

isc N-Channel MOSFET Transistor

STP20N10L

• FEATURES

- With TO-220 packaging
- High speed switching
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

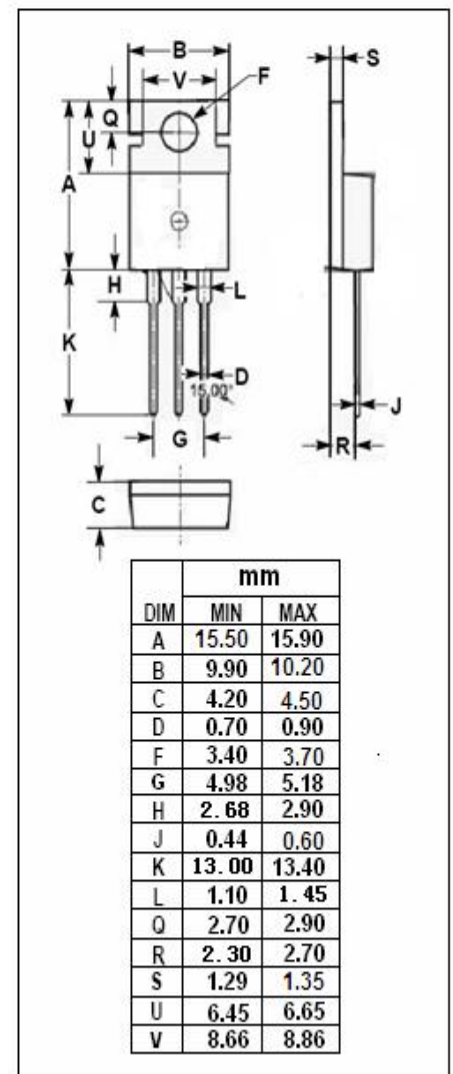
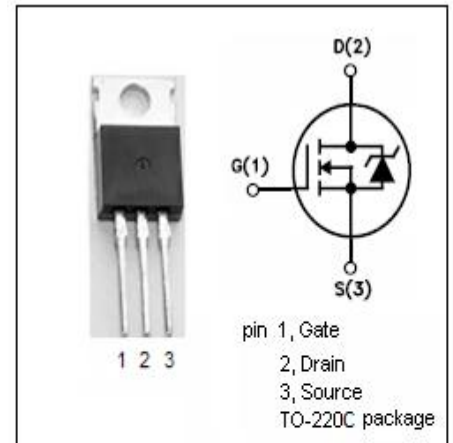
- Power supply
- DC-DC converters
- Motor control
- Switching applications

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	100	V
V _{GSS}	Gate-Source Voltage	± 15	V
I _D	Drain Current-Continuous @T _c =25°C T _c =100°C	20 14	A
I _{DM}	Drain Current-Single Pulsed	80	A
P _D	Total Dissipation	105	W
T _j	Operating Junction Temperature	-65~175	°C
T _{stg}	Storage Temperature	-65~175	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	1.43	°C/W
Rth(ch-a)	Channel-to-ambient thermal resistance	62.5	°C/W



isc N-Channel MOSFET Transistor**STP20N10L****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	100			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25mA$	1.0		2.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=5V; I_D=10A$		90	120	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 15V; V_{DS}=0V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V$			1	μA
V_{SDF}	Diode forward voltage	$I_{SD}=20A, V_{GS}=0V$			1.5	V

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