



FCC 47CFR part 15C Test Report For i2TX-L1, i2TX-L2, i2TX-L3

Reference Standard: FCC 47CFR part 15C

Manufacturer: Hive Industries

For type of equipment and serial number, refer to section 3

Report Number: 10-035/4818/2A/11

Supersedes report # 10-035/4818/2/11

Report Produced by: -

R.N. Electronics Ltd.

1 Arnolds Court
Arnolds Farm Lane
Mountnessing
Essex
CM13 1UT
U.K.

www.RNelectronics.com

Telephone +44 (0) 1277 352219
Facsimile +44 (0) 1277 352968

1. Contents

1.	Contents.....	2
2.	Summary of test results	3
3.	Equipment Under Test (EUT)	4
3.1	EQUIPMENT SPECIFICATION.....	4
3.2	EUT CONFIGURATIONS FOR TESTING.....	4
3.3	EUT MODES	5
3.4	EMISSIONS CONFIGURATION	6
4.	Specifications.....	7
4.1	DEVIATIONS	7
4.2	TESTS AT EXTREMES OF TEMPERATURE & VOLTAGE	7
4.3	MEASUREMENT UNCERTAINTIES.....	7
5.	Tests, Methods and Results	8
5.1	CONDUCTED EMISSIONS.....	8
5.2	RADIATED EMISSIONS	8
5.3	INTENTIONAL RADIATOR FIELD STRENGTH.....	10
5.4	FREQUENCY STABILITY	11
5.5	PERIODIC OPERATION AND EMISSIONS.....	11
5.6	OCCUPIED BANDWIDTH AND BAND EDGE.....	12
6.	Plots and Results	13
6.1	CONDUCTED EMISSIONS	13
6.2	RADIATED EMISSIONS.....	14
6.3	DUTY CYCLE	23
6.4	20dB BANDWIDTH.....	24
7	Explanatory Notes	25
7.1	EXPLANATION OF FAIL LIMIT 1 STATEMENT	25
7.2	EXPLANATION OF LIMIT LINE CALCULATIONS FOR RADIATED MEASUREMENTS	25
8.	Photographs	26
9.	Signal Leads	31
10.	Test Equipment Calibration list	32
11.	Auxiliary equipment	33
11.1	AUXILIARY EQUIPMENT SUPPLIED BY HIVE INDUSTRIES.....	33
11.2	AUXILIARY EQUIPMENT SUPPLIED BY RN ELECTRONICS LIMITED	33
12.	Modifications	34
12.1	MODIFICATIONS BEFORE TEST	34
12.2	MODIFICATIONS DURING TEST	34
13.	Compliance information	35
14	Description of Test Sites	36
15	Abbreviations and Units	37

2. Summary of test results

The i2TX-L3 was tested to the following standards: -

FCC 47CFR Part 15C (effective date October 1st, 2011); Class DSC Intentional Radiator

Any compliance statements are made reliant on the modes of operation as instructed to us by the Manufacturer based on their specific knowledge of the application and functionality of the equipment tested. Whilst every effort is made to assure quality of testing, type tests are not exhaustive and although no non-conformances may be found, this doesn't exclude the possibility of equipment not meeting the intentions of the standard, particularly under different conditions to those during testing.

Title	Reference	Results
1. Conducted emissions	ANSI C63.10 §6.2	Not Applicable ¹
2. Radiated emissions	ANSI C63.10 §6.4 – 6.6	PASSED
3. Intentional radiator field strength	ANSI C63.10 §6.5.	PASSED
4. Occupied bandwidth and band edge	ANSI C63.10 §6.9.	PASSED
5. Frequency stability	ANSI C63.10 §6.8.	Not Applicable ²
6. Periodic operation and emissions	ANSI C63.10 §7.4. – 7.6.	PASSED

¹ EUT does not operate from the AC power lines nor contain provisions for operation while connected to AC power lines.

² EUT is not operating in the 40.66 – 40.70 MHz band, therefore no limits are specified.

This report relates to the equipment tested as identified by a unique serial number and at the time it was tested. It does not relate to any other similar equipment and performance of the product before or after the test cannot be guaranteed.

Date of Test:

6th & 7th October 2011

Test Engineer:



Approved By:



Customer Representative:



3. Equipment Under Test (EUT)

3.1 Equipment Specification

Applicant	Hive Industries 126 Great North Road Unit 1A Hatfield Hertfordshire AL9 5JN
Manufacturer of EUT	Hive Industries
Brand name of EUT	Interspace Industries
Model Number of EUT	i2TX-L3 / i2TX-L2 / i2TX-L1
Proposed FCC ID	T3QI2TXL
Serial Number of EUT	FCC 01
Date when equipment was received by RN Electronics	30th September 2011
Date of test:	6th & 7th October 2011
Customer order number:	RD4086
Visual description of EUT:	A small black hand held unit. The top face incorporates 4 push buttons. A yellow to activate a green laser out of the top, a red and green to provide a left and right output, and a black button which for purposes of test was set to continuously activate the transmitter. The unit has a battery compartment on the rear.
Main function of the EUT:	A remote control for a slide show presentation cueing.
Purpose of test:	To demonstrate compliance of the i2TX-L series of remote controls with the current FCC rules for purposes of Certification. There are three product variants: i2TX-L1, i2TX-L2 and i2TX-L3. The manufacturer has declared all three variants to be electrically identical. Physically the number of push buttons on the control (ignoring the laser push button) are 1, 2 and 3 for the 3 models respectively.
Height	130 mm
Width	55 mm
Depth	30 mm
Weight	0.112 g
Voltage	1.5 V DC for RF, separate battery for the laser.
Current required from above voltage source	0.05 mA

3.2 EUT Configurations for testing

Frequency range	434.075MHz
Normal use position	Hand Held
Normal test signals	Internally generated
Declared power level	approx. -15dBm
Declared channel bandwidth	approx. 50kHz
Highest frequency generated / used	434.075MHz
Lowest frequency generated / used	4MHz

3.3 EUT Modes

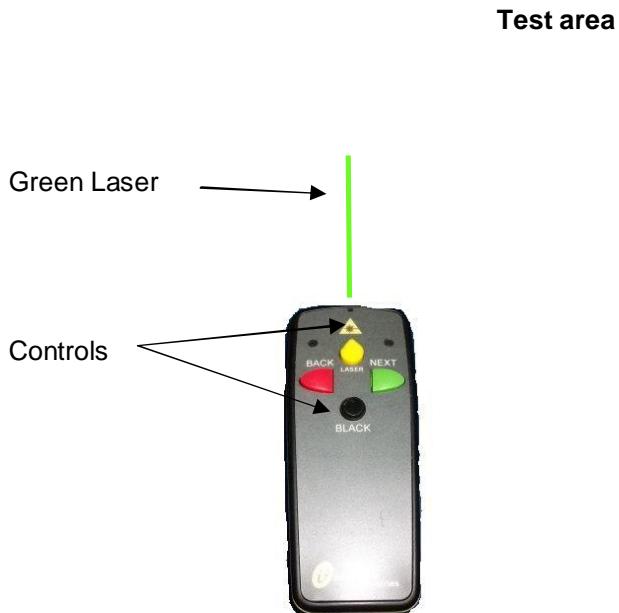
Mode	Description of mode	Used for Testing
Continuous Transmit	EUT continuously transmitting system modulation	YES
Normal mode	EUT transmitting message on button push	YES

Description of ancillary equipment connected to the equipment under test, for the purpose of tests, can be found in Section 10.

Any modifications made to the EUT, whilst under test, can be found in Section 11.

This report was printed on: 19 December 2011

3.4 Emissions Configuration



The EUT was powered via a new battery. A separate battery was used to power the laser pointer and this was in situ for tests. Both batteries are located in the battery compartment on the rear of the unit. For the purpose of test the unit was able to be switched into a permanent transmit mode by pressing the black button once. This mode was specially provided by Hive industries Ltd for test purposes. The yellow button operated the laser pointer and the Green and Red buttons transmitted a signal as in normal use to move the slides back and forward (left and right) on each individual button press.

The EUT has no connecting leads or ports of any type.

4. Specifications

The tests were performed by RN Electronics Engineer Peter Finley who set up the tests, the test equipment, and operated it in accordance with the **R.N. Electronics Ltd** procedures manual, FCC Part 15, ANSI C63.10-2009 and those specifications incorporated by reference into 47CFR15 (e.g. ANSI C63.4-2003).

R.N. Electronics Ltd sites M and OATS are listed with the FCC. Registration Number 293246

4.1 Deviations

Deviations from ANSI C63.10:

ANSI C63.4-2003 was used rather than latest ANSI C63.4-2009.

Deviations from FCC Part 15:

None.

4.2 Tests at Extremes of Temperature & Voltage

No testing at extremes was required for this device.

Tests were performed radiated using the EUT integral antenna.

4.3 Measurement Uncertainties

Parameter	Uncertainty
Transmitter Tests	
Bandwidth	<± 1.9 %
Radiated RF power	<± 3.5 dB
Radiated spurious emissions	<± 3.4 dB
Attack and release times	<± 5.1 ms

5. Tests, Methods and Results

5.1 Conducted emissions

Not applicable.

EUT does not operate from the AC power lines nor contain provisions for operation while connected to AC power lines.

5.2 Radiated emissions

5.2.1 Test Methods

Test Requirements	FCC Part 15C, Reference (15.209)
-------------------	----------------------------------

Test Method:	ANSI C63.10, Reference (6.4 – 6.6.)
--------------	-------------------------------------

5.2.1.1 Configuration of EUT

The EUT was placed on a 0.8 metres high turntable. The front edge of the EUT was initially positioned facing the antenna. The EUT was measured at a distance of 3 metres. The EUT was rotated in all three orthogonal planes. Radiated Emissions testing was performed with a new battery. The EUT was operated in continuous transmit mode.

5.2.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below.

Below 30MHz, measurements were made in a semi-anechoic chamber. The antenna was placed 1m above the ground. The equipment and the antenna were rotated 360° to record the worst case emissions.

