

High Reliability Mixer

Level 7 (LO Power +7 dBm) 10 to 1000 MHz

ADEX-R10+



Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

LO	6
RF	3
IF	2
GROUND	1,4,5

Features

- hermetically sealed ceramic quad
- low conversion loss, 7.0 dB typ.
- excellent L-R isolation, 60 dB typ.
- flat conversion loss, ± 0.2 dB typ. over entire band
- good VSWR, 2:1 typ. for LO, 1.3:1 typ. for RF, 1.2:1 typ. for IF
- good performance to 1500 MHz
- low profile package
- aqueous washable
- protected by US Patent 6,133,525 and 6,947,717

Applications

- cellular

CASE STYLE: CD542

PRICE: \$3.35 ea. QTY. (20)

+RoHS Compliant

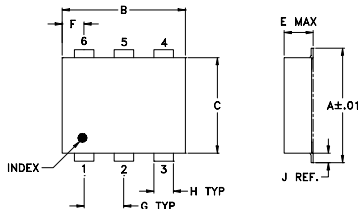
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



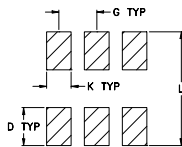
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	500, 1000

Outline Drawing



PCB Land Pattern



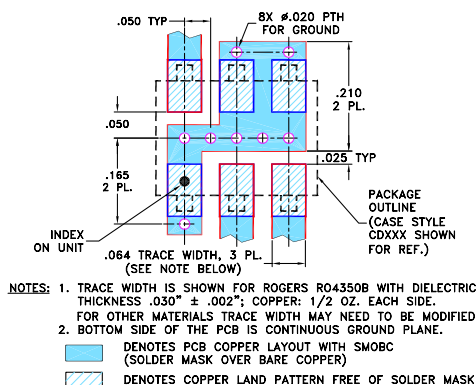
Suggested Layout,
Tolerance to be within $\pm .002$

Outline Dimensions (inch)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54
H	J	K	L		wt	
.030	.026	.065	.300		grams	
0.76	0.66	1.65	7.62		0.20	

Demo Board MCL P/N: TB-03

Suggested PCB Layout (PL-052)



Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)						
LO/RF f_L - f_U	IF	Mid-Band m		Total Range Max.	L	M	U	L	M	U								
		$\bar{X}$	σ								Max.		Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.
10-1000	DC-800	6.8	0.10	7.8	8.3	70	55	60	40	47	37	40	26	33	20	26	13	16

1 dB COMP.: +1 dBm typ.

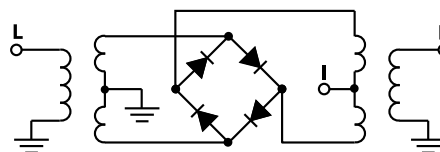
L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

m = mid band [$2f_L$ to $f_U/2$]

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
10.10	40.10	6.25	64.76	56.08	1.29	2.06
70.10	100.10	6.59	67.01	40.99	1.39	1.75
130.10	160.10	6.64	67.47	36.34	1.33	1.84
190.10	220.10	6.53	71.13	34.52	1.37	1.78
250.10	280.10	6.67	76.47	33.57	1.38	1.80
310.10	340.10	6.60	65.84	32.17	1.37	1.86
370.10	400.10	6.59	60.70	31.37	1.40	1.87
430.10	460.10	6.55	54.79	29.87	1.39	1.91
490.10	520.10	6.57	53.46	29.02	1.38	1.98
550.10	580.10	6.65	53.03	27.88	1.37	2.01
610.10	640.10	6.58	50.93	26.59	1.34	2.06
670.10	700.10	6.50	47.52	25.33	1.36	2.11
730.10	760.10	6.67	45.16	24.43	1.35	2.15
790.10	820.10	6.74	44.18	23.85	1.31	2.26
850.10	880.10	6.85	45.23	23.02	1.28	2.29
910.10	940.10	6.87	47.66	22.46	1.19	2.32
970.10	1000.10	6.48	50.13	21.53	1.10	2.35
1030.10	1060.10	6.27	55.18	19.99	1.02	2.32
1090.10	1120.10	6.14	53.76	18.95	1.15	2.43
1150.10	1180.10	6.10	47.59	18.31	1.26	2.49

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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