

isc N-Channel MOSFET Transistor

EKI10198

FEATURES

- Drain Current $-I_D=47A@T_C=25^{\circ}C$
- Drain Source Voltage-
: $V_{DS}=100V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 18.4m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

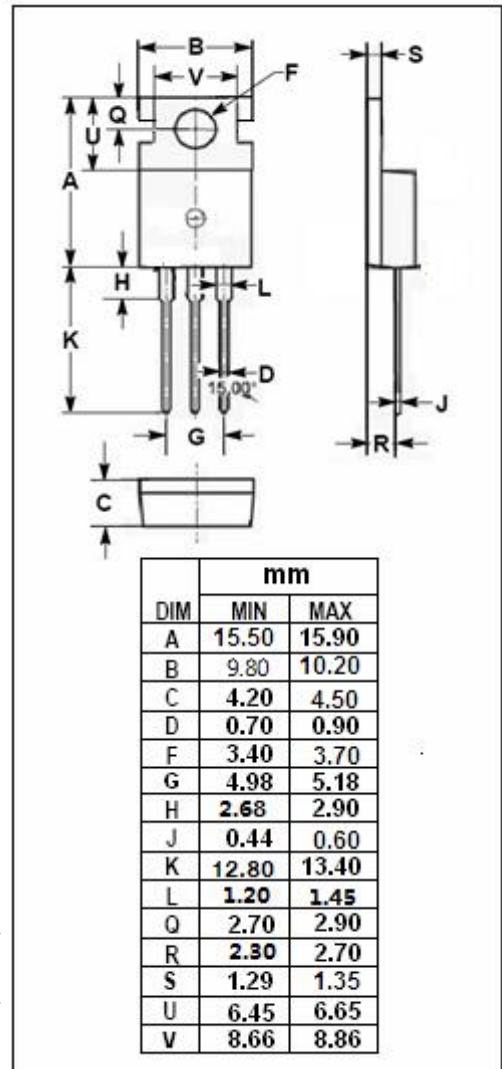
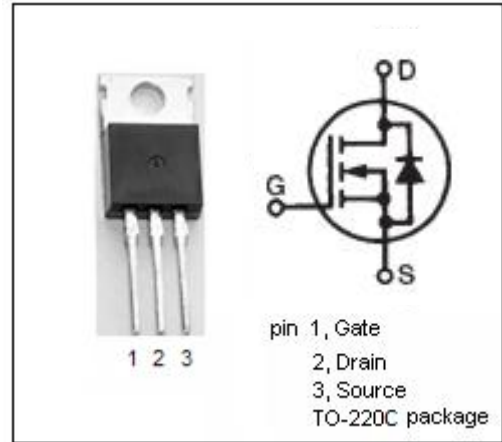
- Designed for use in switch mode power supplies and general purpose applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---------------------------------------|----------|-------------|
| V_{DS} | Drain-Source Voltage | 100 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 20 | V |
| I_D | Drain Current-Continuous | 47 | A |
| P_D | Total Dissipation @ $T_C=25^{\circ}C$ | 116 | W |
| T_J | Max. Operating Junction Temperature | 150 | $^{\circ}C$ |
| T_{stg} | Storage Temperature | -55~150 | $^{\circ}C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|--------------------------------------|-----|---------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 1.1 | $^{\circ}C/W$ |



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ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|---------------------------------|--|-----|-----------|------------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}=0$; $I_D=0.1\text{mA}$ | 100 | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}$; $I_D=1\text{mA}$ | 1 | 2.5 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=10\text{V}$; $I_D=23.4\text{A}$ | | 18.4 | $\text{m}\Omega$ |
| I_{GSS} | Gate-Body Leakage Current | $V_{GS}=\pm 20\text{V}$; $V_{DS}=0$ | | ± 100 | nA |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS}=100\text{V}$; $V_{GS}=0$ | | 100 | μA |
| V_{SD} | Forward On-Voltage | $I_S=23.4\text{A}$; $V_{GS}=0$ | | 1.5 | V |

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