

## isc N-Channel MOSFET Transistor

## AOW7S60

## FEATURES

- Drain Current  $-I_D = 7A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 600V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.6 \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## DESCRIPTION

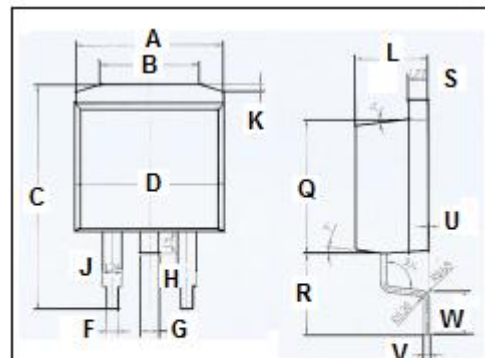
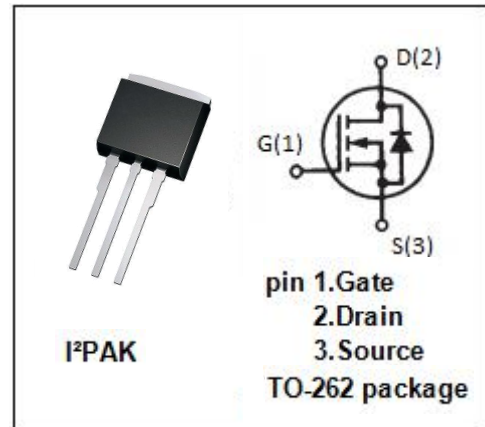
- Designed for use in switch mode power supplies and general purpose applications.

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

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|----------------------------------------|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                   | 600      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 30$ | V          |
| $I_D$     | Drain Current-Continuous               | 7        | A          |
| $I_{DM}$  | Drain Current-Single Pluse             | 33       | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 104      | W          |
| $T_J$     | Max. Operating Junction Temperature    | -55~150  | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~150  | $^\circ C$ |

## THERMAL CHARACTERISTICS

| SYMBOL       | PARAMETER                            | MAX | UNIT         |
|--------------|--------------------------------------|-----|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 1.2 | $^\circ C/W$ |



| DIM | mm    |       |
|-----|-------|-------|
|     | MIN   | MAX   |
| A   | 10    |       |
| B   | 6.6   | 6.8   |
| C   | 15.23 | 15.25 |
| D   | 10.15 | 10.17 |
| F   | 0.76  | 0.78  |
| G   | 1.26  | 1.28  |
| H   | 1.4   | 1.6   |
| J   | 1.33  | 1.35  |
| K   | 0.4   | 0.6   |
| L   | 4.6   | 4.8   |
| O   | 8.69  | 8.71  |
| R   | 5.28  | 5.30  |
| S   | 1.26  | 1.28  |
| U   | 0.0   | 0.2   |
| V   | 0.37  | 0.39  |
| W   | 2.80  | 2.82  |

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## 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  | $V_{GS}=0; I_D=0.25\text{mA}$                                                                        | 600 |      |             | V             |
| $V_{GS(th)}$  | Gate Threshold Voltage          | $V_{DS}=V_{GS}; I_D=0.25\text{mA}$                                                                   | 2.7 |      | 3.9         | V             |
| $R_{DS(on)}$  | Drain-Source On-Resistance      | $V_{GS}=10\text{V}; I_D=3.5\text{A}$<br>$V_{GS}=10\text{V}; I_D=3.5\text{A}@T_J=150^{\circ}\text{C}$ |     |      | 0.6<br>1.64 | $\Omega$      |
| $I_{GSS}$     | Gate-Body Leakage Current       | $V_{GS}=\pm 30\text{V}; V_{DS}=0$                                                                    |     |      | $\pm 100$   | nA            |
| $I_{DSS}$     | Zero Gate Voltage Drain Current | $V_{DS}=600\text{V}; V_{GS}=0$<br>$V_{DS}=480\text{V}; V_{GS}=0@T_J=150^{\circ}\text{C}$             |     | 10   | 1           | $\mu\text{A}$ |
| $V_{SD}$      | Forward On-Voltage              | $I_S=3.5\text{A}; V_{GS}=0$                                                                          |     | 0.82 |             | V             |

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