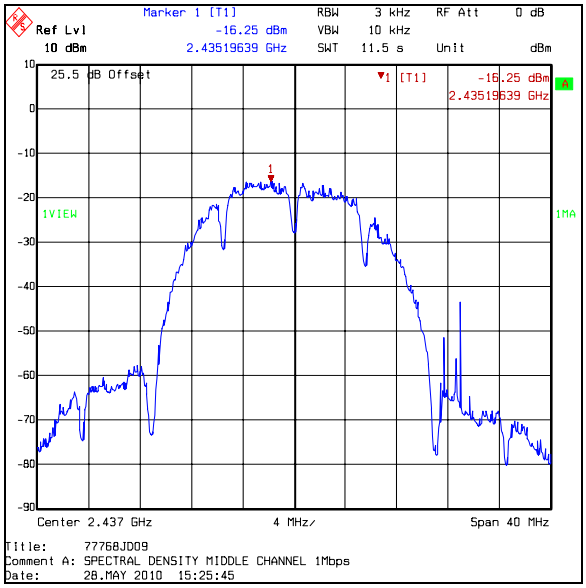
Results: 54Mbps

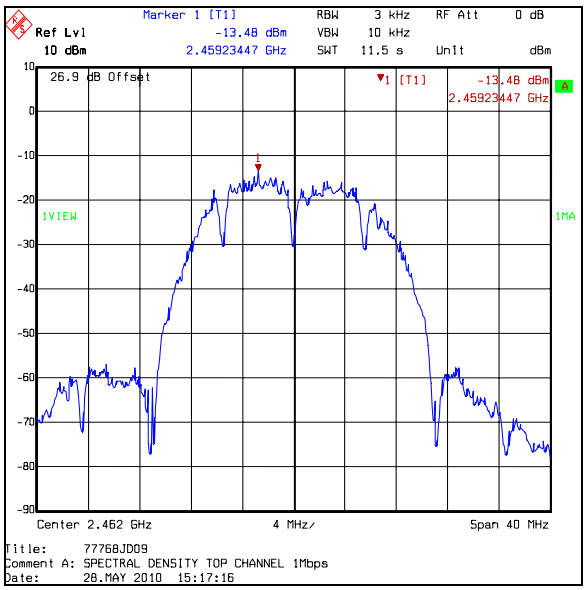
Channel	Output Power (dBm/3 kHz)	Limit (dBm/3 kHz)	Margin (dB)	Result
Bottom	-16.7	8.0	24.7	Complied
Middle	-18.5	8.0	26.5	Complied
Top	-15.3	8.0	23.3	Complied

Transmitter Peak Power Spectral Density (continued)

1Mbps

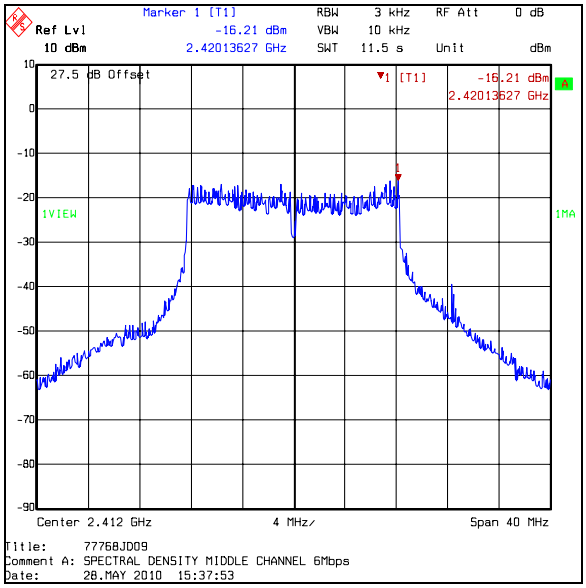


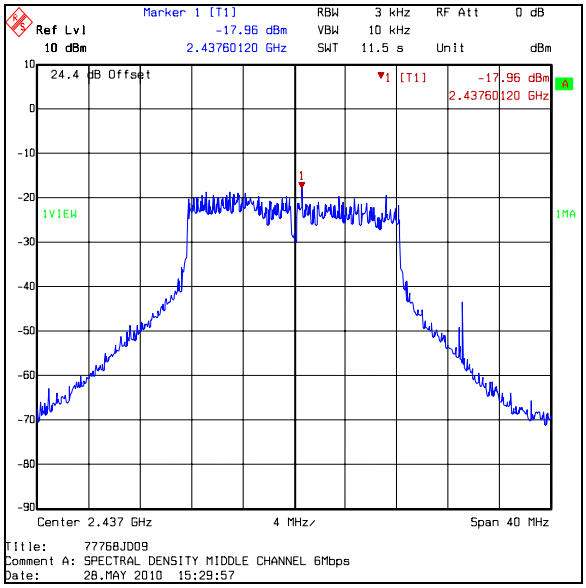


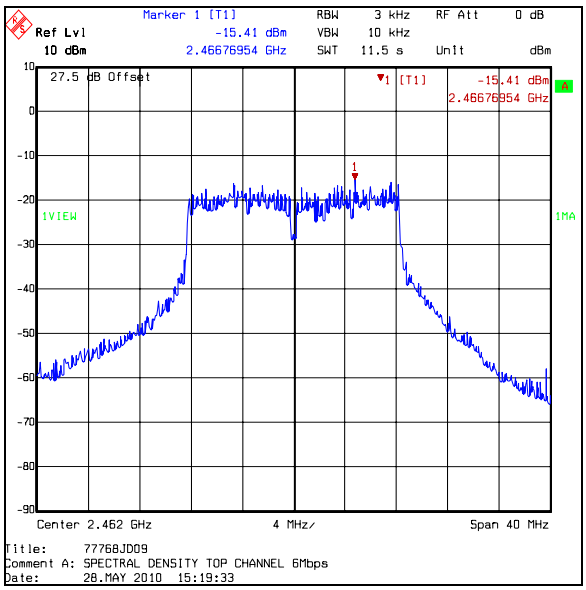


Transmitter Peak Power Spectral Density (Continued)

