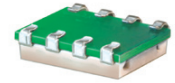


# Surface Mount Frequency Mixer

# SKY-42+ SKY-42

Level 7 (LO Power +7 dBm) 2000 to 4200 MHz



## Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
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, 5.0 dB typ.
- good L-R isolation, 31 dB typ.
- J-leads for strain relief

## Applications

- line of sight links
- fixed satellite

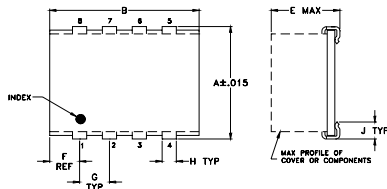
CASE STYLE: BJ398

PRICE: \$16.95 ea. QTY (1-9)

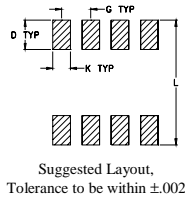
+ RoHS compliant in accordance  
with EU Directive (2002/95/EC)

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

## Outline Drawing



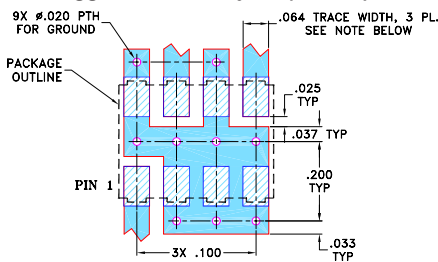
## PCB Land Pattern



## Outline Dimensions (inch)

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

## Electrical Specifications

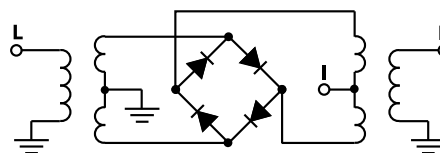
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	IP3 at center band (dBm)
LO/RF $f_L - f_U$	$\bar{X}$ $\sigma$	Typ. Min.	Typ. Min.	Typ.
2000-4200 DC-1200	5.0 .30 8.5	31 20	17 12	9

1 dB COMP.: +1 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
2000.1	2030.1	5.66	29.91	21.74	2.18	7.71
2100.1	2130.1	5.45	29.26	21.94	1.99	6.90
2200.1	2230.1	5.33	28.90	21.48	1.81	6.06
2300.1	2330.1	5.11	28.73	20.23	1.55	5.51
2400.1	2430.1	4.93	27.85	18.89	1.39	4.98
2500.1	2530.1	4.89	27.85	18.15	1.30	4.81
2600.1	2630.1	4.99	27.72	17.64	1.30	4.70
2700.1	2730.1	5.17	28.71	16.94	1.36	4.63
2800.1	2830.1	5.38	29.63	16.39	1.46	4.65
2900.1	2930.1	5.51	31.93	16.20	1.59	4.81
3000.1	3030.1	5.55	34.62	16.51	1.68	4.97
3100.1	3130.1	5.61	35.95	17.07	1.78	4.95
3200.1	3230.1	5.66	37.75	17.19	1.88	4.92
3300.1	3330.1	5.69	42.18	17.45	1.95	4.92
3400.1	3430.1	5.58	48.88	18.23	1.96	4.95
3500.1	3530.1	5.47	52.38	18.64	1.95	5.06
3600.1	3630.1	5.53	42.22	19.29	1.96	5.25
3800.1	3830.1	5.40	38.20	20.70	1.77	5.20
4000.1	4030.1	5.80	44.94	22.14	1.76	6.09
4200.1	4230.1	5.54	40.32	23.50	2.00	6.16

## Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs  
& shopping online see web site

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IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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