

# **THRU Lab & Engineering.**

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Gyeonggi-Do, 469-803, Korea

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## **Test Report**

Product Name: Digital Transmission System

FCC ID: ROYTDSS-900H

**Applicant:**  
**Trinus Systems Inc.**

**Unitech-Ville 8F 801, #1141-2**  
**Beakseok-Dong, Ilsan-Donggu, Goyang-City**  
**Gyeonggi-Do, 410-722**  
**Korea**

**Date Receipt: 10/30/2006**

**Date Tested: 11/03/2006**

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT : THRU-611001

COVER SHEET

# THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

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**FCC ID:** ROYTDSS-900H

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## TEST EQUIPMENT LIST

No	Description	Manufacturer	Model No.	Serial No.	Due Cal.
1	Test Receiver	Rohde & Schwarz	ESVS10	830489/001	2007.04.23
2	Test Receiver	Rohde & Schwarz	ESHS 10	825832/014	2007.08.25
3	Test Receiver	Rohde & Schwarz	ESVS 10	826008/014	2006.05.24
4	Spectrum Analyzer	Hewlett Packard	8566B	2311A02394	2007.06.17
5	Spectrum Display	Hewlett Packard	85662A	2542A12429	2007.06.17
6	Quasi-peak Adapter	Hewlett Packard	85650A	2521A00887	2007.06.17
7	RF Preselector	Hewlett Packard	85685A	2648A00504	2007.06.17
8	Preamplifier	Hewlett Packard	8449B	3008A00375	2007.04.23
9	Preamplifier	Hewlett Packard	8447F	3113A05367	2007.05.09
10	Preamplifier	Hewlett Packard	8447F	2805A02570	2005.12.12
11	Preamplifier	A.H. Systems	PAM-0118	164	2007.04.01
12	Biconical Antenna	Eaton Corp.	94455-1	0977	2007.04.01
13	Biconical Antenna	EMCO	3104C	9111-2468	2006.06.07
14	Log Periodic Antenna	EMCO	3146	2051	2007.05.11
15	Log Periodic Antenna	EMCO	3146	8901-2320	2006.03.28
16	Horn Antenna	A.H. Systems	SAS-571	414	2007.03.17
17	Horn Antenna	A.H. Systems	SAS-571	781	2006.01.07
18	Loop Antenna	Rohde & Schwarz	HFH2-Z2.335.4711.52	826532/006	2007.01.31
19	Dipole Antenna	Rohde & Schwarz	VHAP	574	2007.12.12
20	Dipole Antenna	Rohde & Schwarz	VHAP	575	2007.12.12
21	Dipole Antenna	Rohde & Schwarz	UHAP	546	2007.12.12
22	Dipole Antenna	Rohde & Schwarz	UHAP	547	2007.12.12
23	Signal Generator	Rohde & Schwarz	SMS	872165/100	2006.04.23
24	Signal Generator	Rohde & Schwarz	SMX	825459/030	2007.06.15
25	Spectrum Monitor	Rohde & Schwarz	EZM	862304/007	None
26	Panorama Monitor	Rohde & Schwarz	EPN	883707/207	None
27	Spectrum Analyzer	Advantest Corp.	R3261C	61720208	2007.06.05
28	Spectrum Analyzer	Hewlett Packard	8591A	3205A02641	2007.12.12
29	LISN	EMCO	3825/2	9111-1912	2007.12.12

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30	LISN	Solar	8012-50-R-24	8379121	2007.04.25
31	LISN	Kyoritsu	KNW-242	8-923-2	2007.05.28
32	Plotter	Hewlett Packard	7475A	2210A02802	None
33	Modulation Analyzer	Hewlett Packard	8901B	3438A05094	2007.05.19
34	Waveform Generator	Hewlett Packard	33120A	US34001190	2007.05.23
35	Audio analyzer	Hewlett Packard	8903B	3011A12915	2007.05.23
36	Universal counter	Hewlett Packard	5343A	3020A02978	2007.05.23
37	Frequency Counter	Tektronic	CMC251	TW52489	2007.04.23
38	Temperature & Humidity Chamber	TABAI EZPEC CORP.	MC711P	112000492	2006.08.27
39	Antenna Mast	EMCO	1070-3	9109-1617	None
40	Turn Table	EMCO	1080-1,2	9203-1762	None
41	Positioning Controller	EMCO	1090	9111-1054	
42	Antenna Power Supply	Rohde & Schwarz	HZ-9	920127	None
43	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	881052	None
44	Coaxial Take-up Reel	EMCO	100817	9109-1684	None

APPLICANT: Trinus Systems Inc.

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## TEST PROCEDURE

**GENERAL:** This report shall NOT be reproduced except in full without the written Approval of THRU & ENGINEERING. Shielded interface cables were used in all cases except for cables connecting to the telephone line and the power cords. A test program was run which simulated a normal data transmission on a network.

**POWER LINE CONDUCTED INTERPERENCE:** The procedure used ANSI STANDARD C63.4-2003 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed. The ambient temperature of the UUT was 18.4 with a humidity of 59%.

**BANDWIDTH 6.0dB :** The measurement were made with the spectrum analyzer's resolution bandwidth (RBW)=100 kHz and the video bandwidth (VBW) =100 kHz and the span set as shown on plot.

**POWER OUTPUT:** The RF power output was measured at the antenna feed point by removing the permanent antenna and connecting the UUT to a spectrum analyzer, HP Model No.8566B, RBW=3MHz, VBW>or=RBW, span=5MHz.

**ANTENNA CONDUCTED EMISSIONS:** The RBW=100kHz, VBW > or = RBW and the spectrum was scanned from 30MHz to the 10<sup>th</sup> Harmonic of the fundamental.

**RADIATION INTERFERENCE:** The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a preselector. The bandwidth (RBW) of the spectrum analyzer was 100kHz up to 1GHz and 1.0MHz above 1 GHz with an appropriate sweep speed. The VBW above 1.0 GHz was = 1.0 MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 18.4 with a humidity of 59%.

**15.247(d) POWER SPECTRAL DENSITY:** Starting from the settings that were used for the 6 dB bandwidth the peak signal was located and the span was reduced and the sweep time increased in a manner to maintain calibration and to keep the peak emission in the display, then the sweep time was increased to 670seconds at 2MHz span and a RBW changed to 3kHz. The spectrum analyzer was put into the noise power mode and the plots made.

15.247(e) : PROCESSING GAIN, This gain is supplied by the manufacturer of the UUT.

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2.1033(b) (4)

**ANTENNA AND GROUND SYSTEM :** The antenna for the handset is a wire type built-in the enclosure, which has no provision for connection of an external antenna.

No ground connection is provided. The only ground in use is the ground plane on the printed circuit board.

