

# isc N-Channel MOSFET Transistor

## IRF3007, IIRF3007

### • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 12.6m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • DESCRIPTION

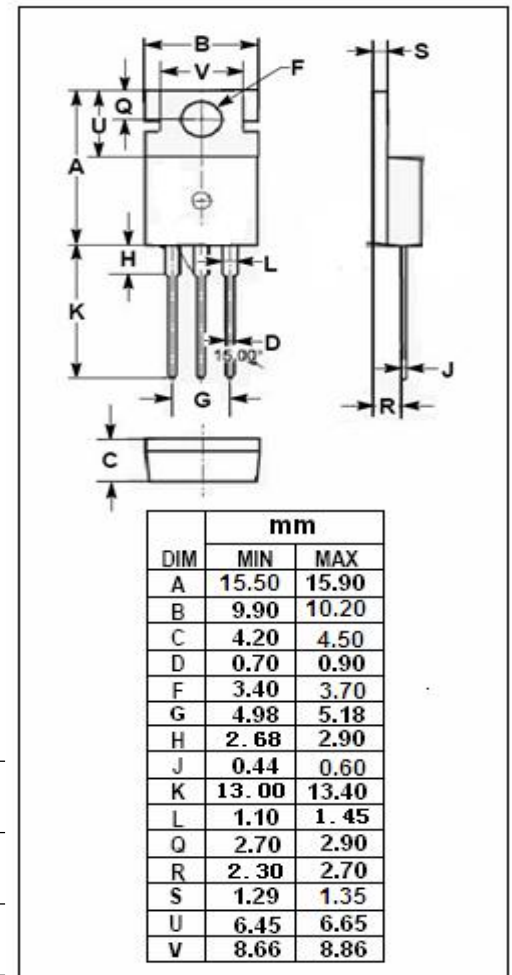
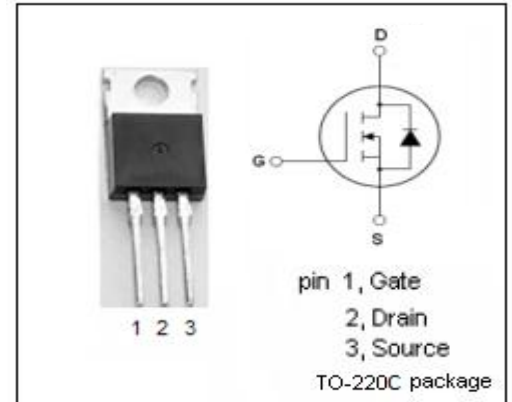
- reliable device for use in a wide variety of applications

### • ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	75	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	75	A
$I_{DM}$	Drain Current-Single Pulsed	320	A
$P_D$	Total Dissipation @ $T_c=25^\circ C$	200	W
$T_j$	Max. Operating Junction Temperature	175	$^\circ C$
$T_{stg}$	Storage Temperature	-55~175	$^\circ C$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.74	$^\circ C/W$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62	$^\circ C/W$



**isc N-Channel MOSFET Transistor****IRF3007, IIRF3007****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=250\ \mu\text{A}$	75			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10V; I_D=250\ \mu\text{A}$	2.0		4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=48A$			12.6	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V$			$\pm 0.2$	$\mu\text{A}$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=75V; V_{GS}=0V$			20	$\mu\text{A}$
$V_{SD}$	Diode forward voltage	$I_S=48A, V_{GS}=0V$			1.3	V

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