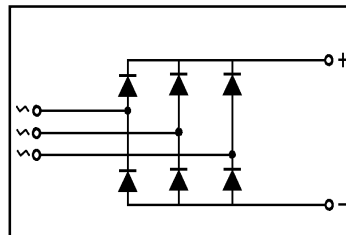


Diode Modules TG-PAK

## Features

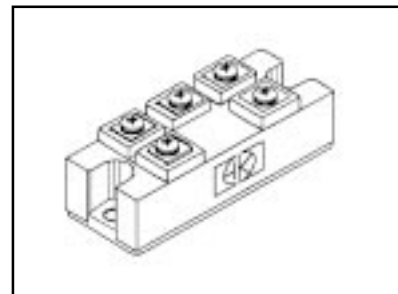
- International standard package
- With DBC ceramic base plate
- Planar passivated chips
- High surge capability
- Complies With RoHS Directive;
- Lead Free;



**IDA<sub>VM</sub> = 55A**  
**V<sub>RRM</sub> = 800-1600V**

## Benefits

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Field supply for DC motors
- Battery DC power supplies



## Absolute Maximum Ratings

| Symbol            | Test Conditions                                      | Max.                  | Units            |
|-------------------|--|-----------------------|------------------|
| V <sub>RRM</sub>  |  | 800, 1200, 1400, 1600 | V                |
| I <sub>DAVM</sub> | T <sub>C</sub> =100°C, module                        | 55                    | A                |
| I <sub>FSM</sub>  | T <sub>VJ</sub> =45°C; t=10ms (50 Hz),sine           | 660                   | A                |
|                   | V <sub>R</sub> =0 t=8.3ms (60 Hz),sine               | 636                   | A                |
|                   | T <sub>VJ</sub> =150°C; t=10ms (50 Hz),sine          | 800                   | A                |
|                   | V <sub>R</sub> =0 t=8.3ms (60 Hz),sine               | 840                   | A                |
| I <sup>2</sup> t  | T <sub>VJ</sub> =45°C; t=10ms (50 Hz),sine           | 2750                  | A <sup>2</sup> s |
|                   | V <sub>R</sub> =0 t=8.3ms (60 Hz),sine               | 3150                  | A <sup>2</sup> s |
|                   | T <sub>VJ</sub> =150°C; t=10ms (50 Hz),sine          | 2520                  | A <sup>2</sup> s |
|                   | V <sub>R</sub> =0 t=8.3ms (60 Hz),sine               | 2750                  | A <sup>2</sup> s |
| V <sub>ISOL</sub> | RMS Isolation Voltage, Any Terminal To Case, t=1 min | 3000                  | V                |
| T <sub>VJ</sub>   |  | -40 to +150           | °C               |
| T <sub>VJM</sub>  |  | 150                   |                  |
| T <sub>STG</sub>  |  | -40 to +125           |                  |

**Thermal / Mechanical Characteristics**

|                  | Parameter                                 | Typ. | Max. | Units |
|------------------|---|------|------|-------|
| R <sub>θJS</sub> | Thermal Resistance, Junction-to- Sink DC  | -    | 0.5  |       |
| R <sub>θJC</sub> | Thermal Resistance, Junction-to- Case DC  | -    | 0.4  | °C/W  |
| R <sub>θCS</sub> | Thermal Resistance, Case-to- Sink- Module | 0.1  | -    |       |
|                  | Mouting Torque, Case-to-Heatsink          | -    | 4.0  | N.m   |
|                  | Mouting Torque, Case-to-Terminal 1,2 & 3  | -    | 3.0  |       |
|                  | Weight of Module                          | 180  | -    | g     |

**Electrical Characteristics (unless otherwise specified)**

|                 | Parameter                        | Min. | Typ. | Max. | Units | Conditions   |
|-----------------|----------------------------------|------|------|------|-------|--|
| I <sub>R</sub>  | Diode Leaking Current            | -    | -    | 0.5  | mA    | T <sub>VJ</sub> =25 °C V <sub>R</sub> =V <sub>RRM</sub>  |
|                 |                                  | -    | -    | 5    | mA    | T <sub>VJ</sub> =125 °C V <sub>R</sub> =V <sub>RRM</sub> |
| V <sub>F</sub>  | Diode Forward Voltage            | -    | -    | 1.33 | V     | I <sub>F</sub> =80A; T <sub>VJ</sub> =25 °C              |
| V <sub>TO</sub> | For power-loss calculations only | -    | -    | 0.8  | V     | T <sub>VJ</sub> =125 °C                                  |
| r <sub>T</sub>  |                                  | -    | -    | 6.0  | mΩ    |  |

**Voltage Ratings**

| Voltage Code | V <sub>RRM</sub> (V) | V <sub>RSM</sub> (V) | I <sub>RRM</sub> (mA) | T <sub>J</sub> =25 °C |
|--------------|----------------------|----------------------|-----------------------|-----------------------|
| 080          | 800                  | 900                  | 1.0                   |                       |
| 120          | 1200                 | 1300                 | 1.0                   |                       |
| 140          | 1400                 | 1500                 | 1.0                   |                       |
| 160          | 1600                 | 1700                 | 1.0                   |                       |

**Case Outline - MDS-pak**

