



Typical Applications

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

Mechanical Data

Package: TO-247AB

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

Terminals: Tin plated leads

Polarity: As marked

Maximum Ratings (T_C=25 Unless otherwise specified

| PARAMETER | SYMBOL | UNIT | VALUE |
|---|------------------|------|---------------|
| Device marking code | | | D112020NCTCG2 |
| Reverse voltage (Repetitive peak) @ T _J =25°C | V _{RRM} | V | 1200 |
| Reverse voltage (Surge peak) @ T _J =25°C | V _{RSM} | V | 1200 |
| Reverse voltage (DC) @ T _J =25°C | | | |

| | | | |
|---|------------------|------------------|-------------------|
| Operating junction and Storage temperature T _J , T _S | | | 10/20 |
| Non-repetitive peak forward surge current @ T _C =25°C, t _p =10ms, Half Sine Wave | I _{FSM} | A | 86 ⁽¹⁾ |
| Power Dissipation @ T _C =25°C | P _{TOT} | W | 272/535 |
| Power Dissipation @ T _C =110°C | | | 118/232 |
| Surge energy value @ T _C =25°C, t _p =10ms | i ² t | A ² S | 36 ⁽¹⁾ |

Operating junction and Storage temperature T_J, T_S

0 3

0mn

a

3



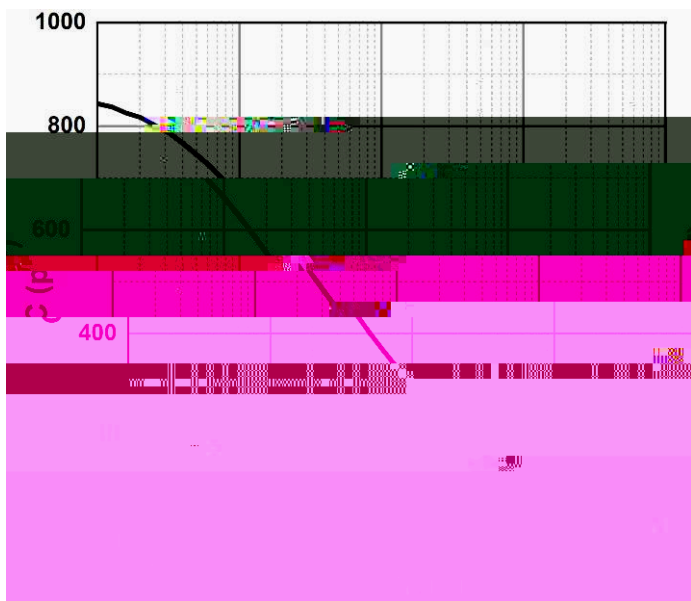


Figure 3. Capacitance vs. Reverse Voltage

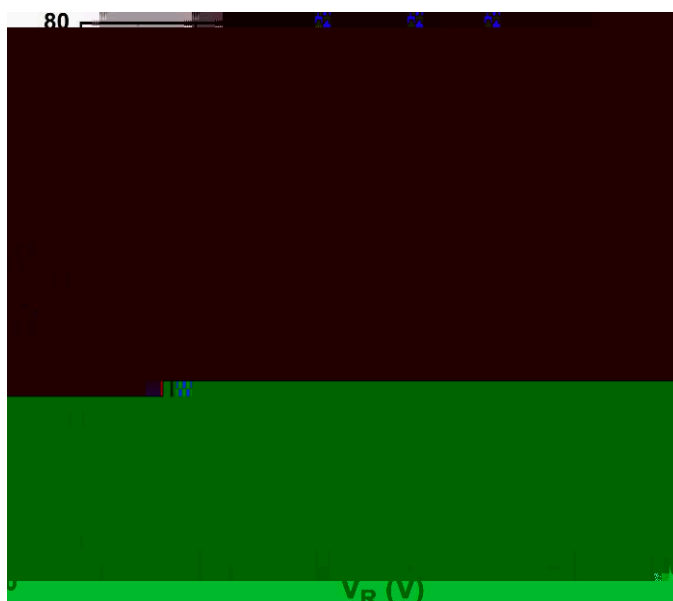


Figure 4. Total Capacitance Charge vs. Reverse Voltage

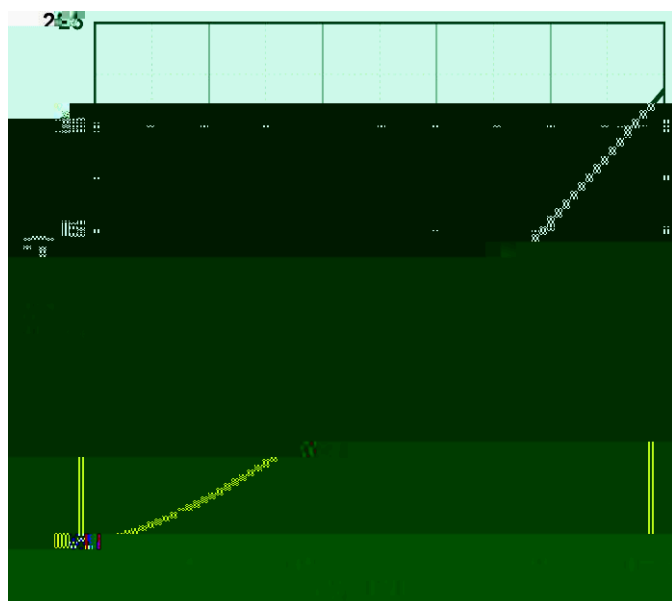


Figure 5. Capacitance Stored Energy

