# FD25H / FD25HC / SFD25H



## **Frequency Doubler**

Rev. V3

#### **Features**

IINPUT: 5 TO 2400 MHzOUTPUT: 10 TO 4800 MHz

INPUT DRIVE LEVEL +23 dBm (NOMINAL)

HERMETICALLY-SEALED PACKAGE

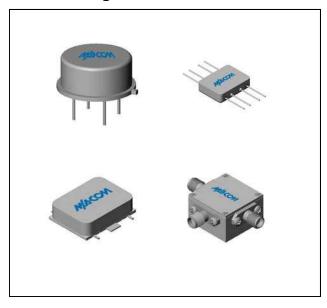
#### **Description**

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

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

<sup>\*</sup> The FD25HC specification limits apply at 0°C to +50°C.

Commitment to produce in volume is not guaranteed.

India Tel: +91.80.4155721
China Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

# FD25H / FD25HC / SFD25H

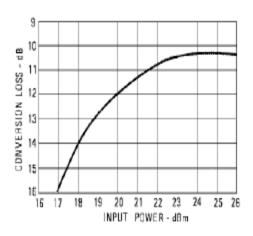


## **Frequency Doubler**

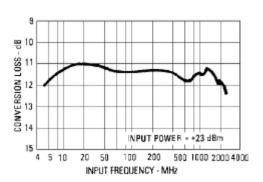
Rev. V3

### **Typical Performance Curves**

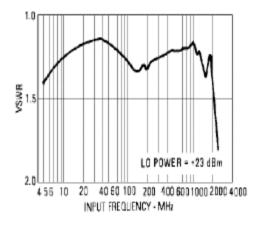
#### Conversion Loss vs. Input Power



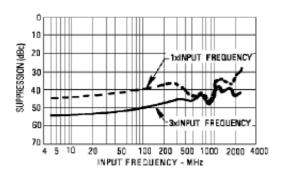
#### Conversion Loss vs. Input Frequency



#### VSWR vs. Frequency



#### Harmonic Suppression vs. Input Frequency



- North America Tel: 800.366.2266 Europe Tel: +353.21.244.6400
- India Tel: +91.80.4155721
- China Tel: +86.21.2407.1588

# FD25H / FD25HC / SFD25H



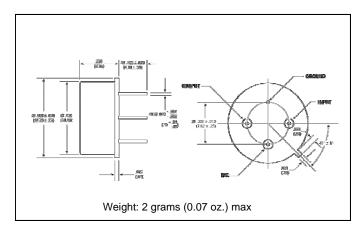
## **Frequency Doubler**

Rev. V3

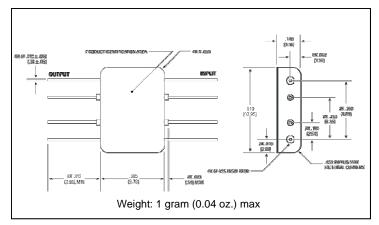
### **Absolute Maximum Ratings**

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

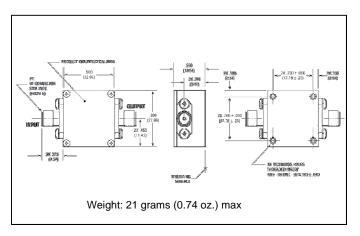
### Outline Drawing: TO-8



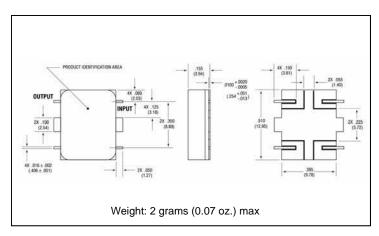
## Outline Drawing: Flatpack \*



## Outline Drawing: SMA Connectorized \*



# Outline Drawing: Surface Mount



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

Commitment to produce in volume is not guaranteed.

- India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.