TEST REPORT FROM:

COMMUNICATION CERTIFICATION LABORATORY 1940 W. Alexander Street Salt Lake City, Utah 84119-2039

Type of Report: Certification

TEST OF: SL-1021

FCC ID: 09C-SL1021

To FCC PART 15.247, Subpart C

Test Report Serial No: 73-7455

Applicant:

3Com Corporation 3930 West Parkway Blvd. West Valley City, UT 84119

Date(s) of Test: February 16 & 20, 2001

Issue Date: March 30, 2001

Equipment Receipt Date: February 16, 2001

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CERTIFICATION OF ENGINEERING REPORT

This report has been prepared by Communication Certification Laboratory to determine compliance of the device described below with the requirements of FCC PART 15.247, Subpart C. This report may be reproduced in full, partial reproduction may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested.

- Applicant: 3Com Corporation
- Manufacturer's: 3Com Corporation
- Brand Name: 3Com
- Model Number: SL-1021
- FCC ID: 09C-SL1021

On this 30th day of March 2001, I, individually, and for Communication Certification Laboratory, certify that the statements made in this engineering report are true, complete, and correct to the best of my knowledge, and are made in good faith.

COMMUNICATION CERTIFICATION LABORATORY

Checked by: Scott B. Earl Engineering Manager

Pested by: Kirk P. Thomas

Project Engineer

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SECTION 1. CLIENT INFORMATION AND MANUFACTURER:

1.1 Client Information:

Company Name: 3Com Corporation 3930 West Parkway Blvd. West Valley City, UT 84119

Contact	Name:	Kaan	Greger	rsen
Title:		Regu]	latory	Engineer

1.2 Manufacturer:

Company Name: 3Com Corporation 3930 West Parkway Blvd. West Valley City, UT 84119

Contact	Name:	Kaan Gregersen
Title:		Regulatory Engineer

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SECTION 2. EQUIPMENT UNDER TEST (EUT)

2.1 Identification of EUT:

Trade Name:3Com CorporationModel Name or Number:SL-1021Serial Number:N/AOptions Fitted:NoneCountry of Manufacture:U.S.A.

2.2 Description of EUT:

The 3Com M/N SL-1021 is a spread spectrum frequency hopping transceiver that operates in the 2.4000 to 2.4835 MHz band. This device is intended for installation within a host and provides a wireless connection to other like devices at a data rate of approx. 1 Mbps. The SL-1021 will install into a socket or may be soldered directly to the host motherboard. The communication interface between the SL-1021 and the host is a USB or serial type interface. Connection to the antenna, which may also be installed within the host, is provided through the wireless device to host interface.

This report covers the transmitter only. The receiver and class B computer peripheral are covered under a separate declaration of conformity report.

2.3 Modification Incorporated/Special Accessories on EUT:

There were no modifications or special accessories required to comply with the specification.

2.4 EUT and Support Equipment:

The FCC ID numbers for all the EUT and support equipment used during the test (including inserted cards) are listed below:

Brand Name	FCC ID	Description	Name of Interface
Model Number	Number		Ports / Interface Cables

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Brand Name Model Number	FCC ID Number	Description	Name of Interface Ports / Interface Cables
BN: 3Com (1) MN: SL-1021	09C- SL1021	Direct Sequence Spread Spectrum Device	See Section 2.5.
BN: 3Com MN: Tiberius SN: N/A	N/A	Test Platform	See Section 2.5.
BN: Dell MN: Inspiron 4000 SN: TW-07914H-12800- 11B-0882	DoC	Laptop Computer	USB / USB to Mini USB cable

Note: (1) EUT.

- (2) Interface port connected to EUT (See Section 2.5)
- (3) Mouse cable permanently attached.

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.5 Interface Ports on EUT:

Name of Ports	No. of Ports Fitted to EUT.	Cable Descriptions/Length
N/A	N/A	The SL-1021 is either installed into a socket or soldered directly to the host motherboard

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2.6 List of Channels:

Channel Number	Channel	Channel Number	Channel
	Frequency		Frequency
	(MHz)		(MHz)
1	2402.0	41	2442.0
2	2403.0	42	2443.0
3	2404.0	43	2444.0
4	2405.0	44	2445.0
5	2406.0	45	2446.0
6	2407.0	46	2447.0
7	2408.0	47	2448.0
8	2409.0	48	2449.0
9	2410.0	49	2450.0
10	2411.0	50	2451.0
11	2412.0	51	2452.0
12	2413.0	52	2453.0
13	2414.0	53	2454.0
14	2415.0	54	2455.0
15	2416.0	55	2456.0
16	2417.0	56	2457.0
17	2418.0	57	2458.0
18	2419.0	58	2459.0
19	2420.0	59	2460.0
20	2421.0	60	2461.0
21	2422.0	61	2462.0
22	2423.0	62	2463.0
23	2424.0	63	2464.0
24	2425.0	64	2465.0
25	2426.0	65	2466.0
26	2427.0	66	2467.0
27	2428.0	67	2468.0
28	2429.0	68	2469.0
29	2430.0	69	2470.0
30	2431.0	70	2471.0
31	2432.0	71	2472.0
32	2433.0	72	2473.0
33	2434.0	73	2474.0
34	2435.0	74	2475.0
35	2436.0	75	2476.0
36	2437.0	76	2477.0
37	2438.0	77	2478.0
38	2439.0	78	2479.0
39	2440.0	79	2480.0
40	2441.0		

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SECTION 3. TEST SPECIFICATION, METHODS & PROCEDURES

3.1 Test Specification:

Title: FCC PART 15.247, Subpart C (47 CFR 15).

Limits and methods of measurement of radio interference characteristics of radio frequency devices. Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

Purpose of Test: The tests were performed to demonstrate Initial compliance.

3.2 Methods & Procedures:

3.2.1 § 15.247

(a) Operation under the provisions of this section is limited to frequency hopping and direct sequence spread spectrum intentional radiators that comply with the following provisions:

(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

(i) For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequencies and the average time of within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

(ii) Frequency hopping systems operating in the 2400-2483.5 MHz and 5725- 5850 MHz bands shall use at least 75 hopping

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frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

(iii) Frequency hopping systems in the 2400-2483.5 MHz band may utilize hopping channels whose 20 dB bandwidth is greater than 1 MHz provided the systems use at least 15 non-over-lapping channels. The total span of hopping channels shall be at least 75 MHz. The average time of occupancy on any one channel shall not be greater than 0.4 seconds within the time period required to hop through all channels.

(2) For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

(b) The maximum peak output power of the intentional radiator shall not exceed the following:

(1) For frequency hopping systems in the 2400-2483.5 MHz band employing at least 75 hopping channels, all frequency hopping systems in the 5725-5850 MHz band, and all direct sequence systems: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

(2) For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

(3) Except as shown in paragraphs (b)(3) (i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(i) Systems operating in the 2400- 2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(ii) Systems operating in the 5725- 5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter peak output power.

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(iii) Fixed, point-to-point operation, as used in paragraphs (b)(3)(i) and (b)(3)(ii) of this section, excludes the use of point-to-multipoint systems, omni-directional applications, and multiple collocated intentional radiators transmitting the same information. The operator of the spread spectrum intentional radiator or, if the equipment is professionally installed, the installer is responsible for ensuring that the system is used exclusively for fixed, point-to-point operations. The instruction manual furnished with the intentional radiator shall contain language in the installation instructions informing the operator and the installer of this responsibility.

(4) Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

(c) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

(d) For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

(e) The processing gain of a direct sequence system shall be at least 10 dB. The processing gain represents the improvement to the received signal-to-noise ratio, after filtering to the information bandwidth, from the spreading/ despreading function. The processing gain may be determined using one of the following methods:

(1) As measured at the demodulated output of the receiver: the ratio in dB of the signal-to-noise ratio with the system spreading code turned off to the signal-to-noise ratio with the system spreading code turned on.

(2) As measured using the CW jamming margin method: a signal generator is stepped in 50 kHz increments across the pass band of the system, recording at each point the generator level required to produce the recommended Bit Error Rate (BER). This level is the

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jammer level. The output power of the intentional radiator is measured at the same point. The jammer to signal ratio (J/S) is then calculated, discarding the worst 20% of the J/S data points. The lowest remaining J/S ratio is used to calculate the processing gain, as follows: Gp = (S/N) o + Mj + Lsys, where Gp = processing gain of the system, (S/N) o = signal to noise ratio required for the chosen BER, Mj = J/S ratio, and Lsys = system losses. Note that total losses in a system, including intentional radiator and receiver, should be assumed to be no more than 2 dB.

(f) Hybrid systems that employ a combination of both direct sequence and frequency hopping modulation techniques shall achieve a processing gain of at least 17 dB from the combined techniques. The frequency hopping operation of the hybrid system, with the direct sequence operation turned off, shall have an average time of occupancy on any frequency not to exceed 0.4 seconds within a time period in seconds equal to the number of hopping frequencies employed multiplied by 0.4. The direct sequence operation of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

(g) Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

3.2.2 § 15.207 Conducted Limits

(a) For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 450 kHz to 30 MHz shall not exceed 250 microvolts. Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

(b) The following option may be employed if the conducted emissions exceed the limits in paragraph (a) of this section when measured using instrumentation employing a quasipeak detector function: If the level of the emission measured using the quasipeak instrumentation is 6 dB, or more, higher than the level of the same emission measured with instrumentation having an average detector and a 9 kHz minimum bandwidth, that emission is considered broadband and the level obtained with the quasipeak detector may be reduced by 13 dB for comparison to the limits. When employing this option, the following conditions shall be observed:

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 $\left(1\right)$ The measuring instrumentation with the average detector shall employ a linear IF amplifier.

(2) Care must be taken not to exceed the dynamic range of the measuring instrument when measuring an emission with a low duty cycle.

(3) The test report required for verification or for an application for a grant of equipment authorization shall contain all details supporting the use of this option.

(c) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 uV within the frequency band 535-1705 kHz.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in § 15.205, § 15.209, § 15.221, § 15.223, or § 15.227, as appropriate.

(d) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.2.3 Test Procedure

The testing was performed according to the procedures in ANSI C63.4 (1992). Testing was performed at CCL's anechoic chamber located in Salt Lake City, Utah. This site has been fully described in a report submitted to the FCC, and was accepted in a letter dated March 1, 1999 (31040/SIT).

CCL participates in the National Voluntary Laboratory Accreditation Program (NVLAP) and has been accepted under NVLAP Lab Code: 100272-0, which is effective until September 30,2001.

For radiated emissions testing performed at distances closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

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SECTION 4. OPERATION OF EUT DURING TESTING.

4.1 Operating Environment:

Power Supply: 3.3/5.0 VDC

4.2 Operating Modes:

Each mode of operation was exercised to produce worst-case emissions. The worst-case emissions were with the SL-1021 running in the following mode. The SL-1021 was placed in the transmit mode with the same type of modulation that would normally be used during normal operation.

4.3 Configuration & Peripherals:

The SL-1021 was placed on the table in the transmit mode with the same type of modulation that would normally be used during normal operation.

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SECTION 5. SUMMARY OF TEST RESULTS:

5.1 FCC PART 15.247, Subpart C

5.1.1 Summary of Tests:

Section	Test Performed	Frequency Range (MHz)	Result
15.247 (a)(1)	Hopping Channel Carrier Frequencies	2400 to 2483.5	Complied
15.247 (a)(1)(ii)	Average Time of Occupancy	2400 to 2483.5	Complied
15.247 (a)(1)(ii)	Emission Bandwidth	2400 to 2483.5	Complied
15.247 (b)(1)	Peak Output Power	2400 to 2483.5	Complied
15.247 (C)	Antenna Conducted Spurious Emissions	10 to 25,000	Complied
15.247 (C)	Radiated Spurious Emissions	10 to 25,000	Complied
15.247 (f)	Hybrid Systems	2400 to 2483.5	Complied
15.207	Line Conducted Emissions	0.45 to 30	Complied
	(Hot Lead to Ground)		
15.207	Line Conducted Emissions	0.45 to 30	Complied
	(Neutral Lead to Ground)		

5.2 Result

In the configuration tested, the EUT complied with the requirements of the specification.

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SECTION 6. MEASUREMENTS, EXAMINATIONS AND DERIVED RESULTS:

6.1 General Comments:

This section contains the test results only. Details of the test methods used, etc., can be found in Appendix 1 of this report.

6.2 Test Results

6.2.1 § 15.247 (a)(1) pseudorandomly ordered list of hopping frequencies and receiver input bandwidth

The SL-1021 contains a transceiver module that determines the pseudorandom sequence of the hop set in the data mode.

The following are two examples of possible 79 channel hopping sequences with channels identified as 1 through 79. The channel numbering scheme starts with channel 2 at 2402 MHz with the 79th channel then appearing at 2480 MHz as channel 80.

Sequence a: 2,17,68,55,4,77,56,27,70,80,22,33,57,34,29,79,44,50,3,71,66,36, 78,20,67,30,24,11,37,69,23,7,41,38,63,14,31,59,40,13,6,25,65,15, 61,73,58,47,19,28,54,76,74,48,52,75,5,42,64,72,62,51,60,18,45,53,1 6,39,46,32,49,43,8,21,9,12,10,26,35

Sequence b: 50,6,41,57,64,14,42,33,79,3,20,38,56,69,75,21,80,23,31,40,45,68, 32,28,4,15,34,59,71,61,70,5,72,13,48,70,39,54,78,7,77,62,30,2,8, 55,10,63,12,16,37,11,43,66,25,51,58,74,17,47,9,29,65,19,53,18,52,3 6,27,26,44,22,49,24,35,60,73,76,67

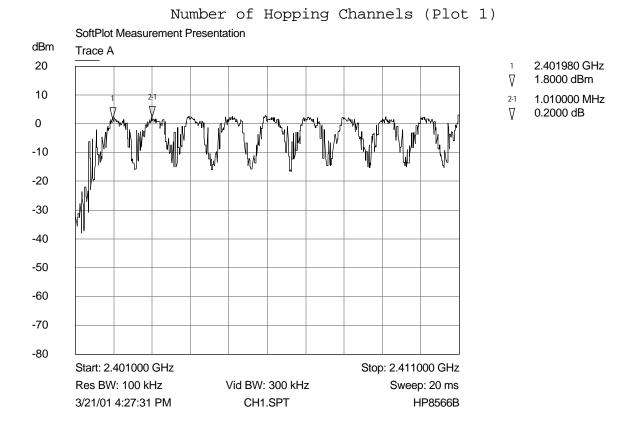
The pseudorandom sequence is generated in a nine-stage shift register whose 5^{th} and 9^{th} stage outputs are added in a modulo-two addition stage with the result fed back to the input of the first stage. This produces a pseudorandom sequence length of 511 bits.

