

**isc N-Channel MOSFET Transistor**

**IRFB4310**

**FEATURES**

- Drain Current  $-I_D = 140A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 100V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.007 \Omega (\text{Max})$

**Applications**

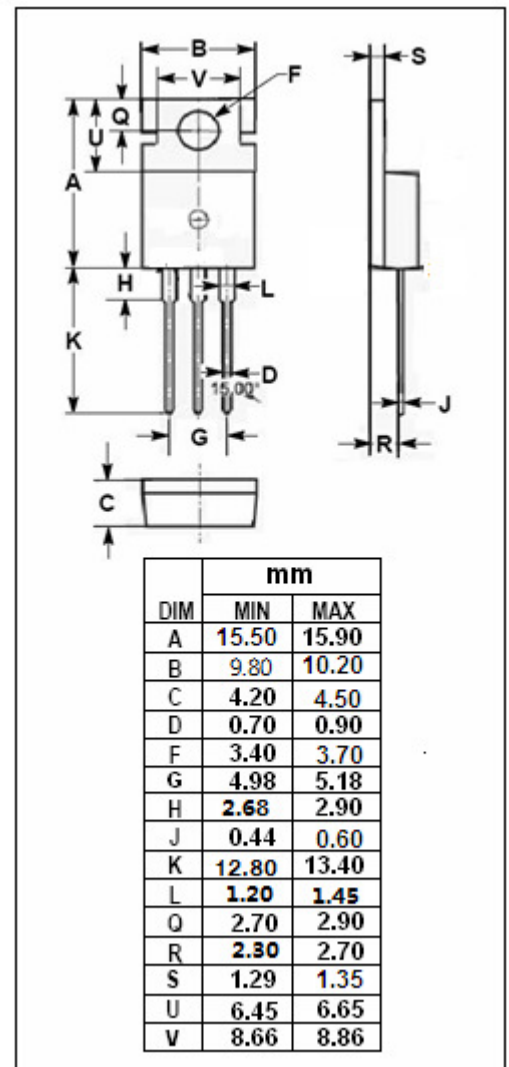
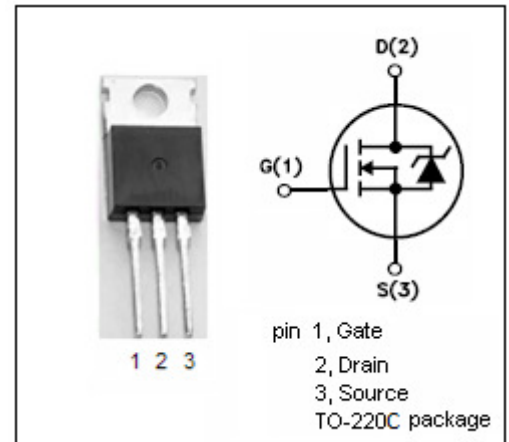
- High Efficiency Synchronous Rectification in SMPS
- Uninterruptible Power Supply
- High Speed Power Switching
- Hard Switched and High Frequency Circuits

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 20$	V
$I_D$	Drain Current-Continuous	140	A
$I_{DM}$	Drain Current-Single Pulse	550	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	330	W
$T_J$	Max. Operating Junction Temperature	175	$^\circ C$
$T_{stg}$	Storage Temperature	-55~175	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.45	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62	$^\circ C/W$



**isc N-Channel MOSFET Transistor****IRFB4310****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	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	$V_{GS}=10\text{V}; I_D=75\text{A}$			0.007	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$			$\pm 200$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=100\text{V}; V_{GS}=0$			20	$\mu\text{A}$
$V_{SD}$	Forward On-Voltage	$I_S=75\text{A}; V_{GS}=0$			1.3	V
Gfs	Forward Transconductance	$V_{DS}=50\text{V}; I_D=75\text{A}$	160			S