

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

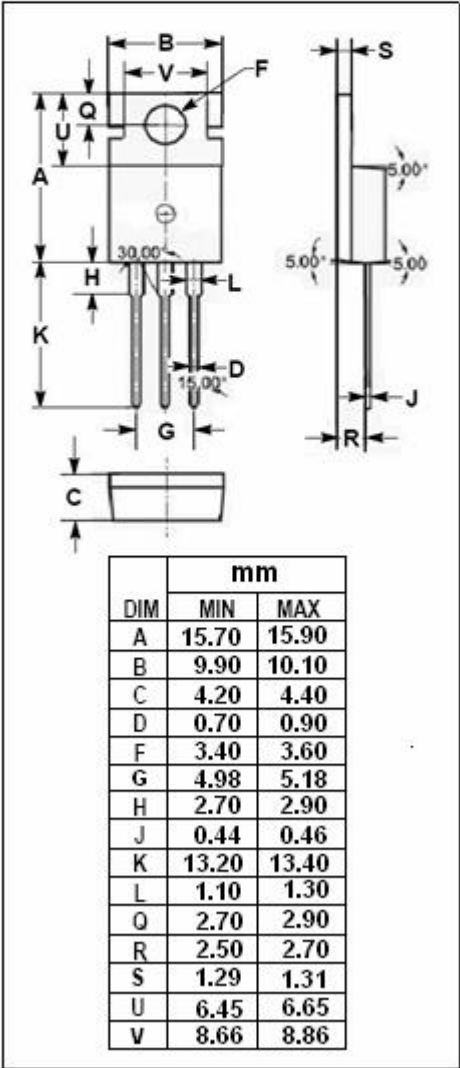
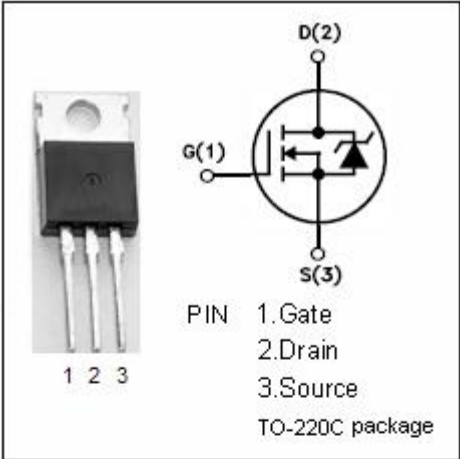
- Switch mode power supply.

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	$^{\circ}C/W$



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SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=250\mu\text{A}$	800			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\mu\text{A}$	2.0		3.5	V
V_{SD}	Diode Forward On-voltage	$I_S=10\text{A}; V_{GS}=0$			1.4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=5.0\text{A}$			1.35	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 30\text{V}; V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=900\text{V}; V_{GS}=0$			25	μA
C_{iss}	Input Capacitance	$V_{DS}=25\text{V};$ $V_{GS}=0\text{V};$ $f_T=1\text{MHz}$		2760	3580	pF
C_{rss}	Reverse Transfer capacitance			105	125	
C_{oss}	Output Capacitance			245	290	
t_r	Rise Time	$V_{GS}=10\text{V};$ $I_D=10.0\text{A};$ $V_{DD}=450\text{V};$ $R_L=9.6\Omega$		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	