Surface Mount

Frequency Mixer

JYM-28H+

Level 17 (LO Power +17 dBm) 400 to 2800 MHz

CASE STYLE: BJ293

+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	200mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

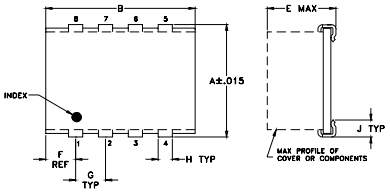
Features

- wide bandwidth, 400 to 2800 MHz
- good IP3, 23 dBm typ.
- high L-R isolation, 40 dB typ.

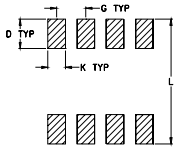
Applications

- cellular
- satellite distribution
- PCS, DCS, UMTS
- MMDS

Outline Drawing



PCB Land Pattern



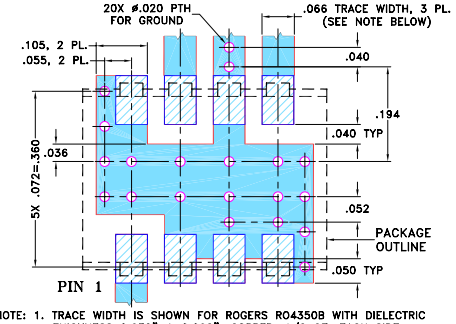
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.395	.500	--	.100	.230	.100	.100
10.03	12.70	--	2.54	5.84	2.54	2.54

H	J	K	L	wt
.047	.065	.065	.425	grams
1.19	1.65	1.65	10.80	0.80

Demo Board MCL P/N: TB-259
Suggested PCB Layout (PL-080)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; 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 SOLDERMASK

Electrical Specifications

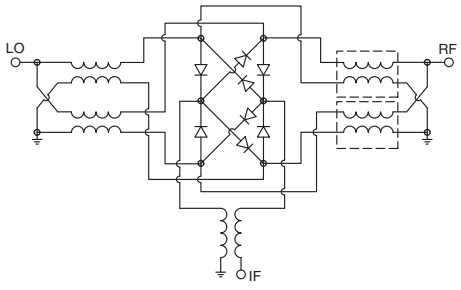
FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	Mid-Band m			Total Range					
f_L-f_U		$\overline{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.
400-2800	4-700	6.3	.20	8.0	9.0	40	25	30	15	23

1 dB COMP.: +10 dBm typ.
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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
400.00	430.00	6.35	39.96	42.42	1.21	2.00
535.85	565.85	6.15	39.94	40.97	1.38	1.68
671.70	701.70	6.13	39.08	39.25	1.60	1.53
800.00	830.00	6.36	39.17	39.90	1.78	1.43
943.40	973.40	6.03	37.63	38.28	2.01	1.41
1079.25	1109.25	5.82	37.76	38.87	2.21	1.39
1169.81	1199.81	5.76	36.05	39.48	2.31	1.37
1260.38	1290.38	5.78	35.62	40.30	2.28	1.36
1400.00	1430.00	5.83	33.66	40.46	2.46	1.32
1486.79	1516.79	5.96	33.40	40.25	2.52	1.33
1622.64	1592.64	6.05	33.61	40.84	2.61	1.35
1713.21	1683.21	6.22	34.09	41.86	2.70	1.35
1803.77	1773.77	6.41	36.18	41.43	2.77	1.36
1984.91	1954.91	6.36	38.60	49.09	2.85	1.37
2075.47	2045.47	6.23	36.96	45.57	2.87	1.40
2211.32	2181.32	6.17	37.30	45.52	2.80	1.54
2347.17	2317.17	6.42	35.31	42.38	2.63	1.75
2483.02	2453.02	6.71	35.03	38.65	2.42	2.06
2618.87	2588.87	7.05	34.27	36.72	2.13	2.36
2800.00	2770.00	8.39	31.73	33.90	1.98	2.80

