



- Positive temperature coefficient
- Temperature-independent switching
- Maximum working temperature at 175 °C
- Unipolar devices and zero reverse recovery current
- Zero forward recovery current
- Essentially no switching losses
- Reduction of heat sink requirements
- High-frequency operation
- Reduction of EMI

Typical applications are in power factor correction(PFC), solar inverter, uninterruptible power supply, motor drives, photovoltaic inverter, electric car and charger.

: TO-263

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

: Tin plated leads

: As marked

(T<sub>C</sub>=25 Unless otherwise specified)

|   |   |   |             |   |
|---|---|---|-------------|---|
|   |   |   |             |   |
| Device marking code   |   |   | D106510BQG2 |   |
| Reverse voltage (repetitive peak)<br>@ T <sub>J</sub> =25°C | V | ® | T eÑ        | Â |
|   |   |   |             | ® |



|                           |       |         |  |      |      |
|---------------------------|-------|---------|--|------|------|
| Forward voltage drop      | $V_F$ | V       | $I_F=10A, T_J=25^{\circ}C$                             | 1.35 | 1.55 |
|                           |       |         | $I_F=10A, T_J=175^{\circ}C$                            | 1.8  | -    |
| Reverse leakage current   | $I_R$ | $\mu A$ | $V_R=650V, T_J=25^{\circ}C$                            | 0.5  | 25   |
|                           |       |         | $V_R=650V, T_J=175^{\circ}C$                           | 2    | -    |
| Total capacitive charge   | $Q_C$ | nC      | $V_R=400V, T_J=25^{\circ}C, Q_C=\int_0^{V_R} I_R(V)dV$ | 30   | -    |
| Total capacitance         | C     | pF      | $V_R=0V, f=1MHz$                                       | 543  | -    |
|                           |       |         | $V_R=200V, f=1MHz$                                     | 55   | -    |
|                           |       |         | $V_R=400V, f=1MHz$                                     | 52   | -    |
| Capacitance Stored Energy | $E_C$ | $\mu J$ | $V_R=400V$   | 3.7  | -    |

( $T_a=25$  Unless otherwise specified)

|                    |           |               |     |
|--------------------|-----------|---------------|-----|
| Thermal resistance | $R_{J-C}$ | $^{\circ}C/W$ | 1.1 |
|--------------------|-----------|---------------|-----|

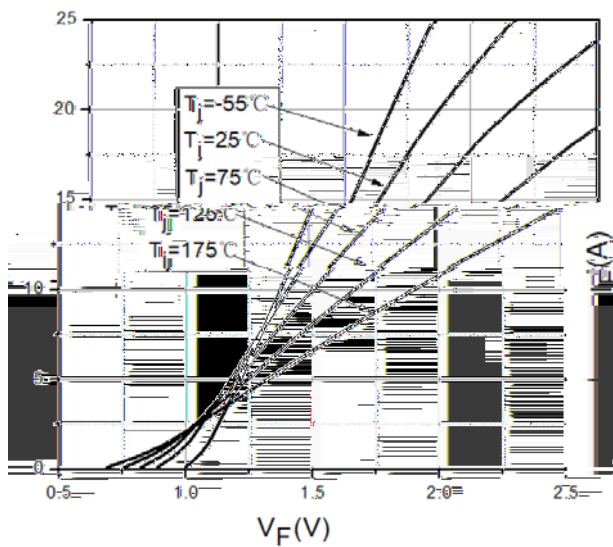


Figure 1. Forward Characteristics

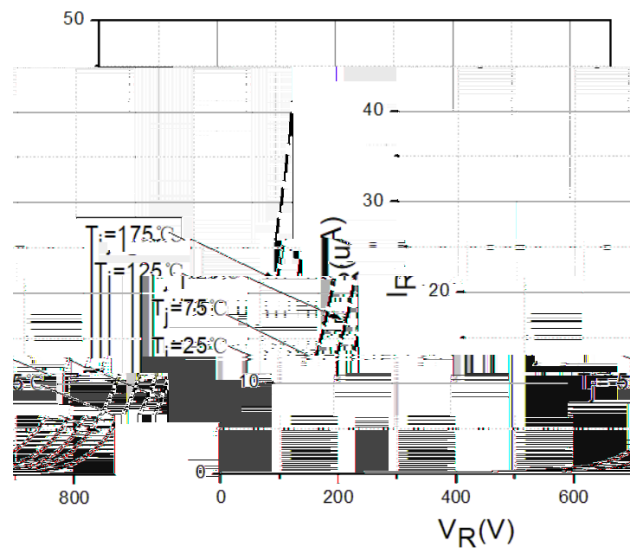
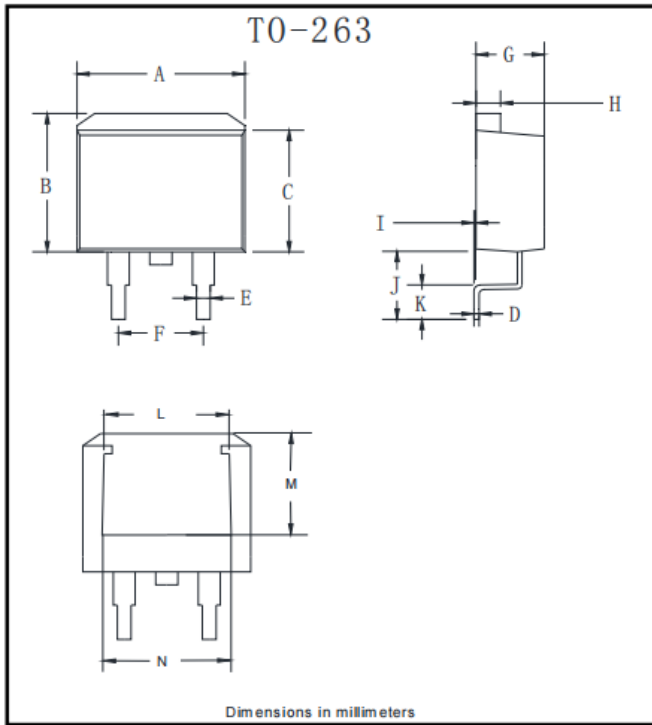


Figure 2. Reverse Characteristic





| <b>TO-263</b> |      |      |
|---------------|------|------|
| Dim           | Min  | Max  |
| A             | 9.5  | 11.5 |
| B             | 9.7  | 10.5 |
| C             | 8.4  | 9.0  |
| D             | 0.28 | 0.64 |
| E             | 0.68 | 0.94 |
| F             | 4.55 | 5.6  |
| G             | 4.04 | 5.10 |
| H             | 1.14 | 1.4  |
| I             | 0    | 0.2  |
| J             | 4.9  | 6.05 |
| K             | 1.79 | 2.79 |
| L             | 7.3  | 7.9  |
| M             | 6.2  | 6.8  |
| N             | 7.6  | 8.2  |



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