



# FCC Test Report

## FCC Part 15.247 for FHSS systems/ CANADA RSS-210

Tablet PC with BT QBTM300

MODEL #: iX104C3

XPLORE TECHNOLOGIES, INC.  
14000 SUMMIT RD. SUITE 900  
AUSTIN, TEXAS 78728  
U.S.A

FCC ID: Q2GIX104-150 and Q2GIX104-154  
IC ID: IC 4596A-IX104WBG

TEST REPORT #: EMC\_XPLOR\_006\_06002\_15.247BT  
Date: 09/08/2006



FCC listed#  
101450  
IC recognized #  
3925

### **CETECOM Inc.**

411 Dixon Landing Road • Milpitas, CA 95035 • U.S.A.

Phone: + 1 (408) 586 6200 • Fax: + 1 (408) 586 6299 • E-mail: [info@cetecomusa.com](mailto:info@cetecomusa.com) • <http://www.cetecom.com>

CETECOM Inc. is a Delaware Corporation with Corporation number: 2113686

Board of Directors: Dr. Harald Ansorge, Dr. Klaus Matkey, Hans Peter May



## **TABLE OF CONTENTS**

<b>1</b>	<b>Assessment</b>	<b>3</b>
<b>2</b>	<b>Administrative Data</b>	<b>4</b>
2.1	<b>Identification of the Testing Laboratory Issuing the EMC Test Report</b>	<b>4</b>
2.2	<b>Identification of the Client</b>	<b>4</b>
2.3	<b>Identification of the Manufacturer</b>	<b>4</b>
<b>3</b>	<b>Equipment under Test (EUT)</b>	<b>5</b>
3.1	<b>Specification of the Equipment under Test</b>	<b>5</b>
3.2	<b>Identification of the Equipment Under Test (EUT)</b>	<b>5</b>
3.3	<b>Identification of Accessory equipment</b>	<b>5</b>
3.4	<b>EUT Setup</b>	<b>6</b>
3.5	<b>EUT operating mode</b>	<b>6</b>
<b>4</b>	<b>Subject Of Investigation</b>	<b>6</b>
<b>5</b>	<b>Measurements</b>	<b>7</b>
5.1	<b>MAXIMUM PEAK OUTPUT POWER § 15.247 (RADIATED)</b>	<b>7</b>
5.1.1	LIMIT SUB CLAUSE § 15.247 (b) (1) (2) (3) (4)	7
5.1.2	EIRP:	7
5.2	<b>RESTRICTED BAND EDGE COMPLIANCE RADIATED §15.247/15.205</b>	<b>11</b>
5.2.1	LIMITS	11
5.2.2	RESULTS (2402MHz)	12
5.2.3	RESULTS (2480MHz)	14
5.3	<b>TRANSMITTER SPURIOUS EMISSIONS RADIATED § 15.247/15.205/15.209</b>	<b>16</b>
5.3.1	LIMITS	16
5.3.2	RESULTS	17
5.4	<b>RECEIVER SPURIOUS RADIATION § 15.209/RSS210</b>	<b>26</b>
5.4.1	LIMITS	26
5.4.2	RESULTS	27
5.5	<b>AC POWER LINE CONDUCTED EMISSIONS § 15.107/207</b>	<b>31</b>
5.5.1	LIMITS	31
5.5.2	RESULTS	32
<b>6</b>	<b>TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS</b>	<b>33</b>
<b>7</b>	<b>BLOCK DIAGRAMS</b>	<b>34</b>



## 1 Assessment

The following is in compliance with the applicable criteria specified in FCC rules Part 15.247 of the Code of Federal Regulations and in compliance with the applicable criteria specified in Industry Canada rules RSS210.

Company	Description	Model #
XPLORE TECHNOLOGIES, INC.	Tablet PC with BT QBTM300	iX104C3

A handwritten signature in black ink that reads "Michael Grings". The signature is written in a cursive style with a large, stylized "G" at the end.

---

Michael Grings  
Project Engineer

The test results of this test report relate exclusively to the test item specified in Identification of the Equipment under Test. The CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM Inc USA.



## 2 Administrative Data

### 2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

Company Name:	<b>CETECOM Inc.</b>
Department:	<b>EMC</b>
Address:	<b>411 Dixon Landing Road Milpitas, CA 95035 U.S.A.</b>
Telephone:	<b>+1 (408) 586 6200</b>
Fax:	<b>+1 (408) 586 6299</b>
Responsible Test Lab Manager:	<b>Lothar Schmidt</b>
Responsible Project Leader:	<b>Michael Grings</b>
Date of test:	<b>8/24/2006 to 8/28/2006</b>

### 2.2 Identification of the Client

Applicant's Name:	<b>XPLORE TECHNOLOGIES, INC.</b>
Street Address:	<b>14000 SUMMIT RD, SUITE 900</b>
City/Zip Code	<b>AUSTIN, TEXAS 78728</b>
Country	<b>U.S.A</b>
Contact Person:	<b>Tom Lavka</b>
Phone No.	<b>512.485.7984</b>
Fax:	<b>512.336.7791</b>
e-mail:	<b>tlavka@xploretech.com</b>

### 2.3 Identification of the Manufacturer

Manufacturer's Name:	<b>XPLORE TECHNOLOGIES, INC.</b>
Manufacturers Address:	<b>14000 SUMMIT RD, SUITE 900</b>
City/Zip Code	<b>AUSTIN, TEXAS 78728</b>
Country	<b>U.S.A</b>



### 3 Equipment under Test (EUT)

#### 3.1 Specification of the Equipment under Test

Marketing Name:	<b>iX104C3</b>
Description:	<b>Tablet PC with BT Module QBTM300</b>
Model No:	<b>C3</b>
FCC ID:	<b>Q2GIX104-150 and Q2GIX104-154</b>
IC ID:	<b>IC 4596A-IX104WBG</b>
Frequency Range:	<b>2400-2483.5MHz</b>
Type(s) of Modulation:	<b>GFSK</b>
Number of Channels:	<b>79</b>
Antenna Type:	<b>PCB antenna</b>
Output Power:	<b>0.000148 W EIRP@ 2402 MHz</b>

#### 3.2 Identification of the Equipment Under Test (EUT)

<b>EUT #</b>	<b>TYPE</b>	<b>MANF.</b>	<b>MODEL</b>	<b>SERIAL #</b>
1	Tablet PC	Xplore Technologies	iX104C3 (conducted)	UNIT 1
2	Tablet PC	Xplore Technologies	iX104C3 (conducted)	UNIT 2

#### 3.3 Identification of Accessory equipment

<b>AE #</b>	<b>TYPE</b>	<b>MANF.</b>	<b>MODEL</b>	<b>SERIAL #</b>
1	AC/DC ADAPTER	Delta Electronics Incorporation	SADP65KB D	92W0546007789
2	AC/DC ADAPTER	Delta Electronics Incorporation	SADP65KB D	92W0546008016



**3.4 EUT Setup**

The following setup(s) were used for testing.

EUT set-up no.	Combination of EUT and AE	Comments
<i>Setup# 1</i>	EUT1 +AE1	Tablet PC with AC Adapter
<i>Setup# 2</i>	EUT2 +AE2	Tablet PC with AC Adapter

**3.5 EUT operating mode**

EUT operating mode no. *)	Description of operating modes	Additional information
<i>op. 1</i>	Transmit (Tx)	Transmit with maximum power on dedicated Channels
<i>op. 2</i>	Receive (Rx)	Receive mode

**4 Subject Of Investigation**

All testing was performed on the iX104C3 referred to as EUT. The EUT carries a pre-certified Bluetooth module with FCC ID# RUJ-QBTM300. This test report contains full radiated testing as per FCC15.247 on the EUT with the pre-certified Bluetooth module. All conducted measurements are covered under Report No.: RF940316L02.

During the testing process the EUT was tested on a single channel using PRBS9 payload using DH5 packets, all data in this report shows the worst case between horizontal and vertical polarization for above 1GHz.

The objective of the measurements done by Cetecom Inc. was to measure the performance of the EUT as specified by requirements listed in FCC rules Part 15.247 of Title 47 of the Code of Federal Regulations and Industry Canada rules RSS210.



## 5 Measurements

### 5.1 MAXIMUM PEAK OUTPUT POWER § 15.247 (RADIATED)

#### 5.1.1 LIMIT SUB CLAUSE § 15.247 (b) (1) (2) (3) (4)

Frequency range	RF power output
2400-2483.5 MHz	36dBm EIRP

\*limit is based upon antenna gain of less than or equal to 6dBi.

#### 5.1.2 EIRP:

TEST CONDITIONS		MAXIMUM PEAK OUTPUT POWER (dBm)		
Frequency (MHz)		2402	2441	2480
T <sub>nom</sub> (23)°C	V <sub>nom</sub> VDC	-8.31	-9.49	-10.00
Measurement uncertainty		±0.5dBm		



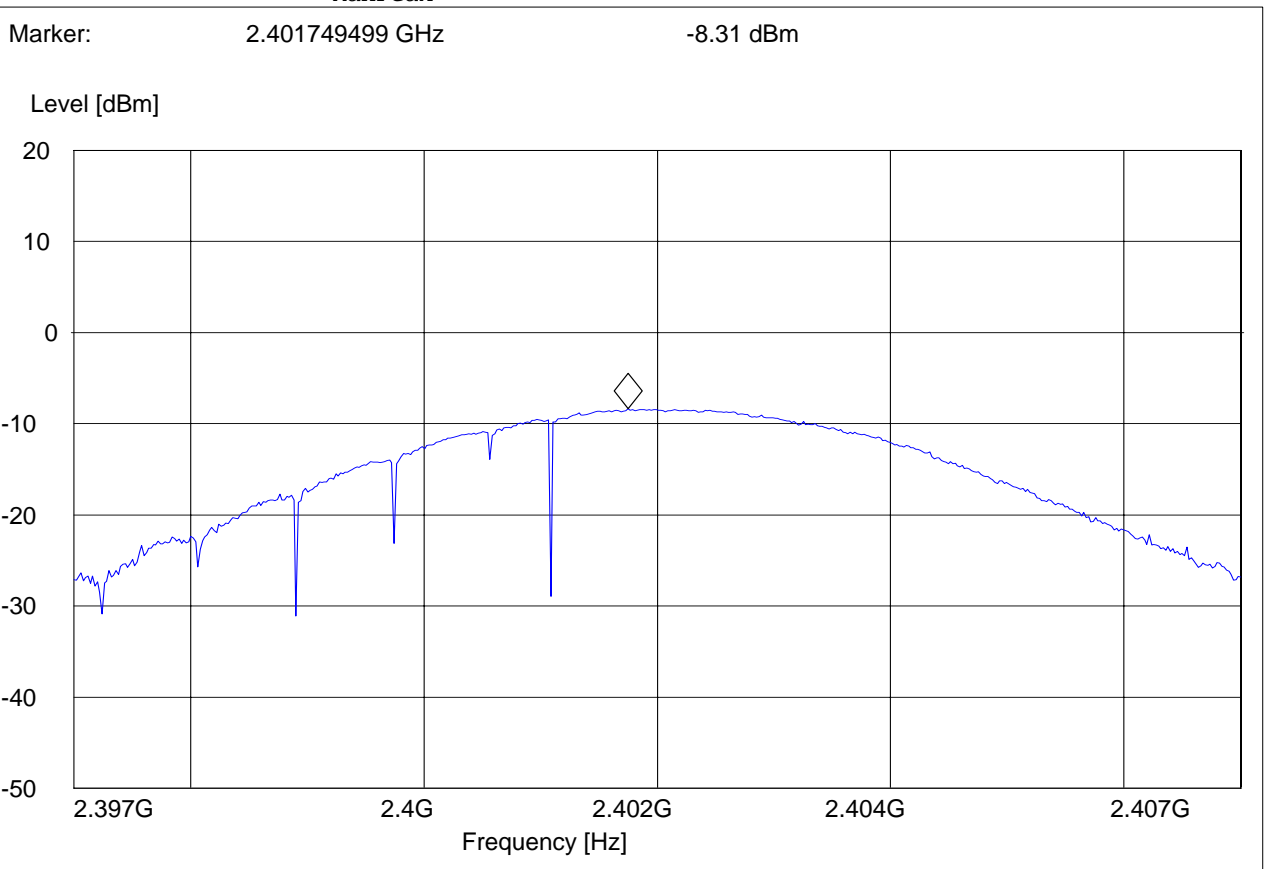
### EIRP (2402 MHz)

**CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA**

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_EU (unit #2)  
 Customer: XPLORER  
 Operating Mode: BT low ch 2402 Mhz turntable at 55° rotation  
 Antenna: H  
 EUT: V  
 Test Engineer: Ed  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: EIRP BT low channel

#### **SWEEP TABLE: "EIRP BT low channel"**

Short Description:		EIRP Bluetooth channel-2402MHz			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.4 GHz	2.4 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM
		MaxPeak			







### EIRP (2441 MHz)

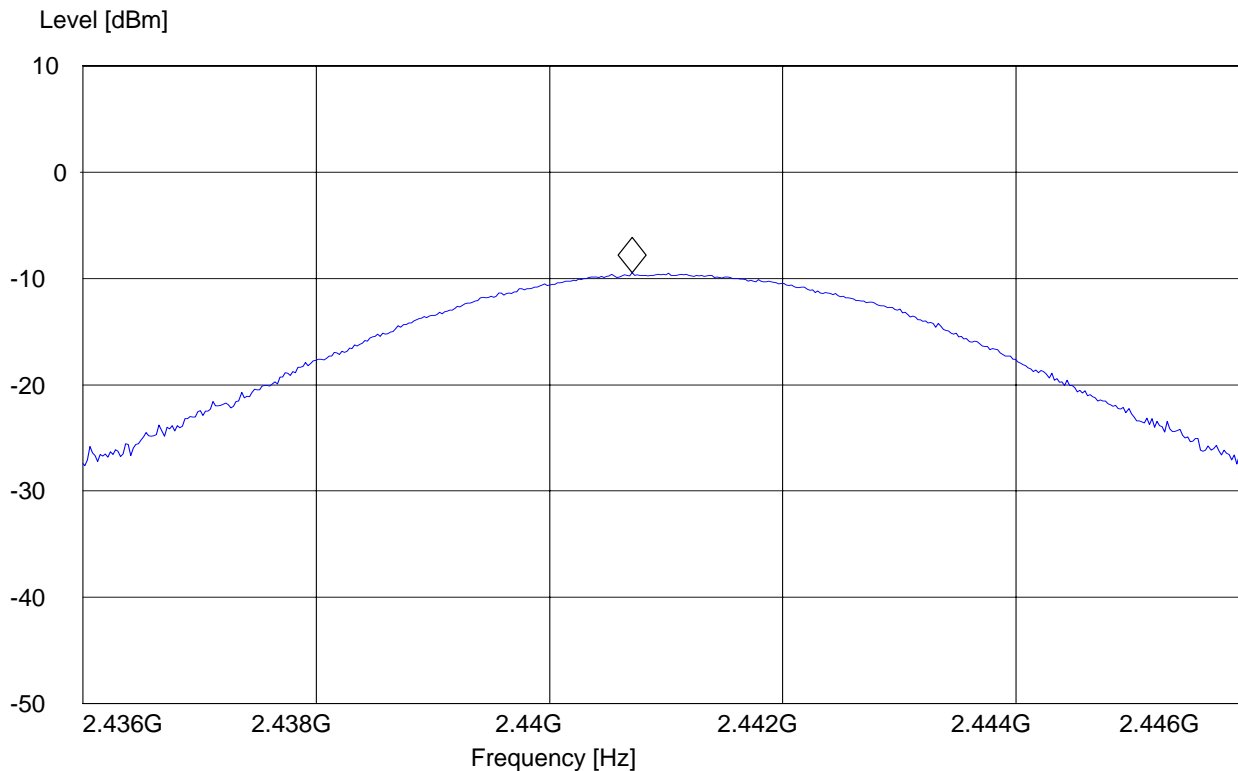
**CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA**

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_EU (unit #2)  
 Customer: XPLORER  
 Operating Mode: BT mid ch 2441Mhz turntable at 55° rotation  
 Antenna: H  
 EUT: V  
 Test Engineer: Ed  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: EIRP BT mid channel

#### ***SWEEP TABLE: "EIRP BT mid channel"***

Start	Stop	Detector	Meas.	IF	Transducer
2.4 GHz	2.4 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM

Marker: 2.440709419 GHz -9.49 dBm





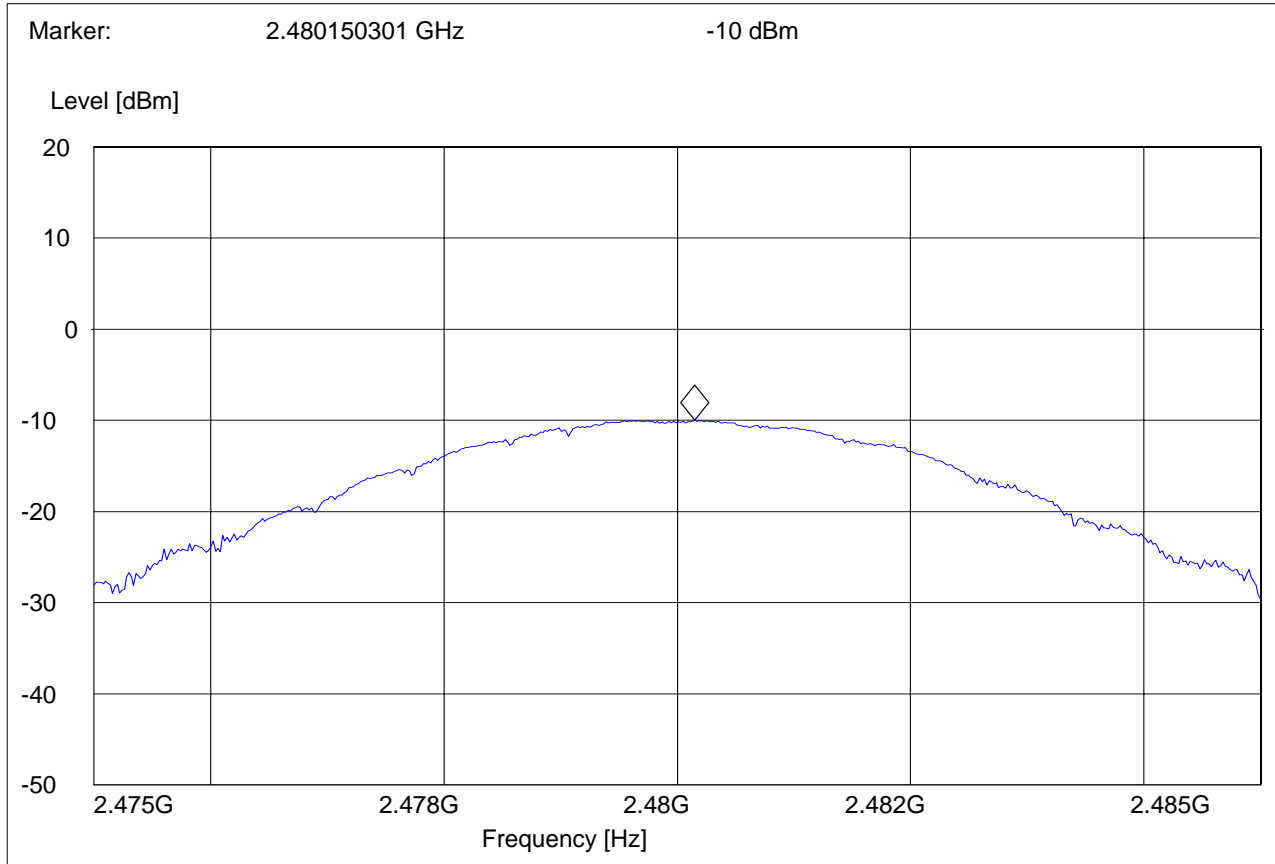
**EIRP (2480 MHz)**

**CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA**

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_EU (unit #2)  
 Customer: XPLORER  
 Operating Mode: BT high ch 2480 Mhz turntable at 55° rotation  
 Antenna: H  
 EUT: V  
 Test Engineer: Ed  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: EIRP BT high channel

**SWEEP TABLE: "EIRP BT high channel"**

Short Description:		EIRP Bluetooth channel-2480MHz			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
2.5 GHz	2.5 GHz	MaxPeak	Coupled	3 MHz	DUMMY-DBM
		MaxPeak			





