

ELECTRICAL SPECIFICATIONS

Model Number	Outline	STEP File	RF		Local Oscillator		IF		Conversion Loss (dB) (typ)	
			Frequency Range (GHz)	WG Band	Frequency Range (GHz)	WG Band	Frequency Range (GHz)	Connector	IF=1 GHz, LO=13 dBm	Fixed LO, LO=13 dBm
MXP-28	MXP-28	28	26.5-40	WR-28	26.5-40	WR-28	0.1-13.5	SMA	7 dB, RF=28-38	8.3 dB, see plot
MXP-22	MXP-22	22	33-50	WR-22	33-50	WR-22	0.1-17	2.92 mm	6.5 dB, RF=34-50	8.3 dB, see plot
MXP-19	MXP-19	19	40-60	WR-19	40-60	WR-19	0.1-20	2.92 mm	6.2 dB, RF=42-60	9 dB, see plot
MXP-15	MXP-15	15	50-75	WR-15	50-75	WR-15	0.1-25	2.92 mm	6.5 dB, RF=50-71	11 dB, see plot
MXP-15*	MXP-15L	15L	50-75	WR-15	40-50	WR-19	0.1-25	2.92 mm	NA	10 dB, see plot
MXP-12	MXP-12	12	60-90	WR-12	60-90	WR-12	0.1-30	2.92 mm	6.5 dB, RF=62-90	9.5 dB, see plot
MXP-10	MXP-10	10	75-110	WR-10	75-110	WR-10	0.1-35	2.92 mm	6.5 dB, RF=75-108	9 dB, see plot
MXP-08	MXP-08	08	90-140	WR-08	90-140**	WR-08	0.1-40	2.92 mm	7 dB, RF=95-100	See plot

* Note that the LO waveguide is WR-19 for this model

** Currently testing MXP-08 only for LO from 90-100 GHz

Noise figure (DSB) is typically the conversion loss minus 3 dB, plus the IF amplifier noise figure. Some typical amplifier choices:

IF Amplifier Frequency	IF Amplifier Noise Figure (typ/max)	Gain (typ)
0.1-4 GHz	1.5 dB / 1.7 dB	35 dB
1-8 GHz	1.5 dB / 2.0 dB	33 dB
2-18 GHz	3.0 dB / 5.0 dB	33 dB
6-18 GHz	2.0 dB / 2.75 dB	30 dB
26.5-40 GHz	3.5 dB / 4.5 dB	22 dB

Other IF ranges are also available, some with lower noise figure. Consult Millitech.

COMMON OPERATING CHARACTERISTICS:

- VSWR at RF Port: 2:1 (typ)
- 1dB Compression Point : +3 dBm (typ) input, either as a downconverter or an upconverter
- LO Drive Power: +13 dBm (typ)
- LO/RF Isolation: 25 dB (typ)
- LO/IF Isolation: 25 dB (typ)
- Maximum RF/IF Power: +19 dBm CW, +25 dBm pulse with 25% duty cycle or less (no damage, 25 C)