

Surface Mount Frequency Mixer

SKY-53MHR+ SKY-53MHR

Level 13 (LO Power +13 dBm) 2800 to 5300 MHz



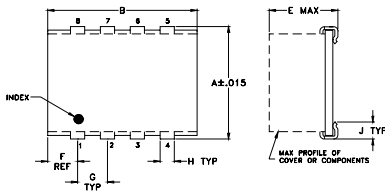
Maximum Ratings

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.	

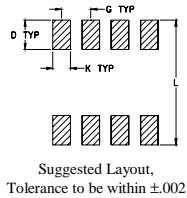
Pin Connections

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

Outline Drawing



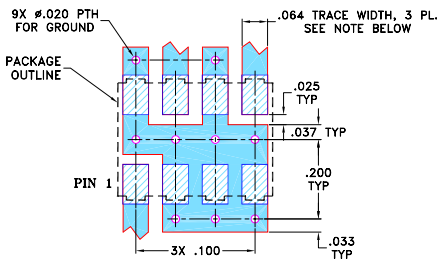
PCB Land Pattern



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:

- 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

- wide bandwidth, 2800 to 5300 MHz.
- low conversion loss, 5.7 dB typ.
- good L-R isolation, 28 dB typ.
- J-leads for strain relief

Applications

- line of sight links
- fixed satellite

CASE STYLE: BJ398

PRICE: \$17.95 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.

Electrical Specifications

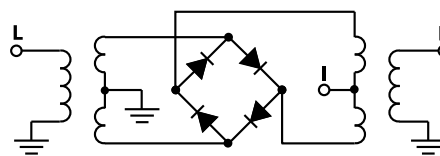
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	Mid-Band	Total Range		Typ.	Min.	Typ.	Min.	Typ.
$f_c - f_u$		\bar{X}	σ	Max.					
2800-5300	DC-500	5.7	.20	9.5	28	15	12	8	19

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
2800.00	2830.00	6.81	24.05	13.89	3.76	1.21
3000.00	3030.00	6.76	22.21	12.43	2.95	1.15
3224.53	3254.53	5.99	22.25	11.65	2.41	1.09
3413.21	3443.21	5.67	23.17	11.34	2.25	1.09
3601.89	3631.89	5.66	24.09	10.82	2.32	1.06
3649.06	3679.06	5.84	24.22	10.73	2.36	1.06
3837.74	3867.74	6.03	25.15	11.25	2.60	1.07
4000.00	4030.00	6.59	27.60	12.14	2.72	1.22
4120.75	4090.75	6.76	27.24	12.80	2.84	1.30
4215.09	4185.09	6.79	27.81	13.43	2.89	1.33
4356.60	4326.60	6.89	35.40	13.95	3.01	1.31
4498.11	4468.11	6.59	52.00	14.21	3.25	1.44
4639.62	4609.62	6.51	40.26	15.15	3.53	1.62
4781.13	4751.13	6.64	35.74	16.72	4.06	1.92
4828.30	4798.30	6.67	34.61	17.36	4.06	1.88
5000.00	4970.00	7.29	32.18	19.27	4.73	1.98
5111.32	5081.32	7.58	31.21	20.41	5.52	1.81
5158.49	5128.49	7.66	30.74	21.01	5.56	1.81
5252.83	5222.83	7.92	29.76	21.69	6.50	1.70
5300.00	5270.00	8.09	29.09	21.97	6.45	1.63

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-Circuits' 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.

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Performance Charts

