

### **Low Cost Frequency Doubler**

Rev. V2

#### **Features**

INPUT: 10 TO 2400 MHzOUTPUT: 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	Dougnator Toot Conditions		Typical	Guaranteed	
Parameter Test Conditions	rest continons	Units		+25°C	-40° to +85°C
SSB Conversion Loss (max)	f <sub>in</sub> = 10 to 2400 MHz	dB	11.5	13.0	13.5
Suppression Fundamental (min)	$f_{in} = 10 \text{ to } 1000 \text{ MHz}$ $f_{in} = 1000 \text{ to } 2000 \text{ MHz}$ $f_{in} = 2000 \text{ to } 2400 \text{ MHz}$	dBc dBc dBc	35 25 20	25 20 16	23 18 14
Third Harmonic Suppression (min)	$f_{in} = 10 \text{ to } 500 \text{ MHz}$ $f_{in} = 500 \text{ to } 1000 \text{ MHz}$ $f_{in} = 1000 \text{ to } 2400 \text{ MHz}$	dBc dBc dBc	50 40 35	40 30 25	38 28 23
Input VSWR	f <sub>in</sub> = 10 to 2400 MHz		2.0:1		

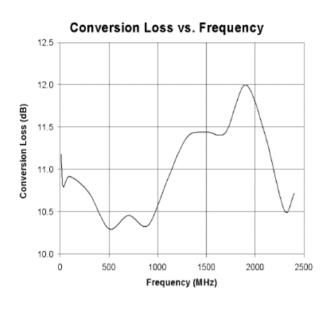
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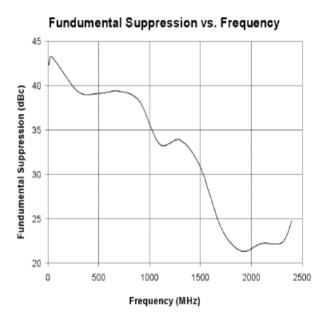


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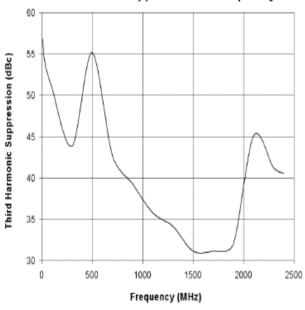
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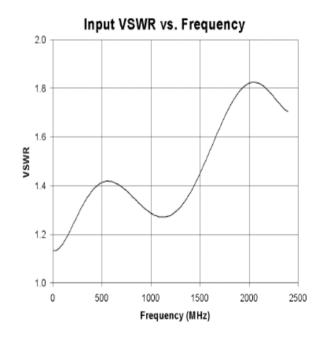
### **Typical Performance Curves**





# Third Harmonic Suppression vs. Frequency







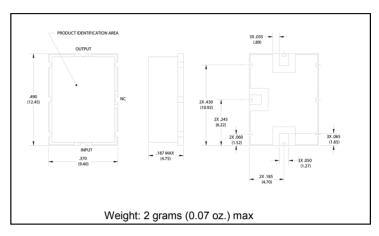
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#### **Absolute Maximum Ratings**

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.

CSFD25



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