

Ceramic Frequency Mixer

Level 17 LO Power+17 dBm 2960 to 3060 MHz

MCA-30FH+ MCA-30FH



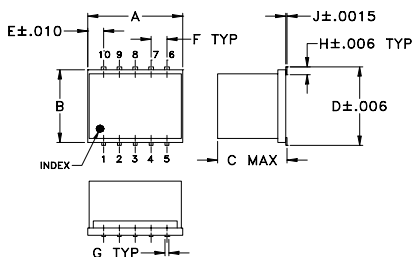
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
LO & RF Power	20 dBm

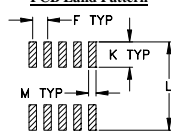
Pin Connections

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

Outline Drawing



PCB Land Pattern

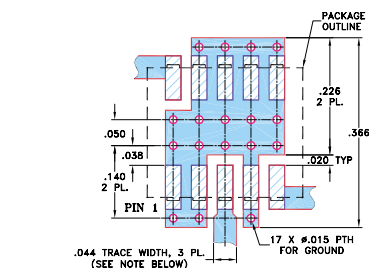


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.30	.250	.190	.262	.050	.050	.012
7.62	6.35	4.83	6.66	1.27	1.27	0.30
H	J	K	L	M	wt	
.027	.004	.085	.296	.030	grams	
0.69	0.10	2.16	7.52	0.76	0.5	

Demo Board MCL P/N: TB-144
Suggested PCB Layout (PL-045)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- high IP3, 34 dBm typ.
- good L-R isolation, 37 dB typ.
- excellent 1 dB compression, RF>LO power
- industry standard foot print
- LTCC design for excellent temperature stability performance repeatability and small size
- aqueous washable
- double balanced mixer
- low price
- protected by US Patent 6,959,180

Applications

- line of sight links
- satellite communications

CASE STYLE: DZ883

PRICE: \$11.95 ea. QTY.(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

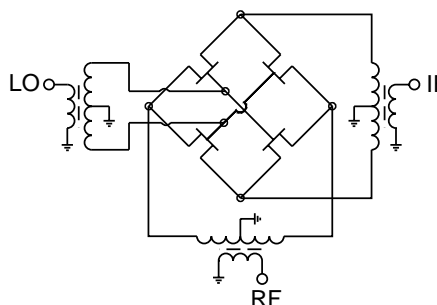
Electrical Specifications (T_{AMB}=-55°C to 100°C)

FREQUENCY (MHz)			IP3 (dBm)	RF in at 1 dB compr. (dBm)	CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)	
RF	LO	IF			Typ	Max.	Typ	Min.	Typ	Min.
2960-3060	2780-2880	130-230	34	17	7.4	8.9	37	20	27	15

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)
RF	LO	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
2960.00	2780.00	7.50	38.58	31.14	1.89	2.64	36.07
2970.00	2790.00	7.46	38.53	31.27	1.89	2.50	36.21
2980.00	2800.00	7.39	38.51	31.36	1.92	2.51	35.72
2990.00	2810.00	7.35	38.24	31.40	1.97	2.59	35.37
3000.00	2820.00	7.35	38.02	31.45	2.03	2.62	35.57
3010.00	2830.00	7.36	37.94	31.51	2.09	2.55	35.47
3020.00	2840.00	7.38	38.04	31.60	2.12	2.42	34.92
3030.00	2850.00	7.42	38.15	31.66	2.14	2.29	34.91
3040.00	2860.00	7.43	38.17	31.70	2.16	2.23	34.79
3050.00	2870.00	7.44	38.19	31.66	2.17	2.28	34.93
3060.00	2880.00	7.45	38.48	31.62	2.19	2.45	35.20

Electrical Schematic



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Performance Charts

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