

Ceramic

NON-CATALOG

Frequency Mixer WIDE BAND

MCA1T-42LH+

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

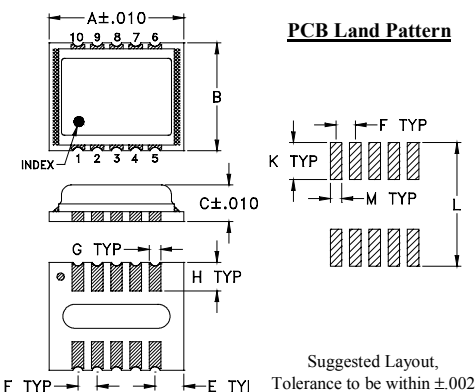
Maximum Ratings

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

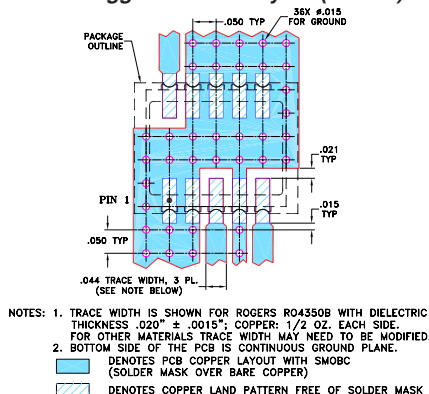
Outline Drawing



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)



Notes

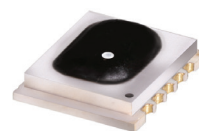
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Features

- 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^A, 8,749,989

Applications

- cellular
- PCN
- fixed satellite
- WCDMA
- defense radar
- defense communications



CASE STYLE: DZ885-2

+RoHS Compliant

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

Electrical Specifications (T_{AMB} = -40°C to 85°C)

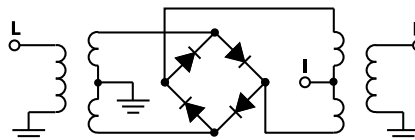
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	$\bar{X}$	σ	Max.	Typ.	Min.	Typ.	Min.	
1000-4200	DC-1500	6.0	0.1	8.9	38	23	20	11	12

1 dB COMPR. +5 dBm typ.

