

isc N-Channel MOSFET Transistor

6N80

• FEATURES

- Drain Current  $I_D = 6A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 800V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 2 \Omega (\text{Max})$
- Avalanche Energy Specified
- Fast Switching
- Simple Drive Requirements

• DESCRIPTION

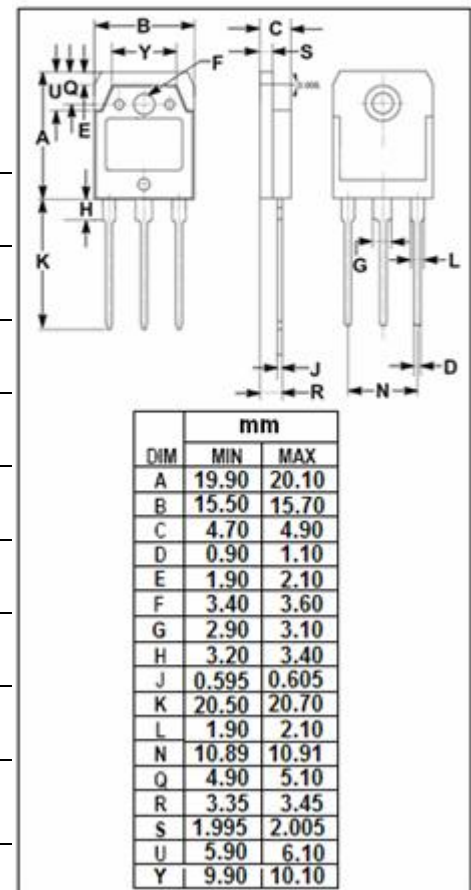
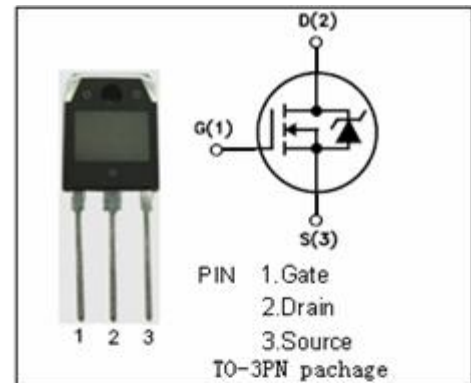
- Switch mode power supply.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	800	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 20$	V
$I_D$	Drain Current-Continuous	6	A
$I_{DM}$	Drain Current-Single Plused	24	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	$^\circ C/W$



**isc N-Channel MOSFET Transistor****6N80****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	$V_{GS}=0; I_D=250\mu\text{A}$	800			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\mu\text{A}$	2.0		4.0	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	$V_{GS}=10\text{V}; I_D=0.85\text{A}$			1.2	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}=\pm 30\text{V}; V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=700\text{V}; V_{GS}=0$			250	$\mu\text{A}$
$C_{iss}$	Input Capacitance	$V_{DS}=25\text{V};$		3678		pF
$C_{rss}$	Reverse Transfer capacitance	$V_{GS}=0\text{V};$		816		
$C_{oss}$	Output Capacitance	$f_T=1\text{MHz}$		293		
$t_r$	Rise Time	$V_{GS}=10\text{V};$			280	ns
$t_{d(on)}$	Turn-on Delay Time	$I_D=5.0\text{A};$			130	
$t_f$	Fall Time	$V_{DD}=406\text{V};$			210	
$t_{d(off)}$	Turn-off Delay Time	$R_L=10\Omega$			630	