

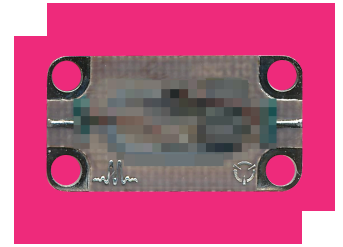
# D-0308ME

## 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.



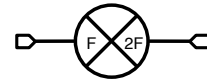
#### Features

- 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	<a href="#">MMD-0415HPSM</a>
<a href="#">D-0308LE</a>	Frequency Doubler	E	Non-RoHS	Not Recommended for New Design	EAR99	<a href="#">MMD-0415HPSM</a>

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**Revision History**

Revision Code	Revision Date	Comment
-	2017-11-21	Initial Date Release

NOT RECOMMENDED FOR NEW DESIGN

**Port Configuration and Functions**

**Port Diagram**



**Port Functions**

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

NOT RECOMMENDED FOR NEW DESIGN

## Specifications

### Package Information

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

NOT RECOMMENDED FOR NEW DESIGN

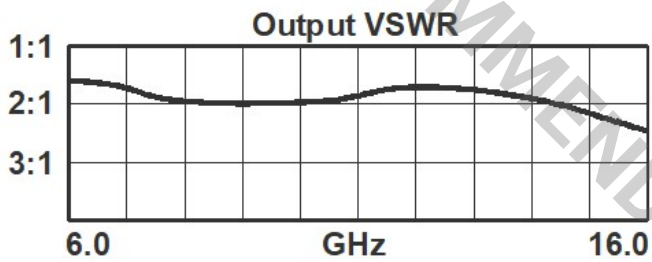
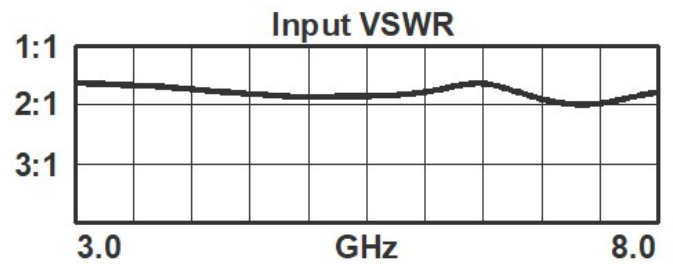
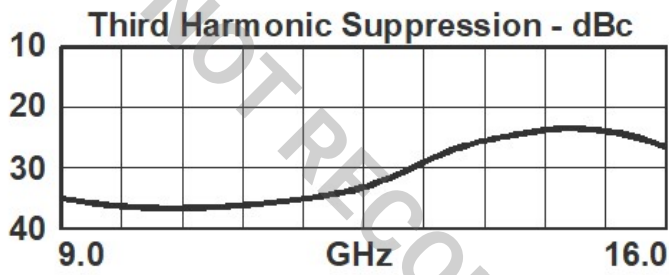
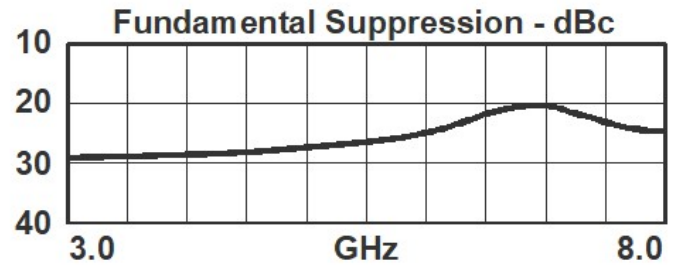
**Electrical Specifications**

Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system.

