

**REPORT ON THE CERTIFICATION TESTING OF**

**Activboard 100 Series**

**PRM-AB364-01**

**PRM-AB378-01**

**Activboard 300 Series**

**PRM-AB378-02**

**PRM-AB387-02**

**PRM-AB395-02**

**Activboard 300 Pro Series**

**PRM-AB378-03**

**PRM-AB387-03**

**PRM-AB395-03**

**THE FCC RULES CFR 47, PART 15.209 July 10<sup>th</sup> 2008  
INTENTIONAL RADIATOR SPECIFICATION  
ON BEHALF OF  
PROMETHEAN LIMITED**

TEST REPORT NO: 22-0003-005057/2

COPY NO: 1

ISSUE NO: 2

FCC ID: QAM012

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**Activboard 100 Series**

**PRM-AB364-01**

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**PRM-AB378-02**

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**Activboard 300 Pro Series**

**PRM-AB378-03**

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**THE FCC RULES CFR 47, PART 15.209 July 10<sup>th</sup> 2008  
INTENTIONAL RADIATOR SPECIFICATION  
ON BEHALF OF  
PROMETHEAN LIMITED**

TEST DATE: 13<sup>th</sup> March - 1<sup>st</sup> April 2009

TESTED BY: S HODGKINSON

APPROVED BY: J CHARTERS  
PRODUCT MANAGER

DATE: 3<sup>rd</sup> June 2009

**Distribution:**

- Copy Nos:
1. Promethean Ltd
  2. TRaC Telecoms & Radio

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The results herein relate only to the sample tested. Full results are contained in the relevant works order file.

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| <br>Notes:                                                                                                                                                                                             |           |            |
| 1. Component failure during test                                                                                                                                                                       | YES<br>NO | [ ]<br>[X] |
| 2. If Yes, details of failure:                                                                                                                                                                         |           |            |
| 3. The facilities used for the testing of the product contain in this report are FCC Listed.                                                                                                           |           |            |
| 4. The contents of the attached applicants declarations and other supplied information are not covered<br>by the scope of this laboratory's UKAS or FCC accreditations' and is provided in good faith. |           |            |

## CERTIFICATE OF CONFORMITY & COMPLIANCE

|                         |                                                                |                                              |                                                                                  |
|-------------------------|----------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------|
| FCC IDENTITY:           | QAM012                                                         |                                              |                                                                                  |
| PURPOSE OF TEST:        | Certification                                                  |                                              |                                                                                  |
| TEST SPECIFICATION:     | FCC RULES CFR 47, Part 15.209                                  |                                              |                                                                                  |
| TEST RESULT:            | Compliant to Specification                                     |                                              |                                                                                  |
|                         | Activboard 100 Series                                          | PRM-AB364-01<br>PRM-AB378-01                 |                                                                                  |
|                         | Activboard 300 Series                                          | PRM-AB378-02<br>PRM-AB387-02<br>PRM-AB395-02 |                                                                                  |
| EQUIPMENT UNDER TEST:   | Activboard 300 Pro Series                                      | PRM-AB378-03<br>PRM-AB387-03<br>PRM-AB395-03 |                                                                                  |
| ITU: EMISSION CODE:     | 12K1K3D                                                        |                                              |                                                                                  |
| EQUIPMENT TYPE:         | Inductive loop                                                 |                                              |                                                                                  |
| PRODUCT USE:            | Teaching Aid                                                   |                                              |                                                                                  |
| CARRIER EMISSION:       | 0.110µV/m                                                      |                                              |                                                                                  |
| ANTENNA TYPE:           | Integral                                                       |                                              |                                                                                  |
| FREQUENCY OF OPERATION: | 123.0 kHz 130.5kHz                                             |                                              |                                                                                  |
| CHANNEL SPACING:        | Wideband                                                       |                                              |                                                                                  |
| NUMBER OF CHANNELS:     | 2                                                              |                                              |                                                                                  |
| FREQUENCY GENERATION:   | SAW Resonator                                                  | <input type="checkbox"/>                     | Crystal <input type="checkbox"/> Synthesiser <input checked="" type="checkbox"/> |
| MODULATION METHOD:      | FHSS                                                           | <input type="checkbox"/>                     | DSSS <input type="checkbox"/> Other <input checked="" type="checkbox"/>          |
| POWER SOURCE(s):        | 110Vac / 5.0Vdc                                                |                                              |                                                                                  |
| TEST DATE(s):           | 13 <sup>th</sup> March - April 2009                            |                                              |                                                                                  |
| ORDER No(s):            | PG0005855                                                      |                                              |                                                                                  |
| APPLICANT:              | Promethean Limited                                             |                                              |                                                                                  |
| ADDRESS:                | Promethean House<br>Lower Philips Road<br>Blackburn<br>BB1 5TH |                                              |                                                                                  |

TESTED BY: \_\_\_\_\_ S HODGKINSON

APPROVED BY: \_\_\_\_\_ J CHARTERS  
PRODUCT  
MANAGER

## APPLICANT'S SUMMARY

|                                |                                                                                                                                                                                                        |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EQUIPMENT UNDER TEST (EUT):    | Activboards                                                                                                                                                                                            |
| EQUIPMENT TYPE:                | Inductive loop                                                                                                                                                                                         |
| PURPOSE OF TEST:               | Certification                                                                                                                                                                                          |
| TEST SPECIFICATION(s):         | FCC RULES CFR 47, Part 15.209                                                                                                                                                                          |
| TEST RESULT:                   | COMPLIANT      Yes <input checked="" type="checkbox"/><br>No <input type="checkbox"/>                                                                                                                  |
| APPLICANT'S CATEGORY:          | MANUFACTURER <input checked="" type="checkbox"/><br>IMPORTER <input type="checkbox"/><br>DISTRIBUTOR <input type="checkbox"/><br>TEST HOUSE <input type="checkbox"/><br>AGENT <input type="checkbox"/> |
| APPLICANT'S ORDER No(s):       | PG0005855                                                                                                                                                                                              |
| APPLICANT'S CONTACT PERSON(s): | Bryan Lofthouse                                                                                                                                                                                        |
| E-mail address:                | Bryan.Lofthouse@prometheanworld.com                                                                                                                                                                    |
| APPLICANT:                     | Promethean Limited                                                                                                                                                                                     |
| ADDRESS:                       | Promethean House<br>Lower Philips Road<br>Blackburn<br>BB1 5TH                                                                                                                                         |
| TEL:                           | +44(0)1254 298598                                                                                                                                                                                      |
| FAX:                           | +44(0)1254 581574                                                                                                                                                                                      |
| EUT(s) COUNTRY OF ORIGIN:      | United Kingdom                                                                                                                                                                                         |
| TEST LABORATORY:               | TRaC Telecoms & Radio                                                                                                                                                                                  |
| UKAS ACCREDITATION No:         | 0728                                                                                                                                                                                                   |
| TEST DATE(s) :                 | 13 <sup>th</sup> March -1 <sup>st</sup> April 2009                                                                                                                                                     |
| TEST REPORT No:                | 22-0003-005057                                                                                                                                                                                         |

## EQUIPMENT TEST / EXAMINATIONS REQUIRED

|    |                                                                                        |                                                |                    |               |
|----|----------------------------------------------------------------------------------------|------------------------------------------------|--------------------|---------------|
| 1. | TEST/EXAMINATION                                                                       | RULE PART                                      | DETECTOR           | APPLICABILITY |
|    | Intentional Emission Frequency:                                                        | 15.209(a)                                      | Average            | Yes           |
|    | Intentional Emission Field Strength:                                                   | 15.209(a)                                      | Average            | Yes           |
|    | Intentional Emission Band Occupancy:                                                   | 15.215(c)                                      | Peak               | Yes           |
|    | Intentional Emission ERP (mW):                                                         | -                                              | -                  | No            |
|    | Spurious Emissions – Conducted:                                                        | 15.207                                         | Quasi Peak Average | No            |
|    | Spurious Emissions – Radiated <1000MHz:                                                | 15.209                                         | Quasi Peak Average | Yes           |
|    | Spurious Emissions – Radiated >1000MHz:                                                | -                                              | -                  | No            |
|    | Maximum Frequency of Search:                                                           | 15.33                                          | -                  | Yes           |
|    | Antenna Arrangements Integral:                                                         | 15.203                                         | -                  | Yes           |
|    | Antenna Arrangements External Connector:                                               | 15.204                                         | -                  | Yes           |
|    | Restricted Bands                                                                       | 15.205                                         | -                  | Yes           |
|    | Extrapolation Factor                                                                   | 15.31(f)                                       | -                  | Yes           |
| 2. | Product Use:                                                                           | Teaching Aid                                   |                    |               |
| 3. | Emission Designator:                                                                   | 12K1K3D                                        |                    |               |
| 4. | Duty Cycle:                                                                            | ≤100%                                          |                    |               |
| 5. | Temperatures:                                                                          | Ambient (Tnom)                                 | 20°C               |               |
| 6. | Supply Voltages:                                                                       | Vnom                                           | 110Vac<br>5.0Vdc   |               |
|    | Note: Vnom voltages are as stated above unless otherwise shown on the test report page |                                                |                    |               |
| 7. | Equipment Category:                                                                    | Single channel<br>Two channel<br>Multi-channel | [ ]<br>[ ]<br>[X]  |               |
| 8. | Channel spacing:                                                                       | Narrowband<br>Wideband                         | [ ]<br>[X]         |               |

## Equipment description

The Promethean wipeboards are available in four sizes 64", 78", 87", 95", and are available in three configurations.

300 Pro Series are available in three sizes 78", 87", 95", and have the following features:

- Stereo Amplifier
- Stereo Loudspeakers
- USB Hub
- USB Port
- 2.4GHz Radio Link
- 2 Pen Frequencies
- 18.0Vdc Power supply unit, model number DT 6018

300 Series are available in three sizes 78", 87", 95", and have the following features:

- USB Hub
- USB Port
- 2.4GHz Radio Link
- 2 Pen Frequencies
- 5.0Vdc Power supply unit, model number FW7650L/05

The cables for the Loudspeakers are pre installed into the outer case of the boards.

The above board can be upgraded by the addition of the following components

- Stereo Amplifier
- Stereo Loudspeakers

100 Series are available in two sizes 64", 78", and have the following features:

- 2.4GHz Radio Link
- 2 Pen Frequencies
- 5.0Vdc Power supply unit, model number FW7650L/05

The 300 Pro Series, testing was carried out with the audio amplifier and USB Hub and USB port exercised, and connected to the PC via a USB lead.

The 300 Series, testing was carried out with the USB Hub and USB port exercised, and connected to the PC via a USB lead.

The 100 Series, testing was carried out with the USB lead connected to the PC.

When required the testing was carried out with all of the boards connected to the PC via the 2.4GHz radio link.