30MHz - 1GHz, measurements were made on a site listed with the FCC. The equipment was rotated 360° and the antenna scanned 1 – 4 metres in both horizontal and vertical polarisations to record the worst case emissions.

Above 1GHz, measurements were made in a semi-anechoic chamber with appropriate absorbing material for use in this range. The EUT was raised and the antenna was placed 1.5m above the ground in line with the EUT, which was rotated through 360° to record the worst case emissions.

At least 6 signals within 20dB and all signals within 10dB of the limits were investigated.

5.2.2 Test results

Final tests were performed using Test Site M.

Test Environment:

Temperature: 20°C	Humidity: 50%
-------------------	---------------

Analyser plots for the Peak / Average values as applicable can be found in Section 6.2 of this report. These are shown against the general limits of 15.209.

Note: EUT tested in a continuous transmit mode for ease of test.

Measuring Polarisation	Frequency (MHz)	Measured result PK (dBuV/m @3m)	Duty cycle adjustment (dB)	Total AV (dBuV/m @3m)
Vertical	-	-	-	-
Horizontal	-	-	-	-

No signals found within 20dB of the limits.

The highest harmonic observed was 3906MHz, which was more than 20dB below the restricted band limit.

LIMITS:

15.209 limits are applicable in the restricted bands of 15.205 with the relevant detector.
15.231(b) limits are applicable elsewhere, although 15.209 limits may be used where these allow a higher field strength.

These show that the **EUT** has **PASSED** this test.

5.2.2.1 Test Equipment used

E410, E411, E412, TMS933, E268, E342, TMS81, TMS82

See Section 10 for more details

5.3 Intentional radiator field strength

5.3.1 Test Methods

Test Requirements	FCC Part 15C, Reference (15.231b)
Test Method:	ANSI C63.10, Reference (6.5)

5.3.1.1 Configuration of EUT

The EUT was placed on a 0.8 metres high turntable. The front edge of the EUT was initially positioned facing the antenna. The EUT was measured at a distance of 3 metres. The antenna was scanned 1-4m in height in both Horizontal and Vertical polarisations. The EUT was rotated in all three orthogonal planes. The EUT was operated in continuous transmit mode.

5.3.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below.

Measurements were made in a semi-anechoic chamber.

Both the equipment and the antenna were rotated 360° to record the maximised emission.

5.3.2 Test results

Test Environment:

Temperature: 20°C Humidity: 50 %

Any Analyser plots can be found in Section 6.2 of this report.

Channel	Measured result	Duty cycle adjustment (dB)	Total
434.075MHz	PK (dBuV/m @3m)		AV (dBuV/m @3m)
Horizontal	79.7	0	79.7

Limits:

15.231(b) Average = 11,000uV/m = 80.8 dBuV/m @ 3m.

15.35 Peak = 20dB above the maximum permitted average emission limit = 100.8 dBuV/m @ 3m.

These results show that the EUT has **PASSED** this test.

5.3.2.1 Test Equipment used

E410, E411, E412, TMS933

See Section 10 for more details

5.4 Frequency stability

Not applicable.

EUT is not operating in the 40.66 – 40.70 MHz band, therefore no limits are specified.

5.5 Periodic operation and emissions

5.5.1 Test Methods

Test Requirements	FCC Part 15C, Reference (15.231a)
Test Method:	ANSI C63.10, Reference (7.4 – 7.6)

5.5.1.1 Configuration of EUT

The EUT was placed on a 0.8 metres high turntable. The front edge of the EUT was initially positioned facing the antenna. The EUT was measured at a distance of 3 metres. The EUT was operated in normal transmit mode.

5.5.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below. The centre frequency of the analyser was set to that of the transmitter, and the span set to zero. The sweep time was adjusted so that either the pulse width or the periodic operation could be observed.

Test site 'M' has been listed with the FCC.

5.5.2 Test results

Tests were performed using Test Site **M**.

Temperature of test Environment: 20°C

Analyser plots for the dwell time and duty cycle can be found in Section 6.3 of this report.

State	Result (ms)	Plot reference
TX on period	332.5	4818-2 Duty On Time
TX Off period	Off within 5s of release	4818-2 Duty Off Time

Limits:

15.231(a)(1) a manually operated transmitter shall employ a switch that will deactivate the transmitter within not more than 5 seconds of being released.

These results show that the **EUT** has **PASSED** this test.

The cycle is greater than 100ms, so no duty cycle correction factor applicable.

5.5.2.1 Test Equipment used

E410, E411, E412, TMS933

See Section 10 for more details.

5.6 Occupied bandwidth and band edge

5.6.1 Test Methods

Test Requirements	FCC Part 15C, Reference (15.231c)
Test Method:	ANSI C63.10, Reference (6.9)

5.6.1.1 Configuration of EUT

The EUT was placed on a 0.8 metres high turntable. The front edge of the EUT was initially positioned facing the antenna. The EUT was measured at a distance of 3 metres. The EUT was operated in normal transmit mode.

5.6.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below. A 1kHz RBW, 3x VBW, auto sweep time and max hold settings were used.

5.6.2 Test results

Tests were performed using Test Site **M**.

Temperature of test Environment: 20°C

Analyser plots for the 20dB bandwidth can be found in Section 6.4 of this report.

Channel	Result	Plot reference
Bottom	-	-
Middle	50.635kHz	4818-2 20dB BW
Top	-	-

n.b. The EUT only had a single channel.

Limits: 15.231(c) must be <0.25% of centre frequency, Fc 434.075MHz = 1.085MHz.

Band edge compliance applies only to 40.66 – 40.70 MHz band.

The restricted band edges closest to the EUT frequency of 434.075MHz are 410 & 608MHz. Further wider span plots have been taken to show the fact that there are no spurious emissions above the restricted limits of 15.209. See section 6.2 of this report.

These results show that the **EUT** has **PASSED** this test.

5.6.2.1 Test Equipment used

E410, E411, E412, TMS933

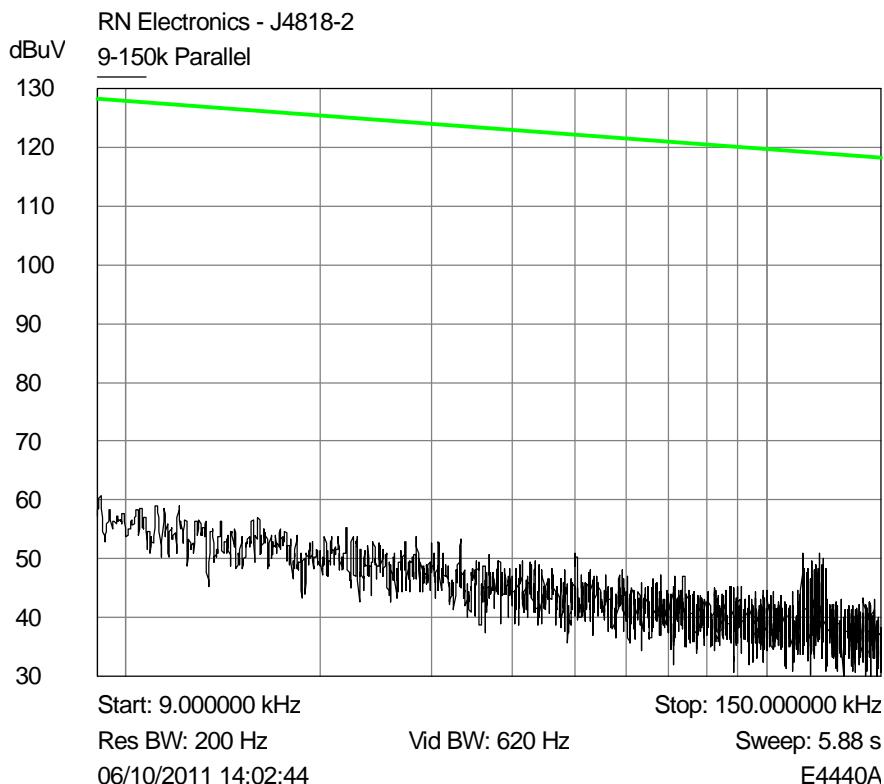
See Section 10 for more details.

6. Plots and Results

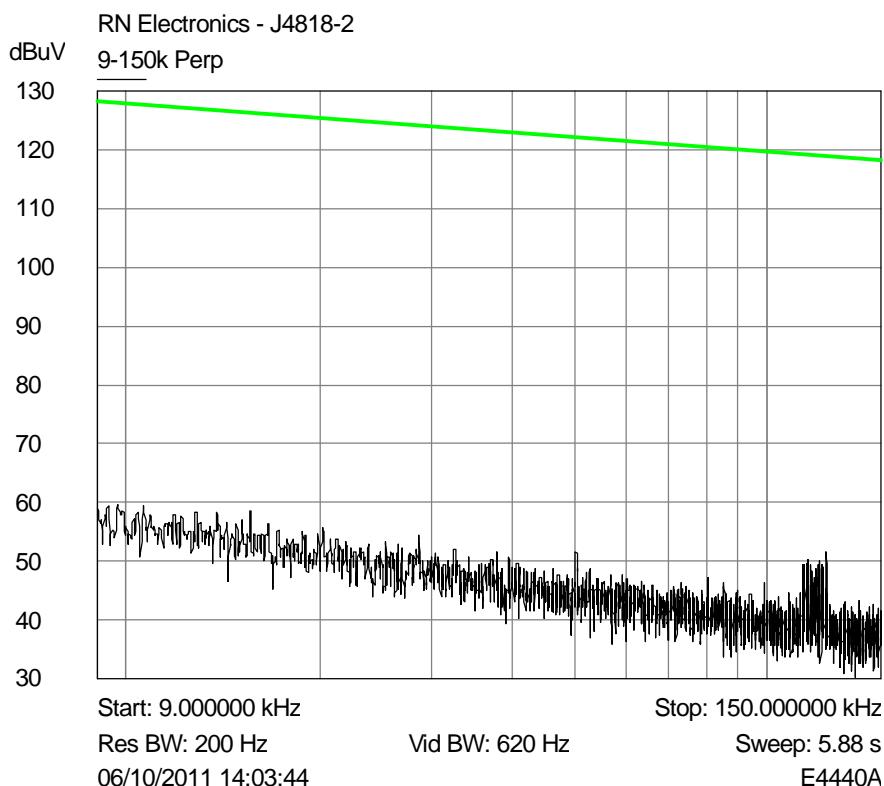
6.1 Conducted Emissions

Not applicable. The EUT is not powered from the mains.

