

isc N-Channel MOSFET Transistor

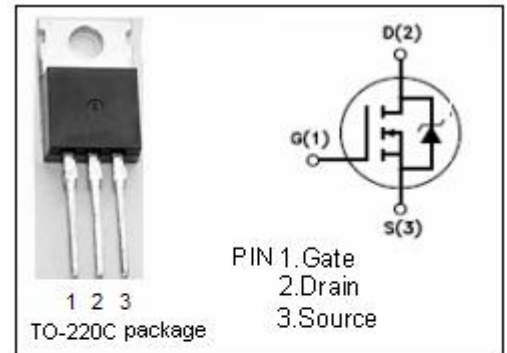
75N06

• 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

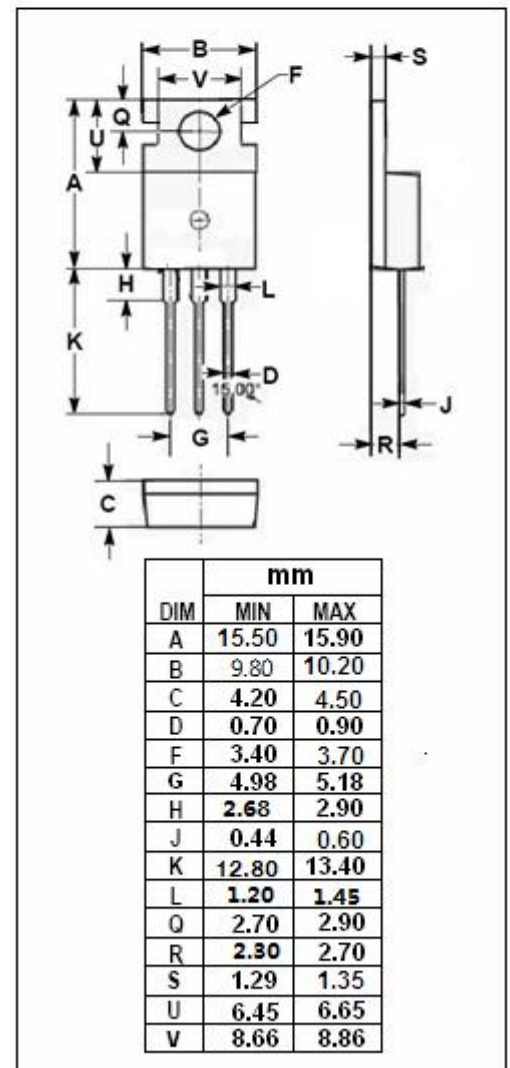
• APPLICATIONS

- 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	± 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_{tot}	Total Dissipation@ $T_C=25^\circ\text{C}$	150	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{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	$^\circ\text{C}/\text{W}$

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• ELECTRICAL CHARACTERISTICS (T_c=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D =0.25mA	60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =1mA	2.0		4.0	V
V _{SD}	Diode Forward On-Voltage	I _S =75A; V _{GS} = 0			1.6	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =40A			0.014	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 60V; V _{GS} = 0			250	μA
t _r	Rise Time	V _{GS} =10V; I _D =40A;			270	ns
t _{d(on)}	Turn-on Delay Time	V _{DD} =25V; R _G =50 Ω			1300	

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