

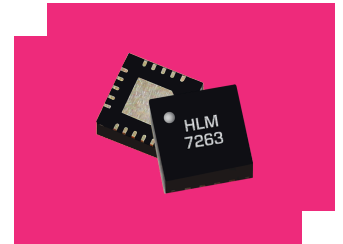
# HLM-40PSM

## DC - 40GHz Surface Mount Limiter

### DEVICE OVERVIEW

#### General Description

The HLM-40PSM is a high-power GaAs Schottky diode signal limiter featuring high IP3 over a broad DC-40GHz bandwidth. It offers low insertion loss and excellent return loss from DC through Ka band and has a typical 1 dB compression point of 14 dBm. Its high power handling makes it ideal for protecting sensitive components and for applications requiring high linearity. It is available as a plastic surface mount or as a connectorized evaluation board.



[Download s-parameters here](#)

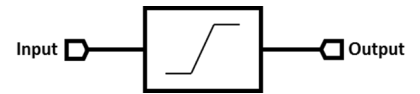
#### Features

- Low 0.7dB loss at 20 GHz
- 9.5W Peak Power (pulsed), 2.5W CW
- +11 to +19 dBm Flat Leakage @ 1W CW
- Typical P1dB of +14dBm
- Small signal S2P data available

#### Applications

- RF Transceivers
- Test and Measurement Equipment
- SATCOM

#### Functional Block Diagram



#### Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
HLM-40PSM	DC - 40GHz Surface Mount Limiter	QFN	REACH RoHS	Released	EAR99
<u>EVAL-HLM-40P</u>	Evaluation Board, DC - 40GHz Surface Mount Limiter	EVAL	REACH RoHS	Released	EAR99

### Table Of Contents

- **Device Overview**
  - General Description
  - Features
  - Applications
  - Functional Block Diagram
- **Revision History**
- **Specifications**
  - Absolute Maximum Ratings
  - Package Information
  - Electrical Specifications
  - Typical Performance Plots
- **Mechanical Data**
  - Outline Drawing
- **Footprint Image**
- **Evaluation Board**

### Revision History

Revision Code	Revision Date	Comment
A	2025-01-07	Updated operating / storage temperatures

**Specifications**

**Absolute Maximum Ratings**

Parameter	Maximum Rating	Unit
Maximum Operating Temperature	100	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-55	°C
Minimum Storage Temperature	-65	°C
RF Power Handling , Average	2.5	W
RF Power Handling , Peak	9.5	W

