

# Plug-In Frequency Mixer

## SRA-1W+

Level 7 (LO Power +7 dBm) 1 to 750 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

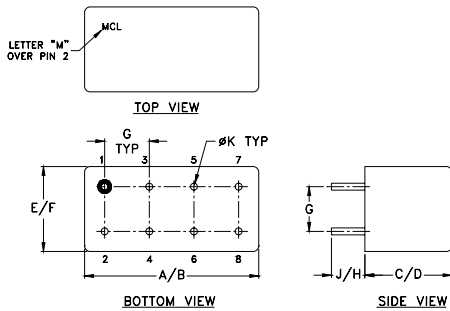
Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

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

<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, 5.80 dB typ.
- high L-R isolation, 45 dB typ. L-I isolation, 40 dB typ.
- rugged welded construction
- hermetic

### Applications

- VHF/UHF
- defense & federal communications
- instrumentation

### Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF $f_L$ - $f_U$	IF	Mid-Band m		Total Range Max.	Total Range Max.	L		M		U		L		M		U	
		$\bar{X}$	$\sigma$			Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
1-750	DC-750	5.80	.04	7.5	8.5	50	45	45	30	35	25	45	30	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  $f_U/2$ ]

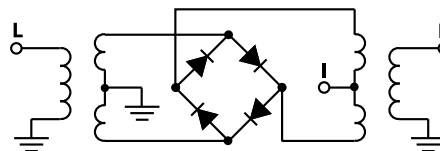
M = mid range [ $10 f_L$  to  $f_U/2$ ]

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
1.00	31.00	6.42	>67.00	>67.00	1.20	3.31
2.00	32.00	5.97	>67.00	>67.00	1.12	3.09
5.00	35.00	5.50	>67.00	>67.00	1.10	3.15
10.00	40.00	5.66	>67.00	>67.00	1.12	2.99
20.00	50.00	5.60	>67.00	>67.00	1.14	2.99
50.00	80.00	5.60	>67.00	62.28	1.16	2.84
100.00	70.00	5.47	>67.00	55.09	1.20	2.88
130.14	100.14	5.52	57.96	51.55	1.23	2.75
200.00	170.00	5.62	50.48	45.84	1.30	2.74
285.11	255.11	5.47	45.61	40.64	1.35	2.74
362.59	332.59	5.71	42.62	37.34	1.40	2.78
414.25	384.25	5.97	40.09	36.21	1.45	2.78
500.00	470.00	6.14	39.49	33.17	1.48	2.80
543.39	513.39	6.24	37.59	31.35	1.50	2.82
595.04	565.04	6.21	37.44	31.39	1.49	2.85
646.70	616.70	6.16	36.31	33.58	1.51	2.93
672.53	642.53	6.27	36.63	31.60	1.58	2.94
698.36	668.36	6.43	36.64	29.86	1.64	3.03
724.18	694.18	6.68	36.68	28.78	1.72	3.01
750.00	720.00	6.98	35.77	27.45	1.83	3.01

