

Open Carrier Frequency Doubler For Microwave Telecommunications

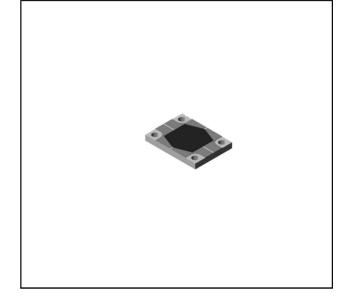
Rev. V1

Features

- Input Frequency 1.5 to 8.0 GHz
- Output Frequency 3.0 to 16.0 GHz
- Input Drive Level +10 dBm (nominal)
- Microstrip Interface

Description

The FDC2310 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 baluns to attain excellent performance. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.



Product Image

Ordering Information

Part Number	Package
FDC2310	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} = 1.5 to 8.0 GHz	dB	11	14.0	14.5
Fundamental Suppression (min)	f _{in} = 1.5 to 8.0 GHz	dBc	35	19.5	19
Third Harmonic Suppression (min)	f _{in} = 1.5 to 8.0 GHz	dBc	40	20	18
Input VSWR	f _{in} = 1.5 to 8.0 GHz		2.0:1		

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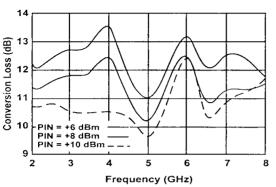


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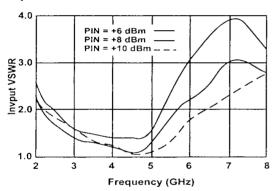
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Typical Performance Curves

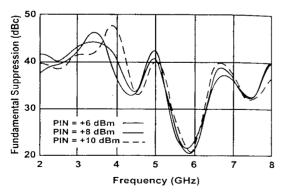
Conversion Loss



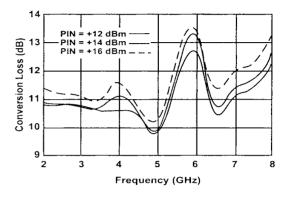
Input VSWR



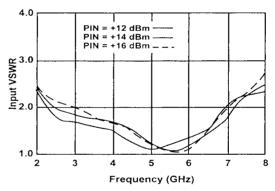
Fundamental Suppression



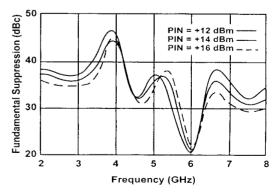
Conversion Loss



Input VSWR



Fundamental Suppression



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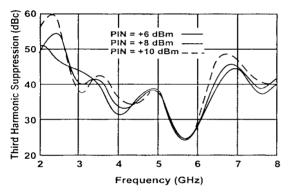
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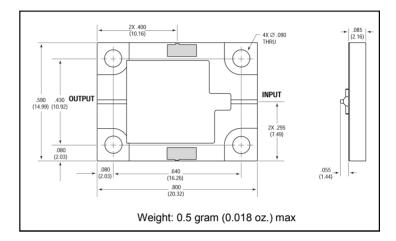
Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+23 dBm max @ +25°C +20 dBm max @ +100°C		
Peak Input Current	50 mA DC		

Third Harmonic Suppression

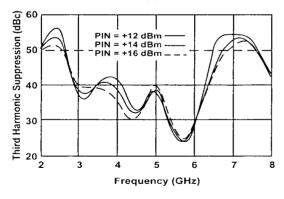


Outline Drawing: Open Carrier *



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

Third Harmonic Suppression



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