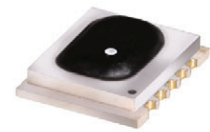


Ceramic

# Frequency Mixer WIDE BAND

## MCA1T-42LH+

Level 10 (LO Power+10 dBm) 1000 to 4200 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	50 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

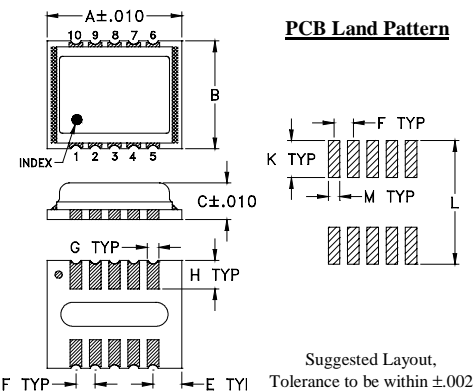
### Features

- wide bandwidth, 1000 to 4200 MHz
- low conversion loss, 6.0 dB typ.
- excellent L-R isolation, 38 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
- fixed satellite
- WCDMA
- defense radar
- defense communications

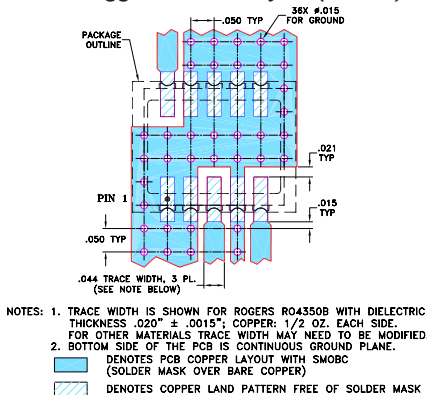
### Outline Drawing



### 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>=-40°C to 85°C)

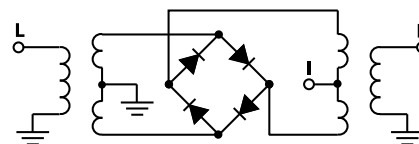
FREQUENCY (MHz)	CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)	
	LO/RF f <sub>c</sub> -f <sub>u</sub>	IF	σ	Max.	Typ.	Min.	Typ.		Min.
1000-4200	DC-1500	6.0	0.1	8.9	38	23	20	11	12

1 dB COMPR. +5 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)
	LO	RF	LO	LO	LO	LO
1000.10	1030.10	6.55	34.13	21.54	2.14	5.34
1200.10	1230.10	5.97	43.05	23.49	2.95	2.96
1500.10	1530.10	5.49	37.05	21.39	2.84	2.57
2000.10	2030.10	6.09	39.22	22.41	2.57	2.93
2200.10	2230.10	6.10	38.41	20.53	2.50	3.47
2500.00	2530.00	5.83	44.08	19.19	2.17	3.86
3000.10	3030.10	5.23	49.42	23.08	1.78	3.37
3500.10	3530.10	5.48	32.83	25.91	1.56	1.72
4000.10	4030.10	6.81	31.85	26.26	3.18	3.03
4200.10	4230.10	7.86	34.53	19.79	3.76	3.54