**5.2 RESTRICTED BAND EDGE COMPLIANCE RADIATED §15.247/15.205**

**5.2.1 LIMITS**

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )
13.36 - 13.41			

**\*PEAK LIMIT= 74dBuV/m**

**\*AVG. LIMIT= 54dBuV/m**



**5.2.2 RESULTS (2402MHz)**

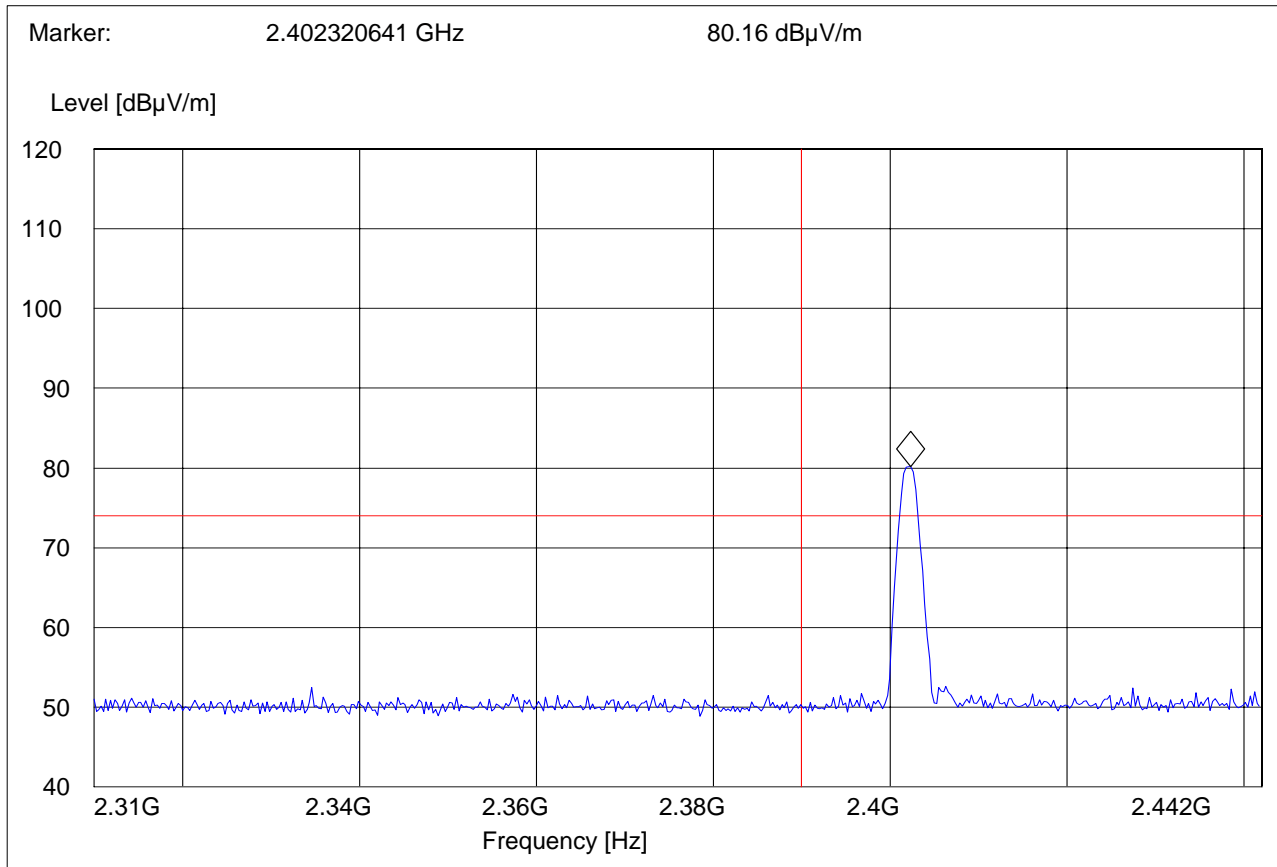
**PEAK**

*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT  
 Antenna: H  
 EUT: V  
 Test Engineer: PETER  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 LBE\_PK

**SWEEP TABLE: "FCC15.247 LBE\_PK"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
2.3 GHz	2.4 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert





AVG

CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA

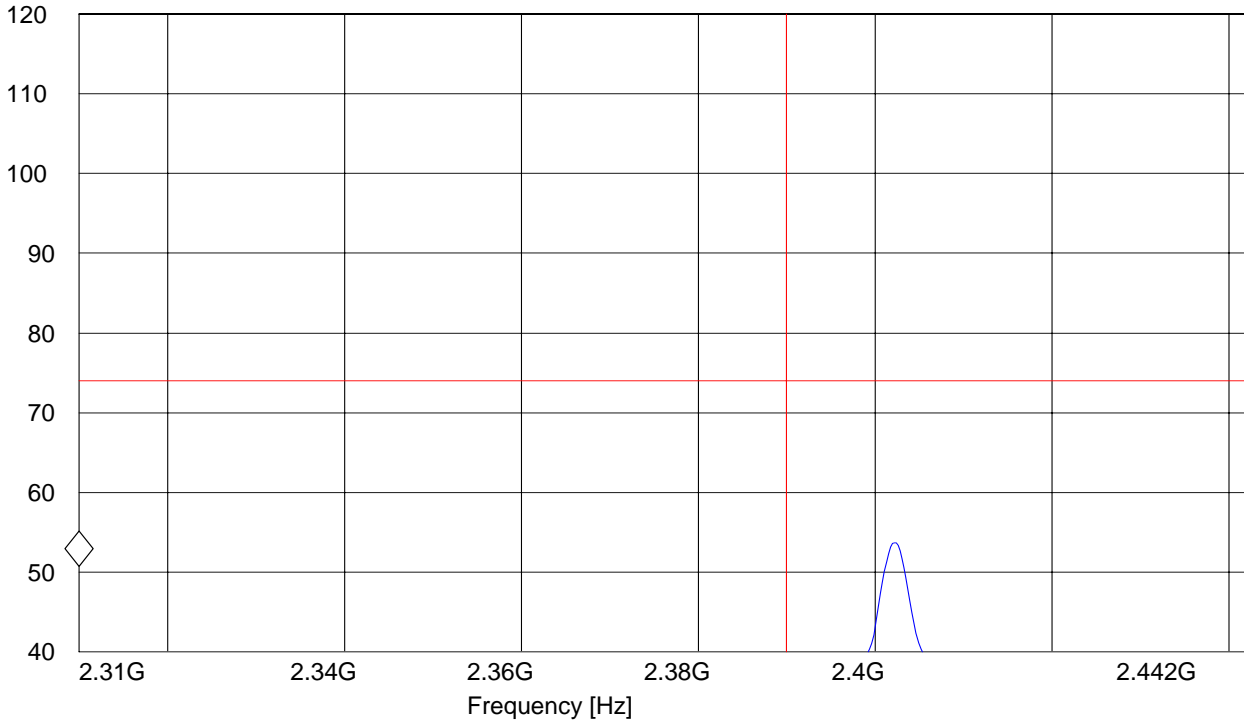
EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA
Customer: XPLORER
Operating Mode: BT
Antenna: H
EUT: V
Test Engineer: PETER
Voltage: AC Adaptor (UNIT #2)
Sweep: FCC15.247 LBE\_AVG

SWEEP TABLE: "FCC15.247 LBE\_AVG"

Table with 6 columns: Start Frequency, Stop Frequency, Detector, Meas. Time, IF Bandw., Transducer. Row 1: 2.3 GHz, 2.4 GHz, MaxPeak, Coupled, 1 MHz, #326horn\_AF\_vert

Marker: 2.31 GHz 50.75 dBµV/m

Level [dBµV/m]





**5.2.3 RESULTS (2480MHz)  
PEAK**

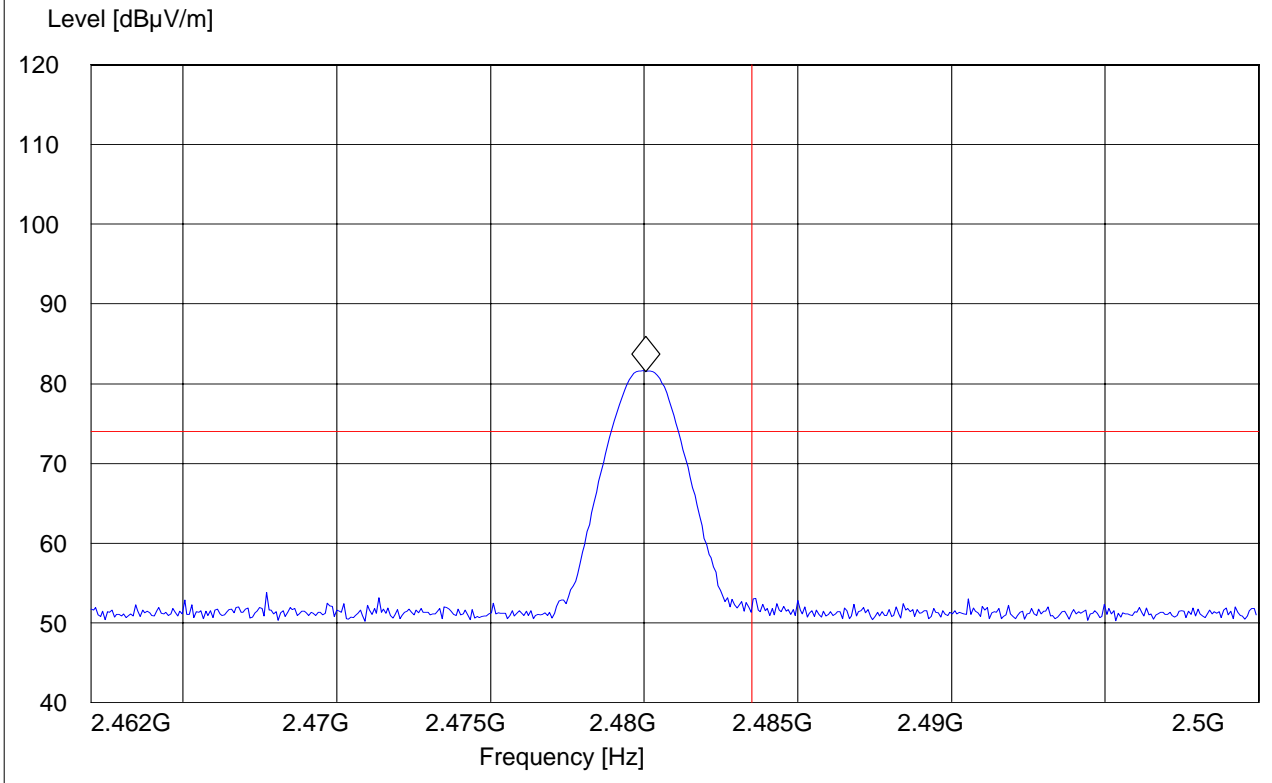
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT  
 Antenna: H  
 EUT: V  
 Test Engineer: PETER  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 HBE\_PK

**SWEEP TABLE: "FCC15.247 HBE\_PK"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 2.480048096 GHz 81.54 dBµV/m





### AVG

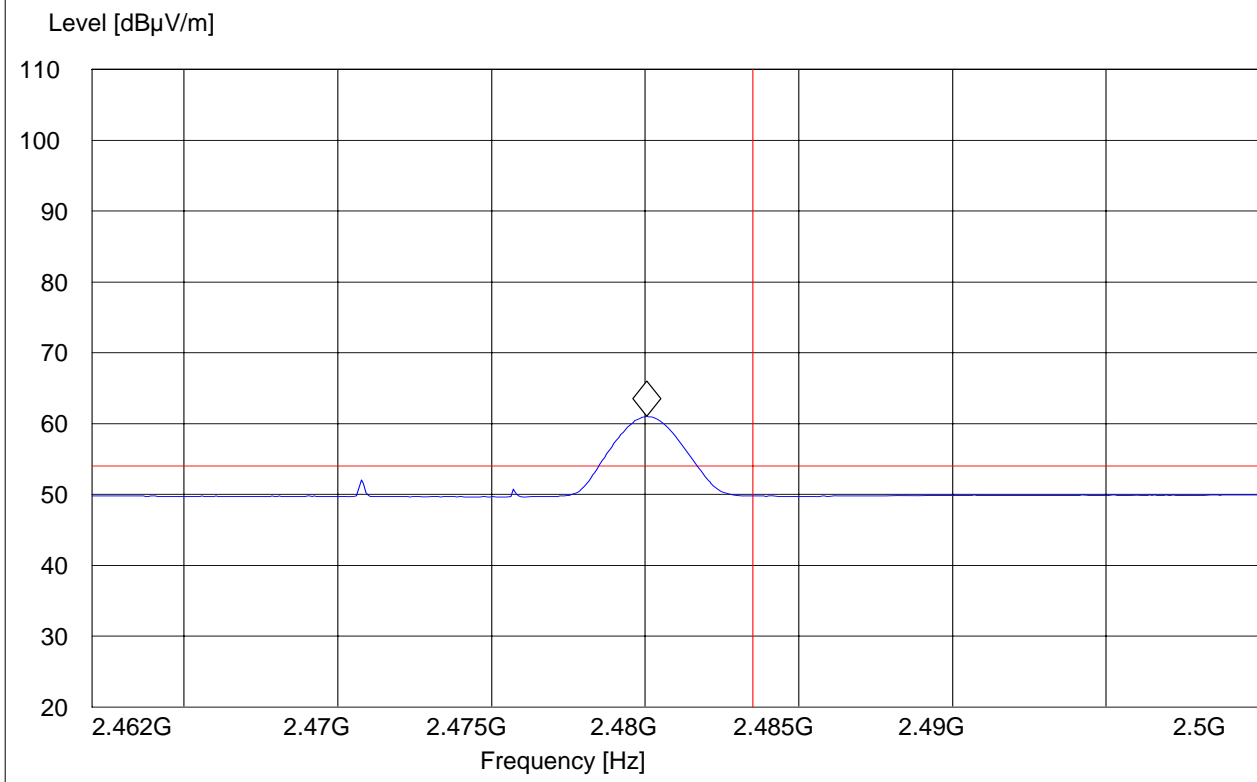
CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
Customer: XPLORER  
Operating Mode: BT  
Antenna: H  
EUT: V  
Test Engineer: PETER  
Voltage: AC Adaptor (UNIT #2)  
Sweep: FCC15.247 HBE\_PK

**SWEEP TABLE: "FCC15.247 HBE\_AVG"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
2.5 GHz	2.5 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_horz

Marker: 2.480048096 GHz 61.01 dBµV/m





**5.3 TRANSMITTER SPURIOUS EMISSIONS RADIATED § 15.247/15.205/15.209**

**5.3.1 LIMITS**

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )
13.36 - 13.41			

**\*PEAK LIMIT= 74dBuV/m**

**\*AVG. LIMIT= 54dBuV/m**

**NOTE:**

1. The radiated emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 3 and 25 GHz very short cable connections to the antenna was used to minimize the noise level.

