Surface Mount

Frequency Mixer

JMS-2W+
JMS-2W

Level 7 (LO Power +7 dBm) 5 to 1200 MHz

CASE STYLE: BH292

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

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

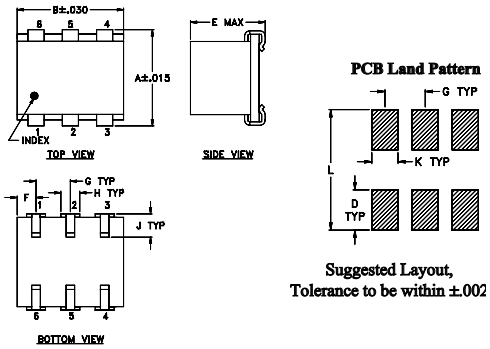
Features

- excellent L-R isolation and L-I isolation, up to 60 dB typ.
- miniature surface mount
- J-leads for strain relief and excellent solderability

Applications

- up & down converters for receivers & transmitters
- UHF TV
- cellular/ISM/GSM

Outline Drawing

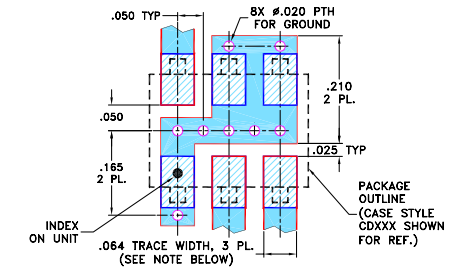


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.280	.310	--	.100	.225	.055	.100
7.11	7.87	--	2.54	5.72	1.40	2.54

H	J	K	L	wt
.047	.065	.065	.300	grams
1.19	1.65	1.65	7.62	0.45

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. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
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

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)
		Mid-Band m			Total Range	L		M		U		L		M		U		
LO/RF f_L-f_U	IF	$\overline{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
5-1200	DC-500	6.8	.10	8.0	9.0	60	40	60	30	37	20	60	40	48	20	31	15	17

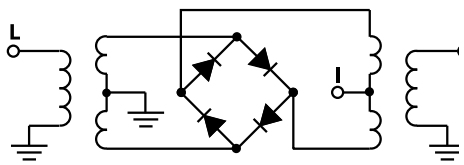
1 dB COMP.: +1 dBm typ.
Phase detection, positive polarity

L = low range [f_L to 10 f_L] m= mid band [$2f_L$ to $f_U/2$] M = mid range [10 f_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	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
5.00	35.00	6.50	62.55	59.95	1.46	1.69
10.00	40.00	6.43	62.08	59.28	1.44	1.67
15.30	45.30	6.43	62.44	58.34	1.43	1.69
29.94	59.94	6.49	62.14	56.11	1.40	1.68
50.00	80.00	6.45	62.11	53.65	1.39	1.67
81.92	111.92	6.52	62.44	50.79	1.44	1.64
102.45	132.45	6.47	62.71	49.36	1.45	1.63
160.26	130.26	6.44	65.46	46.82	1.44	1.64
200.43	170.43	6.34	65.54	45.89	1.46	1.69
350.63	320.63	6.30	53.86	42.07	1.46	1.79
438.53	408.53	6.29	49.13	40.13	1.45	1.90
548.47	518.47	6.28	44.85	37.77	1.42	2.05
600.00	570.00	6.34	43.57	36.59	1.40	2.15
613.38	583.38	6.32	43.25	36.40	1.38	2.16
685.97	655.97	6.45	41.28	34.97	1.33	2.29
767.15	737.15	6.66	40.04	33.20	1.24	2.44
959.47	929.47	7.03	37.35	31.24	1.04	2.85
1073.01	1043.01	7.10	36.16	30.62	1.32	3.17
1120.00	1090.00	7.17	36.10	30.60	1.47	3.18
1200.00	1170.00	7.25	35.69	30.56	1.62	3.41

