

# Surface Mount Frequency Mixer

## SKY-60H+

Level 17 (LO Power +17 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

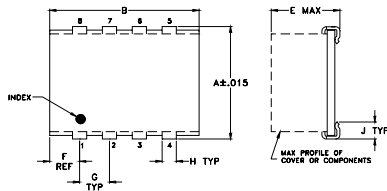
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

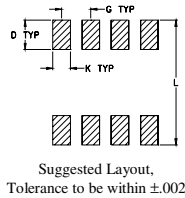
### Pin Connections

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

### Outline Drawing



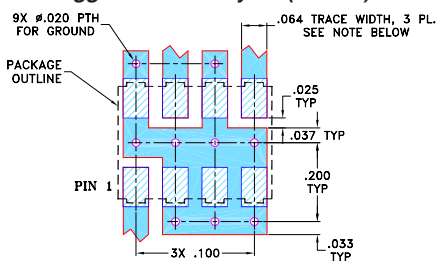
### PCB Land Pattern



### Outline Dimensions (inch/mm)

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

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



#### NOTES:

- 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.
- 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

### 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

### Electrical Specifications

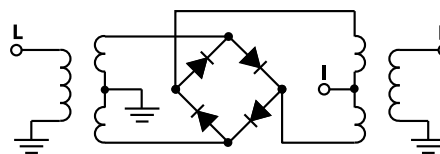
FREQUENCY (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)	
LO/RF	IF	Mid-Band	Total Range	Typ.	Min.	Typ.	Min.	Typ.	
$f_L - f_U$		$\bar{X}$	$\sigma$	Max.					
2500-6000	DC-1500	6.20	.20	9.7	28	17	14	8	23

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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
2500.00	2530.00	6.88	32.29	13.59	3.93	6.58
2698.11	2728.11	6.44	29.33	13.15	3.72	4.96
2896.23	2926.23	6.21	24.54	11.85	3.49	3.45
3000.00	3030.00	6.21	23.79	11.50	3.26	3.17
3292.45	3322.45	6.19	23.83	11.18	2.33	2.57
3490.57	3520.57	6.35	24.27	11.04	1.89	2.50
3688.68	3718.68	6.80	24.82	11.25	1.60	2.49
3886.79	3916.79	6.23	29.18	11.92	1.49	2.32
3952.83	3982.83	6.22	27.07	13.08	1.52	2.29
4000.00	4030.00	6.21	26.84	13.50	1.55	2.50
4283.02	4253.02	6.47	41.78	15.81	1.95	2.66
4547.17	4517.17	6.54	30.70	17.48	2.33	2.46
4811.32	4781.32	6.73	29.83	19.11	2.72	2.39
4943.40	4913.40	6.75	30.97	20.26	2.69	2.25
5000.00	4970.00	6.75	31.42	20.35	2.73	2.14
5273.58	5243.58	7.08	28.94	22.12	2.54	2.83
5537.74	5507.74	7.79	26.69	23.62	2.26	2.94
5801.89	5771.89	8.51	25.77	24.37	2.35	3.31
5867.92	5837.92	8.43	25.88	24.64	2.58	3.36
6000.00	5970.00	8.38	27.21	24.76	3.17	3.70

