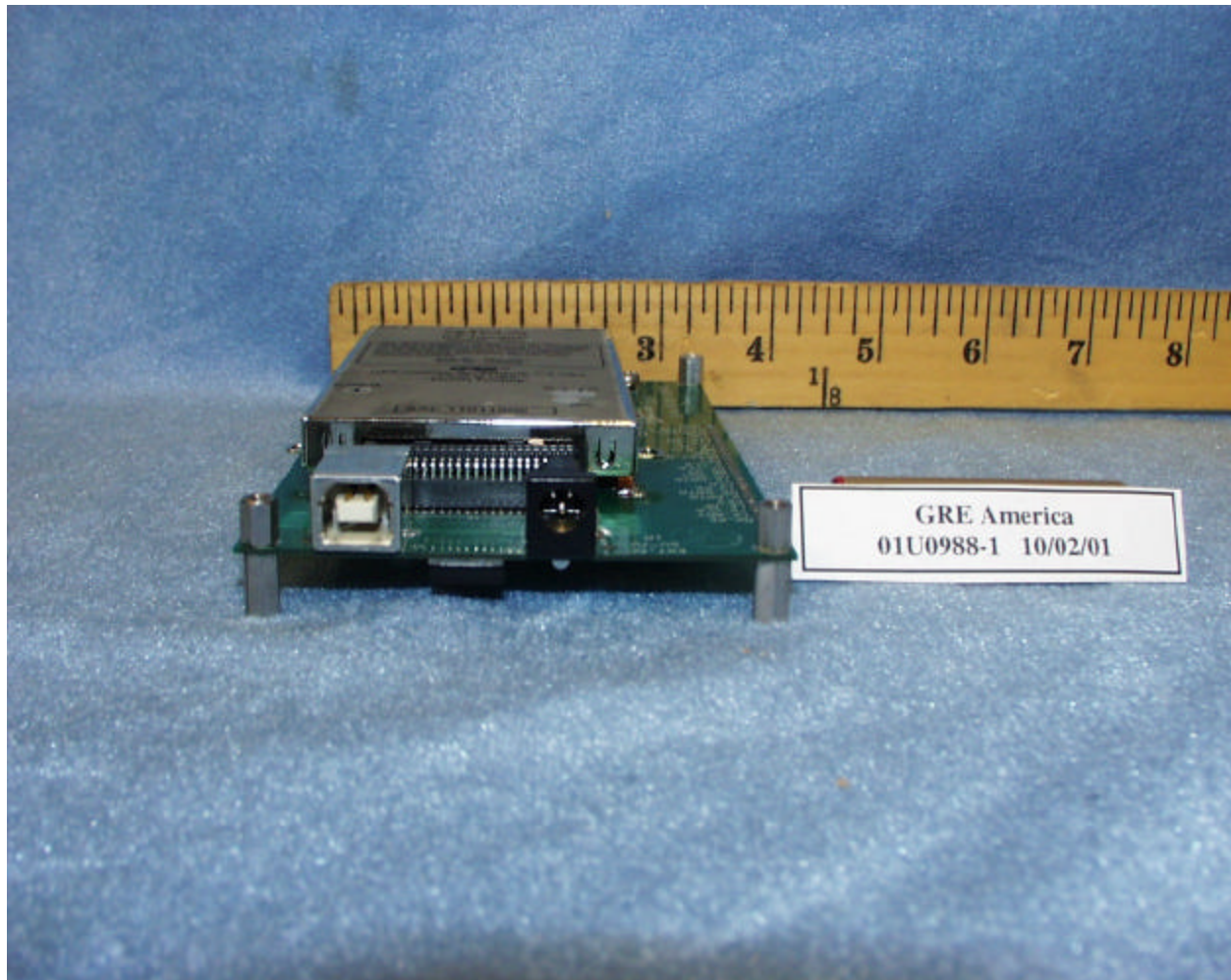
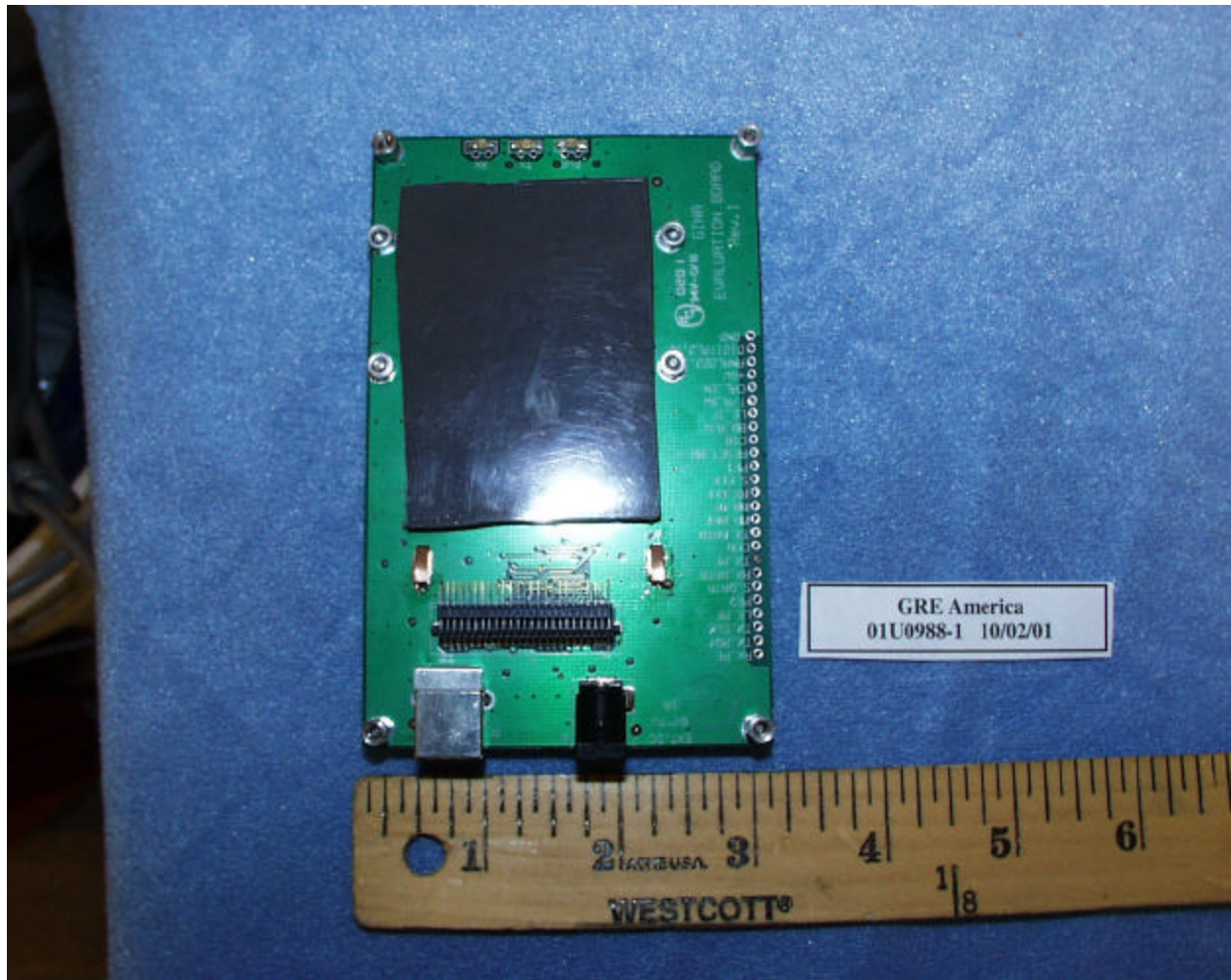
