

Frequency Mixer

Level 17 (LO Power +17 dBm) 2 to 600 MHz

TUF-1HSM+



CASE STYLE: NNN150
PRICE: \$13.20 ea. QTY (10)

+RoHS Compliant

The +Suffix identifies 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	200mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

Features

- low conversion loss, 5.90 dB typ.
- high IP3, 26 dB typ.
- excellent L-R isolation, 50 dB typ.; L-I, 48 dB typ.
- rugged welded construction

Applications

- VHF/UHF
- defense & federal communications

Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 @ CENTER BAND (dBm)
		L	M	U	L	M	U	
f_L - f_U	Mid-Band $\bar{X}$ σ Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ.
2-600 DC-600	5.90 0.18 7.0 8.0	68 50	50 30	43 25	62 45	48 30	33 22	26

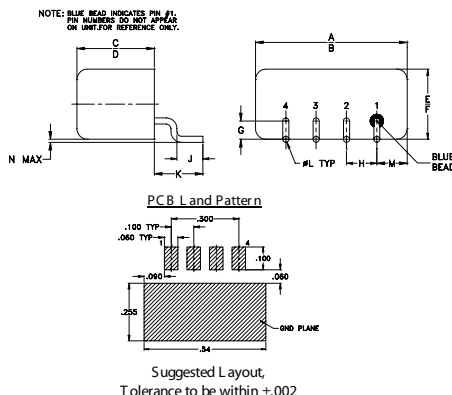
1 dB COMP: +14 dBm typ.

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 [$2f_L$ 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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
2.00	32.00	6.30	62.98	52.28	1.22	1.67
5.00	35.00	5.95	62.06	52.79	1.10	1.60
10.00	40.00	5.92	60.47	52.35	1.03	1.63
20.00	50.00	5.91	57.14	51.13	1.02	1.61
34.13	64.13	5.81	53.27	49.30	1.04	1.58
50.00	80.00	5.72	50.24	47.27	1.06	1.57
66.26	96.26	5.66	48.03	45.61	1.07	1.55
82.33	52.33	5.71	46.33	44.27	1.08	1.54
100.00	70.00	5.63	44.99	43.26	1.09	1.57
130.52	100.52	5.61	43.18	41.91	1.10	1.55
162.65	132.65	5.61	41.46	40.45	1.10	1.55
200.00	170.00	5.60	40.12	39.22	1.08	1.60
259.04	229.04	5.42	38.10	37.51	1.07	1.67
307.24	277.24	5.62	37.54	36.13	1.06	1.70
355.43	325.43	5.86	37.41	36.94	1.05	1.76
387.56	357.56	5.92	36.35	35.99	1.04	1.82
435.76	405.76	5.81	35.35	33.91	1.05	1.84
483.95	453.95	6.08	36.44	33.54	1.08	1.87
500.00	470.00	6.27	36.27	33.21	1.09	1.90
600.00	570.00	6.18	36.36	33.38	1.09	1.89

Outline Drawing

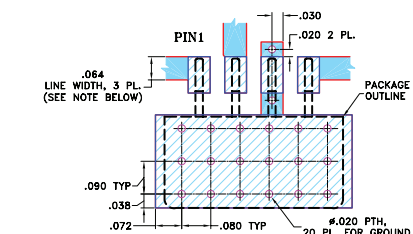


Outline Dimensions (inch mm)

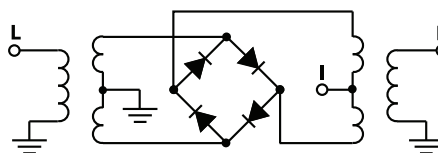
A	B	C	D	E	F	G
.50	.48	.255	.240	.23	.21	.06
12.70	12.19	6.48	6.10	5.84	5.33	1.52

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)



Electrical Schematic



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