

GENERAL INFORMATION REQUIREMENTS

Paragraph 2.983(a)

Name of Applicant: Nucomm, Inc.
Address of Applicant: 101 Bilby Road
Hackettstown, NJ 07840
Name of Manufacturer: Nucomm, Inc.

Paragraph 2.983(b)

Equipment
Identification: **FCC ID: I4U27VT2-L5-E1P5**

Applicant: Nucomm, Inc.
FCC ID: I4U27VT2-L5-E1P5
Retlif Testing Laboratories Report No.: R-11489

Para. 2.1053

FIELD STRENGTH of SPURIOUS EMISSIONS, EFFECTIVE RADIATED POWER

Applicant: Nucomm, Inc.
FCC ID: I4U27VT2-L5-E1P5
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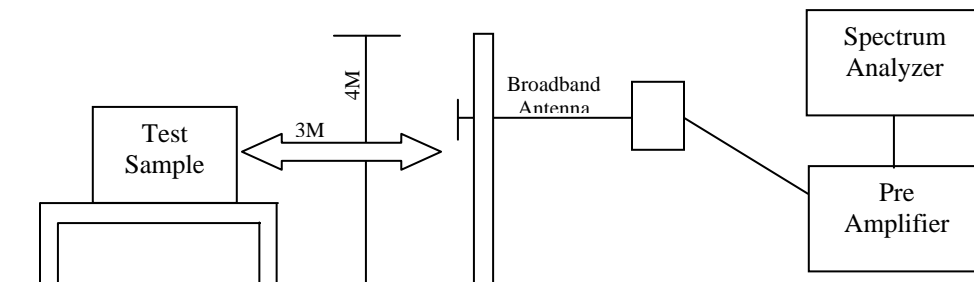
FIELD STRENGTH of SPURIOUS EMISSIONS, EFFECTIVE RADIATED POWER (Para. 2.1053)

A. Measurement Procedure:

The spurious emissions of the transmitter from 30 MHz to 40 GHz were measured in accordance with TIA/EIA603, Paragraph 2.2.1.2 as described below:

The transmitter under test was placed on an 80-cm high non-metallic table on the Open Air Test Site with its antenna terminated into a shielded load. A receive antenna was placed three meters away from the transmitter. The turntable was rotated 360 degrees and the receive antenna was raised and lowered from 1 to 4 meters until a maximum reading was obtained at each spurious emission detected. This reading was recorded. The transmitter under test was replaced with a dipole (or equivalent antenna) and signal generator. The signal generator was set to the frequency for the spurious emission. The level of the signal generator was increased until the level was equal to that previously measured. The required input level from the signal generator in dBm was recorded and the antenna gain (in dB) of the transmit antenna was added. This was the Effective Radiated Power of the spurious emission.

Setup of the test is shown below:



A. Test Results:

The EUT was found to comply with the requirements specified for this test method

EQUIPMENT LIST

TIA/EIA-603-1992, Section 2.2.12, Radiated Spurious Emissions (30MHz – 40GHz)

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3 Meter	RNY	9/12/2006	9/12/2009
127B	Biconical Antenna	Electro-Metrics	20 MHz - 200 MHz	BIA-25	6/5/2006	6/5/2007
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	3/27/2006	3/27/2007
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	6/27/2006	6/27/2007
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/27/2006	6/27/2007
450B	Tuned Dipole Antenna	Empire Devices	140 - 400 MHz	DM-105-T2	8/12/2003	11/12/2006
450C	Tuned Dipole Antenna	Empire Devices	400 - 1000 MHz	DM-105-T3	8/12/2003	11/12/2006
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/9/2005	9/9/2007
574	AM/FM Signal Generator	Marconi Instru.	9 kHz - 2.4 GHz	2024	7/25/2006	7/25/2007
648A	Power Meter	Boonton Electronics	10 kHz - 100 GHz	4232A	6/1/2006	6/1/2007
649A	Power Sensor	Boonton Electronics	10 kHz - 8 GHz	51011-EMC	10/20/2005	10/25/2006
712A	Cable	Retlif	10 kHz - 18 GHz	R&S Analyzer	6/3/2006	6/3/2007
712B	Cable	Retlif	10 kHz - 18 GHz	R&S Analyzer	8/21/2006	8/21/2007
712C	Cable	Retlif	10 kHz - 18 GHz	R&S Analyzer	6/3/2006	6/3/2007
723	H.P. Filter	Mini-Circuits	1 GHz	BHP-1000	8/7/2006	8/7/2007
731	Log Periodic Antenna	Electro-Metrics	200 - 1000 MHz	LPA-30	3/17/2006	3/17/2007
763	Spectrum Analyzer	Agilent	30 Hz - 13.2 GHz	E4405B	8/18/2006	8/18/2007

