

isc N-Channel MOSFET Transistor

18N20

• FEATURES

- Drain Current $I_D = 18A @ T_C = 25^\circ C$
- Static drain-source on-resistance:
 $R_{DS(on)} \leq 0.092\Omega$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

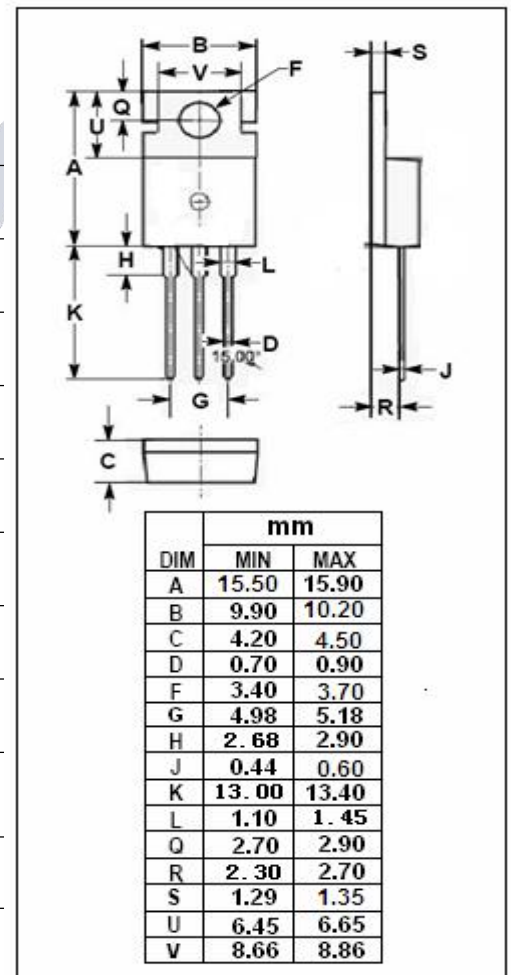
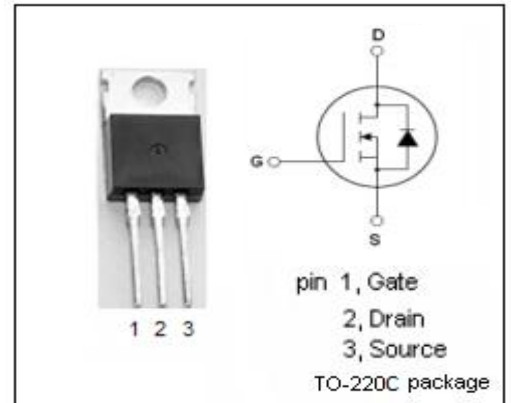
- Switch regulators
- Switching converters, motor drivers, relay drivers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	200	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	18	A
I_{DM}	Drain Current-Single Pulsed	72	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	57	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	2.19	$^\circ C/W$



isc N-Channel MOSFET Transistor**18N20****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	200			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\mu A$	1		3	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=10A$			0.092	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=160V; V_{GS}=0V$			250	μA
V_{SD}	Diode forward voltage	$I_S=18A; V_{GS}=0V$			1.4	V

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