

Nemko EESI, Inc.		11696 Sorrento Valley Road, Suite. F, San Diego, CA 92121 Phone (858) 793-9911 Fax (858) 259-7170		
DATE	DOCUMENT NAME	SUBMITTAL #	FCC ID	PAGE
12/20/99	Solctek Corporation SkyWay Wireless LAN Bridge Antenna Specifications	99-244	KA324WAN5	1



PMPF-1 + PMANT DATA SHEET

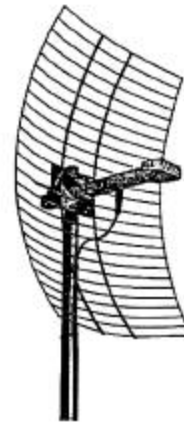
Directional Antenna Systems, 2200 to 2600 MHz Operation

Features

- 50 Ω Passive Feed Dipole
- Optimized for 2.3 to 2.5 GHz Performance
- Type N Female Connector
- 15, 19 or 23.5 dBi Antenna Gain
- Rugged, Lightweight and Waterproof

Applications

- 2.4 GHz ISM Band Applications
- Point to Point Repeaters
- Wireless Bridges
- Campus Connections
- In-Building Data Links



19 dBi Antenna System *
(PMPF-1 plus PMANT19-WW)

Description

The new directional antenna systems offered by Pacific Wireless incorporate grill style antenna reflectors with the new PMPF-1, 50 ohm passive feed dipole with integrated type N female connector. The antenna reflectors and PMPF-1 are sold separately to mix and match for maximum system flexibility. Installation is simple with the Pacific Wireless quick pole mount system, which removes the need for traditional U bolts and does not require three handed installation. The 15 and 19dBi reflectors come with a tilt style pole mount, and the 23.5dBi reflector is a fixed mount design. All mounts are anodized steel and each reflector assembly comes complete with all stainless steel hardware and assembly instructions.

Performance Characteristics

Minimum and Maximum specifications are guaranteed over frequency and temperature

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Specified Frequency Range	F		2300		2500	MHz
Antenna Gain	G	PMANT15 PMANT19 PMANT25		15 19 23.5		dBi
Input Return Loss	S_{11}	50 ohm system		-14	-9.5	dB
Cross Polarization Rejection	CP			<-19		dB

Absolute Maximum Ratings

Characteristic	Symbol	Value	Units
Power Level	Pmax	40	dBm
Operating Temperature	T	-45 to +70	$^{\circ}$ C

