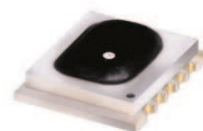


Ceramic

Frequency Mixer WIDE BAND

Level 10 (LO Power+10 dBm) 2800 to 8000 MHz

MCA1T-80LH+



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, 2800 to 8000 MHz
- low conversion loss, 5.9 dB typ.
- high L-R isolation, 35 dB typ.
- IF, DC to 1250 MHz
- LTCC double balanced mixer
- aqueous washable
- low cost
- low profile, 0.095"
- protected by US Patent 7,027,795
- additional patent pending

Applications

- satellite up and down converters
- line of sight links
- defense radar
- defense communication

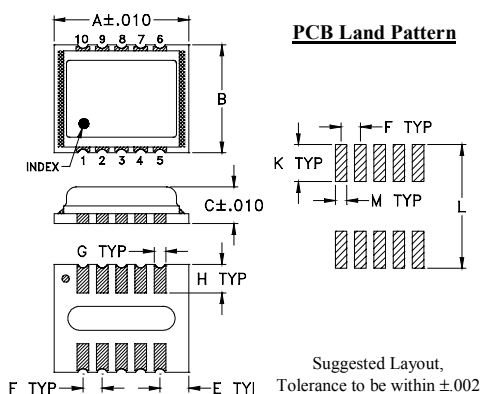
CASE STYLE: DZ885-2

PRICE: \$8.45 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.

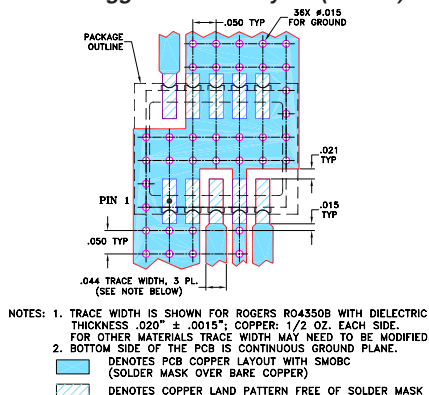
Outline Drawing



Outline Dimensions (inch)

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_{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 f _L -f _U	IF	$\bar{X}$ σ Max.	Typ. Min.	Typ.
2800-8000	DC-1250	6.0 0.2 8.4*	35 25	13
2800-5000	DC-1250	5.7 0.2 8.2*	40 20	8
5000-8000	DC-1250			19

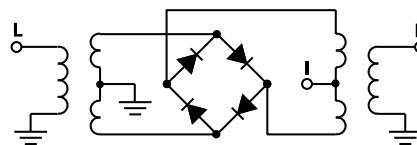
1 dB COMPR. +5 dBm typ.

* Conversion loss at 30 MHz IF, increases with IF frequency.

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	+10dBm	+10dBm	+10dBm	+10dBm
2800.00	2830.10	6.01	38.69	10.54	2.86
3106.00	3136.10	5.29	41.71	12.00	2.83
3406.00	3436.10	4.98	40.03	13.45	2.69
3706.00	3736.10	4.91	29.58	13.53	1.45
4000.00	4030.10	5.72	31.08	13.04	1.96
4300.00	4330.10	6.77	28.29	15.90	1.99
4600.00	4630.10	6.42	29.67	20.20	1.70
4900.00	4930.10	6.53	41.70	23.73	2.24
5200.00	5230.10	5.64	41.08	26.38	2.00
5500.00	5530.10	5.70	42.50	28.95	1.84
5800.00	5830.10	5.77	50.71	32.43	2.05
6100.00	6130.10	6.17	40.53	35.90	2.78
6400.00	6430.10	5.77	37.72	39.36	2.50
6700.00	6730.10	5.66	33.56	43.31	2.41
7000.00	7030.10	5.55	31.26	41.62	2.28
7300.00	7330.10	5.66	31.10	37.52	2.24
7600.00	7630.10	5.85	28.60	30.61	2.18
7800.00	7830.10	5.79	28.27	23.94	1.96
7900.00	7930.10	5.83	27.62	20.54	1.79
8000.00	8030.10	5.80	25.80	19.33	1.60

Electrical Schematic



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IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

