

Electronics

# **Frequency Doubler**



#### FD26/FD26C/FD26E/SFD26

### Features

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

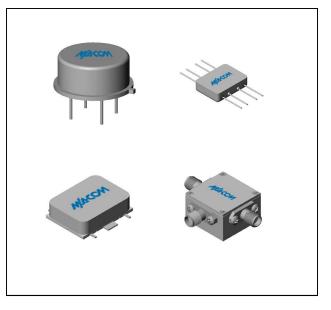
### Description

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				+25°C	-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)	$f_{in}$ = 50 to 500 MHz $f_{in}$ = 500 to 3300 MHz	dBc dBc	25 20	22 17	20 15
Third Harmonic Suppression	f <sub>in</sub> = 50 to 200 MHz f <sub>in</sub> = 200 to 3300 MHz	dBc dBc	25 19	22 17	20 15
Input VSWR	f <sub>in</sub> = 50 to 2500 MHz f <sub>in</sub> = 2500 to 3300 MHz		1.5:1 2.0:1		

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

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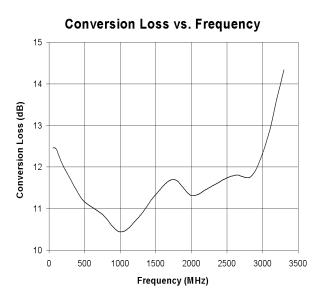


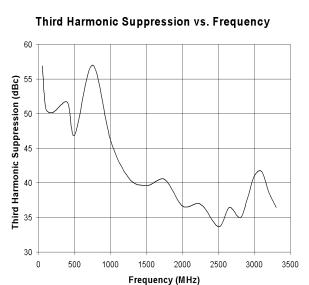
# **Frequency Doubler**



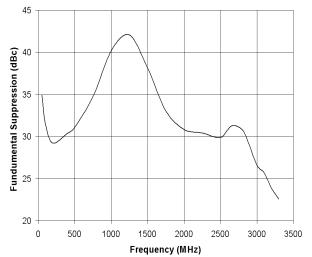
FD26/FD26C/FD26E/SFD26

# **Typical Performance Curves**

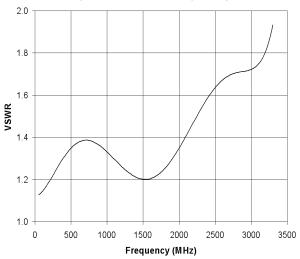




#### Fundumental Suppression vs. Frequency



Input VSWR vs. Frequency



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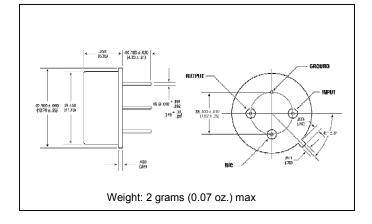


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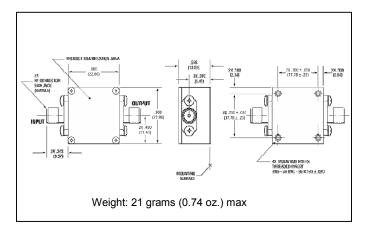
### **Absolute Maximum Ratings**

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

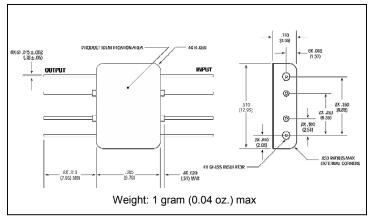
# Outline Drawing: TO-8 \*



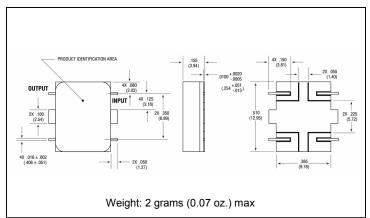
# Outline Drawing: SMA Connectorized \*



### Outline Drawing: Flatpack \*



# Outline Drawing: Surface Mount \*



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

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