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Report On

Limited FCC Testing of the
ASH Wireless Electronics Ltd SWB TAG
In accordance with FCC 47 CFR Part 15C

COMMERCIAL-IN-CONFIDENCE

FCC ID: 2AF3J-XOTAG001

Document 75932139 Report 02 Issue 1 November 2015

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REPORT ON

Limited FCC Testing of the
ASH Wireless Electronics Ltd SWB TAG
In accordance with FCC 47 CFR Part 15C

Document 75932139 Report 02 Issue 1

November 2015

PREPARED FOR

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Shaftesbury Avenue
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PREPARED BY

Natalie Bennett
Senior Administrator, Project Support

APPROVED BY

Matthew Russell
Authorised Signatory

DATED 24 November 2015

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15C. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

G Lawler

UKAS TESTING 0141

Product Service

CONTENTS

Product Service

SECTION 1

REPORT SUMMARY

Limited FCC Testing of the
ASH Wireless Electronics Ltd SWB TAG
In accordance with FCC 47 CFR Part 15C

1.1 INTRODUCTION

The information contained in this report is intended to show the verification of Limited FCC Testing of the ASH Wireless Electronics Ltd SWB TAG to the requirements of FCC 47 CFR Part 15C.

Objective	To perform FCC Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out.
Manufacturer	ASH Wireless Electronics Ltd
Model Number(s)	SWB TAG
Serial Number(s)	0972 1491
Number of Samples Tested	2
Test Specification/Issue/Date	FCC 47 CFR Part 15C (2014)
Incoming Release Date	Application Form 25 September 2015
Disposal Reference Number Date	Held Pending Disposal Not Applicable Not Applicable
Order Number Date	PO-000129 24 September 2015
Start of Test	17 November 2015
Finish of Test	17 November 2015
Name of Engineer(s)	G Lawler
Related Document(s)	ANSI C63.10: 2013

Product Service

1.2 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15C is shown below.

Section	Specification Clause	Test Description	Result	Comments/Base Standard
Transmit				
2.1	15.247 (b)(4)	Peak EIRP	Pass	
2.2	15.247 (d), 15.205 and 15.209	Spurious Radiated Emissions	Pass	
2.3	15.205	Restricted Band Edges	Pass	
2.4	15.247 (d)	Authorised Band Edges	Pass	

Product Service

1.3 APPLICATION FORM

EQUIPMENT DESCRIPTION		
Model Name/Number	SWB TAG	
Part Number	AC22-P0001	
Hardware Version	Rev C	
Software Version	1.1.0	
FCC ID (if applicable)		2AF3J-XOTAG001
Industry Canada ID (if applicable)		N/A
Technical Description (Please provide a brief description of the intended use of the equipment)		This is a hand worn device that provides a visual display using LEDs to the user based on measured skin resistance which it also reports back to a base station. The base station is able to send configuration commands to the wristband.

POWER SOURCE			
☐ AC mains		State voltage	
AC supply frequency	(Hz)		
VAC			
Max Current			
Hz			
☐ Single phase		☐ Three phase	
And / Or			
☐ External DC supply			
Nominal voltage		V	Max Current A
Extreme upper voltage		V	
Extreme lower voltage		V	
Battery			
☐ Nickel Cadmium		☐ Lead acid (Vehicle regulated)	
☐ Alkaline		☐ Leclanche	
☒ Lithium		☐ Other Details : CR2032	
3	Volts nominal.		
End point voltage as quoted by equipment manufacturer		2.6	V

Product Service

FREQUENCY INFORMATION						
Frequency Range	2445 to2460		MHz			
Channel Spacing (where applicable)						
Receiver Frequency Range (if different)	to		MHz			
Channel Spacing (if different)						
Test Frequencies*	Bottom	2445	MHz	Channel Number (if applicable)	19	
	Middle		MHz	Channel Number (if applicable)		
	Top	2460	MHz	Channel Number (if applicable)	22	
Intermediate Frequencies			MHz			
Highest Internally Generated Frequency :			2460 MHz			

POWER CHARACTERISTICS				
Maximum TX power	0.01	W		
Minimum TX power	fixed	W (if variable)		
Is transmitter intended for :				
Continuous duty			☐ Yes	☐ No
Intermittent duty			☒ Yes	☐ No
If intermittent state DUTY CYCLE				
Transmitter ON	15 micro seconds			
Transmitter OFF	2.999985 seconds			

ANTENNA CHARACTERISTICS						
☐	Antenna connector			State impedance		Ohm
☐	Temporary antenna connector			State impedance		Ohm
☒	Integral antenna	Type	PCB	State impedance	0	dBi
☐	External antenna	Type		State impedance		dBi

MODULATION CHARACTERISTICS			
☐	Amplitude	☐	Frequency
☒	Phase	☐	Other (please provide details):
Can the transmitter operate un-modulated?			☐ Yes ☒ No

CLASS OF EMISSION USED	
ITU designation or Class of Emission:	
1	2G445G2D / 2G460G2D
(if applicable) 2	
(if applicable) 3	
If more than three classes of emission, list separately:	

BATTERY POWER SUPPLY			
Model name/number	CR2032	Identification/Part number	CR2032
Manufacturer	Standard off-the-shelf	Country of Origin	

ANCILLARIES (If applicable)	
Model name/number	Identification/Part number
Manufacturer	Country of Origin

EXTREME CONDITIONS					
Extreme test voltages (Max)	3.3	V	Extreme test voltages (Mix)	2.7	V
Nominal DC Voltage	3	V	DC Maximum Current	40mA	A
Maximum temperature	50	°C	Minimum temperature	0	°C

I hereby declare that I am entitled to sign on behalf of the applicant and that the information supplied is correct and complete.

Name: Steve Williams

Position held: Technical Director Date: 25/09/2015

1.4 PRODUCT INFORMATION

1.4.1 Technical Description

The Equipment Under Test (EUT) was a ASH Wireless Electronics Ltd SWB TAG. A full technical description can be found in the manufacturer's documentation.

1.5 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated in a shielded enclosure.

The EUT was powered from a 3.0 V DC supply.