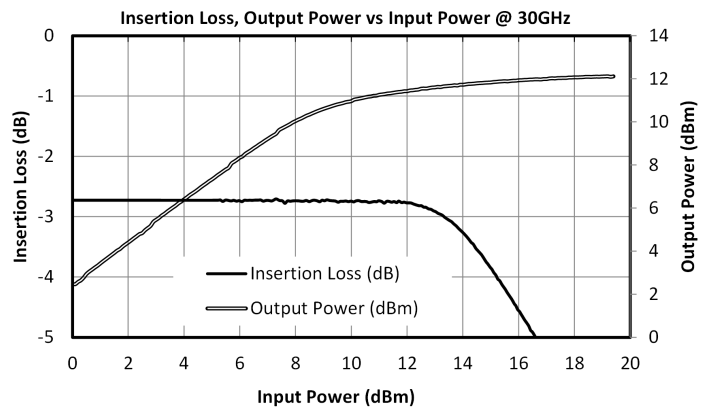
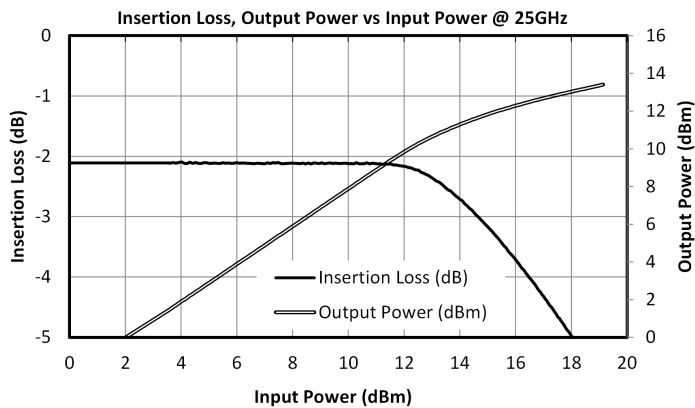
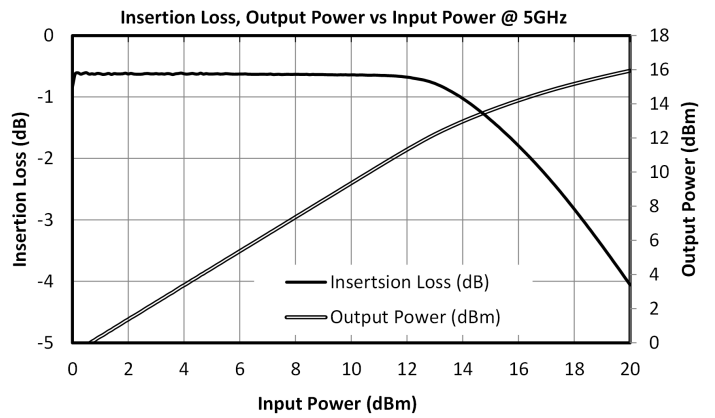
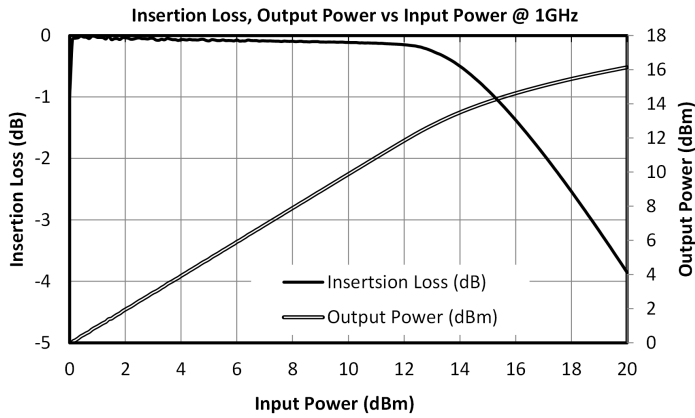
