



Positive temperature coefficient
Temperature-independent switching
Maximum working temperature at 175 °C
Unipolar devices and zero reverse recovery current
Zero forward recovery voltage
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

($T_C=25^{\circ}\text{C}$ Unless otherwise specified)



Device marking code



| Forward voltage drop | V_F | V | $I_F=6A, T_J=25^\circ C$ | 1.31 | 1.5 |
|---------------------------|-------|---------|---|------|-----|
| | | | $I_F=6A, T_J=175^\circ C$ | 1.65 | - |
| Reverse leakage current | I_R | μA | $V_R=650V, T_J=25^\circ C$ | 0.5 | 25 |
| | | | $V_R=650V, T_J=175^\circ C$ | 5 | - |
| Total capacitive charge | Q_C | nC | $V_R=400V, T_J=25^\circ C, Q_C=\int_0^{V_R} I_C(V)dV$ | 25 | - |
| Total capacitance | C | μF | $V_R=0V, f=1MHz$ | 378 | - |
| | | | $V_R=200V, f=1MHz$ | 51 | - |
| | | | $V_R=400V, f=1MHz$ | 49 | - |
| Capacitance Stored Energy | E_C | μJ | $V_R=400V$ | 3 | - |

($T_a=25^\circ C$ Unless otherwise specified)

| Thermal resistance | R_{J-C} | $^\circ C/W$ | 1.75 |
|--------------------|-----------|--------------|------|