2. All measurements are done in peak mode using an average limit , unless specified with the plots.

**Results for the radiated measurements below 30MHz according § 15.33**

Frequency	Measured values	Remarks
9KHz – 30MHz	No emissions found, caused by the EUT	This is valid for all the tested channels





### 5.3.2 RESULTS

#### 30MHz – 1GHz

Antenna: vertical

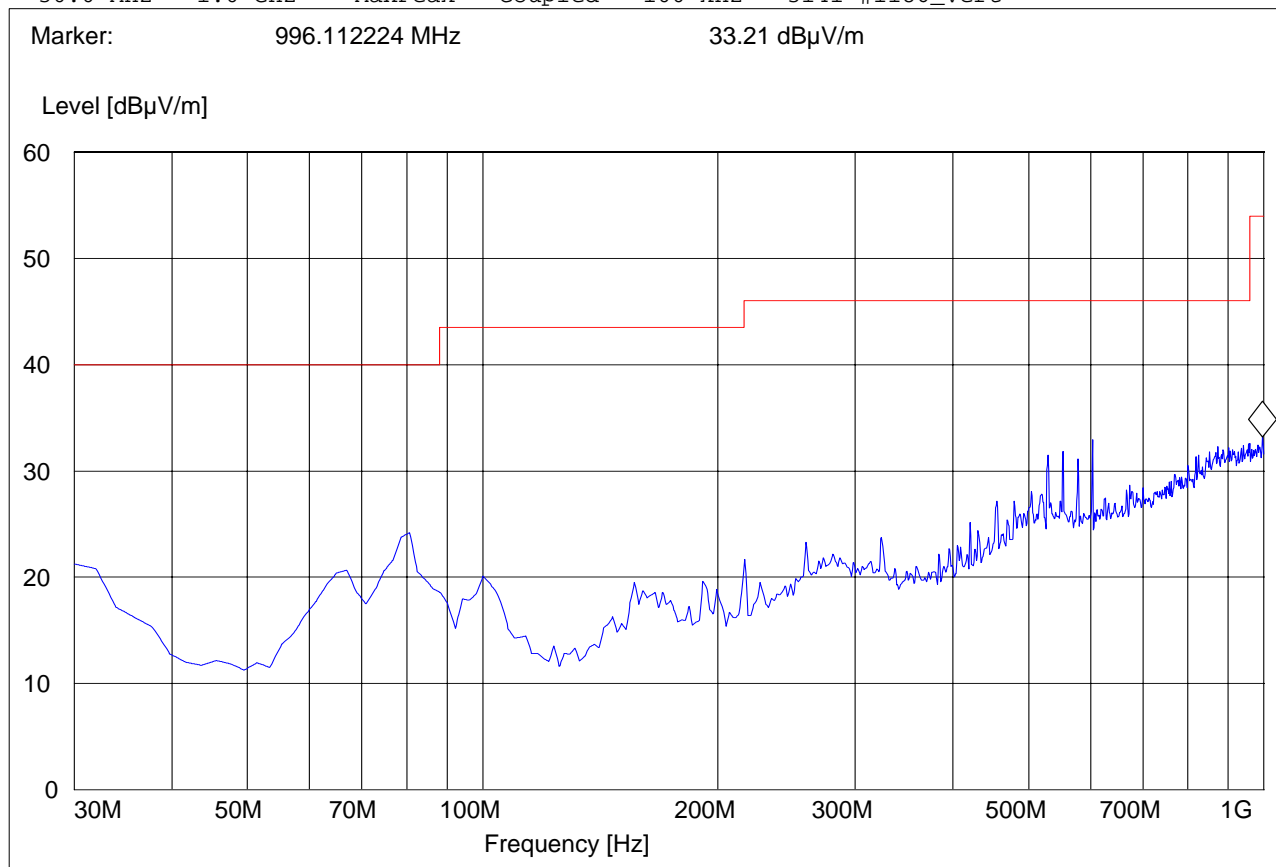
Note: This plot is valid for low, mid, high channels (worst-case plot)

CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT; 2441 MHz  
 Antenna: V  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247\_30M\_1G\_Ver

**SWEEP TABLE: "FCC15.247\_30M-1G\_Ver"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	3141-#1186_Vert





30MHz – 1GHz

Antenna: horizontal

Note: This plot is valid for low, mid, high channels (worst-case plot)

CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA

Customer: XPLORER

Operating Mode: BT; 2480 MHz

Antenna: H

EUT: V

Test Engineer: SATYA

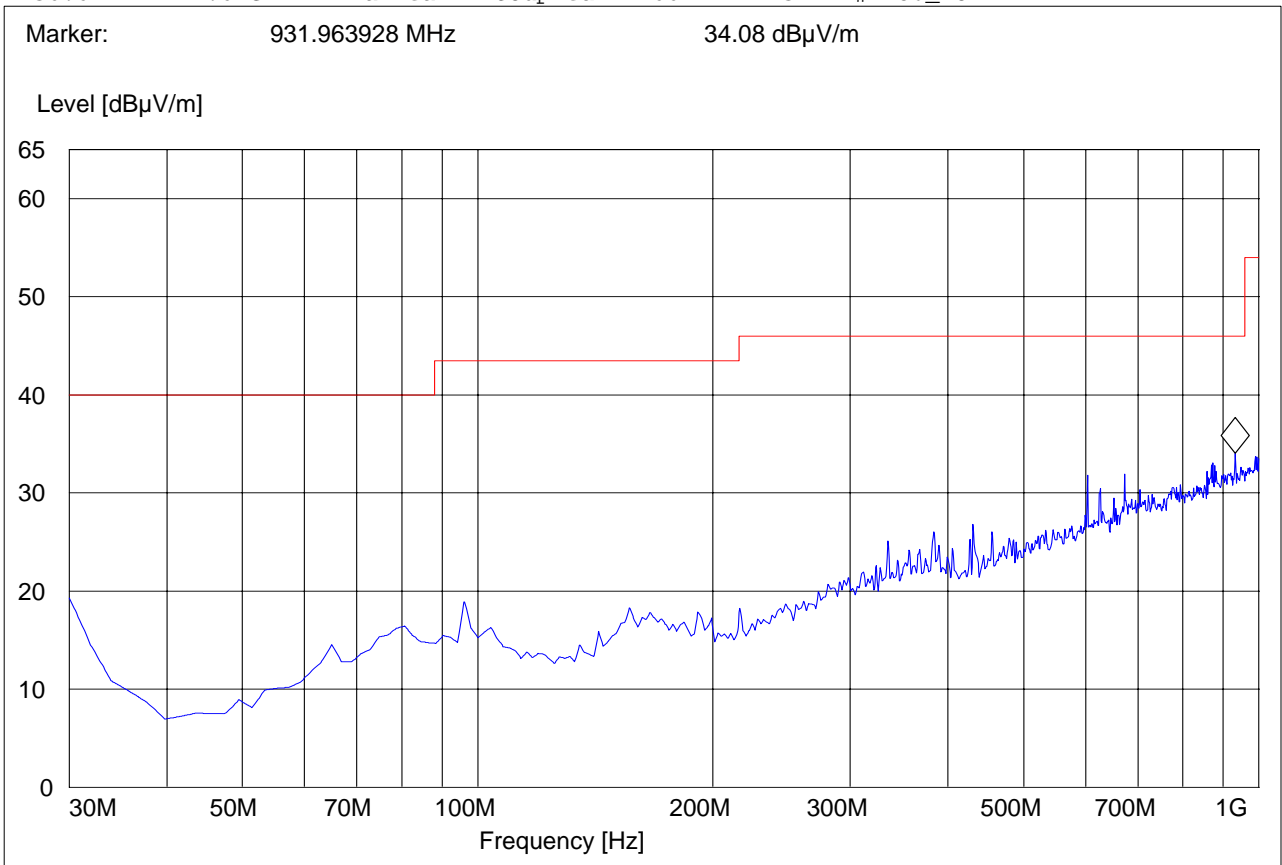
Voltage: AC Adaptor (UNIT #2)

Sweep: FCC15.247\_30M\_1G\_Hor

SWEEP TABLE: "FCC15.247\_30M-1G\_Hor"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	3141-#1186_Horz

