

**Open Carrier Frequency Doubler  
For Microwave Telecommunications**

**FDC2710**  
V2

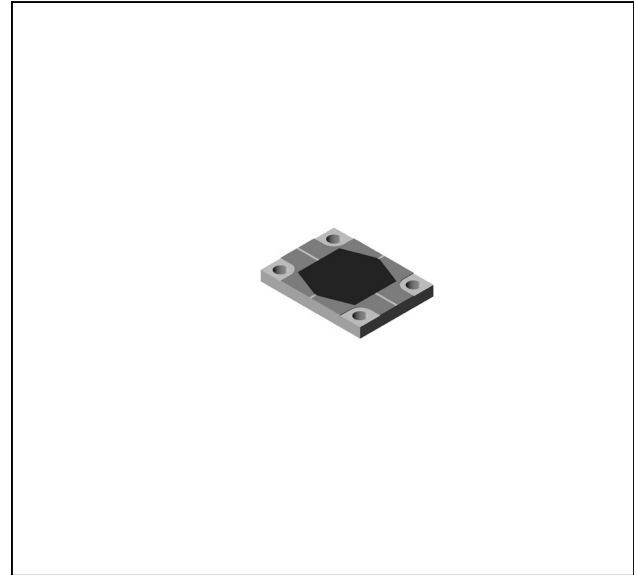
**Features**

- INPUT: 3.5 TO 8.0 GHz
- OUTPUT: 7.0 TO 16.0 GHz
- INPUT DRIVE LEVEL +10 dBm (NOMINAL)
- MICROSTRIP INTERFACE

**Description**

The FDC2710 is a passive bridge diode frequency doubler, designed for use in the high volume commercial and test equipment applications. The design utilizes Schottky bridge quad diodes and broadband baluns to attain excellent performance. 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
FDC2710	Open Carrier

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

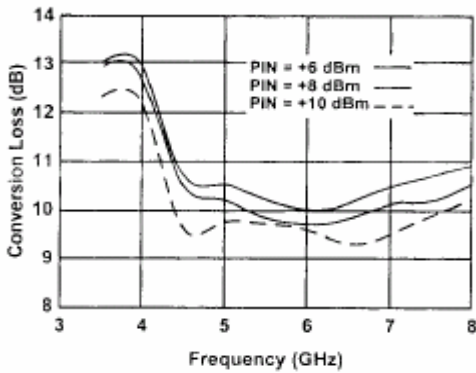
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-40° to +85°C
SSB Conversion Loss (max)	$f_{in} = 3.5$ to $4.5$ GHz	dB	13.0	14.0	14.5
	$f_{in} = 4.5$ to $7.0$ GHz	dB	10.2	12.5	13.0
	$f_{in} = 7.0$ to $8.0$ GHz	dB	11.2	13.5	14.0
Fundamental Suppression (min)	$f_{in} = 3.5$ to $6.5$ GHz	dBc	40	28	26
	$f_{in} = 6.5$ to $8.0$ GHz	dBc	40	30	28
Third Harmonic Suppression (min)	$f_{in} = 6.5$ to $8.0$ GHz	dBc	50	40	38

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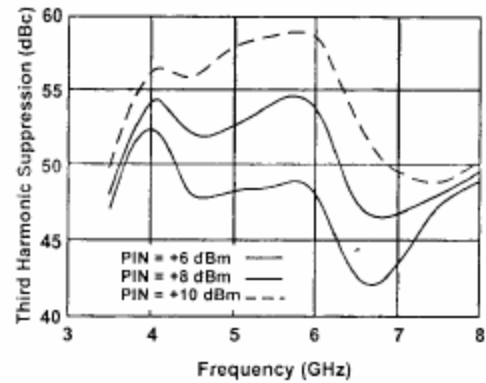
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**Typical Performance Curves**