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB364-01        | Emission Frequency (MHz)          | Meas. Rx. (dBuV) | Cable loss (dB)    | Ant. Factor (dB/m) | Pre Amp (dB) | Field Strength (dBμV/m) | Result (μV/m)  | Limit (μV/m) |
|---------------------|-----------------------------------|------------------|--------------------|--------------------|--------------|-------------------------|----------------|--------------|
| 0.009MHz - 0.49MHz  | No Significant Emissions Detected |                  |                    |                    |              |                         |                |              |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected |                  |                    |                    |              |                         |                |              |
| 1.705MHz - 30MHz    | No Significant Emissions Detected |                  |                    |                    |              |                         |                |              |
| 30MHz - 88MHz       | No Significant Emissions Detected |                  |                    |                    |              |                         |                |              |
| 88MHz - 216MHz      | 214.45                            | 15.98            | 2.80               | 8.22               | N/A          | 27.00                   | 22.38          | 150          |
| 216MHz - 960MHz     | 285.75<br>311.05                  | 18.04<br>20.25   | 3.35<br>3.75       | 12.61<br>13.50     | N/A<br>N/A   | 34.00<br>37.50          | 50.11<br>74.98 | 200          |
| 960MHz - 1GHz       | No Significant Emissions Detected |                  |                    |                    |              |                         |                |              |
| 1GHz - 5GHz         | No Significant Emissions Detected |                  |                    |                    |              |                         |                |              |
| Limits              | 0.009MHz to 0.49MHz               |                  | 2400/F(kHz) @ 300m |                    |              |                         |                |              |
|                     | 0.49MHz to 1.705                  |                  | 24000/F(kHz) @ 30m |                    |              |                         |                |              |
|                     | 1.705MHz to 30MHz                 |                  | 30μV/m @ 30m       |                    |              |                         |                |              |
|                     | 30MHz to 88MHz                    |                  | 100μV/m @ 3m       |                    |              |                         |                |              |
|                     | 88MHz to 216MHz                   |                  | 150μV/m @ 3m       |                    |              |                         |                |              |
|                     | 216MHz to 960MHz                  |                  | 200μV/m @ 3m       |                    |              |                         |                |              |
|                     | 960MHz to 1GHz                    |                  | 500μV/m @ 3m       |                    |              |                         |                |              |
|                     | 1GHz to 5GHz                      |                  | 500μV/m @ 3m       |                    |              |                         |                |              |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB378-01        | Emission Frequency (MHz)          | Meas. Rx. (dBuV) | Cable loss (dB)    | Ant. Factor (dB/m) | Pre Amp (dB) | Field Strength (dBµV/m) | Result (µV/m) | Limit (µV/m) |
|---------------------|-----------------------------------|------------------|--------------------|--------------------|--------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz  | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 1.705MHz - 30MHz    | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 30MHz - 88MHz       | 45.25                             | 14.51            | 1.09               | 10.00              | N/A          | 25.60                   | 19.05         | 100          |
|                     | 46.50                             | 12.91            | 1.10               | 9.49               | N/A          | 23.50                   | 14.96         |              |
|                     | 47.50                             | 12.58            | 1.12               | 9.00               | N/A          | 22.70                   | 13.64         |              |
|                     | 57.00                             | 16.08            | 1.27               | 5.65               | N/A          | 23.00                   | 14.12         |              |
|                     | 58.10                             | 14.23            | 1.29               | 5.48               | N/A          | 21.00                   | 11.22         |              |
|                     | 81.20                             | 12.65            | 1.55               | 6.80               | N/A          | 21.00                   | 11.22         |              |
|                     | 81.95                             | 13.45            | 1.55               | 6.80               | N/A          | 21.80                   | 12.30         |              |
|                     | 83.30                             | 14.15            | 1.60               | 7.25               | N/A          | 23.00                   | 14.12         |              |
|                     | 84.50                             | 14.07            | 1.62               | 7.51               | N/A          | 23.20                   | 14.45         |              |
|                     | 87.15                             | 12.78            | 1.62               | 8.10               | N/A          | 22.50                   | 13.33         |              |
| 88MHz - 216MHz      | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 216MHz - 960MHz     | 233.30                            | 23.05            | 2.97               | 9.98               | N/A          | 36.00                   | 63.09         | 200          |
|                     | 245.70                            | 19.02            | 3.50               | 11.48              | N/A          | 34.00                   | 50.11         |              |
|                     | 248.70                            | 17.40            | 3.90               | 11.70              | N/A          | 33.00                   | 44.66         |              |
|                     | 255.35                            | 14.85            | 3.70               | 12.45              | N/A          | 31.00                   | 35.48         |              |
|                     | 257.30                            | 13.65            | 3.75               | 12.70              | N/A          | 30.10                   | 31.98         |              |
|                     | 259.60                            | 14.32            | 3.23               | 12.95              | N/A          | 30.50                   | 33.49         |              |
|                     | 271.15                            | 14.17            | 3.35               | 12.48              | N/A          | 30.00                   | 31.62         |              |
|                     | 286.00                            | 18.49            | 3.40               | 12.61              | N/A          | 34.50                   | 53.08         |              |
|                     | 357.15                            | 19.64            | 3.85               | 14.51              | N/A          | 38.00                   | 79.43         |              |
|                     | 735.30                            | 10.49            | 6.31               | 19.70              | N/A          | 36.50                   | 66.83         |              |
| 960MHz - 1GHz       | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 1GHz - 5GHz         | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| Limits              | 0.009MHz to 0.49MHz               |                  | 2400/F(kHz) @ 300m |                    |              |                         |               |              |
|                     | 0.49MHz to 1.705                  |                  | 24000/F(kHz) @ 30m |                    |              |                         |               |              |
|                     | 1.705MHz to 30MHz                 |                  | 30µV/m @ 30m       |                    |              |                         |               |              |
|                     | 30MHz to 88MHz                    |                  | 100µV/m @ 3m       |                    |              |                         |               |              |
|                     | 88MHz to 216MHz                   |                  | 150µV/m @ 3m       |                    |              |                         |               |              |
|                     | 216MHz to 960MHz                  |                  | 200µV/m @ 3m       |                    |              |                         |               |              |
|                     | 960MHz to 1GHz                    |                  | 500µV/m @ 3m       |                    |              |                         |               |              |
|                     | 1GHz to 5GHz                      |                  | 500µV/m @ 3m       |                    |              |                         |               |              |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB378-02        | Emission Frequency (MHz)          | Meas. Rx. (dBuV) | Cable loss (dB) | Ant. Factor (dB/m) | Pre Amp (dB) | Field Strength (dBμV/m) | Result (μV/m) | Limit (μV/m) |
|---------------------|-----------------------------------|------------------|-----------------|--------------------|--------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz  | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 1.705MHz - 30MHz    | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 30MHz - 88MHz       | 36.00                             | 22.35            | 0.9             | 14.75              | N/A          | 38.00                   | 79.43         | 100          |
| 88MHz - 216MHz      | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 216MHz - 960MHz     | 231.60                            | 23.35            | 2.97            | 9.68               | N/A          | 36.00                   | 63.09         | 200          |
|                     | 233.00                            | 23.02            | 3.00            | 9.98               | N/A          | 36.00                   | 63.09         |              |
|                     | 237.00                            | 22.37            | 3.07            | 10.56              | N/A          | 36.00                   | 63.09         |              |
|                     | 239.85                            | 21.33            | 3.07            | 10.80              | N/A          | 35.20                   | 57.54         |              |
|                     | 243.00                            | 20.14            | 3.50            | 11.16              | N/A          | 34.80                   | 54.95         |              |
|                     | 244.30                            | 18.30            | 4.00            | 11.48              | N/A          | 34.00                   | 50.11         |              |
|                     | 248.65                            | 17.90            | 4.00            | 11.70              | N/A          | 33.60                   | 47.86         |              |
|                     | 256.35                            | 14.40            | 3.65            | 12.45              | N/A          | 30.50                   | 33.49         |              |
|                     | 263.30                            | 14.78            | 3.27            | 12.95              | N/A          | 31.00                   | 35.48         |              |
|                     | 268.75                            | 14.09            | 3.30            | 12.71              | N/A          | 30.10                   | 31.98         |              |
|                     | 299.10                            | 12.48            | 3.54            | 12.98              | N/A          | 29.00                   | 28.18         |              |
|                     | 357.35                            | 23.44            | 3.85            | 14.51              | N/A          | 41.80                   | 123.02        |              |
| 960MHz - 1GHz       | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 1GHz - 5GHz         | See TRaC report 22-0003-005057/1  |                  |                 |                    |              |                         |               |              |
| Limits              | 0.009MHz to 0.49MHz               |                  |                 | 2400/F(kHz) @ 300m |              |                         |               |              |
|                     | 0.49MHz to 1.705                  |                  |                 | 24000/F(kHz) @ 30m |              |                         |               |              |
|                     | 1.705MHz to 30MHz                 |                  |                 | 30μV/m @ 30m       |              |                         |               |              |
|                     | 30MHz to 88MHz                    |                  |                 | 100μV/m @ 3m       |              |                         |               |              |
|                     | 88MHz to 216MHz                   |                  |                 | 150μV/m @ 3m       |              |                         |               |              |
|                     | 216MHz to 960MHz                  |                  |                 | 200μV/m @ 3m       |              |                         |               |              |
|                     | 960MHz to 1GHz                    |                  |                 | 500μV/m @ 3m       |              |                         |               |              |
|                     | 1GHz to 5GHz                      |                  |                 | 500μV/m @ 3m       |              |                         |               |              |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB387-02        | Emission Frequency (MHz)                                                                                             | Meas. Rx. (dBuV)                                                                                         | Cable loss (dB)                                                                              | Ant. Factor (dB/m)                                                                                   | Pre Amp (dB)                                                                     | Field Strength (dBµV/m)                                                                                  | Result (µV/m)                                                                                             | Limit (µV/m) |
|---------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------|
| 0.009MHz - 0.49MHz  | No Significant Emissions Detected                                                                                    |                                                                                                          |                                                                                              |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected                                                                                    |                                                                                                          |                                                                                              |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
| 1.705MHz - 30MHz    | No Significant Emissions Detected                                                                                    |                                                                                                          |                                                                                              |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
| 30MHz - 88MHz       | 82.35<br>83.75<br>87.15                                                                                              | 13.42<br>13.26<br>14.47                                                                                  | 1.49<br>1.49<br>1.62                                                                         | 7.09<br>7.25<br>8.11                                                                                 | N/A<br>N/A<br>N/A                                                                | 22.00<br>22.00<br>24.20                                                                                  | 12.00<br>12.00<br>16.21                                                                                   | 100          |
| 88MHz - 216MHz      | No Significant Emissions Detected                                                                                    |                                                                                                          |                                                                                              |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
| 216MHz - 960MHz     | 213.30<br>215.05<br>224.15<br>230.85<br>240.00<br>242.25<br>245.45<br>286.80<br>287.55<br>311.05<br>480.00<br>959.95 | 26.44<br>27.61<br>26.76<br>24.85<br>23.09<br>19.64<br>18.02<br>17.86<br>13.90<br>15.53<br>11.51<br>13.79 | 2.76<br>2.77<br>2.89<br>2.97<br>3.07<br>3.20<br>3.50<br>3.39<br>3.40<br>3.67<br>4.68<br>7.56 | 8.30<br>8.22<br>8.95<br>9.68<br>10.84<br>11.16<br>11.48<br>12.75<br>12.70<br>13.40<br>17.01<br>21.15 | N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>N/A<br>N/A | 37.50<br>38.60<br>38.60<br>37.50<br>37.00<br>34.00<br>33.00<br>34.00<br>30.00<br>32.60<br>33.20<br>42.50 | 74.98<br>85.11<br>85.11<br>74.98<br>70.79<br>50.11<br>44.66<br>50.11<br>31.62<br>42.65<br>45.70<br>133.00 | 200          |
| 960MHz - 1GHz       | No Significant Emissions Detected                                                                                    |                                                                                                          |                                                                                              |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
| 1GHz - 5GHz         | See TRaC report 22-0003-005057/1                                                                                     |                                                                                                          |                                                                                              |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
| Limits              | 0.009MHz to 0.49MHz                                                                                                  |                                                                                                          | 2400/F(kHz) @ 300m                                                                           |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
|                     | 0.49MHz to 1.705                                                                                                     |                                                                                                          | 24000/F(kHz) @ 30m                                                                           |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
|                     | 1.705MHz to 30MHz                                                                                                    |                                                                                                          | 30µV/m @ 30m                                                                                 |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
|                     | 30MHz to 88MHz                                                                                                       |                                                                                                          | 100µV/m @ 3m                                                                                 |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
|                     | 88MHz to 216MHz                                                                                                      |                                                                                                          | 150µV/m @ 3m                                                                                 |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
|                     | 216MHz to 960MHz                                                                                                     |                                                                                                          | 200µV/m @ 3m                                                                                 |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
|                     | 960MHz to 1GHz                                                                                                       |                                                                                                          | 500µV/m @ 3m                                                                                 |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |
|                     | 1GHz to 5GHz                                                                                                         |                                                                                                          | 500µV/m @ 3m                                                                                 |                                                                                                      |                                                                                  |                                                                                                          |                                                                                                           |              |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB395-02        | Emission Frequency (MHz)          | Meas. Rx. (dBuV) | Cable loss (dB) | Ant. Factor (dB/m) | Pre Amp (dB) | Field Strength (dBµV/m) | Result (µV/m) | Limit (µV/m) |
|---------------------|-----------------------------------|------------------|-----------------|--------------------|--------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz  | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 1.705MHz - 30MHz    | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 30MHz - 88MHz       | 75.00                             | 16.68            | 1.48            | 5.84               | N/A          | 24.00                   | 15.84         | 100          |
|                     | 76.45                             | 15.73            | 1.48            | 5.99               | N/A          | 23.20                   | 14.45         |              |
|                     | 77.00                             | 15.32            | 1.49            | 6.19               | N/A          | 23.00                   | 14.12         |              |
|                     | 78.40                             | 14.92            | 1.49            | 6.39               | N/A          | 22.80                   | 13.80         |              |
|                     | 80.55                             | 15.82            | 1.50            | 6.68               | N/A          | 24.00                   | 15.84         |              |
|                     | 82.25                             | 15.35            | 1.56            | 7.09               | N/A          | 24.00                   | 15.84         |              |
|                     | 86.35                             | 14.48            | 1.62            | 7.90               | N/A          | 24.00                   | 15.84         |              |
| 88MHz - 216MHz      | 125.55                            | 12.58            | 1.99            | 11.53              | N/A          | 26.10                   | 20.18         | 150          |
| 216MHz - 960MHz     | 230.30                            | 26.55            | 2.97            | 9.68               | N/A          | 39.20                   | 91.20         | 200          |
|                     | 242.75                            | 24.59            | 3.25            | 11.16              | N/A          | 39.00                   | 89.12         |              |
|                     | 246.70                            | 22.53            | 3.57            | 11.50              | N/A          | 37.60                   | 75.85         |              |
|                     | 269.55                            | 18.17            | 3.35            | 12.48              | N/A          | 34.00                   | 50.11         |              |
|                     | 274.00                            | 18.89            | 3.33            | 12.48              | N/A          | 34.70                   | 54.32         |              |
|                     | 279.70                            | 18.13            | 3.31            | 12.56              | N/A          | 34.00                   | 50.11         |              |
|                     | 286.75                            | 19.45            | 3.39            | 12.66              | N/A          | 35.50                   | 59.56         |              |
|                     | 294.20                            | 17.19            | 3.51            | 12.80              | N/A          | 33.50                   | 47.31         |              |
|                     | 299.85                            | 16.98            | 3.54            | 12.98              | N/A          | 33.50                   | 47.31         |              |
|                     | 360.70                            | 12.99            | 3.86            | 14.65              | N/A          | 31.50                   | 37.58         |              |
| 960MHz - 1GHz       | No Significant Emissions Detected |                  |                 |                    |              |                         |               |              |
| 1GHz - 5GHz         | See TRaC report 22-0003-005057/1  |                  |                 |                    |              |                         |               |              |
| Limits              | 0.009MHz to 0.49MHz               |                  |                 | 2400/F(kHz) @ 300m |              |                         |               |              |
|                     | 0.49MHz to 1.705                  |                  |                 | 24000/F(kHz) @ 30m |              |                         |               |              |
|                     | 1.705MHz to 30MHz                 |                  |                 | 30µV/m @ 30m       |              |                         |               |              |
|                     | 30MHz to 88MHz                    |                  |                 | 100µV/m @ 3m       |              |                         |               |              |
|                     | 88MHz to 216MHz                   |                  |                 | 150µV/m @ 3m       |              |                         |               |              |
|                     | 216MHz to 960MHz                  |                  |                 | 200µV/m @ 3m       |              |                         |               |              |
|                     | 960MHz to 1GHz                    |                  |                 | 500µV/m @ 3m       |              |                         |               |              |
|                     | 1GHz to 5GHz                      |                  |                 | 500µV/m @ 3m       |              |                         |               |              |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB378-03        | Emission Frequency (MHz)          | Meas. Rx. (dBuV) | Cable loss (dB)    | Ant. Factor (dB/m) | Pre Amp (dB) | Field Strength (dBµV/m) | Result (µV/m) | Limit (µV/m) |
|---------------------|-----------------------------------|------------------|--------------------|--------------------|--------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz  | See table listed A                |                  |                    |                    |              |                         |               |              |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 1.705MHz - 30MHz    | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 30MHz - 88MHz       | 60.00                             | 20.60            | 1.31               | 5.09               | N/A          | 27.00                   | 22.38         | 100          |
|                     | 72.00                             | 26.33            | 1.47               | 5.50               | N/A          | 33.30                   | 46.23         |              |
|                     | 78.00                             | 20.32            | 1.49               | 6.39               | N/A          | 28.20                   | 25.70         |              |
|                     | 83.85                             | 20.19            | 1.56               | 7.25               | N/A          | 29.00                   | 28.18         |              |
| 88MHz - 216MHz      | 112.50                            | 16.81            | 1.86               | 11.43              | N/A          | 30.10                   | 31.98         | 150          |
|                     | 116.40                            | 18.25            | 1.88               | 11.47              | N/A          | 31.60                   | 38.01         |              |
|                     | 127.25                            | 15.10            | 1.99               | 11.51              | N/A          | 28.60                   | 26.91         |              |
|                     | 134.95                            | 17.42            | 2.08               | 11.30              | N/A          | 30.80                   | 34.67         |              |
|                     | 141.30                            | 15.21            | 2.11               | 10.88              | N/A          | 28.20                   | 25.70         |              |
|                     | 159.35                            | 16.26            | 2.31               | 9.43               | N/A          | 28.00                   | 25.11         |              |
|                     | 172.05                            | 19.27            | 2.40               | 8.83               | N/A          | 30.50                   | 30.49         |              |
|                     | 184.75                            | 28.14            | 2.53               | 8.33               | N/A          | 39.00                   | 89.12         |              |
|                     | 186.15                            | 24.10            | 2.53               | 8.37               | N/A          | 35.00                   | 56.23         |              |
|                     | 194.95                            | 22.29            | 2.61               | 8.60               | N/A          | 33.50                   | 47.31         |              |
|                     | 211.50                            | 23.48            | 2.76               | 8.56               | N/A          | 34.80                   | 53.08         |              |
| 216MHz - 960MHz     | 232.95                            | 25.04            | 2.98               | 9.98               | N/A          | 38.00                   | 79.43         | 200          |
|                     | 237.15                            | 24.12            | 3.02               | 10.56              | N/A          | 37.70                   | 76.73         |              |
|                     | 286.75                            | 22.00            | 3.39               | 12.61              | N/A          | 38.00                   | 79.43         |              |
|                     | 358.35                            | 22.43            | 3.86               | 14.51              | N/A          | 40.80                   | 109.64        |              |
|                     | 719.95                            | 13.00            | 6.19               | 19.31              | N/A          | 38.50                   | 84.14         |              |
|                     | 959.95                            | 13.29            | 7.56               | 21.15              | N/A          | 42.00                   | 125.89        |              |
| 960MHz - 1GHz       | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 1GHz - 5GHz         | See TRaC report 22-0003-005057/1  |                  |                    |                    |              |                         |               |              |
| Limits              | 0.009MHz to 0.49MHz               |                  | 2400/F(kHz) @ 300m |                    |              |                         |               |              |
|                     | 0.49MHz to 1.705                  |                  | 24000/F(kHz) @ 30m |                    |              |                         |               |              |
|                     | 1.705MHz to 30MHz                 |                  | 30µV/m @ 30m       |                    |              |                         |               |              |
|                     | 30MHz to 88MHz                    |                  | 100µV/m @ 3m       |                    |              |                         |               |              |
|                     | 88MHz to 216MHz                   |                  | 150µV/m @ 3m       |                    |              |                         |               |              |
|                     | 216MHz to 960MHz                  |                  | 200µV/m @ 3m       |                    |              |                         |               |              |
|                     | 960MHz to 1GHz                    |                  | 500µV/m @ 3m       |                    |              |                         |               |              |
|                     | 1GHz to 5GHz                      |                  | 500µV/m @ 3m       |                    |              |                         |               |              |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB387-03        | Emission Frequency (MHz)          | Meas. Rx. (dBuV) | Cable loss (dB)    | Ant. Factor (dB/m) | Pre Amp (dB) | Field Strength (dBµV/m) | Result (µV/m) | Limit (µV/m) |  |
|---------------------|-----------------------------------|------------------|--------------------|--------------------|--------------|-------------------------|---------------|--------------|--|
| 0.009MHz - 0.49MHz  | See table listed A                |                  |                    |                    |              |                         |               |              |  |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |  |
| 1.705MHz - 30MHz    | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |  |
| 30MHz - 88MHz       | 60.00                             | 21.40            | 1.31               | 5.09               | N/A          | 27.80                   | 24.54         | 100          |  |
|                     | 61.45                             | 14.73            | 1.33               | 5.04               | N/A          | 21.10                   | 11.35         |              |  |
|                     | 65.85                             | 17.20            | 1.37               | 4.93               | N/A          | 23.50                   | 14.96         |              |  |
|                     | 73.75                             | 17.14            | 1.47               | 5.59               | N/A          | 24.20                   | 16.21         |              |  |
|                     | 83.10                             | 21.15            | 1.55               | 7.30               | N/A          | 30.00                   | 31.62         |              |  |
| 88MHz - 216MHz      | 113.80                            | 16.19            | 1.86               | 11.45              | N/A          | 29.50                   | 29.85         | 150          |  |
|                     | 118.85                            | 15.91            | 1.90               | 11.49              | N/A          | 29.30                   | 29.17         |              |  |
|                     | 135.15                            | 13.60            | 2.08               | 11.12              | N/A          | 26.80                   | 21.87         |              |  |
|                     | 159.10                            | 15.76            | 2.31               | 9.43               | N/A          | 27.50                   | 23.71         |              |  |
|                     | 168.00                            | 25.55            | 2.35               | 9.10               | N/A          | 37.00                   | 70.79         |              |  |
|                     | 173.20                            | 18.77            | 2.40               | 8.83               | N/A          | 30.00                   | 31.62         |              |  |
|                     | 205.15                            | 22.56            | 2.68               | 8.76               | N/A          | 34.00                   | 50.11         |              |  |
|                     | 207.80                            | 26.64            | 2.70               | 8.66               | N/A          | 38.00                   | 79.43         |              |  |
| 216MHz - 960MHz     | 209.05                            | 24.29            | 2.75               | 8.56               | N/A          | 35.60                   | 60.25         | 200          |  |
|                     | 242.60                            | 24.14            | 3.20               | 11.16              | N/A          | 38.50                   | 84.14         |              |  |
|                     | 357.35                            | 21.64            | 3.85               | 14.51              | N/A          | 40.00                   | 100.00        |              |  |
|                     | 480.00                            | 18.31            | 4.68               | 17.01              | N/A          | 40.00                   | 100.00        |              |  |
|                     | 575.95                            | 14.89            | 5.38               | 18.53              | N/A          | 38.80                   | 87.09         |              |  |
|                     | 719.95                            | 16.80            | 6.19               | 19.31              | N/A          | 42.30                   | 130.31        |              |  |
| 960MHz - 1GHz       | 959.95                            | 15.49            | 7.56               | 21.15              | N/A          | 44.20                   | 162.18        |              |  |
|                     | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |  |
| 1GHz - 5GHz         | See TRaC report 22-0003-005057/1  |                  |                    |                    |              |                         |               |              |  |
| Limits              | 0.009MHz to 0.49MHz               |                  | 2400/F(kHz) @ 300m |                    |              |                         |               |              |  |
|                     | 0.49MHz to 1.705                  |                  | 24000/F(kHz) @ 30m |                    |              |                         |               |              |  |
|                     | 1.705MHz to 30MHz                 |                  | 30µV/m @ 30m       |                    |              |                         |               |              |  |
|                     | 30MHz to 88MHz                    |                  | 100µV/m @ 3m       |                    |              |                         |               |              |  |
|                     | 88MHz to 216MHz                   |                  | 150µV/m @ 3m       |                    |              |                         |               |              |  |
|                     | 216MHz to 960MHz                  |                  | 200µV/m @ 3m       |                    |              |                         |               |              |  |
|                     | 960MHz to 1GHz                    |                  | 500µV/m @ 3m       |                    |              |                         |               |              |  |
| 1GHz to 5GHz        |                                   | 500µV/m @ 3m     |                    |                    |              |                         |               |              |  |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 13°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 51% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB395-03        | Emission Frequency (MHz)          | Meas. Rx. (dBuV) | Cable loss (dB)    | Ant. Factor (dB/m) | Pre Amp (dB) | Field Strength (dBµV/m) | Result (µV/m) | Limit (µV/m) |
|---------------------|-----------------------------------|------------------|--------------------|--------------------|--------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz  | See table listed A                |                  |                    |                    |              |                         |               |              |
| 0.49MHz - 1.705 MHz | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 1.705MHz - 30MHz    | No Significant Emissions Detected |                  |                    |                    |              |                         |               |              |
| 30MHz - 88MHz       | 60.00                             | 15.00            | 1.31               | 5.09               | N/A          | 21.40                   | 11.74         | 100          |
|                     | 72.00                             | 30.53            | 1.47               | 5.50               | N/A          | 37.50                   | 74.98         |              |
|                     | 74.95                             | 16.18            | 1.48               | 5.84               | N/A          | 23.50                   | 14.96         |              |
|                     | 84.00                             | 27.07            | 1.62               | 7.51               | N/A          | 36.20                   | 64.56         |              |
| 88MHz - 216MHz      | 136.25                            | 14.32            | 2.08               | 11.00              | N/A          | 27.40                   | 23.44         | 150          |
|                     | 142.65                            | 11.27            | 2.10               | 10.63              | N/A          | 24.00                   | 15.84         |              |
|                     | 144.25                            | 10.94            | 2.17               | 10.39              | N/A          | 23.50                   | 14.96         |              |
|                     | 168.00                            | 16.05            | 2.35               | 9.10               | N/A          | 27.50                   | 23.71         |              |
|                     | 171.90                            | 14.58            | 2.40               | 9.02               | N/A          | 26.00                   | 19.95         |              |
| 216MHz - 960MHz     | 223.30                            | 21.83            | 2.80               | 8.67               | N/A          | 33.30                   | 46.23         | 200          |
|                     | 230.65                            | 21.55            | 2.97               | 9.68               | N/A          | 34.20                   | 51.28         |              |
|                     | 232.10                            | 20.94            | 2.98               | 9.98               | N/A          | 33.90                   | 49.54         |              |
|                     | 236.35                            | 19.29            | 3.02               | 10.29              | N/A          | 32.60                   | 42.65         |              |
|                     | 242.40                            | 18.07            | 3.27               | 11.16              | N/A          | 32.50                   | 42.17         |              |
|                     | 250.15                            | 15.95            | 4.08               | 11.97              | N/A          | 32.00                   | 39.81         |              |
|                     | 254.05                            | 13.95            | 3.65               | 12.45              | N/A          | 30.05                   | 31.80         |              |
|                     | 281.25                            | 12.33            | 3.31               | 12.56              | N/A          | 28.20                   | 25.70         |              |
|                     | 284.20                            | 13.27            | 3.33               | 12.60              | N/A          | 29.20                   | 28.84         |              |
|                     | 312.80                            | 9.80             | 3.70               | 13.50              | N/A          | 27.00                   | 22.38         |              |
|                     | 356.10                            | 12.67            | 3.85               | 14.38              | N/A          | 30.90                   | 35.07         |              |
|                     | 414.90                            | 7.79             | 4.24               | 16.47              | N/A          | 28.50                   | 26.60         |              |
|                     | 430.15                            | 6.72             | 4.33               | 16.45              | N/A          | 27.50                   | 23.71         |              |
|                     | 460.90                            | 6.37             | 4.57               | 16.56              | N/A          | 27.50                   | 23.71         |              |
|                     | 468.05                            | 7.16             | 4.64               | 16.70              | N/A          | 28.50                   | 26.60         |              |
|                     | 480.00                            | 16.51            | 4.68               | 17.01              | N/A          | 38.20                   | 81.28         |              |
| 960MHz - 1GHz       | 960.05                            | 13.89            | 7.56               | 21.15              | N/A          | 42.60                   | 134.89        | 500          |
| 1GHz - 5GHz         | See TRaC report 22-0003-005057/1  |                  |                    |                    |              |                         |               |              |
| Limits              | 0.009MHz to 0.49MHz               |                  | 2400/F(kHz) @ 300m |                    |              |                         |               |              |
|                     | 0.49MHz to 1.705                  |                  | 24000/F(kHz) @ 30m |                    |              |                         |               |              |
|                     | 1.705MHz to 30MHz                 |                  | 30µV/m @ 30m       |                    |              |                         |               |              |
|                     | 30MHz to 88MHz                    |                  | 100µV/m @ 3m       |                    |              |                         |               |              |
|                     | 88MHz to 216MHz                   |                  | 150µV/m @ 3m       |                    |              |                         |               |              |
|                     | 216MHz to 960MHz                  |                  | 200µV/m @ 3m       |                    |              |                         |               |              |
|                     | 960MHz to 1GHz                    |                  | 500µV/m @ 3m       |                    |              |                         |               |              |
|                     | 1GHz to 5GHz                      |                  | 500µV/m @ 3m       |                    |              |                         |               |              |