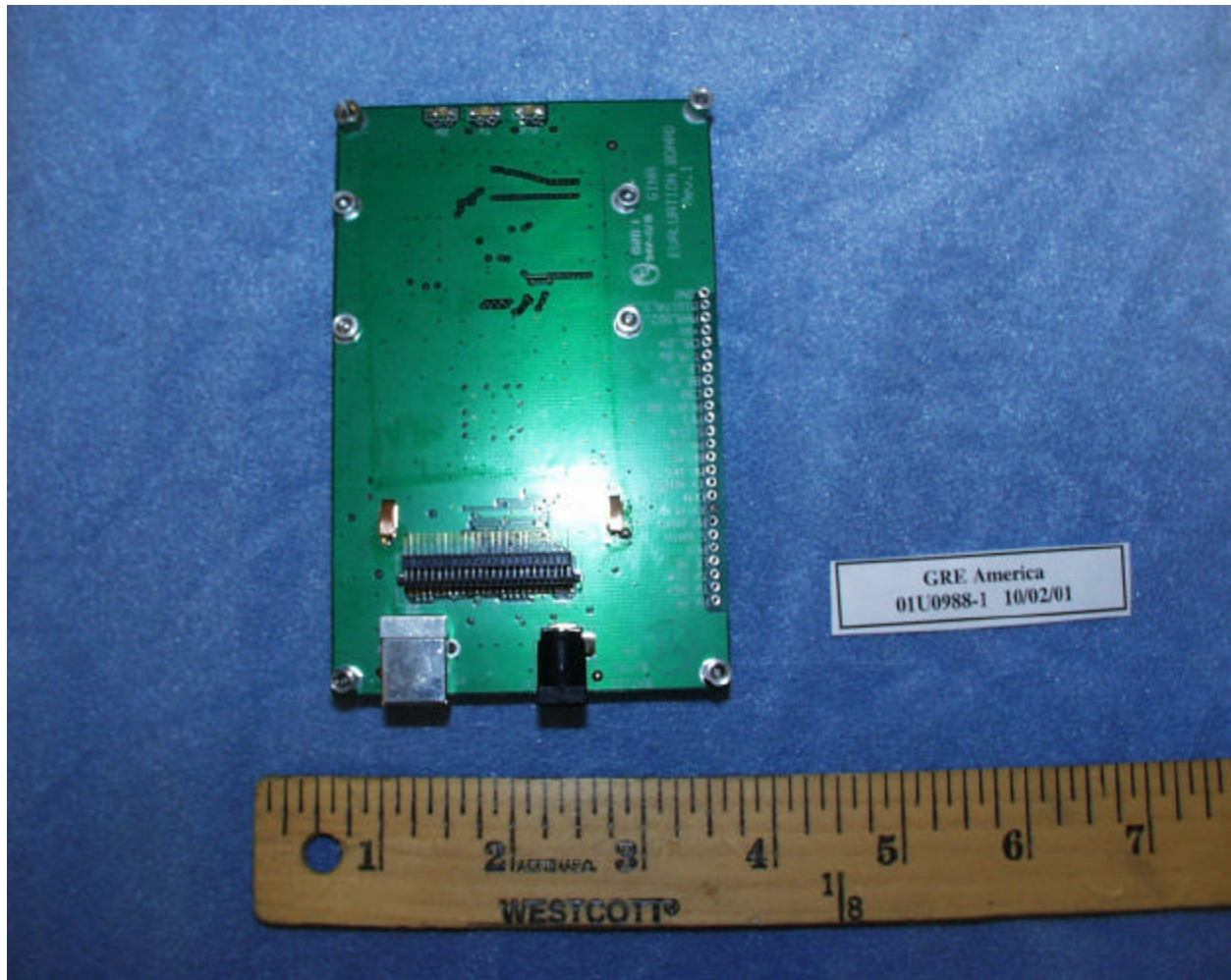


