

Non-Catalog Model

Frequency Mixer

Level 27 (LO Power +27 dBm)

ZFVY-1



CASE STYLE: K18

Important Note

This is a non-catalog model and can be manufactured on specific request. Pricing and delivery information can be supplied upon request.

Please click "Back", and then click "Contact Us" for Applications support.

ELECTRICAL SPECIFICATIONS 50Ω @+25°C

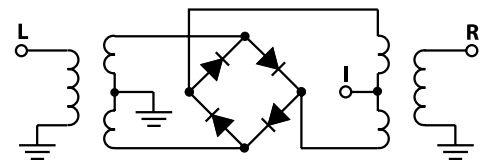
Parameter		Min.	Typ.	Max.	Units
LO/RF Frequency		0.5		500	MHz
IF Frequency		0.02		500	MHz
Conversion Loss	1-250 MHz		5.79	7.5	dB
	0.5-500 MHz			8.5	dB
L-R Isolation	0.5-50 MHz	40	47		dB
	50-250 MHz	35	46		dB
	250-500 MHz	25	35		dB
L-I Isolation	0.5-50 MHz	28	35		dB
	50-250 MHz	35	46		dB
	250-500 MHz	25	35		dB

1 dB COMP: +24 dBm typ.

MAXIMUM RATINGS

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

Electrical Schematic



PIN CONNECTIONS

LO	1
RF	2
IF	3

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The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

REV. OR
M113754
ZFVY-1
080408

Frequency Mixer

ZFVY-1-S

Typical Performance Data

RF (MHz)	LO (MHz)	CONVERSION LOSS (dB)			LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
		@LO (dBm)				@LO (dBm)			@LO (dBm)		
		+24	+27	+30		+24	+27	+30	+24	+27	+30
0.1	30.1	7.65	6.73	6.43	0.1	43.01	45.06	48.21	41.02	44.77	47.90
0.1	30.1	6.76	5.90	5.71	0.1	44.26	46.53	49.77	42.32	46.31	49.47
0.2	30.2	6.63	5.71	5.53	0.2	44.70	46.84	50.03	42.42	46.41	49.42
0.5	30.5	6.42	5.47	5.15	0.5	44.77	46.89	49.86	42.45	46.31	49.14
1.0	31.0	6.45	5.47	5.01	1.0	44.52	46.31	48.58	42.20	45.50	47.93
17.9	47.9	5.87	5.34	5.23	17.9	43.81	45.35	46.91	41.27	44.81	46.67
35.8	65.8	5.86	5.35	5.34	35.8	43.18	44.40	44.78	41.06	44.31	44.93
53.6	83.6	5.84	5.37	5.34	53.6	42.40	43.31	43.54	40.94	43.11	42.67
125.0	95.0	6.48	6.02	5.90	125.0	41.94	42.44	42.46	40.54	41.42	41.53
142.9	112.9	6.51	6.06	5.94	142.9	40.76	40.80	40.64	38.88	39.25	39.31
196.5	166.5	6.72	6.19	6.10	196.5	39.84	39.78	40.08	37.83	38.66	38.73
232.2	202.2	6.83	6.31	6.09	232.2	40.02	40.08	40.09	37.43	38.07	38.43
250.0	220.0	6.95	6.42	6.14	250.0	41.14	40.67	39.70	37.23	37.72	38.04
285.7	255.7	6.94	6.42	6.22	285.7	42.09	40.68	39.68	36.81	36.54	35.61
321.4	291.4	6.79	6.30	6.19	321.4	40.95	41.05	39.67	35.95	34.78	34.56
357.2	327.2	6.79	6.37	6.20	357.2	39.34	41.32	39.35	35.79	34.37	33.14
392.9	362.9	6.83	6.31	6.18	392.9	36.75	38.74	38.90	37.43	35.82	33.51
446.4	416.4	7.29	6.72	6.52	446.4	34.41	35.92	36.07	39.92	36.76	34.66
464.3	434.3	7.45	6.85	6.62	464.3	32.47	34.39	35.61	40.51	38.34	34.54
500.0	470.0	7.74	7.04	6.83	500.0	31.98	33.75	35.07	38.55	35.90	33.07