FCC Measurement Facility Registration Number
90987 Octagon House, Fareham Test Laboratory

1.6 DEVIATIONS FROM THE STANDARD

No deviations from the applicable test standard were made during testing.

Product Service

1.7 MODIFICATION RECORD

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Serial Number: 1491			
0	As supplied by manufacturer.	N/A	N/A
1	To be advised	Steve Williams	06/10/2015
2	Added a low pass filter to the output, remove the 1.8nH inductor and 0p5 capacitor and replace with filter and matching network.	Steve Williams	13/10/2015
3	Component values on the filter to the antenna has improved harmonic filtering.	Steve Williams	16/11/2015
Serial Number: 0972			
0	As supplied by manufacturer.	N/A	N/A
1	To be advised	Steve Williams	06/10/2015
2	Added a low pass filter to the output, remove the 1.8nH inductor and 0p5 capacitor and replace with filter and matching network.	Steve Williams	13/10/2015
3	Component values on the filter to the antenna has improved harmonic filtering.	Steve Williams	16/11/2015

The table above details modifications made to the EUT during the test programme. The modifications incorporated during each test are recorded on the appropriate test pages.

Product Service

SECTION 2

TEST DETAILS

Limited FCC Testing of the
ASH Wireless Electronics Ltd SWB TAG
In accordance with FCC 47 CFR Part 15C

2.1 PEAK EIRP

2.1.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (b)(4)

2.1.2 Equipment Under Test and Modification State

SWB TAG S/N: 0972 - Modification State 3

2.1.3 Date of Test

17 November 2015

2.1.4 Test Equipment Used

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

2.1.5 Test Procedure

The test was performed in accordance with ANSI C63.10, Clause 11.9.1.1.

Remarks

The plots on the following pages are for illustration purposes only. The final measured result is obtained after a substitution procedure.

2.1.6 Environmental Conditions

Ambient Temperature	22.4°C
Relative Humidity	43.0%

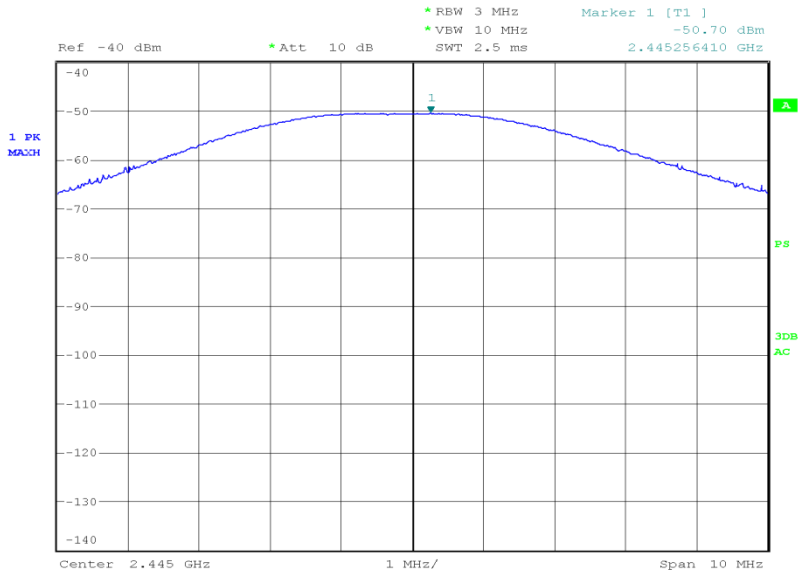
Product Service

2.1.7 Test Results

Transmit, EIRP Peak Power Results

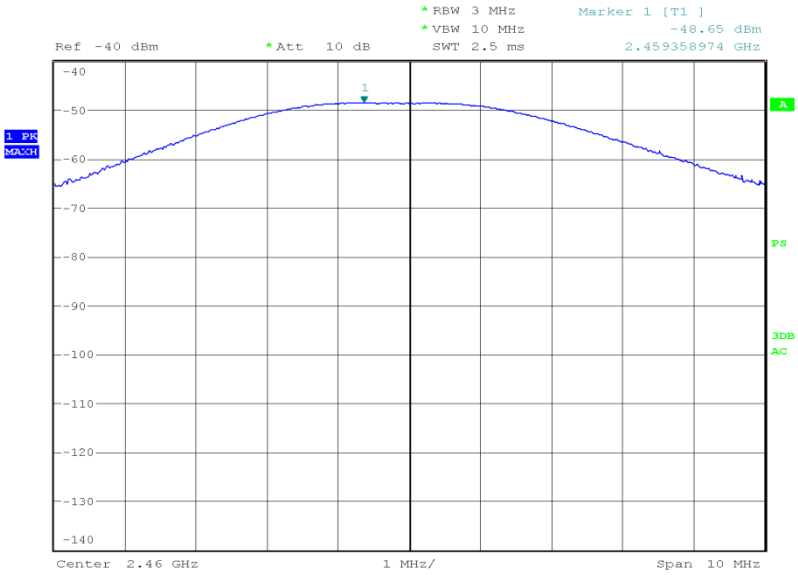
2445 MHz		2460 MHz	
dBm	mW	dBm	mW
-8.37	0.15	-5.88	0.26

Transmit, 2445 MHz, EIRP Peak Power Plot



Date: 17.NOV.2015 19:30:37

Transmit, 2460 MHz, EIRP Peak Power Plot



FCC 47 CFR Part 15, Limit Clause 15.247 (b)(4)

36.0 dBm or 4000 mW

2.2 SPURIOUS RADIATED EMISSIONS

2.2.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d), 15.205 and 15.209

2.2.2 Equipment Under Test and Modification State

SWB TAG S/N: 1491 - Modification State 3

2.2.3 Date of Test

17 November 2015

2.2.4 Test Equipment Used

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

2.2.5 Test Procedure

The test was performed in accordance with ANSI C63.10, clauses 4.1.4.2.2, 6.3, 6.5, 6.6, 11.11 and 11.12.1

Remarks

The plots shown on the following pages show the results from the pre-scan of the EUT that was performed. Final results are shown in the results tables.