## TRANSMITTER TESTS

### TRANSMITTER SPURIOUS EMISSIONS – RADIATED – PART 15.209

Table A

|                     |   |                            |                         |     |
|---------------------|---|----------------------------|-------------------------|-----|
| Ambient temperature | = | 10°C(<1GHz)                | 3m measurements <1GHz   | [X] |
| Relative humidity   | = | 46% (<1GHz),               | 1m measurements >1GHz   | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 3m extrapolated from 1m | [X] |
| Supply voltage      | = | 110Vac / 5.0Vdc            |                         |     |
| Pen Frequency       | = | 123kHz/130kHz              |                         |     |

| PRM-AB378-03       | Emission Frequency (kHz) | Meas. Rx. (dBuV/m) | Distance (m) | Extraploation Factor | Field Strength (dBuV/m) | Result (uV/m) | Limit (uV/m) |
|--------------------|--------------------------|--------------------|--------------|----------------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz | 320.0                    | 98.6               | 1            | 105.5                | -6.90                   | 0.45          | 7.20         |
| 0.009MHz - 0.49MHz | 320.0                    | 73.1               | 3            | 80.0                 | -6.90                   | 0.45          | 7.20         |

| PRM-AB387-03       | Emission Frequency (kHz) | Meas. Rx. (dBuV/m) | Distance (m) | Extraploation Factor | Field Strength (dBuV/m) | Result (uV/m) | Limit (uV/m) |
|--------------------|--------------------------|--------------------|--------------|----------------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz | 320.0                    | 96.4               | 1            | 102.7                | -6.3                    | 0.48          | 7.20         |
| 0.009MHz - 0.49MHz | 320.0                    | 73.7               | 3            | 80.0                 | -6.3                    | 0.48          | 7.20         |

| PRM-AB395-03       | Emission Frequency (kHz) | Meas. Rx. (dBuV/m) | Distance (m) | Extraploation Factor | Field Strength (dBuV/m) | Result (uV/m) | Limit (uV/m) |
|--------------------|--------------------------|--------------------|--------------|----------------------|-------------------------|---------------|--------------|
| 0.009MHz - 0.49MHz | 320.0                    | 92.7               | 1            | 103.6                | -6.4                    | 0.47          | 7.20         |
| 0.009MHz - 0.49MHz | 320.0                    | 73.6               | 3            | 80.0                 | -6.4                    | 0.47          | 7.20         |

**Notes:**

- 1 Results quoted are extrapolated as indicated
- 2 Emissions were searched to: (x) 1000MHz inclusive, as per Part 15.33a
- 3 Extrapolation factor 9.54dB from 1m to 3m, as per Part 15.31f
- 4 Extrapolation factor 80dB from 3m to 300m, as per Part 15.31f
- 5 Extrapolation factor 59dB from 3m to 30m
- 6 Measurements >1GHz @ 1m as per Part 15.31f(1)
- 7 Receiver detector >1GHz = CISPR, Quasi-Peak, 120kHz bandwidth
- 8 Receiver detector >1GHz = Peak Hold, 1MHz resolution bandwidth
- 9 New batteries used for battery powered products.
- 10 Emissions 20dB's below the limit are not recorded  
For emissions below 30MHz, the measuring receiver automatically compensates for the loss due to the antenna factor of the loop antenna. This loss is 20dB's across the
- 11 measurement range 9kHz to 30MHz
- 12 For emission below 30MHz the cable losses are assumed to be negligible
- 13 F(kHz) is the frequency of operation or spurious emission

**Test Method:**

- 1 As per Radio – Noise Emissions, ANSI C63.4: 2003
- 2 Measuring distances as Notes 1 to 4 above
- 3 EUT 0.8 metre above ground plane
- 4 Emissions maximised by rotation of EUT, on an automatic turntable.  
Raising and lowering the receiver antenna between 1m & 4m.  
Horizontal and vertical polarisations, of the receive antenna.  
EUT orientation in three orthogonal planes.  
Maximum results recorded.

The test equipment used for the Transmitter Spurious Emissions – Radiated – Part 15.209 tests is shown overleaf:

| TYPE OF EQUIPMENT                         | MAKER/<br>SUPPLIER | MODEL No | SERIAL No    | TRL No | ACTUAL<br>EQUIPMENT<br>USED |
|-------------------------------------------|--------------------|----------|--------------|--------|-----------------------------|
| AE, LOOP, Z2,<br>9kHz - 30MHz             | ROHDE &<br>SCHWARZ | HFH2     | 881058 - 53  | 07     |                             |
| HORN ANTENNA                              | EMCO               | 3115     | 9010-3580    | 138    |                             |
| HORN ANTENNA                              | EMCO               | 3115     | 9010-3581    | 139    |                             |
| SPECTRUM<br>ANALYSER                      | TEKTRONIX          | 2756P    | B010109      | 164    |                             |
| BICONE<br>ANTENNA                         | CHASE              | BBA9106  | N/A          | 193    |                             |
| ANTENNA, LOG<br>PERIODIC<br>300MHz – 1GHz | CHASE              | UPA6108  | 1061         | 203    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESHS20   | 837960/003   | 237    |                             |
| ANTENNA,<br>BICONE<br>20MHz - 300MHz      | CHASE              | VBA6106A | 1193         | 251    |                             |
| BILOG ANTENNA                             | CHASE              | CBL6112  | 2098         | 274    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESVS10   | 837948/003   | 317    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESVS10   | 844594/003   | 352    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESHS10   | 844077/019   | 353    |                             |
| V / UHF<br>RECEIVER<br>20MHz - 1GHz       | ROHDE &<br>SCHWARZ | ESVS 20  | 838804 / 005 | 415    |                             |
| BILOG ANTENNA                             | SCHAFFNER          | CBL6112B | 2761         | 431    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESHS 10  | 830051/001   | UH03   |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESVS 10  | 841431/014   | UH186  | X                           |
| RANGE 1                                   | TRL                | 3 METRE  | N/A          | UH06   |                             |
| AE, LOOP, Z2,<br>9kHz - 30MHz             | ROHDE &<br>SCHWARZ | HFH2     | 881058 - 53  | 07     | X                           |
| BILOG ANTENNA                             | CHASE              | CBL6112  | 2129         | UH93   | X                           |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESHS 10  | 841429/012   | UH187  | X                           |

## TRANSMITTER TESTS

### TRANSMITTER INTENTIONAL EMISSION – RADIATED – Part 15.209

|                     |   |                            |                           |     |
|---------------------|---|----------------------------|---------------------------|-----|
| Ambient temperature | = | 10°C(<1GHz),               | 1m measurements @ fc      | [X] |
| Relative humidity   | = | 46%(<1GHz),                | 3m measurements @ fc      | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 30m measurements @ fc     | [ ] |
| Supply voltage      | = | 110Vac / 5.0Vdc            | 300m extrapolated from 1m | [X] |
| Pen frequency       | = | 123kHz/130kHz              | 300m extrapolated from 3m | [X] |

|                         | Frequency (kHz) | Meas. Rx. (dBuV/m) | Distance (m)             | Extraploation Factor | Field Strength (dBuV/m) | Result (uV/m) |
|-------------------------|-----------------|--------------------|--------------------------|----------------------|-------------------------|---------------|
| <b>64"BOARD</b>         | 123.52          | 83.0               | 1                        | 103.0                | -20.0                   | 0.100         |
|                         | 123.52          | 60.0               | 3                        | 80.0                 | -20.0                   | 0.100         |
|                         | 130.65          | 84.6               | 1                        | 105.6                | -21.0                   | 0.089         |
|                         | 130.65          | 59.0               | 3                        | 80.0                 | -21.0                   | 0.089         |
| Limit value @ 123.50kHz |                 |                    | <b>19.51 (uV/m)@300m</b> |                      |                         |               |
| Limit value @ 130.5 kHz |                 |                    | <b>18.46 (uV/m)@300m</b> |                      |                         |               |
|                         |                 |                    | <b>f lower</b>           |                      | <b>f higher</b>         |               |
| Band occupancy @ 20dBc  |                 |                    | 121.37820kHz             |                      | 133.118845kHz           |               |

See spectrum analyser plot – Annex B

- Notes:**
- 1 Results quoted are extrapolated as indicated
  - 2 Receiver detector @ fc = Average 10kHz bandwidth

- Test Method:**
- 1 As per Radio – Noise Emissions, ANSI C63.4: 2003
  - 2 Measuring distances 1m & 3m
  - 3 EUT 0.8 metre above ground plane
  - 4 Emissions maximised by rotation of EUT, on an automatic turntable.  
Raising and lowering the receiver antenna between 1m & 4m.  
Horizontal and vertical polarisations, of the receive antenna.  
EUT orientation in three orthogonal planes.  
Maximum results recorded

The test equipment used for the Transmitter Intentional Emission – Radiated – Part 15.209 tests is shown overleaf:

## TRANSMITTER TESTS

### TRANSMITTER INTENTIONAL EMISSION – RADIATED – Part 15.209

|                     |   |                            |                           |     |
|---------------------|---|----------------------------|---------------------------|-----|
| Ambient temperature | = | 10°C(<1GHz),               | 1m measurements @ fc      | [X] |
| Relative humidity   | = | 46%(<1GHz),                | 3m measurements @ fc      | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 30m measurements @ fc     | [ ] |
| Supply voltage      | = | 110Vac / 5.0Vdc            | 300m extrapolated from 1m | [X] |
| Pen frequency       | = | 123kHz/130kHz              | 300m extrapolated from 3m | [X] |

|                                                    | Frequency (kHz) | Meas. Rx. (dBuV/m) | Distance (m)             | Extraploation Factor | Field Strength (dBuV/m) | Result (uV/m) |
|----------------------------------------------------|-----------------|--------------------|--------------------------|----------------------|-------------------------|---------------|
| <b>Highest power output Recorded for 78"BOARDS</b> | 123.6           | 84.0               | 1                        | 103.20               | -19.20                  | 0.110         |
|                                                    | 123.6           | 60.8               | 3                        | 80.00                | -19.20                  | 0.110         |
|                                                    | 130.6           | 83.5               | 1                        | 103.90               | -20.40                  | 0.095         |
|                                                    | 130.6           | 59.6               | 3                        | 80.00                | -20.40                  | 0.095         |
| Limit value @ 123.50kHz                            |                 |                    | <b>19.51 (uV/m)@300m</b> |                      |                         |               |
| Limit value @ 130.5 kHz                            |                 |                    | <b>18.46 (uV/m)@300m</b> |                      |                         |               |
|                                                    |                 |                    | <b>f lower</b>           |                      | <b>f higher</b>         |               |
| Band occupancy @ 20dBc                             |                 |                    | 121.330126kHz            |                      | 133.297305kHz           |               |

See spectrum analyser plot – Annex B

- Notes:**
- 1 Results quoted are extrapolated as indicated
  - 2 Receiver detector @ fc = Average 10kHz bandwidth

- Test Method:**
- 1 As per Radio – Noise Emissions, ANSI C63.4: 2003
  - 2 Measuring distances 1m & 3m
  - 3 EUT 0.8 metre above ground plane
  - 4 Emissions maximised by rotation of EUT, on an automatic turntable.  
Raising and lowering the receiver antenna between 1m & 4m.  
Horizontal and vertical polarisations, of the receive antenna.  
EUT orientation in three orthogonal planes.  
Maximum results recorded

The test equipment used for the Transmitter Intentional Emission – Radiated – Part 15.209 tests is shown overleaf:

## TRANSMITTER TESTS

### TRANSMITTER INTENTIONAL EMISSION – RADIATED – Part 15.209

|                     |   |                            |                           |     |
|---------------------|---|----------------------------|---------------------------|-----|
| Ambient temperature | = | 10°C(<1GHz),               | 1m measurements @ fc      | [X] |
| Relative humidity   | = | 46%(<1GHz),                | 3m measurements @ fc      | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 30m measurements @ fc     | [ ] |
| Supply voltage      | = | 110Vac / 5.0Vdc            | 300m extrapolated from 1m | [X] |
| Pen frequency       | = | 123kHz/130kHz              | 300m extrapolated from 3m | [X] |

| Highest power output Recorded for 87”BOARDS | Frequency (kHz) | Meas. Rx. (dBuV/m) | Distance (m)      | Extraploation Factor | Field Strength (dBμV/m) | Result (μV/m) |
|---------------------------------------------|-----------------|--------------------|-------------------|----------------------|-------------------------|---------------|
|                                             | 123.6           | 82.4               | 1                 | 107.2                | -24.80                  | 0.058         |
|                                             | 123.6           | 55.2               | 3                 | 80.0                 | -24.80                  | 0.058         |
|                                             | 130.65          | 81.0               | 1                 | 105.4                | -24.40                  | 0.060         |
|                                             | 130.65          | 55.6               | 3                 | 80.0                 | -24.40                  | 0.058         |
| Limit value @ 123.50kHz                     |                 |                    | 19.51 (μV/m)@300m |                      |                         |               |
| Limit value @ 130.5 kHz                     |                 |                    | 18.46 (μV/m)@300m |                      |                         |               |
|                                             |                 |                    | f lower           |                      | f higher                |               |
| Band occupancy @ 20dBc                      |                 |                    | 121.105769kHz     |                      | 133.060897kHz           |               |

See spectrum analyser plot – Annex B

**Notes:**

- 1 Results quoted are extrapolated as indicated
- 2 Receiver detector @ fc = Average 10kHz bandwidth

**Test Method:**

- 1 As per Radio – Noise Emissions, ANSI C63.4: 2003
- 2 Measuring distances 1m & 3m
- 3 EUT 0.8 metre above ground plane
- 4 Emissions maximised by rotation of EUT, on an automatic turntable.  
Raising and lowering the receiver antenna between 1m & 4m.  
Horizontal and vertical polarisations, of the receive antenna.  
EUT orientation in three orthogonal planes.  
Maximum results recorded

The test equipment used for the Transmitter Intentional Emission – Radiated – Part 15.209 tests is shown overleaf:

