FD93 / FD93C



Frequency Doubler

Rev. V2

Features

INPUT: 2 TO 9 GHz **OUTPUT: 4 TO 18 GHz**

INPUT DRIVE LEVEL: +12 dBm (NOMINAL)

HERMETICALLY-SEALED PACKAGE

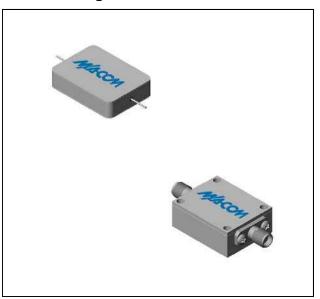
Description

The FD93 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.

Ordering Information

Part Number	Package
FD93	Versapac
FD93C	SMA Connectorized

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ $P_{in} = +12 \text{ dBm}$

Parameter	Test Conditions	Units	Typical	Guaranteed	
Parameter				+25°C	-54º to +85ºC
SSB Conversion Loss (max)	f_{in} = 2 to 4 GHz f_{in} = 4 to 9 MHz	dB dB	10.0 12.0	13.0 14.0	13.5 14.5
Fundamental Suppression (min)	$f_{in} = 2 \text{ to } 9 \text{ GHz}$	dBc	25	18	16
Third Harmonic Suppression	f _{in} = 2 to 6 GHz	dBc	25	17	15
Input VSWR	f _{in} = 2 to 9 GHz		1.5:1		

Commitment to produce in volume is not guaranteed.

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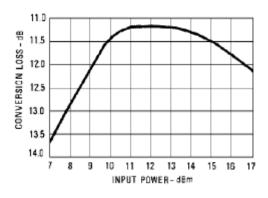


Frequency Doubler

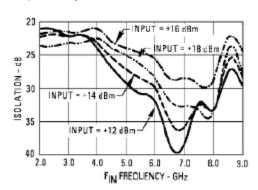
Rev. V2

Typical Performance Curves

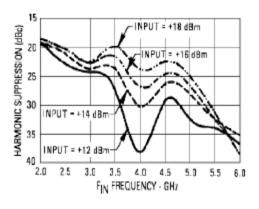
Conversion Loss vs. Input Power



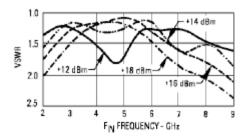
Input/Output Isolation



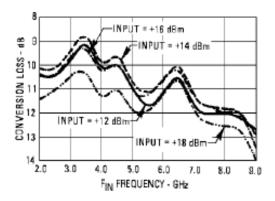
Suppression vs. Input Frequency



VSWR vs. Frequency



Conversion Loss vs. Input Frequency



PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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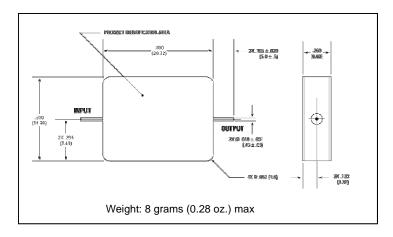
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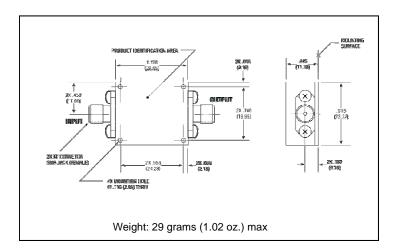
Absolute Maximum Ratings

Parameter	Absolute Maximum	
Operating Temperature	-54°C to +100°C	
Storage Temperature	-65°C to +100°C	
Peak Input Power	+23 dBm max @ +25°C +20 dBm max @ +100°C	

Outline Drawing: Versapac



Outline Drawing: SMA Connectorized *



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

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