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REPORT ON ELECTROMAGNETIC COMPATIBILITY TESTS

Performed at: TWENTY PENCE TEST SITE

> Twenty Pence Road, Cottenham, Cambridge U.K. **CB24 8PS**

> > on

AlertMe.com Ltd

SPG800/SPG130

dated

10th May 2012

Document History

Issue	Date	Affected page(s)	Description of modifications	Revised by	Approved by
1	10/05/12		Initial release		
2	17/05/12	17-19,26-34	Conducted antenna measurements repeated with EBW interpreted as -26dB points	DS	DB
3	31/05/12	1,6 and 16	Incorrect reference to internal battery removed. AC Power conducted emissions 9kHz RBW clarified.	PB	DB

Based on report template:

v090319

	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
dB	Test No:	T4334	Test Report	Page:	2 of 54

Equipment Under	Test (EUT):	SPG800/SPG130	
Test Commissione	ed by:	AlertMe.com Ltd Compass House 80 Newmarket Road Cambridge CB5 8DZ	
Representative:		Bruce Benson	
Test Started:		28th April 2012	
Test Completed:		8th May 2012	
Test Engineer:		Dave Smith	
Date of Report:		10th May 2012	
Written by:	Dave Smith	Checked by:	erek Barlow
Signature:	D. A. Smitt	Signature:	Sarlow
Date:	10th May 2012	Date: 15	th May 2012

dB Technology can only report on the specific unit(s) tested at its site. The responsibility for extrapolating this data to a product line lies solely with the manufacturer.

Test Standards Applied

CFR 47 Code of Federal Regulations: Pt 15 Subpart C - Radio Frequency Devices - Intentional Radiators

In particular, the rules of part 15.247 were applied.

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Device operating in the 2400-2483.5 MHz band (part 15.247)

FCC Part	Parameter	
15.207	Conducted Emissions	PASS
15.209	Radiated Emissions	PASS (for frequencies in the Restricted Bands list of 15.205 only - all other parts of 15.209 are not applicable - 15.247 takes precedence.)
15.247(a)(2)	Minumum 6dB bandwidth (must be > 500kHz)	PASS
15.247(b)(3)	Peak power (must be <1W)	PASS
15.247(b)(4)	Antenna gain (must be < 6dBi)	Manufacturer data states a gain of 1dBi. Only integral antenna.
15.247(b)(5)	Exposure to RF	See separate declaration based on calculation.
15.247(d)	Conducted Antenna Spurious (Must be at least 20dB below carrier in - 100kHz bw)	PASS
15.247(e)	Spectral Density (must not exceed 8dBm in any 3kHz band)	PASS

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1 EUT Details

1.1 General

The EUT was an AlertMe Smart Plug. The device incorporates an intentional radiator:

(a) Zigbee: operating in the 2.4GHz to 2.4835GHz band. Operates on 15 equally spaced channels starting at 2.405GHz (channel 11) and ending at 2.475GHz (channel 25). O-QPSK (digital) modulation. Integral antenna. Gain of the antenna declared to be 1dBi.

For Zigbee transmit mode tests were performed on:

Ch 11: 2.405 GHz Ch 18: 2.440 GHz Ch 25: 2.475 GHz

The device is powered from ac mains.

Details of the EUT and associated peripherals used during the tests are listed below. Figure 1 shows the interconnections between the EUT and peripherals.

Item	Manufacturer	Model	Description	Serial No:	Notes
1	Alertme	SPG800/SPG130	Sample 1 with wired co-axial connection to Zigbee transmitter		
2	Alertme	SPG800/SPG130	Sample 2 - with integral antenna.		

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1.2 Modifications to EUT and Peripherals

Details of any modifications that were required to achieve compliance are listed below. The modification numbers are referred to in the results sections as appropriate.

Mod No:	Details	Implemented for
0	Original. No modifications were made during the course of testing.	

1.3 EUT Operating Modes

The EUT was tested in the following operating mode or modes. Generally, operating modes are chosen that will exercise the functions of the EUT as fully as possible and in a manner likely to produce maximum emission levels or susceptibility. Individual test result sheets reference the operating mode of the EUT.

Operating Mode	Details
1	Zigbee transmit. Continuously transmitting constant packet stream. The transmit channel was set to either Channel 11, 18 or 25. Individual test results show the actual operating channel. Output set to 0dBm.

1.4 Zigbee Duty Cycle

All Zigbee transmit measurements were made with the device sending continuous packet streams. In the intended application transmissions only occur in short bursts. The manufacturer has stated that in any one 100msec period transmissions are limited to a burst of approximately 2 msec. This is backed up by the traces provided by the manufacturer (see Figure 2 and Figure 3).

This allows an additional duty cycle correction factor to be applied where average limits are specified. This duty cycle correction factor has been calculated as -20dB (=20*log 10/100 assuming a transmit time of no more than 10msec in a 100msec period). This additional correction factor has only been applied where necessary and it is clearly indicated in the results tables.

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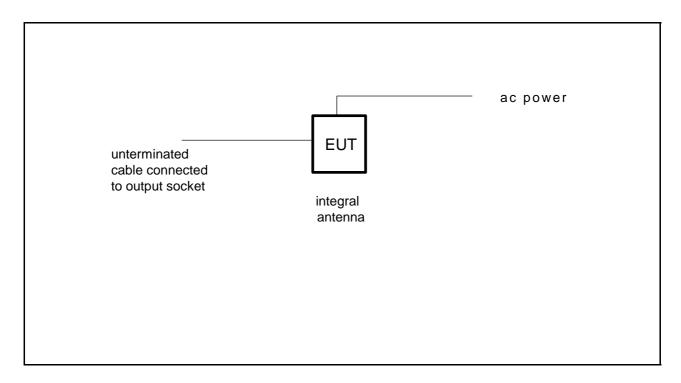


Figure 1 EUT and Peripherals

	Description	Туре	Length	Notes
#1	Mains extension lead	Unscreened	1.5m	
#2	Unterminated power lead	Unscreened	2.0m	

$\stackrel{\clubsuit}{\searrow}$	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
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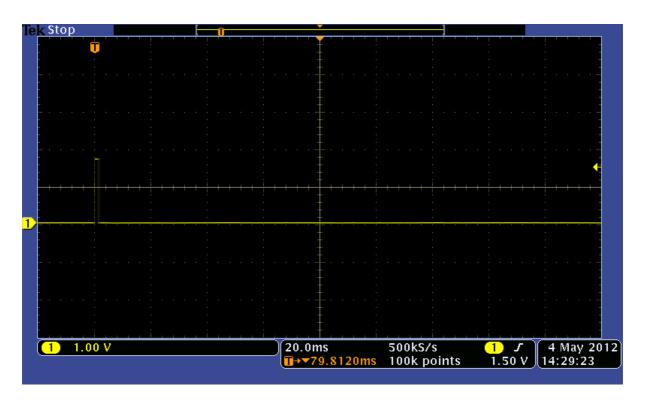


Figure 2 Manufacturer's trace showing Zigbee 2msec burst in 100msec period

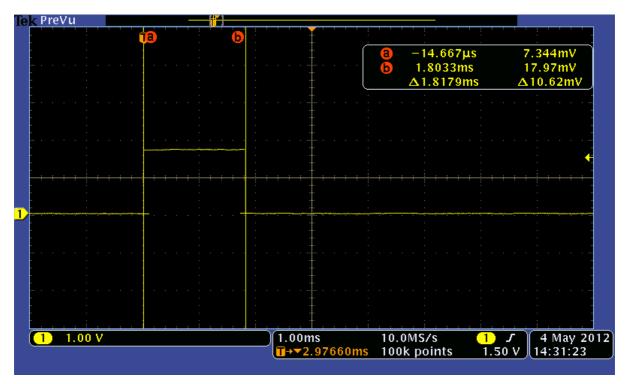


Figure 3 Manufacturer's trace showing duration of Zigbee 2msec

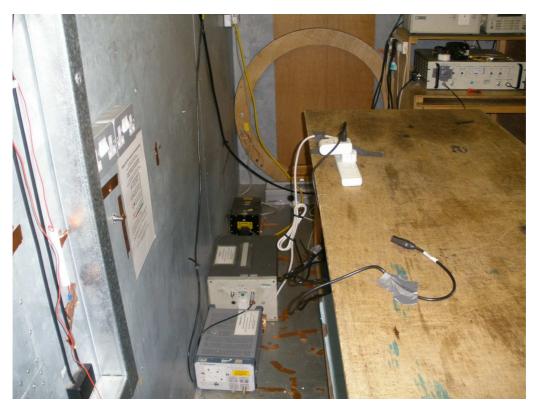
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Photograph 1 Conducted Emissions - Front



Photograph 2 Conducted Emissions - Back

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Photograph 3 Radiated Emissions - Upright - Front



Photograph 4 Radiated Emissions - Flat - Back

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Photograph 5 Conducted Antenna

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2 Test Equipment

The test equipment used during the tests was one or more of the items listed below. Individual test result sheets indicate which items were used.

