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-RP77768JD07A_V2.0

Version 2.0 supersedes all previous versions

This Test Report Is Issued Under The Authority Of Brian Watson, COO Payments and Consultancy: 	
Checked By:	A. Henriques
Signature: 	
Date of Issue:	08 June 2010

RFI Global Services Ltd
Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire RG23 8BG
Telephone: +44 (0)1256 312000 Facsimile: +44 (0)1256 312001
Email: info@rfi-global.com Website: www.rfi-global.com

Registered in England and Wales. Company number:2117901

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1. Customer Information

Company Name:	Panasonic Mobile Communication 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
Site Registration:	209735
Location of Testing:	RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.
Test Dates:	12 May 2010 to 26 May 2010

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
Part 15.107(a)	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)(1)	Transmitter 20 dB Bandwidth	✓
Part 15.247(a)(1)	Transmitter Carrier Frequency Separation	✓
Part 15.247(a)(1)(iii)	Transmitter Average Time of Occupancy	✓
Part 15.247(b)(1)	Transmitter Maximum Peak Output Power	✓
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

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 (*Radiated Sample*) 004401220967158 *(Conducted Sample)*
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

Tested Technology:	*Bluetooth*		
Power Supply Requirement:	Nominal	3.7 V	
	Minimum	3.4 V	
	Maximum	4.2 V	
Type of Unit:	Transceiver		
Channel Spacing:	1 MHz		
Mode:	Basic Rate	Enhanced Data Rate	
Modulation:	GFSK	π/4-DQPSK	8DQPSK
Packet Type: (Maximum Payload)	DH5	2DH5	3DH5
Data Rate (Mbit/s):	1	2	3
Maximum Transmit EIRP:	-1.5 dBm		
Transmit Frequency Range:	2402 MHz to 2480 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	0	2402
	Middle	39	2441
	Top	78	2480
Receive Frequency Range:	2402 MHz to 2480 MHz		
Receive Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	0	2402
	Middle	39	2441
	Top	78	2480

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):

- Receive/Idle Mode
- Transmit mode with Basic Rate (DH5 packets) or EDR (2DH5 or 3DH5 packets) as required.

4.2. Configuration and Peripherals

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

- For Transmit tests: Standalone, connected via a radio link to a Bluetooth tester in order to place the EUT into Bluetooth test mode. The laptop PC with the Client's bespoke application was used to place the EUT into Bluetooth mode.
- Receive/Idle tests: Standalone, with the Bluetooth mode active but not transmitting.
- Both EDR/Basic rate modes were compared and tests were performed with the mode that presented the worst case result. For output power, bandwidth, band edge and channel separation, all modes were tested.
- Idle and transmitter radiated spurious emissions tests were performed with the USB cable connected to the EUT as this was found to be the worst case during pre-scans. The USB cable was terminated into a USB hub supplied by the Client. All the accessories were individually connected and measurements made during the pre-scans to determine the worst case combination.
- The EUT conducted sample was used for 20 dB bandwidth, carrier frequency separation and average time of occupancy tests
- The EUT radiated sample was used for AC conducted emissions, EIRP and radiated spurious emissions tests.

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:

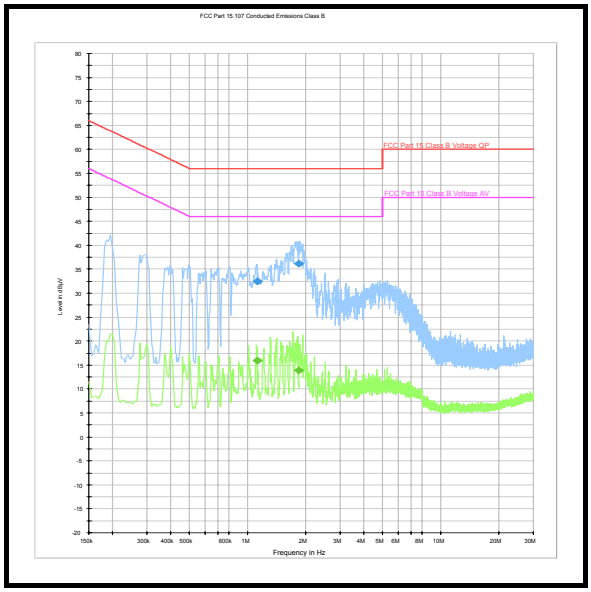
Temperature (°C):	27
Relative Humidity (%):	31

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

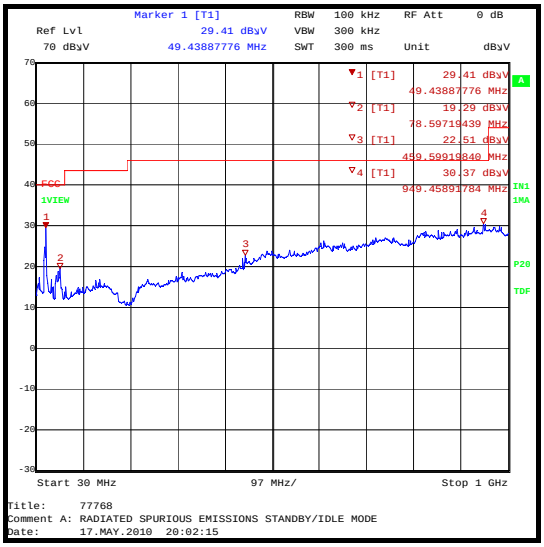
Results:

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

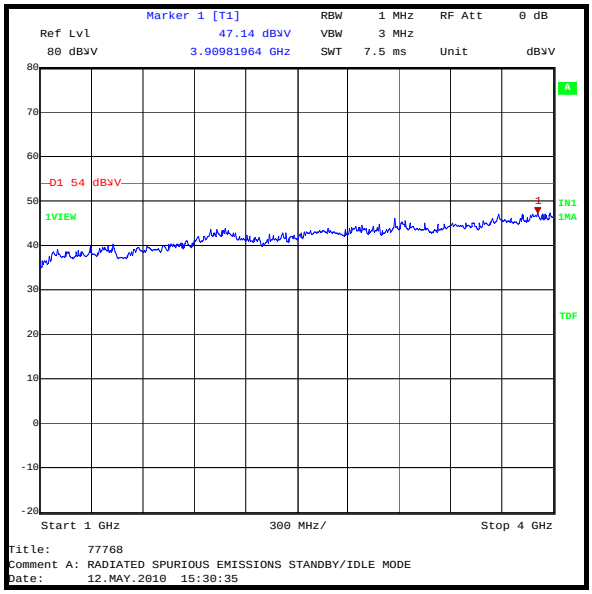
Results:

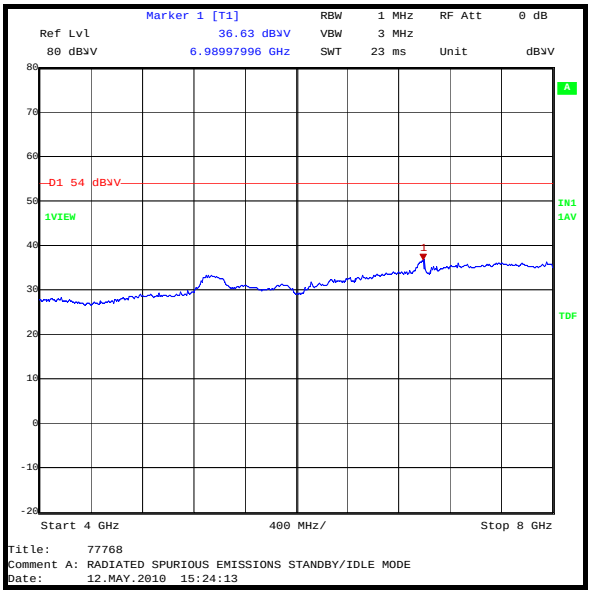
Frequency (MHz)	Antenna Polarity	Peak Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
3909.820	Vertical	47.1	54.0	6.9	Complied

Note(s):

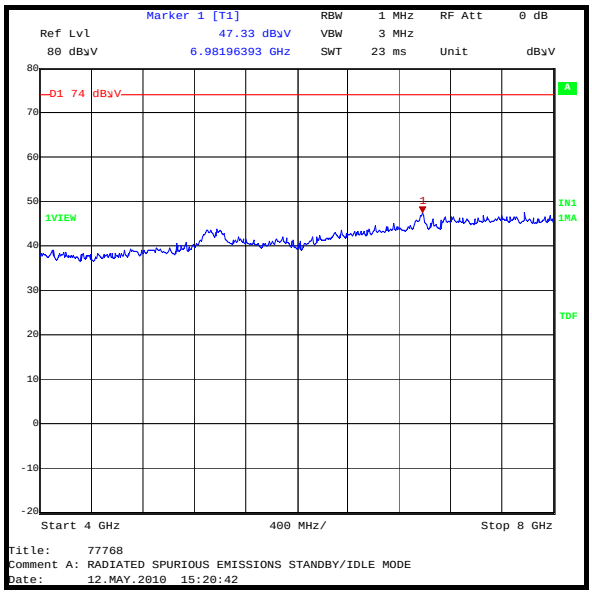
1. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above. The peak level was compared to the average limit as opposed to being compared to the peak limit because 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)