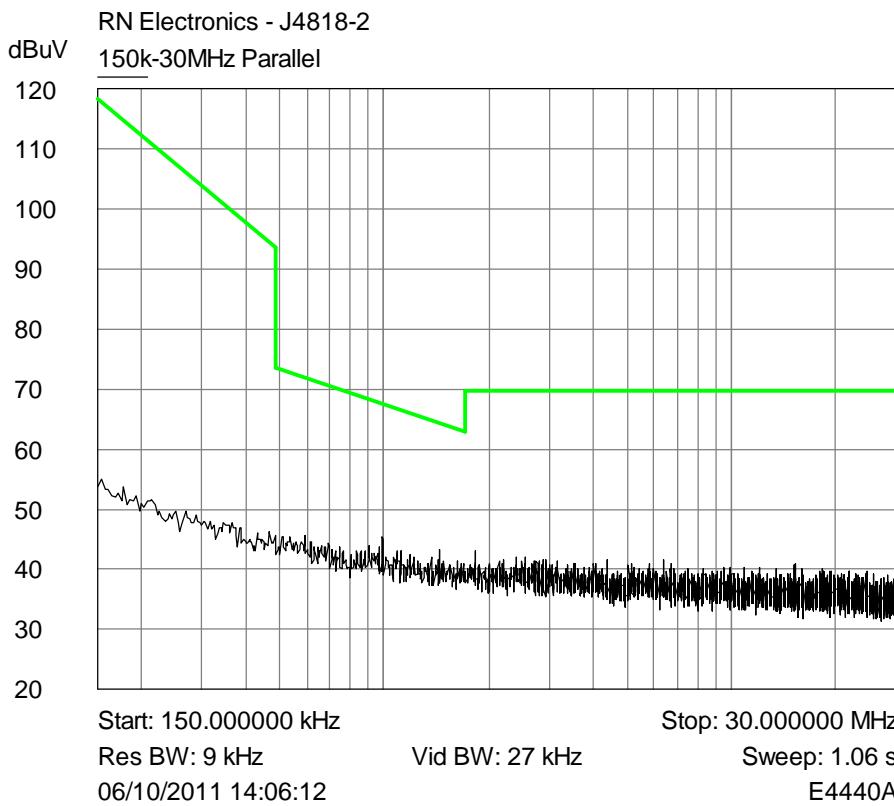
6.2 Radiated Emissions



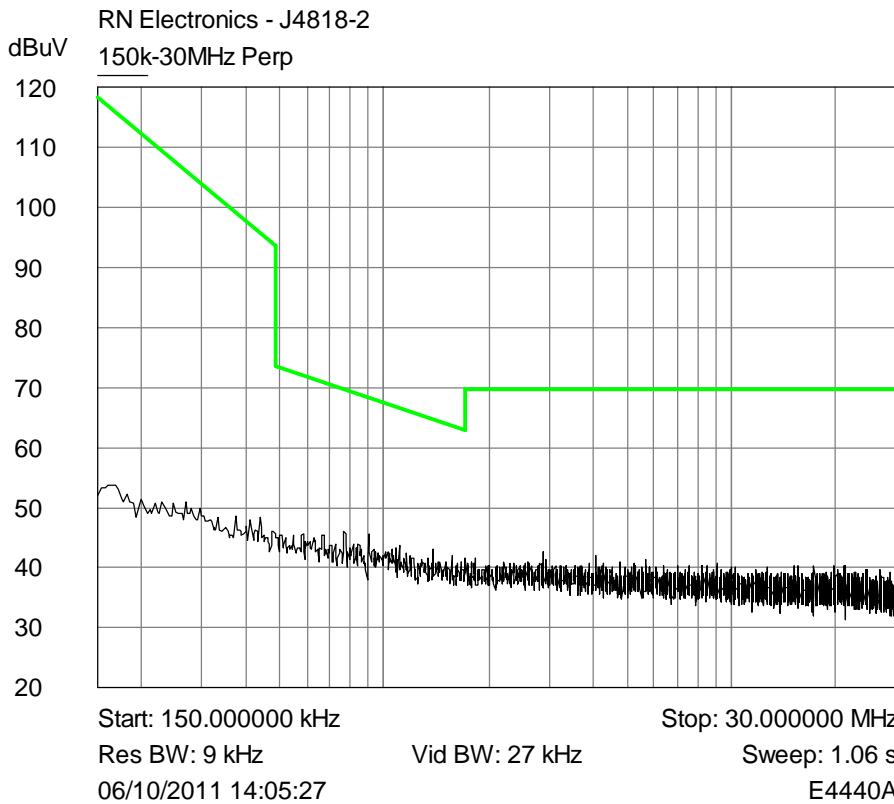
Plot of peak Parallel emissions 9kHz – 150kHz against the quasi-peak limit line.



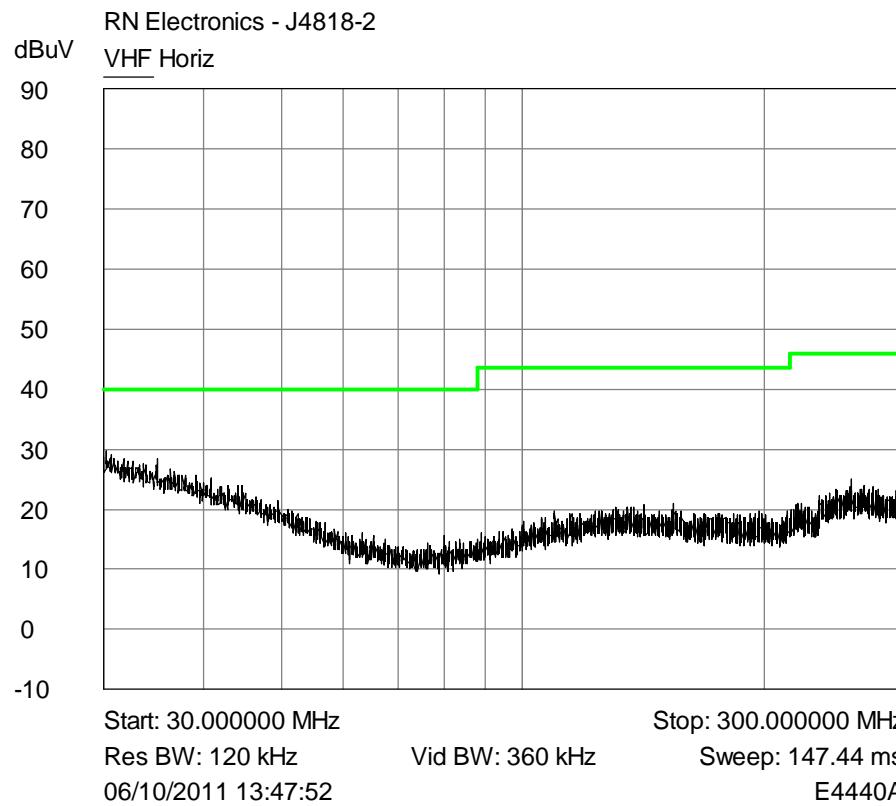
Plot of peak Perpendicular emissions 9kHz – 150kHz against the quasi-peak limit line.



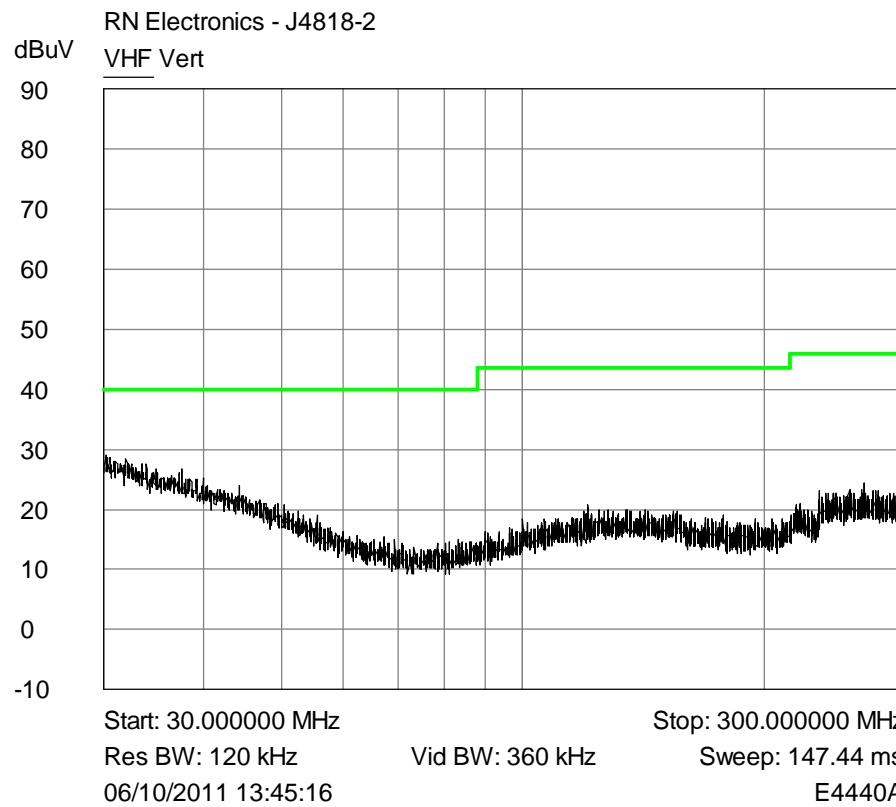
Plot of peak Parallel emissions 150kHz – 30MHz against the quasi-peak limit line