6.2.2 § 15.247 (a)(1) Hopping Channel Carrier Frequencies § 15.247 (a)(1)(ii) Number of Hopping Channels

The SL-1021 operates on the 79 channels that are shown in Section 2.6; 1 MHz separates these channels. Shown below are the plots that show the number of hopping channels and the carrier frequency separation:

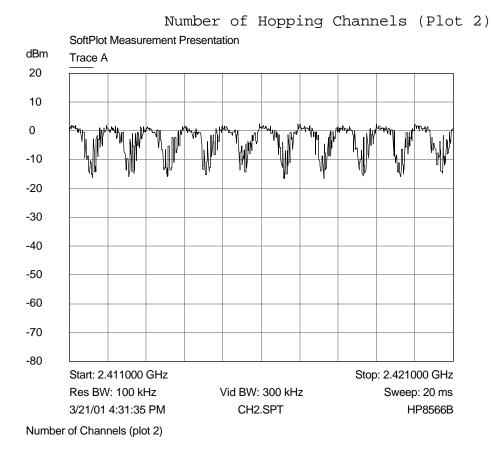
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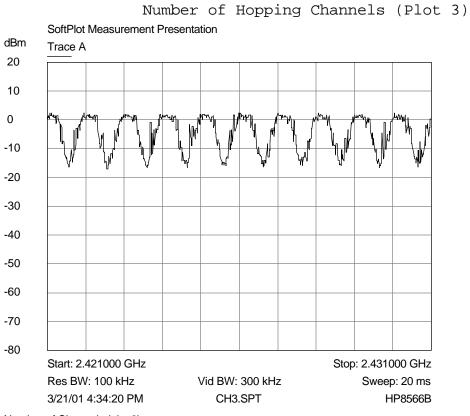
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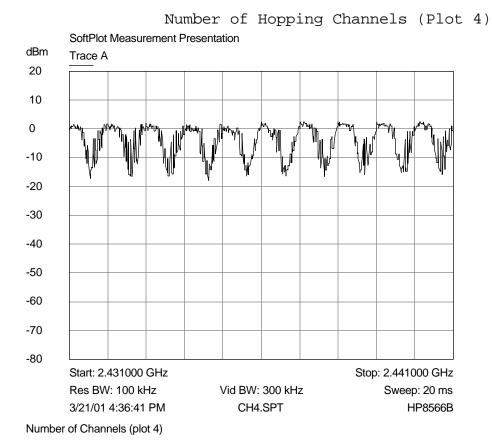
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Number of Channels (plot 3)

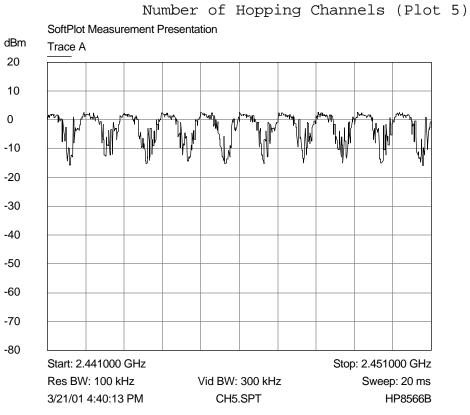
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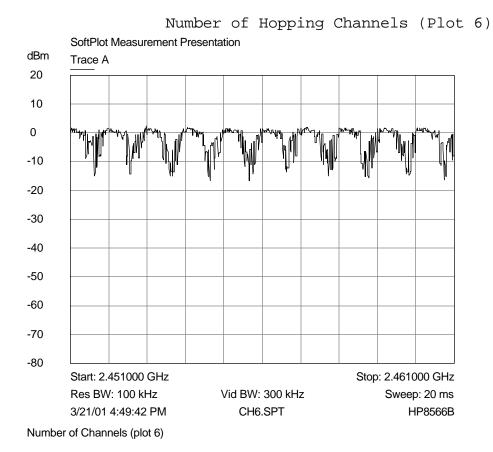
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Number of Channels (plot 5)

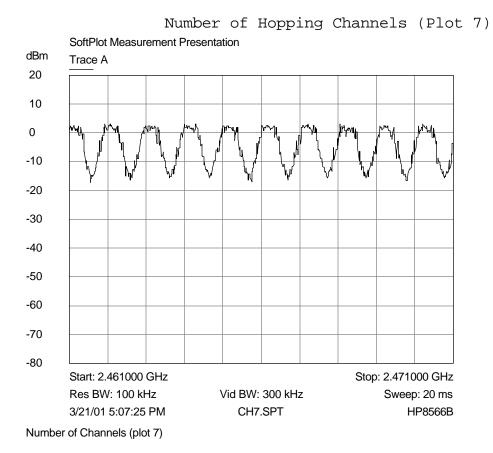
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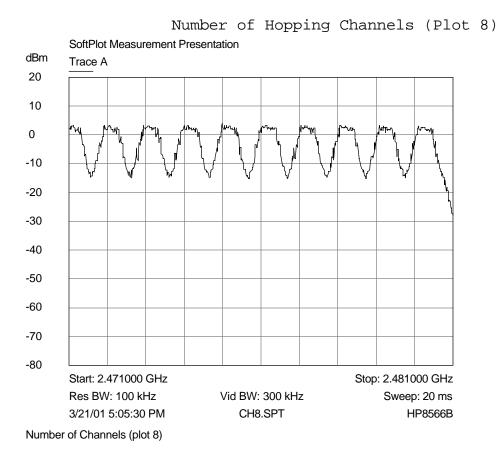
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6.2.3 § 15.247 (a)(1)(ii) Average Time of Occupancy

The SL-1021 hops 1600 times per second. Since the SL-1021 uses 79 hopping channels and each channel is used equally (see manufacturer's Exhibit 12), each channel will transmit 20.25 times per second (1600 hops/second divided by 79 channels); therefore, in any 30 second period the channel will transmit 607.5 times. This device only transmits when there is data to be sent and the amount of data to be sent depends on the file size. In the worst-case mode the maximum on time is 380 μs before it hops to the next channel in its hop list. Therefore, the worst-case average time of occupancy in a 30 sec span is 230.8 msec (see calculation below).

Hop sequence duration: 49.375 msec (79 channels divided by 1600 hops/second; the time needed to complete a full hop sequence and return to a specific channel)

Number of hops per second: 20.25 (1600 hops/second divided by 79 channels)

Single Channel hits in 30 sec: 607.5 hits (20.25 times 30)

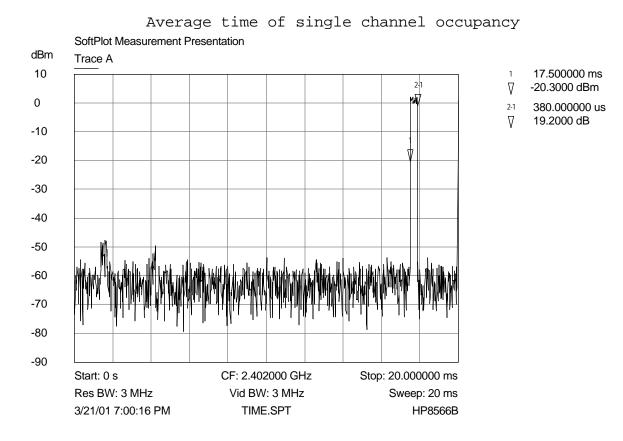
Average time of single channel occupancy: 380 μ s (see plot below)

Average channel time of occupancy: (380 $\mu \text{sec/hit})$ *(607.5 hits per 30 sec) = 230.8 msec

The maximum time of occupancy for a particular channel is 230.8 msec in any 30 second period, which is less than the 400 msec allowed by the rules; therefore, it meets the requirements of this section.

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6.2.4 § 15.247 (a)(1)(ii) Emission Bandwidth

Measurement Data:

A diagram of the test configuration and the test equipment used is enclosed in Appendix 1.

Frequency (MHz)	Emission Bandwidth (kHz)
2402.0	870.0
2441.0	928.0
2480.0	956.0

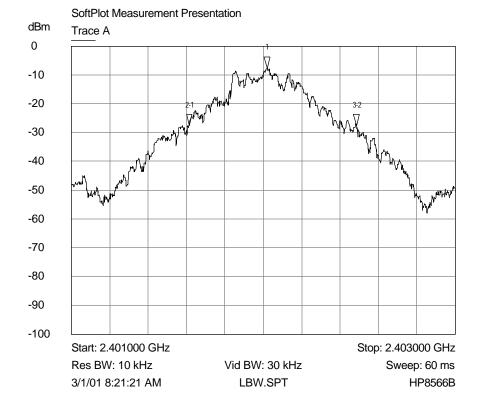
RESULT

In the configuration tested, the 20 dB bandwidth was less than 1 MHz; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plots below).

Emission Bandwidth Plot - (Low Channel)

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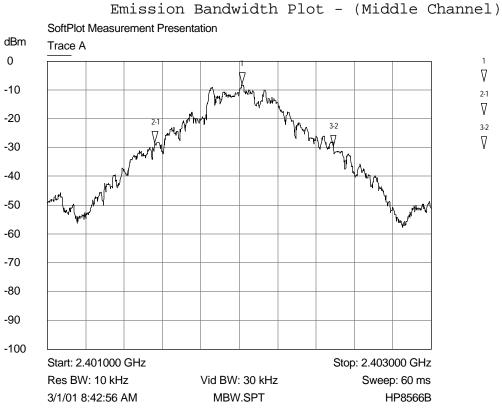
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- 1 2.402018 GHz
- 7.7000 dBm
- 2-1 -404.000000 kHz
- 7 -20.1000 dB
- 3-2 870.00000 kHz

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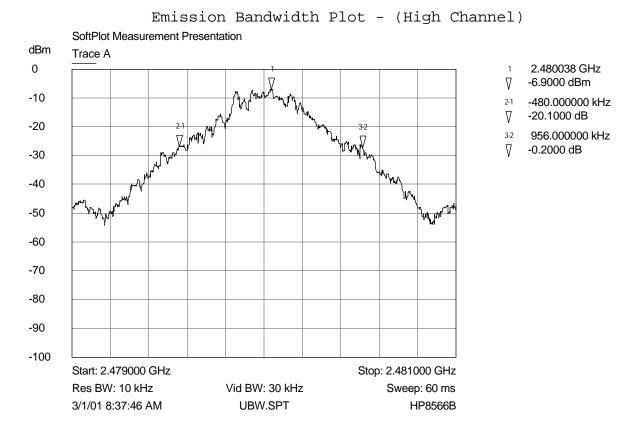
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- 2.402014 GHz
- 7 -8.1000 dBm
- 2-1 -452.000000 kHz
- 7 -20.4000 dB
- 3-2 928.000000 kHz
- 7 -1.2000 dB

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6.2.5 § 15.247 (b)(1) Peak Output Power:

Measurement Data:

The maximum peak RF Conducted output power measured for this device was 1.28 mW or 1.1 dBm. The maximum antenna gain is 4.0 dBi; therefore, the maximum peak radiated (EIRP) for this device is 3.23 mW or 5.1 dBm. Shown below is the measured peak output power. The maximum directional gain of the antenna is less than 6 dBi; therefore, the maximum output power is not required to be reduced from the value measured.

The SL-1021 was tested with the following antennas:

Manufacturer: Centurion Wireless Technologies, Inc. Model: WCI2400PCB/CAF95874 Maximum Directional Gain: +4.0 dBi Type: PIFA

Manufacturer: Centurion Wireless Technologies, Inc. Model: CAF95901 Maximum Directional Gain: +2.5 dBi Type: Dielectrically Loaded Meander Line Mono Pole

Manufacturer: 3Com Centurion Wireless Technologies, Inc. Model: CAF95902 Maximum Directional Gain: +2.9 Type: Directionally Loaded Flat

Manufacturer: RangeStar Wireless Model: 100902 Maximum Directional Gain: 0 dBi Type: Shunt Fed Resonator

Manufacturer: RangeStar Wireless Model: 100903 Maximum Directional Gain: 0 dBi Type: Slot

Manufacturer: RangeStar Wireless Model: 100930 Maximum Directional Gain: +4.0 Type: PIFA

Manufacturer: RangeStar Wireless Model: 100918-100 Maximum Directional Gain: +2.2 dBi Type: Dipole

COMMUNICATION CERTIFICATION LABORATORY TEST REPORT: 73-7455 FCC ID: 09C-SL1021 Page 30 of 144 Manufacturer: Murata Manufacturing Co., Ltd. 2001 Model: ANCG22G45SAA001TT1 Maximum Directional Gain: +0.9 dBi Type: Chip Dielectric Manufacturer: Murata Manufacturing Co., Ltd. 2001 Model: ANCM12G45SAA072TT Maximum Directional Gain: +0.8 dBi Type: Chip Dielectric Manufacturer: PhyComp Model: 431111100245 Maximum Directional Gain: +1.2 dBi Type: Multi-layer Ceramic Manufacturer: M/A-Com Model: AND-C-107 Maximum Directional Gain: 1.9 dBi Type: Dipole

A diagram of the test configuration and the test equipment used is enclosed in Appendix 1.

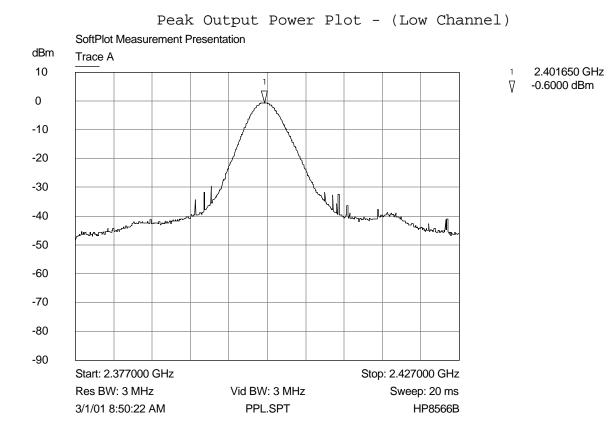
Frequency (MHz)	Measured Output Power (dBm)	Measured Output Power (mW)
2402.0	-0.6	0.87
2441.0	0.1	1.02
2480.0	1.1	1.28

RESULT

In the configuration tested, the RF peak output power was less than 1 Watt; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plots below).

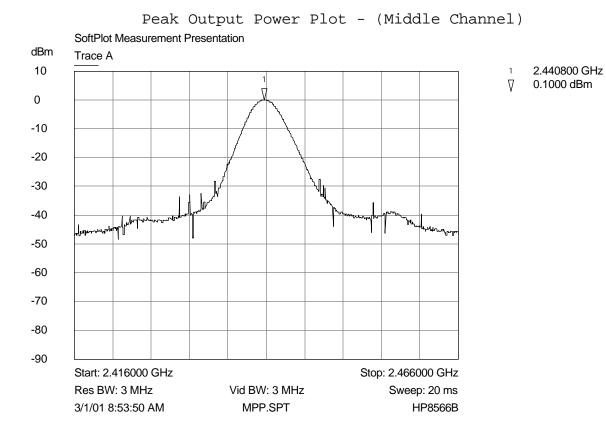
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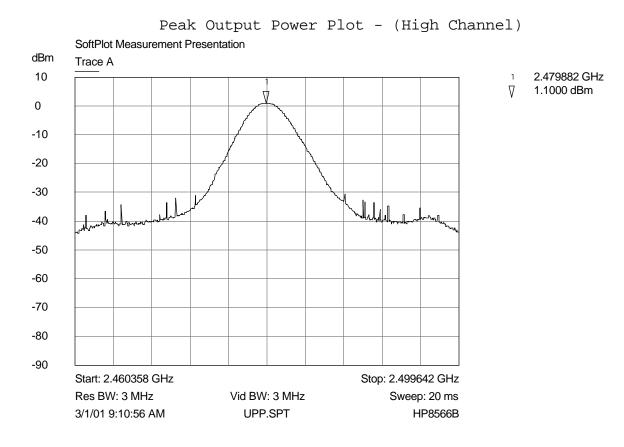
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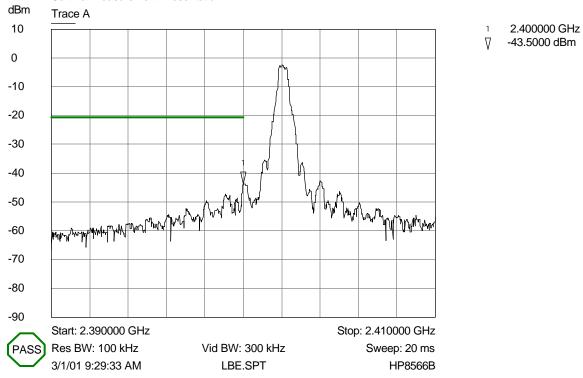
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6.2.6 § 15.247 (c) Spurious Emissions:

Measurement Data Antenna Conducted Emissions:

The frequency range from 10 MHz to the tenth harmonic of the highest fundamental frequency was investigated to measure any antenna-conducted emissions. Shown below are plots with the SL-1021 tuned to the upper and lower channels. These demonstrate compliance with the provisions of this section.

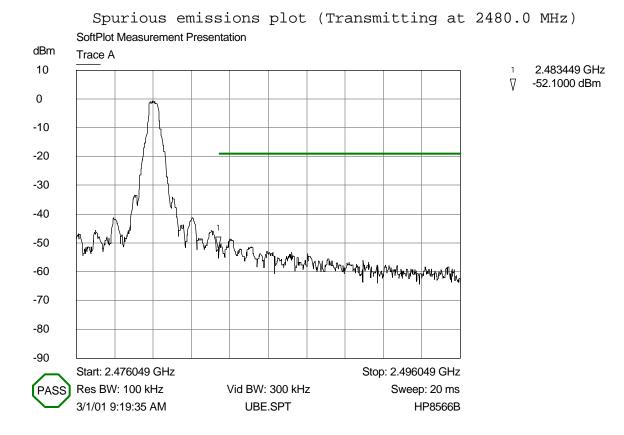
A diagram of the test configuration and the test equipment used is provided in Appendix 1.



