

# isc N-Channel MOSFET Transistor

3N80

**• FEATURES**

- Drain Current  $I_D=3.0A@ T_C=25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS}= 800V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(\text{on})} = 4.5 \Omega (\text{Max})$
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• APPLICATIONS**

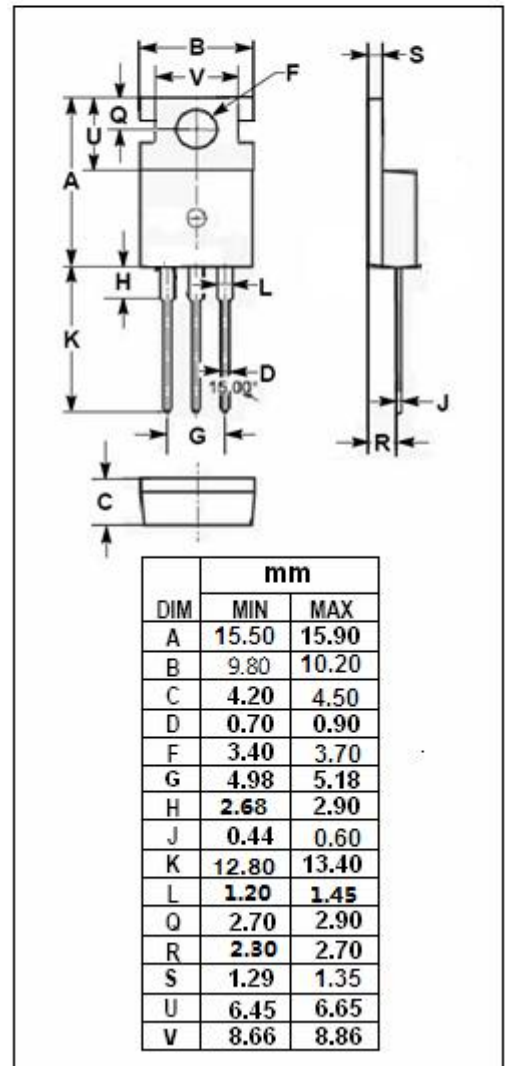
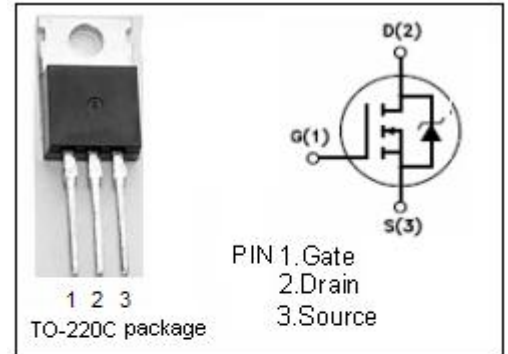
- Switching power supplies,converters,AC and DC motor controls

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	800	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 30$	V
$I_D$	Drain Current-Continuous	3	A
$I_{DM}$	Drain Current-Single Plused	12	A
$P_D$	Total Dissipation @ $T_C=25^\circ C$	75	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^\circ C/W$



**isc N-Channel MOSFET Transistor**
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**• ELECTRICAL CHARACTERISTICS**
**T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> =250μA	800			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =1mA	2.0		4.5	V
V <sub>SD</sub>	Diode Forward On-voltage	I <sub>S</sub> = 3A; V <sub>GS</sub> = 0			1.4	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 1.5A			4.5	Ω
I <sub>GSS</sub>	Gate-Body 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			1	μA
t <sub>r</sub>	Rise Time	V <sub>GS</sub> =10V; I <sub>D</sub> =3A; V <sub>DD</sub> =400V; R <sub>L</sub> =25 Ω			80	ns
t <sub>d(on)</sub>	Turn-on Delay Time				40	
t <sub>f</sub>	Fall Time				75	
t <sub>d(off)</sub>	Turn-off Delay Time				100	

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