

NTD12N08, NTD12N08L

Product Preview

80 V Power MOSFET

ON Semiconductor utilizes its latest MOSFET technology process to manufacture 80 V power MOSFET devices to achieve the lowest possible on-resistance per silicon area. These 80 V devices are designed for Power Management solutions in 42 V Automotive system applications. Typical applications include integrated starter alternator, electronic power steering, electronic fuel injection, catalytic converter heaters and other high power applications made possible via an automotive 42 V bus. ON Semiconductor's latest technology offering continues to offer high avalanche energy capability and low reverse recovery losses.

ELECTRICAL CHARACTERISTICS

($T_J = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Drain-to-Source Breakdown Voltage ($V_{GS} = 0\text{ Vdc}$, $I_D = 250\text{ }\mu\text{Adc}$)	$V_{(BR)DSS}$	80	—	—	Vdc
Zero Gate Voltage Drain Current ($V_{DS} = 80\text{ Vdc}$, $V_{GS} = 0\text{ Vdc}$) ($V_{DS} = 80\text{ Vdc}$, $V_{GS} = 0\text{ Vdc}$, $T_J = 150^\circ\text{C}$)	I_{DSS}	—	—	1.0 10	μAdc
Gate-Body Leakage Current ($V_{GS} = \pm 20\text{ Vdc}$, $V_{DS} = 0\text{ Vdc}$)	I_{GSS}	—	—	± 100	nAdc

ON CHARACTERISTICS

Gate Threshold Voltage ($V_{DS} = V_{GS}$, $I_D = 250\text{ }\mu\text{Adc}$) NTD12N08 NTD12N08L	$V_{GS(th)}$	2.0 1.0	3.0 1.5	4.0 2.0	Vdc
Static Drain-to-Source On-Resistance ($I_D = 6.0\text{ Adc}$) NTD12N08, $V_{GS} = 10\text{ V}$ NTD12N08L, $V_{GS} = 5\text{ V}$	$R_{DS(on)}$	— —	165 180	— —	$\text{m}\Omega$



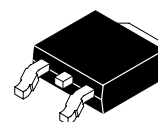
ON Semiconductor

<http://onsemi.com>

12 AMPERES

12N08 Typ $R_{DS(on)} = 165\text{ m}\Omega$

12N08L Typ $R_{DS(on)} = 180\text{ m}\Omega$



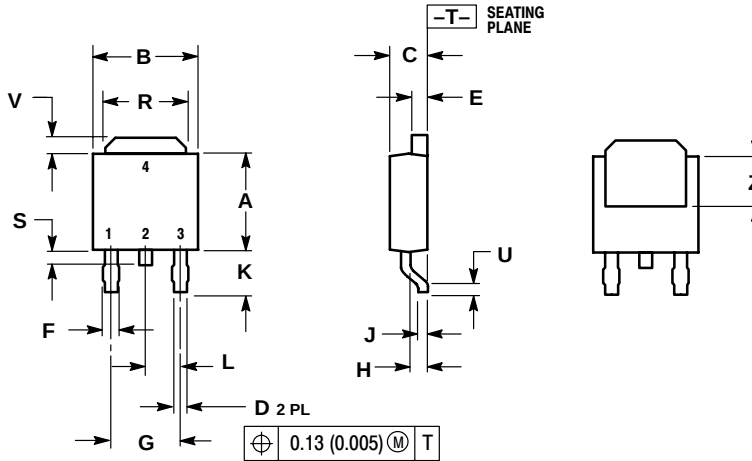
DPAK
CASE 369A
STYLE 2

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PACKAGE DIMENSIONS

DPAK
CASE 369A-13
ISSUE AA



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.235	0.250	5.97	6.35
B	0.250	0.265	6.35	6.73
C	0.086	0.094	2.19	2.38
D	0.027	0.035	0.69	0.88
E	0.033	0.040	0.84	1.01
F	0.037	0.047	0.94	1.19
G	0.180 BSC		4.58 BSC	
H	0.034	0.040	0.87	1.01
J	0.018	0.023	0.46	0.58
K	0.102	0.114	2.60	2.89
L	0.090 BSC		2.29 BSC	
R	0.175	0.215	4.45	5.46
S	0.020	0.050	0.51	1.27
U	0.020	---	0.51	---
V	0.030	0.050	0.77	1.27
Z	0.138	---	3.51	---

STYLE 2:

- PIN 1. GATE
2. DRAIN
3. SOURCE
4. DRAIN

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