Details	Serial Number	Cal Date	Cal Interval
Chase X-wing Bilog CBL6140 20MHz-2GHz	1047	18/11/2011	1 year
Alpha 61932500 Horn Antenna (18-26GHz)	50	#1	
Alpha 61932400 Horn Antenna (12.4-18GHz)	55	#1	
EMCO 3115 DR Guide (1-18GHz)	4982	31/01/2012	1 year
Chase Bilog CBL6111A	1760	31/01/2012	1 year
EMCO 3825/2 LISN	1358	16/02/2012	1 year
LUCIX 0.1GHz to 20GHz	24485	08/01/2012	1 year
LUCIX 18GHz to 26.5GHz	24486	08/01/2012	1 year
CHASE LHR 7000	1056	31/01/2012	1 year
R&S ESVS10	421872	16/10/2011	1 year
Agilent E7405A Spectrum Analyser	MY44212494	19/09/2011	1 year
Agilent E7405A Spectrum Analyser	MY45110758	21/11/2011	1 year
High Pass RF Filter 3GHz to 12.75GHz	1	08/02/2012	1 year
Low Pass RF Filter OMHz to 2GHz	4		1 year
	Chase X-wing Bilog CBL6140 20MHz-2GHz Alpha 61932500 Horn Antenna (18-26GHz) Alpha 61932400 Horn Antenna (12.4-18GHz) EMCO 3115 DR Guide (1-18GHz) Chase Bilog CBL6111A EMCO 3825/2 LISN LUCIX 0.1GHz to 20GHz LUCIX 18GHz to 26.5GHz CHASE LHR 7000 R&S ESVS10 Agilent E7405A Spectrum Analyser Agilent E7405A Spectrum Analyser	Chase X-wing Bilog CBL6140 20MHz-2GHz Alpha 61932500 Horn Antenna (18-26GHz) 50 Alpha 61932400 Horn Antenna (12.4-18GHz) EMCO 3115 DR Guide (1-18GHz) Chase Bilog CBL6111A EMCO 3825/2 LISN 1358 LUCIX 0.1GHz to 20GHz LUCIX 18GHz to 26.5GHz CHASE LHR 7000 R&S ESVS10 Agilent E7405A Spectrum Analyser High Pass RF Filter 3GHz to 12.75GHz 1047 4982 4982 4982 4982 4985 24485 24486 24486 421872 MY44212494 MY45110758	Chase X-wing Bilog CBL6140 20MHz-2GHz Alpha 61932500 Horn Antenna (18-26GHz) Alpha 61932400 Horn Antenna (12.4-18GHz) EMCO 3115 DR Guide (1-18GHz) Chase Bilog CBL6111A EMCO 3825/2 LISN EMCO 3825/2 LISN 1358 16/02/2012 LUCIX 0.1GHz to 20GHz LUCIX 18GHz to 26.5GHz CHASE LHR 7000 R&S ESVS10 Agilent E7405A Spectrum Analyser High Pass RF Filter 3GHz to 12.75GHz 1047 18/11/2011 50 #1 4982 31/01/2012 4982 31/01/2012 24485 08/01/2012 24486 08/01/2012 08/01/2012 421872 16/10/2011 MY44212494 19/09/2011 MY44212494 19/09/2011

^{#1} Standard Gain Horns - Factors derived by calculation from dimensions.

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3 Test Methods

3.1 Conducted Emissions - ac power

This section describes the general method of performing this test. The specific method used and any deviations from this general method are listed in the appropriate results section.

Bench top EUTs and peripheral equipment are normally placed on a 0.8m high non-conducting bench, positioned 0.4m from one of the metallic walls of a screened room. Floor standing EUTs are normally placed 0.1m above the metallic floor of the screened room. Mains leads are bundled so as not to exceed 1m.

The EUT is powered using a 50ohm/50uH Line Impedance Stabilisation Network (LISN). Peripherals are powered using a second a 50ohm/50uH LISN. These LISNs are bonded to the screened room floor.

With the correct supply voltage applied to the EUT scans are performed on both the live and neutral line outputs of the LISN using quasi-peak detection over the specified frequency range. The results of these scans are shown in the plots section at the end of the report.

Significant emissions identified by the scans are measured and the results tabulated. The table of results is shown in the conducted emissions results section.

Final Level = Receiver Reading + Combined Cable & Attenuator Correction Factor (dBuV) (dBuV) (dB)

Example: if at 191kHz the receiver level is 45.8 dBuV

@ 191kHz Final Level = 45.8 + 10.0 = 55.8 dBuV

3.2 Radiated Emissions

This section describes the general method of performing this test. The specific method used and any deviations from this general method are listed in the appropriate results section.

Initial scans are performed in a semi-anechoic screened room at a distance of up to 3m. Scans are performed over the frequency range specified in the test standard with the antenna both horizontally and vertically polarised. During these scans the EUT and peripherals are rotated through 360°. Bench top EUTs are placed on a non-conducting bench at a height of 0.8m above the ground plane. Floor standing EUTs are placed 0.1m above the ground plane. The results of the scans are shown in the plots included at the end of the report. Attempts are made to identify the layout of cables that give highest readings.

Significant emissions identified by the scans are measured on an open area test site at the appropriate test distance using the specified detector function. Maximised readings are obtained by rotating the EUT through 360° and adjusting the height of the antenna from 1 m to 4m. Measurements are made with the antenna both horizontally and vertically polarised and the results tabulated.

Tabulated results show levels based on the following calculation:

Field Strength (dBuV) = receiver reading (dBuV) + CF (dB/m)

CF is the correction factor for the antenna and cable.

For example:

if at 434.478MHz receiver reading was 57.8dBuV and combined correction factor = 20.4 (dB/m).

Total field strength = 57.8 + 20.4 = 78.2 dBuV/m.

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3.3 Conducted Antenna Emissions

This section describes the general method of performing this test. The specific method used and any deviations from this general method are listed in the appropriate results section.

The antenna port of the EUT was connected directly to the input of a spectrum analyser. Sweeps were made over the required frequency ranges with the specified detectors applied.

4 Test Results

The following sections contain tabulated test results. Plots of various scans are included at the back of this section.

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Conducted Emissions (Power) - Results 4.1

L1_11A AB002_CBL005_CBL039_11A --Factor Set 1:

Factor Set 2: Factor Set 3: Test Equipment: R1 L1

Com	pany:	Alert	Me.co		d			Product: SPG800/SPG130				
Date		04/05						Test E	<i>ng:</i> Dav	ve Smith		
Port: Test		ac pow	rer C63.4:	2003	using I	imite	of	FCC(B)			
Ports		ANSI	C03.4.	2003	using i	IIIIII	UI .	1 00(ار			
Test					using l	imits	of					
Plot	Op Mode	Mod State	Line (L/N)	Fact Set	Freq. MHz	Det qp/ av	Rec. Level dBuV	Corr'n Factor dB	Total Level dBuV	Limit FCC dBuV	Margin FCC dB	Notes
28	1	0	L	1	0.194	qp	27.1	10.0	37.1	63.9	26.8	
28	1	0	L	1	0.194	av	16.8	10.0	26.8	53.9	27.1	
28	1	0	L	1	0.263	qp	24.4	10.0	34.4	61.4	26.9	
28	1	0	L	1	0.263	av	14.3	10.0	24.3	51.4	27.0	
28	1	0	L	1	1.587	qp	24.1	10.0	34.1	56.0	21.9	
28	1	0	L	1	1.587	av	14.0	10.0	24.0	46.0	22.0	
29	1	0	N	1	0.200	qp	28.0	10.0	38.0	63.6	25.6	
29	1	0	N	1	0.200	av	8.0	10.0	18.0	53.6	35.6	
29	1	0	N	1	0.319	qp	22.8	10.0	32.8	59.7	26.9	
29	1	0	N	1	0.319	av	10.0	10.0	20.0	49.7	29.7	
29	1	0	N	1	1.587	qp	24.6	10.0	34.6	56.0	21.4	
29	1	0	N	1	1.587	av	12.0	10.0	22.0	46.0	24.0	
	Resul	lts					Minimu PASS/F		jin	21.4 PASS	dB	
No	tes						Comme	nts and	Observ	ations		
					ns show				ements	were mad	le using a 9kl	Hz
					dwidth. 207 wer	e appl	ied.					

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4.2 Zigbee Peak Power - 15.247(b)(3)

Test Equipment: R8

Peak Power

Test:

Peak Pow	er	
Compan	^{y:} AlertMe.com Ltd	Product: SPG800/SPG130
Date:	17/05/2012	Test Eng: Dave Smith
Ports:	Antenna	
Test:	15.247(b)(3	
Ports:		

Notes Comments and Observations

This was performed as a conducted measurement on sample 1.

Results of scans are shown in plots 1 to 3.

The method of 558074 D01 DTS Meas Guidance v01 section 5.2.1.2 was applied. The spectrum analyser's "band power" measurement was used with a peak detector selected.

Results were as follows:

Channel	Level (dBm)	Limit (dBm)	
11	3.91	30	PASS
18	3.56	30	PASS
25	3.17	30	PASS

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4.3 Zigbee Bandwidth - 15.247(a)(2)

Test Equipment: R8

Bandwidth

Test:

2411411141		
Compar	^{Py:} AlertMe.com Ltd	Product: SPG800/SPG130
Date:	17/05/2012	Test Eng: Dave Smith
Ports:	Antenna	
Test:	15.247(a)(2)	
Ports:		

Comments and Observations

This was performed as a conducted measurement on sample 1.

Results of scans are shown in plots 4 to 6.

The method of 558074 D01 DTS Meas Guidance v01 section 5.1.1 was applied.

The results are as follows:

Channel	Measured Bandwidth (MHz)	Limit	
11	1.600	>500kHz	PASS
18	1.590	>500kHz	PASS
25	1.560	>500kHz	PASS

PASS

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4.4 Zigbee Power Spectral Density in 3kHz bw - 15.247(e)

Test Equip	oment: R8
Spectral De	nsitv
	AlertMe.com Ltd Product: SPG800/SPG130
Date:	17/05/2012 Test Eng: Dave Smith
Ports:	Antenna
Test:	15.247(e)
Ports:	
Test:	
Notes	Comments and Observations
	This was well-and as a conducted massagement on complete
	This was performed as a conducted measurement on sample 1.
	The method of 558074 D01 DTS Meas Guidance v01 section 5.3.1 was
	applied. As specified, measurements were made with a RBW of 100kHz
	and an additional CF of -15.2dB applied to convert to dBm/3kHz.

Results of scans are shown in plots 7 to 9.

In all cases the spectral density is below 8dBm/3kHz.

PASS

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4.5 Zigbee Antenna Conducted Spurious Emissions (100kHz bw) - 15.247(d)

Test Equipment: R8		

Conducted	Fmissions	(Signal)
Conducted	LIIIISSIUIIS	(Siyilai)

Notes

Conducted L	inissions (Signar)		
Company:	AlertMe.com Ltd	Product:	SPG800/SPG130
Date:	17/05/2012	Test Eng:	Dave Smith
Ports:	Antenna		
Test:	15.247(d)		
Ports:			
Test:			

Comments and Observations

This was performed as a conducted measurement on sample 1.
The method of 558074 D01 DTS Meas Guidance v01 section 5.4.1 was applied.

