

# Plug-In Frequency Mixer

## SRA-1+

Level 7 (LO Power +7 dBm) 0.5 to 500 MHz



Generic photo used for illustration purposes only

CASE STYLE: A01

**+RoHS Compliant**

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

### Maximum Ratings

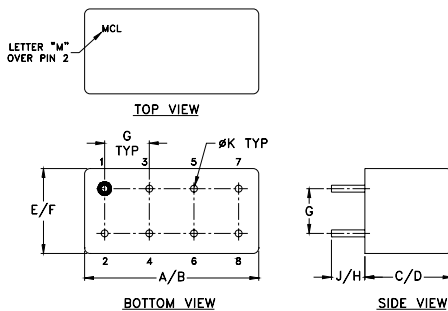
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

LO	8
RF	1
IF	3,4 <sup>^</sup>
GROUND	2,5,6,7
CASE GROUND	2

<sup>^</sup> pins must be connected together externally

### 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	

### Features

- excellent conversion loss, 5.11 dB typ.
- high L-R isolation, 45 dB typ. L-I isolation, 40 dB typ.
- rugged welded construction

### Applications

- VHF/UHF
- defense & federal communications
- instrumentation

### Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band		Total Range Max.	Typ.	L		M		U		L		M		U	
$f_L-f_U$		$\bar{X}$	$\sigma$			Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
0.5-500	DC-500	5.11	.09	7.0	8.5	50	45	45	30	35	25	45	35	40	25	30	20

1 dB COMP.: +1 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ]

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

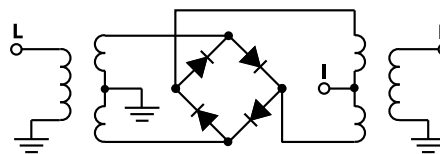
M = mid range [ $10 f_L$  to  $f_U/2$ ]

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

### 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
0.50	30.50	7.29	>67.00	>67.00	1.21	1.98
1.00	31.00	6.89	>67.00	62.73	1.03	1.93
2.00	32.00	6.49	>67.00	61.28	1.02	1.96
5.00	35.00	6.01	>67.00	60.55	1.06	1.86
10.00	40.00	5.99	>67.00	59.37	1.10	1.83
20.00	50.00	6.02	>67.00	59.08	1.13	1.87
32.73	62.73	5.96	59.27	57.92	1.15	1.88
50.00	80.00	5.91	56.01	56.08	1.19	1.91
64.95	94.95	5.87	53.83	54.11	1.23	1.91
100.00	70.00	5.81	49.90	49.45	1.29	1.92
161.63	131.63	5.84	44.60	43.60	1.35	1.91
200.00	170.00	5.99	41.47	40.82	1.42	1.99
226.08	196.08	5.95	40.62	39.96	1.49	1.99
258.31	228.31	5.89	39.44	37.84	1.56	1.99
306.65	276.65	5.99	37.26	36.42	1.65	2.03
354.99	324.99	6.23	34.94	34.34	1.74	2.16
403.33	373.33	6.32	33.70	33.77	1.81	2.20
451.66	421.66	6.68	33.66	33.23	1.93	2.27
483.89	453.89	7.17	34.17	34.46	2.00	2.25
500.00	470.00	7.25	34.51	34.41	2.03	2.26