## TRANSMITTER TESTS

### TRANSMITTER INTENTIONAL EMISSION – RADIATED – Part 15.209

|                     |   |                            |                           |     |
|---------------------|---|----------------------------|---------------------------|-----|
| Ambient temperature | = | 10°C(<1GHz),               | 1m measurements @ fc      | [X] |
| Relative humidity   | = | 46%(<1GHz),                | 3m measurements @ fc      | [X] |
| Conditions          | = | Open Area Test Site (OATS) | 30m measurements @ fc     | [ ] |
| Supply voltage      | = | 110Vac / 5.0Vdc            | 300m extrapolated from 1m | [X] |
| Pen frequency       | = | 123kHz/130kHz              | 300m extrapolated from 3m | [X] |

|                         | Frequency (kHz) | Meas. Rx. (dBuV/m) | Distance (m)             | Extraploation Factor | Field Strength (dBuV/m) | Result (uV/m) |
|-------------------------|-----------------|--------------------|--------------------------|----------------------|-------------------------|---------------|
| <b>95"BOARD</b>         | 123.6           | 82.0               | 1                        | 106.4                | -24.40                  | 0.060         |
|                         | 123.6           | 55.6               | 3                        | 80.0                 | -24.40                  | 0.060         |
|                         | 130.65          | 81.0               | 1                        | 108.5                | -27.50                  | 0.042         |
|                         | 130.65          | 52.5               | 3                        | 80.0                 | -27.50                  | 0.042         |
| Limit value @ 123.50kHz |                 |                    | <b>19.51 (uV/m)@300m</b> |                      |                         |               |
| Limit value @ 130.5 kHz |                 |                    | <b>18.46 (uV/m)@300m</b> |                      |                         |               |
|                         |                 |                    | <b>f lower</b>           |                      | <b>f higher</b>         |               |
| Band occupancy @ 20dBc  |                 |                    | 120.849358kHz            |                      | 133.028845kHz           |               |

See spectrum analyser plot – Annex B

- Notes:**
- 1 Results quoted are extrapolated as indicated
  - 2 Receiver detector @ fc = Average 10kHz bandwidth

- Test Method:**
- 1 As per Radio – Noise Emissions, ANSI C63.4: 2003
  - 2 Measuring distances 1m & 3m
  - 3 EUT 0.8 metre above ground plane
  - 4 Emissions maximised by rotation of EUT, on an automatic turntable.  
Raising and lowering the receiver antenna between 1m & 4m.  
Horizontal and vertical polarisations, of the receive antenna.  
EUT orientation in three orthogonal planes.  
Maximum results recorded

The test equipment used for the Transmitter Intentional Emission – Radiated – Part 15.209 tests is shown overleaf:

| TYPE OF EQUIPMENT                         | MAKER/<br>SUPPLIER | MODEL No  | SERIAL No    | TRL No | ACTUAL<br>EQUIPMENT<br>USED |
|-------------------------------------------|--------------------|-----------|--------------|--------|-----------------------------|
| AE, LOOP, Z2,<br>9kHz - 30MHz             | ROHDE &<br>SCHWARZ | HFH2      | 881058 - 53  | 07     |                             |
| HORN ANTENNA                              | EMCO               | 3115      | 9010-3580    | 138    |                             |
| HORN ANTENNA                              | EMCO               | 3115      | 9010-3581    | 139    |                             |
| SPECTRUM<br>ANALYSER                      | TEKTRONIX          | 2756P     | B010109      | 164    |                             |
| BICONE<br>ANTENNA                         | CHASE              | BBA9106   | N/A          | 193    |                             |
| ANTENNA, LOG<br>PERIODIC<br>300MHz – 1GHz | CHASE              | UPA6108   | 1061         | 203    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESHS20    | 837960/003   | 237    |                             |
| ANTENNA,<br>BICONE<br>20MHz - 300MHz      | CHASE              | VBA6106A  | 1193         | 251    |                             |
| BILOG ANTENNA                             | CHASE              | CBL6112   | 2098         | 274    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESVS10    | 837948/003   | 317    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESVS10    | 844594/003   | 352    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESHS10    | 844077/019   | 353    |                             |
| V / UHF<br>RECEIVER<br>20MHz - 1GHz       | ROHDE &<br>SCHWARZ | ESVS 20   | 838804 / 005 | 415    |                             |
| BILOG ANTENNA                             | SCHAFFNER          | CBL6112B  | 2761         | 431    |                             |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESHS 10   | 841429/012   | UH187  | X                           |
| RECEIVER                                  | ROHDE &<br>SCHWARZ | ESVS 10   | 825892/003   | UH04   |                             |
| RANGE 1                                   | TRL                | 3 METRE   | N/A          | UH06   |                             |
| AE, LOOP, Z2,<br>9kHz - 30MHz             | ROHDE &<br>SCHWARZ | HFH2      | 881058 - 53  | 07     | X                           |
| BILOG ANTENNA                             | CHASE              | CBL6112   | 2129         | UH93   |                             |
| SPECTRUM<br>ANALYSER                      | MARCONI            | 2386/2380 | 152076/004   | UH120  |                             |

## TRANSMITTER TESTS

### TRANSMITTER CONDUCTED EMISSIONS – AC POWER LINE Part 15.207

Ambient temperature = 18°C(<1GHz),  
 Relative humidity = 53%(<1GHz),  
 Conditions = Power Line Laboratory  
 Supply voltage = 110V AC  
 Supply Frequency = 60Hz

### SIGNIFICANT EMISSIONS

|                          | FREQUENCY<br>(MHz) | MEASUREMENT<br>RECEIVER<br>READING<br>(dBµV) | DETECTOR   | CONDUCTOR<br>(L or N) | EMISSION<br>(dBµV)<br>LIMIT |
|--------------------------|--------------------|----------------------------------------------|------------|-----------------------|-----------------------------|
| <b>PRM-<br/>AB364-01</b> | 0.165              | 37.87                                        | AVERAGE    | LIVE LINE             | 55.21                       |
|                          | 2.24               | 26.43                                        | AVERAGE    | LIVE LINE             | 46.00                       |
|                          | 2.47               | 28.05                                        | AVERAGE    | LIVE LINE             | 46.00                       |
|                          | 3.56               | 39.66                                        | QUASI PEAK | LIVE LINE             | 56.00                       |
|                          | 3.56               | 30.59                                        | AVERAGE    | LIVE LINE             | 46.00                       |
|                          | 3.73               | 40.53                                        | QUASI PEAK | LIVE LINE             | 56.00                       |
|                          | 3.73               | 32.00                                        | AVERAGE    | LIVE LINE             | 46.00                       |

### SIGNIFICANT EMISSIONS

|                          | FREQUENCY<br>(MHz) | MEASUREMENT<br>RECEIVER<br>READING<br>(dBµV) | DETECTOR   | CONDUCTOR<br>(L or N) | EMISSION<br>(dBµV)<br>LIMIT |
|--------------------------|--------------------|----------------------------------------------|------------|-----------------------|-----------------------------|
| <b>PRM-<br/>AB378-03</b> | 0.155              | 40.63                                        | AVERAGE    | NEUTRAL               | 55.73                       |
|                          | 0.160              | 48.16                                        | QUASI PEAK | NEUTRAL               | 65.46                       |
|                          | 0.210              | 34.69                                        | AVERAGE    | NEUTRAL               | 53.21                       |
|                          | 0.240              | 36.93                                        | AVERAGE    | NEUTRAL               | 52.10                       |
|                          | 0.465              | 38.38                                        | AVERAGE    | NEUTRAL               | 46.60                       |
|                          | 0.470              | 41.44                                        | QUASI PEAK | NEUTRAL               | 56.51                       |
|                          | 0.52               | 37.18                                        | QUASI PEAK | NEUTRAL               | 56.00                       |
|                          | 0.52               | 35.11                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                          | 0.625              | 28.50                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                          | 0.675              | 28.84                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                          | 2.55               | 26.82                                        | AVERAGE    | NEUTRAL               | 46.00                       |

# SIGNIFICANT EMISSIONS

|                  | FREQUENCY<br>(MHz) | MEASUREMENT<br>RECEIVER<br>READING<br>(dBμV) | DETECTOR   | CONDUCTOR<br>(L or N) | EMISSION<br>(dBμV)<br>LIMIT |
|------------------|--------------------|----------------------------------------------|------------|-----------------------|-----------------------------|
| PRM-<br>AB387-03 | 0.155              | 51.78                                        | QUASI PEAK | NEUTRAL               | 65.73                       |
|                  | 0.155              | 40.71                                        | AVERAGE    | NEUTRAL               | 55.73                       |
|                  | 0.210              | 44.64                                        | QUASI PEAK | NEUTRAL               | 63.21                       |
|                  | 0.210              | 34.78                                        | AVERAGE    | NEUTRAL               | 53.21                       |
|                  | 0.240              | 39.78                                        | QUASI PEAK | NEUTRAL               | 62.10                       |
|                  | 0.240              | 37.38                                        | AVERAGE    | NEUTRAL               | 52.10                       |
|                  | 0.470              | 38.16                                        | AVERAGE    | NEUTRAL               | 46.51                       |
|                  | 0.475              | 41.48                                        | QUASI PEAK | NEUTRAL               | 56.43                       |
|                  | 0.52               | 37.16                                        | QUASI PEAK | NEUTRAL               | 56.00                       |
|                  | 0.52               | 34.52                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 0.625              | 28.10                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 0.675              | 28.19                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 2.55               | 2.55                                         | AVERAGE    | NEUTRAL               | 46.00                       |

# SIGNIFICANT EMISSIONS

|                  | FREQUENCY<br>(MHz) | MEASUREMENT<br>RECEIVER<br>READING<br>(dBμV) | DETECTOR   | CONDUCTOR<br>(L or N) | EMISSION<br>(dBμV)<br>LIMIT |
|------------------|--------------------|----------------------------------------------|------------|-----------------------|-----------------------------|
| PRM-<br>AB395-03 | 0.155              | 52.34                                        | QUASI PEAK | NEUTRAL               | 65.73                       |
|                  | 0.155              | 41.13                                        | AVERAGE    | NEUTRAL               | 55.73                       |
|                  | 0.205              | 35.35                                        | AVERAGE    | NEUTRAL               | 53.41                       |
|                  | 0.210              | 45.14                                        | QUASI PEAK | NEUTRAL               | 63.21                       |
|                  | 0.240              | 37.32                                        | AVERAGE    | NEUTRAL               | 52.10                       |
|                  | 0.320              | 34.69                                        | AVERAGE    | NEUTRAL               | 49.71                       |
|                  | 0.465              | 38.44                                        | AVERAGE    | NEUTRAL               | 46.60                       |
|                  | 0.470              | 41.34                                        | QUASI PEAK | NEUTRAL               | 56.51                       |
|                  | 0.52               | 37.16                                        | QUASI PEAK | NEUTRAL               | 56.00                       |
|                  | 0.52               | 35.11                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 0.625              | 28.59                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 0.675              | 29.01                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 0.960              | 29.65                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 1.600              | 31.81                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 2.235              | 27.81                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 2.875              | 30.49                                        | AVERAGE    | NEUTRAL               | 46.00                       |
|                  | 3.515              | 27.46                                        | AVERAGE    | NEUTRAL               | 46.00                       |

- Notes:**
- 1 See worst case plot in Annex E.
  - 2 Measurements were taken of both live and neutral lines.
  - 3 Only emissions within 20dBs of the limit are recorded.
  - 4 Only worse case emission listed for the four different board sizes

**Test Method:** 1 As per Radio – Noise Emissions, ANSI C63.4: 2003

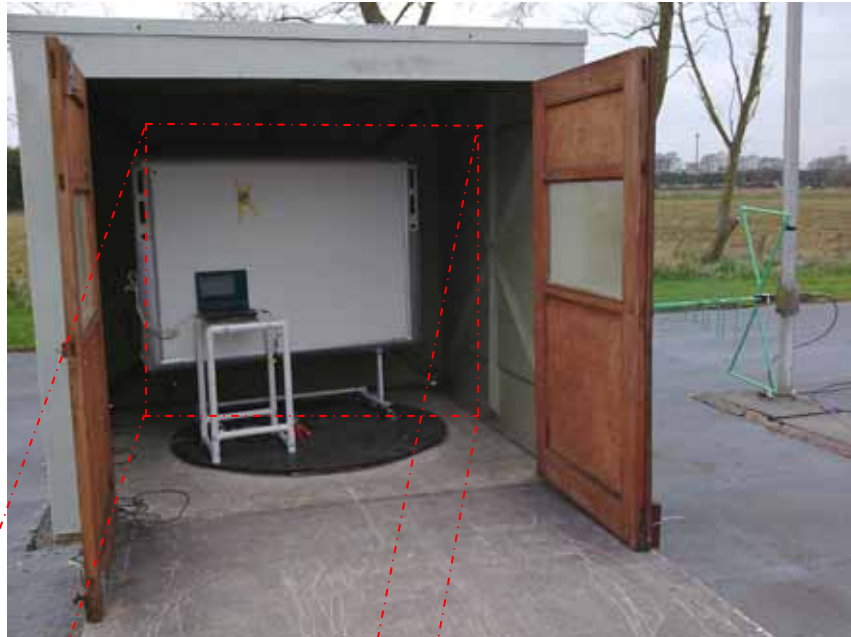
The test equipment used for the Transmitter Conducted Emissions – AC Power Line Part 15.207 test was:

| TYPE OF EQUIPMENT | MAKER/SUPPLIER  | MODEL No | SERIAL No  | TRL No | ACTUAL EQUIPMENT USED |
|-------------------|-----------------|----------|------------|--------|-----------------------|
| RECEIVER          | ROHDE & SCHWARZ | ESHS 10  | 830051/01  | UH03   | X                     |
| LISN/AMN          | ROHDE & SCHWARZ | ESH3-Z5  | 863906/018 | UH05   | X                     |