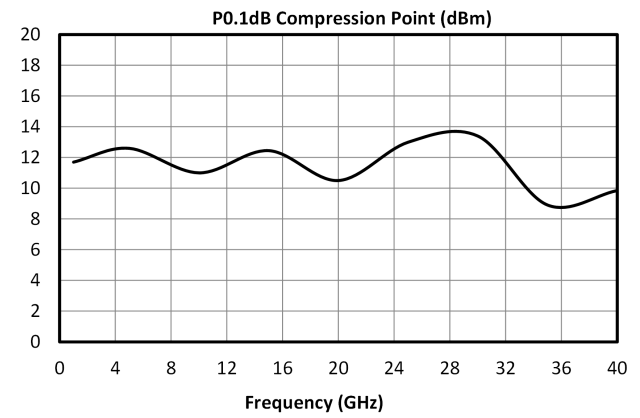
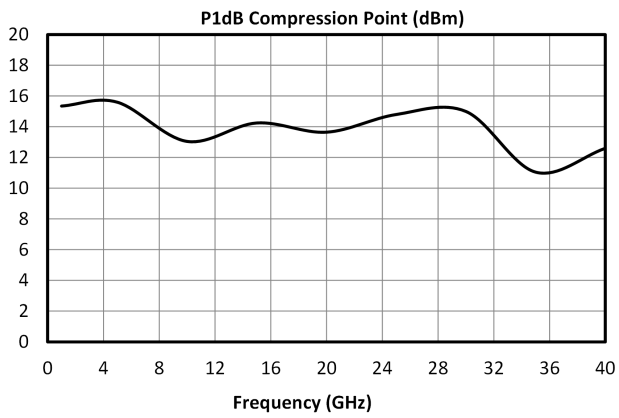
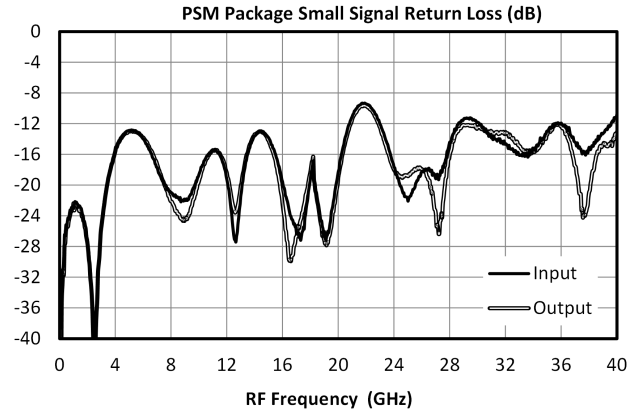
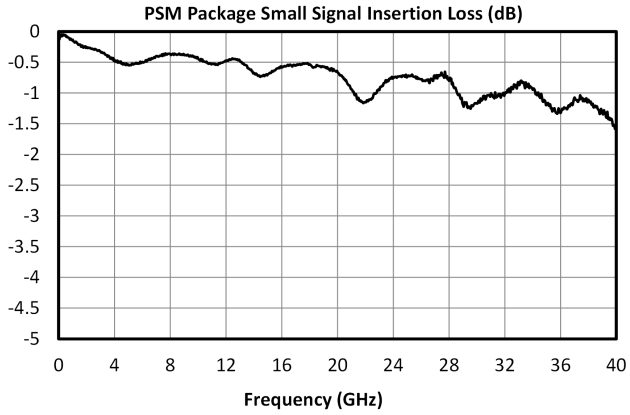
**Package Information**

