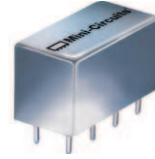


Plug-In

# Frequency Mixer

Level 23 (LO Power +23 dBm) 10 to 2400 MHz

**SAY-11+**



CASE STYLE: A01  
PRICE: \$77.45 ea. QTY (1-9)

**+RoHS Compliant**

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

## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	350mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

## Pin Connections

LO	8
RF	1
IF	3
GROUND	2,5,6,7
CASE GROUND	2,5,6,7
DO NOT USE	4

## Features

- low conversion loss, 7.40 dB typ.
- wideband, 10 to 2400 MHz
- rugged welded construction
- hermetically sealed

## Applications

- VHF/UHF
- GPS
- PCS
- satellite distribution

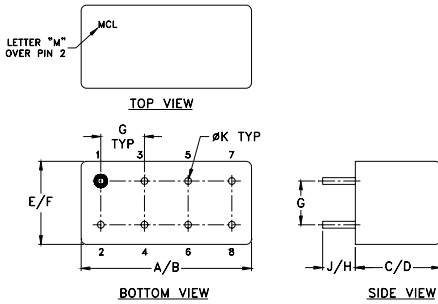
## Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)											
LO/RF	IF	Mid-Band		Total	L			M			U			L			M			U			
$f_L$ - $f_U$		$\bar{X}$	$\sigma$	Max.	Range	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.		
10-2400	5-1000	7.40	0.09	8.5	10	28	20	26	20	25	20	28	20	26	20	25	20	28	20	26	20	25	20

1 dB COMP.: +20 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  $f_U/2$ ]

## Outline Drawing



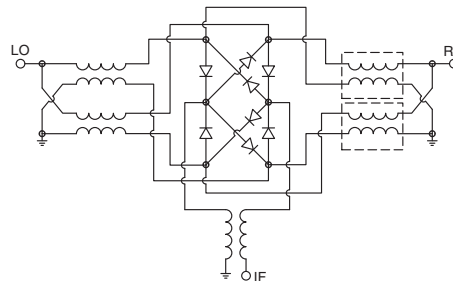
## Outline Dimensions (inch/mm)

A	B	C	D	E	F	
.770	.800	.385	.400	.370	.400	
19.56	20.32	9.78	10.16	9.40	10.16	
G	H	J	K		wt	
.200	.20	.14	.031		grams	
5.08	5.08	3.56	0.79		5.2	

## 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 +23dBm	LO +23dBm	LO +23dBm	LO +23dBm	LO +23dBm
10.00	40.00	7.46	41.65	30.72	1.55	1.24
20.00	50.00	7.51	43.95	31.06	1.54	1.22
50.00	80.00	7.74	44.45	30.74	1.51	1.31
87.10	57.10	7.81	44.86	29.91	1.50	1.26
100.00	70.00	7.66	44.68	29.62	1.49	1.25
200.00	170.00	7.59	46.21	28.67	1.47	1.22
318.39	288.39	8.03	41.22	28.91	1.45	1.23
500.00	470.00	7.47	37.07	29.62	1.43	1.28
626.77	596.77	7.57	33.53	30.05	1.38	1.34
780.97	750.97	7.27	33.54	31.66	1.34	1.29
1000.00	970.00	7.77	33.08	33.53	1.38	1.23
1089.36	1059.36	7.84	33.62	34.45	1.49	1.33
1243.54	1213.54	8.04	34.16	36.92	1.59	1.35
1397.74	1367.74	8.31	33.51	37.46	1.82	1.48
1500.00	1470.00	8.18	34.49	39.38	1.99	1.58
1706.13	1676.13	8.31	34.41	45.70	2.18	1.69
2000.00	1970.00	8.17	37.07	38.82	2.32	1.71
2091.61	2061.61	8.07	37.89	36.35	2.32	1.68
2245.81	2215.81	7.59	37.54	34.57	2.28	1.74
2400.00	2370.00	7.11	35.91	33.44	2.15	1.77

## Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

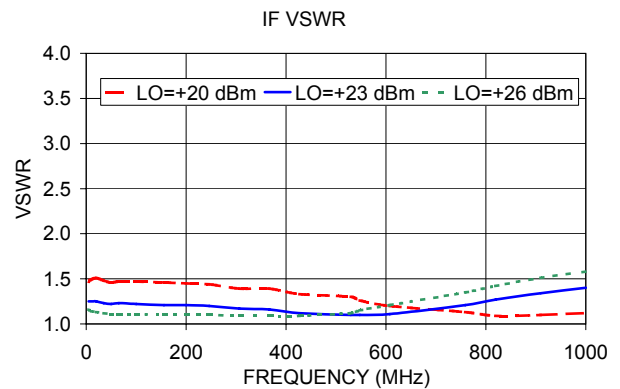
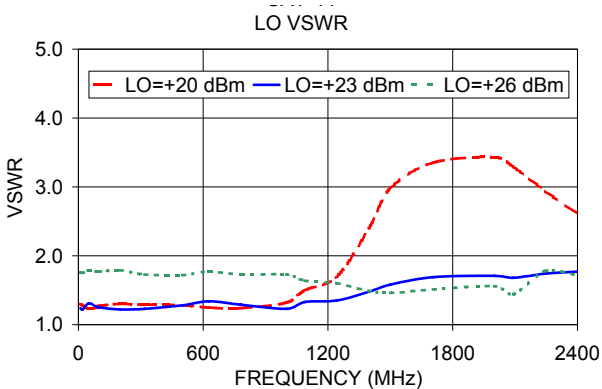
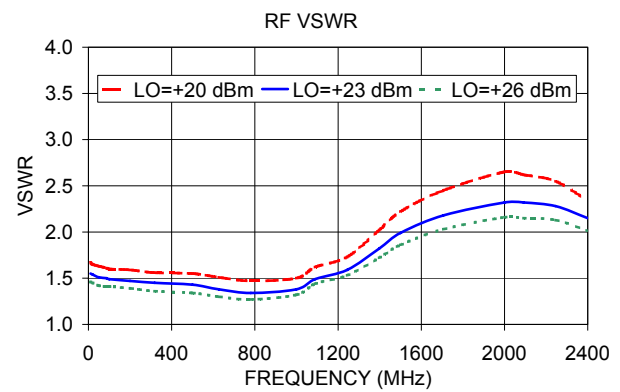
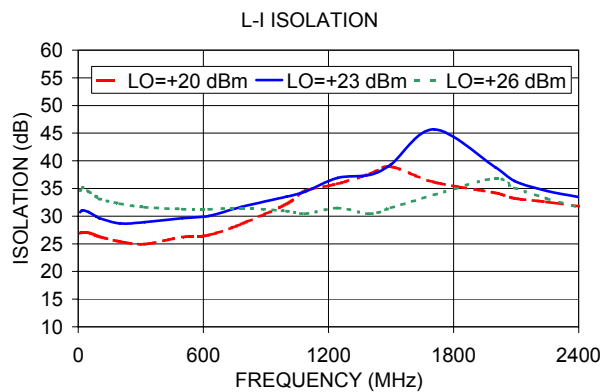
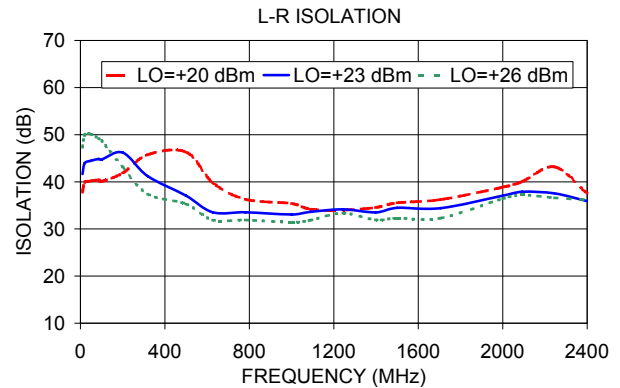
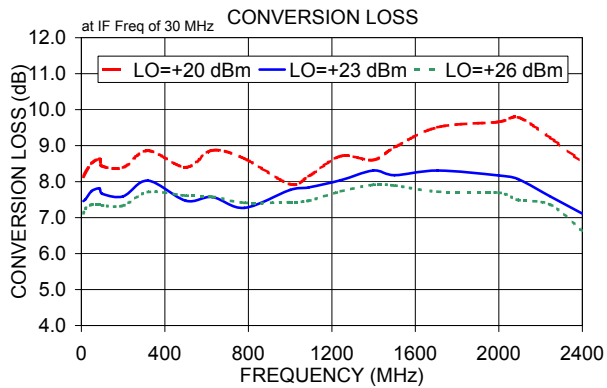
For detailed performance specs & shopping online see web site

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