

# isc N-Channel MOSFET Transistor

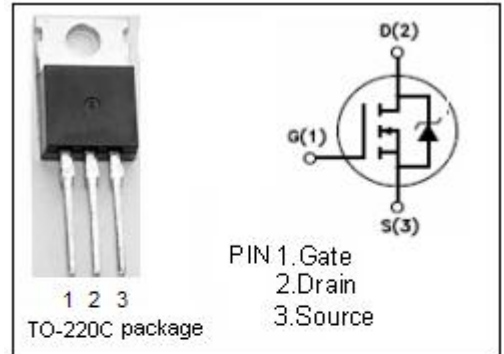
# 75N06

**DESCRIPTION**

- High current capability
- Drain Source Voltage-  
:  $V_{DSS} = 60V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

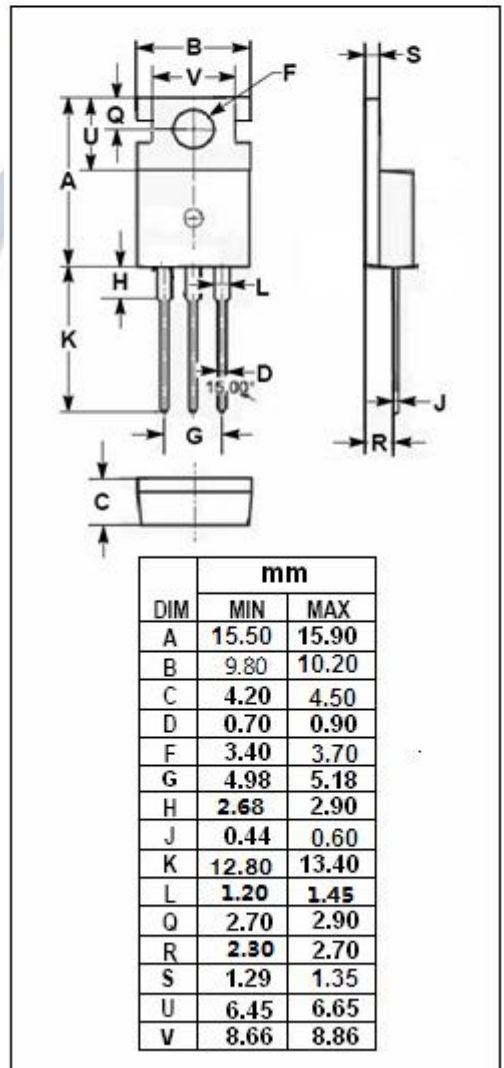
**APPLICATIONS**

- Regulator
- High current, high speed switching
- Solenoid and relay drivers



**ABSOLUTE MAXIMUM RATINGS( $T_C=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	60	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-continuous@ $T_C=25^\circ\text{C}$	75	A
$I_{D(\text{puls})}$	Pulse Drain Current	300	A
$P_{\text{tot}}$	Total Dissipation@ $T_C=25^\circ\text{C}$	150	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ\text{C}$
$T_{\text{stg}}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th j-c}}$	Thermal Resistance, Junction to Case	1.67	$^\circ\text{C}/\text{W}$
$R_{\text{th j-a}}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C}/\text{W}$

**isc N-Channel MOSFET Transistor****75N06****• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)**

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> =0.25mA	60			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =1mA	2.0		4.0	V
V <sub>SD</sub>	Diode Forward On-Voltage	I <sub>S</sub> =75A; V <sub>GS</sub> = 0			1.6	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =40A			0.014	Ω
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 60V; V <sub>GS</sub> = 0			250	μA
t <sub>r</sub>	Rise Time	V <sub>GS</sub> =10V; I <sub>D</sub> =40A;			270	ns
t <sub>d(on)</sub>	Turn-on Delay Time	V <sub>DD</sub> =25V; R <sub>G</sub> =50 Ω			1300	