

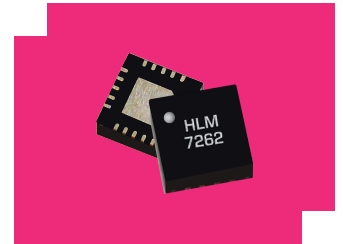
# HLM-20PSM

## High Power DC - 20GHz Limiter

### DEVICE OVERVIEW

#### General Description

The HLM-20PSM is a high-power GaAs Schottky diode signal limiter featuring high IP3 over a broad DC-20GHz bandwidth. It offers low insertion loss and excellent return loss from DC through K band and has a typical 1 dB compression point of 15 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 10 GHz
- 50W Peak Power (pulsed), 5W CW
- +13 to +17 dBm Flat Leakage @ 1W CW
- Typical P1dB of +15dBm
- Small signal S2P data available

#### Applications

- RF Transceivers
- Test and Measurement Equipment
- SATCOM

#### Functional Block Diagram



#### Part Ordering Options

Part Number	Description	Package	Packing Size	Green Status	Product Lifecycle	Export Classification
HLM-20PSM	High Power DC - 20GHz Limiter	QFN	-	REACH RoHS	Released	EAR99
<u>EVAL-HLM-20P</u>	Evaluation Board, High Power DC - 20GHz Limiter	EVAL	-	REACH RoHS	Released	EAR99
<u>HLM-20P-TR</u>	Tape and Reel, High Power DC - 20GHz Limiter	QFN	7"	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**
  - Evaluation Board Outline Drawing