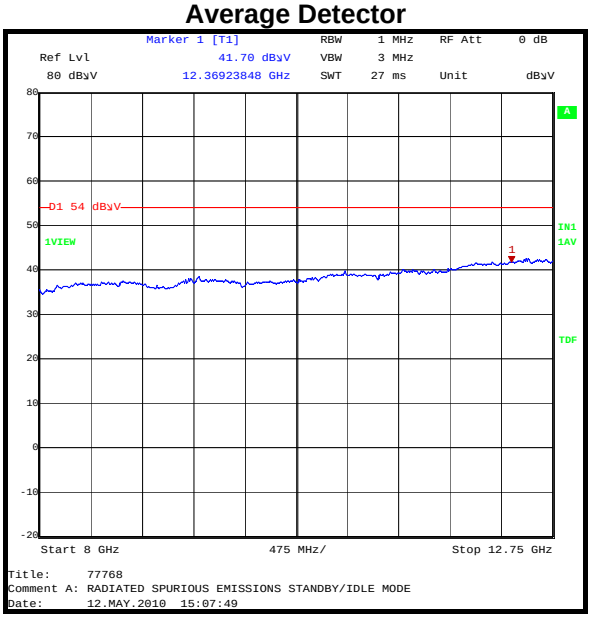




Average Detector

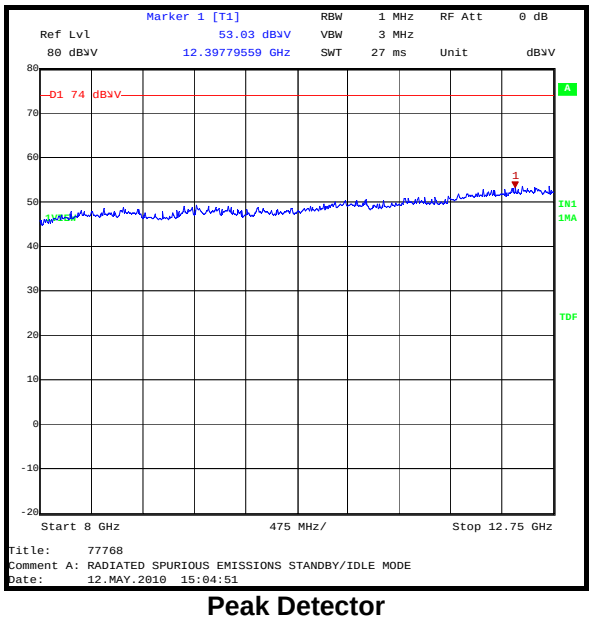


Peak Detector



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 (%):	22

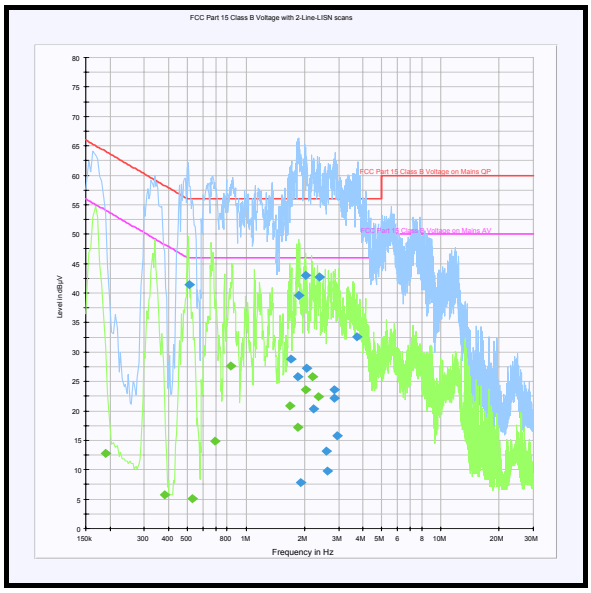
Results: Quasi Peak Detector Measurements

Frequency (MHz)	Line	Quasi Peak Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.510000	Live	41.4	56.0	14.6	Complied
1.702500	Live	28.7	56.0	27.3	Complied
1.851000	Live	25.7	56.0	30.3	Complied
1.860000	Live	39.6	56.0	16.4	Complied
1.905000	Live	7.8	56.0	48.2	Complied
2.031000	Live	43.0	56.0	13.0	Complied
2.040000	Live	27.3	56.0	28.7	Complied
2.211000	Live	20.3	56.0	35.7	Complied
2.373000	Live	42.7	56.0	13.3	Complied
2.575500	Live	13.2	56.0	42.8	Complied
2.616000	Live	9.8	56.0	46.2	Complied
2.841000	Live	22.1	56.0	33.9	Complied
2.845500	Live	23.6	56.0	32.4	Complied
2.931000	Live	15.8	56.0	40.2	Complied
3.714000	Negative	32.6	56.0	23.4	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Average Detector Measurements

Frequency (MHz)	Line	Average Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.190500	Live	12.7	54.0	41.3	Complied
0.379500	Live	5.7	48.3	42.6	Complied
0.528000	Live	5.0	46.0	41.0	Complied
0.694500	Live	14.9	46.0	31.1	Complied
0.838500	Live	27.6	46.0	18.4	Complied
1.680000	Live	20.8	46.0	25.2	Complied
1.851000	Live	17.2	46.0	28.8	Complied
2.022000	Live	23.5	46.0	22.5	Complied
2.193000	Live	25.8	46.0	20.2	Complied
2.359500	Live	22.4	46.0	23.6	Complied



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

5.2.4.Transmitter 20 dB Bandwidth

Test Summary:

FCC Part:	15.247(a)(1)
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.1 (see note below)

Environmental Conditions:

Temperature (°C):	27
Relative Humidity (%):	30

Results:DH5

Channel	20 dB Bandwidth (kHz)
Bottom	877.756
Middle	877.756
Top	877.756

Results: 2DH5

Channel	20 dB Bandwidth (kHz)
Bottom	1160.321
Middle	1154.309
Top	1166.333

Results: 3DH5

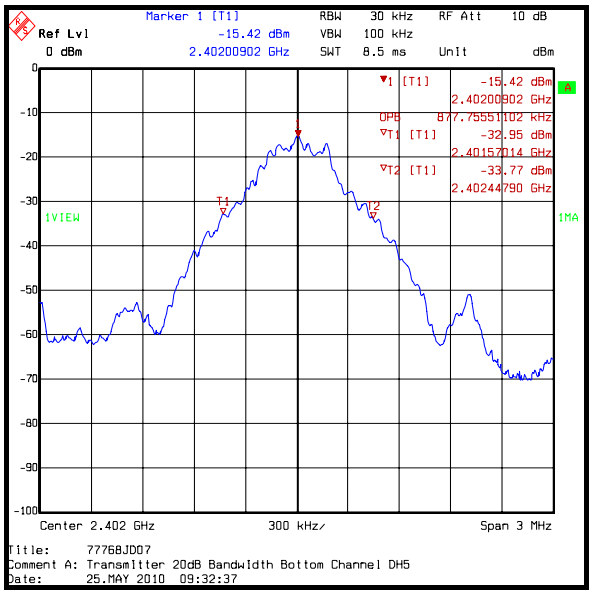
Channel	20 dB Bandwidth (kHz)
Bottom	1166.333
Middle	1172.345
Top	1160.321

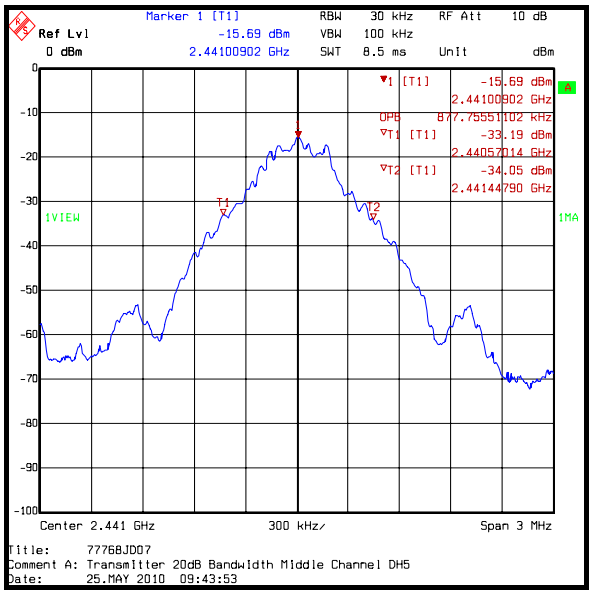
Note(s):

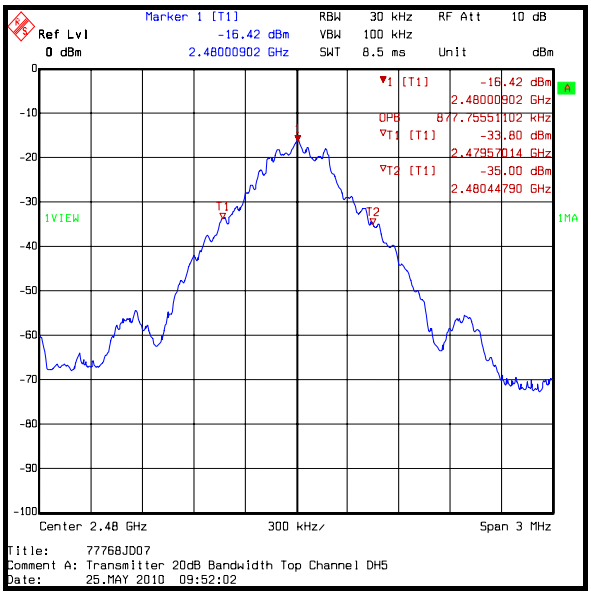
1. In lieu of the test method detailed in ANSI C63.10 Section 6.9.1 the 20 dB bandwidth was measured using the Occupied Bandwidth function of the spectrum analyser.