**ANNEX A**  
**PHOTOGRAPHS**

**PHOTOGRAPH No. 1 & 2 & 3**

**TYPICAL E - FIELD TEST SETUP**



**PHOTOGRAPH No. 4**

**TEST SETUP  
POWERLINE**



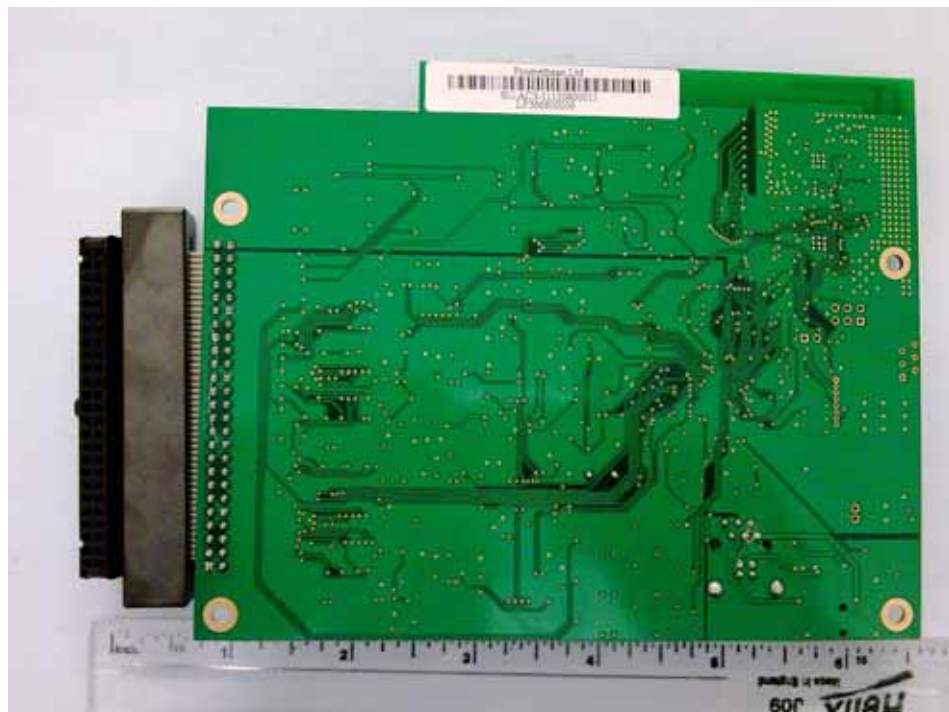
**PHOTOGRAPH No. 5**

**RADIO PCB FITTED ON REAR OF BOARD  
HUB UNIT WITH USB AUDIO AMPLIFIER FITTED IN THE SIDE PANEL**



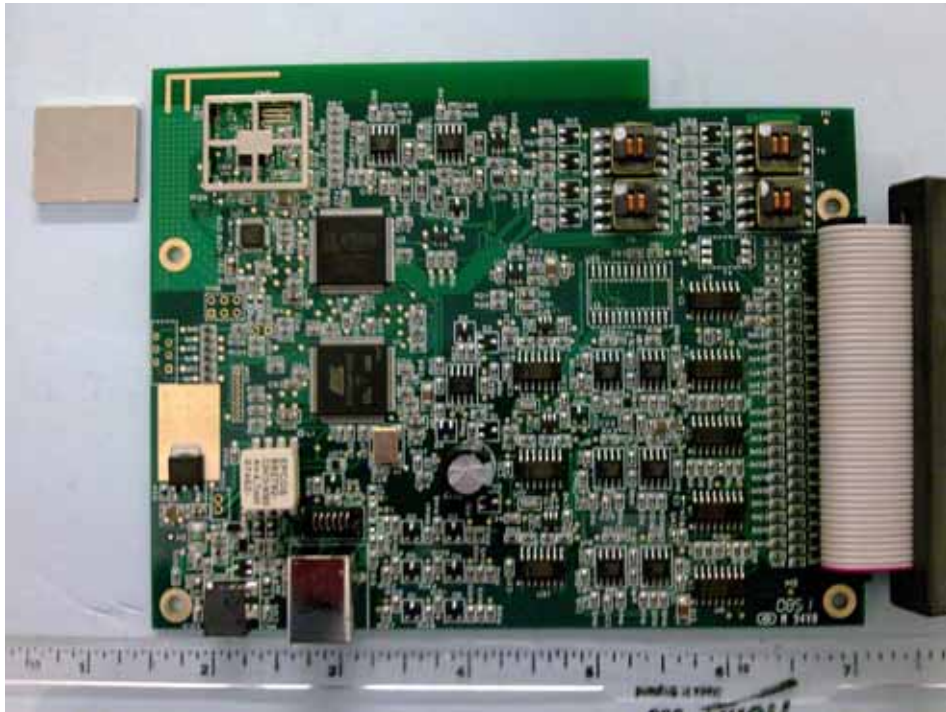
PHOTOGRAPH No. 6

**RADIO PCB REMOVED FROM BOARD  
TOP AND UNDERSIDE VIEW**



**PHOTOGRAPH No. 7**

**TOP VIEW OF 2.4GHz PCB  
SCREENING CAN REMOVED  
FROM RADIO SECTION**

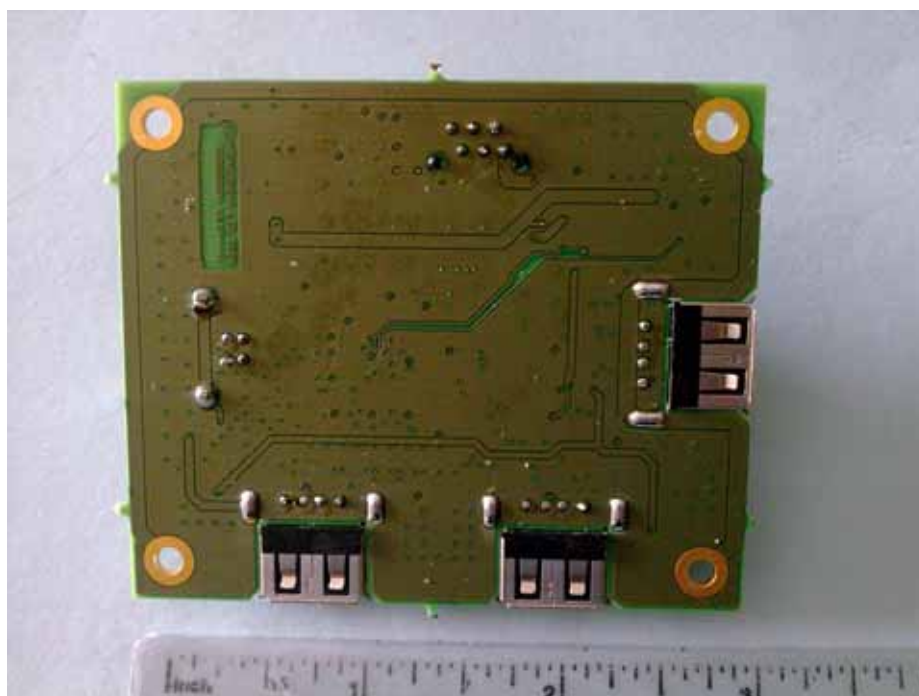
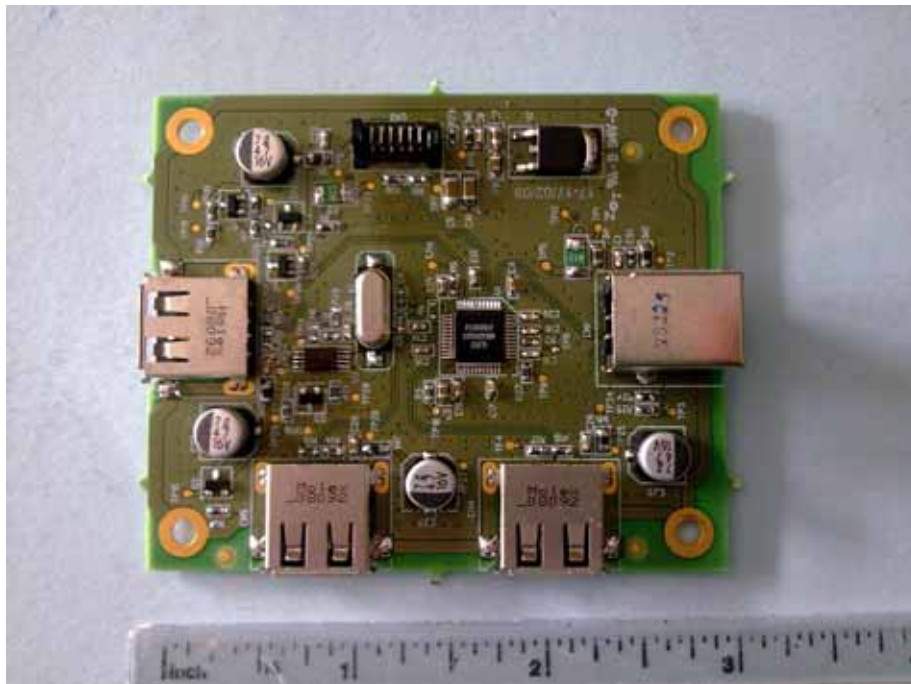


**CLOSE UP VIEW OF PCB  
SCREENING CAN REMOVED  
FROM RADIO SECTION**



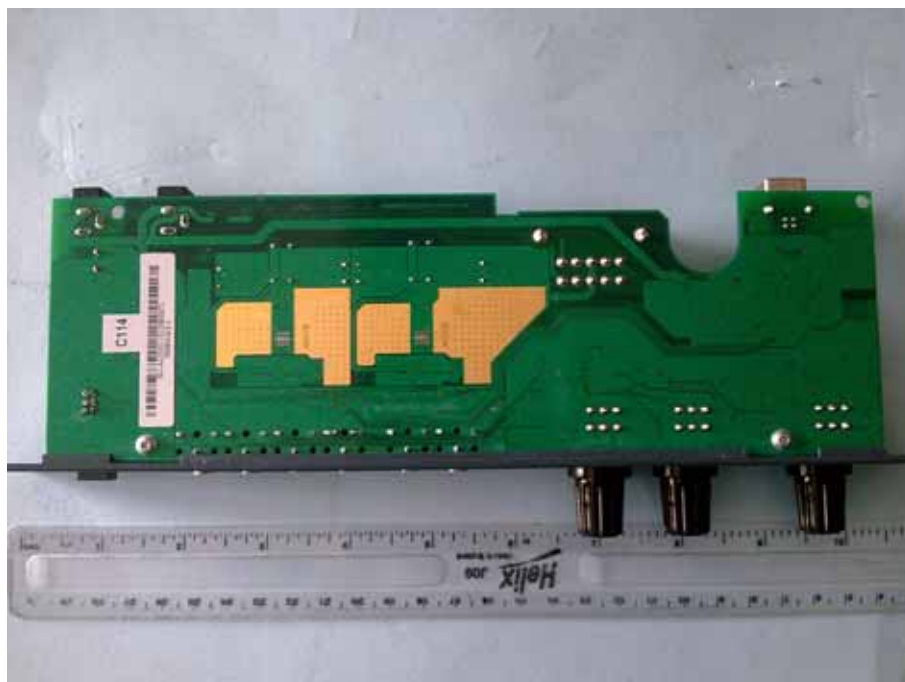
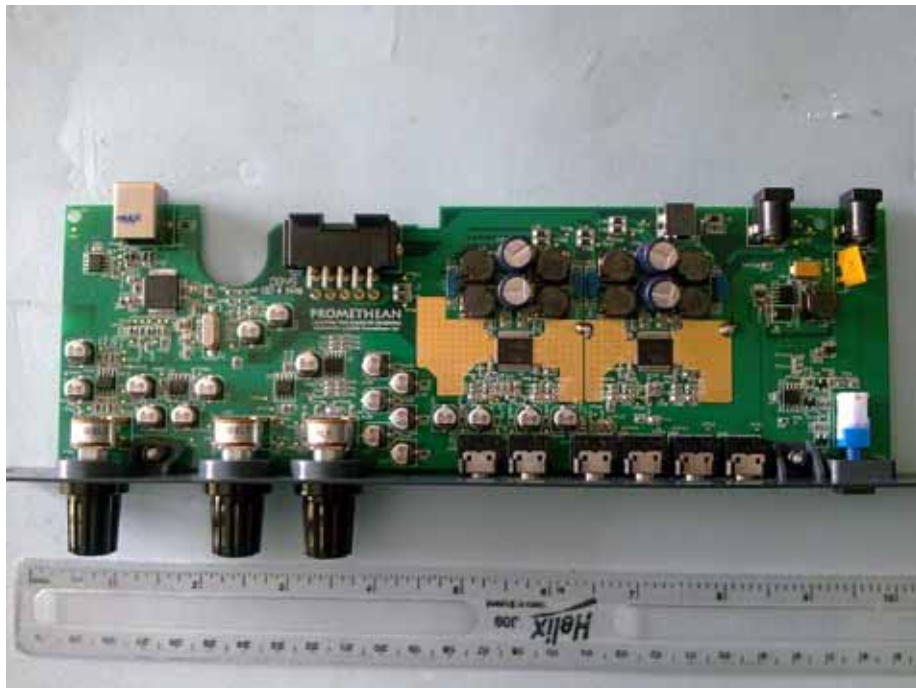
**PHOTOGRAPH No. 8**

**TOP AND UNDERSIDE VIEW OF HUB**



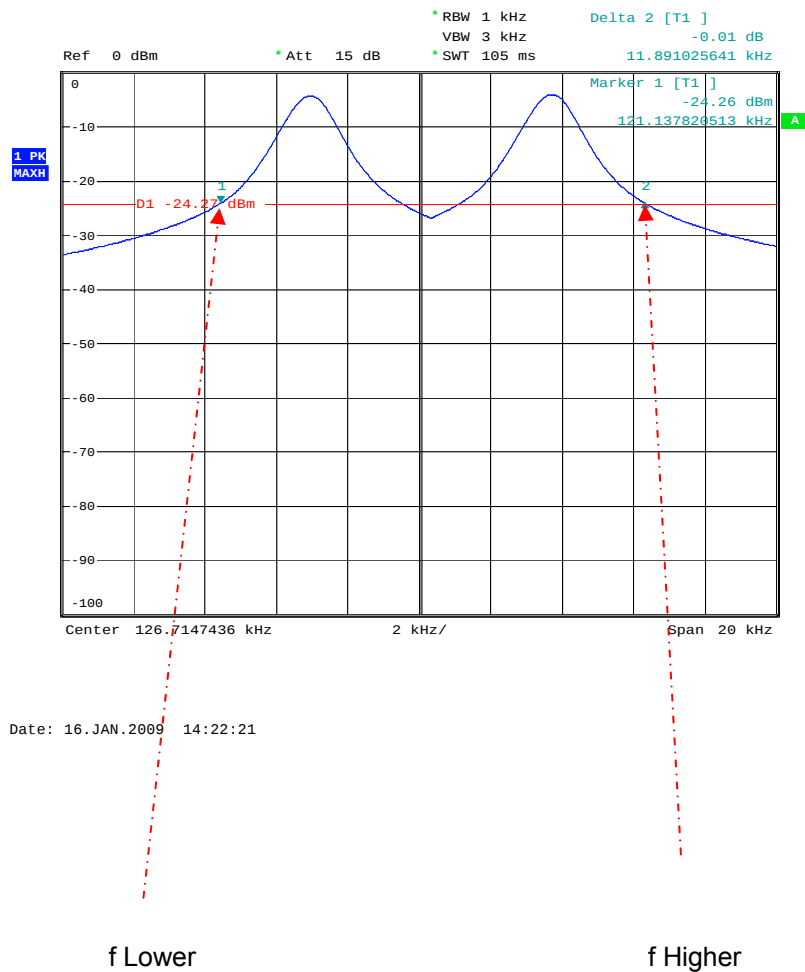
**PHOTOGRAPH No. 9**

**TOP AND UNDERSIDE VIEW OF AUDIO AMPLIFIER**



**ANNEX B**  
**BANDWIDTH PLOT**

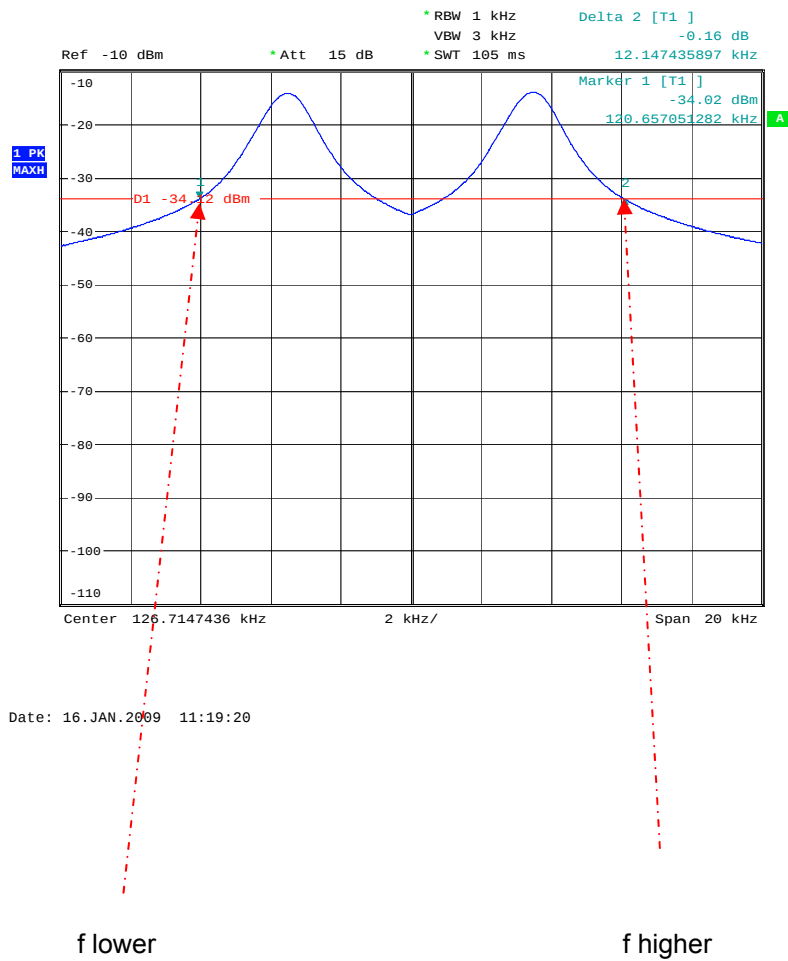
## 20 dB BANDWIDTH PLOT



Occupied Bandwidth = 11.89kHz  
f Lower = 121.137820kHz  
f Higher = 133.028845kHz

78"Board

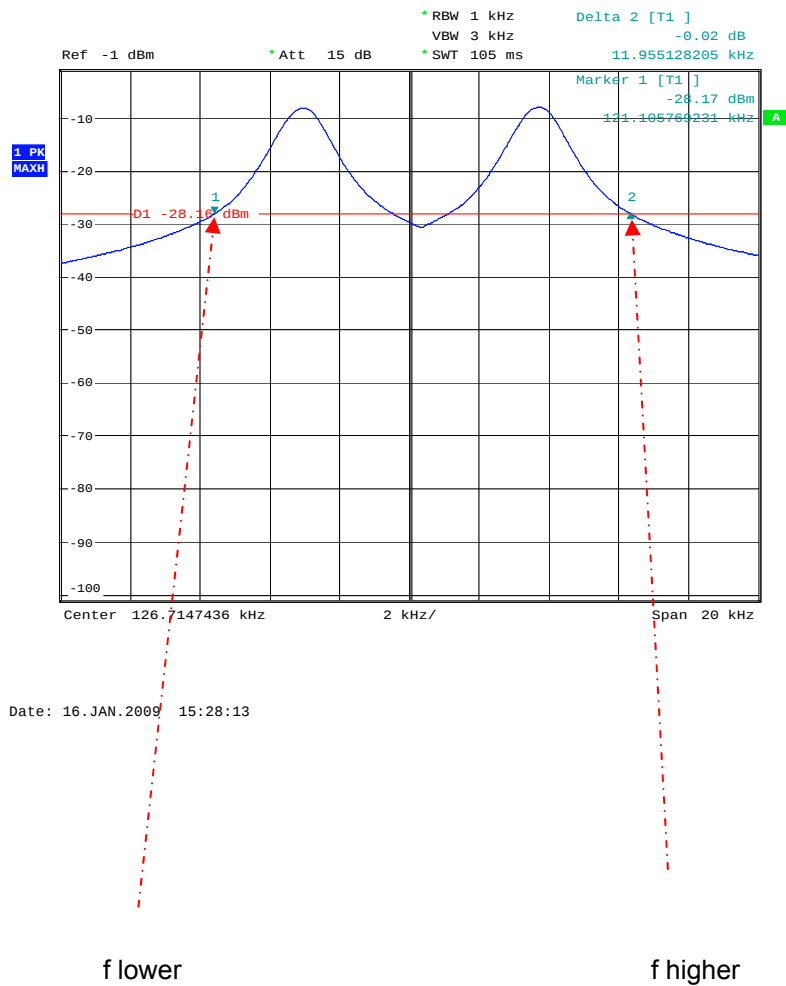
## 20 dB BANDWIDTH PLOT



Occupied Bandwidth = 12.14kHz  
 f Lower = 120.657051kHz  
 f Higher = 132.80495kHz

87"Board

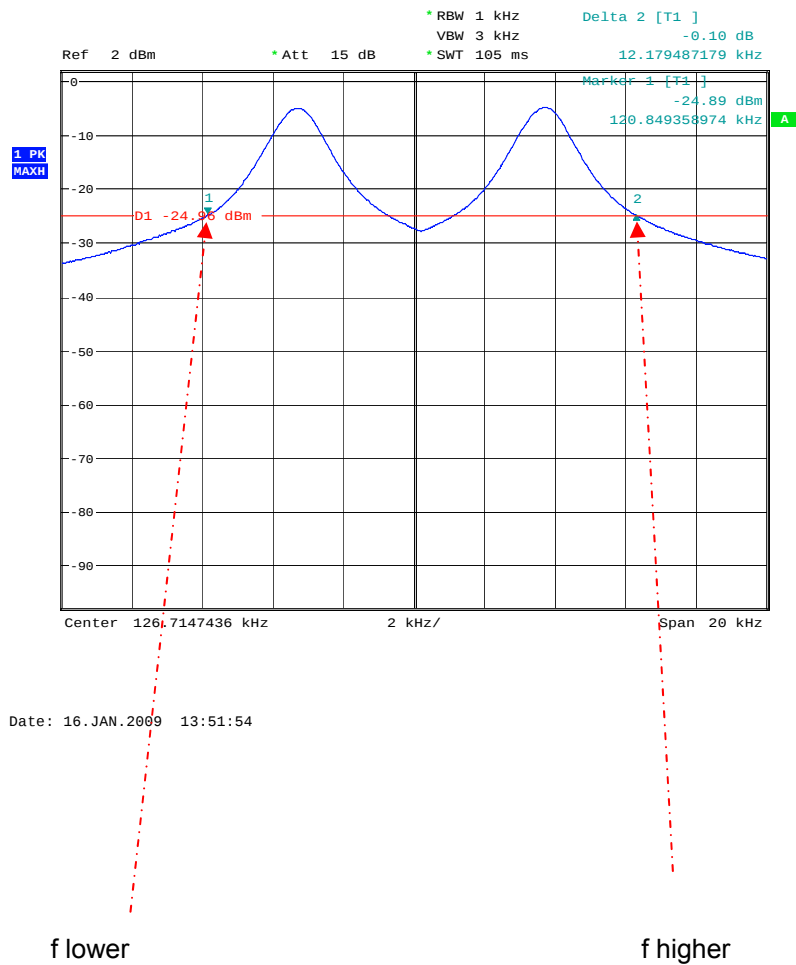
## 20 dB BANDWIDTH PLOT



Occupied Bandwidth = 11.95kHz  
f Lower = 121.105769kHz  
f Higher = 133.060897kHz

