

High Reliability Mixer

TUF-R2SM+

Level 7 (LO Power +7 dBm) 50 to 1000 MHz



CASE STYLE: NNN150
PRICE: \$8.85 ea. QTY (1-9)

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

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

Pin Connections

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

Features

- hermetically sealed ceramic quad
- low conversion loss, 6.2 dB typ.
- excellent isolation L-R, 50 dB typ.; L-I, 45 dB typ.
- wideband, 50 to 1000 MHz
- rugged welded construction
- shielded metal case

Applications

- VHF/UHF
- cellular
- ISM/GSM

Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)										
		L	M	U	L	M	U											
50-1000	DC-1000	6.2	0.05	7.5	9.0	60	45	50	38	45	33	52	40	45	25	35	20	16

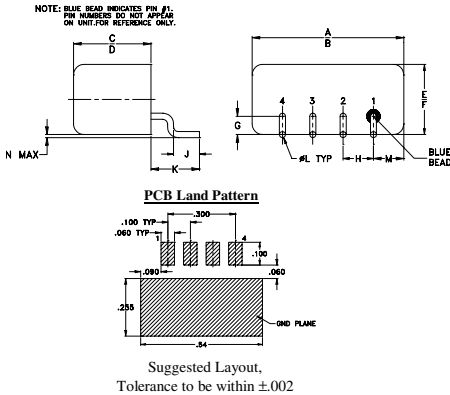
1 dB COMP.: +1 dBm typ.

L = 50-100 MHz M = 100-500 MHz U = upper range [$f_c/2$ to f_u]
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)
50.10	80.10	6.13	61.06	1.13	2.65
130.10	160.10	6.04	55.37	1.14	2.72
210.10	240.10	6.00	52.64	1.07	2.72
250.10	280.10	6.03	51.85	1.04	2.61
330.10	360.10	6.02	49.94	1.11	2.62
450.10	480.10	6.09	47.28	1.12	2.57
530.10	560.10	6.16	45.92	1.17	2.56
570.10	600.10	6.23	45.54	1.15	2.58
610.10	640.10	6.28	45.27	1.17	2.57
650.10	680.10	6.36	44.97	1.22	2.54
690.10	720.10	6.43	44.43	1.21	2.57
730.10	760.10	6.57	44.04	1.22	2.54
770.10	800.10	6.69	43.45	1.23	2.57
810.10	840.10	6.79	43.09	1.22	2.55
850.10	880.10	6.88	42.80	1.23	2.53
890.10	920.10	6.97	42.61	1.29	2.53
930.10	960.10	7.03	42.50	1.29	2.50
970.10	1000.10	7.04	42.34	1.31	2.49
990.10	1020.10	7.04	42.36	1.34	2.50
1030.10	1060.10	7.10	42.36	1.33	2.51

Outline Drawing

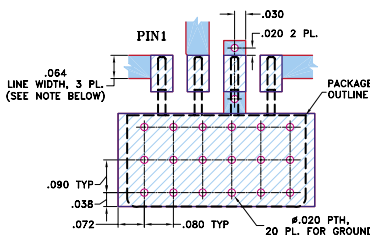


Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.50	.48	.255	.240	.23	.21	.06
12.70	12.19	6.48	6.10	5.84	5.33	1.52

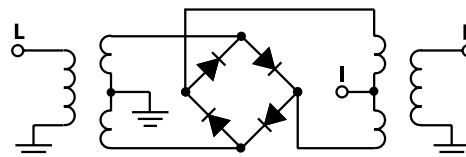
H	J	K	L	M	N	wt
.100	.09	.16	.020	.09	.005	grams
2.54	2.29	4.06	0.51	2.29	0.13	1.9

Demo Board MCL PIN: TB-201 Suggested PCB Layout (PL-081)



- 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 Schematic



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