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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: RADIATED EMISSIONS (Below 1000MHz)

RULES PART NO.: 15.209

## REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	s15.209
OF Fundamental :	of Harmonics	30 – 88 MHz 40 dBuV/m@
902-928MHz		88- 216MHz 43.5
2.4-2.4835GHz		216-916MHz 46
127.38dBuV/m @3m	54 dBuV	ABOVE 960MHz 54dBuV/m

TEST DATA: 1CH

No	Emission Frequency (MHz)	Meter Reading dBuV	Ant. Polaritry	Correction Factor dB	Cable Loss dB	Field Strength (dBuv/m)	Margin (dBuv)	Limit (dBuv/m)
1	33.60	3.2	V	13.3	0.7	17.2	-22.8	40.0
2	63.00	5.7	H	7.0	1.2	13.8	-26.2	40.0
3	76.40	5.0	H	7.3	1.3	13.6	-26.4	40.0
4	90.00	3.8	V	10.5	1.5	15.8	-27.2	43.0
5	135.60	9.8	H	14.3	2.0	26.1	-16.9	43.0
6	147.60	10.3	V	16.1	2.1	28.5	-14.5	43.0
7	194.40	12.1	V	15.8	2.5	30.4	-12.6	43.0
8	578.40	10.8	H	18.5	5.4	34.7	-11.3	46.0
9	592.00	12.4	H	18.6	5.5	36.5	-9.5	46.0
10	628.80	11.6	V	19.5	5.7	36.8	-9.2	46.0
11	633.60	10.3	H	19.6	5.8	35.7	-10.3	46.0
12	916.00	11.4	V	22.6	7.4	41.3	-4.7	46.0

APPLICANT: Trinus Systems Inc.

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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NO.: 15.207

REQUIREMENTS:	QUASI-PEAK	AVERAGE
.15 – 0.5 MHz	66-56 dBuV	56-46 dBuV
0.5 – 5.0	56	46
5.0 – 30.	60	50

TEST PROCEDURE: ANSI STANDARD C63.4-1992. The spectrum was scanned from .15 to 30MHz.

THE HIGHEST EMISSION READ FOR LINE 1 was

THE HIGHEST EMISSION READ FOR LINE 2 was.

TEST RESULTS : Both lines were observed with the UUT transmitting. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.

PERFORMED BY: K.M CHOI

DATE : 2006/11/03

This device was used 3.7V rechargeable battery ( Lithium-ion Battery-LG103450).

“NOT APPLIED”

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001



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**APPLICANT :** Trinus Systems Inc.

**FCC ID:** ROYTDSS-900H

**NAME OF TEST:** OCCUPIED BANDWIDTH

**RULES PART NO.:** 15.247

15.247(a) (2)

6dB bandwidth shall be at least 500 kHz as shown in the accompanying plots. The bandwidth was measured at three places in the band and the narrowest is reported below.

Handset 6dB Bandwidth

HANDY		
CHANNEL	MHz	LIMIT
1	1.525	<b>6dB bandwidth shall be at least 500kHz</b>
10	1.46	
20	1.47	

**PERFORMED BY:** K.M CHOI

**DATE :** 2006/11/03

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

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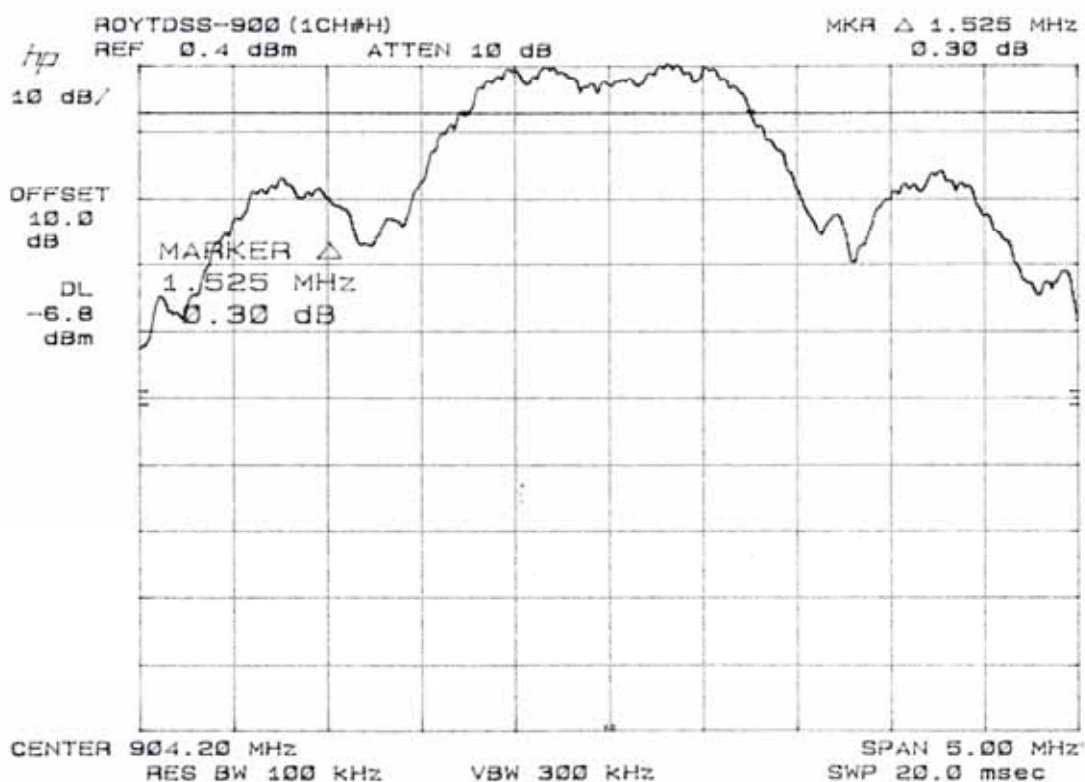
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: OCCUPIED BANDWIDTH (1ch)

RULES PART NO.: 15.247



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

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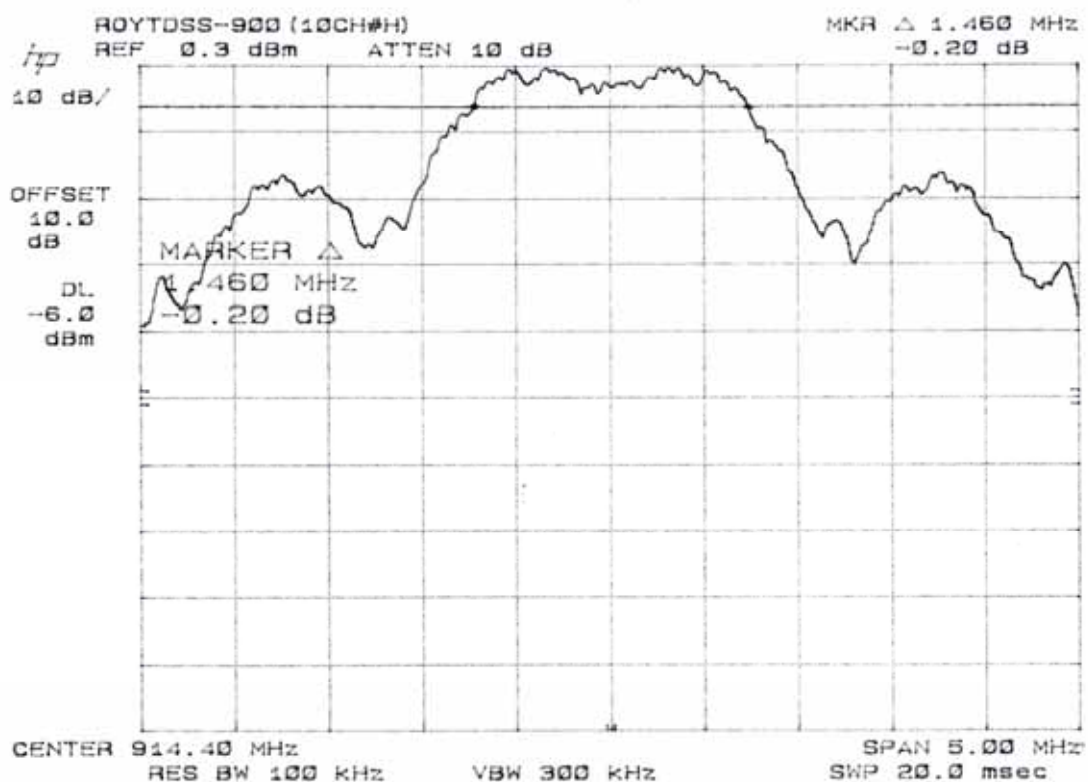
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: OCCUPIED BANDWIDTH (10ch)