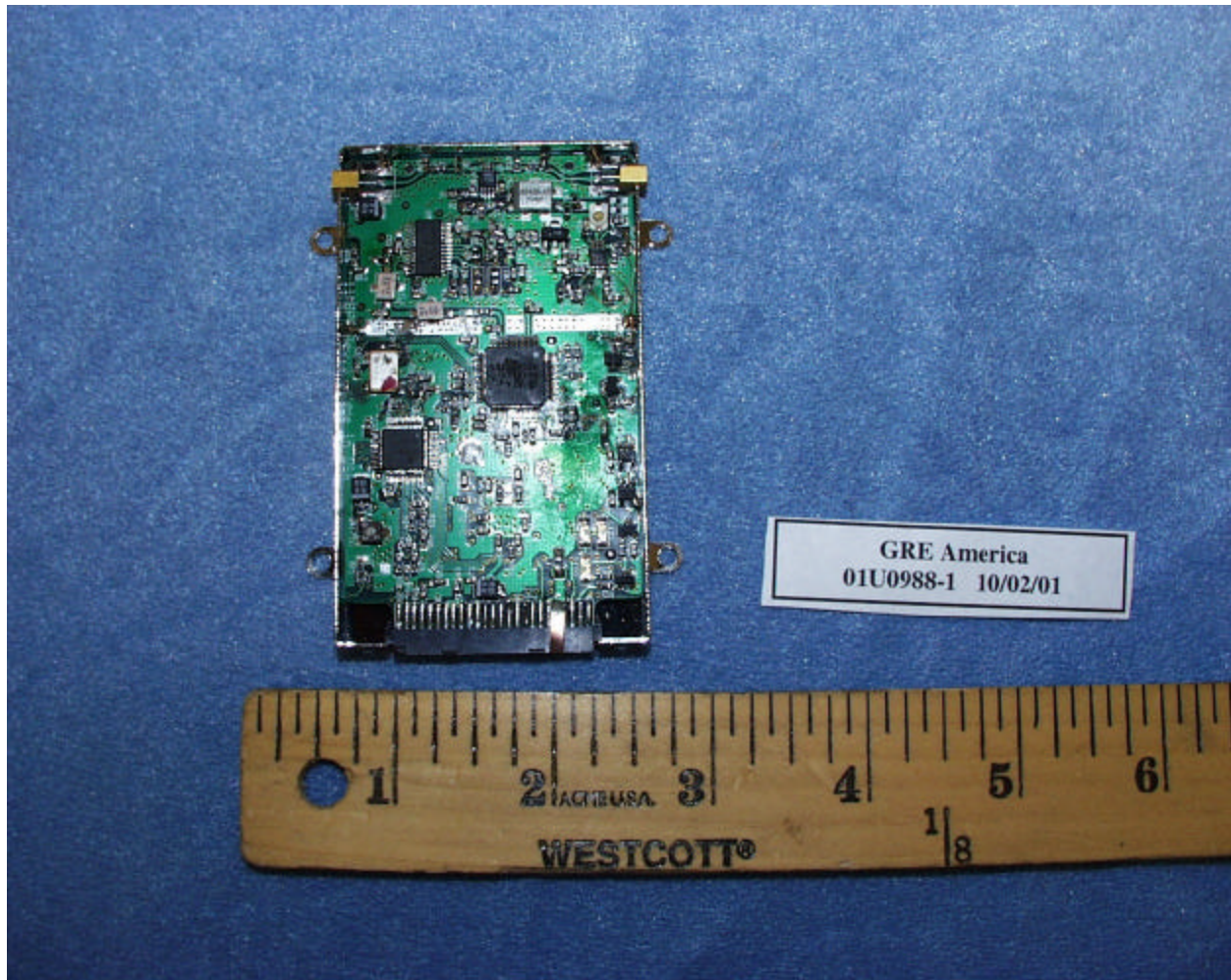


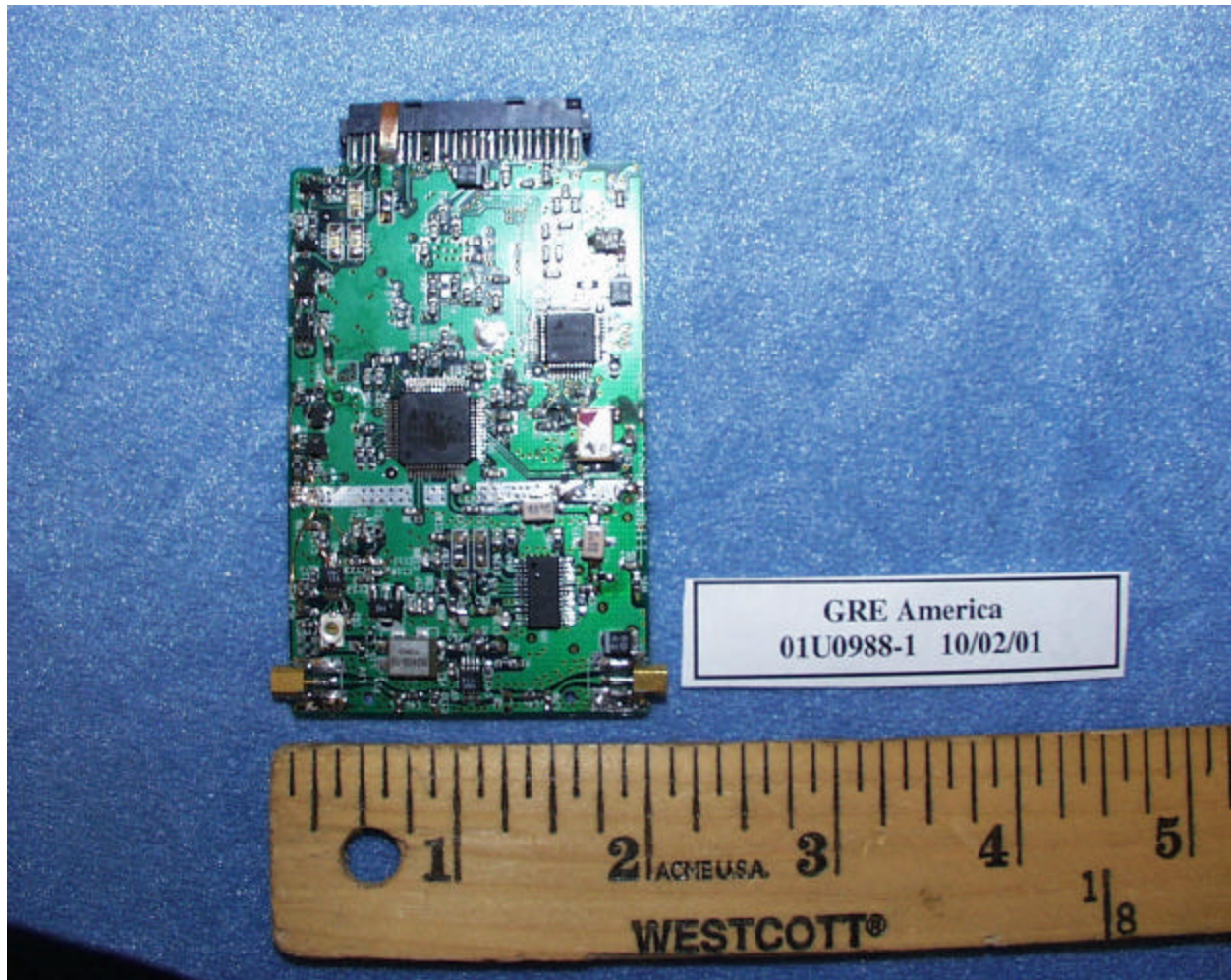


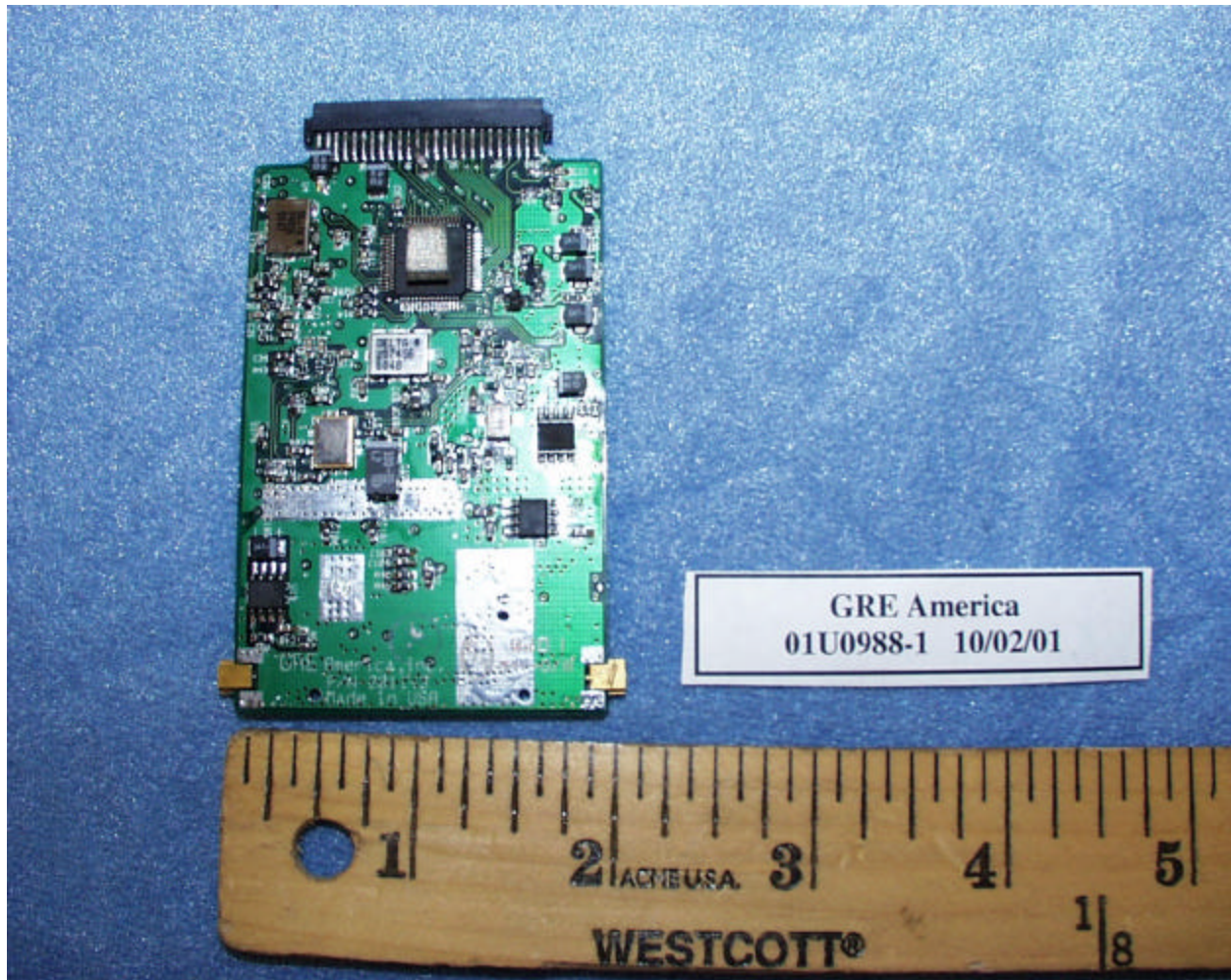


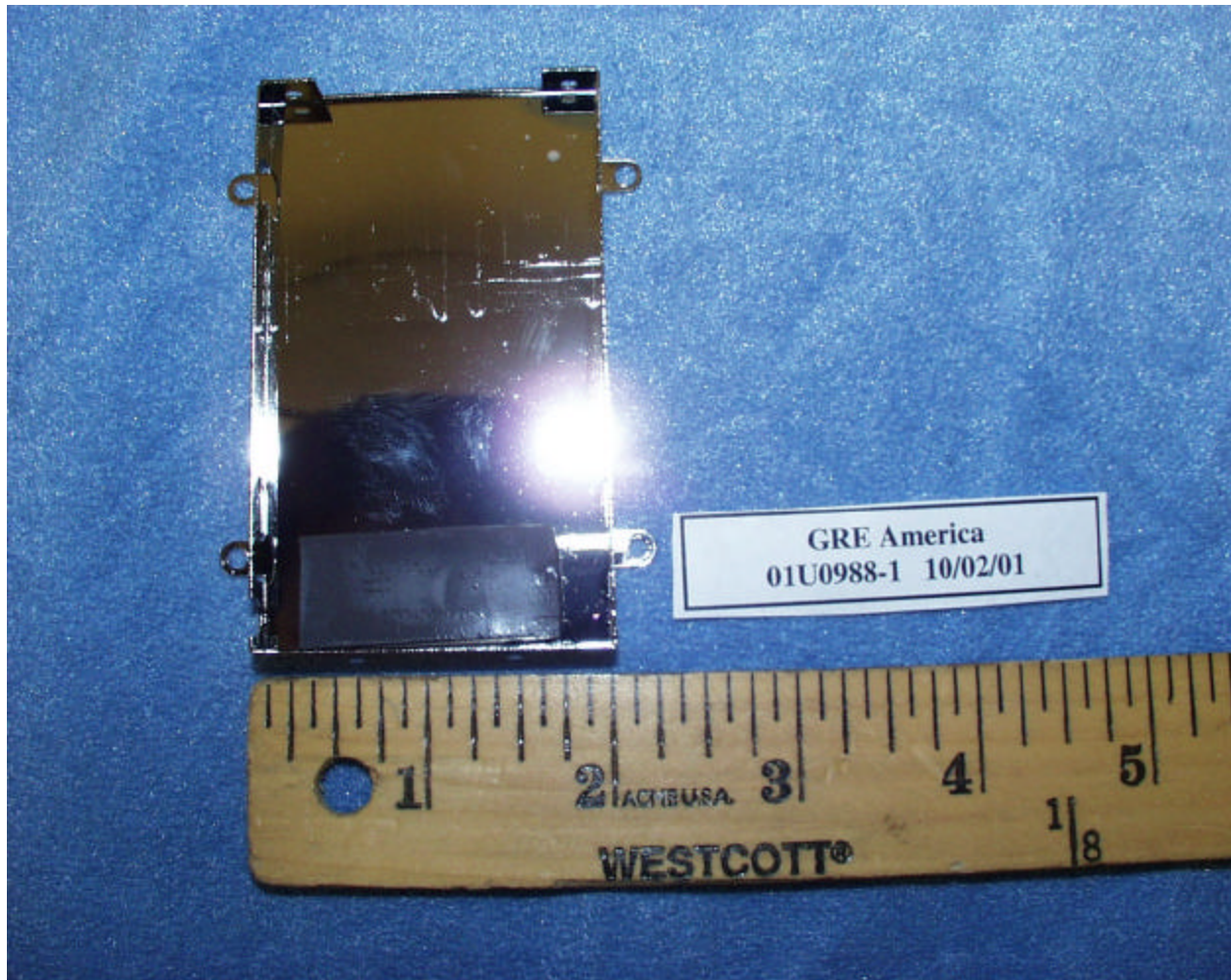












MPE CALCULATION

MPE CALCULATION for GRE S2403BP120

Formular used in the MPE Calculations:

$$\begin{aligned} E^2/3770 &= S, \text{ mW/cm}^2 \\ P_{\text{watts}} * G_{\text{gain}} &= 10^{(P_{\text{dBm}} - 30 + G_{\text{dBi}})/10} \\ E, \text{ V/m} &= (P_{\text{watts}} * G_{\text{gain}} * 30)^{.5} / d, \text{ meters} \\ d &= ((P_{\text{watts}} * G * 30) / 3770 * S)^{.5} \text{ ----- (A)} \end{aligned}$$

