

FD25H / FD25HC / SFD25H

Frequency Doubler

Rev. V3

Features

- IINPUT: 5 TO 2400 MHz
- OUTPUT: 10 TO 4800 MHz
- INPUT DRIVE LEVEL +23 dBm (NOMINAL)
- HERMETICALLY-SEALED PACKAGE

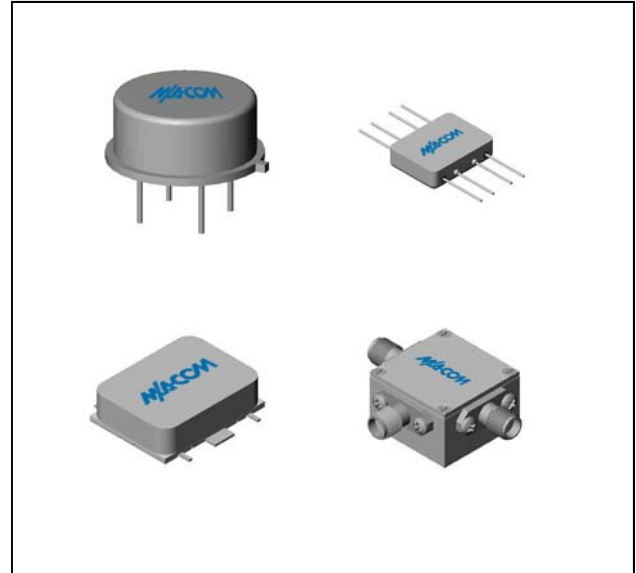
Description

The FD25H 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 broad-band 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
FD25H	TO-8
FD25HC	SMA Connectorized
SFD25H	Surface Mount
MAUC-010499-SFD25H	Surface Mount Screened

Product Image



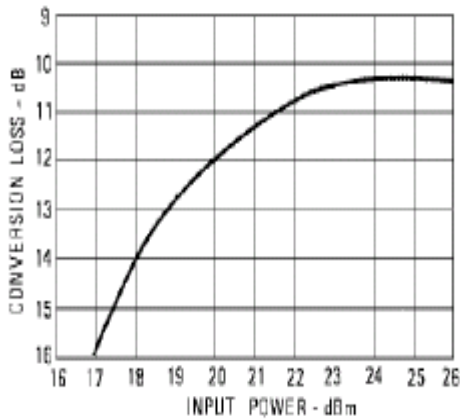
Electrical Specifications: $Z_0 = 50\Omega$ $P_{in} = +23$ dBm

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54° to +85°C*
SSB Conversion Loss (max)	$f_{in} = 5$ to 2400 MHz	dB	12.0	13.5	13.8
Fundamental Suppression (min)	$f_{in} = 5$ to 1000 MHz	dBc	35	25	24
	$f_{in} = 1000$ to 2000 MHz	dBc	25	20	19
	$f_{in} = 2000$ to 2400 MHz	dBc	20	16	15
Third Harmonic Suppression	$f_{in} = 5$ to 500 MHz	dBc	40	30	29
	$f_{in} = 500$ to 2400 MHz	dBc	35	25	24
Input VSWR	$f_{in} = 5$ to 2400 MHz		1.5:1		

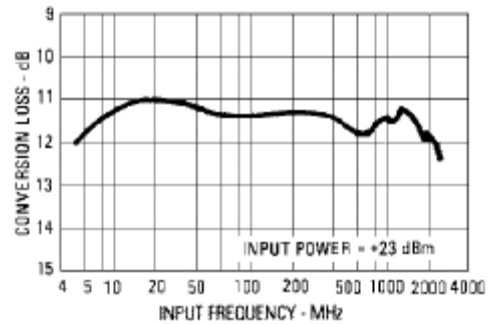
* The FD25HC specification limits apply at 0°C to +50°C.

