

EMI -- TEST REPORT

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| Test Report No. : T31939-00-00HU | 17. September 2007 <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> Date of issue |
|--|--|

Type / Model Name : Counterpoint XI

Variations : Two 12"x12" Antenna Pads or two Sheet Deactivators or one 12"x12" Antenna Pad & one Sheet Deactivator

Product Description : Electronic Article Surveillance Deactivation System

Applicant : Checkpoint Systems, Inc.

Address : 101 Wolf Drive, Thorofare
New Jersey, USA 08086

Manufacturer : Checkpoint Caribbean (Dominican Republic)

Address : Zona Franca Los Alcarrizos, Manzana A. Edif No1
Apartado Postal No. 182-0, Los Alcarrizos
Santo Domingo Republica Dominicana

Licence holder : Checkpoint Systems, Inc.

Address : 101 Wolf Drive, Thorofare
New Jersey, USA 08086

| | |
|--|-----------------|
| Test Result according to the standards listed in clause 1 test standards: | POSITIVE |
|--|-----------------|



The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules and Regulations Part 15 Subpart C - Intentional Radiators (October 01, 2006)

| | |
|---------------------------------------|--|
| Part 15, Subpart C, Section 15.223 | Operation in the band 1.705-10 MHz §15.223(a) Radiated emissions, Fundamental & Harmonics |
| Part 15, Subpart C, Section 15.207(a) | AC Line conducted emissions |
| Part 15, Subpart C, Section 15.209(a) | Radiated emissions, general requirements |
| Part 15, Subpart C, Section 15.215(c) | Additional Provisions to the general radiated emission limitations |

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2 SUMMARY

GENERAL REMARKS:

None

FINAL ASSESSMENT:

The equipment under test **fulfills** the EMI requirements cited in clause 1 test standards.

Date of receipt of test sample : acc. to storage records

Testing commenced on : 07. August 2007

Testing concluded on : 29. August 2007

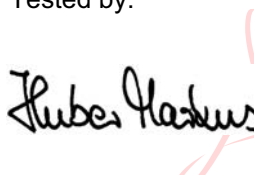
Checked by:



Thomas Weise
Ich bestätige die
Richtigkeit und Integrität
dieses Dokuments
2007.09.17 10:02:18
+02'00'

Thomas Weise
Dipl.-Ing.(FH)
Laboratory Manager

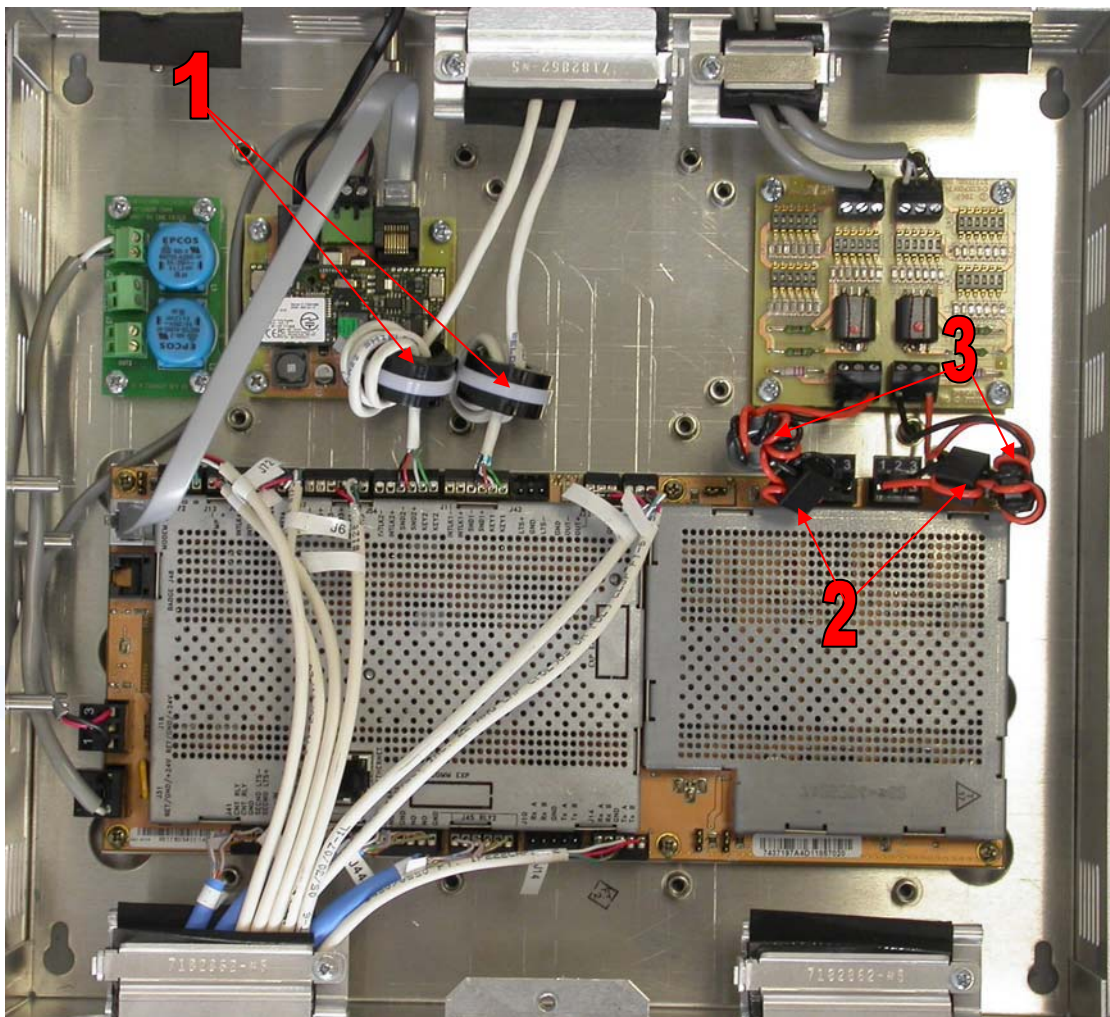
Tested by:



Huber Markus
Ich bin der Verfasser
dieses Dokuments
2007.09.17 08:11:28
+02'00'

Huber Markus

3.2 Ferrite Locations



Ferrite Locations:

1. Fair Rite P/N 0443806406 (Order No 284760) – Add one ferrite on each end of the main switchches with 4 turns.
2. Chang Sung Corp P/N FS155090 (Order No 7235629) – Add one ferrite on the Tx1 and Tx2 cables with two turns.
3. Fair Rite P/N 5943000601 (Order No 7225873) – Add one ferrite on the Tx1 and Tx2 cables with three turns.

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3.3 Power supply system utilised

Power supply voltage : 115 V / 60 Hz / 1 ϕ
24 V / DC

3.4 Short description of the Equipment under Test (EuT)

The Counterpoint XI utilizes RF energy to deactivate security tags attached to merchandise. The Counterpoint XI is used at point of sale locations during purchase. The Counterpoint XI sweeps between 7.4 and 8.8 MHz emitting a narrow six microseconds pulse. The L/C tuned circuit in the security tags react to pulse by resonating when exposed to the Counterpoint Antenna Pad.

Number of tested samples: 1
Serial number: see Photo documentation of the EuT under Point 3 / Equipment Under Test

EuT operation mode:

The equipment under test was operated during the measurement under the following conditions:

- Continuous sweep mode at 9.0 MHz Dual Band

-

-

EuT configuration:

(The CDF filled by the applicant can be viewed at the test laboratory.)

The following peripheral devices and interface cables were connected during the measurements:

- PSU (Power Supply Unit) GlobTek Model : GT-2S5024D-R, S/N RoHS01275403/06
- PSU (Power Supply Unit) GlobTek Model : GT-2S5024D-R-ES, S/N Prototype
- PSU (Power Supply Unit) EOS Model : LFZVC36FS24S91, S/N 2260
- Standard AC mains cable Model : _____
- _____ Model : _____
- _____ Model : _____

- customer specific cables

- For detailed information about the connected cables during the test and other technical details, see attached CDF (Subclause 7) which was filled out from the manufacturer and Photo documentation of the EuT under Point 3 / Equipment Under Test.

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

mikes-testingpartners gmbh
Ohmstrasse 2-4
94342 Strasskirchen
Germany

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 86-106 kPa

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2 /11.2003 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

4.4 Measurement Protocol for FCC, VCCI and AUSTEL

4.4.1 GENERAL INFORMATION

4.4.1.1 Test Methodology

Conducted and radiated disturbance testing is performed according to the procedures in International Special Committee on Radio Interference (CISPR) Publication 22, European Standard EN 55022 as shown under section 1 of this report.

In compliance with 47 CFR Part 15 Subpart A Section 15.38 testing for FCC compliance may be done following the ANSI C63.4-2003 procedures and using the CISPR 22 Limits.

4.4.1.2 Justification

The Equipment Under Test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral using the appropriate impedance characteristic or left unterminated. Where appropriate, cables are manually manipulated with respect to each other thus obtaining maximum disturbances from the unit.

4.4.2 DETAILS OF TEST PROCEDURES

General Standard Information

The test methods used comply with CISPR Publication 22, EN 55022 - "Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement" and with ANSI C63.4-2003 - "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz."

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4.5 Discovery of worst case measurement conditions

The Counterpoint XI chassis can be used with the following antenna configurations:

- ⇒ Counterpoint XI chassis with two 12"x12" Antenna Pads
- ⇒ Counterpoint XI chassis with two Sheet Deactivators
- ⇒ Counterpoint XI chassis with one 12"x12" Antenna Pad

Following power supplies can be used:

- ⇒ Power supply GlobTek GT-2S5024D-R with standard AC mains cable and power line filter board
- ⇒ Power supply GlobTek GT-2S5024D-R-ES with standard AC mains cable and power line filter board
- ⇒ Power supply EOS LFZVC36FS24S91 with standard AC mains cable

All versions are technically identical except for the following items:

- ⇒ different type of antenna frames
- ⇒ same type of power supply unit
- ⇒ For more detailed information see technical documentation set and Constructional Data Form (Subclause 7) which was filled out from the manufacturer

The tests have been performed in the following configurations:

- ⇒ Measurement of the conducted emissions of the 3 versions. This measurement has been performed in order to find out the maximum spurious emissions of the transmitter (antenna).
 - Counterpoint XI chassis with two 12"x12" Antenna Pads and with Power Supply EOS LFZVC36FS24S91:
 - Cont. sweep mode at 9.0 MHz Band
 - Counterpoint XI chassis with two Sheet Deactivators and with Power Supply GT-2S5024D-R and power line filter board:
 - Cont. sweep mode at 9.0 MHz Band
 - Counterpoint XI chassis with one 12"x12" Antenna Pad and one Sheet Deactivator and with Power Supply GT-2S5024D-R-ES and power line filter board:
 - Cont. sweep mode at 9.0 MHz Band
- ⇒ Measurement of the radiated field strength of the operating frequency of the 3 versions. This measurement has been performed in order to find out the transmitter (antenna) with the maximum field strength. Pre-measurements show no essential differences on the different working frequency bands.
 - Counterpoint XI chassis with two 12"x12" Antenna Pads and with Power Supply EOS LFZVC36FS24S91:
 - Cont. sweep mode at 9.0 MHz Band
 - Counterpoint XI chassis with two Sheet Deactivators and with Power Supply GT-2S5024D-R:
 - Cont. sweep mode at 9.0 MHz Band
 - Counterpoint XI chassis with one 12"x12" Antenna Pad and one Sheet Deactivator and with Power Supply GT-2S5024D-R-ES:
 - Cont. sweep mode at 9.0 MHz Band

- ⇒ Measurement of the radiated spurious emissions of the 3 versions. This measurement have been performed in order to find out the maximum spurious emission of the transmitter (antenna). Pre measurements shows no essential differences on the different working frequency bands. Re measurements of the worst case frequencies after the conducted emission measurement where the power line filter board is inside the Counterpoint XI housing connected shows, that this modification has no influence to the radiated spurious emission.
 - Counterpoint XI chassis with two 12"x12" Antenna Pads and with Power Supply EOS LFZVC36FS24S91:
 - Cont. sweep mode at 9.0 MHz Band
 - Counterpoint XI chassis with two Sheet Deactivators and with Power Supply GT-2S5024D-R:
 - Cont. sweep mode at 9.0 MHz Band
 - Counterpoint XI chassis with one 12"x12" Antenna Pad and one Sheet Deactivators and with Power Supply GT-2S5024D-R-ES:
 - Cont. sweep mode at 9.0 MHz Band

Summarizing:

- ⇒ maximum conducted emission:
- ⇒ maximum field strength:
- ⇒ maximum spurious emission:
- ⇒ bandwidth plots: no essential differences on the 3 versions
- ⇒ Duty Cycle: no essential differences on the 3 versions

This test results are documented in the following sections of this test report.

For detailed information about the connected cables during the test and other technical details, see attached CDF (Subclause 7) which was filled out from the manufacturer and Photo documentation of the EuT under Point 3 / Equipment Under Test.

4.6 Deviations or Exclusions from the Requirements and Standards

Measurement of the fundamental – 7.4 to 10.0 MHz – was performed by setting a spectrum analyzer to “max-hold”, peak detector, a 300 kHz bandwidth and a span from 6.5 MHz to 10 MHz. A resolution bandwidth of 300 kHz was used in performing the “true peak” measurements, because increasing the bandwidth above 300 kHz did not increase the detected peak of the fundamental.

