

## isc N-Channel MOSFET Transistor

IRFU120

### • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 0.27 \Omega$
- Enhancement mode
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • DESCRIPTION

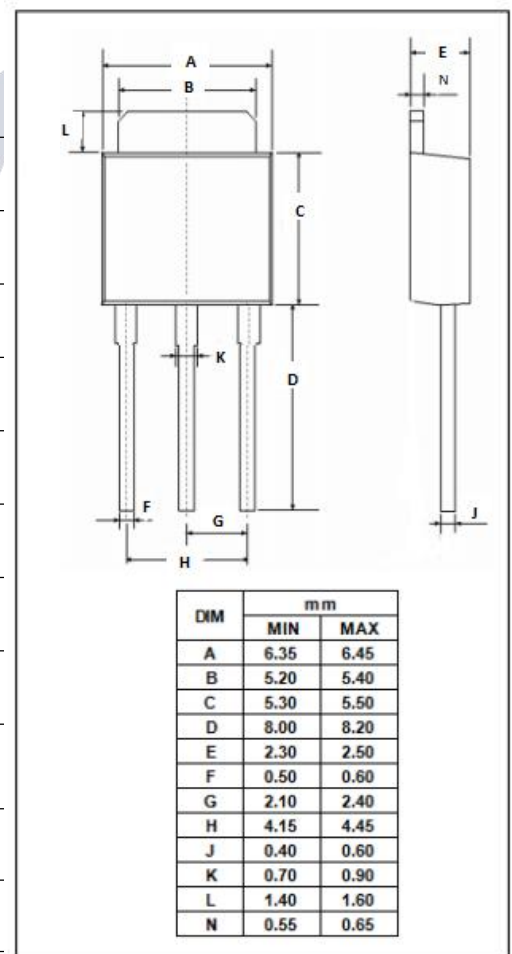
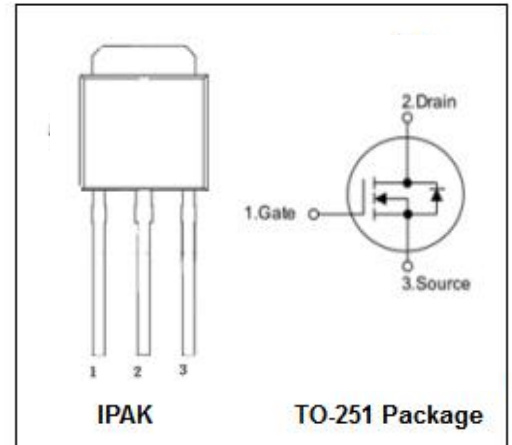
- Power factor correction
- Switched mode power supplies

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	7.7	A
$I_{DM}$	Drain Current-Single Pulsed	31	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	42	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	2.98	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IRFU120****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=250\ \mu\text{A}$	100			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\ \mu\text{A}$	2		4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=4.6A$			0.27	$\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V$			25	$\mu\text{A}$
		$V_{DS}=80V; V_{GS}=0V; T_J=125^{\circ}\text{C}$			250	
$V_{SD}$	Diode forward voltage	$I_{SD}=7.7A, V_{GS}=0V$			2.5	V

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