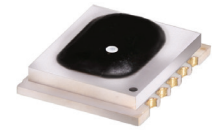


# Frequency Mixer WIDE BAND

## MCA1T-80H+

Level 17 (LO Power+17 dBm) 2800 to 8000 MHz



CASE STYLE: DZ885-2

### 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, 2800 to 8000 MHz
- low conversion loss, 6.3 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 & 8,749,989

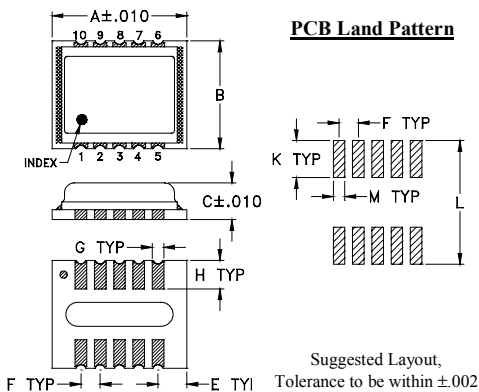
### Applications

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

### +RoHS Compliant

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

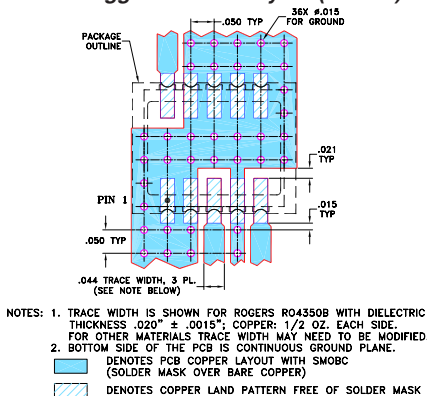
### Outline Drawing



### 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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### 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>L</sub> -f <sub>U</sub>	IF	$\bar{X}$	$\sigma$	Max.	Typ.	Min.	Typ.	Min.	Typ.
2800-8000	DC-1250	6.5	0.2	8.9*	34	22	12	8	24
2800-5000	DC-1250								
5000-8000	DC-1250	6.0	0.2	8.9*	35	21	35	13	21

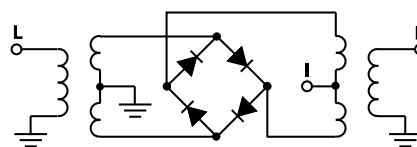
1 dB COMPR. +14 dBm typ.

\* 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	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
2800.00	2830.10	6.13	41.00	11.93	2.36	2.36
5000.00	5030.10	6.65	36.29	27.03	2.63	2.63
6200.00	6230.10	6.86	35.62	38.03	2.95	2.95
6300.00	6330.10	6.57	36.43	39.57	2.92	2.92
6400.00	6430.10	6.41	41.37	41.68	2.95	2.95
6500.00	6530.10	6.30	39.86	44.02	3.22	3.22
6600.00	6630.10	6.55	36.15	45.57	3.24	3.24
6650.00	6680.10	6.54	35.67	47.07	3.28	3.28
6700.00	6730.10	6.39	35.84	47.65	3.28	3.28
7000.00	7030.10	6.17	33.43	45.36	3.41	3.41
7150.00	7180.10	6.39	34.29	42.31	3.46	3.46
7200.00	7230.10	6.23	35.27	42.14	3.55	3.55
7300.00	7330.10	6.23	34.89	41.25	3.64	3.64
7400.00	7430.10	6.29	33.13	39.47	3.75	3.75
7500.00	7530.10	6.39	32.66	35.70	3.78	3.78
7600.00	7630.10	6.54	34.37	31.19	3.74	3.74
7700.00	7730.10	6.48	34.16	27.04	3.65	3.65
7800.00	7830.10	6.48	36.44	22.80	3.62	3.62
7900.00	7930.10	6.48	33.88	19.30	3.54	3.54
8000.00	8030.10	6.46	30.03	17.69	3.59	3.59

