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## Test Report

for

Model: TT-3672B

to

**ETSI**

EN 300 328 V1.7.1

**Date Of Report:** May 30, 2008

**At the Request of:**

Thrane & Thrane A/S  
Lundtoftøgardsvej 93D  
DK-2800 Lyngby, Denmark

**Attention of:**

Morten Becker  
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Supervised By:

Hoosamuddin S. Bandukwala, Lab Director

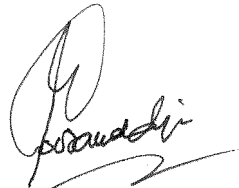
## Revision History

Revision	Date	Revised By	Reason for revision
1.0	May 30, 2008	J. Erhard	Original Document
2.0	June 16, 2008	J. Erhard	Correct typographical errors and titles on original report
3.0	June 19, 2008	J Erhard	Edit units for recorded values in EIRP spectral density

## Testimonial And Statement Of Certification

**This is to certify that:**

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

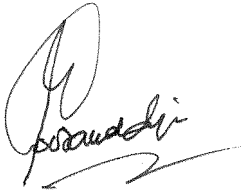


Certifying Engineer:

Hoosamuddin S. Bandukwala, Lab Director

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- a) **Test Report**
- b) Laboratory: Flom Test Lab, Inc.  
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107  
(Canada: IC 2044) Chandler, AZ 85225
- c) Report Number: d0850056
- d) Client: Thrane & Thrane A/S
- e) Identification: TT-3672B  
Description: Wireless VoIP Handset
- f) EUT Condition: Not required unless specified in individual tests.
- g) Report Date: May 30, 2008  
EUT Received:
- h, j, k): As indicated in individual tests.
- i) Sampling method: No sampling procedure used.
- l) Uncertainty: In accordance with FTL internal quality manual.
- m) Supervised by:
- 
- Hoosamuddin S. Bandukwala, Lab Director
- n) Results: The results presented in this report relate only to the item tested.
- o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

## List Of General Information Required For Certification

In Accordance with ETSI Rules and Regulations,

EN 300 328 V1.7.1

**Name and Address of Applicant::** Thrane & Thrane A/S

**Model Number:** TT-3672B

**Type of Emission:** DTS

**FREQUENCY RANGE, MHz:** 2412 - 2472

**Power Rating, W:** 231 uW  
 Switchable  Variable  N/A

**Antenna Requirement:**

- The antenna is permanently attached to the EUT
- The antenna uses a unique coupling
- The EUT must be professionally installed
- The antenna requirement does not apply

**The unit was tested with an F antenna with a gain of 2 dBi.**

## Test And Measurement Data

All tests and measurement data shown were performed in accordance with ETSI

EN 300-328 V1.7.1 Operation within bands 2400-2483.5 MHz (spread spectrum)

### Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with EN 300-328 V1.7.1 and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

### A2LA

“A2LA has accredited Flom Test Labs, Inc. Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 ‘General Requirements for the Competence of Testing and Calibration Laboratories’ and any additional program requirements in the identified field of testing.”

Please refer to [www.a2la.org](http://www.a2la.org) for current scope of accreditation.

Certificate number: 2152.01



### Test Results Summary

Specification	Test Name	Pass, Fail, N/A	Comments
4.3.1	Maximum Transmit Power	Pass	
4.3.2	Maximum EIRP Spectral Density	Pass	
4.3.3	Frequency Range	Pass	
4.3.6	Transmitter Spurious Emissions	Pass	
4.3.7	Receiver Spurious Emissions	Pass	



**Name of Test:** Maximum Transmit Power  
**Specification:** 4.3.1  
**Equipment used:** i00027, i00228, i00317

**Test Date: 5/23/2008**

### Test Procedure

The UUT was connected directly to a Spectrum. The peak readings were taken at extreme temperatures and voltages. The power readings, antenna gain, and duty cycle were input into the formula specified in EN 300-328 V1.7.1 section 5.7.2.2. The results were then compared to the limit.

#### BPSK 1 MBPs Maximum Transmit Power Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Measurement dBm	Specification Limit	Result
2412	-10	-8.92	20 dBm	Pass
2442	-10	-9.22	20 dBm	Pass
2472	-10	-9.22	20 dBm	Pass
2412	25	-10.10	20 dBm	Pass
2442	25	-10.79	20 dBm	Pass
2472	25	-11.11	20 dBm	Pass
2412	45	-9.32	20 dBm	Pass
2442	45	-10.52	20 dBm	Pass
2472	45	-10.32	20 dBm	Pass

#### BPSK 1 MBPs Maximum Transmit Power Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Measurement dBm	Specification Limit	Result
2412	207	-10.10	20 dBm	Pass
2442	207	-10.79	20 dBm	Pass
2472	207	-11.11	20 dBm	Pass
2412	230	-10.10	20 dBm	Pass
2442	230	-10.79	20 dBm	Pass
2472	230	-11.11	20 dBm	Pass
2412	253	-10.10	20 dBm	Pass
2442	253	-10.79	20 dBm	Pass
2472	253	-11.11	20 dBm	Pass

#### BPSK 1 MBPs Maximum Transmit Power Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Measurement dBm	Specification Limit	Result
2412	10.5	-10.10	20 dBm	Pass
2442	10.5	-10.79	20 dBm	Pass
2472	10.5	-11.11	20 dBm	Pass
2412	24	-10.10	20 dBm	Pass
2442	24	-10.79	20 dBm	Pass
2472	24	-11.11	20 dBm	Pass
2412	32	-10.10	20 dBm	Pass
2442	32	-10.79	20 dBm	Pass
2472	32	-11.11	20 dBm	Pass

