# 8000–12000 MHz GaAs PIN RF Limiter Die

LCI-LIM-8000-12000-PIP37MAX-M is a GaAs PIN limiter bare die for 8000–12000 MHz, designed to limit RF power ahead of power-sensitive components.



Insertion loss: 0.3 dB (typical); Limiting level: 17 dBm (typical) / 18 dBm (maximum); Maximum pulsed input power: 37 dBm (maximum) (τ = 300 µs; D = 30%). Die dimensions: 1.6 × 0.9 × 0.1 mm.

## RF characteristics

TA = +25 °C

| Parameter | Symbol | Minimum | Typical | Maximum | Value | Unit |
|---|---|---|---|---|---|---|
| Operating frequency | - | 8000 | - | 12000 | - | MHz |
| Insertion loss | - | - | 0.3 | - | - | dB |
| Input VSWR | - | - | 1.2 | 1.3 | - | - |
| Output VSWR | - | - | 1.2 | 1.3 | - | - |
| Limiting level | - | - | 17 | 18 | - | dBm |
| Maximum pulsed input power | - | - | - | 37 | τ = 300 µs; D = 30% | dBm |

## Environmental specifications

| Parameter | Symbol | Minimum | Typical | Maximum | Unit |
|---|---|---|---|---|---|
| Storage temperature | - | -65 | - | 150 | °C |
| Operating temperature | - | -55 | - | 125 | °C |

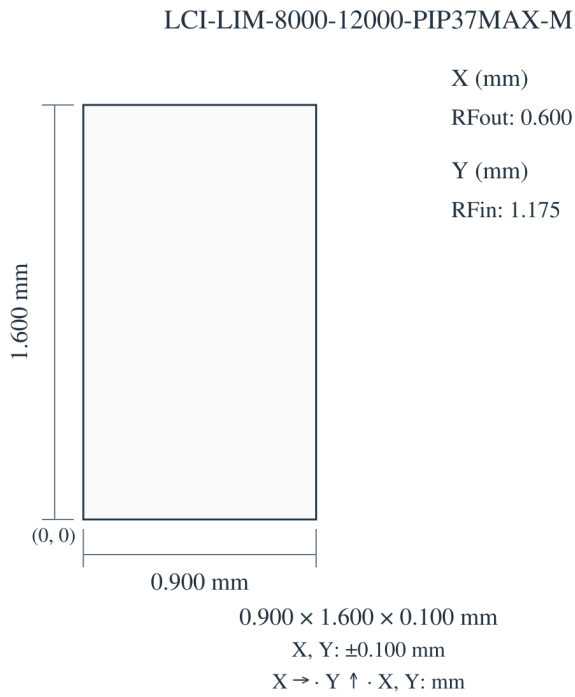
## Bond-pad assignments

| Pins | Symbol | mm |
|---|---|---|
| 2 | RF_in | 0.100 × 0.150 |
| 5 | RF_out | 0.150 × 0.100 |
| 1, 3, 4, 6 | GND | 0.190 × 0.100 |

## Die dimensions

| Parameter | Value | Unit |
|---|---|---|
| Die dimensions | 1.6 × 0.9 × 0.1 | mm |

Outline and dimensioned coordinates in mm. Use this drawing as a dimensional reference. Fabrication and wire bonding require complete drawings.

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## Die integration and bias sequencing

RFout includes an integrated DC-blocking capacitor.

## Pad connection notes

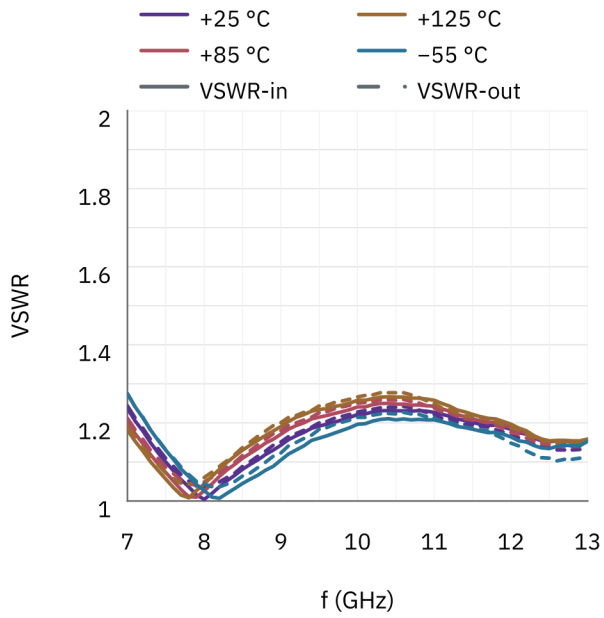
The listed GND pads are test ground pads.

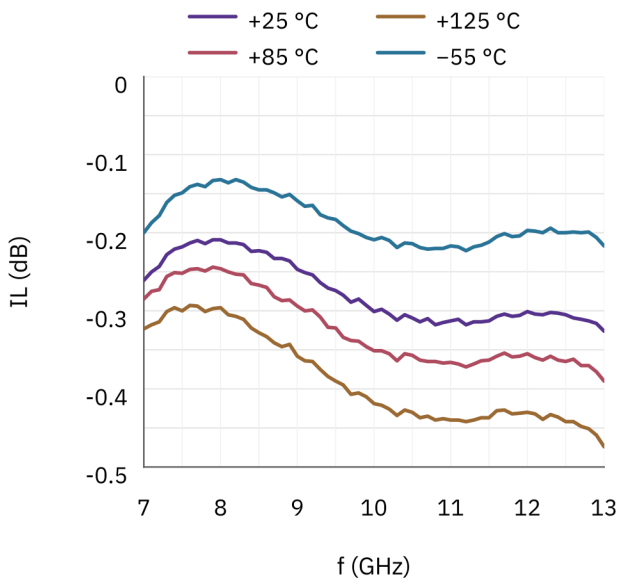
## Performance curves

Each performance plot applies to its stated operating conditions.

**Series reference curves — Input/output matching; Insertion loss.**

Figure notes: TA=+25°C. Readings are approximate. Use the temperature shown in each trace's legend.




**Document notice**

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.