



**SPECIFICATION BULLETIN**      **MR141L Open Substrate Mixer**  
**RF/LO: 4 to 18 GHz IF: to 500 MHz**



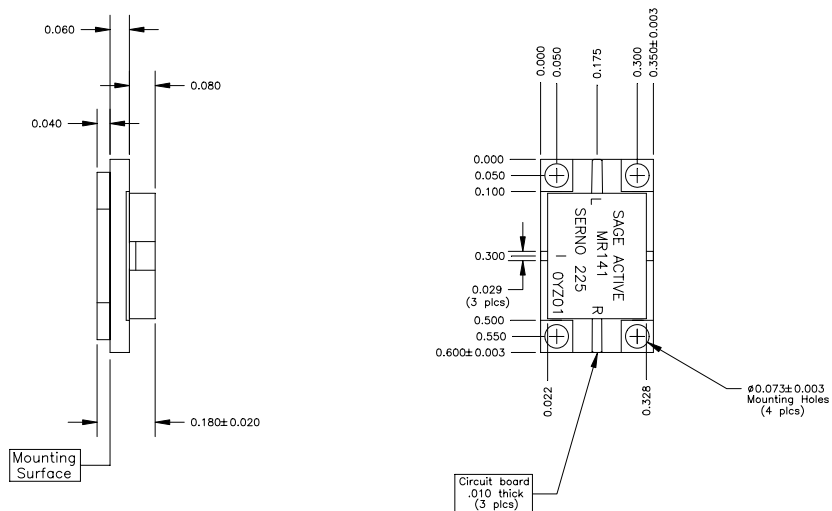
**Standard Product Features:**

- Surface Mount (Drop-in)
- Double Balanced
- 5.5 dB Typical Conversion Loss
- 30 dB Typical Isolation
- Can be used as Phase Detector
- Low Cost
- Protective Covers

Specifications	Typical	Min.	Max.
RF/LO Frequency Range	-----	4 GHz	18 GHz
IF Frequency Range (3 dB Bandwidth)	-----	DC	1000 MHz
Conversion Loss	5.5 dB	----	9.0 dB
LO Drive Level	9.0 dBm	7.0 dBm	11.0 dBm
Isolation, LO to RF	30 dB	18 dB	---
LO to IF	25 dB	15 dB	---
VSWR, RF	2.2:1	---	---
LO	1.8:1	---	---
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

Alternate LO Drive Ranges are available. Consult factory for assistance on your requirements.

**OUTLINE DRAWING**

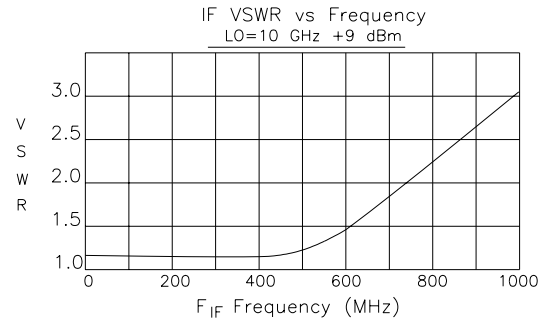
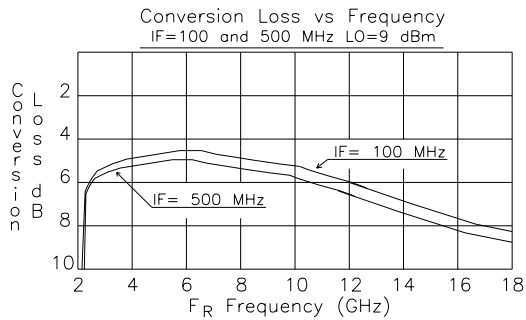
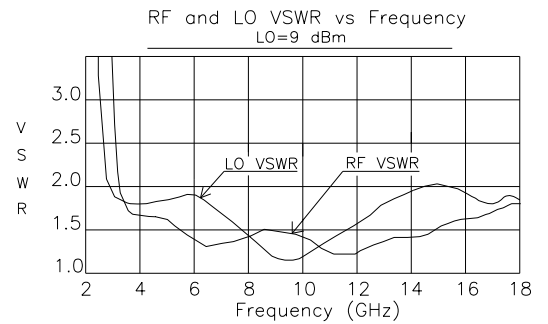
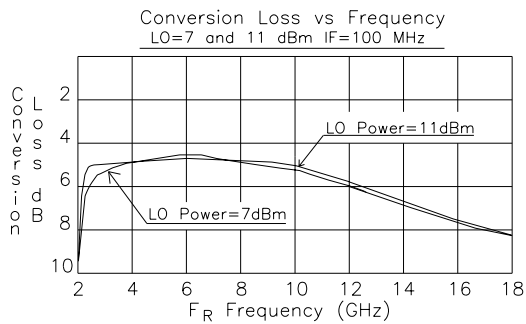


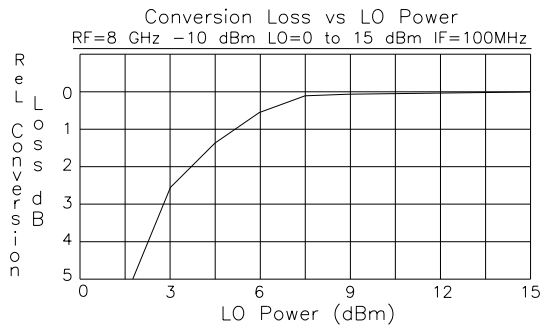
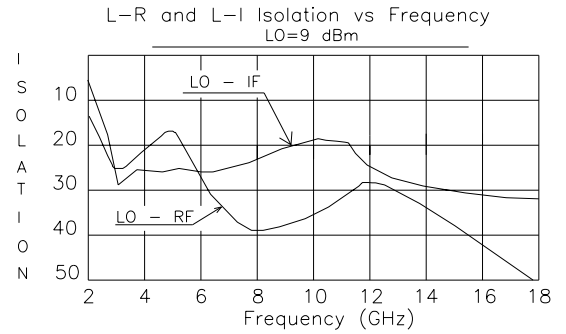
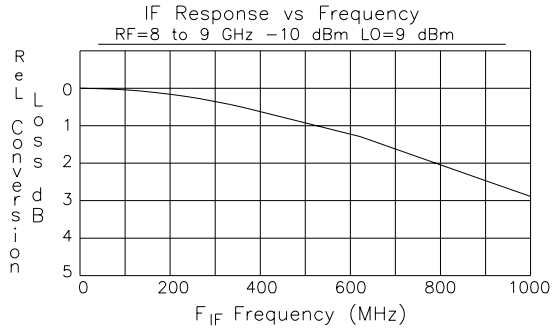


## TYPICAL PERFORMANCE @ 25° C

**MR 141L**  
(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 $f_R$ IM $f_L$	RF = 0dBm LO=7dBm LO=11dBm		RF = -5dBm LO=7dBm LO=11dBm		RF = -10dBm LO=7dBm LO=11dBm	
	$2 \times 1$	43	45	46	49	49
$2 \times 2$	50	48	54	58	57	62
$3 \times 2$	49	56	53	61	58	68
$3 \times 3$	29	29	35	39	43	48
$4 \times 3$	68	68	>75	>75	>75	>75
$5 \times 4$	55	61	64	73	>75	>75
$6 \times 3$	>75	>75	>75	>75	>75	>75
$6 \times 5$	73	75	>75	>75	>75	>75

