

isc N-Channel MOSFET Transistor
STP140NF75
FEATURES

- Drain Current : $I_D=120A@ T_C=25^{\circ}C$
- Drain Source Voltage : $V_{DSS}=75V(\text{Min})$
- Static Drain-Source On-Resistance : $R_{DS(\text{on})} = 7.5m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

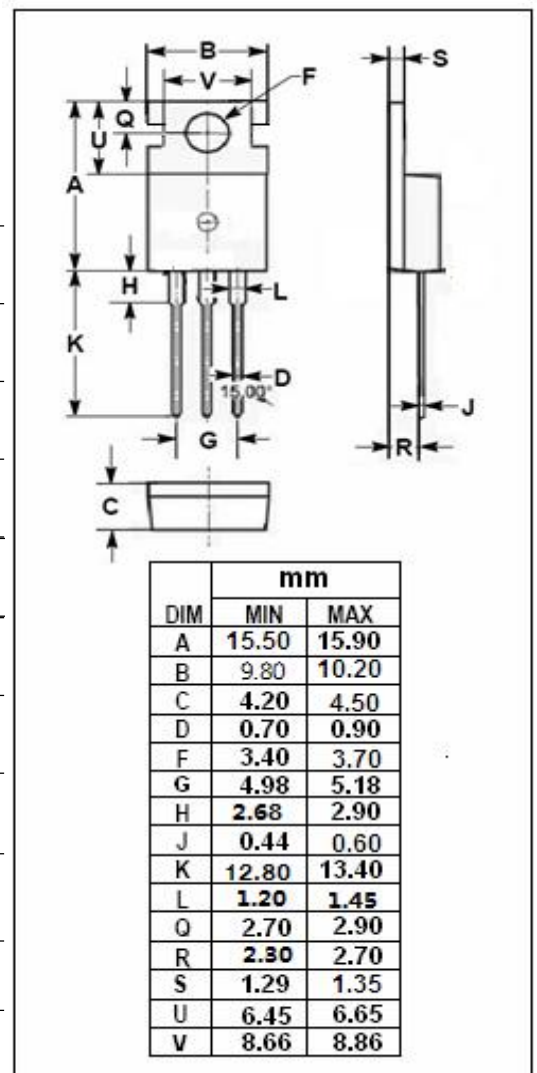
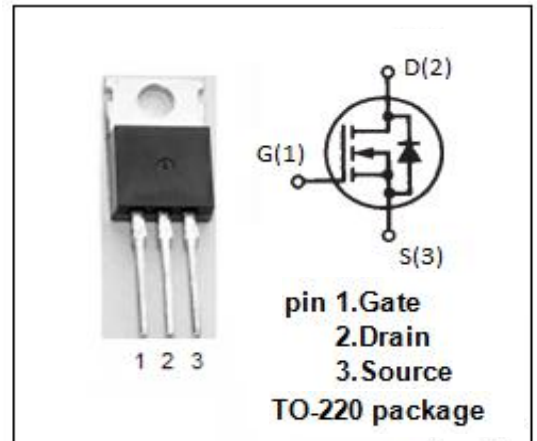
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	75	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	120	A
I_{DM}	Drain Current-Single Pluse	480	A
P_D	Total Dissipation @ $T_C=25^{\circ}C$	310	W
T_J	Max. Operating Junction Temperature	175	$^{\circ}C$
T_{stg}	Storage Temperature	-55~175	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.48	$^{\circ}C/W$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V; I _D = 0.25mA	75	--	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D = 0.25mA	2	4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 70A	--	7.5	mΩ
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0	--	±0.1	μA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 75V; V _{GS} = 0	--	1	μA
V _{SD}	Forward On-Voltage	I _{SD} = 70A; V _{GS} = 0	--	1.5	V

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