## Plug-In Frequency Doubler, <br> 20-1500 MHz Output

## Features

Relay Header Case
Multioctave Frequency Coverage
Conversion Loss: 12 dB Midband
Impedance: 50 Ohms Nominal
Maximum Input Power: 300 mW Max.
MIL-STD-883 Screening Available

## Description

A transmission line balun transformer connects to Schottky diodes arranged in a bridge configuration. This design allows balanced activation of all diodes, and yields excellent conversion loss, and odd-order term suppression.

## Pin Configuration

| Pin No. | Function | Pin No. | Function |
| :---: | :---: | :---: | :---: |
| 1 | Input | 5 | GND |
| 2 | GND | 6 | GND |
| 3 | GND | 7 | GND |
| 4 | GND | 8 | Output |

## RH-3



Electrical Specifications ${ }^{1}$ : $\mathrm{T}_{\mathrm{A}}=-55^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$

| Parameter | Test Conditions | Frequency | Units | Min | Typ | Max |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency Range | Input <br> Output | $10-750$ | MHz | - | - | - |
| Conversion Loss |  | $20-1500$ | MHz | - | - | - |
| Spurious (Referred to <br> Output $\mathrm{F}_{2}$ Level) |  | $\mathrm{F}_{1}$ | $10-500 \mathrm{MHz}$ | dB | - | - |
|  | $500-750 \mathrm{MHz}$ | dB | - | - | 14.5 |  |
|  |  |  | $10-100 \mathrm{MHz}$ | dB | 25 | - |

1. All specifications apply when operated at +13 dBm input power with 50 ohm source and load impedance.

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## Typical Performance Curves

Conversion Loss


Spurious Response


Spurious Response


Conversion Loss vs. Input Power


Spurious Response


## Ordering Information

| Part Number | Package |
| :---: | :---: |
| FM-105 PIN | RH-3 |

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