

# Frequency Mixer

## SKY-60MH+

Level 13 (LO Power +13 dBm) 2500 to 6000 MHz



Generic photo used for illustration purposes only  
CASE STYLE: BJ398

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

LO	1
RF	5
IF	7
GROUND	2,3,4,6,8

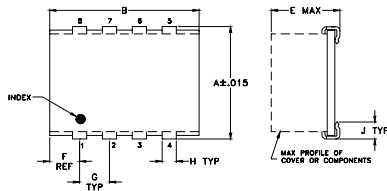
### Features

- low conversion loss, 6.2 dB typ.
- good L-R isolation, 28 dB typ.
- J-leads for strain relief

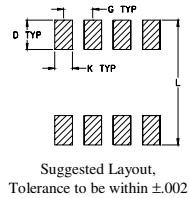
### Applications

- line of sight links
- fixed satellite

### Outline Drawing



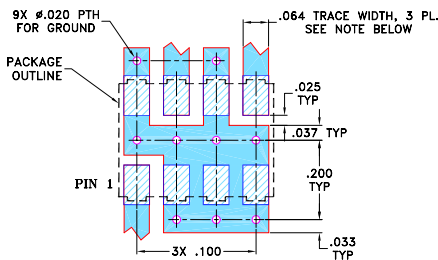
### PCB Land Pattern



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.305	.390	---	.100	.105	.045	.100
7.75	9.91	---	2.54	2.67	1.14	2.54
H	J	K	L	wt		
.047	.065	.065	.325	grams		
1.19	1.65	1.65	8.26	0.20		

### Demo Board MCL P/N: TB-11 Suggested PCB Layout (PL-056)



#### NOTES:

1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
  - DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

#### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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### Electrical Specifications

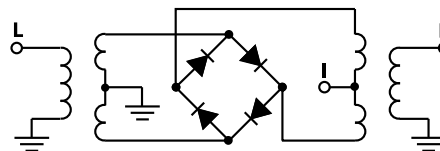
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)			
		Typ.	Min.	Typ.	Min.				
2500-6000	DC-1500	6.20	.20	9.5	28	17	14	8	19

