

Isc N-Channel MOSFET Transistor

STP20NM60

• FEATURES

- Typical $R_{DS(on)}=0.25\ \Omega$
- Low input capacitance and gate charge
- Low gate input resistances
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

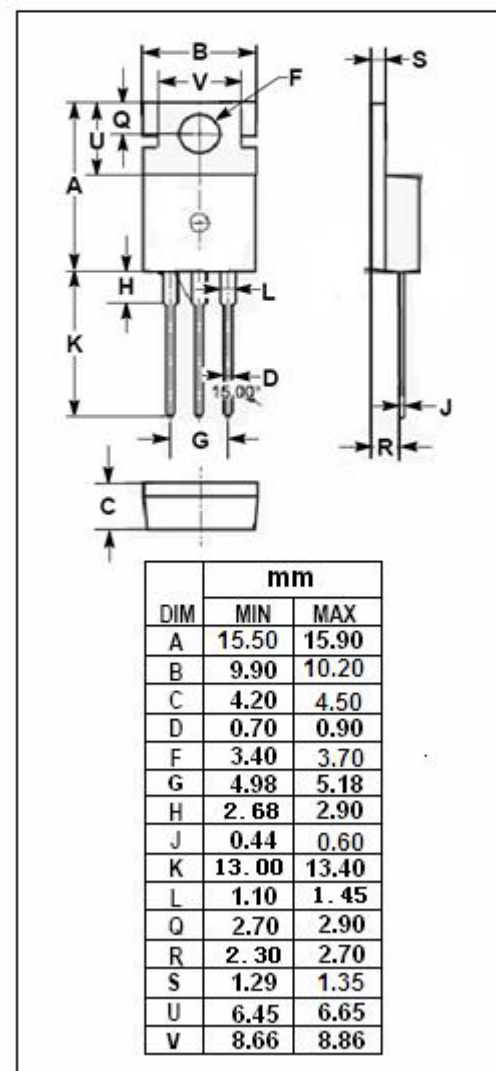
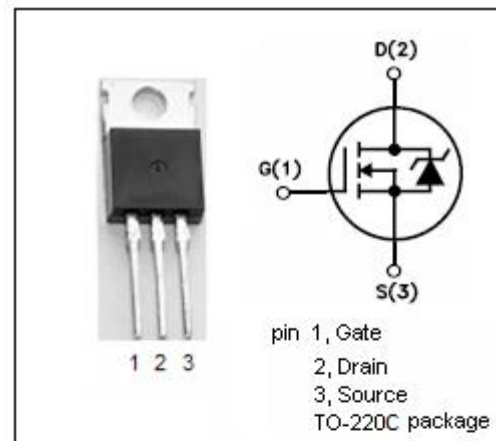
- Suitable for increasing power density of high voltage converters allowing system miniaturization
- High efficiencies.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	600	V
V_{GSS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous@ $T_c=25^\circ\text{C}$ $T_c=100^\circ\text{C}$	20 12.6	A
I_{DM}	Drain Current-Single Pulsed	80	A
P_D	Total Dissipation	192	W
T_j	Operating Junction Temperature	-65~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.65	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^\circ\text{C/W}$



Isc N-Channel MOSFET Transistor**STP20NM60****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$; $I_D=0.25mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=\pm 30V$; $I_D=0.25mA$	3		5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$; $I_D=10A$		250	290	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 30V$; $V_{DS}=0V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=600V$; $V_{GS}=0V$; $T_J=25^{\circ}\text{C}$ $T_J=125^{\circ}\text{C}$			1 10	μA
V_{SDF}	Diode forward voltage	$I_{SD}=20A$, $V_{GS}=0V$			1.5	V

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