

isc N-Channel MOSFET Transistor

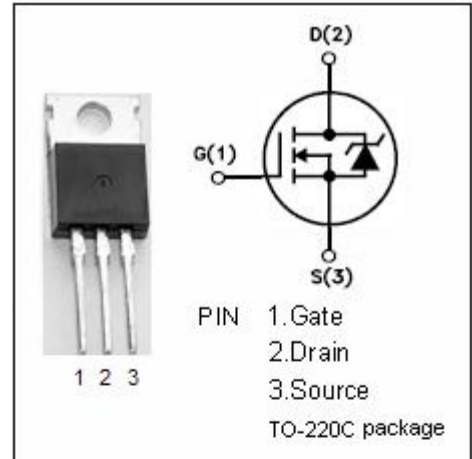
IRFZ40

FEATURES

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

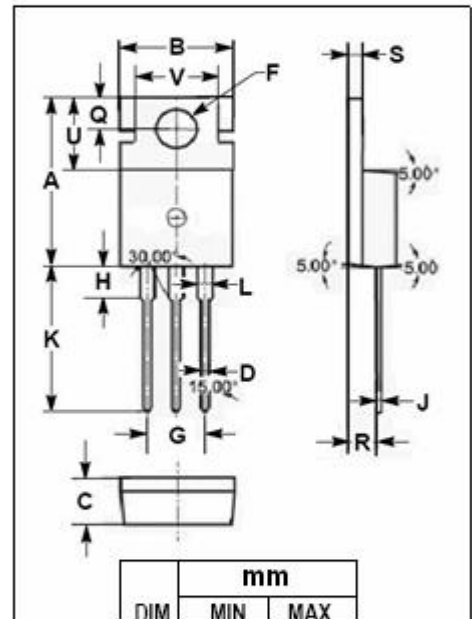
DESCRIPTION

- 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	50	A
I _{DM}	Drain Current-Single Pluse	200	A
P _D	Total Dissipation @T _C =25°C	150	W
T _J	Max. Operating Junction Temperature	175	°C
T _{stg}	Storage Temperature	-65~175	°C



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.0	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	62.5	°C/W

isc N-Channel MOSFET Transistor**IRFZ40****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