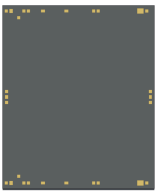


## 13750–15250 MHz GaN MMIC Power Amplifier Die

Saturated output power: 46 dBm (typical); Power gain: 21 dB (typical); Power-added efficiency: 33 % (typical). Die dimensions: 5 × 6 × 0.08 mm.



### RF characteristics · TA = +25 °C; Vd = +28 V; Vg = -3.05 V; CW

| Parameter              | Symbol | Minimum | Typical | Maximum | Value       | Unit |
|------------------------|--------|---------|---------|---------|-------------|------|
| Operating frequency    | -      | 13750   | -       | 15250   | 13750–15250 | MHz  |
| Saturated output power | -      | -       | 46      | -       | -           | dBm  |
| Power gain             | -      | -       | 21      | -       | -           | dB   |
| Power-gain flatness    | -      | -       | -       | ±0.3    | -           | dB   |
| Power-added efficiency | -      | -       | 33      | -       | -           | %    |
| IMD3 (P–3)             | -      | -       | -26     | -       | -           | dBc  |

### DC bias and current · TA = +25 °C

| Parameter               | Symbol | Minimum | Typical | Maximum | Unit |
|-------------------------|--------|---------|---------|---------|------|
| Drain voltage           | -      | -       | 28      | -       | V    |
| Gate voltage            | -      | -3.2    | -3.05   | -2.6    | V    |
| Quiescent drain current | -      | -       | 0.28    | -       | A    |
| Dynamic drain current   | -      | -       | 4.3     | -       | A    |
| Dynamic gate current    | -      | -       | -       | 5       | mA   |

### Absolute limits

| Parameter                    | Symbol | Minimum | Typical | Maximum | Unit | Notes |
|------------------------------|--------|---------|---------|---------|------|-------|
| Maximum drain-source voltage | -      | -       | -       | 32      | V    | -     |
| Minimum gate bias            | -      | -5      | -       | -       | V    | -     |
| Maximum input power          | -      | -       | -       | 28      | dBm  | CW    |
| Maximum channel temperature  | -      | -       | -       | 225     | °C   | -     |

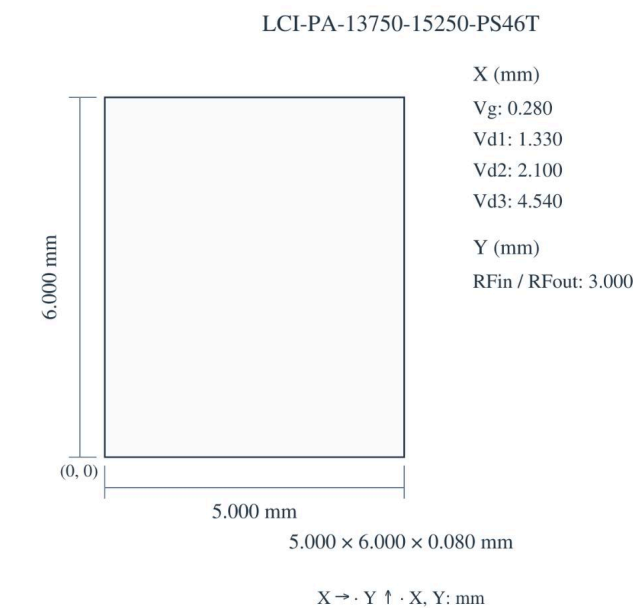
Environmental specifications

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

Die dimensions

| Parameter      | Value        | Unit |
|----------------|--------------|------|
| Die dimensions | 5 × 6 × 0.08 | mm   |

Mechanical Outline



All dimensions are in mm [in].

Bond-pad assignments

| Pins  | Symbol | mm            |
|-------|--------|---------------|
| 1     | RFin   | 0.100 × 0.120 |
| 2, 10 | Vg     | 0.110 × 0.130 |
| 3, 9  | Vd1    | 0.130 × 0.090 |
| 4, 8  | Vd2    | 0.130 × 0.090 |
| 5, 7  | Vd3    | 0.210 × 0.170 |
| 6     | RFout  | 0.090 × 0.120 |

Current publication record · 1.4 · 2026-10-27. Product description or editorial content updated. Replaces revision 1.3.

Die integration and bias sequencing

Apply the negative supply before the positive supply; remove the positive supply before the negative supply. Input and output DC-blocking capacitors are integrated. The RF input includes a DC short to ground.

