Sales: 408-778-9952 | General: 408-778-4200 | Fax: 408-778-4300
Sales & Customer Support: sales@markimicrowave.com
Tech Support: support@markimicrowave.com

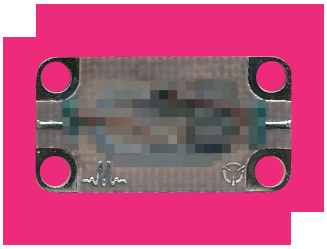
D-0308LE

Frequency Doubler

DEVICE OVERVIEW

General Description

The D-0308 is a passive doubler fabricated with silicon Schottky diodes. This operates over a guaranteed 3 to 8 GHz input frequency range or a doubled output frequency range of 6 to 16 GHz. It features excellent conversion loss, isolations, and harmonic suppressions across a broad bandwidth. D series doublers have generally been replaced with MMD doublers with superior performance, repeatability and availability. The D-0308 is still used in legacy systems and is suitable for laboratory use.



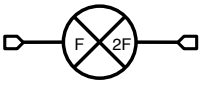
Features

- Input 3.0 to 8.0 GHz
- Output 6.0 to 16.0 GHz
- 9.0 dB Typical Conversion Loss
- 30 dBc Typical 3rd Harmonic Suppression
- Two Input Levels Available
- Multi-Octave Band Input

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification	Recommended Replacement
D-0308ME	Frequency Doubler	E	Non-RoHS	Not Recommended for New Design	EAR99	MMD-0415HPSM
D-0308LE	Frequency Doubler	E	Non-RoHS	Not Recommended for New Design	EAR99	MMD-0415HPSM

Table Of Contents

Port Configuration and Functions

Port Diagram

Port Functions

Port	Function	Description	Equivalent Circuit for Package
2F	2F Output	-	-
F	F input	-	-

Specifications

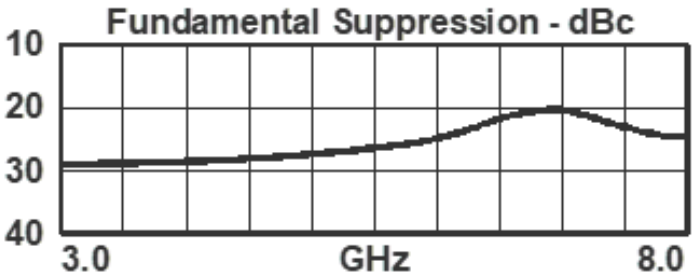
Package Information

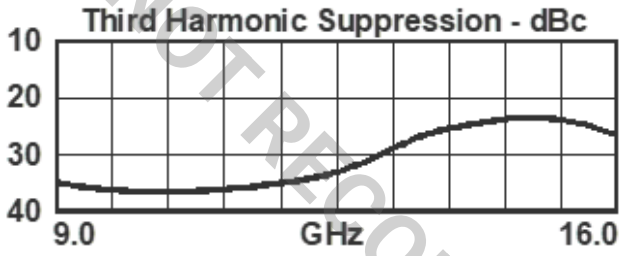
Parameter	Details	Rating
Weight	Package name: E	1g
Dimensions	-	15.24 x 8.13 mm

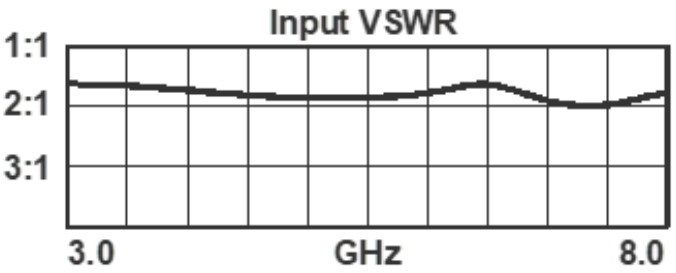
Electrical Specifications

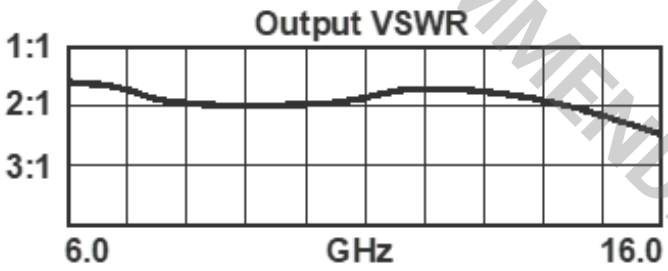
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Spurious Suppression, All Harmonics	-	3	8	15	25	-	dBc
Conversion Loss	Second Harmonic Output	6	16	-	9	14	dB
LO Input Drive Level, L Diode Option	-	-	-	10	-	13	dBm
Suppression, 3F	-	9	16	20	30	-	dBc

