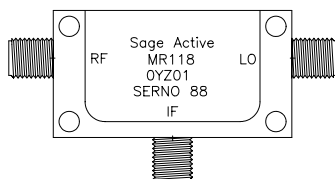




SPECIFICATION BULLETIN

MR118 HIGH DYNAMIC RANGE MIXER RF/LO: 2 to 18 GHz IF: 10 to 5000 MHz



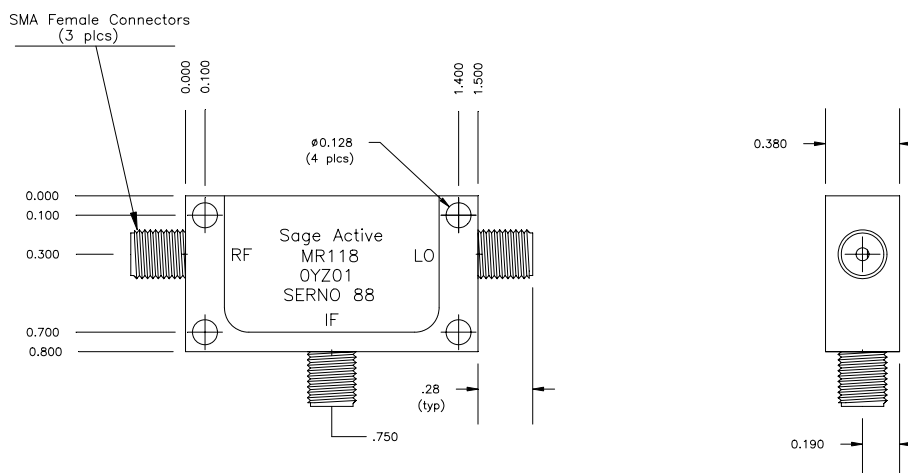
Standard Product Features:

- +28 dBm IP3 Intercept Point
- Triple Balanced Design
- Broadband Performance
- 6.5 dB Typical Conversion Loss
- 30 dB Typical Isolation
- Broadband IF Coverage
- Low Cost

Specifications	Typical	Min.	Max.
RF/LO Frequency Range	-----	2 GHz	18 GHz
IF Frequency Range (3 dB Bandwidth)	-----	10	5000 MHz
Conversion Loss (2 to 3 GHz)	8.5 dB	----	10.0 dB
(3 to 18 GHz)	5.5 dB	---	9.0 dB
LO Drive Level	22 dBm	20 dBm	24 dBm
Isolation, LO to RF	30 dB	20 dB	---
LO to IF	25 dB	15 dB	---
VSWR, RF	2.2:1	---	---
LO	1.8:1	---	---
Input 1 dB Compression	16 dBm	12 dBm	---
Input Two-Tone Third Order IP (IP3)	28 dBm	22 dBm	---
Operating Temperature Range	---	-54 C	+75 C
Storage Temperature Range	---	-65 C	+125 C

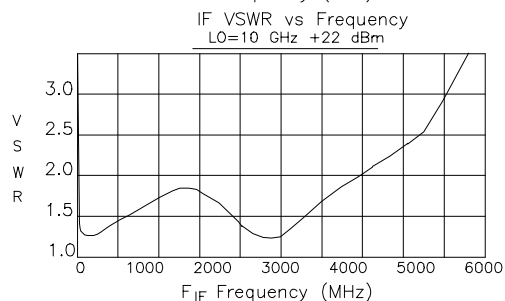
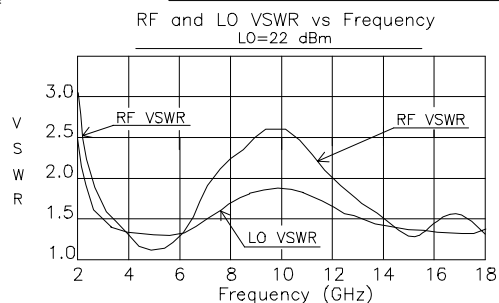
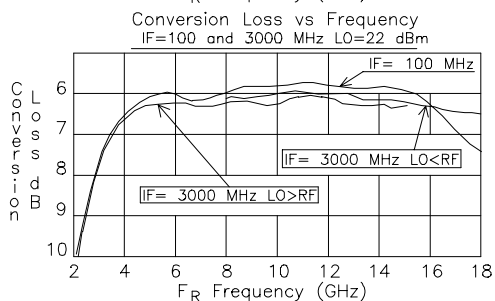
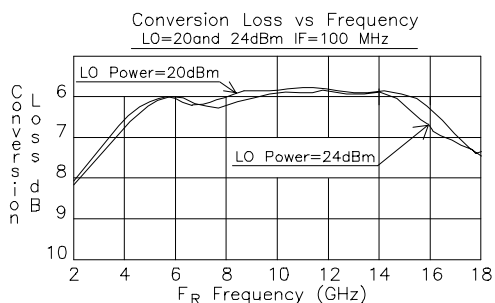
Custom designs also available. Consult factory for assistance on your requirements.