Since

$$\begin{aligned} S \text{ (mW/cm}^2\text{)} &= 1.00 && \text{from 1.1310 Table 1} \\ P \text{ (dBm)} &= 22.7 && \text{EUT output power} \\ G \text{ (dBi)} &= 5.15 \text{ EUT} && \text{antenna gain} \end{aligned}$$

Substitute these parameters into the A above, we have
MPE safe distance d (cm) = 7.0

NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less

MPE CALCULATION for GRE TELEX 2415

Formular used in the MPE Calculations:

$$\begin{aligned} E^2/3770 &= S, \text{ mW/cm}^2 \\ P_{\text{watts}} * G_{\text{gain}} &= 10^{(P_{\text{dBm}} - 30 + G_{\text{dBi}})/10} \\ E, \text{ V/m} &= (P_{\text{watts}} * G_{\text{gain}} * 30)^{.5} / d, \text{ meters} \\ d &= ((P_{\text{watts}} * G * 30) / 3770 * S)^{.5} \text{ ----- (A)} \end{aligned}$$

Since

$$\begin{aligned} S \text{ (mW/cm}^2\text{)} &= 1.00 && \text{from 1.1310 Table 1} \\ P \text{ (dBm)} &= 18.9 && \text{EUT output power} \\ G \text{ (dBi)} &= 9.01 \text{ EUT} && \text{antenna gain} \end{aligned}$$

Substitute these parameters into the A above, we have
MPE safe distance d (cm) = 7.0

NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less

**MPE CALCULATION for GRE OMNI ANT - GAIN LESS THAN
0 dBd (2.15dBi)**

Formular used in the MPE Calculations:

$$E^2/3770 = S, \text{ mW/cm}^2$$

$$P_{\text{watts}} * G_{\text{gain}} = 10^{(P_{\text{dBm}} - 30 + G_{\text{dBi}})/10}$$

$$E, \text{ V/m} = (P_{\text{watts}} * G_{\text{gain}} * 30)^{.5} / d, \text{ meters}$$

$$d = ((P_{\text{watts}} * G * 30) / 3770 * S)^{.5} \text{ ----- (A)}$$

Since

$$S \text{ (mW/cm}^2\text{)} = 1.00 \quad \text{from 1.1310 Table 1}$$

$$P \text{ (dBm)} = 27.0 \quad \text{EUT output power}$$

$$G \text{ (dBi)} = 2.15 \text{ EUT antenna gain}$$

Substitute these parameters into the A above, we have

$$\text{MPE safe distance } d \text{ (cm)} = 8.1$$

NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less

FREQUENCY RANGE-CORRECTION LETTER

425 Harbor Blvd.
Belmont, California 94002

GRE GRE AMERICA, INC.

Tel: (650) 591-1400
Fax: (650) 591-2001

Sales Email: gre@greamerica.com
Technical support: support@greamerica.com
WLAN support: wlan@greamerica.com

December 7, 2001

RE: FCC ID DE 8-2011

Mr. Joe Dichoso
Office of Engineering and Technology Laboratory
Federal Communications Commission
7435 Oakland Mills Rd
Columbia, MD 21046-1609

Dear Mr. Dichoso:

The Documentation originally provided to the FCC was submitted by mistake.
Please accept our apology for this error.

This Documentation submitted had been prepared and is intended to support our Japan Application as the Frequency Range for Japan is 2.4 through 2.4965 Ghz.

The corrected Documentation is enclosed along with this Letter. This changes the Frequency Range to the FCC Requirement of 2.4 through 2.4835 Ghz. Again, we apologize for this oversight.

This Product (under DE 8-2011) has been Factory Set at 2.4 – 2.4835 Ghz for use in the USA Market .

Please grant approval to this device as a modular device.

