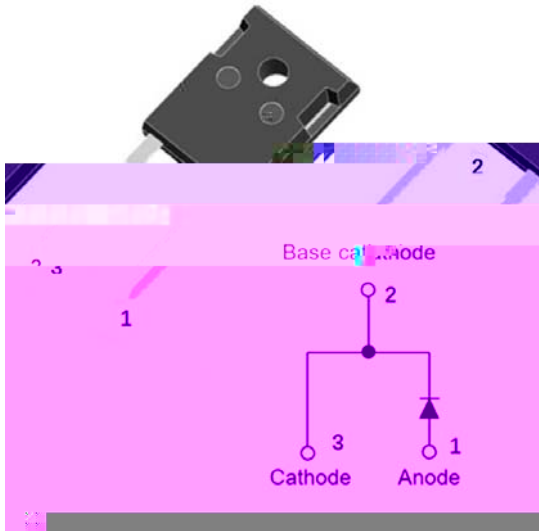


|             |       |
|-------------|-------|
| $V_{RRM}$   | 1200V |
| $I_F$ 135°C | 62A   |
| $Q_C$       | 222nC |

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-247AC  
 : Tin plated leads  
 : As marked

( $T_c=25$  Unless otherwise specified)

| Device marking code  |                |                      | D112040NGG2 |
|--|----------------|----------------------|-------------|
| Reverse voltage (repetitive peak)<br>@ $T_j=25^\circ\text{C}$  | $V_{RRM}$      | V                    | 1200        |
| Reverse voltage (Surge Peak)<br>@ $T_j=25^\circ\text{C}$   | $V_{RSM}$      | V                    | 1200        |
| Reverse voltage (DC)<br>@ $T_j=25^\circ\text{C}$   | $V_{DC}$       | V                    | 1200        |
| Continuous forward current @ $T_c=25^\circ\text{C}$  | $I_F$          | A                    | 133         |
| Continuous forward current @ $T_c=135^\circ\text{C}$   |                |                      | 62          |
| Continuous forward current @ $T_c=155^\circ\text{C}$   |                |                      | 40          |
| Non-repetitive peak forward surge current<br>@ $T_c=25^\circ\text{C}$ , $t_p=10\text{ms}$ , Half Sine Wave | $I_{FSM}$      | A                    | 300         |
| Power Dissipation @ $T_c=25^\circ\text{C}$   | $P_{TOT}$      | W                    | 573         |
| Power Dissipation @ $T_c=110^\circ\text{C}$  |                |                      | 246         |
| $i^2t$ Value @ $T_c=25^\circ\text{C}$ , $t_p=10\text{ms}$  | $i^2dt$        | $\text{A}^2\text{S}$ | 450         |
| Operating junction and Storage temperature range   | $T_j, T_{stg}$ | $^\circ\text{C}$     | -55 to +175 |