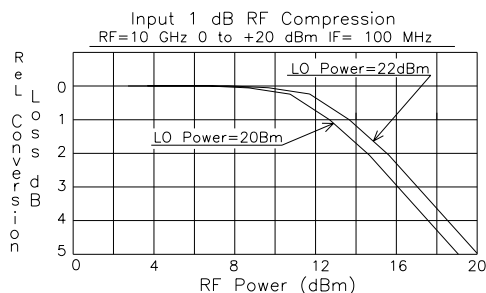
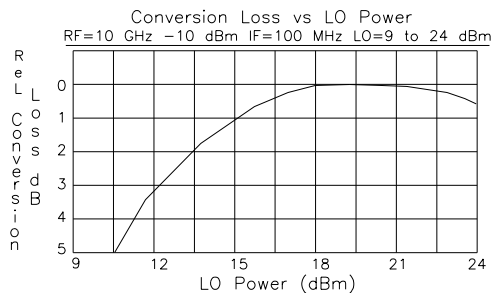
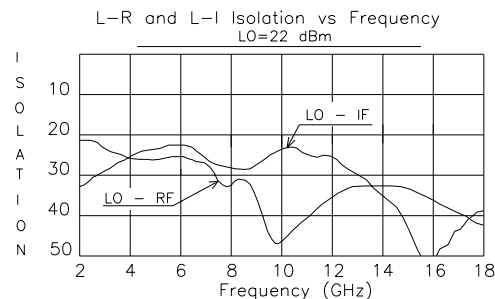
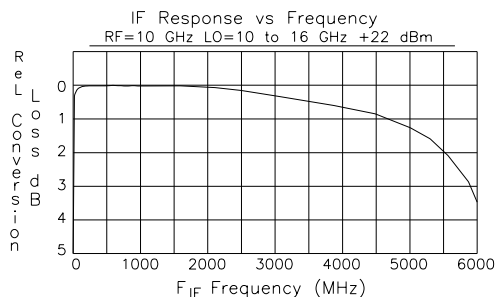
OUTLINE DRAWING



MR118
 (Triple Balanced Mixer)
 High Drive

Operating Parameters	
Freq. RF=	2 to 18 GHz
LO=	2 to 18 GHz
IF=	10 to 5000 MHz
LO Power=	20 to 24dBm





Single Tone Intermodulation Products

Test Conditions:
Frequency RF= 4.0 GHz LO= 4.5 GHz

Single Tone f_R f_L	RF = 0dBm LO=20dBm LO=22dBm		RF = -5dBm LO=20dBm LO=22dBm	
	IM	f_L	IM	f_L
1 × 2	28	27	27	27
2 × 2	55	55	59	60
3 × 2	56	60	64	69
3 × 1	59	63	69	76
3 × 3	51	52	62	63
4 × 1	>80	>80	>80	>80
4 × 3	75	>80	>80	>80
4 × 4	68	74	>80	>80
5 × 1	>80	>80	>80	>80
5 × 2	>80	>80	>80	>80
5 × 3	>80	>80	>80	>80

RF= 4.4 GHz LO= 4.0 GHz

Single Tone f_R f_L	RF = 0dBm LO=20dBm LO=22dBm		RF = -5dBm LO=20dBm LO=22dBm	
	IM	f_L	IM	f_L
1 × 3	16	16	16	16
1 × 4	35	36	36	37
1 × 5	32	31	32	32
2 × 1	56	60	65	67
2 × 2	54	56	60	64
2 × 3	60	71	68	75
2 × 5	50	52	57	59
3 × 2	76	>80	>80	>80
3 × 3	53	54	65	65
3 × 4	67	68	>80	>80
3 × 5	>80	>80	>80	>80
4 × 4	>80	>80	>80	>80
4 × 5	>80	>80	>80	>80