95"Board

## 20 dB BANDWIDTH PLOT



Occupied Bandwidth =12.17kHz  
f Lower =120.849358kHz  
f Higher =133.028845kHz

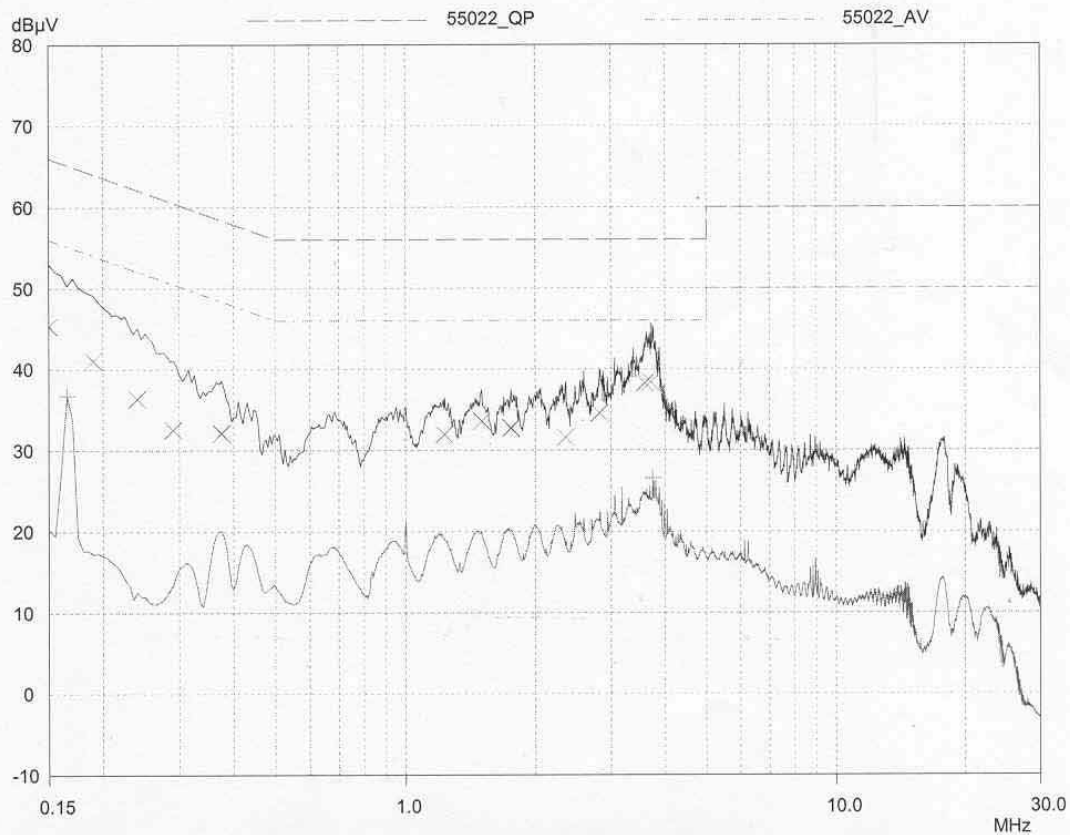
**ANNEX C**  
**POWERLINE SCAN PLOT**

## Powerline Conduction 150kHz - 30MHz

EUT: 64" Entry Level Board  
Manuf: Promethean  
Op Conid: LISN UH195, cable UH21 & Receiver UH187  
Operator: D Winstanley  
Test Spec: EN55022 Class B (or Variant)  
Comment: Neutral Line, 110V, 60Hz  
Pen Present, Connect to PC Via USB Cable

| Scan Settings |       |        | (1 Range) |          |        | Receiver Settings |        |       |  |
|---------------|-------|--------|-----------|----------|--------|-------------------|--------|-------|--|
| Frequencies   |       |        |           |          |        |                   |        |       |  |
| Start         | Stop  | Step   | IF BW     | Detector | M-Time | Atten             | Preamp | OpRge |  |
| 150kHz        | 30MHz | 5kHz   | 10kHz     | PK+AV    | 50msec | Auto              | OFF    | 60dB  |  |
| Transducer    | No.   | Start  | Stop      | Name     |        |                   |        |       |  |
| 1             | 1     | 9kHz   | 30MHz     | UH21     |        |                   |        |       |  |
|               | 2     | 150kHz | 30MHz     | UH195    |        |                   |        |       |  |

Final Measurement: Detectors: X QP / + AV  
Meas Time: 2sec  
Subranges: 25  
Acc Margin: 20 dB



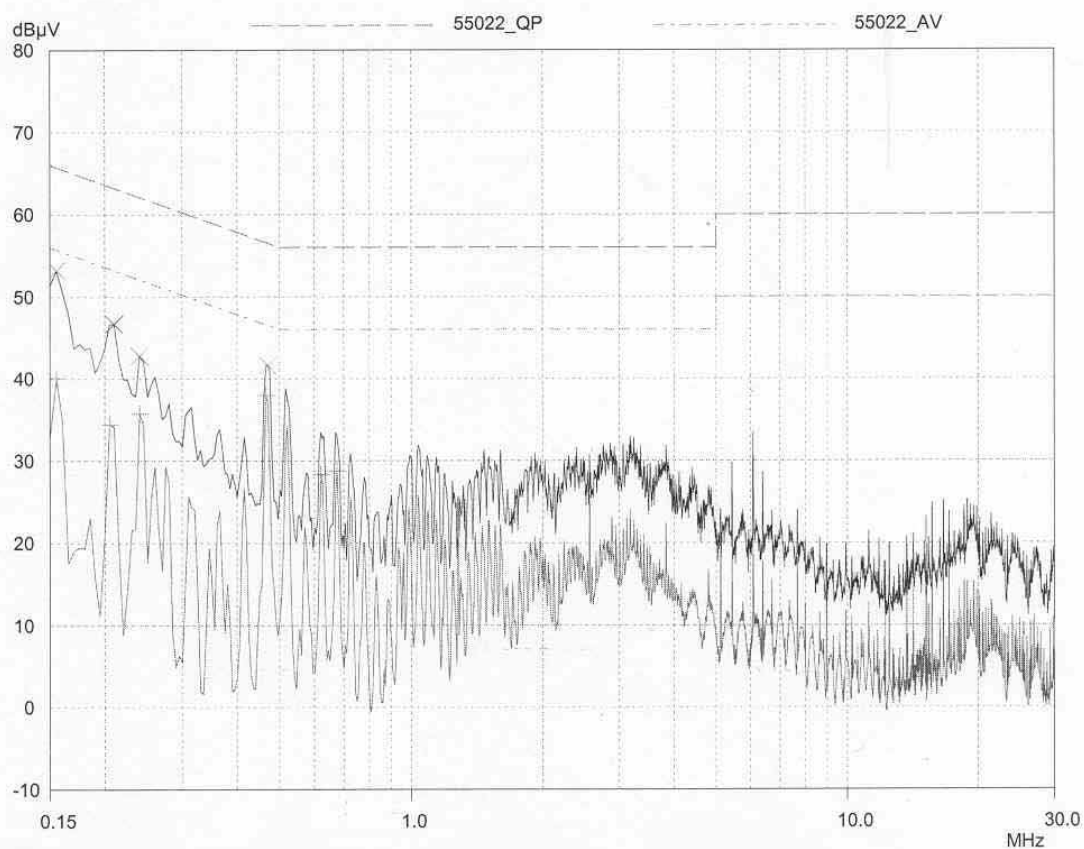
## Powerline Conduction 150kHz - 30MHz

EUT: 78" Premium Board  
Manuf: Promethean  
Op Cond: LISN UH195, cable UH21 & Receiver UH187  
Operator: S Hodgkinson  
Test Spec: EN55022 Class B (or Variant)  
Comment: Live Line, 110V, 60Hz  
Pen present, connected to PC via USB cable, playing audio track via memory stick, transmitting middle 2.4GHz.

| Scan Settings |       | (1 Range) |       | Receiver Settings |        |       |        |
|---------------|-------|-----------|-------|-------------------|--------|-------|--------|
| Frequencies   |       |           |       |                   |        |       |        |
| Start         | Stop  | Step      | IF BW | Detector          | M-Time | Atten | Preamp |
| 150kHz        | 30MHz | 5kHz      | 10kHz | PK+AV             | 50msec | Auto  | OFF    |

| Transducer | No. | Start  | Stop  | Name  |
|------------|-----|--------|-------|-------|
| 1          | 1   | 9kHz   | 30MHz | UH21  |
|            | 2   | 150kHz | 30MHz | UH195 |

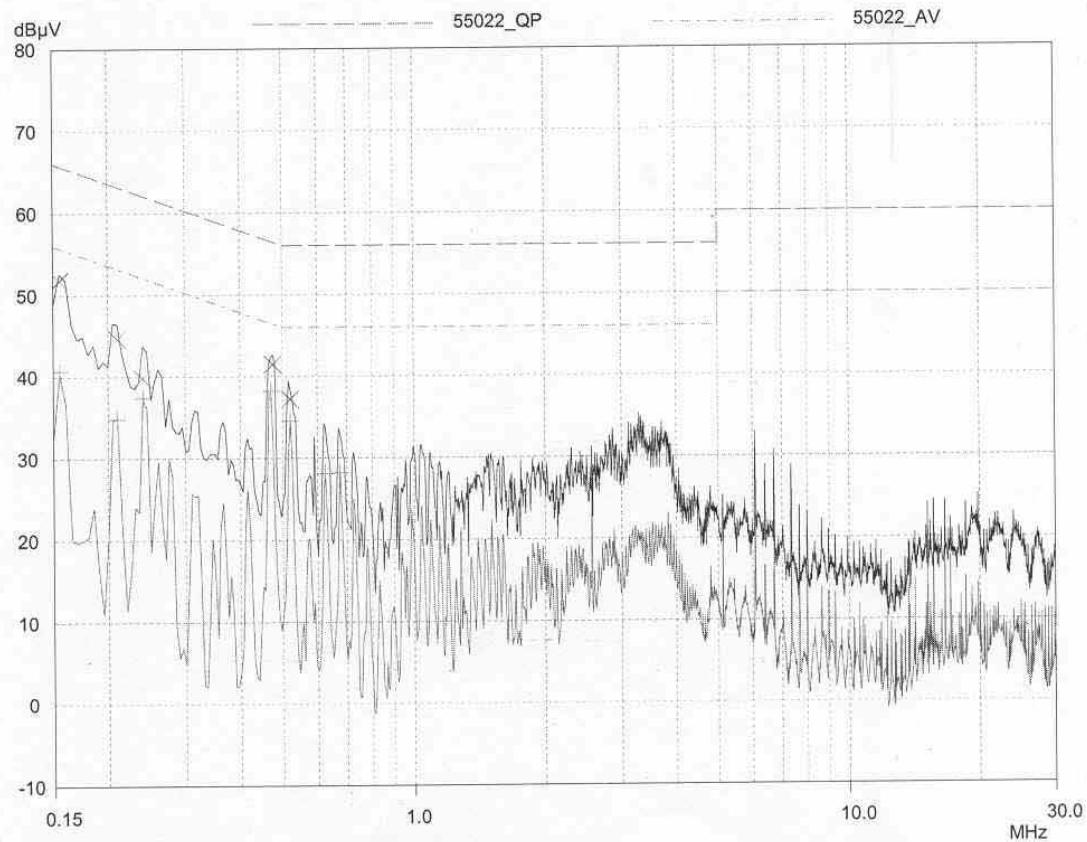
Prescan Measurement: Detectors: X PK / + AV  
Meas Time: see scan settings  
Subranges: 25  
Acc Margin: 20 dB



## Powerline Conduction 150kHz - 30MHz

EUT: 87" Premium Board  
Manuf: Promethean  
Op Cond: LISN UH195, cable UH21 & Receiver UH187  
Operator: S Hodgkinson  
Test Spec: EN55022 Class B (or Variant)  
Comment: Neutral Line, 110V, 60Hz  
Pen present, connected to PC via USB cable, playing audio track via memory stick, transmitting middle 2.4GHz.

| Scan Settings      |       |        | (1 Range)   |             | Receiver Settings |       |        |       |
|--------------------|-------|--------|-------------|-------------|-------------------|-------|--------|-------|
| Frequencies        |       |        |             |             |                   |       |        |       |
| Start              | Stop  | Step   | IF BW       | Detector    | M-Time            | Atten | Preamp | OpRge |
| 150kHz             | 30MHz | 5kHz   | 10kHz       | PK+AV       | 50msec            | Auto  | OFF    | 60dB  |
| Transducer         | No.   | Start  | Stop        | Name        |                   |       |        |       |
| 1                  | 1     | 9kHz   | 30MHz       | UH21        |                   |       |        |       |
|                    | 2     | 150kHz | 30MHz       | UH195       |                   |       |        |       |
| Final Measurement: |       |        | Detectors:  | X QP / + AV |                   |       |        |       |
|                    |       |        | Meas Time:  | 2sec        |                   |       |        |       |
|                    |       |        | Subranges:  | 25          |                   |       |        |       |
|                    |       |        | Acc Margin: | 20 dB       |                   |       |        |       |

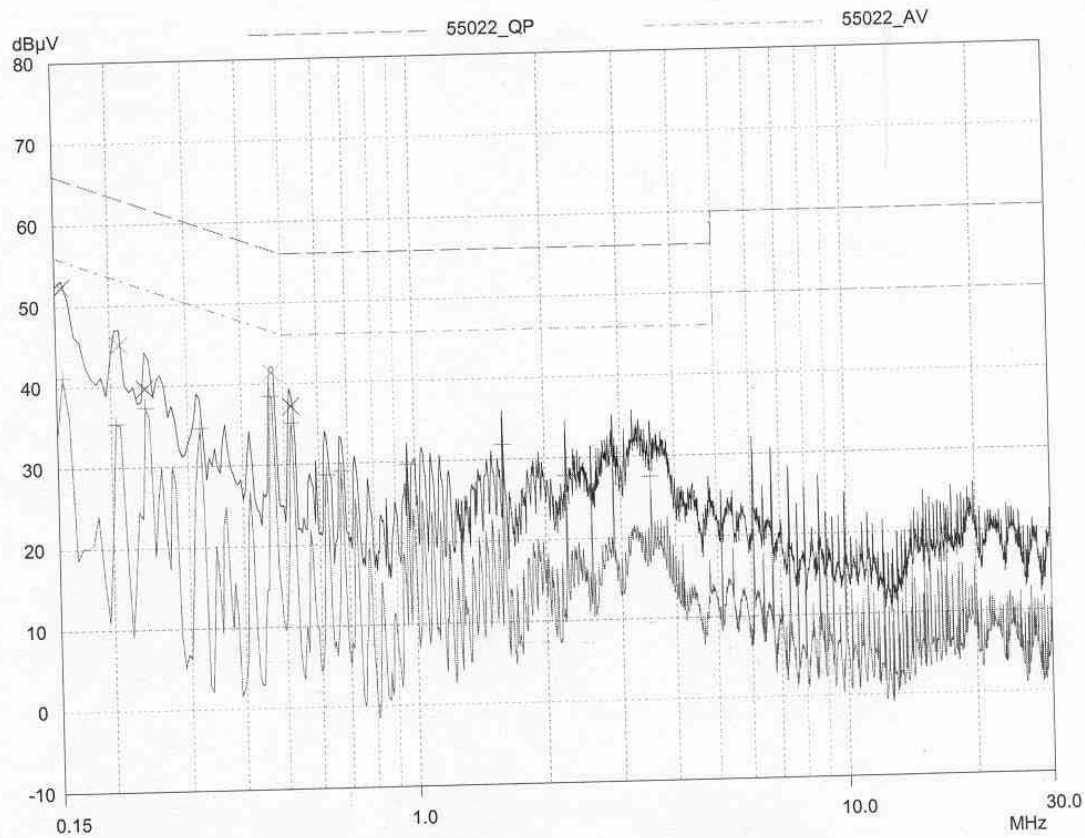


## TRaC Global

## Powerline Conduction 150kHz - 30MHz

EUT: 95" Premium Board  
 Manuf: Promethean  
 Op Cond: LISN UH195, cable UH21 & Receiver UH187  
 Operator: S Hodgkinson  
 Test Spec: EN55022 Class B (or Variant)  
 Comment: Neutral Line, 110V, 60Hz  
 Pen present, connected to PC via USB cable, playing audio track via memory stick, transmitting middle 2.4GHz.

| Scan Settings      |       | (1 Range)   |             |          | Receiver Settings |       |        |       |
|--------------------|-------|-------------|-------------|----------|-------------------|-------|--------|-------|
| Frequencies        |       |             |             |          |                   |       |        |       |
| Start              | Stop  | Step        | IF BW       | Detector | M-Time            | Atten | Preamp | OpRge |
| 150kHz             | 30MHz | 5kHz        | 10kHz       | PK+AV    | 50msec            | Auto  | OFF    | 60dB  |
| Transducer         | No.   | Start       | Stop        | Name     |                   |       |        |       |
| 1                  | 1     | 9kHz        | 30MHz       | UH21     |                   |       |        |       |
|                    | 2     | 150kHz      | 30MHz       | UH195    |                   |       |        |       |
| Final Measurement: |       | Detectors:  | X QP / + AV |          |                   |       |        |       |
|                    |       | Meas Time:  | 2sec        |          |                   |       |        |       |
|                    |       | Subranges:  | 25          |          |                   |       |        |       |
|                    |       | Acc Margin: | 20 dB       |          |                   |       |        |       |



