TIMCO ENGINEERING INC.
849 NW State Road 45
Newberry, Florida 32669
http://www.timcoengr.com
888.472.2424 F 352.472.2030 email: tei@timcoengr.com

Test Report

Product Name: VOIP HANDSET

FCC ID: PBWDS24R29

Applicant:

ARKON NETWORKS INC.
12051 RIVERSIDE WAY
RICHMOND, BC V6W 1K7
CANADA

Date Receipt: OCTOBER 7, 2004

Date Tested: OCTOBER 21, 2004

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TABLE OF CONTENTS

TEST REPORT CONTAINING:

EXHIBITS INCLUDED:

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EMC Equipment List

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
3-Meter OATS	TEI	N/A	N/A	Listed 1/13/03	1/12/06
Biconnical Antenna	Eaton	94455-1	1057	CAL 3/18/03	3/18/05
Biconnical Antenna	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/26/01	4/26/03
Double-Ridged Horn Antenna	Electro-Metrics	RGA-180	2319	CAL 2/17/03	2/17/05
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 3/12/03	3/12/05
Log-Periodic Antenna	Eaton	96005	1243	CAL 5/8/03	5/8/05

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-1992 using a 50uH LISN. Both lines were observed with the UUT transmitting. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed. The ambient temperature of the UUT was 76°F with a humidity of 55%.

BANDWIDTH 6.0dB: The measurements were made with the spectrum analyzer's resolution bandwidth (RBW)=1.0MHz and the video bandwidth (VBW) =3.0MHz and the span set as shown on plot.

POWER OUTPUT: The RF power output was measured at the antenna feed point using a peak power meter.

ANTENNA CONDUCTED EMISSIONS: The RBW=100KHz, VBW=300KHz and the span set to 10.0MHz and the spectrum was scanned from 30MHz to the 10th Harmonic of the fundamental. Above 1.0GHz the resolution bandwidth was 1.0MHz and the VBW = 3.0MHz and the span to 50MHz.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. The bandwidth (RBW) of the spectrum analyzer was 100kHz up to 1GHz and 1.0MHz above 1GHz with an appropriate sweep speed. The VBW above 1.0GHz was = 3.0MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 76°F with a humidity of 55%.

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APPLICANT: ARKON NETWORKS INC.

FCC ID: PBWDS24R29

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NO.: 15.107(a)

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 30 MHz.

TEST DATA:

THE PLOTS ON THE FOLLOWING PAGES REPRESENT THE EMISSIONS TAKEN FOR THIS DEVICE.

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

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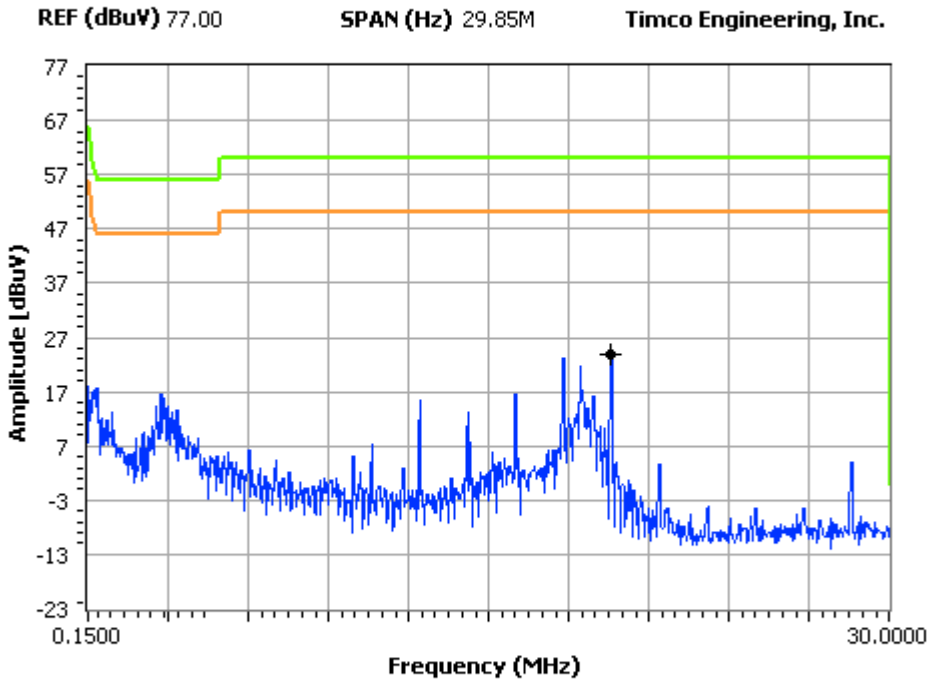
POWER LINE CONDUCTED
LINE 1