Mechanical reference scope

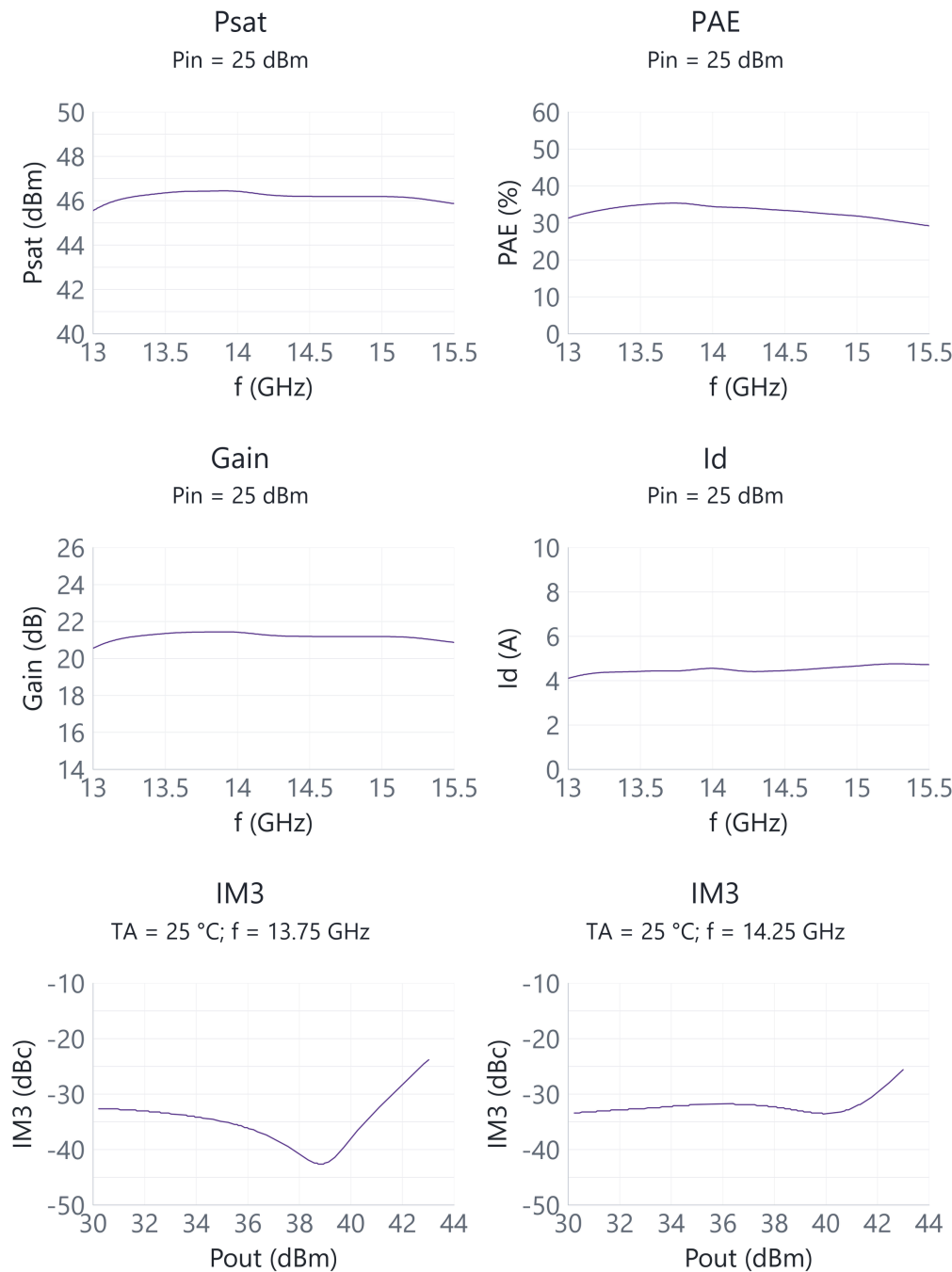
Source-based outline and explicitly dimensioned coordinate guides in mm. Not a complete fabrication or wire-bonding drawing.

Performance curves

Plots from the source datasheet. Read each figure with its stated operating conditions.

Continuous wave (CW) — Power-added efficiency; Saturated output power; Power gain; Dynamic current.

