

High IP3

Frequency Mixer

MCA-272FH+

Level 17 (LO Power+17 dBm) 2500 to 2720 MHz

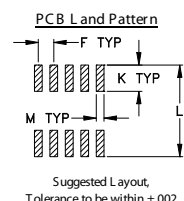
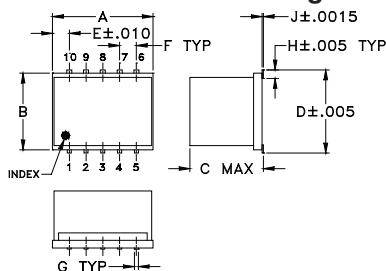
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
LO & RF Power	19 dBm

Pin Connections

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

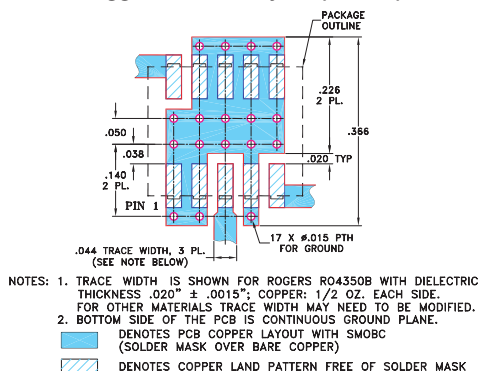
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.30	.250	.190	.266	.050	.050	.012
7.62	6.35	4.83	6.76	1.27	1.27	0.30
H	J	K	L	M	N	O
.029	.004	.085	.296	.030	.030	.030
0.74	0.10	2.16	7.52	0.76	0.76	0.76

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



Features

- high IP3, 30 dBm typ.
- good L-R isolation, 32 dB typ.
- excellent 1 dB compression
- industry standard foot print
- LTCC design for excellent temperature stability performance repeatability and small size
- aqueous washable
- double balanced mixer
- protected by US Patent 6,959,180

Applications

- WiMAX
- line of sight links
- satellite communications
- broadband radio service

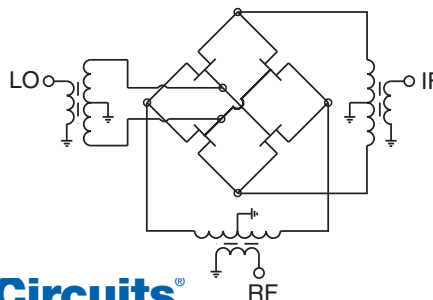
Electrical Specifications (T_{AMB}=-55°C to 100°C)

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.	Min.	Typ. Max.	Typ. Min.	Typ. Min.
2500-2720	2030-2250	130-670	30	15	7.6 9.1	32 25	24 18

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
2500.10	2030.10	7.44	31.80	24.28	1.45	5.21	29.91
2510.10	2040.10	7.49	31.37	24.19	1.48	4.68	30.17
2520.10	2050.10	7.45	31.17	24.04	1.50	4.16	30.56
2530.10	2060.10	7.54	31.28	24.22	1.52	3.69	30.73
2540.10	2070.10	7.57	31.35	24.41	1.53	3.27	30.73
2550.10	2080.10	7.59	31.51	24.69	1.55	2.90	30.21
2560.10	2090.10	7.53	32.08	24.75	1.56	2.57	29.88
2570.10	2100.10	7.53	32.68	24.95	1.58	2.29	29.67
2580.10	2110.10	7.58	32.92	25.10	1.59	2.08	29.49
2590.10	2120.10	7.57	32.83	25.00	1.61	1.90	29.45
2600.10	2130.10	7.51	32.85	24.56	1.62	1.77	29.84
2620.10	2150.10	7.69	33.16	24.39	1.63	1.67	29.60
2630.10	2160.10	7.70	33.29	24.77	1.63	1.69	29.72
2640.10	2170.10	7.77	33.48	24.71	1.62	1.76	29.69
2650.10	2180.10	7.85	33.73	24.90	1.63	1.87	30.03
2660.10	2190.10	7.89	33.75	24.90	1.64	2.03	30.28
2670.10	2200.10	7.85	33.48	25.01	1.66	2.23	30.71
2680.10	2210.10	7.83	33.51	24.86	1.68	2.48	31.27
2690.10	2220.10	7.88	33.77	24.95	1.69	2.72	30.75
2720.10	2250.10	8.02	35.03	25.80	1.71	3.49	29.59

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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