2.2.6 Environmental Conditions

Ambient Temperature	22.4°C
Relative Humidity	43.0%

Product Service

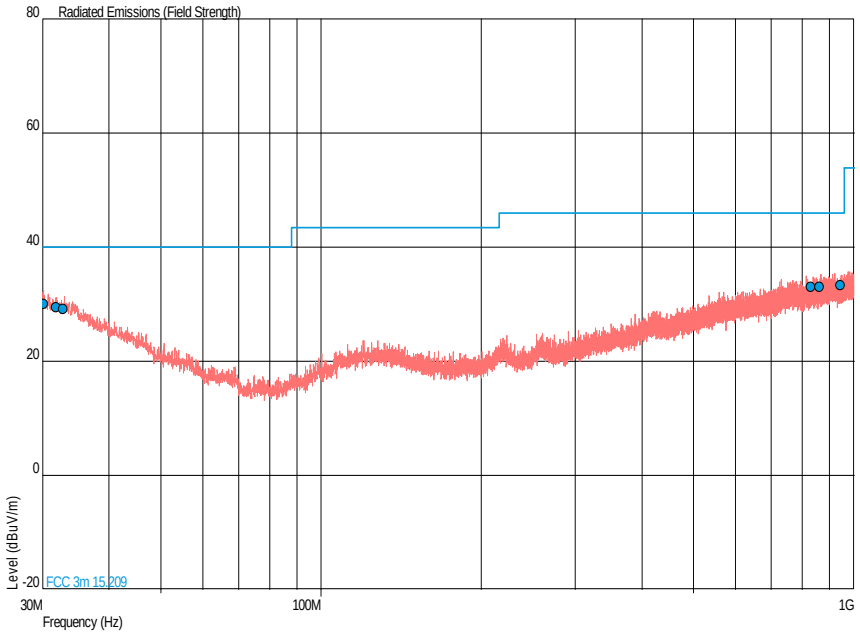
2.2.7 Test Results

3 V DC Supply

Transmit, 2445 MHz, 30 MHz to 1 GHz, Spurious Radiated Emissions Results

Frequency (MHz)	QP Level (dBµV/m)	QP Margin (dBµV/m)	QP Level (µV/m)	QP Margin (µV/m)	Angle (°)	Height (m)	Polarisation
30.194	30.1	-9.9	32.0	-68.0	180	1.00	Vertical
31.795	29.4	-10.6	29.5	-70.5	0	1.00	Vertical
32.813	29.2	-10.8	28.8	-71.2	0	1.00	Vertical
831.220	33.0	-13.0	44.7	-155.3	0	1.00	Vertical
860.078	33.0	-13.0	44.7	-155.3	0	1.00	Vertical
942.382	33.4	-12.6	46.8	-153.2	0	1.00	Vertical

Transmit, 2445 MHz, 30 MHz to 1 GHz, Spurious Radiated Emissions Plot

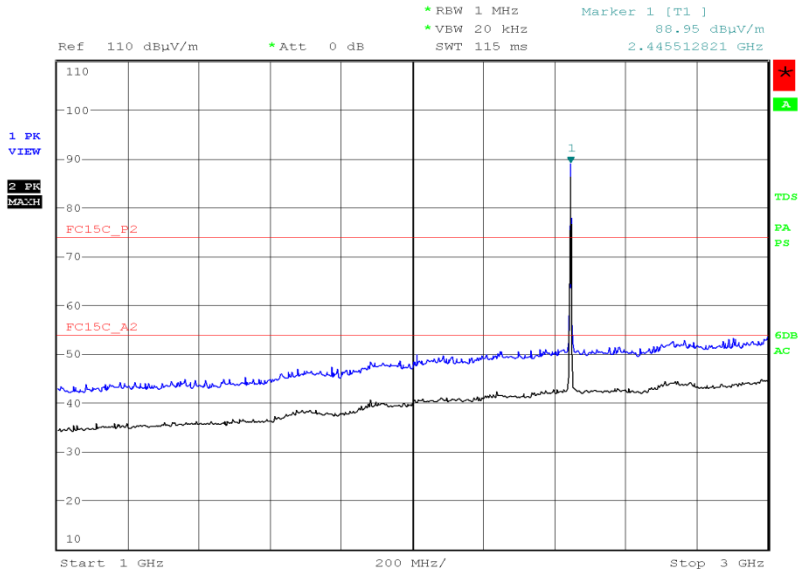


Transmit, 2445 MHz, 1 GHz to 25 GHz, Spurious Radiated Emissions Results

Frequency (MHz)	Final Peak (dBµV/m)	Final Average (dBµV/m)	Final Peak (µV/m)	Final Average (µV/m)	Angle (°)	Height (m)	Polarisation
4889.001	52.20	45.41	407.38	186.42	005	3.20	Horizontal

No other emissions were detected within 10 dB of the limit.

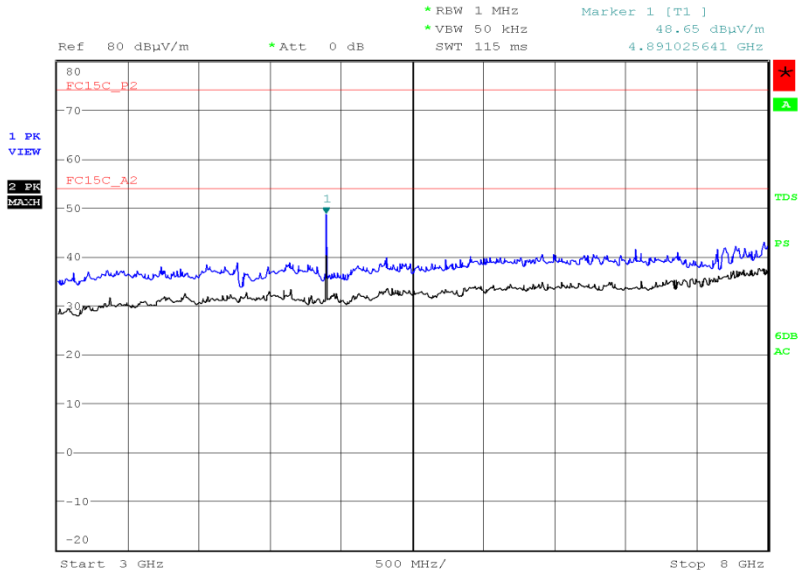
Transmit, 2445 MHz, 1 GHz to 3 GHz, Spurious Radiated Emissions Plot