4.7 Operation in Restricted Bands

The EUT is a digital swept frequency hopping transmitter. The EUT hops on discrete frequencies. The discrete frequencies that can be transmitted by the EUT are as follows:

Original Emerald frequency tables

/ Center frequency 8.2MHz +/- 410KHz */*

Value CT_8200_300[] = {8610, 8555, 8500, 8446, 8391, 8337, 8282, 8227,
8173, 8118, 8063, 8009, 7954, 7899, 7845, 7790};

/ Center frequency 8.6MHz +/- 430KHz */*

Value CT_8600_300[] = {9030, 8973, 8915, 8858, 8801, 8743, 8686, 8629,
8571, 8514, 8457, 8399, 8342, 8285, 8227, 8170};

/ Center frequency 9.0MHz +/- 450KHz */*

Value CT_9000_300[] = {9450, 9390, 9330, 9270, 9210, 9150, 9090, 9030,
8970, 8910, 8850, 8790, 8730, 8670, 8610, 8550};

/ Center frequency 9.2MHz +/- 460KHz */*

Value CT_9200_300[] = {9660, 9599, 9537, 9476, 9415, 9353, 9292, 9231,
9169, 9108, 9047, 8985, 8924, 8863, 8801, 8740};

/ Center frequency 9.5MHz +/- 480KHz */*

Value CT_9500_300[] = {9980, 9916, 9852, 9788, 9724, 9660, 9596, 9532,
9468, 9404, 9340, 9276, 9212, 9148, 9084, 9020};

/ Multi tag with bins 0-7 center frequency 9.2MHz and bins 8-16 center frequency 8.2MHz
each range +/- 300KHz */*

Value CTMult_9200_8200_300[] = {9500, 9404, 9329, 9243, 9157, 9071, 8986, 8900,
8500, 8414, 8329, 8243, 8157, 8071, 7986, 7900};

Skinny Pulse frequency tables.....

/ This table is used for multi band (8.2/9.2) skinny pulse, using PW of 4us JRG_SP */*

Value CTMult_sp[] = {9325, 9325, 9325, 9325, 9075, 9075, 9075, 9075,
8325, 8325, 8325, 8325, 8075, 8075, 8075, 8075};

/ This table is used for 8.2 band skinny pulse, using PW of 4us JRG_SP */*

Value CT_8200_sp[] = {8450, 8450, 8450, 8450, 8325, 8325, 8325, 8325,
8075, 8075, 8075, 8075, 7950, 7950, 7950, 7950};

The restricted frequency bands (per FCC Part 15 Clause 15.205) in the operating frequency band of the EuT are as follows:

8.291 – 8.294 MHz
8.362 – 8.366 MHz
8.37625 – 8.38675 MHz
8.41425 – 8.41475 MHz

The transmitter is not capable of hopping into, or operating, in the restricted frequency bands and therefore complies with the restriction.

5 TEST CONDITIONS AND RESULTS

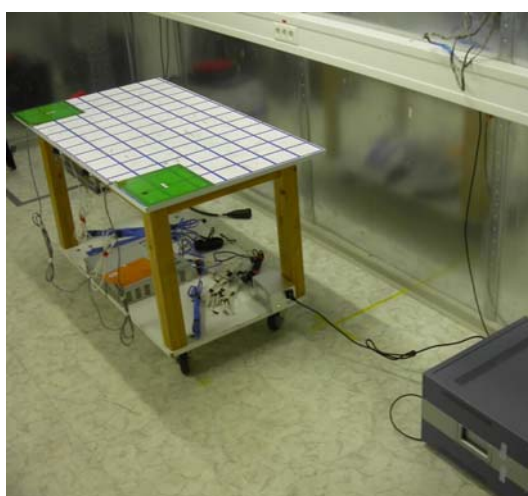
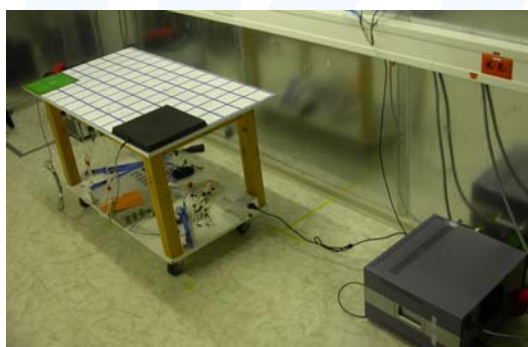
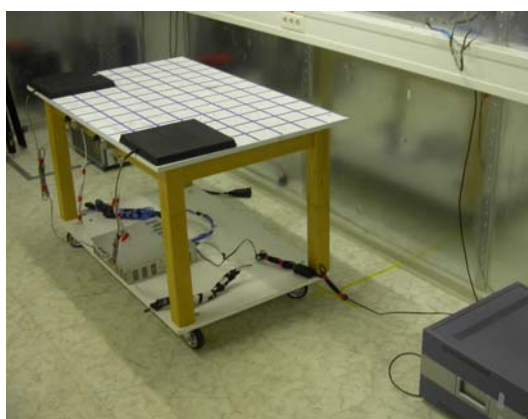
5.1 Conducted emissions

For test instruments and accessories used see section 6 Part A 4.

5.1.1 Description of the test location

Test location: Shielded Room S2

5.1.2 Photo documentation of the test set-up



5.1.3 Description of Measurement

The final level, expressed in dB μ V, is arrived at by taking the reading directly from the EMI receiver. This level is compared directly to the FCC Limit or to the CISPR limit.

To convert between dB μ V and μ V, the following conversions apply:

$$\text{dB}\mu\text{V} = 20(\log \mu\text{V})$$

$$\mu\text{V} = \text{Inverse log}(\text{dB}\mu\text{V}/20)$$

Conducted emissions on the 50 Hz and/or 60 Hz power interface of the EuT are measured in the frequency range of 150 kHz to 30 MHz. The measurements are performed using a receiver, which has CISPR characteristic bandwidth and quasi-peak detection and a Line Impedance Stabilization Network (LISN) with 50 Ω /50 μ H (CISPR 16) characteristics. Table top equipment is placed on a non-conducting table 80 centimeters above the floor and is positioned 40 centimeters from the vertical ground plane (wall) of the screen room. If the minimum limit margin appears to be less than 20 dB with a peak mode measurement, the emissions are remeasured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

5.1.4 Test result

| | |
|--|--|
| Frequency range: | 0.15 MHz - 30 MHz |
| With PSU GT-2S5024D-R: Min. limit margin | 9.0 MHz Band Counterpoint XI chassis with two Sheet Deactivators: 9.8 dB at 8.335 MHz |
| With PSU GT-2S5024D-R-ES: Min. limit margin | 9.0 MHz Band Counterpoint XI chassis with one 12"x12" Antenna Pad and one Sheet Deactivators: 11.7 dB at 9.51 MHz |
| With PSU LFZVC36FS24S91: Min. limit margin | 9.0 MHz Band Counterpoint XI chassis with two 12"x12" Antenna Pads: 7.4 dB at 8.165 MHz |

The requirements are **FULFILLED**.

Remarks:

5.1.5 Test protocol

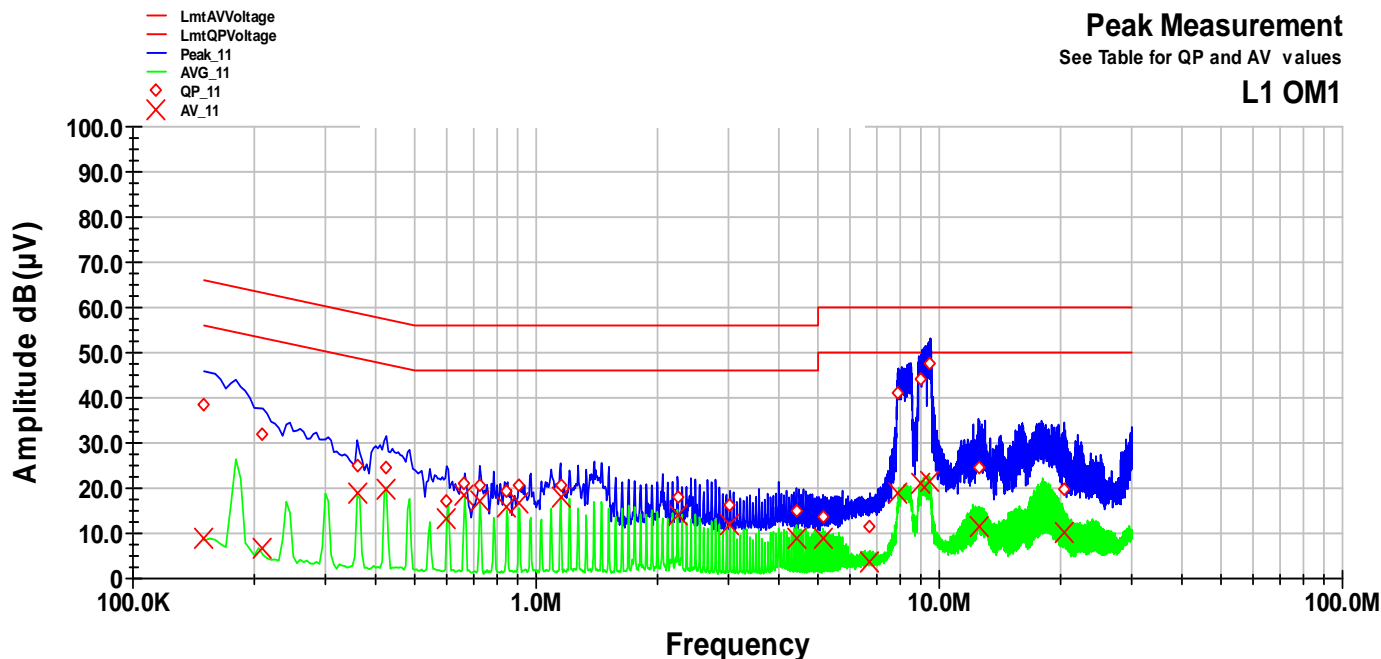
Test point: L1
 Operation mode: Counterpoint XI with one Sheet Deac & one 12"x12" Pad
 Remarks: PSU GT-2S5024D-R-ES / FCC/IC Requirements
With standard PSU Cable
9.0MHz Band, Tx1 & Tx2: 31
 Date: 13.08.07
 Tested by: Huber Markus

Result: passed

Peak Measurement

See Table for QP and AV values

L1 0M1



| Frequency MHz | QP Level dB(µV) | QP Margin dB | QP Limit dB | AV Level dB(µV) | AV Margin dB | AV Limit dB |
|------------------|--------------------|-----------------|----------------|--------------------|-----------------|----------------|
| 0.15 | 38.5 | -27.5 | 66.0 | 8.9 | -47.1 | 56.0 |
| 0.21 | 31.9 | -31.3 | 63.2 | 6.6 | -46.6 | 53.2 |
| 0.36 | 24.8 | -33.9 | 58.7 | 18.8 | -29.9 | 48.7 |
| 0.425 | 24.6 | -32.7 | 57.3 | 19.7 | -27.6 | 47.3 |
| 0.6 | 17.2 | -38.8 | 56.0 | 13.3 | -32.7 | 46.0 |
| 0.665 | 21.2 | -34.8 | 56.0 | 18.4 | -27.6 | 46.0 |
| 0.725 | 20.6 | -35.4 | 56.0 | 17.2 | -28.8 | 46.0 |
| 0.845 | 19.1 | -36.9 | 56.0 | 15.7 | -30.3 | 46.0 |
| 0.905 | 20.5 | -35.5 | 56.0 | 16.9 | -29.1 | 46.0 |
| 1.15 | 20.6 | -35.4 | 56.0 | 17.9 | -28.1 | 46.0 |
| 2.24 | 18.0 | -38.0 | 56.0 | 14.2 | -31.8 | 46.0 |
| 3.025 | 16.3 | -39.7 | 56.0 | 11.8 | -34.2 | 46.0 |
| 4.42 | 14.8 | -41.2 | 56.0 | 8.7 | -37.3 | 46.0 |
| 5.145 | 13.6 | -46.5 | 60.0 | 9.0 | -41.0 | 50.0 |
| 6.725 | 11.6 | -48.4 | 60.0 | 3.8 | -46.2 | 50.0 |
| 7.91 | 41.0 | -19.0 | 60.0 | 18.9 | -31.1 | 50.0 |
| 8.99 | 44.3 | -15.8 | 60.0 | 20.9 | -29.1 | 50.0 |
| 9.495 | 47.6 | -12.4 | 60.0 | 21.6 | -28.4 | 50.0 |
| 12.49 | 24.3 | -35.7 | 60.0 | 11.7 | -38.3 | 50.0 |
| 20.4 | 19.9 | -40.1 | 60.0 | 10.0 | -40.0 | 50.0 |

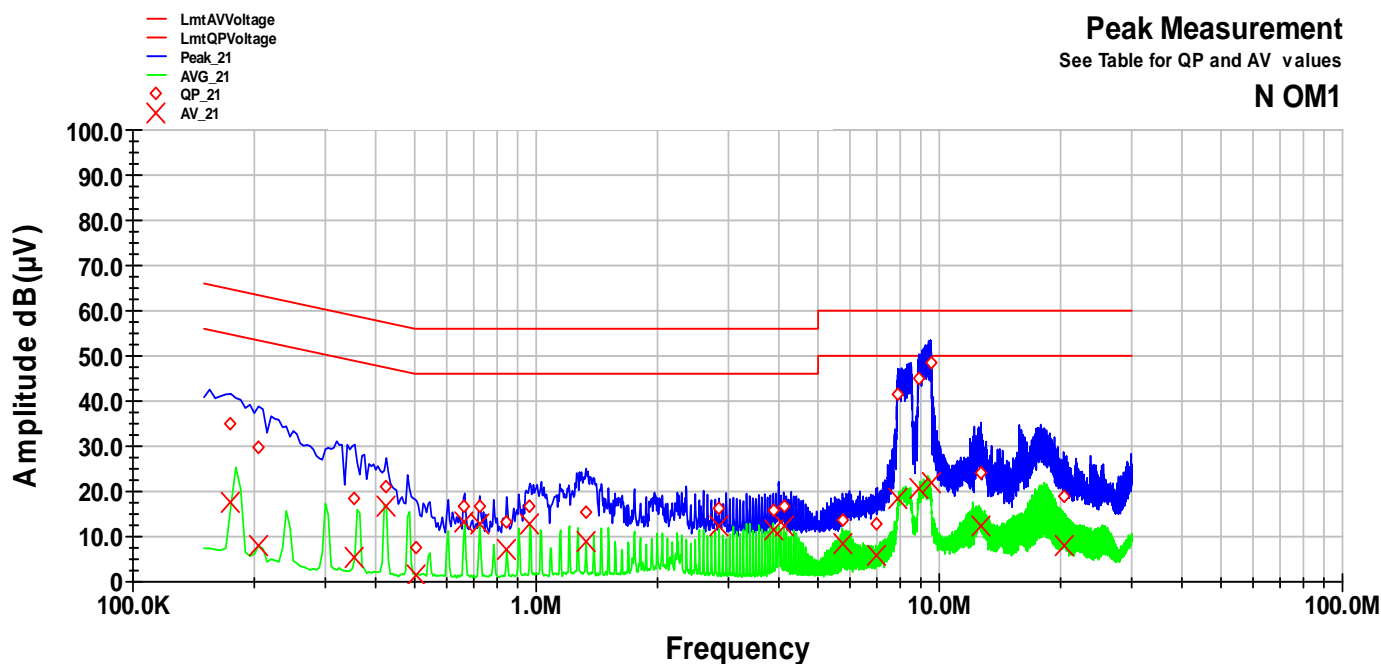
Test point: N
 Operation mode: Counterpoint XI with one Sheet Deac & one 12"x12" Pad
 Remarks: PSU GT-2S5024D-R-ES / FCC/IC Requirements
With standard PSU Cable
9.0MHz Band, Tx1 & Tx2: 31
 Date: 13.08.07
 Tested by: Huber Markus

