

Up Converter Frequency Mixer

Level 7 (LO Power +7 dBm) 1600 to 6000 MHz

SIM-U63+



CASE STYLE: HV1195
PRICE: \$8.95 ea. QTY (10)

+RoHS Compliant

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200, 500

Maximum Ratings

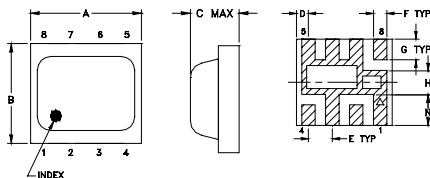
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
IF Power	50mW

For extended temperature range, consult factory.
Permanent damage may occur if any of these limits are exceeded.

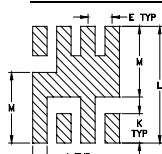
Pin Connections

LO	4
IF (IN)	2
RF (OUT)	8
GROUND	1,3,5,6,7

Outline Drawing



PCB Land Pattern

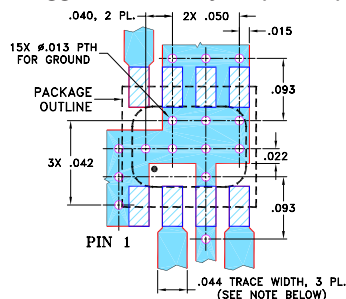


Suggested Layout,
Tolerance to be within ±0.002

Outline Dimensions (inch)

A	B	C	D	E	F	G
.200	.180	.087	.025	.050	.028	.043
5.08	4.57	2.21	0.64	1.27	0.71	1.09
H	J	K	L	M	N	wt
.050	.030	.060	0.238	0.144	0.065	grams
1.27	0.76	1.52	6.05	3.66	1.65	0.08

Demo Board MCL P/N: TB-382 Suggested PCB Layout (PL-239)



NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; 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

- up converter mixer
- low conversion loss, 6.9 dB typ.
- high L-R isolation, 39 dB typ.
- ceramic, tiny size
- aqueous washable
- protected by US patent, 7,027,795

Applications

- ISM
- wide band receivers

Electrical Specifications

FREQUENCY (MHz)			CONVERSION LOSS* (dB)			LO-IF (IN) ISOLATION (dB)		LO-RF (OUT) ISOLATION (dB)		IP3 at center band (dBm)
IF (IN)	LO	RF (OUT)	Typ.	σ**	Max.	Typ.	Min.	Typ.	Min.	
1600-2500	3100-5700	3800-6000	6.9	0.3	8.4	16	10	39	29	10

1 dB Compression: +1 dBm typ.

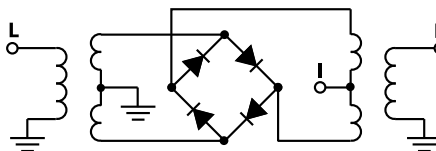
* Conversion loss at 2400 MHz IF

** σ is a standard deviation

Typical Performance Data

Frequency (MHz)			Conversion Loss (dB)	Isolation L-I (dB)	Isolation L-R (dB)	VSWR RF (OUT) Port (:1)	VSWR LO Port (:1)
IF (IN)	LO	RF (OUT)	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
2400.00	3100.00	5500.00	6.27	16.24	40.52	1.12	2.43
2400.00	3150.00	5550.00	6.35	16.28	40.43	1.16	2.36
2400.00	3200.00	5600.00	6.43	16.58	40.80	1.25	2.40
2400.00	3250.00	5650.00	6.61	16.60	40.95	1.34	2.32
2400.00	3300.00	5700.00	6.62	16.42	40.63	1.45	2.36
2400.00	3350.00	5750.00	6.79	16.53	40.50	1.55	2.33
2400.00	3400.00	5800.00	6.86	16.64	40.25	1.65	2.36
2400.00	3450.00	5850.00	7.07	16.71	39.98	1.66	2.38
2400.00	3500.00	5900.00	7.10	16.22	39.21	1.71	2.38
2400.00	3550.00	5950.00	7.22	16.61	39.49	1.66	2.46
2400.00	3600.00	6000.00	7.29	16.80	39.30	1.55	2.39

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

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