

isc N-Channel MOSFET Transistor

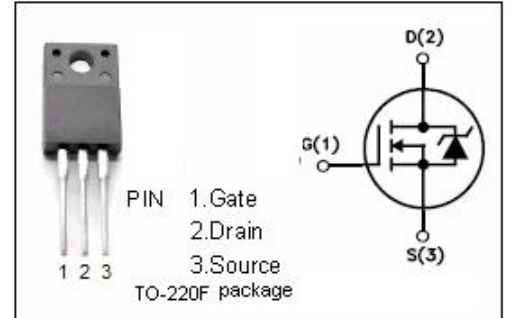
IRF640FI

FEATURES

- Low $R_{DS(on)} = 0.180 \Omega$ (TYP)
- Lower Input Capacitance
- Improved Gate Charge
- Extended Safe Operating Area
- Rugged Gate Oxide Technology

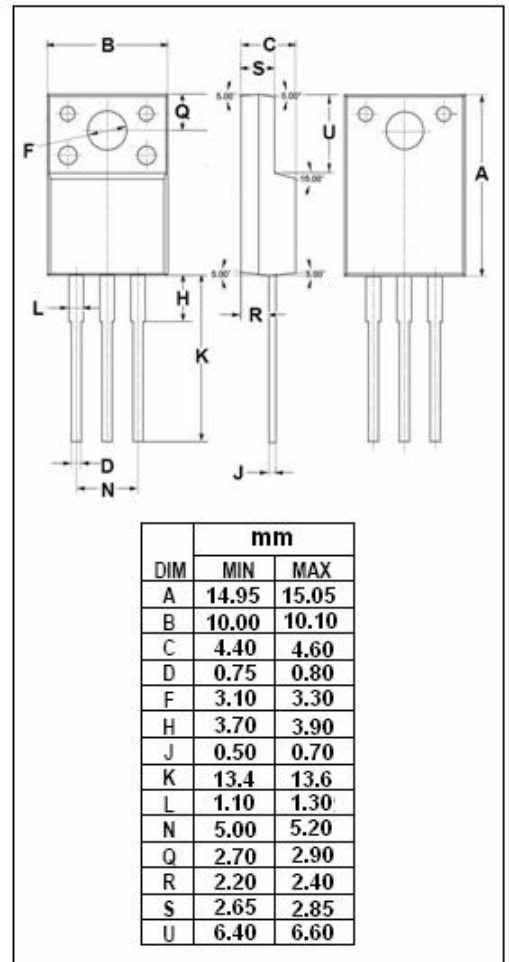
DESCRIPTION

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



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	200	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	10	A
I_{DM}	Drain Current-Single Pluse	40	A
P_D	Total Dissipation @ $T_C=25^\circ\text{C}$	40	W
T_J	Max. Operating Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



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	80	°C/W

isc N-Channel MOSFET Transistor**IRF640FI****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	200		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	$V_{GS}=10\text{V}; I_D=9\text{A}$		0.18	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$		± 500	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=200\text{V}; V_{GS}=0$ $V_{DS}=160\text{V}; V_{GS}=0; T_j=125^{\circ}\text{C}$		250 1000	μA
V_{SD}	Forward On-Voltage	$I_S=10\text{A}; V_{GS}=0$		2.0	V