Marker: 931.963928 MHz 34.08 dBµV/m





**1-3GHz (2402MHz)**

**Note: The peaks above the limit line is the carrier freq.**

**Note: Peak Reading vs. Average limit**

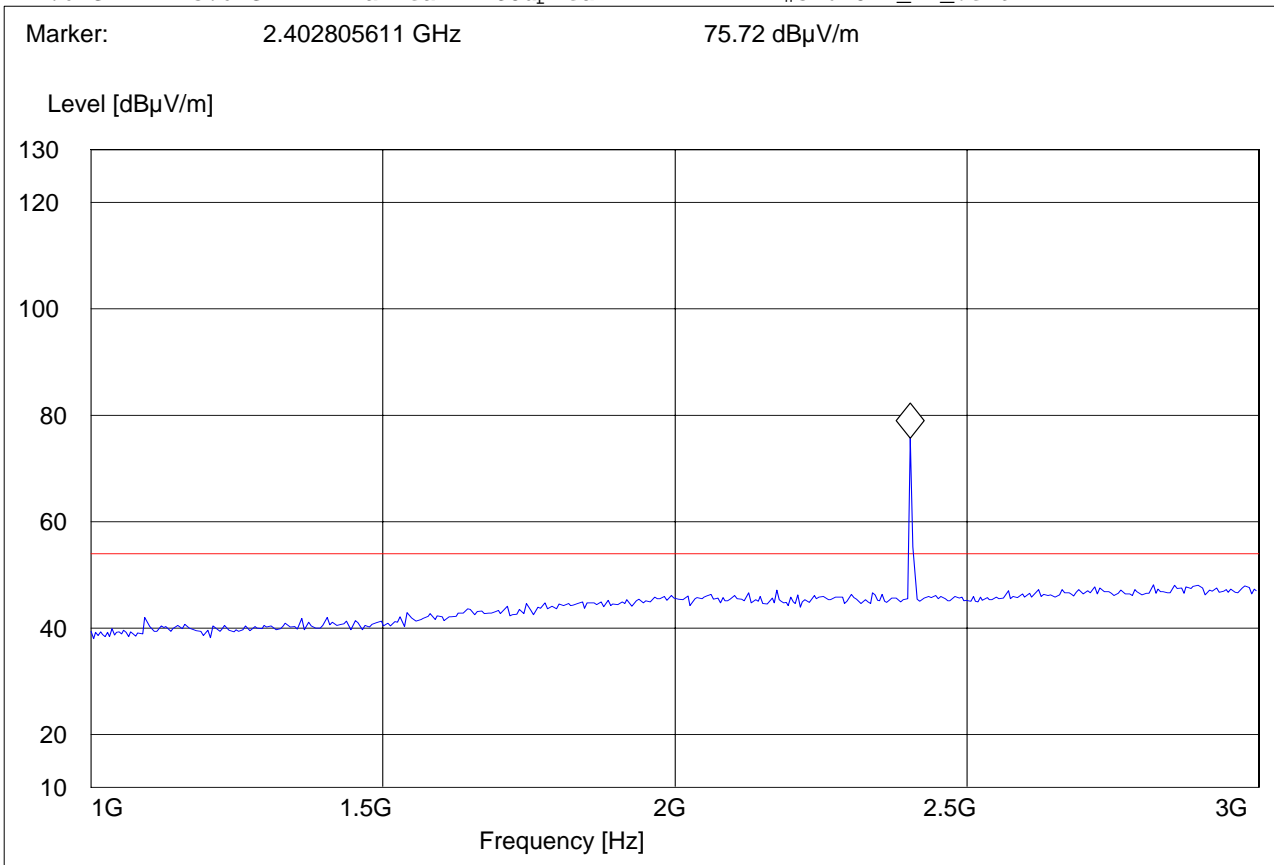
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT; 2402 MHz; PEAK MARKED IS TX SIGNAL  
 Antenna: H  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 1-3G

**SWEEP TABLE: "FCC15.247\_1-3G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 2.402805611 GHz 75.72 dBµV/m





**1-3GHz (2441MHz)**

**Note: The peaks above the limit line is the carrier freq.**

**Note: Peak Reading vs. Average limit**

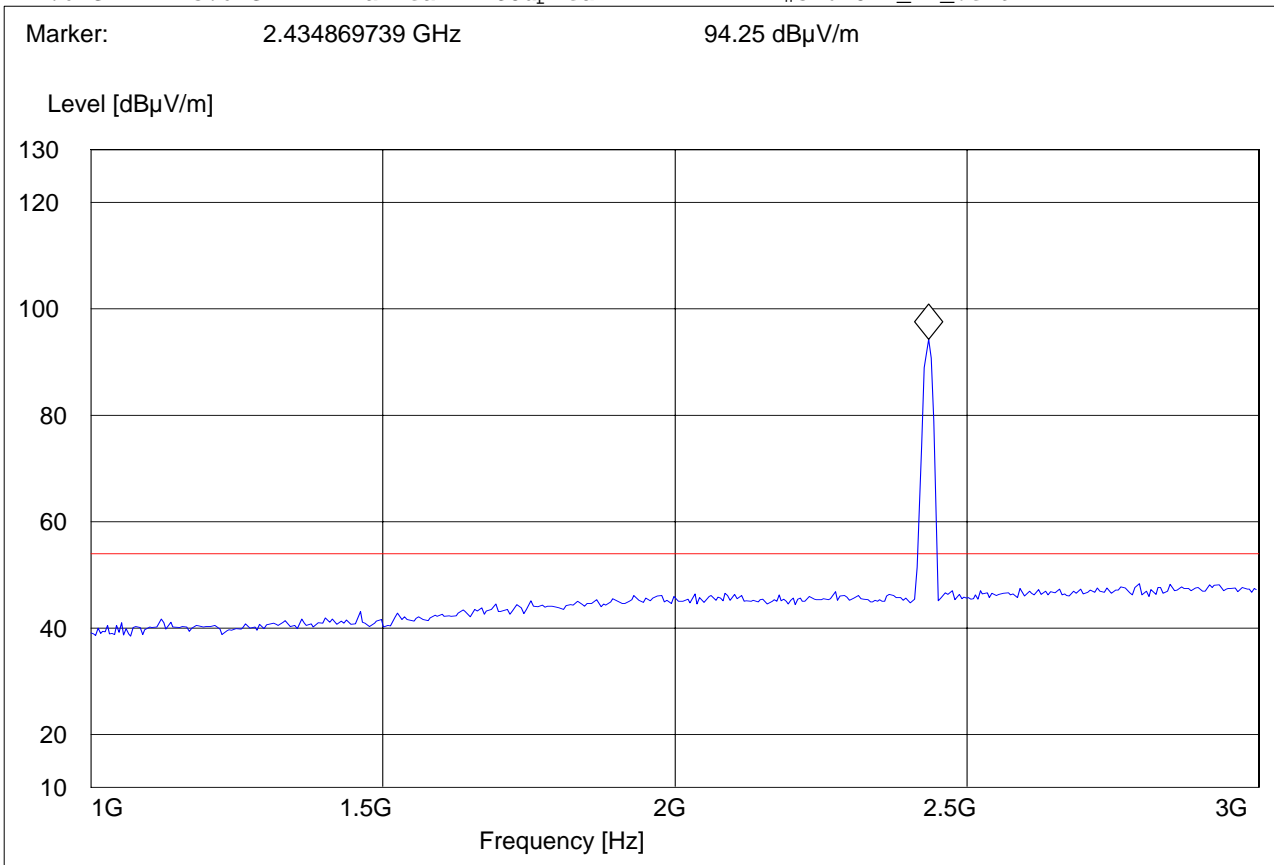
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT; PEAK MARKED IS TX SIGNAL  
 Antenna: H  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 1-3G

**SWEEP TABLE: "FCC15.247\_1-3G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 2.434869739 GHz 94.25 dBµV/m





**1-3GHz (2480MHz)**

**Note: The peaks above the limit line is the carrier freq.**

**Note: Peak Reading vs. Average limit**

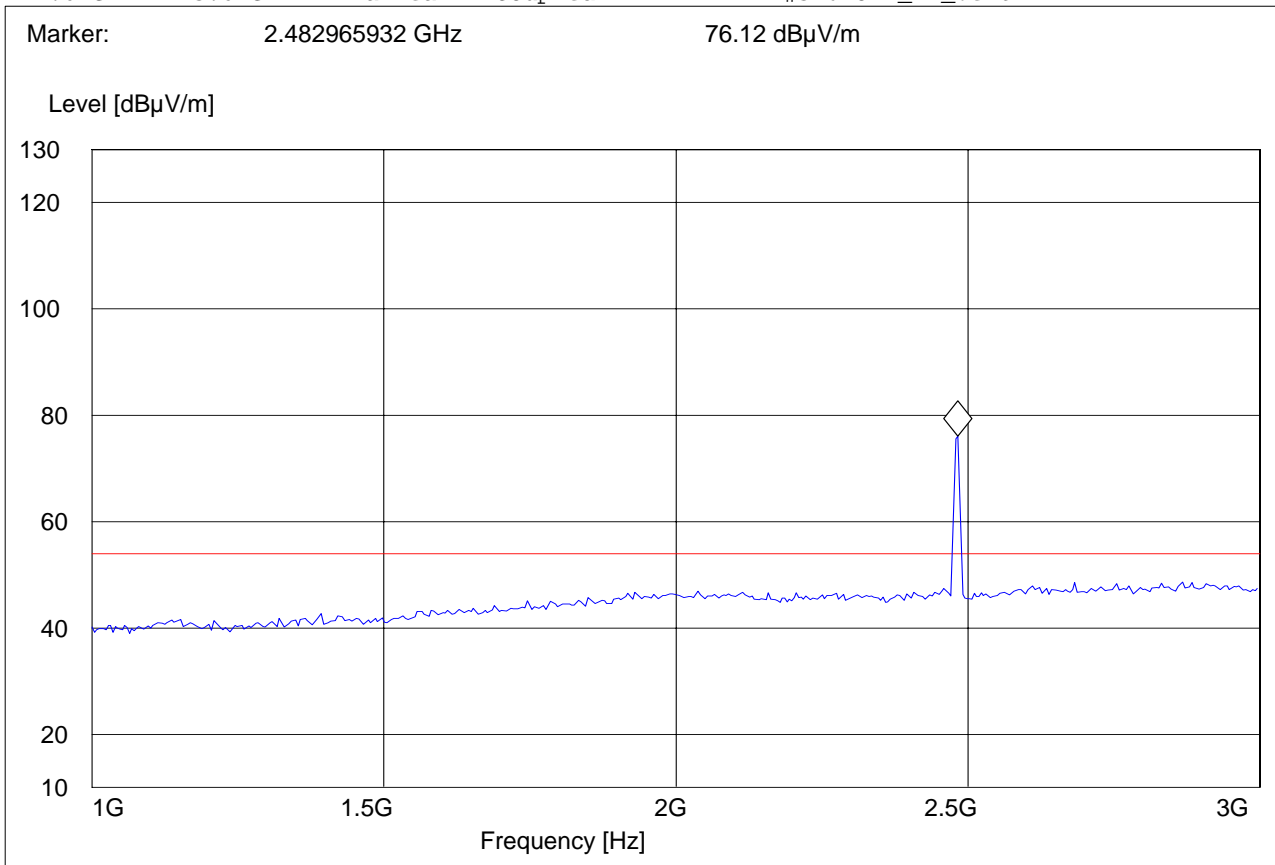
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT ; PEAK MARKED IS TX SIGNAL  
 Antenna: H  
 EUT: V  
 Test Engineer: PETER  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 1-3G

