

Electronics

Open Carrier Frequency Doubler For Microwave Telecommunications



FDC2710

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.

Ordering Information

Part Number	Package
FDC2710	Open Carrier

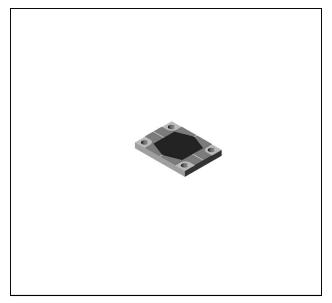
Electrical Specifications: $Z_0 = 50\Omega$ $P_{in} = +10$ dBm

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

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Product Image



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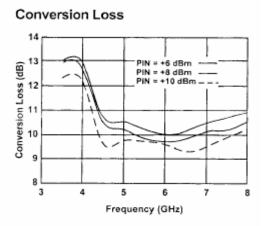


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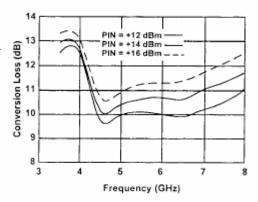


FDC2710

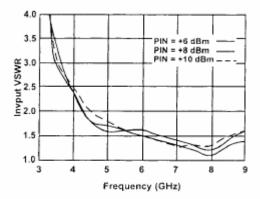
Typical Performance Curves



Conversion Loss



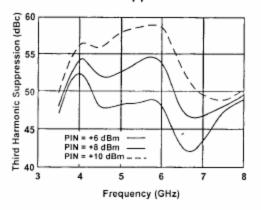
Input VSWR



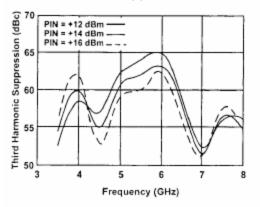
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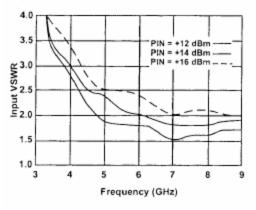
Third Harmonic Suppression



Third Harmonic Suppression







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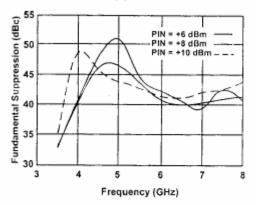


FDC2710

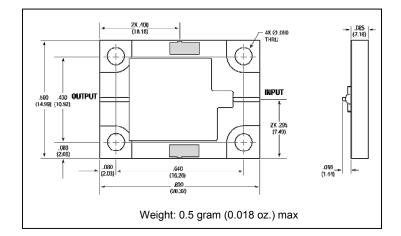
Absolute Maximum Ratings

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℃
Peak Input Current	50 mA DC

Fundamental Suppression

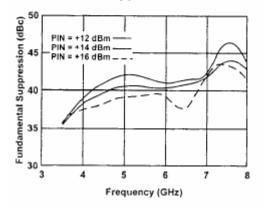


Outline Drawing: Open Carrier



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

Fundamental Suppression



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