FD93H / FD93HC

Frequency Doubler

Rev. V1

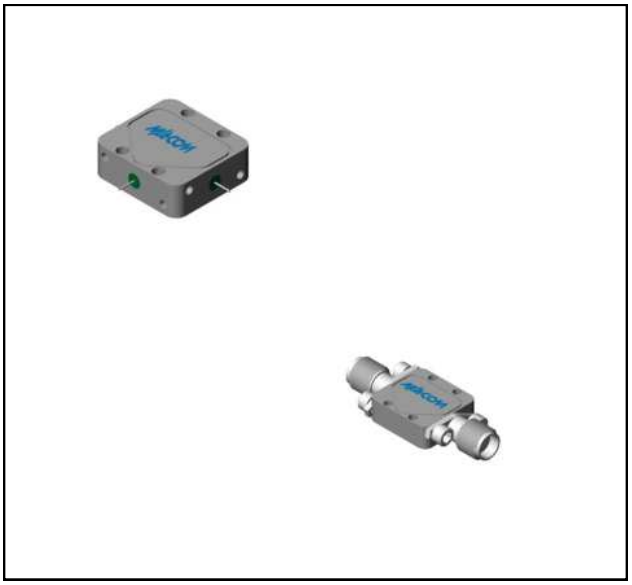
Features

- INPUT: 2 TO 9 GHz
- OUTPUT: 4 TO 18 GHz
- INPUT DRIVE LEVEL: +19 dBm (NOMINAL)
- HERMETICALLY-SEALED PACKAGE

Description

The FD93H is a passive bridge diode frequency doubler, designed for use in the high volume commercial and test equipment applications. The design utilizes Schottky bridge quad diodes and broadband baluns to attain excellent performance. The use of high temperature solder and welded assembly processes used internally makes it ideal for use in semi-automated and automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

Product Image



Ordering Information

Part Number	Package
FD93H	Versapac
FD93HC	SMA Connectorized

Electrical Specifications: $Z_0 = 50\Omega$ $P_{in} = +19$ dBm

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54° to +85°C
SSB Conversion Loss (max)	f_{in} = 2 to 4 GHz f_{in} = 4 to 9 GHz	dB dB	10.0 12.0	13.0 14.0	13.3 14.3
Fundamental Suppression (min)	f_{in} = 2 to 9 GHz	dBc	25	18	17
Third Harmonic Suppression	f_{in} = 2 to 6 GHz	dBc	25	16	15
Input VSWR	f_{in} = 2 to 9 GHz		1.5:1		

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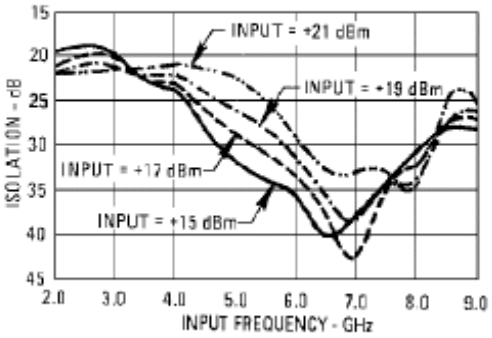
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Typical Performance Curves

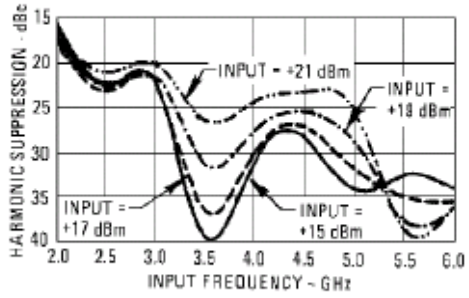
Conversion Loss Vs. LO Drive Power



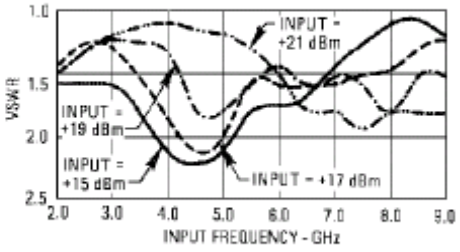
Isolation vs. Frequency



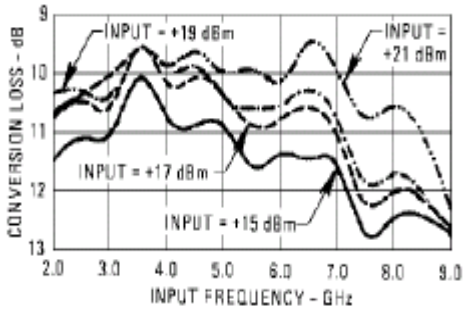
Suppression vs. Input Frequency



VSWR vs. Frequency



Conversion Loss vs. Input Frequency



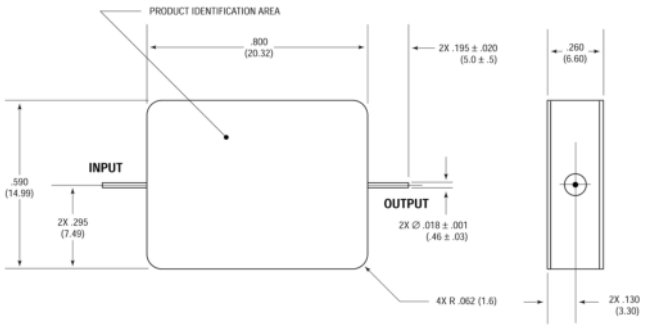
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Absolute Maximum Ratings

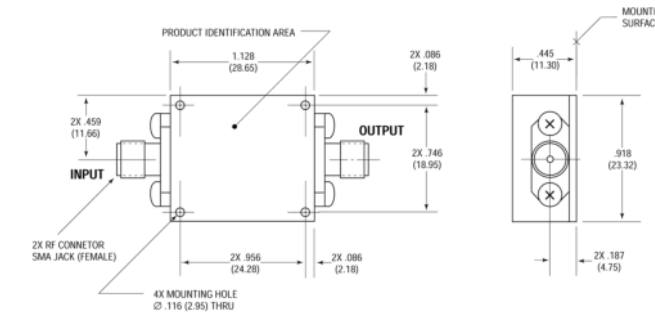
Parameter	Absolute Maximum
Operating Temperature	-54ºC to +100ºC
Storage Temperature	-65ºC to +100ºC
Peak Input Power	+26 dBm max @ +25ºC +23 dBm max @ +100ºC

Outline Drawing: Versapac *



Weight: 8 grams (0.28 oz.) max

Outline Drawing: SMA Connectorized *



Weight: 29 grams (1.02 oz.) max

* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

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