Result: passed

Peak Measurement

See Table for QP and AV values

N OM1



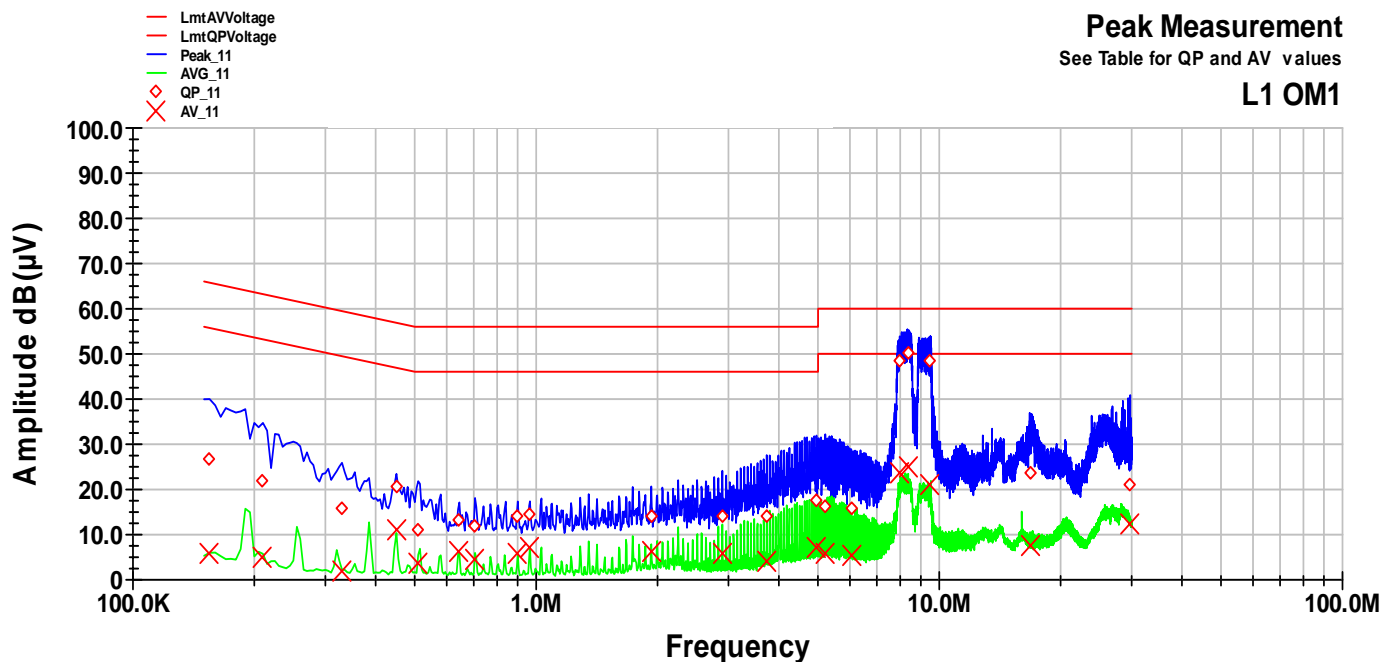
| Frequency MHz | QP Level dB(µV) | QP Margin dB | QP Limit dB | AV Level dB(µV) | AV Margin dB | AV Limit dB |
|------------------|--------------------|-----------------|----------------|--------------------|-----------------|----------------|
| 0.175 | 34.8 | -29.9 | 64.7 | 17.4 | -37.3 | 54.7 |
| 0.205 | 29.8 | -33.6 | 63.4 | 7.9 | -45.5 | 53.4 |
| 0.355 | 18.5 | -40.4 | 58.8 | 5.6 | -43.3 | 48.8 |
| 0.425 | 21.1 | -36.2 | 57.3 | 16.9 | -30.5 | 47.3 |
| 0.505 | 7.7 | -48.3 | 56.0 | 1.5 | -44.5 | 46.0 |
| 0.665 | 16.5 | -39.5 | 56.0 | 13.1 | -32.9 | 46.0 |
| 0.725 | 16.6 | -39.4 | 56.0 | 12.8 | -33.2 | 46.0 |
| 0.845 | 13.3 | -42.8 | 56.0 | 7.3 | -38.7 | 46.0 |
| 0.965 | 16.8 | -39.2 | 56.0 | 12.9 | -33.1 | 46.0 |
| 1.33 | 15.2 | -40.8 | 56.0 | 8.8 | -37.2 | 46.0 |
| 2.84 | 16.3 | -39.8 | 56.0 | 12.4 | -33.6 | 46.0 |
| 3.87 | 15.7 | -40.3 | 56.0 | 11.3 | -34.7 | 46.0 |
| 4.11 | 16.8 | -39.2 | 56.0 | 12.4 | -33.6 | 46.0 |
| 5.745 | 13.6 | -46.4 | 60.0 | 8.3 | -41.7 | 50.0 |
| 6.955 | 12.9 | -47.1 | 60.0 | 5.8 | -44.2 | 50.0 |
| 7.895 | 41.6 | -18.4 | 60.0 | 18.4 | -31.6 | 50.0 |
| 8.9 | 44.9 | -15.1 | 60.0 | 20.5 | -29.5 | 50.0 |
| 9.51 | 48.3 | -11.7 | 60.0 | 21.8 | -28.2 | 50.0 |
| 12.675 | 24.2 | -35.8 | 60.0 | 12.2 | -37.8 | 50.0 |
| 20.33 | 18.8 | -41.2 | 60.0 | 8.1 | -41.9 | 50.0 |

Test point: L1
 Operation mode: Counterpoint XI with two Sheet Deac
 Remarks: PSU GT-2S5024D-R / FCC/IC Requirements
With standard PSU Cable
9.0MHz Band, Tx1 & Tx2: 31

Result: passed

Date: 13.08.07
 Tested by: Huber Markus

Peak Measurement
 See Table for QP and AV values
L1 0M1



| Frequency MHz | QP Level dB(µV) | QP Margin dB | QP Limit dB | AV Level dB(µV) | AV Margin dB | AV Limit dB |
|------------------|--------------------|-----------------|----------------|--------------------|-----------------|----------------|
| 0.155 | 26.9 | -38.8 | 65.7 | 5.9 | -49.8 | 55.7 |
| 0.21 | 22.0 | -41.2 | 63.2 | 4.9 | -48.3 | 53.2 |
| 0.33 | 15.7 | -43.8 | 59.5 | 2.0 | -47.4 | 49.5 |
| 0.45 | 20.5 | -36.4 | 56.9 | 10.9 | -36.0 | 46.9 |
| 0.51 | 10.9 | -45.1 | 56.0 | 3.8 | -42.2 | 46.0 |
| 0.645 | 13.3 | -42.7 | 56.0 | 6.4 | -39.6 | 46.0 |
| 0.705 | 11.9 | -44.1 | 56.0 | 4.6 | -41.4 | 46.0 |
| 0.9 | 13.9 | -42.1 | 56.0 | 5.7 | -40.3 | 46.0 |
| 0.965 | 14.5 | -41.5 | 56.0 | 7.0 | -39.0 | 46.0 |
| 1.93 | 14.0 | -42.0 | 56.0 | 6.3 | -39.7 | 46.0 |
| 2.895 | 14.1 | -41.9 | 56.0 | 5.8 | -40.2 | 46.0 |
| 3.73 | 13.9 | -42.1 | 56.0 | 4.2 | -41.8 | 46.0 |
| 4.955 | 17.7 | -38.3 | 56.0 | 7.2 | -38.8 | 46.0 |
| 5.21 | 16.3 | -43.7 | 60.0 | 5.9 | -44.1 | 50.0 |
| 6.045 | 16.0 | -44.0 | 60.0 | 5.3 | -44.7 | 50.0 |
| 7.975 | 48.3 | -11.7 | 60.0 | 23.5 | -26.5 | 50.0 |
| 8.335 | 50.0 | -10.0 | 60.0 | 25.0 | -25.0 | 50.0 |
| 9.495 | 48.5 | -11.5 | 60.0 | 21.2 | -28.8 | 50.0 |
| 16.74 | 23.8 | -36.2 | 60.0 | 7.5 | -42.5 | 50.0 |
| 29.72 | 21.0 | -39.0 | 60.0 | 12.3 | -37.7 | 50.0 |

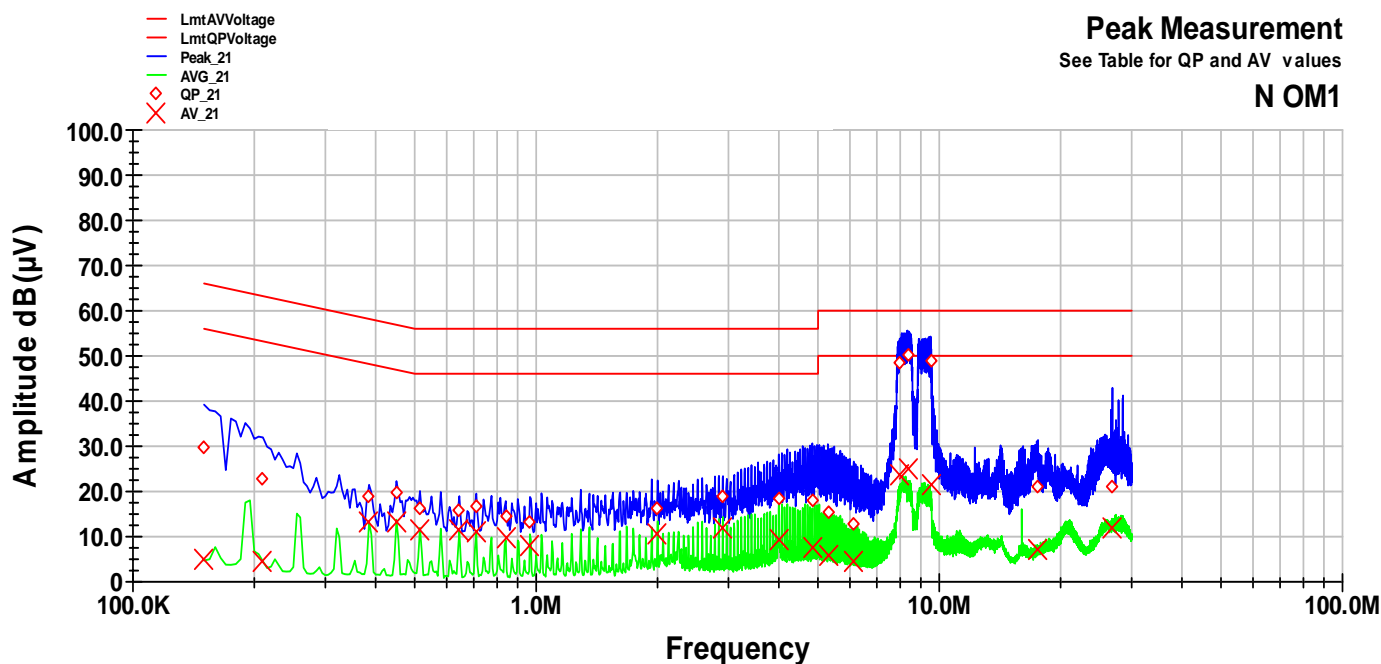
Test point: N
 Operation mode: Counterpoint XI with two Sheet Deac
 Remarks: PSU GT-2S5024D-R / FCC/IC Requirements
With standard PSU Cable
9.0MHz Band, Tx1 & Tx2: 31
 Date: 13.08.07
 Tested by: Huber Markus

Result: passed

Peak Measurement

See Table for QP and AV values

N OM1



| Frequency MHz | QP Level dB(µV) | QP Margin dB | QP Limit dB | AV Level dB(µV) | AV Margin dB | AV Limit dB |
|------------------|--------------------|-----------------|----------------|--------------------|-----------------|----------------|
| 0.15 | 29.7 | -36.3 | 66.0 | 5.1 | -50.9 | 56.0 |
| 0.21 | 22.8 | -40.5 | 63.2 | 4.6 | -48.6 | 53.2 |
| 0.385 | 18.8 | -39.4 | 58.2 | 13.2 | -35.0 | 48.2 |
| 0.45 | 20.0 | -36.9 | 56.9 | 13.2 | -33.7 | 46.9 |
| 0.515 | 16.4 | -39.6 | 56.0 | 11.6 | -34.4 | 46.0 |
| 0.645 | 15.8 | -40.2 | 56.0 | 11.5 | -34.5 | 46.0 |
| 0.71 | 16.7 | -39.3 | 56.0 | 11.0 | -35.0 | 46.0 |
| 0.84 | 14.6 | -41.5 | 56.0 | 9.8 | -36.2 | 46.0 |
| 0.965 | 13.1 | -42.9 | 56.0 | 7.9 | -38.1 | 46.0 |
| 2 | 16.4 | -39.6 | 56.0 | 10.7 | -35.3 | 46.0 |
| 2.905 | 18.8 | -37.2 | 56.0 | 11.9 | -34.1 | 46.0 |
| 4 | 18.3 | -37.7 | 56.0 | 9.4 | -36.6 | 46.0 |
| 4.84 | 17.8 | -38.2 | 56.0 | 7.4 | -38.6 | 46.0 |
| 5.29 | 15.3 | -44.7 | 60.0 | 5.6 | -44.4 | 50.0 |
| 6.13 | 12.6 | -47.4 | 60.0 | 4.4 | -45.6 | 50.0 |
| 7.975 | 48.6 | -11.4 | 60.0 | 23.5 | -26.5 | 50.0 |
| 8.335 | 50.2 | -9.8 | 60.0 | 25.1 | -24.9 | 50.0 |
| 9.51 | 48.8 | -11.2 | 60.0 | 21.5 | -28.5 | 50.0 |
| 17.565 | 21.2 | -38.8 | 60.0 | 7.3 | -42.7 | 50.0 |
| 26.845 | 21.0 | -39.0 | 60.0 | 12.1 | -37.9 | 50.0 |