Spurious emissions plot (Transmitting at 2402.0 MHz) SoftPlot Measurement Presentation

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The emissions must be attenuated 20 dB below the highest power level measured within the authorized band as measured with a 100 kHz RBW; the highest level measured with a 100 kHz RBW was - 0.6 dBm therefore, the criteria is -0.6 - 20.0 = -20.6 dBm.

	Transmitting at 2402.0 MHz							
Frequency Range	Frequency	Corrected Level	Criteria					
MHz	MHz	dBm	dBm					
10 - 200	163.9	-65.2	-20.6					
200 - 1000	873.6	-64.6	-20.6					
1000 - 2000	1200.0	-43.3	-20.6					
2000 - 2399.9	2371.9	-44.2	-20.6					
2483.6 - 4000	3878.0*	-62.7	-20.6					
4000 - 6000	5928.0*	-59.6	-20.6					
6000 - 8000	6474.0*	-59.1	-20.6					
8000 - 11,000	9209.0*	-58.7	-20.6					
11,000 - 13,000	12818.0*	-52.4	-20.6					
13,000 - 15,000	14590.0*	-47.8	-20.6					
15,000 - 17,000	16996.0*	-47.7	-20.6					
17,000 - 20,000	18662.0*	-42.4	-20.6					
20,000 - 23,000	22460.0*	-41.5	-20.6					
23,000 - 25,000	23494.0*	-41.9	-20.6					
* Noise Floor								

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The emissions must be attenuated 20 dB below the highest power level measured within the authorized band as measured with a 100 kHz RBW; the highest level measured with a 100 kHz RBW was 0.1 dBm therefore, the criteria is 0.1 - 20.0 = -19.9 dBm.

	Transmitting at 2441.0 MHz							
Frequency Range	Frequency	Corrected Level	Criteria					
MHz	MHz	dBm	dBm					
10 - 200	24.4	-61.4	-19.9					
200 - 1000	830.4	-61.7	-19.9					
1000 - 2000	1220.0	-44.1	-19.9					
2000 - 2399.9	2379.9	-50.4	-19.9					
2483.6 - 4000	3363.0*	-59.6	-19.9					
4000 - 6000	5930.0*	-54.6	-19.9					
6000 - 8000	6818.0*	-54.3	-19.9					
8000 - 11,000	10652.0*	-53.3	-19.9					
11,000 - 13,000	12546.0*	-48.4	-19.9					
13,000 - 15,000	13036.0*	-47.8	-19.9					
15,000 - 17,000	15116.0*	-48.2	-19.9					
17,000 - 20,000	19958.0*	-42.3	-19.9					
20,000 - 23,000	21998.0*	-41.7	-19.9					
23,000 - 25,000	23954.0*	-41.4	-19.9					
* Noise Floor								

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The emissions must be attenuated 20 dB below the highest power level measured within the authorized band as measured with a 100 kHz RBW; the highest level measured with a 100 kHz RBW was 1.1 dBm therefore, the criteria is 1.1 - 20.0 = -18.9 dBm.

	Transmitting at 2480.0 MHz							
Frequency Range	Frequency	Corrected Level	Criteria					
MHz	MHz	dBm	dBm					
10 - 200	70.8	-61.4	-18.9					
200 - 1000	560.0	-62.3	-18.9					
1000 - 2000	1240.0	-44.6	-18.9					
2000 - 2399.9	2327.1	-52.7	-18.9					
2483.6 - 4000	2778.0*	-59.9	-18.9					
4000 - 6000	5844.0*	-55.4	-18.9					
6000 - 8000	7964.0*	-54.0	-18.9					
8000 - 11,000	8345.0*	-53.7	-18.9					
11,000 - 13,000	12820.0*	-48.3	-18.9					
13,000 - 15,000	14700.0*	-47.9	-18.9					
15,000 - 17,000	15252.0*	-47.7	-18.9					
17,000 - 20,000	19052.0*	-41.7	-18.9					
20,000 - 23,000	22301.0*	-41.3	-18.9					
23,000 - 25,000	23296.0*	-41.3	-18.9					
* Noise Floor								

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Measurement Data Radiated Emissions Restricted Bands § 15.205:

The frequency range from 10 MHz to 25 GHz was investigated to measure any radiated emissions in the restricted bands. Shown below are any emissions that fell into the restricted bands of § 15.205.

A diagram of the test configuration and the test equipment used is enclosed in Appendix 1. RBW = 100 kHz, VBW = 300 kHz

AVERAGE FACTOR

The SL-1021 transmits continuously therefore; there is not an average factor for this device.

Vertical	Polarity	(Centurion	WCI2400PCB/CAF95874)
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Transmitting at 2402.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	12.1	35.1	0.0	47.2	74.0	-26.8			
2483.5 A	-0.7	35.1	0.0	34.3	54.0	-19.7			
4804.0 P	15.5	42.5	0.0	58.0	74.0	-16.0			
4804.0 A	3.0	42.5	0.0	45.5	54.0	-8.5			
12,010.0 P *	11.3	41.7	0.0	53.0	74.0	-21.0			
12,010.0 A *	-1.2	41.7	0.0	40.5	54.0	-13.5			
19,216.0 P *	26.9	22.9	0.0	49.8	74.0	-24.2			
19,216.0 A *	13.0	22.9	0.0	35.9	54.0	-18.1			

P = Peak Detection

A = Average Detection

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Transmitting at 2441.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	17.4	35.1	0.0	52.5	74.0	-21.5			
2483.5 A	-0.7	35.1	0.0	34.3	54.0	-19.7			
4882.0 P	17.4	42.9	0.0	60.3	74.0	-13.7			
4882.0 A	1.0	42.9	0.0	43.9	54.0	-10.1			
7323.0 P *	24.3	37.7	0.0	62.0	74.0	-12.0			
7323.0 A *	8.4	37.7	0.0	46.1	54.0	-7.9			
12,205.0 P *	10.4	41.4	0.0	51.8	74.0	-22.2			
12,205.0 A *	-0.8	41.4	0.0	40.6	54.0	-13.4			
19,528.0 P *	27.3	22.6	0.0	49.9	74.0	-24.1			
19,528.0 A *	12.9	22.6	0.0	35.5	54.0	-18.5			

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	29.2	35.1	0.0	64.3	74.0	-9.7			
2483.5 A	0.6	35.1	0.0	35.7	54.0	-18.3			
4960.0 P	19.2	43.2	0.0	62.4	74.0	-11.6			
4960.0 A	4.9	43.2	0.0	48.1	54.0	-5.9			
7440.0 P *	11.7	37.9	0.0	49.6	74.0	-24.4			
7440.0 A *	1.0	37.9	0.0	38.9	54.0	-15.1			
12,400.0 P *	9.8	41.0	0.0	50.8	74.0	-23.2			
12,400.0 A *	-1.7	41.0	0.0	39.3	54.0	-14.7			
19,840.0 P *	33.2	22.1	0.0	55.3	74.0	-18.7			
19,840.0 A *	12.2	22.1	0.0	34.3	54.0	-19.7			
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2			
22,320.0 A *	9.9	21.8	0.0	31.7	54.0	-22.3			

P = Peak Detection

A = Average Detection

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Horizontal Polarity (Centurion WCI2400PCB/CAF95874)

Transmitting at 2402.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	12.1	35.1	0.0	47.2	74.0	-26.8			
2483.5 A	-0.7	35.1	0.0	34.3	54.0	-19.7			
4804.0 P	14.1	42.5	0.0	49.2	74.0	-24.8			
4804.0 A	2.2	42.5	0.0	44.7	54.0	-9.3			
12,010.0 P *	11.1	41.7	0.0	52.8	74.0	-21.2			
12,010.0 A *	-1.0	41.7	0.0	40.7	54.0	-13.3			
19,216.0 P *	26.9	22.9	0.0	49.8	74.0	-24.2			
19,216.0 A *	13.0	22.9	0.0	35.9	54.0	-18.1			

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB				
2483.5 P	11.9	35.1	0.0	47.0	74.0	-27.0				
2483.5 A	-0.8	35.1	0.0	34.3	54.0	-19.7				
4882.0 P	10.5	42.9	0.0	53.4	74.0	-20.6				
4882.0 A	4.2	42.9	0.0	47.1	54.0	-6.9				
7323.0 P *	18.2	37.7	0.0	55.9	74.0	-18.1				
7323.0 A *	6.2	37.7	0.0	43.9	54.0	-10.1				
12,205.0 P *	10.6	41.4	0.0	52.0	74.0	-22.0				
12,205.0 A *	-0.8	41.4	0.0	40.6	54.0	-13.4				
19,528.0 P *	27.3	22.6	0.0	49.9	74.0	-24.1				
19,528.0 A *	12.9	22.6	0.0	35.5	54.0	-18.5				

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	11.6	35.1	0.0	46.7	74.0	-27.3			
2483.5 A	-0.9	35.1	0.0	34.1	54.0	-19.9			
4960.0 P	11.8	43.2	0.0	55.0	74.0	-19.0			
4960.0 A	1.0	43.2	0.0	44.2	54.0	-9.8			
7440.0 P *	13.7	37.9	0.0	51.6	74.0	-22.4			
7440.0 A *	1.1	37.9	0.0	39.0	54.0	-15.0			
12,400.0 P *	10.9	41.0	0.0	51.9	74.0	-22.1			
12,400.0 A *	-1.7	41.0	0.0	39.3	54.0	-14.7			
19,840.0 P *	33.2	22.1	0.0	55.3	74.0	-18.7			
19,840.0 A *	12.2	22.1	0.0	34.3	54.0	-19.7			
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2			
22,320.0 A *	9.9	21.8	0.0	31.7	54.0	-22.3			

P = Peak Detection

A = Average Detection

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Vertical Polarity (Centurion CAF95901)

	Transmitting at 2402.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB				
2483.5 P	13.6	35.1	0.0	48.7	74.0	-25.3				
2483.5 A	-0.4	35.1	0.0	34.6	54.0	-19.4				
4804.0 P	14.9	42.5	0.0	57.4	74.0	-16.6				
4804.0 A	2.3	42.5	0.0	44.8	54.0	-9.2				
12,010.0 P *	11.2	41.7	0.0	52.9	74.0	-21.1				
12,010.0 A *	-0.7	41.7	0.0	41.0	54.0	-13.0				
19,216.0 P *	26.7	22.9	0.0	49.6	74.0	-24.4				
19,216.0 A *	12.9	22.9	0.0	24.8	54.0	-29.2				

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB				
2483.5 P *	14.6	35.1	0.0	49.7	74.0	-24.3				
2483.5 A *	-0.4	35.1	0.0	34.6	54.0	-19.4				
4882.0 P	13.9	42.9	0.0	56.8	74.0	-17.2				
4882.0 A	1.0	42.9	0.0	43.9	54.0	-10.1				
7323.0 P *	11.7	37.7	0.0	49.4	74.0	-24.6				
7323.0 A *	0.7	37.7	0.0	38.4	54.0	-15.6				
12,205.0 P *	10.4	41.4	0.0	51.8	74.0	-22.2				
12,205.0 A *	-1.2	41.4	0.0	40.2	54.0	-13.8				
19,528.0 P *	27.1	22.6	0.0	49.7	74.0	-24.3				
19,528.0 A *	13.0	22.6	0.0	35.6	54.0	-18.4				

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	31.7	35.1	0.0	66.8	74.0	-7.2			
2483.5 A	7.6	35.1	0.0	42.7	54.0	-11.3			
4960.0 P	15.3	43.2	0.0	58.5	74.0	-15.5			
4960.0 A	3.6	43.2	0.0	46.8	54.0	-7.2			
7440.0 P *	15.7	37.9	0.0	53.6	74.0	-20.4			
7440.0 A *	1.3	37.9	0.0	39.2	54.0	-14.8			
12,400.0 P *	10.1	41.0	0.0	51.1	74.0	-22.9			
12,400.0 A *	-0.8	41.0	0.0	40.2	54.0	-13.8			
19,840.0 P *	30.7	22.1	0.0	52.8	74.0	-21.2			
19,840.0 A *	9.8	22.1	0.0	31.9	54.0	-22.1			
22,320.0 P *	30.8	21.8	0.0	52.6	74.0	-21.4			
22,320.0 A *	9.8	21.8	0.0	31.6	54.0	-22.4			

P = Peak Detection

A = Average Detection

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Horizontal Polarity (Centurion CAF95901)

	Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	12.0	35.1	0.0	47.1	74.0	-26.9			
2483.5 A *	-0.5	35.1	0.0	34.5	54.0	-19.5			
4804.0 P	13.9	42.5	0.0	56.4	74.0	-17.6			
4804.0 A	1.7	42.5	0.0	44.2	54.0	-9.8			
12,010.0 P *	11.0	41.7	0.0	52.7	74.0	-21.3			
12,010.0 A *	-0.6	41.7	0.0	41.1	54.0	-12.9			
19,216.0 P *	26.9	22.9	0.0	49.8	74.0	-24.2			
19,216.0 A *	12.9	22.9	0.0	35.8	54.0	-18.2			

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	12.7	35.1	0.0	47.8	74.0	-26.2			
2483.5 A *	-0.6	35.1	0.0	34.4	54.0	-19.6			
4882.0 P	14.5	42.9	0.0	57.4	74.0	-16.6			
4882.0 A	2.3	42.9	0.0	45.2	54.0	-8.8			
7323.0 P *	15.7	37.7	0.0	53.4	74.0	-20.6			
7323.0 A *	3.3	37.7	0.0	41.0	54.0	-13.0			
12,205.0 P *	10.0	41.4	0.0	51.4	74.0	-22.6			
12,205.0 A *	-1.2	41.4	0.0	40.2	54.0	-13.8			
19,528.0 P *	27.2	22.6	0.0	49.8	74.0	-24.2			
19,528.0 A *	12.9	22.6	0.0	35.5	54.0	-18.5			

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	26.1	35.1	0.0	61.2	74.0	-12.8			
2483.5 A	3.1	35.1	0.0	38.2	54.0	-15.8			
4960.0 P	16.3	43.2	0.0	59.5	74.0	-14.5			
4960.0 A	5.0	43.2	0.0	48.2	54.0	-5.8			
7440.0 P *	11.7	37.9	0.0	49.6	74.0	-24.4			
7440.0 A *	0.7	37.9	0.0	38.6	54.0	-15.4			
12,400.0 P *	10.2	41.0	0.0	51.2	74.0	-22.8			
12,400.0 A *	-1.8	41.0	0.0	39.2	54.0	-14.8			
19,840.0 P *	30.9	22.1	0.0	53.0	74.0	-21.0			
19,840.0 A *	9.9	22.1	0.0	32.0	54.0	-22.0			
22,320.0 P *	31.1	21.8	0.0	52.9	74.0	-21.1			
22,320.0 A *	10.0	21.8	0.0	31.8	54.0	22.2			

P = Peak Detection

A = Average Detection

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Vertical Polarity (Centurion CAF95902)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	10.3	35.1	0.0	45.4	74.0	-28.6		
2483.5 A *	-0.8	35.1	0.0	34.2	54.0	-19.8		
4804.0 P	14.2	42.5	0.0	56.7	74.0	-17.3		
4804.0 A	2.7	42.5	0.0	45.2	54.0	-8.8		
12,010.0 P *	11.0	41.7	0.0	52.7	74.0	-21.3		
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1		
19,216.0 P *	26.8	22.9	0.0	49.7	74.0	-24.3		
19,216.0 A *	12.7	22.9	0.0	35.6	54.0	-18.4		

