

isc N-Channel Mosfet Transistor

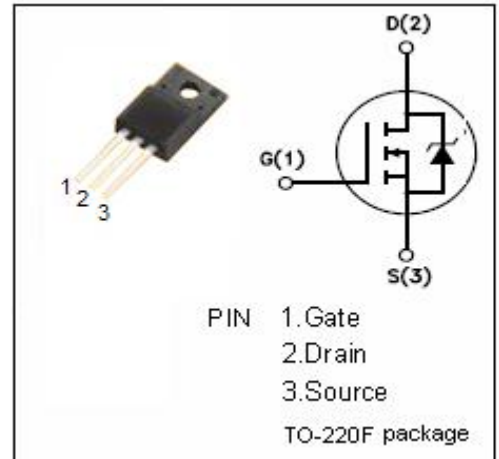
IRF520FI

• FEATURES

- Typical $R_{DS(on)} = 0.23\Omega$
- Avalanche Rugged Technology
- High Current Capability
- Low Gate Charge
- 175°C Operating Temperature

• DESCRIPTION

- High Current ,High Speed Switching
- DC-DC&DC-AC Converters
- Motor Control ,Audio Amplifiers

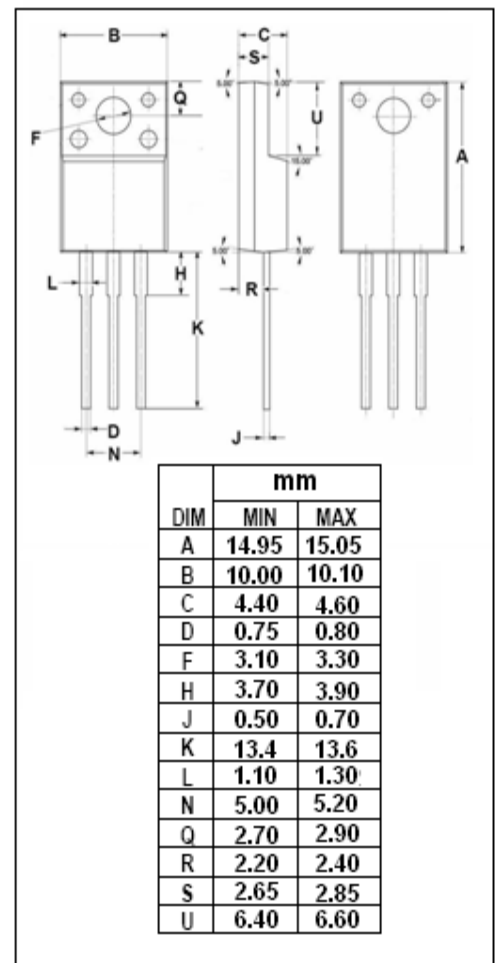


• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	7	A
I_{DM}	Drain Current-Single Plused	40	A
P_D	Total Dissipation @ $T_C=25^\circ\text{C}$	35	W
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~175	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	4.29	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^\circ\text{C/W}$



isc N-Channel Mosfet Transistor**IRF520FI****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	100		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	$V_{GS}=10\text{V}; I_D=5\text{A}$		0.27	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	$V_{DS}=100\text{V}; V_{GS}=0$		250	μA
V_{SD}	Forward On-Voltage	$I_S=10\text{A}; V_{GS}=0$		1.6	V
C_{iss}	Input Capacitance	$V_{DS}=25\text{V}; V_{GS}=0\text{V};$ $F=1.0\text{MHz}$		450	pF
C_{oss}	Output Capacitance			120	pF
C_{rss}	Reverse Transfer Capacitance			40	pF

• SWITCHING CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$T_d(on)$	Turn-on Delay Time	$V_{DD}=50\text{V}; I_D=5\text{A}$ $V_{GS}=10\text{V}$ $R_{GS}=4.7\Omega$			15	ns
T_r	Rise Time				75	ns
$T_d(off)$	Turn-off Delay Time				40	ns
T_f	Fall Time				30	ns