

Ceramic

# Frequency Mixer WIDE BAND

New!

## MCA1-24LH

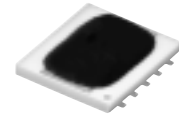
Level 10 (LO Power +10 dBm) 300 to 2400 MHz

### Features

- low conversion loss, 6.5 dB typ.
- excellent L-R isolation, 40 dB typ.
- wide bandwidth, 300 to 2400 MHz
- double balanced mixer
- low cost
- low profile, 0.08"

### Applications

- cellular
- UHF TV
- PCN
- WCDMA
- defense & weather radar
- defense communications



**BLUE CELL™**

CASE STYLE: DZ885  
PRICE: \$ 6.45 ea. QTY (10-49)  
(Patent pending)

### Mixer Electrical Specifications (T<sub>AMB</sub> = -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 <sub>L</sub> -f <sub>U</sub>	IF	$\bar{x}$	$\sigma$	Max.	Typ.	Min.	Typ.	Min.		
MCA1-24LH	300-2400	DC-700	6.5	0.1	8.9	40	25	22	12	13	0.3

1dB Compr.: + 5 dBm typ.  
E= [IP3(dBm)-LO Power(dBm)]/10

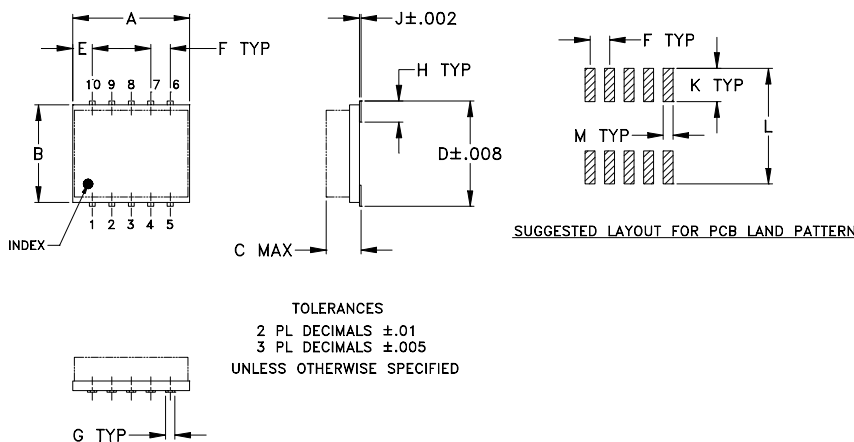
### Pin Connections

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

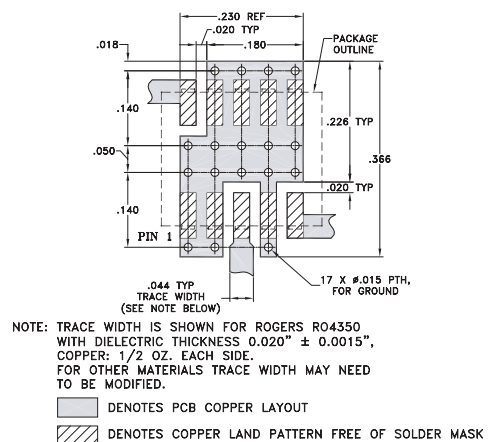
### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

### Outline Drawing



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



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	wt.
.30	.250	.080	.274	.050	.050	.024	.05	.004	.085	.296	.030	grams
7.62	6.35	2.03	6.96	1.27	1.27	0.61	1.27	0.10	2.16	7.52	0.76	0.3



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ISO 9001 CERTIFIED

REV. C  
M85169  
ED-9574/1  
MCA1-24LH  
DJ/TD/CP  
030203  
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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 +10 dBm	LO +10 dBm	LO +10 dBm	LO +10 dBm	LO +10 dBm
301.00	331.00	5.75	47.96	22.24	6.52	1.84
401.00	431.00	5.00	41.59	24.26	2.34	1.46
501.00	531.00	6.40	43.45	27.04	1.38	3.74
701.00	731.00	6.34	43.78	27.28	2.43	3.52
901.00	931.00	7.26	42.42	26.85	3.80	4.31
1151.00	1181.00	7.32	44.15	30.33	4.23	4.79
1301.00	1331.00	7.16	42.78	34.33	3.84	3.38
1501.00	1531.00	5.61	40.19	29.17	2.26	1.87
1701.00	1731.00	5.14	36.19	25.42	1.40	1.46
2001.00	2031.00	6.07	33.56	22.01	2.77	2.01
2401.00	2431.00	6.73	33.38	25.12	3.97	2.32

## Performance Charts