**Revision History**

Revision Code	Revision Date	Comment
A	2025-12-05	ESD Updated

## 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	5	W
RF Power Handling , Peak	50	W

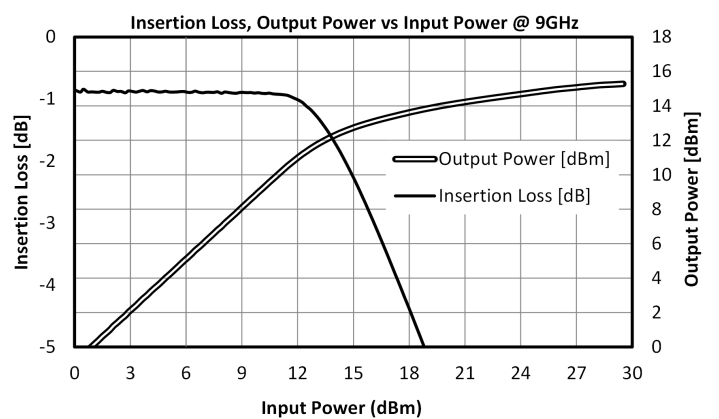
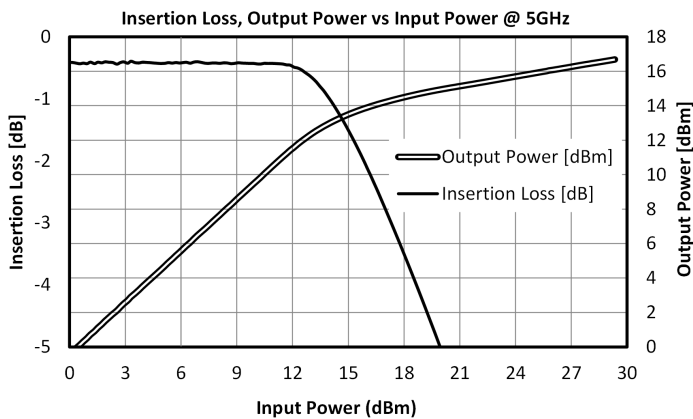
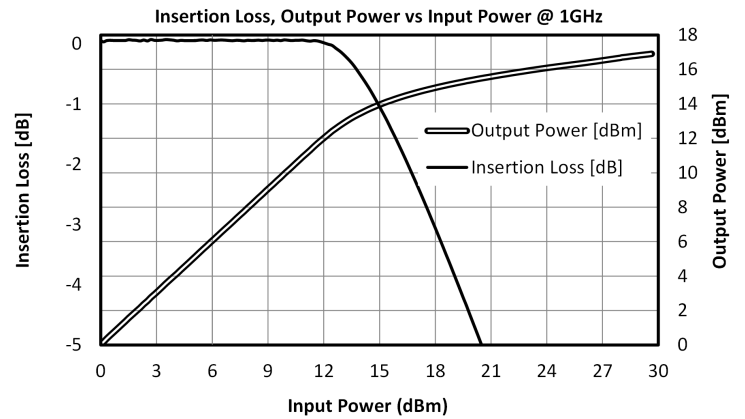
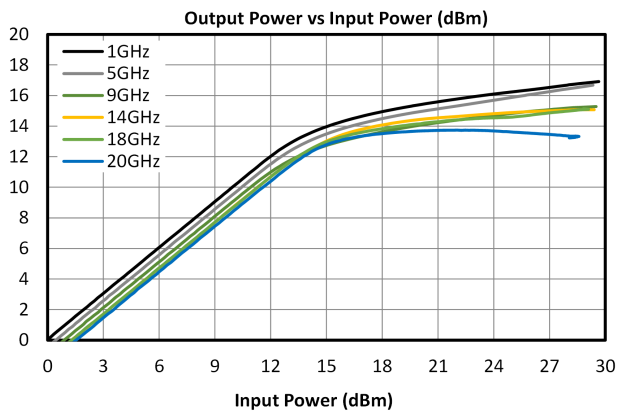
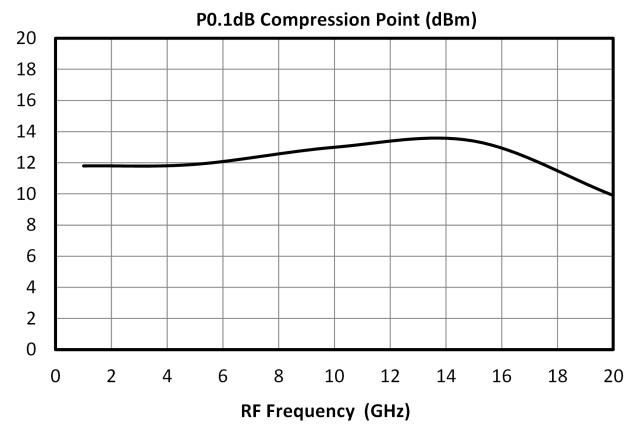
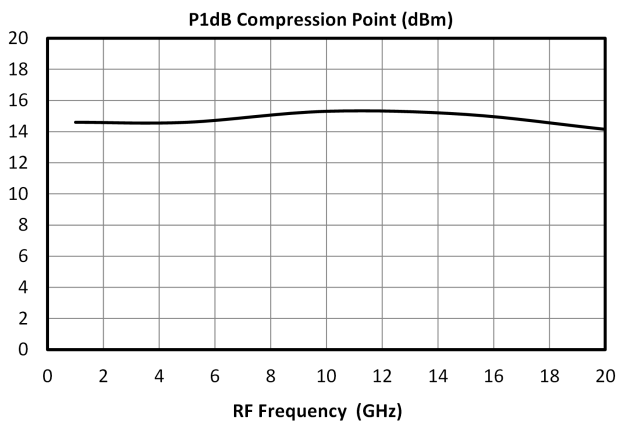
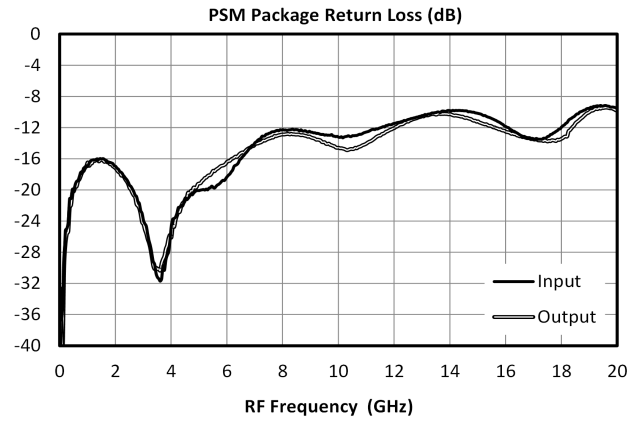
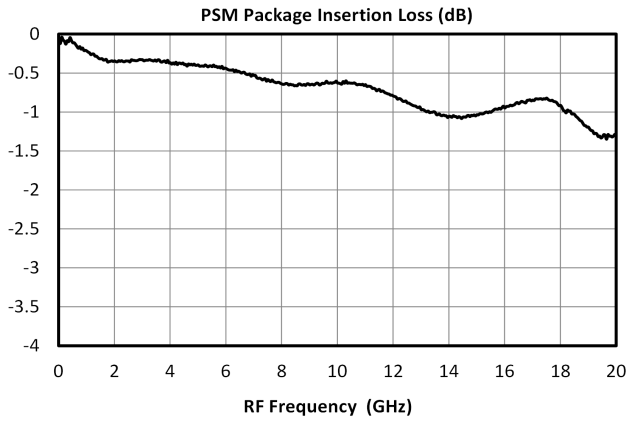
### Package Information