Transmitter 20 dB Bandwidth (continued)

Results:DH5

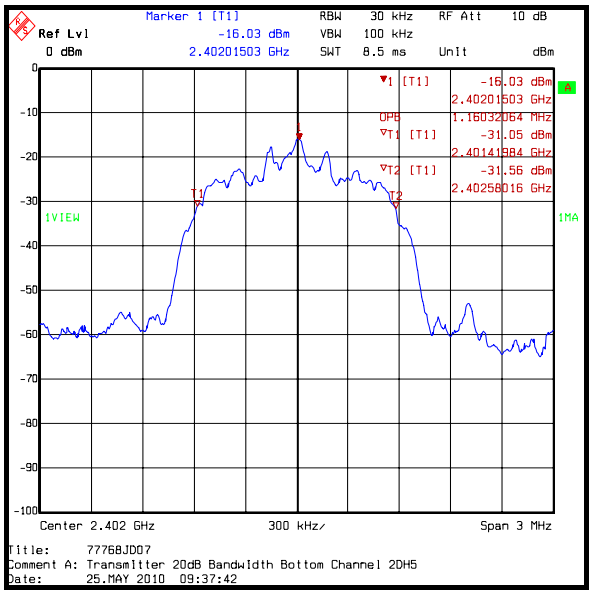


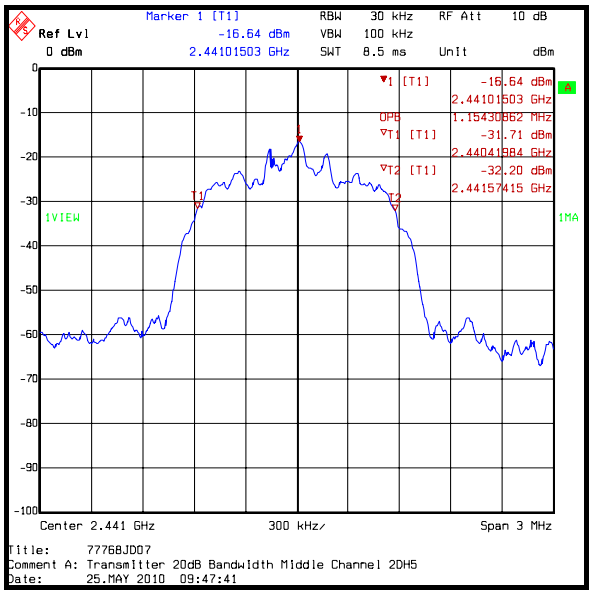


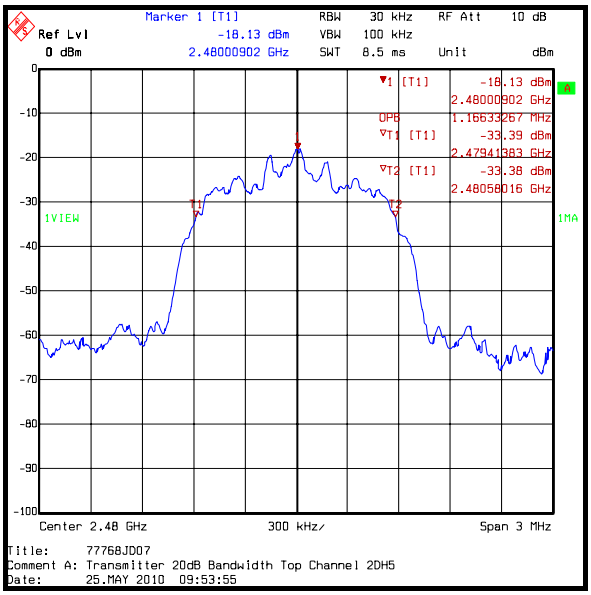


Transmitter 20 dB Bandwidth (continued)

Results: 2DH5

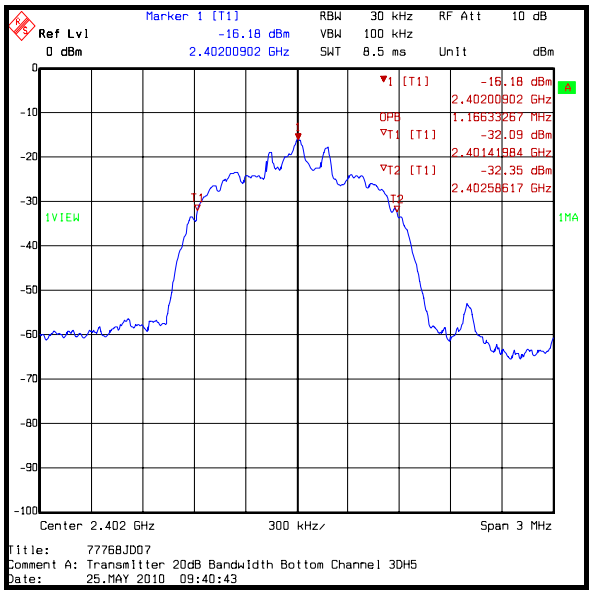


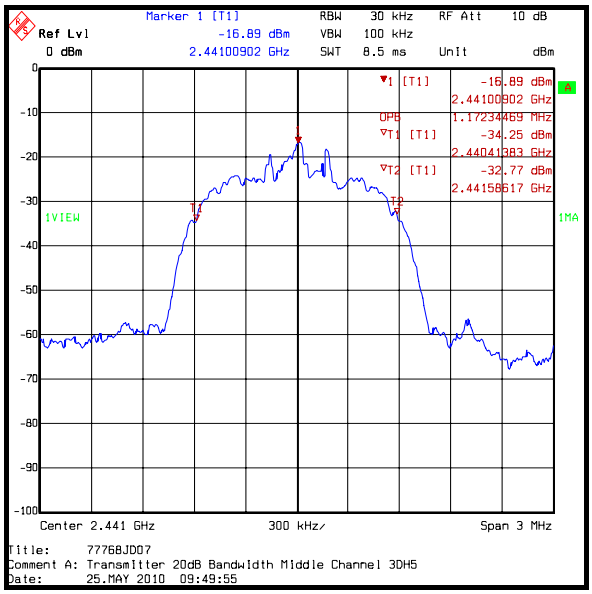


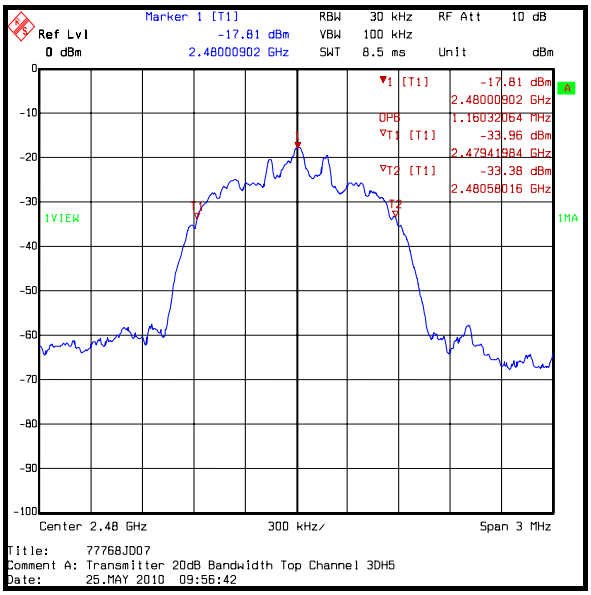


Transmitter 20 dB Bandwidth (continued)

Results: 3DH5







5.2.5. Transmitter Carrier Frequency Separation

Test Summary:

FCC Part:	15.247(a)(1)
Test Method Used:	As detailed in ANSI C63.10 Section 7.7.2

Environmental Conditions:

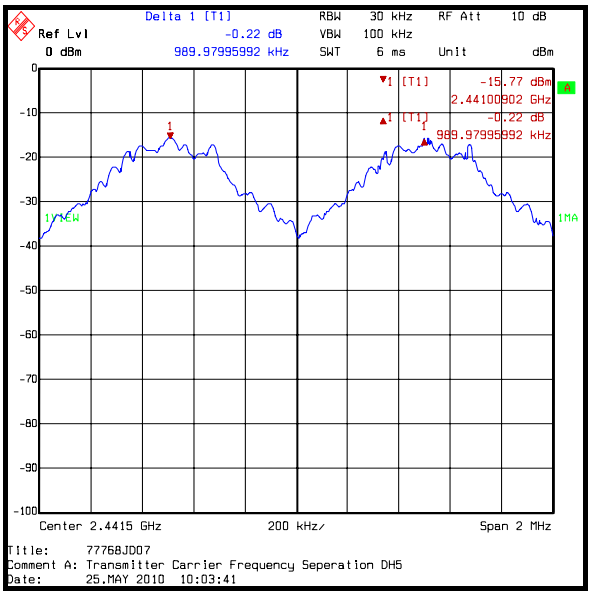
Temperature (°C):	27
Relative Humidity (%):	30

Results: DH5

Transmitter Carrier Frequency Separation (kHz)	Limit ($^2/_3$ of 20 dB BW) (kHz)	Margin (kHz)	Result
989.980	585.171	404.809	Complied

Note(s):

1. The 20 dB bandwidth measured for the middle channel operating at 2441 was used to calculate the limit

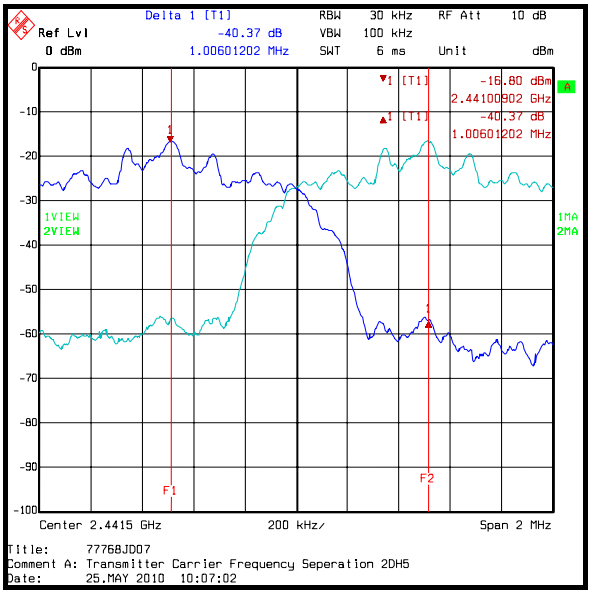


Results: 2DH5

Transmitter Carrier Frequency Separation (kHz)	Limit ($^2/_3$ of 20 dB BW) (kHz)	Margin (kHz)	Result
1006.012	769.539	236.473	Complied

Note(s):

1. The 20 dB bandwidth measured for the middle channel operating at 2441 was used to calculate the limit

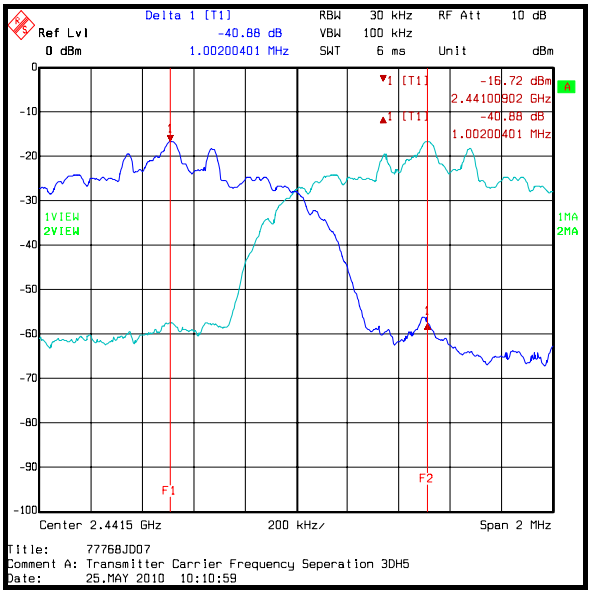


Results: 3DH5

Transmitter Carrier Frequency Separation (kHz)	Limit ($^2/_3$ of 20 dB BW) (kHz)	Margin (kHz)	Result
1002.004	781.563	220.441	Complied

Note(s):

1. The 20 dB bandwidth measured for the middle channel operating at 2441 was used to calculate the limit



5.2.6. Transmitter Number of Hopping Frequencies and Average Time of Occupancy

Test Summary:

FCC Part:	15.247(a)(1)(iii)
Test Method Used:	As detailed in ANSI C63.10 Section 7.7.3 & 7.7.4

Environmental Conditions:

Temperature (°C):	27
Relative Humidity (%):	30

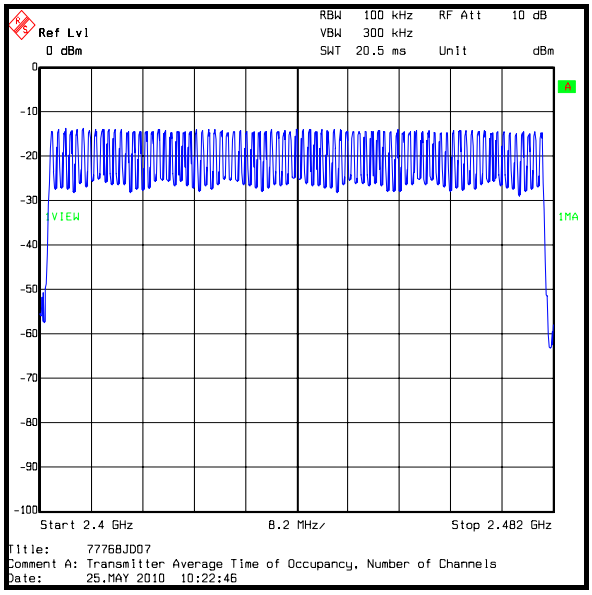
Results:

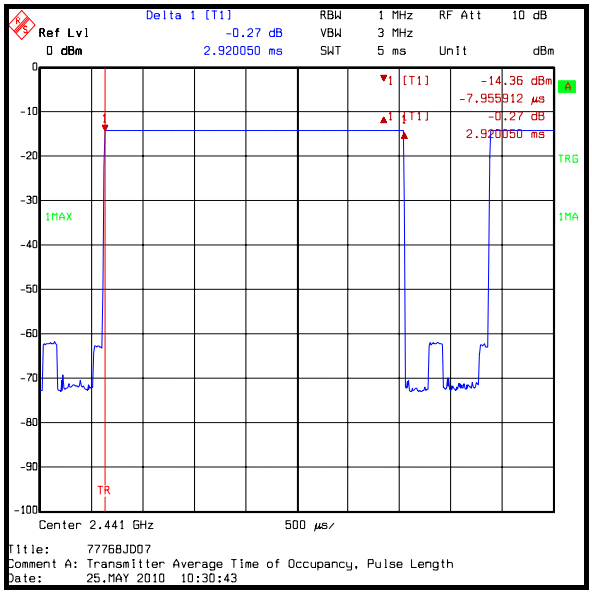
Emission Width (μs)	Number of Hops in 31.6 Seconds	Average Time of Occupancy (s)	Limit (s)	Margin (s)	Result
2920.050	96	0.280	0.4	0.120	Complied

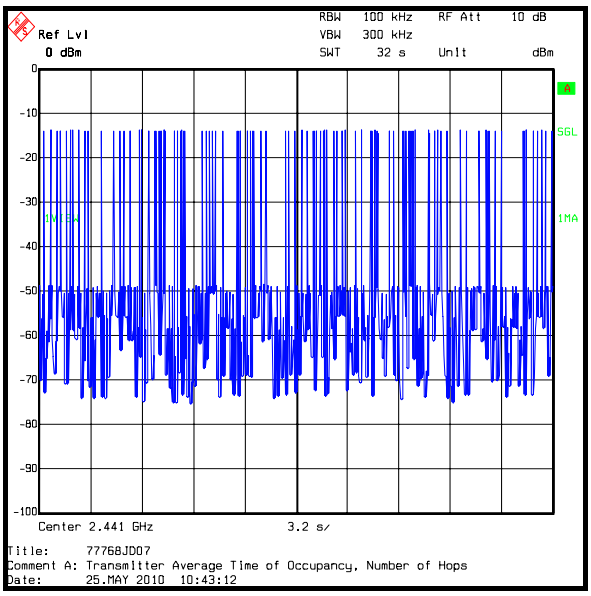
Note(s):

1. Tests were performed to identify the average time of occupancy in number of channels (79) x 0.4 seconds. The calculated period is 31.6 seconds.