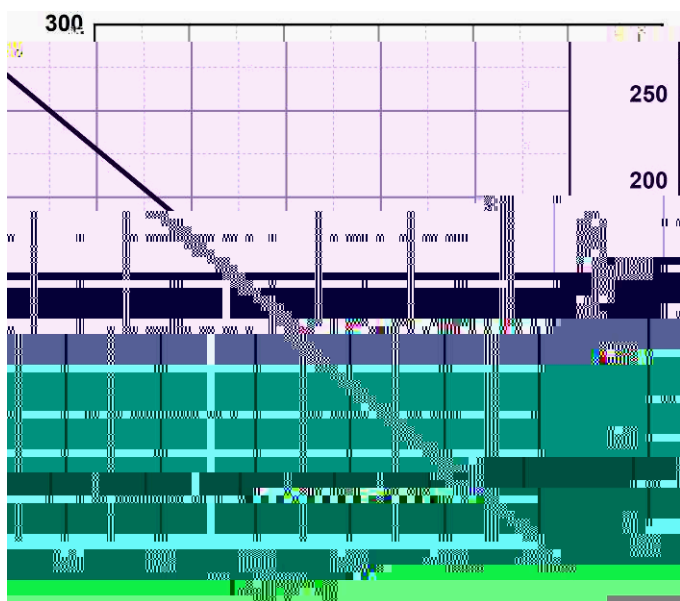


Figure 6. Power Derating

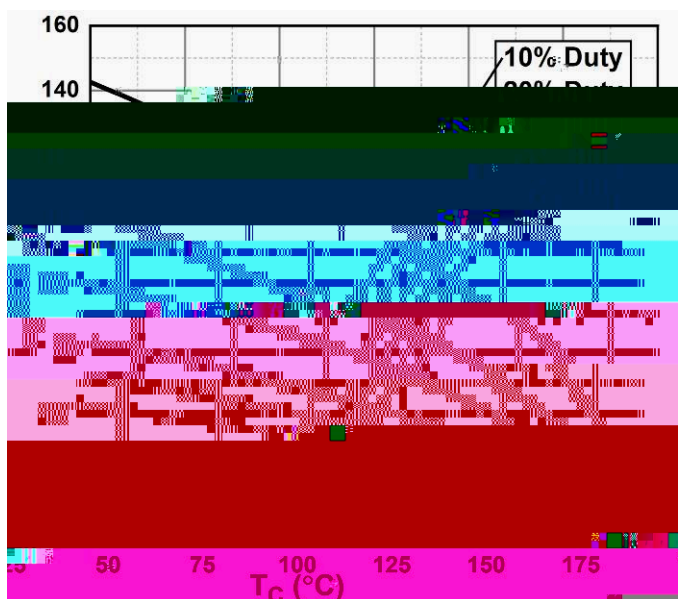
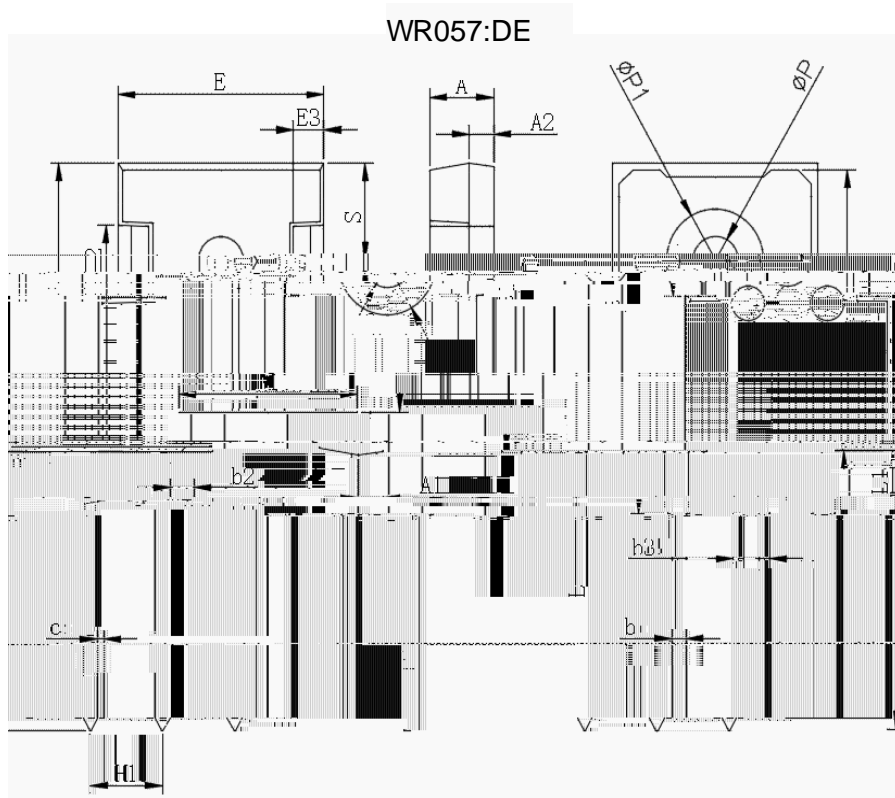


Figure 7. Current Derating

Outline Dimensions



| TO-247AB | | |
|----------|---------|-------|
| Dim | Min | Max |
| A | 4.80 | 5.20 |
| A1 | 2.21 | 2.61 |
| A2 | 1.85 | 2.15 |
| b | 1.0 | 1.4 |
| b2 | 1.91 | 2.21 |
| C | 0.5 | 0.7 |
| D | 20.70 | 21.30 |
| D1 | 16.25 | 16.85 |
| E | 15.50 | 16.10 |
| E1 | 13.0 | 13.6 |
| E2 | 4.80 | 5.20 |
| E3 | 2.30 | 2.70 |
| L | 19.62 | 20.22 |
| L1 | - | 4.30 |
| P | 3.40 | 3.80 |
| P1 | - | 7.30 |
| S | 6.15TYP | |
| H1 | 5.44TYP | |
| b3 | 2.80 | 3.20 |



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