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	12.4	35.1	0.0	47.5	74.0	-26.5			
2483.5 A *	-0.7	35.1	0.0	34.4	54.0	-19.6			
4882.0 P	19.8	42.9	0.0	62.7	74.0	-11.3			
4882.0 A	7.9	42.9	0.0	50.8	54.0	-3.2			
7323.0 P *	14.1	37.7	0.0	51.8	74.0	-22.2			
7323.0 A *	2.2	37.7	0.0	39.9	54.0	-14.1			
12,205.0 P *	11.2	41.4	0.0	52.6	74.0	-21.4			
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6			
19,528.0 P *	26.8	22.6	0.0	49.4	74.0	-24.6			
19,528.0 A *	12.9	22.6	0.0	35.5	54.0	-18.5			

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	27.8	35.1	0.0	62.9	74.0	-11.1			
2483.5 A	1.7	35.1	0.0	36.8	54.0	-17.2			
4960.0 P	20.6	43.2	0.0	63.8	74.0	-10.2			
4960.0 A	8.7	43.2	0.0	51.9	54.0	-2.1			
7440.0 P	18.2	37.9	0.0	56.1	74.0	-17.9			
7440.0 A	3.9	37.9	0.0	41.8	54.0	-12.2			
12,400.0 P*	10.5	41.0	0.0	51.5	74.0	-22.5			
12,400.0 A*	-1.8	41.0	0.0	39.1	54.0	-14.9			
19,840.0 P *	30.7	22.1	0.0	52.8	74.0	-21.2			
19,840.0 A *	9.8	22.1	0.0	31.9	54.0	-22.1			
22,320.0 P *	31.1	21.8	0.0	52.9	74.0	-21.1			
22,320.0 A *	10.0	21.8	0.0	31.8	54.0	-22.2			

P = Peak Detection

A = Average Detection

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Horizontal Polarity (Centurion CAF95902)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P	12.2	35.1	0.0	47.4	74.0	-26.6		
2483.5 A	-0.7	35.1	0.0	34.3	54.0	-19.7		
4804.0 P	12.3	42.5	0.0	54.8	74.0	-19.2		
4804.0 A	1.1	42.5	0.0	43.6	54.0	-10.4		
12,010.0 P *	11.2	41.7	0.0	52.9	74.0	-21.1		
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1		
19,216.0 P *	26.9	22.9	0.0	49.8	74.0	-24.2		
19,216.0 A *	12.9	22.9	0.0	35.8	54.0	-18.2		

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz							
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P	12.9	35.1	0.0	48.0	74.0	-26.0		
2483.5 A	-0.4	35.1	0.0	34.7	54.0	-19.3		
4882.0 P	18.2	42.9	0.0	61.1	74.0	-12.9		
4882.0 A	5.7	42.9	0.0	48.6	54.0	-5.4		
7323.0 P	16.3	37.7	0.0	54.0	74.0	-20.0		
7323.0 A	2.8	37.7	0.0	40.5	54.0	-13.5		
12,205.0 P *	10.9	41.4	0.0	52.3	74.0	-21.7		
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6		
19,528.0 P *	27.0	22.6	0.0	49.6	74.0	-24.4		
19,528.0 A *	12.6	22.6	0.0	35.2	54.0	-18.8		

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	26.9	35.1	0.0	62.0	74.0	-12.0			
2483.5 A	2.3	35.1	0.0	37.4	54.0	-16.6			
4960.0 P	17.0	43.2	0.0	60.2	74.0	-13.8			
4960.0 A	5.1	43.2	0.0	48.3	54.0	-5.7			
7440.0 P	13.6	37.9	0.0	51.5	74.0	-22.5			
7440.0 A	1.3	37.9	0.0	39.2	54.0	-14.8			
12,400.0 P	9.9	41.0	0.0	50.9	74.0	-23.1			
12,400.0 A	-1.8	41.0	0.0	39.1	54.0	-14.9			
19,840.0 P *	30.9	22.1	0.0	53.0	74.0	-21.0			
19,840.0 A *	9.8	22.1	0.0	31.9	54.0	-22.1			
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2			
22,320.0 A *	9.9	21.8	0.0	31.7	54.0	-22.3			

P = Peak Detection

A = Average Detection

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Vertical Polarity (RangeStar 100902)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P	11.6	35.1	0.0	46.7	74.0	-27.3		
2483.5 A	-0.6	35.1	0.0	34.4	54.0	-19.6		
4804.0 P	14.1	42.5	0.0	56.6	74.0	-17.4		
4804.0 A	2.2	42.5	0.0	44.7	54.0	-9.3		
12,010.0 P *	10.6	41.7	0.0	52.5	74.0	-21.5		
12,010.0 A *	-0.4	41.7	0.0	41.5	54.0	-12.5		
19,216.0 P *	26.6	22.9	0.0	49.5	74.0	-24.5		
19,216.0 A *	12.8	22.9	0.0	35.7	54.0	-18.3		

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	12.2	35.1	0.0	47.3	74.0	-26.7			
2483.5 A	-0.4	35.1	0.0	34.7	54.0	-19.3			
4882.0 P	15.8	42.9	0.0	58.7	74.0	-15.3			
4882.0 A	3.3	42.9	0.0	46.2	54.0	-7.8			
7323.0 P *	12.7	37.7	0.0	50.4	74.0	-23.6			
7323.0 A *	0.5	37.7	0.0	38.2	54.0	-15.8			
12,205.0 P *	10.3	41.4	0.0	51.7	74.0	-22.3			
12,205.0 A *	-1.4	41.4	0.0	40.0	54.0	-14.0			
19,528.0 P *	27.0	22.6	0.0	49.6	74.0	-24.4			
19,528.0 A *	12.5	22.6	0.0	35.1	54.0	-18.9			

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	30.1	35.1	0.0	65.2	74.0	-8.8			
2483.5 A	2.1	35.1	0.0	37.2	54.0	-16.8			
4960.0 P	17.3	43.2	0.0	60.5	74.0	-13.5			
4960.0 A	5.5	43.2	0.0	48.7	54.0	-5.3			
7440.0 P *	12.5	37.9	0.0	50.4	74.0	-23.6			
7440.0 A *	3.4	37.9	0.0	41.3	54.0	-12.7			
12,400.0 P *	10.5	41.0	0.0	51.5	74.0	-22.5			
12,400.0 A *	-1.2	41.0	0.0	39.8	54.0	-14.2			
19,840.0 P *	27.2	22.1	0.0	49.3	74.0	-24.7			
19,840.0 A *	13.4	22.1	0.0	35.5	54.0	-18.5			
22,320.0 P *	26.5	21.8	0.0	48.3	74.0	-25.7			
22,320.0 A *	12.7	21.8	0.0	34.5	54.0	-19.5			

P = Peak Detection

A = Average Detection

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Horizontal Polarity (RangeStar 100902)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P	11.6	35.1	0.0	46.7	74.0	-27.3		
2483.5 A	-0.6	35.1	0.0	34.4	54.0	-19.6		
4804.0 P	14.1	42.5	0.0	56.6	74.0	-17.4		
4804.0 A	2.2	42.5	0.0	44.7	54.0	-9.3		
12,010.0 P *	10.6	41.7	0.0	52.5	74.0	-21.5		
12,010.0 A *	-0.4	41.7	0.0	41.5	54.0	-12.5		
19,216.0 P *	27.0	22.9	0.0	49.9	74.0	-24.1		
19,216.0 A *	13.1	22.9	0.0	36.0	54.0	-18.0		

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	14.1	35.1	0.0	49.2	74.0	-24.8			
2483.5 A *	-0.4	35.1	0.0	34.7	54.0	-19.3			
4882.0 P	11.0	42.9	0.0	53.9	74.0	-20.1			
4882.0 A	0.3	42.9	0.0	43.2	54.0	-10.8			
7323.0 P	17.0	37.7	0.0	54.7	74.0	-19.3			
7323.0 A	5.2	37.7	0.0	42.9	54.0	-11.1			
12,205.0 P *	10.0	41.4	0.0	51.4	74.0	-22.6			
12,205.0 A *	-1.4	41.4	0.0	40.0	54.0	-14.0			
19,528.0 P *	26.8	22.6	0.0	49.4	74.0	-24.6			
19,528.0 A *	12.0	22.6	0.0	34.6	54.0	-19.4			

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	26.4	35.1	0.0	61.5	74.0	-12.5			
2483.5 A	6.5	35.1	0.0	41.6	54.0	-12.4			
4960.0 P	11.6	43.2	0.0	54.8	74.0	-19.2			
4960.0 A	-0.6	43.2	0.0	42.5	54.0	-11.5			
7440.0 P *	13.7	37.9	0.0	51.6	74.0	-22.4			
7440.0 A *	1.2	37.9	0.0	39.1	54.0	-14.9			
12,400.0 P *	10.1	41.0	0.0	51.1	74.0	-22.9			
12,400.0 A *	-1.3	41.0	0.0	39.7	54.0	-14.3			
19,840.0 P *	30.9	22.1	0.0	53.0	74.0	-21.0			
19,840.0 A *	9.9	22.1	0.0	32.0	54.0	-22.0			
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2			
22,320.0 A *	10.0	21.8	0.0	31.8	54.0	-22.2			

P = Peak Detection

A = Average Detection

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Vertical Polarity (RangeStar 100903)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P	11.7	35.1	0.0	46.8	74.0	-27.2		
2483.5 A	-0.7	35.1	0.0	34.3	54.0	-19.7		
4804.0 P	18.6	42.5	0.0	61.1	74.0	-12.9		
4804.0 A	4.3	42.5	0.0	46.8	54.0	-7.2		
12,010.0 P *	10.8	41.7	0.0	52.5	74.0	-21.5		
12,010.0 A *	-0.9	41.7	0.0	40.8	54.0	-13.2		
19,216.0 P *	25.8	22.9	0.0	48.7	74.0	-25.3		
19,216.0 A *	12.0	22.9	0.0	34.9	54.0	-19.1		

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P*	11.9	35.1	0.0	47.0	74.0	-27.0			
2483.5 A*	-0.6	35.1	0.0	34.4	54.0	-19.6			
4882.0 P	20.6	42.9	0.0	63.5	74.0	-10.5			
4882.0 A	7.6	42.9	0.0	50.5	54.0	-3.5			
7323.0 P *	14.1	37.7	0.0	51.8	74.0	-22.2			
7323.0 A *	1.4	37.7	0.0	39.1	54.0	-14.9			
12,205.0 P *	10.3	41.4	0.0	51.7	74.0	-22.3			
12,205.0 A *	-1.1	41.4	0.0	40.3	54.0	-13.7			
19,528.0 P *	26.7	22.6	0.0	49.3	74.0	-24.7			
19,528.0 A *	11.8	22.6	0.0	34.4	54.0	-19.6			

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	80.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin DB
2483.5 P	16.5	35.1	0.0	52.6	74.0	-21.4
2483.5 A	3.1	35.1	0.0	38.2	54.0	-15.8
4960.0 P	14.7	43.2	0.0	57.9	74.0	-16.1
4960.0 A	3.1	43.2	0.0	46.3	54.0	-7.7
7440.0 P *	12.8	37.9	0.0	50.7	74.0	-23.3
7440.0 A *	-1.4	37.9	0.0	36.5	54.0	-17.5
12,400.0 P *	10.5	41.0	0.0	51.5	74.0	-22.5
12,400.0 A *	-0.9	41.0	0.0	40.1	54.0	-13.9
19,840.0 P *	29.7	22.1	0.0	51.8	74.0	-22.2
19,840.0 A *	9.4	22.1	0.0	31.5	54.0	-22.5
22,320.0 P *	28.7	21.8	0.0	50.5	74.0	-23.5
22,320.0 A *	9.6	21.8	0.0	31.4	54.0	-22.6

P = Peak Detection

A = Average Detection

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Horizontal Polarity (RangeStar 100903)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	11.6	35.1	0.0	46.7	74.0	-27.3		
2483.5 A *	-0.8	35.1	0.0	34.3	54.0	-19.7		
4804.0 P	14.7	42.5	0.0	57.2	74.0	-16.8		
4804.0 A	3.0	42.5	0.0	45.5	54.0	-8.5		
12,010.0 P *	11.1	41.7	0.0	53.0	74.0	-21.0		
12,010.0 A *	-0.9	41.7	0.0	41.0	54.0	-13.0		
19,216.0 P *	26.5	22.9	0.0	49.4	74.0	-24.6		
19,216.0 A *	13.2	22.9	0.0	36.1	54.0	-17.9		

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	12.9	35.1	0.0	48.0	74.0	-26.0			
2483.5 A *	-0.6	35.1	0.0	34.4	54.0	-19.6			
4882.0 P	13.5	42.9	0.0	56.4	74.0	-17.6			
4882.0 A	1.1	42.9	0.0	44.0	54.0	-10.0			
7323.0 P *	12.6	37.7	0.0	50.3	74.0	-23.7			
7323.0 A *	3.6	37.7	0.0	41.3	54.0	-12.7			
12,205.0 P *	10.1	41.4	0.0	51.5	74.0	-22.5			
12,205.0 A *	-1.3	41.4	0.0	40.1	54.0	-13.9			
19,528.0 P *	27.6	22.6	0.0	50.2	74.0	-23.8			
19,528.0 A *	13.1	22.6	0.0	35.7	54.0	-18.3			

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	80.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P	23.4	35.1	0.0	58.5	74.0	-15.5
2483.5 A	3.0	35.1	0.0	38.1	54.0	-15.9
4960.0 P	12.3	43.2	0.0	55.5	74.0	-18.5
4960.0 A	-0.3	43.2	0.0	42.8	54.0	-11.2
7440.0 P *	13.1	37.9	0.0	51.0	74.0	-23.0
7440.0 A *	0.4	37.9	0.0	38.3	54.0	-15.7
12,400.0 P *	10.1	41.0	0.0	51.1	74.0	-22.9
12,400.0 A *	-1.8	41.0	0.0	39.2	54.0	-14.8
19,840.0 P *	30.1	22.1	0.0	52.2	74.0	-21.8
19,840.0 A *	9.7	22.1	0.0	31.8	54.0	-22.2
22,320.0 P *	30.5	21.8	0.0	52.3	74.0	-21.7
22,320.0 A *	9.3	21.8	0.0	31.1	54.0	-22.9

P = Peak Detection

A = Average Detection

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Vertical Polarity (100930)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	11.7	35.1	0.0	46.8	74.0	-27.2		
2483.5 A *	-0.8	35.1	0.0	34.3	54.0	-19.7		
4804.0 P	21.9	42.5	0.0	64.4	74.0	-9.6		
4804.0 A	9.1	42.5	0.0	51.6	54.0	-2.4		
12,010.0 P *	11.3	41.7	0.0	53.0	74.0	-21.0		
12,010.0 A *	-1.4	41.7	0.0	40.3	54.0	-13.7		
19,216.0 P *	25.0	22.9	0.0	47.9	74.0	-26.1		
19,216.0 A *	12.3	22.9	0.0	35.2	54.0	-18.8		

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	11.8	35.1	0.0	46.9	74.0	-27.1			
2483.5 A *	-0.6	35.1	0.0	34.5	54.0	-19.5			
4882.0 P	18.8	42.9	0.0	61.7	74.0	-12.3			
4882.0 A	6.7	42.9	0.0	49.6	54.0	-4.4			
7323.0 P *	13.7	37.7	0.0	51.4	74.0	-22.6			
7323.0 A *	0.4	37.7	0.0	38.1	54.0	-15.9			
12,205.0 P *	11.3	41.4	0.0	52.7	74.0	-21.3			
12,205.0 A *	-0.8	41.4	0.0	40.6	54.0	-13.4			
19,528.0 P *	25.0	22.6	0.0	47.6	74.0	-26.4			
19,528.0 A *	11.5	22.6	0.0	34.1	54.0	-19.9			

P = Peak Detection

A = Average Detection

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Transmitting at 2480.0 MHz						
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P	14.2	35.1	0.0	49.3	74.0	-24.7
2483.5 A	2.5	35.1	0.0	37.6	54.0	-16.4
4960.0 P	12.5	43.2	0.0	55.7	74.0	-18.3
4960.0 A	-0.4	43.2	0.0	42.8	54.0	-11.2
7440.0 P *	11.9	37.9	0.0	49.8	74.0	-24.2
7440.0 A *	0.0	37.9	0.0	37.9	54.0	-16.1
12,400.0 P *	9.8	41.0	0.0	50.8	74.0	-23.2
12,400.0 A *	-1.7	41.0	0.0	39.3	54.0	-14.7
19,840.0 P *	28.6	22.1	0.0	50.7	74.0	-23.3
19,840.0 A *	9.1	22.1	0.0	31.2	54.0	-22.8
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2
22,320.0 A *	9.9	21.8	0.0	31.7	54.0	-22.3