Transmitter Average Time of Occupancy (continued)







5.2.7. Transmitter Maximum Peak Output Power (EIRP)

Test Summary:

FCC Part:	15.247(b)(1)
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):	26
Relative Humidity (%):	20

DH5 Results:

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	-1.5	30.0	31.5	Complied
Middle	-3.1	30.0	33.1	Complied
Top	-2.2	30.0	32.2	Complied

2DH5 Results:

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	-1.7	21.0	22.7	Complied
Middle	-3.1	21.0	24.1	Complied
Top	-2.8	21.0	23.8	Complied

3DH5 Results:

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	-1.5	21.0	22.5	Complied
Middle	-2.8	21.0	23.8	Complied
Top	-2.5	21.0	23.5	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 6.10.1.

5.2.8. 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:

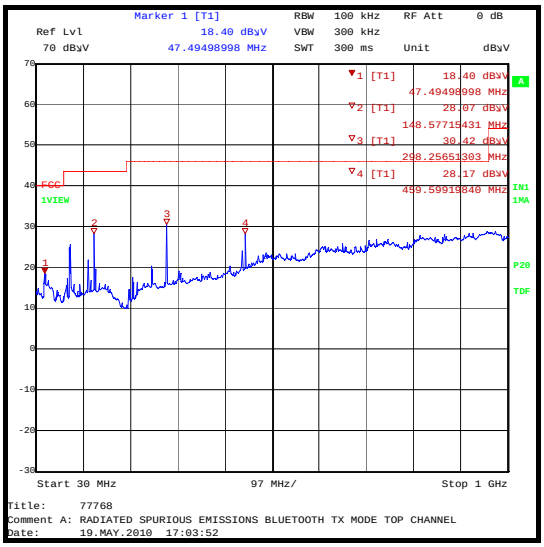
Temperature (°C):	29
Relative Humidity (%):	26

Results:

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
99.643	Horizontal	27.1	43.5	16.4	Complied
149.033	Vertical	28.9	43.5	14.6	Complied
298.256	Vertical	30.9	46.0	15.1	Complied
458.792	Vertical	26.1	46.0	19.9	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.



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

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):	29
Relative Humidity (%):	26

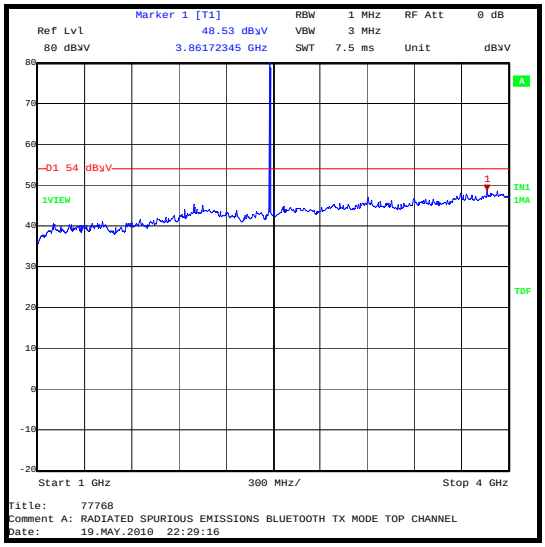
Results:

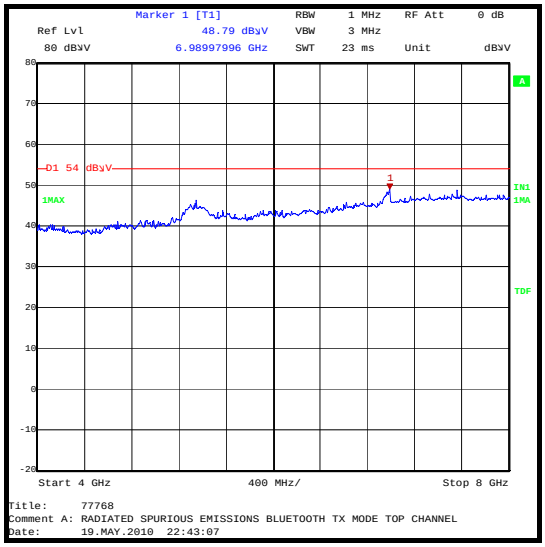
Frequency (GHz)	Antenna Polarity	Peak Level (dBμV/m)	Average Limit (dBμV/m)	Margin (dB)	Result
6.990	Vertical	48.8	54.0	5.2	Complied

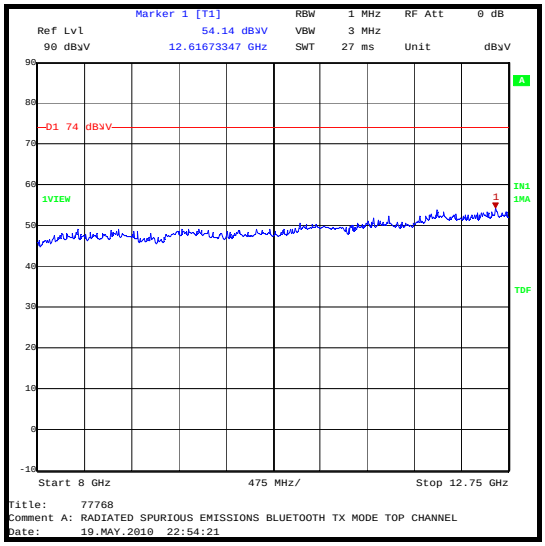
Note(s):

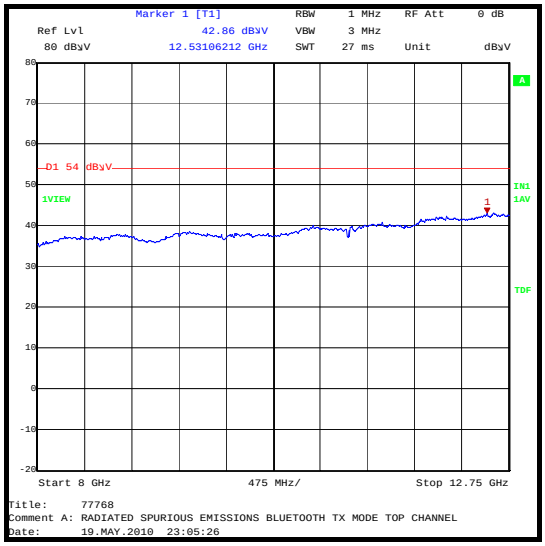
1. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above. The peak level was compared to the average limit as opposed to being compared to the peak limit because 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 at 2480 MHz.

Transmitter Radiated Emissions (continued)



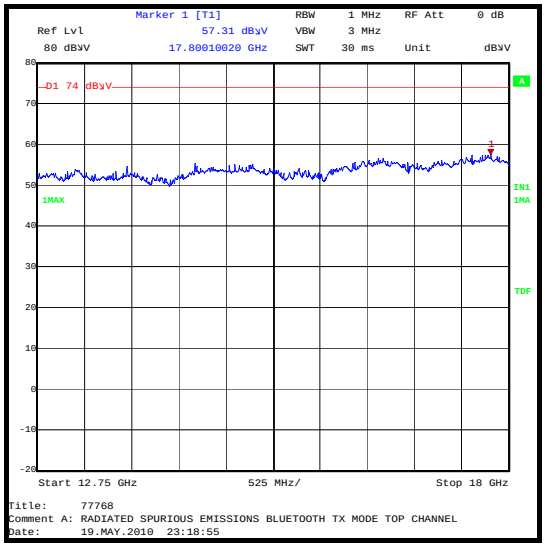




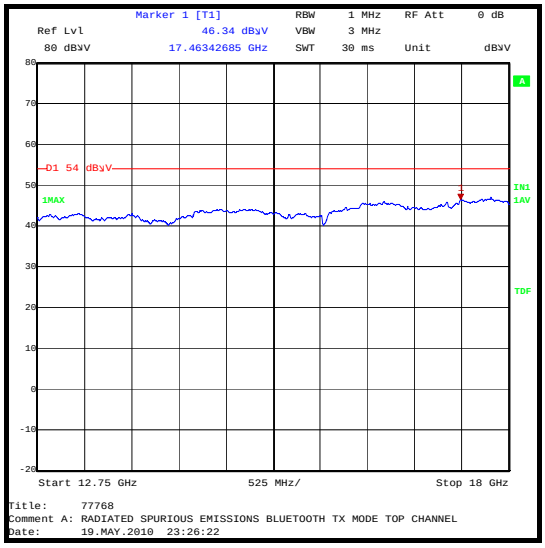


Peak Detector **Average Detector**

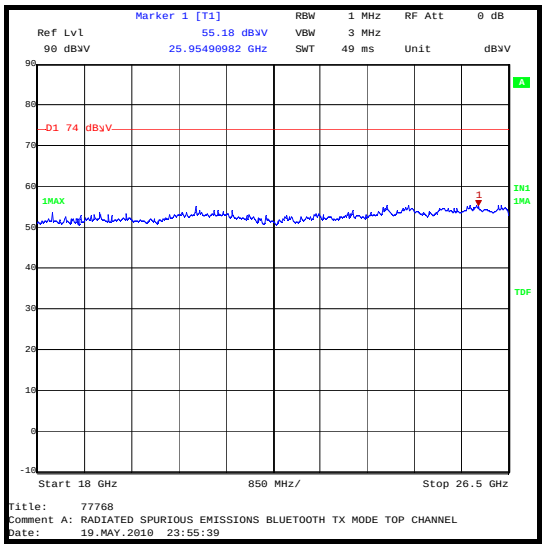
Transmitter Radiated Emissions (continued)



