

isc N-Channel Mosfet Transistor

IRF647

FEATURES

- Avalanche Rugged Technology
- Rugged Gate Oxide Technology
- Lower Input Capacitance
- Improved Gate Charge
- Extended Safe Operating Area
- Lower Leakage Current: 10mA (Max.) @ $V_{DS} = 250V$

DESCRIPTION

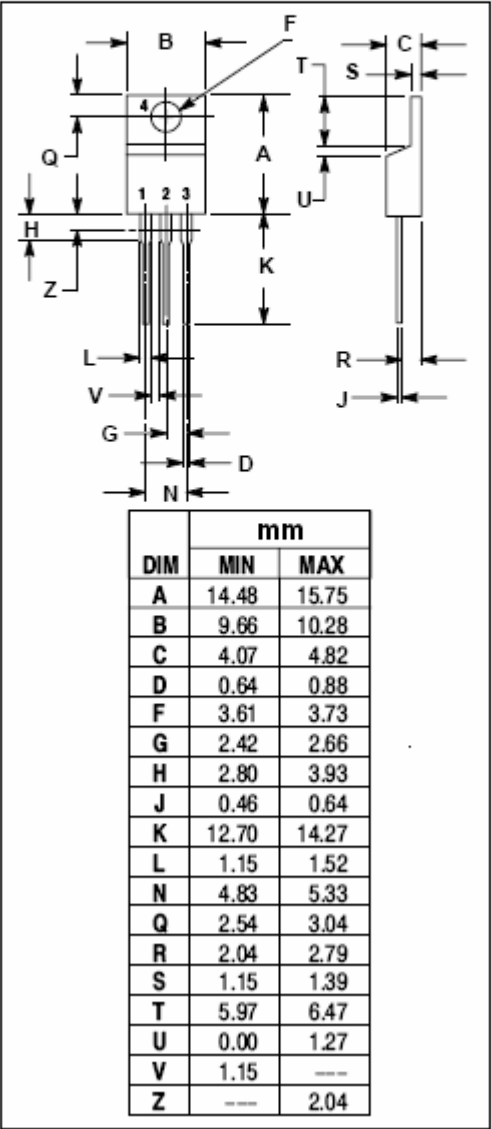
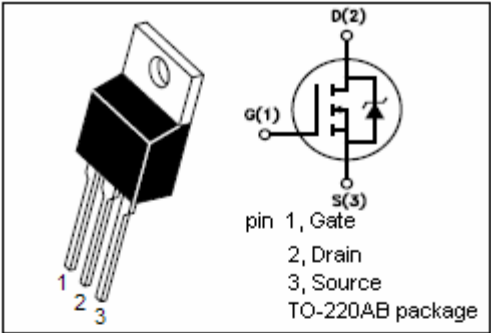
- Designed especially for high voltage,high speed applications, such as off-line switching power supplies , UPS,AC and DC motor controls,relay and solenoid drivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	275	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	13	A
I_{DM}	Drain Current-Single Plused	52	A
P_D	Total Dissipation @ $T_C=25^{\circ}C$	125	W
T_j	Max. Operating Junction Temperature	-55~150	$^{\circ}C$
T_{stg}	Storage Temperature	-55~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	1.0	$^{\circ}C/W$
$R_{\theta JA}$	Junction-to-Ambient	80	$^{\circ}C/W$



isc N-Channel Mosfet Transistor**IRF647****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	275		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 0.25mA	2	4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 8A		0.34	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0		±500	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 275V; V _{GS} =0		250	uA
V _{SD}	Forward On-Voltage	I _S = 14A; V _{GS} =0		1.8	V
C _{iss}	Input Capacitance	V _{DS} =25V, V _{GS} =0V, F=1.0MHz		1600	pF
C _{oss}	Output Capacitance			210	pF
C _{rss}	Reverse Transfer Capacitance			95	pF

• SWITCHING CHARACTERISTICS (T_C=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Td(on)	Turn-on Delay Time	V _{DD} =125V, I _D =14A R _G =9.1Ω		16	24	ns
Tr	Rise Time			67	100	ns
Td(off)	Turn-off Delay Time			53	80	ns
Tf	Fall Time			49	74	ns