6Mbps

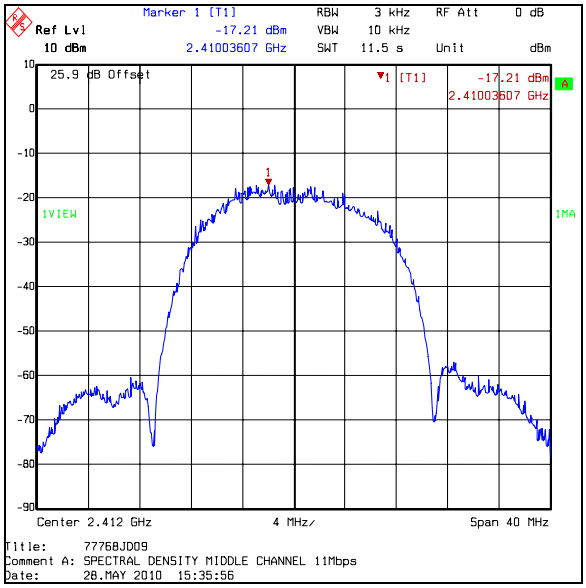


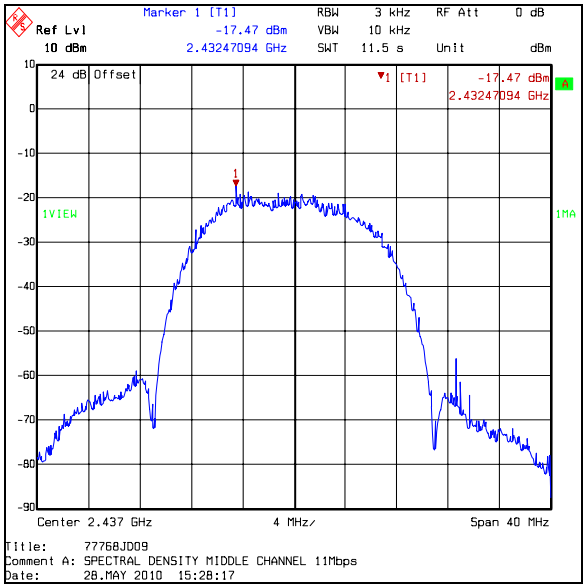


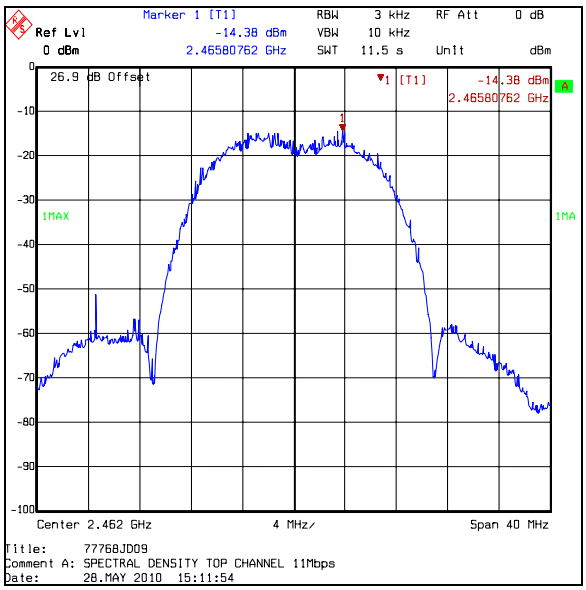


Transmitter Peak Power Spectral Density (continued)