RULES PART NO.: 15.247



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

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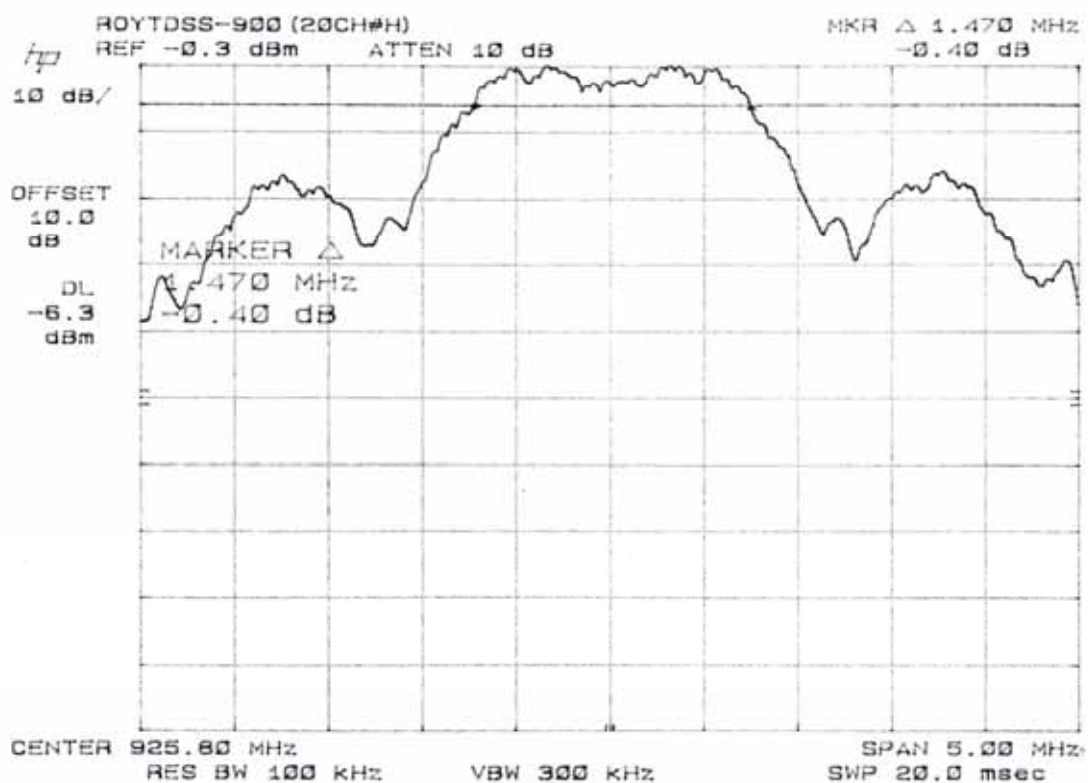
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: OCCUPIED BANDWIDTH (20ch)

RULES PART NO.: 15.247



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

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**APPLICANT :** Trinus Systems Inc.

**FCC ID:** ROYTDSS-900H

**NAME OF TEST:** PEAK POWER OUTPUT

**RULES PART NO.:** 15.247(b)

The maximum peak output power shall not exceed 1 watt (30dBm). If directional transmitting antennas with a gain of more than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Both the base and handset have a maximum power output of less than +30 dBm. Power was measured by disconnecting the antennas and measuring across a 50 ohm load as recommended by the manufacturer using a HP spectrum analyzer Model 8566B. The antennas are non-directional and do not exceed 6dBi gain. The power output was measured at three places in the band highest is reported below.

POWER OUTPUT – LIMIT + 30 dBm

HANDY			
CHANNEL	dBm	mW	LIMIT
1	8.5	7.1	902-928MHz 1.0 WATT or 30dBm
10	7.9	6.2	
20	7.3	5.4	

**PERFORMED BY:** K.M CHOI

**DATE :** 2006/11/03

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

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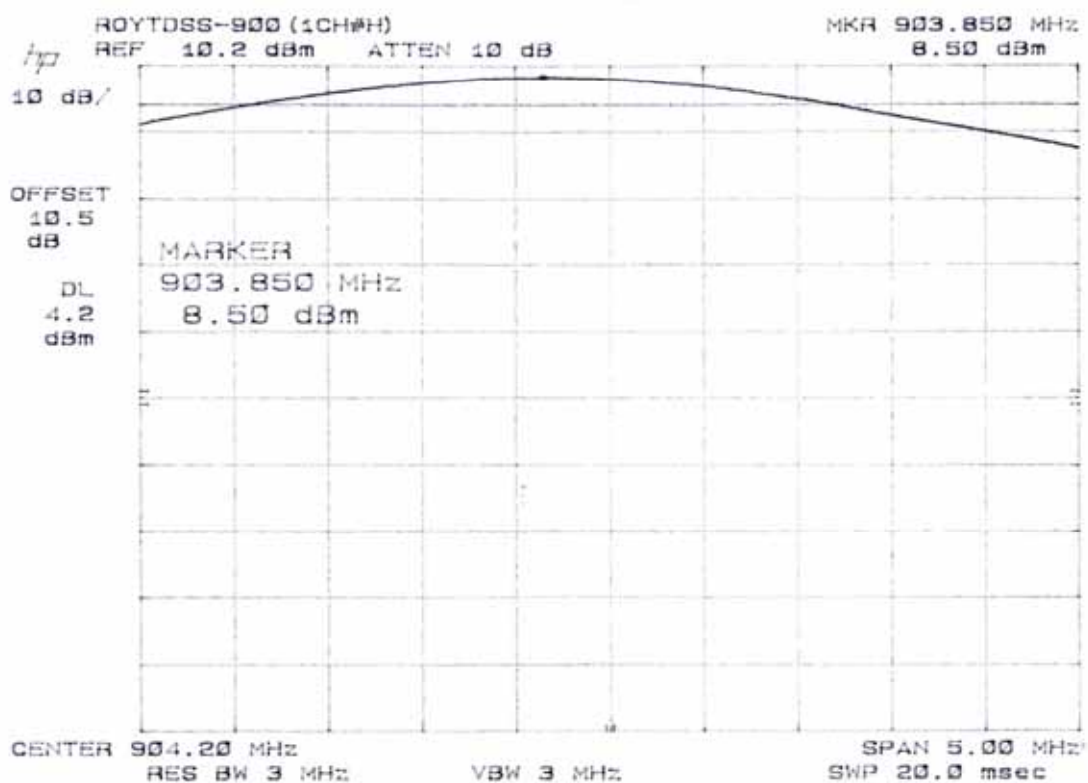
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: PEAK POWER OUTPUT (1ch)

