

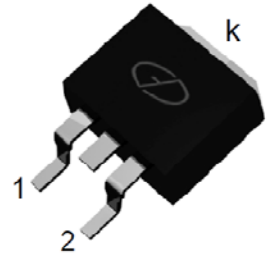


MURB1660CT

Ultrafast Recovery Planar Diode
Reverse Voltage 600 Volts Forward Current 16 Amperes

Features

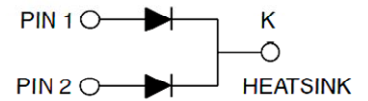
- FRED (Planar) wafer construction
- Ultrafast recovery time
- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory
Flammability Classification 94V-0



Package: TO-263

Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.4grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube or tape reel packing 800/reel



Maximum Ratings & Electrical Characteristics

($T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | TEST CONDITIONS | | SYMBOL | MURB1660CT | UNIT |
|--|------------------------------------|---|-----------|--------------|--------------------------------|
| Maximum repetitive peak reverse voltage | | | V_{RRM} | 600 | V |
| Working peak reverse voltage | | | V_{RWM} | 600 | V |
| Maximum DC blocking voltage | | | V_{DC} | 600 | V |
| Maximum average forward rectified current at $T_c=105^\circ\text{C}$ total device per diode | | | $I_F(AV)$ | 16 8 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode | | | I_{FSM} | 125 | A |
| Voltage rate of change (rated V_R) | | | DV/dt | 10000 | V/us |
| Operating junction temperature range | | | T_J | -55 to +150 | $^\circ\text{C}$ |
| Storage temperature range | | | T_{STG} | -55 to +150 | $^\circ\text{C}$ |
| Maximum Reverse Recover Time ($I_F=0.5\text{Amp}$, $I_R=1.0\text{Amp}$, $I_{rec}=0.25\text{Amp}$) | T_{rr} | | T_{rr} | 50 | ns |
| Maximum instantaneous forward voltage per leg | $I_F=8\text{A}$ $I_F=8\text{A}$ | $T_C=25^\circ\text{C}$ $T_C=125^\circ\text{C}$ | V_F | 1.50 1.40 | V |
| Maximum reverse current per leg at working peak Reverse voltage | | $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$ | I_R | 10 500 | μA μA |

Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | TYP (TO-263) | Unit |
|---------------|---|--------------|---------------------------|
| R θ JC | Thermal Resistance, Junction to Case per Leg | 2.0 | $^\circ\text{C}/\text{W}$ |
| R θ JA | Thermal Resistance, Junction to Ambient per Leg | 62.5 | $^\circ\text{C}/\text{W}$ |

Note: Pulse test: 300us pulse width, duty cycle=2%



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Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