### BPSK 1 MBPs Maximum Transmit Power Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Measurement dBm	Specification Limit	Result
2412	3.145	-9.40	20 dBm	Pass
2442	3.145	-10.21	20 dBm	Pass
2472	3.145	-12.16	20 dBm	Pass
2412	3.7	-10.82	20 dBm	Pass
2442	3.7	-11.31	20 dBm	Pass
2472	3.7	-11.45	20 dBm	Pass
2412	4.255	-11.07	20 dBm	Pass
2442	4.255	-11.44	20 dBm	Pass
2472	4.255	-11.91	20 dBm	Pass

### QPSK 11 MBPs Maximum Transmit Power Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Measurement dBm	Specification Limit	Result
2412	-10	-6.36	20 dBm	Pass
2442	-10	-7.33	20 dBm	Pass
2472	-10	-7.68	20 dBm	Pass
2412	25	-7.68	20 dBm	Pass
2442	25	-8.65	20 dBm	Pass
2472	25	-8.51	20 dBm	Pass
2412	45	-7.58	20 dBm	Pass
2442	45	-8.98	20 dBm	Pass
2472	45	-8.58	20 dBm	Pass

### QPSK 11 MBPs Maximum Transmit Power Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Measurement dBm	Specification Limit	Result
2412	207	-7.68	20 dBm	Pass
2442	207	-8.65	20 dBm	Pass
2472	207	-8.51	20 dBm	Pass
2412	230	-7.68	20 dBm	Pass
2442	230	-8.65	20 dBm	Pass
2472	230	-8.51	20 dBm	Pass
2412	253	-7.68	20 dBm	Pass
2442	253	-8.65	20 dBm	Pass
2472	253	-8.51	20 dBm	Pass

### QPSK 11 MBPs Maximum Transmit Power Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Measurement dBm	Specification Limit	Result
2412	10.5	-7.68	20 dBm	Pass
2442	10.5	-8.65	20 dBm	Pass
2472	10.5	-8.51	20 dBm	Pass
2412	24	-7.68	20 dBm	Pass
2442	24	-8.65	20 dBm	Pass
2472	24	-8.51	20 dBm	Pass
2412	32	-7.68	20 dBm	Pass
2442	32	-8.65	20 dBm	Pass
2472	32	-8.51	20 dBm	Pass

### QPSK 11 MBPs Maximum Transmit Power Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Measurement dBm	Specification Limit	Result
2412	3.145	-9.18	20 dBm	Pass
2442	3.145	-9.88	20 dBm	Pass
2472	3.145	-10.91	20 dBm	Pass
2412	3.7	-9.05	20 dBm	Pass
2442	3.7	-9.82	20 dBm	Pass
2472	3.7	-11.16	20 dBm	Pass
2412	4.255	-8.99	20 dBm	Pass
2442	4.255	-10.66	20 dBm	Pass
2472	4.255	-10.21	20 dBm	Pass

### BPSK 6 MBPs Maximum Transmit Power Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Measurement dBm	Specification Limit	Result
2412	-10	-12.29	20 dBm	Pass
2442	-10	-13.87	20 dBm	Pass
2472	-10	-13.59	20 dBm	Pass
2412	25	-13.64	20 dBm	Pass
2442	25	-15.21	20 dBm	Pass
2472	25	-14.94	20 dBm	Pass
2412	45	-13.59	20 dBm	Pass
2442	45	-15.29	20 dBm	Pass
2472	45	-15.29	20 dBm	Pass

### BPSK 6 MBPs Maximum Transmit Power Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Measurement dBm	Specification Limit	Result
2412	207	-13.64	20 dBm	Pass
2442	207	-15.21	20 dBm	Pass
2472	207	-14.94	20 dBm	Pass
2412	230	-13.64	20 dBm	Pass
2442	230	-15.21	20 dBm	Pass
2472	230	-14.94	20 dBm	Pass
2412	253	-13.64	20 dBm	Pass
2442	253	-15.21	20 dBm	Pass
2472	253	-14.94	20 dBm	Pass

### BPSK 6 MBPs Maximum Transmit Power Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Measurement dBm	Specification Limit	Result
2412	10.5	-13.64	20 dBm	Pass
2442	10.5	-15.21	20 dBm	Pass
2472	10.5	-14.94	20 dBm	Pass
2412	24	-13.64	20 dBm	Pass
2442	24	-15.21	20 dBm	Pass
2472	24	-14.94	20 dBm	Pass
2412	32	-13.64	20 dBm	Pass
2442	32	-15.21	20 dBm	Pass
2472	32	-14.94	20 dBm	Pass

### BPSK 6 MBPs Maximum Transmit Power Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Measurement dBm	Specification Limit	Result
2412	3.145	-13.89	20 dBm	Pass
2442	3.145	-15.20	20 dBm	Pass
2472	3.145	-16.16	20 dBm	Pass
2412	3.7	-14.47	20 dBm	Pass
2442	3.7	-15.35	20 dBm	Pass
2472	3.7	-16.01	20 dBm	Pass
2412	4.255	-14.53	20 dBm	Pass
2442	4.255	-16.05	20 dBm	Pass
2472	4.255	-16.06	20 dBm	Pass

### 64QAM 54 MBPs Maximum Transmit Power Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Measurement dBm	Specification Limit	Result
2412	-10	-7.17	20 dBm	Pass
2442	-10	-9.30	20 dBm	Pass
2472	-10	-9.07	20 dBm	Pass
2412	25	-8.49	20 dBm	Pass
2442	25	-9.29	20 dBm	Pass
2472	25	-9.46	20 dBm	Pass
2412	45	-7.37	20 dBm	Pass
2442	45	-9.87	20 dBm	Pass
2472	45	-9.97	20 dBm	Pass