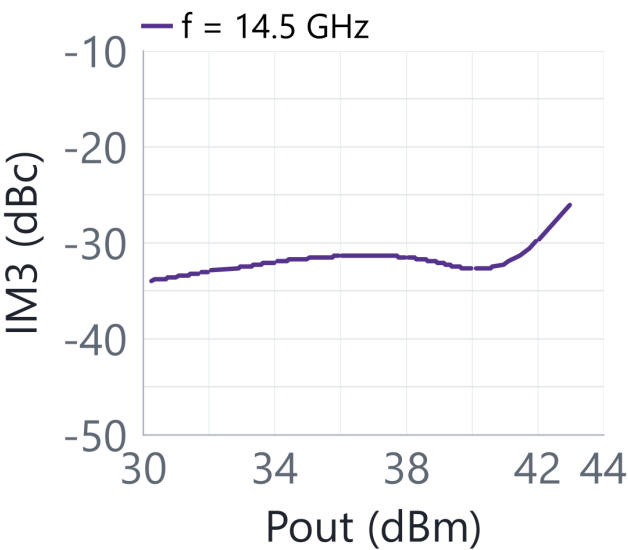
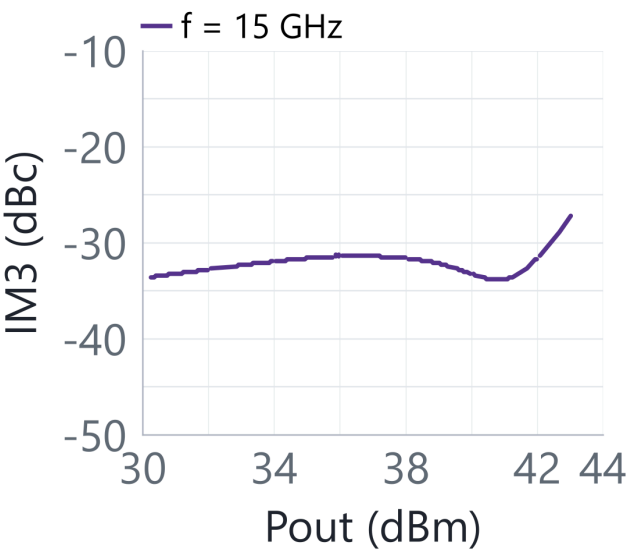
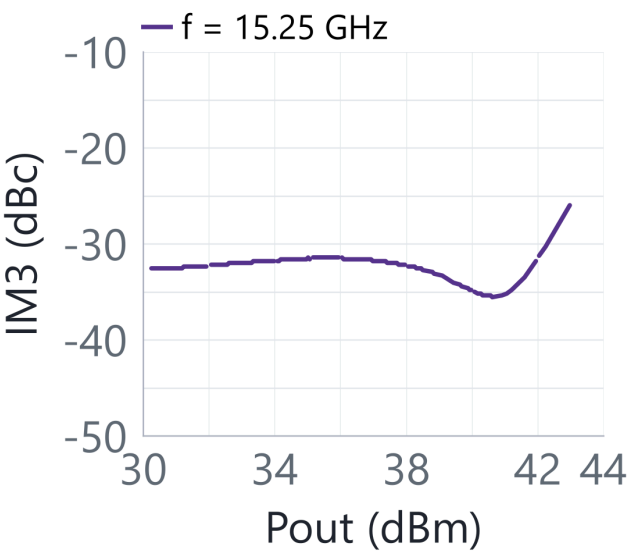
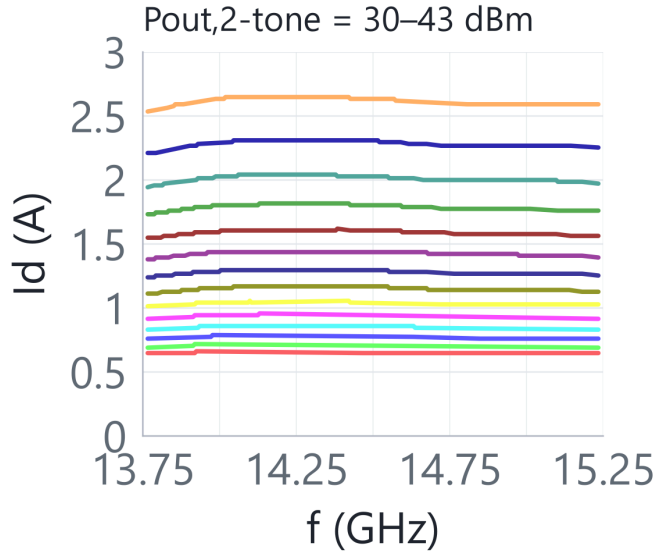
Source-page annotation: Vd=+28V; Pin=25dBm; Vg=-3.05V; Id=280mA. IM3 (f = 13.75 GHz): TA = 25°C. IM3 (f = 14.25 GHz): TA = 25°C. Redrawn from the source figure; readings are approximate.



[Source](#)

IMD3; Drain current.

Source-page annotation: Vd=+28V. Replotted from the source image; readings are approximate. IMD3: f = 14.5 / 15 / 15.25 GHz; TA = +25 °C. The drain-current heading states two-tone output power of 30–43 dBm; individual traces are not assigned to particular output-power values. The +25 °C annotation belongs to the three IMD3 plots.



[Source](#)

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.