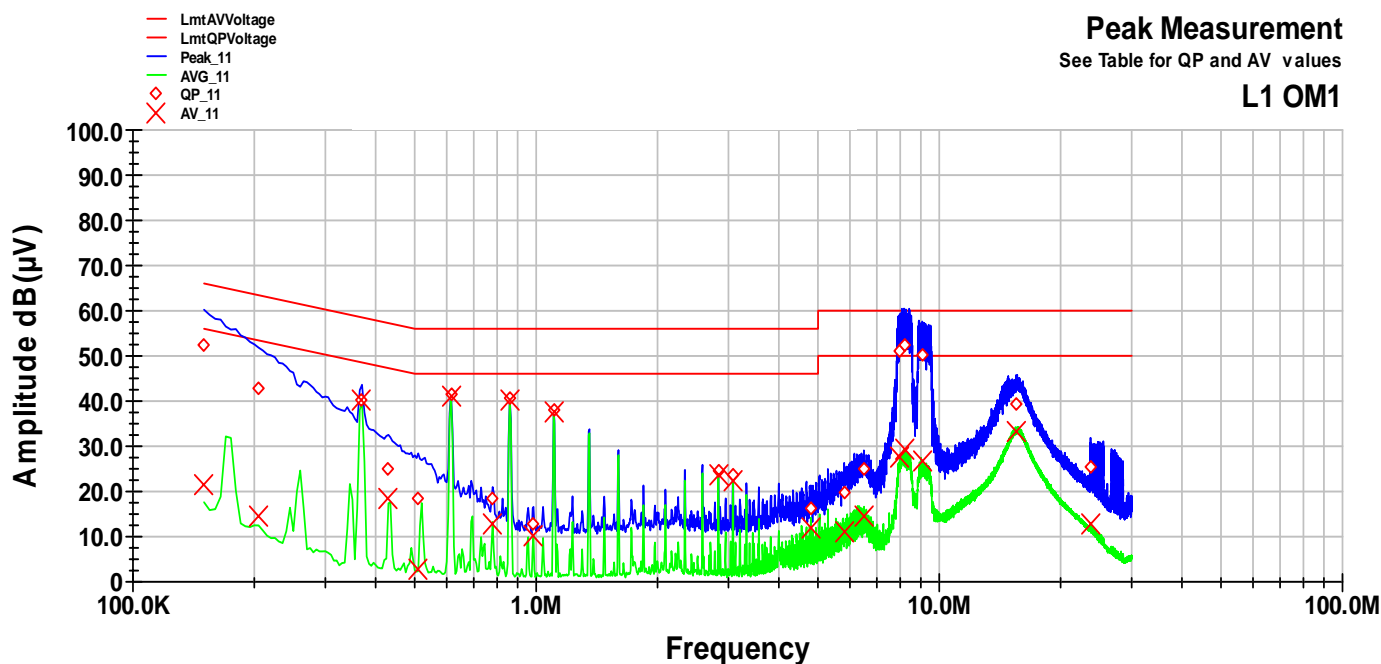
Test point: L1
 Operation mode: Counterpoint XI with two 12"x12" Antenna Pads
 Remarks: PSU EOS LFZVC36FS24S91 / FCC/IC Requirements
With standard PSU Cable
9.0MHz Band, Tx1 & Tx2: 31
 Date: 14.08.07
 Tested by: Huber Markus

Result: passed

Peak Measurement

See Table for QP and AV values

L1 0M1



| Frequency MHz | QP Level dB(µV) | QP Margin dB | QP Limit dB | AV Level dB(µV) | AV Margin dB | AV Limit dB |
|------------------|--------------------|-----------------|----------------|--------------------|-----------------|----------------|
| 0.15 | 52.5 | -13.5 | 66.0 | 21.7 | -34.3 | 56.0 |
| 0.205 | 42.7 | -20.7 | 63.4 | 14.8 | -38.7 | 53.4 |
| 0.37 | 40.4 | -18.1 | 58.5 | 40.0 | -8.5 | 48.5 |
| 0.43 | 25.1 | -32.2 | 57.3 | 18.3 | -28.9 | 47.3 |
| 0.51 | 18.3 | -37.7 | 56.0 | 2.6 | -43.4 | 46.0 |
| 0.615 | 41.5 | -14.5 | 56.0 | 41.2 | -4.8 | 46.0 |
| 0.78 | 18.4 | -37.6 | 56.0 | 12.9 | -33.0 | 46.0 |
| 0.86 | 40.6 | -15.4 | 56.0 | 40.3 | -5.7 | 46.0 |
| 0.985 | 12.7 | -43.3 | 56.0 | 10.0 | -36.0 | 46.0 |
| 1.105 | 38.0 | -18.0 | 56.0 | 37.7 | -8.3 | 46.0 |
| 2.83 | 24.6 | -31.4 | 56.0 | 23.7 | -22.3 | 46.0 |
| 3.075 | 23.7 | -32.3 | 56.0 | 22.5 | -23.5 | 46.0 |
| 4.8 | 16.4 | -39.6 | 56.0 | 12.1 | -33.9 | 46.0 |
| 5.805 | 19.7 | -40.3 | 60.0 | 11.2 | -38.8 | 50.0 |
| 6.495 | 25.0 | -35.0 | 60.0 | 14.4 | -35.6 | 50.0 |
| 7.975 | 51.0 | -9.0 | 60.0 | 27.7 | -22.3 | 50.0 |
| 8.165 | 52.6 | -7.4 | 60.0 | 29.3 | -20.7 | 50.0 |
| 9.07 | 50.0 | -10.0 | 60.0 | 26.7 | -23.3 | 50.0 |
| 15.585 | 39.5 | -20.5 | 60.0 | 33.1 | -16.9 | 50.0 |
| 23.7 | 25.5 | -34.5 | 60.0 | 12.6 | -37.4 | 50.0 |

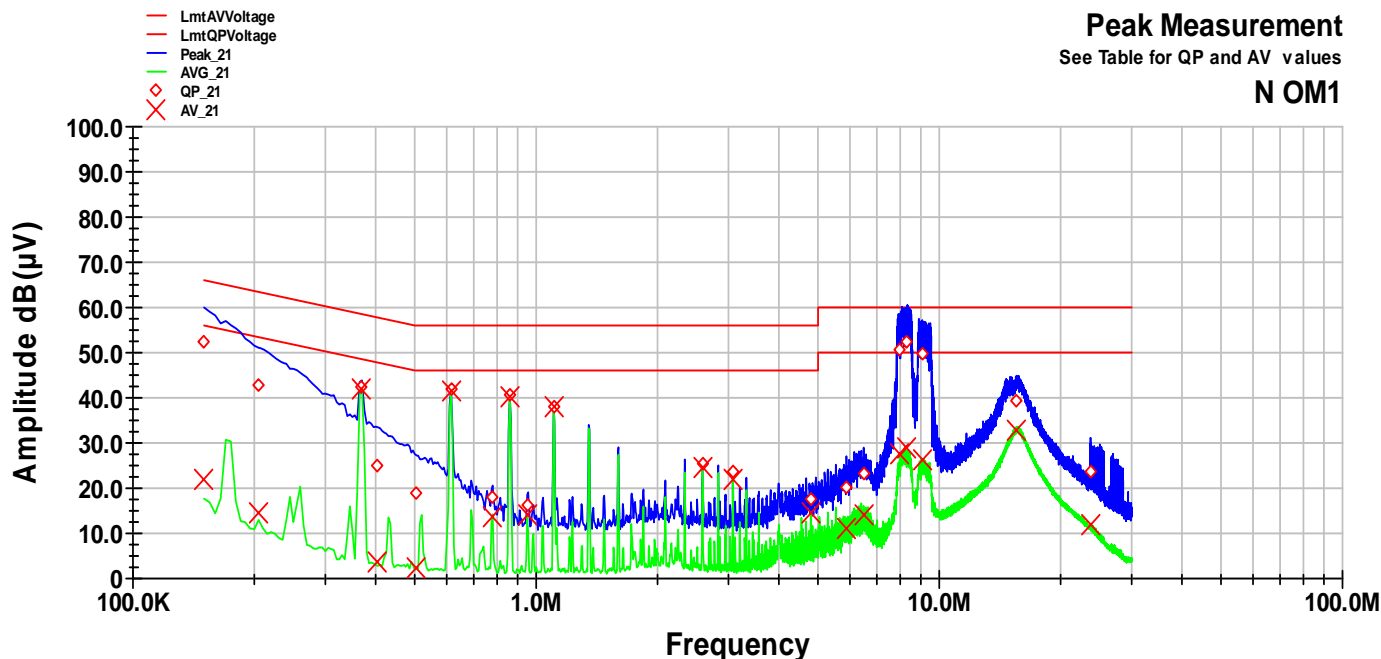
Test point: N
 Operation mode: Counterpoint XI with two 12"x12" Antenna Pads
 Remarks: PSU EOS LFZVC36FS24S91 / FCC/IC Requirements
With standard PSU Cable
9.0MHz Band, Tx1 & Tx2: 31
 Date: 14.08.07
 Tested by: Huber Markus

Result: passed

Peak Measurement

See Table for QP and AV values

N OM1



| Frequency MHz | QP Level dB(µV) | QP Margin dB | QP Limit dB | AV Level dB(µV) | AV Margin dB | AV Limit dB |
|------------------|--------------------|-----------------|----------------|--------------------|-----------------|----------------|
| 0.15 | 52.3 | -13.8 | 66.0 | 21.7 | -34.3 | 56.0 |
| 0.205 | 43.0 | -20.4 | 63.4 | 14.6 | -38.8 | 53.4 |
| 0.37 | 42.4 | -16.1 | 58.5 | 42.0 | -6.5 | 48.5 |
| 0.405 | 25.0 | -32.7 | 57.8 | 3.6 | -44.2 | 47.8 |
| 0.505 | 18.7 | -37.3 | 56.0 | 2.2 | -43.8 | 46.0 |
| 0.615 | 41.8 | -14.3 | 56.0 | 41.4 | -4.6 | 46.0 |
| 0.78 | 17.8 | -38.2 | 56.0 | 13.8 | -32.2 | 46.0 |
| 0.86 | 40.8 | -15.2 | 56.0 | 40.4 | -5.6 | 46.0 |
| 0.95 | 16.3 | -39.7 | 56.0 | 14.1 | -31.9 | 46.0 |
| 1.105 | 38.2 | -17.8 | 56.0 | 37.8 | -8.2 | 46.0 |
| 2.58 | 25.2 | -30.8 | 56.0 | 24.5 | -21.5 | 46.0 |
| 3.075 | 23.5 | -32.5 | 56.0 | 22.0 | -24.0 | 46.0 |
| 4.795 | 17.6 | -38.4 | 56.0 | 14.3 | -31.7 | 46.0 |
| 5.88 | 20.4 | -39.6 | 60.0 | 11.1 | -38.9 | 50.0 |
| 6.49 | 23.1 | -36.9 | 60.0 | 13.9 | -36.1 | 50.0 |
| 7.99 | 50.8 | -9.2 | 60.0 | 27.6 | -22.4 | 50.0 |
| 8.32 | 52.5 | -7.5 | 60.0 | 29.1 | -20.9 | 50.0 |
| 9.07 | 49.6 | -10.4 | 60.0 | 26.3 | -23.7 | 50.0 |
| 15.565 | 39.4 | -20.6 | 60.0 | 32.7 | -17.3 | 50.0 |
| 23.7 | 23.7 | -36.3 | 60.0 | 11.9 | -38.1 | 50.0 |

5.2 Field strength of the fundamental wave

For test instruments and accessories used see section 6 Part CPR 1.