Results of scans shown in plots 10 to 14.

riodaito di di	ourio orio vvii i	ii pioto i o to				
Frequency	Tx Ch	Level	Level w.r.t Fundamental	Limit	Margin	
MHz		dBm	dB	dB	dB	
2.4050	Ch 11	-2.3				
2.4000	Ch 11	-42.5	-40.2	-20	20.2	PASS
4.8094	Ch 11	-40.5	-38.3	-20	18.3	N/A *
2.4400	Ch 18	-2.6				
4.8794	Ch 18	-42.9	-40.2	-20	20.2	N/A *
0.4750	01.05	2.0				
2.4750	Ch 25	-2.9				
2.4835	Ch 25	-49.3	-49.3	-20	29.3	PASS
4.9494	Ch 25	-42.4	-39.5	-20	19.5	N/A *

^{*} This emission falls within a restricted band and was therefore also measured as a radiated test using the limits of 15.209. Providing an emission meets the radiated limits of 15.209 there is no requirement to additionally meet -20dBc conducted limit.

PASS

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Zigbee Radiated Emissions - Channel 11 - 15.209 4.6

A23_3m_10A PRE7_CBL052_CBL093_11A RFF01_11A -Factor Set 1:

Factor Set 2: Factor Set 3:

Test Equipment: R8 A23 PRE8 PRE7 RFF01 RFF04 A20 A22 A15

		issions											
Com	pany:	Alert	Me.	com	Ltd			Prod	3	PG800/			
Date		01/05	5/201	2				Test	Eng:	ave Smith	<u>1</u>		
Ports Test		ANSI	C63	4:20	03 using	limits	s of	15	.209				
Ports	S.:												
Test	:				using	limits	s of						
Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes
	Char	nnel 11	1										
21	1	0	3	1	4809.095	V	60.9	-5.3		55.5	74.0	18.5	Pk
21	1	0	3	1	4809.095	V	54.0	-5.3		48.7	54.0	5.3	Av Pk
21 21	1 1	0	3 3	1 1	4809.095 4809.095	H H	64.6 58.0	-5.3 -5.3		59.2 52.7	74.0 54.0	14.8 1.3	Av
								Management			12	-ID	
	Resul	τs					Minimu PASS/F	_	jin		1.3 PASS	dB	
No	tes					Comr	ments ar	nd Obse	ervation	าร			
			Results of scans shown in plots 17 to 27. All average measurements could be reduced by a further 20dB if the "Duty Cycle Correction" were applied.										
Κe	ey:		qp - 0	quasi-	peak, av - a	ıveraç	ge, pk - j	peak					

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Zigbee Radiated Emissions - Channel 18 - 15.209 4.7

A23_3m_10A PRE7_CBL052_CBL093_11A RFF01_11A -Factor Set 1:

Factor Set 2: Factor Set 3:

Test Equipment: R8 A23 PRE8 PRE7 RFF01 RFF04 A20 A22 A15

		nissions											
Com	pany:	Alert	Me.	com	Ltd			Prod	<i>uct:</i> S	PG800/	SPG130		
Date	:	01/0						Test	Eng:	ave Smith	ı		
Ports				4.00				4-					
Test Ports		ANSI	C63.	.4:200	03 using	limits	s of	15	.209				
Test					using	limits	s of						
							ı	1	1			ı	
Plot	Op	Mod	Dist	Fact	Freq.	Ant	Rec.		Corr'n	Total	Limit	Margin	Notes
	iviode	State	m	Set	MHz	Pol	Level dBuV	Factor dB/m	Factor dB	Level dBuV/m	FCC_B dBuV/m	FCC_B dB	
	Char	 nnel 18	2										
21	0	0	3	1	4879.520	V	60.4	-5.0		55.3	74.0	18.7	Pk
21	0	0	3	1	4879.520	V	53.4	-5.0		48.4	54.0	5.6	Av
21	0	0	3	1	4879.520	Н	63.1	-5.0		58.1	74.0	15.9	Pk
21	0	0	3	1	4879.520	Н	56.5	-5.0		51.4	54.0	2.6	Av
22	0	0	3	1	7319.300	V	50.9	-0.7		50.2	74.0	23.8	Pk
22	0	0	3	1	7319.300	V	41.0	-0.7		40.3	54.0	13.7	Av
22	0	0	3	1	7319.300	Н	54.4	-0.7		53.7	74.0	20.3	Pk
22	0	0	3	1	7319.300	Н	45.7	-0.7		45.0	54.0	9.0	Av
	Resul	ts					Minimu	m Marc	ıin		2.6	dB	
							PASS/F	_	,		PASS		
No	tes					Comr	ments ar	nd Obse	ervation	าร			
			Resul	ts of	scans show	/n in p	olots 17	to 27.					
			دα اا∆	/eran	measuren	nente	could be	e reduc	ed by a	a further ?	20dB if the "	Duty Cycle	
				_	n" were app		codia bi	. reduc	cu by a	i fultifici 2	Oub II tile	Duty Cyclo	
					• • • • • • • • • • • • • • • • • • • •								
ν.			an -		ook ov -		بام مح	2001					
L K	ey:		чр - С	ıuası-	peak, av - a	iveraç	је, pк -	реак					

	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
1 /	Test No:	T4334	Test Report	Page:	23 of 54

Zigbee Radiated Emissions - Channel 25 - 15.209 4.8

A23_3m_10A PRE7_CBL052_CBL093_11A RFF01_11A -Factor Set 1:

Factor Set 2: Factor Set 3:

Test Equipment: R8 A23 PRE8 PRE7 RFF01 RFF04 A20 A22 A15

Radia	ted Em	nissions	s										
Com	pany:	Alert	Me.	com	Ltd			Prod	<i>uct:</i> S	PG800/	SPG130		
Date		01/05						Test	Eng:	ave Smitl	h		
Ports				4.00				4-					
Test Ports		ANSI	C63	.4:20	03 using	limits	3 01	15	.209				
Test					using	limits	s of						
Plot	Ор	Mod	Dist	Fact	Freq.	Ant	Rec.		Corr'n	Total	Limit	Margin	Notes
	Mode	State	m	Set	MHz	Pol	Level dBuV	Factor dB/m	Factor dB	Level dBuV/m	FCC_B dBuV/m	FCC_B dB	
							ивиу	UD/III	иь	ubuv/III	ubuv/III	ив	
21	Char 0	nnel 25	3	1	4949.235	V	57.8	-5.0		52.7	74.0	21.3	Pk
21	0		3	1 1	4949.235	V	50.0	-5.0		45.0	74.0 54.0	9.0	Av
21	0	0	3	1	4949.235	Н	61.0	-5.0		56.0	74.0	18.0	Pk
21	0	0	3	1	4949.235	н	54.7	-5.0		49.7	54.0	4.3	Av
					7400 750	,,	400			40.0	74.0	07.4	DI.
21	0	0 0	3	1 1	7423.750 7423.750	V V	46.9 35.4	-0.1 -0.1		46.9 35.3	74.0 54.0	27.1 18.7	Pk Av
21	0		3	1	7423.750	V H	50.2	-0.1		50.2	74.0	23.8	Pk
21	0	0	3	1	7423.750	Н	40.4	-0.1		40.4	54.0	13.6	Av
					'		-					ı	
	Resul	ts					Minimu		jin		4.3	dB	
							PASS/F				PASS		
No	tes					Comr	ments ai	nd Obse	ervation	ns			
								. 67					
			Kesu	its of	scans show	n in p	plots 17	to 27.					
			All a	verag	e measuren	nents	could b	e reduc	ed by a	a further 2	20dB if the "	Duty Cycle	
					n" were ap				-, -		- •	, -,-	
κ ₄	ey:	l	an - a	าเเลรเ-เ	peak, av - a	vera	nenk-	neak					
17.0	-y.		4p - (₁ սսծ։-	pour, av - c	ινοιαί	₃ υ, μκ -	JUAN					

	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
I /\	Test No:	T4334	Test Report	Page:	24 of 54

4.9 Zigbee Radiated Emissions - Band Edges - 15.209

Factor Set 1: A23_3m_10A CBL049_11A --

Factor Set 2: -- -Factor Set 3: -- -Test Equipment: R8 A23

		nissions			1			Prod	uct: c	*DC000/	000100				
Date		Alert			Lta		Froduct: SPG800/SPG130 Test Eng: Dave Smith								
Ports Test	:	ANSI			03 using	limits	s of		.209		•				
Ports Test					using	limits	limits of								
Plot	Op Mode	Mod State	Dist m	Fact Set	Freq. MHz	Ant Pol	Rec. Level dBuV	Corr'n Factor dB/m	Corr'n Factor dB	Total Level dBuV/m	Limit FCC_B dBuV/m	Margin FCC_B dB	Notes		
	Char	nnel 1													
15 15	1 1	0 0	3 3	1 1	2390.000 2390.000	V V	14.0 2.4	29.7 29.7		43.7 32.1	74.0 54.0	30.3 21.9	Pk Av		
15 15	1 1	0	3	1 1	2390.000 2390.000	H H	14.8 3.5	29.7 29.7		44.5 33.3	74.0 54.0	29.5 20.7	Pk Av		
	Char	 nnel 25	5												
16 16	1	0 0	3 3	1 1	2483.500 2483.500	V V	19.6 11.1	29.9 29.9		49.5 41.0	74.0 54.0	24.5 13.0	Pk Av		
16 16	1 1	0 0	3	1 1	2483.500 2483.500	Н	21.1 11.5	29.9		51.0 41.5	74.0 54.0	23.0 12.5	Pk Av		
	Resul	lts		1	<u> </u>	l	Minimu	m Marg	jin		12.5	dB			
							PASS/F				PASS				
No	tes					Com	ments a	nd Ubse	ervation	าร					
			All a	verag	scans show e measuren n" were app	nents				a further 2	20dB if the "	'Duty Cycle			
K	ey:		<u>qp -</u> (quasi-	peak, av - a	ı <u>ve</u> raç	ge, pk -	peak							