### 64QAM 54 MBPs Maximum Transmit Power Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Measurement dBm	Specification Limit	Result
2412	207	-8.49	20 dBm	Pass
2442	207	-9.29	20 dBm	Pass
2472	207	-9.46	20 dBm	Pass
2412	230	-8.49	20 dBm	Pass
2442	230	-9.29	20 dBm	Pass
2472	230	-9.46	20 dBm	Pass
2412	253	-8.49	20 dBm	Pass
2442	253	-9.29	20 dBm	Pass
2472	253	-9.46	20 dBm	Pass

### 64QAM 54 MBPs Maximum Transmit Power Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Measurement dBm	Specification Limit	Result
2412	10.5	-8.49	20 dBm	Pass
2442	10.5	-9.29	20 dBm	Pass
2472	10.5	-9.46	20 dBm	Pass
2412	24	-8.49	20 dBm	Pass
2442	24	-9.29	20 dBm	Pass
2472	24	-9.46	20 dBm	Pass
2412	32	-8.49	20 dBm	Pass
2442	32	-9.29	20 dBm	Pass
2472	32	-9.46	20 dBm	Pass

### 64QAM 54 MBPs Maximum Transmit Power Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Measurement dBm	Specification Limit	Result
2412	3.145	-9.17	20 dBm	Pass
2442	3.145	-10.48	20 dBm	Pass
2472	3.145	-11.44	20 dBm	Pass
2412	3.7	-9.75	20 dBm	Pass
2442	3.7	-10.63	20 dBm	Pass
2472	3.7	-11.29	20 dBm	Pass
2412	4.255	-8.95	20 dBm	Pass
2442	4.255	-10.17	20 dBm	Pass
2472	4.255	-11.28	20 dBm	Pass

**Name of Test:** Maximum EIRP Spectral Density  
**Specification:** 4.3.2  
**Equipment Used:** i00290

**Test Date: 5/22/2008**

### Test Procedure

The UUT was connected directly to a spectrum analyzer to verify that the UUT met the requirements for Maximum EIRP Spectral Density at the low, mid, and high frequencies. The procedure in EN 300-328 V1.7.1 5.7.3.1 was utilized.

#### BPSK 1 MBPs Maximum EIRP Spectral Density

Tuned Frequency MHz	Recorded Measurement	Specification Limit	Result
2412	-9.92 dBm/MHz	10 mW/MHz	Pass
2442	-10.62 dBm /MHz	10 mW/MHz	Pass
2472	-10.42 dBm /MHz	10 mW/MHz	Pass

#### QPSK 11 MBPs Maximum EIRP Spectral Density

Tuned Frequency MHz	Recorded Measurement	Specification Limit	Result
2412	-10.98 dBm /MHz	10 mW/MHz	Pass
2442	-10.58 dBm /MHz	10 mW/MHz	Pass
2472	-10.78 dBm /MHz	10 mW/MHz	Pass

#### BPSK 6 MBPs Maximum EIRP Spectral Density

Tuned Frequency MHz	Recorded Measurement	Specification Limit	Result
2412	-16.19 dBm /MHz	10 mW/MHz	Pass
2442	-16.49 dBm /MHz	10 mW/MHz	Pass
2472	-16.79 dBm /MHz	10 mW/MHz	Pass

#### 64QAM 54 MBPs Maximum EIRP Spectral Density

Tuned Frequency MHz	Recorded Measurement	Specification Limit	Result
2412	-14.47 dBm /MHz	10 mW/MHz	Pass
2442	-11.37 dBm /MHz	10 mW/MHz	Pass
2472	-12.37 dBm /MHz	10 mW/MHz	Pass

**Name of Test:** Frequency Range  
**Specification:** 4.3.3  
**Equipment Used:** i00027, i00290

**Test Date:** 5/23/2008

### Test Procedure

The UUT was connected directly to a spectrum analyzer and frequency measurements were taken at extreme temperatures and voltages. The results were then compared to the limit. The procedure in EN 300-328 V1.7.1 5.7.4 was utilized.

#### BPSK 1 MBPs Frequency Range Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Frequency MHz	Specification Limit MHz	Result
2412	-10	2402.2	>2400	Pass
2472	-10	2483.0	<2483.5	Pass
2412	25	2400.1	>2400	Pass
2472	25	2481.7	<2483.5	Pass
2412	45	2402.2	>2400	Pass
2472	45	2481.7	<2483.5	Pass

#### BPSK 1 MBPs Frequency Range Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	207	2400.1	>2400	Pass
2472	207	2481.7	<2483.5	Pass
2412	230	2400.1	>2400	Pass
2472	230	2481.7	<2483.5	Pass
2412	253	2400.1	>2400	Pass
2472	253	2481.7	<2483.5	Pass

#### BPSK 1 MBPs Frequency Range Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	10.5	2400.1	>2400	Pass
2472	10.5	2481.7	<2483.5	Pass
2412	24	2400.1	>2400	Pass
2472	24	2481.7	<2483.5	Pass
2412	32	2400.1	>2400	Pass
2472	32	2481.7	<2483.5	Pass

#### BPSK 1 MBPs Frequency Range Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	3.145	2400.1	>2400	Pass
2472	3.145	2481.7	<2483.5	Pass
2412	3.7	2400.1	>2400	Pass
2472	3.7	2481.7	<2483.5	Pass
2412	4.255	2400.1	>2400	Pass
2472	4.255	2481.7	<2483.5	Pass



### QPSK 11 MBPs Frequency Range Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Frequency MHz	Specification Limit MHz	Result
2412	-10	2402.2	>2400	Pass
2472	-10	2483.0	<2483.5	Pass
2412	25	2400.1	>2400	Pass
2472	25	2481.7	<2483.5	Pass
2412	45	2402.2	>2400	Pass
2472	45	2481.7	<2483.5	Pass