**SWEEP TABLE: "FCC15.247\_1-3G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 2.482965932 GHz 76.12 dBµV/m





**3-18GHz (2402MHz)**

**Note: Peak Reading vs. Average limit**

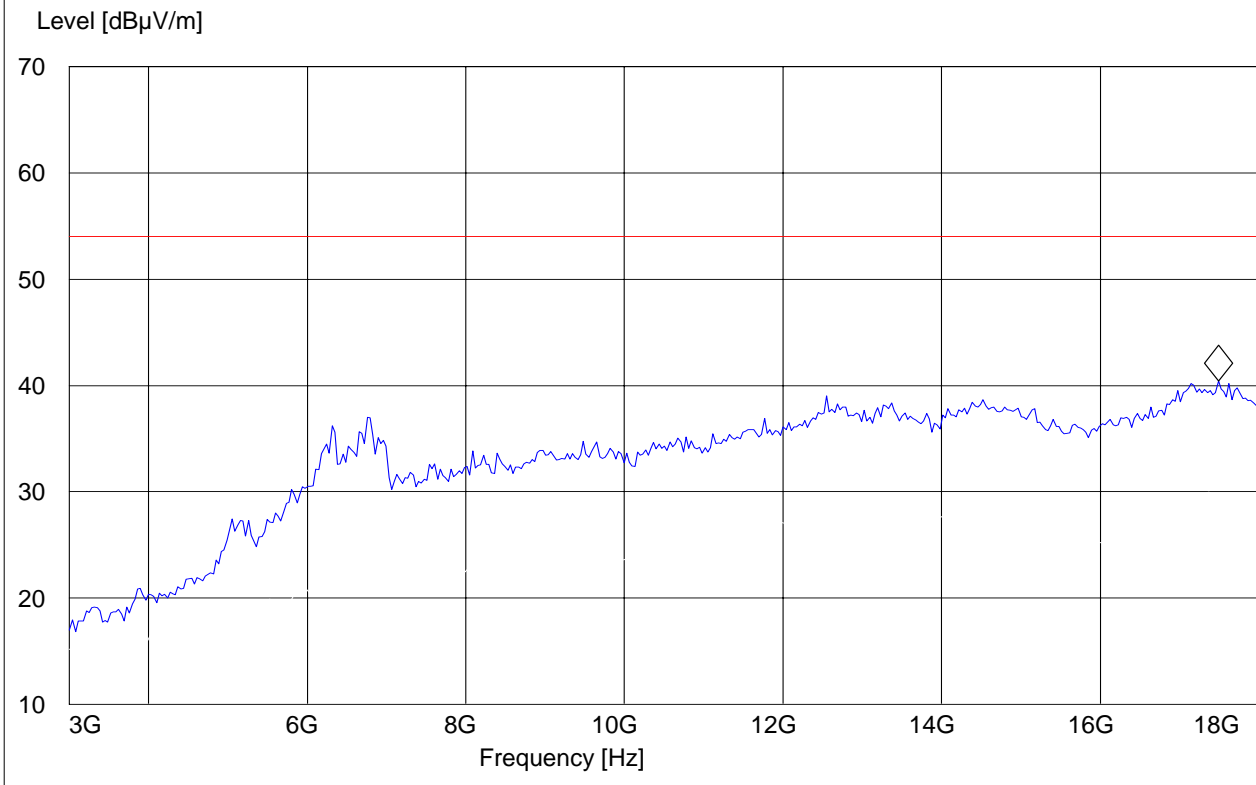
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLOER  
 Operating Mode: BT; 2402 MHz  
 Antenna: H  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 3-18G

**SWEEP TABLE: "FCC15.247\_3-18G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 17.488977956 GHz 40.44 dBµV/m





**3-18GHz (2441MHz)**

**Note: Peak Reading vs. Average limit**

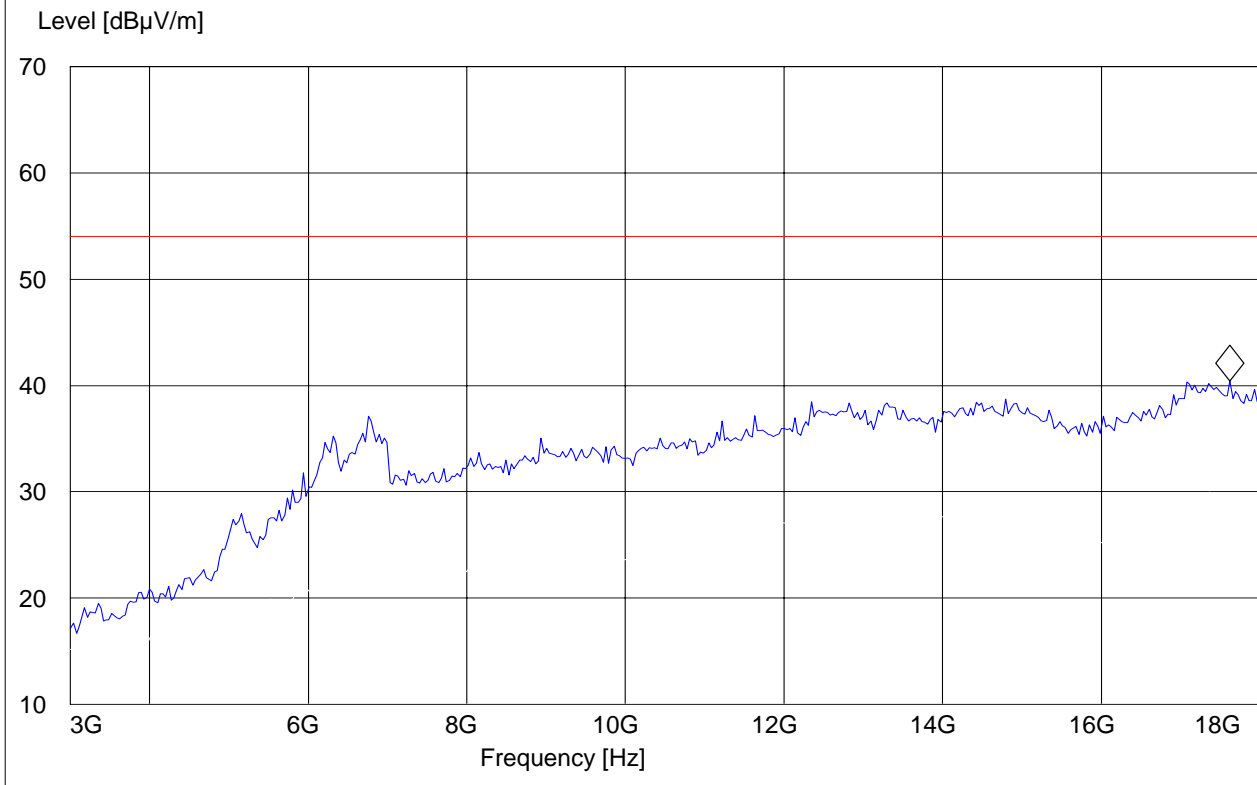
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT; 2441 MHz  
 Antenna: H  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 3-18G

**SWEEP TABLE: "FCC15.247\_3-18G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 17.625250501 GHz 40.45 dBµV/m





### 3-18GHz (2480MHz)

**Note: Peak Reading vs. Average limit**

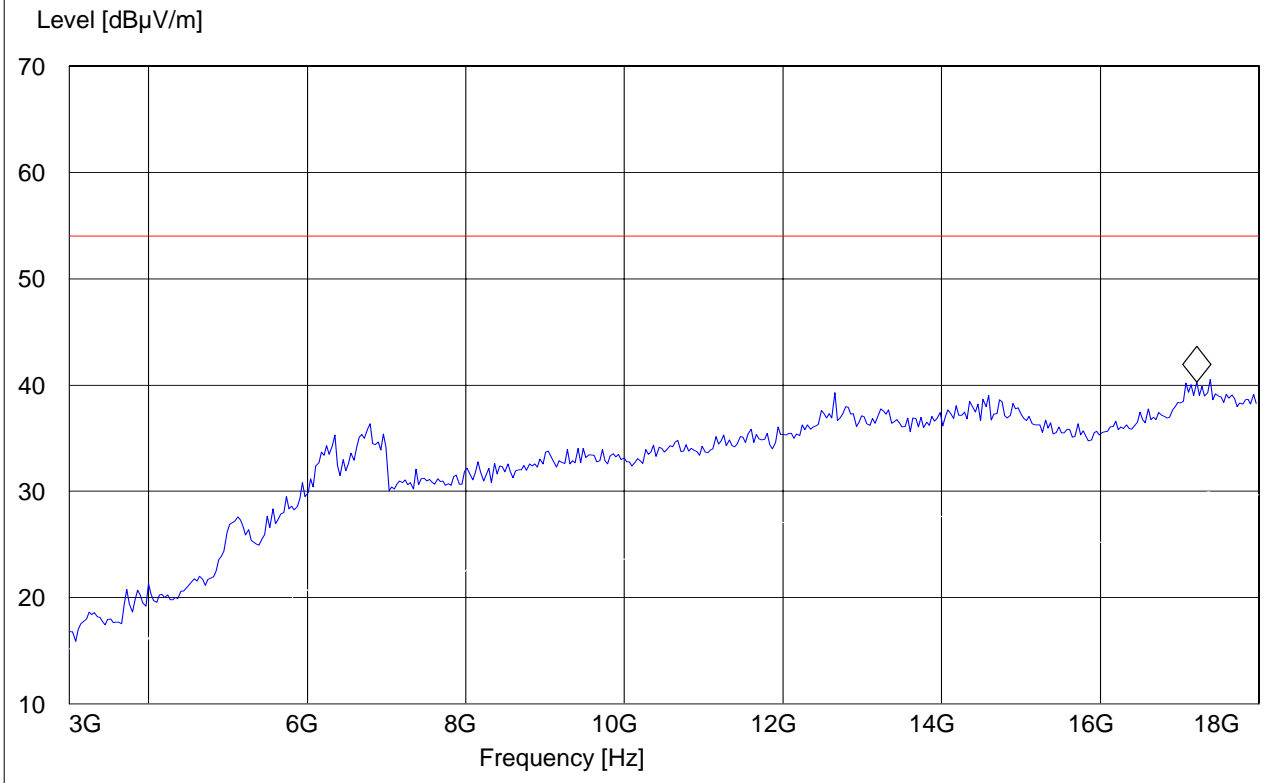
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLORER  
 Operating Mode: BT  
 Antenna: H  
 EUT: V  
 Test Engineer: PETER  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: FCC15.247 3-18G

**SWEEP TABLE: "FCC15.247\_3-18G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 17.216432866 GHz 40.26 dBµV/m







18-25GHz

Note: This plot is valid for low, mid, high channels (worst-case plot)

Note: Peak Reading vs. Average limit

CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA

Customer: XPLORER

Operating Mode: BT; 2441 MHz

Antenna: H

EUT: V

Test Engineer: SATYA

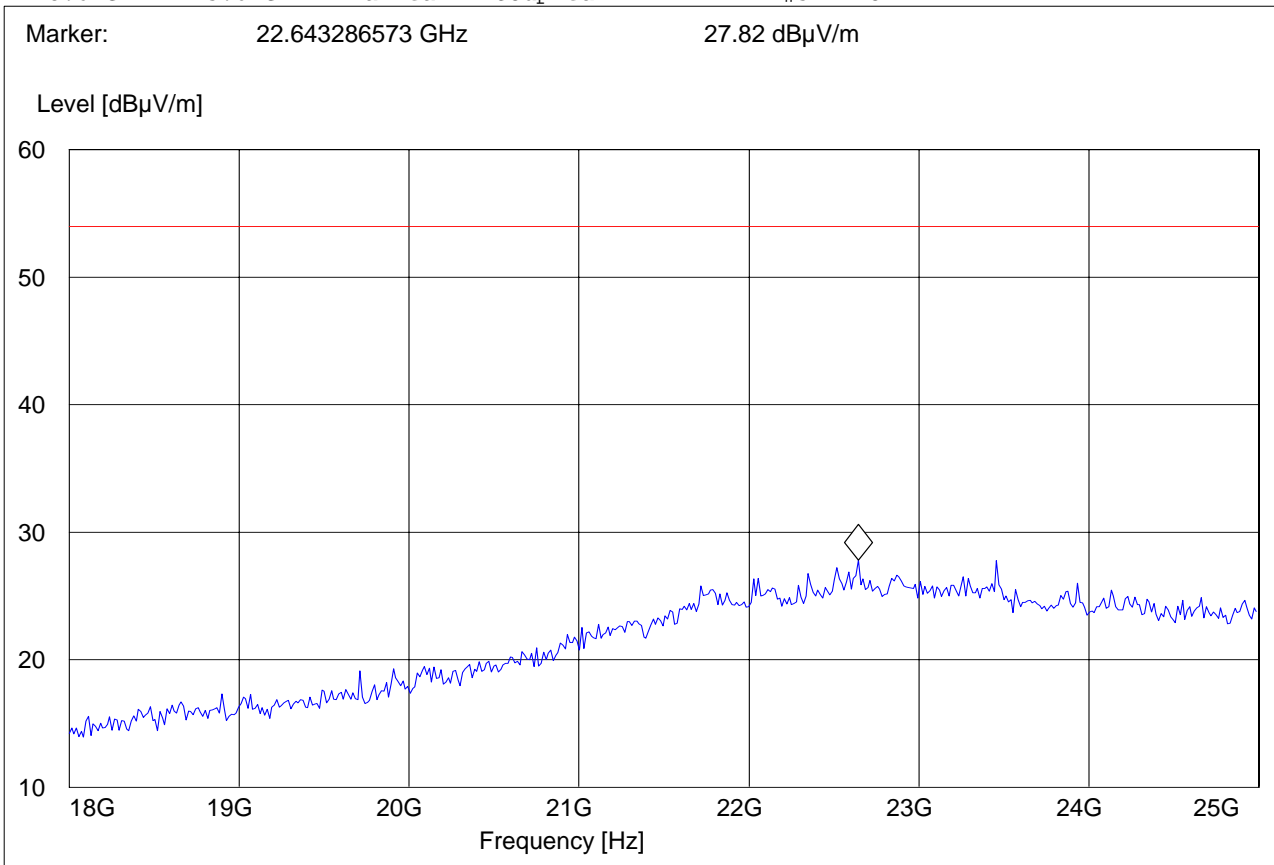
Voltage: AC Adaptor (UNIT #2)