5.2.1 Description of the test location

Test location: OATS1

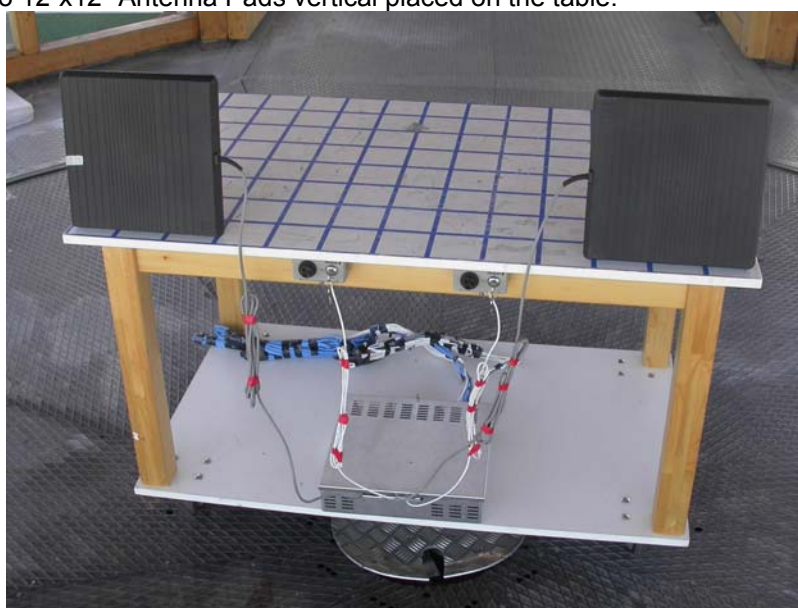
Test distance: 10 metres

5.2.2 Photo documentation of the test set-up

Counterpoint XI with two 12"x12" Antenna Pads horizontal placed on the table:



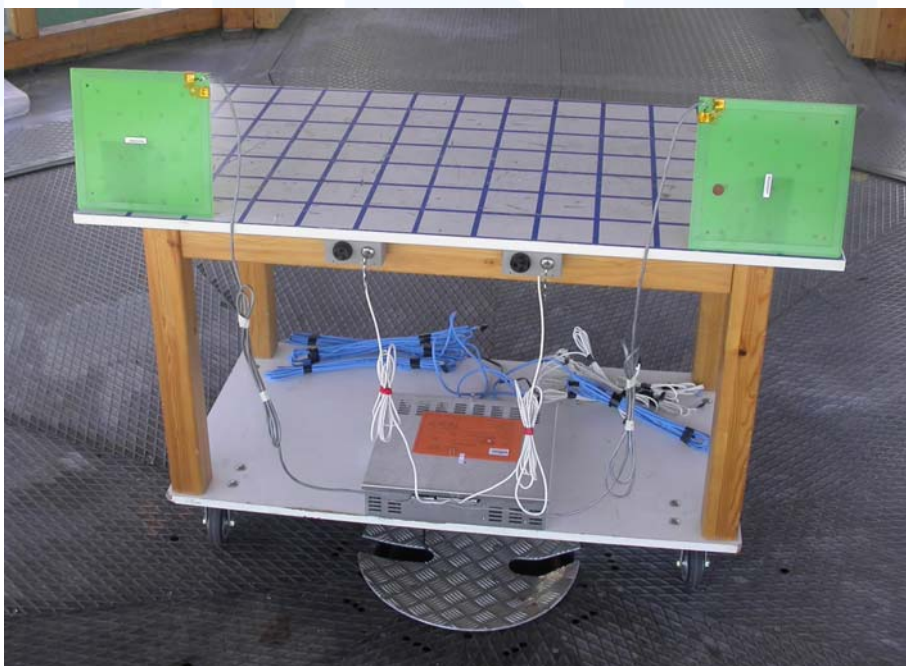
Counterpoint XI with two 12"x12" Antenna Pads vertical placed on the table:



Counterpoint XI with two Sheet Deactivators horizontal placed on the table:



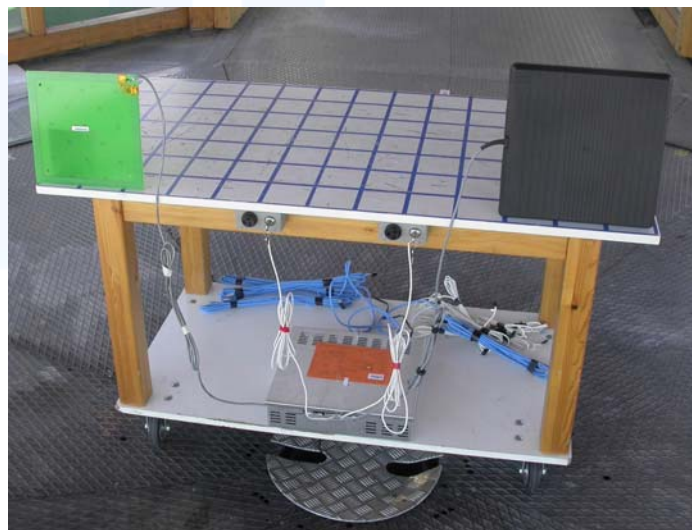
Counterpoint XI with two Sheet Deactivators vertical placed on the table:



Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator horizontal placed on the table:



Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator vertical placed on the table:



5.2.3 Description of Measurement

The magnetic field strength from the EuT will be measured on an open area test site in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The set up of the Equipment under test will be in accordance to ANSI C63.4-2003. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. In the case where larger measuring distances are required the results will extrapolated based on the values measured on the closer distances according to Section 15.31 (f) (2) [2]. The final measurement will be performed with an EMI Receiver set to an average and a peak detector.

The final level, expressed in $\text{dB}\mu\text{V}/\text{m}$, is arrived at by taking the reading from the EMI receiver (Level $\text{dB}\mu\text{V}$) and adding the antenna correction factor and cable loss factor (Factor dB) to it. This result then has to be compared with the relevant FCC limit.

The resolution bandwidth during the measurement was 300 kHz.

5.2.4 Test result

Counterpoint XI with two 12"x12" Antenna Pads horizontal placed on the table:

10m Distance measured:

Setting: Tx1&Tx2: 31, 9.0 MHz Band

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.170 | 52.17 | 20 | 72.17 | 80.0 | 7.8 |
| 8.914 | 46.79 | 20 | 66.79 | 80.0 | 13.2 |
| | | | | | |

30m Distance calculated:

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.170 | 32.17 | 20 | 52.17 | 60.0 | 7.83 |
| 8.914 | 26.79 | 20 | 46.79 | 60.0 | 13.21 |
| | | | | | |

Counterpoint XI with two 12"x12" Antenna Pads vertical placed on the table:

10m Distance measured:

Setting: Tx1&Tx2: 24, 9.0 MHz Band

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.17 | 59.37 | 20 | 79.37 | 80.0 | 0.63 |
| 8.914 | 55.74 | 20 | 75.74 | 80.0 | 4.26 |
| | | | | | |

30m Distance calculated:

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.17 | 39.37 | 20 | 59.37 | 60.0 | 0.63 |
| 8.914 | 35.74 | 20 | 55.74 | 60.0 | 4.26 |
| | | | | | |

Counterpoint XI with two Sheet Deactivators horizontal placed on the table:

10m Distance measured

Setting: Tx1&Tx2: 31, 9.0 MHz Band

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.086 | 50.84 | 20 | 70.84 | 80.0 | 9.16 |
| 8.896 | 46.59 | 20 | 66.95 | 80.0 | 13.05 |
| | | | | | |

30m Distance calculated:

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.086 | 30.84 | 20 | 50.84 | 60.0 | 9.16 |
| 8.896 | 26.59 | 20 | 46.95 | 60.0 | 13.05 |
| | | | | | |

Counterpoint XI with two Sheet Deactivators vertical placed on the table:

10m Distance measured:

Setting: Tx1&Tx2: 24, 9.0 MHz Band

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.068 | 59.65 | 20 | 79.65 | 80.0 | 0.35 |
| 8.896 | 54.71 | 20 | 74.71 | 80.0 | 5.29 |
| | | | | | |

30m Distance calculated:

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.068 | 39.65 | 20 | 59.65 | 60.0 | 0.35 |
| 8.896 | 34.71 | 20 | 54.71 | 60.0 | 5.29 |
| | | | | | |

Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator horizontal placed on the table:

10m Distance measured:

Setting: Tx1&Tx2: 31, 9.0 MHz Band

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.08 | 51.05 | 20 | 71.05 | 80.0 | 8.95 |
| 8.89 | 46.16 | 20 | 66.16 | 80.0 | 13.84 |
| | | | | | |

30m Distance calculated:

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.08 | 31.05 | 20 | 51.05 | 60.0 | 8.95 |
| 8.89 | 26.16 | 20 | 46.16 | 60.0 | 13.84 |
| | | | | | |

Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator vertical placed on the table:

10m Distance measured:

Setting: Tx1&Tx2: 23, 9.0 MHz Band

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.08 | 59.38 | 20 | 79.38 | 80.0 | 0.62 |
| 8.89 | 54.37 | 20 | 74.37 | 80.0 | 5.63 |
| | | | | | |

30m Distance calculated:

| Frequency [MHz] | L: PK [dBµV] | Correct. [dB] | L: PK [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 8.08 | 39.38 | 20 | 59.38 | 60.0 | 0.62 |
| 8.89 | 34.37 | 20 | 54.37 | 60.0 | 5.63 |
| | | | | | |

Limit according to FCC Part 15 Subpart 15.223, 15.35(b)

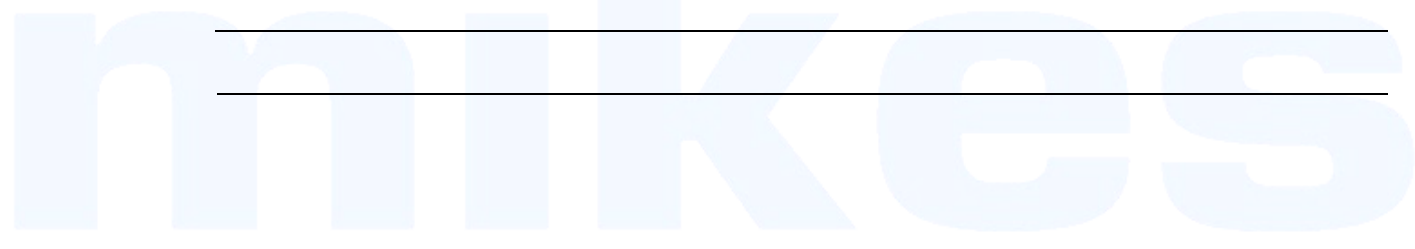
| Frequency (MHz) | Field strength of fundamental – Average Detector | |
|--------------------|---|------------------------|
| | ($\mu\text{V/m}$) | dB ($\mu\text{V/m}$) |
| 1.705-10.0 | 100* | 40* |

| Frequency (MHz) | Field strength of fundamental – Peak Detector | |
|--------------------|--|------------------------|
| | ($\mu\text{V/m}$) | dB ($\mu\text{V/m}$) |
| 1.705-10.0 | 1000* | 60* |

* At a test distance of 30 metres

The requirements are **FULFILLED**.

Remarks:



5.3 Spurious emissions (Magnetic field) 9 kHz – 30 MHz

For test instruments and accessories used see section 6 Part SER 1.

5.3.1 Description of the test location

Test location: OATS1

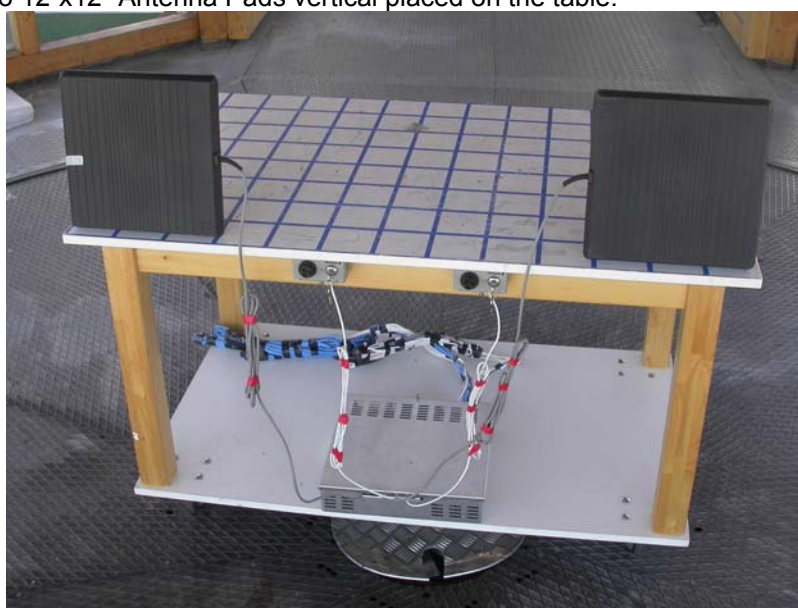
Test distance: 10 metres

5.3.2 Photo documentation of the test set-up

Counterpoint XI with two 12"x12" Antenna Pads horizontal placed on the table:



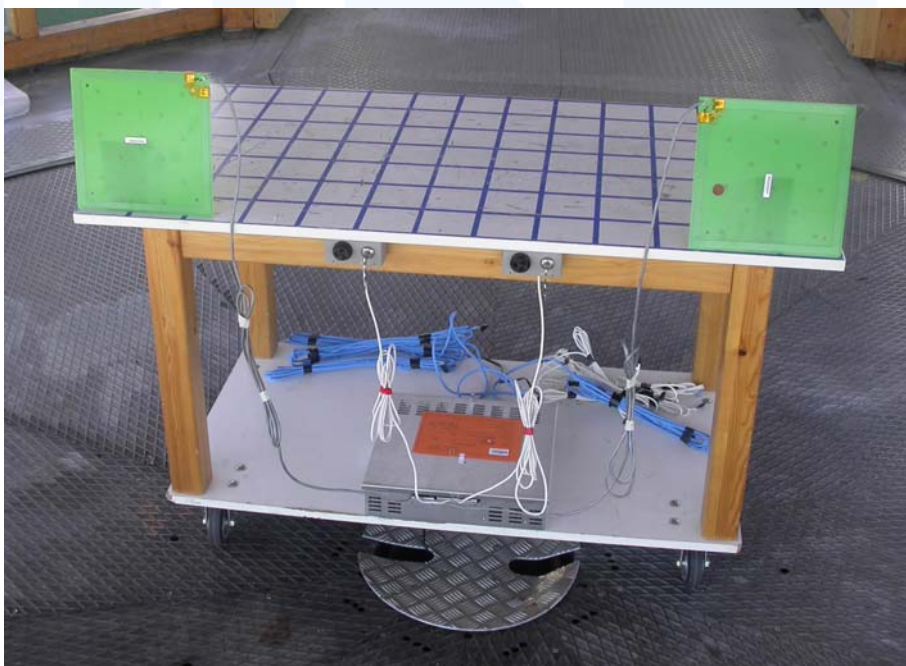
Counterpoint XI with two 12"x12" Antenna Pads vertical placed on the table:



Counterpoint XI with two Sheet Deactivators horizontal placed on the table:



Counterpoint XI with two Sheet Deactivators vertical placed on the table:

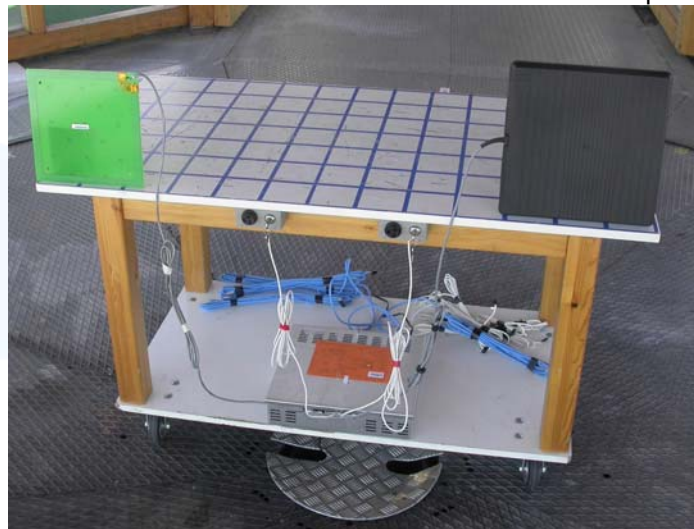


FCC ID:DO4CP11

Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator horizontal placed on the table:



Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator vertical placed on the table:



5.3.3 Description of Measurement

The spurious emissions from the EuT will be measured on an open area test site in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. In the case where larger measuring distances are required the results will extrapolated based on the values measured on the closer distances according to Section 15.31 (f) (2) [2]. The final measurement will be performed with an EMI Receiver set to Quasi Peak detector except for the frequency bands 9 kHz to 90 kHz and 110 to 490 kHz where an average detector will be used according to Section 15.209 (d) [2].