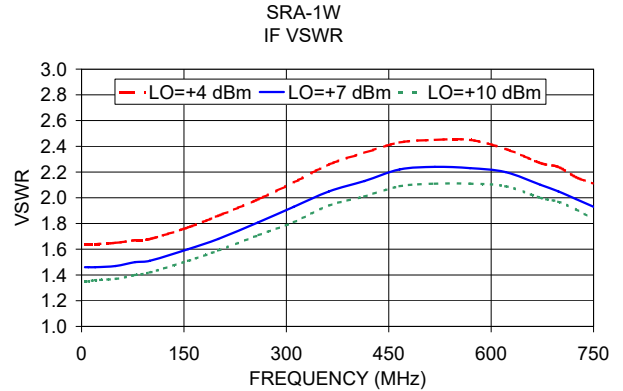
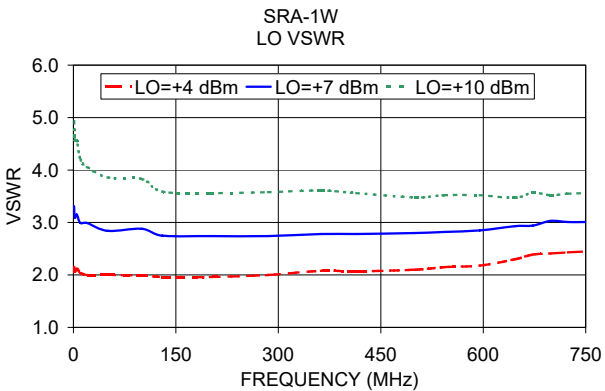
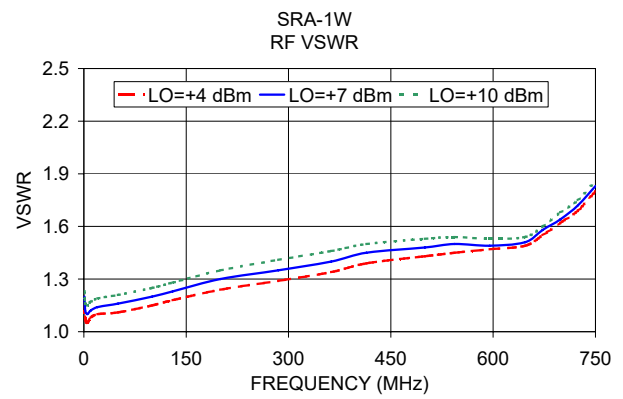
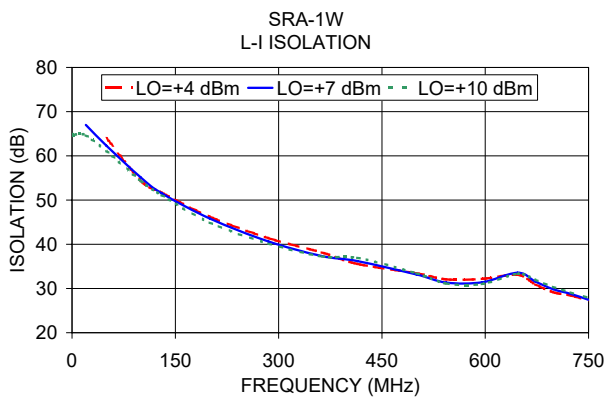
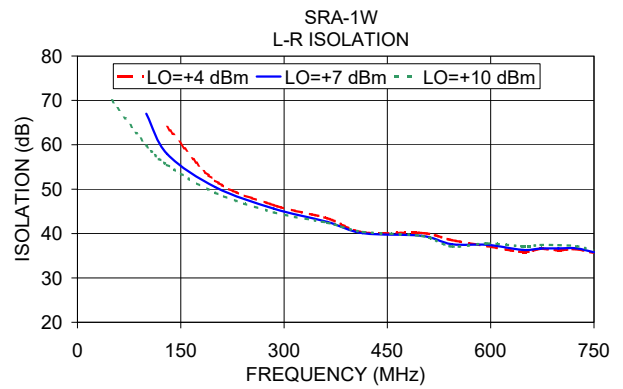
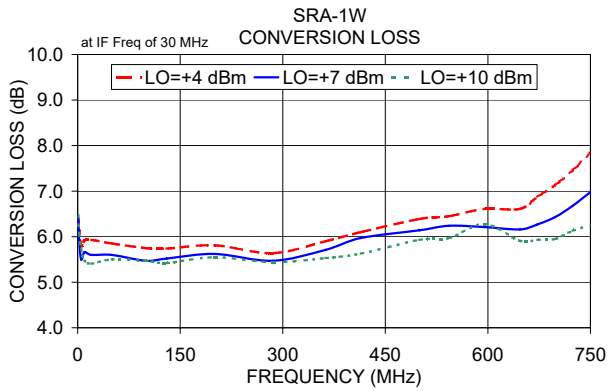
### Electrical Schematic



### 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.
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