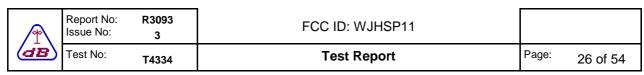
	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
1 /	Test No:	T4334	Test Report	Page:	25 of 54

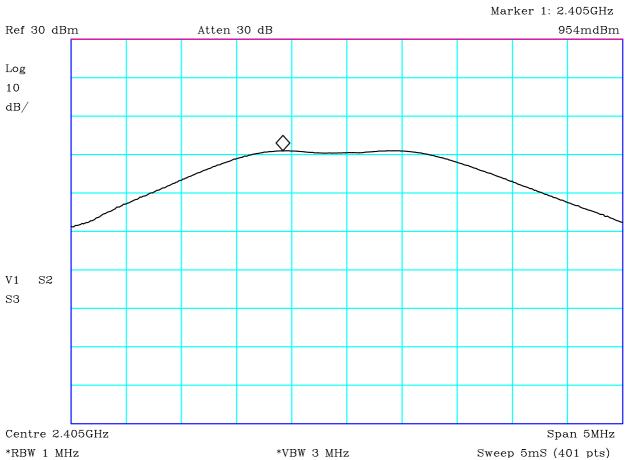
4.10 Zigbee Radiated Emissions - Below 1GHz - 15.209

A5_FS_10C CBL015_11A --Factor Set 1:

Factor Set 2: Factor Set 3: Test Equipment: R4 A5

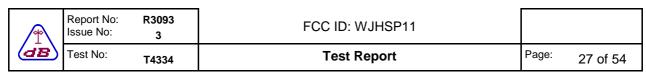
Radia	ted En	nissions	S										
Com	pany:	AlertMe.com Ltd Product: SPG800/SPG130											
Date	e <i>:</i>	08/05/2012 Test Eng: Dave Smith						า					
Ports			000	4 004				4-					
Test Ports		ANSI	C63.	.4:200	J3 using	limits	3 01	15	.209				
Test					using	limits	s of						
	1						ı	1				1	
Plot	Op	Mod	Dist		Freq.	Ant	Rec.		Corr'n	Total	Limit FCC	Margin	Notes
	iviode	State	m	Set	MHz	Pol	Level dBuV	Factor dB/m	Factor dB	Level dBuV/m	dBuV/m	FCC dB	
17	1	0	3	1	48.004	V	4.5	9.6		14.1	40.0	25.9	 qp
17	1	0	3	1	48.004	н	1.0	9.6		10.6	40.0	29.4	qp
17	1	0	3	1	60.003	V	9.1	6.3		15.4	40.0	24.6	qp
17	1	0	3	1	60.003	H	2.0	6.3		8.3	40.0	31.7	qp
17 17	1 1	0 0	3 3	1 1	69.876 69.876	V H	25.5 8.7	6.7 6.7		32.2 15.4	40.0 40.0	7.8 24.6	qp qp
'′	'		3	'	03.070	''	0.7	0.7		13.4	40.0	24.0	96
	Resul	te					Minimu	m Marc	uin.		7.8	dB	
	nesu	115					PASS/F		J II I		PASS	uБ	
No	tes					Comr	ments ar	nd Obse	ervation	าร			•
					scans show	-				annol Th	o obovo ros	ulto moro	
					eveis aid n the EUT tr		-			annen. IN	e above resu	aits were	
			canor		201 (1	31.0111		. 5					
ĺ													
ν.	2)./:		an a		anak ay s		بام مد	oo ole					
L K	ey:		qp - 0	լuası-լ	oeak, av - a	veraç	је, рк -	реак					

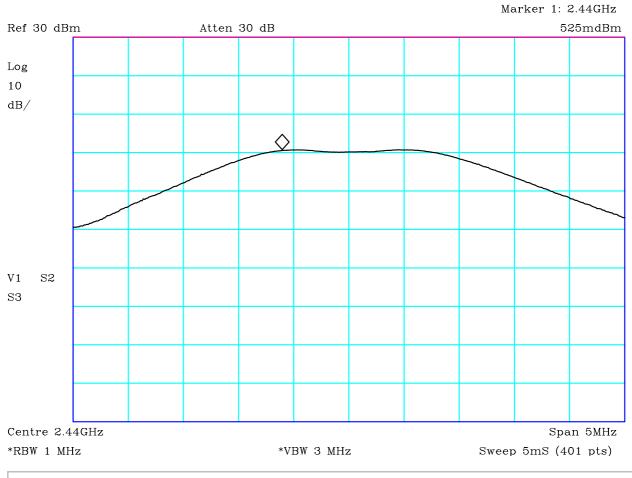




PLOT 1 Peak Power - Channel 11

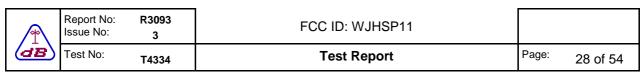
Company:	Alertme		Product:	Smart Plug	
Date:	17/05/2012		Test Eng:	Dave Smith	
Method:	D01 DTS Mea	as Guidance v01	Method:		
Limit1:(VIO)	30dBm		Limit2:		
Limit3:			Limit4:		
	3m which theref	W (-26dB points) us fore complies with t /).			
Facility:	GTEM_1			Mode:	1
				Modification State:	0
		File: F	12417401		

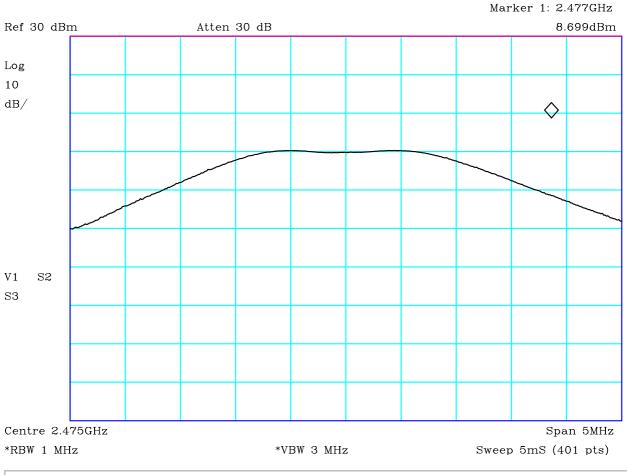




PLOT 2 Peak Power - Channel 18

	7/05/2012			
Method: D	17700/2012	Test Eng:	Dave Smith	
	001 DTS Meas Guidance v01	Method:		
Limit1:(VIO) 3	30dBm	Limit2:		
Limit3:		Limit4:		
	ured over EBW (-26dB points) us n which therefore complies with t of 30dBm (1W).			
Facility: GTI	ΓΕM_1	!	Mode:	1
		ı	Modification State:	0
	File: H	2417404		





PLOT 3 Peak Power - Channel 25

Company:	Alertme		Product:	Smart Plug	
Date:	17/05/2012		Test Eng:	Dave Smith	
Method:	D01 DTS Mea	s Guidance v01	Method:		
Limit1:(VIO)	30dBm		Limit2:		
Limit3:			Limit4:		
	3m which theref	N (-26dB points) usifore complies with the		r.	
Facility:	GTEM_1			Mode:	1
				Modification State:	0
T		File: H2	24173FA		

	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
dB	Test No:	T4334	Test Report	Page:	29 of 54

Marker 1: 2.404GHz
Ref 20 dBm Atten 30 dB -29.33dBm

Log
10
dB/

V1 S2
S3

Centre 2.405GHz

*RBW 100 kHz

*VBW 3 MHz

Sweep 4mS (401 pts)

PLOT 4 6dB Bandwidth - Channel 11

Company:	Alertme	Product:	Smart Plug
Date:	17/05/2012	Test Eng:	Dave Smith
Method:	D01 DTS Meas Guidance v01	Method:	
Limit1:(VIO)	-6dB	Limit2:(GRN)	-26dB
Limit3:		Limit4:	

Channel 11

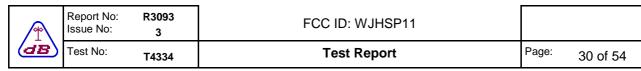
6dB Bandwidth lies between 2.4044125 GHz and 2.4060125GHz.

6dB Bandwidth = 1.60MHz.

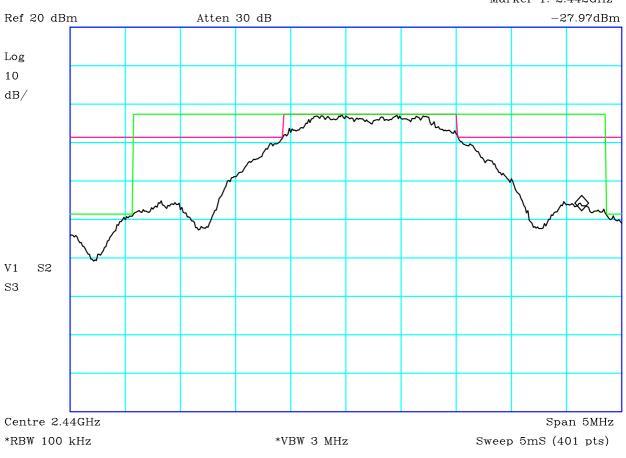
26dB Bandwidth = 4.26MHz.

Part 15.247(a)(2) requires the 6dB bandwidth to be more than 500kHz.

Facility:	GTEM_1			Mode:	1
				Modification State:	0
		File:	H24173E2		



Marker 1: 2.442GHz



PLOT 5 6dB Bandwidth - Channel 18

Company:	Alertme	Product:	Smart Plug
Date:	17/05/2012	Test Eng:	Dave Smith
Method:	D01 DTS Meas Guidance v01	Method:	
Limit1:(VIO)	-6dB	Limit2:(GRN)	-26dB
Limit3:		Limit4:	
Channel 18			

6dB Bandwidth lies between 2.4394250 GHz and 2.4410125GHz.

6dB Bandwidth = 1.59MHz.