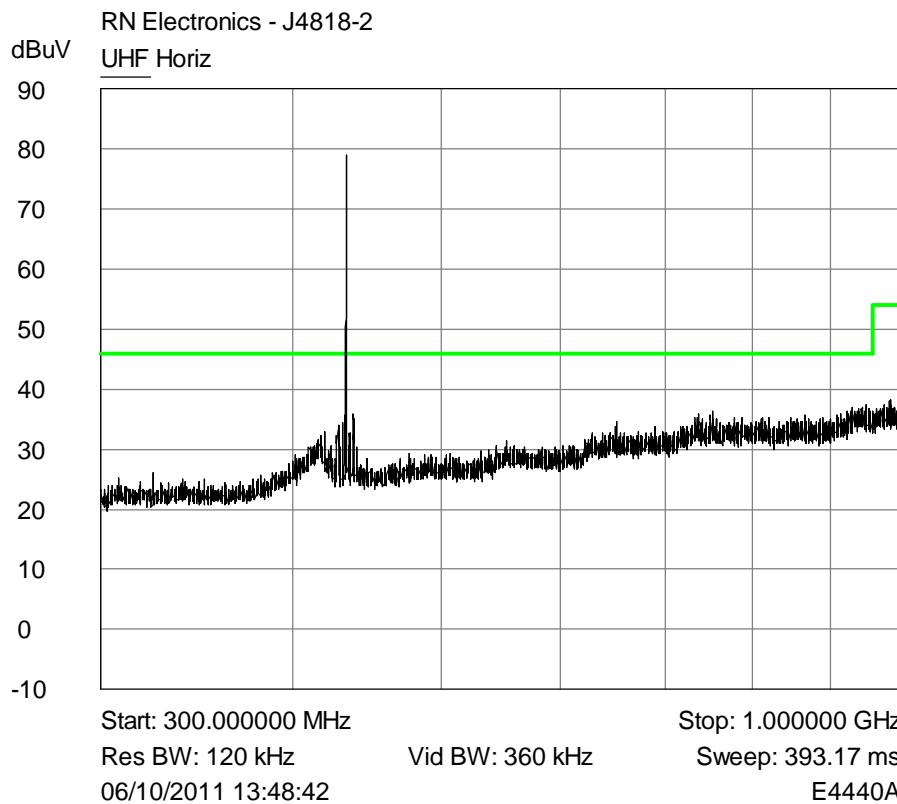
Plot of peak Perpendicular emissions 150kHz – 30MHz against the quasi-peak limit line.



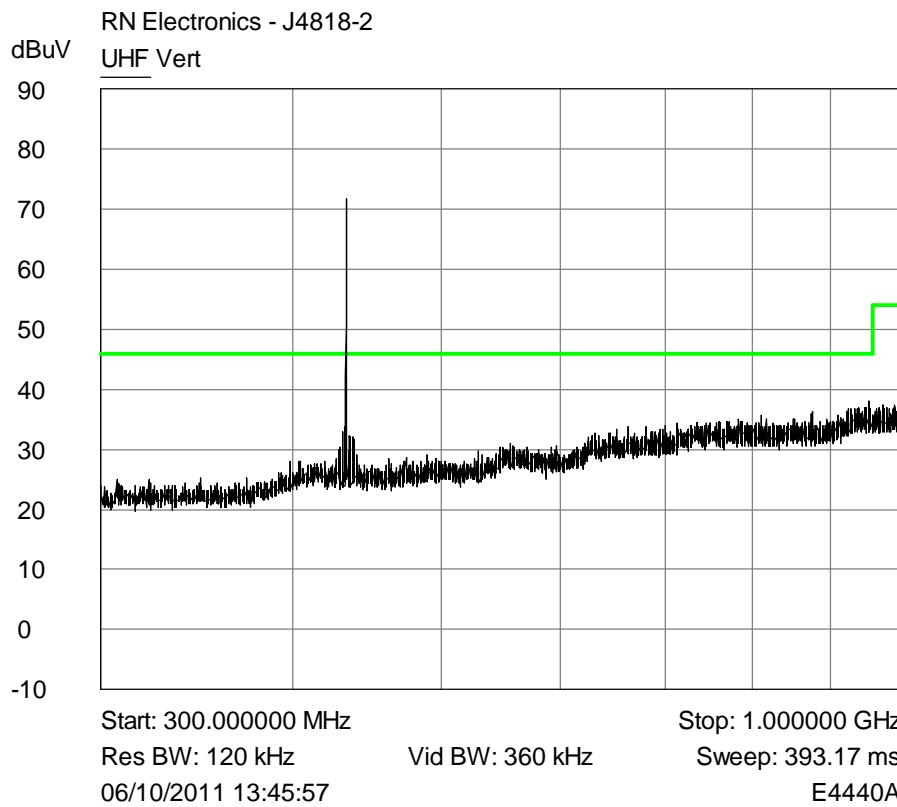
Plot of peak horizontal emissions 30MHz - 300MHz against the quasi-peak limit line.



Plot of peak vertical emissions 30MHz - 300MHz against the quasi-peak limit line.

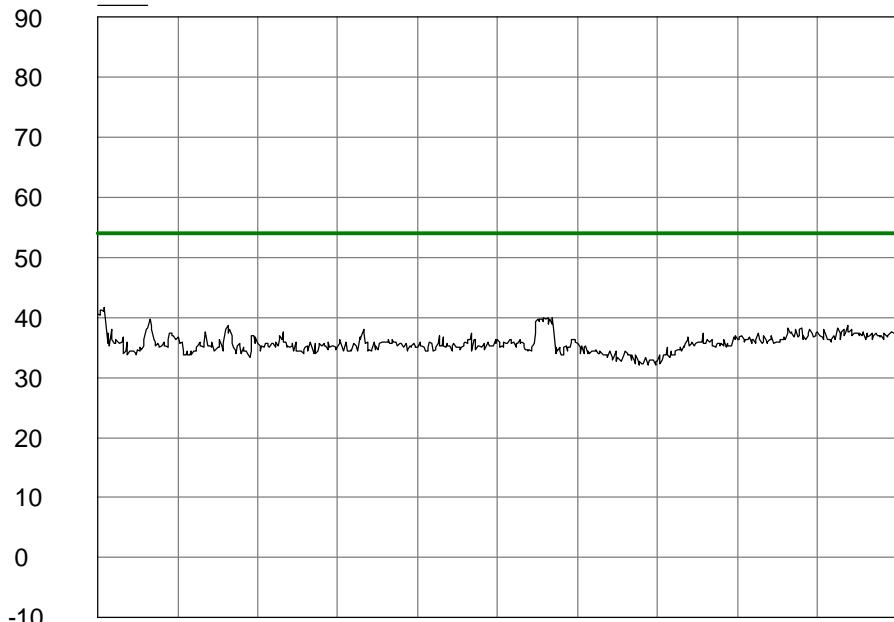


Plot of peak horizontal emissions 300MHz - 1GHz against the quasi-peak limit line.



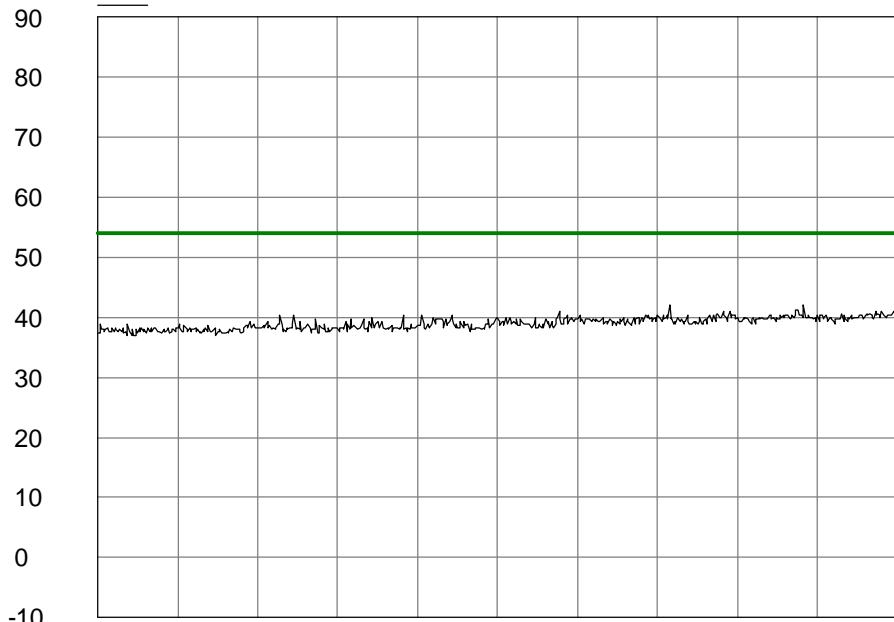
Plot of peak vertical emissions 300MHz - 1GHz against the quasi-peak limit line.

