

## isc N-Channel MOSFET Transistor

## IRFB3307Z, IIRFB3307Z

### • FEATURES

- Static drain-source on-resistance:  $R_{DS(on)} \leq 5.8\text{m}\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • DESCRIPTION

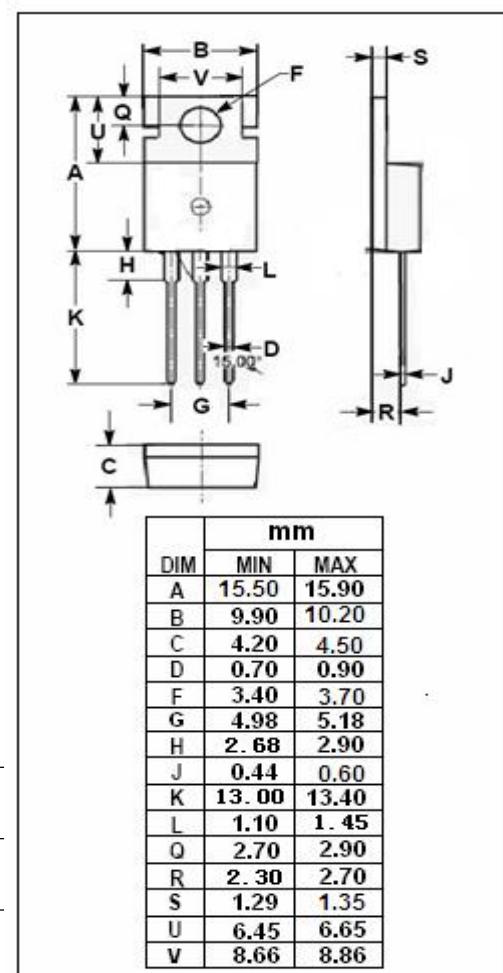
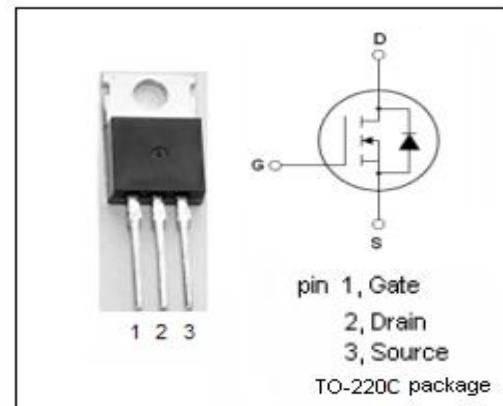
- reliable device for use in a wide variety of applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	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	480	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	230	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
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.65	$^\circ\text{C}/\text{W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62	$^\circ\text{C}/\text{W}$



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## ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$\text{BV}_{\text{DSS}}$	Drain-Source Breakdown Voltage	$\text{V}_{\text{GS}}=0\text{V}$ ; $\text{I}_D=250\text{ }\mu\text{A}$	75			V
$\text{V}_{\text{GS(th)}}$	Gate Threshold Voltage	$\text{V}_{\text{DS}}=\text{V}_{\text{GS}}$ ; $\text{I}_D=150\text{ }\mu\text{A}$	2.0		4.0	V
$\text{R}_{\text{DS(on)}}$	Drain-Source On-Resistance	$\text{V}_{\text{GS}}=10\text{V}$ ; $\text{I}_D=75\text{A}$			5.8	$\text{m}\Omega$
$\text{I}_{\text{GSS}}$	Gate-Source Leakage Current	$\text{V}_{\text{GS}}=\pm 20\text{V}$			$\pm 0.1$	$\mu\text{A}$
$\text{I}_{\text{DSS}}$	Drain-Source Leakage Current	$\text{V}_{\text{DS}}=75\text{V}$ ; $\text{V}_{\text{GS}}=0\text{V}$			20	$\mu\text{A}$
$\text{V}_{\text{SD}}$	Diode forward voltage	$\text{I}_S=80\text{A}$ , $\text{V}_{\text{GS}}=0\text{V}$			1.3	V

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