P = Peak Detection

A = Average Detection

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Horizontal Polarity (100930)

Transmitting at 2402.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	11.9	35.1	0.0	47.0	74.0	-27.0			
2483.5 A *	-0.6	35.1	0.0	34.5	54.0	-19.5			
4804.0 P	16.6	42.5	0.0	59.1	74.0	-14.9			
4804.0 A	4.6	42.5	0.0	47.1	54.0	-6.9			
12,010.0 P *	10.8	41.7	0.0	52.5	74.0	-21.5			
12,010.0 A *	-1.4	41.7	0.0	40.3	54.0	-13.7			
19,216.0 P *	26.0	22.9	0.0	48.9	74.0	-25.1			
19,216.0 A *	12.2	22.9	0.0	35.1	54.0	-18.9			

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	11.2	35.1	0.0	46.3	74.0	-27.7			
2483.5 A *	-0.7	35.1	0.0	34.4	54.0	-19.6			
4882.0 P	12.8	42.9	0.0	55.7	74.0	-18.3			
4882.0 A	3.7	42.9	0.0	46.6	54.0	-7.4			
7323.0 P *	16.2	37.7	0.0	53.9	74.0	-20.1			
7323.0 A *	3.7	37.7	0.0	41.4	54.0	-12.6			
12,205.0 P *	11.1	41.4	0.0	52.5	74.0	-21.5			
12,205.0 A *	-0.8	41.4	0.0	40.6	54.0	-13.4			
19,528.0 P *	27.8	22.6	0.0	50.4	74.0	-23.6			
19,528.0 A *	13.0	22.6	0.0	35.6	54.0	-18.4			

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	80.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P	11.9	35.1	0.0	47.0	74.0	-27.0
2483.5 A	2.6	35.1	0.0	37.7	54.0	-16.3
4960.0 P	10.6	43.2	0.0	53.8	74.0	-20.2
4960.0 A	-1.5	43.2	0.0	41.7	54.0	-12.3
7440.0 P *	20.8	37.9	0.0	58.7	74.0	-15.3
7440.0 A *	8.0	37.9	0.0	45.9	54.0	-8.1
12,400.0 P *	10.4	41.0	0.0	51.4	74.0	-22.6
12,400.0 A *	-1.7	41.0	0.0	39.3	54.0	-14.7
19,840.0 P *	27.5	22.1	0.0	49.6	74.0	-24.4
19,840.0 A *	9.1	22.1	0.0	31.2	54.0	-22.8
22,320.0 P *	32.0	21.8	0.0	53.8	74.0	-20.2
22,320.0 A *	8.6	21.8	0.0	30.4	54.0	-23.6

P = Peak Detection

A = Average Detection

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Vertical Polarity (RangeStar 100918-100)

Transmitting at 2402.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	11.6	35.1	0.0	46.7	74.0	-27.3			
2483.5 A *	-0.6	35.1	0.0	34.5	54.0	-19.5			
4804.0 P	13.8	42.5	0.0	56.3	74.0	-17.7			
4804.0 A	0.6	42.5	0.0	43.1	54.0	-10.9			
12,010.0 P *	10.4	41.7	0.0	52.1	74.0	-21.9			
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1			
19,216.0 P *	26.7	22.9	0.0	49.6	74.0	-24.4			
19,216.0 A *	13.1	22.9	0.0	36.0	54.0	-18.0			

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	41.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P *	13.0	35.1	0.0	48.1	74.0	-25.9
2483.5 A *	-0.3	35.1	0.0	34.8	54.0	-19.2
4882.0 P	18.4	42.9	0.0	61.3	74.0	-12.7
4882.0 A	7.2	42.9	0.0	50.1	54.0	-3.9
7323.0 P *	15.9	37.7	0.0	53.6	74.0	-20.4
7323.0 A *	4.1	37.7	0.0	41.8	54.0	-12.2
12,205.0 P *	10.9	41.4	0.0	52.3	74.0	-21.7
12,205.0 A *	-0.9	41.4	0.0	40.5	54.0	-13.5
19,528.0 P *	27.6	22.6	0.0	50.2	74.0	-23.8
19,528.0 A *	13.3	22.6	0.0	35.9	54.0	-18.1

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB				
2483.5 P	25.9	35.1	0.0	61.0	74.0	-13.0				
2483.5 A	10.6	35.1	0.0	45.7	54.0	-8.3				
4960.0 P	22.4	43.2	0.0	65.6	74.0	-8.4				
4960.0 A	10.3	43.2	0.0	53.5	54.0	-0.5				
7440.0 P *	15.8	37.9	0.0	53.7	74.0	-20.3				
7440.0 A *	5.6	37.9	0.0	43.5	54.0	-10.5				
12,400.0 P *	9.8	41.0	0.0	50.8	74.0	-23.2				
12,400.0 A *	-1.9	41.0	0.0	39.1	54.0	-14.9				
19,840.0 P *	30.0	22.1	0.0	52.1	74.0	-21.9				
19,840.0 A *	9.5	22.1	0.0	31.6	54.0	-22.4				
22,320.0 P *	32.3	21.8	0.0	54.1	74.0	-19.9				
22,320.0 A *	10.2	21.8	0.0	32.0	54.0	-22.0				

P = Peak Detection

A = Average Detection

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Horizontal Polarity (RangeStar 100918-100)

Transmitting at 2402.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	12.1	35.1	0.0	47.2	74.0	-26.8			
2483.5 A *	-0.6	35.1	0.0	34.5	54.0	-19.5			
4804.0 P	15.0	42.5	0.0	57.5	74.0	-16.5			
4804.0 A	2.8	42.5	0.0	45.3	54.0	-8.7			
12,010.0 P *	10.0	41.7	0.0	51.7	74.0	-22.3			
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1			
19,216.0 P *	26.1	22.9	0.0	49.0	74.0	-25.0			
19,216.0 A *	12.9	22.9	0.0	35.8	54.0	-18.2			

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	13.6	35.1	0.0	48.7	74.0	-25.3			
2483.5 A *	-0.2	35.1	0.0	34.9	54.0	-19.1			
4882.0 P	21.5	42.9	0.0	64.4	74.0	-9.6			
4882.0 A	9.3	42.9	0.0	52.2	54.0	-1.8			
7323.0 P *	13.3	37.7	0.0	51.0	74.0	-23.0			
7323.0 A *	0.9	37.7	0.0	38.6	54.0	-15.4			
12,205.0 P *	10.7	41.4	0.0	52.1	74.0	-21.9			
12,205.0 A *	-0.9	41.4	0.0	40.5	54.0	-13.5			
19,528.0 P *	26.4	22.6	0.0	49.0	74.0	-25.0			
19,528.0 A *	12.0	22.6	0.0	34.6	54.0	-19.4			

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	29.3	35.1	0.0	64.4	74.0	-9.6			
2483.5 A	4.5	35.1	0.0	39.6	54.0	-14.4			
4960.0 P	23.2	43.2	0.0	66.4	74.0	-7.6			
4960.0 A	9.2	43.2	0.0	52.4	54.0	-1.6			
7440.0 P *	13.0	37.9	0.0	50.9	74.0	-23.1			
7440.0 A *	-0.1	37.9	0.0	37.8	54.0	-16.2			
12,400.0 P *	10.6	41.0	0.0	51.6	74.0	-22.4			
12,400.0 A *	-1.9	41.0	0.0	39.1	54.0	-14.9			
19,840.0 P *	29.9	22.1	0.0	52.0	74.0	-22.0			
19,840.0 A *	8.9	22.1	0.0	31.0	54.0	-23.0			
22,320.0 P *	30.0	21.8	0.0	51.8	74.0	-22.2			
22,320.0 A *	10.9	21.8	0.0	32.7	54.0	-21.3			

P = Peak Detection

A = Average Detection

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Vertical Polarity (ANCG22G45SAA001TT1)

Transmitting at 2402.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	10.6	35.1	0.0	45.7	74.0	-28.3			
2483.5 A *	-0.7	35.1	0.0	34.4	54.0	-19.6			
4804.0 P	18.8	42.5	0.0	61.3	74.0	-12.7			
4804.0 A	6.1	42.5	0.0	48.6	54.0	-5.4			
12,010.0 P *	11.3	41.7	0.0	53.0	74.0	-21.0			
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1			
19,216.0 P *	25.9	22.9	0.0	48.8	74.0	-25.2			
19,216.0 A *	12.0	22.9	0.0	34.9	54.0	-19.1			

P = Peak Detection

A = Average Detection

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	Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P *	13.0	35.1	0.0	48.1	74.0	-25.9			
2483.5 A *	-1.0	35.1	0.0	34.1	54.0	-19.9			
4882.0 P	17.4	42.9	0.0	60.3	74.0	-13.7			
4882.0 A	6.2	42.9	0.0	49.1	54.0	-4.9			
7323.0 P *	18.2	37.7	0.0	55.9	74.0	-18.1			
7323.0 A *	4.6	37.7	0.0	42.3	54.0	-11.7			
12,205.0 P *	11.5	41.4	0.0	52.9	74.0	-21.1			
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6			
19,528.0 P *	28.3	22.6	0.0	50.9	74.0	-23.1			
19,528.0 A *	13.9	22.6	0.0	36.5	54.0	-17.5			

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz									
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB				
2483.5 P	29.9	35.1	0.0	65.0	74.0	-9.0				
2483.5 A	0.4	35.1	0.0	35.5	54.0	-18.5				
4960.0 P	18.9	43.2	0.0	62.1	74.0	-11.9				
4960.0 A	7.1	43.2	0.0	50.3	54.0	-3.7				
7440.0 P *	13.0	37.9	0.0	50.9	74.0	-23.1				
7440.0 A *	0.2	37.9	0.0	38.1	54.0	-15.9				
12,400.0 P *	11.2	41.0	0.0	52.2	74.0	-21.8				
12,400.0 A *	-1.1	41.0	0.0	39.9	54.0	-14.1				
19,840.0 P *	30.4	22.1	0.0	52.5	74.0	-21.5				
19,840.0 A *	9.5	22.1	0.0	31.6	54.0	-22.4				
22,320.0 P *	30.5	21.8	0.0	52.3	74.0	-21.7				
22,320.0 A *	9.4	21.8	0.0	31.2	54.0	-22.8				

P = Peak Detection

A = Average Detection

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Horizontal Polarity (ANCG22G45SAA001TT1)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	9.7	35.1	0.0	44.8	74.0	-29.2		
2483.5 A *	-1.0	35.1	0.0	34.1	54.0	-19.9		
4804.0 P	16.9	42.5	0.0	59.4	74.0	-14.6		
4804.0 A	5.1	42.5	0.0	47.6	54.0	-б.4		
12,010.0 P *	11.4	41.7	0.0	53.1	74.0	-20.9		
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1		
19,216.0 P *	26.4	22.9	0.0	49.3	74.0	-24.7		
19,216.0 A *	12.6	22.9	0.0	35.5	54.0	-18.5		

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	41.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P *	10.9	35.1	0.0	46.0	74.0	-28.0
2483.5 A *	-1.0	35.1	0.0	34.1	54.0	-19.9
4882.0 P	15.2	42.9	0.0	58.1	74.0	-15.9
4882.0 A	4.2	42.9	0.0	47.1	54.0	-6.9
7323.0 P *	15.2	37.7	0.0	52.9	74.0	-21.1
7323.0 A *	1.8	37.7	0.0	39.5	54.0	-14.5
12,205.0 P *	11.3	41.4	0.0	52.7	74.0	-21.3
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6
19,528.0 P *	26.5	22.6	0.0	49.1	74.0	-24.9
19,528.0 A *	11.9	22.6	0.0	34.5	54.0	-19.5

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	27.9	35.1	0.0	63.0	74.0	-11.0			
2483.5 A	1.0	35.1	0.0	36.1	54.0	-17.9			
4960.0 P	17.1	43.2	0.0	60.3	74.0	-13.7			
4960.0 A	4.8	43.2	0.0	48.0	54.0	-6.0			
7440.0 P *	17.8	37.9	0.0	55.7	74.0	-18.3			
7440.0 A *	3.8	37.9	0.0	41.7	54.0	-12.3			
12,400.0 P *	11.5	41.0	0.0	52.5	74.0	-21.5			
12,400.0 A *	-1.1	41.0	0.0	39.9	54.0	-14.1			
19,840.0 P *	30.9	22.1	0.0	53.0	74.0	-21.0			
19,840.0 A *	9.9	22.1	0.0	32.0	54.0	-22.0			
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2			
22,320.0 A *	10.0	21.8	0.0	31.8	54.0	-22.2			

P = Peak Detection

A = Average Detection

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Vertical Polarity (PhyComp 4311 111 00245)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	11.7	35.1	0.0	46.8	74.0	-27.2		
2483.5 A *	-0.4	35.1	0.0	34.7	54.0	-19.3		
4804.0 P	16.7	42.5	0.0	59.2	74.0	-14.8		
4804.0 A	4.6	42.5	0.0	47.1	54.0	-6.9		
12,010.0 P *	10.6	41.7	0.0	52.3	74.0	-21.7		
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1		
19,216.0 P *	27.0	22.9	0.0	49.9	74.0	-24.1		
19,216.0 A *	13.8	22.9	0.0	36.7	54.0	-17.3		

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	41.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P *	16.3	35.1	0.0	51.4	74.0	-22.6
2483.5 A *	-0.8	35.1	0.0	34.3	54.0	-19.7
4882.0 P	19.3	42.9	0.0	62.2	74.0	-11.8
4882.0 A	7.1	42.9	0.0	50.0	54.0	-4.0
7323.0 P *	21.0	37.7	0.0	58.7	74.0	-15.3
7323.0 A *	8.0	37.7	0.0	45.7	54.0	-8.3
12,205.0 P *	11.5	41.4	0.0	52.9	74.0	-21.1
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6
19,528.0 P *	25.9	22.6	0.0	48.5	74.0	-25.5
19,528.0 A *	11.2	22.6	0.0	33.8	54.0	-20.2

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	34.0	35.1	0.0	69.1	74.0	-4.9			
2483.5 A	0.9	35.1	0.0	36.0	54.0	-18.0			
4960.0 P	17.2	43.2	0.0	60.4	74.0	-13.6			
4960.0 A	6.0	43.2	0.0	49.2	54.0	-4.8			
7440.0 P *	17.5	37.9	0.0	55.4	74.0	-18.6			
7440.0 A *	4.7	37.9	0.0	42.6	54.0	-11.4			
12,400.0 P *	10.5	41.0	0.0	51.5	74.0	-22.5			
12,400.0 A *	-1.1	41.0	0.0	39.9	54.0	-14.1			
19,840.0 P *	30.9	22.1	0.0	53.0	74.0	-21.0			
19,840.0 A *	9.9	22.1	0.0	32.0	54.0	-22.0			
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2			
22,320.0 A *	9.9	21.8	0.0	31.7	54.0	-22.3			

P = Peak Detection

A = Average Detection

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Horizontal Polarity (PhyComp 4311 111 00245)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	13.9	35.1	0.0	49.0	74.0	-25.0		
2483.5 A *	-0.7	35.1	0.0	34.4	54.0	-19.6		
4804.0 P	14.6	42.5	0.0	57.1	74.0	-16.9		
4804.0 A	2.2	42.5	0.0	44.7	54.0	-9.3		
12,010.0 P *	10.8	41.7	0.0	52.5	74.0	-21.5		
12,010.0 A *	-0.9	41.7	0.0	40.8	54.0	-13.2		
19,216.0 P *	26.1	22.9	0.0	49.0	74.0	-25.0		
19,216.0 A *	12.7	22.9	0.0	35.6	54.0	-18.4		