4818-2 1-2GHz Horiz PK
dBuV Trace A

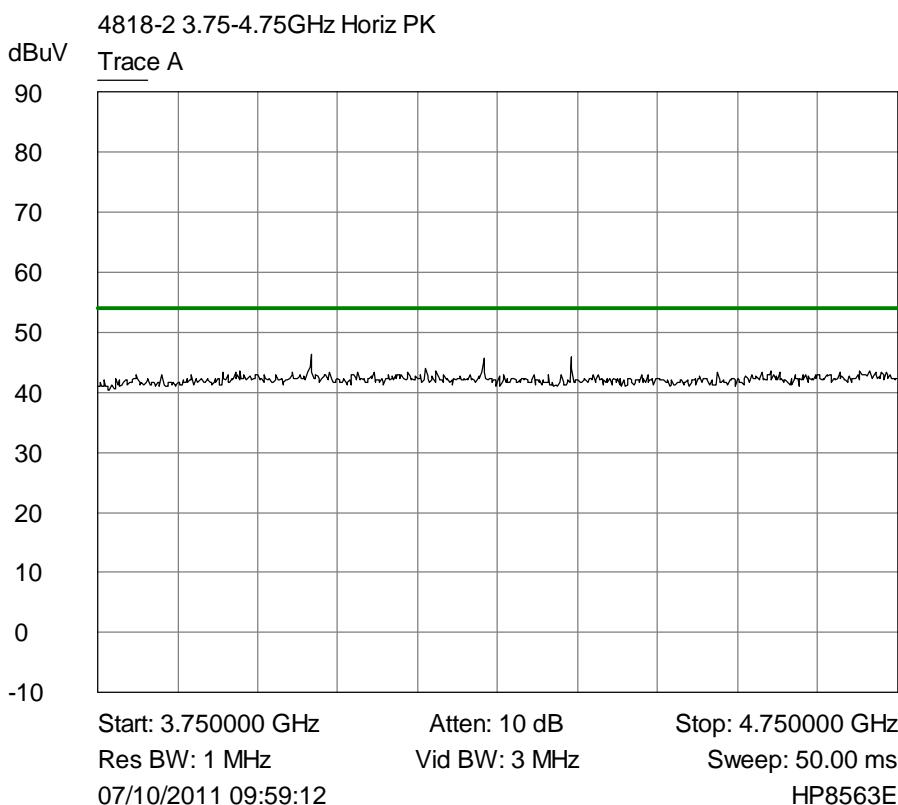
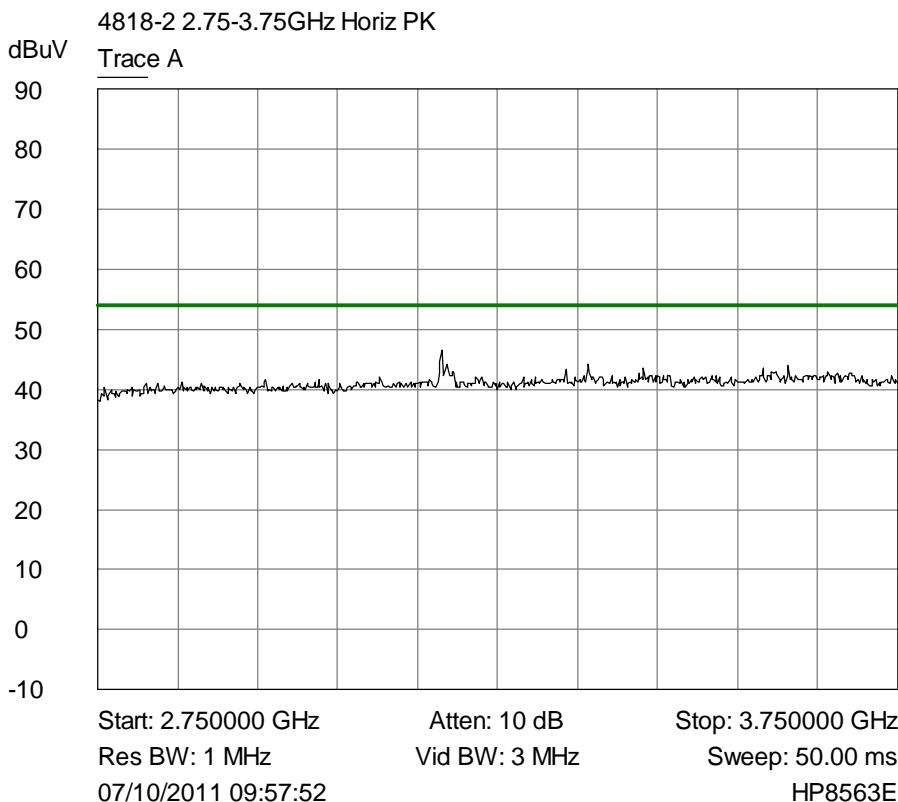


Start: 1.000000 GHz Atten: 10 dB Stop: 2.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
07/10/2011 09:54:31 HP8563E

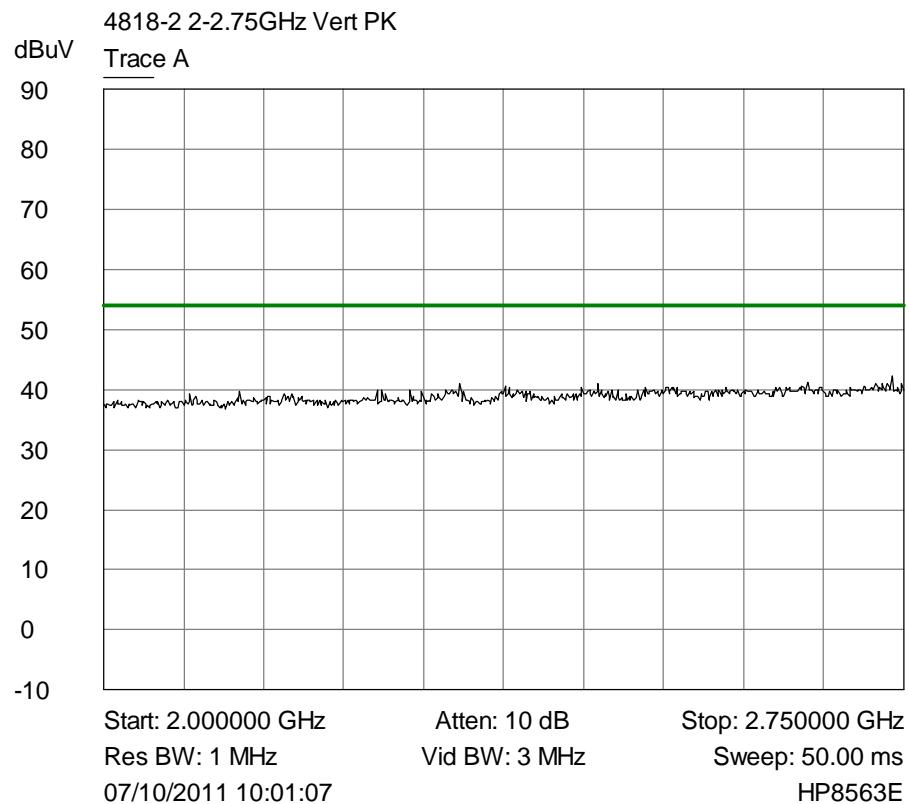
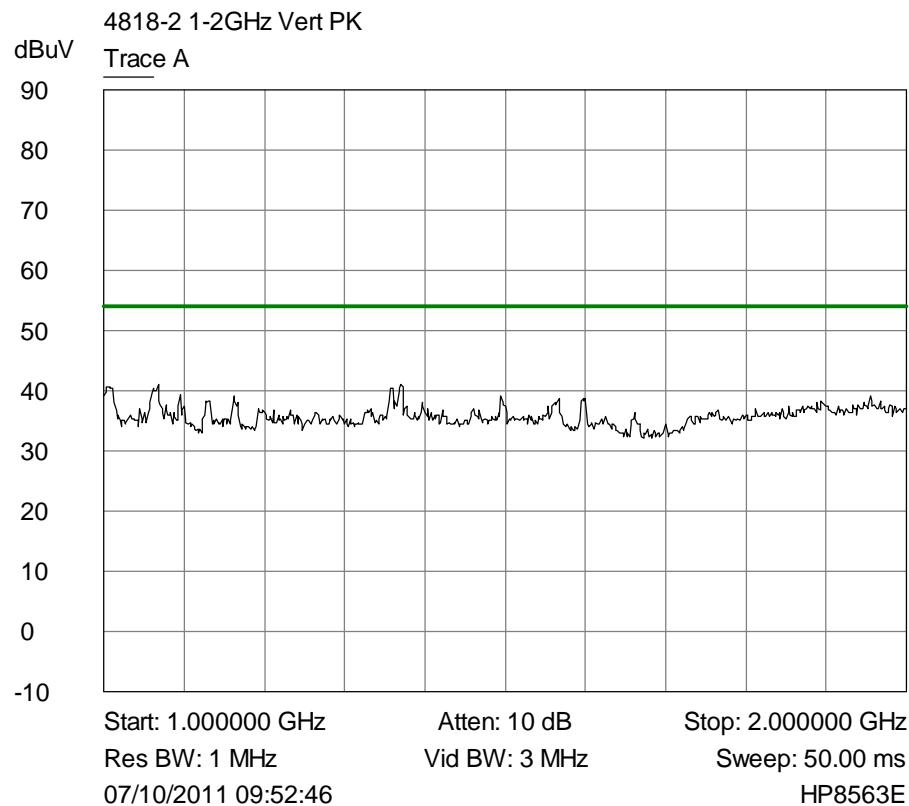
4818-2 2-2.75GHz Horiz PK
dBuV Trace A

