

# Frequency Doubler

FD26/FD26C/FD26E/SFD26

V2

## Features

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

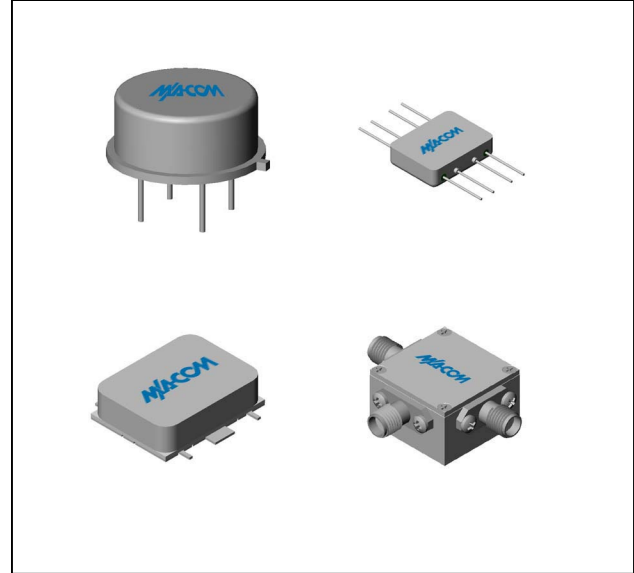
## Description

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

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

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

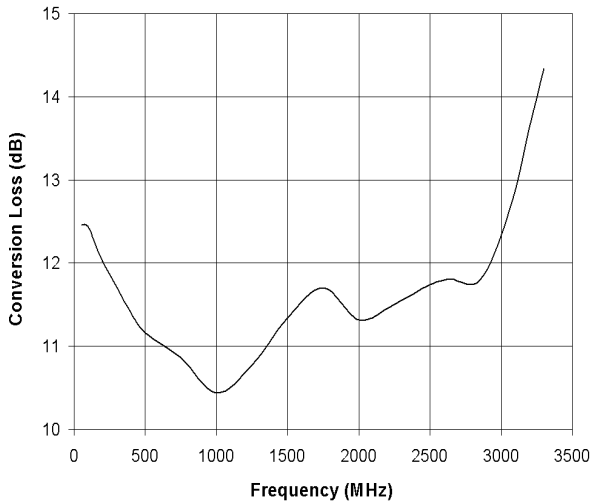
**Frequency Doubler**

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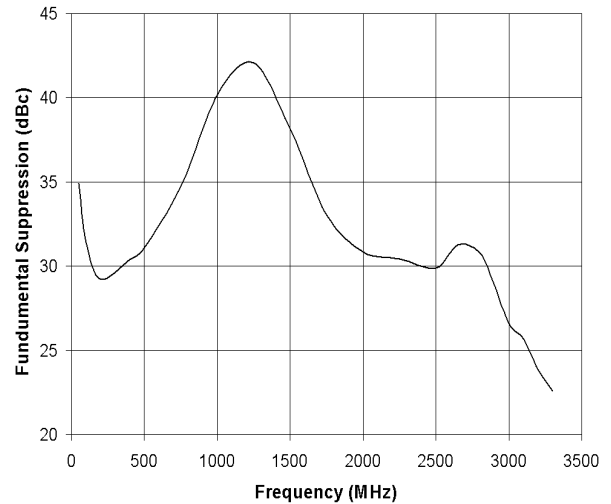
V2

**Typical Performance Curves**

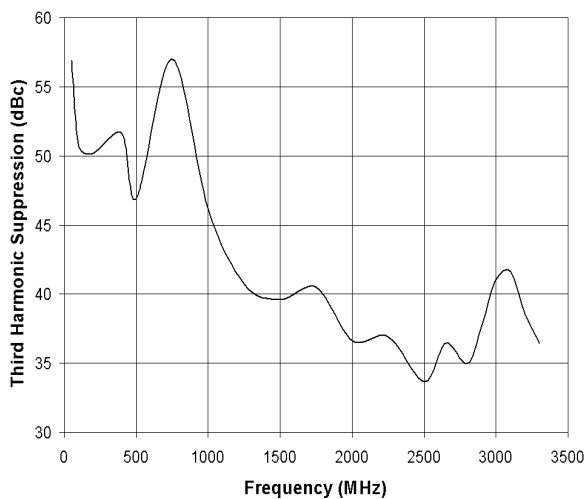
**Conversion Loss vs. Frequency**



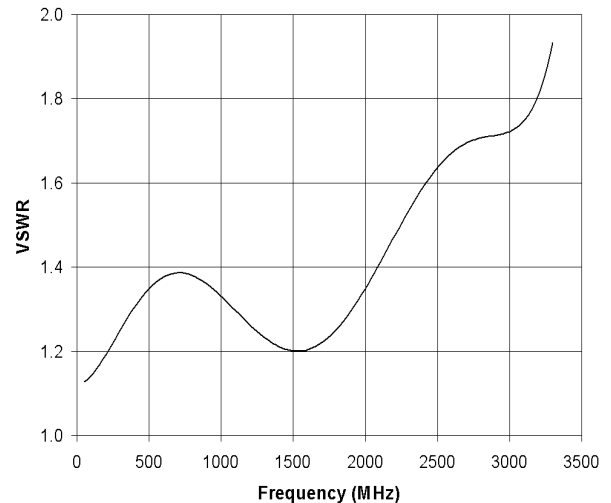
**Fundamental Suppression vs. Frequency**



