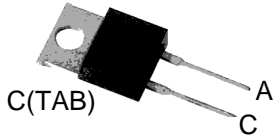


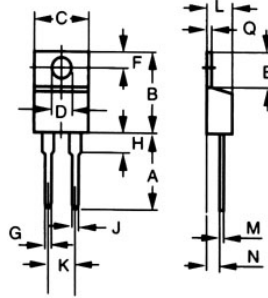
STPR830DF thru STPR840DF

Ultra Fast Recovery Diodes



A=Anode, C=Cathode, TAB=Cathode

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 |

| | V _{RRM} | V _{RMS} | V _{DC} |
|-----------|------------------|------------------|-----------------|
| | V | V | V |
| STPR830DF | 300 | 210 | 300 |
| STPR840DF | 400 | 280 | 400 |

| Symbol | Characteristics | Maximum Ratings | Unit |
|-----------------------------------|---|-----------------|------|
| I _{AV} | Maximum Average Forward Rectified Current @T _c =100°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 | 1.3 | V |
| I _R | Maximum DC Reverse Current @T _J =25°C At Rated DC Blocking Voltage @T _J =100°C | 5 500 | uA |
| C _J | Typical Junction Capacitance (Note 1) | 110 | pF |
| T _{RR} | Maximum Reverse Recovery Time (Note 2) | 50 | ns |
| R _{θJC} | Typical Thermal Resistance (Note 3) | 2.5 | °C/W |
| T _J , T _{STG} | Operating And Storage Temperature Range | -55 to +150 | °C |

NOTES: 1. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.
2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.
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



STPR830DF thru STPR840DF

Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

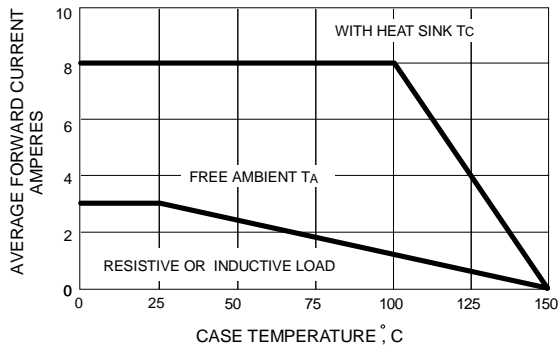


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

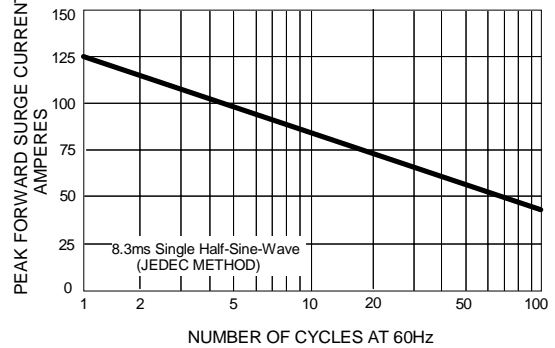


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

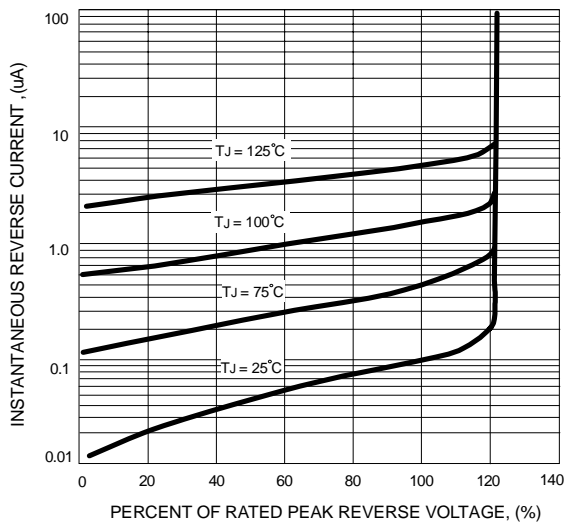


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

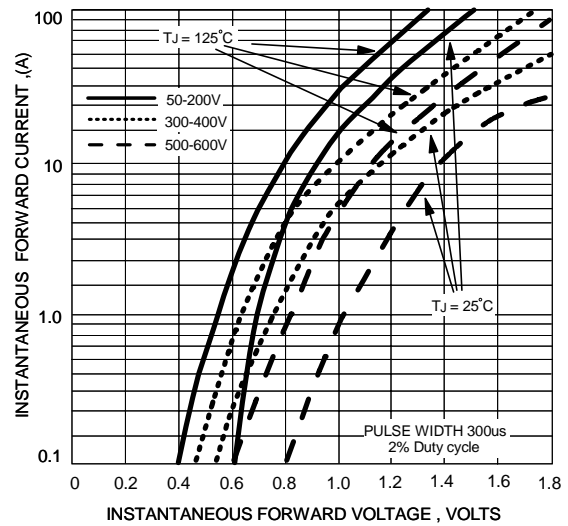


FIG.5 - TYPICAL JUNCTION CAPACITANCE