### QPSK 11 MBPs Frequency Range Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	207	2400.1	>2400	Pass
2472	207	2481.7	<2483.5	Pass
2412	230	2400.1	>2400	Pass
2472	230	2481.7	<2483.5	Pass
2412	253	2400.1	>2400	Pass
2472	253	2481.7	<2483.5	Pass

### QPSK 11 MBPs Frequency Range Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	10.5	2400.1	>2400	Pass
2472	10.5	2481.7	<2483.5	Pass
2412	24	2400.1	>2400	Pass
2472	24	2481.7	<2483.5	Pass
2412	32	2400.1	>2400	Pass
2472	32	2481.7	<2483.5	Pass

### QPSK 11 MBPs Frequency Range Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	3.145	2400.1	>2400	Pass
2472	3.145	2481.7	<2483.5	Pass
2412	3.7	2400.1	>2400	Pass
2472	3.7	2481.7	<2483.5	Pass
2412	4.255	2400.1	>2400	Pass
2472	4.255	2481.7	<2483.5	Pass

### BPSK 6 MBPs Frequency Range Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Frequency MHz	Specification Limit MHz	Result
2412	-10	2402.7	>2400	Pass
2472	-10	2481.2	<2483.5	Pass
2412	25	2402.5	>2400	Pass
2472	25	2481.1	<2483.5	Pass
2412	45	2402.8	>2400	Pass
2472	45	2480.9	<2483.5	Pass

### BPSK 6 MBPs Frequency Range Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	207	2402.5	>2400	Pass
2472	207	2481.1	<2483.5	Pass
2412	230	2402.5	>2400	Pass
2472	230	2481.1	<2483.5	Pass
2412	253	2402.5	>2400	Pass
2472	253	2481.1	<2483.5	Pass

### BPSK 6 MBPs Frequency Range Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	10.5	2402.5	>2400	Pass
2472	10.5	2481.1	<2483.5	Pass
2412	24	2402.5	>2400	Pass
2472	24	2481.1	<2483.5	Pass
2412	32	2402.5	>2400	Pass
2472	32	2481.1	<2483.5	Pass

### BPSK 6 MBPs Frequency Range Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	3.145	2402.5	>2400	Pass
2472	3.145	2481.1	<2483.5	Pass
2412	3.7	2402.5	>2400	Pass
2472	3.7	2481.1	<2483.5	Pass
2412	4.255	2402.5	>2400	Pass
2472	4.255	2481.1	<2483.5	Pass

### 64QAM 54 MBPs Frequency Range Extreme Temperature

Tuned Frequency MHz	Temperature Deg. C	Recorded Frequency MHz	Specification Limit MHz	Result
2412	-10	2402.7	>2400	Pass
2472	-10	2482.8	<2483.5	Pass
2412	25	2402.8	>2400	Pass
2472	25	2481.1	<2483.5	Pass
2412	45	2402.8	>2400	Pass
2472	45	2402.8	<2483.5	Pass

### 64QAM 54 MBPs Frequency Range Extreme Voltage AC

Tuned Frequency MHz	Voltage AC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	207	2402.8	>2400	Pass
2472	207	2481.1	<2483.5	Pass
2412	230	2402.8	>2400	Pass
2472	230	2481.1	<2483.5	Pass
2412	253	2402.8	>2400	Pass
2472	253	2481.1	<2483.5	Pass

### 64QAM 54 MBPs Frequency Range Extreme Voltage DC

Tuned Frequency MHz	Voltage DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	10.5	2402.8	>2400	Pass
2472	10.5	2481.1	<2483.5	Pass
2412	24	2402.8	>2400	Pass
2472	24	2481.1	<2483.5	Pass
2412	32	2402.8	>2400	Pass
2472	32	2481.1	<2483.5	Pass

### 64QAM 54 MBPs Frequency Range Extreme Voltage Battery

Tuned Frequency MHz	Voltage Battery DC	Recorded Frequency MHz	Specification Limit MHz	Result
2412	3.145	2402.8	>2400	Pass
2472	3.145	2481.1	<2483.5	Pass
2412	3.7	2402.8	>2400	Pass
2472	3.7	2481.1	<2483.5	Pass
2412	4.255	2402.8	>2400	Pass
2472	4.255	2481.1	<2483.5	Pass

**Name of Test:** Transmitter Spurious Emissions  
**Specification:** 4.3.6  
**Equipment Used:** i00290

**Test Date:** 5/22/2008

**Test Procedure**

The UUT was connected directly to a spectrum analyzer. The peak conducted spurious emissions were measured in both standby and operation modes for the frequencies indicated. The highest result was recorded in the test results tables. The procedure in EN 300-328 V1.7.1 5.7.5 was utilized. Only the worst-case emission (QAM 54 MBPs) is plotted and reported.

**Transmitter Spurious Emissions Test Table 2412 MHz**

Frequency Range MHz	Operating Limit	Recorded Measurement	Result
30 MHz – 1 GHz	-36 dBm	-60.67 dBm	Pass
1 GHz – 12.75 GHz	-30 dBm	-62.07 dBm	Pass
1.8 GHz – 1.9 GHz	-47 dBm	No Emissions Detected	Pass
5.15 GHz – 5.3 GHz	-47 dBm	No Emissions Detected	Pass

