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## Low Cost Frequency Doubler

Rev. V2

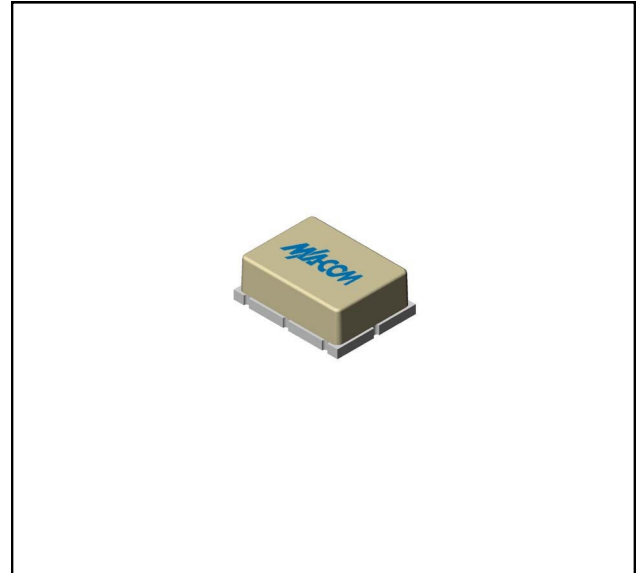
### Features

- 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.

### Product Image



### Ordering Information

Part Number	Package
CSFD25	Surface Mount

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

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

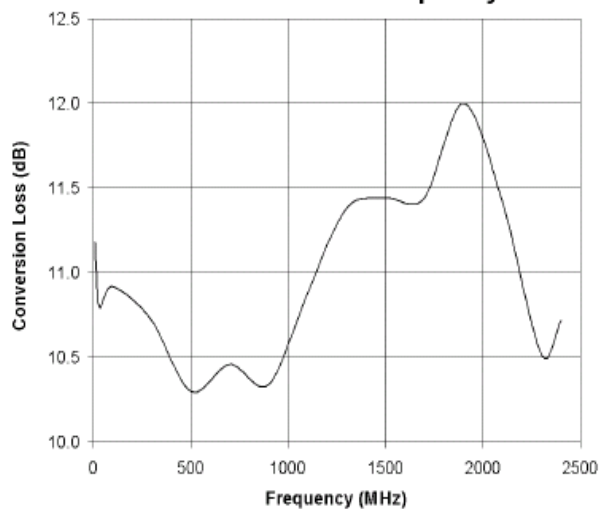
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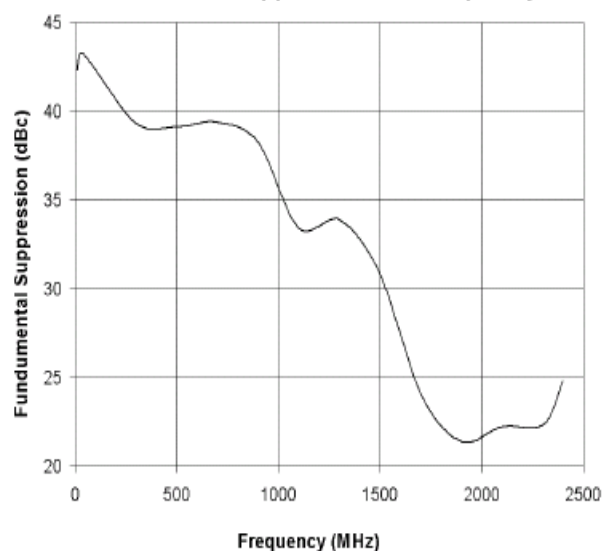
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### Typical Performance Curves

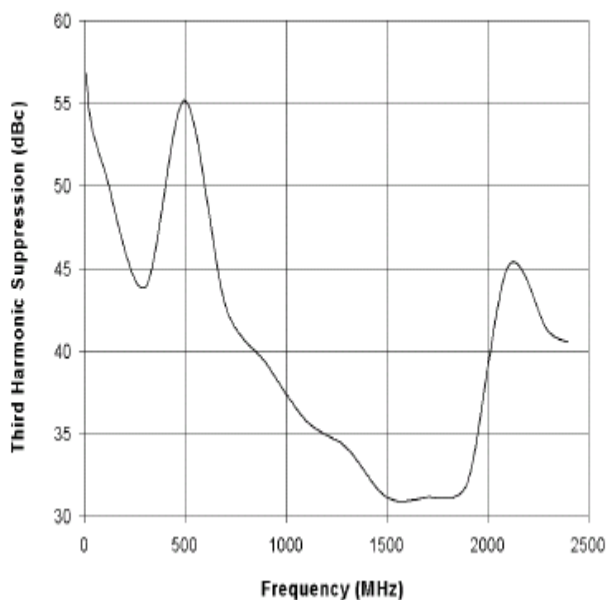
**Conversion Loss vs. Frequency**



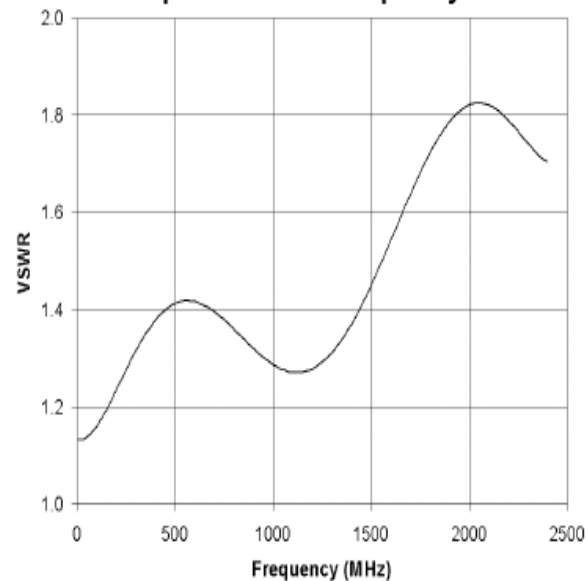
**Fundamental Suppression vs. Frequency**



**Third Harmonic Suppression vs. Frequency**



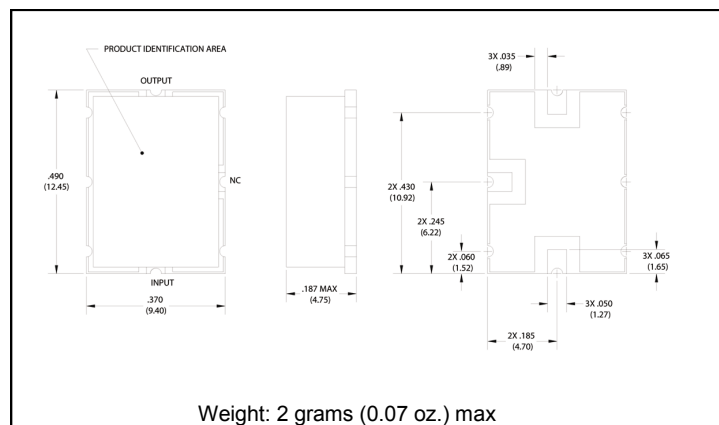
**Input VSWR vs. Frequency**



### 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)  $\pm 0.015$  (0.38) unless otherwise specified.



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