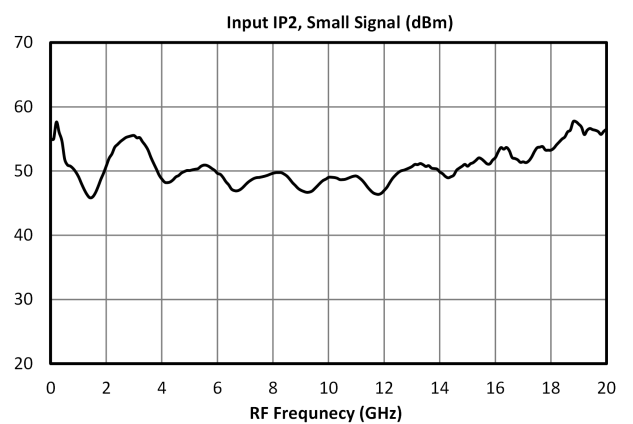
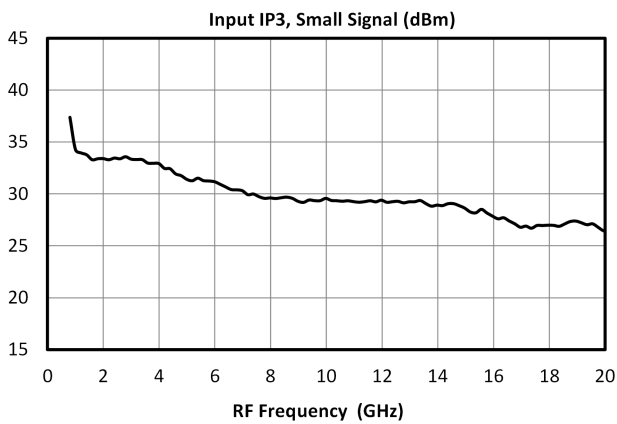
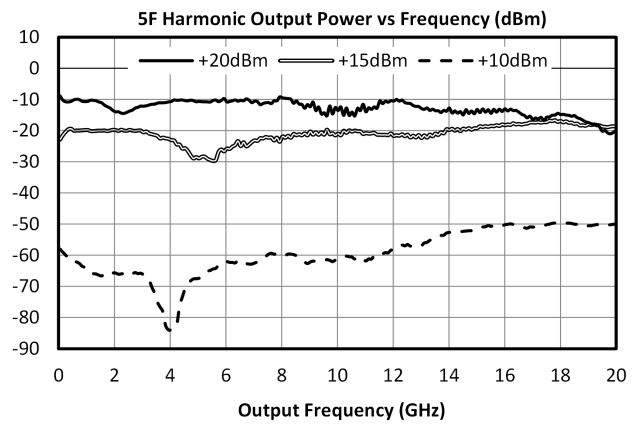
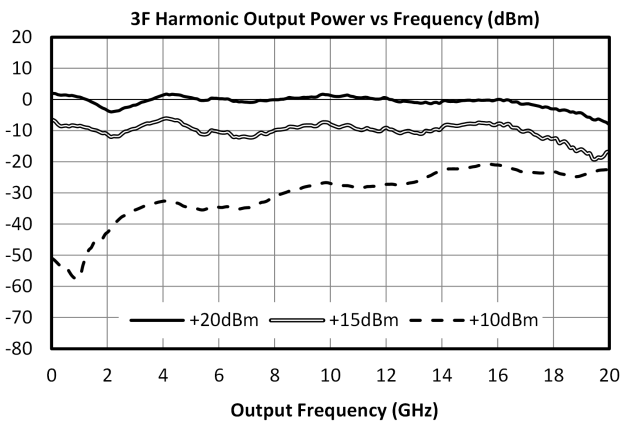
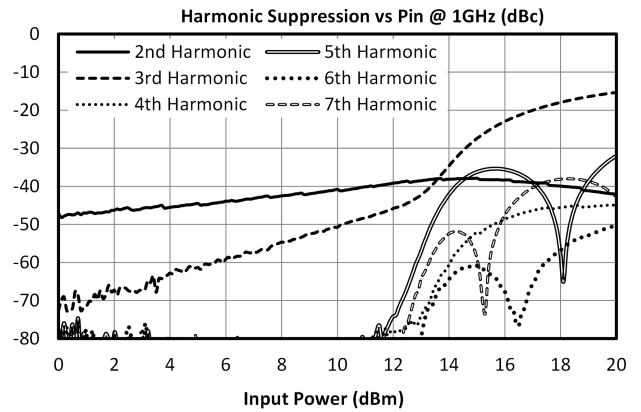
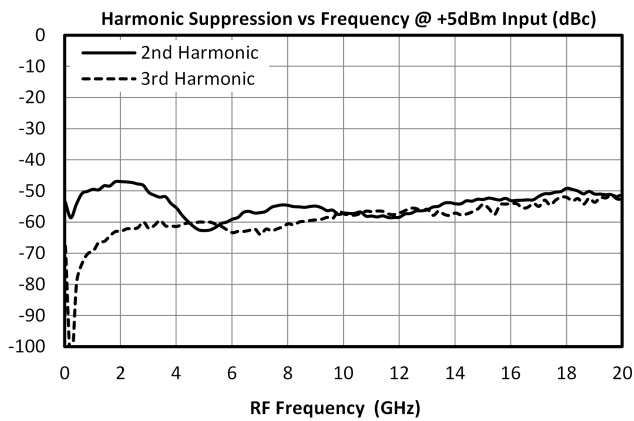
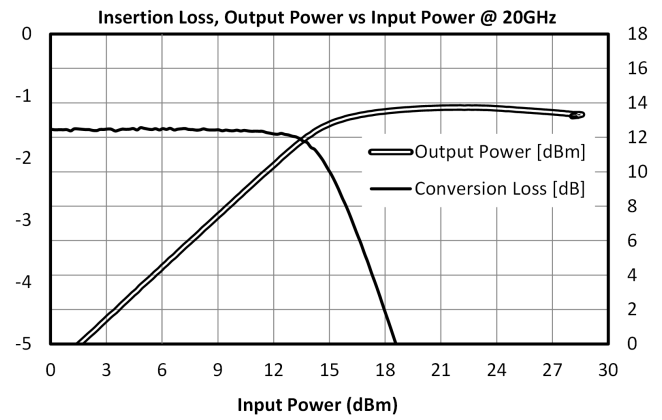
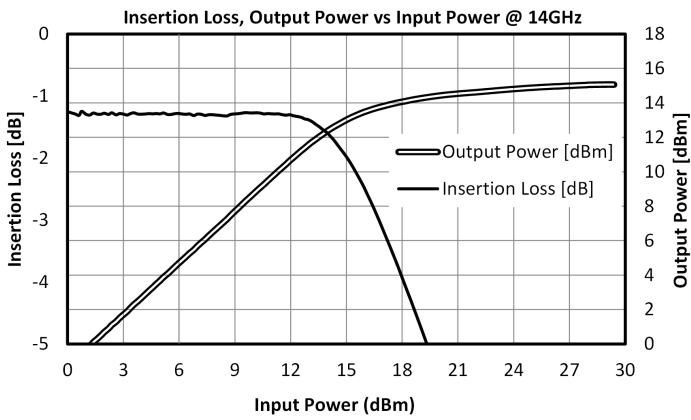
Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Weight	Package name: QFN	0.041g
Dimensions	-	4 x 4 mm
Moisture Sensitivity Level	-	MSL 1