**Third Harmonic Suppression vs. Frequency**



**Input VSWR vs. Frequency**



**Frequency Doubler**

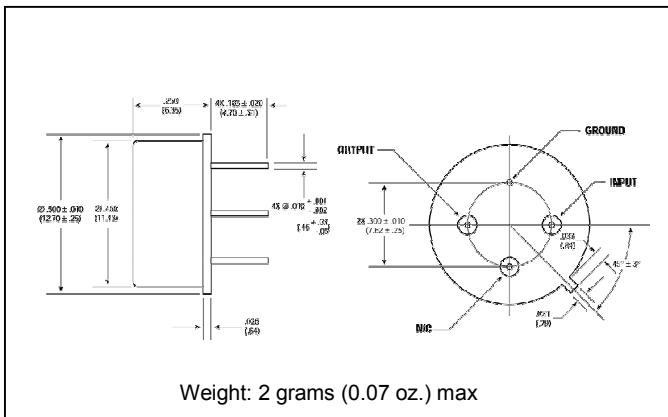
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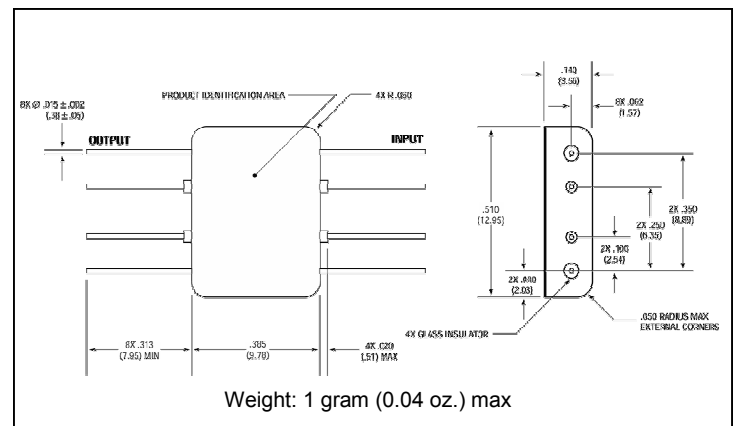
**Absolute Maximum Ratings**

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

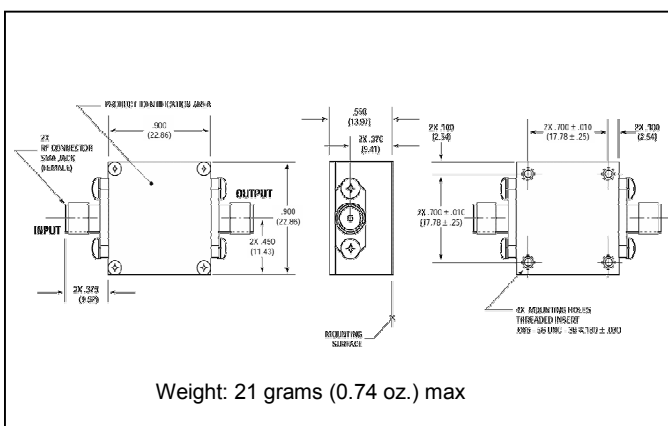
**Outline Drawing: TO-8 \***



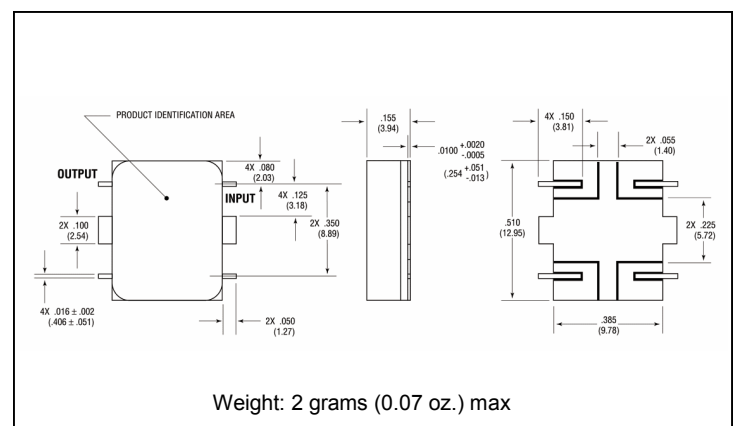
**Outline Drawing: Flatpack \***



**Outline Drawing: SMA Connectorized \***



**Outline Drawing: Surface Mount \***



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