FD26 / FD26C / FD26E / SFD26



Frequency Doubler

Rev. V2

Features

INPUT: 50 TO 3300 MHzOUTPUT: 100 TO 6600 MHz

• INPUT DRIVE LEVEL +10 dBm (NOMINAL)

HERMETICALLY-SEALED PACKAGE

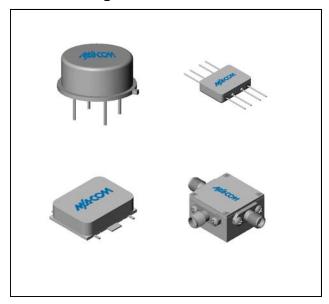
Description

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

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54º to +85ºC*
SSB Conversion Loss (max)	$\begin{array}{l} f_{in} = \ 5 \ to \ 400 \ MHz \\ f_{in} = 400 \ to \ 2500 \ MHz \\ f_{in} = 2500 \ to \ 3000 \ MHz \\ f_{in} = 3000 \ to \ 3300 \ MHz \end{array}$	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)	$\begin{aligned} f_{in} &= 50 \text{ to } 500 \text{ MHz} \\ f_{in} &= 500 \text{ to } 3300 \text{ MHz} \end{aligned}$	dBc dBc	25 20	22 17	20 15
Third Harmonic Suppression	f_{in} = 50 to 200 MHz f_{in} = 200 to 3300 MHz	dBc dBc	25 19	22 17	20 15
Input VSWR	f_{in} = 50 to 2500 MHz f_{in} = 2500 to 3300 MHz		1.5:1 2.0:1		

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

typical. Mechanical outline has been fixed. Engineering samples

Commitment to produce in volume is not du

Solutions has under development. Performance is based on engineering tests. Specifications are

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology

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 Visit www.macomtech.com for additional data sheets and product information.

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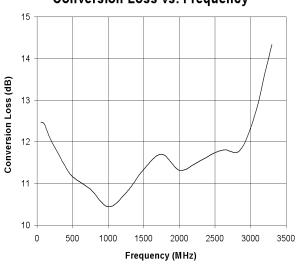


Frequency Doubler

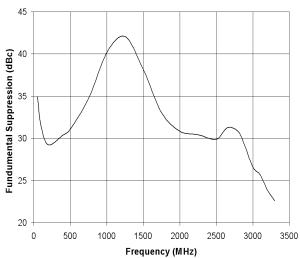
Rev. V2

Typical Performance Curves

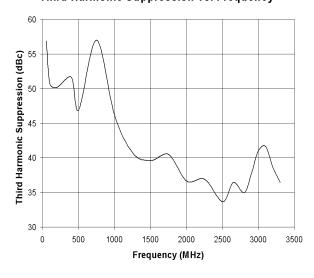
Conversion Loss vs. Frequency



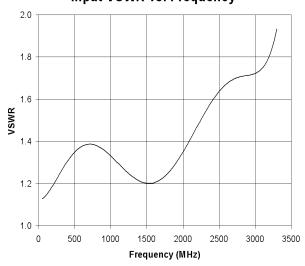
Fundumental Suppression vs. Frequency



Third Harmonic Suppression vs. Frequency



Input VSWR vs. Frequency



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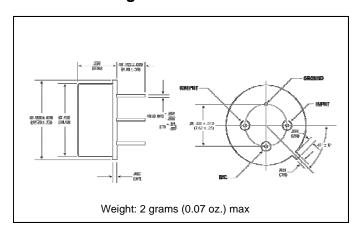
Frequency Doubler

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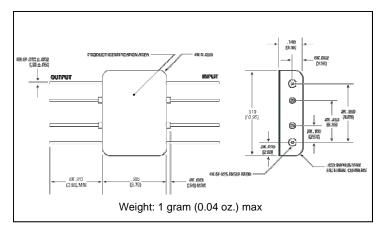
Absolute Maximum Ratings

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

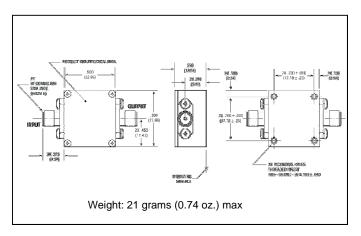
Outline Drawing: TO-8



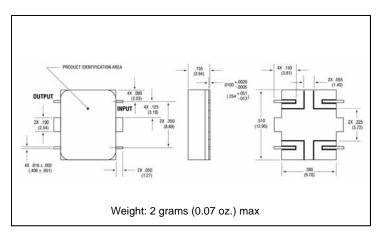
Outline Drawing: Flatpack *



Outline Drawing: SMA Connectorized *



Outline Drawing: Surface Mount



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

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