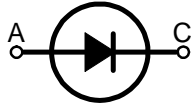
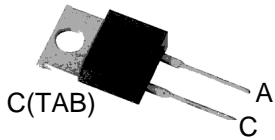


STPR805DF thru STPR820DF

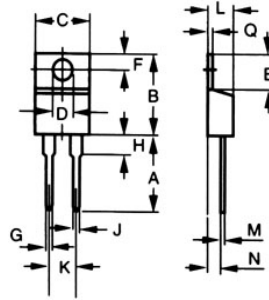
Ultra Fast Recovery Diodes



A=Anode, C=Cathode, TAB=Cathode

| | V_{RRM} V | V_{RMS} V | V_{DC} V |
|------------------|----------------|----------------|---------------|
| STPR805DF | 50 | 35 | 50 |
| STPR810DF | 100 | 70 | 100 |
| STPR815DF | 150 | 105 | 150 |
| STPR820DF | 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 @ $T_c=100^\circ\text{C}$ | 8.0 | A |
| I_{FSM} | Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD) | 125 | A |
| V_F | Maximum Forward Voltage At 8.0A DC | 0.95 | V |
| I_R | Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_J=100^\circ\text{C}$ | 5 500 | μA |
| C_J | Typical Junction Capacitance (Note 1) | 110 | pF |
| T_{RR} | Maximum Reverse Recovery Time (Note 2) | 35 | ns |
| $R_{\theta JC}$ | Typical Thermal Resistance (Note 3) | 2.5 | $^\circ\text{C}/\text{W}$ |
| 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

Sirectifier®

STPR805DF thru STPR820DF

Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

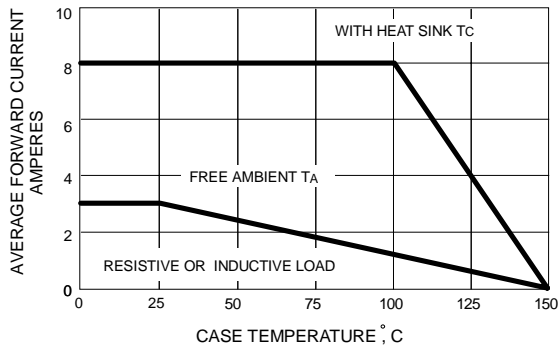


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

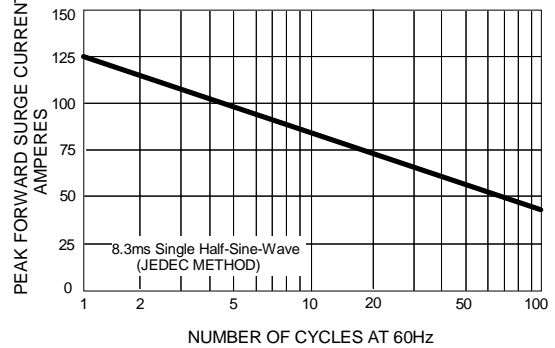


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

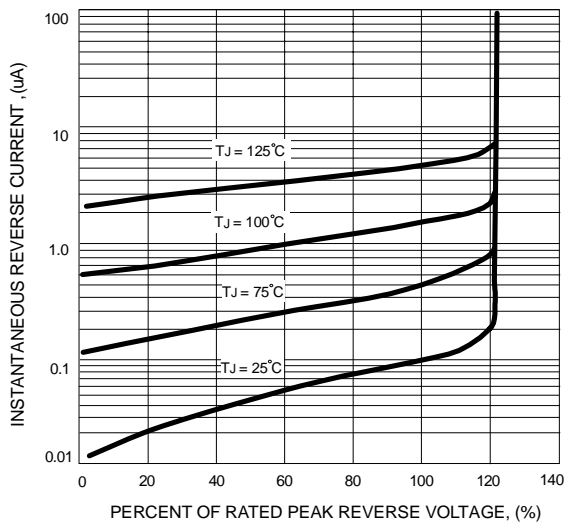


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

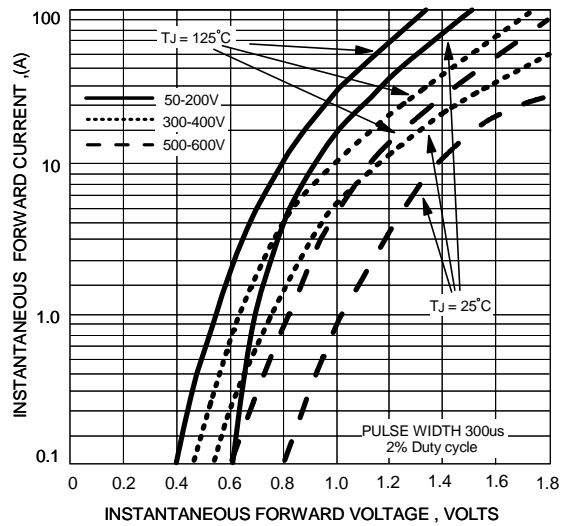


FIG.5 - TYPICAL JUNCTION CAPACITANCE