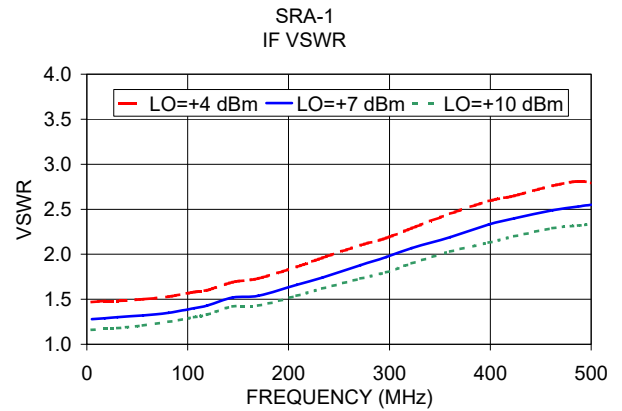
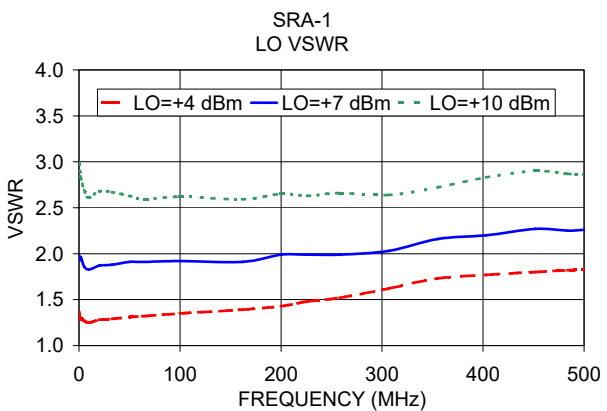
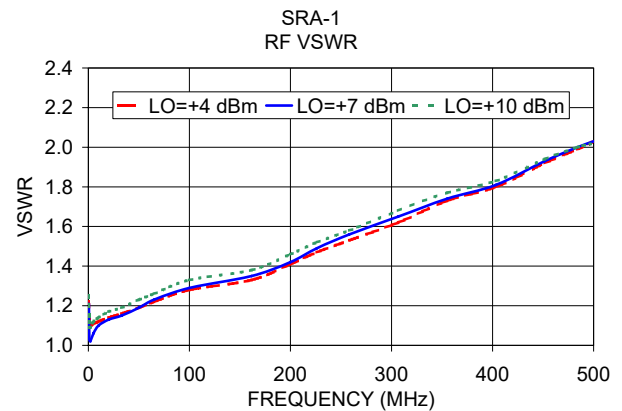
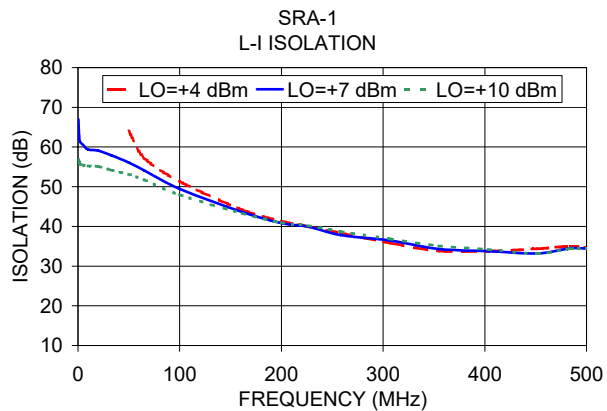
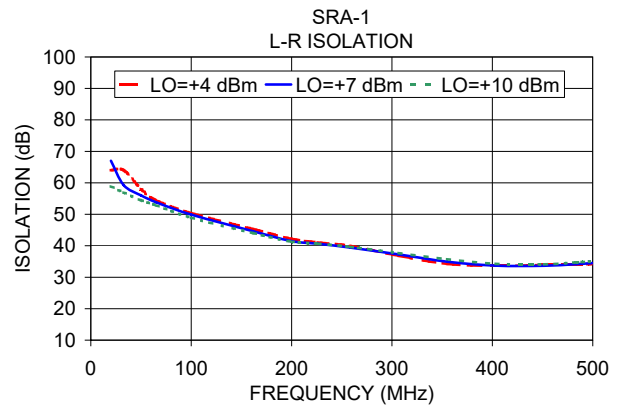
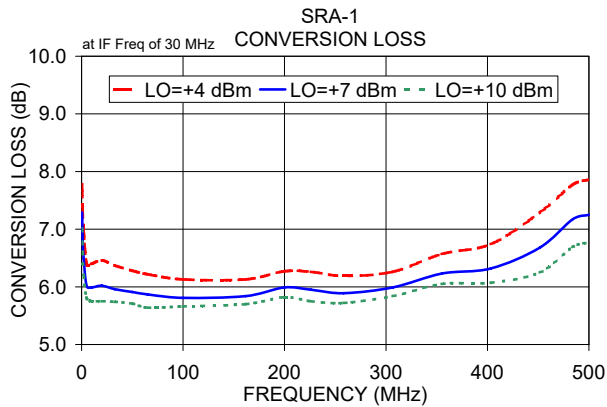
### Electrical Schematic



### 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-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](http://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](http://www.minicircuits.com/MCLStore/terms.jsp)

