

## isc N-Channel MOSFET Transistor

AOB440

## • FEATURES

- Drain Current  $-I_D = 75A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 7.5m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

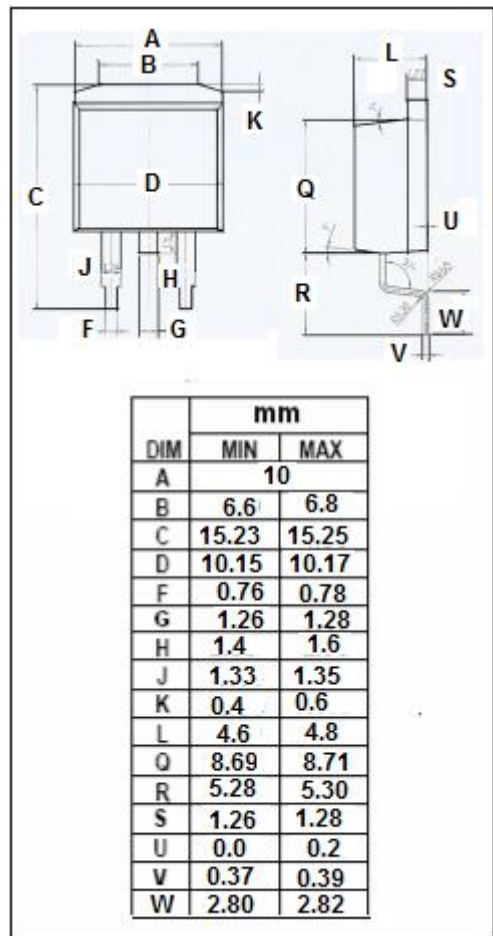
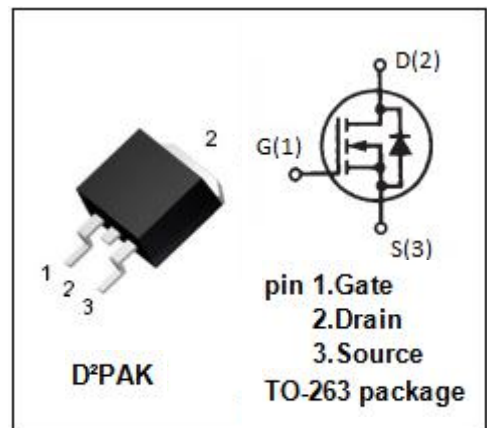
- Be suitable for synchronous rectification for server and general purpose applications

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

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|--|----------|------------|
| $V_{DS}$  | Drain-Source Voltage                   | 60       | V          |
| $V_{GS}$  | Gate-Source Voltage                    | $\pm 20$ | V          |
| $I_D$     | Drain Current-Continuous               | 75       | A          |
| $I_{DM}$  | Drain Current-Single Pulsed            | 150      | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 150      | W          |
| $T_j$     | Max. Operating Junction Temperature    | -55~175  | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~175  | $^\circ C$ |

## • THERMAL CHARACTERISTICS

| SYMBOL         | PARAMETER                          | MAX | UNIT         |
|----------------|------------------------------------|-----|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 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      |
|--------------|--------------------------------|---|-----|-----------|-----------|
| $BV_{DSS}$   | Drain-Source Breakdown Voltage | $V_{GS}=0V$ ; $I_D = 250\ \mu A$  | 60  |           | V         |
| $V_{GS(th)}$ | Gate Threshold Voltage         | $V_{DS}=V_{GS}$ ; $I_D = 250\ \mu A$  | 2   | 4         | V         |
| $R_{DS(on)}$ | Drain-Source On-Resistance     | $V_{GS}=10V$ ; $I_D=30A$<br>$V_{GS}=10V$ ; $I_D=30A$ ; $T_J=125^{\circ}\text{C}$    |     | 7.5<br>13 | $m\Omega$ |
| $I_{GSS}$    | Gate-Source Leakage Current    | $V_{GS}=\pm 25V$ ; $V_{DS}=0V$  |     | $\pm 100$ | nA        |
| $I_{DSS}$    | Drain-Source Leakage Current   | $V_{DS}=60V$ ; $V_{GS}=0V$<br>$V_{DS}=60V$ ; $V_{GS}=0V$ ; $T_J=55^{\circ}\text{C}$ |     | 10<br>50  | $\mu A$   |
| $V_{SD}$     | Diode forward voltage          | $I_S=1A$ ; $V_{GS}=0V$  |     | 1         | V         |

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