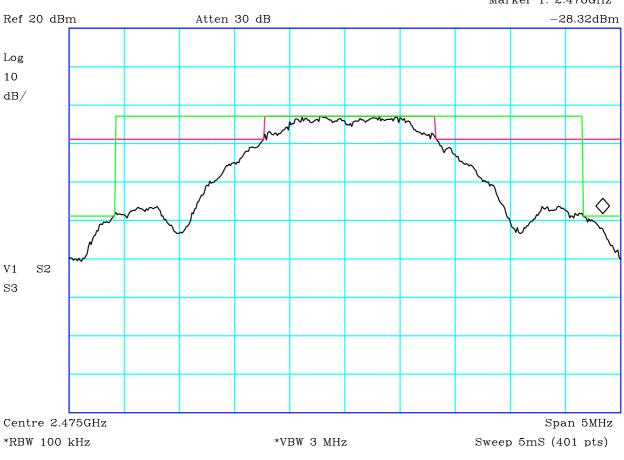
26dB Bandwidth = 4.27MHz.

Part 15.247(a)(2) requires the 6dB bandwidth to be more than 500kHz.

Facility:	GTEM_1			Mode:	1
				Modification State:	0
		File:	H24173EA		

	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
dB	Test No:	T4334	Test Report	Page:	31 of 54

Marker 1: 2.478GHz



PLOT 6 6dB Bandwidth - Channel 25

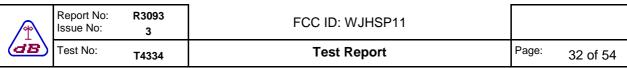
Company:	Alertme	Product:	Smart Plug
Date:	17/05/2012	Test Eng:	Dave Smith
Method:	D01 DTS Meas Guidance v01	Method:	
Limit1:(VIO)	-6dB	Limit2:(GRN)	-26dB
Limit3:		Limit4:	

Channel 25

6dB Bandwidth lies between 2.4744500 GHz and 2.4760125GHz. 6dB Bandwidth = 1.56MHz. 26dB Bandwidth = 4.24MHz.

Part 15.247(a)(2) requires the 6dB bandwidth to be more than 500kHz.

Facility:	GTEM_1			Mode:	1
				Modification State:	0
		File:	H24173F2		



Marker 1: 2.405GHz

Ref 20 dBm Atten 30 dB -17.28dBm

Log 10 dB/

V1 S2 S3

 Centre 2.405GHz
 Span 5MHz

 *RBW 100 kHz
 *VBW 3 MHz
 Sweep 5mS (401 pts)

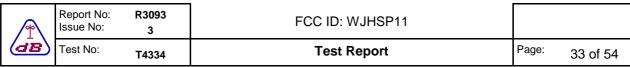
PLOT 7 Spectral Density - Channel 11

CF1:-15.2

=					
Company:	Alertme	Product:	Smart Plug		
Date:	17/05/2012	Test Eng:	Dave Smith		
Method:	D01 DTS Meas Guidance v01	Method:			
Limit1:(VIO)	8dBm/3kHz	Limit2:			
Limit3:		Limit4:			
Channel 11 Maximum spectral density = -17.28 dBm/3kHz					

Maximum spectral density = -17.28 dBm/3kHz Includes correction factor to convert from 100kHz to 3kHz bandwidth (-15.2dB) Part 15 Subpart (c) 15.247(e) requires the spectral density to be below 8dBm/3kHz

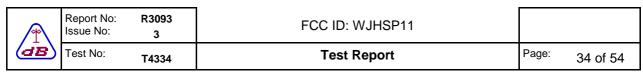
Facility: GTEM_1 Mode: 1
Modification State: 1
File: H241740E

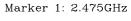


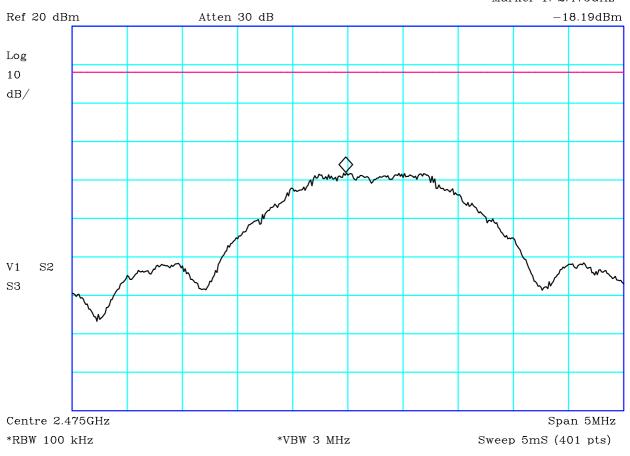
CF1:-15.2

PLOT 8 Spectral Density - Channel 18

Company:	Alertme		Product:	Smart Plug	
Date:	17/05/2012		Test Eng:	Dave Smith	
Method:	D01 DTS Mea	s Guidance v01	Method:		
Limit1:(VIO)	8dBm/3kHz		Limit2:		
Limit3:			Limit4:		
Part 15 Subpart 8dBm/3kHz	on factor to con (c) 15.247(e) re	.9 dBm/3kHz vert from 100kHz t quires the spectral		low	
Facility:	GTEM_1			Mode:	1
				Modification State:	1
		File:	H2417408		







CF1:-15.2

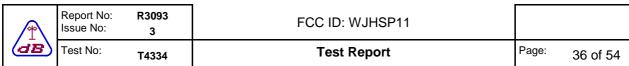
PLOT 9 Spectral Density - Channel 25

Company:	Alertme	Product:	Smart Plug	
Date:	17/05/2012	Test Eng:	Dave Smith	
Method:	D01 DTS Meas Guidan	ce v01 Method:		
Limit1:(VIO)	8dBm/3kHz	Limit2:		
Limit3:		Limit4:		
Includes correct	tral density = -18.19 dBm/3 tion factor to convert from t (c) 15.247(e) requires the	100kHz to 3kHz bandwi		
Facility:	GTEM_1		Mode:	1
			Modification State:	1
	File:	H241740C		

	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
dB	Test No:	T4334	Test Report	Page:	35 of 54

PLOT 10 Antenna Conducted Spurious - 9kHz to 1GHz

Company:	Alertme		Product:	Smart Plug			
Date:	03/05/2012		Test Eng:	Dave Smith			
Method:	D01 DTS Meas Gui	dance v01	Method:				
Limit1:(VIO)	-20dBc		Limit2:				
Limit3:			Limit4:				
Black = Channel 11 Blue = Channel 18 Red = Channel 25 Part 15 Subpart (c) 15.247(d) requires spurious conducted emissions to be at least 20dB below carrier. Carrier level of -2dBm used to set limit. (With 100kHz RBW all channels measured within 0.5dB of -2dBm)							
Facility:	GTEM_1			Mode:	1		
				Modification State:	0		
	File:	H2	40363B				



Marker 1: 2.494GHz Ref 10 dBm Atten 30 dB -53.17dBm Log 10 dB/ V1 V2 VЗ Start 2.38GHz

*VBW 3 MHz

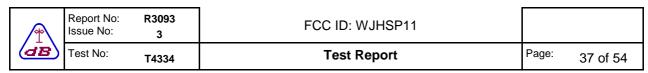
Stop 2.5GHz

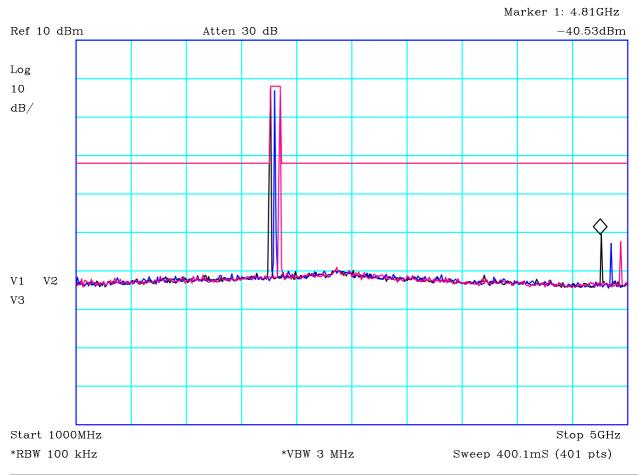
Sweep 12mS (401 pts)

PLOT 11 Antenna Conducted Spurious - near band edges

*RBW 100 kHz

Company:	Alertme		Product:	Smart Plug			
Date:	03/05/2012		Test Eng:	Dave Smith			
Method:	D01 DTS Mea	s Guidance v01	Method:				
Limit1:(VIO)	-20dBc		Limit2:	Limit2:			
Limit3:			Limit4:				
Black = Channel 11 Blue = Channel 18 Red = Channel 25 Part 15 Subpart (c) 15.247(d) requires spurious conducted emissions to be at least 20dB below carrier. Carrier level of -2dBm used to set limit. (With 100kHz RBW all channels measured within 0.5dB of -2dBm)							
Facility:	GTEM_1			Mode:	1		
				Modification State:	0		
		File:	H2403620				

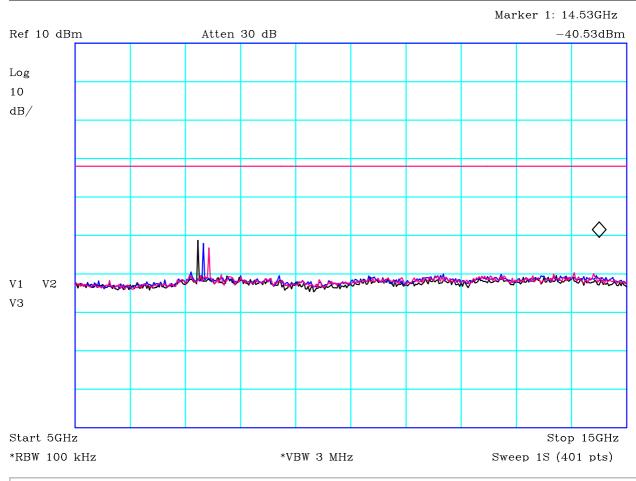




PLOT 12 Antenna Conducted Spurious - 1GHz to 5GHz

Company:	Alertme		Product:	Smart Plug						
Date:	03/05/2012		Test Eng:	Dave Smith						
Method:	D01 DTS Mea	as Guidance v01	Method:							
Limit1:(VIO)	-20dBc		Limit2:							
Limit3:			Limit4:							
Blue = Channel Red = Channel Part 15 Subpart least 20dB below Carrier level of -2 within 0.5dB of -2	Limit3: Black = Channel 11 Blue = Channel 18 Red = Channel 25 Part 15 Subpart (c) 15.247(d) requires spurious conducted emissions to be at least 20dB below carrier. Carrier level of -2dBm used to set limit. (With 100kHz RBW all channel measured within 0.5dB of -2dBm)									
Facility:	GTEM_1			Mode:	1					
				Modification State:	0					
		File:	H2403623							

