

Ceramic

Frequency Mixer WIDE BAND

MCA-35MH

Level 13 (LO Power +13 dBm) 500 to 3500 MHz

Features

- wide bandwidth, 500 to 3500 MHz
- excellent isolation, 30 dB typ. (1800-2500 MHz)
- good matching 2:1 VSWR (over 1800-2800 MHz)
- small size 0.25"x0.3"x0.2"
- triple balanced mixer

Applications

- cellular
- PCN
- PDC
- DECT
- PHS



BLUE CELL™

CASE STYLE: DZ883

PRICE: \$7.95 ea. QTY (10-49)

(Patent pending)

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

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 @ center band Typ. (dBm)	E FACTOR
	LO/RF f _L - f _U	IF	\bar{x}	σ	Max.	Typ.	Min.	Typ.	Min.		
MCA-35MH	500-3500	10-1500	6.9	0.1	8.7						
	500-800	10-300	6.3	0.1	7.7	18	11	29	23	19	0.6
	800-1000	10-200	6.5	0.1	7.7	24	17	28	20	22	0.9
	1000-1800	10-800	6.6	0.1	8.7	29	20	28	20	20	0.7
	1800-2000	10-200	6.3	0.1	7.7	32	25	29	23	19	0.6
	1800-2500	10-700	5.8	0.1	7.9	32	22	27	20	19	0.6
	2000-3500	10-1500	6.5	0.1	8.7	29	17	23	15	19	0.6

1dB Compr.: +9 dBm typ.

E = (IP3(dBm) - LO Power(dBm))/10

* see individual band specs.

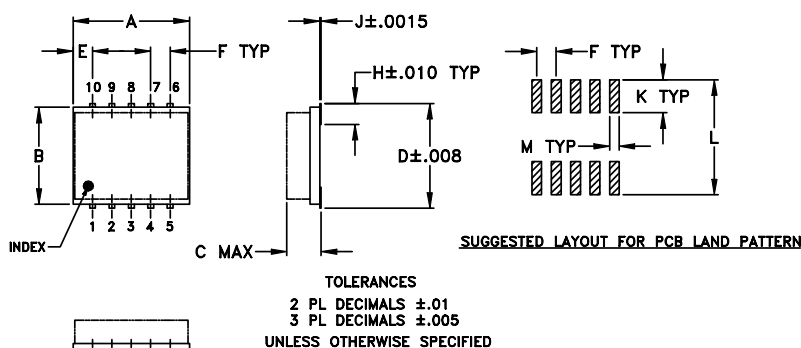
Pin Connections

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

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

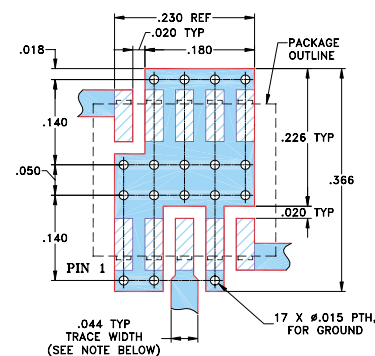
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.30	.250	.190	.274	.050	.050	.012
7.62	6.35	4.83	6.96	1.27	1.27	0.30
H	J	K	L	M		wt
.057	.004	.085	.296	.030		grams
1.45	0.10	2.16	7.52	0.76		0.50

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

INTERNET <http://www.minicircuits.com>

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Mini-Circuits ISO 9001 & ISO 14001 Certified

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 MCA-35MH
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Typical Performance Data at 25°C

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO port (:1)	VSWR RF port (:1)
RF MHz	LO MHz	LO +13 dBm	LO +13 dBm	LO +13 dBm	LO +13 dBm	LO +13 dBm
460.00	490.00	6.07	14.89	31.56	1.44	1.65
820.00	850.00	6.55	22.74	28.78	1.11	2.86
1000.00	1030.00	6.52	27.75	27.75	1.27	3.40
1400.00	1430.00	6.99	32.26	26.14	1.75	2.21
1800.00	1830.00	6.07	32.12	30.09	1.57	1.92
1992.00	2022.00	5.92	33.68	28.32	1.54	1.70
2097.00	2127.00	5.70	32.52	28.29	1.38	1.55
2202.00	2232.00	5.82	31.97	28.76	1.34	1.54
2395.00	2425.00	6.15	30.82	26.29	1.35	1.67
2500.00	2530.00	5.95	30.44	26.01	1.37	1.87
2600.00	2630.00	6.13	31.78	26.48	1.30	2.20
2700.00	2730.00	6.47	30.50	26.37	1.28	2.54
2800.00	2830.00	6.75	30.68	25.93	1.34	2.82
2900.00	2930.00	6.94	30.99	25.14	1.49	3.05
3000.00	3030.00	6.74	28.34	24.21	1.62	3.53
3100.00	3130.00	6.80	29.07	23.03	1.83	3.88
3200.00	3230.00	6.80	28.43	21.62	2.01	3.85
3300.00	3330.00	6.81	27.62	22.07	2.12	3.63
3400.00	3430.00	6.53	27.00	21.28	2.19	3.23
3500.00	3530.00	6.35	24.71	20.83	2.20	2.77

Performance Charts