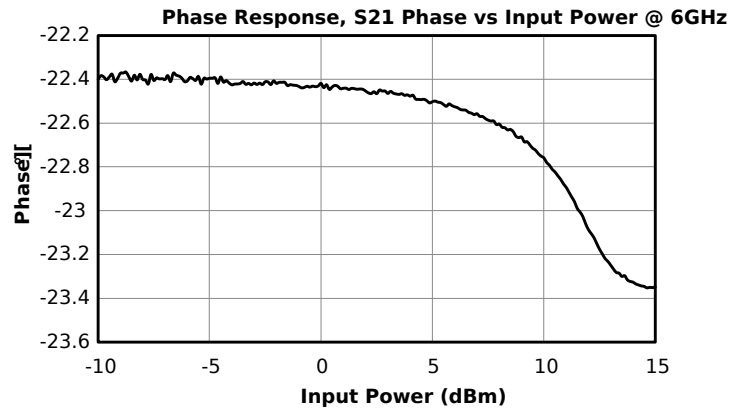
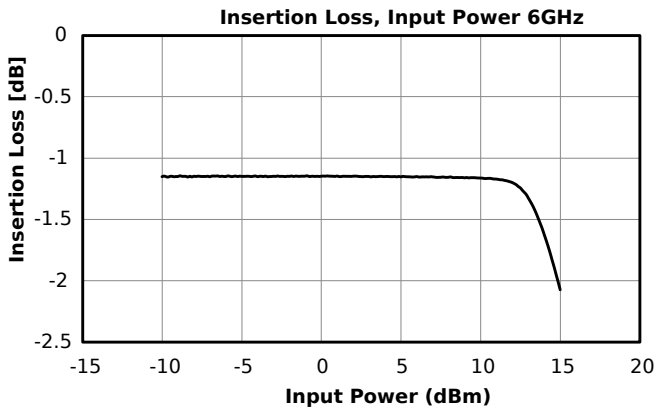
**Electrical Specifications**