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	41.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P *	10.9	35.1	0.0	46.0	74.0	-28.0
2483.5 A *	-0.5	35.1	0.0	34.6	54.0	-19.4
4882.0 P	14.3	42.9	0.0	57.2	74.0	-16.8
4882.0 A	5.4	42.9	0.0	48.3	54.0	-5.7
7323.0 P *	18.5	37.7	0.0	56.2	74.0	-17.8
7323.0 A *	3.1	37.7	0.0	40.8	54.0	-13.2
12,205.0 P *	10.9	41.4	0.0	52.3	74.0	-21.7
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6
19,528.0 P *	25.9	22.6	0.0	48.5	74.0	-25.5
19,528.0 A *	11.4	22.6	0.0	34.0	54.0	-20.0

P = Peak Detection

A = Average Detection

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	Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB			
2483.5 P	21.6	35.1	0.0	56.7	74.0	-17.3			
2483.5 A	0.6	35.1	0.0	35.7	54.0	-18.3			
4960.0 P	16.4	43.2	0.0	59.6	74.0	-14.4			
4960.0 A	4.2	43.2	0.0	47.4	54.0	-6.6			
7440.0 P *	13.3	37.9	0.0	51.2	74.0	-22.8			
7440.0 A *	1.9	37.9	0.0	39.8	54.0	-14.2			
12,400.0 P *	11.0	41.0	0.0	52.0	74.0	-22.0			
12,400.0 A *	-1.1	41.0	0.0	39.9	54.0	-14.1			
19,840.0 P *	31.1	22.1	0.0	53.2	74.0	-20.8			
19,840.0 A *	11.0	22.1	0.0	33.1	54.0	-20.9			
22,320.0 P *	32.2	21.8	0.0	54.0	74.0	-20.0			
22,320.0 A *	10.3	21.8	0.0	32.1	54.0	-21.9			

P = Peak Detection

A = Average Detection

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Vertical Polarity (ANCM12G45SAA072TT)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	10.8	35.1	0.0	45.9	74.0	-28.1		
2483.5 A *	-0.9	35.1	0.0	34.2	54.0	-19.8		
4804.0 P	17.6	42.5	0.0	60.1	74.0	-13.9		
4804.0 A	5.9	42.5	0.0	48.4	54.0	-5.б		
12,010.0 P *	12.1	41.7	0.0	53.8	74.0	-20.2		
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1		
19,216.0 P *	25.8	22.9	0.0	48.7	74.0	-25.3		
19,216.0 A *	12.1	22.9	0.0	35.0	54.0	-19.0		

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	41.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P *	10.8	35.1	0.0	45.9	74.0	-28.1
2483.5 A *	-1.0	35.1	0.0	34.1	54.0	-19.9
4882.0 P	19.5	42.9	0.0	62.4	74.0	-11.6
4882.0 A	7.2	42.9	0.0	50.1	54.0	-3.9
7323.0 P *	16.9	37.7	0.0	54.6	74.0	-19.4
7323.0 A *	4.7	37.7	0.0	42.4	54.0	-11.6
12,205.0 P *	11.5	41.4	0.0	52.9	74.0	-21.1
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6
19,528.0 P *	26.8	22.6	0.0	49.4	74.0	-24.6
19,528.0 A *	12.8	22.6	0.0	35.4	54.0	-18.6

P = Peak Detection

A = Average Detection

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		Transmit	ting at 24	80.0 MHz		
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB
2483.5 P	25.1	35.1	0.0	60.2	74.0	-13.8
2483.5 A	3.2	35.1	0.0	38.3	54.0	-15.7
4960.0 P	16.1	43.2	0.0	59.3	74.0	-14.7
4960.0 A	3.9	43.2	0.0	47.1	54.0	-6.9
7440.0 P *	12.4	37.9	0.0	50.3	74.0	-23.7
7440.0 A *	1.5	37.9	0.0	39.4	54.0	-14.6
12,400.0 P *	10.8	41.0	0.0	51.8	74.0	-22.2
12,400.0 A *	-1.2	41.0	0.0	39.8	54.0	-14.2
19,840.0 P *	30.0	22.1	0.0	52.1	74.0	-21.9
19,840.0 A *	9.5	22.1	0.0	31.6	54.0	-22.4
22,320.0 P *	31.3	21.8	0.0	53.1	74.0	-20.9
22,320.0 A *	10.9	21.8	0.0	32.7	54.0	-21.3

P = Peak Detection

A = Average Detection

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Horizontal Polarity (ANCM12G45SAA072TT)

Transmitting at 2402.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	10.7	35.1	0.0	45.8	74.0	-28.2		
2483.5 A *	-0.9	35.1	0.0	34.2	54.0	-19.8		
4804.0 P	20.8	42.5	0.0	63.3	74.0	-10.7		
4804.0 A	8.8	42.5	0.0	51.3	54.0	-2.7		
12,010.0 P *	11.2	41.7	0.0	52.9	74.0	-21.1		
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1		
19,216.0 P *	25.3	22.9	0.0	48.2	74.0	-25.8		
19,216.0 A *	11.8	22.9	0.0	34.7	54.0	-19.3		

P = Peak Detection

A = Average Detection

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Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	11.0	35.1	0.0	46.1	74.0	-27.9		
2483.5 A *	-1.1	35.1	0.0	34.0	54.0	-20.0		
4882.0 P	17.4	42.9	0.0	60.3	74.0	-13.7		
4882.0 A	5.6	42.9	0.0	48.5	54.0	-5.5		
7323.0 P *	13.6	37.7	0.0	51.3	74.0	-22.7		
7323.0 A *	2.4	37.7	0.0	40.1	54.0	-13.9		
12,205.0 P *	11.2	41.4	0.0	52.6	74.0	-21.4		
12,205.0 A *	-1.0	41.4	0.0	40.4	54.0	-13.6		
19,528.0 P *	26.1	22.6	0.0	48.7	74.0	-25.3		
19,528.0 A *	12.5	22.6	0.0	35.1	54.0	-18.9		

P = Peak Detection

A = Average Detection

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Transmitting at 2480.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P	26.8	35.1	0.0	61.9	74.0	-12.1		
2483.5 A	3.5	35.1	0.0	38.6	54.0	-15.4		
4960.0 P	14.1	43.2	0.0	57.3	74.0	-16.7		
4960.0 A	2.0	43.2	0.0	45.2	54.0	-8.8		
7440.0 P *	13.9	37.9	0.0	51.8	74.0	-22.2		
7440.0 A *	1.2	37.9	0.0	39.1	54.0	-14.9		
12,400.0 P *	10.8	41.0	0.0	51.8	74.0	-22.2		
12,400.0 A *	-1.2	41.0	0.0	39.8	54.0	-14.2		
19,840.0 P *	30.3	22.1	0.0	52.4	74.0	-21.6		
19,840.0 A *	9.7	22.1	0.0	31.8	54.0	-22.2		
22,320.0 P *	31.2	21.8	0.0	53.0	74.0	-21.0		
22,320.0 A *	9.7	21.8	0.0	31.5	54.0	-22.5		

P = Peak Detection

A = Average Detection

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Vertical Polarity (M/A-Com AND-C-107)

Transmitting at 2402.0 MHz							
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB	
2483.5 P *	11.9	35.1	0.0	47.0	74.0	-27.0	
2483.5 A *	-0.6	35.1	0.0	34.5	54.0	-19.5	
4804.0 P	13.4	42.5	0.0	55.9	74.0	-18.1	
4804.0 A	0.5	42.5	0.0	43.0	54.0	-11.0	
12,010.0 P *	11.0	41.7	0.0	52.7	74.0	-21.3	
12,010.0 A *	-0.8	41.7	0.0	40.9	54.0	-13.1	
19,216.0 P *	25.5	22.9	0.0	48.4	74.0	-25.6	
19,216.0 A *	10.9	22.9	0.0	33.8	54.0	-20.2	

P = Peak Detection

A = Average Detection

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Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	11.9	35.1	0.0	47.0	74.0	-27.0		
2483.5 A *	-0.4	35.1	0.0	34.7	54.0	-19.3		
4882.0 P	17.7	42.9	0.0	60.6	74.0	-13.4		
4882.0 A	4.3	42.9	0.0	47.2	54.0	-6.8		
7323.0 P *	13.0	37.7	0.0	50.7	74.0	-23.3		
7323.0 A *	2.3	37.7	0.0	40.0	54.0	-14.0		
12,205.0 P *	11.7	41.4	0.0	53.1	74.0	-20.9		
12,205.0 A *	-0.7	41.4	0.0	40.7	54.0	-13.3		
19,528.0 P *	27.1	22.6	0.0	49.7	74.0	-24.3		
19,528.0 A *	13.2	22.6	0.0	35.8	54.0	-18.2		

P = Peak Detection

A = Average Detection

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Transmitting at 2480.0 MHz							
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB	
2483.5 P	11.5	35.1	0.0	46.6	74.0	-27.4	
2483.5 A	5.3	35.1	0.0	40.4	54.0	-13.6	
4960.0 P	16.3	43.2	0.0	59.5	74.0	-14.5	
4960.0 A	4.8	43.2	0.0	48.0	54.0	-6.0	
7440.0 P *	13.5	37.9	0.0	51.4	74.0	-22.6	
7440.0 A *	1.1	37.9	0.0	39.0	54.0	-15.0	
12,400.0 P *	10.6	41.0	0.0	51.6	74.0	-22.4	
12,400.0 A *	-1.0	41.0	0.0	40.0	54.0	-14.0	
19,840.0 P *	31.2	22.1	0.0	53.3	74.0	-20.7	
19,840.0 A *	10.4	22.1	0.0	32.5	54.0	-21.5	
22,320.0 P *	31.0	21.8	0.0	52.8	74.0	-21.2	
22,320.0 A *	9.8	21.8	0.0	31.6	54.0	-22.4	

P = Peak Detection

A = Average Detection

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Horizontal Polarity (M/A-Com AND-C-107)

Transmitting at 2402.0 MHz							
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB	
2483.5 P *	12.1	35.1	0.0	47.2	74.0	-26.8	
2483.5 A *	-0.9	35.1	0.0	34.2	54.0	-19.8	
4804.0 P	12.4	42.5	0.0	54.9	74.0	-19.1	
4804.0 A	-0.3	42.5	0.0	42.2	54.0	-11.8	
12,010.0 P *	10.9	41.7	0.0	52.6	74.0	-21.4	
12,010.0 A *	-0.6	41.7	0.0	41.1	54.0	-12.9	
19,216.0 P *	25.9	22.9	0.0	48.8	74.0	-25.2	
19,216.0 A *	10.6	22.9	0.0	33.5	54.0	-20.5	

P = Peak Detection

A = Average Detection

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Transmitting at 2441.0 MHz								
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB		
2483.5 P *	12.7	35.1	0.0	47.8	74.0	-26.2		
2483.5 A *	-0.7	35.1	0.0	34.4	54.0	-19.6		
4882.0 P	15.3	42.9	0.0	58.2	74.0	-15.8		
4882.0 A	4.0	42.9	0.0	46.9	54.0	-7.1		
7323.0 P *	12.6	37.7	0.0	50.3	74.0	-23.7		
7323.0 A *	2.1	37.7	0.0	39.8	54.0	-14.2		
12,205.0 P *	12.3	41.4	0.0	53.7	74.0	-20.3		
12,205.0 A *	-0.9	41.4	0.0	40.5	54.0	-13.5		
19,528.0 P *	26.8	22.6	0.0	49.4	74.0	-24.6		
19,528.0 A *	12.5	22.6	0.0	35.1	54.0	-18.9		

P = Peak Detection

A = Average Detection

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Transmitting at 2480.0 MHz							
Frequency MHz	Receiver Reading dBµV	Correction Factor dB	Average Factor dB	Corrected Reading dBµV/m	Limit dBµV/m	Margin dB	
2483.5 P	12.1	35.1	0.0	47.2	74.0	-26.8	
2483.5 A	2.0	35.1	0.0	37.1	54.0	-16.9	
4960.0 P	13.5	43.2	0.0	56.7	74.0	-17.3	
4960.0 A	2.5	43.2	0.0	45.7	54.0	-8.3	
7440.0 P *	13.0	37.9	0.0	50.9	74.0	-23.1	
7440.0 A *	1.6	37.9	0.0	39.5	54.0	-14.5	
12,400.0 P *	10.2	41.0	0.0	51.2	74.0	-22.8	
12,400.0 A *	-1.0	41.0	0.0	40.0	54.0	-14.0	
19,840.0 P *	31.7	22.1	0.0	53.8	74.0	-20.2	
19,840.0 A *	10.3	22.1	0.0	32.4	54.0	-21.6	
22,320.0 P *	31.3	21.8	0.0	53.1	74.0	-20.9	
22,320.0 A *	9.5	21.8	0.0	31.3	54.0	-22.7	

P = Peak Detection

A = Average Detection

 \ast No emissions were detected with the antenna 1 meter from the EUT, the indicated readings are the noise floor measurements from the spectrum analyzer

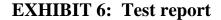
Sample Field Strength Calculation:

The field strength is calculated by adding the Correction Factor (Antenna Factor + Cable Factor), to the measured level from the receiver. The basic equation with a sample calculation is shown below:

FS = RA + CF - AF Where
FS = Field Strength
RA = Receiver Amplitude (Receiver Reading - Amplifier Gain)
CF = Correction Factor (Antenna Factor + Cable Factor)
AF = Average Factor

RESULT

In the configuration tested, the EUT complied with the requirements of the specification.



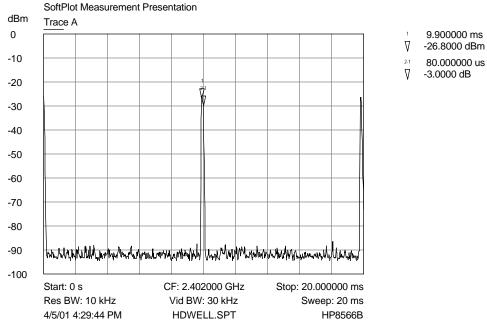
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6.2.7 § 15.247 (f) Hybrid System:

The SL-1021 has two modes of operation, Frequency Hopping mode (connection link) and Hybrid mode (page and inquiry acquisition). The page and inquiry acquisition functions operate under the provisions of this section. While in the Hybrid mode, the SL-1021 uses a hopping sequence consisting of 32 frequencies and the combined processing gain from the direct sequence and hopping operations is greater than 17 dB. The frequency hopping operation of the SL-1021 with the direct sequence operation turned off does not exceed an average time of occupancy on any frequency greater than 0.4 seconds in a time span of 12.8 seconds (32 hopping frequencies x 0.4). The direct sequence operation of the SL-1021 with the frequency hopping operation turned off does not exceed the peak power spectral density of 8 dBm in any 3 kHz band.

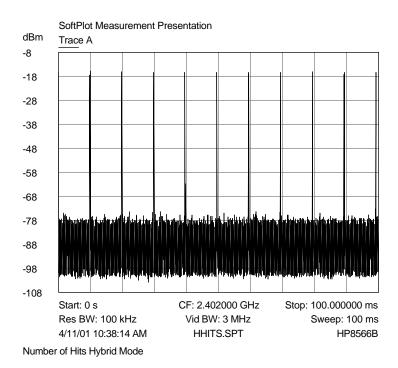
The SL-1021 uses an off-the-shelf chipset for the transceiver. Test results for the processing gain in the hybrid mode applicable to this device were uploaded as a separate exhibit. Refer to manufacturer's Exhibit 12 to review this data.



Hybrid Dwell Time

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6.2.7 § 15.247 (g) and § 15.247 (h):

The SL-1021 is designed to comply with these sections; see technical description in manufacturer's Exhibit 12.

6.2.8 § 15.207 Line Conducted Emissions:

The frequency range from 450 kHz to 30 MHz was investigated to measure any AC line conducted emissions.

