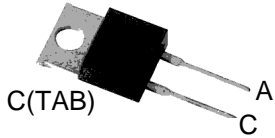


# STPR805DB thru STPR820DB

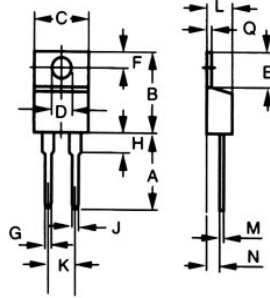
## Ultra Fast Recovery Diodes



A=Anode, C=Cathode, TAB=Cathode

|                  | $V_{RRM}$<br>V | $V_{RMS}$<br>V | $V_{DC}$<br>V |
|------------------|----------------|----------------|---------------|
| <b>STPR805DB</b> | 50             | 35             | 50            |
| <b>STPR810DB</b> | 100            | 70             | 100           |
| <b>STPR815DB</b> | 150            | 105            | 150           |
| <b>STPR820DB</b> | 200            | 140            | 200           |

Dimensions TO-220AC



| Dim. | Inches |       | Millimeter |       |
|------|--------|-------|------------|-------|
|      | Min.   | Max.  | Min.       | Max.  |
| A    | 0.500  | 0.580 | 12.70      | 14.73 |
| B    | 0.560  | 0.650 | 14.23      | 16.51 |
| C    | 0.380  | 0.420 | 9.66       | 10.66 |
| D    | 0.139  | 0.161 | 3.54       | 4.08  |
| E    | 2.300  | 0.420 | 5.85       | 6.85  |
| F    | 0.100  | 0.135 | 2.54       | 3.42  |
| G    | 0.045  | 0.070 | 1.15       | 1.77  |
| H    | -      | 0.250 | -          | 6.35  |
| J    | 0.025  | 0.035 | 0.64       | 0.89  |
| K    | 0.190  | 0.210 | 4.83       | 5.33  |
| L    | 0.140  | 0.190 | 3.56       | 4.82  |
| M    | 0.015  | 0.022 | 0.38       | 0.56  |
| N    | 0.080  | 0.115 | 2.04       | 2.49  |
| Q    | 0.025  | 0.055 | 0.64       | 1.39  |

| Symbol          | Characteristics  | Maximum Ratings | Unit                      |
|-----------------|--|-----------------|---------------------------|
| $I_{AV}$        | Maximum Average Forward Rectified Current @ $T_c=125^\circ\text{C}$                                      | 8.0             | A                         |
| $I_{FSM}$       | Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)         | 100             | A                         |
| $V_F$           | Maximum Forward Voltage $I_F=8\text{A}$ @ $T_J=25^\circ\text{C}$<br>@ $T_J=150^\circ\text{C}$            | 1.3<br>0.8      | V                         |
| $I_R$           | Maximum DC Reverse Current At Peak Reverse Voltage @ $T_J=25^\circ\text{C}$<br>@ $T_J=100^\circ\text{C}$ | 10<br>500       | $\mu\text{A}$             |
| $C_J$           | Typical Junction Capacitance (Note 1)  | 45              | pF                        |
| $T_{RR}$        | Maximum Reverse Recovery Time (Note 2)   | 25              | ns                        |
| $R_{\theta JC}$ | Typical Thermal Resistance (Note 3)  | 3.0             | $^\circ\text{C}/\text{W}$ |
| $T_J, T_{STG}$  | Operating And Storage Temperature Range  | -55 to +150     | $^\circ\text{C}$          |

NOTES: 1. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.

2. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .

3. Thermal Resistance Junction To Case.

### FEATURES

- \* Glass passivated chip
- \* Superfast switching time for high efficiency
- \* Low forward voltage drop and high current capability
- \* Low reverse leakage current
- \* High surge capacity

### MECHANICAL DATA

- \* Case: TO-220AC molded plastic
- \* Polarity: As marked on the body
- \* Weight: 0.08 ounces, 2.24 grams
- \* Mounting position: Any

# STPR805DB thru STPR820DB

## Ultra Fast Recovery Diodes