NOTES:
1643aut4 ac line conducted line 1

FCC 15.107 Mask Class B



RBW	VBW	ST (sec)
10 kHz	30 kHz	2

Center Frequency (Hz) 15.075M

Marker Delta (Hz) 0.00

Peak	19.612	23.70
MKR2	0.000	0.00
MKR3	0.000	0.00
HWMK	23.076	6.27

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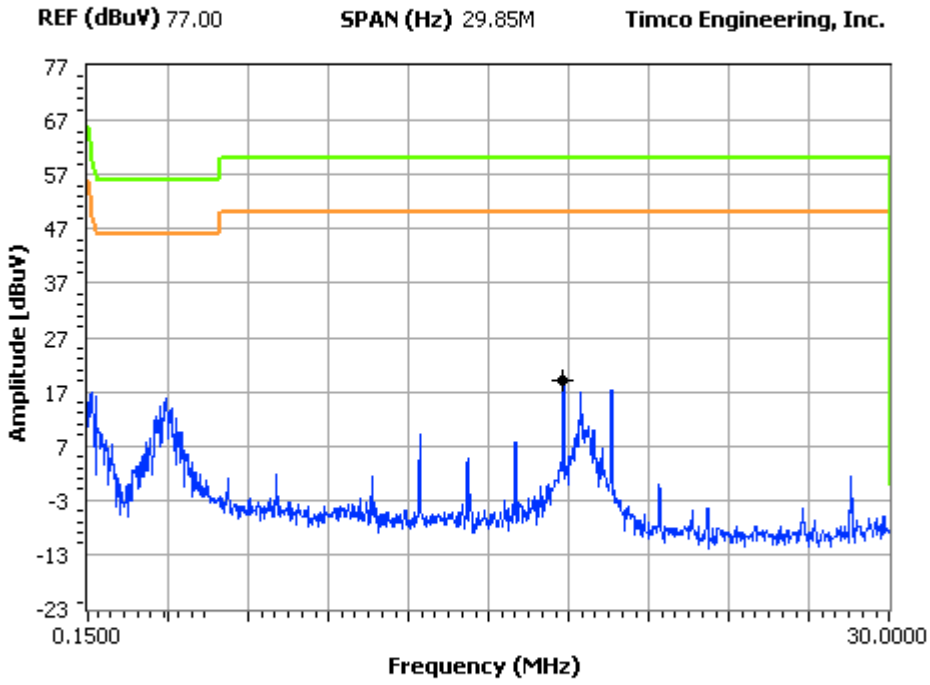
POWER LINE CONDUCTED
LINE 2

NOTES:
1643aut4 ac line conducted line 2

FCC 15.107 Mask Class B



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APPLICANT: ARKON NETWORKS INC.