A diagram of the test configuration and the test equipment used is enclosed in Appendix 1. RBW = 100 kHz, VBW = 300 kHz

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Line Conducted Data - (Hot Lead)

Frequency (MHz)	Detector	Measured Level (dBµV)	Limit (dBµV)	Margin (dB)			
0.48	Peak (Note 1)	43.2	48.0	-4.8			
0.77	Peak (Note 1)	40.2	48.0	-7.8			
1.85	Peak (Note 1)	39.7	48.0	-8.3			
3.42	Peak (Note 1)	39.3	48.0	-8.7			
26.43	Peak (Note 1)	28.7	48.0	-19.3			
	erence detector nd the data was o						
average detecto emissio level v	<pre>peak and the data was compared to the quasi-peak limit. Note 2: The reference detector used for the measurements ware quasi-peak and average. The level of the emission measured using the quasi-peak detector was 6 dB, or more, higher than the level of the same emission measured with average detection; therefore, the quasi-peak level was reduced by 13 dB for comparison to the limits, as per FCC § 15.107 (d).</pre>						

Line Conducted Data - (Neutral Lead)

Frequency (MHz)	Detector	Measured Level (dBµV)	Limit (dBµV)	Margin (dB)
0.48	Peak (Note 1)	43.2	48.0	-4.8
0.77	Peak (Note 1)	40.2	48.0	-7.8
27.0	Peak (Note 1)	27.7	48.0	-20.3
	ference detector nd the data was o			
average detecto emissio	Eerence detector e. The level of or was 6 dB, or r on measured with was reduced by 13 07 (d).	the emission me nore, higher that average detection	asured using the n the level of t on; therefore, t	quasi-peak he same he quasi-peak

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APPENDIX 1 TEST PROCEDURES AND TEST EQUIPMENT

FCC Sections 15.247 (a)(1)(ii) Emission Bandwidth

The EUT was directly connected to the spectrum analyzer via the antenna output port as shown in the block diagram below.

The measurements were performed on three channels, as per 47 CFR 15.31(m), one near the bottom of the spectrum, one near the middle of the spectrum and one near the top of the spectrum.

The spectrum analyzer's resolution bandwidth and video bandwidth were set as follows:

RBW = 10 kHz VBW = 30 kHz

Type of Equipment	Manufacturer	Model Number	Serial Number
Spectrum Analyzer	Hewlett Packard	8566B	2230A01711
Quasi-Peak Detector	Hewlett Packard	8565A	3107A01582
Low Loss Cable (1 dB)	N/A	N/A	N/A

All the equipment listed above is calibrated every 12 months by an independent calibration laboratory or by CCL personal following outlined calibration procedures.

Test Configuration Block Diagram



FCC Sections 15.247 (b)(1) Peak Output Power

The EUT was directly connected to the spectrum analyzer via the antenna output port as shown in the block diagram below.

The measurements were performed on three channels, as per 47

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CFR 15.31(m), one near the bottom of the spectrum, one near the middle of the spectrum and one near the top of the spectrum.

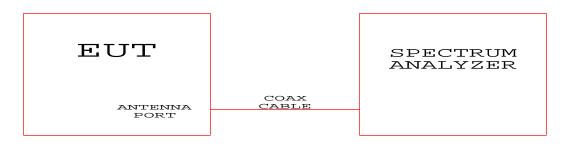
The spectrum analyzer's resolution bandwidth and video bandwidth were set as follows:

RBW = 3 MHz VBW = 3 MHz

Type of Equipment	Manufacturer	Model Number	Serial Number
Spectrum Analyzer	Hewlett Packard	8566B	2230A01711
Quasi-Peak Detector	Hewlett Packard	8565A	3107A01582
Low Loss Cable (1 dB)	N/A	N/A	N/A

All the equipment listed above is calibrated every 12 months by an independent calibration laboratory or by CCL personal following outlined calibration procedures.

Test Configuration Block Diagram



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FCC Sections 15.247 (c) Spurious Emissions

Conducted Spurious Emissions

The EUT was directly connected to the spectrum analyzer via the antenna output port as shown in the block diagram below.

The measurements were performed on three channels, as per 47 CFR 15.31(m), one near the bottom of the spectrum, one near the middle of the spectrum and one near the top of the spectrum.

The spectrum analyzer's resolution bandwidth and video bandwidth were set as follows:

RBW = 100 kHz VBW = 300 kHz

Type of Equipment	Manufacturer	Model Number	Serial Number
Spectrum Analyzer	Hewlett Packard	8566B	2230A01711
Quasi-Peak Detector	Hewlett Packard	8565A	3107A01582
Low Loss Cable (1 dB)	N/A	N/A	N/A

All the equipment listed above is calibrated every 12 months by an independent calibration laboratory or by CCL personal following outlined calibration procedures.

Test Configuration Block Diagram



Radiated Spurious Emissions in Restricted Bands:

The radiated emissions from the intentional radiator were measured using a spectrum analyzer with a quasi-peak adapter for peak and quasi-peak readings. An amplifier and preamplifier were

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used to increase the sensitivity of the measuring instrumentation. The quasi-peak adapter uses a bandwidth of 120 kHz, with the spectrum analyzer's resolution bandwidth set at 1 MHz, for readings in the 30 to 1000 MHz frequency ranges. For peak emissions above 1000 MHz the spectrum analyzer's resolution bandwidth was set to 1 MHz and the video bandwidth was set to 3 MHz. For average emissions above 1000 MHz the spectrum analyzer's resolution bandwidth was set to 1 MHz and the video bandwidth was set to 10 Hz.

A biconilog antenna was used to measure the frequency range of 30 to 1000 MHz and a Double Ridge Guide Horn antenna was used to measure the frequency range of 1 GHz to 18 GHz, and a Pyramidal Horn antenna was used to measure the frequency range of 18 GHz to 25 GHz, at a distance of 3 meters from the EUT. The readings obtained by these antennas are correlated to the levels obtained with a tuned dipole antenna by adding antenna factors.

The configuration of the intentional radiator was varied to find the maximum radiated emission. The EUT was connected to the peripherals listed in Section 2.4 via the interconnecting cables listed in Section 2.5. These interconnecting cables were manipulated manually by a technician to obtain worst case radiated emissions. The intentional radiator was rotated 360 degrees, and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission. Where there were multiple interface ports all of the same type, cables are either placed on all of the ports or cables added to these ports until the emissions do not increase by more than 2 dB.

Desktop intentional radiator is measured on a non-conducting table one meter above the ground plane. The table is placed on a turntable which is level with the ground plane. The turntable has slip rings, which supply AC power to the intentional radiator. For equipment normally placed on floors, the equipment shall be placed directly on the turntable.

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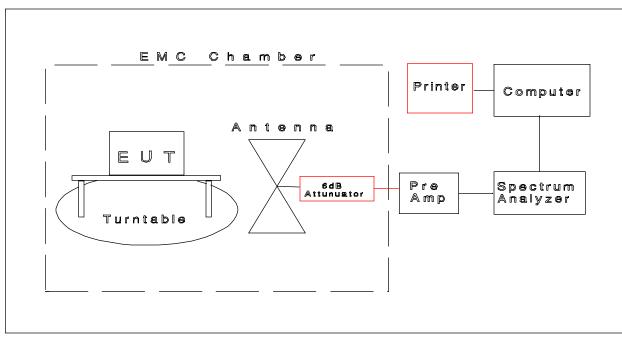
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	Manuelant	Madal	Carrial
Type of Equipment	Manufacturer	Model Number	Serial Number
Anechoic Chamber	CCL	N/A	N/A
Test Software	CCL	Radiated Emissions	Revision 1.3
Spectrum Analyzer	Hewlett Packard	8566B	2230A01711
Quasi-Peak Detector	Hewlett Packard	8565A	3107A01582
Biconilog Antenna	EMCO	3141	1045
Double Ridged Guide Antenna	EMCO	3115	9409-4355
Pyramidal Horn Antenna	EMCO	3160-09	0003-1197
Harmonic Mixer	Hewlett Packard	11970K	3003A05756
Radiated Emissions Cable Anechoic Chamber	CCL	Cable B	N/A
Amplifier	Hewlett Packard	11975A	2738A02030
Pre-Amplifier	Hewlett Packard	8447D	1937A03151
Pre-Amplifier	Hewlett Packard	8449B	3008A00777
6 dB Attenuator	Hewlett Packard	8491A	32835

All the equipment listed above is calibrated every 12 months by an independent calibration laboratory or by CCL personal following outlined calibration procedures.

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Radiated Emissions Test

FCC Sections 15.207 AC Line Conducted Emissions:

The conducted disturbance at mains ports from the ITE was measured using a spectrum analyzer with a quasi-peak adapter for peak, quasi-peak and average readings. The quasi-peak adapter uses a bandwidth of 9 kHz, with the spectrum analyzer's resolution bandwidth set at 100 kHz, for readings in the 450 kHz to 30 MHz frequency ranges.

The conducted disturbance at mains ports measurements are performed in a screen room using a (50 $\Omega/50~\mu\text{H})$ Line Impedance Stabilization Network (LISN).

Where mains flexible power cords are longer than 1 m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

Where the EUT is a collection of ITE with each ITE having its own power cord, the point of connection for the LISN is determined from the following rules:

- a) Each power cord, which is terminated in a mains supply plug, shall be tested separately.
- b) Power cords, which are not specified by the manufacturer to be connected via a host unit, shall be tested separately.
- c) Power cords which are specified by the manufacturer to be

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connected via a host unit or other power supplying equipment shall be connected to that host unit and the power cords of that host unit connected to the LISN and tested.

- d) Where a special connection is specified, the necessary hardware to effect the connection is supplied by the manufacturer for the testing purpose.
- e) When testing equipment with multiple mains cords, those cords not under test are connected to an artificial mains network (AMN) different than the AMN used for the mains cord under test.

Desktop ITE are placed on a non-conducting table at least 0.8 meters from the metallic floor. The equipment is placed a minimum of 40 cm from all walls. Floor standing equipment is placed directly on the earth grounded floor.

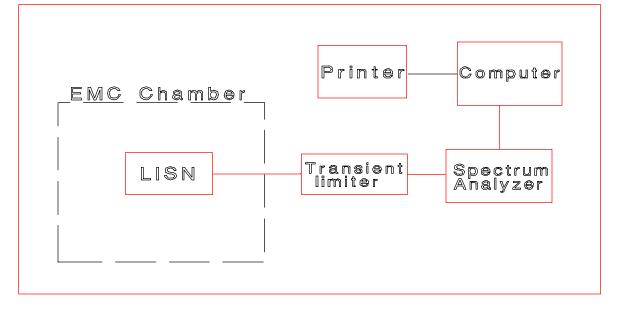
Type of Equipment	Manufacturer	Model Number	Serial Number
Anechoic Chamber Test Site #2	CCL	N/A	N/A
Test Software	CCL	Conducted Emissions	Revision 1.2
Spectrum Analyzer	Hewlett Packard	8566B	2230A01711
Quasi-Peak Detector	Hewlett Packard	8565A	3107A01582
LISN	EMCO	3825/2	9307-1893
Conductance Cable Anechoic Chamber	CCL	Cable A	N/A
Transient Limiter	Hewlett Packard	11947A	3107A00895

An independent calibration laboratory or CCL personal calibrates all the equipment listed above every 12 months following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to tractability is on file and is available for examination upon request.

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Line Conducted Emissions Test

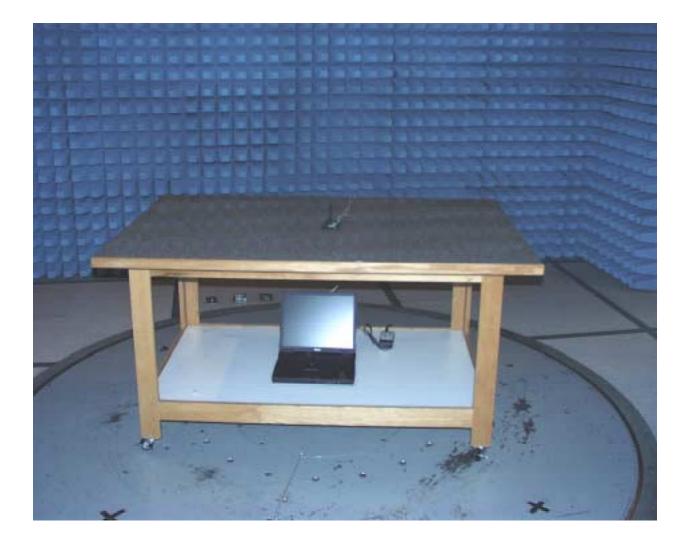


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APPENDIX 2 Photographs

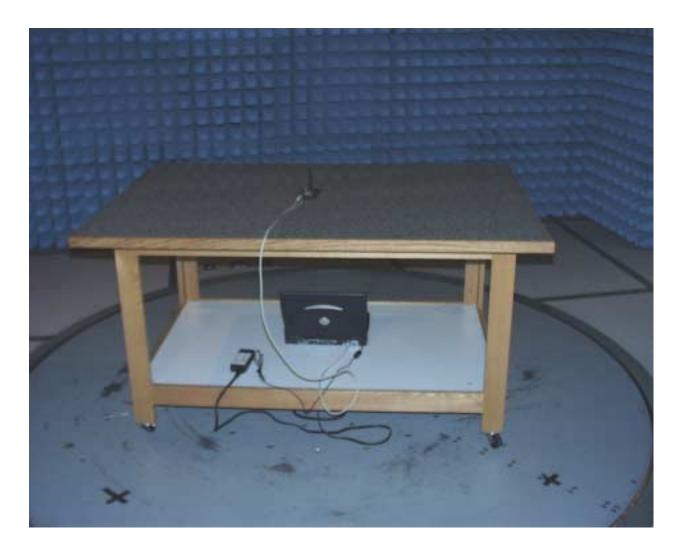
Front View of Radiated Test Setup



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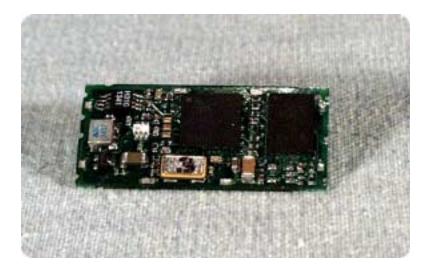
Back View Of Radiated Test Setup



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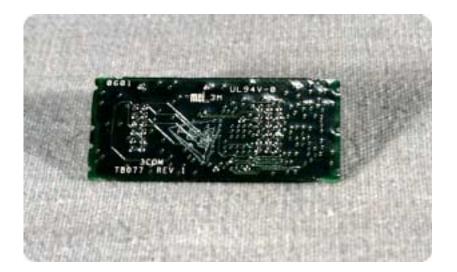
Front View of the SL-1021



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Back View of the SL-1021



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Front View of The Tiberius Test Platform



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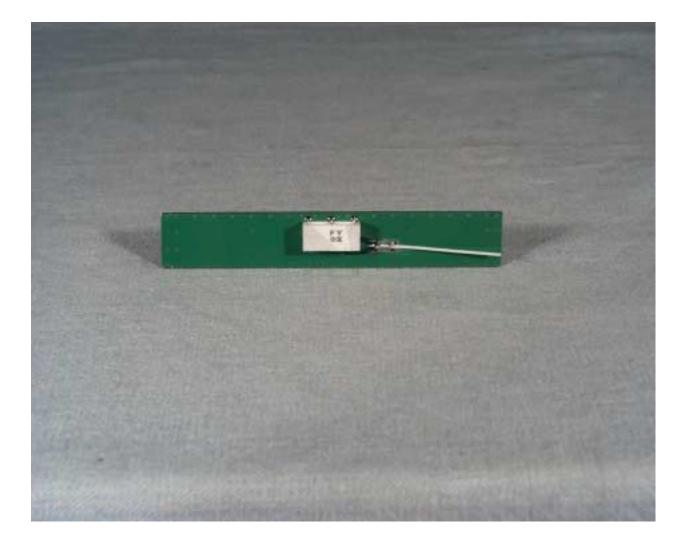
Side View of the Tiberius Test Platform