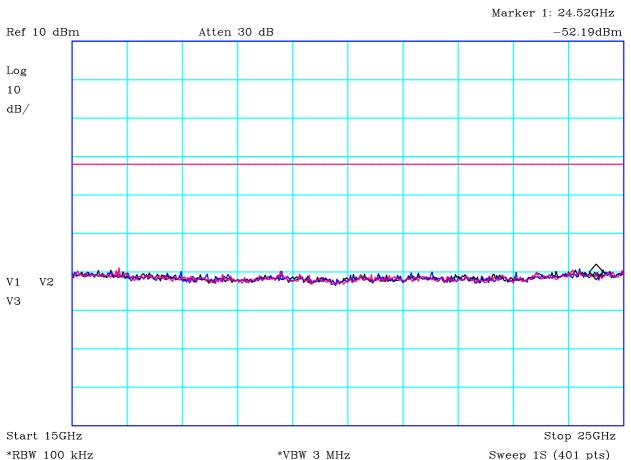
	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
(dB)	Test No:	T4334	Test Report	Page:	38 of 54



PLOT 13 Antenna Conducted Spurious - 5GHz to 15GHz

Company:	Alertme	Product:	Smart Plug
Date:	03/05/2012	Test Eng:	Dave Smith
Method:	D01 DTS Meas Guidance v01	Method:	
Limit1:(VIO)	-20dBc	Limit2:	
Limit3:		Limit4:	
least 20dB below Carrier level of -2 within 0.5dB of -2	18 25 (c) 15.247(d) requires spurious con carrier. 2dBm used to set limit. (With 100kl 2dBm)	Hz RBW all chann	el measured
Facility:	GTEM_1		ode: 1
			odification State: 0
	File: H	2403629	

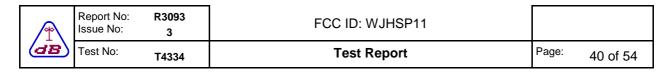
	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
dB	Test No:	T4334	Test Report	Page:	39 of 54

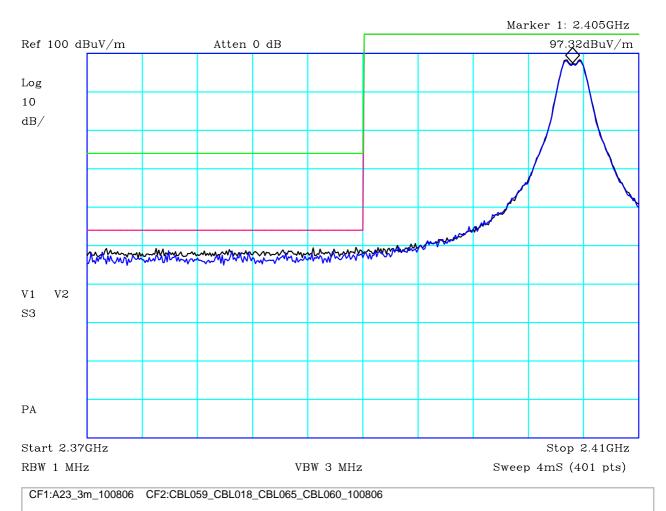


PLOT 14 Antenna Conducted Spurious - 15GHz to 25GHz

Company: Alertme Product: Smart Plug Dave Smith Date: 03/05/2012 Test Eng: Method: D01 DTS Meas Guidance v01 Method: Limit1:(VIO) Limit2: -20dBc

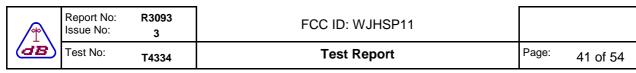
Limit3: Limit4: Black = Channel 11 Blue = Channel 18 Red = Channel 25 Part 15 Subpart (c) 15.247(d) requires spurious conducted emissions to be at least 20dB below carrier. Carrier level of -2dBm used to set limit. (With 100kHz RBW all channel measured within 0.5dB of -2dBm) Facility: GTEM_1 Mode: Modification State: File: H2403636

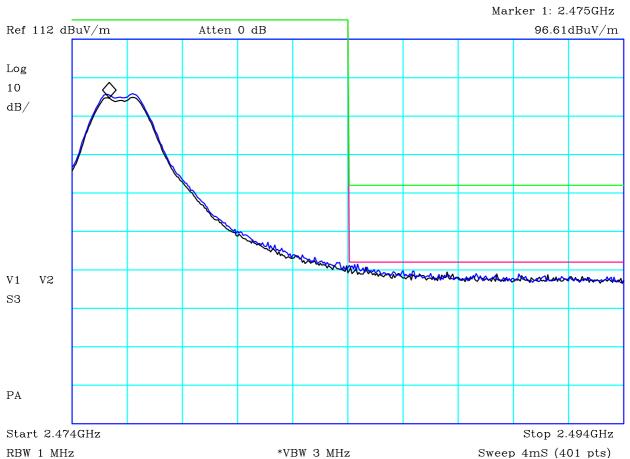




PLOT 15 Radiated Emissions - Ch 11 - Band Edge

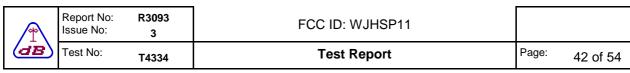
Company:	Alertme		Product:	Smart Plug	
Date:	28/04/2012		Test Eng:	Dave Smith	
Method:	ANSI C63.4		Method:		
Limit1:(VIO)	FCC Restricte	d Bands@3m Av	Limit2:(GRN)	FCC Restricte	d Bands@3m Pk
Limit3:			Limit4:		
Transmitting o Peak measure Maximum of E		ıt.			
Facility:	Anech_2	Height	1.5m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle		File:			

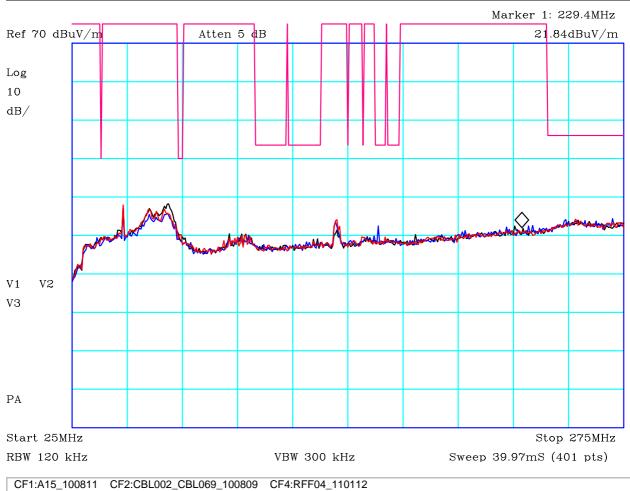




PLOT 16 Radiated Emissions - Ch 25 - Band Edge

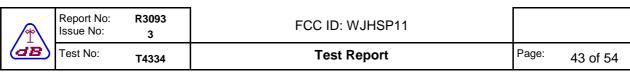
Company:	Alertme		Product:	Smart Plug						
Date:	28/04/2012		Test Eng:	Dave Smith						
Method:	ANSI C63.4		Method:							
Limit1:(VIO)	FCC Restricte	ed Bands@3m Av	Limit2:(GRN)	FCC Restricted Bands@3m Pk						
Limit3:			Limit4:							
Transmitting on Peak measurem	Black:Vertical, Blue: Horizontal Transmitting on channel 25. Peak measurement Maximum of EUT upright and flat.									
Facility:	Anech_2	Height	1.5m	Mode: 1						
Distance	3m	Polarisation	V+H	Modification State: 0						
Angle	0-360	File:	H23285FB							

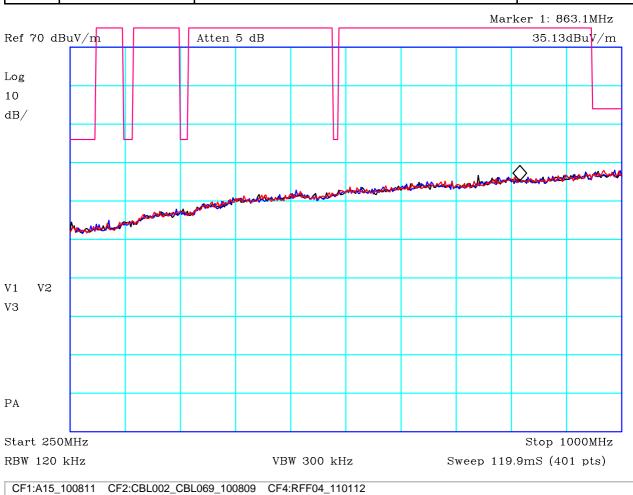




PLOT 17 Radiated Emissions - 25MHz to 275MHz

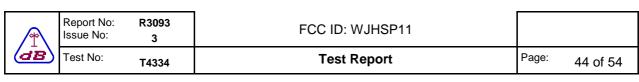
Company:	Alertme		Product:	Smart Plug		
Date:	02/05/2012		Test Eng:	Dave Smith		
Method:	ANSI C63.4	1	Method:			
Limit1:(VIO)	FCC Restri	cted Bands	Limit2:			
Limit3:			Limit4:			
Peak measure Maximum of E	Blue: Ch18, Redement EUT upright and	flat.				
Facility:	Anech_1	Height	1m,1.5m,2m	Mode:	1	
Distance	3m	Polarisation	V+H	Modification State:	0	
Angle	0-360	File:	H240267C			