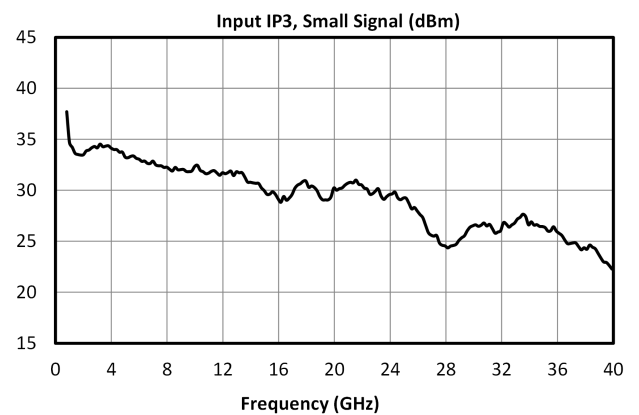
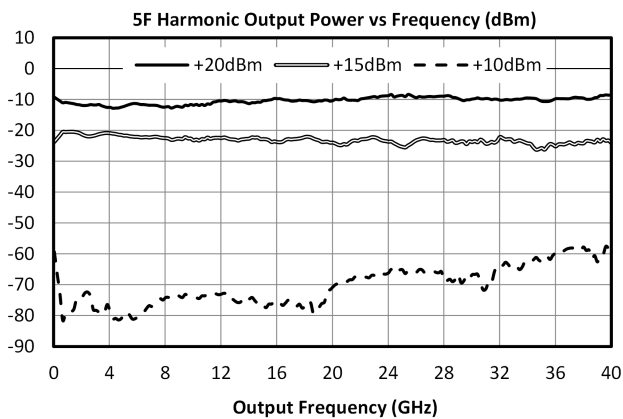
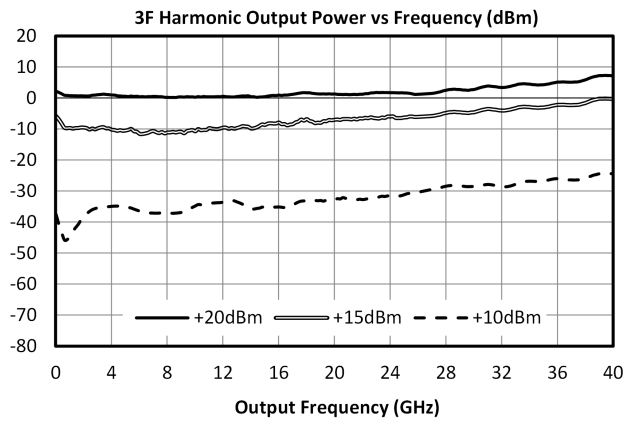
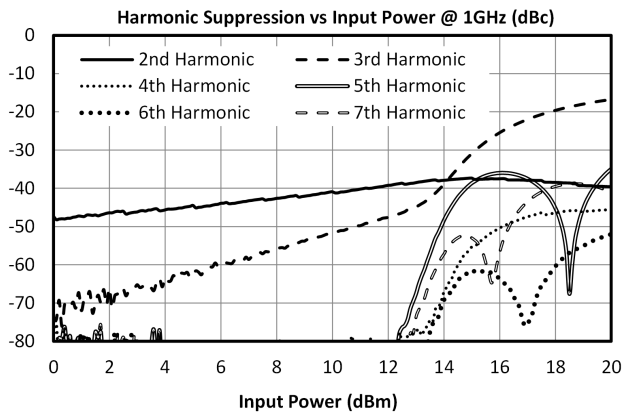
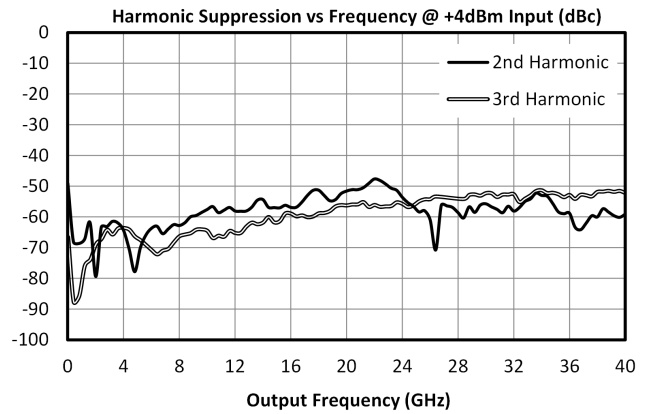