Date: 17.NOV.2015 18:56:01

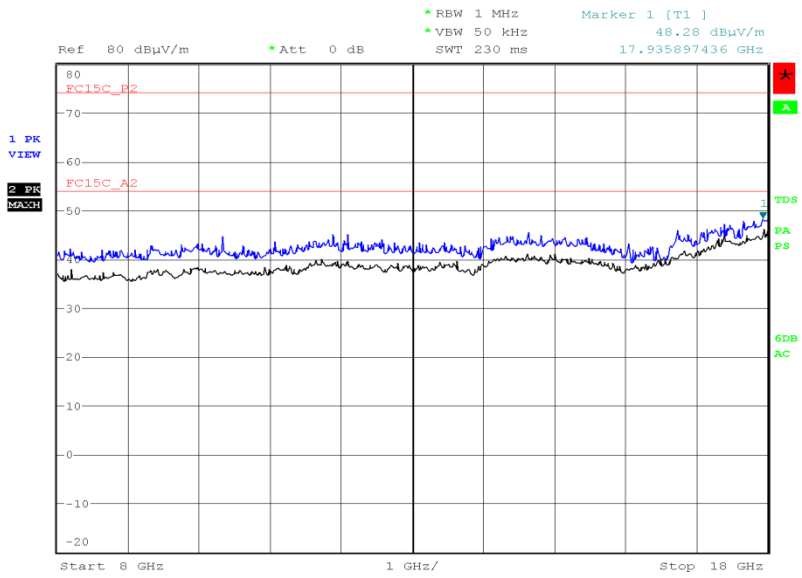
Product Service

Transmit, 2445 MHz, 3 GHz to 8 GHz, Spurious Radiated Emissions Plot



Date: 17.NOV.2015 17:31:56

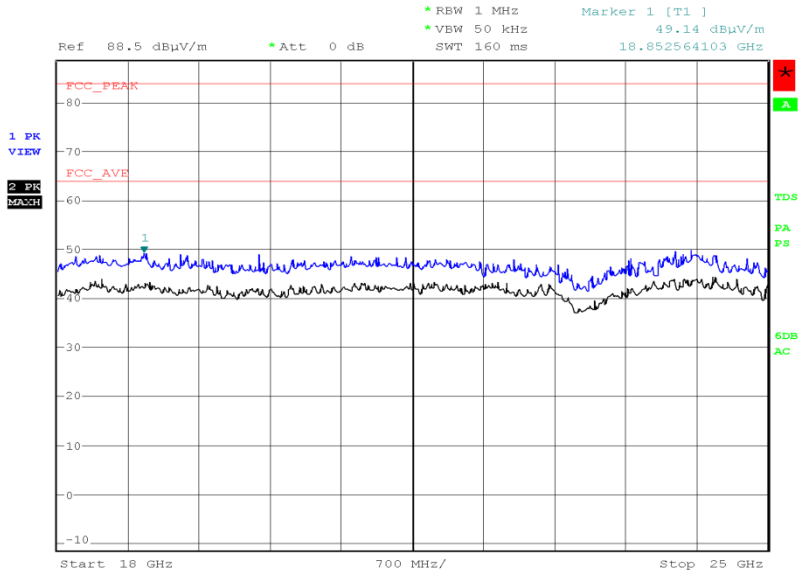
Transmit, 2445 MHz, 8 GHz to 18 GHz, Spurious Radiated Emissions Plot



Date: 17.NOV.2015 18:50:58

Product Service

Transmit, 2445 MHz, 18 GHz to 25 GHz, Spurious Radiated Emissions Plot

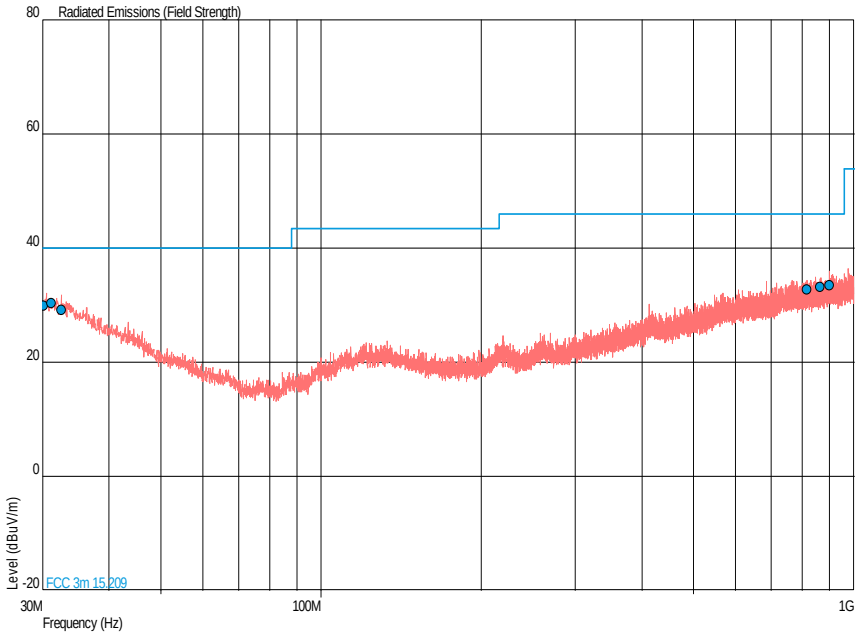


Date: 17.NOV.2015 21:44:12

Transmit, 2460 MHz, 30 MHz to 1 GHz, Spurious Radiated Emissions Results

Frequency (MHz)	QP Level (dBµV/m)	QP Margin (dBµV/m)	QP Level (µV/m)	QP Margin (µV/m)	Angle (°)	Height (m)	Polarisation
30.194	30.0	-10.0	31.6	-68.4	180	1.00	Vertical
31.213	30.3	-9.7	32.7	-67.3	180	1.00	Vertical
32.522	29.2	-10.8	28.8	-71.2	0	1.00	Vertical
814.924	32.7	-13.3	43.2	-156.8	0	1.00	Vertical
864.588	33.3	-12.7	46.2	-153.8	180	1.00	Vertical
900.090	33.6	-12.4	47.9	-152.1	180	1.00	Vertical

