

Surface Mount Frequency Mixer

SCM-2500+ SCM-2500

Level 7 (LO Power +7 dBm) 500 to 2500 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	8
IF	3
GROUND	2,4,5,6,7

Features

- low conversion loss, 5.88 dB typ.
- wide bandwidth, 500 to 2500 MHz
- high L-R isolation, 35 dB typ.

Applications

- UHF
- cellular
- satellite distribution
- GPS/PCS

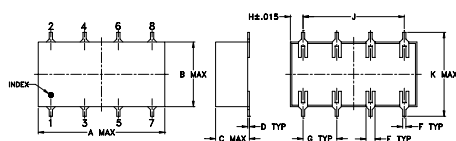
CASE STYLE: YY109

PRICE: \$11.95 ea. QTY (1-9)

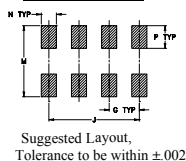
**+ RoHS compliant in accordance
with EU Directive (2002/95/EC)**

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

Outline Drawing



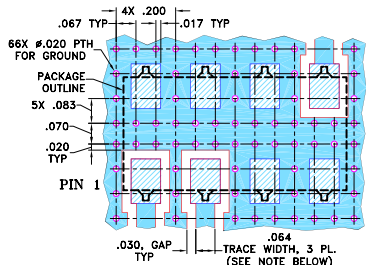
PCB Land Pattern



Outline Dimensions (inch)

A	B	C	D	E	F	G
.75	.38	.20	.10	.050	.020	.200
19.05	9.65	5.08	2.54	1.27	0.51	5.08
H	J	K	M	N	P	wt
.075	.600	.720	.740	.100	.150	grams
1.91	15.24	18.29	18.80	2.54	3.81	1.6

Demo Board MCL P/N: TB-171 Suggested PCB Layout (PL-130)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002". 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

Electrical Specifications

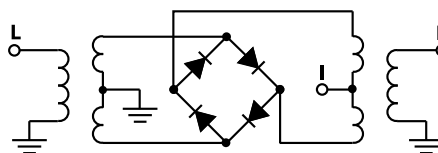
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	IP3 at center band (dBm)
LO/RF $f_L - f_U$	Mid-Band m \bar{X} σ Max. Total Range Max.	Typ. Min.	Typ. Min.	Typ.
500-2500 DC-500	5.88 .08 6.9 10	35 22	18 12	13

1 dB COMP: +1 dBm typ.
m= mid band [$2f_L$ to $f_U/2$]

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
500.00	530.00	5.45	54.10	25.42	1.90	2.44
650.00	680.00	5.24	46.72	24.17	1.19	2.42
800.00	830.00	5.18	50.53	24.04	1.21	2.60
950.00	980.00	5.34	39.92	22.92	1.56	2.84
1000.00	1030.00	5.61	38.68	21.93	1.74	2.92
1100.00	1070.00	6.52	35.67	19.02	1.90	2.94
1150.00	1120.00	6.54	35.25	17.69	2.78	2.95
1250.00	1220.00	6.21	35.47	16.09	3.17	2.82
1350.00	1320.00	6.10	38.09	15.24	3.20	2.88
1500.00	1470.00	6.10	40.51	17.24	3.59	3.05
1650.00	1620.00	6.97	39.61	20.00	3.82	3.00
1750.00	1720.00	7.73	40.56	21.79	4.92	2.60
1800.00	1770.00	7.87	41.20	23.27	5.75	2.00
1950.00	1920.00	7.91	37.08	25.03	6.73	1.71
2000.00	1970.00	7.83	36.28	24.82	6.63	1.59
2150.00	2120.00	7.95	34.61	21.63	7.22	1.54
2300.00	2270.00	8.12	34.07	19.31	7.66	1.68
2400.00	2370.00	8.32	33.85	18.30	8.43	2.03
2450.00	2420.00	7.93	33.63	17.81	8.60	2.45
2500.00	2470.00	7.98	34.92	18.95	8.16	2.65

Electrical Schematic



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IF/RF MICROWAVE COMPONENTS

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070503
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Performance Charts

SCM-2500+ SCM-2500