### Electrical Schematic



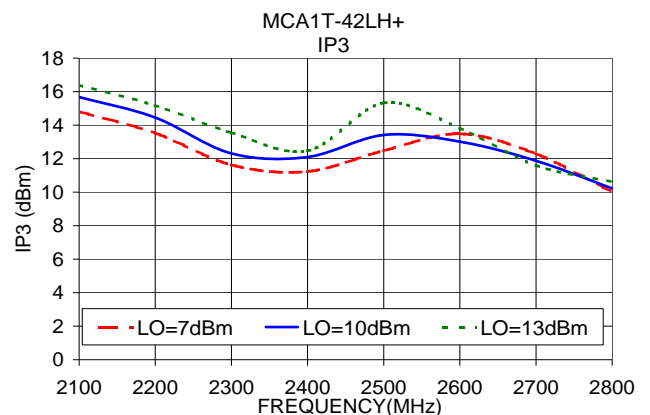
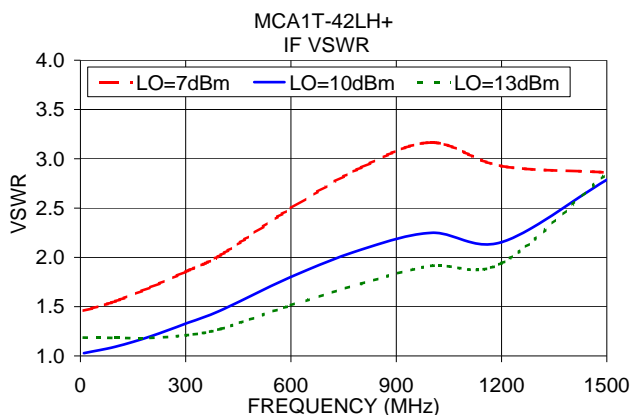
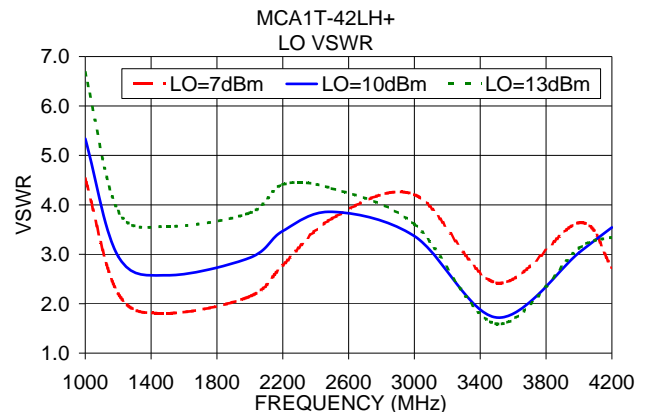
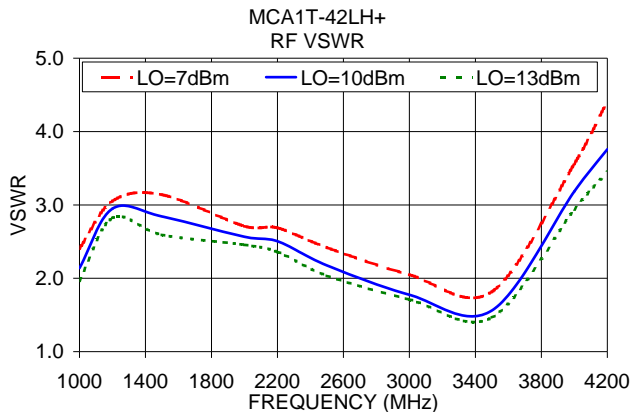
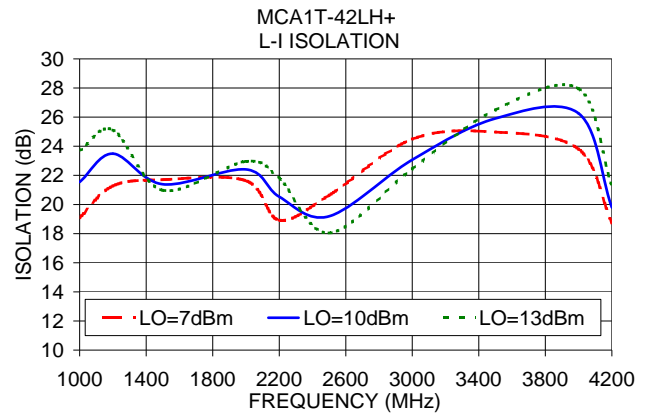
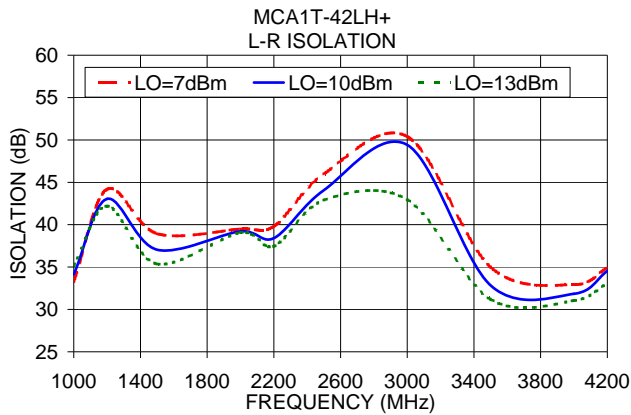
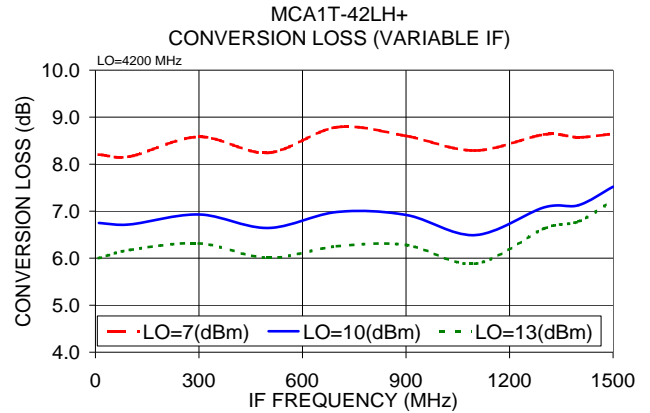
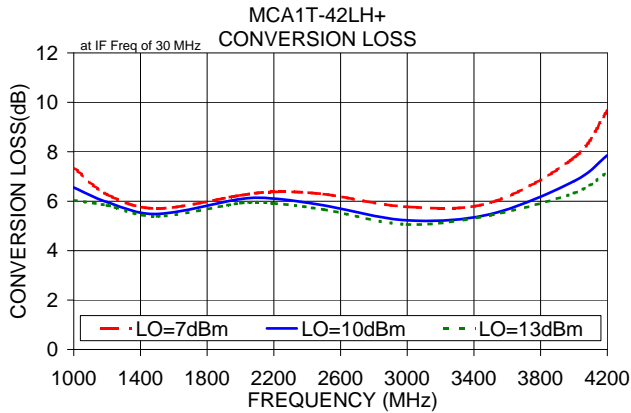
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ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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