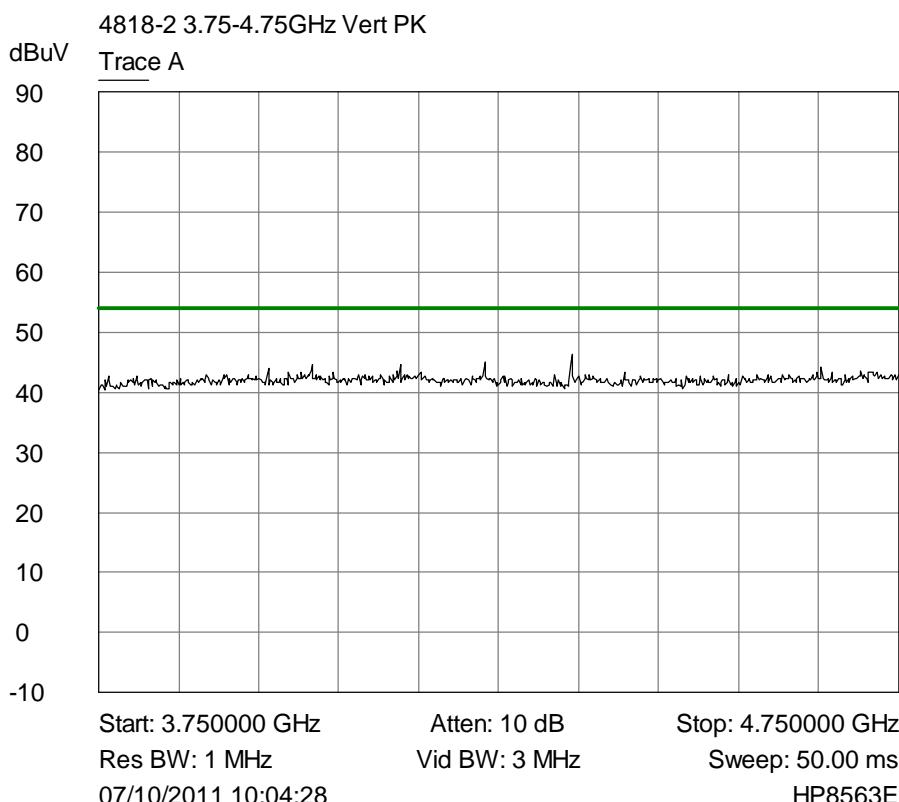
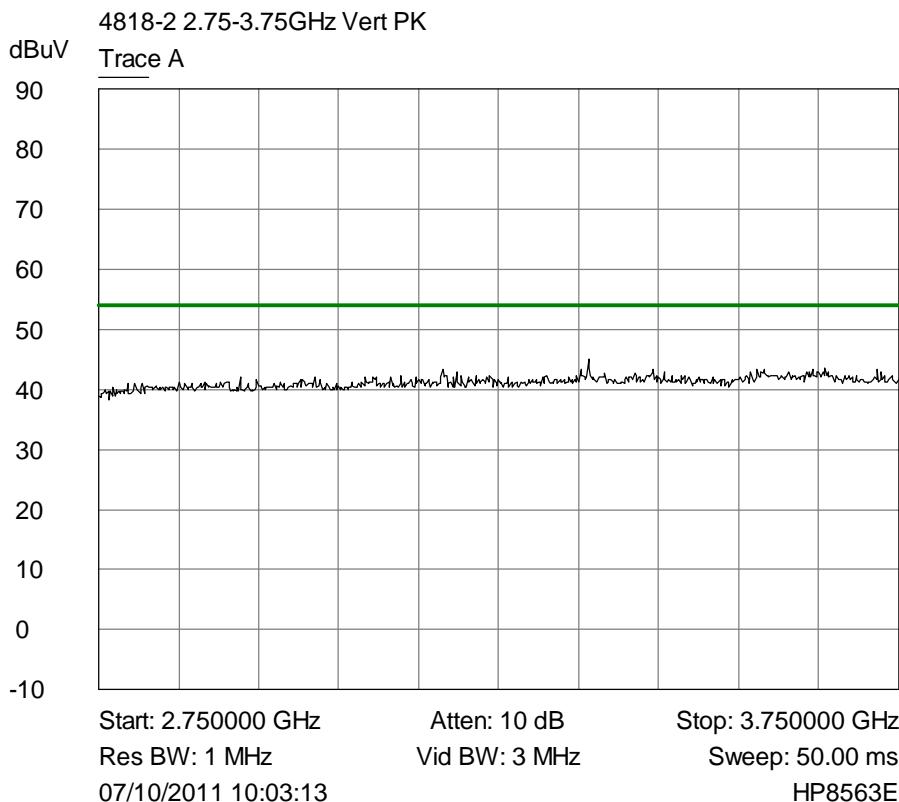


Start: 2.000000 GHz Atten: 10 dB Stop: 2.750000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
07/10/2011 09:56:44 HP8563E



Plots of Peak horizontal emissions 1GHz – 4.75GHz against the Average limit line.





Plot of Peak Vertical emissions 1GHz – 4.75GHz against the Average limit line.

Table of signals measured above 1GHz.

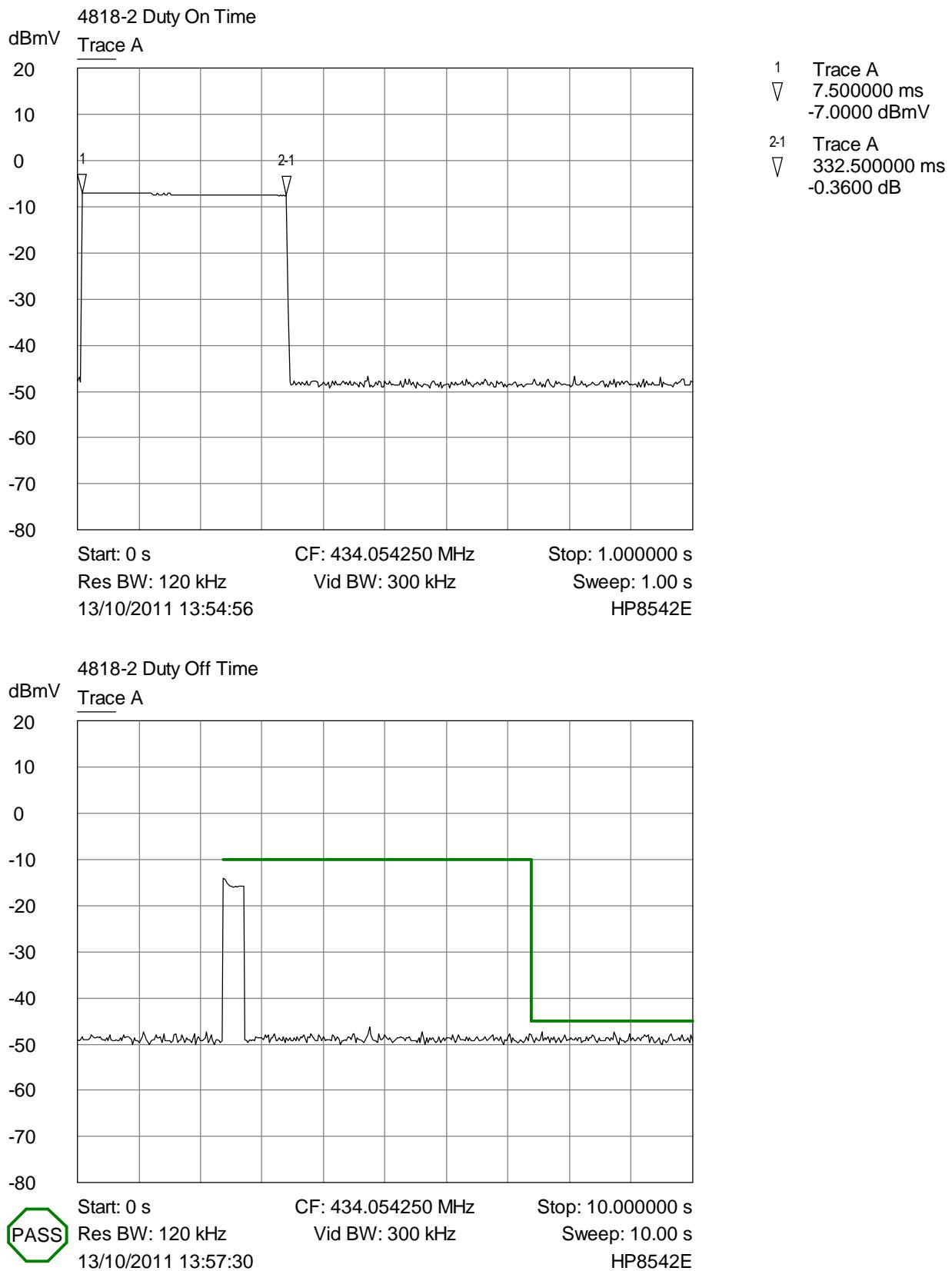
Horizontal

None within 20dB

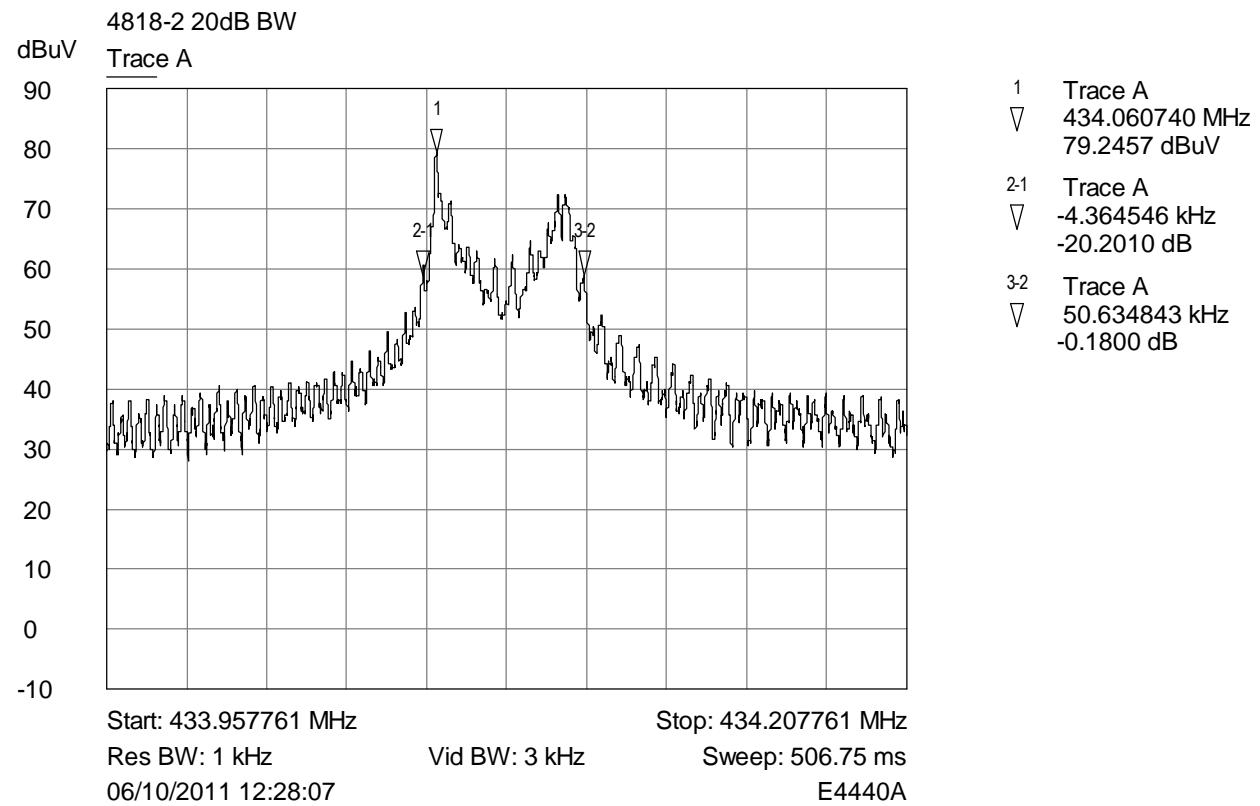
Vertical

None within 20dB

6.3 Duty Cycle



6.4 20dB Bandwidth



7 Explanatory Notes

7.1 Explanation of FAIL LIMIT 1 Statement

The **FAIL MARGIN 1** statement(s) may appear on the graphical plots when the receiver used to measure your equipment detects a signal that exceeds the dashed line. This does not mean that the **EUT** has failed the test, only that the 10 dB calculation margin set, has been exceeded on a peak measurement.