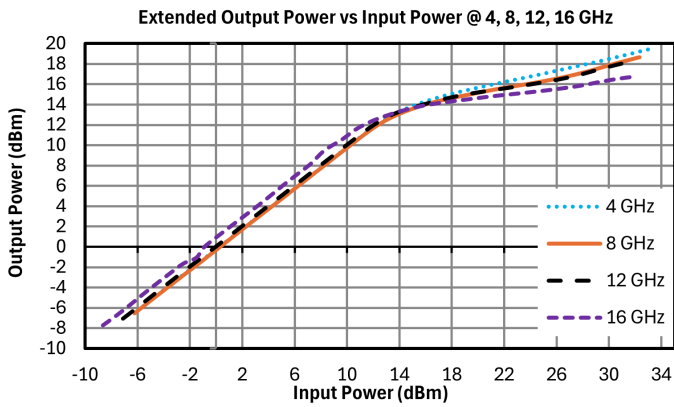
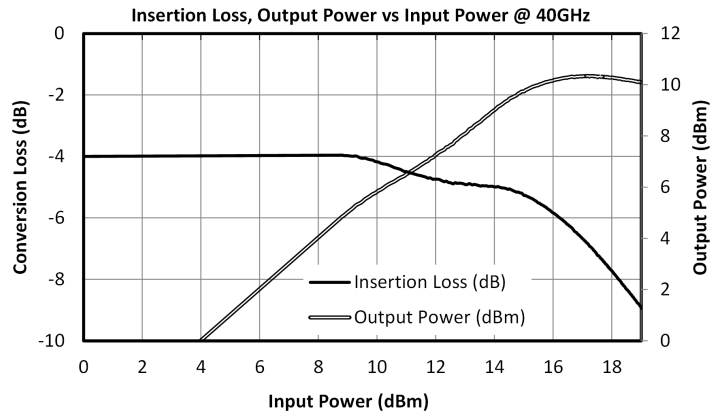
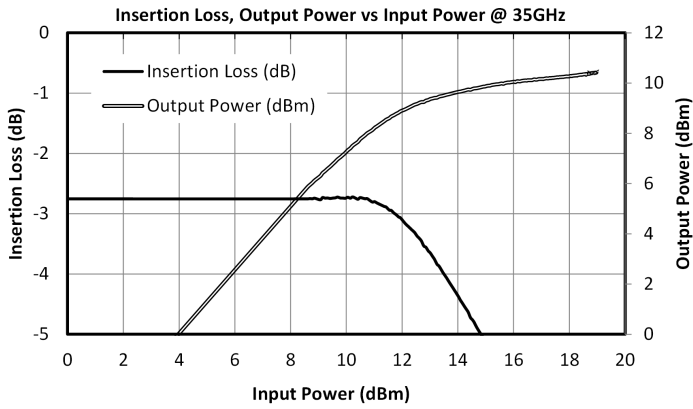
Parameter	Details	Rating
Weight	Package name: QFN	0.041g
Dimensions	-	4 x 4 mm
Moisture Sensitivity Level	-	MSL 1