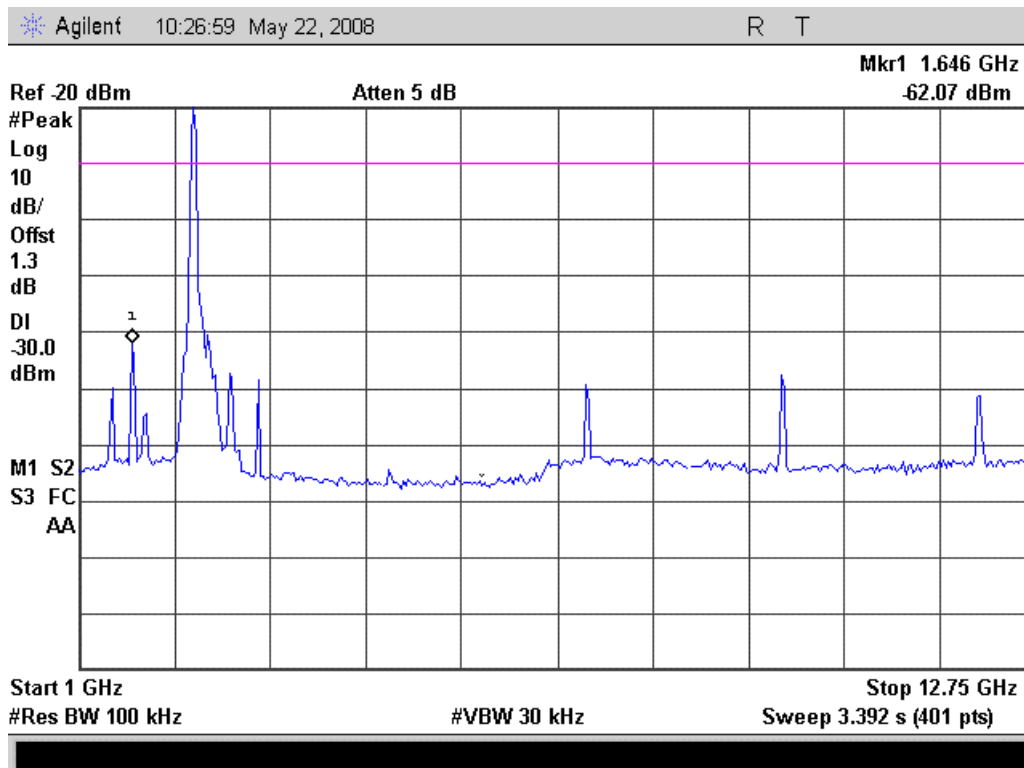
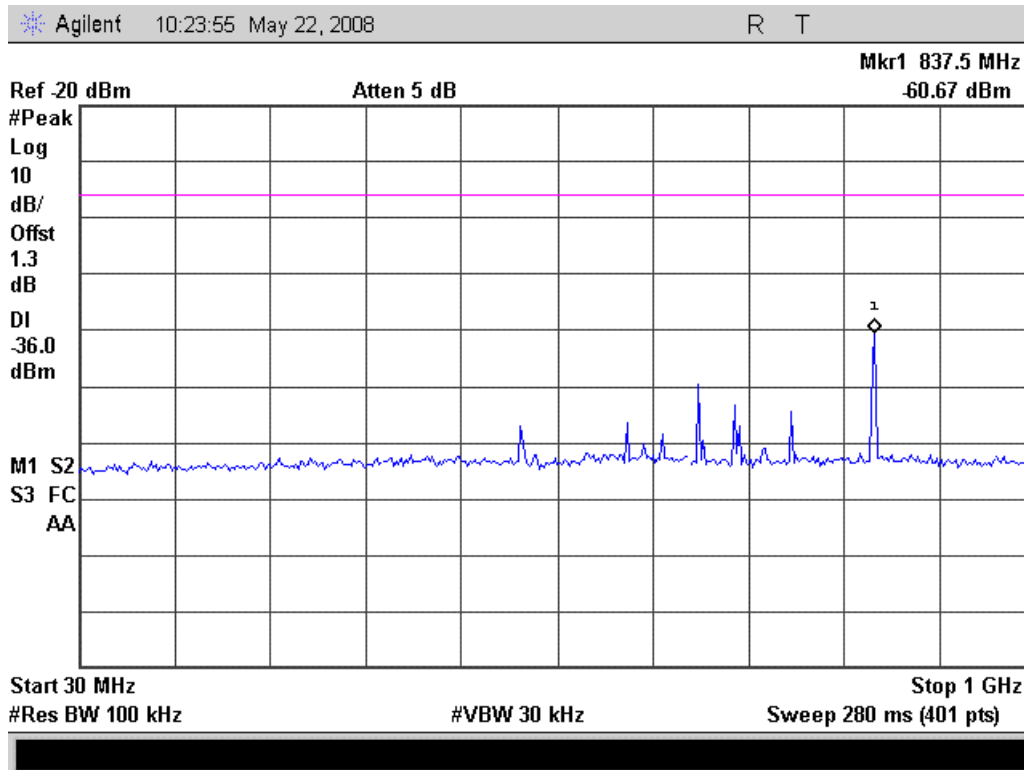
**Transmitter Spurious Emissions Test Table 2472 MHz**

Frequency Range MHz	Operating Limit	Recorded Measurement	Result
30 MHz – 1 GHz	-36 dBm	-56.20 dBm	Pass
1 GHz – 12.75 GHz	-30 dBm	-61.79 dBm	Pass
1.8 GHz – 1.9 GHz	-47 dBm	No Emissions Detected	Pass
5.15 GHz – 5.3 GHz	-47 dBm	No Emissions Detected	Pass