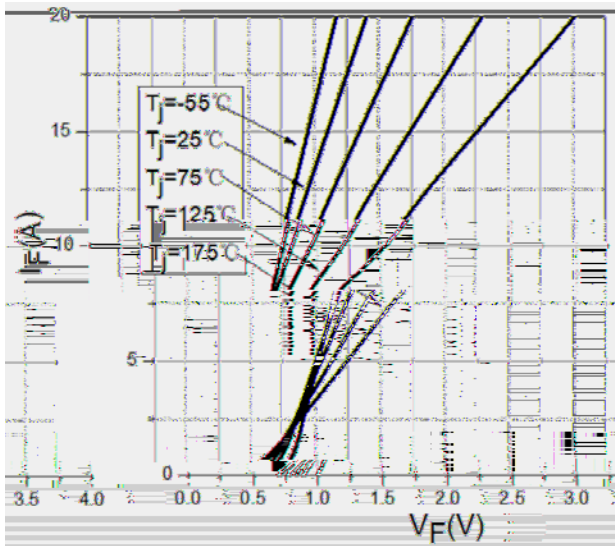


Figure 1. Forward Characteristics

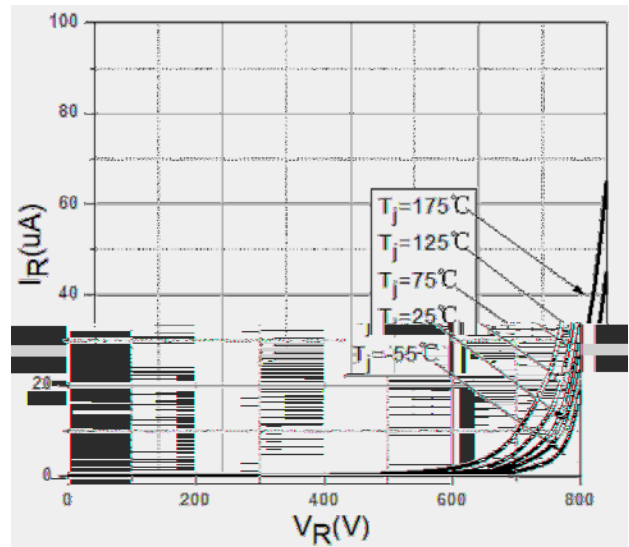


Figure2. Reverse Characteristic

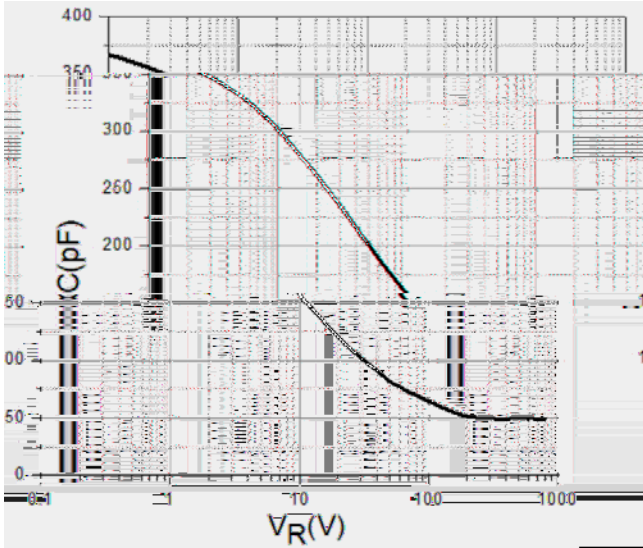


Figure 3. Capacitance vs. Reverse Voltage

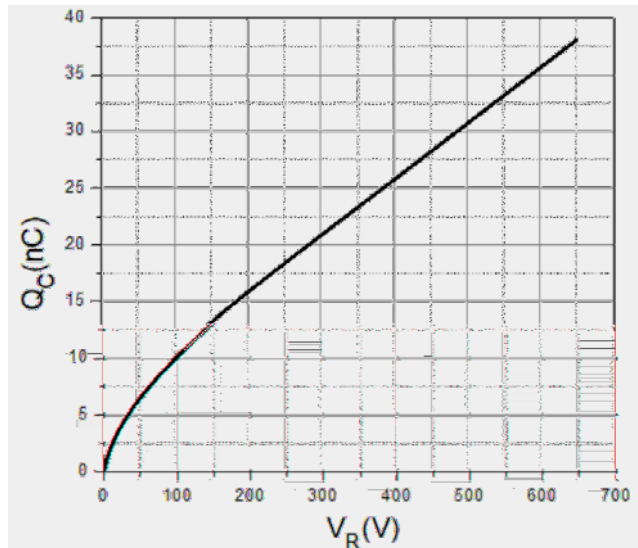


Figure 4. Total Capacitance Charge vs. Reverse Voltage

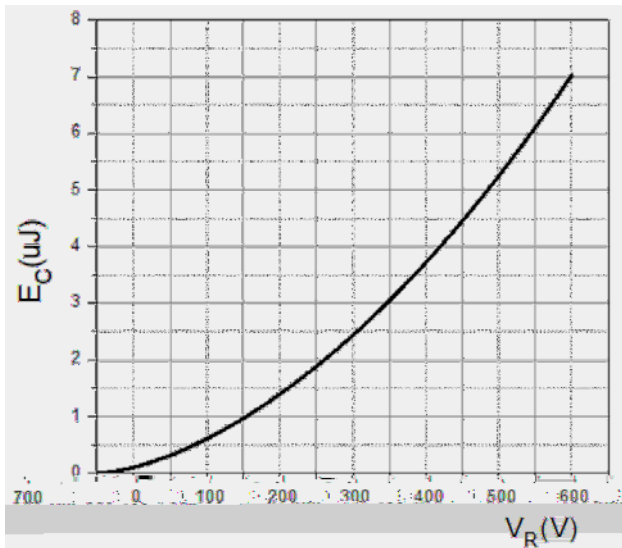


