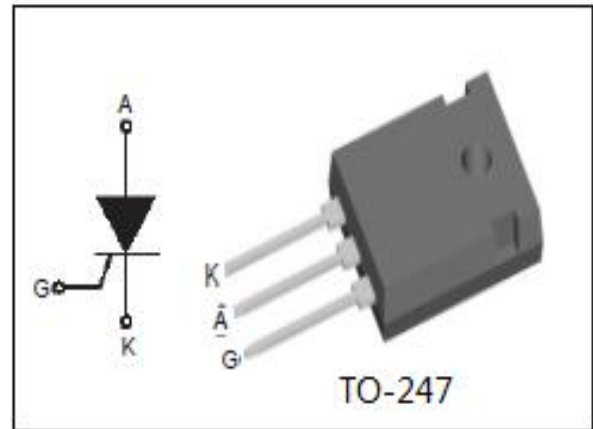


**isc Thyristors**
**40TPS12A**
**DESCRIPTION**

- With TO-247 packaging
- Long-term stability
- Thyristor for line frequency
- Planar passivated chip
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching applications
- Line rectifying 50/60 Hz


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

| SYMBOL              | PARAMETER   | MIN          | UNIT       |
|---------------------|---|--------------|------------|
| V <sub>DRM</sub>    | Repetitive peak off-state voltage                             | 1200         | V          |
| V <sub>RRM</sub>    | Repetitive peak reverse voltage                               | 1200         | V          |
| I <sub>T(AV)</sub>  | Average forward current @T <sub>c</sub> =79°C                 | 35           | A          |
| I <sub>T(RMS)</sub> | RMS on-state current  | 55           | A          |
| I <sub>TSM</sub>    | Surge non-repetitive on-state current ( 1/2 cycle,sine wave ) | 50HZ<br>60HZ | 500<br>600 |
| P <sub>G(AV)</sub>  | Average gate power dissipation                                | 2.5          | W          |
| T <sub>j</sub>      | Operating junction temperature                                | -40~125      | °C         |
| T <sub>stg</sub>    | Storage temperature   | -40~150      | °C         |

**ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless otherwise specified)**

| SYMBOL               | PARAMETER                         | CONDITIONS  | MIN | MAX       | UNIT |
|----------------------|-----------------------------------|---|-----|-----------|------|
| I <sub>RRM</sub>     | Repetitive peak reverse current   | V <sub>RM</sub> =V <sub>RRM</sub><br>V <sub>DM</sub> =V <sub>DRM</sub><br>T <sub>j</sub> =25°C<br>T <sub>j</sub> =125°C |     | 0.5<br>10 | mA   |
| I <sub>DRM</sub>     | Repetitive peak off-state current |   |     |           |      |
| V <sub>TM</sub>      | On-state voltage                  | I <sub>TM</sub> = 110A  |     | 1.85      | V    |
| I <sub>GT</sub>      | Gate-trigger current              | V <sub>D</sub> = 6V   |     | 150       | mA   |
| V <sub>GT</sub>      | Gate-trigger voltage              | V <sub>D</sub> = 6V   |     | 2.5       | V    |
| R <sub>th(j-c)</sub> | Thermal resistance                | Junction to case  |     | 0.6       | °C/W |