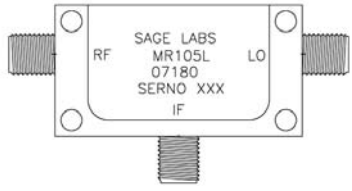




SPECIFICATION BULLETIN MR105L DOUBLE BALANCED MIXER RF/LO:2 to 18GHz IF: DC to 800 MHz

Standard Product Features:

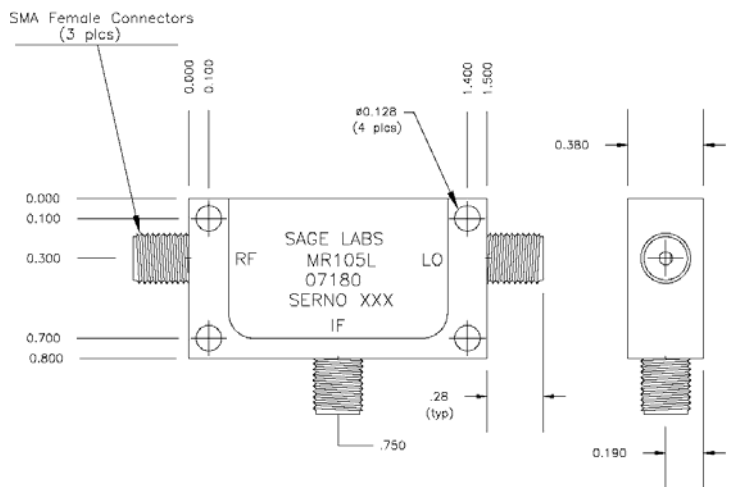
- Broadband Performance
- 5.5 dB Typical Conversion Loss
- 35 dB Typical Isolation
- DC Coupled IF
- Low Cost
- Versatile Package



SPECIFICATIONS	TYPICAL	Min.	Max.
RF/LO Frequency Range (GHz)	-----	2	18
IF Frequency Range (3dB Bandwidth) (MHz)	-----	DC	800
Conversion Loss (dB) (IF = DC to 500 MHz)	5.5	-----	9.5
VSWR, RF Port	2.2:1	---	-----
LO Port	1.8:1	---	-----
Isolation, LO to RF (dB)	35	20	---
LO to IF (dB)	25	15	-----
LO Drive Range (dBm)	9	7	11
Input 1 dB Compression Point (dBm)	+5	+2	-----
Input Two-Tone Third Order IP (IP3) (dBm)	+15	+10	-----
Operating Temperature Range (Degrees C)	-----	-54	+95
Storage Temperature (Degrees C)	-----	-65	+125

Note: Custom Designs also available. Consult factory for assistance on your specific requirements.

OUTLINE DRAWING



Specification Revision - 071910

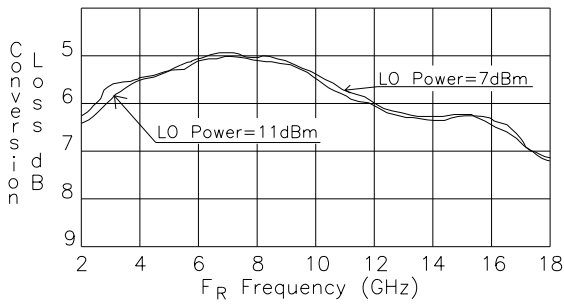


TYPICAL PERFORMANCE @ 25°C

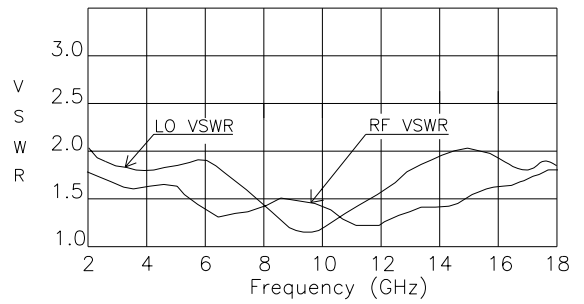
MR 105L (Double Balanced Mixer)

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

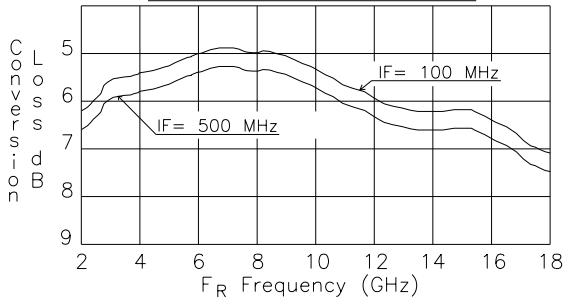
Conversion Loss vs Frequency
LO=7 and 11 dBm IF=100 MHz



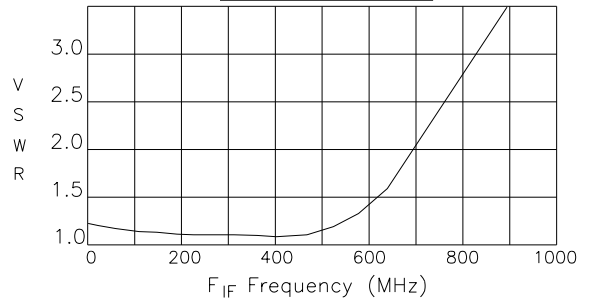
RF and LO VSWR vs Frequency
LO=9 dBm

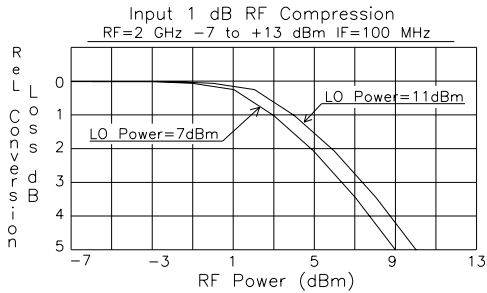
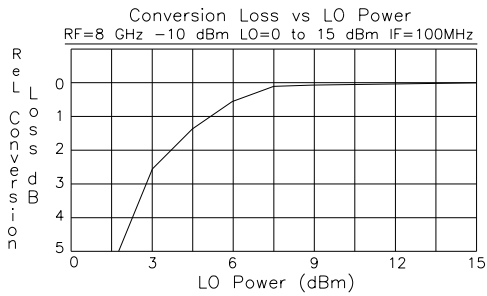
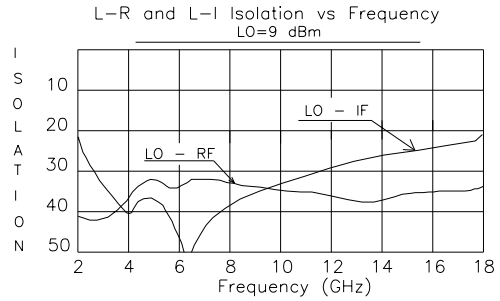
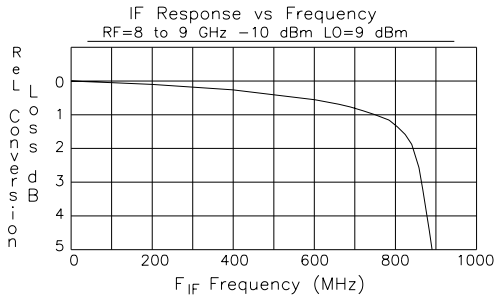


Conversion Loss vs Frequency
IF=100 and 500 MHz LO=9 dBm



IF VSWR vs Frequency
LO=10 GHz +9 dBm





Single Tone Intermodulation Products

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

Single Tone f_R 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