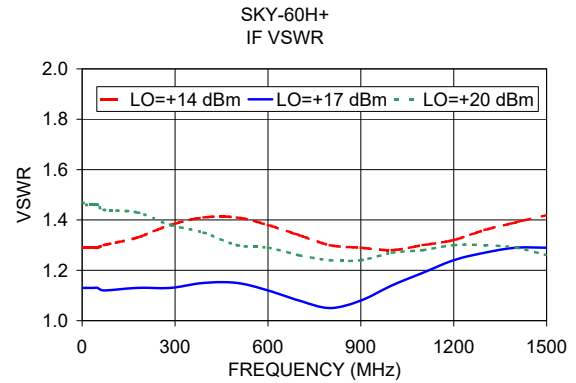
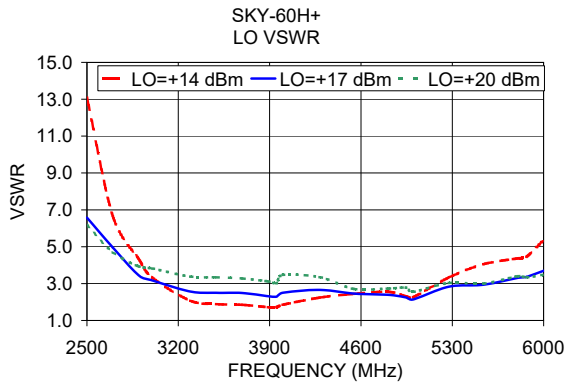
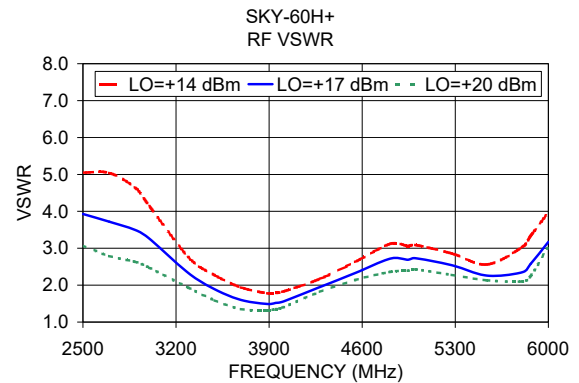
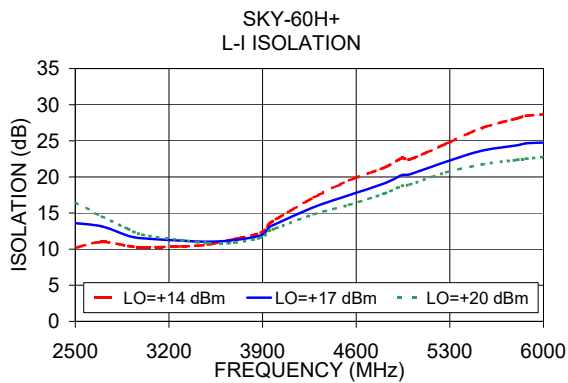
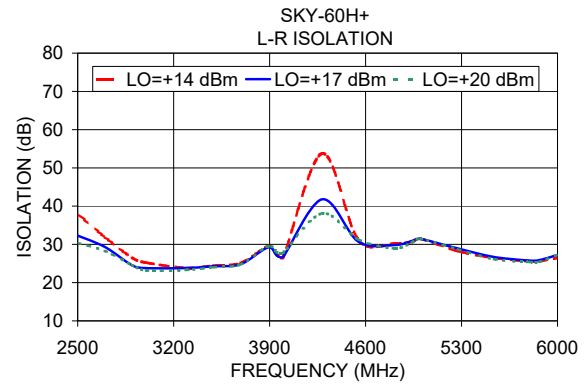
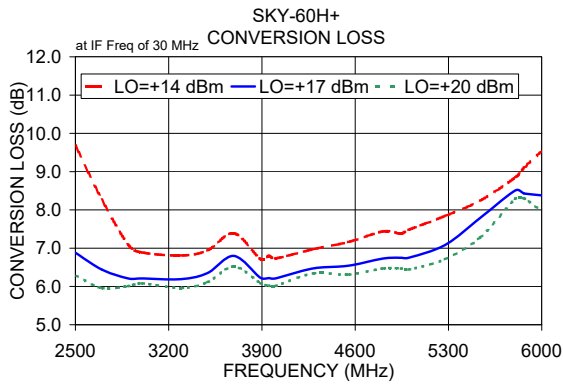
### Electrical Schematic



#### Notes

- 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.
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