FD26 / FD26C / FD26E / SFD26





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Rev. V2

Features

- INPUT: 50 TO 3300 MHz
- OUTPUT: 100 TO 6600 MHz
- INPUT DRIVE LEVEL +10 dBm (NOMINAL)
- HERMETICALLY-SEALED PACKAGE

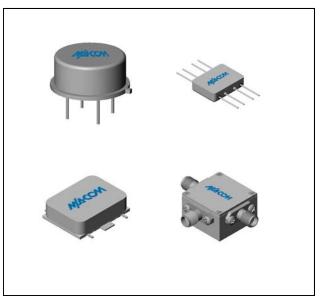
Description

The FD26 is a passive bridge diode frequency doubler, designed for use in military, commercial and test equipment applications. The design utilizes Schottky bridge quad diodes and broadband soft dielectric and/or ferrite baluns to attain excellent performance. The use of high temperature solder assembly processes used internally makes it ideal for use in manual and semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

Ordering Information

| Part Number | Package | | |
|-------------|-------------------|--|--|
| FD26 | TO-8 | | |
| FD26C | SMA Connectorized | | |
| FD26E | Flatpack | | |
| SFD26 | Surface Mount | | |

Product Image



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

| | Test Conditions | Units | Typical | Guaranteed | |
|----------------------------------|--|----------------------|------------------------------|------------------------------|------------------------------|
| Parameter | | | | +25⁰C | -54º to +85ºC* |
| SSB Conversion Loss (max) | $\begin{array}{l} f_{in} = \ 5 \ to \ 400 \ \text{MHz} \\ f_{in} = \ 400 \ to \ 2500 \ \text{MHz} \\ f_{in} = \ 2500 \ to \ 3000 \ \text{MHz} \\ f_{in} = \ 3000 \ to \ 3300 \ \text{MHz} \end{array}$ | dB dB dB dB | 12.0 12.0 12.5 13.5 | 14.5 13.5 14.0 15.5 | 15.0 14.0 14.5 16.0 |
| Fundamental Suppression (min) | $\label{eq:fin} \begin{array}{l} f_{in}=50 \text{ to } 500 \text{ MHz} \\ f_{in}=500 \text{ to } 3300 \text{ MHz} \end{array}$ | dBc dBc | 25 20 | 22 17 | 20 15 |
| Third Harmonic Suppression | $\label{eq:fin} \begin{array}{l} f_{in} = 50 \text{ to } 200 \text{ MHz} \\ f_{in} = 200 \text{ to } 3300 \text{ MHz} \end{array}$ | dBc dBc | 25 19 | 22 17 | 20 15 |
| Input VSWR | $f_{in} = 50 \text{ to } 2500 \text{ MHz}$ $f_{in} = 2500 \text{ to } 3300 \text{ MHz}$ | | 1.5:1 2.0:1 | | |

* The FD26C specification limits apply at 0°C to +50°C.

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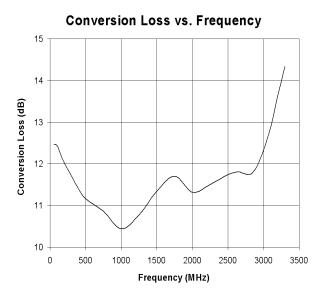
FD26 / FD26C / FD26E / SFD26

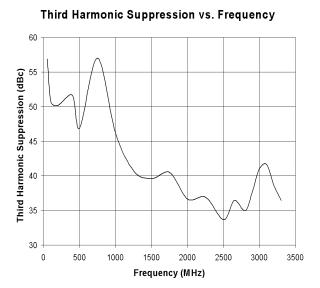
Frequency Doubler



Rev. V2

Typical Performance Curves

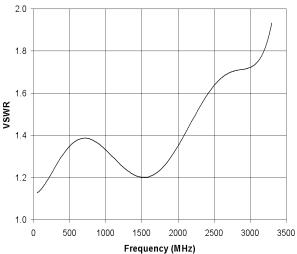




45 Fundumental Suppression (dBc) 40 35 30 25 20 0 500 1000 1500 2000 2500 3500 3000 Frequency (MHz)

Fundumental Suppression vs. Frequency

Input VSWR vs. Frequency



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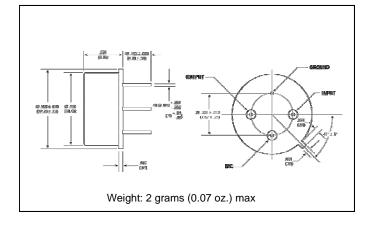
Frequency Doubler

Rev. V2

Absolute Maximum Ratings

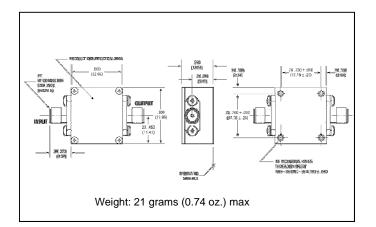
| Parameter | Absolute Maximum |
|-----------------------|---|
| Operating Temperature | -54°C to +100°C |
| Storage Temperature | -65ºC to +100ºC |
| Peak Input Power | +23 dBm max @ +25⁰C +20 dBm max @ +100⁰C |

Outline Drawing: TO-8 *

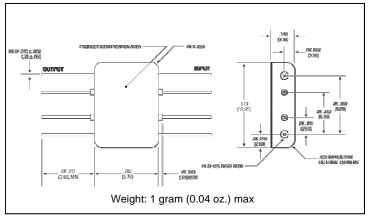


Outline Drawing: SMA Connectorized

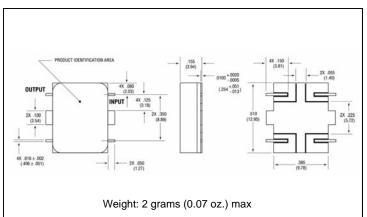
3



Outline Drawing: Flatpack



Outline Drawing: Surface Mount



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

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