

## isc N-Channel MOSFET Transistor

## AOB290L

## • FEATURES

- With TO-263( D2PAK ) packaging
- High speed switching
- Low gate input resistance
- Standard level gate drive
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

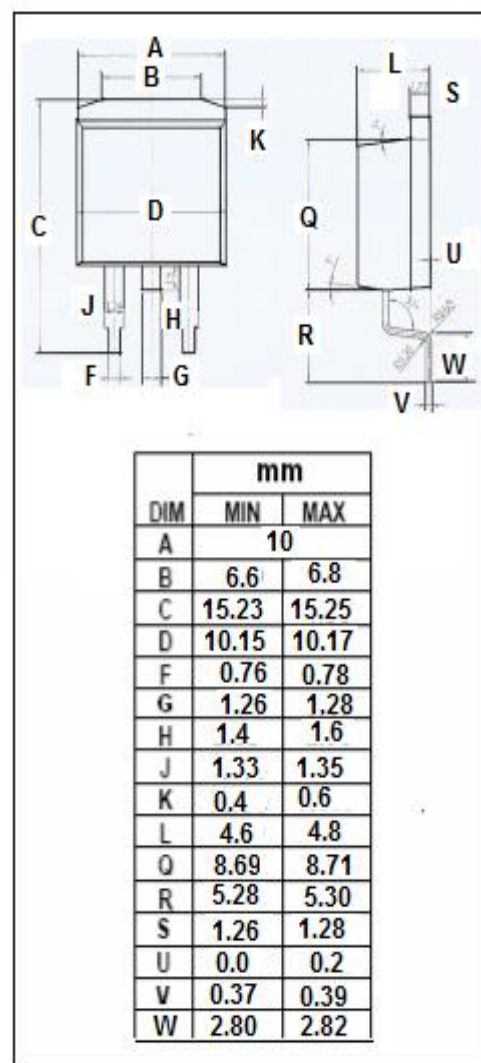
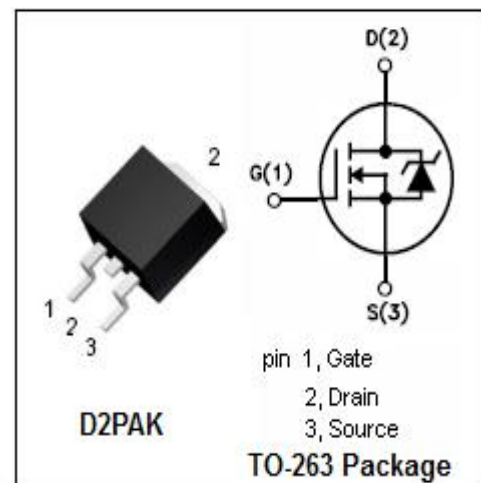
- Power supply
- Switching applications

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

| SYMBOL    | PARAMETER                                                                       | VALUE      | UNIT               |
|-----------|---------------------------------------------------------------------------------|------------|--------------------|
| $V_{DS}$  | Drain-Source Voltage                                                            | 650        | V                  |
| $V_{GS}$  | Gate-Source Voltage                                                             | $\pm 25$   | V                  |
| $I_D$     | Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$<br>$T_c=100^{\circ}\text{C}$ | 42<br>26.5 | A                  |
| $I_{DM}$  | Drain Current-Single Pulsed                                                     | 168        | A                  |
| $P_D$     | Total Dissipation                                                               | 250        | W                  |
| $T_j$     | Operating Junction Temperature                                                  | 150        | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage Temperature                                                             | -55~150    | $^{\circ}\text{C}$ |

## • THERMAL CHARACTERISTICS

| SYMBOL         | PARAMETER                             | MAX  | UNIT                 |
|----------------|---------------------------------------|------|----------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance    | 0.5  | $^{\circ}\text{C/W}$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62.5 | $^{\circ}\text{C/W}$ |



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

| SYMBOL       | PARAMETER                      | CONDITIONS                                                                      | MIN | TYP | MAX       | UNIT      |
|--------------|--------------------------------|---------------------------------------------------------------------------------|-----|-----|-----------|-----------|
| $BV_{DSS}$   | Drain-Source Breakdown Voltage | $V_{GS}=0V; I_D=1mA$                                                            | 650 |     |           | V         |
| $V_{GS(th)}$ | Gate Threshold Voltage         | $V_{DS}=V_{GS}V; I_D=0.25mA$                                                    | 3   |     | 5         | V         |
| $R_{DS(on)}$ | Drain-Source On-Resistance     | $V_{GS}=10V; I_D=21A$                                                           |     | 56  | 63        | $m\Omega$ |
| $I_{GSS}$    | Gate-Source Leakage Current    | $V_{GS}= \pm 25V; V_{DS}= 0V$                                                   |     |     | $\pm 0.1$ | $\mu A$   |
| $I_{DSS}$    | Drain-Source Leakage Current   | $V_{DS}= 650V; V_{GS}= 0V; T_J=25^{\circ}\text{C}$<br>$T_J=125^{\circ}\text{C}$ |     |     | 1<br>100  | $\mu A$   |
| $V_{SDF}$    | Diode forward voltage          | $I_{SD}=42A, V_{GS}= 0V$                                                        |     |     | 1.5       | V         |