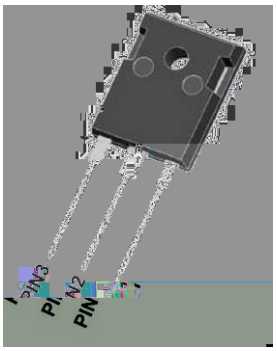
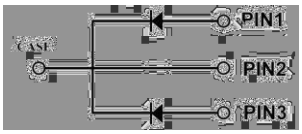
RoHS
COMPLIANT

| | |
|---|---|
| $V_{RRM}$ | 1200V |
| $I_{F\ 135°C}$ | 20A |
| $Q_C$ | 74nC |






- 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-247AB
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- : Tin plated leads
- : As marked

■ ($T_C$=25 Unless otherwise specified)

| | | | |
|---|---|---|---|
| Device marking code | | | D112016NCTQG3 |
| 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 | $V_{DC}$ | V | 1200 |
| Continuous forward current @ $T_C$=25°C | $I_F$ | A | 22/44 |
| Continuous forward current @ $T_C$=135°C | | | 10/20 |
| Continuous forward current @ $T_C$=150°C | | | 8/16 |
| Non-repetitive peak forward surge current @ $T_C$=25°C, tp=10ms, Half Sine Wave | $I_{FSM}$ | A | 95 |
| Power Dissipation@ $T_C$=25°C | $P_{TOT}$ | W | 100/200 |
| Power Dissipation@ $T_C$=110°C | | | 43/86 |
| $i^2t$ Value@ $T_C$=25°C ,tp=10ms | $\int i^2dt$ | $A^2S$ | 45 |
| Operating junction and Storage temperature range | $T_j$ , $T_{stg}$ | °C | -55 to +175 |

Per Leg, Per Device

■

| | | | | | |
|---|---|---|---|---|---|
| Forward voltage drop | $V_F$ | V | $I_F$=8A, $T_j$=25°C | 1.46 | 1.55 |
| | | | $I_F$=8A, $T_j$=175°C | 2.2 | - |
| Reverse leakage current | $I_R$ | μA | $V_R$=1200V, $T_j$=25°C | 1 | 10 |
| | | | $V_R$=1200V, $T_j$=175°C | 5 | - |
| Total capacitive charge | $Q_C$ | nC | $V_R$=800V, $T_j$=25°C , $Q_C=\int_0^{V_R} C(V)dV$ | 37 | - |
| Total capacitance | C | pF | $V_R$=0V, f=1MHZ | 500 | - |
| | | | $V_R$=400V, f=1MHZ | 35 | - |
| | | | $V_R$=800V, f=1MHZ | 27 | - |
| Capacitance Stored Energy | $E_C$ | μJ | $V_R$=800V | 9.5 | - |

■ (Ta=25 Unless otherwise specified)

| | | | |
|---|---|---|---|
| Thermal resistance | $R_{\theta J-C}$ | °C /W | 1.49<br>0.75 |

Per Leg, Per Device

■

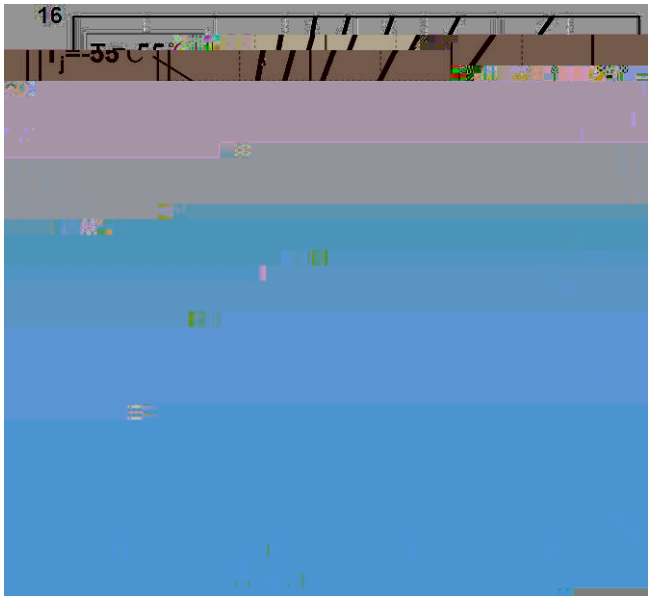



Figure 1. Forward Characteristics

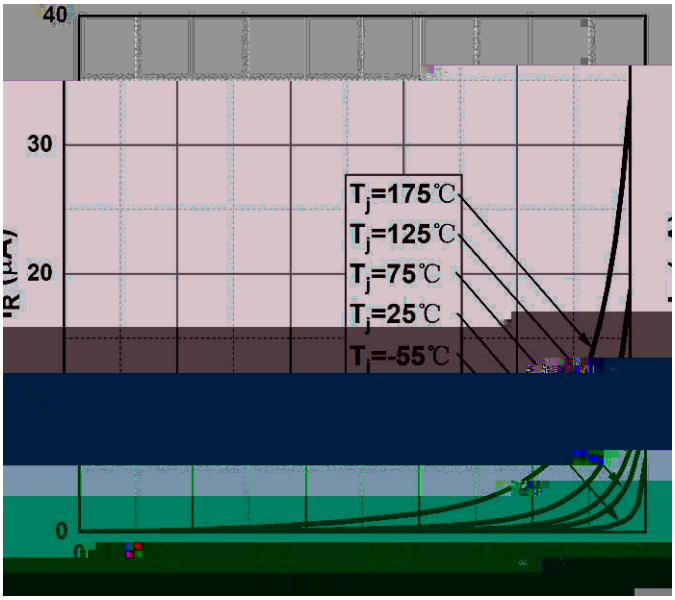



Figure 2. Reverse Characteristics

■

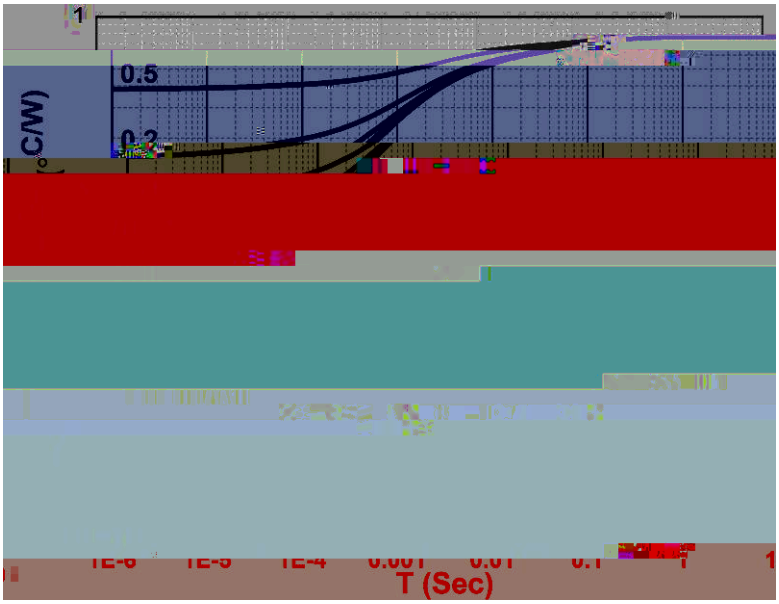



Figure 8. Transient Thermal Impedance

■

| | | |
|---|---|---|
| | | |
| | | |

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function o