

849 NW State Road 45
Newberry, FL 32669 USA
Phone: 888.472.2424 or 352.472.5500
Fax: 352.472.2030
Email: info@timcoengr.com
Website: www.timcoengr.com

FCC PART 15 TEST REPORT

Applicant	BG TECH AMERICA, INC.
Address	300 PARK BOULEVARD SUITE 335
	ITASCA, IL 60143
FCC ID	U6BCG7
Model Number	EWR-737 (Model with no voice) EWR-757 (Model with voice)
Product Description	RADAR DETECTOR
Date Sample Received	3/23/2007
Date Tested	4/15/07
Tested By	JOSEPH SCOGLIO
Approved By	MARIO DE ARANZETA
Report Number	688AUT7TestReport.doc
Total Pages	11
Test Results	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL

**THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.**



Certificate # 0955-01

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STATEMENT OF COMPLIANCE

This equipment has been tested in accordance with the standards identified in the referenced test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report and demonstrate that the equipment complies with the appropriate standards.

I attest that the necessary measurements were made by me or under my supervision, at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45, Newberry, Florida 32669 USA.



Certificate #0955-01

Authorized by: Mario de Aranzeta

Authorized Signature: *<Mario de Aranzeta>*

Function: Engineer

Date: 4/23/2007

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GENERAL INFORMATION

The test results relate only to the items tested.	
DUT Description	Radar Detector
FCC ID	U6BCG7
Model Number	EWR-737 (Model with no voice) EWR-757 (Model with voice)
DUT Power Source	<input type="checkbox"/> 110–120Vac/50– 60Hz <input checked="" type="checkbox"/> DC Power <input type="checkbox"/> Battery Operated Exclusively
Test Item	<input type="checkbox"/> Prototype <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Production
Type of Equipment	<input type="checkbox"/> Fixed <input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable
Laboratory Test Conditions	Temperature: 26°C Humidity: 55%
Modifications to DUT:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explanation below)

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TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/20/07	3/19/10
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
Antenna: Biconnical	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Antenna: Biconnical	Eaton	94455-1	1096	CAL 10/11/06	10/11/08
Antenna: Biconnical	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Antenna: Standard Gain Horn 8.2-12.5 GHz	Systron Donner	DBG-520-20	Not Serialized	No Cal req.	No Cal req.
Antenna: Standard Gain Horn 18.0-26.3 GHz	Systron Donner	DBE-520-20	Not Serialized	No Cal req.	No Cal req.
Analyzer Silver Tower Quasi-Peak Adapter	HP	85650A	3303A01844	CAL 10/30/06	10/30/08
Analyzer Silver Tower RF Preselector	HP	85685A	2620A00294	CAL 3/6/07	3/6/09
Analyzer Silver Tower Spectrum Analyzer	HP	8568B Opt 462	3552A22064 3638A08608	CAL 10/30/06	10/30/08
LISN	Electro-Metrics	ANS-25/2	2604	CAL 10/5/06	10/5/08
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Antenna: Log-Periodic	Eaton	96005	1243	CAL 12/14/05	12/14/07

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TEST PROCEDURES

RADIATION INTERFERENCE: Testing was done in accordance with ANSI C63.4-2003. Section 15.35(b) specifies the use of an average detector in this band. In addition, the peak level of an emission shall not exceed the average limit by more than 20 dB using a minimum resolution B=bandwidth (RBW) of 1 MHz and minimum Video Bandwidth (VBW) OF 1 MHz. The following procedure is designed to determine if there are any spurious emissions from the local oscillator within the band of interest along with any additional spurious emissions caused by other circuitry within the device.