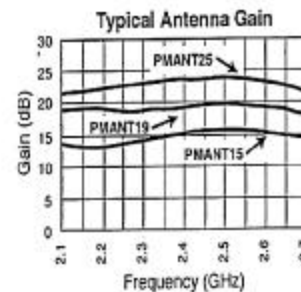
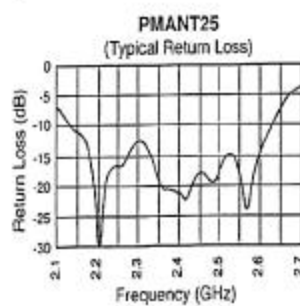
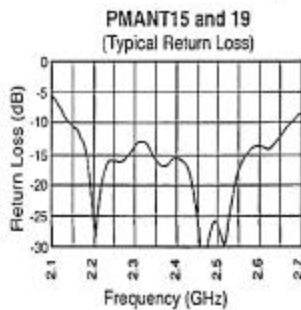
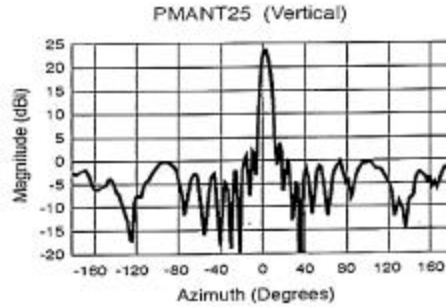
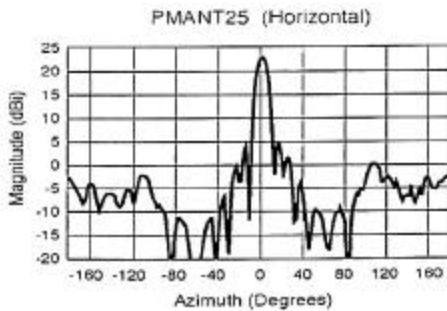
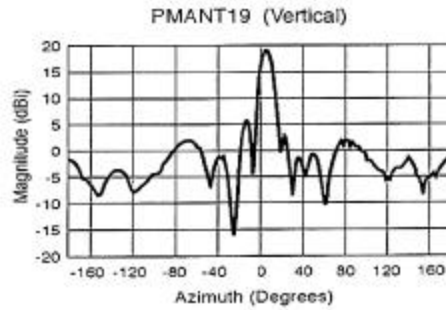
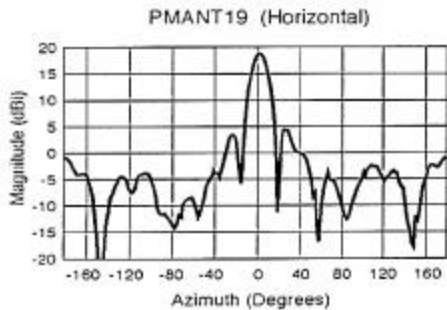
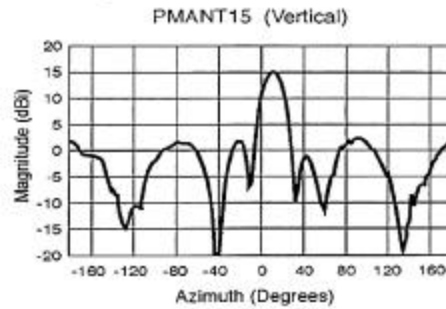
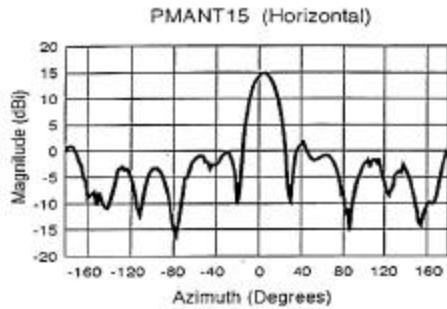
*Note: Pacific Wireless does not supply the mounting pole or coax cable. Antenna system assembly is required.

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PMPF-1 and PMANT

Integrated Antenna Patterns at 2.45 GHz



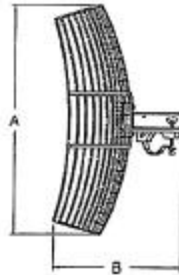
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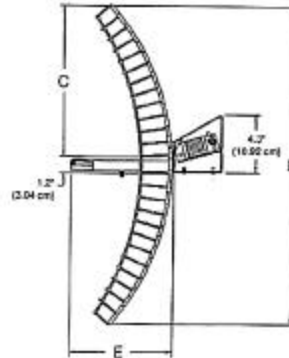
PMPF-1 and PMANT

Mechanical Specifications

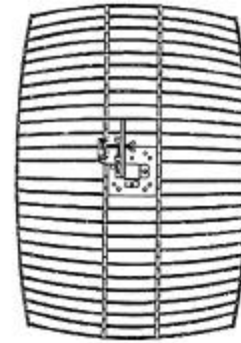
Antenna Reflector: Wire welded construction



Top View



Side View



Rear View

	A		B		C		D		E		Approximate Installed Weight • including PMPF-1
	in.	cm.	in.	cm.	in.	cm.	in.	cm.	in.	cm.	
PMANT15	11.5	29.21	6.5	16.51	6.4	16.26	14.0	35.56	7.2	18.29	PMANT15 2.6 lbs (1.18 kg)
PMANT19	16.7	42.42	9.4	23.88	11.2	28.45	23.6	59.95	9.4	23.87	PMANT19 3.9 lbs (1.77 kg)
PMANT25	28.0	71.12	11.4	28.96	16.4	41.66	34.0	86.36	16.0	40.64	PMANT25 8.2 lbs (3.72 kg)

The System . . .

