Balanced Mixers
26.5-110 GHz

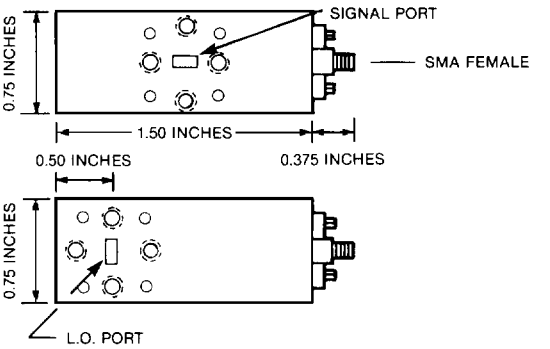
Features

- Low Noise Figure
- Beam Lead Diodes
- Broad IF Bandwidth
- Low Conversion Loss
- Low LO Drive Power
- Small Size and Lightweight

Description

This series of balanced mixers achieves a low SSB noise figure with the utilization of M/A-COM proprietary beam lead diodes. The overall SSB noise figure is optimized over a ± 1.0 GHz bandwidth. Additional features include a high LO to RF isolation and high LO noise suppresion. These mixers are supplied with an IF amplifier in various IF bandwidths from 0.01 to 1.0 GHz. The local oscillator power required can be supplied by M/A-COM Gunn diode oscillators. When low noise M/A-COM Gunn diode oscillators and isolators are purchased with these balanced mixers, they are tested as an integrated Mixer-LO Subassembly. Special mixer performance and features to meet specific system requirements are available.

DIMENSIONS OF MIXER/IF AMPLIFIER ON REQUEST.



Mechanical Specifications

Waveguide	WR-28	WR-22	WR-15	WR-10
RF Mating Flange MIL-F-3922/	68-002	67B-006	67B-008	67B-010
UG Reference	599/U	383/U	385/U	387/U-M

Specifications at 25°C

Waveguide	Frequency (GHz)	SSB Conversion Loss (dB)	LO Drive Power (dBm Max.)	IF Frequency[2] With IF Amplifier (MHz)	SSB Noise[3] Figure (dB Max.)	Model No.[1] With IF Amplifier	Model No.[1] Without IF Amplifier
WR-28	26.5-40	6.5	+10	10-110	8.5	5-28-701-XX	5-28-700-XX
WR-22	33-50	6.5	+10	10-110	8.5	5-22-701-XX	5-22-700-XX
WR-15	50-75	7.0	+10	10-110	9.0	5-15-700-XX	5-15-700-XX
WR-10	75-110	8.0	+14	10-110	10.0	5-10-701-XX	5-10-700-XX

Common Specifications

RF Bandwidth	±1.0 GHz	RF to IF Gain	20 dB Typ.	dc Input Voltage	1.5V
LO to RF Isolation	20 dB	IF Output Impedance	50 Ohms	dc Input Current	30-50 mA
LO Noise Suppression	20 dB	IF Output VSWR	1.5	Operating Temperature	-54°C to +85°C
RF Input Level	100 mW Max.	IF Output Power (1 dB Compression)	0 dBm		
RF VSWR	2.0 Typ.				

Notes:
1. Replace "XX" in model number with desired center frequency.
2. Consult factory for other frequency bands.
3. SSB noise figure for 100-600 MHz IF will degrade 0.3 dB and 0.5 dB for 100-1000 MHz IF options.