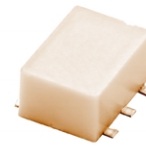


Surface Mount

Frequency Mixer

Level 13 (LO Power +13dBm) 5 to 4200 MHz

ADE-42MH+
ADE-42MH



CASE STYLE: CD542
PRICE: \$14.95 ea. QTY(10-49)

Features

- low conversion loss, 7.5 dB typ.
- aqueous washable
- protected by U.S. Patent 6,133,525

Applications

- cellular
- PCS
- instrumentation
- satellite communication

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

See our web site for RoHS Compliance methodologies and qualifications.

Mixer Electrical Specifications

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	Mid-Band m σ	Total Range Max.	L Typ.	M Typ.	U Typ.	L Typ.	M Typ.	U Typ.	L Typ.	M Typ.	U Typ.							
ADE-42MH(+)	5-4200	5-3500	7.5	.20	9.8	11.8	47	28	29	20	30	15	34	23	26	17	23	17	17	0.4

1 dB COMP.: +9 dBm typ.
E= |IP3(dBm)-LO Power(dBm)|/10

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 $f_U/2$]

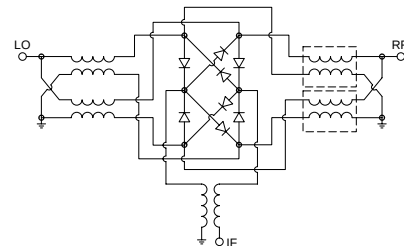
Pin Connections

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

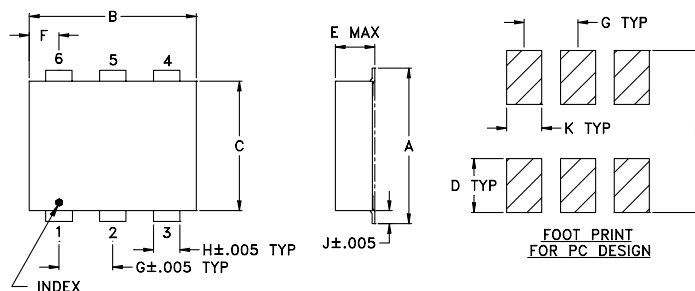
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

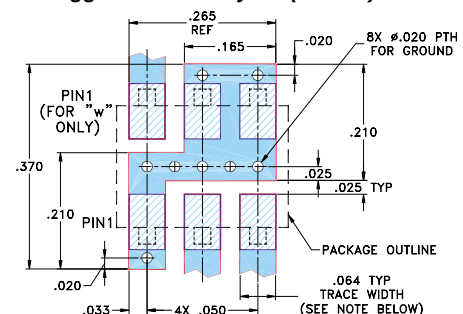
electrical schematic



Outline Drawing



Demo Board MCL P/N: TB-03 Suggested PCB Layout (PL-052)



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS R04350 WITH DIELECTRIC THICKNESS .030" ± .002".
COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

■ DENOTES PCB COPPER LAYOUT
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	wt.
.280	.310	.220	.100	.112	.055	.100	.030	.030	.065	.300	grams
7.11	7.87	5.58	2.54	2.84	1.40	2.54	0.76	0.76	1.65	7.62	.20

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ADE-42MH+ ADE-42MH

Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF port (:1)	VSWR LO port (:1)
RF MHz	LO MHz	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
5.00	35.00	7.36	49.90	34.20	1.35	2.37
25.00	55.00	6.76	51.40	34.10	1.20	2.32
75.00	105.00	6.54	54.00	33.90	1.20	2.25
100.00	130.00	6.52	52.70	34.00	1.19	2.30
250.00	280.00	7.05	42.40	33.80	1.10	2.18
500.00	530.00	7.02	35.40	31.50	1.10	2.16
884.28	914.28	7.09	32.20	27.50	1.55	1.91
1000.00	1030.00	7.22	32.20	26.30	1.64	1.91
1326.38	1356.38	7.87	33.40	24.70	2.37	1.84
1547.43	1577.43	7.39	35.80	24.00	2.40	1.81
1768.47	1798.47	7.30	38.90	23.00	2.16	1.78
2000.00	2030.00	7.30	40.00	23.30	2.04	1.63
2431.62	2461.62	7.45	39.50	24.20	2.18	1.30
3000.00	2970.00	7.66	31.10	24.50	2.20	1.56
3315.81	3285.81	7.39	28.10	25.10	1.92	1.87
3536.85	3506.85	7.97	27.10	25.60	1.71	2.06
3757.90	3727.00	8.23	26.30	25.80	1.63	2.06
4000.00	3970.00	8.23	25.00	26.20	1.46	2.20
4100.00	4070.00	8.18	24.30	26.30	1.46	2.20
4200.00	4170.00	8.41	24.20	26.70	1.27	2.20

Performance Charts

