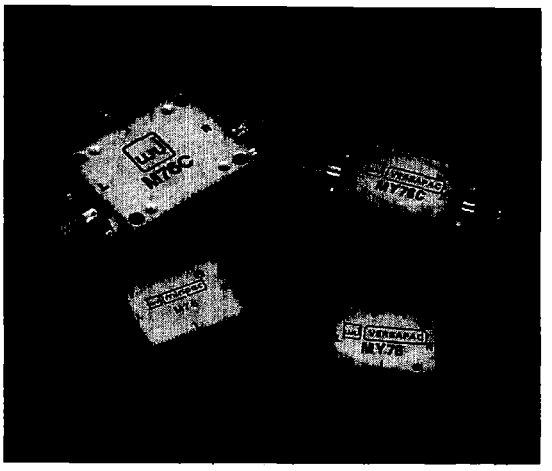
M76 / M76C
MY76 / MY76C

DOUBLE-BALANCED MIXER

- LO 2.5 TO 11.5 GHz
- RF 4.5 TO 9.5 GHz
- IF DC TO 2.0 GHz
- LO DRIVE + 10 dBm (NOMINAL)
- LOW NOISE FIGURE: 5.5 dB (TYP.)
- MIL–M–28837 EQUIVALENT LEVEL SCREENING AVAILABLE



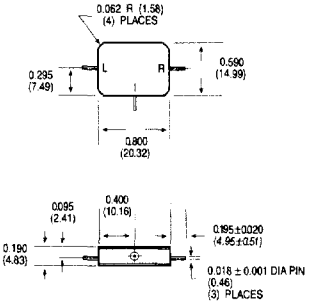
Guaranteed Specifications[1,2]

Characteristics	Typ.	+25°C	-54°C to +85°C	Test Conditions
SSB Conversion Loss and SSB Noise Figure (Max.)	5.5 dB	7.0 dB	7.5 dB	f_R 6 to 8.0 GHz f_L 4 to 9.0 GHz f_I 30 to 2000 MHz
	5.5 dB	7.0 dB	7.5 dB	f_R 5 to 9.0 GHz f_L 4 to 9.0 GHz f_I 30 to 1000 MHz
	6.0 dB	8.0 dB	8.5 dB	f_R 4.5 to 9.5 GHz f_L 2.5 to 11.5 GHz f_I 30 to 2000 MHz
Isolation (Min.)				
f_L at R	40 dB	25 dB	23 dB	f_L 2.5 to 9 GHz
	30 dB	20 dB	18 dB	f_L 9.0 to 11.5 GHz
f_L at I	25 dB	15 dB	13 dB	f_L 4.0 to 11.5 GHz
	20 dB	10 dB	8 dB	f_L 2.5 to 4.0 GHz
Conversion Compression	1.0 dB			f_R Level +3 dBm f_L Level +10 dBm
Third-Order Input Intercept Point	+13 dBm			f_{R1} 7.00 GHz at -6 dBm f_{R2} 7.01 GHz at -6 dBm f_L 8.0 GHz at +10 dBm
Single Tone IM Suppression				f_R 4.5 to 9.5 GHz at -10 dBm f_L 2.5 to 11.5 GHz at -10 dBm
f_L f_R				
2 x 2	56 dB			
2 x 3	> 70 dB			
3 x 2	37 dB			
3 x 3	50 dB			
3 x 4	> 70 dB			
4 x 3	> 70 dB			

Notes:
1. Measured in a 50-ohm system with nominal LO drive and downconverter application only, unless otherwise specified. The I-Port frequency range extends to DC for phase detection, pulse modulation, or attenuator applications. I-Port VSWR degrades
2. Typical values are measured at 25°C and are not guaranteed. Typical performance applies to the MINPAC™ model and does not necessarily reflect the performance of the VERSAPAC® model.

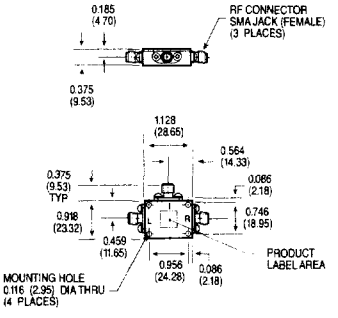
Outline Drawings

M76
(MINPAC)



DIMENSIONS ARE IN INCHES (MILLIMETERS)
±.015 (.38) UNLESS OTHERWISE SPECIFIED

M76C
(CONNECTORIZED)



DIMENSIONS ARE IN INCHES (MILLIMETERS)
±.015 (.38) UNLESS OTHERWISE SPECIFIED

Absolute Maximum Ratings

Operating Temperature	-54°C to +100°C
Storage Temperature	-65°C to +100°C
Peak Input Power	+23 dBm max. at +25°C, +20 dBm max. at +100°C
Peak Input Current at 25°C	100 mA DC

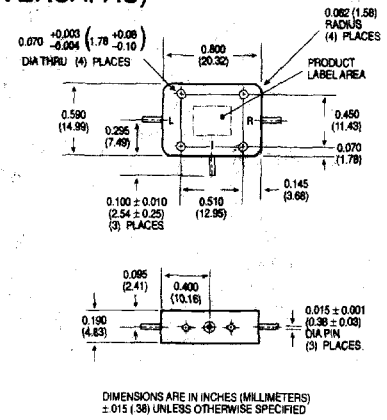
Weight

M76:	9 grams (0.32 oz.) max.
M76C:	36 grams (1.27 oz.) max.
MY76:	7.9 grams (0.28 oz.) max.
MY76C:	20.0 grams (0.70 oz.) max.

