

Up Converter Frequency Mixer

Level 17 (LO Power +17 dBm) 10 to 7100 MHz

SIM-U712H+



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

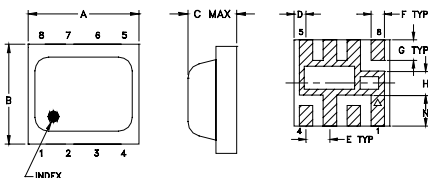
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
IF Power	100mW
For extended temperature range, consult factory.	
Permanent damage may occur if any of these limits are exceeded.	

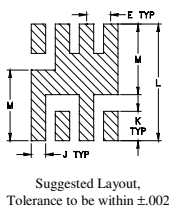
Pin Connections

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

Outline Drawing



PCB Land Pattern

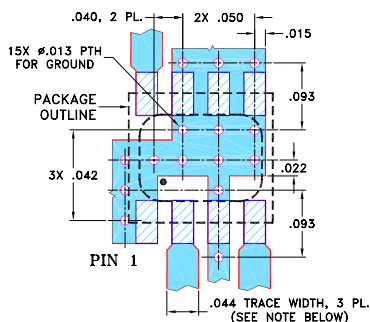


Suggested Layout,
Tolerance to be within ±.002

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

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine www.minicircuits.com Provides ACTUAL Data Instantly at [minicircuits.com](http://www.minicircuits.com)

Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuits' applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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.	Typ.
2600-7100	10-1780	2600-7100	7.3	0.3	9.5	27	14	19	11	27

1 dB Compression: +14 dBm typ.

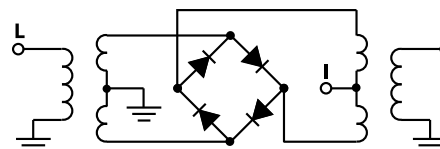
* Conversion Loss at 30 MHz LO

** σ is a standard deviation

Typical Performance Data

Frequency (MHz)			Conversion Loss (dB)	VSWR RF Port (:1)	Frequency (MHz)			Isolation L-I (dB)	Isolation L-R (dB)	VSWR LO Port (:1)
IF (IN)	LO	RF (OUT)	LO +17dBm	LO +17dBm	IF (IN)	LO	RF (OUT)	LO +17dBm	LO +17dBm	LO +17dBm
2600.10	30.00	2630.10	7.80	1.34	11.00	67.68	51.44	1.47		
2800.10	30.00	2830.10	7.15	1.41	51.00	55.46	42.85	1.50		
3000.10	30.00	3030.10	6.88	1.59	91.00	50.53	38.59	1.50		
3200.10	30.00	3230.10	6.61	1.52	153.60	46.33	35.04	1.53		
3400.10	30.00	3430.10	6.74	1.60	238.80	42.47	31.79	1.55		
3600.10	30.00	3630.10	6.62	1.69	324.00	39.73	29.14	1.59		
3800.10	30.00	3830.10	6.81	1.91	409.20	37.68	27.14	1.60		
4000.10	30.00	4030.10	7.00	2.30	494.40	35.96	25.30	1.58		
4400.10	30.00	4430.10	7.21	2.77	664.80	33.22	22.36	1.52		
4600.10	30.00	4630.10	7.42	2.80	750.00	31.84	21.29	1.49		
4800.10	30.00	4830.10	7.52	3.53	776.67	31.61	21.20	1.53		
5000.10	30.00	5030.10	7.64	3.83	803.33	31.30	21.00	1.54		
5400.10	30.00	5430.10	7.58	2.09	871.67	30.30	20.66	1.67		
5600.10	30.00	5630.10	7.45	1.43	913.33	29.80	20.50	1.69		
5800.10	30.00	5830.10	7.59	1.78	955.00	29.17	20.11	1.79		
6280.10	30.00	6310.10	8.08	1.46	1080.00	27.50	19.86	1.93		
6440.10	30.00	6470.10	7.68	1.23	1121.67	26.99	19.53	2.10		
6600.10	30.00	6630.10	7.98	1.49	1205.00	25.85	19.07	2.23		
6920.10	30.00	6950.10	7.75	2.82	1436.67	23.03	17.93	2.37		
7240.10	30.00	7270.10	8.80	3.39	1796.50	19.26	16.94	2.29		

Electrical Schematic



For detailed performance specs & shopping online see web site

REV. A
M110409
SIM-U712H+
ED-12399/5
DJ/TD/CP/AM
120822
Page 1 of 2

