

isc N-Channel MOSFET Transistor

4N10

• FEATURES

- Drain Current $I_D = 4A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 100V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.8 \Omega (Max)$
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

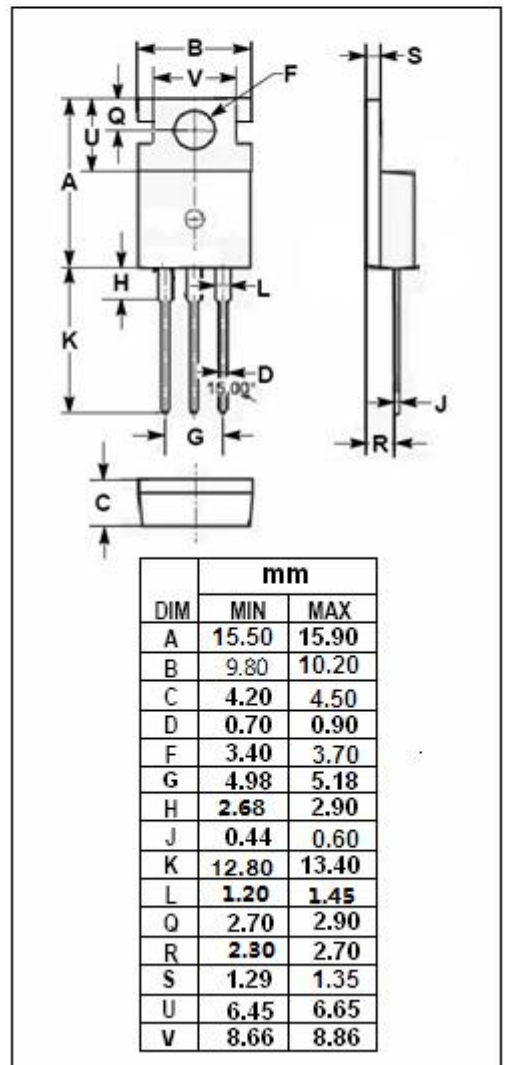
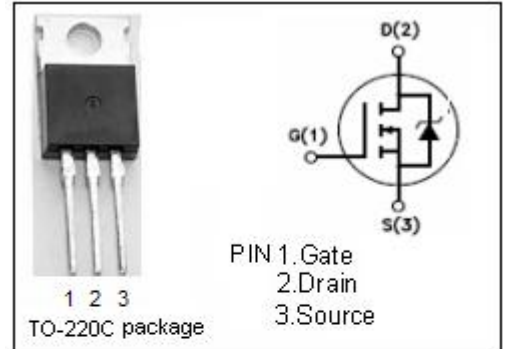
- Switching power supplies, converters, AC and DC motor controls

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	4	A
I_{DM}	Drain Current-Single Pulsed	16	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	20	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	0.63	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



isc N-Channel MOSFET Transistor**4N10****• 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	100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =250μA	2.0		4.0	V
V _{SD}	Diode Forward On-voltage	I _S = 4A; V _{GS} = 0			2.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 2A			0.8	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =100V; V _{GS} = 0			10	μA
t _r	Rise Time	V _{GS} =10V; I _D =2A; V _{DD} =50V; R _L =50 Ω			25	ns
t _{d(on)}	Turn-on Delay Time				20	
t _f	Fall Time				20	
t _{d(off)}	Turn-off Delay Time				25	

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