

Low Cost Frequency Doubler

Rev. V2

Features

INPUT: 10 TO 2400 MHzOUTPUT: 20 TO 4800 MHz

INPUT DRIVE LEVEL +23 dBm (NOMINAL)

SURFACE MOUNT

Description

The CSFD25H is a passive bridge diode frequency doubler, designed for use in the high volume wireless and test equipment applications. The design utilizes Schottky bridge quad diodes and broadband baluns to attain excellent performance. Due to 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 |
|-------------|---------------|
| CSFD25H | Surface Mount |

Product Image



Electrical Specifications: $Z_0 = 50\Omega P_{in} = +23 dBm$

| Parameter | Test Conditions | Units | Typical | Guaranteed | |
|-------------------------------------|--|-------------------|----------------|----------------|----------------|
| Parameter | | | | +25°C | -40° to +85°C |
| SSB Conversion Loss (max) | f _{in} = 10 to 2400 MHz | dB | 12.0 | 13.5 | 13.8 |
| Suppression Fundamental (min) | $f_{in} = 10 \text{ to } 1000 \text{ MHz}$ $f_{in} = 1000 \text{ to } 2000 \text{ MHz}$ $f_{in} = 2000 \text{ to } 2400 \text{ MHz}$ | dBc dBc dBc | 35 25 20 | 25 20 16 | 24 19 15 |
| Third Harmonic Suppression (min) | f_{in} = 10 to 1000 MHz f_{in} = 1000 to 2400 MHz | dBc dBc | 40 35 | 30 25 | 29 24 |
| Input VSWR | f _{in} = 10 to 2400 MHz | | 2.0:1 | | |

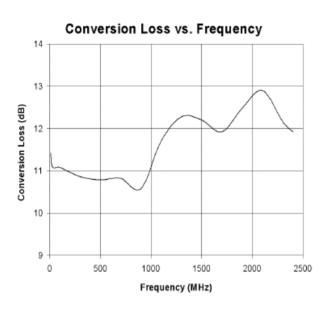
1

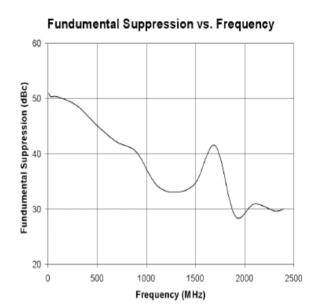


Low Cost Frequency Doubler

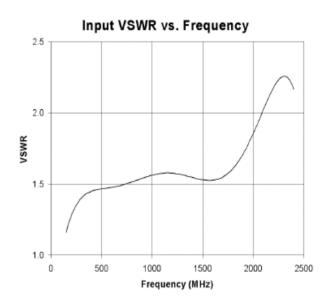
Rev. V2

Typical Performance Curves





Third Harmonic Suppression vs. Frequency 70 60 40 20 0 500 1000 1500 2000 2500 Frequency (MHz)



CSFD25H



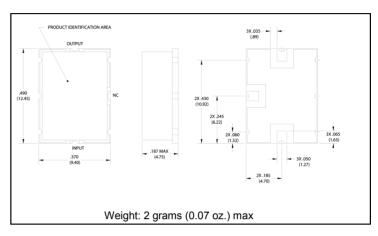
Low Cost Frequency Doubler

Rev. V2

Absolute Maximum Ratings

| Parameter | Absolute Maximum | | |
|-----------------------|---|--|--|
| Operating Temperature | -54°C to +85°C | | |
| Storage Temperature | -65°C to +100°C | | |
| Peak Input Power | +23 dBm max @ +25°C +20 dBm max @ +100°C | | |

Outline Drawing: Surface Mount *



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

CSFD25H



Low Cost Frequency Doubler

Rev. V2

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.