11Mbps

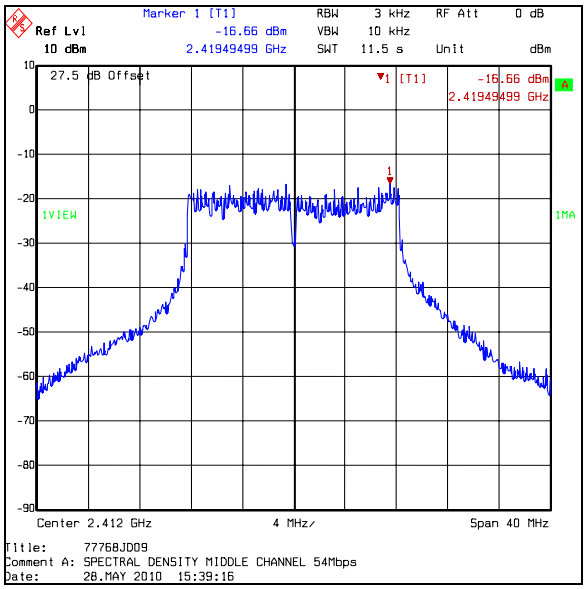


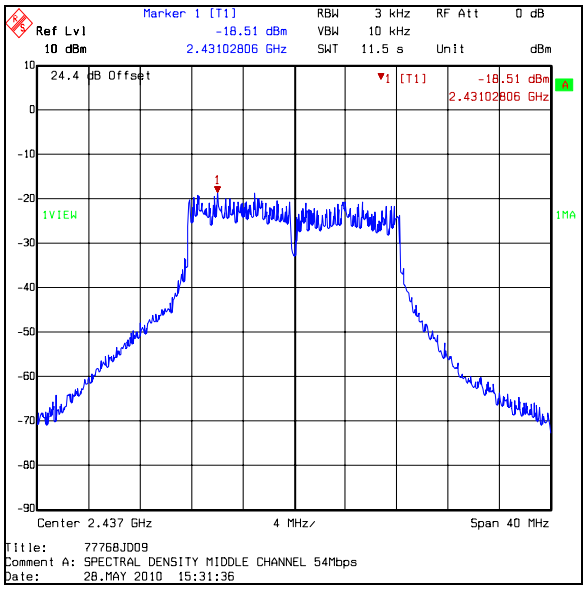


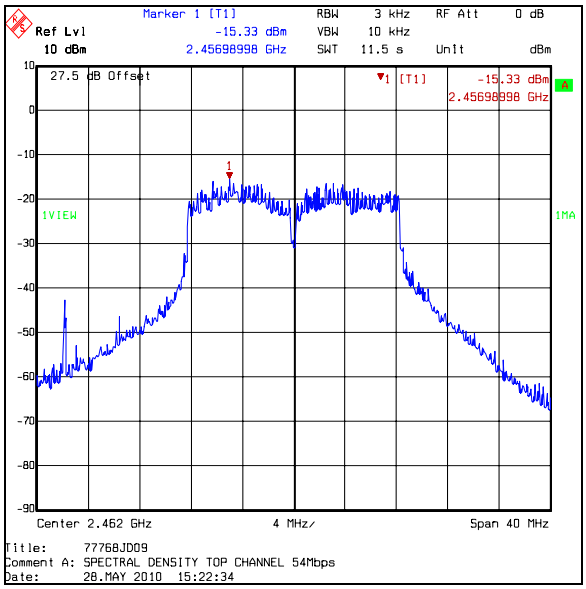


Transmitter Peak Power Spectral Density (continued)

54Mbps







5.2.7. Transmitter Maximum Peak Output Power (EIRP)

Test Summary:

FCC Part:	15.247(b)(3)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.6 referencing ANSI C63.4 (see note below)

Environmental Conditions:

Temperature (°C):	28
Relative Humidity (%):	29

Results: 1Mbps

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	14.1	30.0	15.9	Complied
Middle	13.1	30.0	16.9	Complied
Top	15.0	30.0	15.0	Complied

Results: 6Mbps

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	16.0	30.0	14.0	Complied
Middle	14.6	30.0	15.4	Complied
Top	17.4	30.0	12.6	Complied

Results: 11Mbps

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	15.8	30.0	14.2	Complied
Middle	14.3	30.0	15.7	Complied
Top	17.6	30.0	12.4	Complied

Results: 54Mbps

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	16.6	30.0	13.4	Complied
Middle	14.8	30.0	15.2	Complied
Top	18.2	30.0	11.8	Complied

Note(s):

1. These tests were performed radiated; therefore the EUT antenna gain is encompassed in the final result and not measurable.
2. Tests were performed using the test methods described in ANSI C63.10 Sections 6.3 and 6.6 in lieu of the test method for a conducted measurement described in ANSI C63.10 Section 6.10.2.

5.2.8. Transmitter Average Output Power (EIRP)

Test Summary:

FCC Part:	15.247(b)(3)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.6 referencing ANSI C63.4 (see note below)

Environmental Conditions:

Temperature (°C):	28
Relative Humidity (%):	29

Results:

Channel	Frequency (MHz)	Average Transmit Power (dBm)	Note
1	2412	12.6	802.11b (1Mbps)
6	2437	11.6	
11	2462	13.5	
1	2412	13.4	802.11b (11Mbps)
6	2437	12.0	
11	2462	14.8	
1	2412	13.5	802.11g (6Mbps)
6	2437	12.0	
11	2462	15.3	
1	2412	14.2	802.11g (54Mbps)
6	2437	12.4	
11	2462	15.8	

Note(s):

1. These tests were performed radiated; therefore the EUT antenna gain is encompassed in the final result and not measurable.
2. Tests were performed using the test methods described in ANSI C63.10 Sections 6.3 and 6.6 in lieu of the test method for a conducted measurement described in ANSI C63.10 Section 6.10.2.

5.2.9. Transmitter Radiated Emissions

Test Summary:

FCC Part:	15.247(d) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.5 referencing ANSI C63.4
Frequency Range	30 MHz to 1000 MHz

Environmental Conditions:

Temperature (°C):	28
Relative Humidity (%):	29

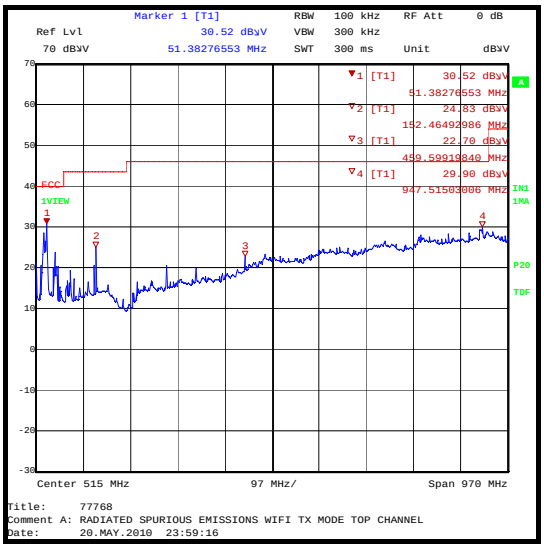
Results:

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
44.953	Vertical	29.5	40.0	10.5	Complied
51.808	Vertical	28.8	40.0	11.2	Complied
69.992	Vertical	24.5	40.0	15.5	Complied
153.288	Vertical	27.6	43.5	15.9	Complied
945.582	Vertical	30.1	46.0	15.9	Complied

Note(s):

1. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the top channel only.
2. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss
3. All other emissions were at least 20 dB below the appropriate limit or below the noise floor of the measurement system.

