

isc N-Channel MOSFET Transistor

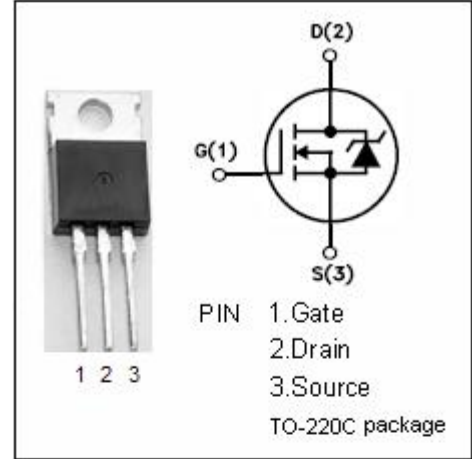
2N20

• FEATURES

- Drain Current $I_D = 2A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 200V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 3.5 \Omega (\text{Max})$
- Fast Switching

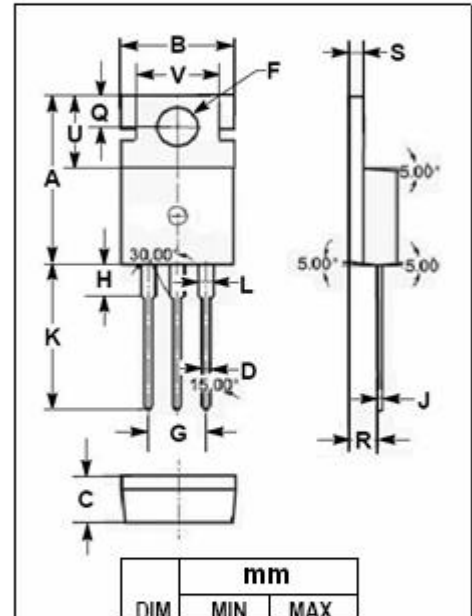
• APPLICATIONS

- Switching power supplies, converters, AC and DC motor controls



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	200	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	2	A
I_{DM}	Drain Current-Single Plused	9	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	25	W
T_j	Max. Operating Junction Temperature	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	2.5	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	80	$^\circ C/W$

isc N-Channel MOSFET Transistor**2N20****• ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D =250μA	200			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =1mA	2.0		4.0	V
V _{SD}	Diode Forward On-voltage	I _S = 2A ;V _{GS} = 0			1.4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 1A			3.5	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V;V _{DS} = 0			±500	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =200V; V _{GS} = 0			250	μA
C _{iss}	Input Capacitance	V _{DS} =25V;			200	pF
C _{rss}	Reverse Transfer capacitance	V _{GS} =0V;			25	
C _{oss}	Output Capacitance	f _T =1MHz			80	
t _r	Rise Time	V _{GS} =10V;			25	ns
t _{d(on)}	Turn-on Delay Time	I _D =1.25A;			15	
t _f	Fall Time	V _{DD} =50V;			15	
t _{d(off)}	Turn-off Delay Time	R _L =50 Ω			15	