

isc N-Channel MOSFET Transistor

10N70

• FEATURES

- Drain Current  $-I_D = 10A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 700V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 1.2 \Omega (\text{Max})$
- Avalanche Energy Specified
- Fast Switching
- Simple Drive Requirements

• DESCRIPTION

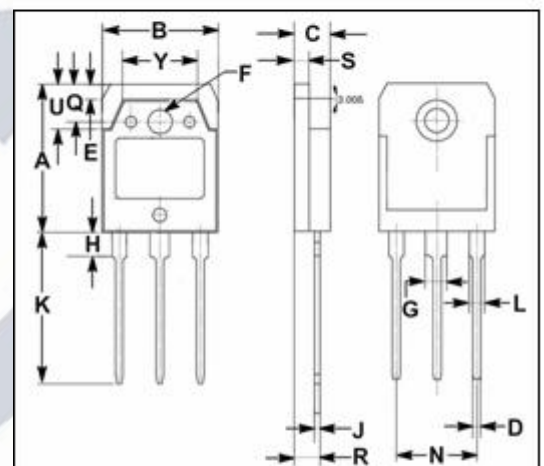
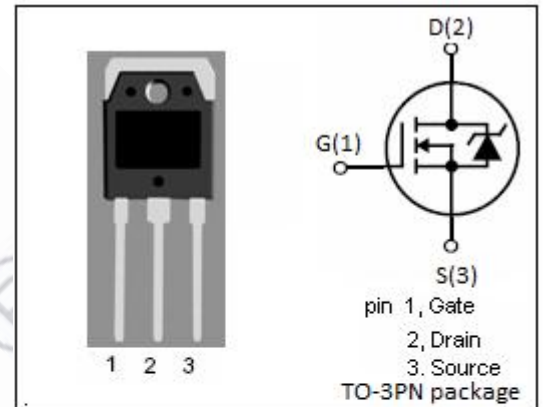
- Switch mode power supply.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	700	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 20$	V
$I_D$	Drain Current-Continuous	10	A
$I_{DM}$	Drain Current-Single Plused	40	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	150	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	0.83	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	40	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

**isc N-Channel MOSFET Transistor****10N70****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=250\mu\text{A}$	700			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=1\text{mA}$	2.0		4.5	V
$V_{SD}$	Diode Forward On-voltage	$I_S=10\text{A}; V_{GS}=0$			2.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=5.0\text{A}$			1.2	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=700\text{V}; V_{GS}=0$			250	$\mu\text{A}$
$t_r$	Rise Time	$V_{GS}=10\text{V};$ $I_D=5.0\text{A};$ $V_{DD}=40\text{V};$ $R_L=10\Omega$			280	ns
$t_{d(on)}$	Turn-on Delay Time				130	
$t_f$	Fall Time				210	
$t_{d(off)}$	Turn-off Delay Time				630	