

➤ Features

- Process: 0.25 μm Power GaN HEMT Technology
- Frequency Range: 13.7~14.5 GHz
- Typical Output Power: 47.5 dBm (CW)
- Typical Gain: 6.5 dB
- Typical PAE: 30%
- Bias: 28V/0.6A
- Ceramic Hermetic Sealed Package
- Meet the demand of mass production



➤ General Description

The NDNM01161 is a high power and high efficiency internally matched transistor with GaN based 0.25 μm HEMT technology. This transistor operates from 13.7 to 14.5 GHz providing a output power of 47 dBm with gain of 6 dB, power added efficiency of 30% and $V_{ds}=28\text{V}$ by dual power supplies.

➤ Absolute Maximum Ratings($T_A = 25^\circ\text{C}$)

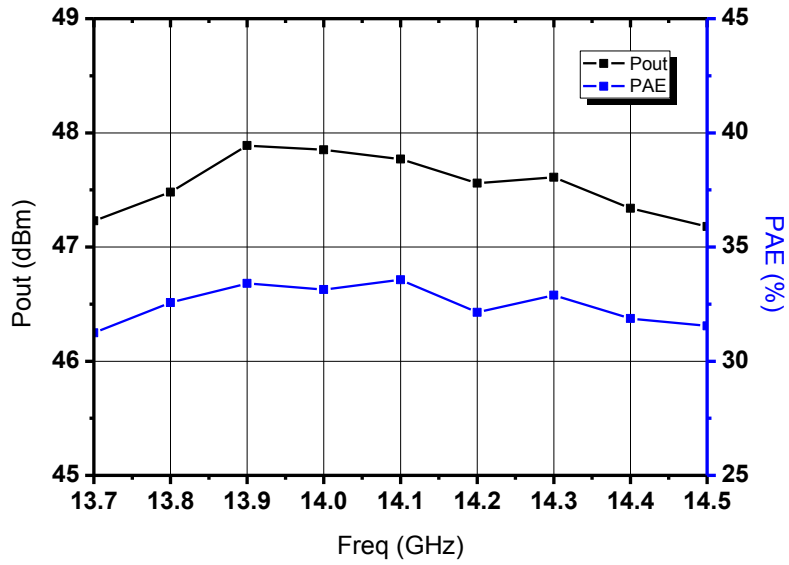
| Symbol | Parameter | Value | Notes |
|-----------|----------------------|-----------|---------------------------------|
| V_{ds} | Drain voltage | 32V | |
| V_{gs} | Grid voltage | -5V | |
| P_d | DC Power Consumption | 80W | 25°C |
| T_{ch} | Channel Temperature | 225°C | [1] |
| T_m | Mounting Temperature | 300°C | 1 min, N ₂ protected |
| T_{stg} | Storage Temperature | -55~150°C | |

[1] More than one excess above maximum limits may cause permanent damage

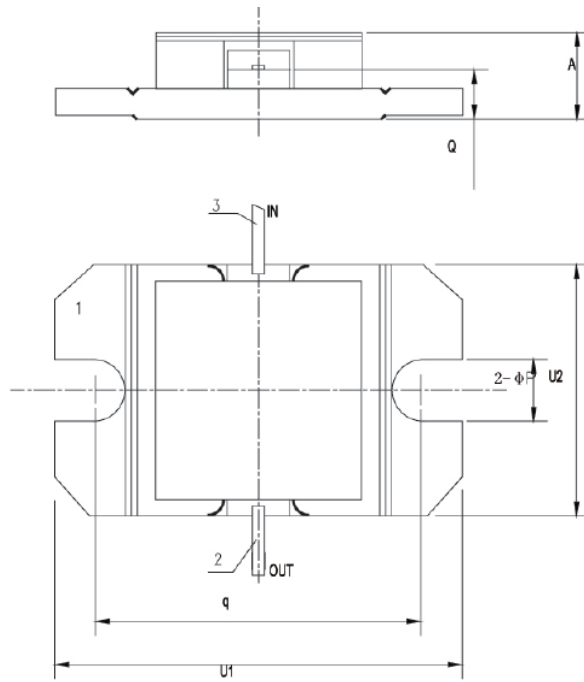
➤ Specifications ($T_A=25^\circ\text{C}$)

| Symbol | Parameter | Conditions | Value | | | Units |
|--------------|--------------------|--|-------|---------|-----|-------|
| | | | Min | Typical | Max | |
| P_{out} | Output Power | $V_d=28\text{V};$ $I_d\approx 0.6\text{A}; F:$ 13.7-14.5 GHz | 46.5 | 47.5 | - | dBm |
| G_p | Power Gain | | 5.5 | 6 | - | dB |
| η_{add} | PAE | | 32 | 30 | - | % |
| R_{th} | Thermal resistance | | - | - | 1.5 | °C/W |

➤ Typical Performances ($T_A=25^\circ\text{C}$)



➤ **Package Size:**

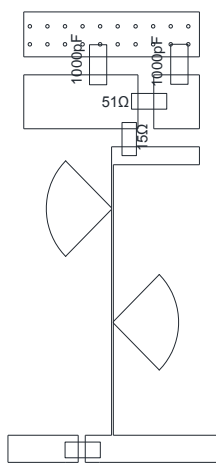


1 — 源电极 2 — 漏电极 3 — 栅电极

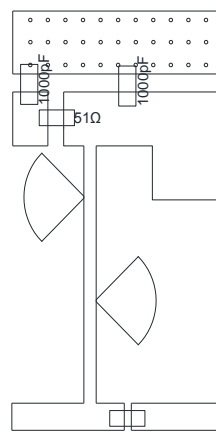
1 – source, 2 – drain, 3 – gate, Unit: mm

| Symbol | Value | |
|----------|-------|-------|
| | Min | Max |
| A | - | 5.2 |
| Q | 2.50 | 2.80 |
| q | 16.80 | 17.20 |
| $U1$ | 20.80 | 21.30 |
| $U2$ | 12.85 | 13.10 |
| ΦP | 3.10 | 3.40 |

➤ **Advised application circuit**



0.5 pF chip capacitor



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