PMPF-1 - Passive Feed Dipole:

- Integrated Type N Female Connector
- Waterproof Sealed Plastic Housing
- No rear cable connection problems
- Easily installs onto any PMANTxx

+

PMANTxx - Antenna Reflector:

- 15, 19 or 23.5 dBi Gain
- Powder Coated Painted Finish (Color: light gray)
- Rugged, Wire Welded Construction
- Includes all hardware for 1" to 1.5" dia. Pole mount

Notes:

- Mounting brackets are disassembled from the antenna reflectors so the reflectors stack compactly, which saves volume in both shipping and warehouse storage.
- A complete antenna system includes one PMPF-1 and one antenna reflector assembly. Our standard packaging is a 2 system pack, 5 system pack or 10 system pack. Bulk packaging is available on request.
- All shipments F.O.B. Pacific Wireless Midwest Warehouse in Albion, Michigan 49224

Part Numbers:

Part Number	Description
PMPF-1	Passive Feed Dipole – with integrated type N female connector
PMANT15	Antenna Reflector Assembly – 15 dBi Gain
PMANT19	Antenna Reflector Assembly – 19 dBi Gain
PMANT25	Antenna Reflector Assembly – 23.5 dBi Gain

For further information contact:

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Scotts Valley, CA 95066
TEL (831) 438-5442
FAX (831) 438-6239



Pacific Wireless

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www.pacwireless.com

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12-Apr-99

Soltek Corporation
6370 Nancy Ridge Road
Suite 109
San Diego, CA 92121-3212
Attn: Vice President of Engineering

Hello ,

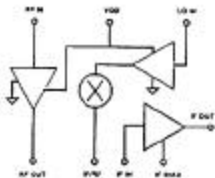
I realize your time is very valuable so I will be brief. I am writing you to introduce you to Pacific Wireless and the range of wireless products, which we offer. I'm hoping you may find them of some interest.

A little background...

Pacific Wireless was formed in January 1999 out of the ashes of Pacific Monolithics. Previously Pacific Monolithics was a premier supplier of MMDS products used for Wireless Cable TV before filing for Chapter 11 in October 1998 after a market downturn in the MMDS business. Pacific Wireless was formed to concentrate on servicing the ISM band digital data communications market with our Passive Feed Antenna Products and MMIC Downconverter Block IC products.

Our products:

We currently manufacture 15dBi, 19dBi and 23.5dBi **parabolic reflector antennas** with Passive Feed Dipoles. These antennas are field proven with over 200,000 installations over the past 5 years. I think you will find the design of the antennas to be more attractive than other offerings in the market, while maintaining superior performance.



We also manufacture a **2.4GHz GaAs MMIC downconverter IC** which is a fully integrated downconversion block. The IC features 26dB gain, 4dB noise figure, 110mA supply current and contains separate RF AMP, IF AMP, LO AMP and MIXER blocks. It comes packaged in a 14 lead SOIC plastic package and is available in tubes or tape and reel. The reliability of the IC has been field proven with over 300,000 rooftop installations over the past 5 years.

I've attached our current product specifications and price list for your review. You can visit us at our web page www.pacwireless.com or call our sales representative **Val Jackson** at **831-438-5442** for more information. Our products are also available through *Richardson Electronics*.

Thank you in advance for taking the time to review our products. We hope that we can be of some service to you in the future.