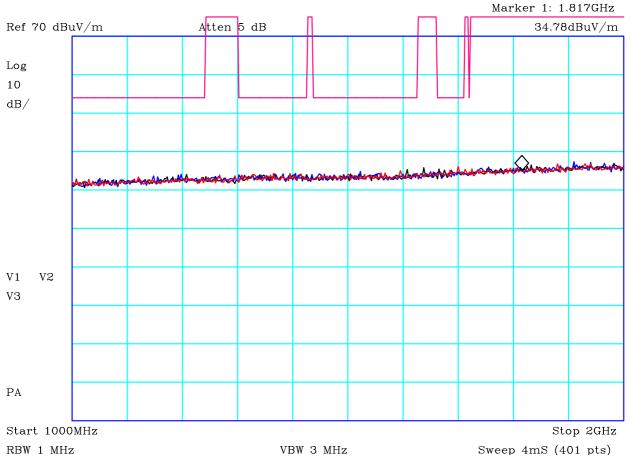




PLOT 18 Radiated Emissions - 250MHz to 1GHz

Company:	Alertme		Product:	Smart Plug				
Date:	02/05/2012	2	Test Eng:	Dave Smith				
Method:	ANSI C63.	4	Method:					
Limit1:(VIO)	FCC Restr	icted Bands	Limit2:					
Limit3:			Limit4:					
Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.								
Facility:	Anech_1	Height	1m,1.5m,2m	Mode:	1			
Distance	3m	Polarisation	V+H	Modification State:	0			
		File:						

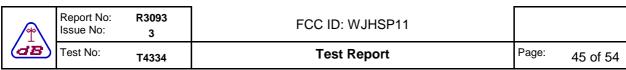


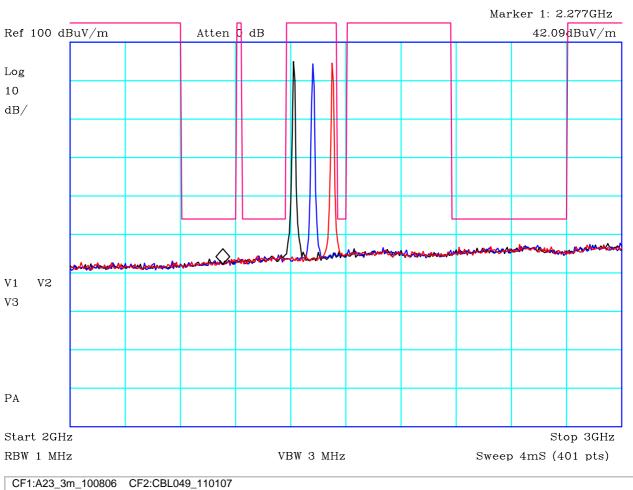


CF1:A23_3m_100806 CF2:CBL002_CBL069_100809 CF3:PRE7_110112 CF4:RFF04_110112

PLOT 19 Radiated Emissions - 1GHz to 2GHz

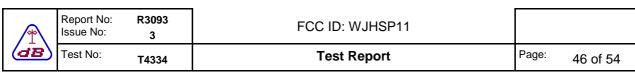
Company:	Alertme		Product:	Smart Plug	
Date:	02/05/2012		Test Eng:	Dave Smith	
Method:	ANSI C63.4		Method:		
Limit1:(VIO)	FCC Restricte	d Bands	Limit2:		
Limit3:			Limit4:		
Black: Ch11, Blu Peak measuren Maximum of EU	nent	at.			
Facility:	Anech_1	Height	1m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H2402600		

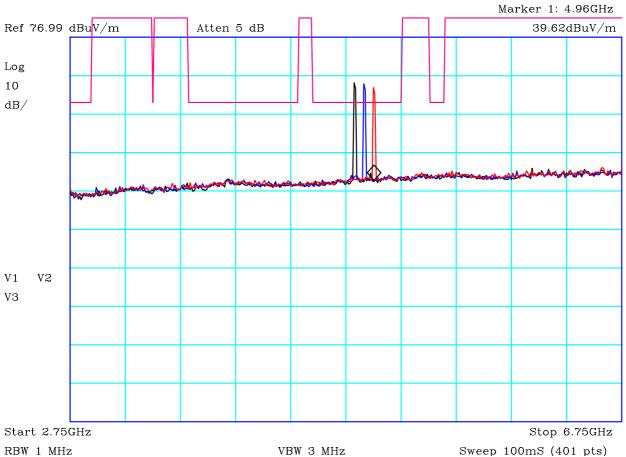




PLOT 20 Radiated Emissions - 2GHz to 3GHz

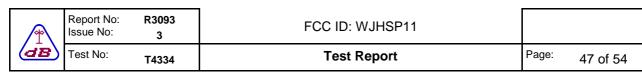
Company:	Alertme		Product:	Smart Plug	
Date:	28/04/2012		Test Eng:	Dave Smith	
Method:	ANSI C63.4		Method:		
Limit1:(VIO)	FCC Restricte	ed Bands@3m Av	Limit2:		
Limit3:			Limit4:		
Black: Ch11, Blu Peak measurem Maximum of EU	ent	at.			
Facility:	Anech_2	Height	1.5m	Mode:	1
Distance	3m	Polarisation	V+H	Modification State:	0
Angle	0-360	File:	H23285A8		

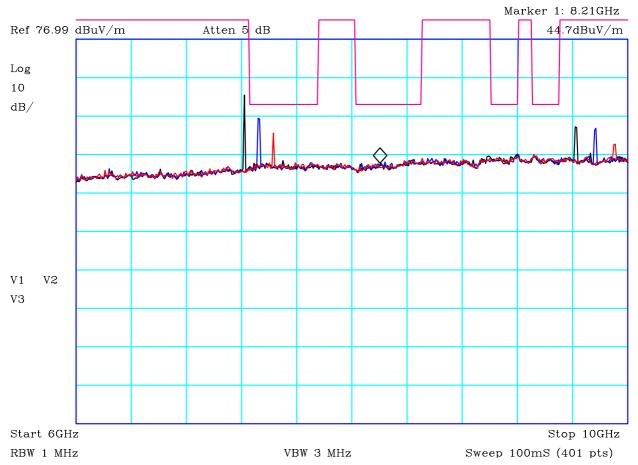




PLOT 21 Radiated Emissions - 2.75GHz to 6.75GHz

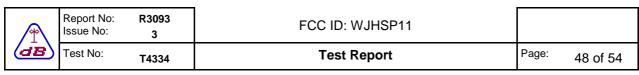
Company:	Alertme		Product:	Smart Plug				
Date:	28/04/2012		Test Eng:	Dave Smith				
Method:	ANSI C63.4		Method:					
Limit1:(VIO)	FCC Restricte	d Bands@1.5m	Limit2:					
Limit3:			Limit4:					
Black: Vertical, Blue: Horizontal Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.								
Facility:	Anech_2	Height	1.5m	Mode:	1			
Distance	1.5m	Polarisation	V+H	Modification State:	0			
Angle	0-360	File:	H2328638					

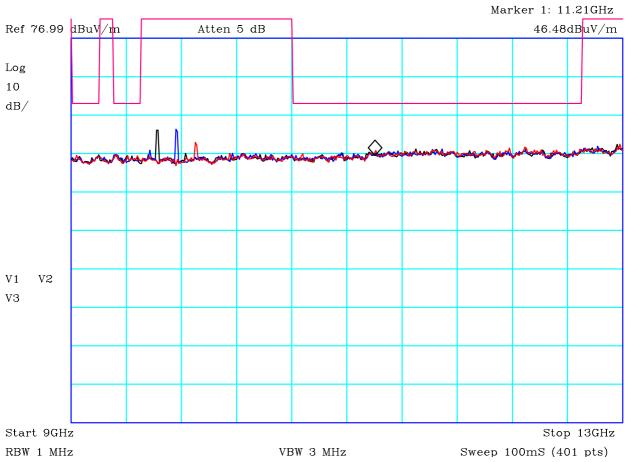




PLOT 22 Radiated Emissions - 6GHz to 10GHz

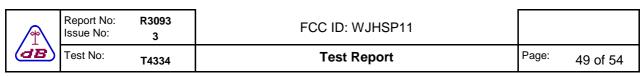
Company:	Alertme		Product:	Smart Plug				
Date:	28/04/2012		Test Eng:	Dave Smith				
Method:	ANSI C63.4		Method:					
Limit1:(VIO)	FCC Restricte	ed Bands@1.5m	Limit2:					
Limit3:			Limit4:					
Black: Vertical, Blue: Horizontal Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.								
Facility:	Anech_2	Height	1.5m	Mode:	1			
Distance	1.5m	Polarisation	V+H	Modification State:	0			
Angle	0-360	File:	H2328660					

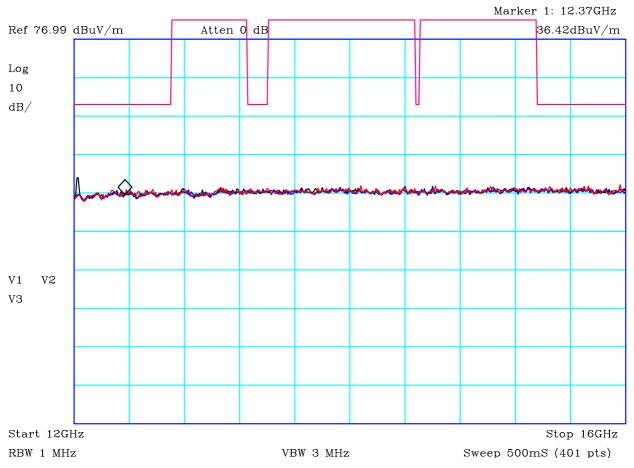




PLOT 23 Radiated Emissions - 9GHz to 13GHz

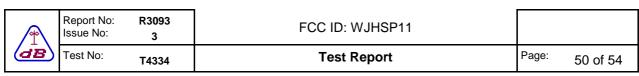
Company:	Alertme		Product:	Smart Plug		
Date:	28/04/2012		Test Eng:	Dave Smith		
Method:	ANSI C63.4		Method:			
Limit1:(VIO)	FCC Restricte	ed Bands@1.5m	Limit2:			
Limit3:			Limit4:			
Black: Vertical, Blue: Horizontal Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.						
Facility:	Anech_2	Height	1.5m	Mode:	1	
Distance	1.5m	Polarisation	V+H	Modification State:	0	
Angle	0-360	File:	H232867F			