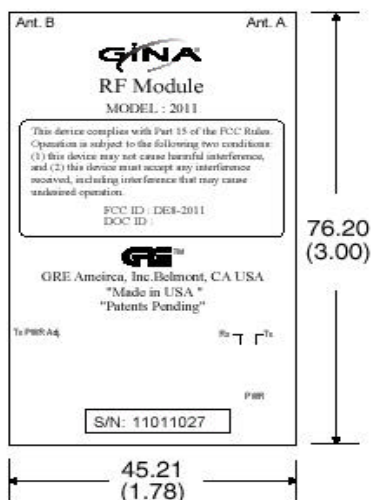
Sincerely,



Teru Takahashi,
President

PROPOSED FCC ID LABEL

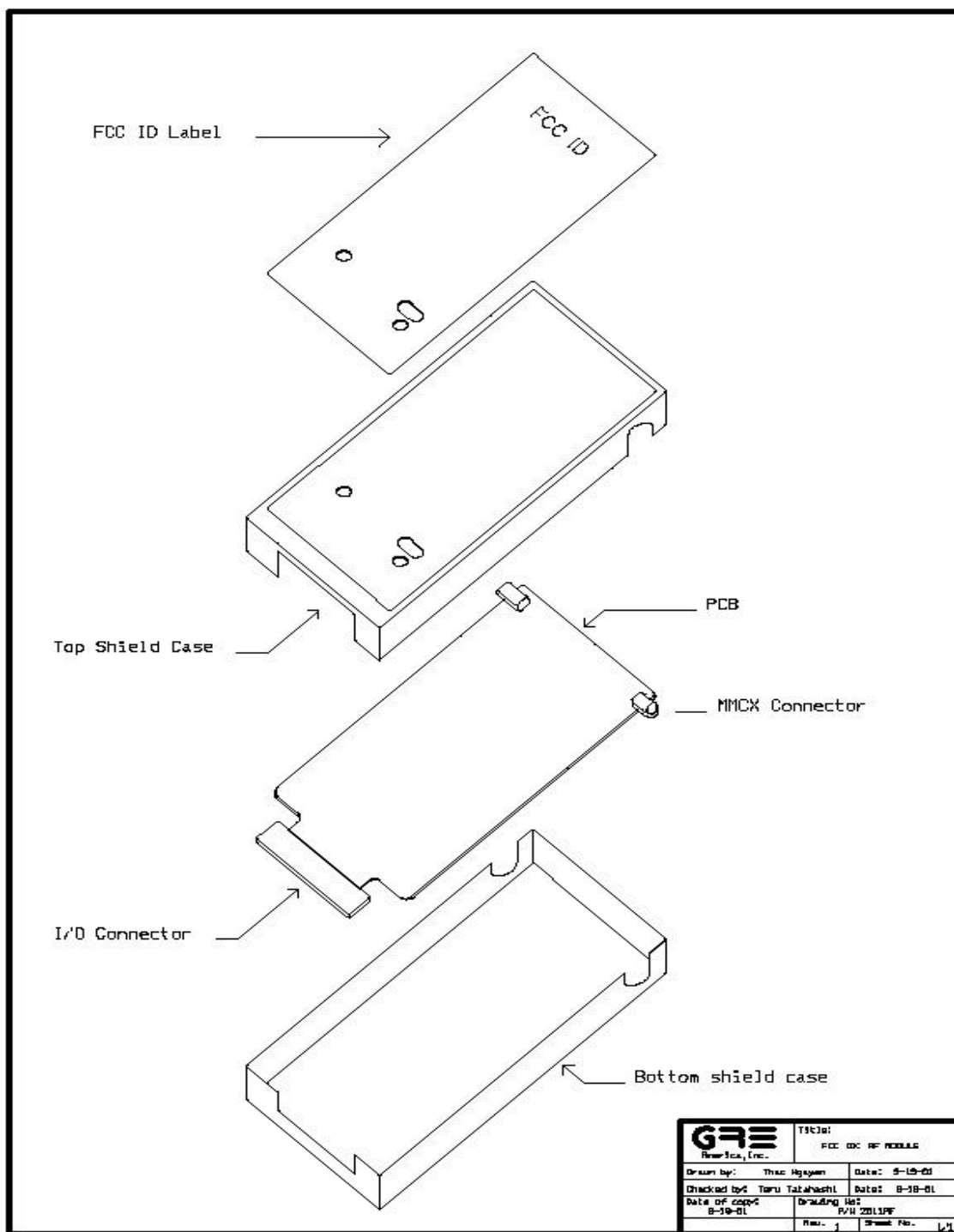
FCC LABEL INFORMATION



1. Tolerance is .0.5
2. All legend to be black on silver background
3. Material: 0.13 (9.005) Mat silver aluminum foil, pressure sensitive adhesive backing.

Note: Unless otherwise specified.

GRE TM GRE America, Inc.		GINA FCC LABEL MODEL: 2011	
DRAWN BY: Raj Gounder	DATE: 9/18/2001	DRAWING No.:	SCALE: 1:1
APPROVED BY:	DATE:	DATE OF COPY: 9/18/2001	REV:



AGENT AUTHORIZATION LETTER

425 Harbor Blvd.
Belmont, California 94002

GRE GRE AMERICA, INC.

Tel: (650) 591-1400
Fax: (650) 591-2001

Agent Authorization Format (Federal Communications Commission)

Sept. 28, 2001

Federal Communications Commission
Authorization and Evaluation Division
Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

Gentleman:

We, the undersigned, hereby authorize Compliance Certification Services to act on our behalf in all matters relating to applications for equipment authorization, including the signing of all documents relating to these matters. Any and all acts carried out by COMPLIANCE certification Service on our behalf shall have the same effect as our own.

We also hereby certify that no party to the applications authorized hereunder is subject to a denial of benefits, that includes FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 853(a).

This agreement expires one year from the current date.

Sincerely,


Teru Takahashi
President

REQUEST FOR CONFIDENTIALITY

425 Harbor Blvd.
Belmont, California 94002

GRE GRE AMERICA, INC.

Tel: (650) 591-1400
Fax: (650) 591-2001

Sept. 28, 2001

Federal Communications Commission
Authorization and Evaluation Division
Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

Gentleman:

In accordance with the 0.459 CRF47 FCC Rules, GRE America requests confidentiality for the *Block Diagram/ Schematics/Theory of Operation* of the attached test reports.

These documents contain detailed system and equipment description and related information about the product, which we consider to be proprietary, confidential, and a custom design and otherwise, would not be released to the public. Since this design is a basis from which future technological products will evolve, GRE America feels that this information will be of benefit to its competitors, and that the disclosure of the information in these documents would give our competitors an unfair advantage in the markets.

Sincerely,



Teru Takahashi
President

ANTENNA SPECIFICATION

425 Harbor Blvd.
Belmont, California 94002



GRE AMERICA, INC.

Tel: (650) 591-1400
Fax: (650) 591-2001

ANTENNA GAIN & CABLE LOSS CALCULATIONS

The two antennas are constructed with coaxial cable and non-standard MMCX connector. Below we have calculated the total net gain with the cable loss.

1. OMNIDIRECTIONAL ANTENNA CUSHCRAFT S2403BP120

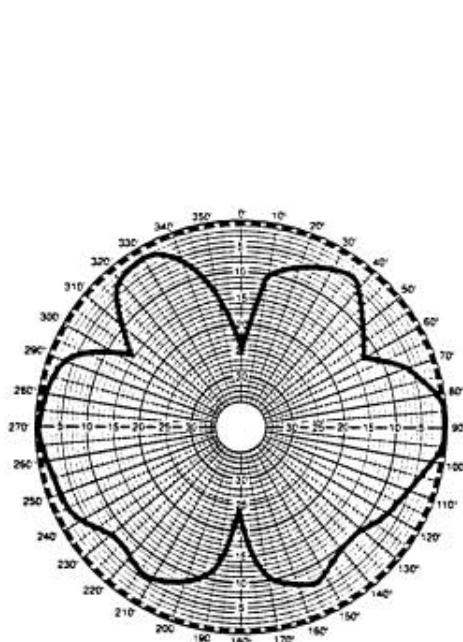
This antenna is constructed with a 10 ft. Ultralink cable Part number TL92463. The Connector and cable has a loss of 4.3 dB.

Antenna gain	= 3.0 dBd
Cable loss	= 3.8 dBd
Total gain	= -0.8 dBd

Connector loss	= -0.5 dBd
Net gain	= -1.3 dBd
Or	= 0.84 dBi

Type	Omni
Frequency	2.404 to 2.478 GHz
Gain	3 dBd
Front to Back	N/A
Bandwidth, 1.5.1	100 MHz
Beamwidth	-3 dB
E-plane	45°
H-plane	360°
Connector Type	MMCX
Height	13.5"
Enclosure Material	Fiberglass
Weight	6 oz.
Mount style	Pipe clamp
Max. Mast Diameter	2"

