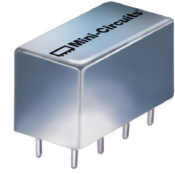


Plug-In

Frequency Mixer

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

SAY-11+



CASE STYLE: A01

+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

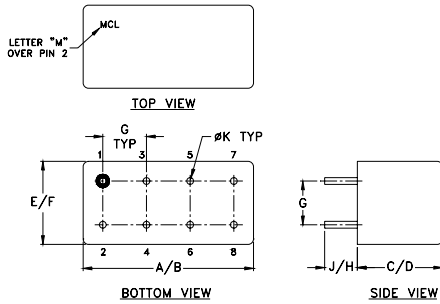
Features

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

Applications

- VHF/UHF
- GPS
- PCS
- satellite distribution

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	

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}	σ	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 $f_U/2$]

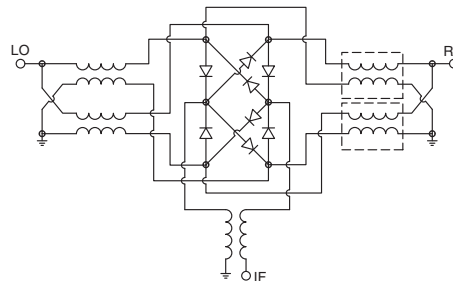
U = upper range [$f_U/2$ to f_U]

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

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

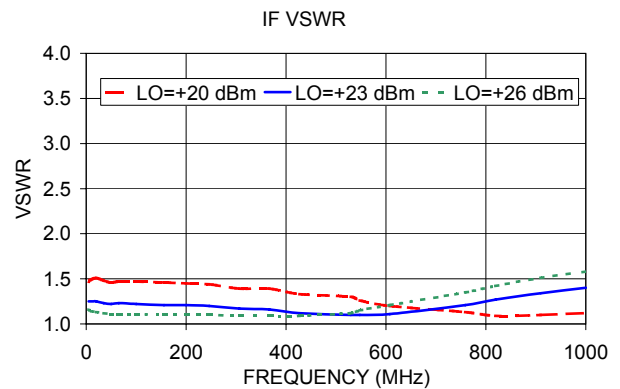
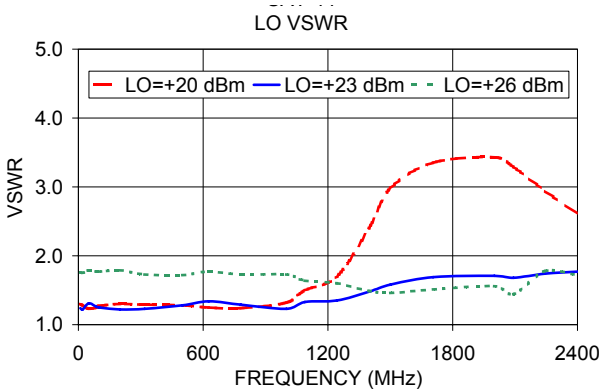
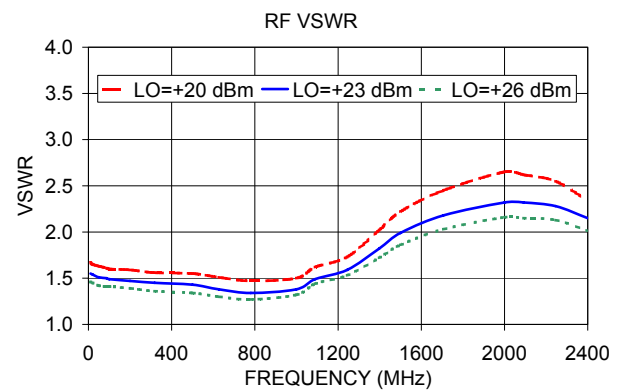
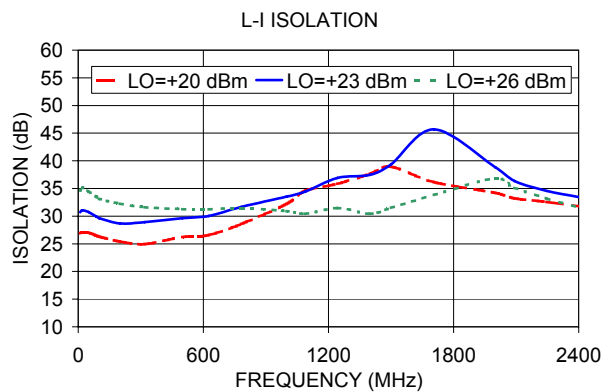
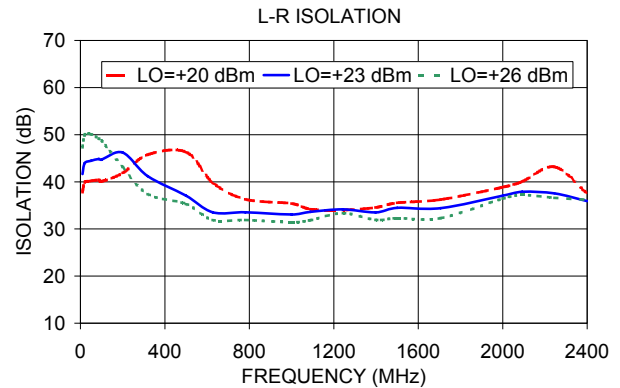
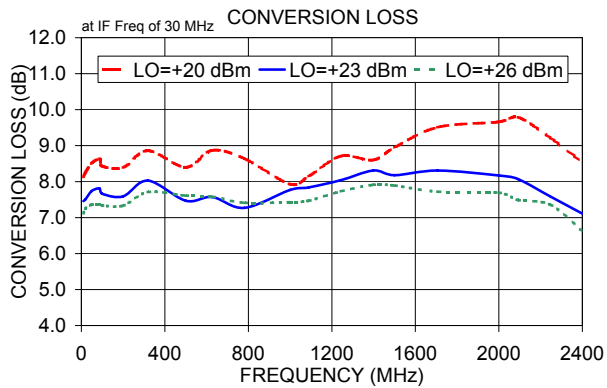
Electrical Schematic



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp





Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