Best Regards,

Scott M Parsons / President
Pacific Wireless

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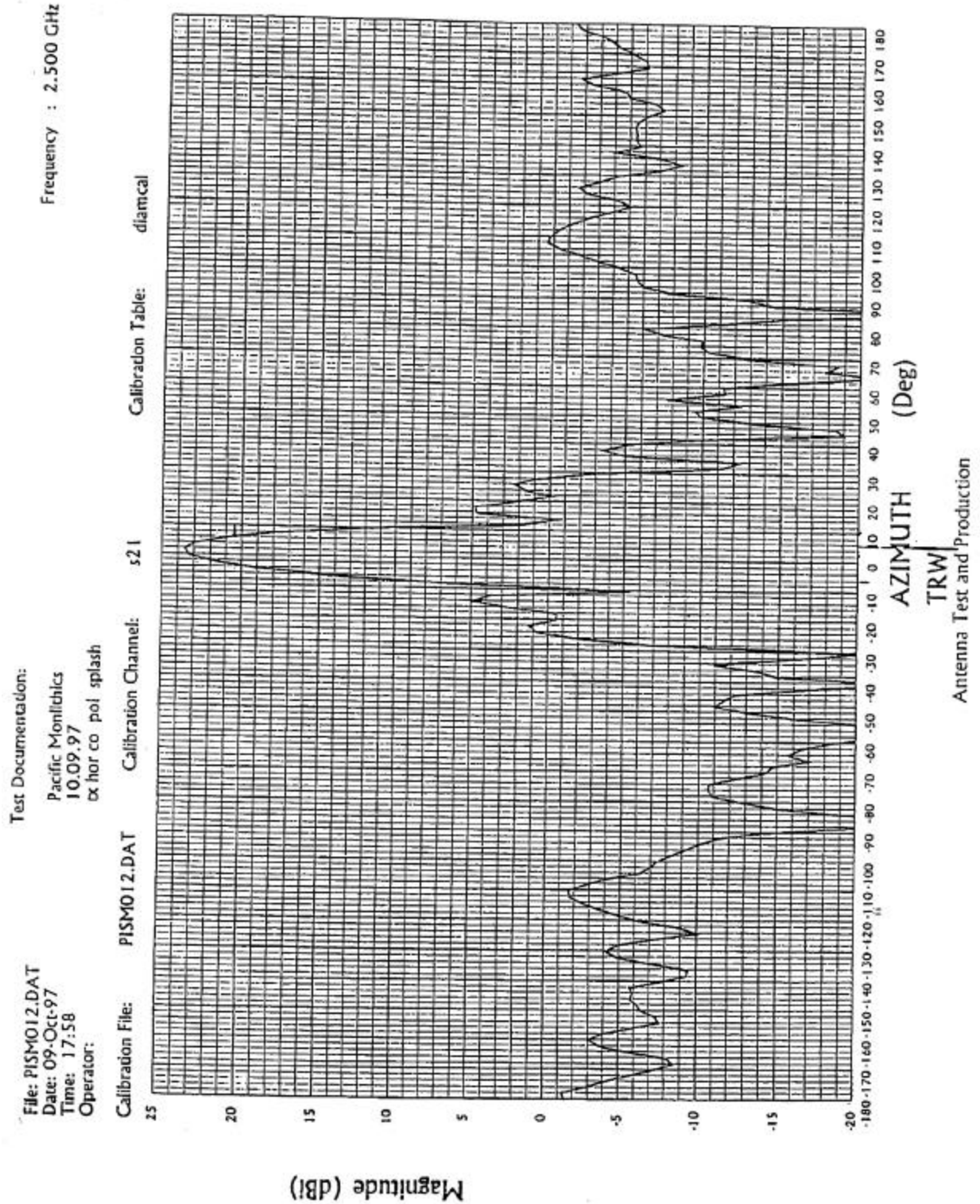


