

Pb Free Plating Product

## MURD820



8Ampere, 200Volt Surface Mount Ultra Fast Recovery Rectifier Diodes

## Features

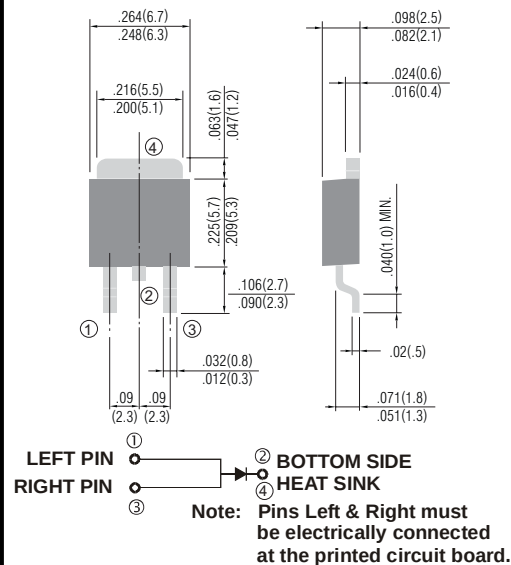
- ★ Ultrafast Recovery Time
- ★ Soft Recovery Characteristics
- ★ Low Recovery Loss
- ★ Low Forward Voltage
- ★ High Surge Current Capability
- ★ Low Leakage Current

## APPLICATIONS

- ★ Freewheeling, Snubber, Clamp
- ★ Inversion Welder
- ★ PFC
- ★ Plating Power Supply
- ★ Ultrasonic Cleaner and Welder
- ★ Converter & Chopper
- ★ UPS/LED SMPS/HID

TO-252/D-PAK

Unit : inch (mm)



## ABSOLUTE MAXIMUM RATINGS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

| Symbol       | Parameter                            | Test Conditions                       | Max.        | Unit               |
|--------------|--------------------------------------|---------------------------------------|-------------|--------------------|
| $V_{RRM}$    | Repetitive Reverse Voltage           |                                       | 200         | V                  |
| $I_{F(AV)}$  | Average Forward Current              | $T_C=110^{\circ}\text{C}$ , Per Diode | 8           | A                  |
| $I_{F(RMS)}$ | RMS Forward Current                  | $T_C=110^{\circ}\text{C}$ , Per Diode | 12          | A                  |
| $I_{FSM}$    | Non-Repetitive Surge Forward Current | $t=10\text{ms}$ , Sine                | 80          | A                  |
| $T_J$        | Junction Temperature                 |                                       | -55 to +150 | $^{\circ}\text{C}$ |
| $T_{STG}$    | Storage Temperature Range            |                                       | -55 to +150 | $^{\circ}\text{C}$ |

## ELECTRICAL AND THERMAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

| Symbol    | Parameter                                                                                         | Test Conditions                               | Min. | Typ. | Max. | Unit          |
|-----------|---------------------------------------------------------------------------------------------------|-----------------------------------------------|------|------|------|---------------|
| $I_{RM}$  | Reverse Leakage Current                                                                           | $V_R=200\text{V}$ , $T_J=25^{\circ}\text{C}$  | --   | --   | 10   | $\mu\text{A}$ |
|           |                                                                                                   | $V_R=200\text{V}$ , $T_J=125^{\circ}\text{C}$ | --   | --   | 200  | $\mu\text{A}$ |
| $V_F$     | Forward Voltage                                                                                   | $I_F=8\text{A}$ , $T_J=25^{\circ}\text{C}$    | --   | 0.90 | 1.1  | V             |
|           |                                                                                                   | $I_F=8\text{A}$ , $T_J=125^{\circ}\text{C}$   | --   | 0.86 | --   | V             |
| $t_{rr}$  | Reverse Recovery Time ( $I_F=1\text{A}$ , $V_R=30\text{V}$ , $di_F/dt=-200\text{A}/\mu\text{s}$ ) |                                               | 20   | 25   | 30   | ns            |
| $t_{rr}$  | Reverse Recovery Time                                                                             | $I_F=8\text{A}$                               | --   | 42   | --   | ns            |
| $t_{rr}$  | Reverse Recovery Time                                                                             | $V_R=100\text{V}$                             |      |      |      |               |
| $I_{RRM}$ | Max. Reverse Recovery Current                                                                     | $di_F/dt=-200\text{A}/\mu\text{s}$            | --   | 5    | --   | A             |
|           |                                                                                                   | $T_J=125^{\circ}\text{C}$                     |      |      |      |               |