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FCC ID: I4U27VT2-L5-E1P5

Retlif Testing Laboratories Report No.: R-11489

Test Method:	TIA / EIA-603-1992, Section 2.2.12, Radiated Spurious Emissions (30 MHz – 40 GHz)								
Customer:	Nucomm, Inc.					Job No.:	R-11489		
Test Sample:	2 GHz / 7 GHz Digital / Analog ENG/OB Van Transmitter.								
Part No.:	2 / 7NCVT2-L5E1.5-326-A2C2K					FCC ID.:	I4U27VT2-L5-E1P5		
Operating Mode:	Color bars plus audio, High power, Channel 1, Analog FM Modulation, 25 MHz channel Transmitting at 6887.5 MHz.								
Technician:	R. Soodoo					Date:	October 12, 2006.		
Notes:	Test Distance: 3 Meters					Temp: 20°C		Humidity: 15%	
	Detector: Peak		Limit: (43+10 log P) down from fundamental level = -13dBm						
Frequency	Antenna Position	EUT Orientation	Meter Readings	Power Meter Reading	Gain Above Isotropic	Cable loss	ERP	Limit	
MHz	(V/H) / Meters	Degrees	dBμV	dBm	dB	dB	dBm	dBm	
30.00								-13.0	
40000.0								-13.0	
	The EUT was placed on a table, and the radiated output level was measured with a receive antenna.								
	After the level was maximized, the EUT was replaced with a transmit antenna and a signal generator.								
	The level of the generator was raised until it matched the level recorded from the EUT and this plus the antenna gain was considered the output power.								
	All emissions not recorded were more than 20 dB below the limit								

Test Method:	TIA / EIA-603-1992, Section 2.2.12, Radiated Spurious Emissions (30 MHz – 40 GHz)							
Customer:	Nucomm, Inc.				Job No.:	R-11489		
Test Sample:	2 GHz / 7 GHz Digital / Analog ENG/OB Van Transmitter.							
Part No.:	2 / 7NCVT2-L5E1.5-326-A2C2K				FCC ID.:	I4U27VT2-L5-E1P5		
Operating Mode:	Color bars plus audio, High power, Channel 4 , Digital COFDM Modulation, 25 MHz channel Transmitting at 6962.5 MHz.							
Technician:	R. Soodoo				Date:	October 12, 2006.		
Notes:	Test Distance: 3 Meters		Temp: 20°C		Humidity: 15%			
	Detector: Peak		Limit: (43+10 log P) down from fundamental level = -13dBm					
Frequency	Antenna Position	EUT Orientation	Meter Readings	Power Meter Reading	Gain Above Isotropic	Cable loss	ERP	Limit
MHz	(V/H) / Meters	Degrees	dBµV	dBm	dB	dB	dBm	dBm
30.00								-13.0
40000.0								-13.0
The EUT was placed on a table, and the radiated output level was measured with a receive antenna. After the level was maximized, the EUT was replaced with a transmit antenna and a signal generator. The level of the generator was raised until it matched the level recorded from the EUT and this plus the antenna gain was considered the output power.								
All emissions not recorded were more than 20 dB below the limit								

Test Method:	TIA / EIA-603-1992, Section 2.2.12, Radiated Spurious Emissions (30 MHz – 40 GHz)							
Customer:	Nucomm, Inc.	Job No.:	R-11489					
Test Sample:	2 GHz / 7 GHz Digital / Analog ENG/OB Van Transmitter.							
Part No.:	2 / 7NCVT2-L5E1.5-326-A2C2K	FCC ID.:	I4U27VT2-L5-E1P5					
Operating Mode:	Color bars plus audio, High power, Channel 14, Analog FM Modulation, 25 MHz channel Transmitting at 6512.5 MHz.							
Technician:	R. Soodoo	Date:	October 12, 2006.					
Notes:	Test Distance: 3 Meters		Temp: 20°C		Humidity: 15%			
	Detector: Peak		Limit: (43+10 log P) down from fundamental level = -13dBm					
Frequency	Antenna Position	EUT Orientation	Meter Readings	Power Meter Reading	Gain Above Isotropic	Cable loss	ERP	Limit
MHz	(V/H) / Meters	Degrees	dBµV	dBm	dB	dB	dBm	dBm
30.00								-13.0
471.0	V / 1.0	158.0	63.3	-58.7	2.2	1.7	-54.8	
40000.0								-13.0
The EUT was placed on a table, and the radiated output level was measured with a receive antenna. After the level was maximized, the EUT was replaced with a transmit antenna and a signal generator. The level of the generator was raised until it matched the level recorded from the EUT and this plus the antenna gain was considered the output power.								
All emissions not recorded were more than 20 dB below the limit								

