

Low Cost Frequency Doubler

Rev. V1

Features

- Input Frequency 50 to 3300 MHz
- Output Frequency 100 to 6600 MHz
- Input Drive +10 dBm (nominal)
- Surface Mount

Description

The CSFD26 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

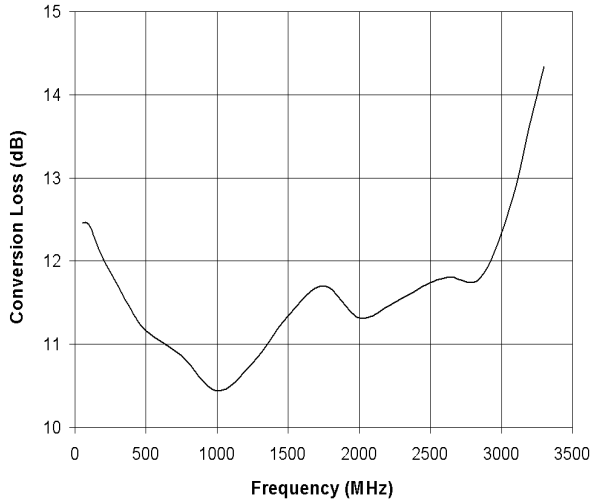
Part Number	Package
CSFD26	Surface Mount

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

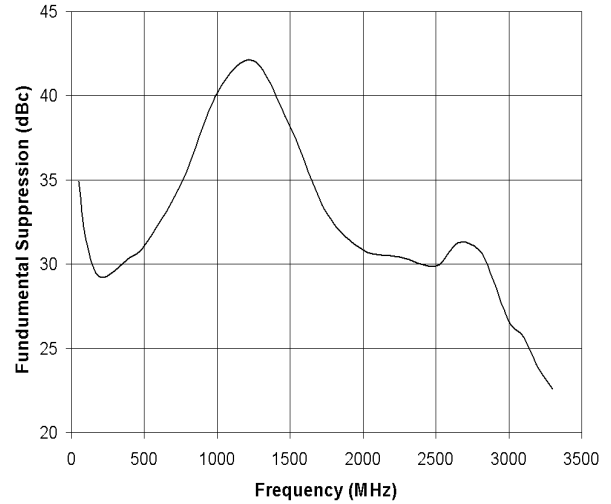
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54° to +85°C
SSB Conversion Loss (max)	$f_{in} = 50$ to 400 MHz	dB	12	14.5	15
	$f_{in} = 400$ to 2500 MHz		12	13.5	14
	$f_{in} = 2500$ to 3000 MHz		12.5	14.0	14.5
	$f_{in} = 3000$ to 3300 MHz		13.5	15.5	16.0
Suppression Fundamental (min)	$f_{in} = 50$ to 500 MHz	dBc	25	22	20
	$f_{in} = 500$ to 3300 MHz		20	17	15
Third Harmonic Suppression (min)	$f_{in} = 50$ to 200 MHz	dBc	25	22	20
	$f_{in} = 200$ to 3300 MHz		19	17	15
Input VSWR	$f_{in} = 50$ to 2500 MHz		1.5:1		
	$f_{in} = 2500$ to 3300 MHz		2.0:1		

Typical Performance Curves

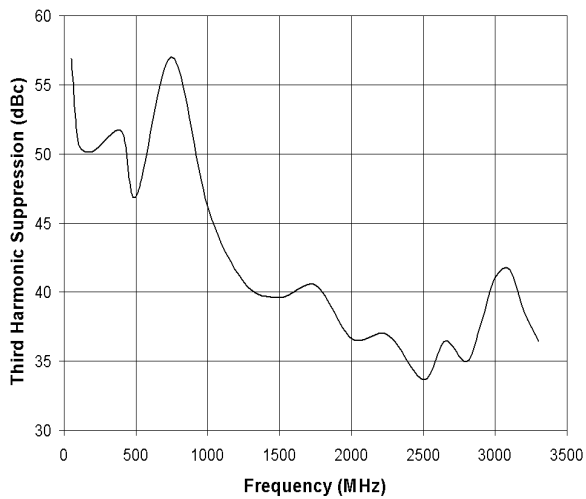
Conversion Loss vs. Frequency



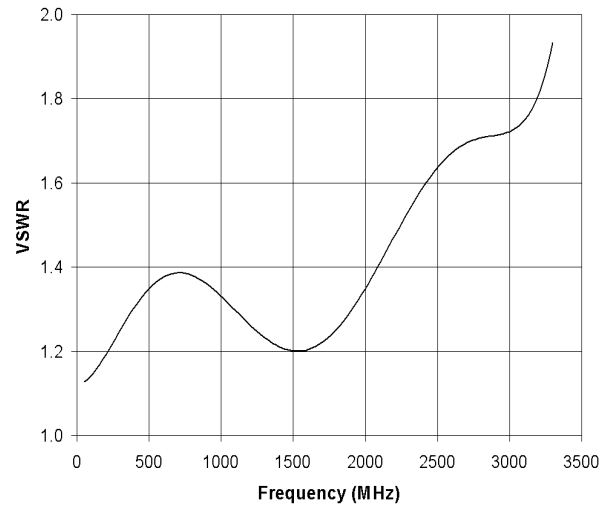
Fundamental Suppression vs. Frequency



Third Harmonic Suppression vs. Frequency



Input VSWR vs. Frequency



CSFD26

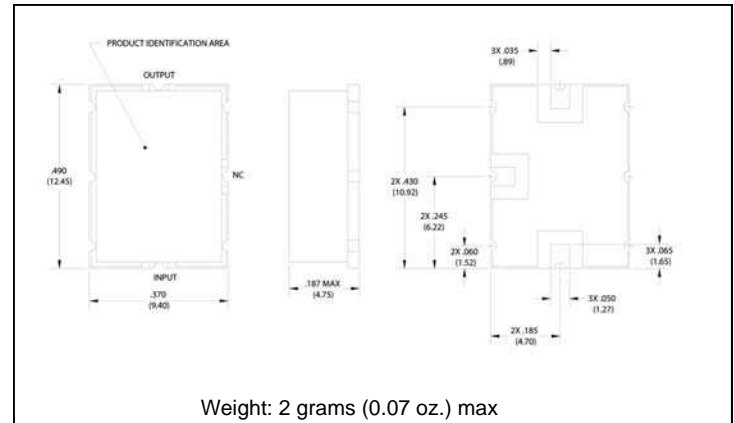
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Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-54°C to +100°C
Storage Temperature	-65°C to +100°C
Peak Input Power	+23 dBm max @ +25°C +20 dBm max @ +100°C
Peak Input Current	50 mA DC

Outline Drawing: Surface Mount *



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