Transmit, 2460 MHz, 30 MHz to 1 GHz, Spurious Radiated Emissions Plot

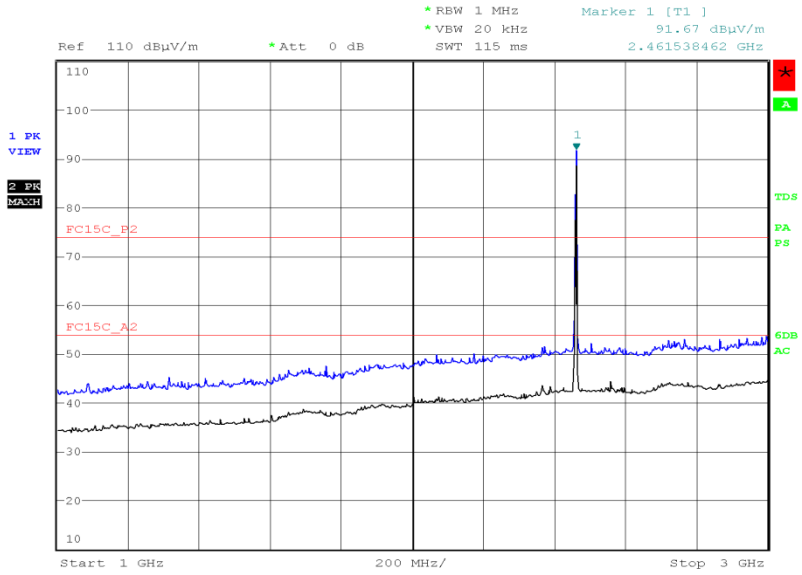


Transmit, 2460 MHz, 1 GHz to 25 GHz, Spurious Radiated Emissions Results

Frequency (MHz)	Final Peak (dBµV/m)	Final Average (dBµV/m)	Final Peak (µV/m)	Final Average (µV/m)	Angle (°)	Height (m)	Polarisation
4918.729	51.65	44.04	382.38	159.22	277	1.70	Horizontal

No other emissions were detected within 10 dB of the limit.

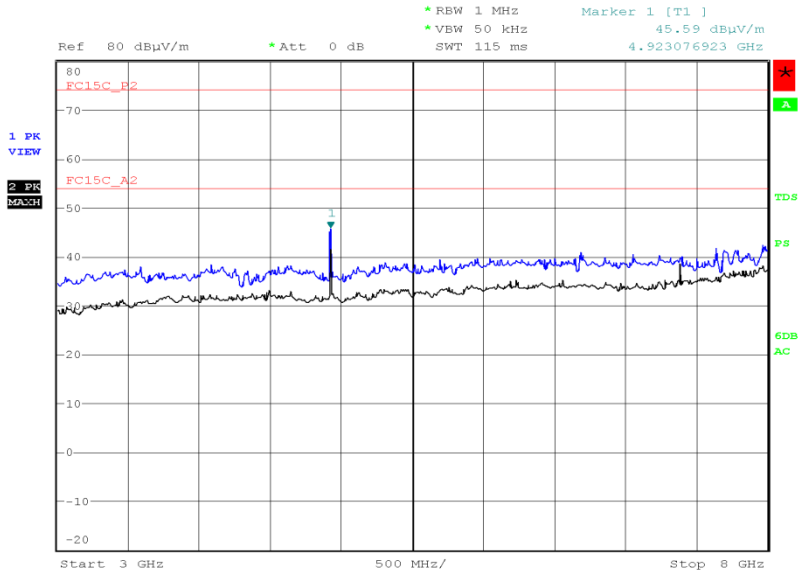
Transmit, 2460 MHz, 1 GHz to 3 GHz, Spurious Radiated Emissions Plot