Following the indication that the margin has been exceeded, measurements are made at the frequency (ies) of the peaks. These peaks have been calculated to either Quasi Peak or Average Peak dependant on the test. A table of results has been printed on the reverse of the page. This table looks similar to the one illustrated below: -

Signal Number	Frequency (MHz)	Peak (dB μ V)	PK Delta L 1 (dB)	Avg (dB μ V)	Av Delta L 1 (dB)
1	12345.0000	12.9	-2.5	10.2	-5.2

The First column, labelled Signal Number, is a number that the receiver has given to each signal, which has been calculated.

Column Two, labelled Frequency (MHz), is the frequency of the signal received.

Column Three, labelled Peak (dB μ V), (can also be labelled, in the case of Quasi Peak, Peak dB μ V/m) is the Level that was received at peak amount in dB above 1 μ V.

Column Four, labelled PK Delta L1 (dB), is the same level as Column three but is given in a level relative to the limit line required.

Column Five, labelled AVG (dB μ V), (can also be labelled, in the case of Quasi Peak, QP dB μ V/m) when undertaking a Quasi peak test, This is the Average or Quasi peak calculation results given in dB μ V or dB μ V/m above 1 μ V.

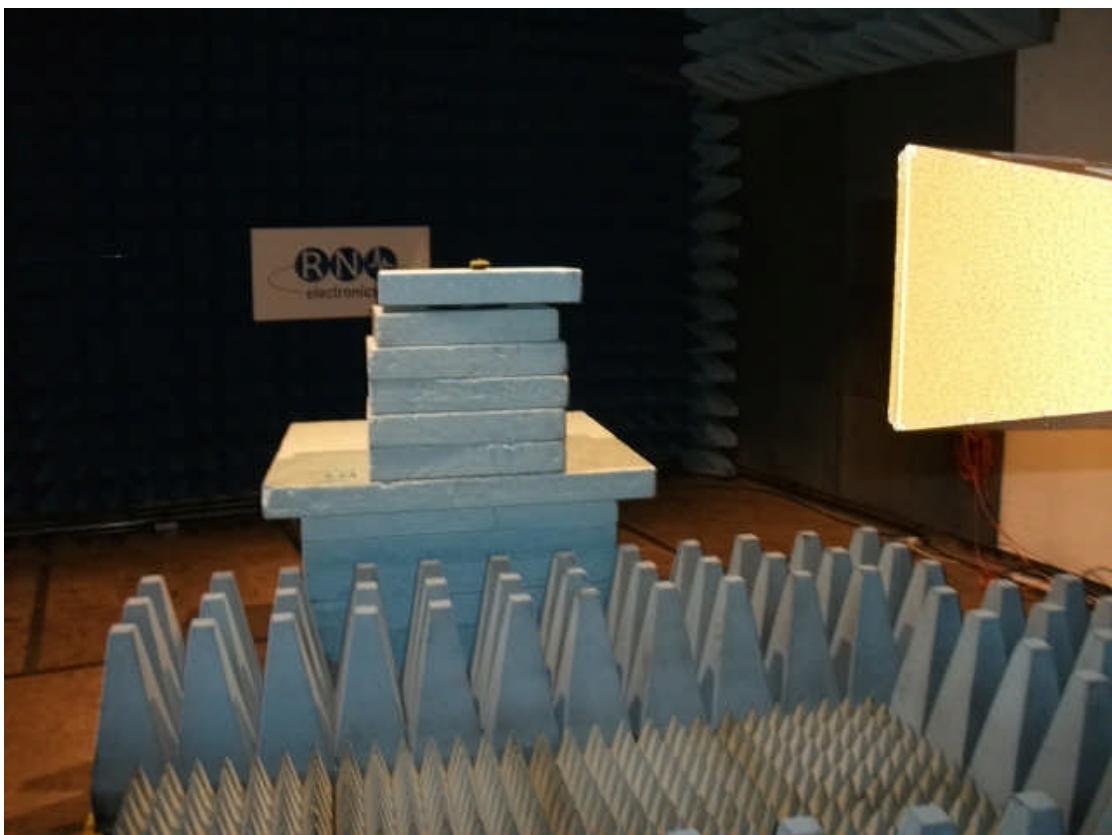
Column Six, labelled AV Delta L 1 (dB), (can also be labelled, in the case of Quasi Peak, QP Delta L 1 (dB)) is the Average or Quasi Peak calculation relevant to the limit line. The results entered in this column indicate the signal level relative to the compliance limit required. Negative numbers indicate that the product is compliant.

7.2 Explanation of limit line calculations for radiated measurements

The limits given in the test standard are normally expressed as absolute values (e.g. in μ V/m at a specified distance), whereas the measured values are expressed as peak, quasi peak or average values in dB μ V/m referenced to the measuring instrument inputs. RN Electronics calibrate the test set-up to account for any path losses, antenna gains, etc. so that the value read at the receiver relates directly to the absolute value required, except that it is expressed in dB relative to one microVolt and may need to take account of any alternative measuring distance used. Examples:

- (a) limit of 500 μ V/m equates to $20 \log (500) = 54$ dB μ V/m.
- (b) limit of 300 μ V/m at 10m equates to $20 \log (300 \cdot 10/3) = 60$ dB μ V/m at 3m
- (c) limit of 30 μ V/m at 30m, but below 30MHz, equates to $20 \log(30) + 40 \log(30/3) = 69.5$ dB μ V/m at 3m, as extrapolation factor below 30MHz is 40dB/decade per 15.31(f)(2).

8. Photographs



Photograph of the EUT as viewed from in front of the antenna, site M.