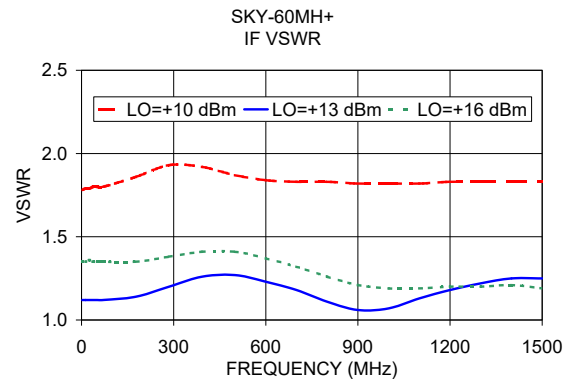
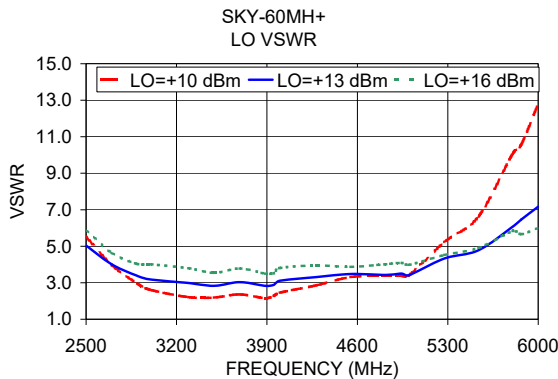
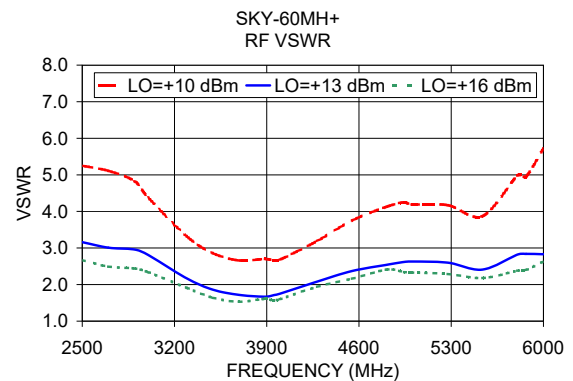
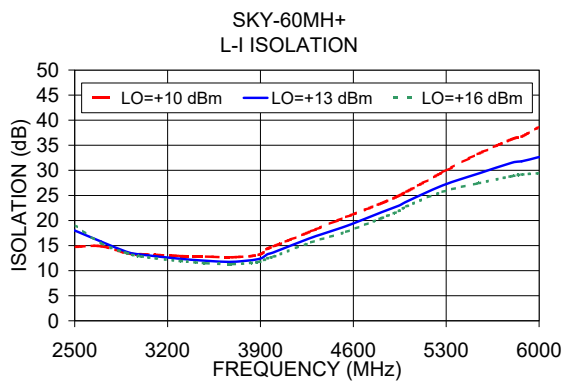
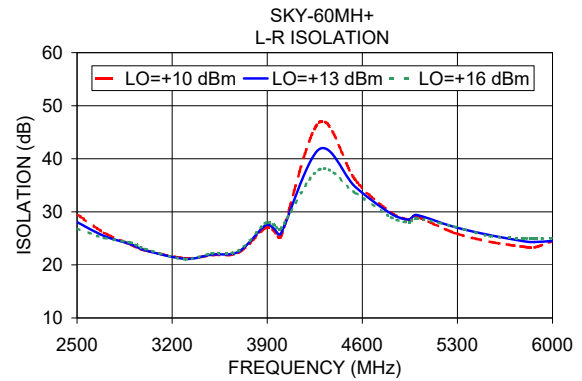
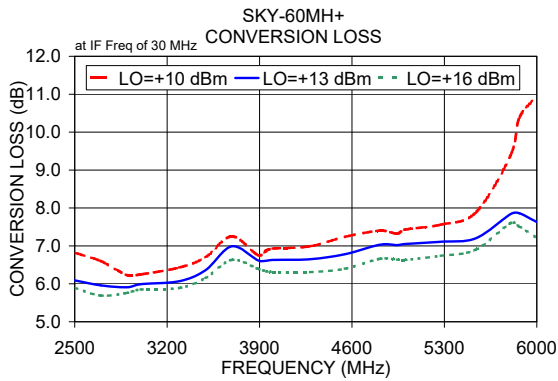
1 dB COMP.: +9 dBm typ.

### Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
2500.00	2530.00	6.09	28.06	18.01	3.16	5.04
2698.11	2728.11	5.96	25.47	15.81	3.01	4.01
2896.23	2926.23	5.91	23.88	13.71	2.96	3.38
3000.00	3030.00	5.99	22.77	13.21	2.81	3.18
3292.45	3322.45	6.07	21.14	12.38	2.17	2.99
3490.57	3520.57	6.36	21.92	11.97	1.86	2.83
3688.68	3718.68	6.99	22.48	11.77	1.72	3.03
3886.79	3916.79	6.62	27.45	12.31	1.67	2.83
3952.83	3982.83	6.61	26.77	13.27	1.71	2.88
4000.00	4030.00	6.63	25.89	13.66	1.75	3.11
4283.02	4253.02	6.65	41.81	16.55	2.08	3.31
4547.17	4517.17	6.78	34.72	18.89	2.37	3.48
4811.32	4781.32	7.03	29.66	21.64	2.54	3.43
4943.40	4913.40	7.02	28.54	22.96	2.62	3.50
5000.00	4970.00	7.05	29.40	23.76	2.63	3.42
5273.58	5243.58	7.11	27.17	27.00	2.60	4.33
5537.74	5507.74	7.20	25.62	29.31	2.41	4.78
5801.89	5771.89	7.84	24.40	31.57	2.82	6.07
5867.92	5837.92	7.86	24.32	31.80	2.84	6.46
6000.00	5970.00	7.63	24.50	32.65	2.83	7.17

### Electrical Schematic





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