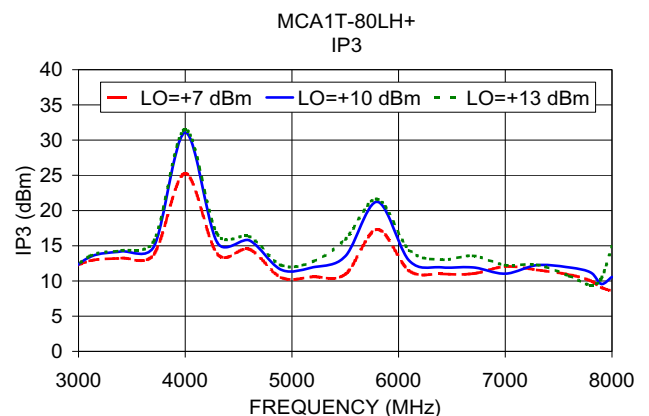
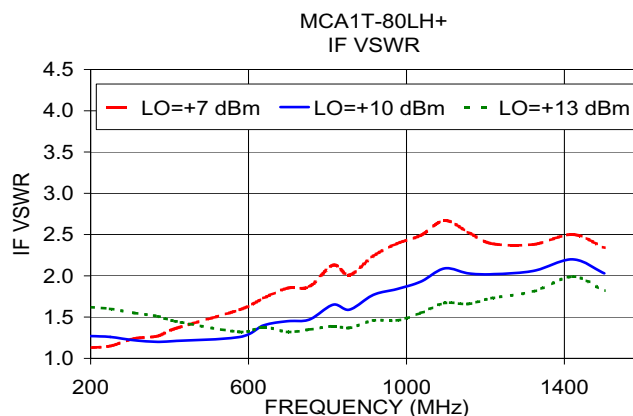
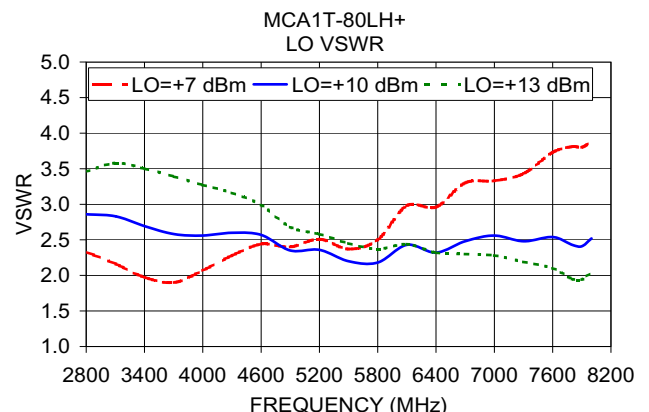
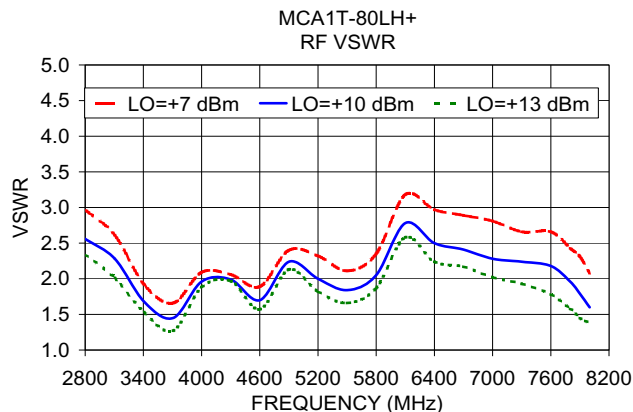
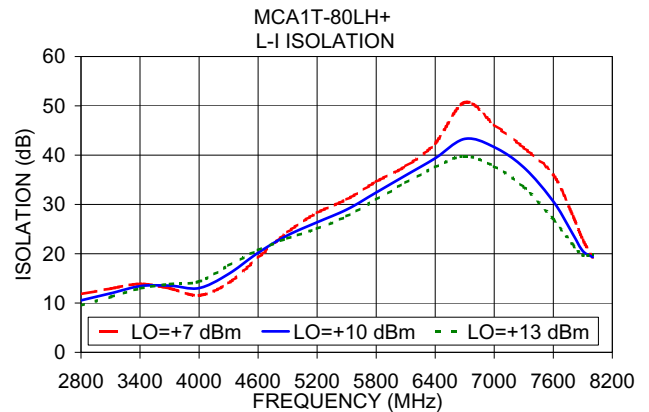
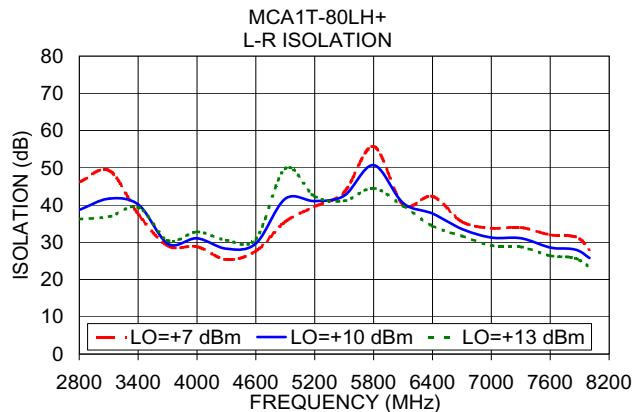
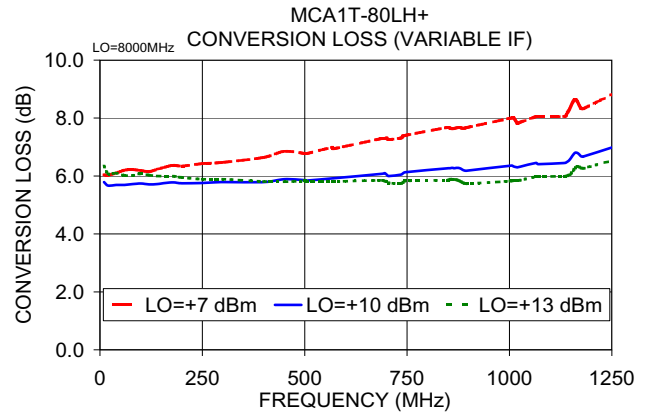
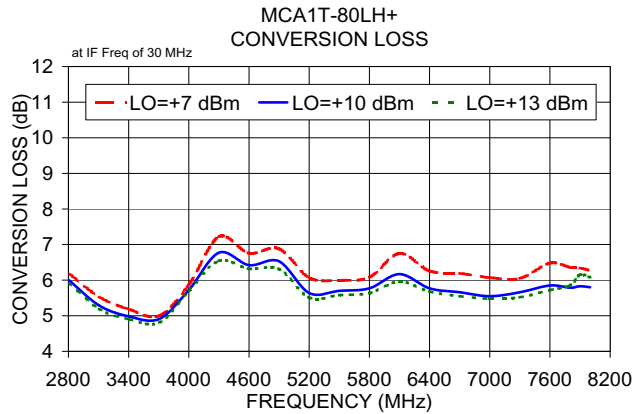
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Performance Charts

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