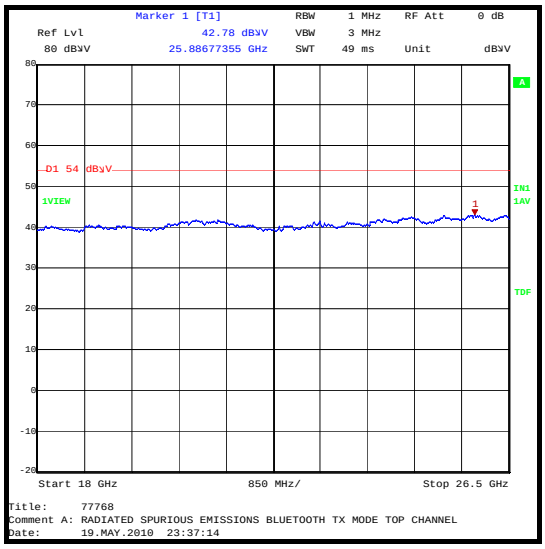
Peak Detector



Average Detector



Peak Detector



Average Detector

5.2.9. 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):	27
Relative Humidity (%):	30

Results: Peak Power Level Hopping Mode: DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	55.9	73.7*	17.8	Complied
2483.5	Vertical	50.5	74.0	23.5	Complied

Results: Average Power Level Hopping Mode: DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	28.5	54.0	25.5	Complied

Results: Peak Power Level Hopping Mode: 2DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m))	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	41.4	73.5*	32.4	Complied
2483.5	Vertical	55.6	74.0	18.4	Complied

Results: Average Power Level Hopping Mode: 2DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	29.4	54.0	24.6	Complied

Transmitter Band Edge Radiated Emissions (continued)

Results: Peak Power Level Hopping Mode: 3DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m))	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	41.4	73.7*	32.3	Complied
2483.5	Vertical	56.7	74.0	17.3	Complied

Results: Average Power Level Hopping Mode: 3DH5

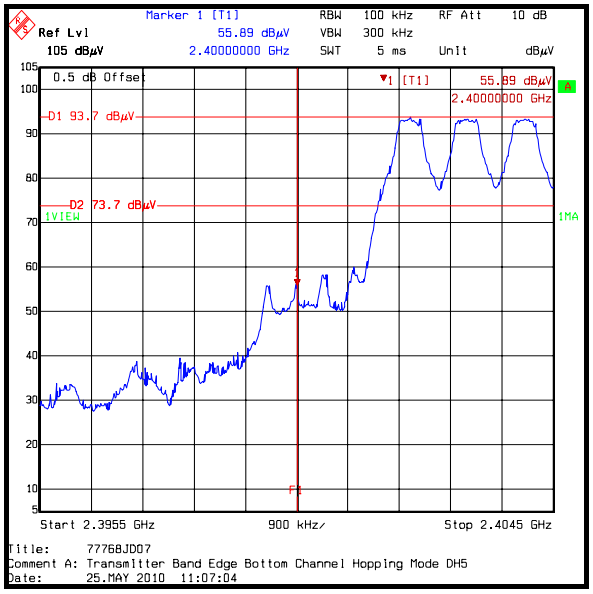
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	30.3	54.0	23.7	Complied

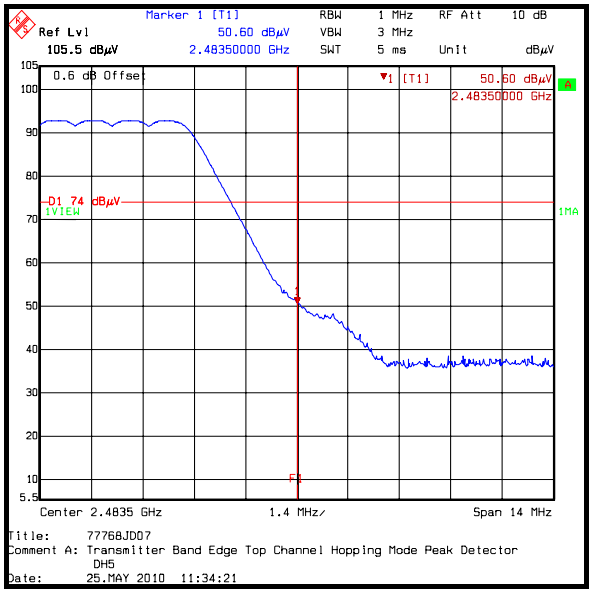
Note(s):

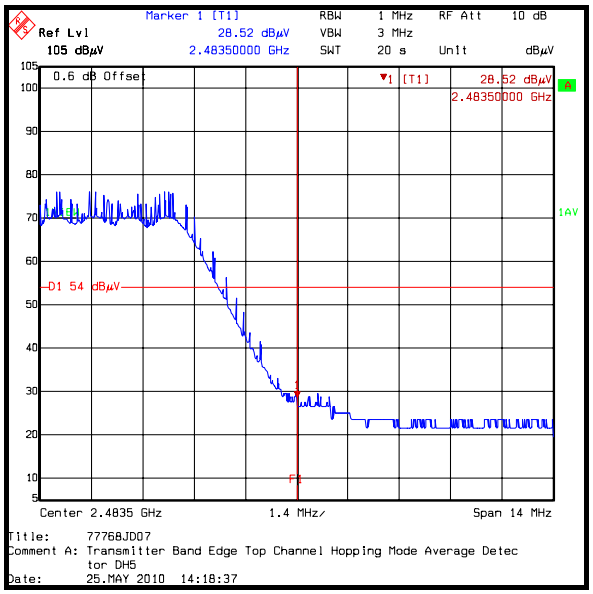
1. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.
2. * -20 dBc limit.

Transmitter Band Edge Radiated Emissions (continued)

DH5



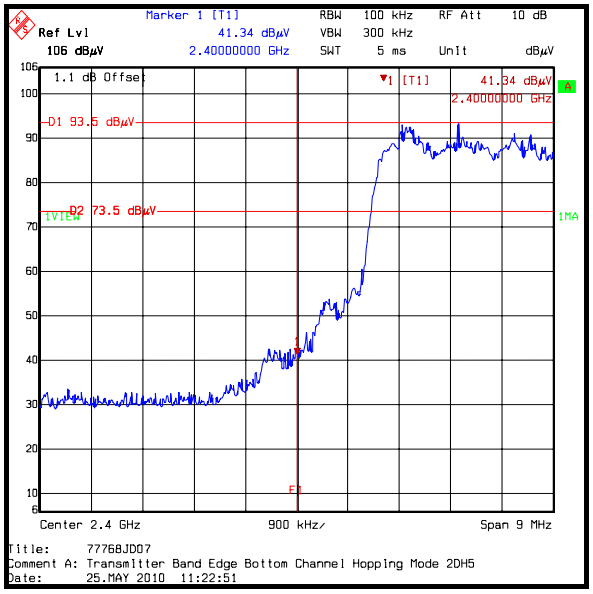


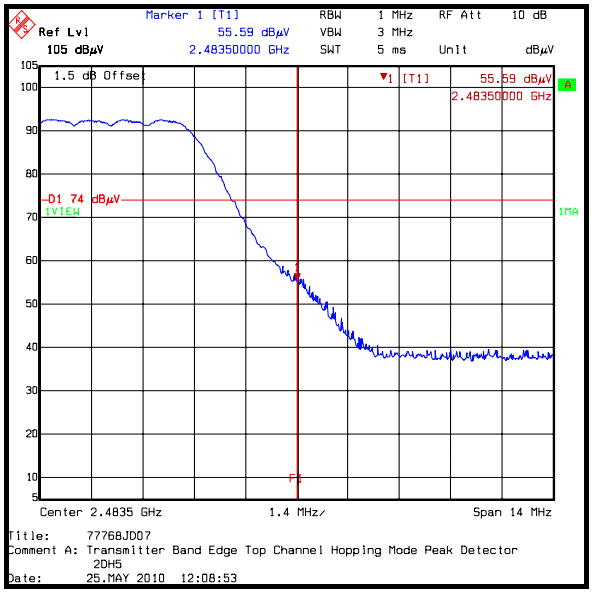


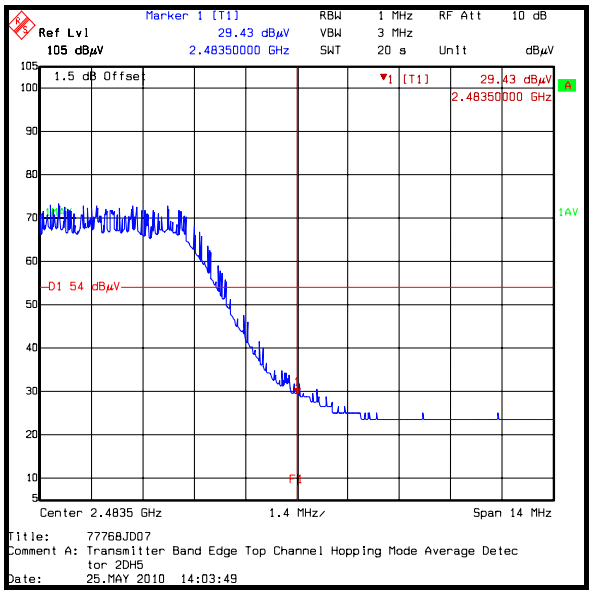
DH5

Transmitter Band Edge Radiated Emissions (continued)