The final level, expressed in dB μ V/m, is arrived at by taking the reading from the EMI receiver (Level dB μ V) and adding the antenna correction factor and cable loss factor (Factor dB) to it. This result then has to be compared with the relevant FCC limit.

The resolution bandwidth during the measurement is as follows:

9 kHz – 150 kHz: ResBW: 200 Hz

150 kHz – 30 MHz: ResBW: 300 kHz

Example:

| Frequency (MHz) | Level (dB μ V) | + | Factor (dB) | = | Level (dB μ V/m) | Limit (dB μ V/m) | = | Delta (dB) |
|--------------------|-----------------------|---|----------------|---|-------------------------|-------------------------|---|---------------|
| 1.705 | 5 | + | 20 | = | 25 | 30 | = | 5 |

5.3.4 Test result

Counterpoint XI with two 12"x12" Antenna Pads vertical and horizontal placed on the table:

| Frequency [MHz] | L: PK [dBµV] | L: AV [dBµV] | L: QP [dBµV] | Correct. [dB] | L: PK [dBµV/m] | L: AV [dBµV/m] | L: QP [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|--------------|--------------|---------------|----------------|----------------|----------------|----------------|------------|
| 0.009 – 30.0 | | | | 20 | | | | 40.0 | > 20 |
| | | | | | | | | | |
| | | | | | | | | | |

Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator vertical and horizontal placed on the table:

| Frequency [MHz] | L: PK [dBµV] | L: AV [dBµV] | L: QP [dBµV] | Correct. [dB] | L: PK [dBµV/m] | L: AV [dBµV/m] | L: QP [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|--------------|--------------|---------------|----------------|----------------|----------------|----------------|------------|
| 0.009 – 30.0 | | | | 20 | | | | 40.0 | > 20 |
| | | | | | | | | | |
| | | | | | | | | | |

Counterpoint XI with two Sheet Deactivators vertical and horizontal placed on the table:

| Frequency [MHz] | L: PK [dBµV] | L: AV [dBµV] | L: QP [dBµV] | Correct. [dB] | L: PK [dBµV/m] | L: AV [dBµV/m] | L: QP [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|--------------|--------------|---------------|----------------|----------------|----------------|----------------|------------|
| 0.009 – 30.0 | | | | 20 | | | | 40.0 | > 20 |
| | | | | | | | | | |
| | | | | | | | | | |

Limit according to FCC Part 15 Subpart 15.209(a), Subpart 15.223(a)

| Frequency (MHz) | Field strength of spurious emissions | | Measurement distance (meters) |
|-----------------|--------------------------------------|-----------|-------------------------------|
| | (µV/m) | dB (µV/m) | |
| 0.009-0.490 | 2400/F(kHz) | -- | 300 |
| 0.490-1.705 | 24000/F (kHz) | -- | 30 |
| 1.705-30.0 | 100 | 40 | 30 |

The requirements are **FULFILLED**.

Remarks:

5.4 Radiated emissions (electric field) 30 MHz – 1 GHz

For test instruments and accessories used see section 6 Part SER 2.

5.4.1 Description of the test location

Test location: OATS1

Test distance: 3 metres

5.4.2 Photo documentation of the test set-up

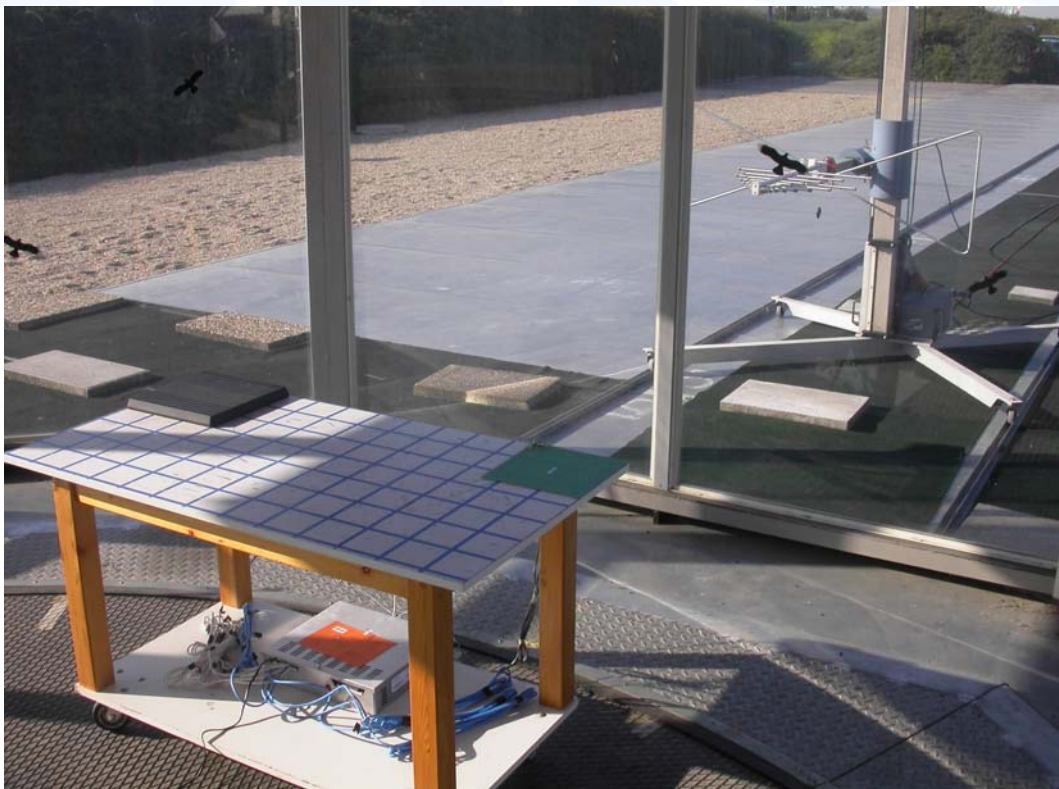
Counterpoint XI with two 12"x12" Antenna Pads:



Counterpoint XI with two Sheet Deactivators:



Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator:



5.4.3 Description of Measurement

Spurious emissions from the EuT are measured in the frequency range of 30 MHz to 1000 MHz using a tuned receiver and appropriate broadband linearly polarized antennas. Measurements between 30 MHz and 1000 MHz are made with 120 kHz/6 dB bandwidth and quasi-peak detection. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimetres above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. The set up of the Equipment under test will be in accordance to ANSI C63.4-2003. The Interface cables that are closer than 40 centimetres to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimetres from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarization's and the EuT are rotated 360 degrees.

The final level, expressed in dBµV/m, is arrived by taking the reading from the EMI receiver (Level dBµV) and adding the correction factors and cable loss factor (Factor dB) to it. This is done automatically in the EMI receiver, where the correction factors are stored. This result then has the FCC or CISPR limit subtracted from it to provide the Delta which gives the tabular data as shown in the data sheets at page.

The resolution bandwidth during the measurement is as follows:
30 MHz – 1000 MHz: ResBW: 120 kHz

Example:

| | | | | | | | | |
|--------------------|-----------------|---|----------------|---|-------------------|-------------------|---|---------------|
| Frequency (MHz) | Level (dBµV) | + | Factor (dB) | = | Level (dBµV/m) | Limit (dBµV/m) | = | Delta (dB) |
| 719 | 75 | + | 32.6 | = | 107.6 | 110 | = | -2.4 |

5.4.4 Test result

Extract of the critical values:

Counterpoint XI with two 12"x12" Antenna Pads:

| Frequency [MHz] | L: QP [dBµV] | Correct. [dB] | L: QP [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 33.68 | 18.1 | 14.2 | 32.2 | 40.0 | 7.7 |
| 75.23 | 24.2 | 11.4 | 35.6 | 40.0 | 4.4 |
| 81.59 | 25.5 | 10.8 | 36.3 | 40.0 | 3.7 |
| 90.68 | 26.8 | 11.0 | 37.8 | 43.5 | 5.7 |
| 108.27 | 29.1 | 12.7 | 41.8 | 43.5 | 1.7 |
| 119.01 | 20.6 | 13.9 | 34.5 | 43.5 | 9.0 |

Counterpoint XI with two Sheet Deactivators:

| Frequency [MHz] | L: QP [dBµV] | Correct. [dB] | L: QP [dBµV/m] | Limit [dBµV/m] | Delta [dB] |
|-----------------|--------------|---------------|----------------|----------------|------------|
| 47.50 | 16.2 | 14.7 | 30.9 | 40.0 | 9.1 |
| 65.28 | 19.7 | 13.0 | 32.7 | 40.0 | 7.3 |
| 89.01 | 25.4 | 10.9 | 36.3 | 43.5 | 7.2 |
| 90.79 | 25.8 | 11.0 | 36.8 | 43.5 | 6.7 |
| 108.26 | 23.8 | 12.7 | 36.5 | 43.5 | 7.0 |
| 110.48 | 21.1 | 13.0 | 34.1 | 43.5 | 9.4 |

Extract of the critical values:

Counterpoint XI with one 12"x12" Antenna Pad and one Sheet Deactivator:

| Frequency [MHz] | L: QP [dB μ V] | Correct. [dB] | L: QP [dB μ V/m] | Limit [dB μ V/m] | Delta [dB] |
|-----------------|--------------------|---------------|----------------------|----------------------|------------|
| 31.93 | 20.4 | 14.1 | 34.5 | 40.0 | 5.5 |
| 45.35 | 16.9 | 14.7 | 31.6 | 40.0 | 8.4 |
| 65.30 | 20.4 | 13.0 | 33.4 | 40.0 | 6.6 |
| 72.58 | 22.7 | 11.8 | 34.5 | 40.0 | 5.5 |
| 84.99 | 23.9 | 10.8 | 34.7 | 40.0 | 5.3 |
| 110.53 | 24.5 | 13.0 | 37.5 | 43.5 | 6.0 |

Limit according to FCC Part 15 Subpart 15.209(a)

| Frequency (MHz) | Field strength of spurious emissions | | Measurement distance (meters) |
|-----------------|--------------------------------------|-----------------|-------------------------------|
| | (μ V/m) | dB (μ V/m) | |
| 30-88 | 100 | 40 | 3 |
| 88-216 | 150 | 43.5 | 3 |
| 216-960 | 200 | 46 | 3 |
| 960-1000 | 500 | 54 | 3 |

The requirements are **FULFILLED**.

Remarks:

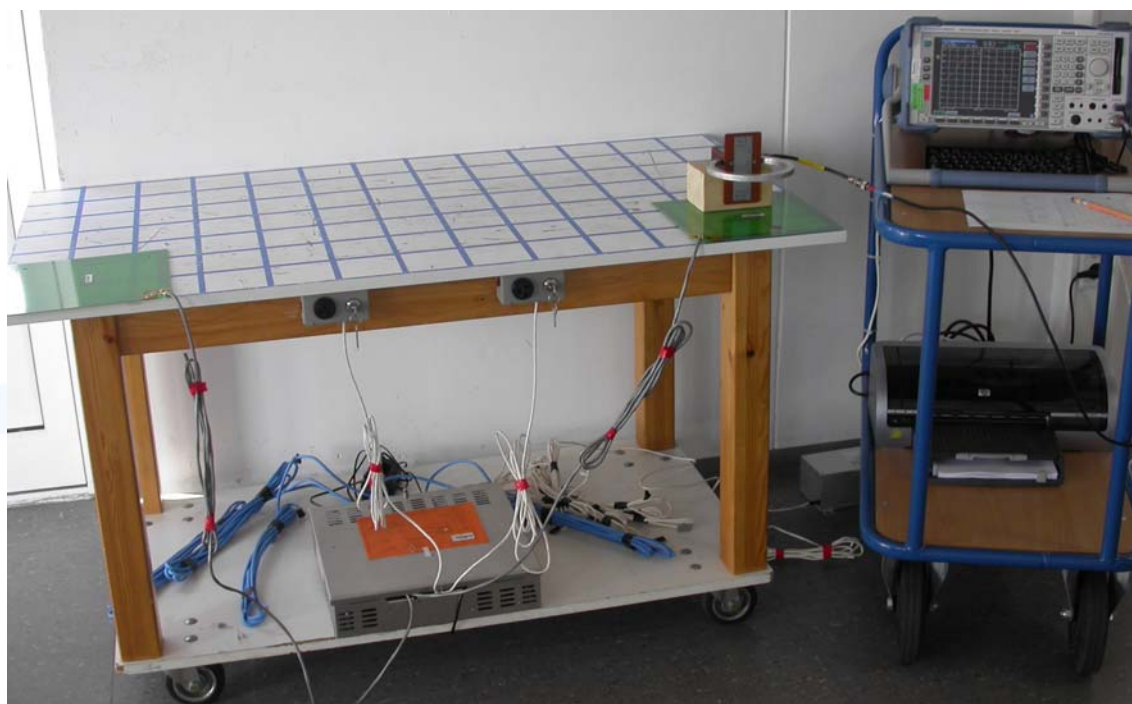
5.5 Emission Bandwidth

For test instruments and accessories used see section 6 Part MB.

