# FDC2310

## Open Carrier Frequency Doubler For Microwave Telecommunications

Rev. V1

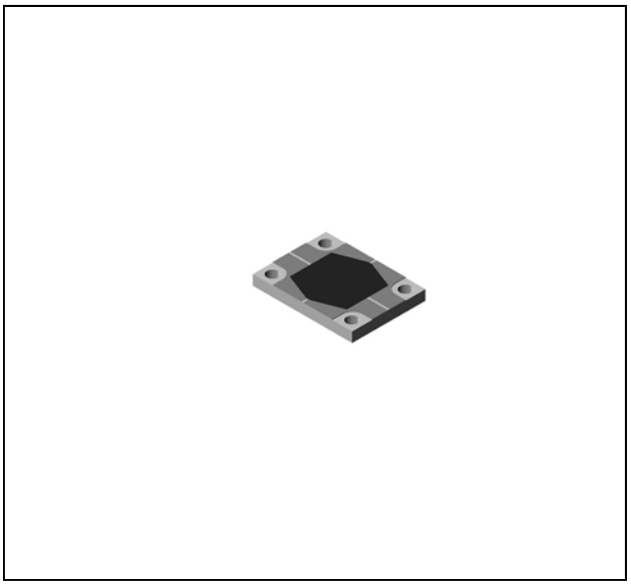
### Features

- 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 | | |

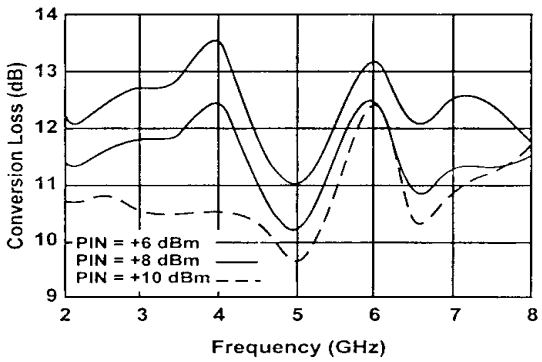




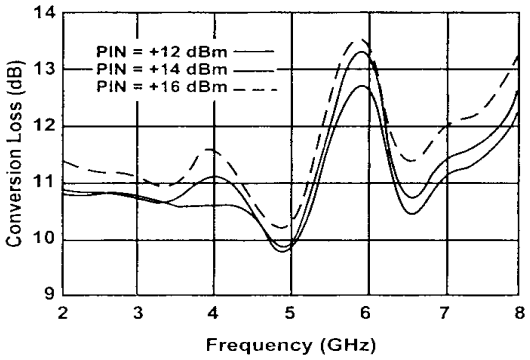
• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

## Typical Performance Curves

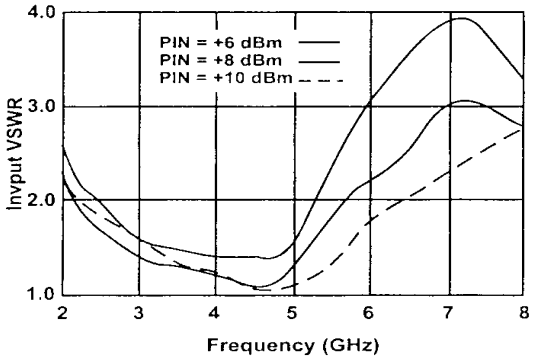
### Conversion Loss



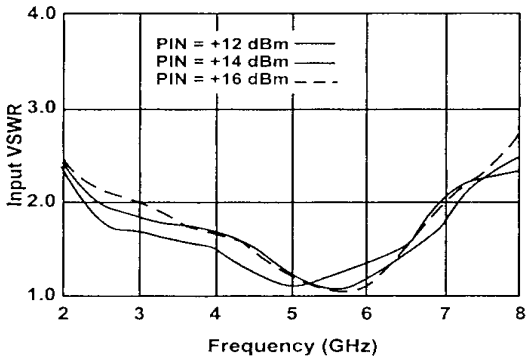

### Conversion Loss



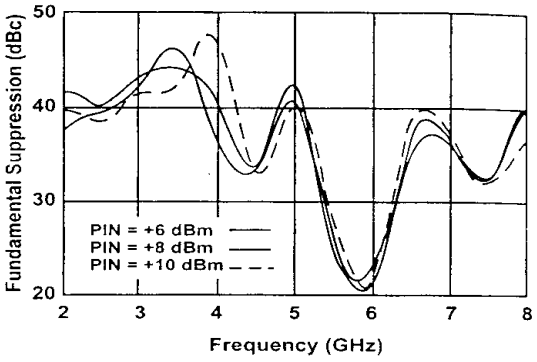

### Input VSWR



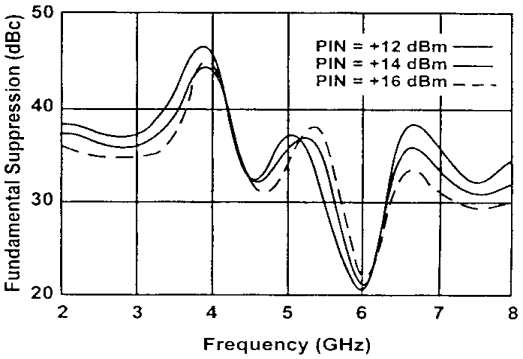

### Input VSWR




### Fundamental Suppression




### Fundamental Suppression



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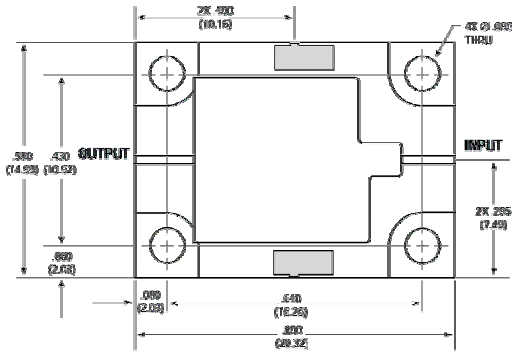
### Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|---|---|
| Operating Temperature | -54ºC to +100ºC |
| Storage Temperature | -65ºC to +100ºC |
| Peak Input Power | +23 dBm max @ +25ºC<br>+20 dBm max @ +100ºC |
| Peak Input Current | 50 mA DC |

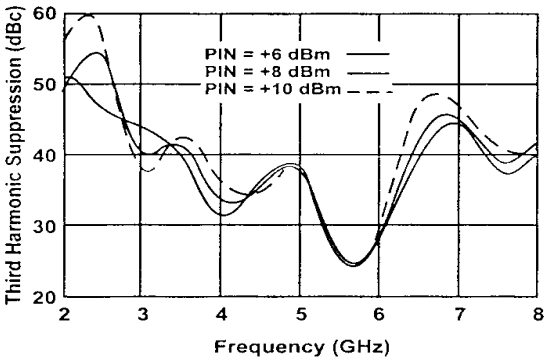
### Outline Drawing: Open Carrier *




Weight: 0.5 gram (0.018 oz.) max

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

### Third Harmonic Suppression




### Third Harmonic Suppression