

isc N-Channel MOSFET Transistor

10N90

• FEATURES

- Drain Current $I_D = 10A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 900V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.95 \Omega (Max)$
- Avalanche Energy Specified
- Fast Switching
- Simple Drive Requirements

• APPLICATIONS

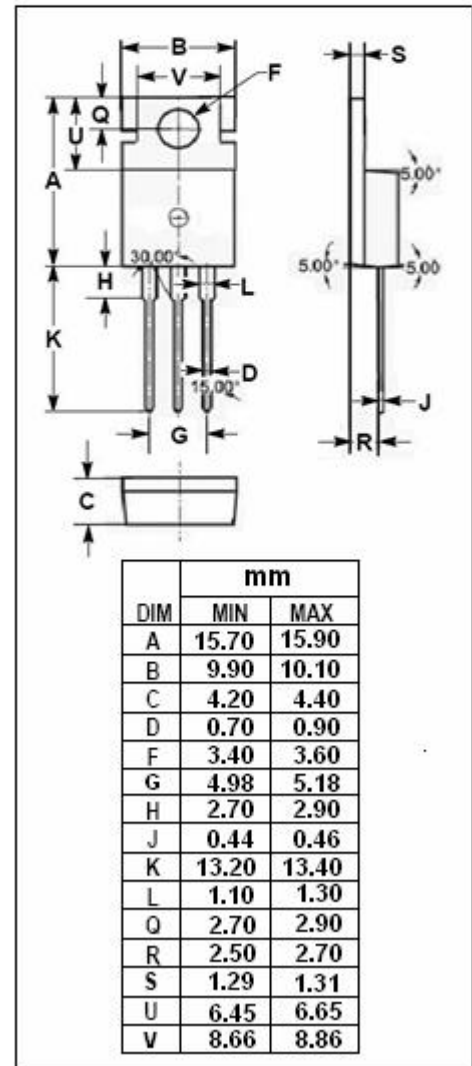
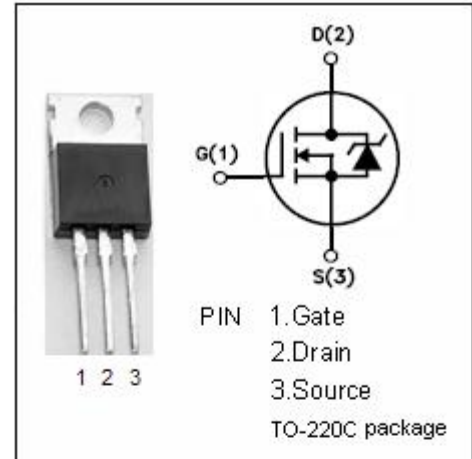
- Switch mode power supply.

• 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	10	A
I_{DM}	Drain Current-Single Plused	40	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	156	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	0.8	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



isc N-Channel MOSFET Transistor**10N90****• 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	800			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =250μA	2.0		3.5	V
V _{SD}	Diode Forward On-voltage	I _S = 10A ;V _{GS} = 0			1.4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 5.0A			1.35	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			25	μA
C _{iss}	Input Capacitance	V _{DS} =25V; V _{GS} =0V; f _T =1MHz		2760	3580	pF
C _{rss}	Reverse Transfer capacitance			105	125	
C _{oss}	Output Capacitance			245	290	
t _r	Rise Time	V _{GS} =10V; I _D =10.0A; V _{DD} =450V; R _L =9.6 Ω		54	120	ns
t _{d(on)}	Turn-on Delay Time			29	70	
t _f	Fall Time			47	105	
t _{d(off)}	Turn-off Delay Time			161	330	