RULES PART NO.: 15.247(b)



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

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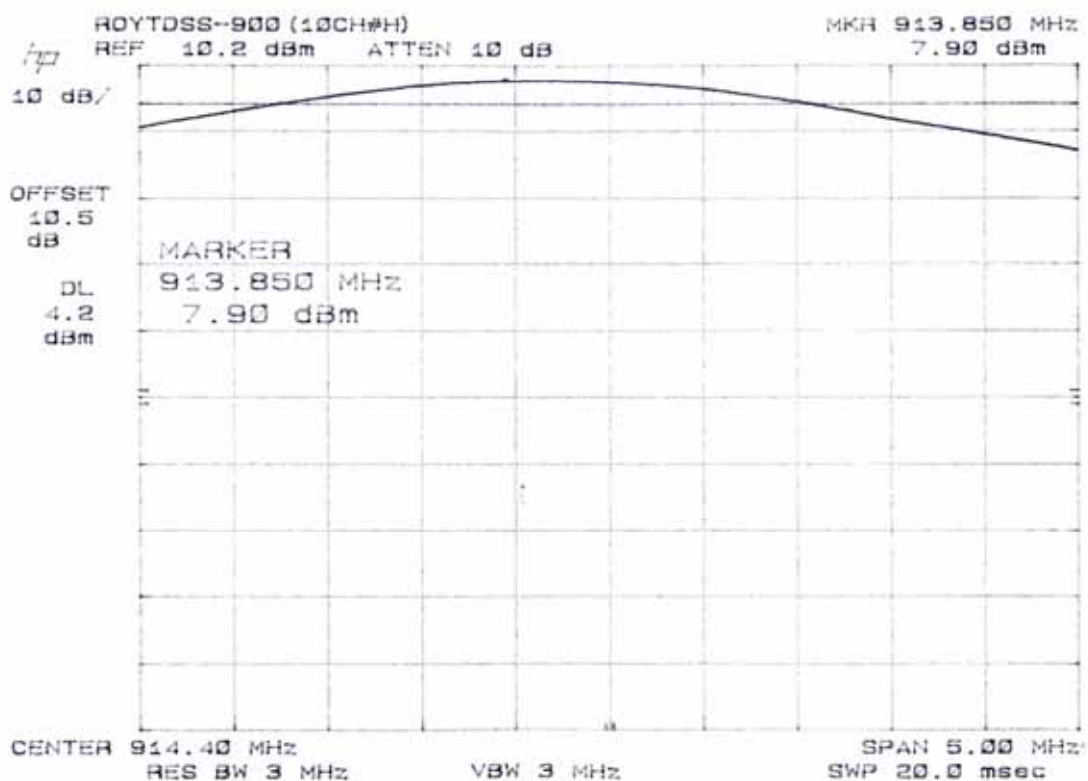
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: PEAK POWER OUTPUT (10ch)

RULES PART NO.: 15.247(b)



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

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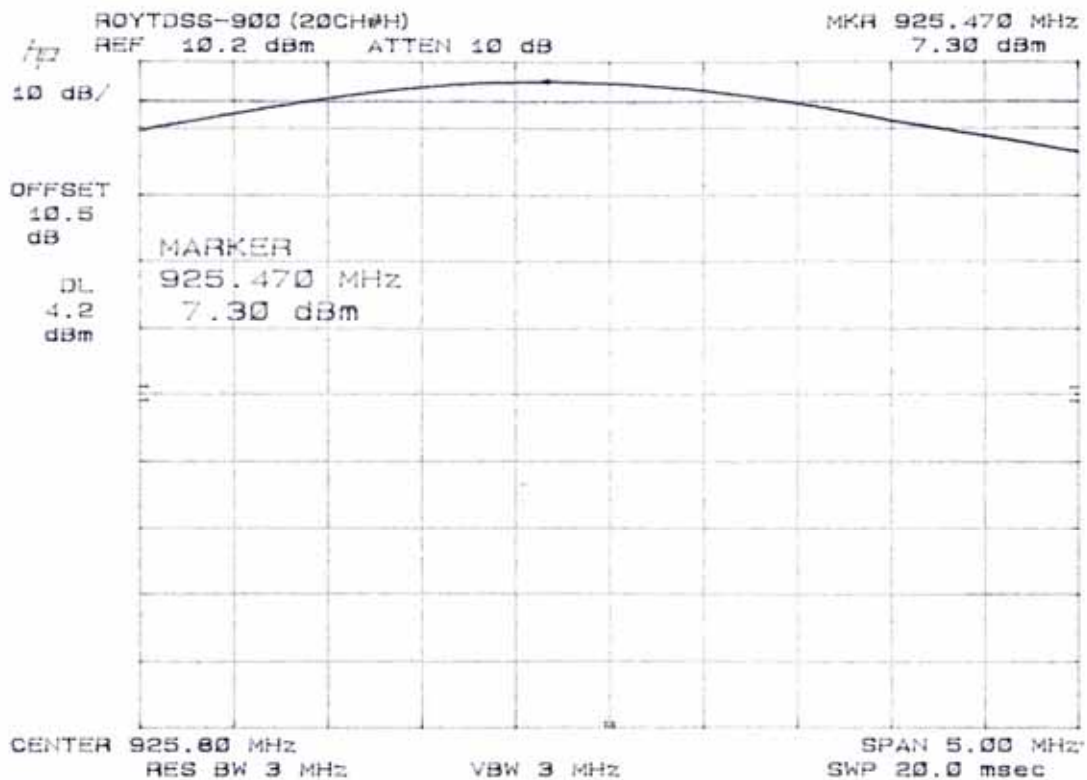
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: PEAK POWER OUTPUT (20ch)

RULES PART NO.: 15.247(b)