Date: 17.NOV.2015 20:01:10

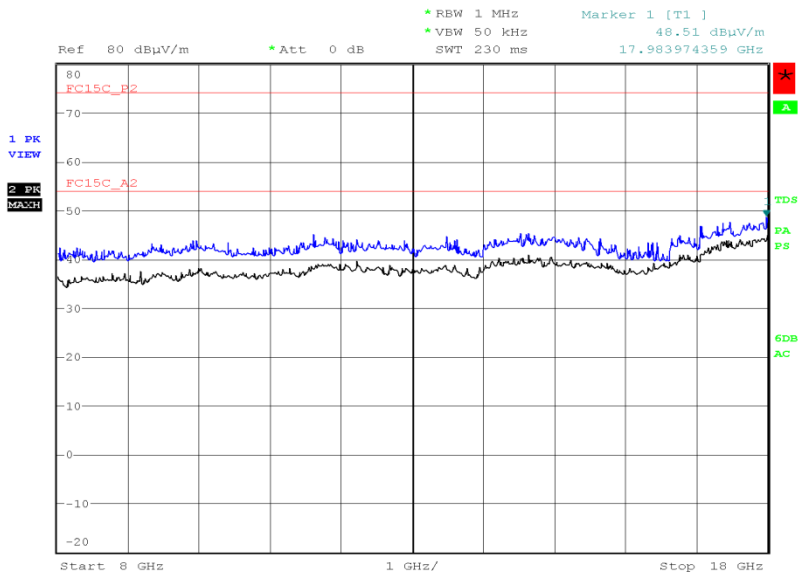
Product Service

Transmit, 2460 MHz, 3 GHz to 8 GHz, Spurious Radiated Emissions Plot



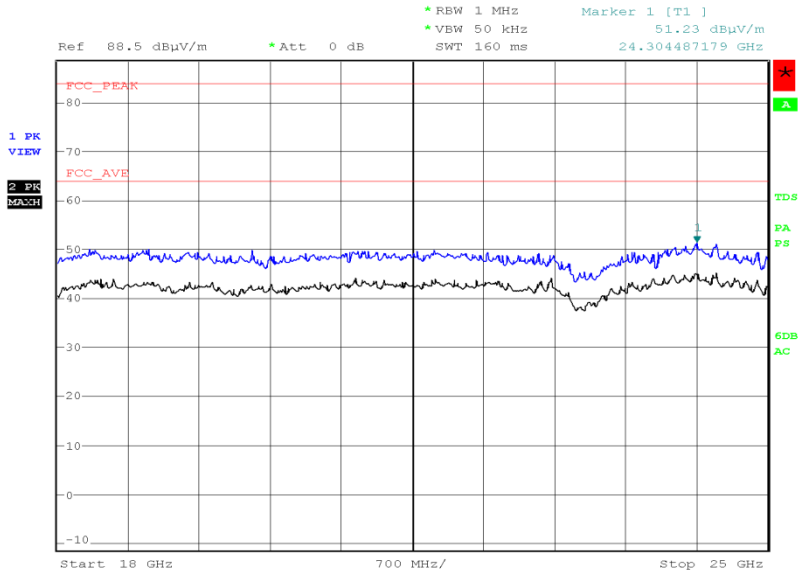
Date: 17.NOV.2015 18:04:56

Transmit, 2460 MHz, 8 GHz to 18 GHz, Spurious Radiated Emissions Plot



Date: 17.NOV.2015 18:41:51

Transmit, 2460 MHz, 18 GHz to 25 GHz, Spurious Radiated Emissions Plot



Date: 17.NOV.2015 21:32:23

FCC 47 CFR Part 15, Limit Clause 15.247 (d)

Emissions outside the restricted bands shall be at least 20 dB below the fundamental measured in a 100 kHz bandwidth using a peak detector. If the transmitter complies with the conducted power limits, based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB below the fundamental instead of 20 dB.

FCC 47 CFR Part 15, Limit Clause 15.205

	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

FCC 47 CFR Part 15, Limit Clause 15.209

Frequency (MHz)	Field Strength			Measurement Distance (m)
	(µV/m)	Average (dBµV/m)	Peak (dBµV/m)	
30-88	100	40.0	60.0	3
88-216	150	43.5	63.5	3
216-960	200	46.0	66.0	3
Above 960	500	54.0	74.0	3

2.3 RESTRICTED BAND EDGES

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.205

2.3.2 Equipment Under Test and Modification State

SWB TAG S/N: 1491 - Modification State 3

2.3.3 Date of Test

17 November 2015

2.3.4 Test Equipment Used

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

2.3.5 Test Procedure

The test was performed in accordance with ANSI C63.10, clauses 4.1.4.2.2, 6.3, 6.6, 6.10.5.

Pre-scan plots have been taken to identify the location of emissions within the restricted frequency band using the alternative average method as specified in clause 4.1.4.2.3. Final measurements were taken using the CISPR average detector function with the measuring instrument in receiver mode.

2.3.6 Environmental Conditions

Ambient Temperature	22.4°C
Relative Humidity	43.0%

Product Service

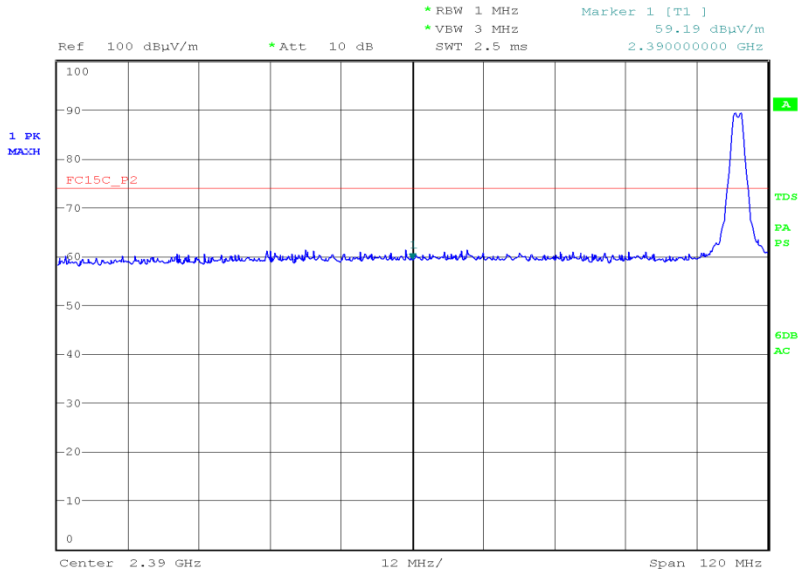
2.3.7 Test Results

3.0 V DC Supply

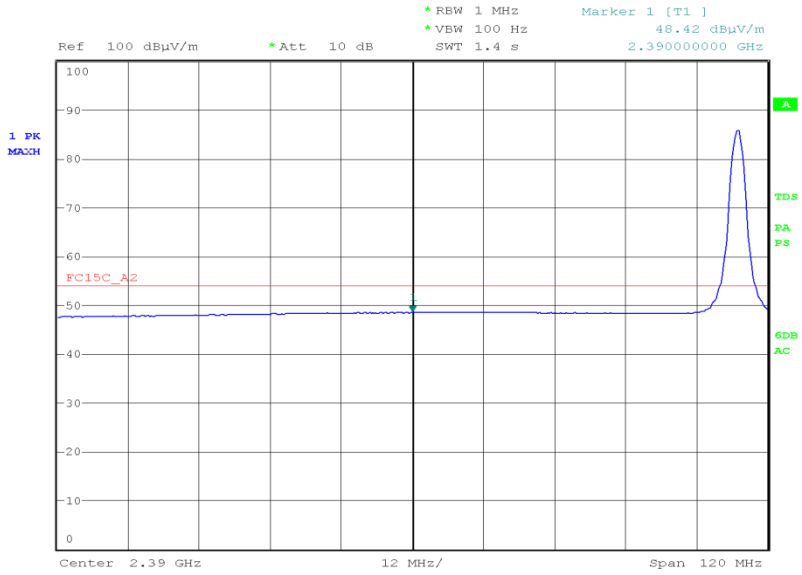
Transmit, Phase Modulation, Restricted Band Edges Results

