

# isc N-Channel MOSFET Transistor

## 8N80

### DESCRIPTION

- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 1.25 \Omega$  (Max) @  $I_D = 4A$
- Drain Current  $-I_D = 8.0A @ T_C = 25^\circ C$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

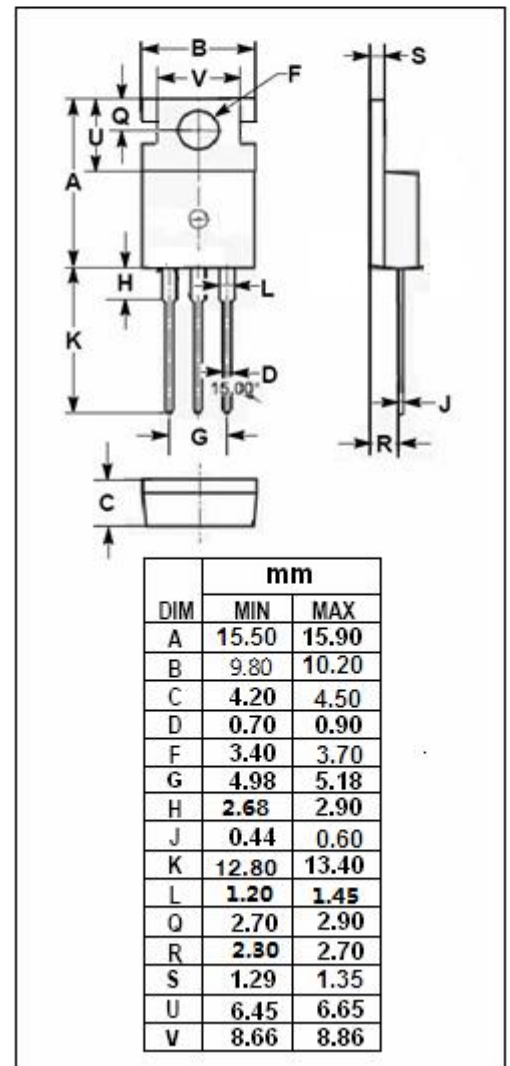
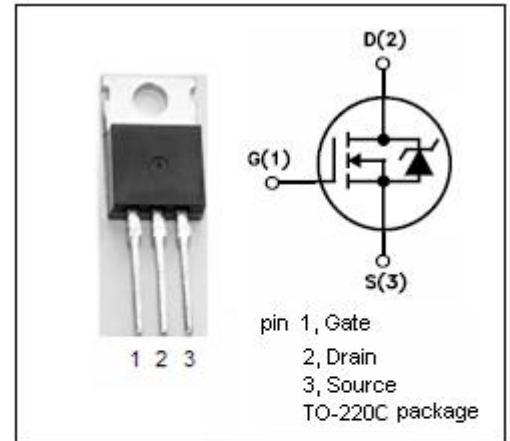
- Designed for high voltage, high speed switching power applications such as switching regulators, converters, solenoid and relay driver .

### ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	800	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C = 25^\circ C$	8	A
$I_{CM}$	Collector Current-Peak	32	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	135	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.92	$^\circ C/W$



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• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA	800			V
V <sub>GS(TH)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 0.25mA	2		4.0	V
R <sub>DS(ON)</sub> *	Drain-Source On-stage Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 4A		1.10	1.25	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 800V; V <sub>GS</sub> = 0			25	uA
V <sub>SD</sub> *	Diode Forward Voltage	I <sub>F</sub> = 8.0A; V <sub>GS</sub> = 0			1.5	V

\*:Pulse width≤300us,duty cycle ≤2%

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