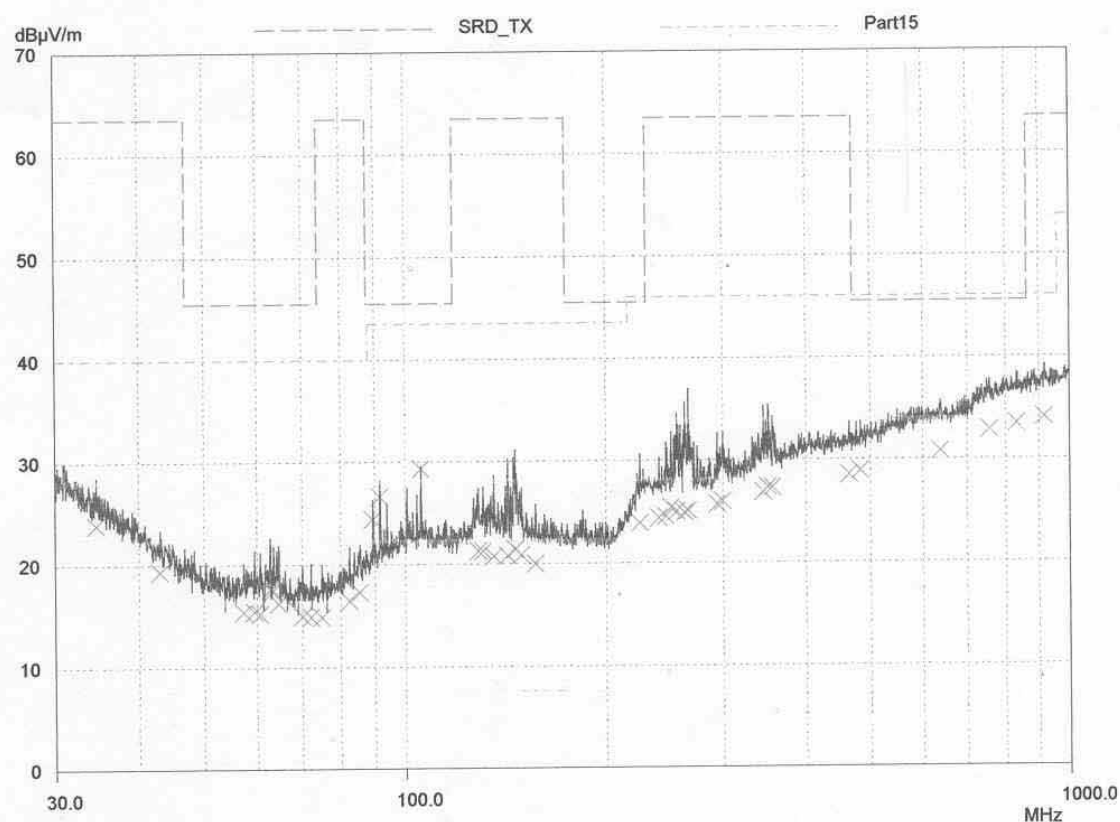
**ANNEX D**  
**30MHz – 1GHz SCAN PLOT**

## E-Field Radiation (30MHz-1GHz)

EUT: 64" Entry Level Board  
Manuf: Promethean  
Op Cond: Prescan 30MHz - 1000MHz  
Operator: S Hodgkinson  
Test Spec: Part15  
Comment: Pen present, connected to PC via USB cable, 2.4GHz radio disabled.  
Rx antenna Horizontal.

| Scan Settings |         |       | (1 Range) |          | Receiver Settings |       |        |       |  |
|---------------|---------|-------|-----------|----------|-------------------|-------|--------|-------|--|
| Frequencies   |         |       |           |          |                   |       |        |       |  |
| Start         | Stop    | Step  | IF BW     | Detector | M-Time            | Atten | Preamp | OpRge |  |
| 30MHz         | 1000MHz | 50kHz | 120kHz    | PK       | 1msec             | Auto  | ON     | 60dB  |  |
| Transducer    | No.     | Start | Stop      | Name     |                   |       |        |       |  |
| 1             | 21      | 30MHz | 1000MHz   | UH72     |                   |       |        |       |  |
|               | 22      | 30MHz | 1000MHz   | UH93     |                   |       |        |       |  |

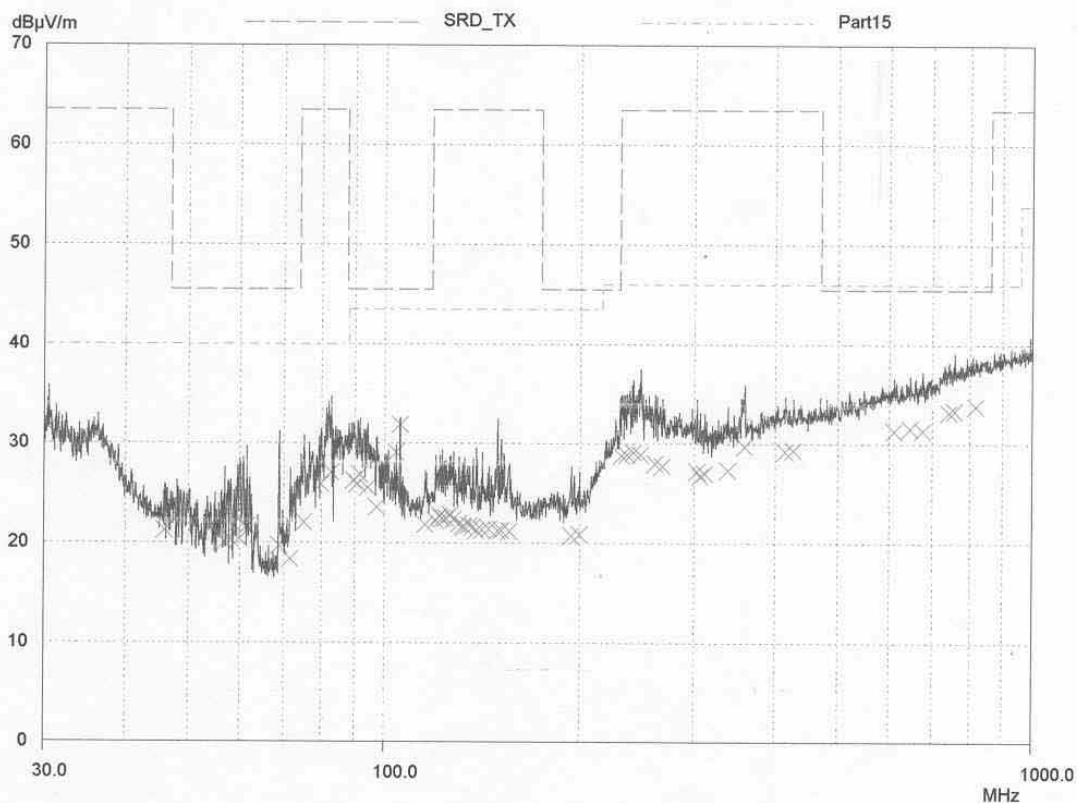
Final Measurement: Detector: X QP  
Meas Time: 2sec  
Subranges: 50  
Acc Margin: 10 dB



## E-Field Radiation (30MHz-1GHz)

EUT: 78" Entry Level Board  
Manuf: Promethean  
Op Cond: Prescan 30MHz - 1000MHz  
Operator: S Hodgkinson  
Test Spec: Part15  
Comment: Pen present, connected to PC via USB cable, 2.4GHz radio disabled.  
Rx antenna Vertical.

| Scan Settings      |         | (1 Range)   |         |          | Receiver Settings |       |        |       |
|--------------------|---------|-------------|---------|----------|-------------------|-------|--------|-------|
| Frequencies        |         |             |         |          |                   |       |        |       |
| Start              | Stop    | Step        | IF BW   | Detector | M-Time            | Atten | Preamp | OpRge |
| 30MHz              | 1000MHz | 50kHz       | 120kHz  | PK       | 1msec             | Auto  | ON     | 60dB  |
| Transducer         | No.     | Start       | Stop    | Name     |                   |       |        |       |
| 1                  | 21      | 30MHz       | 1000MHz | UH72     |                   |       |        |       |
|                    | 22      | 30MHz       | 1000MHz | UH93     |                   |       |        |       |
| Final Measurement: |         | Detector:   | X QP    |          |                   |       |        |       |
|                    |         | Meas Time:  | 2sec    |          |                   |       |        |       |
|                    |         | Subranges:  | 50      |          |                   |       |        |       |
|                    |         | Acc Margin: | 10 dB   |          |                   |       |        |       |



## E-Field Radiation (30MHz-1GHz)

EUT: 78" Standard Level Board

Manuf: Promethean

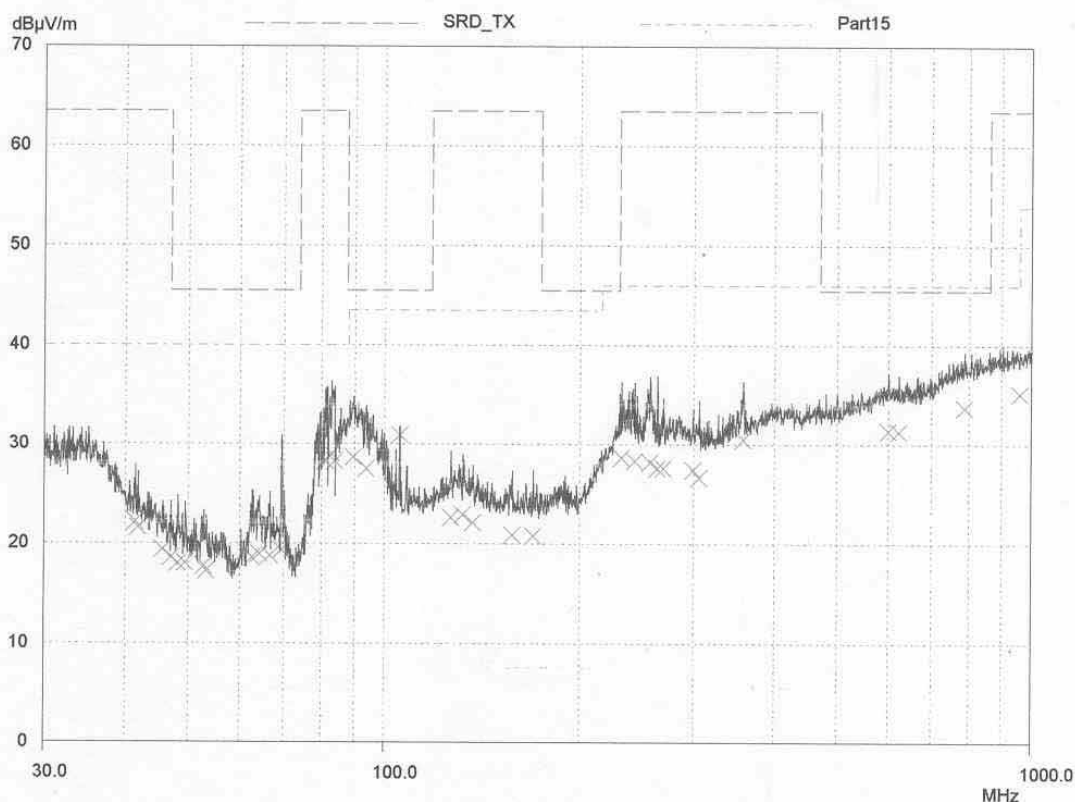
Op Cond: Prescan 30MHz - 1000MHz

Operator: S Hodgkinson

Test Spec: Part15

Comment: Pen present, connected to PC via USB cable, 2.4GHz radio disabled playing audio track via memory stick. No amp fitted.  
Rx antenna Vertical.

| Scan Settings      |         | (1 Range)   |         |          | Receiver Settings |       |        |       |
|--------------------|---------|-------------|---------|----------|-------------------|-------|--------|-------|
|                    |         | Frequencies |         |          |                   |       |        |       |
| Start              | Stop    | Step        | IF BW   | Detector | M-Time            | Atten | Preamp | OpRge |
| 30MHz              | 1000MHz | 50kHz       | 120kHz  | PK       | 1msec             | Auto  | ON     | 60dB  |
| Transducer         | No.     | Start       | Stop    | Name     |                   |       |        |       |
| 1                  | 21      | 30MHz       | 1000MHz | UH72     |                   |       |        |       |
|                    | 22      | 30MHz       | 1000MHz | UH93     |                   |       |        |       |
| Final Measurement: |         | Detector:   | X QP    |          |                   |       |        |       |
|                    |         | Meas Time:  | 2sec    |          |                   |       |        |       |
|                    |         | Subranges:  | 50      |          |                   |       |        |       |
|                    |         | Acc Margin: | 10 dB   |          |                   |       |        |       |

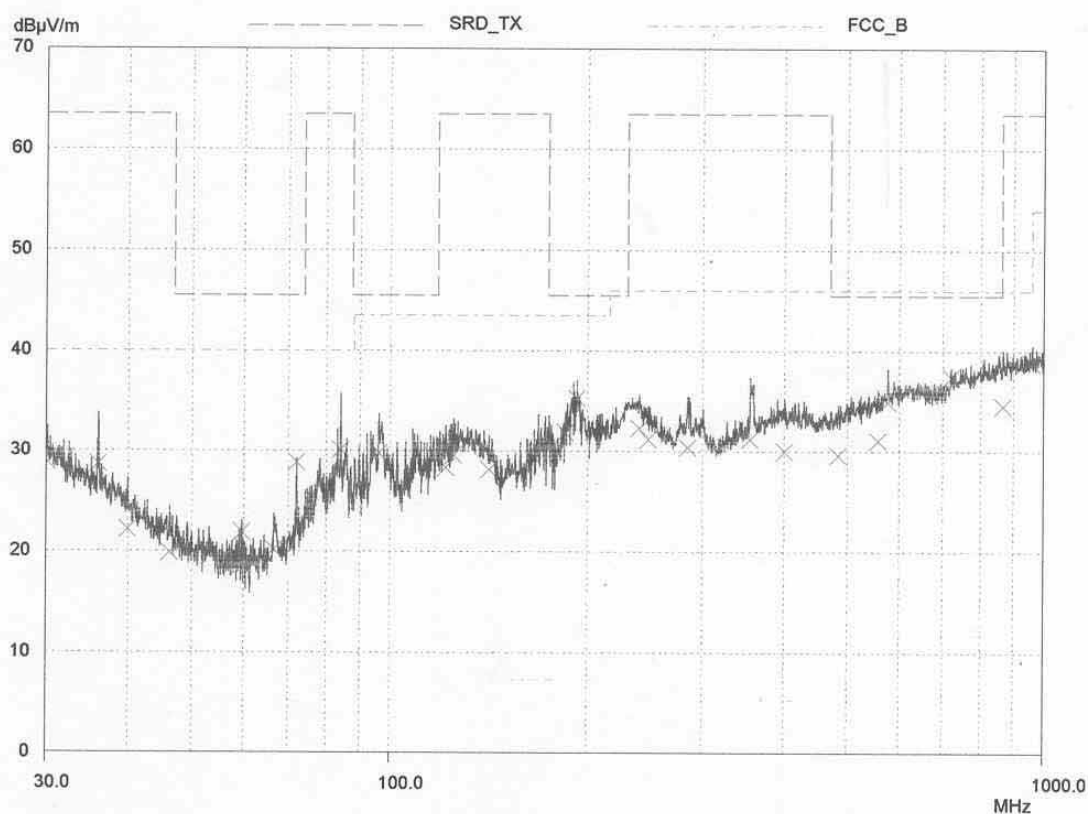


## E-Field Radiation (30MHz-1GHz)

EUT: 78" Premium Baord  
Manuf: Promethean Ltd  
Op Cond: Prescan 30MHz - 1000MHz  
Operator: S Hodgkinson  
Test Spec: Part15  
Comment: Pen Present Tx DISABLED Playing Audio track Via memory stick. PC connected Via USB  
Amp Ports Terminated. Rx antenna Vertical  
Result File: plot11~1.dat : PART 15.247 TOP TX Vertical

| Scan Settings |         | (1 Range) |         | Receiver Settings |        |       |        |       |  |
|---------------|---------|-----------|---------|-------------------|--------|-------|--------|-------|--|
| Frequencies   |         |           |         |                   |        |       |        |       |  |
| Start         | Stop    | Step      | IF BW   | Detector          | M-Time | Atten | Preamp | OpRge |  |
| 30MHz         | 1000MHz | 50kHz     | 120kHz  | PK                | 1msec  | Auto  | ON     | 60dB  |  |
| Transducer    | No.     | Start     | Stop    | Name              |        |       |        |       |  |
| 1             | 21      | 30MHz     | 1000MHz | UH72              |        |       |        |       |  |
|               | 22      | 30MHz     | 1000MHz | UH93              |        |       |        |       |  |

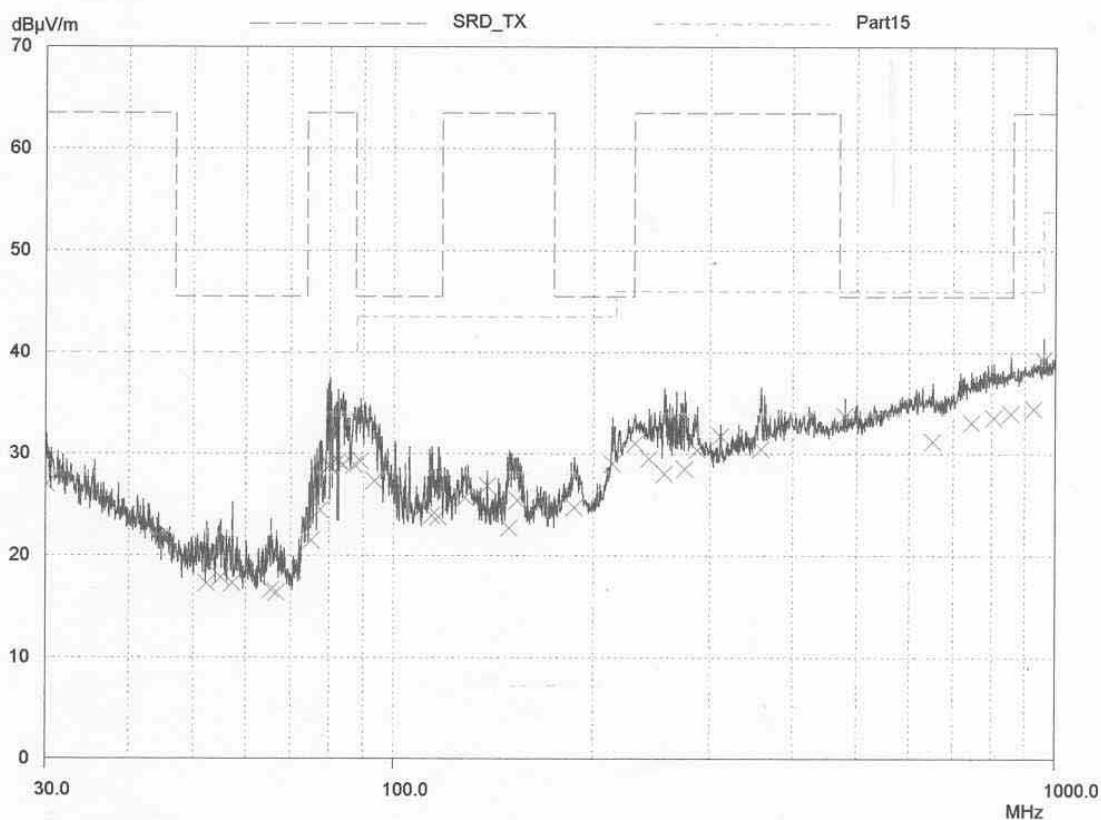
Final Measurement: Detector: X QP  
Meas Time: 2sec  
Subranges: 50  
Acc Margin: 20 dB