Transmitter Radiated Emissions (continued)



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying tables.

Transmitter Radiated Emissions (continued)

Test Summary:

FCC Part:	15.247(d) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.6 referencing ANSI C63.4
Frequency Range	1 GHz to 26.5 GHz

Environmental Conditions:

Temperature (°C):	28
Relative Humidity (%):	29

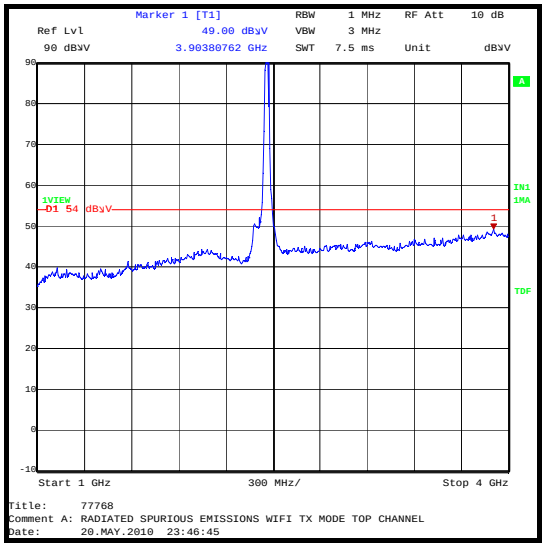
Results:

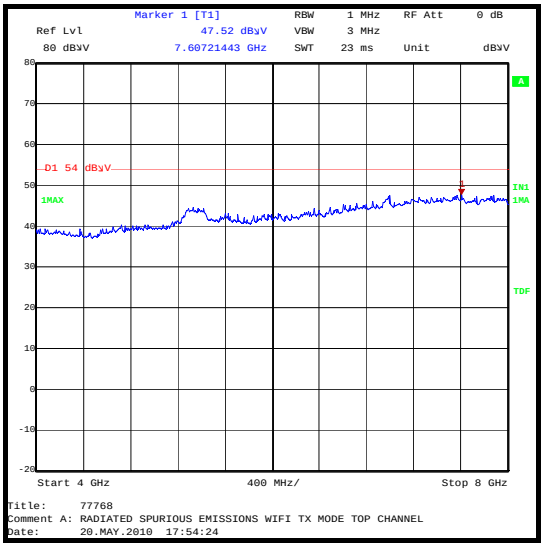
Frequency (GHz)	Antenna Polarity	Peak Level (dBμV/m)	Average Limit (dBμV/m)	Margin (dB)	Result
3.904	Vertical	49.0	54.0	5.0	Complied

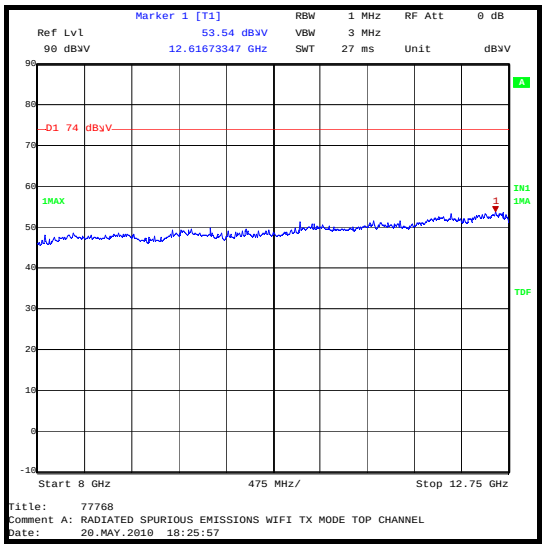
Note(s):

1. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above. The peak level was compared to the average limit as opposed to being compared to the peak limit because this is the more onerous limit.
2. All pre-scans were performed with a peak detector against average limits apart from measurements made in the range 8 to 26.5 GHz where pre-scans were performed with peak and average detectors and the applicable limit applied. This was due to the noise floor exceeding the average limit when using a peak detector.
3. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss
4. The emission shown on the 1 GHz to 4 GHz plot is the EUT carrier.

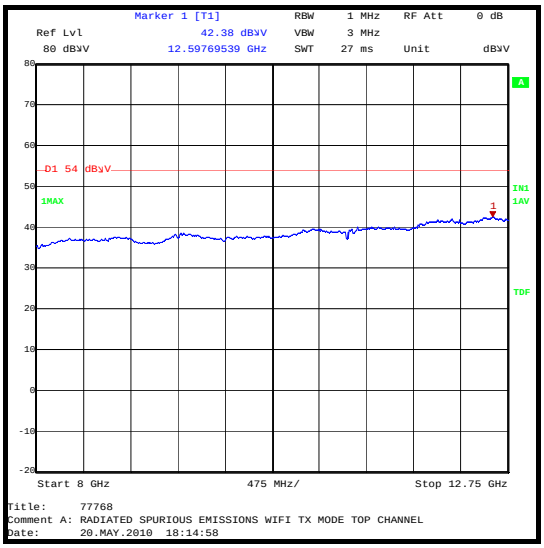
Transmitter Radiated Emissions (continued)