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

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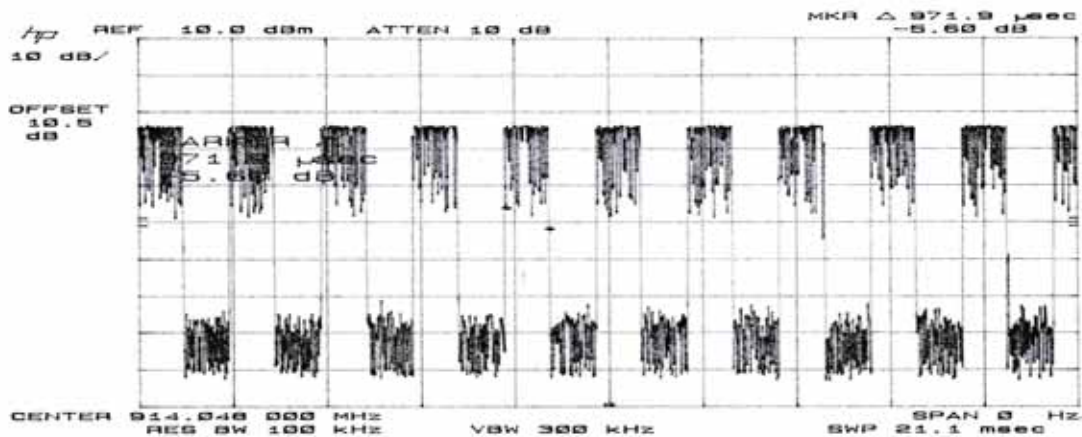
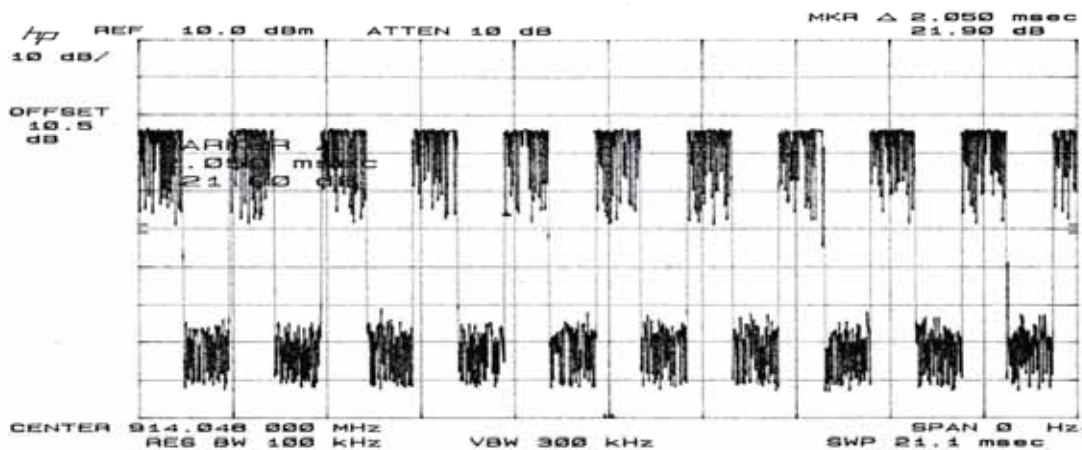
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: DUTY CYCLE

RULES PART NO.: 15.209, 15.247(c)



$$\text{Duty cycle value} = 20\log(\text{Twidth}/\text{Tperiod}) = 20\log(0.9719 \times 10^{-3} / 2.050 \times 10^{-3}) = -6.482$$

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: RADIATED SPURIOUS EMISSIONS

RULES PART NO.: 15.209, 15.247(c)

## REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	s15.209
OF Fundamental :	of Harmonics	30 – 88 MHz 40 dBuV/m@
902-928MHz		88- 216MHz 43.5
2.4-2.4835GHz		216-916MHz 46
127.38dBuV/m @3m	54 dBuV	ABOVE 960MHz 54dBuV/m

## TEST DATA:

No	Emission Frequency (MHz)	Meter Reading dBuV	Ant. Pola	ANT Factor dB	Cable Loss dB	Duty Cycle dB	Field Strength (dBuV/m)	Margin (dBc)	Limit (dBuV/m)	Detector mode
904.2	904.2	59.1	H	23.4	7.3		90.5	90.5		PK
904.2	1808.4	27.5	H	25.7	2.8	6.5	50.6	-3.4	54.0	PK ( * )
904.2	2712.6	4.2	H	28.7	3.5	6.5	31.1	-22.9	54.0	PK
904.2	3616.8	3.9	H	30.6	3.6	6.2	33.5	-20.5	54.0	PK
904.2	4521.0	3.0	H	32.8	4.5	6.5	35.7	-18.3	54.0	PK
904.2	5425.2	3.5	H	33.8	4.9	6.5	37.6	-16.4	54.0	PK
914.4	914.4	57.4	H	23.3	7.4		88.9	88.9		PK
914.4	1828.8	28.1	H	25.9	2.9	6.5	51.4	-2.6	54.0	PK ( * )
914.4	2743.2	5.5	H	28.8	3.6	6.5	32.7	-21.3	54.0	PK
914.4	3657.6	3.6	H	30.8	3.5	6.5	33.1	-20.9	54.0	PK
914.4	4572.0	4.0	H	32.9	4.5	6.5	37.0	-17.0	54.0	PK
914.4	5486.4	5.9	H	33.7	4.9	6.5	40.2	-13.8	54.0	PK
925.8	925.8	59.6	H	23.2	7.4		90.9	90.9		PK
925.8	1851.6	28.6	H	26.1	2.9	6.5	52.3	-1.7	54.0	PK ( * )
925.8	2777.4	3.8	H	29.0	3.6	6.5	31.5	-22.5	54.0	PK
925.8	3703.2	5.1	H	31.0	3.5	6.5	34.8	-19.2	54.0	PK
925.8	4629.0	3.2	H	33.1	4.6	6.5	36.6	-17.4	54.0	PK
925.8	5554.8	4.2	H	33.8	4.9	6.5	39.4	-14.6	54.0	PK

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**APPLICANT :** Trinus Systems Inc.

**FCC ID:** ROYTDSS-900H

**NAME OF TEST:** RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND

**RULES PART NO.:** 15.209, 15.247(c)

## REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	s15.209
OF Fundamental :	of Harmonics	30 – 88 MHz 40 dBuV/m@
902-928MHz		88- 216MHz 43.5
2.4-2.4835GHz		216-916MHz 46
127.38dBuV/m @3m	54 dBuV	ABOVE 960MHz 54dBuV/m

Emissions that fall in the restricted bands(15.205) must be less than or equal to 500uV/m (54 dBuV/m).

PK(*) exceed 54dBuV/m and retested AV Mode (RBW=1MHZ,VBW=10Hz )										
No	Emission Frequency (MHz)	Meter Reading dBuV	Ant. Pola	ANT Factor dB	Cable Loss dB	Duty Cycle dB	Field Strength (dBuV/m)	Margin (dBuV)	Limit (dBuV/m)	Detector mode
904.2	1808.4	22.3	H	25.7	2.8	6.5	44.4	-9.6	54.0	AV
914.4	1828.8	23.5	H	25.9	2.9	6.5	45.8	-8.2	54.0	AV
925.8	1851.6	23.1	H	26.1	2.9	6.5	45.6	-8.4	54.0	AV

**SAMPLE CALCULATION:** FSdBuV/m = MR(dBuV) + ACFdB + COAX + C.F.

**METHOD OF MEASUREMENT :** The procedure used was ANSI STANDARD C63.4-2003. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was scanned from 30MHz to 10GHz using a Hewlett Packard Model8566B Spectrum Analyzer, Hewlett Packard Model 85685A Preselector, Hewlett Packard Model 85650A Quasi-peak Adaptor, and an appropriate antenna. Low loss coax was used above 1 GHz. Measurements were made at ThruLab & ENGINEERING. located at 477-6, Hager-Ri, Yoju-Up, Yoju-Gun, Kyunggi-Do, 469-803, Korea

