

Frequency Mixer

TUF-1LHSM+



+RoHS Compliant

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

Operating Temperature	-55°C to 100°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	

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

NOTE: BLUE BEAD INDICATES PIN #1. PIN NUMBERS DO NOT APPEAR ON UNIT FOR REFERENCE ONLY.

Side View Dimensions: C, D, J, K, N MAX.

Top View Dimensions: A, B, G, H, M, 1/4 inch. Pins: 1, 2, 3, 4. Label: #L TYP. Label: BLUE BEAD.

PCB Land Pattern

Dimensions: .100 TYP., .060 TYP., .300, .100, .090, .080, .295, .34. Label: DND PLANE.

Suggested Layout, Tolerance to be within ± 0.02

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

[illegible]

NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" $\pm$ 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

- low conversion loss, 6.0 dB typ.
- high L-R & L-I isolation, 50 dB typ.
- rugged welded construction

- VHF/UHF
- defense & federal communications

Frequency (MHz)		Conversion Loss (dB)				LO-RF Isolation (dB)						LO-IF Isolation (dB)						IP3 @ Center Band (dBm)	
LO/Rf	IF	Mid-Band m				L M U						L M U						Typ.	
		$\bar{X}$	σ	Max.	Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.		
2-600	DC-600	6.0	0.17	7.0	8.0	70	50	50	30	42	25	65	45	50	30	41	22	17	

1 dB COMP.: +5 dBm typ.

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]
m = mid band [$2f_c$ to $f_U/2$]

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
2.00	32.00	6.28	67.01	84.01	1.47	2.80
4.00	34.00	5.95	65.93	80.03	1.27	2.68
5.00	35.00	5.89	65.47	78.57	1.23	2.65
10.00	40.00	5.80	63.93	73.13	1.14	2.48
20.00	50.00	5.82	61.72	68.22	1.12	2.53
50.00	80.00	5.82	56.12	60.69	1.11	2.47
59.87	89.87	5.78	54.83	59.50	1.11	2.35
100.00	70.00	5.77	51.13	55.91	1.12	2.37
117.74	87.74	5.79	50.12	55.10	1.15	2.32
175.61	145.61	5.69	47.32	52.30	1.18	2.26
200.00	170.00	5.73	46.57	51.26	1.21	2.33
233.48	203.48	5.70	45.24	49.36	1.25	2.27
291.36	261.36	5.69	43.94	46.68	1.27	2.24
300.00	270.00	5.68	43.65	46.00	1.31	2.29
349.23	319.23	5.71	42.63	43.46	1.35	2.28
407.10	337.10	5.70	41.85	41.86	1.40	2.28
464.97	434.97	5.72	40.61	39.52	1.45	2.29
522.84	492.84	5.77	39.23	37.60	1.49	2.33
580.71	550.71	5.84	38.82	36.92	1.51	2.33
600.00	570.00	5.87	38.87	36.44	1.53	2.31



For detailed performance specs
& shopping online see web site

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