FCC ID: PBWDS24R29

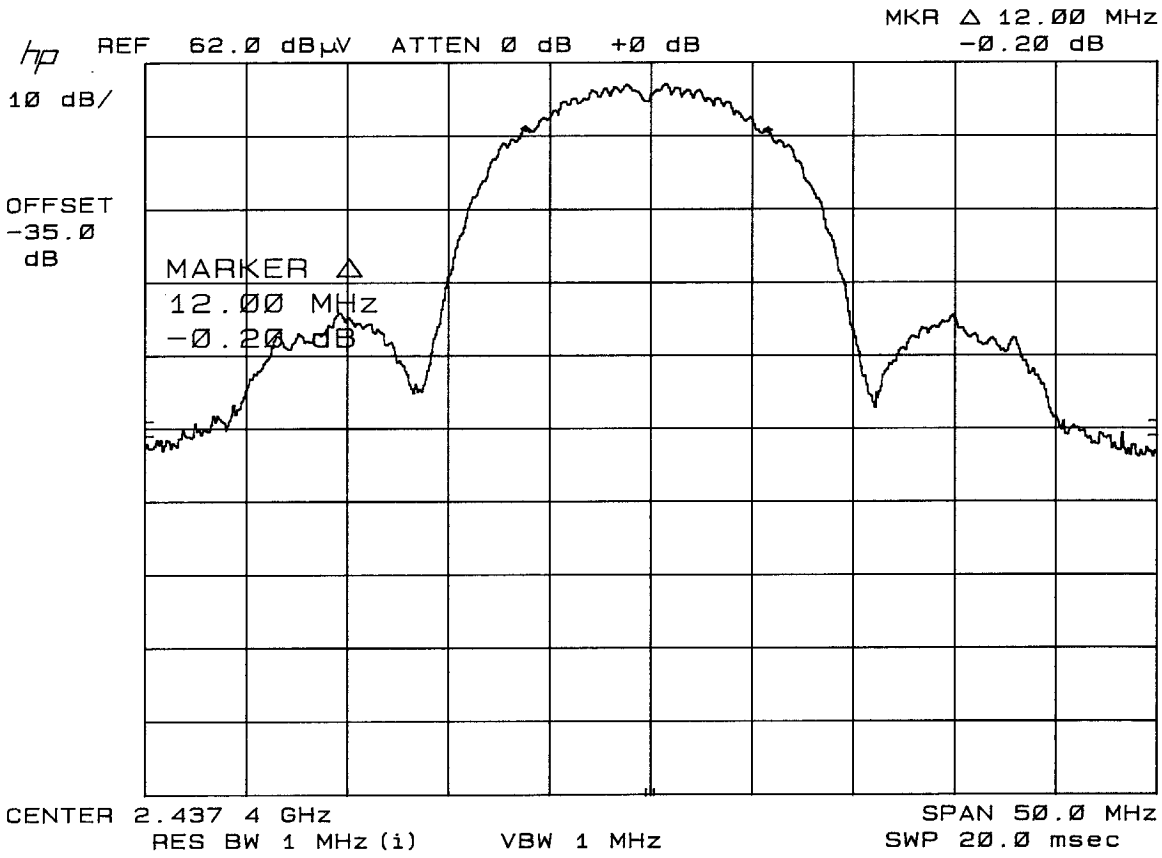
NAME OF TEST: 6.0dB BANDWIDTH

RULES PART NO.: 15.247(a)(2)

REQUIREMENTS: The 6.0dB bandwidth must be greater than 500 kHz.