2445 MHz		2460 MHz	
Measured Frequency 2390 MHz		Measured Frequency 2483.5 MHz	
dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average
59.19	48.11	59.35	47.92

Transmit, 2445 MHz, Measured Frequency 2390 MHz, Phase Modulation, Final Peak, Restricted Band Edges Plot

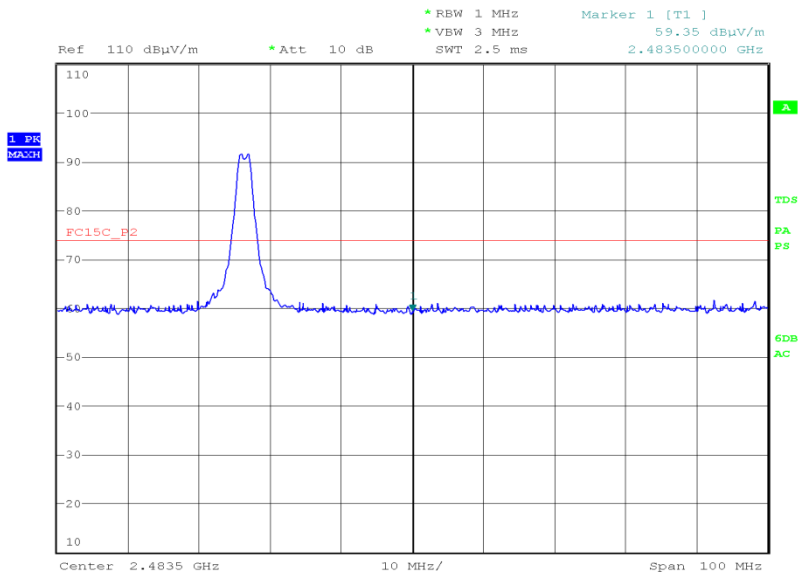


Transmit, 2445 MHz, Measured Frequency 2390 MHz, Phase Modulation, Final Average, Restricted Band Edges Plot

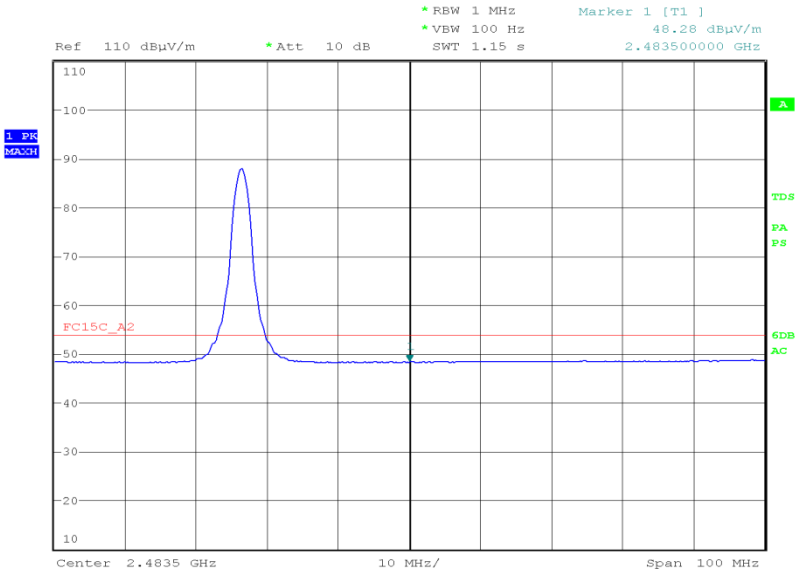


Note: Prescan plot to identify emissions prior to measurement

Transmit, 2460 MHz, Measured Frequency 2483.5 MHz, Phase Modulation, Final Peak, Restricted Band Edges Plot



Transmit, 2460 MHz, Measured Frequency 2483.5 MHz, Phase Modulation, Final Average, Restricted Band Edges Plot



Date: 17.NOV.2015 19:56:48

Note: Prescan plot to identify emissions prior to measurement

FCC 47 CFR Part 15, Limit Clause 15.205

	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

2.4 AUTHORISED BAND EDGES

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d)

2.4.2 Equipment Under Test and Modification State

SWB TAG S/N: 1491 - Modification State 3

2.4.3 Date of Test

17 November 2015

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 test was performed in accordance with ANSI C63.10, clauses 6.3, 6.6 and 6.10.4.