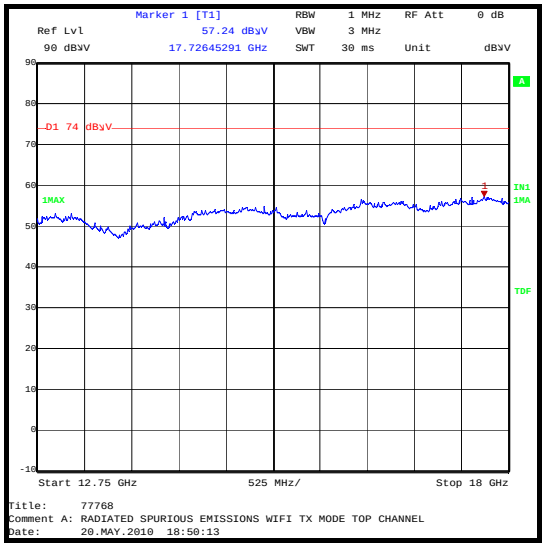


Peak Detector

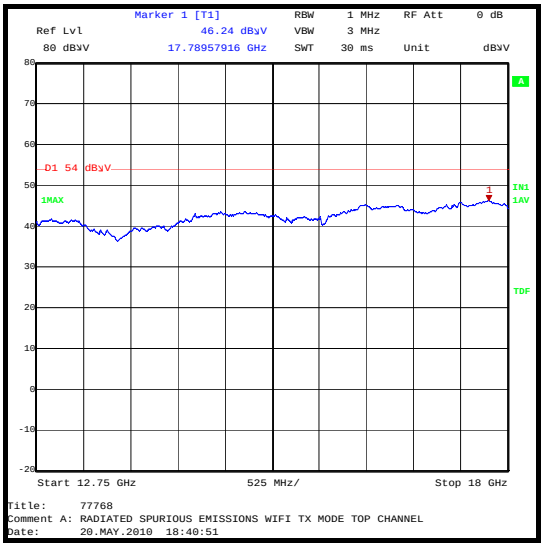


Average Detector

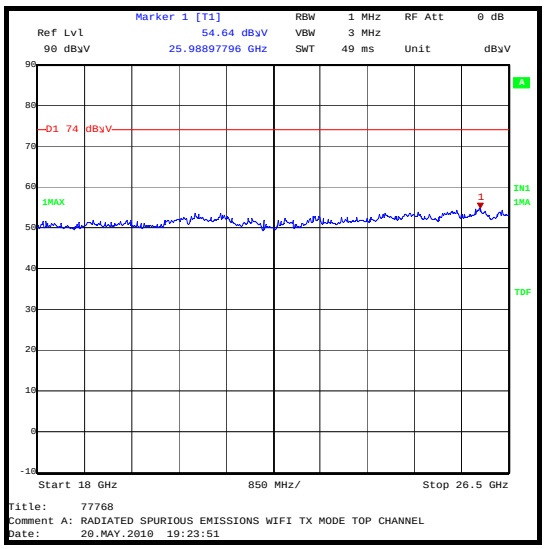
Transmitter Radiated Emissions (continued)



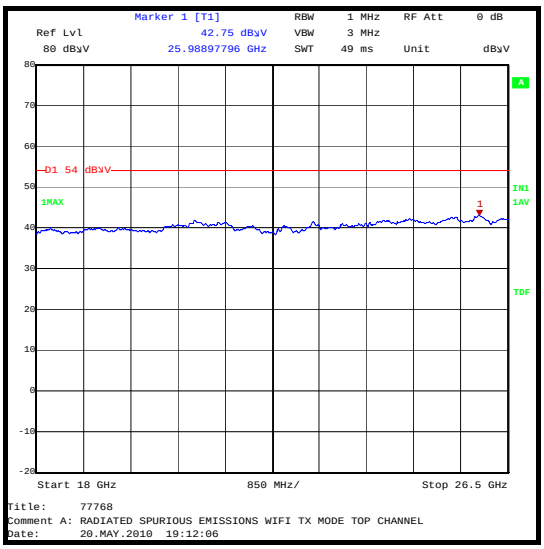
Peak Detector



Average Detector



Peak Detector



Average Detector

5.2.10. Transmitter Band Edge Radiated Emissions

Test Summary:

FCC Part:	15.247(d) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.2

Environmental Conditions:

Temperature (°C):	28
Relative Humidity (%):	27

Results: Peak Power Level, 1Mbps

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	69.5	89.4*	19.9	Complied
2483.5	Vertical	53.4	74.0	20.6	Complied

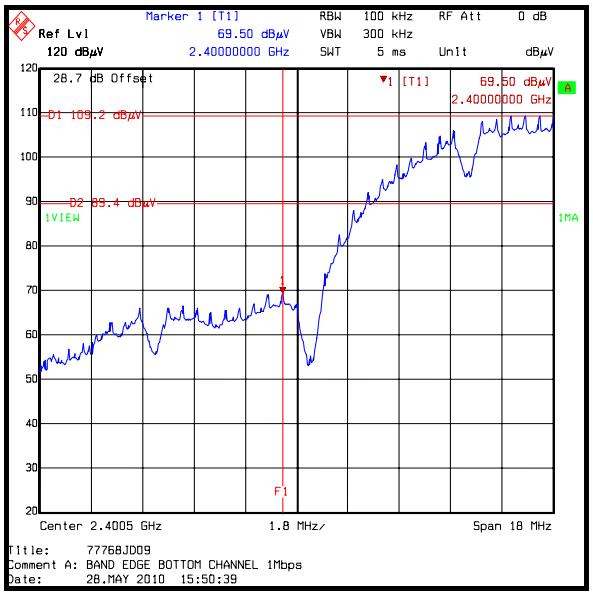
Results: Average Power Level, 1Mbps

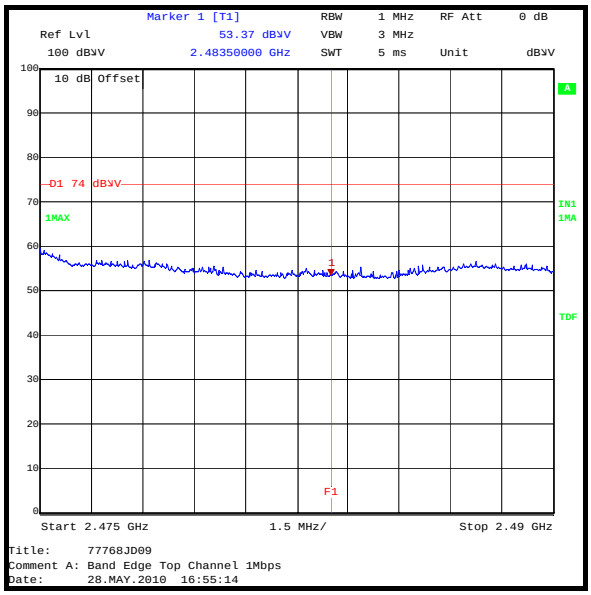
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	42.5	54.0	11.5	Complied

Note(s):

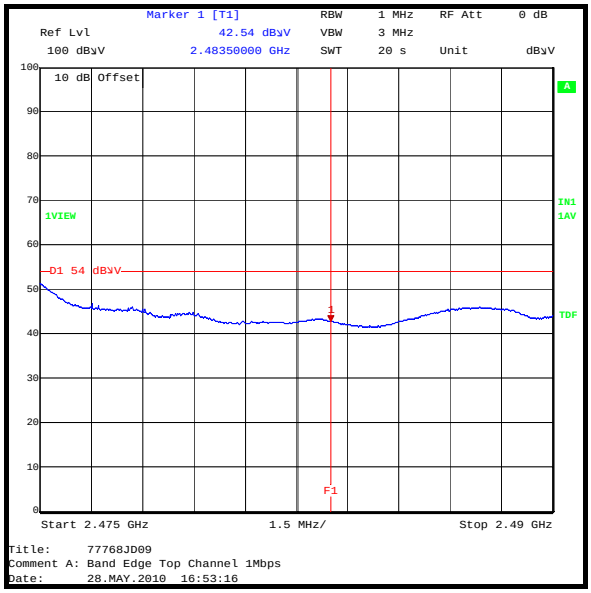
1. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.
2. * -20 dBc limit.

Transmitter Band Edge Radiated Emissions (continued)





Peak Detector



Average Detector

Transmitter Band Edge Radiated Emissions (continued)

Results: Peak Power Level, 6Mbps

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	78.9	88.2*	9.3	Complied
2483.5	Vertical	69.1	74.0	4.9	Complied

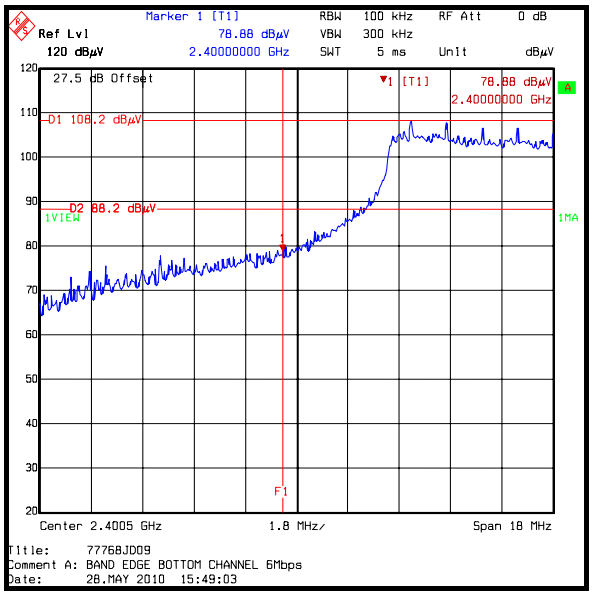
Results: Average Power Level, 6Mbps

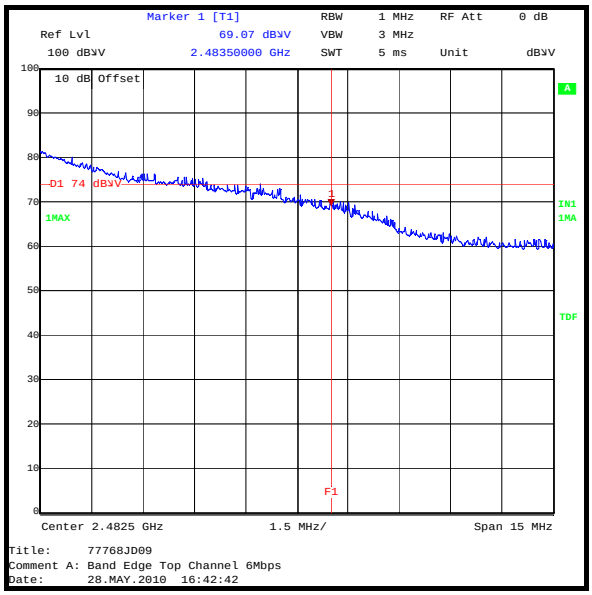
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	47.5	54.0	6.5	Complied

Note(s):

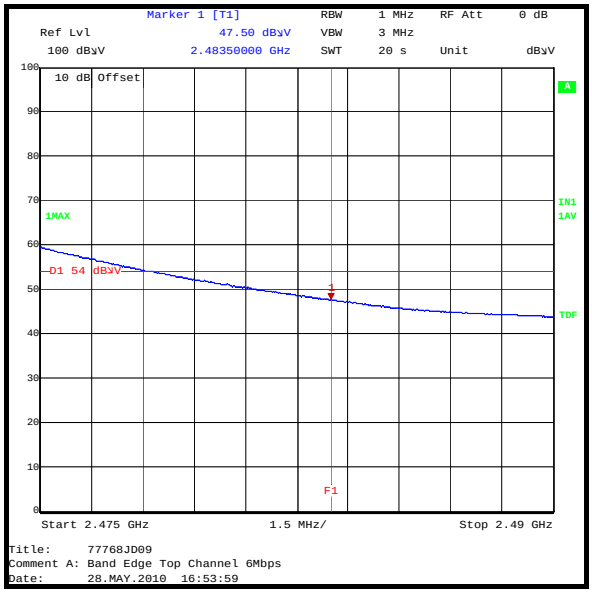
1. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.
2. * -20 dBc limit.

Transmitter Band Edge Radiated Emissions (continued)





Peak Detector



Average Detector

Transmitter Band Edge Radiated Emissions (continued)

Results: Peak Power Level, 11Mbps

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	64.2	86.3	22.1	Complied
2483.5	Vertical	53.1	74.0	20.9	Complied

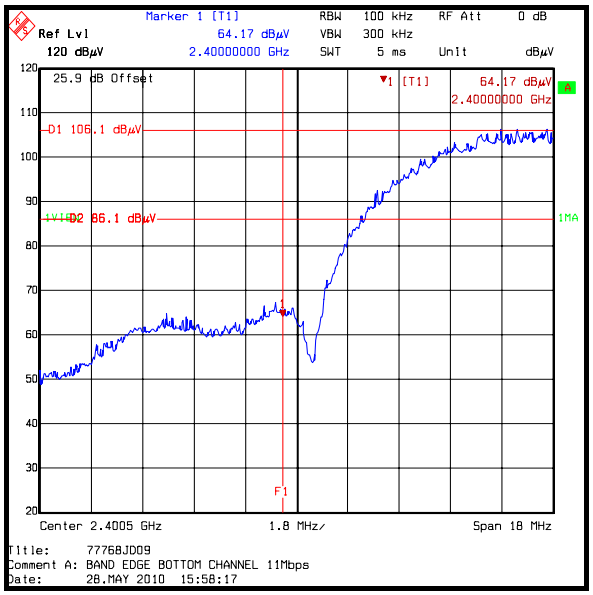
Results: Average Power Level, 11Mbps

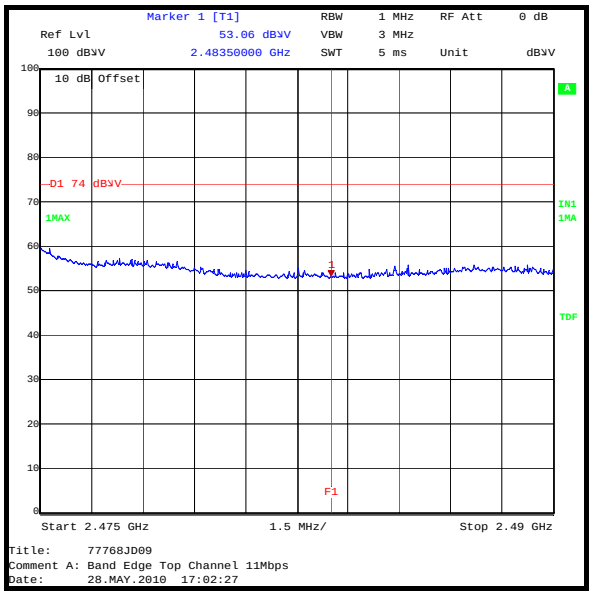
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	41.8	54.0	12.2	Complied

Note(s):

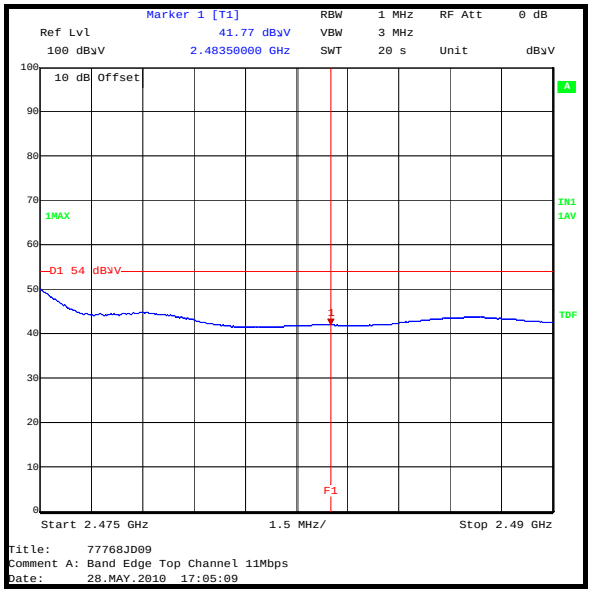
1. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.
2. * -20 dBc limit.