MEASUREMENT DATA: See the following plot

6 dB BANDWIDTH PLOT



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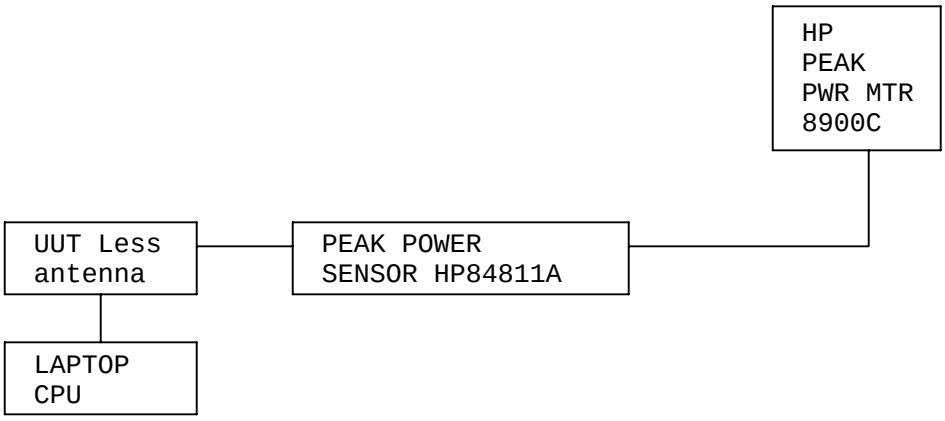
NAME OF TEST: POWER OUTPUT

RULES PART NO.: 15.247(b)

MEASUREMENT: 13.8 dBm or 0.024W @ 2462.0 MHz

15.247(c) Method of Measuring RF Power output: The Peak power Sensor was connected in place of the antenna.



Harmonics were checked through the 10th harmonic

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NAME OF TEST: SPURIOUS EMISSIONS AT ANTENNA TERMINALS

REQUIREMENTS: Emissions must be at least 20dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

TEST DATA:

TF	EF	dB below carrier
2412.2	2412.2	0.0
	4824.4	75.0
	7236.6	79.1
	9648.8	90.1

TF	EF	dB below carrier
2437	2437	0.0
	4874	70.9
	7311	75.4
	9748	91.1

TF	EF	dB below carrier
2462.1	2462.1	0.0
	4924.2	70.7
	7386.3	75.9
	9848.4	108.8

NOTE: THE SPECTRUM WAS SCANNED TO THE TENTH HARMONIC.

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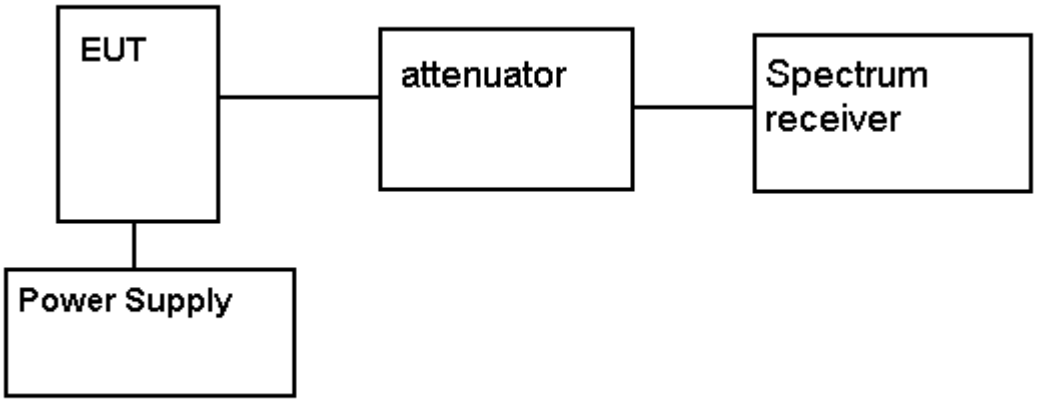
15.247(c) Method of Measuring RF Conducted Spurious Emissions



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15.247(c), 15.205 &15.209(b) **Field_strength_of_spurious_emissions:**

REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	S15.209
of Fundamental:	of Harmonics	30 - 88 MHz 40 dBuV/m @3M
902-928MHz		88 -216 MHz 43.5
2.4-2.4835GHz	127.37dBuV/m	216 -960 MHz 46
	54 dBuV/m @3m	ABOVE 960 MHz 54dBuV/m

EMISSIONS RADIATED OUTSIDE OF THE SPECIFIED FREQUENCY BANDS, EXCEPT FOR HARMONICS, SHALL BE ATTENUATED BY AT LEAST 20 dB BELOW THE LEVEL OF THE FUNDAMENTAL OR TO THE GENERAL RADIATED EMISSION LIMITS IN 15.209, WHICHEVER IS THE LESSER ATTENUATION.

