

X-BAND LOW-NOISE RECEIVER FRONT END

MODEL: ARZ0227

FEATURES

- RF frequency range..... 8.5 to 9.6 GHz
- Integrated LO amplifier
- Noise figure..... 0.9 dB
- LO detector
- WR90 waveguide input



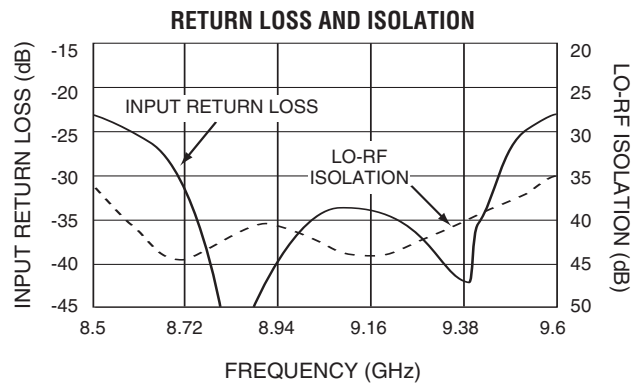
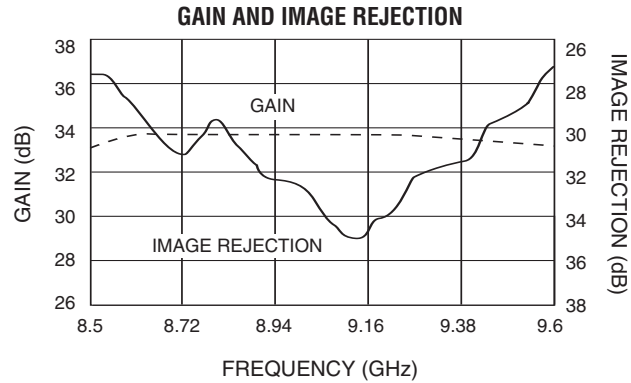
MITEQ's ARZ0227 low-noise receiver front end converts signals in X-band to 60 MHz and is ideal for radar installations with waveguide interface. The integrated PHEMT LNA offers exceptional single-sideband noise figure and is housed in a weatherproof chassis for shipborne applications.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	UNITS	MIN.	TYP.	MAX.
RF frequency range	GHz	8.5		9.6
RF VSWR	Ratio			1.3:1
LO frequency range	GHz	8.5		9.6
LO power range	dBm	-3		+3
LO VSWR (LO = +10 dBm)	Ratio			1.5:1
TRANSFER CHARACTERISTICS	UNITS	MIN.	TYP.	MAX.
Conversion gain (IF = 60 MHz)	dB	32	33	
Single-sideband noise figure at 25°C	dB		.9	1.2
LO-to-RF isolation	dB	40		
LO-to-IF isolation	dB	45		
RF-to-IF isolation	dB		30	
Input power at 1 dB compression	dBm	-25		
Image rejection		25	30	
OUTPUT PARAMETERS	UNITS	MIN.	TYP.	MAX.
LO detector voltage	mV		150	
IF frequency range (3 dB bandwidth)	MHz	54		66
IF VSWR (IF = -10 dBm, LO = +10 dBm)	Ratio		1.5:1	



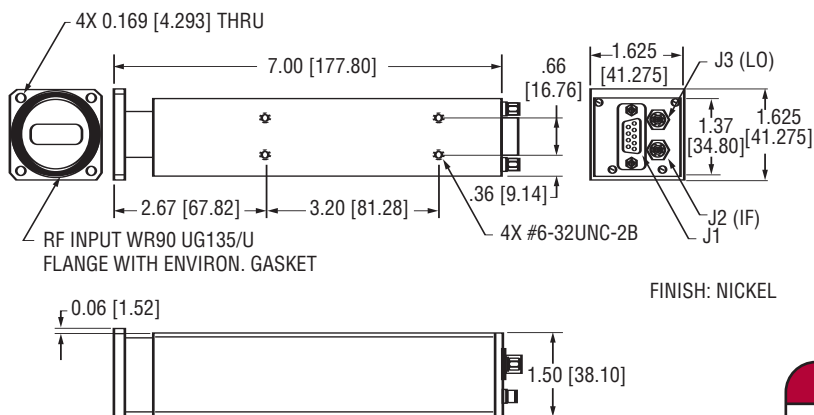
ARZ0227 TYPICAL TEST DATA



MAXIMUM RATINGS

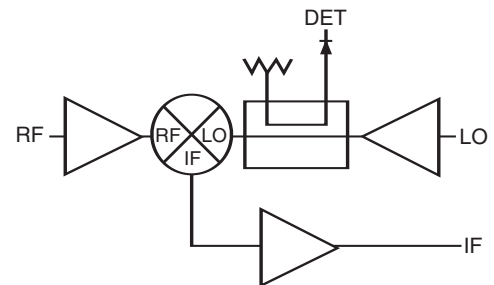
Specification temperature +25°C
 Operating temperature -55 to +85°C
 Storage temperature -65 to +95°C

OUTLINE DRAWING



NOTE: All dimensions shown in brackets [] are in millimeters.

BLOCK DIAGRAM



J1 PIN NUMBER

1	+15V
2	DET
3	GND
4-9	NOT USED