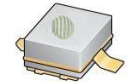


## 25W, 28V RF Power GaN HEMT

### NGN60025L4C



#### Description

The NGN60025L4C is an unmatched 25W GaN HEMT, designed for applications up to 6GHz. The transistor is packaged in a surface mounted package making it a compact and versatile product that can be used in a multitude of applications with many possible signal formats such as CW, pulsed radar or complex modulation schemes.

#### Applications and Features

- 5G, LTE and multi-mode wireless communication
- Radar
- Wideband amplifiers
- EMC testing, ISM

#### Maximum Ratings

Rating	Symbol	Value	Unit
Drain-Source Voltage	$V_{DSS}$	120	Vdc
Gate-Source Voltage	$V_{GS}$	-10,+2	Vdc
Operating Voltage	$V_{DD}$	40	Vdc
Maximum Forward Gate Current @ TC = 25°C	$I_{gmax}$	6	mA
Storage Temperature Range	$T_{stg}$	-65 to +150	°C
Case Operating Temperature	$T_C$	+150	°C
Operating Junction Temperature	$T_J$	+225	°C
Total Device Power Dissipation	$P_{diss}$	33	W
Thermal Resistance, $T_C=85^\circ\text{C}$ , $T_J=200^\circ\text{C}$ ,	$R_{\theta JC}$	5.3	°C/W

#### Electrical Characteristics

##### DC Characteristics

Characteristic	Conditions	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS}=-8\text{V}$ ; $I_{DS}=10\text{mA}$	$V_{DSS}$		160		V
Gate Threshold Voltage	$V_{DS}=28\text{V}$ , $I_D=5\text{mA}$	$V_{GS(th)}$		-2.7		V
Gate Quiescent Voltage	$V_{DS}=28\text{V}$ , $I_{DS}=120\text{mA}$ ,	$V_{GS(Q)}$		-2.35		V

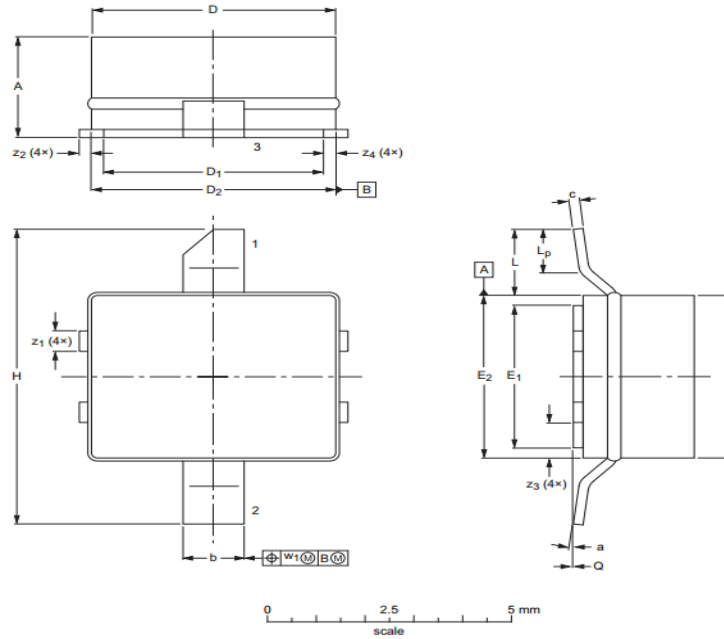
##### RF Characteristics

As measured in standard test fixture  $V_{DD}=28\text{V}$ ,  $I_{DQ}=120\text{mA}$ ,  $f=2\text{GHz}$ ,  $P_{in}=25\text{dBm}$

Characteristic	Symbol	Min	Typ	Max	Unit
Power Gain	$G_p$		19		dB
Drain Efficiency @ $P_{SAT}$	$\eta$		70		%
Saturated Power	$P_{SAT}$		25		W
Input Return Loss	IRL		-7		dB
Mismatch stress at all phases	VSWR		10:1		$\Psi$

## Package Outline

Earless Flange Ceramic Package; 2 leads (1:Drain, 2:Gate, 3-Source (Bottom base))



UNIT	A	b	c	D	D <sub>1</sub>	E	E <sub>1</sub>	E <sub>2</sub>	H	L	L <sub>p</sub>	Q	W <sub>1</sub>	Z <sub>1</sub>	Z <sub>2</sub>	Z <sub>3</sub>	Z <sub>4</sub>	α
mm	2.34 2.13	1.35 1.19	0.23 0.18	5.16 5.00	4.65 4.50	4.14 3.99	3.63 3.48	4.14 3.99	7.49 7.24	2.03 1.27	1.02 0.51	0.1 0.0	0.25	0.58 0.43	0.25 0.18	0.97 0.81	0.51 0.00	7° 0°

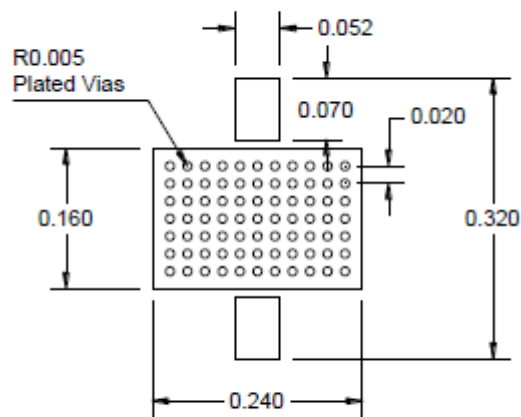
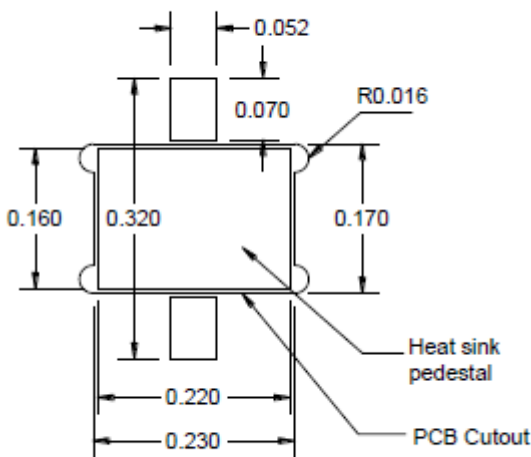
## Recommendations for assembly, PCB connection layout

### Option 1: Package leads straight

Device mounted on heatsink through cavity in PCB

### Option 2: Package leads bent

Device mounted atop tightly stitched array of filled vias



Note: Dimensions in inches