FD25H / FD25HC / SFD25H



Features

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

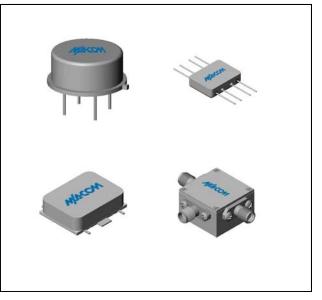
Description

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 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		
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

_			Typical	Guaranteed	
Parameter	Test Conditions	Units		+25⁰C	-54º to +85ºC*
SSB Conversion Loss (max)	$f_{in} = 5$ to 2400 MHz	dB	12.0	13.5	13.8
Fundamental Suppression (min)	$\begin{array}{l} f_{in} = 5 \text{ to } 1000 \text{ MHz} \\ f_{in} = 1000 \text{ to } 2000 \text{ MHz} \\ f_{in} = 2000 \text{ to } 2400 \text{ MHz} \end{array}$	dBc dBc dBc	35 25 20	25 20 16	24 19 15
Third Harmonic Suppression	$\label{eq:fin} \begin{array}{l} f_{in}=5 \text{ to } 500 \text{ MHz} \\ f_{in}=500 \text{ to } 2400 \text{ MHz} \end{array}$	dBc dBc	40 35	30 25	29 24
Input VSWR	f _{in} = 5 to 2400 MHz		1.5:1		

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

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Rev. V3

FD25H / FD25HC / SFD25H

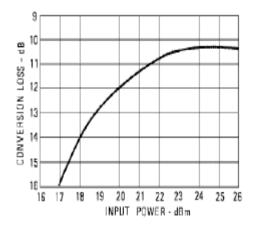
Frequency Doubler



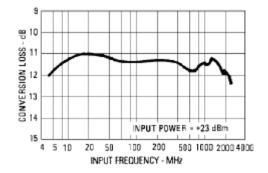
Rev. V3

Typical Performance Curves

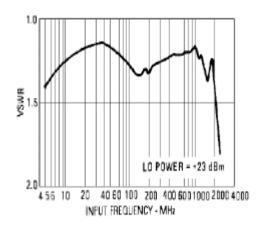
Conversion Loss vs. Input Power



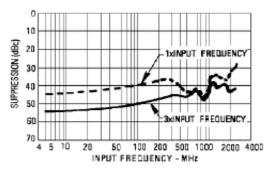
Conversion Loss vs. Input Frequency



VSWR vs. Frequency



Harmonic Suppression vs. Input Frequency



2

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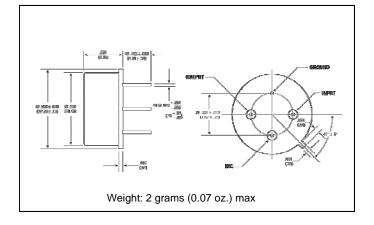
Frequency Doubler

Rev. V3

Absolute Maximum Ratings

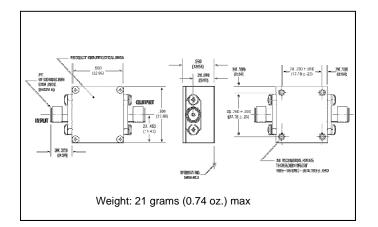
Parameter	Absolute Maximum
Operating Temperature	-54°C to +100°C
Storage Temperature	-65ºC to +100ºC
Peak Input Power	+27.6 dBm max @ +25⁰C +25 dBm max @ +100⁰C

Outline Drawing: TO-8 *

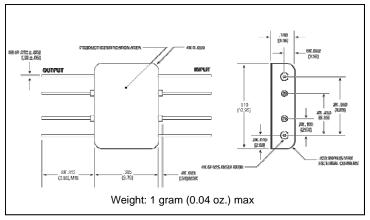


Outline Drawing: SMA Connectorized

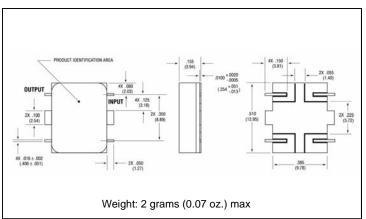
3



Outline Drawing: Flatpack



Outline Drawing: Surface Mount



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

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