

Low Cost Frequency Doubler

Rev. V1

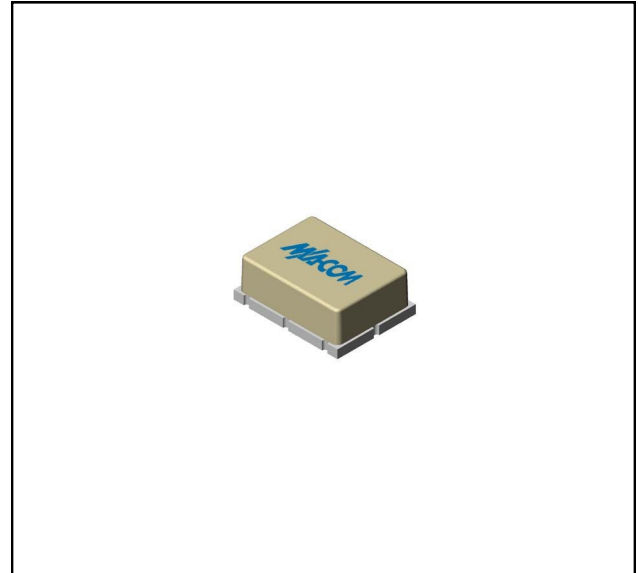
Features

- 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

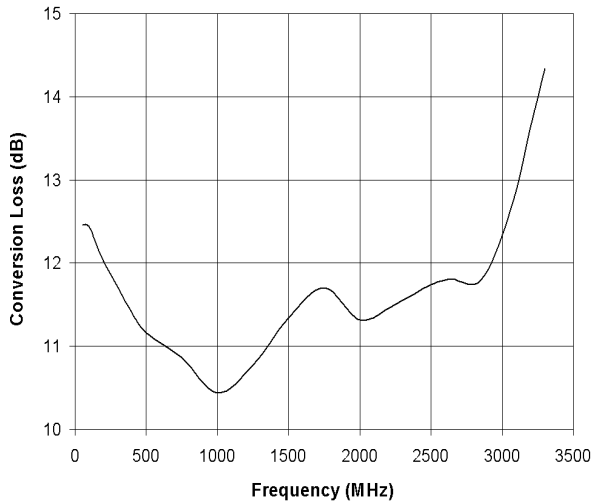
| Part Number | Package |
|-------------|---------------|
| CSFD26 | Surface Mount |

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

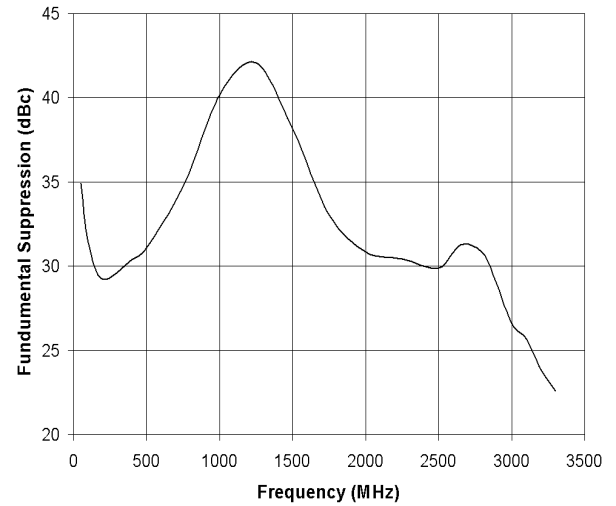
| Parameter | Test Conditions | Units | Typical | Guaranteed | |
|----------------------------------|-----------------------------|-------|---------|------------|---------------|
| | | | | +25°C | -54° to +85°C |
| SSB Conversion Loss (max) | $f_{in} = 50$ to 400 MHz | dB | 12 | 14.5 | 15 |
| | $f_{in} = 400$ 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

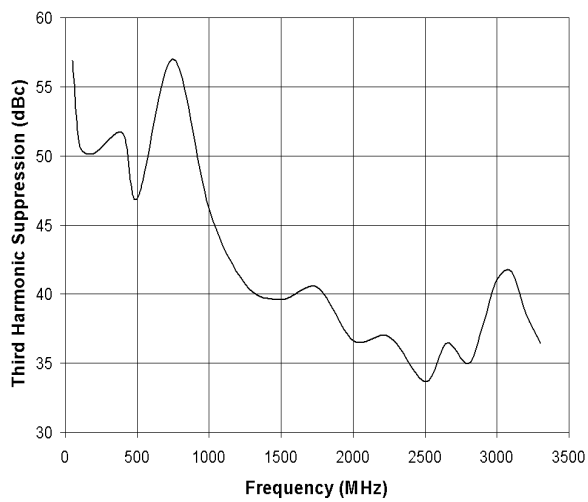
Conversion Loss vs. Frequency



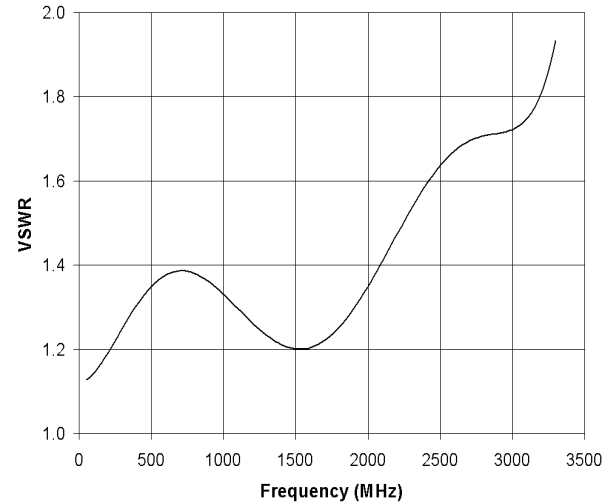
Fundamental Suppression vs. Frequency



Third Harmonic Suppression vs. Frequency



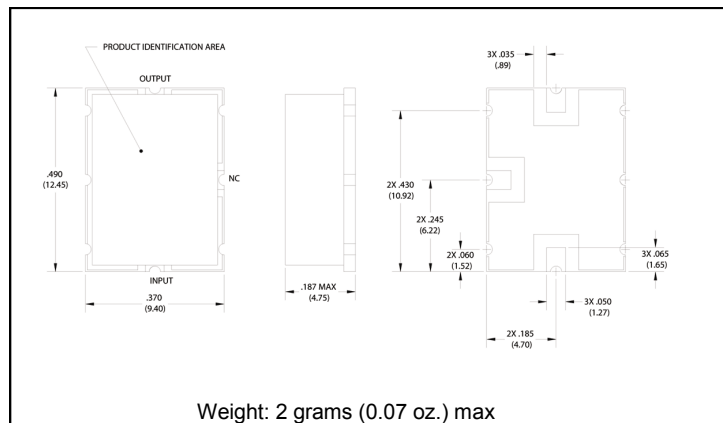
Input VSWR vs. Frequency



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.

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