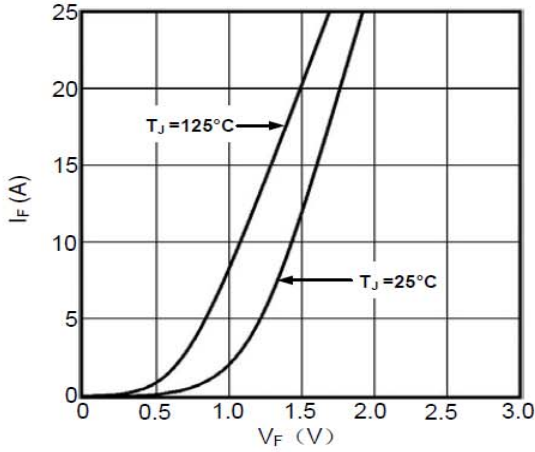


Fig1. Forward Voltage Drop vs Forward Current

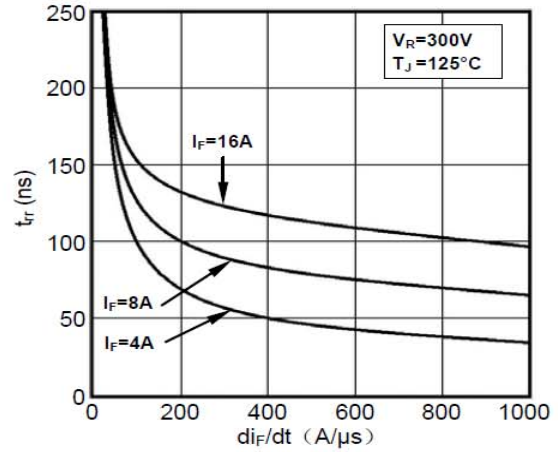


Fig2. Reverse Recovery Time vs di_F/dt

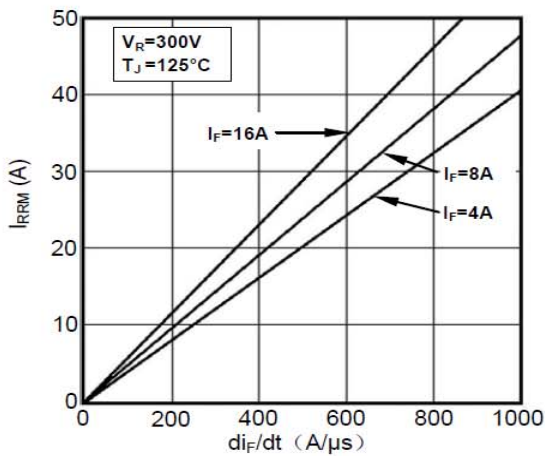


Fig3. Reverse Recovery Current vs di_F/dt

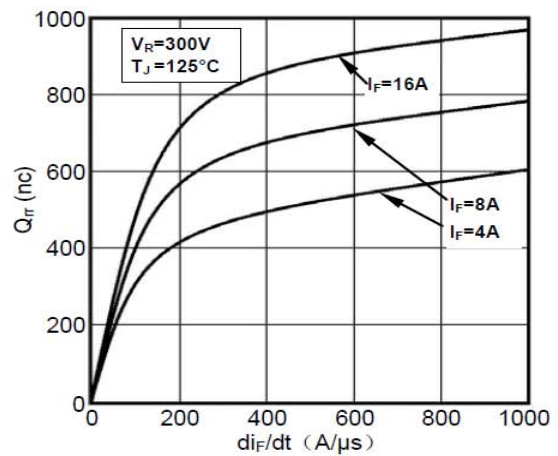


Fig4. Reverse Recovery Charge vs di_F/dt

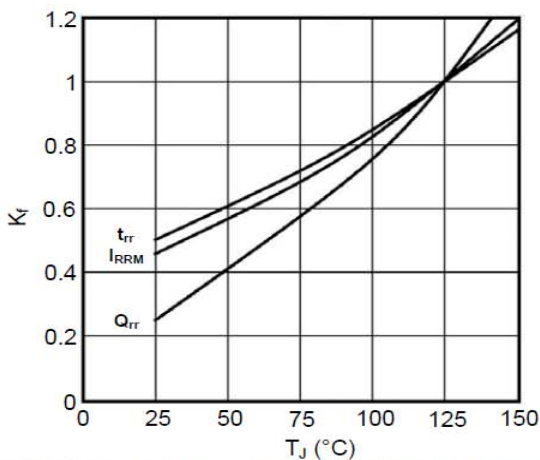


Fig5. Dynamic Parameters vs Junction Temperature

