

isc N-Channel MOSFET Transistor

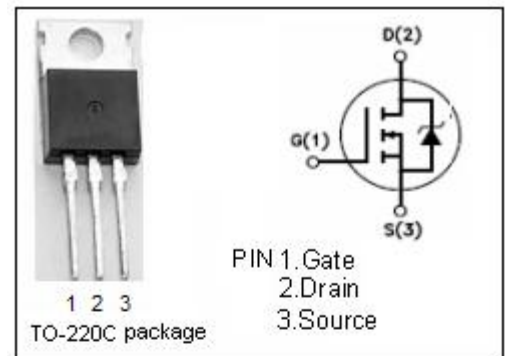
60N06-18

• DESCRIPTION

- High current capability
- Avalanche rugged technology
- Low gate charge
- 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

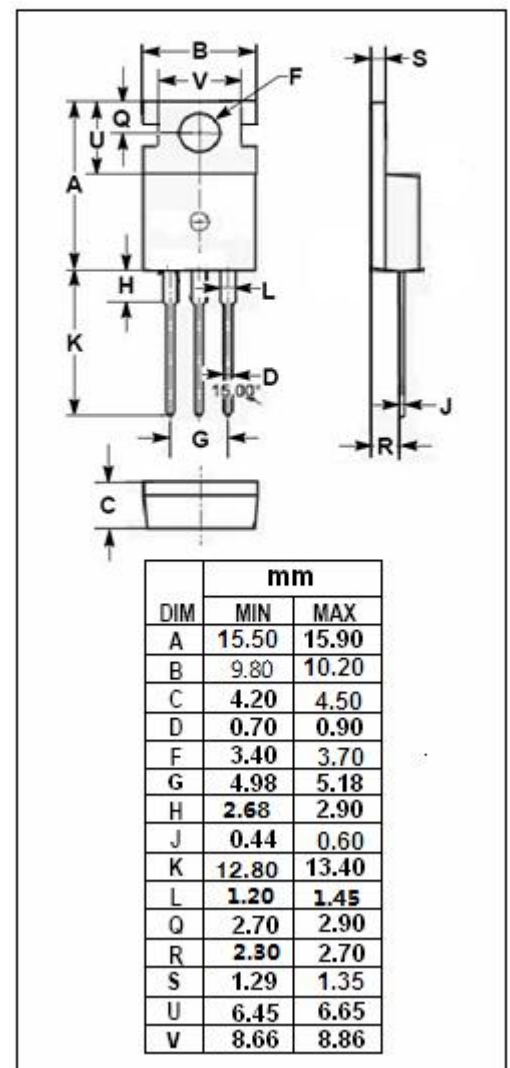


ABSOLUTE MAXIMUM RATINGS($T_C=25^\circ\text{C}$)

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@ $T_C=25^\circ\text{C}$	60	A
	Drain Current-continuous@ $T_C=100^\circ\text{C}$	39	
$I_{D(puls)}$	Pulse Drain Current	120	A
P_{tot}	Total Dissipation@ $T_C=25^\circ\text{C}$	150	W
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~175	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ\text{C}/\text{W}$
$R_{th\ j-a}$	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 = 250μA	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 =60A; V _{GS} = 0			1.6	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =30A			18	mΩ
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			1	μA
t _r	Rise Time	V _{GS} =10V; I _D =60A; V _{DD} =30V; R _G =2.5Ω			30	ns
t _{d(on)}	Turn-on Delay Time				30	
t _f	Fall Time				30	
t _{d(off)}	Turn-off Delay Time				50	

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