- 1) Determine the frequency of the peak emission:
Start Frequency 11.7 GHz
Stop Frequency 12.2 GHz
RBW equal to or greater than 1 MHz
VBW equal to or greater than 1 MHz
Detector Function Peak
Maximize the emissions with regards to device orientation, antenna polarization, and antenna height. Sweep the band using Max Hold for a minimum of 2 minutes. Record this frequency for measuring the peak emission. In addition record the frequency of other spurious emissions noted.
- 2) Determine the peak level of the emission:
Center Frequency Set to the frequency determined in Step 1
RBW Equal to or greater than 1 MHz
VBW Equal to or greater than 1 MHz
Detector Function Peak Measure the value of the peak emission using Max Hold for a minimum of 2 minutes. This can be done at zero span or a frequency span where the analyzer does not show a "Measurement Uncalibrated" message. Record the peak value. If the peak measurement is compliant with the average limit an average measurement is not necessary. If the peak value exceeds the average limit by less than 20 dB proceed to Step 3.
- 3) Determine the average level of the emission:
Center Frequency Set to the frequency determined in Step 1
Span Zero
RBW Equal to or greater than 1 MHz
VBW Equal to or greater than 10 Hz
Detector Function Peak
This measurement uses video averaging and must be done in Linear mode. The analyzer Reference Level is adjusted so that a signal is clearly visible on the screen. Measure the value of the emission using Max Hold for a minimum of 2 minutes. Record this as the average value. Step 2 and Step 3 should be repeated for other spurious emissions.

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TEST PROCEDURES CONTINUED

FORMULA OF CONVERSION FACTORS: The field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the preselector was accounted for in the spectrum analyzer meter reading.

Example:

$$\begin{array}{rcll} \text{Freq (MHz)} & \text{METER READING} & + \text{CL} & + \text{ACF} = \text{FS} \\ 33 & 20 \text{ dBuV} + 10.36 \text{ dB/m} & + 1.02 \text{ dB} & = 31.38 \text{ dBuV/m @ 3m} \end{array}$$

ANSI C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The DUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

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RADIATED SPURIOUS EMISSIONS

Rules Part No.: 15.109

Requirements:

Frequency	Limits
30 – 88 MHz	40.0 dB μ V/m measured @ 3 meters
80 – 216 MHz	43.5 dB μ V/m measured @ 3 meters
216 – 960 MHz	46.0 dB μ V/m measured @ 3 meters
Above 960 MHz	54.0 dB μ V/m measured @ 3 meters
11.7 to 12.2 GHz	54.0 dB μ V/m measured @ 3 meters

Test Procedure: A search was made of the spectrum from 30 to 1000MHz and from 11.7 to 12.2GHz. Measurements in the 11.7 to 12.2GHz band were made with a Standard Gain Horn. The measurements in the 11.7 to 12.2GHz band represent the ambient noise levels. The attached plots were made with peak detector with the analyzer in a maximum hold for 2 minutes.

Test Data:

Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
12,020.00	7.9	H	7.81	29.76	45.47	8.53
12,086.00	7.4	V	7.86	29.80	45.06	8.94

