

Frequency Mixer

VAY-1+

Level 27 (LO Power +27 dBm) 0.5 to 500 MHz

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	500mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

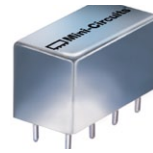
LO	8
RF	1
IF	3
GROUND	2,5,6,7
CASE GROUND	2,5,6,7
NOT USED	4

Features

- good conversion loss, 5.79 dB typ.
- high L-R & L-I isolation, 46 dB typ.
- rugged welded construction
- hermetically sealed

Applications

- VHF/UHF
- FM radio
- defense & federal communications



CASE STYLE: A01

PRICE: \$89.45 ea. QTY (1-9)

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

The +Suffix has been added in order to identify RoHS
Compliance. See our web site for RoHS Compliance
methodologies and qualifications.

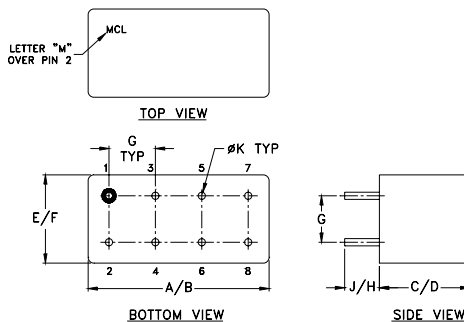
Electrical Specifications

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 Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.5-500	0.02-500	5.79	0.15	7.5	8.5	47	40	46	35	35	25	35	28	46	35	35	25

1 dB COMP: +24 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 [$2 f_L$ to $f_U/2$]

Outline Drawing



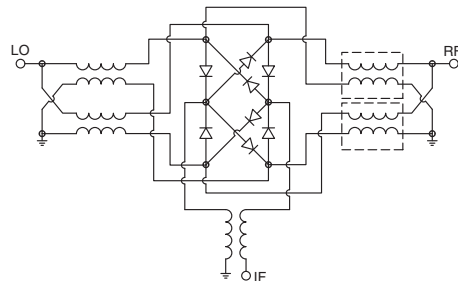
Outline Dimensions (inch mm)

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		
.200	.20	.14	.031		
5.08	5.08	3.56	0.79		
				wt	grams
					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 +27dBm	LO +27dBm	LO +27dBm	LO +27dBm	LO +27dBm
0.05	30.05	6.73	45.06	44.77	1.46	1.14
0.10	30.10	5.90	46.53	46.31	1.46	1.14
0.20	30.20	5.71	46.84	46.41	1.47	1.11
0.50	30.50	5.47	46.89	46.31	1.47	1.19
1.00	31.00	5.47	46.31	45.50	1.48	1.23
17.91	47.91	5.34	45.35	44.81	1.49	1.22
35.76	65.76	5.35	44.40	44.31	1.51	1.18
53.62	83.62	5.37	43.31	43.11	1.54	1.20
125.04	95.04	6.02	42.44	41.42	1.59	1.23
142.89	112.89	6.06	40.80	39.25	1.65	1.18
196.46	166.46	6.19	39.78	38.66	1.68	1.25
232.17	202.17	6.31	40.08	38.07	1.75	1.22
250.02	220.02	6.42	40.67	37.72	1.77	1.21
285.73	255.73	6.42	40.68	36.54	1.86	1.25
321.44	291.44	6.30	41.05	34.78	1.92	1.29
357.15	327.15	6.37	41.32	34.37	2.02	1.47
392.86	362.86	6.31	38.74	35.82	2.09	1.52
446.43	416.43	6.72	35.92	36.76	2.17	1.70
464.28	434.28	6.85	34.39	38.34	2.27	1.96
500.00	470.00	7.04	33.75	35.90	2.27	1.95

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs
& shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine  Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

REV. C
M131858
VAY-1+
DJ/TD/CP/AM
110901
Page 1 of 2