5.5.1 Description of the test location

Test location: AREA4

5.5.2 Photo documentation of the test set-up



5.5.3 Test result

Tx Frequency: 9.0 MHz Dual Band

| Fundamental [MHz] See Plot 1 | 6dB Bandwidth F1 [MHz] | 6dB Bandwidth F2 [MHz] | Measured Bandwidth [MHz] |
|---------------------------------|------------------------|------------------------|--------------------------|
| 8.0785 | 7.6942 | 8.658 | 0.9638 |

| Fundamental [MHz] See Plot 2 | 6dB Bandwidth F1 [MHz] | 6dB Bandwidth F2 [MHz] | Measured Bandwidth [MHz] |
|---------------------------------|------------------------|------------------------|--------------------------|
| 8.9081 | 7.4807 | 9.634 | 2.1533 |

5.5.4 Test protocol

Emission Bandwidth
FCC Part 15 Subpart 15.223(a)

Plot 1:

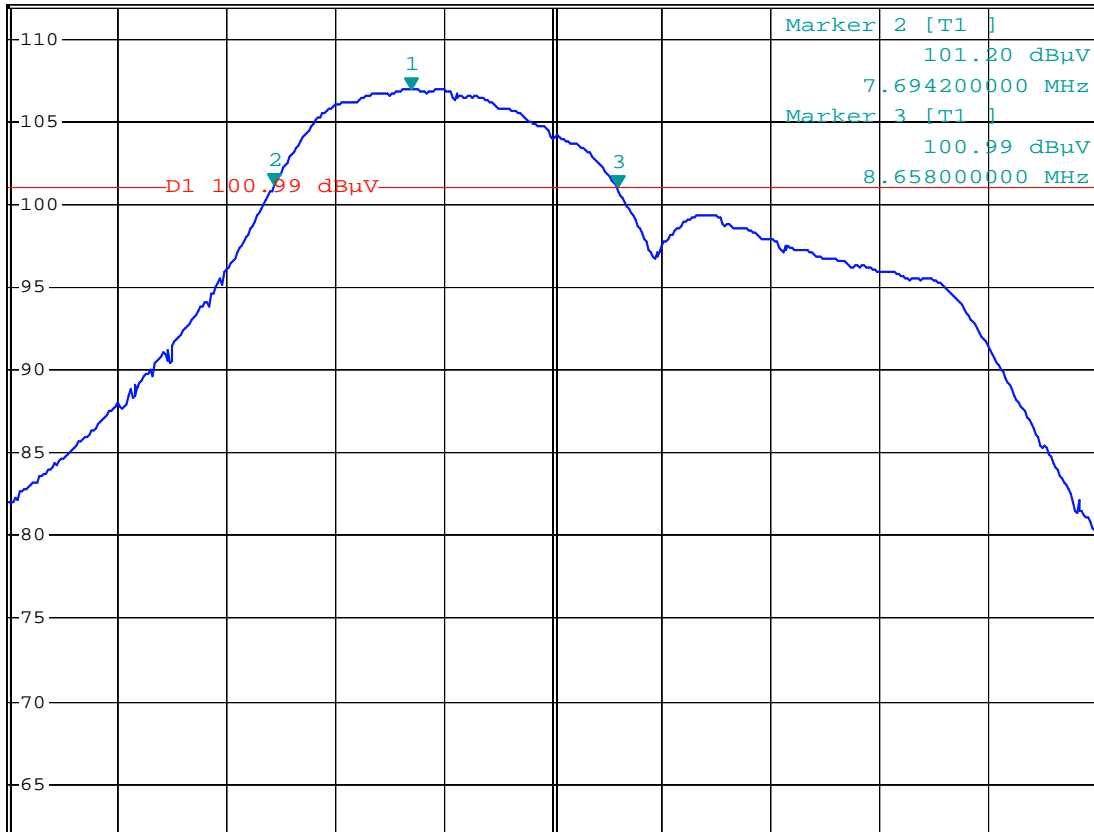


*RBW 300 kHz Marker 1 [T1]
 *VBW 300 kHz 106.99 dBμV
 SWT 2.5 ms 8.078500000 MHz

Ref 112 dBμV

Att 40 dB

1 PK
VIEW



Start 6.95 MHz

305 kHz/

Stop 10 MHz

Emission Bandwidth
FCC Part 15 Subpart 15.223(a)

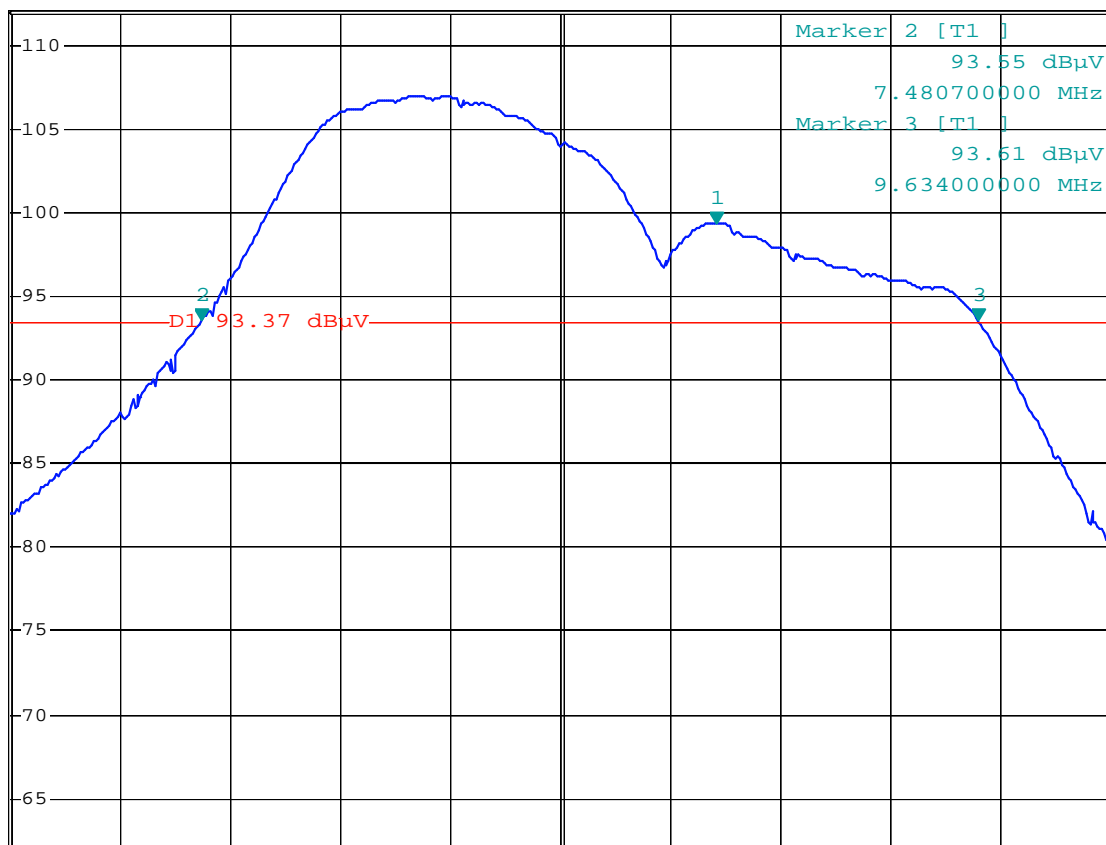
Plot 2:



*RBW 300 kHz Marker 1 [T1]
*VBW 300 kHz 99.37 dBμV
8.908100000 MHz

Ref 112 dBμV Att 40 dB SWT 2.5 ms

1 PK
VIEW



Start 6.95 MHz 305 kHz/ Stop 10 MHz

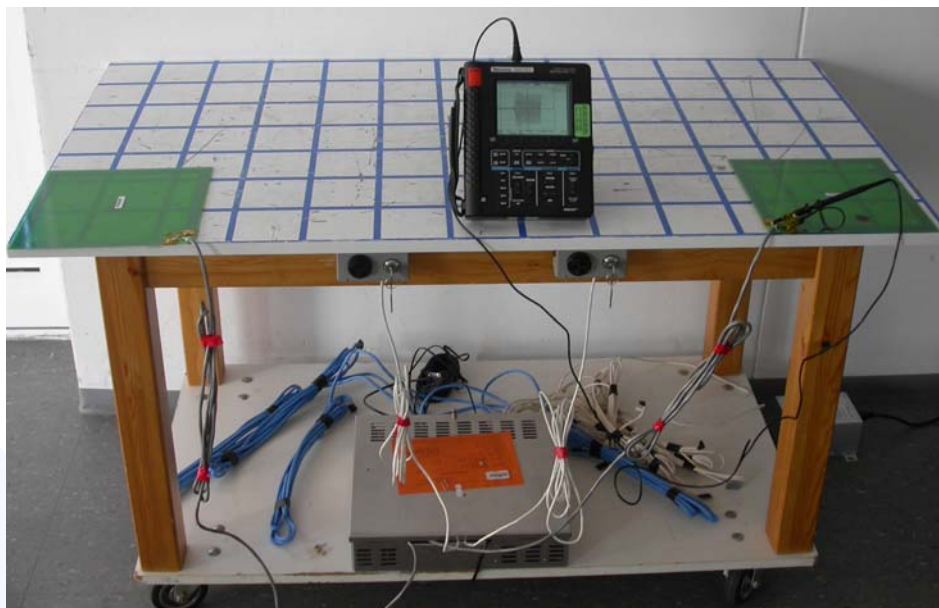
5.6 Correction for Pulse Operation (Duty Cycle)

For test instruments and accessories used see section 6 Part DC.

5.6.1 Description of the test location

Test location: AREA4

5.6.2 Photo documentation of the test set-up



5.6.3 Description of Measurement

The Duty cycle factor, expressed in dB, is arrived by taking the following formula:

$$KE = 20 \log [(t_{iB} * p) / T_w]$$

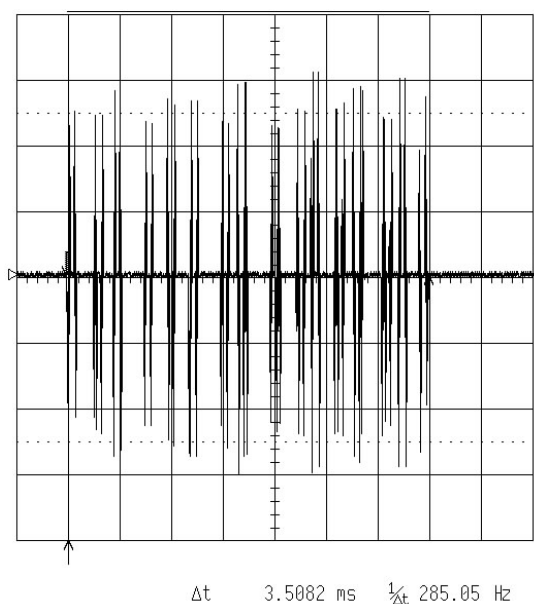
- KE: pulse operation correction factor [dB]
 t_{iw} pulse duration for one complete pulse track [msec]
 t_{iB} pulse duration for one pulse [μ sec]
 T_w a period of the pulse track [msec]
 p number of pulses in one train

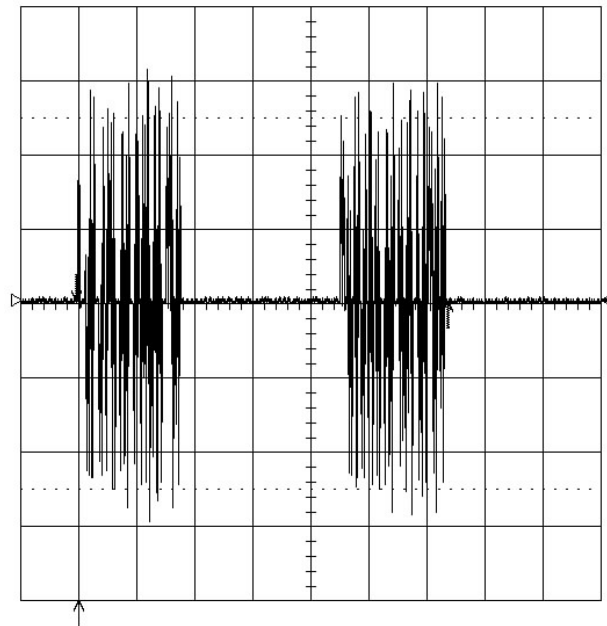
5.6.4 Test result

| t_{iw} [msec] | T_w [msec] | t_{ib} [µsec] | p | KE [dB / %] |
|-----------------|--------------|-----------------|-----|---------------|
| 3.508 | 12.800 | 6.781 | 64 | -29.39 / 3.39 |
| | | | | |

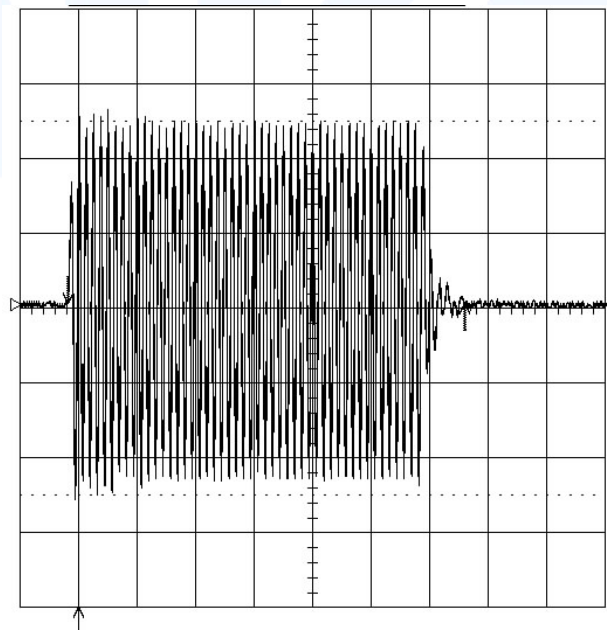
Remarks: For detailed results, please see the test protocol below.

5.6.5 Test protocol





Δt 12.800 ms $\frac{1}{\Delta t}$ 78.125 Hz



Δt 6.781 μ s $\frac{1}{\Delta t}$ 147.47 kHz

6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

The calibration intervals and the calibration history will be given out on request.

