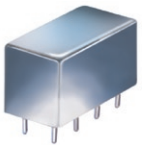
Plug-In

Frequency Mixer

VAY-1+
VAY-1

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



CASE STYLE: A01
PRICE: $89.45 ea. QTY (1-9)

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

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	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

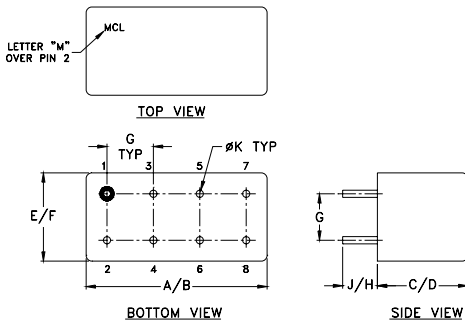
Features

- 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

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 m			Total Range	L		M		U		L		M		U	
f_L-f_U		$\overline{X}$	σ	Max.	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

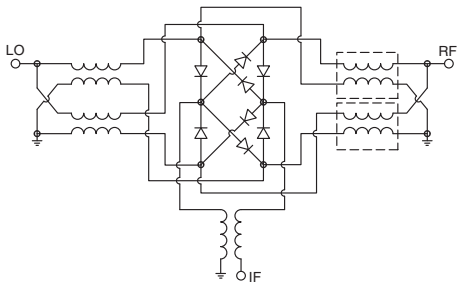
1 dB COMP.: +24 dBm typ.

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 [2f_L to f_U/2]

Typical Performance Data

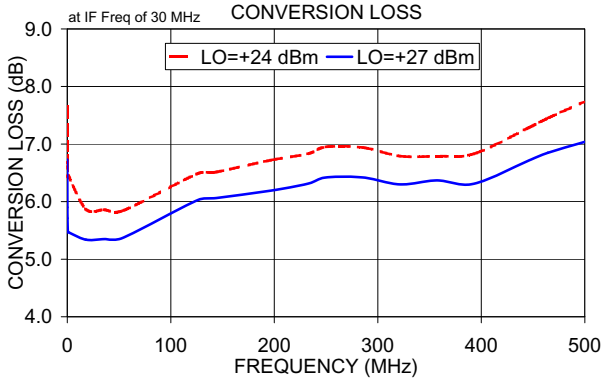
Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +27dBm	LO +27dBm	LO +27dBm	LO +27dBm	LO +27dBm
0.05	30.05	6.73	45.06	44.77	1.46	1.14
0.10	30.10	5.90	46.53	46.31	1.46	1.14
0.20	30.20	5.71	46.84	46.41	1.47	1.11
0.50	30.50	5.47	46.89	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

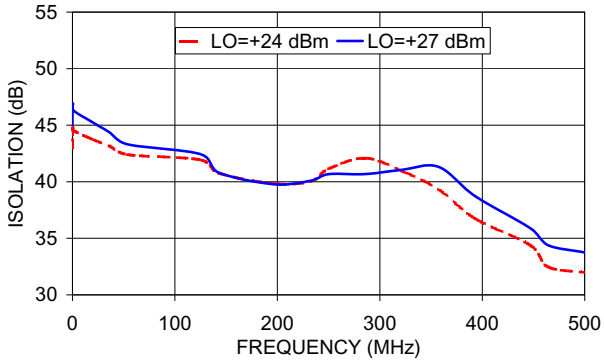


Performance Charts

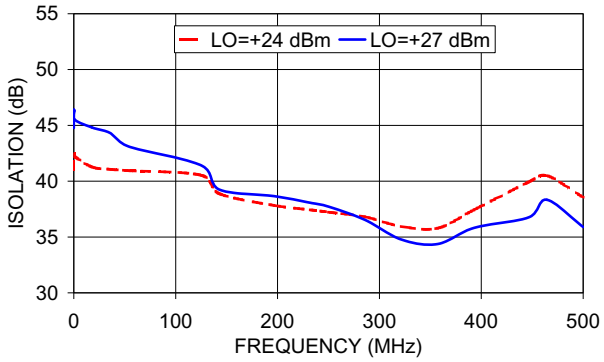
VAY-1
CONVERSION LOSS
at IF Freq of 30 MHz



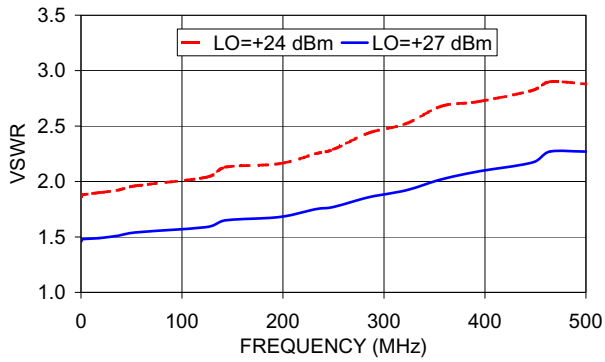
VAY-1
L-R ISOLATION



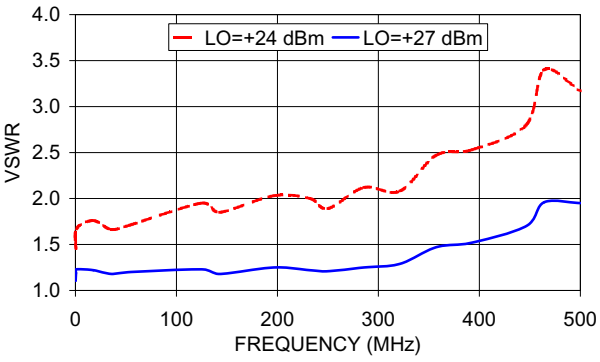
VAY-1
L-I ISOLATION



VAY-1
RF VSWR



VAY-1
LO VSWR



VAY-1
IF VSWR