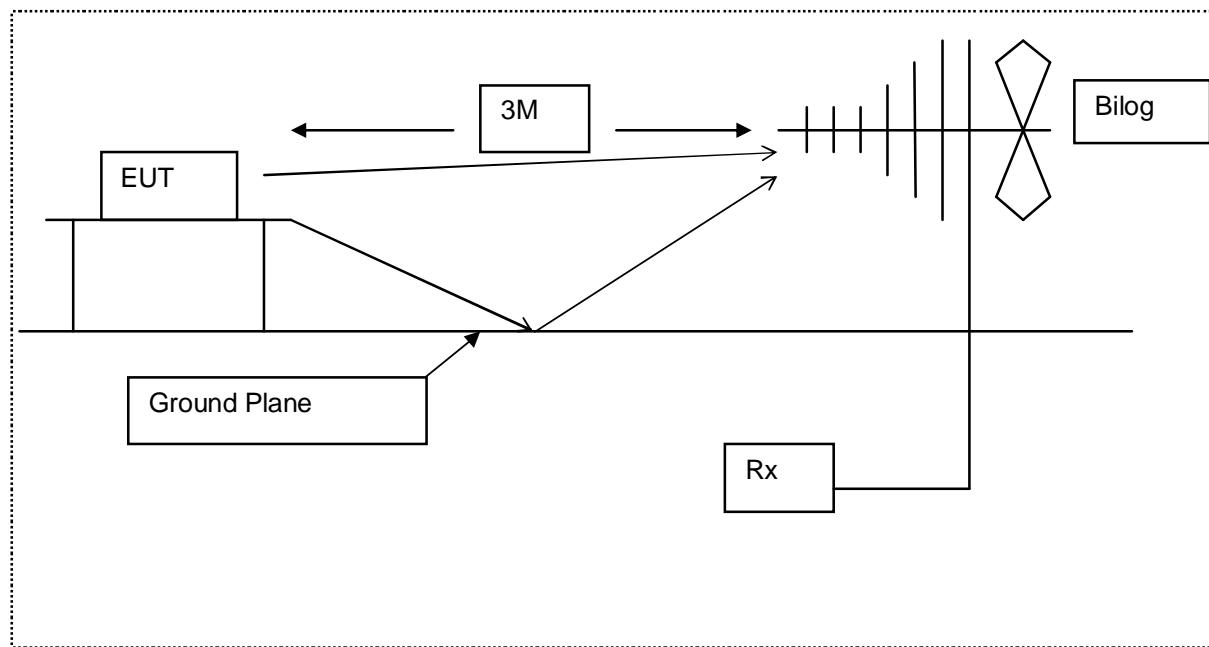
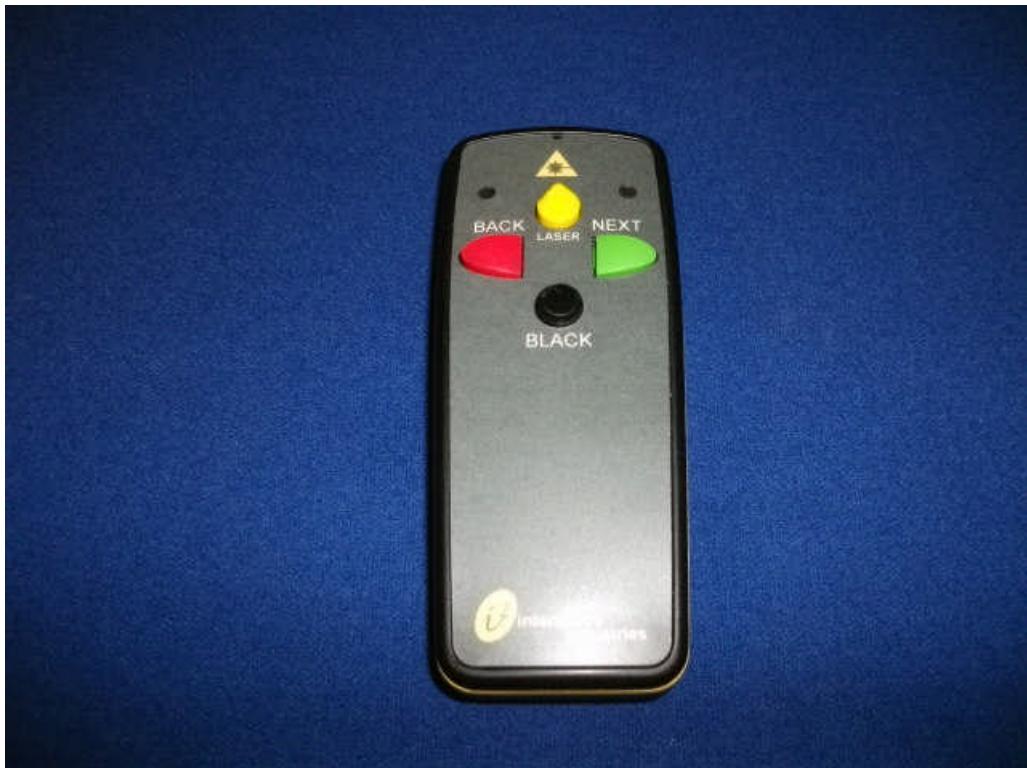
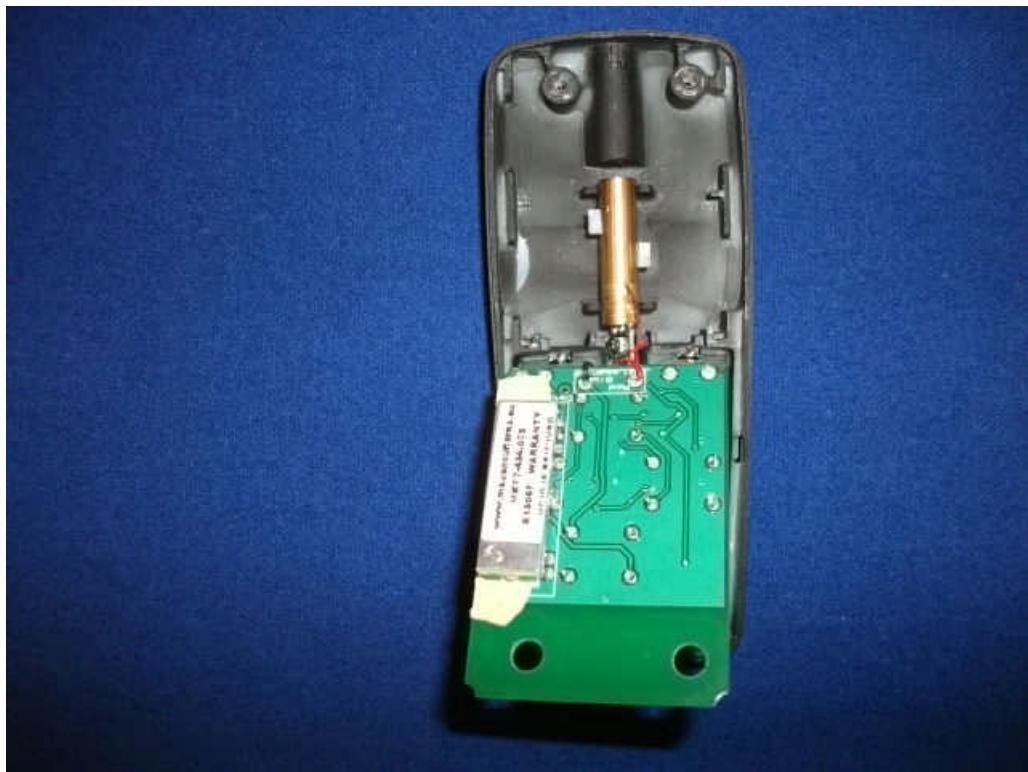


Diagram of the radiated emissions test setup.

Identifying Photographs of the EUT







9. Signal Leads

None.

10. Test Equipment Calibration list

The following table lists the test equipment used.

All test equipment used has been maintained within the calibration requirements of **R.N. Electronics Ltd.** test facility quality system. Calibration intervals are regularly reviewed dependent on equipment manufacturer's recommendations and actual usage of the equipment.

RNNo	Model	Description	Manufacturer	Date Last Calibrated	Period
E268	BHA 9118	1-18 GHz Horn Antenna	Schaffner	14-Apr-11	36
E342	8563E	Spectrum Analyser 26.5 GHz	HP	29-Mar-11	24
E410	N5181A	3 GHz MXG Signal Generator	Agilent Technologies	26-Oct-11 ¹	12
E411	N9039A	9 kHz - 1 GHz RF Filter Section	Agilent Technologies	26-Oct-11 ¹	12
E412	E4440A	3 Hz - 26.5 GHz PSA	Agilent Technologies	26-Oct-11 ¹	12
TMS81	6502	Active Loop Antenna	EMCO	13-Apr-10	24
TMS82	8449B	Pre Amplifier 1 - 26 GHz	Agilent	29-Oct-10	12
TMS933	CBL6141A	Bilog Antenna 30MHz - 2GHz	York EMC	09-Sep-10	36

NOTES:

1. Last calibration date shown is when report was created. Equipment was also calibrated 12 months prior.

11. Auxiliary equipment

11.1 Auxiliary equipment supplied by Hive Industries

Auxiliary equipment used for the purpose of test supplied by the above has been listed below

None.

11.2 Auxiliary equipment supplied by RN Electronics Limited

Auxiliary equipment used for the purpose of test supplied by the above has been listed below

None.

12. Modifications

In order for the EUT to produce the results shown within this report the following modifications, if any, were implemented.

12.1 Modifications before test

1. Operation of black button changed from single transmission to continuous transmit for purposes of test only.
2. Resistor R15 changed from 0 ohm to 470 ohm.

12.2 Modifications during test

There were no modifications made by R.N. Electronics Ltd during testing.

13. Compliance information

Products subject to the Declaration of Conformity procedure are required to be supplied with a compliance information statement. A copy of this statement may be included here:

CERTIFIED equipment – DoC not required.

14 Description of Test Sites

Site A	Radio / Calibration Laboratory and anechoic chamber
Site B	Semi-anechoic chamber
Site B1	Control Room for Site B
Site C	Transient Laboratory
Site D	Screened Room (Conducted Immunity)
Site E	Screened Room (Control Room for Site D)
Site F	Screened Room (Conducted Emissions) VCCI Registration No. C-2823
Site K	Screened Room (Control Room for Site M)
Site M	3m Semi-anechoic chamber (indoor OATS) FCC Registration No. 293246
Site Q	Fully-anechoic chamber
Site OATS	3m and 10m Open Area Test Site FCC Registration No. 293246 IC Registration No. 5612A-1 VCCI Registration No. R-2580

15 Abbreviations and Units

%	Percent
µV	microVolts
µW	microWatts
AC	Alternating Current
ALSE	Absorber Lined Screened Enclosure
AM	Amplitude Modulation
Amb	Ambient
ANSI	American National Standards Institute
°C	Degrees Celsius
CFR	Code of Federal Regulations
CS	Channel Spacing
CW	Continuous Wave
dB	deciBels
dBµV	deciBels relative to 1µV
dBc	deciBels relative to Carrier
dBm	deciBels relative to 1mW
DC	Direct Current
EIRP	Equivalent Isotropic Radiated Power
ERP	Effective Radiated Power
EUT	Equipment Under Test
FCC	Federal Communications Commission
FM	Frequency Modulation
FSK	Frequency Shift Keying
g	Grams
GHz	GigaHertz
Hz	Hertz
IF	Intermediate Frequency
kHz	kiloHertz
LO	Local Oscillator
mA	milliAmps
max	maximum
mbar	milliBars
MHz	MegaHertz
min	minimum
mm	milliMetres
ms	milliSeconds
mW	milliWatts
NA	Not Applicable
nom	Nominal
nW	nanoWatt
OATS	Open Area Test Site
OFDM	Orthogonal Frequency Division Multiplexing
ppm	Parts per million
QAM	Quadrature Amplitude Modulation
QPSK	Quadrature Phase Shift Keying
Ref	Reference
RF	Radio Frequency
RTP	Room Temperature and Pressure
s	Seconds
Tx	Transmitter
V	Volts



Certificate of Test

The unit noted below has been tested by **R.N. Electronics Limited** and, where appropriate, conforms to the relevant subpart of FCC 47CFR Part 15.

This certificate relates to the unit, as identified by unique serial number(s) and further detailed in the referenced report, in the condition(s) at the time it was tested. It does not relate to any other similar equipment and performance of the product before or after the test cannot be guaranteed. Furthermore, this is a certificate of test only and should not be confused with an equipment authorisation.

Equipment:	i2TX-L3, i2TX-L2, i2TX-L1
Model Number(s):	i2TX-L3
Unique Serial Number(s):	FCC 01
Manufacturer:	Hive Industries 126 Great North Road. Unit 1A Hatfield Hertfordshire AL9 5JN
Customer Purchase Order Number:	RD4086
R.N. Electronics Limited Report Number:	10-035/4818/2A/11
Test Standards:	FCC 47CFR Part 15C: effective date October 1st 2011 , Class DSC Intentional Radiator
Date:	6th & 7th October 2011
For and on behalf of R.N. Electronics Limited	
Signature Technical Director:	
Notes:	

QMF21J – 3: FCC PART 15C: RNE ISSUE 02: - JUN 10

RN Electronics Ltd www.RNelectronics.com

Arnolds Court, Arnolds Farm Lane, Mountnessing, Brentwood, Essex CM13 1UT
Tel: +44 1277 352219 E-mail: sales@RNelectronics.com Fax: +44 1277 352968