ANTENNA SPECIFICATIONS

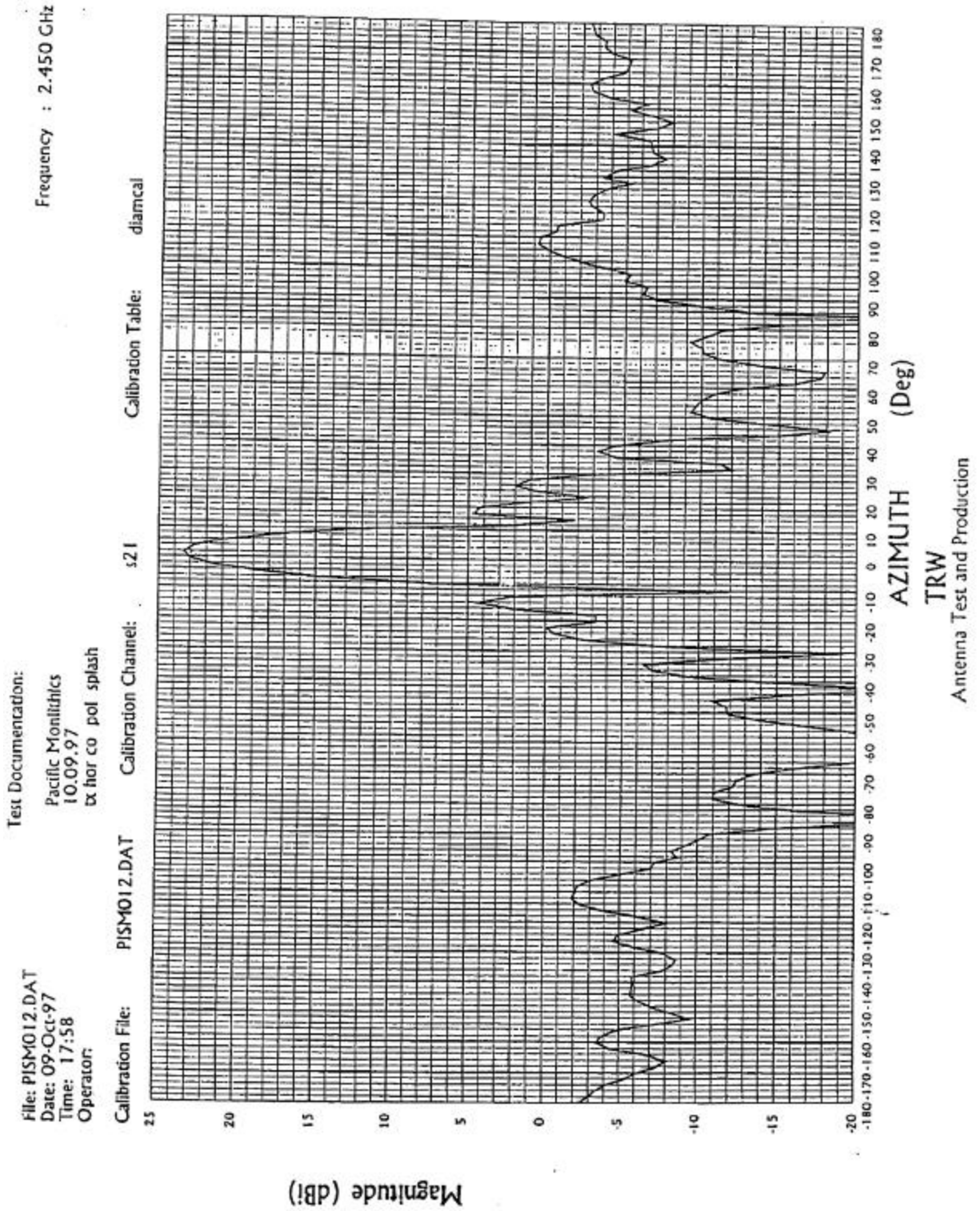
1800 MHz to 2700 MHz

	PMANT15	PMANT19	PMANT25
<i>Gain</i>	15dB	19dB	24dB
<i>3dB Beam Angle</i>	19 deg	17 deg	8 deg
<i>Cross Pole</i>	21 dB	32 dB	26 dB
<i>Front to Back</i>	>19 dB	>22 dB	> 24 dB
<i>Side Lobe</i>	-15 dB	-17 dB	- 20 dB
<i>VSWR</i>	1.5:1	1.5:1	1.5:1
<i>Impedance</i>	50 ohms	50 ohms	50 ohms
<i>Input Power</i>	50 W	50 W	50 W
<i>Polarity</i>	Horizontal or Vertical	Horizontal or Vertical	Horizontal or Vertical
<i>Wind Loading</i>			
100MPH	8.2 Lbs	16.6 Lbs	40 Lbs
140MPH	16.1 Lbs	32.5 Lbs	78 Lbs
100MPH : 1/2" Radial Ice	33.2 Lbs	72.4 Lbs	166 Lbs
<i>Weight</i>	2.6 Lbs	3.9 Lbs	8.2 Lbs
<i>Pole Diameter</i>	1" to 2.4"	1" to 2.4"	1" to 2.4"
<i>Focal Length</i>	7"	9.5"	16"
<i>Connector</i>	N Male	N Male	N Male