**TEST RESULTS :** The unit DOES meet the FCC requirements.

**PERFORMED BY:** K.M CHOI

**DATE :** 2006/11/03

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

# THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Gyeonggi-Do, 469-803, Korea

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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: RADIATED SPURIOUS EMISSIONS

RULES PART NO.: 15.209, 15.247(c)

## REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	s15.209
OF Fundamental :	of Harmonics	30 – 88 MHz 40 dBuV/m@
902-928MHz		88- 216MHz 43.5
2.4-2.4835GHz		216-916MHz 46
127.38dBuV/m @3m	54 dBuV	ABOVE 960MHz 54dBuV/m

## TEST DATA:

No	Emission Frequency (MHz)	Meter Reading dBuV	Ant. Pola	ANT Factor dB	Cable Loss dB	Duty Cycle dB	Field Strength (dBuV/m)	Margin (dBc)	Limit (dBuV/m)	Detector mode
904.2	904.2	63.7	V	23.4	7.3		95.1	95.1		PK
904.2	1808.4	28.5	V	25.7	2.8	6.5	51.6	-2.4	54.0	PK ( * )
904.2	2712.6	4.5	V	28.7	3.5	6.5	31.4	-22.6	54.0	PK
904.2	3616.8	4.1	V	30.6	3.6	6.2	33.7	-20.3	54.0	PK
904.2	4521.0	3.5	V	32.8	4.5	6.5	36.2	-17.8	54.0	PK
904.2	5425.2	3.2	V	33.8	4.9	6.5	37.3	-16.7	54.0	PK
914.4	914.4	64.3	V	23.3	7.4		95.8	95.8		PK
914.4	1828.8	27.8	V	25.9	2.9	6.5	51.1	-2.9	54.0	PK ( * )
914.4	2743.2	5.3	V	28.8	3.6	6.5	32.5	-21.5	54.0	PK
914.4	3657.6	3.8	V	30.8	3.5	6.5	33.3	-20.7	54.0	PK
914.4	4572.0	4.2	V	32.9	4.5	6.5	37.2	-16.8	54.0	PK
914.4	5486.4	6.1	V	33.7	4.9	6.5	40.4	-13.6	54.0	PK
925.8	925.8	61.0	V	23.2	7.4		92.3	92.3		PK
925.8	1851.6	28.9	V	26.1	2.9	6.5	52.6	-1.4	54.0	PK ( * )
925.8	2777.4	3.9	V	29.0	3.6	6.5	31.6	-22.4	54.0	PK
925.8	3703.2	5.0	V	31.0	3.5	6.5	34.7	-19.3	54.0	PK
925.8	4629.0	3.3	V	33.1	4.6	6.5	36.7	-17.3	54.0	PK
925.8	5554.8	4.2	V	33.8	4.9	6.5	39.4	-14.6	54.0	PK

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

# THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND

RULES PART NO.: 15.209, 15.247(c)

## REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	s15.209
OF Fundamental :	of Harmonics	30 – 88 MHz 40 dBuV/m@
902-928MHz		88- 216MHz 43.5
2.4-2.4835GHz		216-916MHz 46
127.38dBuV/m @3m	54 dBuV	ABOVE 960MHz 54dBuV/m

Emissions that fall in the restricted bands(15.205) must be less than or equal to 500uV/m (54 dBuV/m).

PK(*) exceed 54dBuV/m and retested AV Mode (RBW=1MHZ,VBW=10Hz )										
No	Emission Frequency (MHz)	Meter Reading dBuV	Ant. Pola	ANT Factor dB	Cable Loss dB	Duty Cycle dB	Field Strength (dBuV/m)	Margin (dBuV)	Limit (dBuV/m)	Detector mode
904.2	1808.4	23.1	V	25.7	2.8	6.5	45.2	-8.8	54.0	AV
914.4	1828.8	22.7	V	25.9	2.9	6.5	45.0	-9.0	54.0	AV
925.8	1851.6	24.5	V	26.1	2.9	6.5	47.0	-7.0	54.0	AV

SAMPLE CALCULATION:  $FSdBuV/m = MR(dBuV) + ACFdB + COAX + C.F.$

**METHOD OF MEASUREMENT :** The procedure used was ANSI STANDARD C63.4-2003. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was scanned from 30MHz to 10GHz using a Hewlett Packard Model8566B Spectrum Analyzer, Hewlett Packard Model 85685A Preselector, Hewlett Packard Model 85650A Quasi-peak Adaptor, and an appropriate antenna. Low loss coax was used above 1 GHz. Measurements were made at ThruLab & ENGINEERING. located at 477-6, Hager-Ri, Yoju-Up, Yoju-Gun, Kyunggi-Do, 469-803, Korea

**TEST RESULTS :** The unit DOES meet the FCC requirements.

PERFORMED BY: K.M CHOI

DATE : 2006/11/03

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

# THRU Lab & Engineering.

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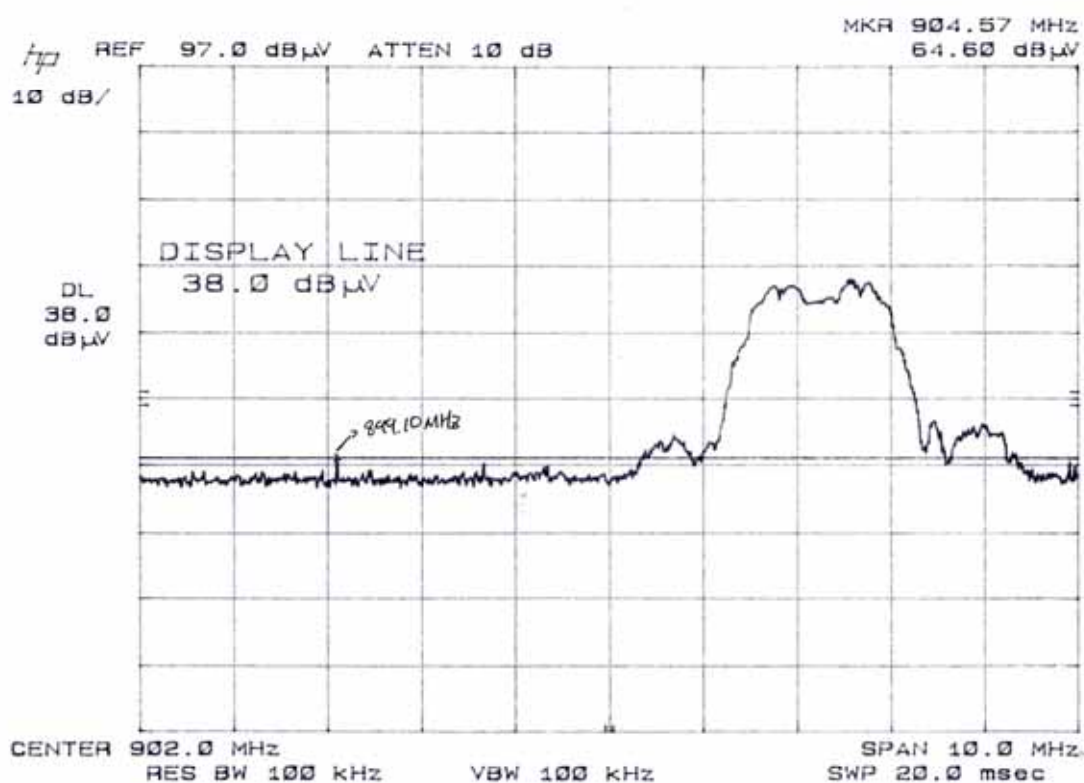
**APPLICANT :** Trinus Systems Inc.