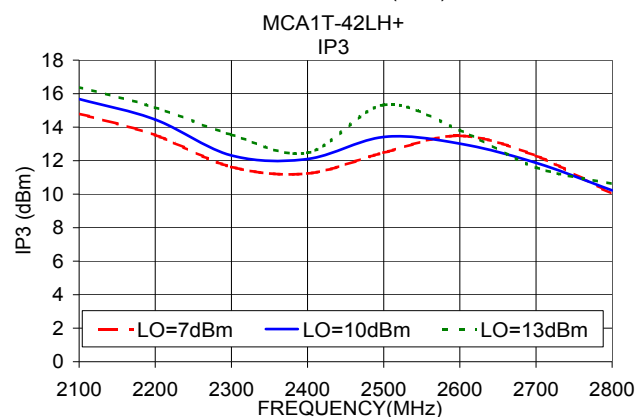
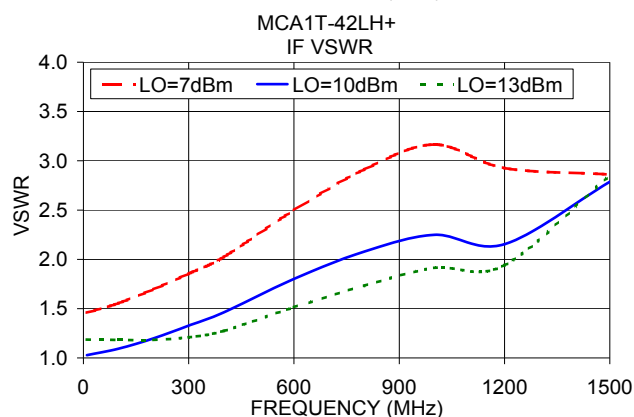
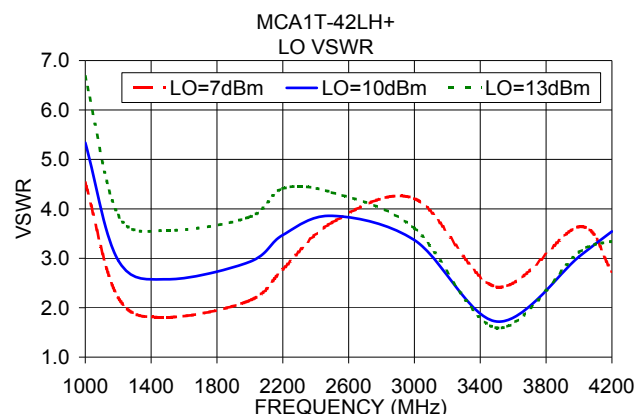
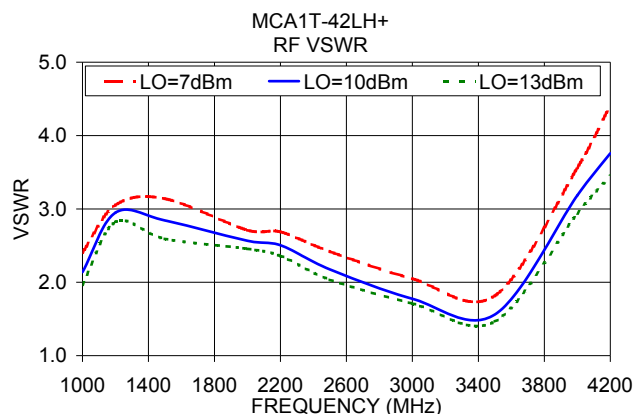
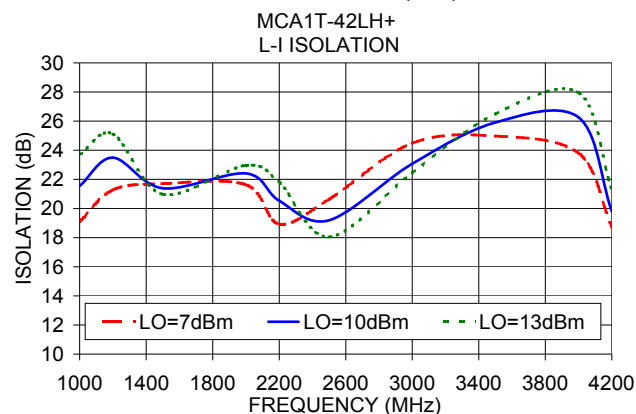
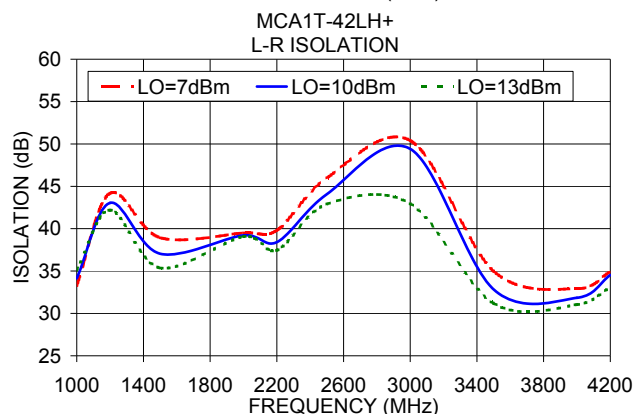
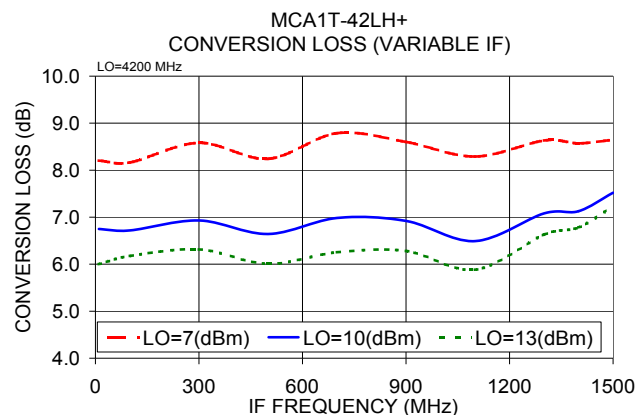
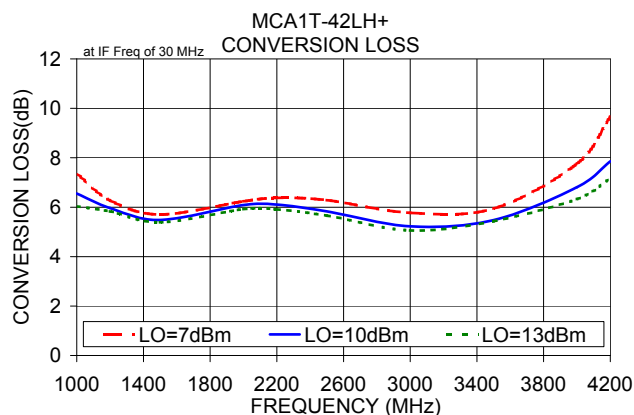
Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
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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MCA1T-42LH+
DJ/RS/CP/AM
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