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Flat Leakage	-	1	1	-	17	-	dBm
Flat Leakage	-	20	20	-	13	-	dBm
Input P1dB	-	0	20	-	15	-	dBm
Insertion Loss	-	0	20	-	0.5	1.5	dB
Return Loss	-	0	20	-	15	-	dB

### Typical Performance Plots



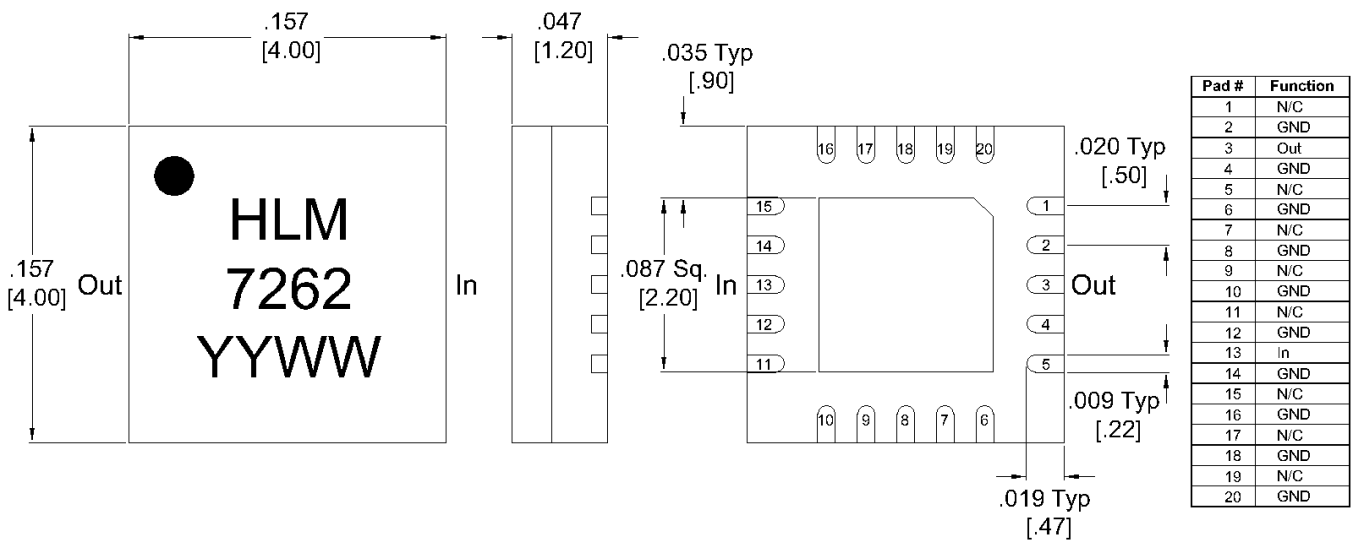




**Mechanical Data**

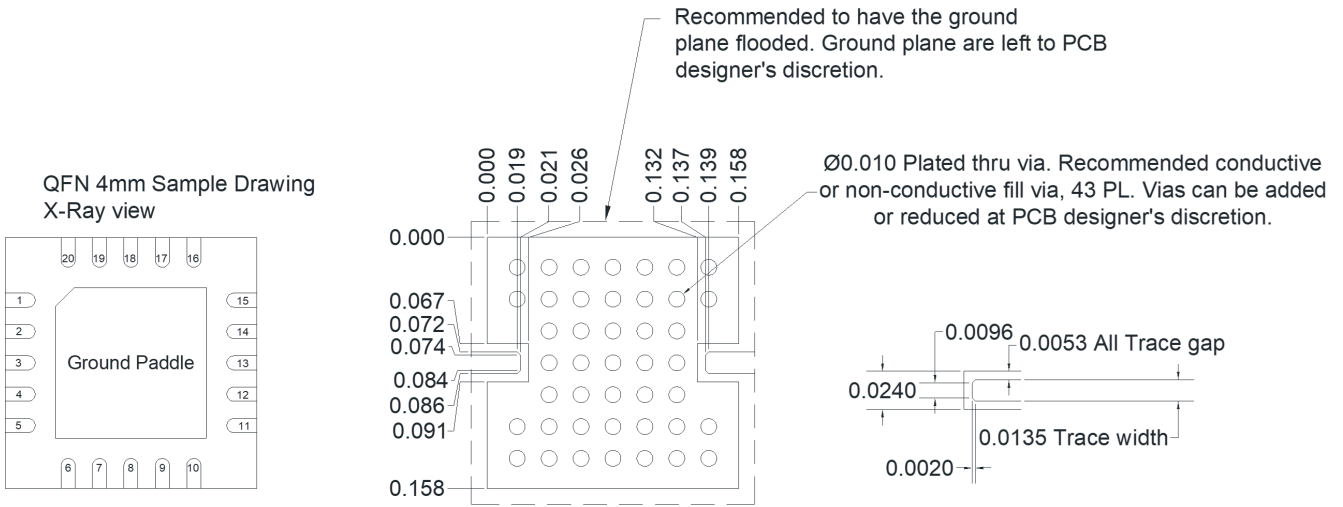
**Outline Drawing**

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