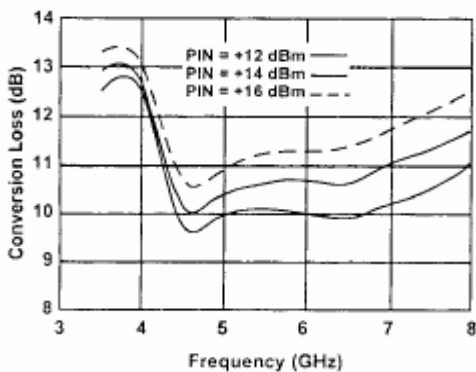
**Conversion Loss**



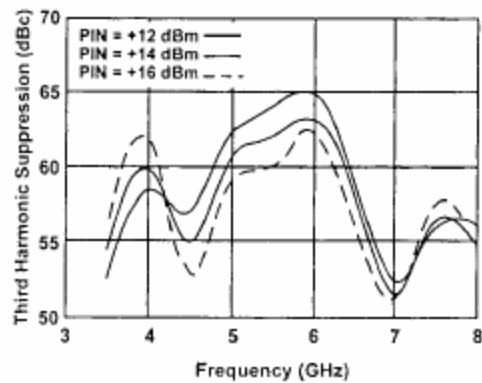
**Third Harmonic Suppression**



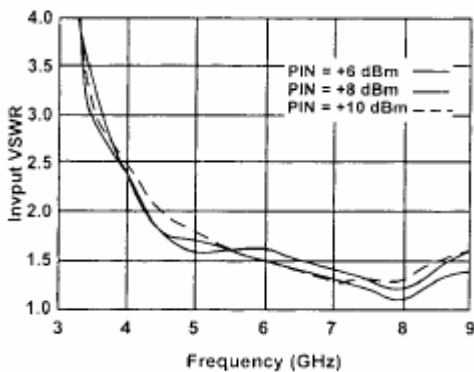
**Conversion Loss**



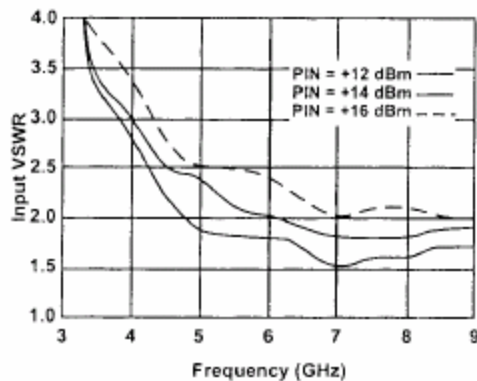
**Third Harmonic Suppression**



**Input VSWR**



**Input VSWR**



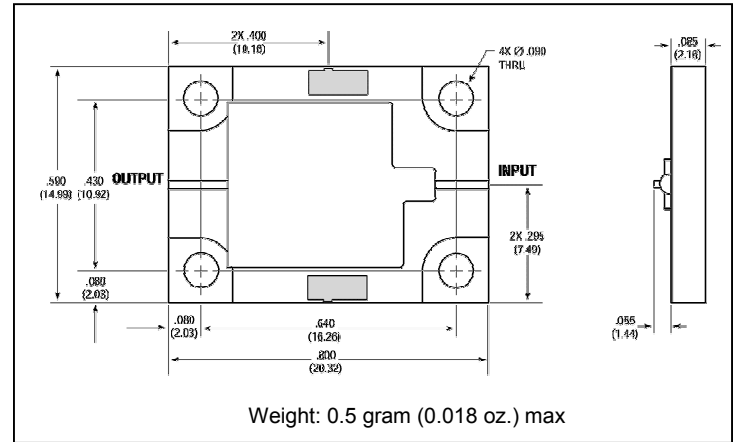
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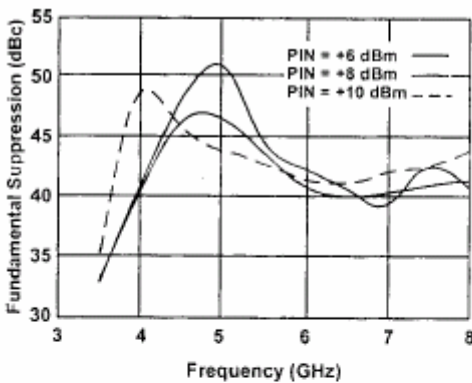
**Absolute Maximum Ratings**

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
Peak Input Current	50 mA DC

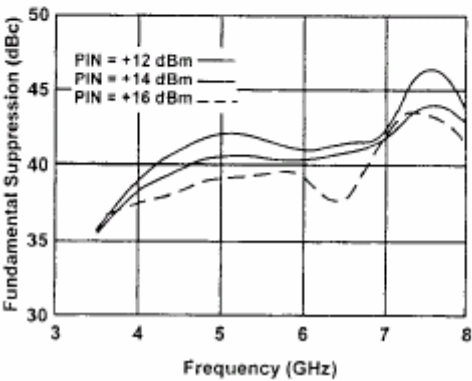
**Outline Drawing: Open Carrier \***



**Fundamental Suppression**



**Fundamental Suppression**



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