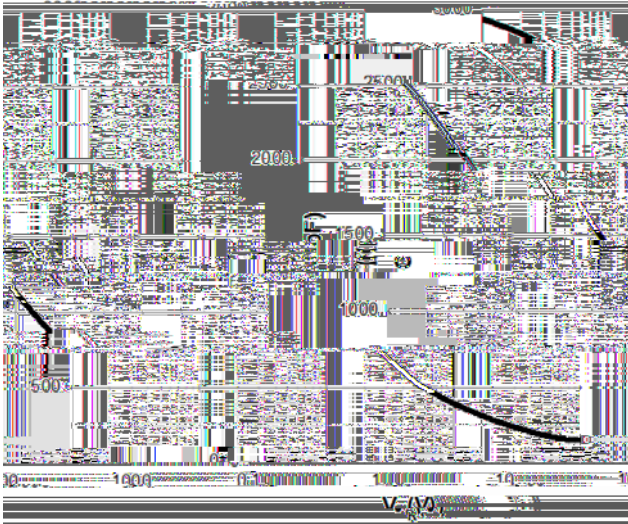


Figure 3. Capacitance vs. Reverse Voltage



Figure 4. Total Capacitance Charge vs. Reverse Voltage

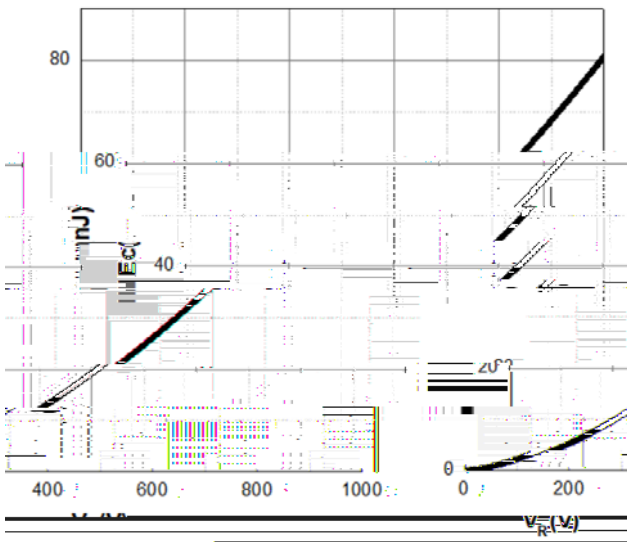


Figure 5. Capacitance Stored Energy

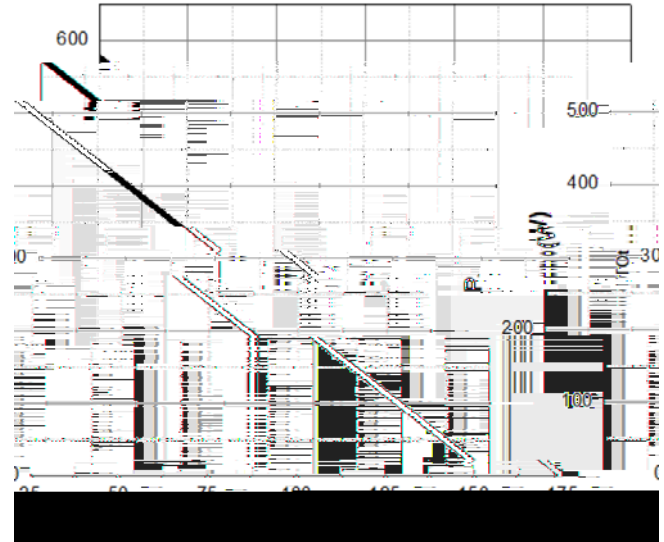


Figure 6. Power Derating

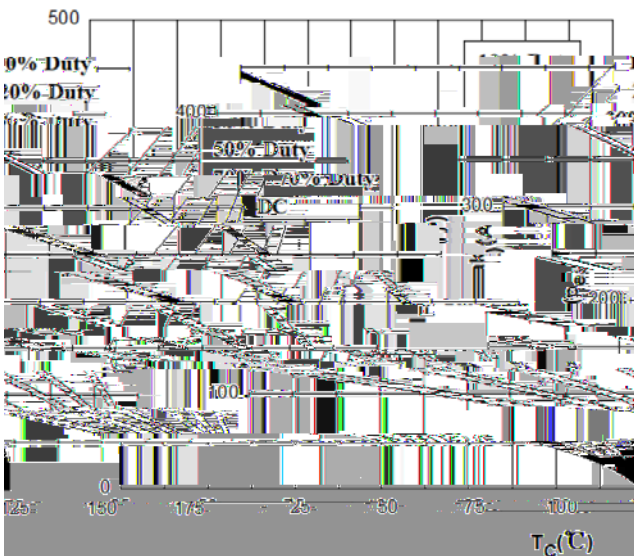


Figure 7. Current Derating

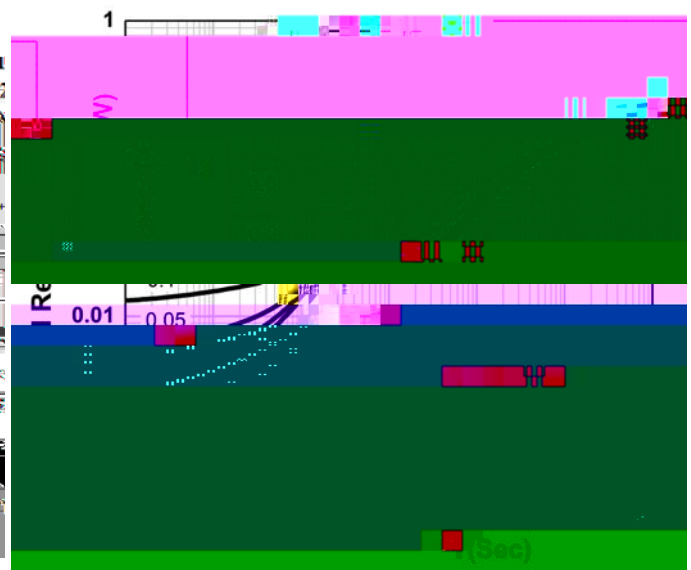


Figure 8. Transient Thermal Impedance



| Dim | Min   | Max   |
|-----|-------|-------|
| A   | 4.80  | 5.20  |
| A1  | 2.21  | 2.61  |
| A2  | 1.85  | 2.15  |
| b   | 1.11  | 1.36  |
| b2  | 1.91  | 2.21  |
| c   | 0.51  | 0.75  |
| D   | 20.70 | 21.30 |