**Electrical Specifications**

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Flat Leakage	-	1	1	-	19	-	dBm
Flat Leakage	-	20	20	-	15	-	dBm
Flat Leakage	-	40	40	-	11	-	dBm
Input P1dB	-	0	40	-	14	-	dBm
Insertion Loss	-	0	40	-	0.5	1.75	dB
Return Loss	-	0	40	-	17	-	dB

### Typical Performance Plots

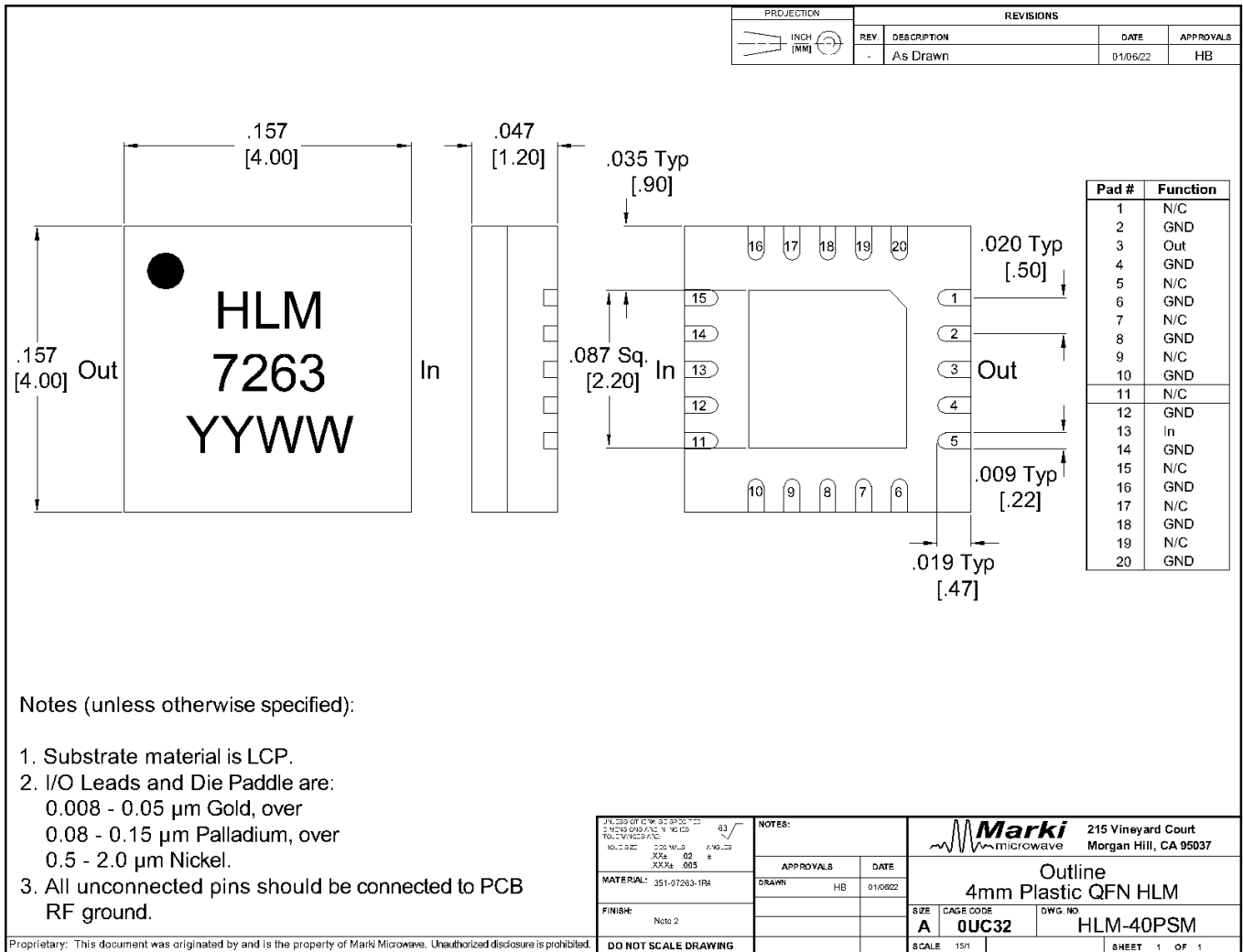




### Mechanical Data

### Outline Drawing

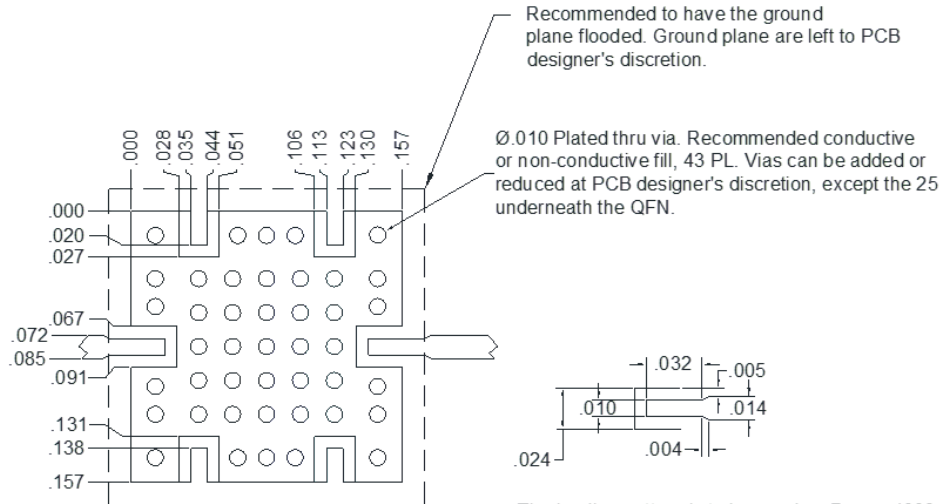
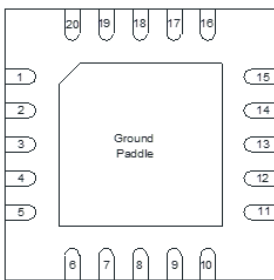
Download : [Outline 2D Drawing](#) | [Outline 3D Drawing](#) | [Outline 3D STP](#)



### Footprint Image

Download: [Footprint Drawing](#)

QFN 4mm Sample Drawing  
X-Ray view



The landing pattern is to be used on Rogers4003, 0.008" thick, ½ Oz Cu. Grounded coplanar wave guide with 0.005" slot, 6 PL.

**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.

© 2025, Marki Microwave, Inc