REQUIREMENTS: Emissions that fall in the restricted bands (15.205) must be less than 54dBuV/m otherwise the spurious and harmonics must be attenuated by at least 20dB.

TEST DATA:

Tuned Frequency MHz	Emission Frequency MHz		Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m		Margin dB
2,412.2	2,412.20		72.3	V	1.86	29.20	103.36		24.01
2,412.2	4,824.40	R	7.4	H	2.65	33.63	43.68	PK	10.32
2,412.2	9,648.20		10.6	V	3.86	38.31	52.77		30.59
2,437.0	2,437.00		70.6	V	1.87	29.22	101.69		25.68
2,437.0	4,874.10	R	9.1	H	2.66	33.75	45.51	PK	8.49
2,437.0	9,748.20		10.2	V	3.87	38.48	52.55		29.14
2,462.1	2,462.10		68.5	V	1.88	29.25	99.63		27.74
2,462.1	4,924.20	R	12.3	V	2.68	33.87	48.85	PK	5.15
2,462.1	9,848.40		6.0	H	3.88	38.65	48.53		31.10

Harmonics were checked through the 10th harmonic

All emissions shown are peak emissions

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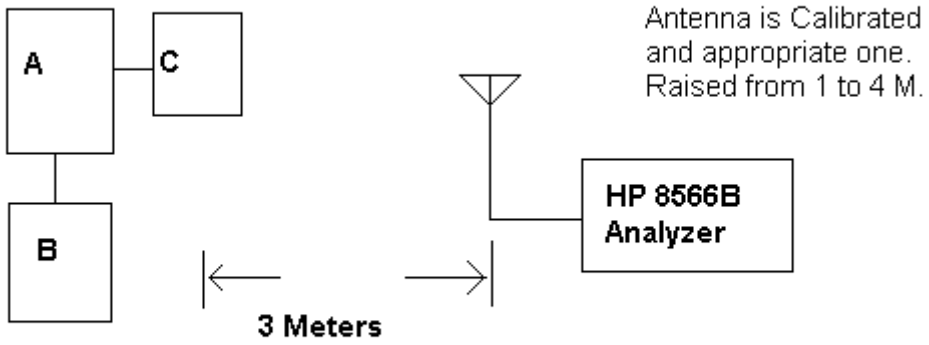
Method of Measuring Radiated Spurious Emissions



A is Radio under test
B is power supply
C is antenna

METHOD OF MEASUREMENT: The procedure used was ANSI STANDARD C63.4-1992 & the FCC/OET Guidance on Measurements for Direct Sequence Spread Spectrum Systems – Public Notice 54797 Dated July 12, 1995. Measurements were made at the open field test site of TIMCO ENGINEERING INC. located at 849 N.W. State Road 45, Newberry, FL 32669.

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NAME OF TEST: RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND

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

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

LOWER	UPPER
FREQUENCY: 2390 MHz	FREQUENCY: 2483.50 MHz
- 1.10 dBuV from plot	- 2.00 dBuV from plot
+29.25 dB ACF	+29.38 dB ACF
+ 3.17 dB Coax Loss	+ 3.24 dB Coax Loss
+20.00 dB Attn.	+20.00 dB Attn.
+51.32 dBuV	+50.62 dBuV

