

isc N-Channel MOSFET Transistor

FDP39N20

• FEATURES

- With TO-220 packaging
- Drain Source Voltage-
: $V_{DSS} \geq 200V$
- Static drain-source on-resistance:
 $R_{DS(on)} \leq 66m\Omega @ V_{GS}=10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

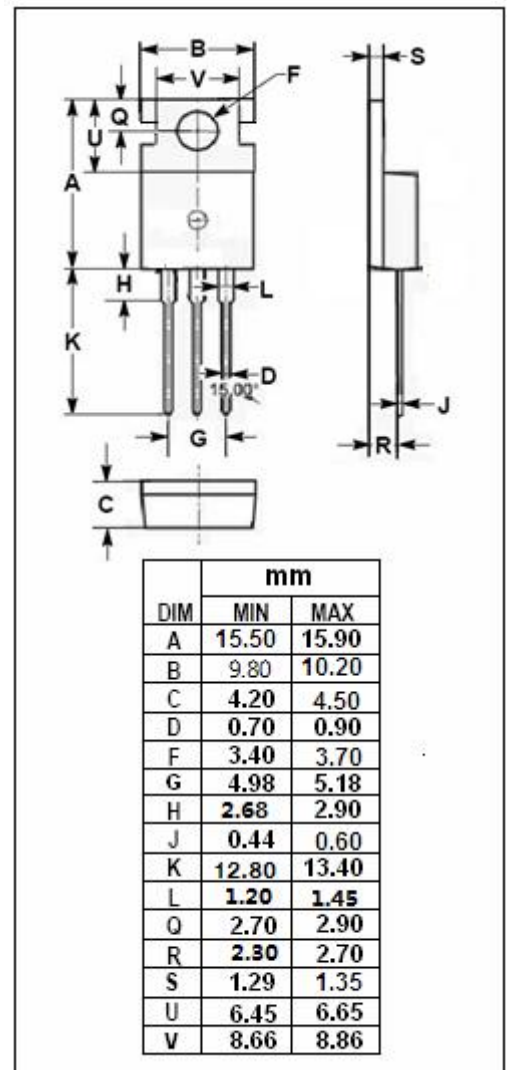
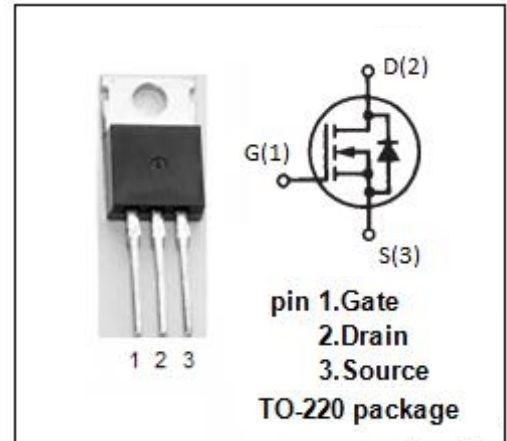
- Power supply
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	200	V
V_{GSS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous; @ $T_c=25^\circ C$	39	A
I_{DM}	Drain Current-Single Pulsed	156	A
P_D	Total Dissipation	251	W
T_j	Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.5	$^\circ C/W$



isc N-Channel MOSFET Transistor**FDP39N20****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 250uA	200			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =250uA	3		5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =19.5A			66	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0V			±100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 200V; V _{GS} = 0V V _{DS} = 160V; V _{GS} = 0V; T _J =125°C			1 10	μA
V _{SDF}	Diode forward voltage	I _{SD} = 39A, V _{GS} = 0 V			1.4	V

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