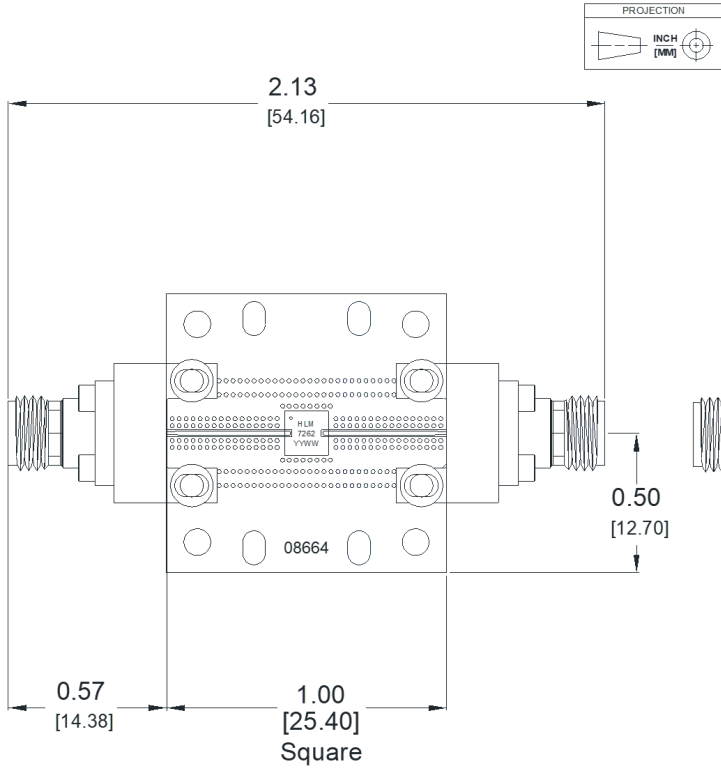
**Footprint Image**

Download : [Footprint Drawing](#)



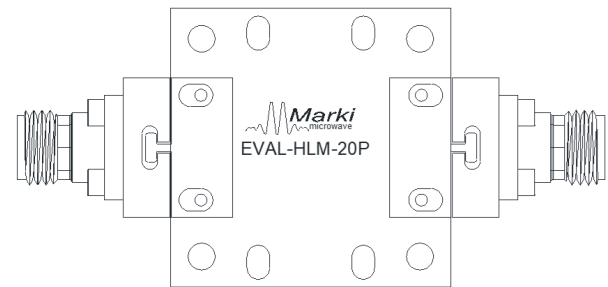
The Landing Pattern is to be used on Rogers 4003,  
0.008" thick ½ Oz Cu.

**Evaluation Board - Outline Drawing**



All Measurements are Typical  
 Input and output connectors are 2.92mm F

Backside



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