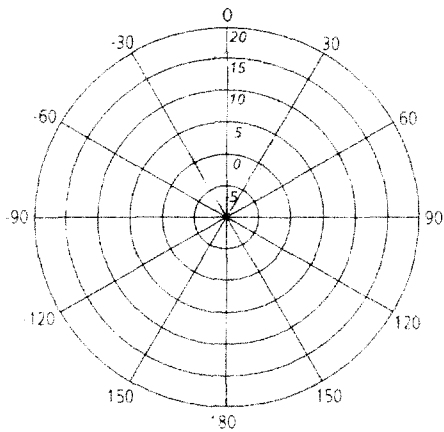


# Planar Array

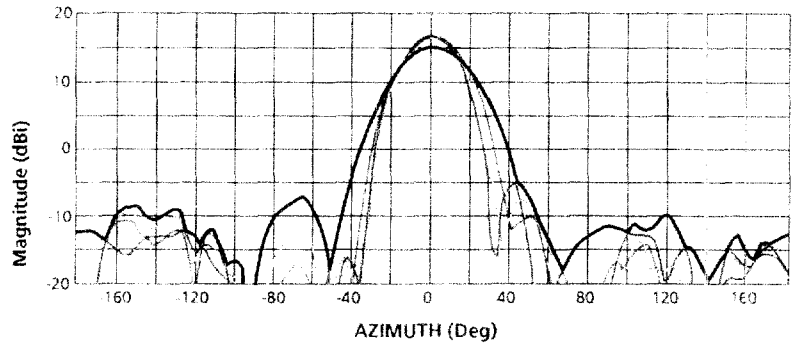
## Antenna Patterns

Legend	
	Plot at 2.150 GHz
	Plot at 2.500 GHz
	Plot at 2.600 GHz
	Plot at 2.700 GHz
	Composite worst case plot

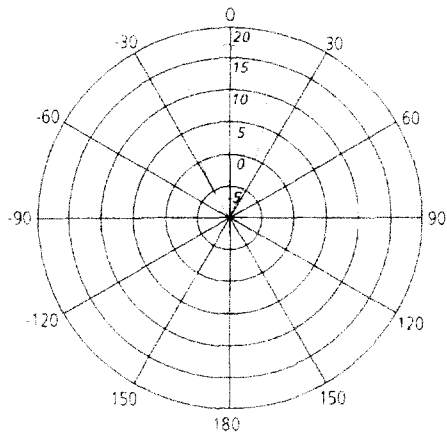
Planar Array Horizontal  
2500 MHz



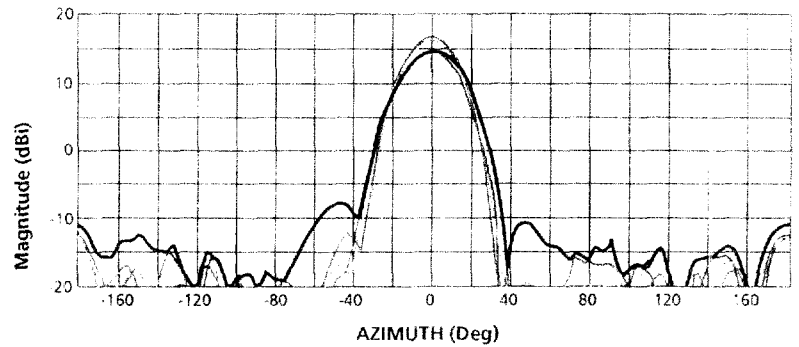
Planar Array  
Composite Antenna Pattern  
Horizontal Polarity



Planar Array Vertical  
2500 MHz



Planar Array  
Composite Antenna Pattern  
Vertical Polarity



XPACFS00046x

- Planar - 33SG: 33 Channel Filtered Downconverter/Antenna With Selectable Gain
- Planar - 33SGL: 33 Channel Filtered Downconverter/Antenna
- Planar - 31SG: 31 Channel Filtered Downconverter/Antenna With Selectable Gain
- Planar - 31HG: 31 Channel Filtered Downconverter/Antenna
- Planar - 31LG: 31 Channel Filtered Downconverter/Antenna

**Typical Operating Specifications**

Parameter	Minimum	Maximum
Input Frequency (MMDS)	2500 MHz	2686 MHz
Input Frequency (MDS) *	2150 MHz	2162 MHz
Temperature Range	-40° C	+70° C
Humidity	0%	100%
Input Voltage	14 VDC	24 VDC

**Typical Electrical Performance**

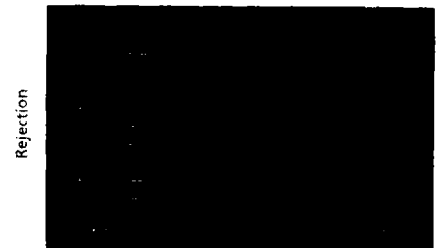
Parameter	
Integrated Gain at Low/High Gain Setting (SG)	36/48 dB
Integrated Gain at Low/High Gain Setting (SGD)	28/40 dB
Integrated Gain (HG)	52 dB
Integrated Gain (LG)	36 dB
Output Frequency (MMDS)	222-408 MHz
Output Frequency (MDS) *	116-128 MHz
Output Impedance	75 ohms
Return Loss	>14 dB
Gain Flatness (1 ch)	+/- .20 dB
Gain Flatness (MDS & MMDS)	+/- 1.1 dB
Noise Figure (SG - High Gain/Low Gain)	1.2dB/3.5 dB
Noise Figure (HG/LG)	1.2dB/3.5 dB
LO Frequency	2278 MHz
LO Frequency Over Temperature	+/- 25 KHz
LO Leakage IF Port	-45 dBm
LO Antenna Leakage	-90 dBm
Phase Noise @ 100 Hz Offset	-68 dBc/Hz
@ 1 KHz Offset	-88 dBc/Hz
@ 10 KHz Offset	-96 dBc/Hz
@ 100 KHz Offset	-116 dBc/Hz
@ >1.0 MHz	<-136 dBc/Hz
Image Rejection (MDS & MMDS)	>60 dB
Minimum PCS Rejection (1930-1990 MHz)	>100 dB
Third Order IM @ Low Gain Setting	-50 dBc @ -10 dBm output
@ High Gain Setting	-60 dBc @ -10 dBm output
P <sub>1dB</sub> Output Power (31 & 33 channel)	+12 dBm
Input Current	200 mA
Spurious in IF band	<-100 dBm
Group Delay Variation (6MHz)	<+/- 3 nsec
Radar Pulse Recovery Time	<15 usec
Lightning Protection	Meets IEEE Standards

Antenna Specifications	
Antenna Gain	16 dBi
Antenna Front to Back Ratio	>25 dB
Antenna Side Lobe Levels	>26 dB
Antenna Cross Polarization	>25 dB

\* 33 Channel only

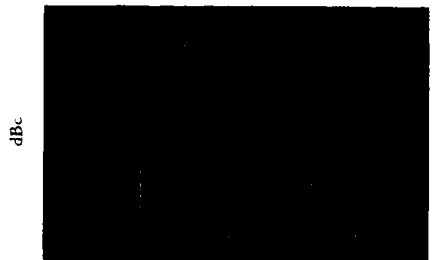


PCS Rejection



Frequency  
1.80 GHz to 2.80 GHz

LO Phase Noise



Frequency Offset