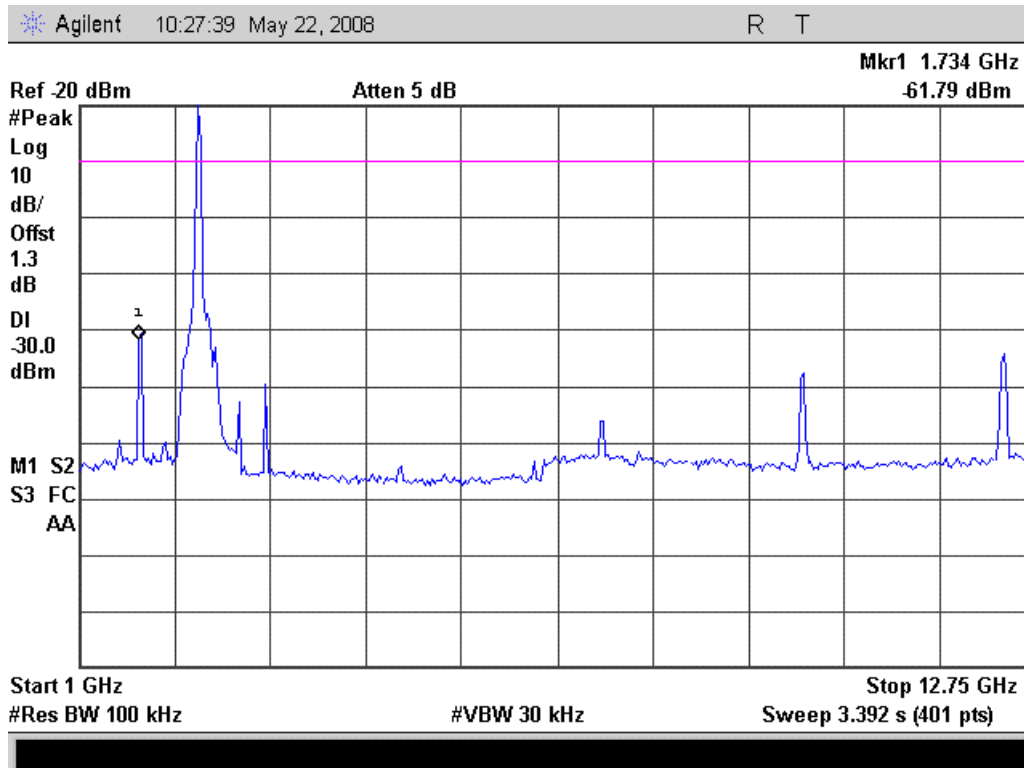
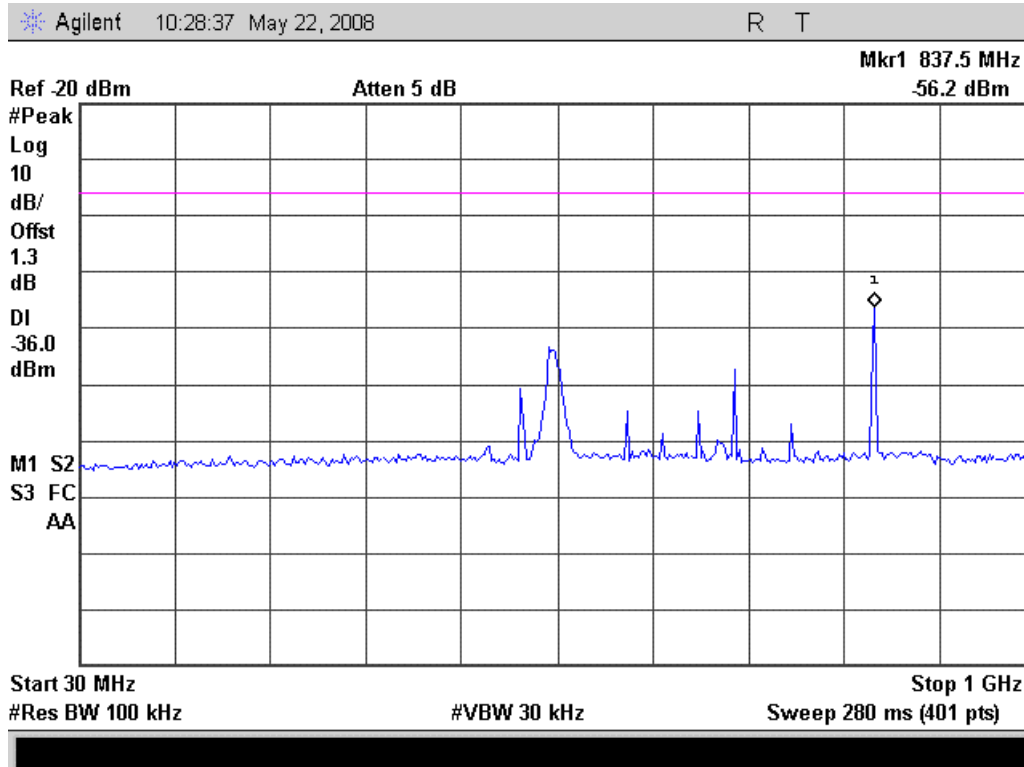
**Transmitter Spurious Emissions Standby Test Table**

Frequency Range MHz	Standby Limit	Recorded Measurement	Result
30 MHz – 1 GHz	-57 dBm	-67.50 dBm	Pass
1 GHz – 12.75 GHz	-47 dBm	No Emissions Detected	Pass
1.8 GHz – 1.9 GHz	-47 dBm	No Emissions Detected	Pass
5.15 GHz – 5.3 GHz	-47 dBm	No Emissions Detected	Pass

