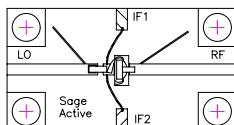




SPECIFICATION BULLETIN MR147L Low Cost Open Substrate Mixer
RF/LO: 3 to 18 GHz IF: DC to 800 MHz

Standard Product Features

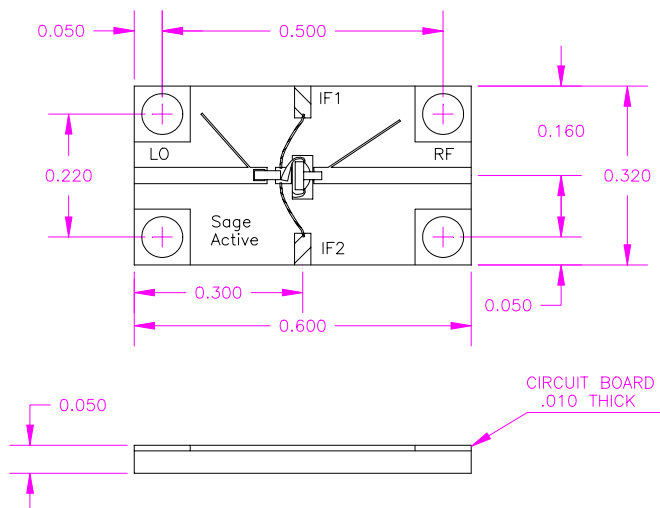
- Surface Mount Configuration
- Covers Telecommunication Bands
- 5.5 dB Typical Mid-Band Conversion Loss
- High Isolation > 30 dB LO-RF
- Two IF Outputs (One active at a time)
- Low Cost



SPECIFICATIONS	TYPICAL	Min.	Max.
RF/LO Frequency Range	-----	3 GHz	18 GHz
IF Frequency Range (3 dB Bandwidth)	-----	DC	800 MHz
Conversion Loss (IF = DC to 500 MHz)	5.5 dB	----	8.5 dB
LO Drive Level	9 dBm	7 dBm	11 dBm
Isolation, LO to RF	30 dB	20 dB	---
LO to IF	25 dB	15 dB	---
VSWR, RF	2.2:1	---	---
LO	1.6:1	---	---
Input 1 dB Compression	4 dBm	2 dBm	---
Input Two-Tone Third Order IP (IP3)	14 dBm	10 dBm	---
Operating Temperature Range	---	-54 C	+95 C
Storage Temperature Range	---	-65 C	+125 C

Note: Only one IF Output can be connected. Alternate LO Drive ranges available. Consult Factory.

OUTLINE DRAWING

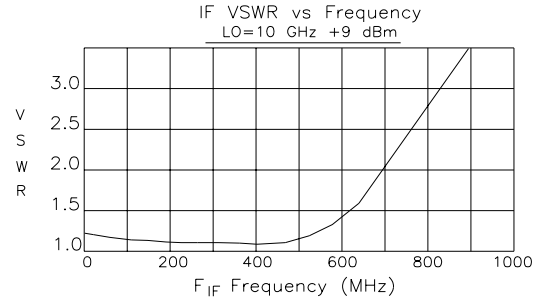
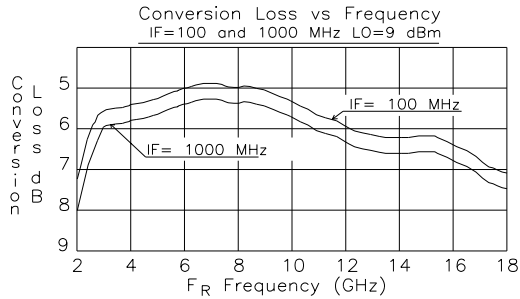
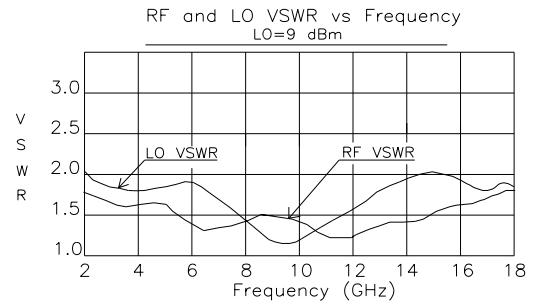
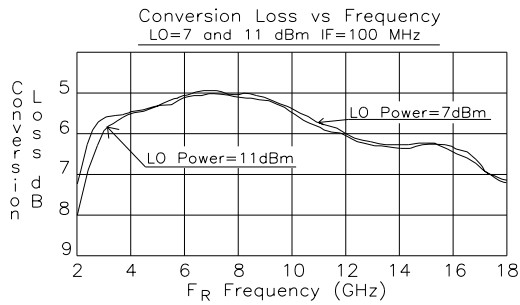


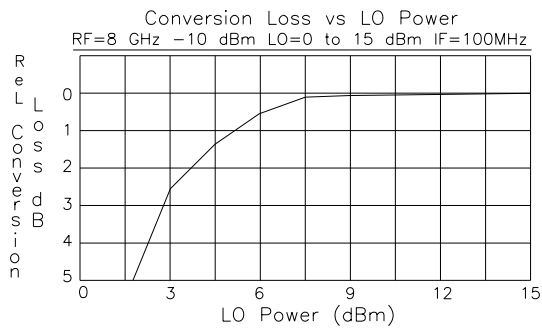
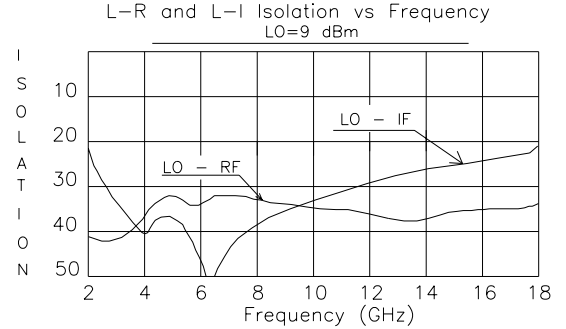
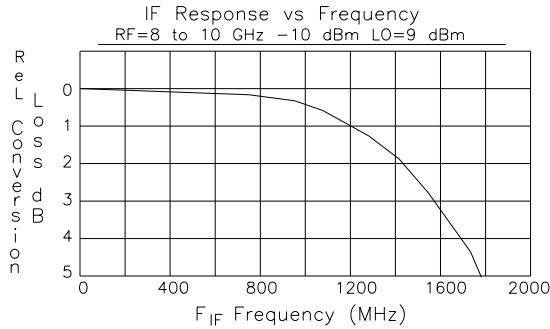


TYPICAL PERFORMANCE @ 25° C

MR 147L (Double Balanced Mixer)

Operating Parameters	
Freq. RF=	2 to 18 GHz
LO=	2 to 18 GHz
IF=	DC to 500 MHz
LO Power=	7 to 11dBm





Single Tone Intermodulation Products

Test Conditions:
Frequency RF= 2.0 GHz LO= 2.1 GHz

Single Tone f_R f_{IM} f_L	RF =0dBm		RF =-5dBm		RF =-10dBm	
	LO=7dBm	LO=11dBm	LO=7dBm	LO=11dBm	LO=7dBm	LO=11dBm
2 × 1	43	45	46	49	49	53
2 × 2	50	48	54	58	57	62
3 × 2	49	56	53	61	58	68
3 × 3	29	29	35	39	43	48
4 × 3	68	68	>75	>75	>75	>75
5 × 4	55	61	64	73	>75	>75
6 × 3	>75	>75	>75	>75	>75	>75
6 × 5	73	75	>75	>75	>75	>75

