

Frequency Mixer

Level 7 (LO Power +7 dBm) 0.05 to 250 MHz

ADE-6+



Generic photo used for illustration purposes only

CASE STYLE: CD637

+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 13" Devices/Reel 900

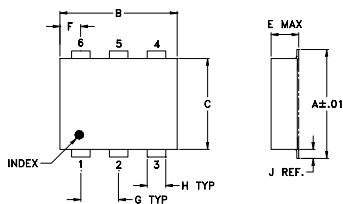
Maximum Ratings

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.	

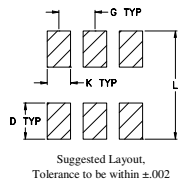
Pin Connections

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

Outline Drawing



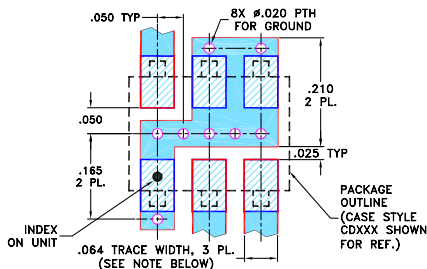
PCB Land Pattern



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.206	.055	.100
6.91	7.87	5.59	2.54	5.23	1.40	2.54
H	J	K	L			
.030	.026	.065	.300			wt
0.76	0.66	1.65	7.62			grams
						0.40

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



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- low conversion loss, 4.6 dB typ.
- excellent L-R isolation, 40 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

Applications

- cellular

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		
		$\overline{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	
0.05-250	DC-200	4.6	0.05	7.0	8.4	62	49	40	30	40	20	58	44	45	24	25	15	10

1 dB COMP.: +1 dBm typ.

L = low range [f_L to $10 f_L$]
m = mid band [$2 f_L$ to $f_U/2$]

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

1 dB COMP.: +1 dBm typ.

L = low range [f_L to 10 f_L]

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

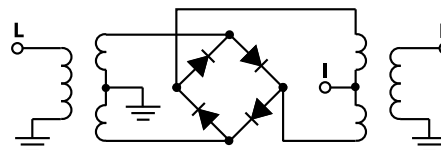
M = mid range [$10f_L$ to $f_U/2$]

U = upper range [$f_U/2$ to f_U]

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					
0.05	30.05	4.68	59.77	56.14	1.58	2.30
10.00	40.00	4.13	66.00	52.10	1.27	2.52
26.76	56.76	4.22	68.60	49.00	1.23	2.55
40.00	70.00	4.19	66.80	46.10	1.21	2.58
53.42	83.42	4.35	57.30	45.60	1.18	2.55
60.00	90.00	4.32	54.40	44.40	1.18	2.61
80.00	110.00	4.18	56.90	41.50	1.13	2.55
100.00	130.00	4.49	48.70	40.80	1.14	2.65
106.74	136.74	4.62	43.60	42.00	1.15	2.68
120.00	150.00	4.62	40.20	40.00	1.12	2.80
133.40	163.40	4.54	38.00	37.00	1.13	2.76
140.00	170.00	4.64	37.00	35.70	1.15	2.80
150.00	180.00	4.68	36.30	34.30	1.13	2.84
160.06	190.06	4.75	53.20	32.70	1.07	2.68
170.00	200.00	4.81	54.40	32.20	1.02	2.76
186.72	216.72	5.14	54.50	31.20	1.16	2.92
200.00	230.00	5.19	53.80	31.80	1.28	2.96
213.38	243.38	5.26	61.60	31.60	1.41	2.92
240.04	270.04	5.44	42.00	26.40	1.62	2.72
250.00	280.00	5.44	39.40	24.50	1.69	2.65