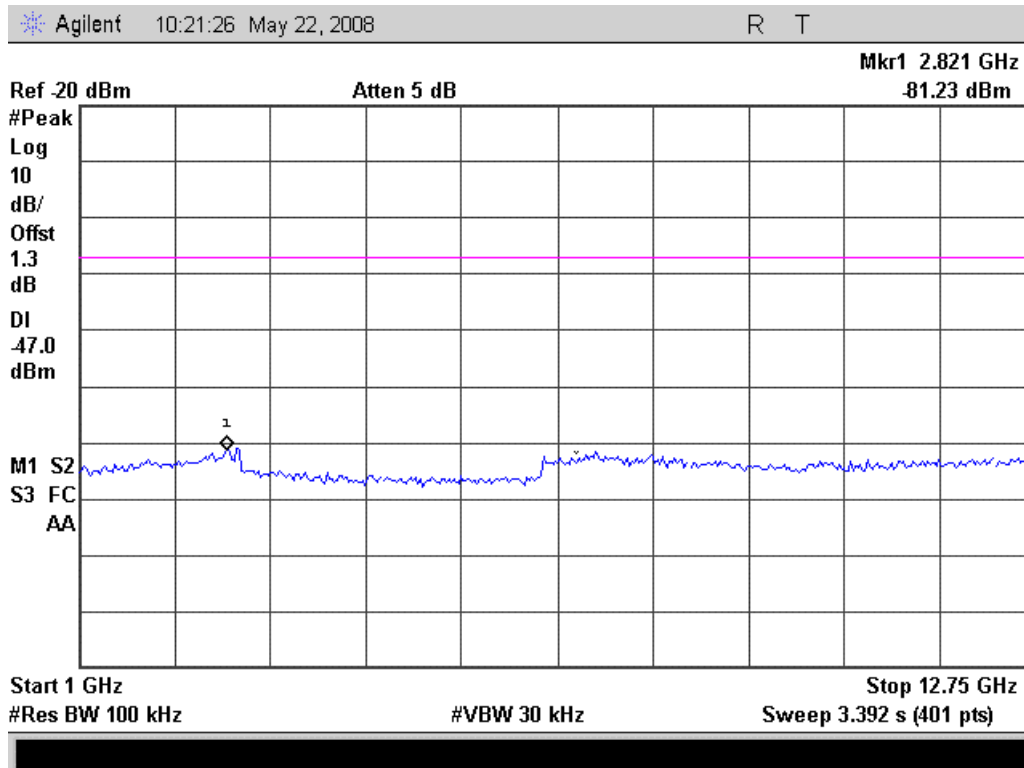
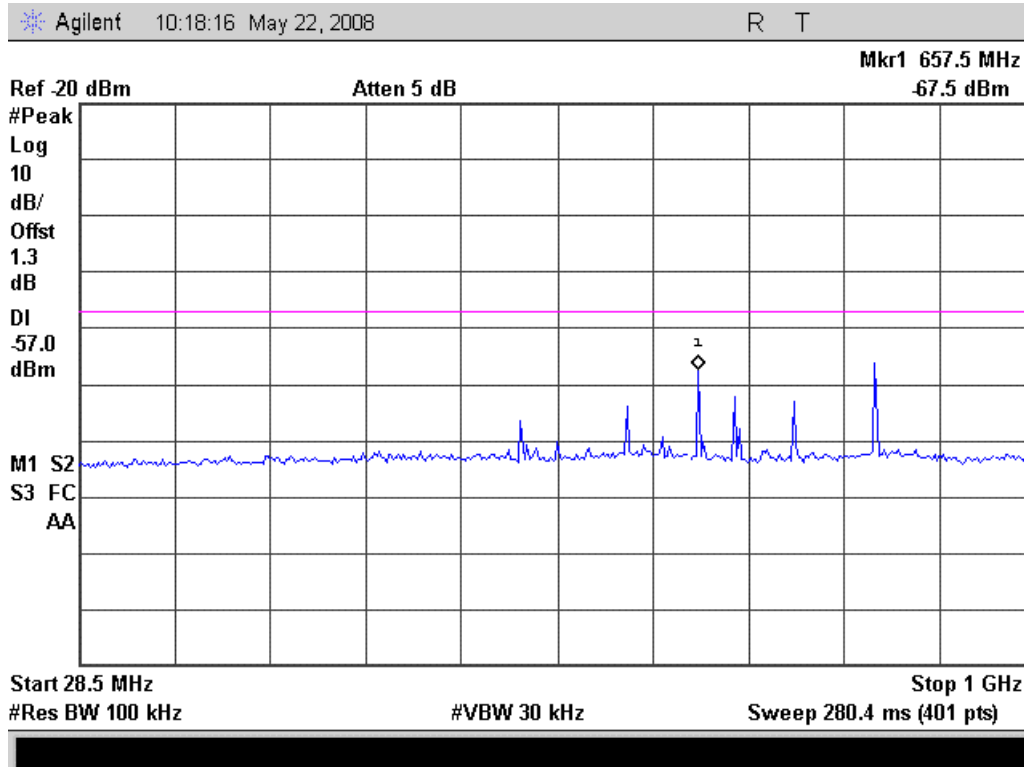
### Transmitter Spurious Emissions Test Table 2412 MHz