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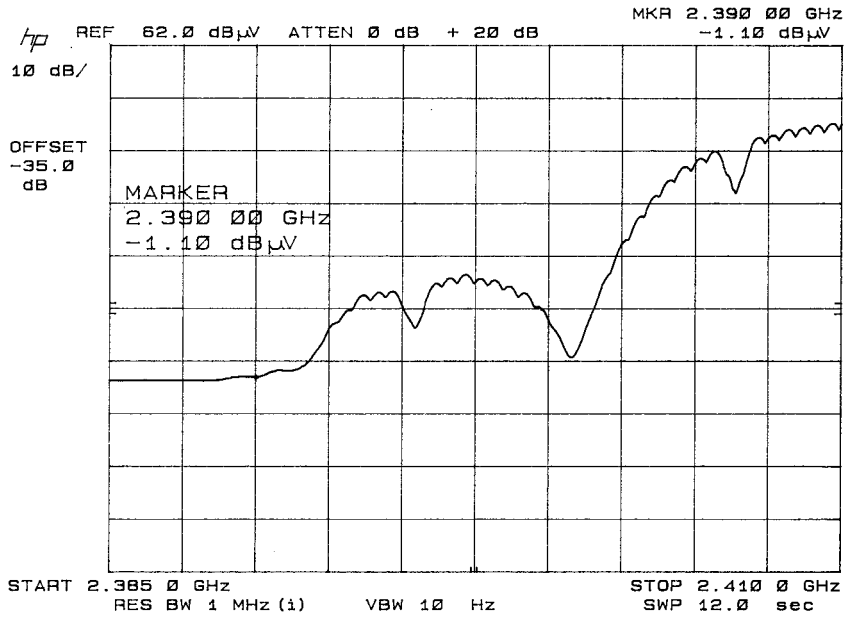
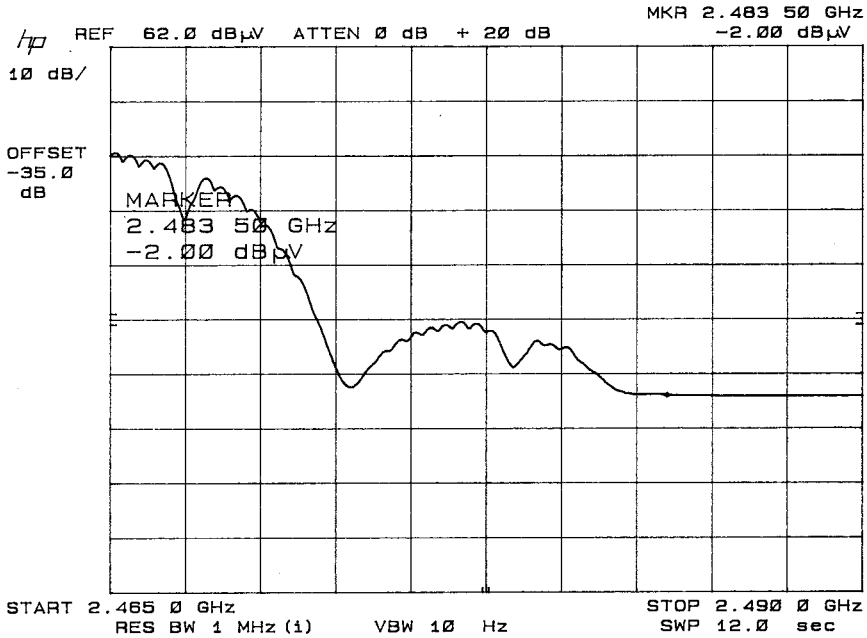


LOWER



UPPER

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APPLICANT: ARKON NETWORKS INC.

FCC ID: PBWDS24R29

NAME OF TEST: POWER SPECTRAL DENSITY

RULES PART NO.: 15.247(d)

REQUIREMENTS: The peak level measured must be no greater than +8.0dBm.

DATA: SEE THE FOLLOWING PLOT

- 1.4	From Plot
+60 dB	Attn.
+35 dB	Correction Factor
+ 93.6 dB	
-107.0 dBm	
-13.4 dBm	

POWER SPECTRAL DENSITY PLOT