Electrical Schematic



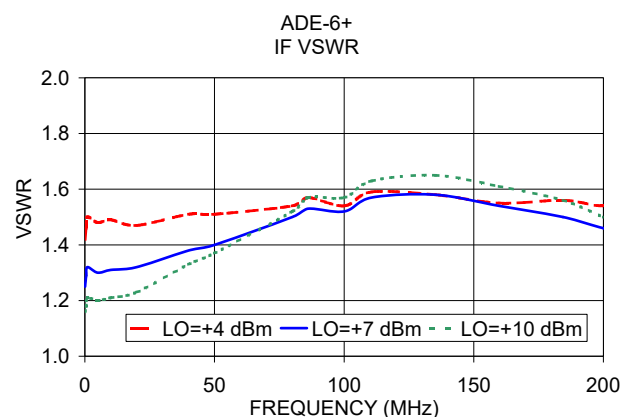
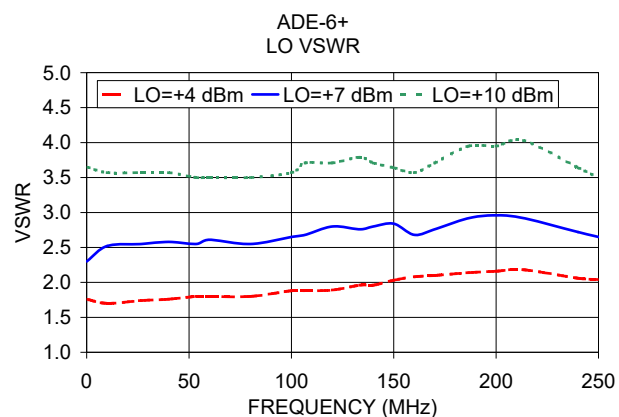
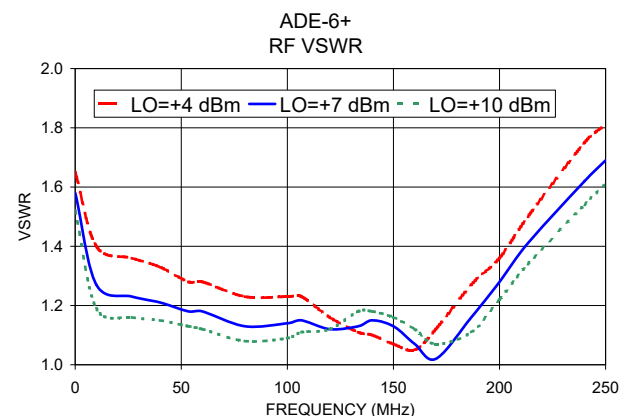
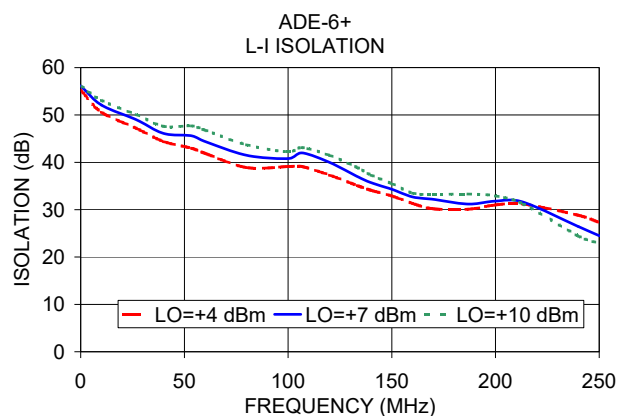
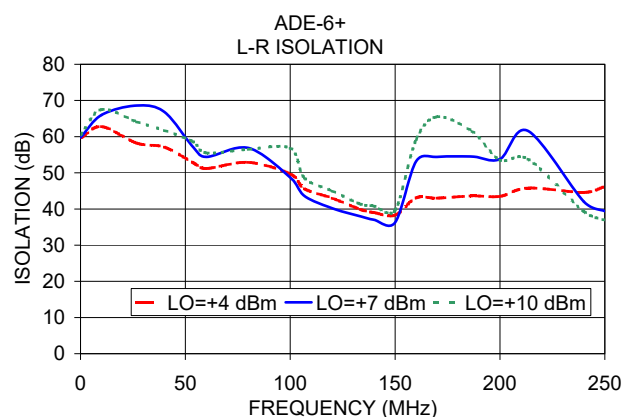
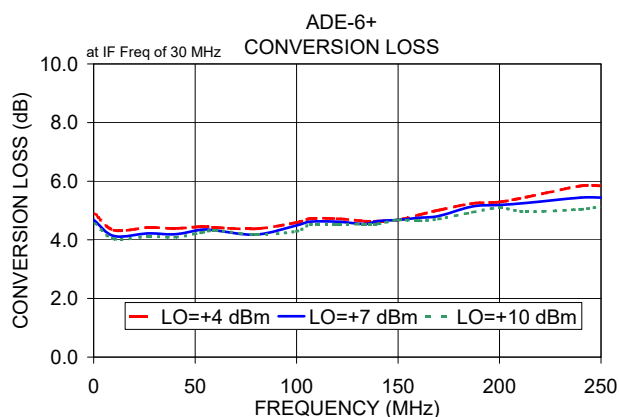
Notes

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