Typical Performance





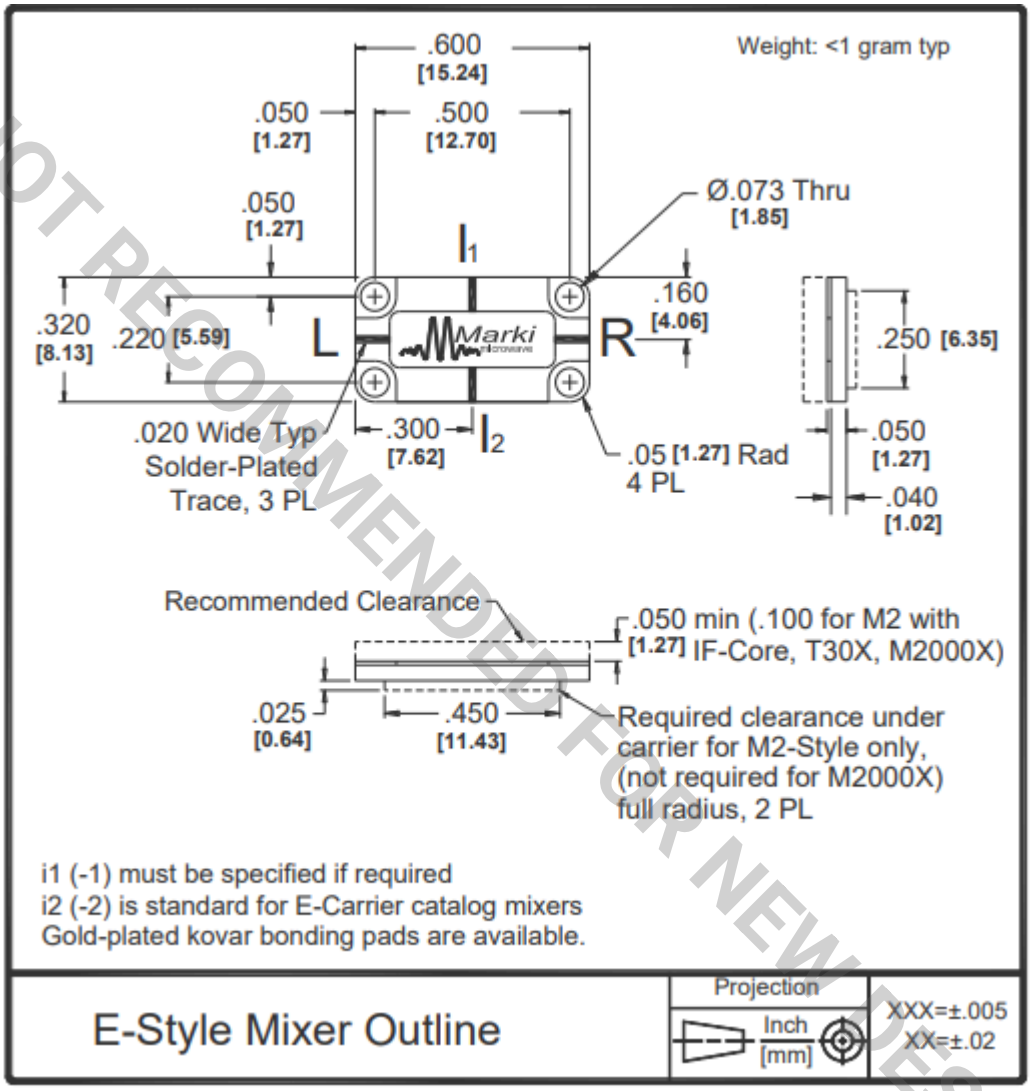




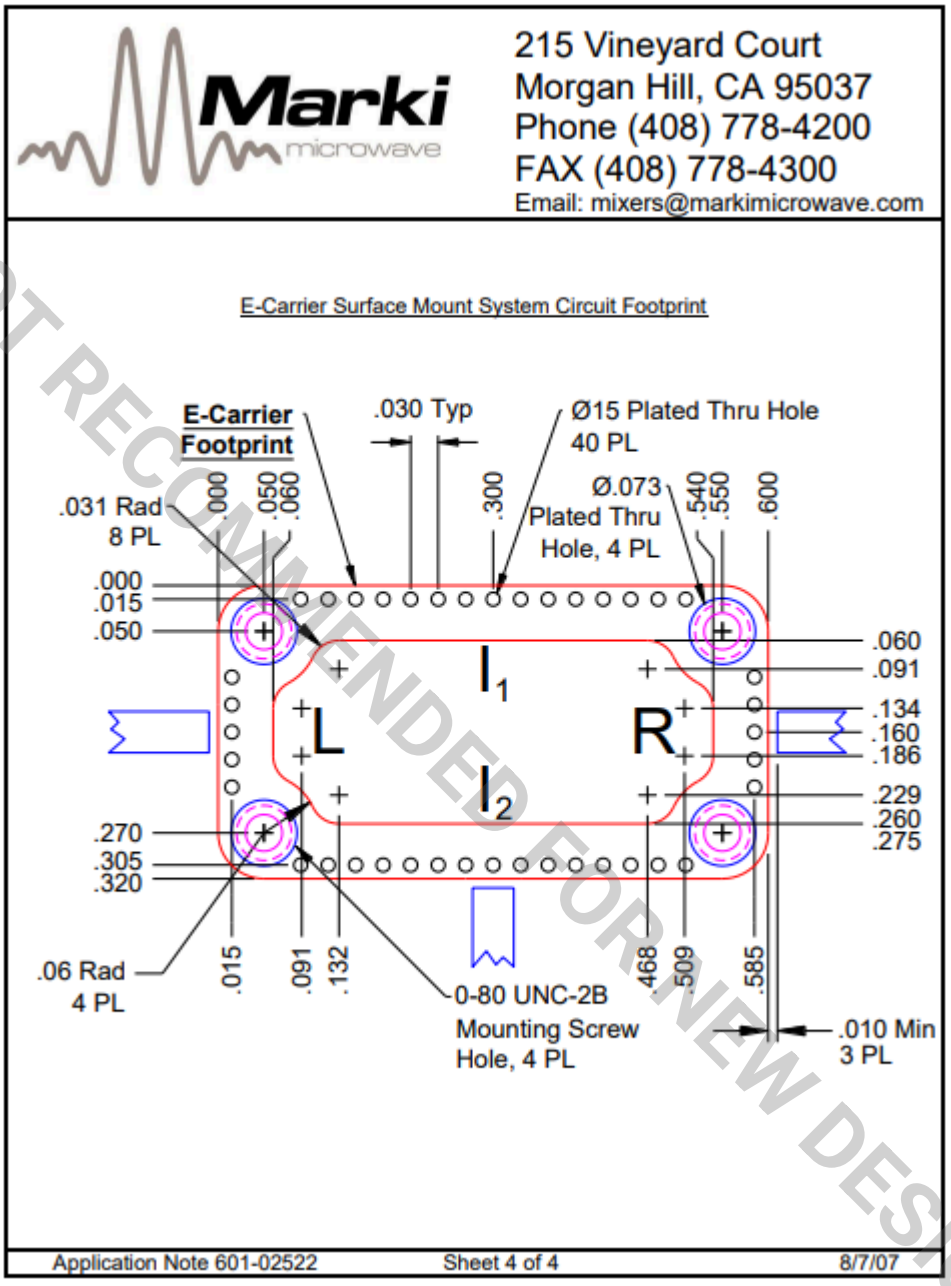
Mechanical Data

Outline Drawing

Download : Outline 2D Drawing



Footprint Image



DISCLAIMER

MARKI MICROWAVE, INC., (“MARKI”) PROVIDES TECHNICAL SPECIFICATIONS AND DATA (INCLUDING DATASHEETS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, AND OTHER INFORMATION AND RESOURCES “AS IS” AND WITH ALL FAULTS. MARKI DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.
These resources are intended for developers skilled in the art designing with Marki products. You are solely responsible for (1) selecting the appropriate products for your application, (2) designing, validating, and testing your application, and (3) ensuring your application meets applicable standards and other requirements. Marki makes no guarantee regarding the suitability of its products for any particular purpose, nor does Marki assume any liability whatsoever arising out of your use or application of any Marki product.
Marki grants you permission to use these resources only for development of an application that uses Marki products. Other reproduction or use of these resources is strictly prohibited. No license is granted to any other Marki intellectual property or to any third-party intellectual property. Marki reserves the right to make changes to the product(s) or information contained herein without notice.
MARKI MICROWAVE and T3 MIXER are trademarks or registered trademarks of Marki Microwave, Inc. All other trademarks used are the property of their respective owners.