

**isc N-Channel MOSFET Transistor**

**AOK20S60**

**• FEATURES**

- With TO-247 packaging
- High speed switching
- Very high commutation ruggedness
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• APPLICATIONS**

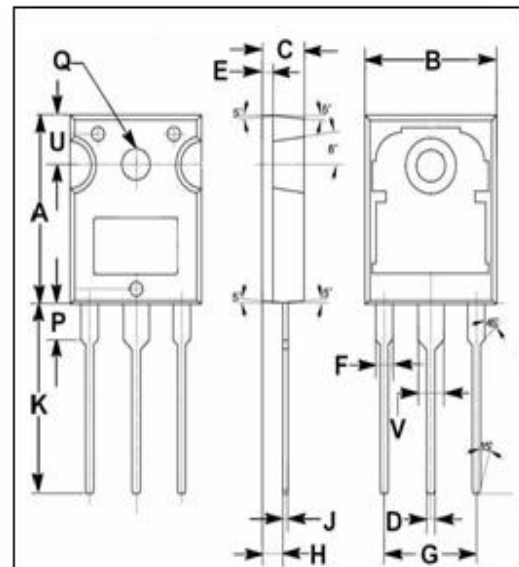
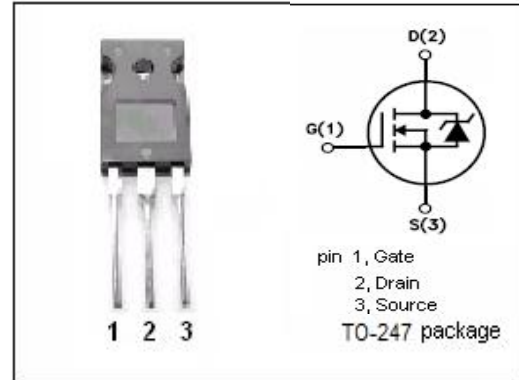
- PFC stages
- Power supply
- Switching applications

**• ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

| SYMBOL           | PARAMETER  | VALUE    | UNIT |
|------------------|--|----------|------|
| V <sub>DSS</sub> | Drain-Source Voltage   | 600      | V    |
| V <sub>GSS</sub> | Gate-Source Voltage  | ±30      | V    |
| I <sub>D</sub>   | Drain Current-Continuous@T <sub>c</sub> =25°C<br>T <sub>c</sub> =100°C | 20<br>14 | A    |
| I <sub>DM</sub>  | Drain Current-Single Pulsed  | 80       | A    |
| P <sub>D</sub>   | Total Dissipation  | 266      | W    |
| T <sub>j</sub>   | Operating Junction Temperature   | -55~150  | °C   |
| T <sub>stg</sub> | Storage Temperature  | -55~150  | °C   |

**• THERMAL CHARACTERISTICS**

| SYMBOL                | PARAMETER                             | MAX  | UNIT |
|-----------------------|---------------------------------------|------|------|
| R <sub>th(ch-c)</sub> | Channel-to-case thermal resistance    | 0.47 | °C/W |
| R <sub>th(ch-a)</sub> | Channel-to-ambient thermal resistance | 40   | °C/W |



| DIM | mm    |       |
|-----|-------|-------|
|     | MIN   | MAX   |
| A   | 19.80 | 20.20 |
| B   | 15.40 | 15.80 |
| C   | 4.90  | 5.10  |
| D   | 0.90  | 1.10  |
| E   | 1.40  | 1.60  |
| F   | 1.90  | 2.10  |
| G   | 10.80 | 11.00 |
| H   | 2.40  | 2.60  |
| J   | 0.50  | 0.70  |
| K   | 19.50 | 20.50 |
| P   | 3.90  | 4.10  |
| Q   | 3.30  | 3.50  |
| U   | 5.20  | 5.40  |
| V   | 2.90  | 3.10  |

**isc N-Channel MOSFET Transistor**

**AOK20S60**

**ELECTRICAL CHARACTERISTICS**

T<sub>c</sub>=25°C unless otherwise specified

| SYMBOL              | PARAMETER                      | CONDITIONS  | MIN | TYP  | MAX     | UNIT |
|---------------------|--------------------------------|---|-----|------|---------|------|
| BV <sub>DSS</sub>   | Drain-Source Breakdown Voltage | V <sub>GS</sub> =0V; I <sub>D</sub> = 0.25mA  | 600 |      |         | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =5V; I <sub>D</sub> =0.25mA   | 2.8 |      | 4.1     | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> = 10V; I <sub>D</sub> =10A  |     | 0.18 | 0.20    | Ω    |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0V  |     |      | ±0.1    | μA   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> = 600V; V <sub>GS</sub> = 0V; T <sub>c</sub> =25°C<br>V <sub>DS</sub> = 480V; V <sub>GS</sub> = 0V; T <sub>c</sub> =150°C |     |      | 1<br>10 | μA   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>SD</sub> =10A, V <sub>GS</sub> = 0 V   |     | 0.84 |         | V    |