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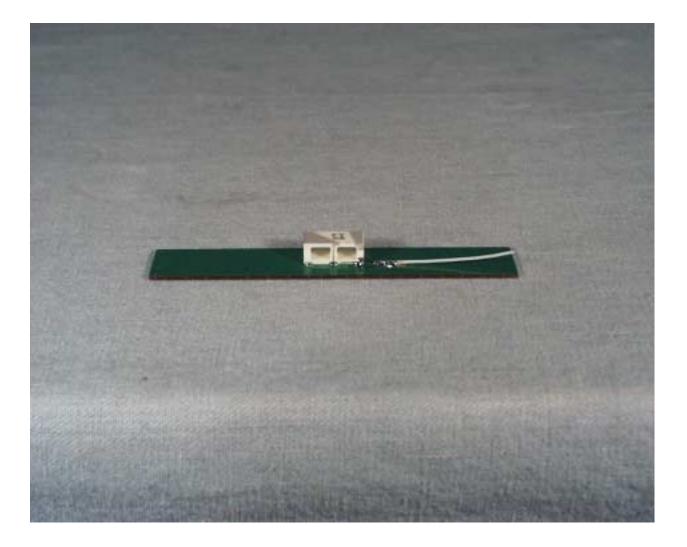
Top View of the Murata Manufacturing Co., Ltd Model ANCG22G45SAA001TT1 Antenna



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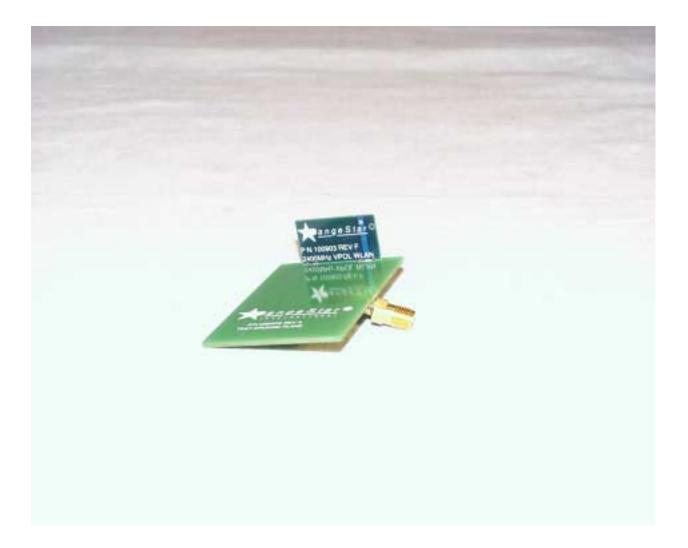
Side View of the Murata Manufacturing Co., Ltd Model ANCG22G45SAA001TT1 Antenna



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Front View of the RangeStar Wireless Model 100903 Antenna



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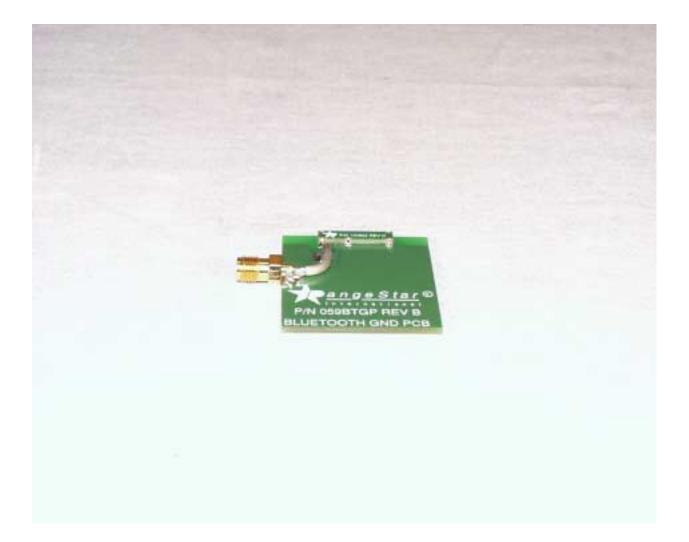
Back View of the RangeStar Wireless Model 100903 Antenna



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Front View of the RangeStar Wireless Model 100902 Antenna



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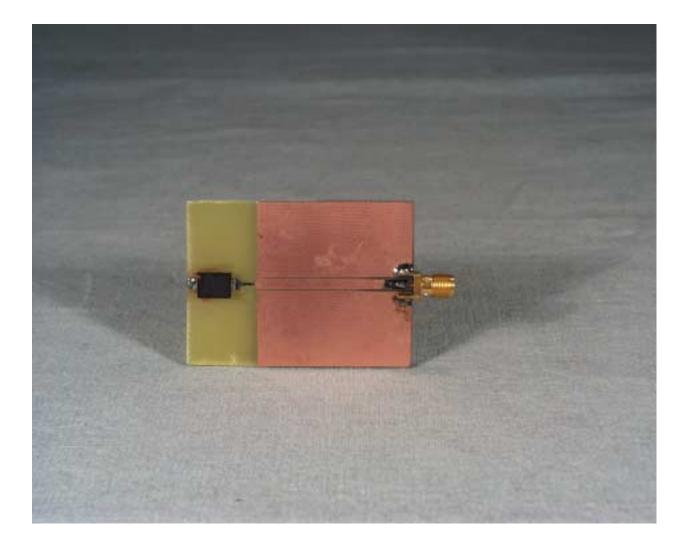
Back View of the RangeStar Wireless Model 100902 Antenna



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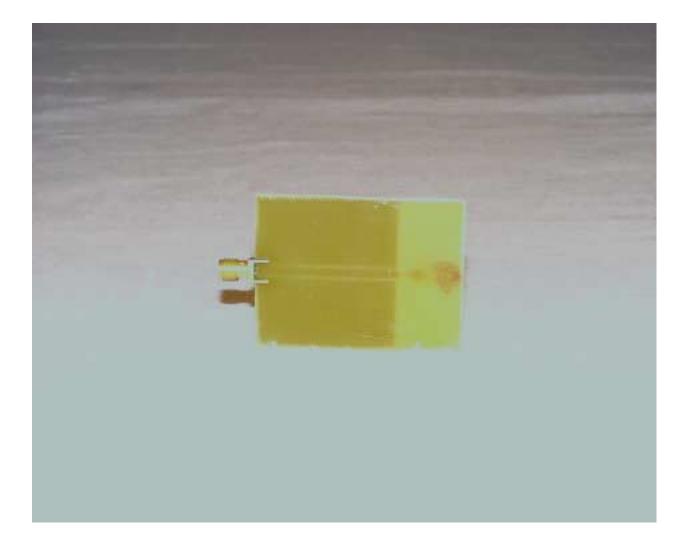
Front View of the Centurion Wireless Technologies, Inc. Model CAF95901 Antenna



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Back View of the Centurion Wireless Technologies, Inc. Model CAF95901 Antenna



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Top View of the RangeStar Wireless Model 100930 Antenna



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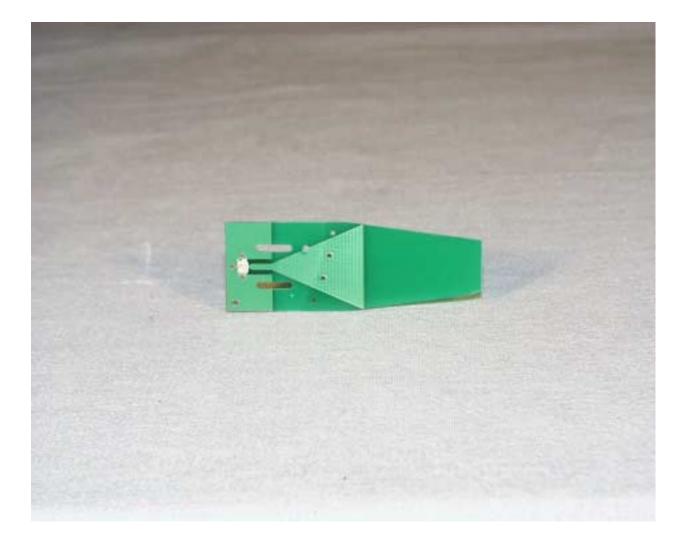
Back View of the RangeStar Wireless Model 100930 Antenna



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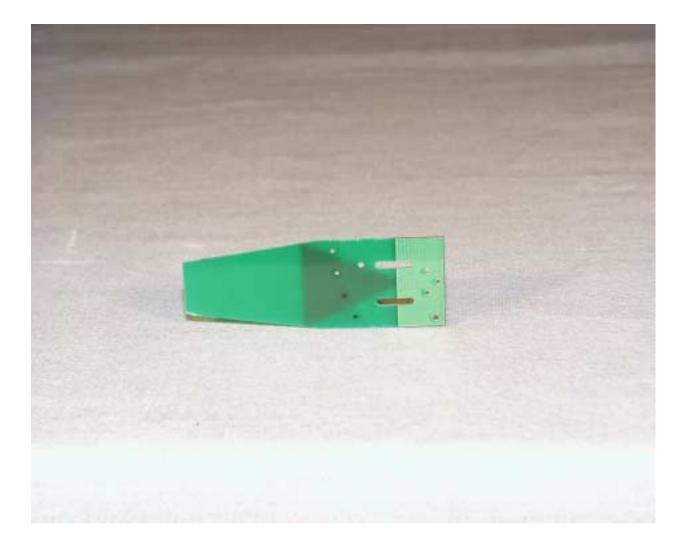
Front View of the Centurion Wireless Technologies, Inc. Model CAF95902 Antenna



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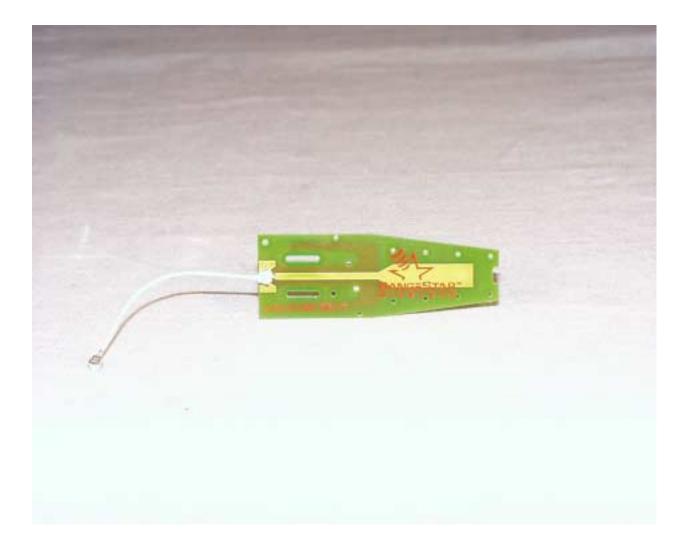
Back View of the Centurion Wireless Technologies, Inc. Model CAF95902 Antenna



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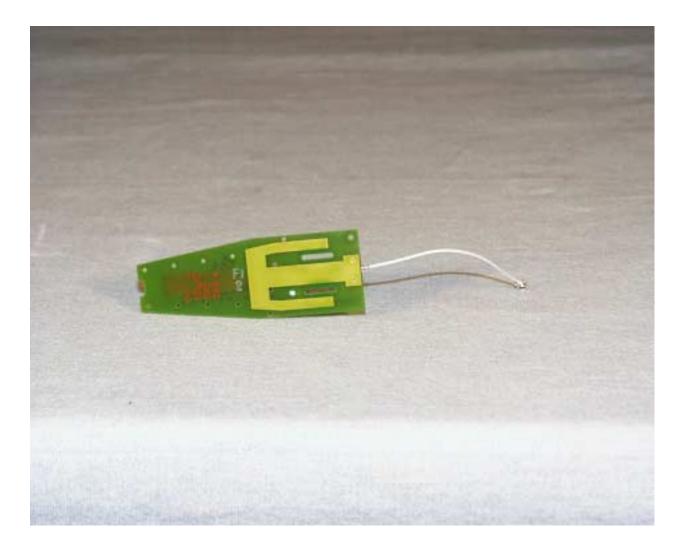
Front View of the RangeStar Wireless Model 100918-100 Antenna



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Back View of the RangeStar Wireless Model 100918-100 Antenna



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Top View of the Centurion Wireless Technologies, Inc. Model WCI2400PCB/CAF95874 Antenna



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Back View of the Centurion Wireless Technologies, Inc. Model WCI2400PCB/CAF95874 Antenna



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Front View of the M/A-Com Model AND-C-107 Antenna



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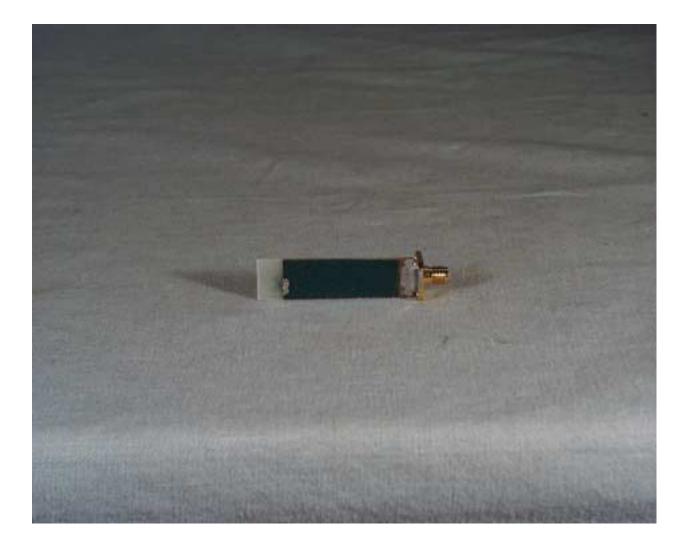
Front View of the PhyComp Model 4311 111 00245 Antenna



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Back View of the PhyComp Model 4311 111 00245 Antenna



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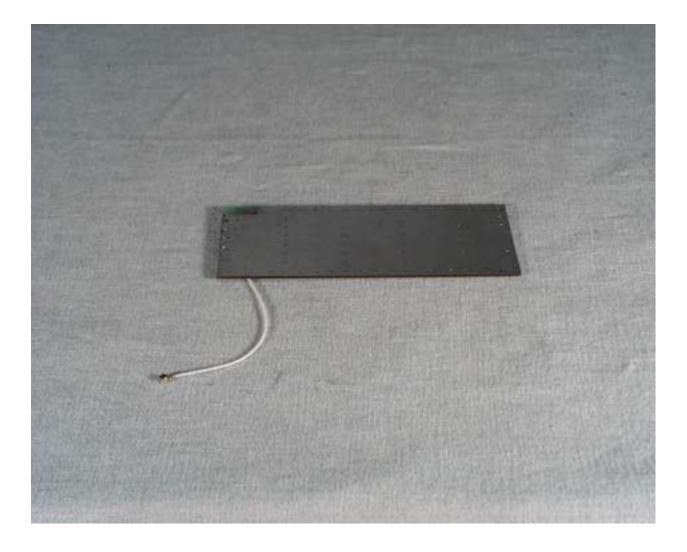
Front View of the Murata Manufacturing Co. Model ANCM12645SAA072TT Antenna



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Back View of the Murata Manufacturing Co. Model ANCM12645SAA072TT Antenna



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APPENDIX 2 RF Exposure/Environmental Evaluation

Per 47 CFR 15.247 (b)(4), the EUT meets the requirement that it be operated in a manner that ensures the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines (ref. 47 CFR 1.1307, 1.1310, and 2.1093. See also OET Bulletin 65, Supplement C).

The EUT will be used in personal computers and peripherals and can therefore be considered a portable transmitter per 47 CFR 2.1093. The EUT supports the connection of only one antenna at a time.

The MPE estimates are as follows:

Table 1 in 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population as 1mW/cm^2 . The distance from the EUT's transmitting antenna where the exposure level reaches the maximum permitted level is calculated using the general equation: S = (PG)/4\pi R^2.

Where: S = power density (1 mW/cm² maximum permitted level) P = power input to the antenna (1.1 mW) G = linear power gain relative to an isotropic radiator (4 dBi = numeric gain of 2.5) R = distance to the center of the radiation of the antenna

Solving for R, the 1 mW/cm² limit is reached 0.47 cm or closer to the transmitting antenna. Therefore, no warning labels, no RF exposure warnings in the user manual, or other protection measures are required for the EUT. Installation instructions will include the following information:

" This device generates and radiates radio-frequency energy. In order to comply with FCC radio-frequency radiation exposure guidelines for an uncontrolled environment, this device must be installed and operated while maintaining a minimum body to antenna distance of 0.47 cm (0.185 inch), based on an antenna gain of 4 dBi.

Contact 3Com for additional information regarding minimum body to antenna distances based on antenna gains other than 4 dBi."