Sweep: FCC15.247\_18-26.5G\_Hor

SWEEP TABLE: "FCC15.247\_18-26.5G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	25.0 GHz	MaxPeak	Coupled	1 MHz	#572 horn AF

Marker: 22.643286573 GHz 27.82 dBµV/m





## 5.4 RECEIVER SPURIOUS RADIATION § 15.209/RSS210

### 5.4.1 LIMITS

Frequency (MHz)	Field strength ( $\mu\text{V/m}$ )	Measurement distance (m)
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	2400/F (kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

#### **NOTE:**

1. The radiated emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 3 and 25 GHz very short cable connections to the antenna was used to minimize the noise level.
2. All measurements are done in peak mode using a quasi peak or average limit , unless specified with the plots.



**5.4.2 RESULTS**

**30MHz – 1GHz**

**Antenna: horizontal**

**Note: This plot is valid for all polarizations and low, mid, high channels (worst-case plot)**

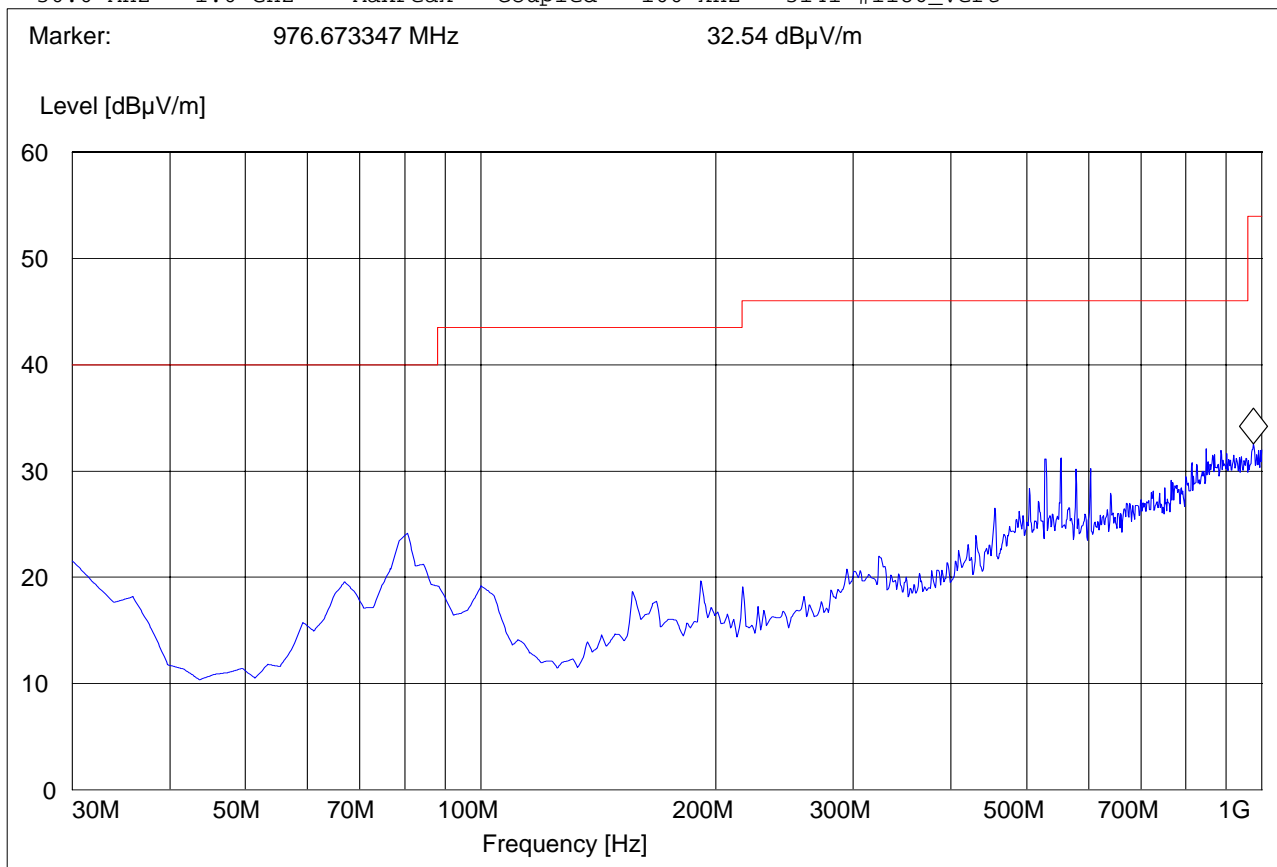
**Note: Peak Reading vs. Quasi-peak limit**

*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLOER  
 Operating Mode: BT; 2402 MHz  
 Antenna: V  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: CANADA RE\_30M-1G\_Ver

**SWEEP TABLE: "CANADA RE\_30M-1G\_Hor"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	3141-#1186_Vert





**1-3GHz**

**Note: Peak Reading vs. Average limit**

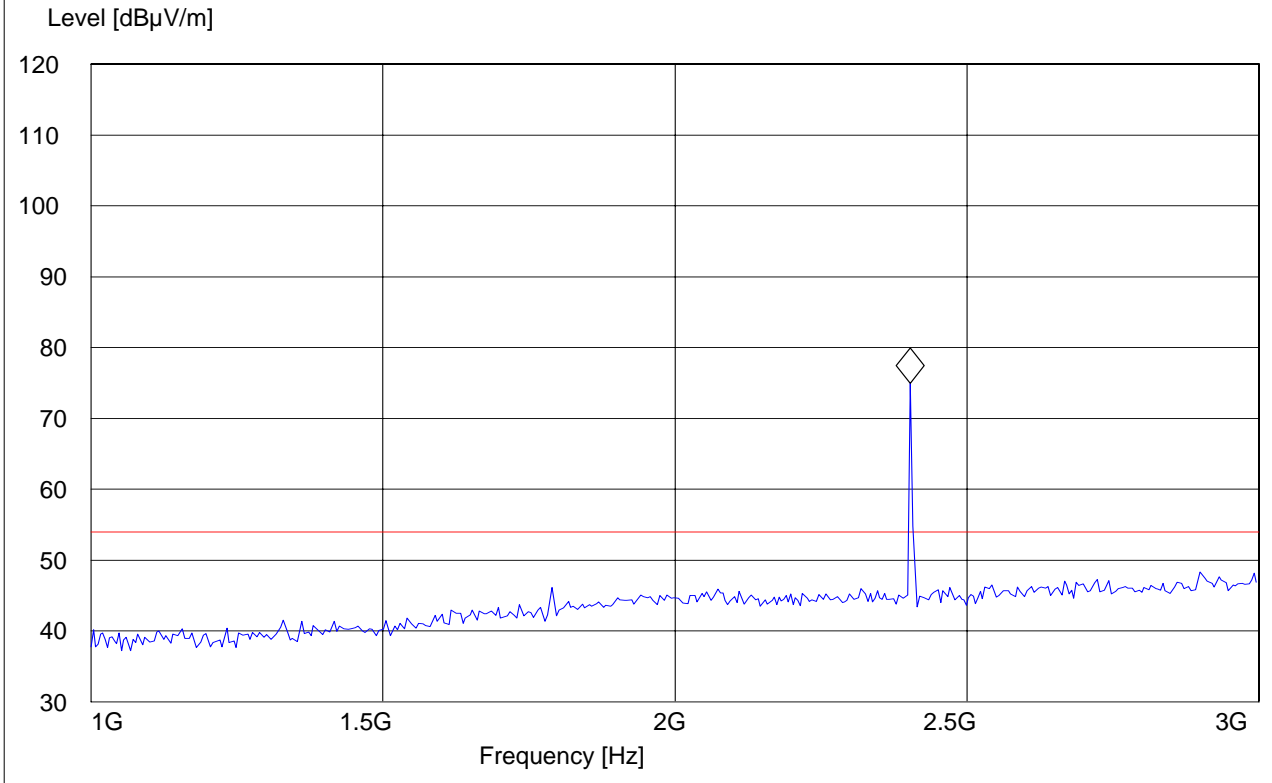
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLOER  
 Operating Mode: BT; 2402 MHz  
 Antenna: H  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: CANADA RE\_1-3G

**SWEEP TABLE: "CANADA RE\_1-3G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	3.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 2.402805611 GHz 74.94 dBµV/m





**3-18GHz**

**Note: Peak Reading vs. Average limit**

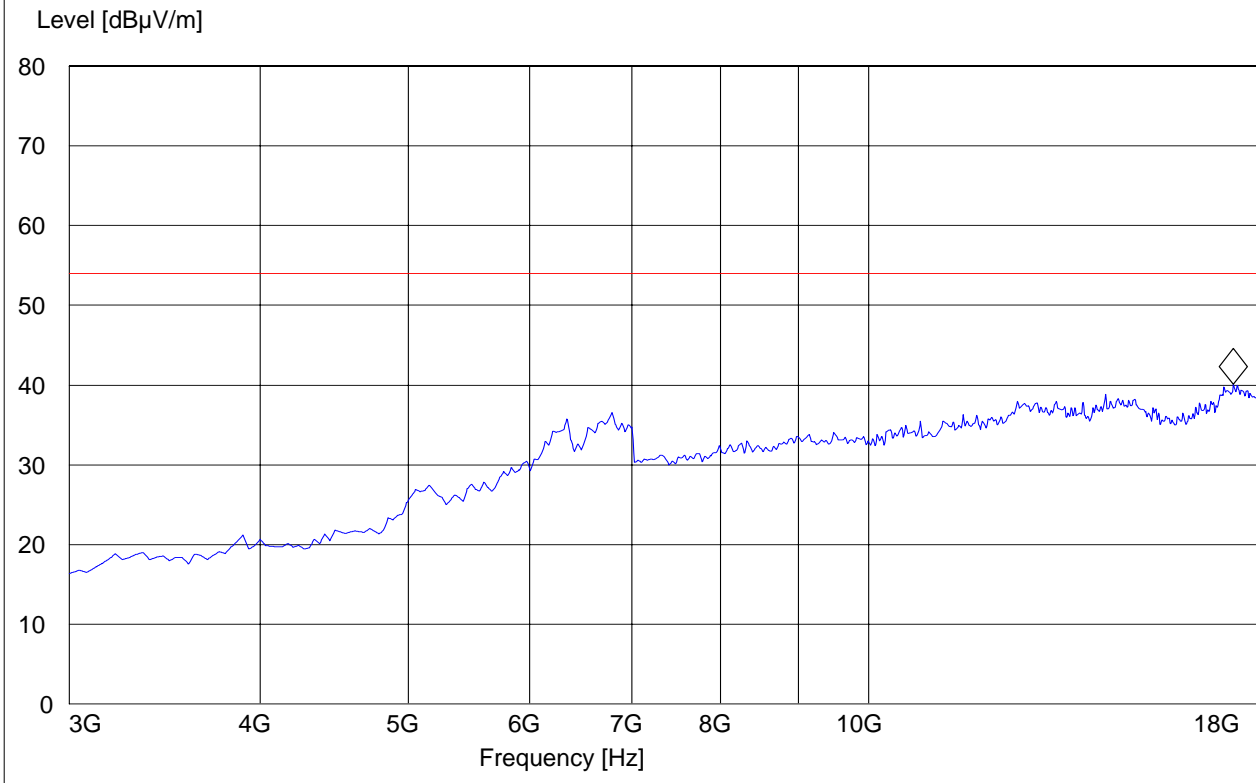
*CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA*