**FCC ID:** ROYTDSS-900H

**NAME OF TEST:** BAND EDGES MEASUREMENT

**RULES PART NO.:** 15.209, 15.247(c)

**TEST PROCEDURE :** An in band field strength measurement of the fundamental emission using the RBW and detector function required by C63.4-2003 and FCC Rules. The procedure was repeated with a peak detector and a plot made. The calculated field strength in the adjacent restricted band is presented below.



**PERFORMED BY:** K.M CHOI

**DATE :** 2006/11/03

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

# THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

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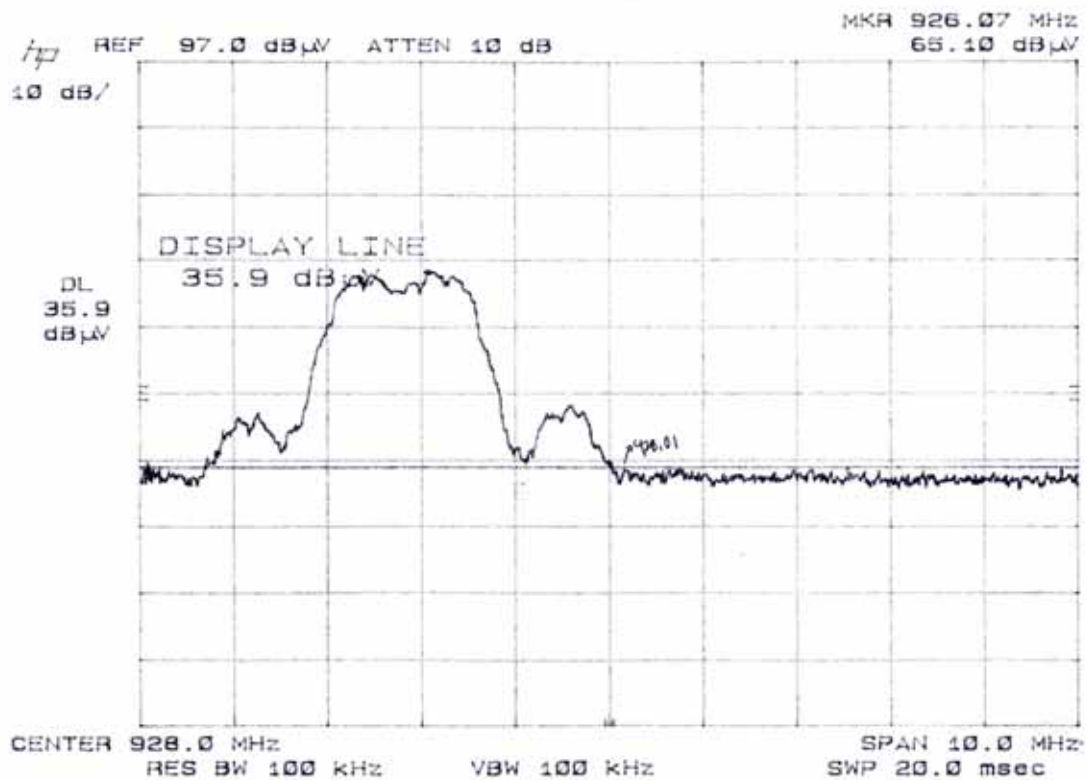
**APPLICANT :** Trinus Systems Inc.

**FCC ID:** ROYTDSS-900H

**NAME OF TEST:** BAND EDGES MEASUREMENT

**RULES PART NO.:** 15.209, 15.247(c)

**TEST PROCEDURE :** An in band field strength measurement of the fundamental emission using the RBW and detector function required by C63.4-2003 and FCC Rules. The procedure was repeated with an peak detector and a plot made. The calculated field strength in the adjacent restricted band is presented below.



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

# THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Gyeonggi-Do, 469-803, Korea

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**APPLICANT :** ISV Co.,LTD.

**FCC ID:** ROYTDSS-900H

**NAME OF TEST:** POWER SPECTRAL DENSITY

**RULES PART NO.:** 15.247(d)

**REQUIREMENTS:** The power spectral density averaged over any 1-second interval shall not be greater than 8 dBm in any 3KHz bandwidth within these bands.

**TEST DATA :**

HANDY		
CHANNEL	dBm	LIMIT
1	-7.9	Less Than 8 dBm
10	-7.7	
20	-7.3	

## Measurement Method;

Starting from the settings that were used for the 6 dB bandwidth the peak signal was located and the span was reduced and the sweep time increased in a manner to maintain calibration and to keep the peak emission in the display, then the sweep time was increased to 670seconds at 2MHz span and a RBW changed to 3KHz. The spectrum analyzer was put into the noise power mode and the plots made.

**PERFORMED BY:** K.M CHOI

**DATE :** 2006/11/03

APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001



# THRU Lab & Engineering.

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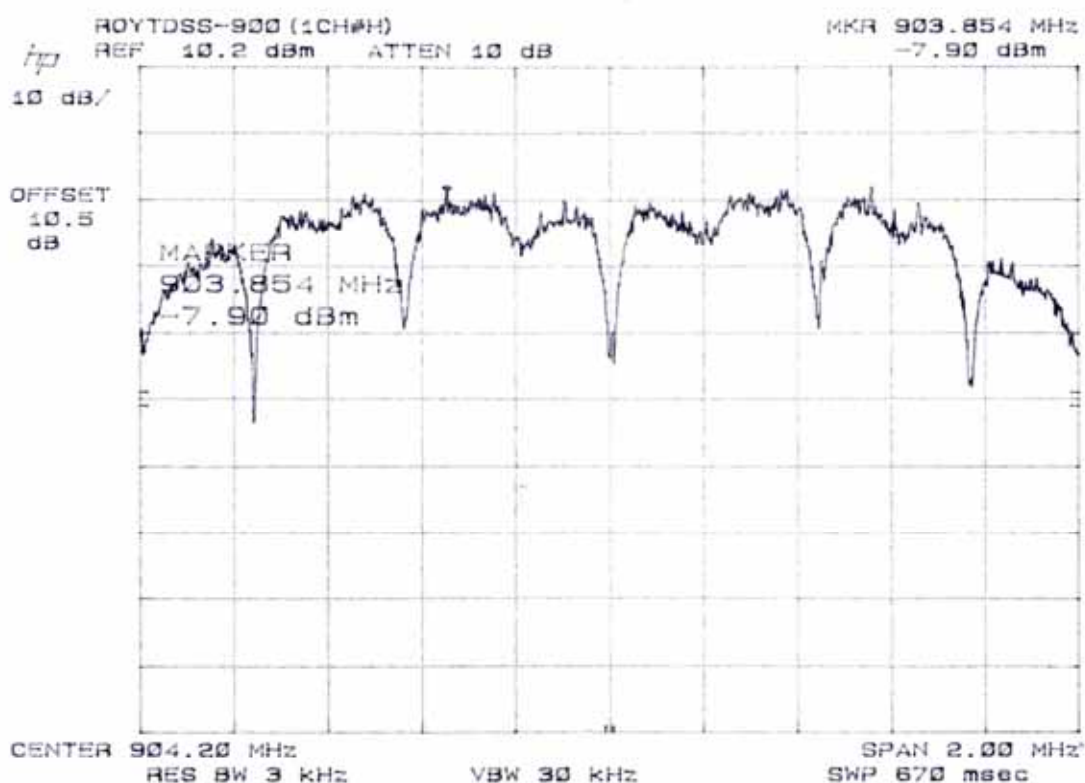
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: POWER SPECTRAL DENSITY (1ch)