Test Report No: T31939-00-00HU
 Beginning of Testing: 07 August 2007
 End of Testing: 29 August 2007

| Test ID | Model Type | Kind of Equipment | Manufacturer | Equipment No. |
|---------|-----------------------|--------------------------|-----------------------------|-----------------|
| A 4 | ESHS 30 | EMI Test Receiver | Rohde & Schwarz München | 02-02/03-05-002 |
| | NNLK 8129 | LISN | Schwarzbeck Mess-Elektronik | 02-02/20-05-001 |
| | ESH 2 - Z 5 | LISN | Rohde & Schwarz München | 02-02/20-05-004 |
| | N-4000-BNC | RF Cable | mikes-testingpartners gmbh | 02-02/50-05-138 |
| | N-1500-N | RF Cable | mikes-testingpartners gmbh | 02-02/50-05-140 |
| | ESH 3 - Z 2 | Pulse Limiter | Rohde & Schwarz München | 02-02/50-05-155 |
| | SP 103 /3.5-60 | Convertor 220V / 110V | mikes-testingpartners gmbh | 02-02/50-05-182 |
| CPR 1 | FMZB 1516 | Magnetic Field Antenna | Schwarzbeck Mess-Elektronik | 01-02/24-01-018 |
| | ESCI | EMI Test Receiver | Rohde & Schwarz München | 02-02/03-05-005 |
| | S10162-B/+11N-50-10-5 | RF Cable 33m | Huber + Suhner | 02-02/50-05-031 |
| | KK-EF393-21N-16 | RF Cable 20m | Huber + Suhner | 02-02/50-05-033 |
| | NW-2000-NB | RF Cable | Huber + Suhner | 02-02/50-05-113 |
| DC | THS730A | Handheld Scope | Tektronix GmbH | 02-02/13-05-001 |
| MB | ESCI | EMI Test Receiver | Rohde & Schwarz München | 02-02/03-05-005 |
| | HZ-10 | Magnetic Field Antenna | Rohde & Schwarz München | 02-02/24-05-012 |
| SER 1 | FMZB 1516 | Magnetic Field Antenna | Schwarzbeck Mess-Elektronik | 01-02/24-01-018 |
| | ESCI | EMI Test Receiver | Rohde & Schwarz München | 02-02/03-05-005 |
| | S10162-B/+11N-50-10-5 | RF Cable 33m | Huber + Suhner | 02-02/50-05-031 |
| | KK-EF393-21N-16 | RF Cable 20m | Huber + Suhner | 02-02/50-05-033 |
| | NW-2000-NB | RF Cable | Huber + Suhner | 02-02/50-05-113 |
| SER 2 | ESVS 30 | EMI Test Receiver | Rohde & Schwarz München | 02-02/03-05-006 |
| | VULB 9168 | Trilog-Broadband Antenna | Schwarzbeck Mess-Elektronik | 02-02/24-05-005 |
| | S10162-B/+11N-50-10-5 | RF Cable 33m | Huber + Suhner | 02-02/50-05-031 |
| | KK-EF393-21N-16 | RF Cable 20m | Huber + Suhner | 02-02/50-05-033 |
| | NW-2000-NB | RF Cable | Huber + Suhner | 02-02/50-05-113 |

7 Constructional dataform for testing

| | | | | | |
|----------------------|--|---------------------------------|---------------------------------|---|--|
| Licence holder: | Checkpoint Systems, Inc. | | | | |
| Address: | 101 Wolf Drive, Thorofare, New Jersey, USA 08086 | | | | |
| Manufacturer: | Checkpoint Caribbean (Dominican Republic) | | | | |
| Address: | Zona Franca Los Alcarrizos, Manzana A. Edif No 1, Apartado Postal No. 182-0, Los Alcarrizos, Santo Domingo, Republica Dominicana | | | | |
| Type / Model Name: | Electronic Article Surveillance Deactivation Systems | | | | |
| Product Description: | Counterpoint XI Deactivation chassis w/ <u>two 12"x12" Antenna Pads</u> ; w/ <u>two Sheet Deactivators</u> ; w/ <u>one 12"x12" Antenna Pad & one Sheet Deactivator</u> | | | | |
| Serial-No.: | Deac. Chassis, S/N: 7870431P1D11877026 and 7870431P1D11877015 | Antenna Pad 1 S/N: Prototype | Antenna Pad 2 S/N: Prototype | Sheet Deac. #1 S/N: 73901100T52295739 | Sheet Deac. #2 S/N: 739201100T52305004 |

Additional informations to the above named model:

| | | | |
|--|----------------------------------|--------------|--|
| Antenna: transmitter-receiver Antenna Width Height | Type: Loop Antennas | | |
| | Sheet Deac. | Antenna Pads | |
| | 16 mm | 19 mm | |
| | 16 mm | 19 mm | |
| Power supply of the transmitter: Type: | nominal voltage: 24.0 V | | |
| | lowest voltage: 18.0 V | | |
| | highest voltage: 25.0 V | | |
| | current consumption 0.5 A | | |
| Power supply of the receiver: Type: | Same as transmitter | | |
| | nominal voltage: V | | |
| | lowest voltage: V | | |
| | highest voltage: V | | |
| | current consumption A | | |

Ancillary equipment:

| | | | | | |
|--------------|-------------|-------|-----------------|-------------|-----------------|
| Description: | PSU GlobTek | Type: | GT-2S5024D-R-ES | Serial-no.: | Prototype |
| Description: | PSU GlobTek | Type: | GT-2S5024D-R | Serial-no.: | RoHS01275403/06 |

Extreme temperature range in which the approval test should be performed:

- Category I: General (-20°C to +55°C)
- Category II: Portable (-10°C to +55°C)
- Category III: Equipment for normal indoor use (0°C to +55°C)

Connectable cables:

| Name of the cable | Digital | Length/m | shielded |
|--|---|----------|---|
| DC cable from PSU | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no | 5.0 | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no |
| Additional cables listed in the attachment | <input type="checkbox"/> yes <input type="checkbox"/> no | | <input type="checkbox"/> yes <input type="checkbox"/> no |
| | <input type="checkbox"/> yes <input type="checkbox"/> no | | <input type="checkbox"/> yes <input type="checkbox"/> no |

Type designation:
COUNTERPOINT XI Deactivation Chassis w/Antenna Models:
Two 12"x12" Antenna Pads, Two Sheet Deactivators, One 12"x12" Antenna Pad + One Sheet Deactivator

Name and type designation of individual units comprising the radio equipment:
PSU, GT-2S5024D-R-ES
PSU, GT-2S5024D-R

Type of equipment:

- | | | | |
|---|---|---|-------------------------------|
| <input type="checkbox"/> Radiotelephone equipment | <input type="checkbox"/> Remote-control equipment | <input type="checkbox"/> Radiomaritime equipment | <input type="checkbox"/> LPD |
| <input type="checkbox"/> One-way radiotelephone equipment | <input checked="" type="checkbox"/> Inductive loop system | <input type="checkbox"/> Inland waterways equipment | <input type="checkbox"/> RLAN |
| <input type="checkbox"/> Personal paging system | <input type="checkbox"/> Radio-relay system | <input type="checkbox"/> Radionavigation equipm. | <input type="checkbox"/> |
| <input type="checkbox"/> Satellite earth station | <input type="checkbox"/> CB radiotelephone equipment | <input type="checkbox"/> Antenna | <input type="checkbox"/> |
| <input type="checkbox"/> Data transmission equipment | <input type="checkbox"/> Movement detector | <input type="checkbox"/> Aeronautical equipment | <input type="checkbox"/> |

Technical characteristics:

| | Transmitter-receiver | Transmitter | Receiver |
|--|----------------------|-------------|----------|
| Frequency range | 7.4-10 MHz | | |
| Maximum no. of channels | 1 | | |
| Channel spacing | | | |
| Class of emission (type of modulation) | P0N | | |
| Maximum RF output power | | | |
| Maximum effective radiated power (ERP) | 60 dBµV/m at 30 m | | |
| Output power variable | Yes | | |
| Channel switching frequency range | | | |

| | | | |
|---|--|--------|--------|
| Method of frequency generation | <input checked="" type="checkbox"/> Synthesizer <input type="checkbox"/> Crystal <input type="checkbox"/> Other | | |
| Frequency generation TX | | | |
| Frequency generation RX | | | |
| IF | 1st IF | 2nd IF | 3rd IF |
| Integral selective calling | | | |
| Audio-frequency interface level at external data socket | | | |
| Modes of operation | <input type="checkbox"/> Duplex mode <input type="checkbox"/> Semi-duplex mode <input checked="" type="checkbox"/> Simplex mode | | |
| Power source | <input checked="" type="checkbox"/> Mains <input type="checkbox"/> Vehicle-regulated <input type="checkbox"/> Integral | | |
| Antenna socket | <input type="checkbox"/> BNC <input type="checkbox"/> TNC <input type="checkbox"/> N <input type="checkbox"/> M <input type="checkbox"/> UHF <input type="checkbox"/> Adapter <input checked="" type="checkbox"/> None <input type="checkbox"/> <input type="checkbox"/> | | |

Test specifications:
FCC Part 15 Sub Part C (May 4, 2007)
RSS 210 Issue 7 (June 2007)

Declarations:

- We declare that the above information are correct and the named model was supplied with the maximum configuration to the accredited test laboratory.

THOROFARE, NJ

place of issue

,date JUL 27, 2007



Seal and signature of applicant

mikes

| FCC/IC System Setup (Horizontal Antenna Mount Only) | | | | |
|---|------------------|---------------------------------|--|-----------------------|
| Counterpoint XI Deactivation Chassis w/ Antenna models: | Serial Number(s) | PSU | Max Tx Pwr Setting In DMS (Ant1, Ant2) | Frequency Band in DMS |
| Two 12"x12" antenna pads | | GT-2S5024D-R GT-2S5024D-R-ES | 31 | 8.2 |
| | | | 31 | 9.0(dual band) |
| | | | 31 | 9.5 |
| Two Sheet Deactivators | | GT-2S5024D-R GS 599ES(R) | 31 | 8.2 |
| | | | 31 | 9.0(dual band) |
| | | | 31 | 9.5 |
| One Sheet Deactivator + one 12"x12" antenna pad | | GT-2S5024D-R GS 599ES(R) | 31 | 8.2 |
| | | | 31 | 9.0(dual band) |
| | | | 31 | 9.5 |

| FCC/IC System Setup (Vertical Antenna Mount Only) | | | | |
|---|------------------|---------------------------------|--|-----------------------|
| Counterpoint XI Deactivation Chassis w/ Antenna models: | Serial Number(s) | PSU | Max Tx Pwr Setting In DMS (Ant1, Ant2) | Frequency Band in DMS |
| Two 12"x12" antenna pads | | GT-2S5024D-R GT-2S5024D-R-ES | 24 | 8.2 |
| | | | 24 | 9.0(dual band) |
| | | | 24 | 9.5 |
| Two Sheet Deactivators | | GT-2S5024D-R GS 599ES(R) | 24 | 8.2 |
| | | | 24 | 9.0(dual band) |
| | | | 24 | 9.5 |
| One Sheet Deactivator + one 12"x12" antenna pad | | GT-2S5024D-R GS 599ES(R) | 23 | 8.2 |
| | | | 23 | 9.0(dual band) |
| | | | 23 | 9.5 |

| Connected Cables | | | | | | | |
|-------------------|-------|--------------|-----------------------|------------------------------|--------------|------------------------------------|----------------------|
| Connector | Pin # | Wire Colour | Termination Resistors | Function | Cable Length | Supplier Part # | Termination Resistor |
| J72 (MAIN) | 1 | Green | R1/1 | People Counter Sensor | 2.4 m | Belden - 82723 plenum rated | 100Ohm |
| | 2 | Black | | | | | |
| | 3 | White | R1/2 | | | | |
| | 4 | Red | | | | | |
| J13 | 1 | Black | R1/1 | Metal Point | | Belden - 82723 plenum rated | 10KOhm |
| | 2 | Red | R1/2 | | | | |
| J6/J7/J54 | 1 | Green | R1/1 | Deactivator Interlock 4/3/2 | 2.4 m | Belden - 82723 plenum rated | 10KOhm |
| | 2 | White | R1/2 | Ext. Sounder 4 | | | 10KOhm |
| | 3 | Black | R2/1 | | | | |
| | 4 | Red | R2/2 | | | | |
| J20/J22 | 1 | Red | R1/1 | System Synchronization | 2.4 m | Belden - 82723 plenum rated | 100Ohm |
| | 2 | Black | R1/2 | | | | |
| | 3 | Ground | | | | | |
| J18 or J31 | | | | System Main Power | 0.3 m | from filter pcb | |
| J41 | 1 | white-blue | R1/1 | External Counter | 4.2 m | Olympic - 3804M5-6 plenum rated | 10KOhm |
| | 2 | blue | R1/2 | | | | 10KOhm |
| | 3 | ground | | External Alarm Lights | | | |
| | 4 | white-orange | R2/1 | | | | |
| | 5 | orange | R2/2 | | | | |
| J9 | 1 | white-blue | R1/1 | Alarm Group | 4.2 m | Olympic - 3804M5-6 plenum rated | 10KOhm |
| | 2 | blue | R1/2 | External Alarm Group | | | 10KOhm |
| | 3 | white-green | | | | | |
| | 4 | green+ground | R2/1 | | | | |
| | 5 | white-orange | R2/2 | | | | |
| | 6 | orange | | | | | |
| J44/J45 | 1 | white-blue | R1/1 | External Relay 0/1 | 4.2 m | Olympic - 3804M5-6 plenum rated | 10KOhm |
| | 2 | blue | R1/2 | | | | 10KOhm |
| | 3 | white-green | | | | | |
| | 4 | white-orange | R2/1 | | | | |
| | 5 | orange | R2/2 | | | | |
| | 6 | green+ground | | | | | |
| J10/J14 | 1 | red | R1/1 | Inter-system Network Com. | 2.4 m | Belden - 82723 plenum rated | 100Ohm |
| | 2 | white | R2/1 | | | | 100Ohm |
| | 3 | ground | | | | | |
| | 4 | black | R1/2 | | | | |
| | 5 | green | R2/2 | | | | |
| J7 | | | | Ethernet /LAN | 5 m | Cat5e | |