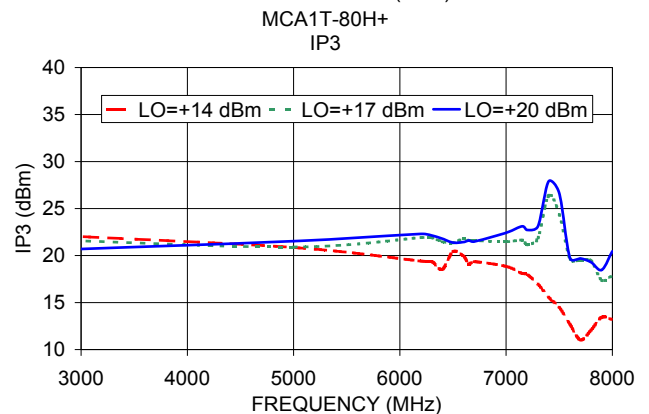
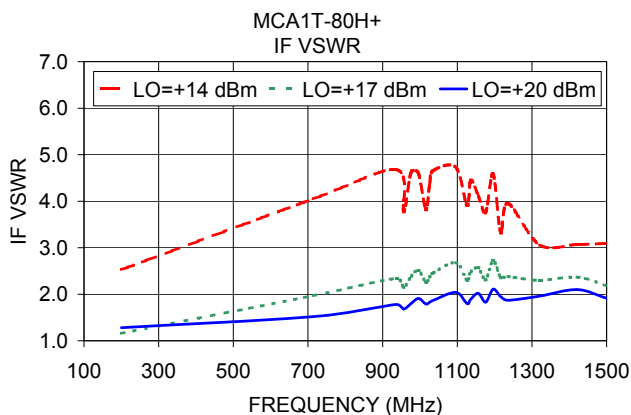
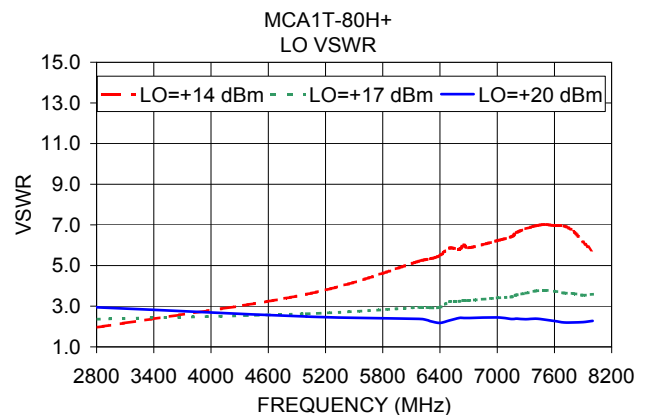
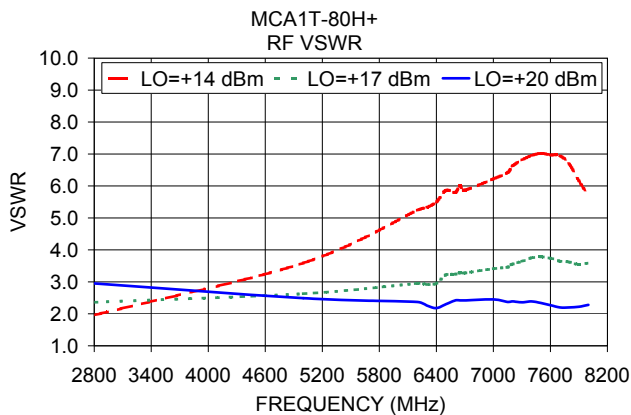
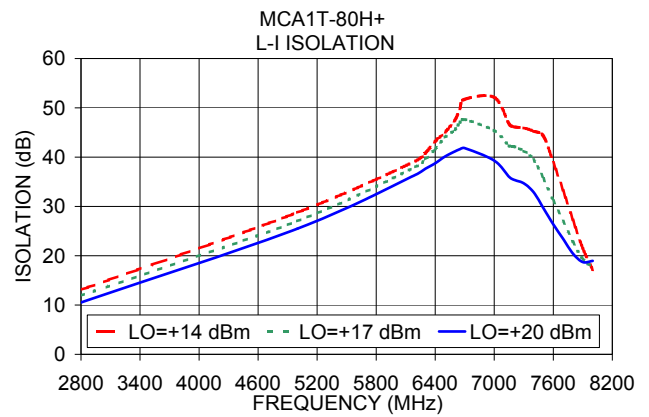
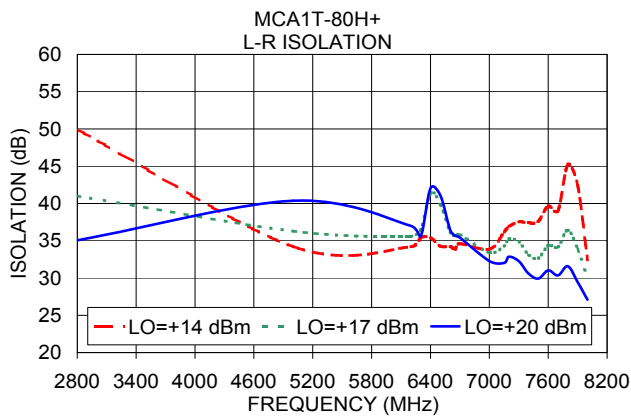
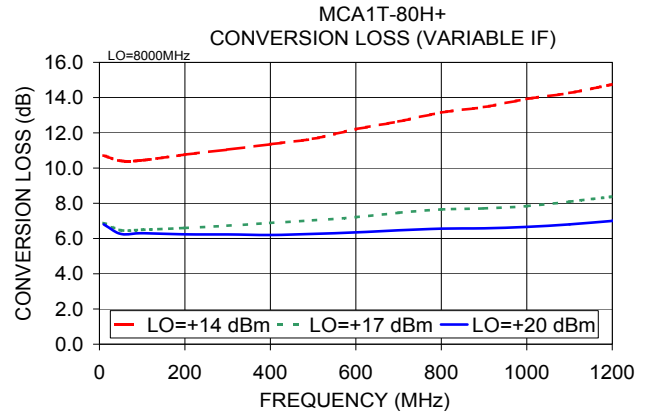
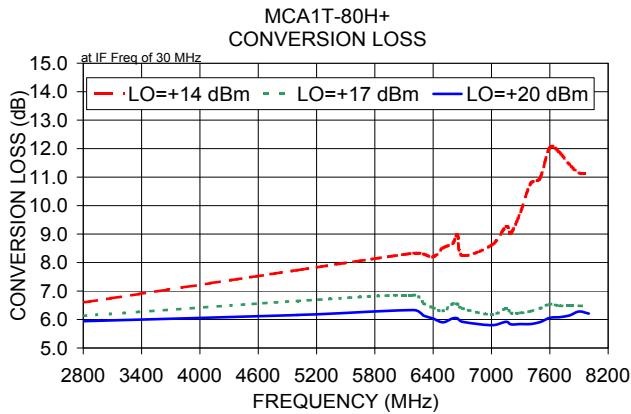
### Electrical Schematic



# NON-CATALOG

## Performance Charts

## MCA1T-80H+



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