2.4.6 Environmental Conditions

Ambient Temperature	22.4°C
Relative Humidity	43.0%

Product Service

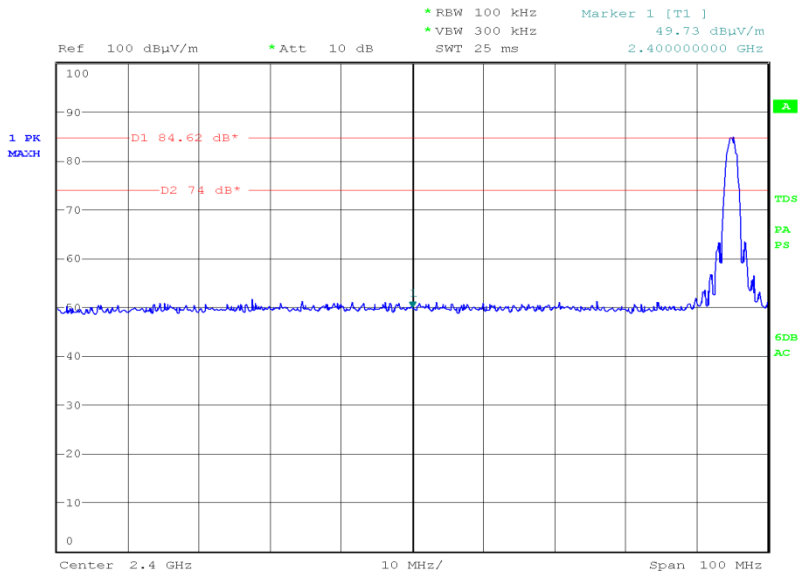
2.4.7 Test Results

3.0 V DC Supply

Transmit, Phase Modulation, Authorised Band Edges Results

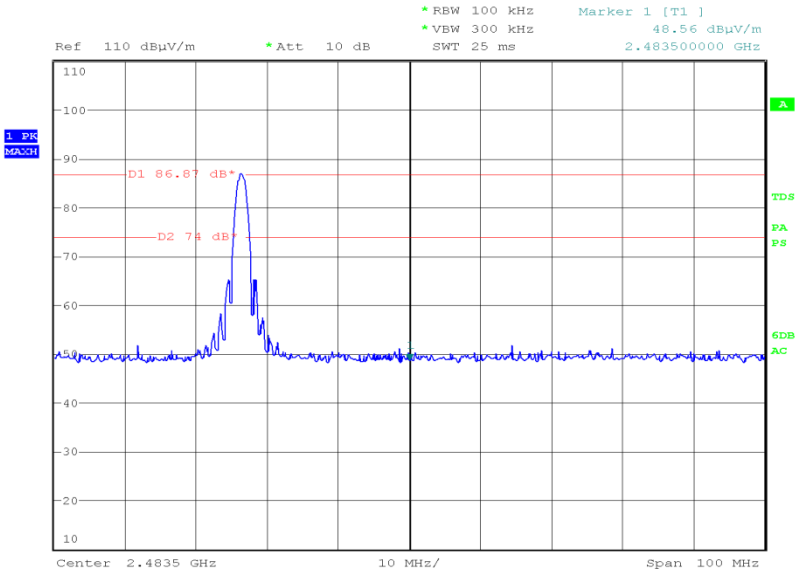
2445 MHz	2460 MHz
Measured Frequency 2400.00 MHz	Measured Frequency 2483.50 MHz
dBµV/m	dBµV/m
Final Peak	Final Peak
49.73	48.56

Transmit, 2445 MHz, Measured Frequency 2400.00 MHz, Phase Modulation, Final Peak, Authorised Band Edges Plot



Date: 17.NOV.2015 19:26:01

Transmit, 2460 MHz, Measured Frequency 2483.50 MHz, Phase Modulation, Final Peak, Authorised Band Edges Plot



Date: 17.NOV.2015 19:55:17

FCC 47 CFR Part 15, Limit Clause 15.247 (d)

20 dB below the fundamental measured in a 100 kHz bandwidth using a peak detector. If the transmitter complies with the conducted power limits, based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB below the fundamental instead of 20 dB.

Product Service

SECTION 3

TEST EQUIPMENT USED

Product Service

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 – Peak EIRP					
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	234	12	29-Apr-2016
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	235	22	28-Nov-2015
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	1002	12	25-Sep-2016
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2138	12	3-Dec-2015
Antenna (DRG Horn)	ETS-LINDGREN	3115	3125	12	17-Jul-2016
Signal Generator: 10MHz to 20GHz	Rohde & Schwarz	SMR20	3475	12	18-Feb-2016
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
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
Multimeter	Fluke	177	3833	12	16-Jun-2016
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Hygropalm Temperature and Humidity Meter	Rotronic	HP21	4410	12	15-Apr-2016
2m K-Type Cable (Rx)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.2 - Spurious Radiated Emissions					
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	29-Apr-2016
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	235	22	28-Nov-2015
Antenna (Bilog)	Schaffner	CBL6143	287	24	3-Feb-2016
Pre-Amplifier	Phase One	PS04-0086	1533	12	30-Jul-2016
Pre-Amplifier	Phase One	PSO4-0087	1534	12	23-Dec-2015
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2138	12	3-Dec-2015
Filter (Hi Pass)	Lorch	9HP7-7000-SR	2833	12	5-Feb-2016
Antenna (Bilog)	Chase	CBL6143	2904	24	11-Jun-2017
Amplifier (1 - 8GHz)	Phase One	PS06-0060	3175	12	11-Aug-2016
Signal Generator: 10MHz to 20GHz	Rohde & Schwarz	SMR20	3475	12	18-Feb-2016
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
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
Multimeter	Fluke	177	3833	12	16-Jun-2016
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
1GHz to 8GHz Low Noise Amplifier	Wright Technologies	APS04-0085	4365	12	6-Oct-2016
Hygropalm Temperature and Humidity Meter	Rotronic	HP21	4410	12	15-Apr-2016
Suspended Substrate Highpass Filter	Advance Power Components	11SH10-3000/X18000-O/O	4411	12	24-Mar-2016
Suspended Substrate Highpass Filter	Advance Power Components	11SH10-3000/X18000-O/O	4412	12	24-Mar-2016
2m K-Type Cable (Rx)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU
0.5m SMA Cable (Rx)	Scott Cables	SLSLL18-SMSM-00.50M	4528	6	19-Feb-2016
Section 2.3- Restricted Band Edges					
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	234	12	29-Apr-2016
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2138	12	3-Dec-2015
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Multimeter	Fluke	177	3833	12	16-Jun-2016
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Hygropalm Temperature and Humidity Meter	Rotronic	HP21	4410	12	15-Apr-2016
2m K-Type Cable (Rx)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.4 - Authorised Band Edges					
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	234	12	29-Apr-2016
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2138	12	3-Dec-2015
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Multimeter	Fluke	177	3833	12	16-Jun-2016
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Hygropalm Temperature and Humidity Meter	Rotronic	HP21	4410	12	15-Apr-2016
2m K-Type Cable (Rx)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU

TU – Traceability Unscheduled

3.2 MEASUREMENT UNCERTAINTY

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

Test Discipline	MU
Peak EIRP	30 MHz to 1 GHz: ± 5.1 dB 1 GHz to 40 GHz: ± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.1 dB 1 GHz to 40 GHz: ± 6.3 dB
Authorised Band Edges	Conducted: ± 3.08 dB Radiated: 30 MHz to 1 GHz: ± 5.1 dB Radiated: 1 GHz to 40 GHz: ± 6.3 dB
Restricted Band Edges	30 MHz to 1 GHz: ± 5.1 dB 1 GHz to 40 GHz: ± 6.3 dB

SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

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

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

Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited).