

isc N-Channel MOSFET Transistor

IRFB4110

FEATURES

- Drain Current $-I_D = 180A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 100V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 4.5m \Omega (\text{Max})$

Applications

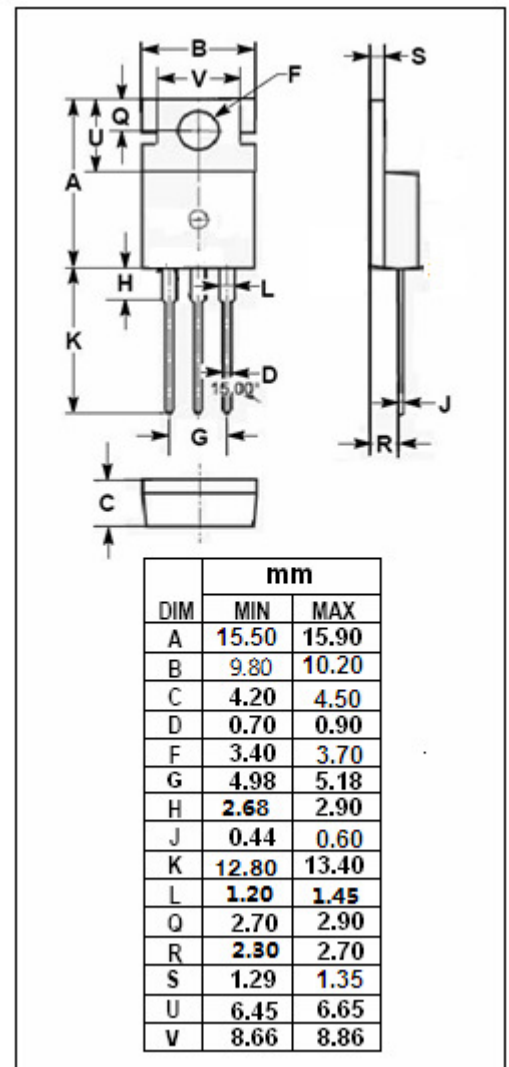
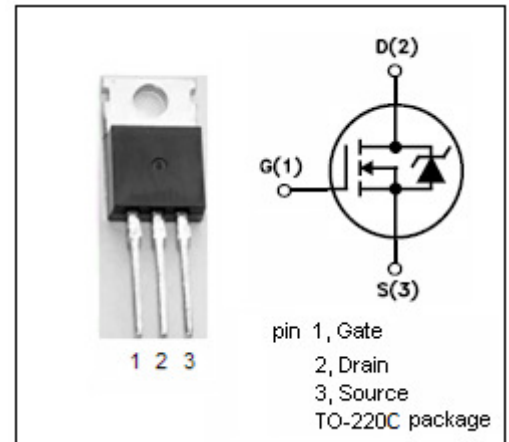
- High Efficiency Synchronous Rectification in SMPS
- Uninterruptible Power Supply
- High Speed Power Switching
- Hard Switched and High Frequency Circuits

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 | ± 20 | V |
| I_D | Drain Current-Continuous | 180 | A |
| I_{DM} | Drain Current-Single Pulse | 670 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 370 | 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 | 0.402 | $^\circ C/W$ |
| $R_{th j-a}$ | Thermal Resistance, Junction to Ambient | 62 | $^\circ C/W$ |



isc N-Channel MOSFET Transistor**IRFB4110****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 | $V_{GS}=10\text{V}; I_D=75\text{A}$ | | | 4.5 | $\text{m}\Omega$ |
| I_{GSS} | Gate-Body Leakage Current | $V_{GS}=\pm 20\text{V}; V_{DS}=0$ | | | ± 100 | nA |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS}=100\text{V}; V_{GS}=0$ | | | 20 | μA |
| 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 |