

isc N-Channel MOSFET Transistor

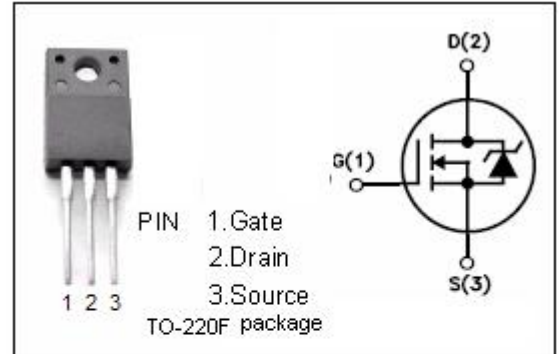
IRFZ40FI

FEATURES

- Typical RDS(on) = 0.022
- Avalanche Rugged Technology
- 100% Avalanche Tested
- Low Gate Charge
- High Current Capability

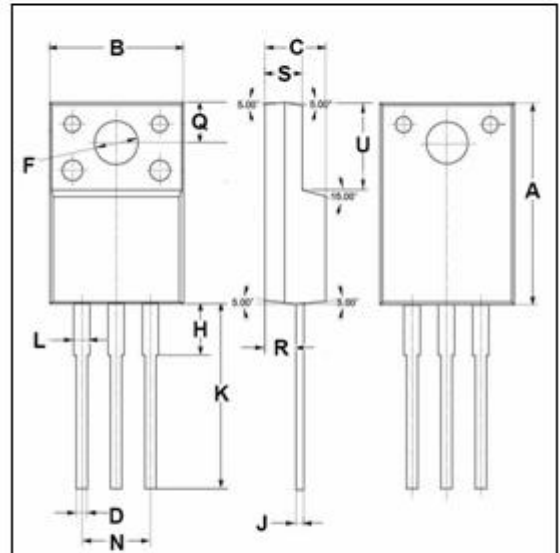
DESCRIPTION

- Designed for use in switch mode power supplies and general purpose applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	50	V
V _{GS}	Gate-Source Voltage-Continuous	±20	V
I _D	Drain Current-Continuous	27	A
I _{DM}	Drain Current-Single Pluse	200	A
P _D	Total Dissipation @T _C =25°C	45	W
T _J	Max. Operating Junction Temperature	175	°C
T _{stg}	Storage Temperature	-65~175	°C



DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.80
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	3.33	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	62.5	°C/W

isc N-Channel MOSFET Transistor**IRFZ40FI****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	50		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	$V_{GS}=10\text{V}; I_D=29\text{A}$		0.028	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$		± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=50\text{V}; V_{GS}=0$ $V_{DS}=40\text{V}; V_{GS}=0; T_j=125^{\circ}\text{C}$		250 1000	μA
V_{SD}	Forward On-Voltage	$I_S=50\text{A}; V_{GS}=0$		2.0	V