

isc N-Channel MOSFET Transistor

STP75NF75

FEATURES

- Drain Current  $-I_D = 80A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 75V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.011 \Omega (\text{Max})$

DESCRIPTION

Suitable as primary switch in advanced high-efficiency, high-frequency isolated DC-DC converters for Telecom and Computer applications. It is also intended for any application with low gate drive requirements .

APPLICATIONS

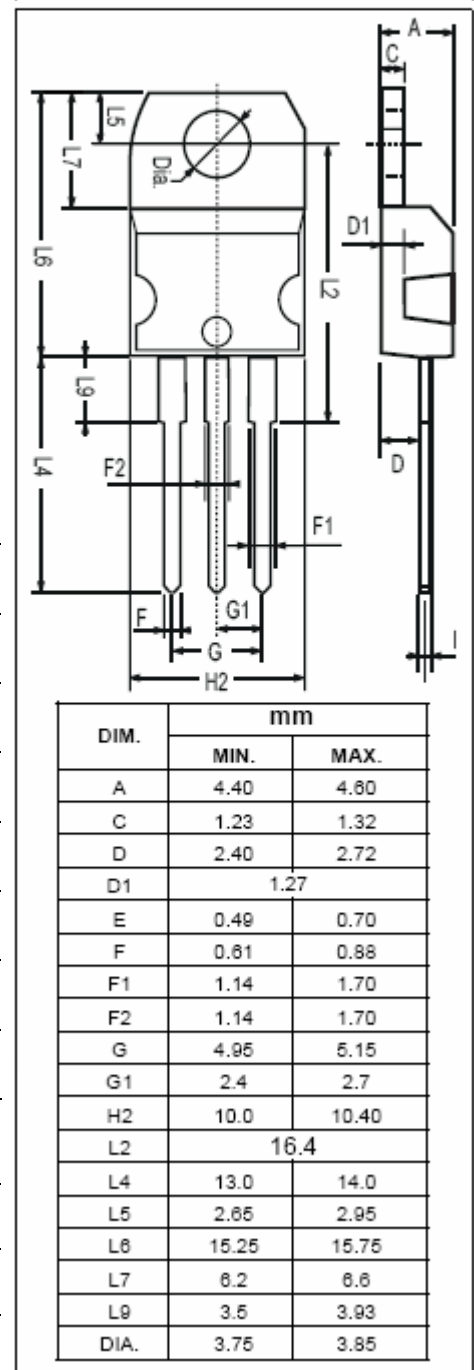
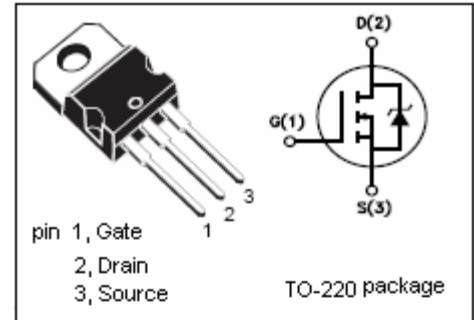
- Solenoid and relay drivers
- DC motor control
- DC-DC converters DC
- Automotive environment

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	75	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 20$	V
$I_D$	Drain Current-Continuous	80	A
$I_{DM}$	Drain Current-Single Pluse ( $t_p \leq 10 \mu s$ )	320	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	300	W
$T_J$	Max. Operating Junction Temperature	175	$^\circ C$
$T_{stg}$	Storage Temperature	-55~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.5	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



**isc N-Channel MOSFET Transistor****STP75NF75****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	75		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25\text{mA}$	2	4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=40\text{A}$		0.011	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}= \pm 20\text{V}; V_{DS}=0$		$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=75\text{V}; V_{GS}=0$ $V_{DS}=75\text{V}; V_{GS}=0; T_j=125^\circ\text{C}$		1 10	$\mu\text{A}$
$V_{SD}$	Forward On-Voltage	$I_S=80\text{A}; V_{GS}=0$		1.5	V