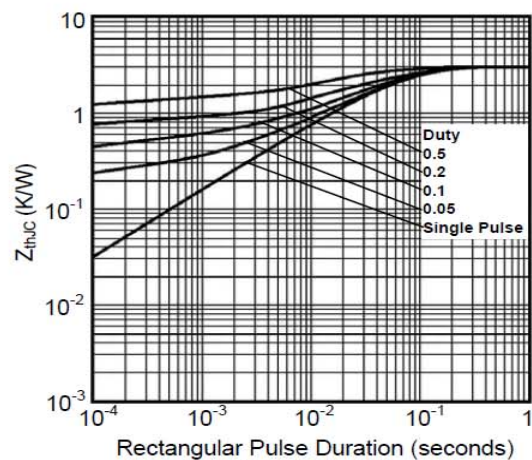


Fig6. Transient Thermal Impedance



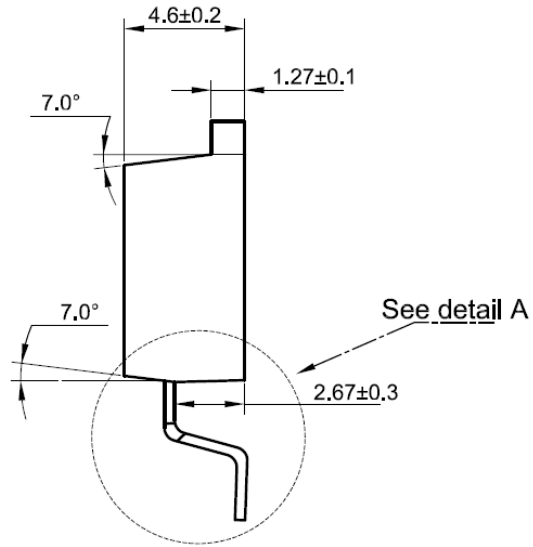
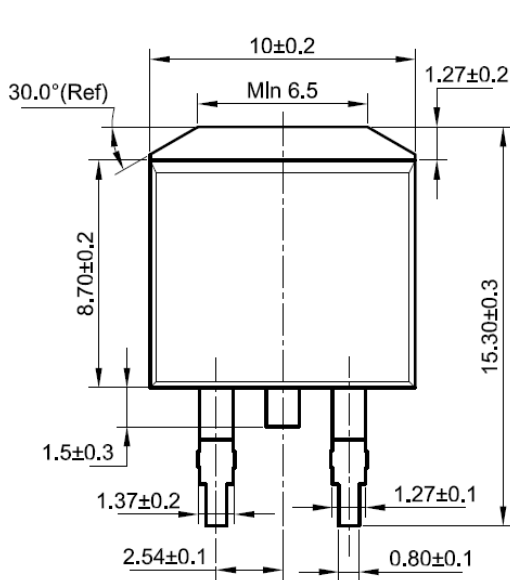
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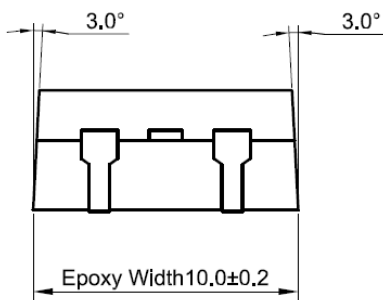
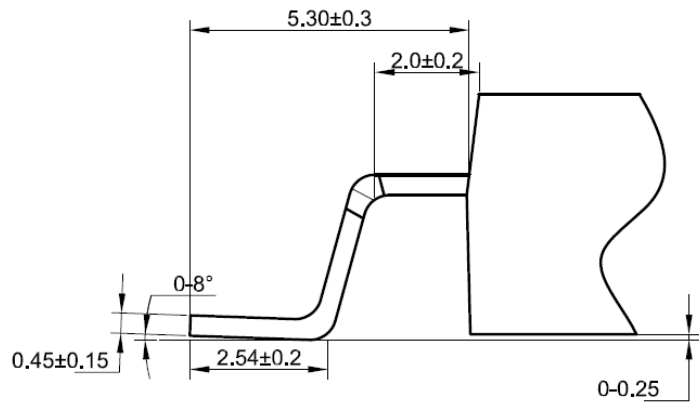
Package Outline Dimensions

Unit: millimeters

TO-263



Detail A





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