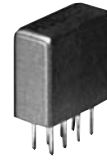


# Plug-In Frequency Mixer

Level 7 (LO Power +7dBm) 1 to 600 MHz

## SAM-1+ SAM-1



CASE STYLE: A03  
PRICE: \$18.95 ea. QTY (1-9)

### Features

- low conversion loss, 5.67 dB typ.
- high isolation, 45 dB typ. L-R, 40 dB typ. L-I

### Applications

- VHF/UHF
- instrumentation
- federal & defense communications

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

See our web site for RoHS Compliance methodologies and qualifications.

### Mixer Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)				LO-IF ISOLATION (dB)								
	LO/RF $f_L - f_U$	IF	Mid-Band $\bar{x}$	m $\sigma$	Total Range Max.	L Typ.	M Typ.	U Typ.	L Typ.	M Typ.	U Typ.	L Typ.	M Typ.	U Typ.				
SAM-1(+)	1-600	DC-600	5.67	.05	7.0	8.5	55	45	45	30	35	20	50	40	40	25	30	20

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

### Pin Connections

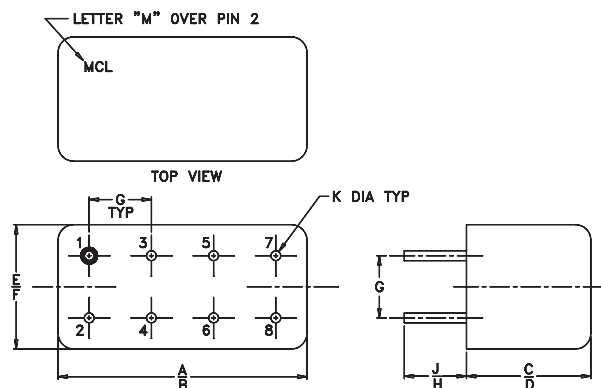
LO	8
RF	1
IF	3,4^
GROUND	2,5,6,7
CASE GROUND	2

^pins must be connected together externally

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

### Outline Drawing

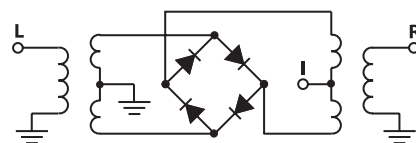


NOTE: BLUE BEAD INDICATES PIN 1.  
PIN NUMBERS DO NOT APPEAR ON UNIT,  
FOR REFERENCE ONLY.

### Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	wt.
.480	.500	.390	.405	.210	.230	.100	.20	.14	.020	grams
12.19	12.70	9.91	10.29	5.33	5.84	2.54	5.08	3.56	.51	2.3

### electrical schematic



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REV. A  
M98898  
SAM-1  
DJ/TD/CP  
051014  
page 1 of 2

## Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF port (:1)	VSWR LO port (:1)
RF MHz	LO MHz	LO +7 dBm	LO +7 dBm	LO +7 dBm	LO +7 dBm	LO +7 dBm
1.00	31.00	7.00	>67.00	>67.00	1.34	2.92
5.00	35.00	5.81	>67.00	>67.00	1.23	2.84
20.00	50.00	5.82	>67.00	63.03	1.20	2.70
39.65	69.65	5.79	60.82	57.34	1.21	2.87
58.97	88.97	5.75	56.81	53.89	1.21	2.73
97.62	67.62	5.72	52.49	49.40	1.20	2.53
136.26	106.26	5.69	49.36	46.66	1.18	2.46
174.91	144.91	5.77	47.07	44.47	1.16	2.46
200.00	170.00	5.87	45.71	43.53	1.15	2.42
232.88	202.88	5.82	44.45	41.92	1.11	2.40
271.52	241.52	5.63	42.63	40.43	1.21	2.40
310.17	280.17	5.69	41.76	39.12	1.29	2.37
348.81	318.81	5.81	40.89	37.24	1.27	2.37
387.46	357.46	5.71	40.87	36.52	1.27	2.39
426.11	396.11	5.99	38.89	35.09	1.29	2.40
464.75	434.75	5.95	37.39	34.88	1.30	2.37
500.00	470.00	5.94	37.14	34.65	1.31	2.41
522.72	492.72	6.05	37.11	33.82	1.32	2.41
561.37	531.37	6.32	37.22	32.34	1.33	2.42
600.00	570.00	6.59	35.63	30.55	1.34	2.37

## Performance Charts

