

# NTP70N08, NTB70N08, NTP70N08L, NTB70N08L

## 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<sub>J</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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#### OFF CHARACTERISTICS

Drain-to-Source Breakdown Voltage (V <sub>GS</sub> = 0 Vdc, I <sub>D</sub> = 250 μAdc)	V <sub>(BR)DSS</sub>	80	–	–	Vdc
Zero Gate Voltage Drain Current (V <sub>DS</sub> = 80 Vdc, V <sub>GS</sub> = 0 Vdc) (V <sub>DS</sub> = 80 Vdc, V <sub>GS</sub> = 0 Vdc, T <sub>J</sub> = 150°C)	I <sub>DSS</sub>	–	–	1.0 10	μAdc
Gate-Body Leakage Current (V <sub>GS</sub> = ±20 Vdc, V <sub>DS</sub> = 0 Vdc)	I <sub>GSS</sub>	–	–	±100	nAdc

#### ON CHARACTERISTICS

Gate Threshold Voltage (V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250 μAdc) NTP/B70N08 NTP/B70N08L	V <sub>GS(th)</sub>	2.0 1.0	3.0 1.5	4.0 2.0	Vdc
Static Drain-to-Source On-Resistance (I <sub>D</sub> = 35 Adc) NTP/B70N08, V <sub>GS</sub> = 10 V NTP/B70N08L, V <sub>GS</sub> = 5 V	R <sub>DS(on)</sub>	–	19 21	–	mΩ



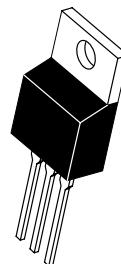
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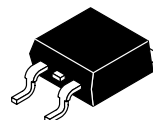
70 AMPERES

70N08 Typ R<sub>DS(on)</sub> = 19 mΩ

70N08L Typ R<sub>DS(on)</sub> = 21 mΩ



TO-220 (XTP)  
CASE 221A-09  
STYLE 5



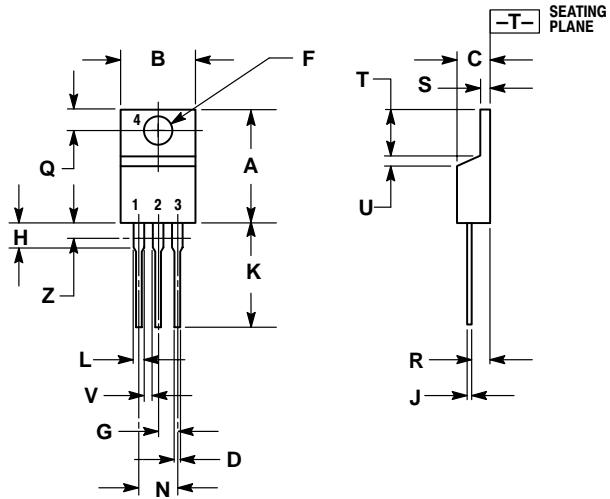
D<sup>2</sup>PAK (XTB)  
CASE 418B  
STYLE 2

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# NTP70N08, NTB70N08, NTP70N08L, NTB70N08L

## 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.

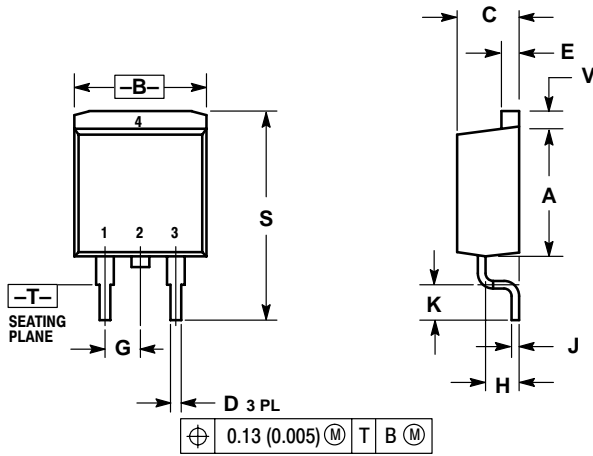
DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.570	0.620	14.48	15.75
B	0.380	0.405	9.66	10.28
C	0.160	0.190	4.07	4.82
D	0.025	0.035	0.64	0.88
F	0.142	0.147	3.61	3.73
G	0.095	0.105	2.42	2.66
H	0.110	0.155	2.80	3.93
J	0.018	0.025	0.46	0.64
K	0.500	0.562	12.70	14.27
L	0.045	0.060	1.15	1.52
N	0.190	0.210	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
- DRAIN
- SOURCE
- DRAIN

# NTP70N08, NTB70N08, NTP70N08L, NTB70N08L

## D<sup>2</sup>PAK CASE 418B-03 ISSUE D



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

DIM	INCHES		MILLIMETERS	
	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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