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLOER  
 Operating Mode: BT; 2402 MHz  
 Antenna: H  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: CANADA RE\_3-18G

**SWEEP TABLE: "CANADA RE\_3-18G"**

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	#326horn_AF_vert

Marker: 17.318637275 GHz 40.11 dBµV/m





### 18-25GHz

#### Note: Peak Reading vs. Average limit

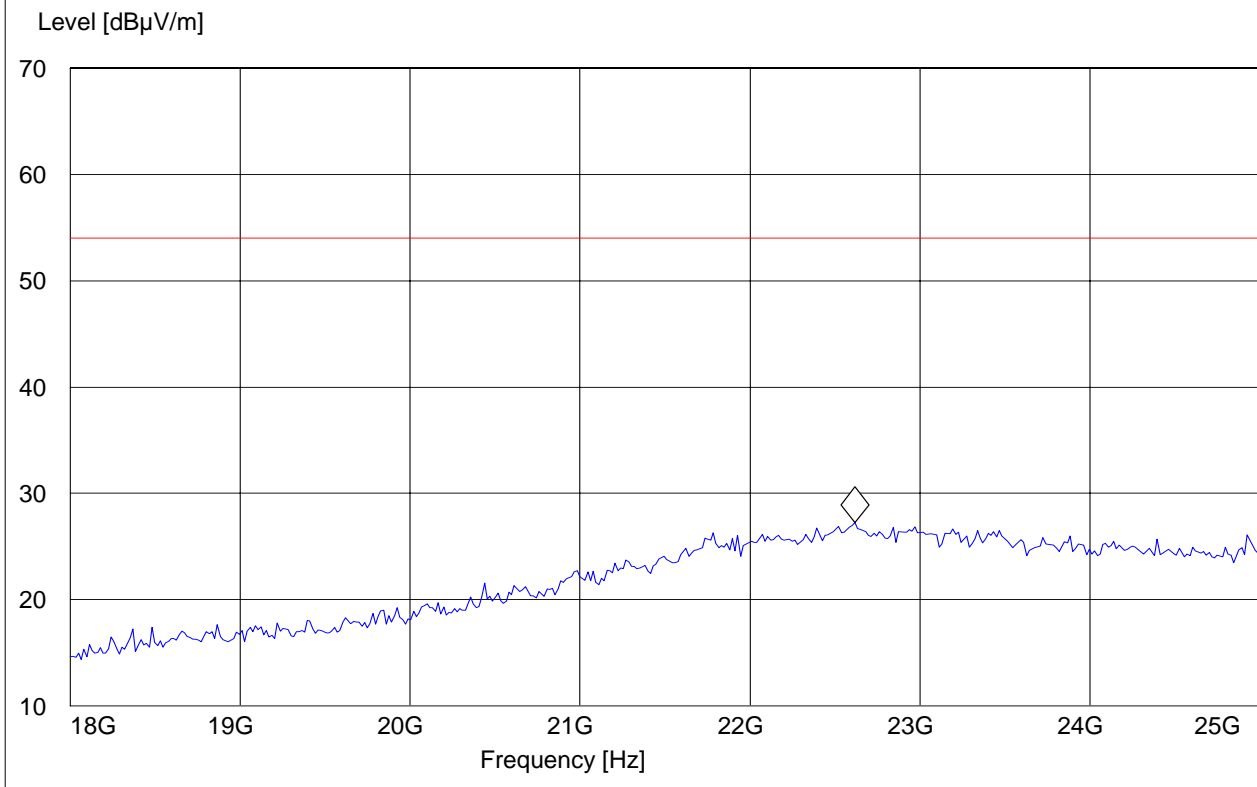
CETECOM Inc., 411 Dixon Landing Road, Milpitas CA 95035, USA

EUT / Description: XPLOR\_005\_06002\_BT\_replacement\_NA  
 Customer: XPLOER  
 Operating Mode: BT; 2402 MHz  
 Antenna: H  
 EUT: V  
 Test Engineer: SATYA  
 Voltage: AC Adaptor (UNIT #2)  
 Sweep: CANADA RE\_18-26.5G

#### SWEEP TABLE: "CANADA RE\_18-26.5G"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	26.0 GHz	MaxPeak	Coupled	1 MHz	3160 Horn 18-26.5G

Marker: 22.617234469 GHz 27.27 dBµV/m





**5.5 AC POWER LINE CONDUCTED EMISSIONS § 15.107/207**

**5.5.1 LIMITS**

**Technical specification: 15.107 / 15.207 (Revised as of August 20, 2002)**

**Limit**

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-Peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

\* Decreases with logarithm of the frequency

**ANALYZER SETTINGS: RBW = 10KHz**

**VBW = 10KHz**



5.5.2 RESULTS

LISN

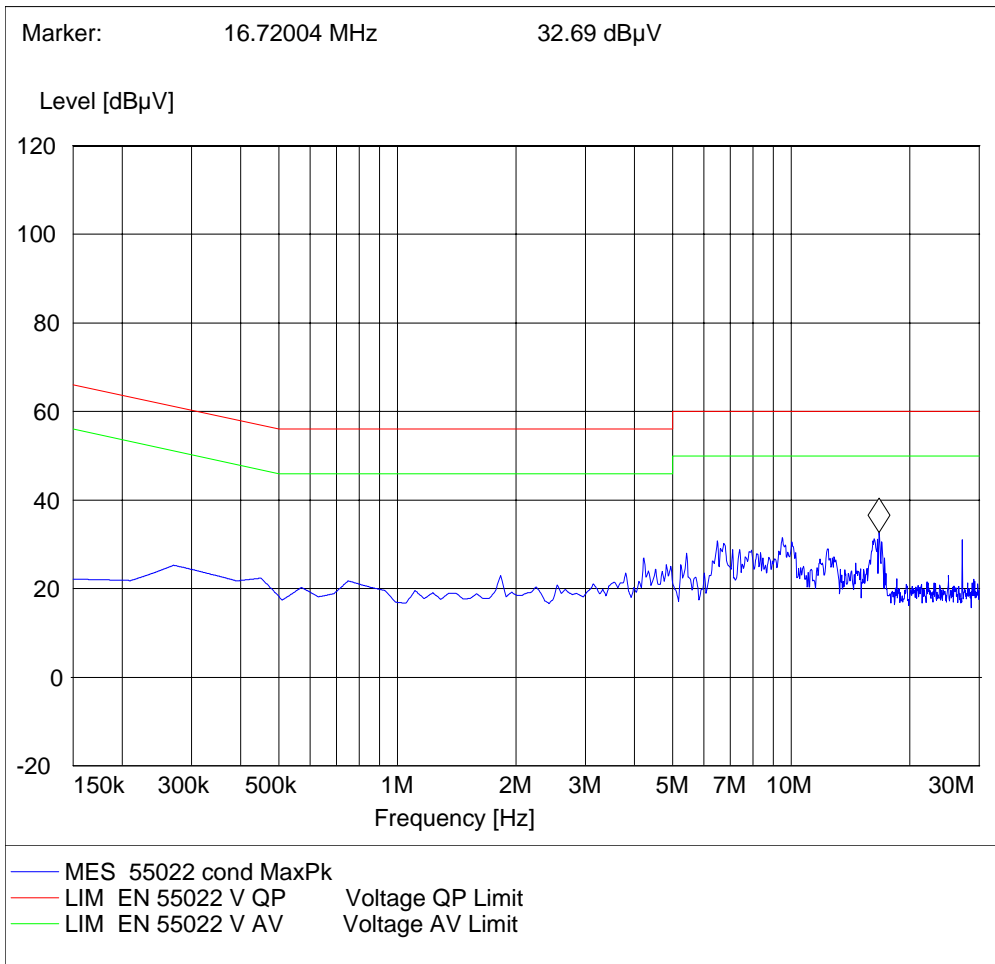
CETECOM INC., 411 Dixon Landing Road, CA 95035

EUT / Description: BT/ iX104C3  
 Manufacturer: Xplore  
 Test mode: TX 2402  
 Test Engineer: Satya  
 Phase: L & N  
 Comment: 120 volt

SWEEP TABLE: "55022 cond"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	MaxPeak	Coupled	10 kHz	None

Short Description: EN 55022 for 150KHz-30MHz







## 6 TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

No	Instrument/Ancillary	Type	Manufacturer	Serial No.	Cal Due	Interval
01	Spectrum Analyzer	ESIB 40	Rohde & Schwarz	100107	May 2007	1 year
02	Spectrum Analyzer	FSEM 30	Rohde & Schwarz	100017	August 2007	1 year
03	Signal Generator	SMY02	Rohde & Schwarz	836878/011	May 2007	1 year
04	Power-Meter	NRVD	Rohde & Schwarz	0857.8008.02	May 2007	1 year
05	Biconilog Antenna	3141	EMCO	0005-1186	June 2007	1 year
06	Horn Antenna (1-18GHz)	SAS-200/571	AH Systems	325	June 2007	1 year
07	Horn Antenna (18-26.5GHz)	3160-09	EMCO	1240	June 2007	1 year
08	Power Splitter	11667B	Hewlett Packard	645348	n/a	n/a
09	Climatic Chamber	VT4004	Voltsch	G1115	May 2007	1 year
10	High Pass Filter	5HC2700	Trilithic Inc.	9926013	n/a	n/a
11	High Pass Filter	4HC1600	Trilithic Inc.	9922307	n/a	n/a
12	Pre-Amplifier	JS4-00102600	Miteq	00616	May 2007	1 year
13	Power Sensor	URV5-Z2	Rohde & Schwarz	DE30807	May 2007	1 year
14	Digital Radio Comm. Tester	CMD-55	Rohde & Schwarz	847958/008	May 2007	1 year
15	Universal Radio Comm. Tester	CMU 200	Rohde & Schwarz	832221/06	May 2007	1 year
16	LISN	ESH3-Z5	Rohde & Schwarz	836679/003	May 2007	1 year
17	Loop Antenna	6512	EMCO	00049838	July 2007	2 years

## 7 BLOCK DIAGRAMS

### Radiated Testing

#### ANECHOIC CHAMBER