### Transmitter Spurious Emissions Test Plots 2472 MHz



### Transmitter Spurious Emissions Standby Plots



**Name of Test:** Receiver Spurious Emissions  
**Specification:** 4.3.7  
**Equipment Used:** i00290

**Test Date:** 5/22/2008

**Test Procedure**

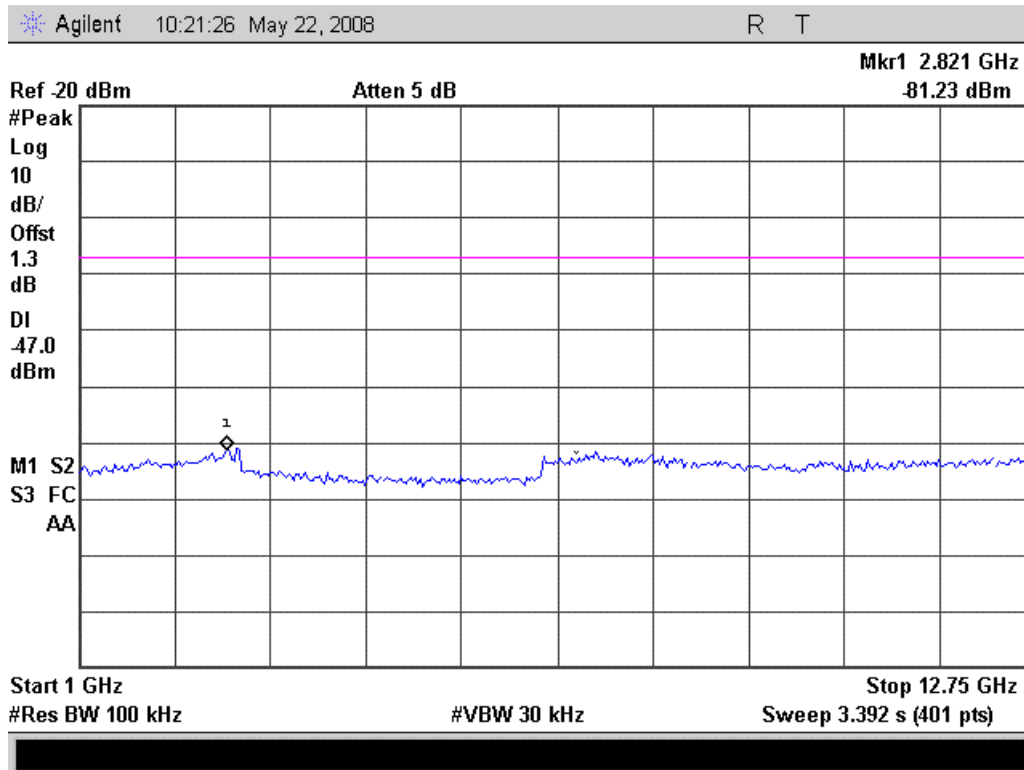
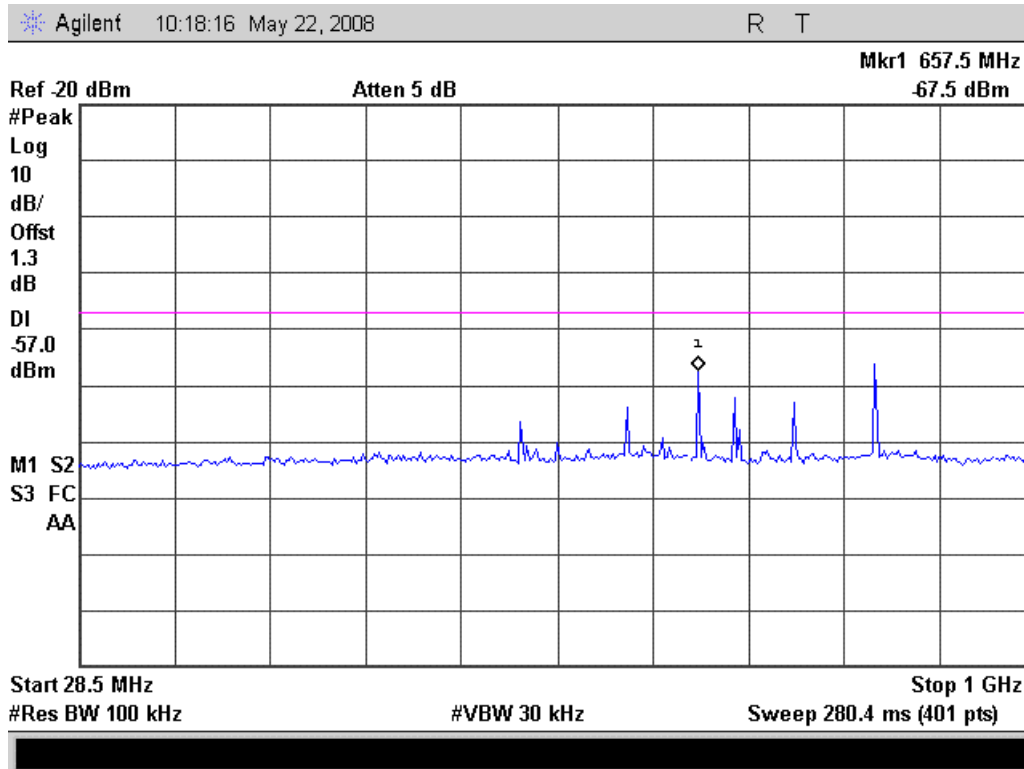
The UUT was connected directly to a spectrum analyzer. The peak spurious in the indicated bands were measured and tested in accordance to procedure 5.7.5 in EN 300-328 V1.7.1 5.7.5 to determine if the spurious were narrow or wideband. The highest result was recorded in the test results tables.

**Receiver Spurious Emissions Test Table**

Frequency Range MHz	Narrowband Limit	Recorded Measurement	Result
30 MHz – 1 GHz	-57 dBm	-67.50	Pass
1 GHz – 12.75 GHz	-47 dBm	No Emissions detected	Pass



### Receiver Spurious Emissions Plots



### Test Equipment Utilized

Description	MFG	Model Number	FTL Asset #	Last Cal Date	Cal Due Date
DC Power Supply	HP	6634A	i00004	N/A	N/A
Temp Test Chamber	Tenney	JR	i00027	9/25/07	9/25/08
Variable AC Source	Powerstat	3PN120	i00108	N/A	N/A
Spectrum Analyzer	HP	E4407B	i00331	10/23/07	10/23/08
Step-up Transformer	Jefferson Electric	J8110	i00338	N/A	N/A

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation. END OF TEST REPORT