

Open Carrier Frequency Doubler For Microwave Telecommunications



Rev. V2

Features

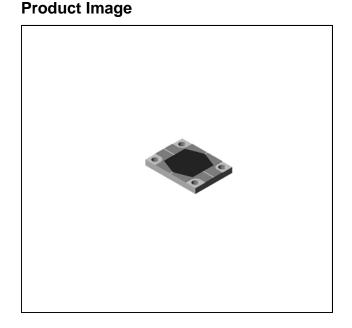
- INPUT: 3.5 TO 8.0 GHz
- OUTPUT: 7.0 TO 16.0 GHz
- INPUT DRIVE LEVEL +10 dBm (NOMINAL)
- MICROSTRIP INTERFACE

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.

Ordering Information

Part Number	Package	
FDC2710	Open Carrier	



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

Decomotor	Test Conditions	Units -	Typical	Guaranteed	
Parameter	rest conditions			+25⁰C	-40º to +85ºC
SSB Conversion Loss (max)	$f_{in} = 3.5 \text{ to } 4.5 \text{ GHz}$ $f_{in} = 4.5 \text{ to } 7.0 \text{ GHz}$ $f_{in} = 7.0 \text{ to } 8.0 \text{ GHz}$	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

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed. PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Visit www.macomte

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 Europe Tel: +353.21.244.6400
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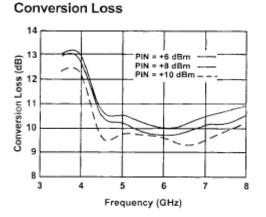
Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples indonest or to are may be available Commitment to produce in volume is not outparanteed.

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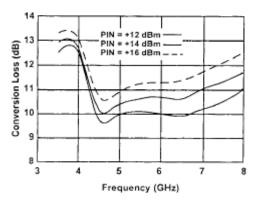
FDC2710

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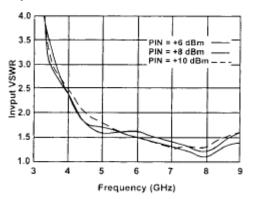
Typical Performance Curves



Conversion Loss

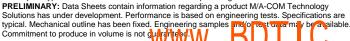


Input VSWR



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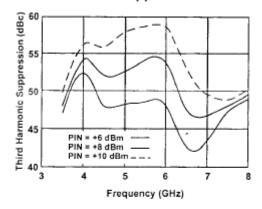
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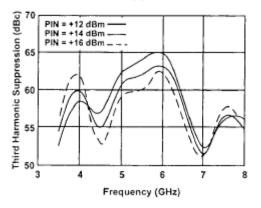


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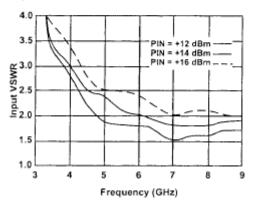
Third Harmonic Suppression



Third Harmonic Suppression







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and may be available. MA-COM Technol. gy Solutions not an driss diffiliates reserve the right to make Changes to the productis) on more tion contained herein without notice.



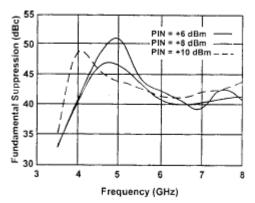
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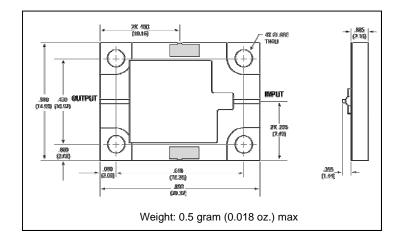
Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-54ºC to +100ºC		
Storage Temperature	-65ºC to +100ºC		
Peak Input Power	+23 dBm max @ +25⁰C +20 dBm max @ +100⁰C		
Peak Input Current	50 mA DC		

Fundamental Suppression



Outline Drawing: Open Carrier

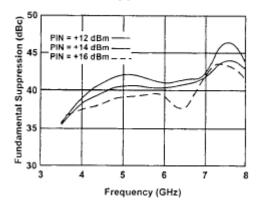


Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified. *

Fundamental Suppression

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Commitment to produce in volume is not gu



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