

isc N-Channel MOSFET Transistor

3N90

• FEATURES

- Drain Current $I_D = 3A @ T_C = 25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS} = 900V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 4.8 \Omega (Max)$
- Fast Switching

• APPLICATIONS

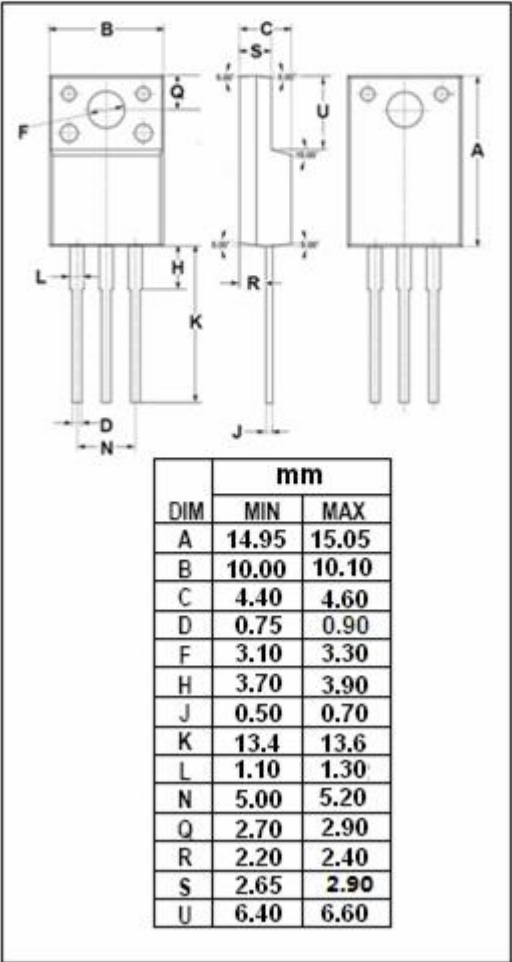
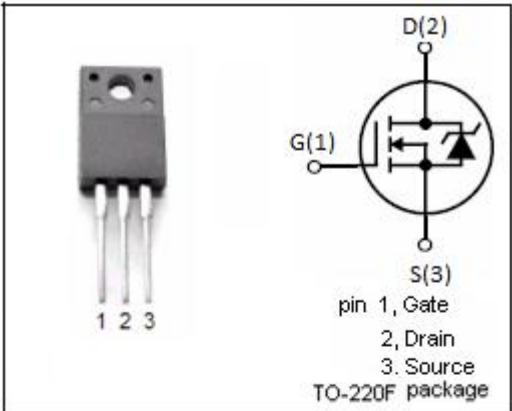
- Switching power supplies, converters, AC and DC motor controls

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	900	V
V_{GS}	Gate-Source Voltage-Continuous	± 30	V
I_D	Drain Current-Continuous	3	A
I_{DM}	Drain Current-Single Plused	10	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	5	$^{\circ}C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}C/W$



isc N-Channel MOSFET Transistor**3N90****• 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	900			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =250μA	3.0		4.5	V
V _{SD}	Diode Forward On-voltage	I _S = 3A ;V _{GS} = 0			1.6	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 1.5A			4.8	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V;V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =900V; V _{GS} = 0			1	μA
t _r	Rise Time	V _{GS} =10V; I _D =1.5A; V _{DD} =450V; R _L =4.7 Ω		7		ns
t _{d(on)}	Turn-on Delay Time			18		
t _f	Fall Time			18		
t _{d(off)}	Turn-off Delay Time			45		