NTP85N08, NTB85N08, NTP85N08L, NTB85N08L

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°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Drain–to–Source Breakdown Voltage (V_{GS} = 0 Vdc, I_D = 250 μAdc)	$V_{(BR)DSS}$	80	–	–	Vdc
Zero Gate Voltage Drain Current (V_{DS} = 80 Vdc, V_{GS} = 0 Vdc) (V_{DS} = 80 Vdc, V_{GS} = 0 Vdc, T_J =150°C)	I_{DSS}	– –	– –	1.0 10	μAdc
Gate–Body Leakage Current (V_{GS} = ±20 Vdc, V_{DS} = 0 Vdc)	I_{GSS}	–	–	±100	nAdc
ON CHARACTERISTICS					
Gate Threshold Voltage (V_{DS} = V_{GS}, I_D = 250 μAdc) NTP/B85N08 NTP/B85N08L	$V_{GS(th)}$	2.0 1.0	3.0 1.5	4.0 2.0	Vdc
Static Drain–to–Source On–Resistance (I_D = 42.5 Adc) NTP/B85N08, V_{GS}= 10 V NTP/B85N08L, V_{GS} = 5 V	$R_{DS(on)}$	– –	13 15	– –	mΩ

This document contains information on a product under development. ON Semiconductor reserves the right to change or discontinue this product without notice.

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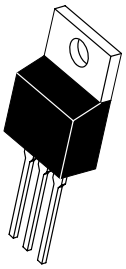
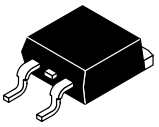
http://onsemi.com

85 AMPERES
85N08 Typ $R_{DS(on)}$ = 13 mΩ
85N08L Typ $R_{DS(on)}$ = 15 mΩ



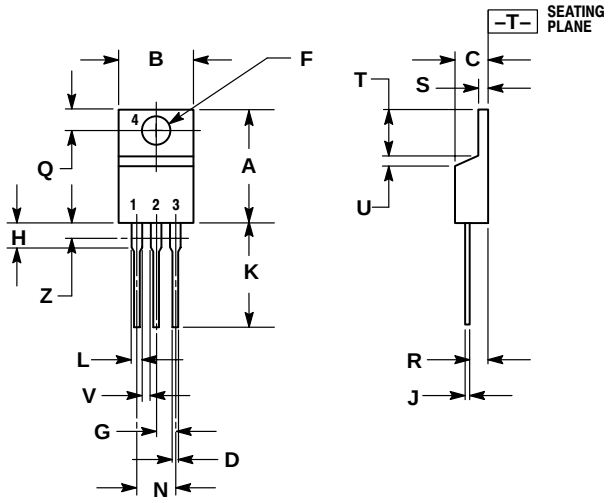
TO–220 (XTP)
CASE 221A–09
STYLE 5



D²PAK (XTB)
CASE 418B
STYLE 2

PACKAGE DIMENSIONS

TO–220
CASE 221A–09
ISSUE AA

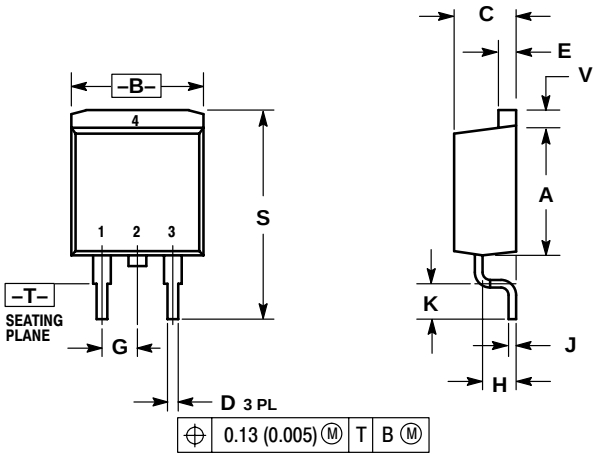


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION Z DEFINES A ZONE WHERE ALL BODY AND LEAD IRREGULARITIES ARE ALLOWED.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.570	0.620	14.48	15.75
B	0.380	0.405	9.66	10.28
C	0.160	0.190	4.07	4.82
D	0.025	0.035	0.64	0.88
F	0.142	0.147	3.61	3.73
G	0.095	0.105	2.42	2.66
H	0.110	0.155	2.80	3.93
J	0.018	0.025	0.46	0.64
K	0.500	0.562	12.70	14.27
L	0.045	0.060	1.15	1.52
N	0.190	0.210	4.83	5.33
Q	0.100	0.120	2.54	3.04
R	0.080	0.110	2.04	2.79
S	0.045	0.055	1.15	1.39
T	0.235	0.255	5.97	6.47
U	0.000	0.050	0.00	1.27
V	0.045	---	1.15	---
Z	---	0.080	---	2.04

STYLE 5:
PIN 1. GATE
2. DRAIN
3. SOURCE
4. DRAIN

D²PAK
CASE 418B–03
ISSUE D



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

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.340	0.380	8.64	9.65
B	0.380	0.405	9.65	10.29
C	0.160	0.190	4.06	4.83
D	0.020	0.035	0.51	0.89
E	0.045	0.055	1.14	1.40
G	0.100 BSC		2.54 BSC	
H	0.080	0.110	2.03	2.79
J	0.018	0.025	0.46	0.64
K	0.090	0.110	2.29	2.79
S	0.575	0.625	14.60	15.88
V	0.045	0.055	1.14	1.40

STYLE 2:
PIN 1. GATE
2. DRAIN
3. SOURCE
4. DRAIN

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Phone: 303–675–2121 (Tue–Fri 9:00am to 1:00pm, Hong Kong Time)
Toll Free from Hong Kong & Singapore:
001–800–4422–3781
Email: ONlit–asia@hibbertco.com

JAPAN: ON Semiconductor, Japan Customer Focus Center
4–32–1 Nishi–Gotanda, Shinagawa–ku, Tokyo, Japan 141–0031
Phone: 81–3–5740–2700
Email: r14525@onsemi.com

ON Semiconductor Website: http://onsemi.com

For additional information, please contact your local
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