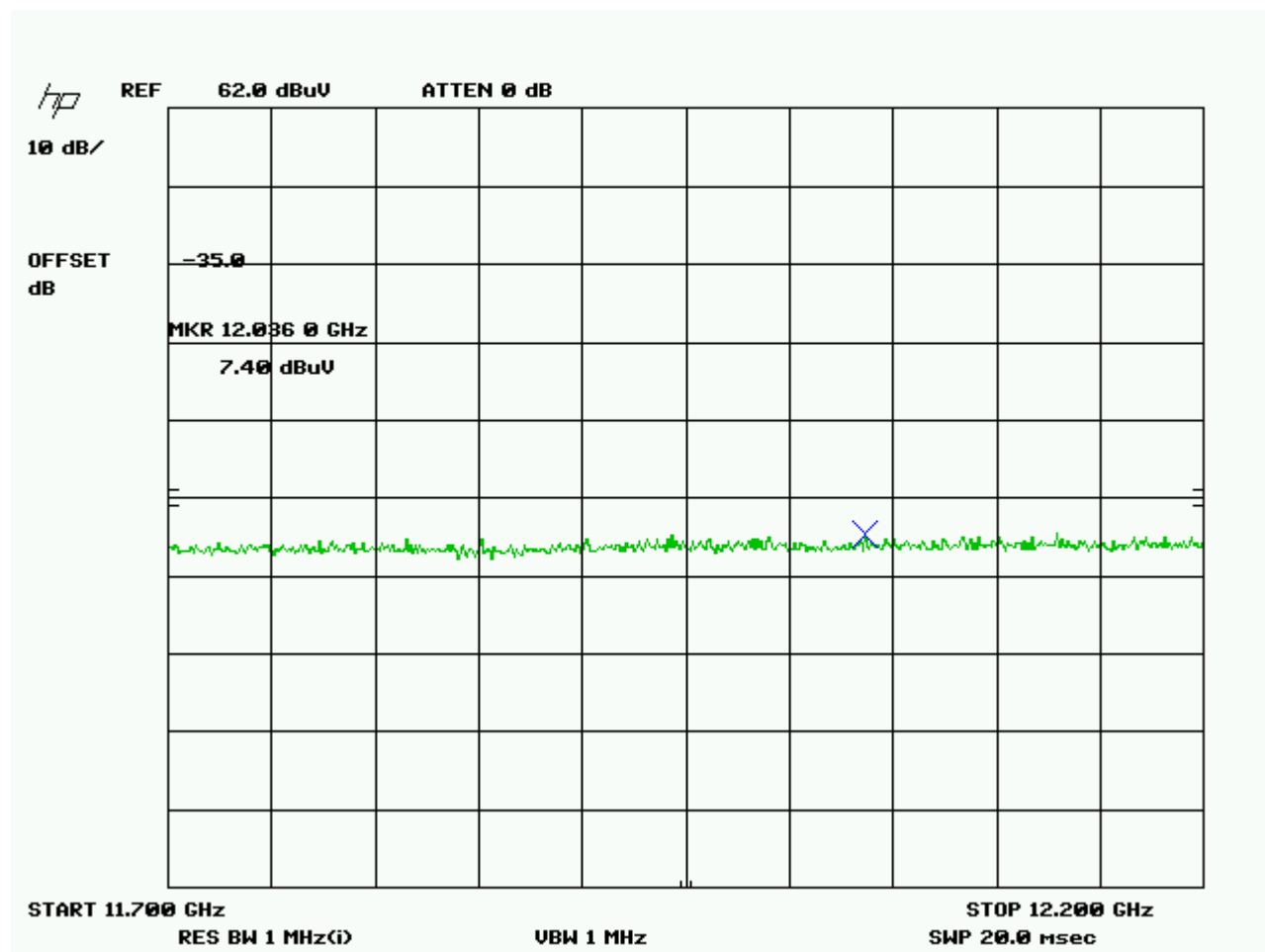
* The EUT is operating on the following bands; 10.525GHz(X-Band), 24.150GHz(K-Band), 33.4-36.0GHz(KA Band)