Frequency Mixer

ZFVY-1-S

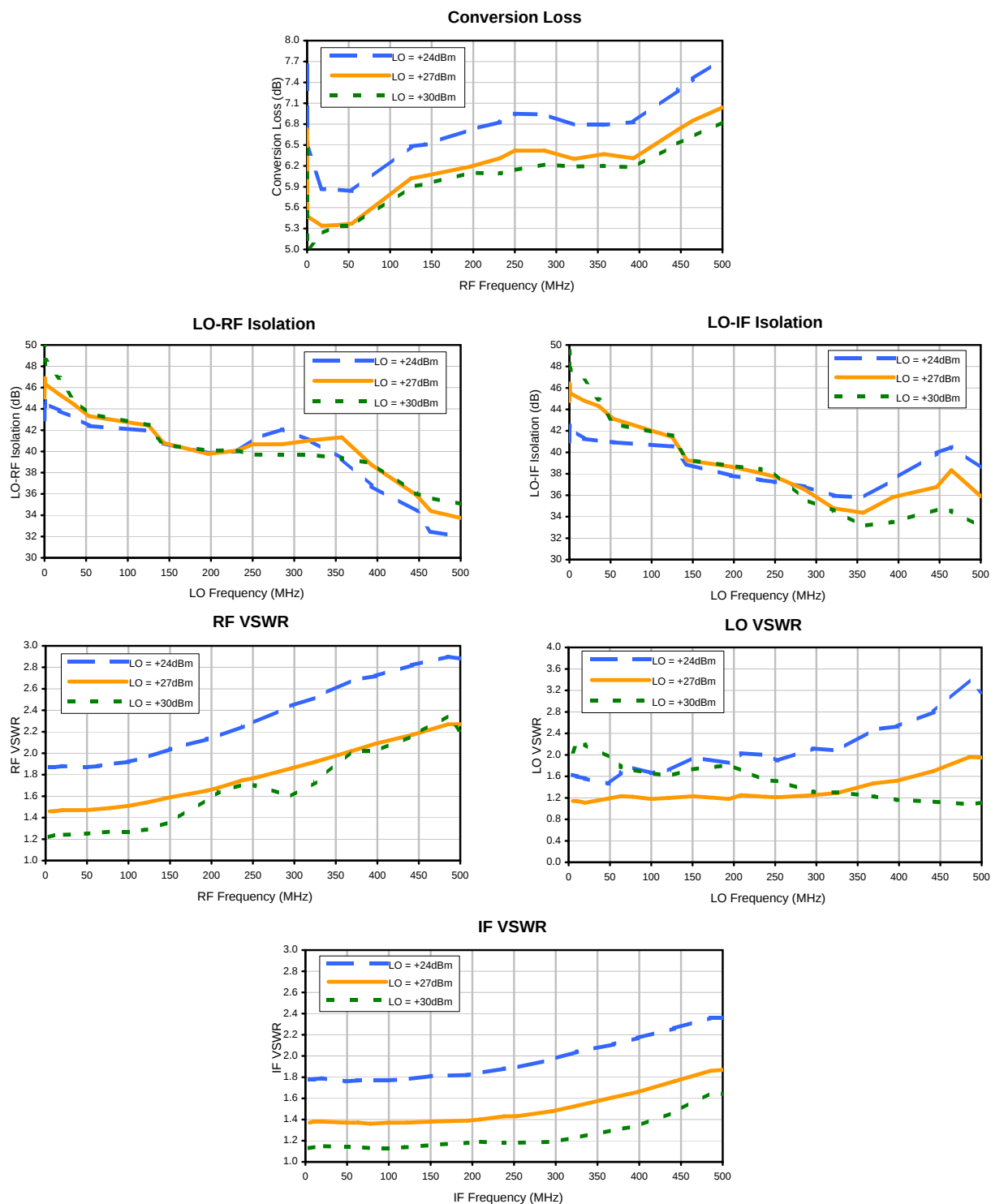
Typical Performance Data

RF/LO (MHz)	RF VSWR (:1)			LO VSWR (:1)			IF (MHz)	IF VSWR (:1)		
	@LO (dBm)			@LO (dBm)				@LO (dBm)		
	+24	+27	+30	+24	+27	+30		+24	+27	+30
5.0	1.87	1.46	1.22	1.63	1.14	2.06	5.0	1.78	1.37	1.13
10.0	1.87	1.46	1.24	1.60	1.14	2.23	10.0	1.78	1.38	1.14
20.0	1.88	1.47	1.24	1.56	1.11	2.19	20.0	1.79	1.38	1.15
48.7	1.87	1.47	1.25	1.46	1.19	1.96	48.7	1.76	1.37	1.14
63.2	1.88	1.48	1.26	1.67	1.23	1.78	63.2	1.77	1.37	1.14
77.8	1.90	1.49	1.27	1.76	1.22	1.72	77.8	1.77	1.36	1.13
100.0	1.92	1.51	1.27	1.66	1.18	1.66	100.0	1.77	1.37	1.13
121.5	1.96	1.54	1.29	1.71	1.20	1.61	121.5	1.78	1.37	1.14
150.6	2.04	1.59	1.36	1.95	1.23	1.73	150.6	1.81	1.38	1.16
194.3	2.13	1.65	1.57	1.85	1.18	1.81	194.3	1.82	1.39	1.18
208.8	2.16	1.68	1.64	2.03	1.25	1.71	208.8	1.84	1.40	1.19
237.9	2.25	1.75	1.71	2.00	1.22	1.53	237.9	1.88	1.43	1.18
252.5	2.29	1.77	1.70	1.89	1.21	1.51	252.5	1.89	1.43	1.18
296.2	2.44	1.86	1.60	2.12	1.25	1.31	296.2	1.97	1.48	1.19
325.3	2.52	1.92	1.73	2.08	1.29	1.30	325.3	2.04	1.53	1.23
369.0	2.68	2.02	2.02	2.47	1.47	1.23	369.0	2.11	1.61	1.30
398.1	2.72	2.09	2.02	2.53	1.52	1.16	398.1	2.17	1.66	1.34
441.8	2.82	2.17	2.16	2.80	1.70	1.13	441.8	2.26	1.76	1.47
485.4	2.90	2.27	2.35	3.40	1.96	1.08	485.4	2.36	1.86	1.65
500.0	2.88	2.27	2.21	3.17	1.95	1.11	500.0	2.36	1.87	1.64

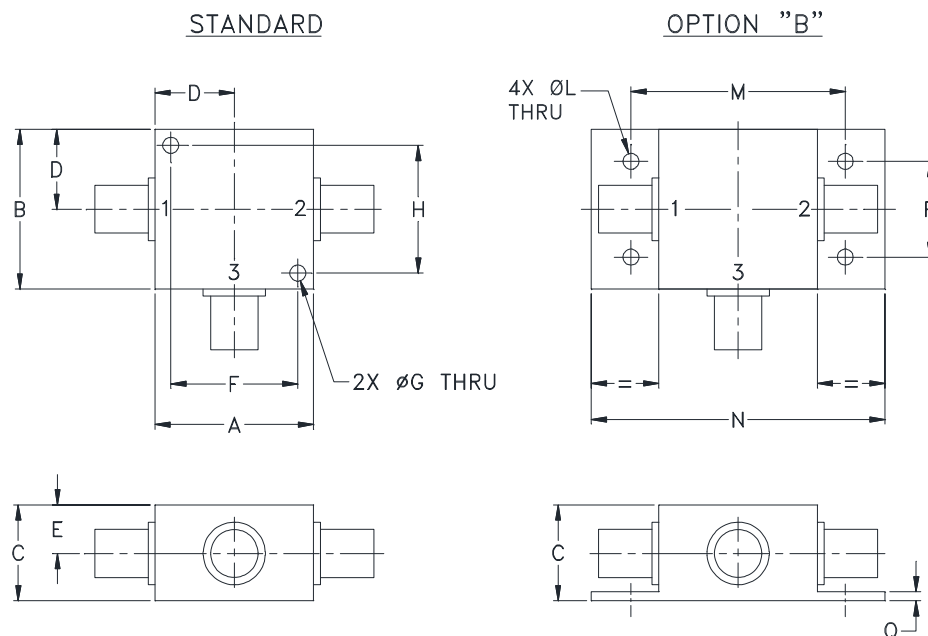
Frequency Mixer

ZFVY-1-S

Typical Performance Curves



Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
K18	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.00)	.38 (9.65)	1.000 (25.40)	.125 (3.18)	1.000 (25.40)	--	--	.125 (3.18)	1.688 (42.88)	2.18 (55.37)

CASE#	P	Q	WT. GRAMS
K18	.75 (19.05)	.07 (1.78)	70.0

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Mounting bracket available on request. Add suffix B to part number.
- For port marking 1, 2, and 3 see specifications data sheet.
- For bracket version, option B, dimension "C" changes from .75 to .94 inches when connectors are type N.
- Refer to the individual model data sheet for the type of connectors available.



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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I