WJ Customer Service: 1-800-WJ1-4401 • FAX: 415-813-2758 • e-mail: mw.devices@wj.com

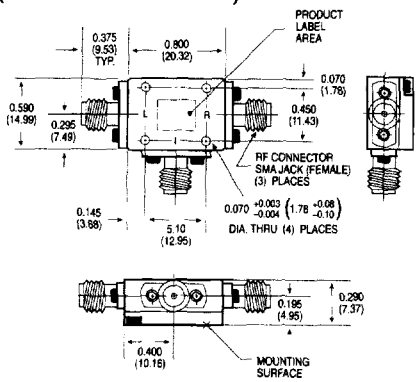
Outline Drawings

MY76 (VERSAPAC)



DIMENSIONS ARE IN INCHES (MILLIMETERS)
±.015 (.38) UNLESS OTHERWISE SPECIFIED

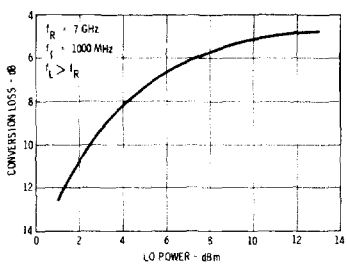
MY76C (CONNECTORIZED)



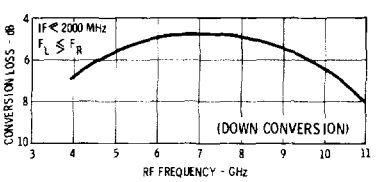
DIMENSIONS ARE IN INCHES (MILLIMETERS)
±.015 (.38) UNLESS OTHERWISE SPECIFIED

Typical Performance at 25°C*

Conversion Loss Vs. LO Drive

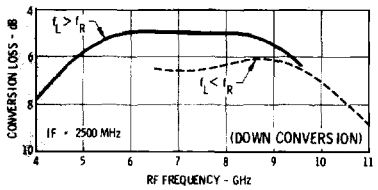


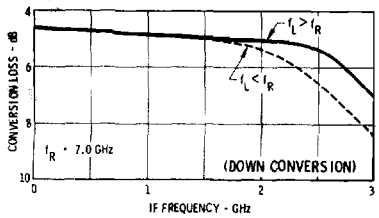
Conversion Loss vs. Frequency



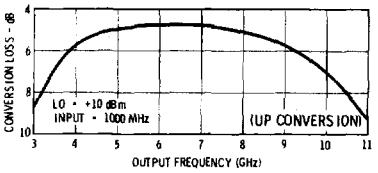
Typical Performance at 25°C*

Conversion Loss vs. Frequency

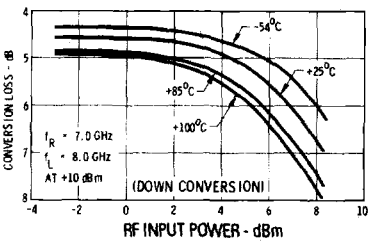




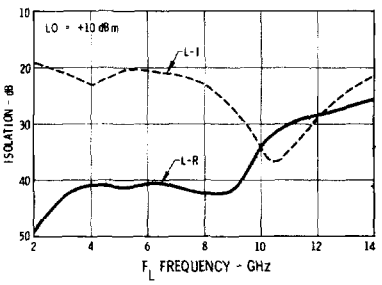
Conversion Loss vs. Output Frequency

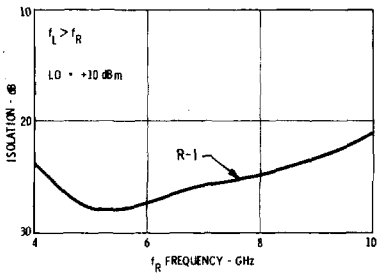


Conversion Loss vs. RF Input Power

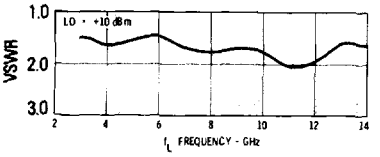


Isolation vs. Frequency

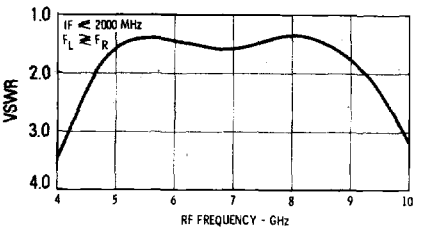




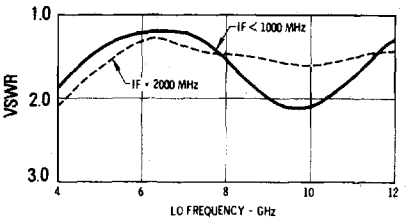
L-Port VSWR vs. Frequency



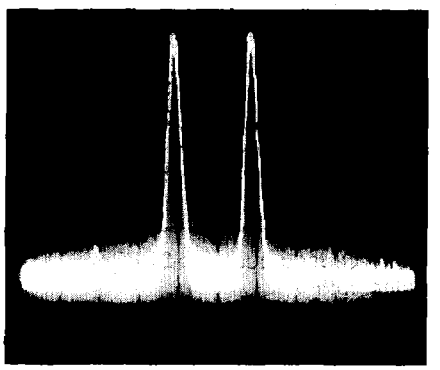
R-Port VSWR vs. Frequency



I-Port VSWR vs. f_L



Typical Two-Tone Performance



Typical Two-Tone Performance: f_I = 1.0 GHz, $f_L > f_R$, f_L = 8.0 GHz @ +10 dBm, f_R 7.0 GHz ± 1 MHz, f_R @ -10 dBm. Vertical scale = 10 dB/cm.

*Typical performance applies to the MINPAC™ model and does not necessarily reflect the performance of the VERSAPAC® model.

9