Electrical Schematic



Notes
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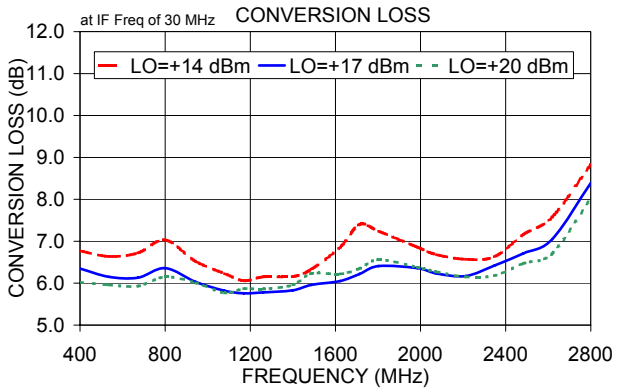
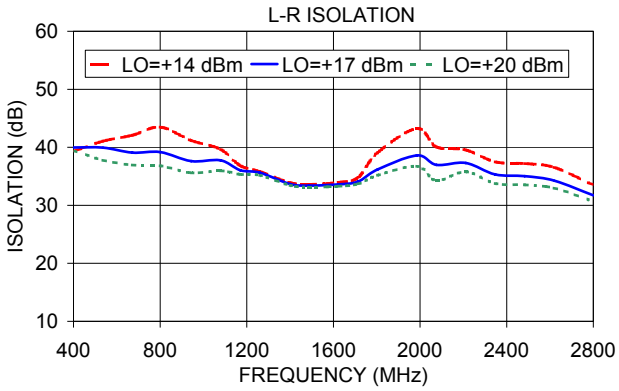
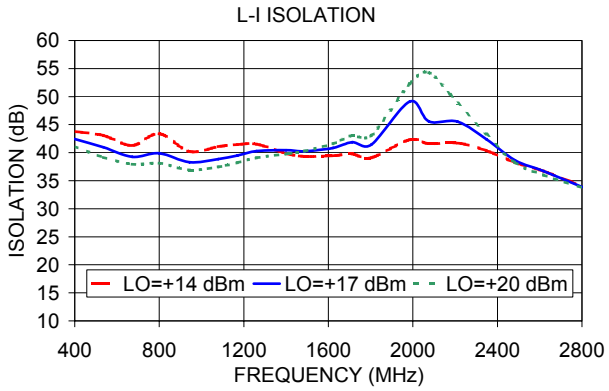
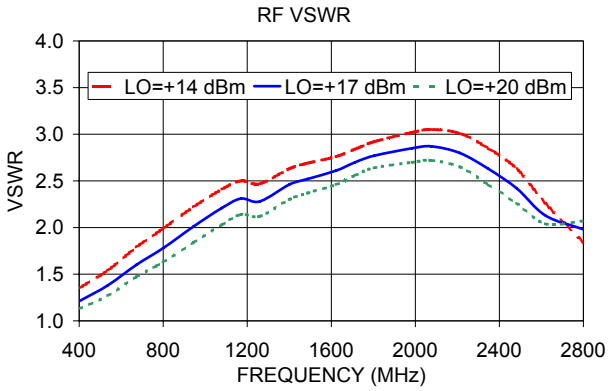
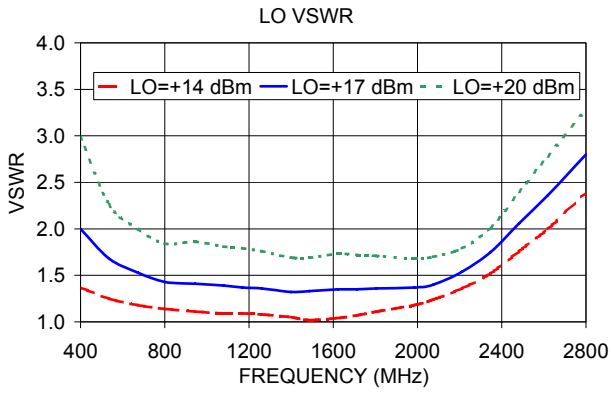
at IF Freq of 30 MHz

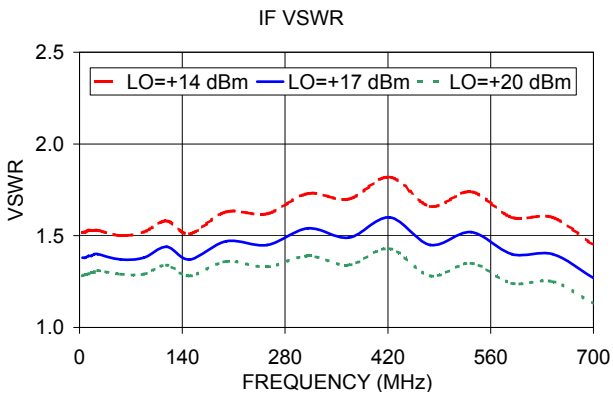












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