

## Low Cost Frequency Doubler

Rev. V2

#### **Features**

INPUT: 10 TO 2400 MHz OUTPUT: 20 TO 4800 MHz

INPUT DRIVE LEVEL +10 dBm (NOMINAL)

SURFACE MOUNT

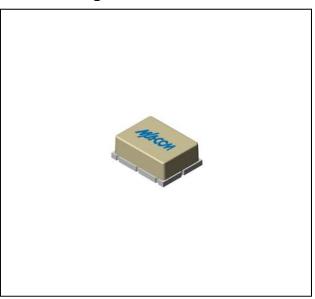
#### **Description**

The CSFD25 is a passive bridge diode frequency doubler, designed for use in the high volume wireless and test equipment applications. The design utilizes Schottky bridge quad diodes and broadband baluns to attain excellent performance. Due to 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
CSFD25	Surface Mount

#### Product Image



# Electrical Specifications: $Z_0 = 50\Omega$ $P_{in} = +10$ dBm

Parameter Test Conditions	Units	Typical	Guaranteed		
	rest Conditions	Onits		+25°C	-40° to +85°C
SSB Conversion Loss (max)	$f_{in} = 10 \text{ to } 2400 \text{ MHz}$	dB	11.5	13.0	13.5
Suppression Fundamental (min)	$\begin{array}{l} f_{in} = 10 \text{ to } 1000 \text{ MHz} \\ f_{in} = 1000 \text{ to } 2000 \text{ MHz} \\ f_{in} = 2000 \text{ to } 2400 \text{ MHz} \end{array}$	dBc dBc dBc	35 25 20	25 20 16	23 18 14
Third Harmonic Suppression (min)	$\begin{array}{l} f_{in} = 10 \text{ to } 500 \text{ MHz} \\ f_{in} = 500 \text{ to } 1000 \text{ MHz} \\ f_{in} = 1000 \text{ to } 2400 \text{ MHz} \end{array}$	dBc dBc dBc	50 40 35	40 30 25	38 28 23
Input VSWR	$f_{in} = 10 \text{ to } 2400 \text{ MHz}$		2.0:1		

Commitment to produce in volume is not guaranteed.

<sup>•</sup> North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

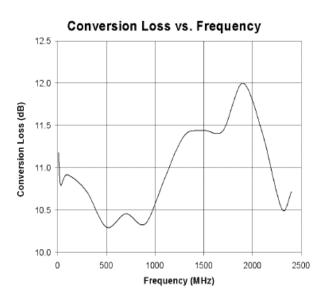
<sup>•</sup> India Tel: +91.80.4155721



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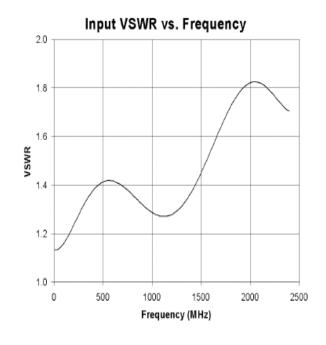
#### **Typical Performance Curves**



# Fundamental Suppression vs. Frequency 45 40 Fundumental Suppression (dBc) 25 20 500 0 1000 1500 2000 2500

Frequency (MHz)

## Third Harmonic Suppression vs. Frequency 60 55 Third Harmonic Suppression (dBc) 50 45 40 35 30 1000 1500 2000 2500 0 500 Frequency (MHz)



<sup>•</sup> India Tel: +91.80.4155721 Visit www.macomtech.com for additional data sheets and product information.

<sup>•</sup> China Tel: +86.21.2407.1588

# CSFD25



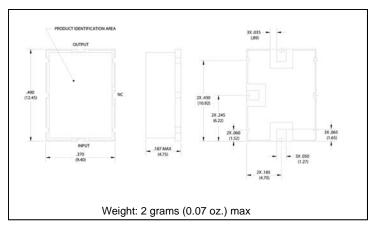
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#### **Absolute Maximum Ratings**

Parameter	Absolute Maximum		
Operating Temperature	-54°C to +85°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+23 dBm max @ +25°C +20 dBm max @ +100°C		

# Outline Drawing: Surface Mount



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

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