Transmitter Band Edge Radiated Emissions (continued)





Peak Detector



Average Detector

Transmitter Band Edge Radiated Emissions (continued)

Results: Peak Power Level Static Mode, 54Mbps

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	79.0	86.9*	7.9	Complied
2483.5	Vertical	56.3	74.0	17.7	Complied

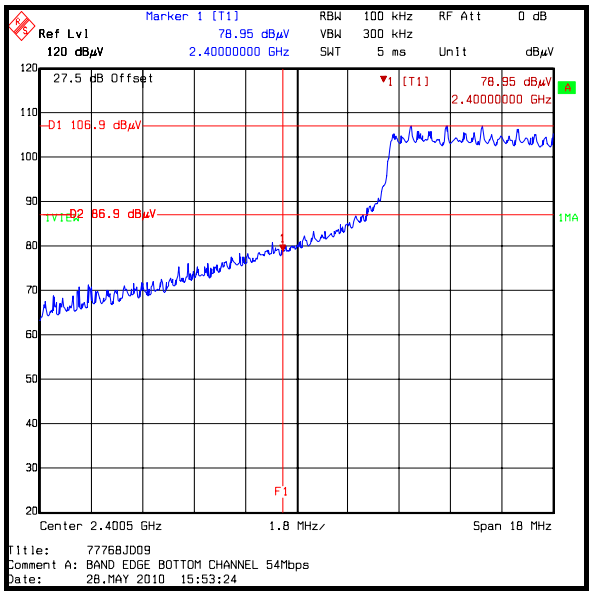
Results: Average Power Level Static Mode, 54Mbps

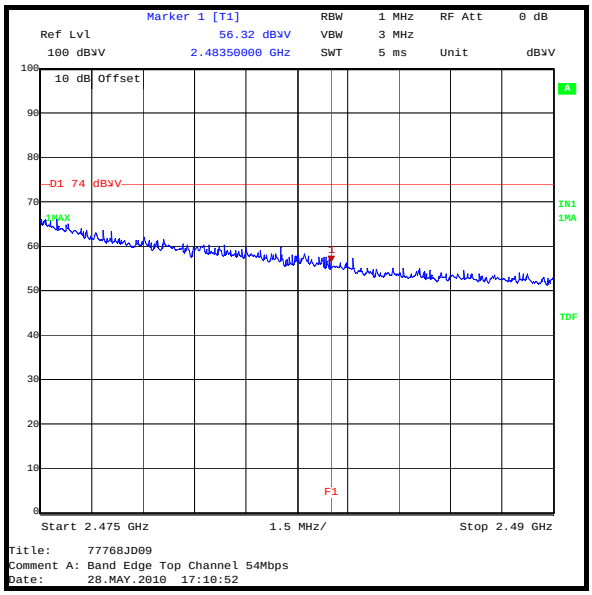
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	40.7	54.0	14.7	complied

Note(s):

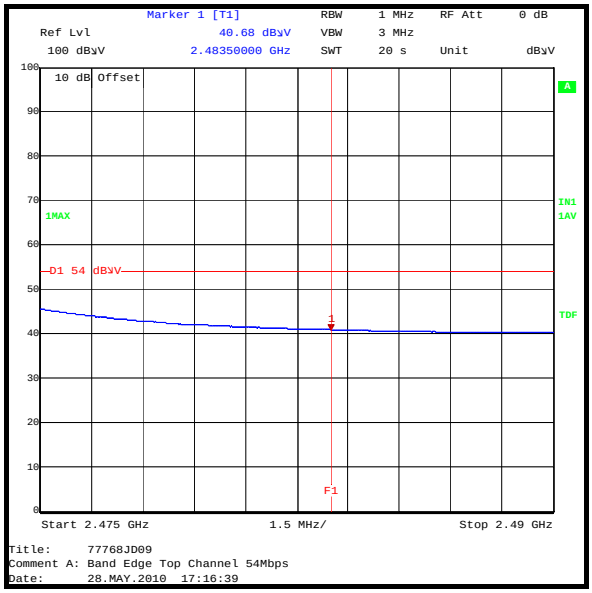
1. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.
2. * -20 dBc limit.

Transmitter Band Edge Radiated Emissions (continued)





Peak Detector



Average Detector

6. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±3.72 dB
Transmitter Maximum Peak Output Power	Not Applicable	95%	±2.94 dB
Spectral Power Density	Not Applicable	95%	±2.94 dB
6 dB / 20 dB Bandwidth	Not Applicable	95%	±0.92 ppm
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	±4.64 dB
Radiated Spurious Emissions	1 GHz to 26.5 GHz	95%	±2.94 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A1069	LISN	Rohde & Schwarz	ESH3-Z5	837469/012	13 Apr 2011	12
A1396	Attenuator	Huber + Suhner	757987	6810.17.B	Calibrated before use	-
A1534	Pre Amplifier	Hewlett Packard	8449B OPT H02	3008A00405	Calibrated before use	-
A1818	Antenna	EMCO	3115	00075692	27 Nov 2010	12
A1830	Pulse Limiter	Rhode & Schwarz	ESH3-Z2	100668	01 Mar 2011	12
A1975	High Pass Filter	AtlanTecRF	AFH-03000	090424010	Calibrated before use	-
A288	Antenna	Chase	CBL6111A	1589	16 Mar 2011	12
A436	Antenna	Flann	20240-20	330	11 May 2013	36
A649	LISN	Rohde & Schwarz	ESH3-Z5	825562/008	16 Mar 2011	12
K0001	5m Semi-Anechoic Chamber	Rainford EMC	N/A	N/A	25 Apr 2011	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	01 Sep 2010	12
L1001	Test Receiver	Rohde & Schwarz	ESU26	100239	28 Jan 2011	12
M1124	Test Receiver	Rohde & Schwarz	ESI26	100046K	22 Apr 2011	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842 659/016	10 Jul 2010	12
M1273	Test Receiver	Rhode & Schwarz	ESIB 26	100275	08 Apr 2011	12

NB In accordance with UKAS requirements all the measurement equipment is on a calibration schedule.