Figure 5. Capacitance Stored Energy

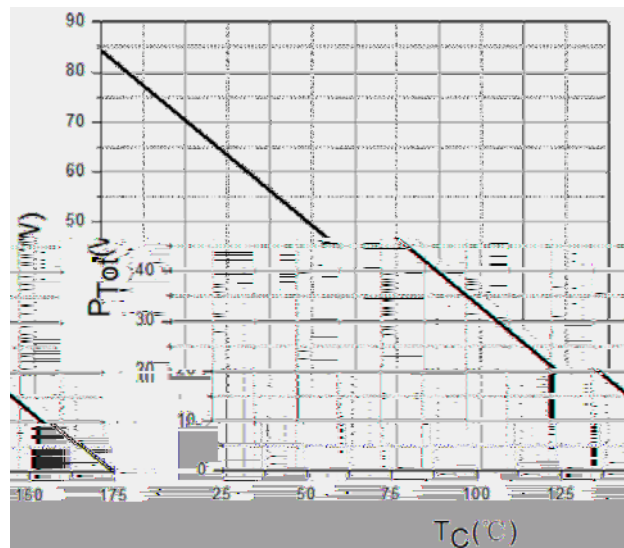


Figure 6. Power Derating

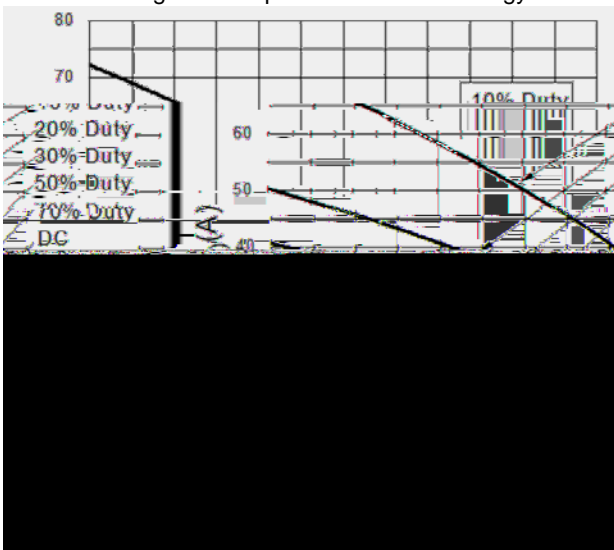


Figure 7. Current Derating

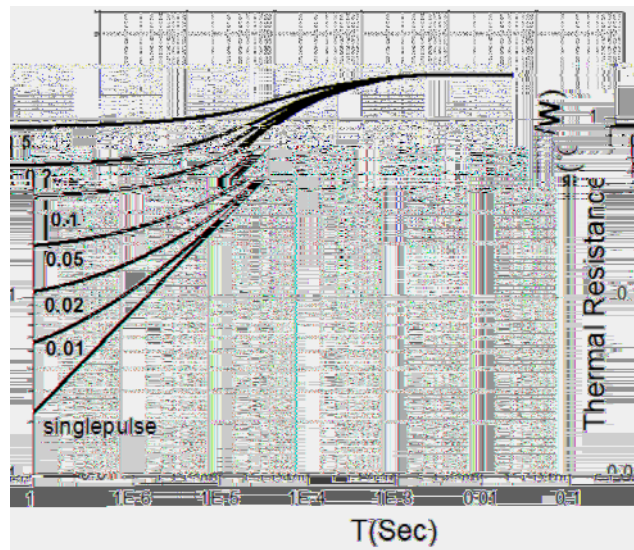
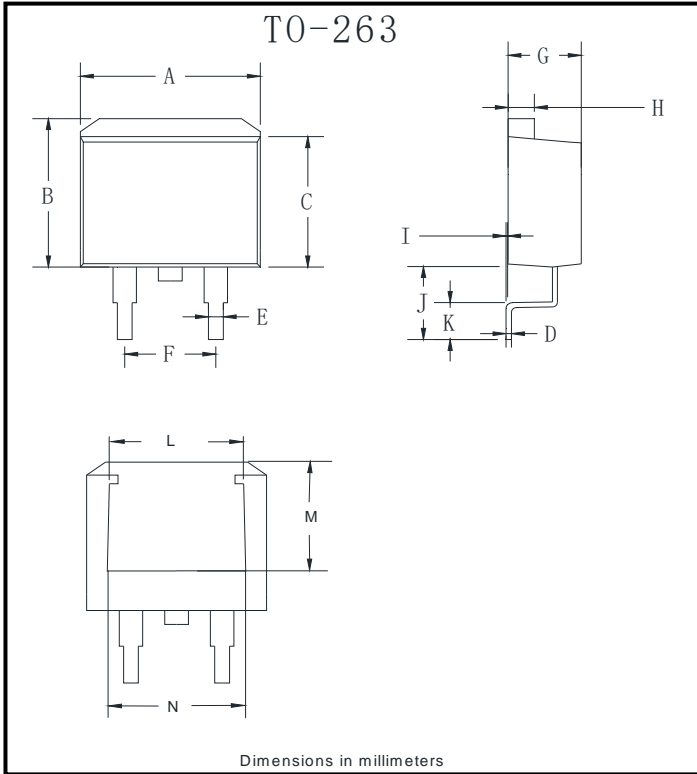


Figure 8. Transient Thermal Impedance



| 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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