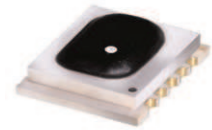


Ceramic

# Frequency Mixer WIDE BAND

## MCA1T-24MH+

Level 13 (LO Power+13 dBm) 300 to 2400 MHz



CASE STYLE: DZ885-2  
PRICE: \$5.95 ea. QTY (10-49)

**+ 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	-40°C to 85°C
Storage Temperature	-40°C to 85°C
RF Power	200 mW
IF Current	40 mA
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

LO	10
RF	5
IF	3
GROUND	1,2,4,6,7,8,9

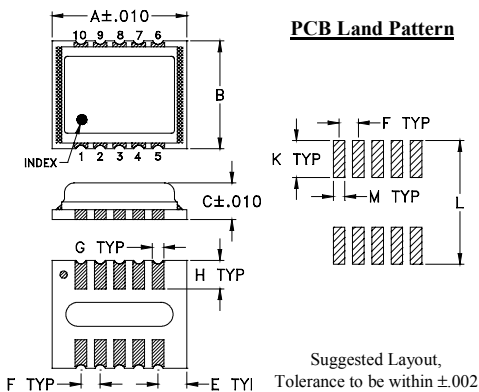
### Features

- wide bandwidth, 300 to 2400 MHz
- low conversion loss, 6.1 dB typ.
- excellent L-R isolation, 40 dB typ.
- LTCC double balanced mixer
- aqueous washable
- low cost
- low profile, 0.095"
- protected by US Patent 7,027,795
- additional patent pending

### Applications

- cellular
- PCN
- defense & weather radar
- UHF TV
- WCDMA
- defense communications

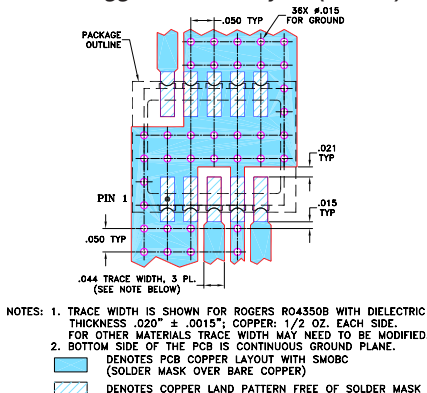
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	E	F	G
.350	.280	.095	.075	.050	.030
8.89	7.11	2.41	1.91	1.27	0.76
H	K	L	M	wt	
.074	.096	.321	.030	grams	
1.88	2.44	8.15	0.76	0.21	

### Demo Board MCL P/N: TB-493+ Suggested PCB Layout (PL-288)



### Electrical Specifications (T<sub>AMB</sub>=-55°C to 100°C)

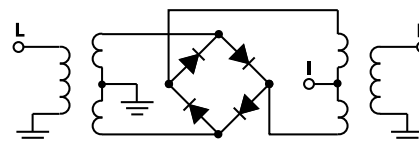
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
		Typ.	Min.	Typ.	Min.	
300-2400	6.1	40	20	25	14	13

1 dB COMPR. +9 dBm typ.

### Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
300.00	5.82	49.37	21.78	1.81	8.01
400.00	5.10	42.20	23.99	1.56	2.46
500.00	6.84	40.15	27.27	3.96	1.34
700.00	6.58	46.19	27.35	3.69	2.12
1000.00	7.41	43.92	24.46	4.01	2.74
1200.00	7.45	39.35	31.83	4.28	3.82
1500.00	5.74	39.15	28.78	1.91	2.66
1700.00	5.13	36.63	25.65	1.04	1.79
2000.00	6.17	32.38	21.69	2.26	2.44
2200.00	7.25	33.19	20.62	3.48	3.62
2400.00	7.16	30.70	25.44	3.42	7.44

### Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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

**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-Circuit's 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](http://www.minicircuits.com/MCLStore/terms.jsp).

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