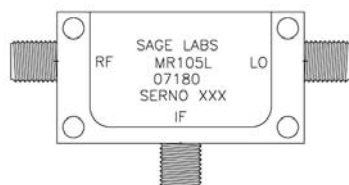


SPECIFICATION BULLETIN

MR105L DOUBLE BALANCED MIXER

RF/LO: 2 to 18GHz IF: DC to 800 MHz



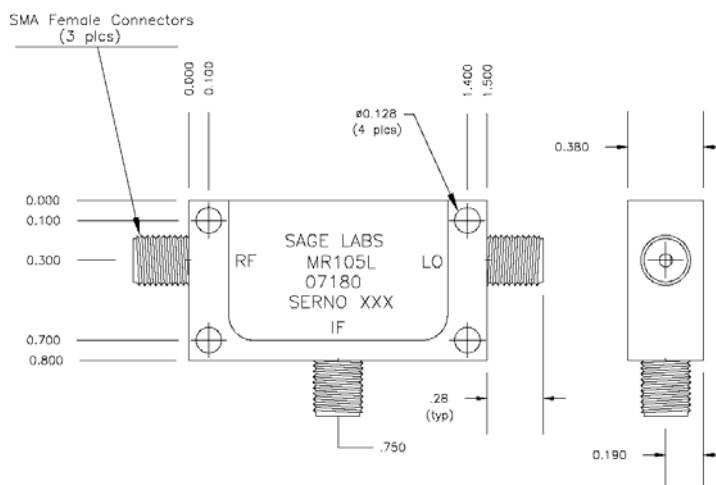
Standard Product Features:

- 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

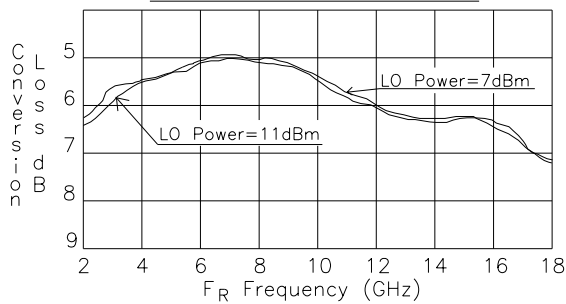
TYPICAL PERFORMANCE @ 25°C

MR 105L (Double Balanced Mixer)

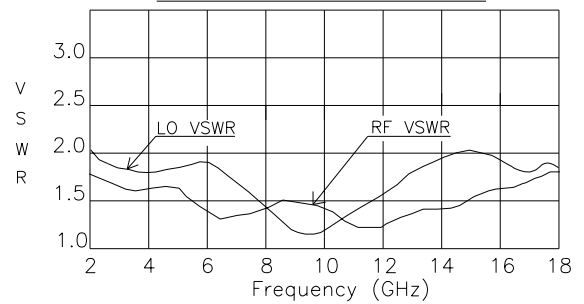
Operating Parameters

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

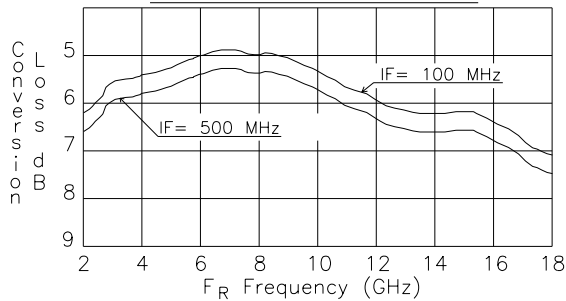
Conversion Loss vs Frequency
 LO=7 and 11 dBm IF=100 MHz



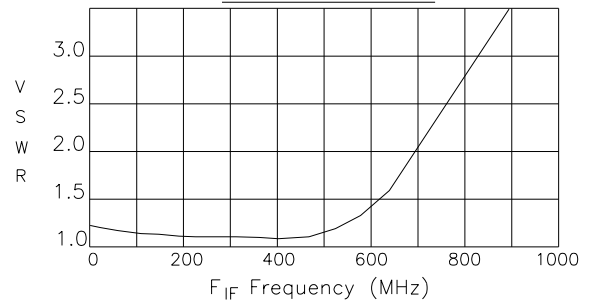
RF and LO VSWR vs Frequency
 LO=9 dBm

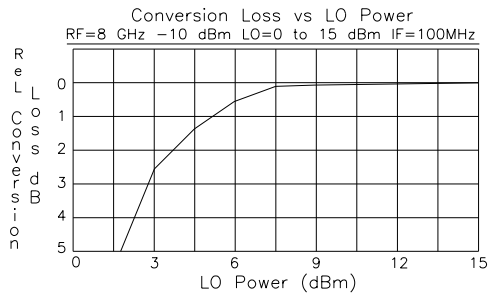
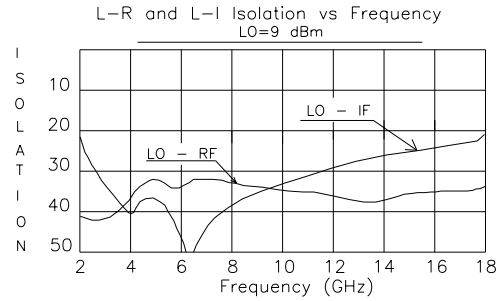
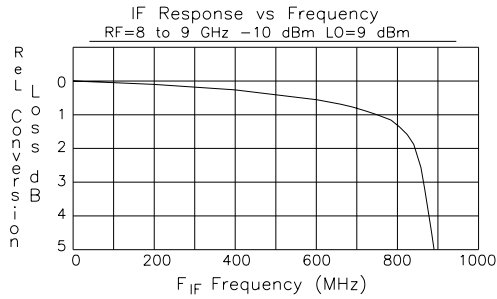


Conversion Loss vs Frequency
 IF=100 and 500 MHz LO=9 dBm



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 LO=7dBm LO=11dBm	RF =-5dBm LO=7dBm LO=11dBm	RF =-10dBm LO=7dBm LO=11dBm	RF =-15dBm LO=7dBm LO=11dBm	RF =-20dBm LO=7dBm LO=11dBm
2×1	43	45	46	49	53
2×2	50	48	54	58	62
3×2	49	56	53	61	68
3×3	29	29	35	39	48
4×3	68	68	>75	>75	>75
5×4	55	61	64	73	>75
6×3	>75	>75	>75	>75	>75
6×5	73	75	>75	>75	>75