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VERTICAL PLOT

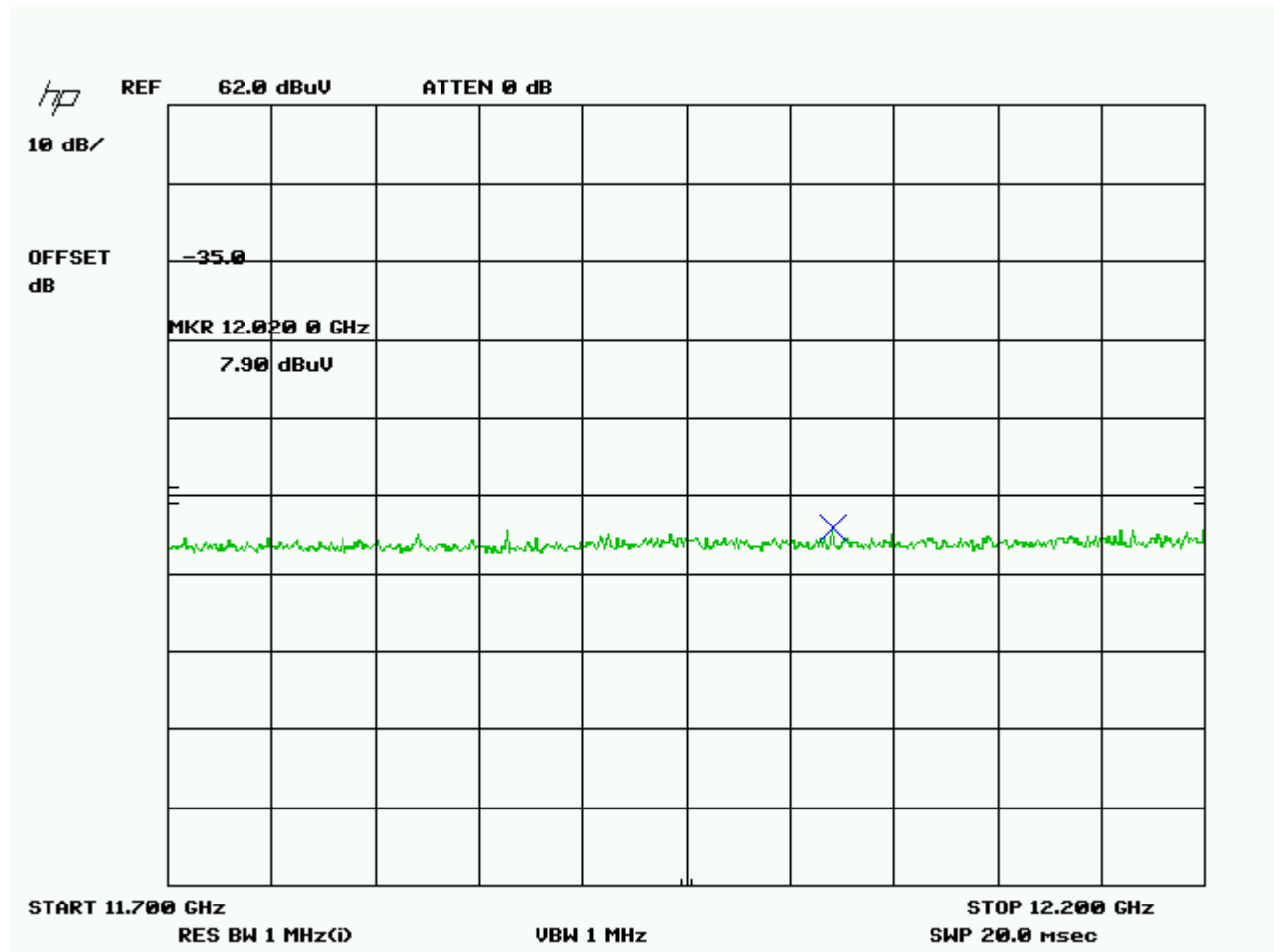


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HORIZONTAL PLOT



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RADIATED SPURIOUS EMISSIONS

Rules Part No.: 15.109(a) - Class B Digital Device
Model EWR-757

Requirements:

Frequency	Limits
30 – 88	40.0 dB μ V/m measured @ 3 meters
80 – 216	43.5 dB μ V/m measured @ 3 meters
216 – 960	46.0 dB μ V/m measured @ 3 meters
Above 960	54.0 dB μ V/m measured @ 3 meters

Test Procedure: The procedure used was ANSI C63.4-2003 Section 8.2. The frequency was scanned from 30 MHz to 1.0 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. The DUT was measured in three (3) orthogonal planes when necessary.

Test Data:

Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
30.00	3.8	H	0.40	13.80	18.00	22.00
30.00	9.7	V	0.40	12.40	22.50	17.50
36.10	3.0	H	0.43	11.95	15.38	24.62
36.10	11.7	V	0.43	10.32	22.45	17.55
40.00	2.4	H	0.45	11.40	14.25	25.75
40.00	6.9	V	0.45	9.70	17.05	22.95
80.00	6.3	H	0.60	6.60	13.50	26.50
80.00	8.9	V	0.60	6.70	16.20	23.80
82.60	4.8	H	0.61	6.91	12.32	27.68
82.60	8.3	V	0.61	7.27	16.18	23.82
90.00	7.9	H	0.63	8.20	16.73	26.78
90.00	13.5	V	0.63	9.50	23.63	19.88
92.50	6.8	H	0.63	8.80	16.23	27.27
92.50	10.5	V	0.63	10.10	21.23	22.27
419.50	5.5	H	1.22	16.20	22.92	23.08
419.50	6.9	V	1.22	16.00	24.12	21.88

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