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

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**Typical Performance Plots**

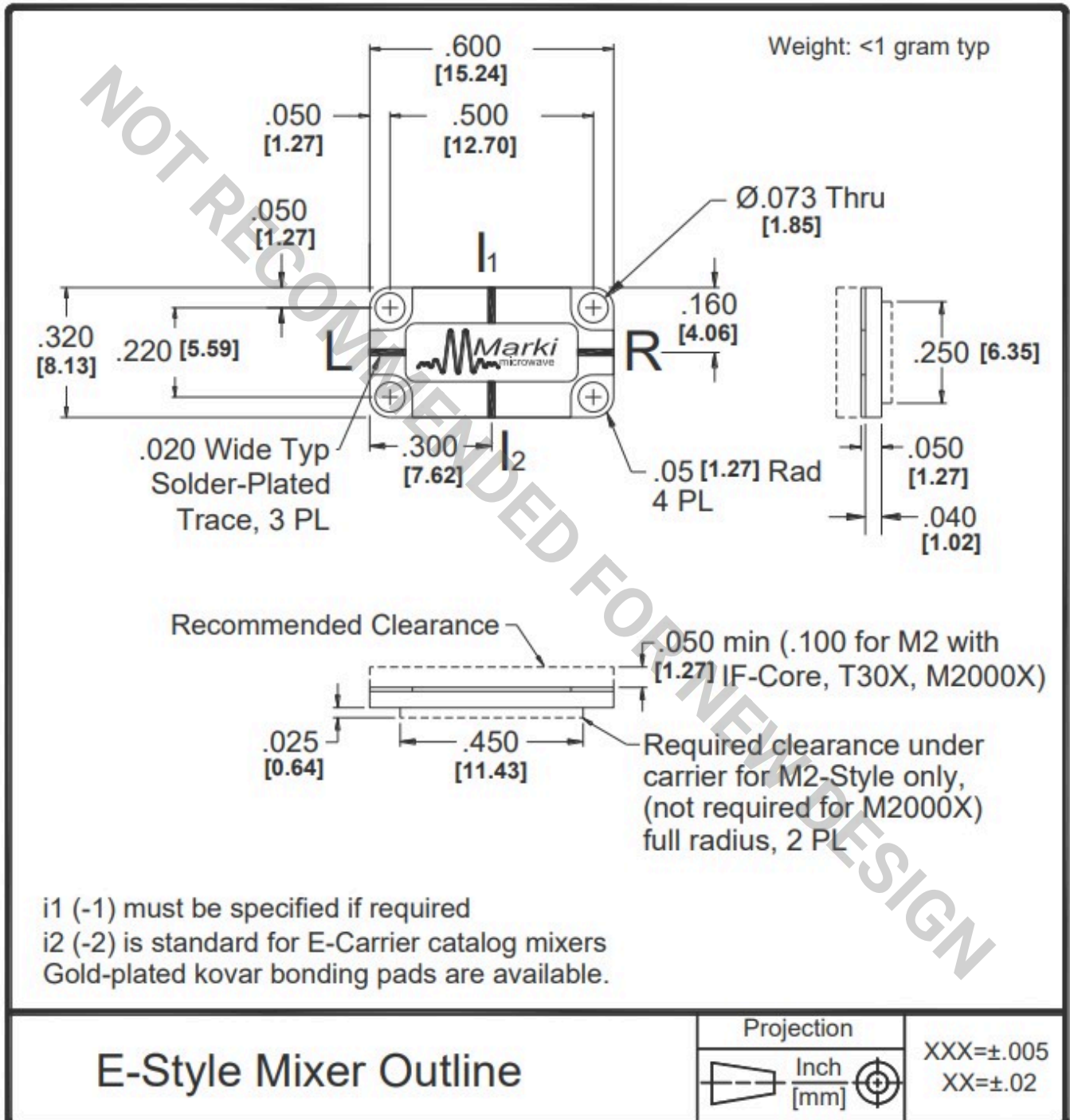


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**Mechanical Data**

**Outline Drawing**

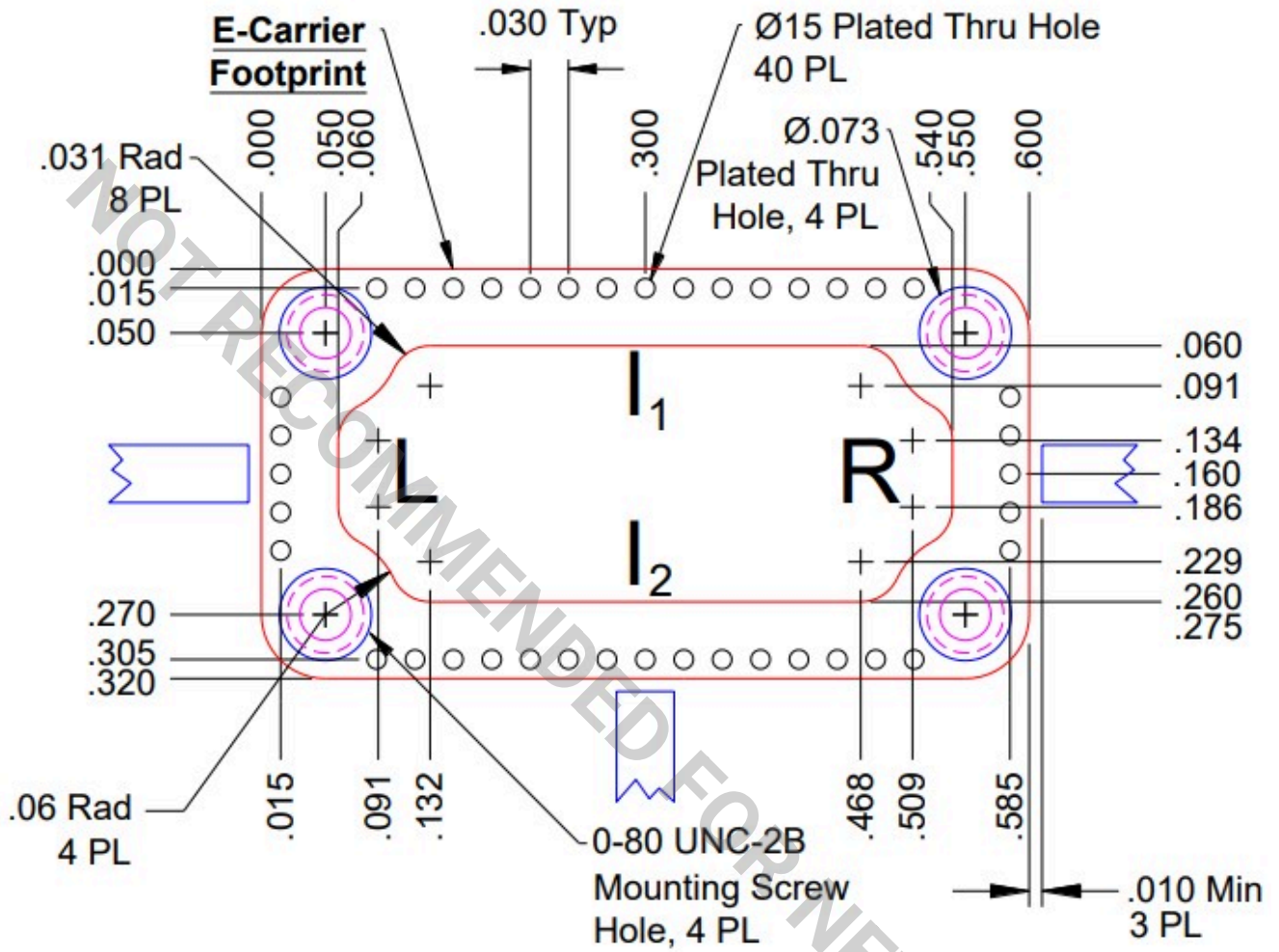
Download : [Outline 2D Drawing](#)



E-Carrier I/O trace finish is reflowed Sn63/Pb37 solder plate over Cu.

E-Carrier is Half Hard Brass, plated Electroless Nickel 150-250 μ-inches, followed by Nickel Flash.

Footprint Image



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