Electrical Schematic



Notes
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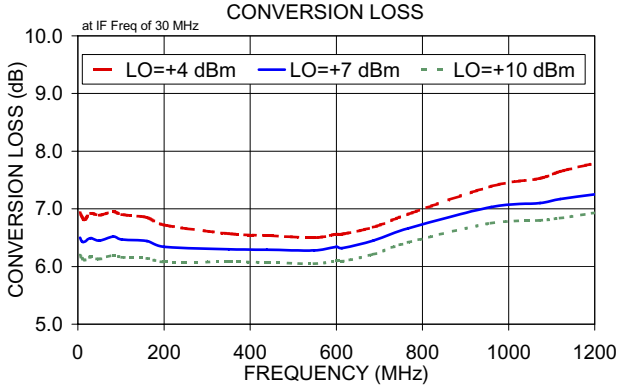
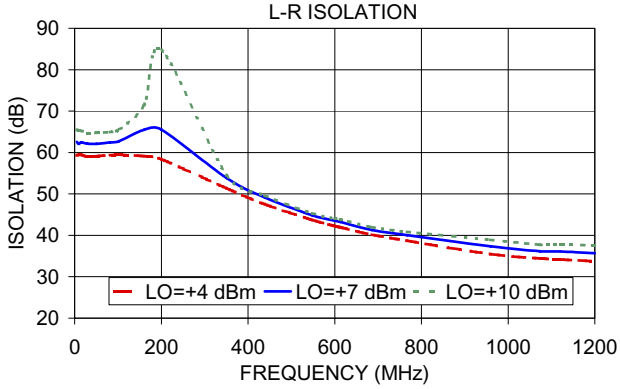
Performance Charts

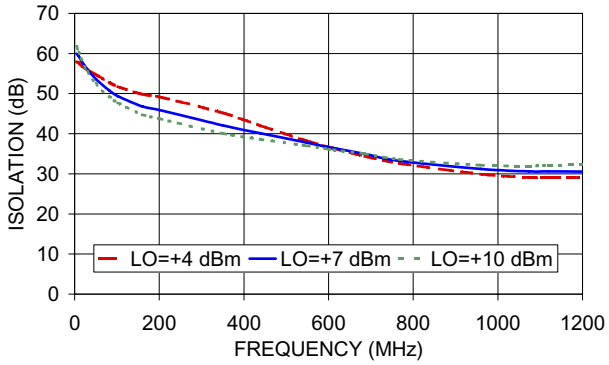
JMS-2W
CONVERSION LOSS
at IF Freq of 30 MHz



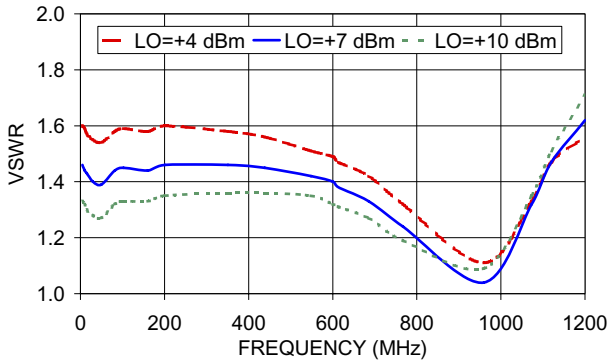
JMS-2W
L-R ISOLATION



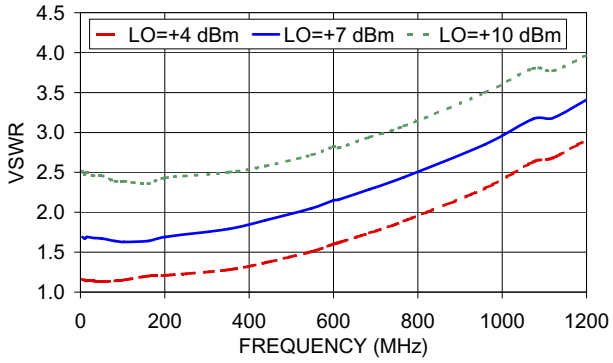
JMS-2W
L-I ISOLATION



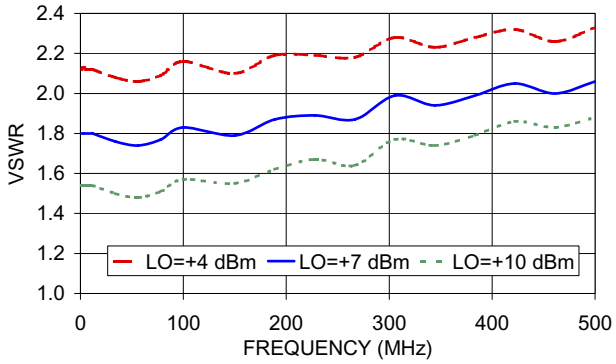
JMS-2W
RF VSWR



JMS-2W
LO VSWR



JMS-2W
IF VSWR



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