RULES PART NO.: 15.247(d)



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

# THRU Lab & Engineering.

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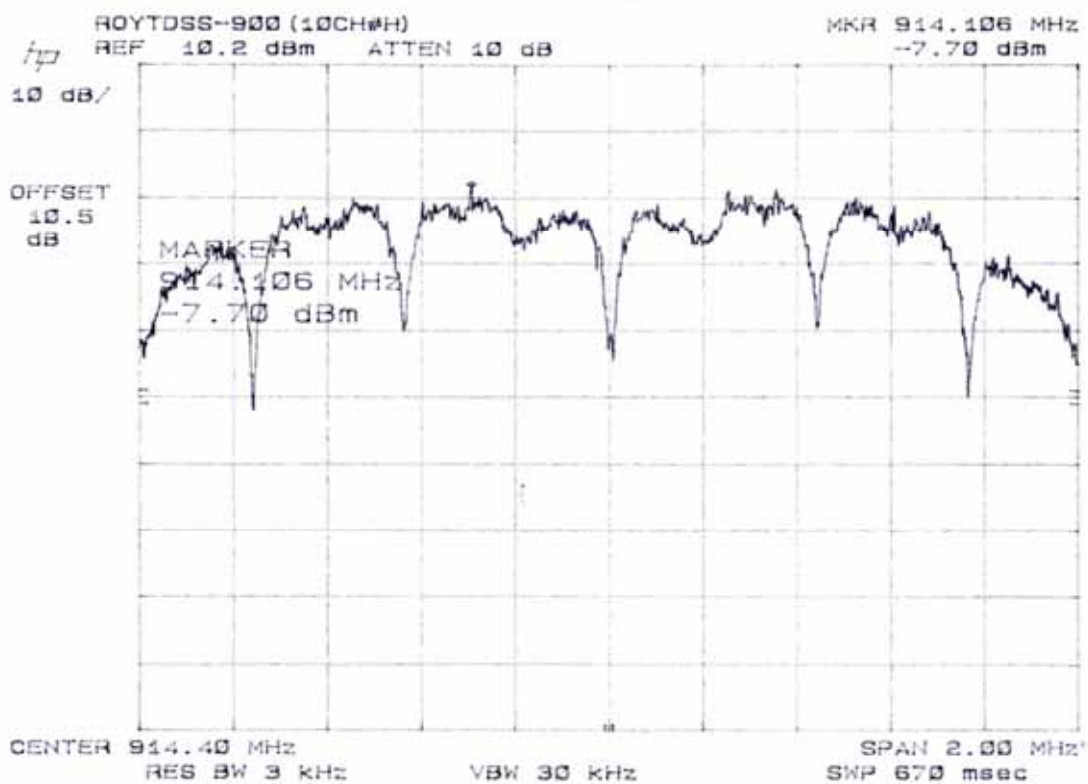
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: POWER SPECTRAL DENSITY (10ch)

RULES PART NO.: 15.247(d)



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001

# THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

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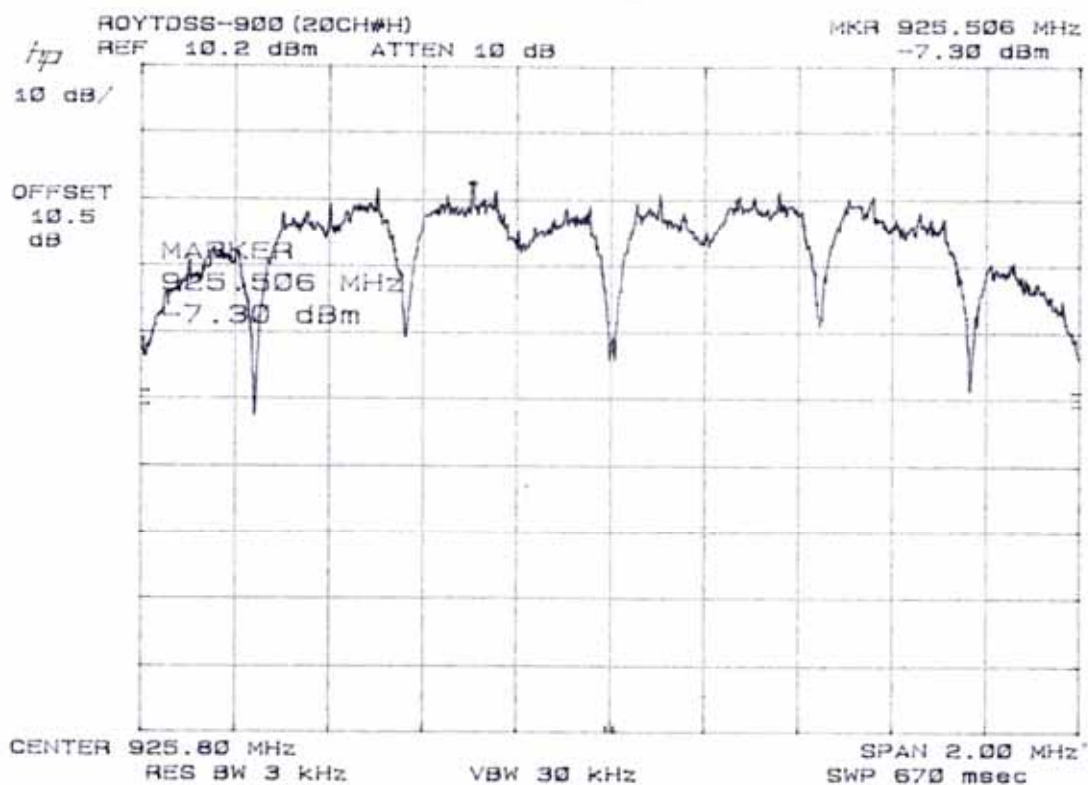
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APPLICANT : Trinus Systems Inc.

FCC ID: ROYTDSS-900H

NAME OF TEST: POWER SPECTRAL DENSITY (20ch)

RULES PART NO.: 15.247(d)



APPLICANT: Trinus Systems Inc.

FCC ID: ROYTDSS-900H

REPORT :THRU-611001