## E-Field Radiation (30MHz-1GHz)

EUT: 87" Standard Board  
Manuf: Promethean  
Op Cond: Prescan 30MHz - 1000MHz  
Operator: S Hodgkinson  
Test Spec: Part15  
Comment: Pen present, 2.4GHz radio disabled, playing audio track via memory stick. Connected to PC via USB cable.  
Rx antenna Vertical.

| Scan Settings      |         | (1 Range)   |         |          | Receiver Settings |       |        |       |
|--------------------|---------|-------------|---------|----------|-------------------|-------|--------|-------|
| Start              | Stop    | Step        | IF BW   | Detector | M-Time            | Atten | Preamp | OpRge |
| 30MHz              | 1000MHz | 50kHz       | 120kHz  | PK       | 1msec             | Auto  | ON     | 60dB  |
| Transducer         | No.     | Start       | Stop    | Name     |                   |       |        |       |
| 1                  | 21      | 30MHz       | 1000MHz | UH72     |                   |       |        |       |
|                    | 22      | 30MHz       | 1000MHz | UH93     |                   |       |        |       |
| Final Measurement: |         | Detector:   | X QP    |          |                   |       |        |       |
|                    |         | Meas Time:  | 2sec    |          |                   |       |        |       |
|                    |         | Subranges:  | 50      |          |                   |       |        |       |
|                    |         | Acc Margin: | 10 dB   |          |                   |       |        |       |

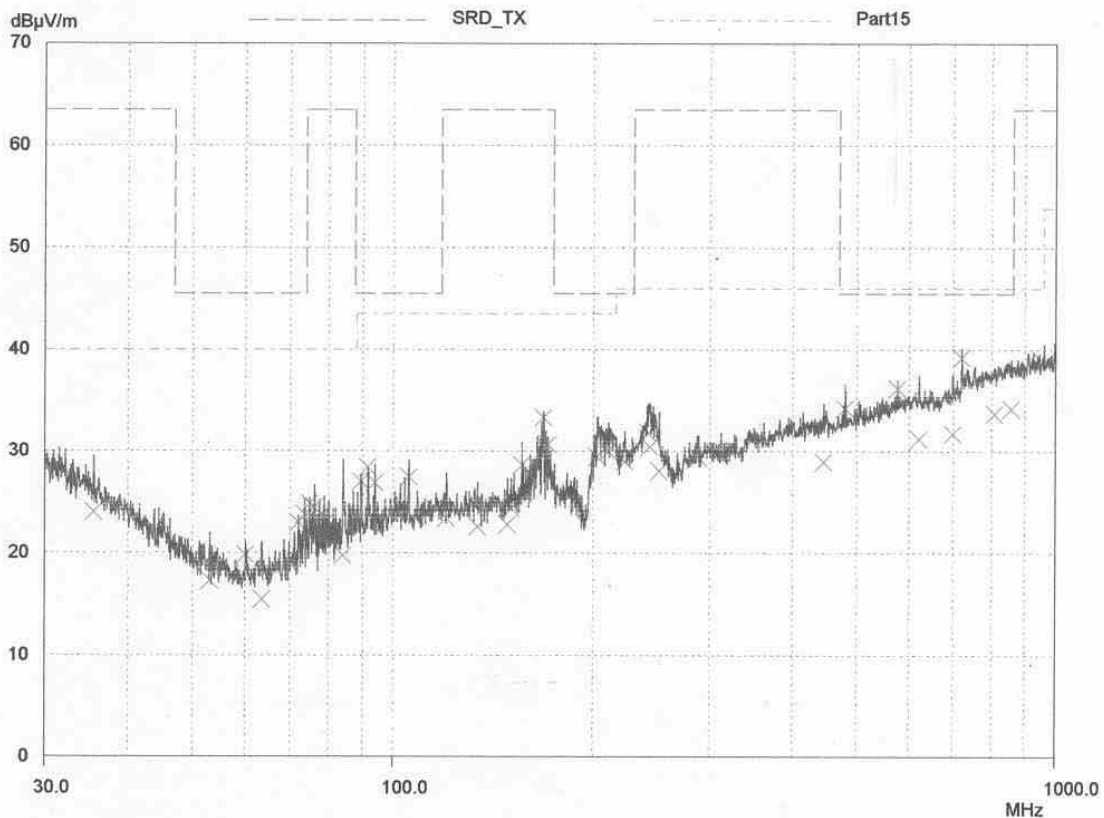


## E-Field Radiation (30MHz-1GHz)

EUT: 87" Premium Board  
Manuf: Promethean  
Op Cond: Prescan 30MHz - 1000MHz  
Operator: S Hodgkinson  
Test Spec: Part15  
Comment: Pen present, 2.4GHz disabled, playing audio track via memory stick, connected to PC via USB.  
Rx antenna Horizontal.

| Scan Settings |         | (1 Range) |         | Receiver Settings |        |       |        |       |
|---------------|---------|-----------|---------|-------------------|--------|-------|--------|-------|
| Start         | Stop    | Step      | IF BW   | Detector          | M-Time | Atten | Preamp | OpRge |
| 30MHz         | 1000MHz | 50kHz     | 120kHz  | PK                | 1msec  | Auto  | ON     | 60dB  |
| Transducer    | No.     | Start     | Stop    | Name              |        |       |        |       |
| 1             | 21      | 30MHz     | 1000MHz | UH72              |        |       |        |       |
|               | 22      | 30MHz     | 1000MHz | UH93              |        |       |        |       |

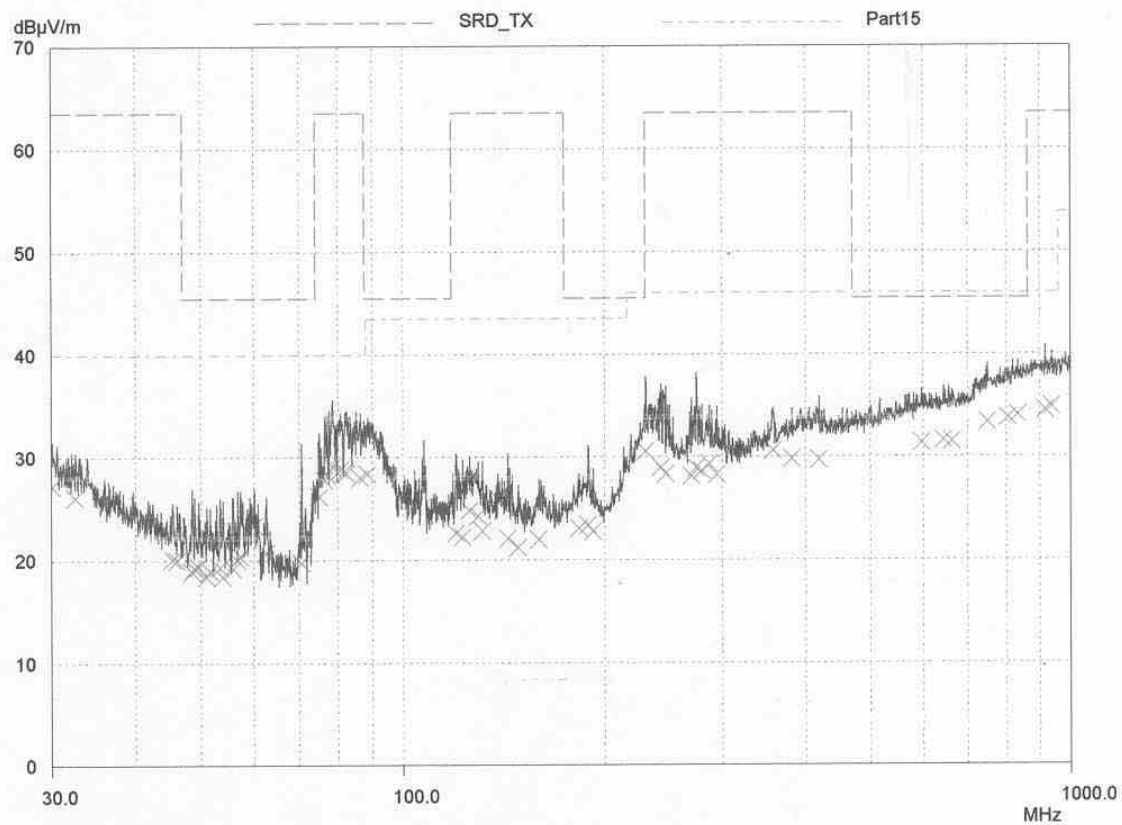
Final Measurement: Detector: X QP  
Meas Time: 2sec  
Subranges: 50  
Acc Margin: 10 dB



## E-Field Radiation (30MHz-1GHz)

EUT: 95" Standard Board  
Manuf: Promethean  
Op Cond: Prescan 30MHz - 1000MHz  
Operator: S Hodgkinson  
Test Spec: Part15  
Comment: Pen present, 2.4GHz radio disabled, playing audio track via memory stick. Connected to PC via USB cable.  
Rx antenna Vertical.

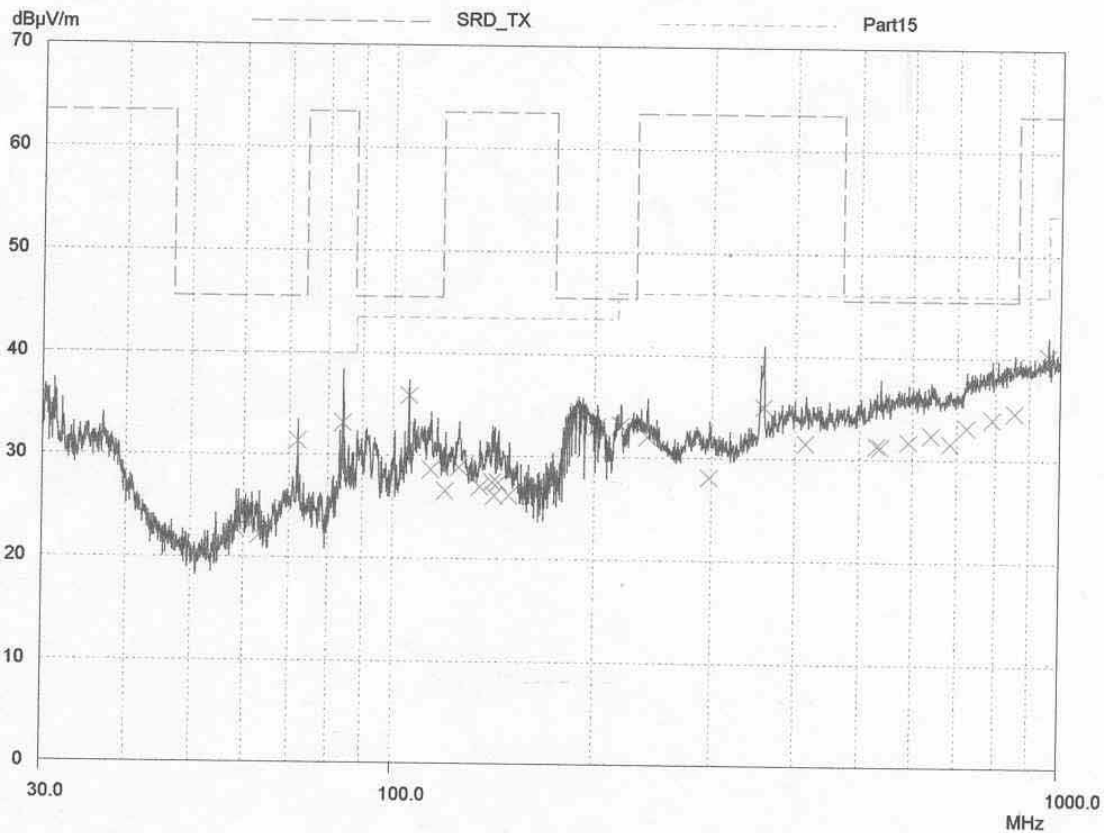
| Scan Settings      |         | (1 Range) Frequencies |         |          | Receiver Settings |       |        |       |
|--------------------|---------|-----------------------|---------|----------|-------------------|-------|--------|-------|
| Start              | Stop    | Step                  | IF BW   | Detector | M-Time            | Atten | Preamp | OpRge |
| 30MHz              | 1000MHz | 50kHz                 | 120kHz  | PK       | 1msec             | Auto  | ON     | 60dB  |
| Transducer         | No.     | Start                 | Stop    | Name     |                   |       |        |       |
| 1                  | 21      | 30MHz                 | 1000MHz | UH72     |                   |       |        |       |
|                    | 22      | 30MHz                 | 1000MHz | UH93     |                   |       |        |       |
| Final Measurement: |         | Detector:             | X QP    |          |                   |       |        |       |
|                    |         | Meas Time:            | 2sec    |          |                   |       |        |       |
|                    |         | Subranges:            | 50      |          |                   |       |        |       |
|                    |         | Acc Margin:           | 10 dB   |          |                   |       |        |       |



## E-Field Radiation (30MHz-1GHz)

EUT: 95" Premium Board  
Manuf: Promethean  
Op Cond: Prescan 30MHz - 1000MHz  
Operator: S Hodgkinson  
Test Spec: Part15  
Comment: Pen Present ,2.4GHz disabled,playing audio track via memory stick, connected to PC via USB.  
Rx antenna Vertical.

| Scan Settings      |     | (1 Range)   |         |        | Receiver Settings |        |       |        |       |
|--------------------|-----|-------------|---------|--------|-------------------|--------|-------|--------|-------|
| Frequencies        |     | Stop        | Step    | IF BW  | Detector          | M-Time | Atten | Preamp | OpRge |
| 30MHz              |     | 1000MHz     | 50kHz   | 120kHz | PK                | 1msec  | Auto  | ON     | 60dB  |
| Transducer         | No. | Start       | Stop    | Name   |                   |        |       |        |       |
| 1                  | 21  | 30MHz       | 1000MHz | UH72   |                   |        |       |        |       |
|                    | 22  | 30MHz       | 1000MHz | UH93   |                   |        |       |        |       |
| Final Measurement: |     | Detector:   | X QP    |        |                   |        |       |        |       |
|                    |     | Meas Time:  | 2sec    |        |                   |        |       |        |       |
|                    |     | Subranges:  | 50      |        |                   |        |       |        |       |
|                    |     | Acc Margin: | 10 dB   |        |                   |        |       |        |       |



**ANNEX E**  
**MEASUREMENT UNCERTAINTY**

## **Radio Testing – General Uncertainty Schedule**

*All statements of uncertainty are expanded standard uncertainty using a coverage factor of 1.96 to give a 95% confidence where no required test level exists.*

### **[1] Adjacent Channel Power**

Uncertainty in test result = **1.86dB**

### **[2] Carrier Power**

Uncertainty in test result (Equipment - TRLUH120) = **2.18dB**

Uncertainty in test result (Equipment – TRL05) = **1.08dB**

Uncertainty in test result (Equipment – TRL479) = **2.48dB**

### **[3] Effective Radiated Power**

Uncertainty in test result = **4.71dB**

### **[4] Spurious Emissions**

Uncertainty in test result = **4.75dB**

### **[5] Maximum frequency error**

Uncertainty in test result (Equipment - TRLUH120) = **119ppm**

Uncertainty in test result (Equipment – TRL05) = **0.113ppm**

Uncertainty in test result (Equipment – TRL479) = **0.265ppm**

### **[6] Radiated Emissions, field strength OATS 14kHz-18GHz Electric Field**

Uncertainty in test result (14kHz – 30MHz) = **4.8dB**, Uncertainty in test result (30MHz – 1GHz) = **4.6dB**,  
Uncertainty in test result (1GHz-18GHz) = **4.7dB**

### **[7] Frequency deviation**

Uncertainty in test result = **3.2%**

### **[8] Magnetic Field Emissions**

Uncertainty in test result = **2.3dB**

### **[9] Conducted Spurious**

Uncertainty in test result (Equipment TRL479) Up to 8.1GHz = **3.31dB**

Uncertainty in test result (Equipment TRL479) 8.1GHz – 15.3GHz = **4.43dB**

Uncertainty in test result (Equipment TRL479) 15.3GHz – 21GHz = **5.34dB**

Uncertainty in test result (Equipment TRLUH120) Up to 26GHz = **3.14dB**

### **[10] Channel Bandwidth**

Uncertainty in test result = **15.5%**

### **[11] Amplitude and Time Measurement – Oscilloscope**

Uncertainty in overall test level = **2.1dB**, Uncertainty in time measurement = **0.59%**, Uncertainty in Amplitude measurement = **0.82%**

### **[11] Power Line Conduction**

Uncertainty in test result = **3.4dB**

***[12] Spectrum Mask Measurements***

Uncertainty in test result = **2.59% (frequency)**  
Uncertainty in test result = **1.32dB (amplitude)**

***[13] Adjacent Sub Band Selectivity***

Uncertainty in test result = **1.24dB**

***[14] Receiver Blocking – Listen Mode, Radiated***

Uncertainty in test result = **3.42dB**

***[15] Receiver Blocking – Talk Mode, Radiated***

Uncertainty in test result = **3.36dB**

***[16] Receiver Blocking – Talk Mode, Conducted***

Uncertainty in test result = **1.24dB**

***[17] Receiver Threshold***

Uncertainty in test result = **3.23dB**

***[18] Transmission Time Measurement***

Uncertainty in test result = **7.98%**