

isc N-Channel MOSFET Transistor
FDP20N50
FEATURES

- Drain Current : $I_D = 20A @ T_C = 25^\circ C$
- Drain Source Voltage : $V_{DSS} = 500V(\text{Min})$
- Static Drain-Source On-Resistance : $R_{DS(on)} = 0.24 \Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

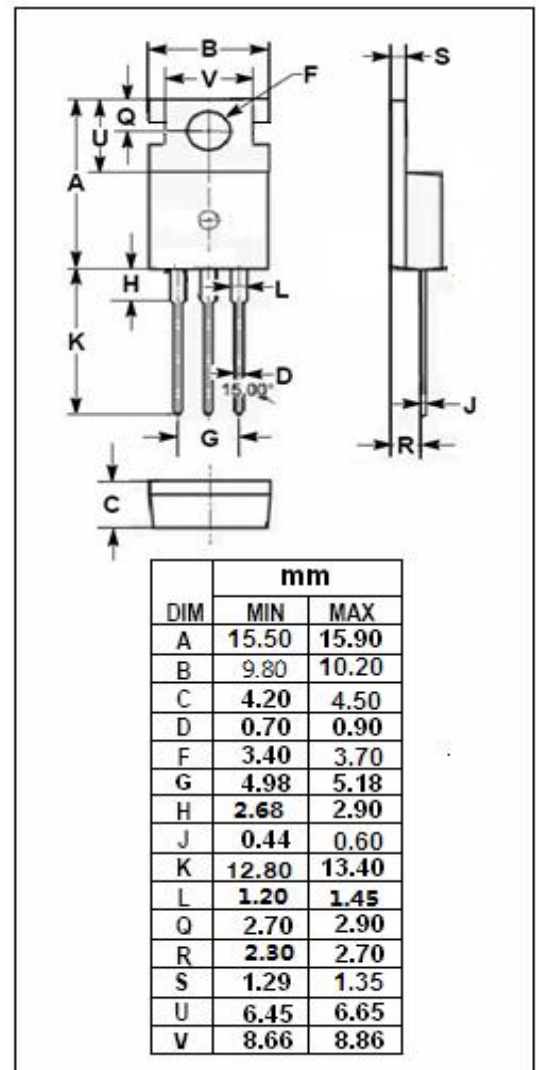
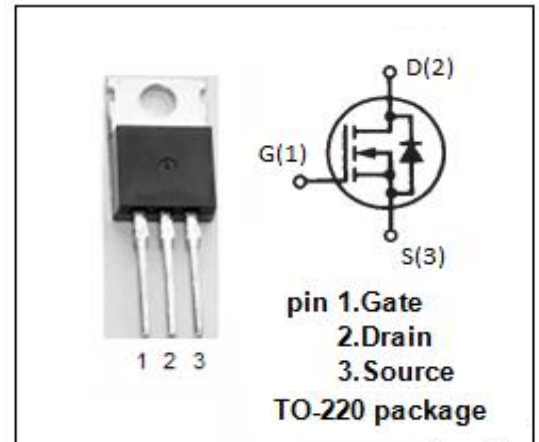
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	20	A
I_{DM}	Drain Current-Single Pluse	80	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	250	W
T_J	Max. Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.5	$^\circ C/W$



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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} = 0; I _D = 0.25mA	500	-	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 0.25mA	2.0	4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D = 10A	-	0.24	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V; V _{DS} = 0	-	±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =500V; V _{GS} = 0	-	25	uA
V _{SD}	Forward On-Voltage	I _S =20A; V _{GS} = 0	-	1.4	V

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