2DH5

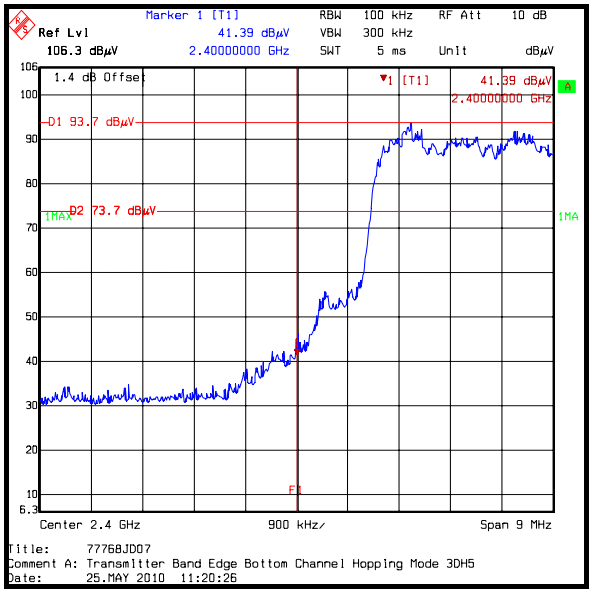


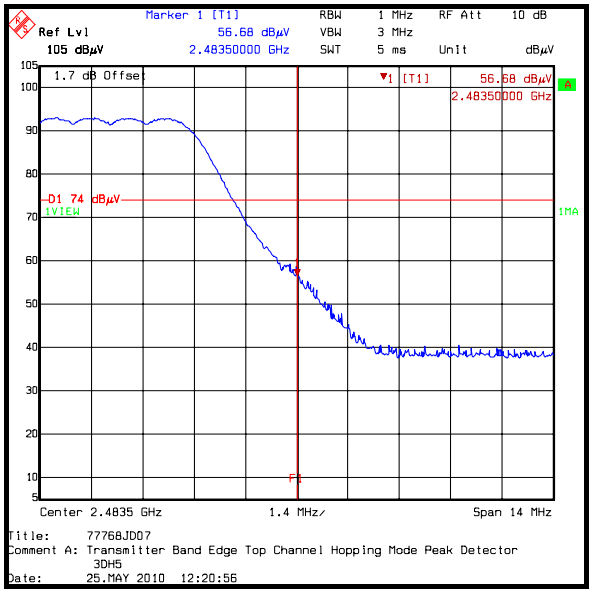


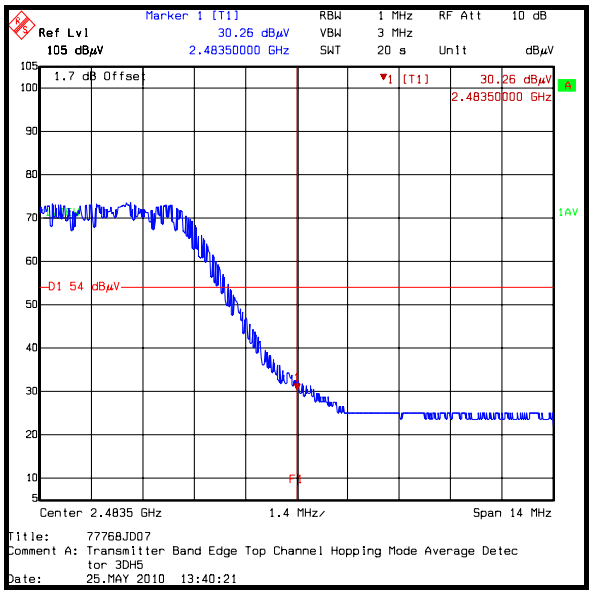


Transmitter Band Edge Radiated Emissions (continued)

3DH5







Transmitter Band Edge Radiated Emissions (continued)

Results: Peak Power Level Static Mode: DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	56.2	73.7*	17.5	Complied
2483.5	Vertical	52.6	74.0	21.4	Complied

Results: Average Power Level Static Mode: DH5

Frequency (MHz)	Antenna Polarity	Actual Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	41.1	54.0	12.9	Complied

Results: Peak Power Level Static Mode: 2DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	47.5	73.5*	26.0	Complied
2483.5	Vertical	57.8	74.0	16.2	Complied

Results: Average Power Level Static Mode: 2DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	43.8	54.0	10.2	Complied

Results: Peak Power Level Static Mode: 3DH5

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400	Vertical	47.0	73.7*	26.7	Complied
2483.5	Vertical	57.9	74.0	16.9	Complied

Results: Average Power Level Static Mode: 3DH5

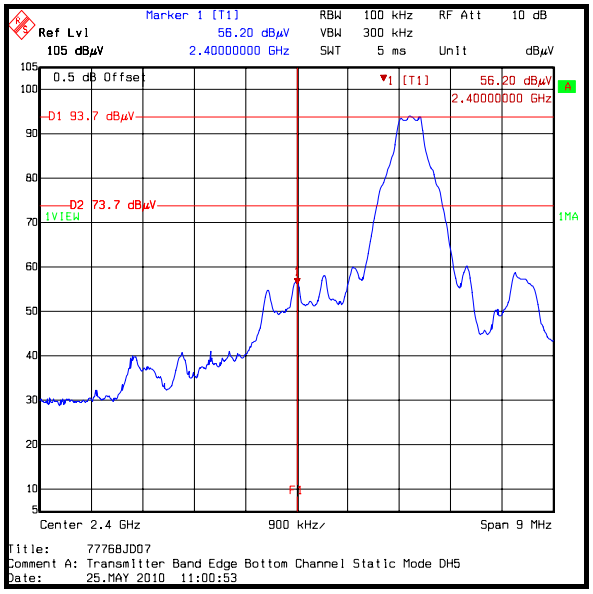
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Vertical	44.1	54.0	9.9	Complied

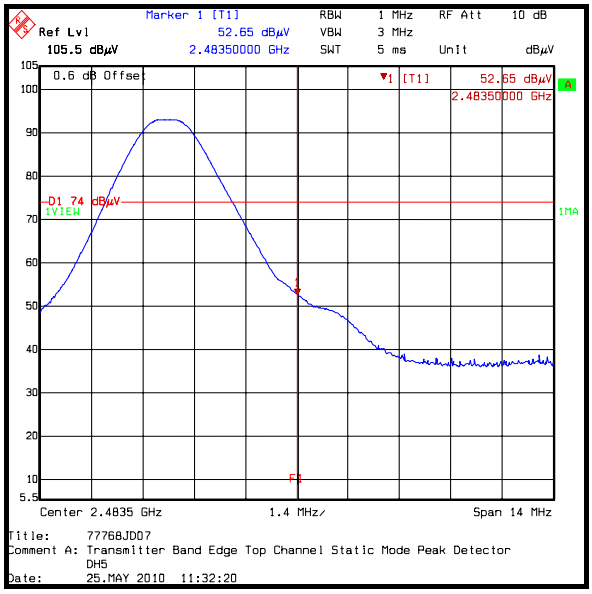
Note(s):

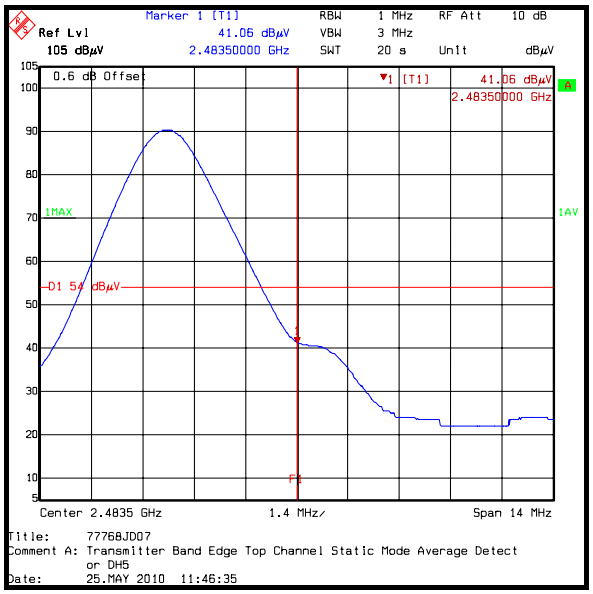
1. The final measured value, for the given emission, in the table above incorporates the calibrated antenna factor and cable loss.
2. * -20 dBc limit.