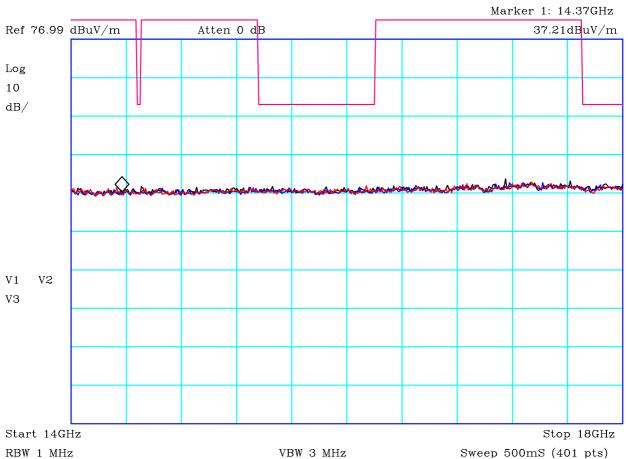




PLOT 24 Radiated Emissions - 12GHz to 16GHz

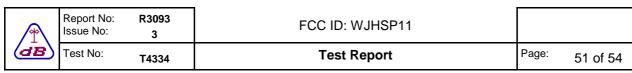
Company:	Alertme		Product:	Smart Plug		
Date:	01/05/2012		Test Eng:	Dave Smith		
Method:	ANSI C63.4		Method:			
Limit1:(VIO)	FCC Restricte	ed Bands@1.5m	Limit2:			
Limit3:			Limit4:			
Black: Vertical, Blue: Horizontal Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.						
Facility:	Anech_2	Height	1.5m	Mode:	1	
Distance	1.5m	Polarisation	V+H	Modification State:	0	
Angle	0-360	File:	H24016EF			

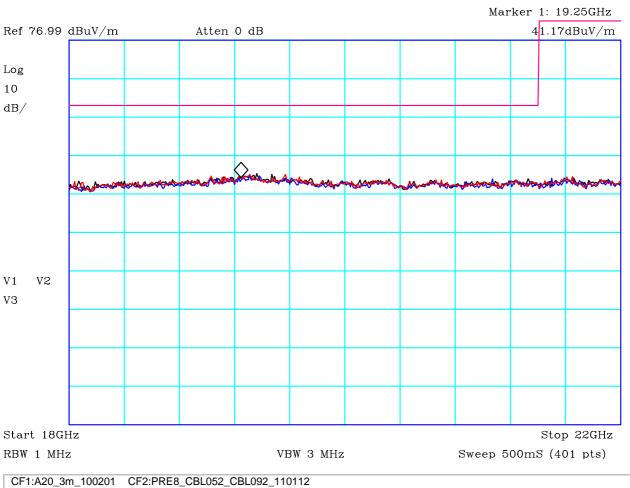




PLOT 25 Radiated Emissions - 14GHz to 18GHz

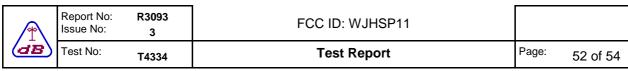
Company:	Alertme		Product:	Smart Plug		
Date:	01/05/2012		Test Eng:	Dave Smith		
Method:	ANSI C63.4		Method:			
Limit1:(VIO)	FCC Restricte	d Bands@1.5m	Limit2:			
Limit3:			Limit4:			
Black: Vertical, Blue: Horizontal Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.						
Facility:	Anech_2	Height	1.5m	Mode:	1	
Distance	1.5m	Polarisation	V+H	Modification State:	0	
Angle	0-360	File:	H2401711			

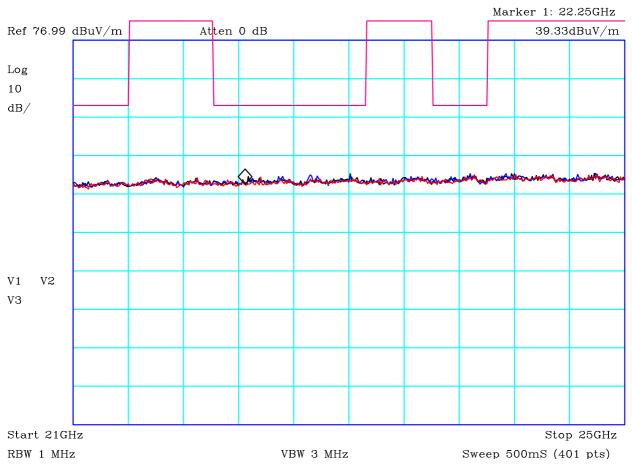




PLOT 26 Radiated Emissions - 18GHz to 22GHz

Company:	Alertme		Product:	Smart Plug		
Date:	01/05/2012		Test Eng:	Dave Smith		
Method:	ANSI C63.4		Method:			
Limit1:(VIO)	FCC Restricte	d Bands@1.5m	Limit2:			
Limit3:			Limit4:			
Black: Vertical, Blue: Horizontal Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.						
Facility:	Anech_2	Height	1.5m	Mode:	1	
Distance	1.5m	Polarisation	V+H	Modification State:	0	
Angle	0-360	File:	H2401810			



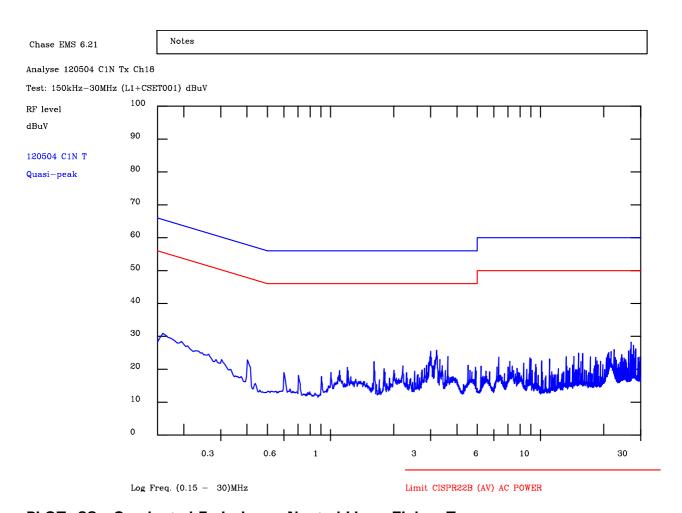


PLOT 27 Radiated Emissions - 21GHz to 25GHz

CF1:A20_3m_100201 CF2:PRE8_CBL052_CBL092_110112

Company:	Alertme		Product:	Smart Plug		
Date:	01/05/2012		Test Eng:	Dave Smith		
Method:	ANSI C63.4		Method:			
Limit1:(VIO)	FCC Restricte	d Bands@1.5m	Limit2:			
Limit3:			Limit4:			
Black: Vertical, Blue: Horizontal Black: Ch11, Blue: Ch18, Red: Ch25 Peak measurement Maximum of EUT upright and flat.						
Facility:	Anech_2	Height	1.5m	Mode:	1	
Distance	1.5m	Polarisation	V+H	Modification State:	0	
Angle	0-360	File:	H24017FA			

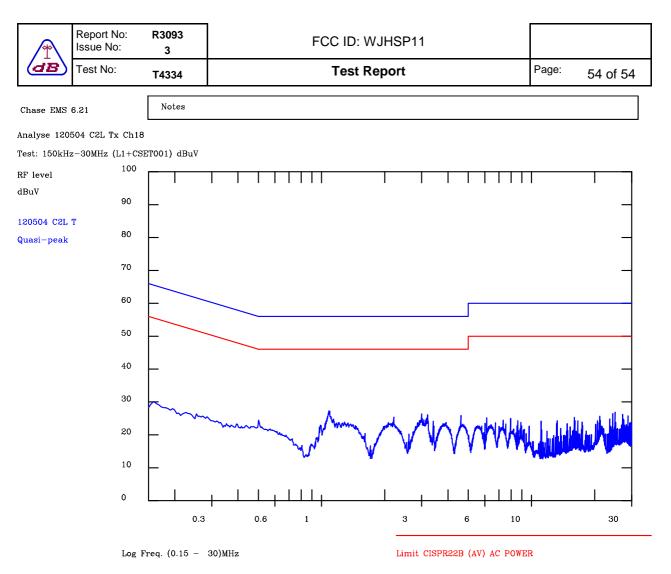
	Report No: Issue No:	R3093 3	FCC ID: WJHSP11		
dB	Test No:	T4334	Test Report	Page:	53 of 54



PLOT 28 Conducted Emissions - Neutral Line - Zigbee Tx

Company:	Alertme		Product:	SmartPlug				
Date:	04 May 12		Test Enginee	er: Dave Smith				
Test:	FCC Part 15		Limit:	FCC classB				
Notes:								
Transmitting on C	Ch 18							
Equip:R1,L1,AB	Equip:R1,L1,AB002,CBL005,CBL039							
Line:	Neutral	Attenuator:	10dB PAD	Operating Mode:	1			
Detector:	QuasiPeak			Mod. State:	0			
LISN:	EMCO	Filename:	C2504735.plt					

Frequency List (MHz)



PLOT 29 Conducted Emissions - Live Line - Zigbee Tx

Company:	Alertme		Product:	SmartPlug				
Date:	04 May 12		Test Engineer:	Dave Smith				
Test:	FCC Part 15		Limit:	FCC classB				
Notes: Transmitting on C	Notes: Transmitting on Ch 18							
Equip:R1,L1,AB(002,CBL005,CBL	.039						
Line:	Live	Attenuator:	10dB PAD	Operating Mode:	1			
Detector:	QuasiPeak			Mod. State:	0			
LISN:	EMCO	Filename:	C2504747.plt					

Frequency List (MHz)