Typical Performance Curves

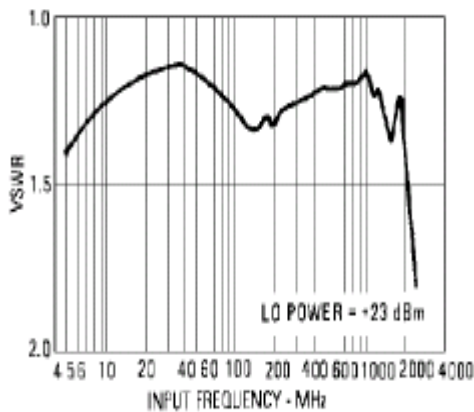
Conversion Loss vs. Input Power



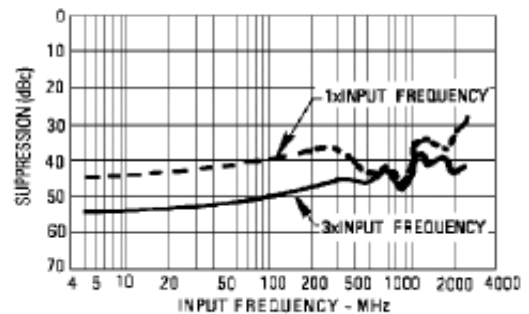
Conversion Loss vs. Input Frequency



VSWR vs. Frequency



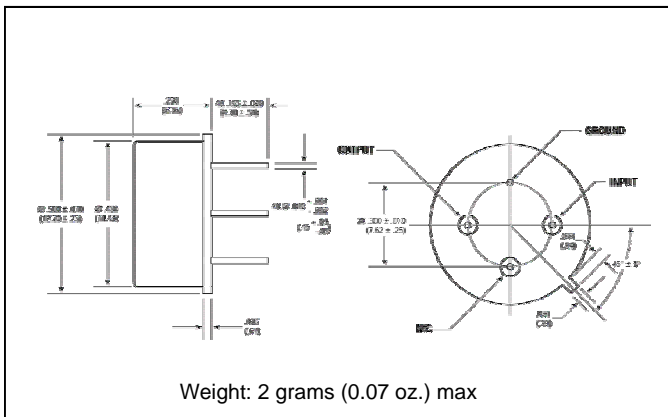
Harmonic Suppression vs. Input Frequency



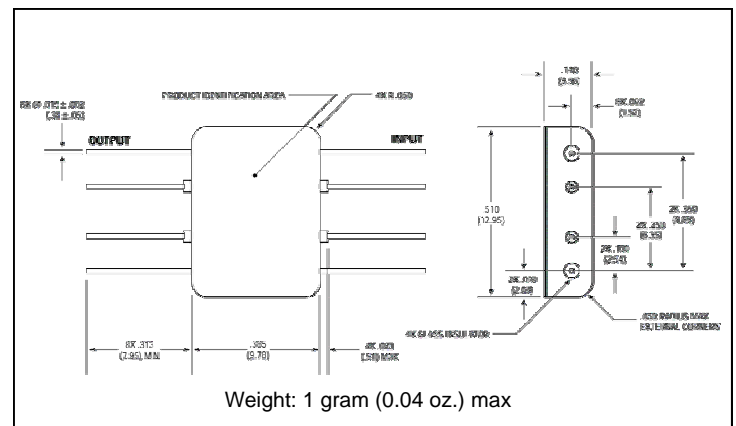
Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-54°C to +100°C
Storage Temperature	-65°C to +100°C
Peak Input Power	+27.6 dBm max @ +25°C +25 dBm max @ +100°C

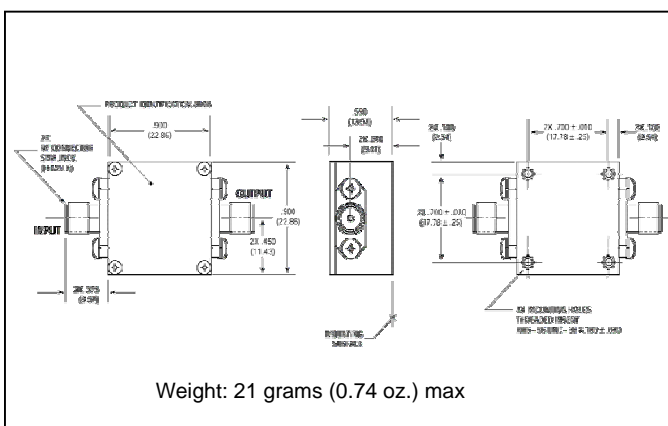
Outline Drawing: TO-8 *



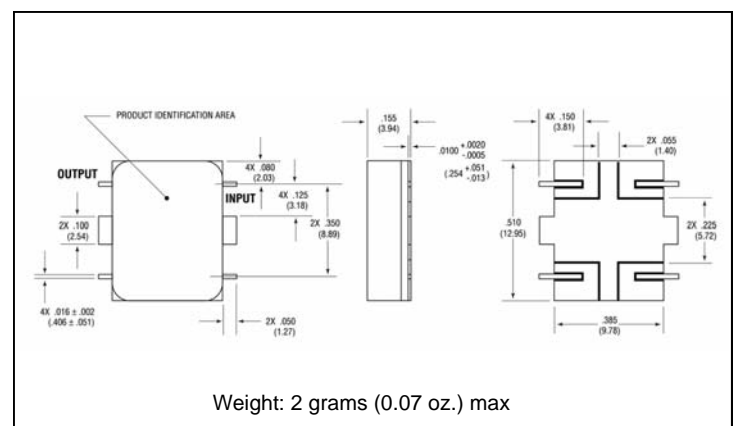
Outline Drawing: Flatpack *



Outline Drawing: SMA Connectorized *



Outline Drawing: Surface Mount *



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