Transmitter Band Edge Radiated Emissions (continued)

DH5

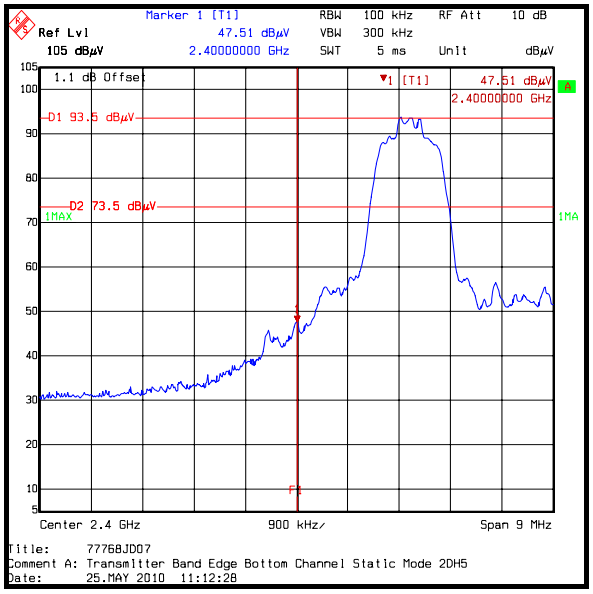


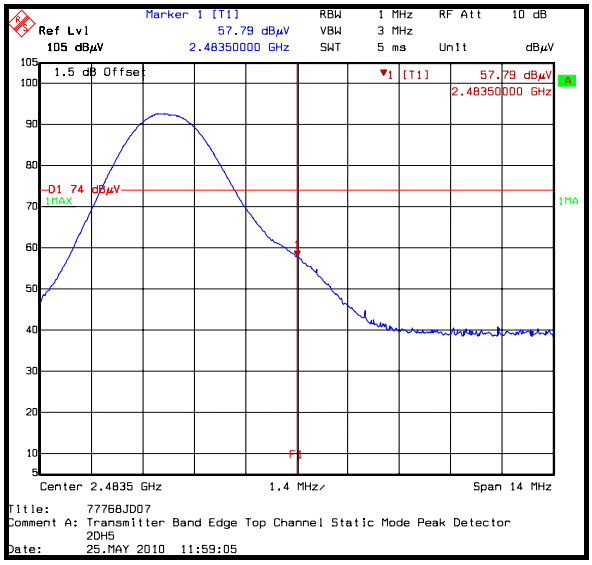


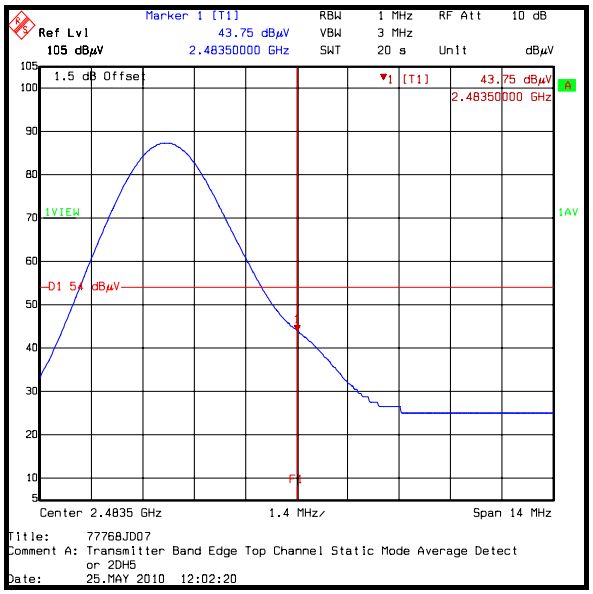


Transmitter Band Edge Radiated Emissions (continued)

2DH5

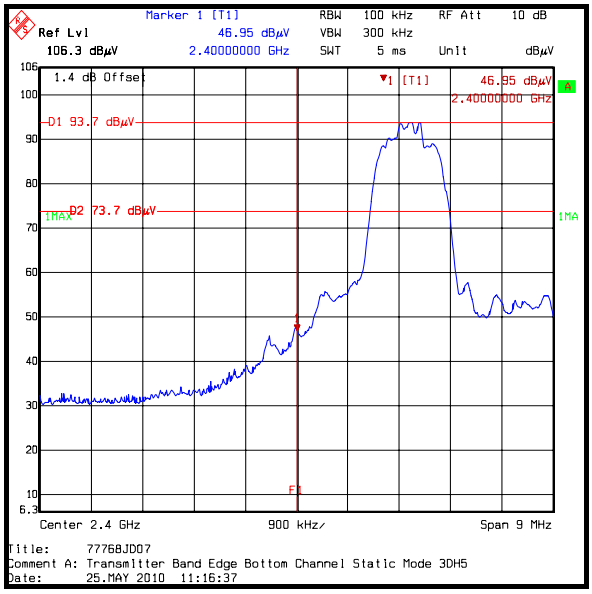


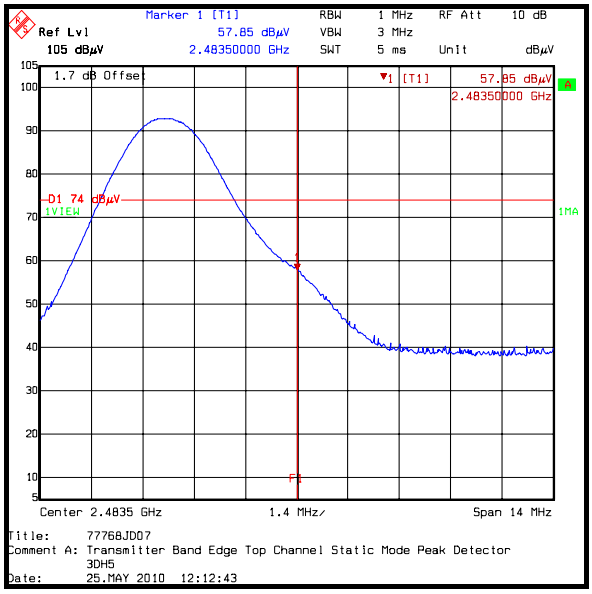


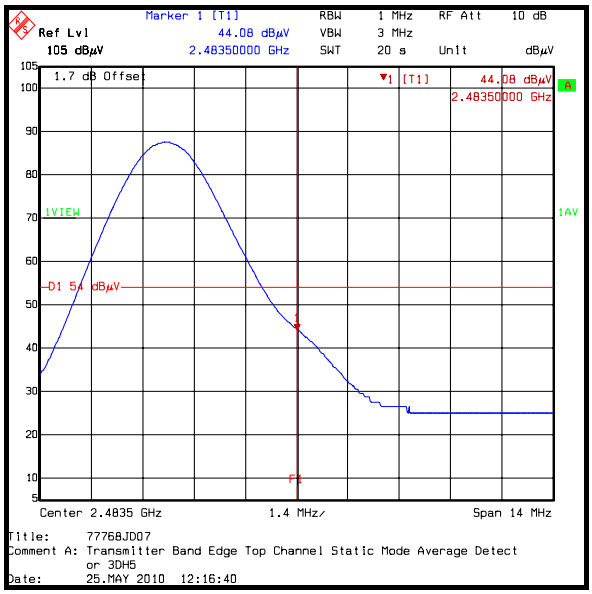


Transmitter Band Edge Radiated Emissions (continued)

3DH5







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%	±3.25 dB
Transmitter Maximum Peak Output Power	Not Applicable	95%	±2.94 dB
Transmitter Carrier Frequency Separation	Not Applicable	95%	±0.92 ppm
Transmitter Average Time of Occupancy	Not Applicable	95%	±0.3 ns
20 dB Bandwidth	Not Applicable	95%	±0.92 ppm
Radiated Spurious Emissions	30 MHz 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
A1428	Directional Coupler	Narda	3292-1	02439	Calibrated before use	-
A1534	Pre Amplifier	Hewlett Packard	8449B OPT H02	3008A00405	Calibrated before use	-
A1818	Antenna	EMCO	3115	00075692	27 Nov 2010	12
A1829	Pulse Limiter	Rhode & Schwarz	ESH3-Z2	100671	25 Oct 2010	12
A1830	Pulse Limiter	Rhode & Schwarz	ESH3-Z2	100668	01 Mar 2011	12
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
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	01 Sep 2010	12
L1001	Test Receiver	Rhode & 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
M1447	Bluetooth Tester	Rhode & Schwarz	CBT	100329	02 Feb 2011	12

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