SEE RENDERING ON NEXT PAGE



2. DIRECTIONAL ANTENNA TELEX 2415

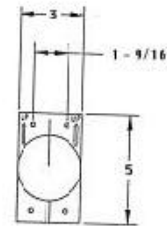
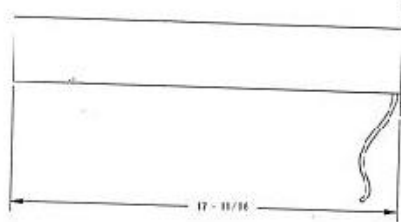
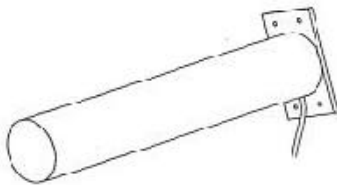
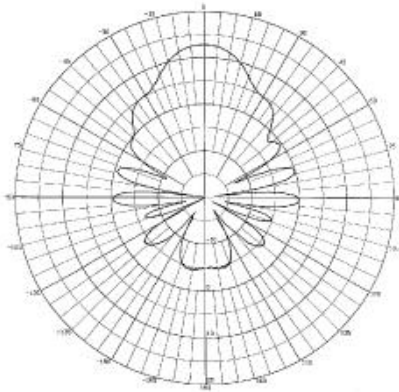
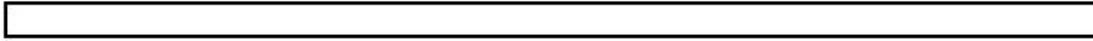
SEE RENDERING ON NEXT PAGE

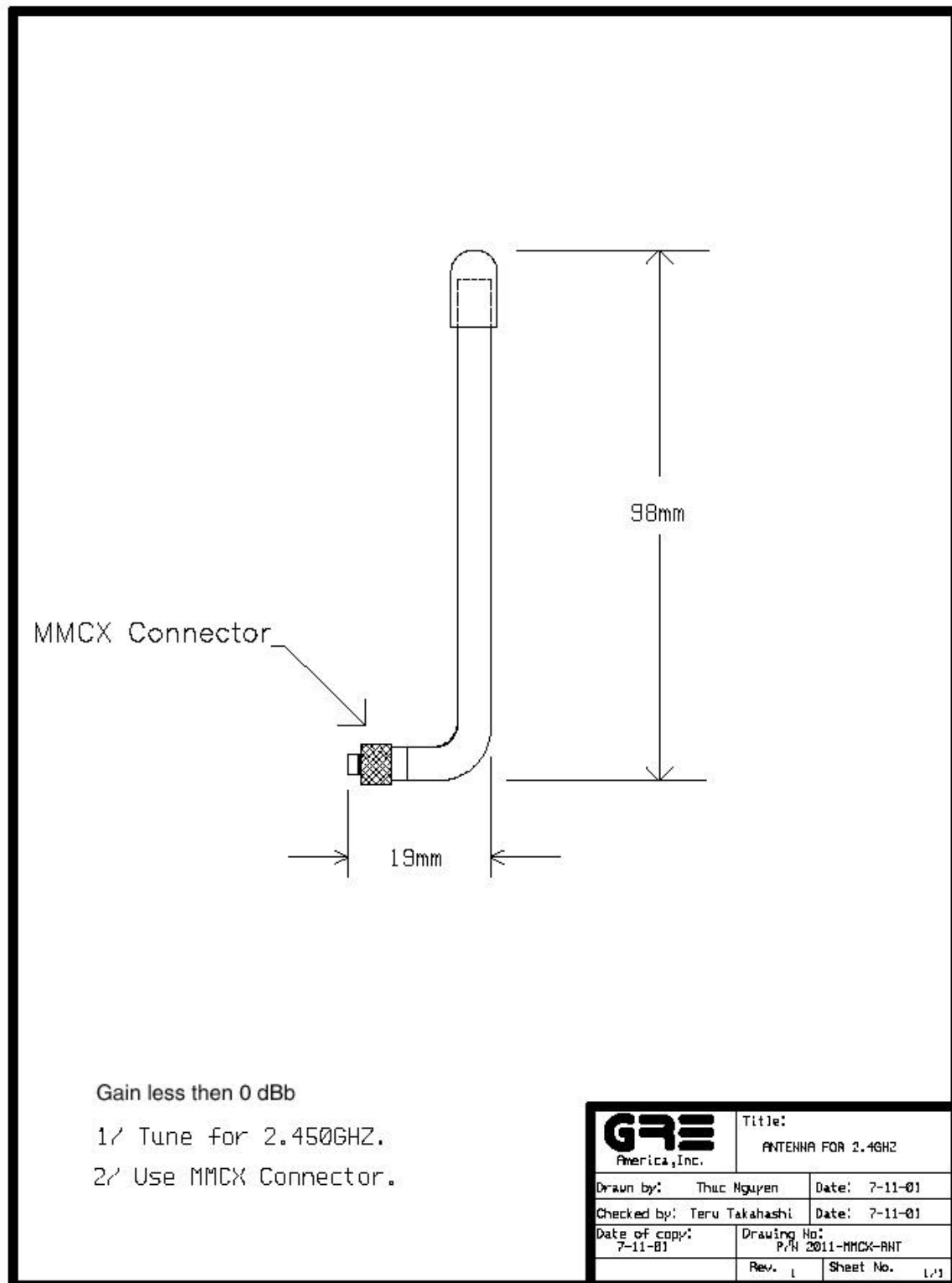
This antenna is constructed with a 26 ft. Ultralink cable Part number TL92463. Connector and cable for 26 ft is 8.1 dBd.

Antenna gain = 6.86 dBd
Cable loss = 7.6 dBd
Total gain = -0.74 dBd

Connector loss = -0.5 dBd
Net gain = -1.24 dBd
Or = 0.9 dBi

Polarity	Vertical or Horizontal
Frequency	2.404 to 2.478 GHz
Gain	9 dBi or 6.86 dBd
Diameter	3" x 18"
Front to Back	>20 dB
SWR	1.5:1 maximum
Half Power Beamwidth	30°
Nominal Impedance	50 ohms
Connector Type	MMCX
Weight	25 oz
Mount	U-Bolt Provided
Max. Mast Diameter	1.52 "





USER'S MANUAL



Models : 2011 RF Module

User Manual