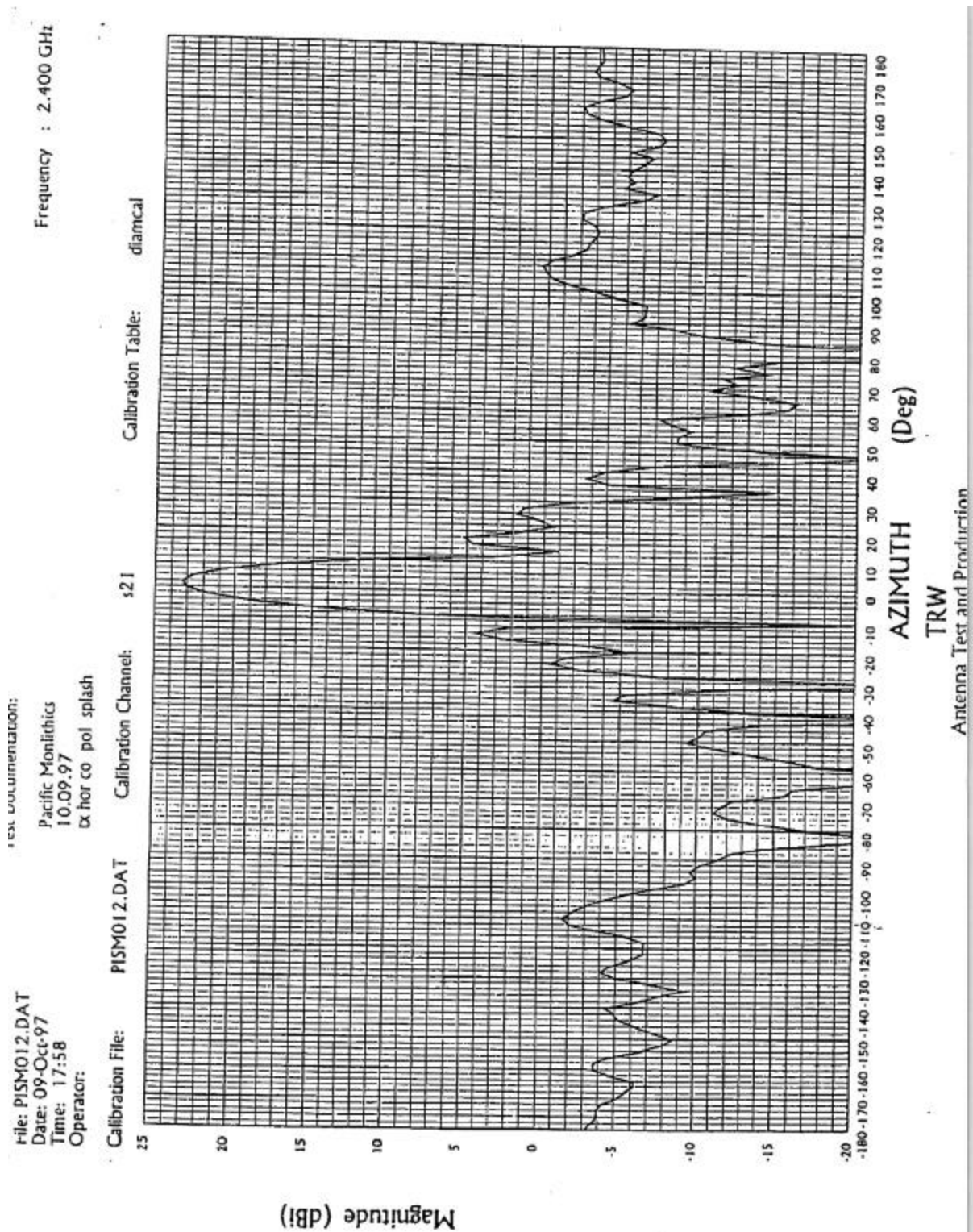
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One 24 dBi Pacific Monolitihc grid

From Vendors Charts

<u>Degree</u>	<u>ANT- GRID-24</u>	<u>TEST 09</u>
0	23.5	
10	15	
20	-6.5	
30	-10	
40	-2	
50	-9	
60	-10	
70	-1	
80	-5	
90	-3	
100	0	
110	-1.7	
120	-5	
130	-10	
140	-8	
150	-2.5	
160	-5	
170	-4	
180	-2	
190	-2	
200	-6.4	
210	-5.8	
220	-5.6	
230	-12.8	
240	-7.5	
250	-4.5	
260	-0.9	
270	-0.3	
280	-4	
290	-8	
300	-10	
310	-3.6	
320	-15	
330	-18.5	
340	-5	
350	0	

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24 dBi Pacific Monolithhc Grid Test 09

