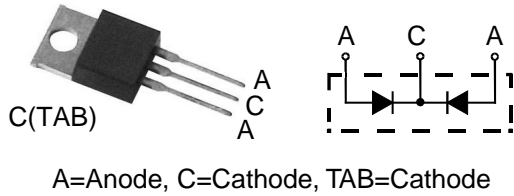
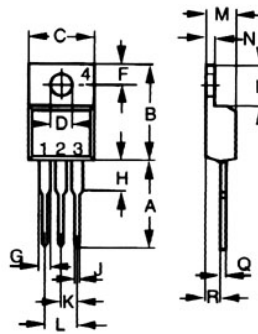


STPRF1605CT thru STPRF1620CT

Ultra Fast Recovery Diodes



Dimensions TO-220AB



| Dim. | Inches | | Millimeter | |
|------|--------|-------|------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.500 | 0.550 | 12.70 | 13.97 |
| B | 0.580 | 0.630 | 14.73 | 16.00 |
| C | 0.390 | 0.420 | 9.91 | 10.66 |
| D | 0.139 | 0.161 | 3.54 | 4.08 |
| E | 0.230 | 0.270 | 5.85 | 6.85 |
| F | 0.100 | 0.125 | 2.54 | 3.18 |
| G | 0.045 | 0.065 | 1.15 | 1.65 |
| H | 0.110 | 0.230 | 2.79 | 5.84 |
| J | 0.025 | 0.040 | 0.64 | 1.01 |
| K | 0.100 | BSC | 2.54 | BSC |
| M | 0.170 | 0.190 | 4.32 | 4.82 |
| N | 0.045 | 0.055 | 1.14 | 1.39 |
| Q | 0.014 | 0.022 | 0.35 | 0.56 |
| R | 0.090 | 0.110 | 2.29 | 2.79 |

| | V_{RRM} V | V_{RMS} V | V_{DC} V |
|-------------|----------------|----------------|---------------|
| STPRF1605CT | 50 | 35 | 50 |
| STPRF1610CT | 100 | 70 | 100 |
| STPRF1615CT | 150 | 105 | 150 |
| STPRF1620CT | 200 | 140 | 200 |

| Symbol | Characteristics | Maximum Ratings | Unit |
|-----------------|---|-----------------|--------------------|
| I_{AV} | Maximum Average Forward Rectified Current @ $T_c=100^\circ\text{C}$ | 16 | 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 At Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$ | 5 500 | μA |
| C_J | Typical Junction Capacitance Per Element (Note 1) | 110 | pF |
| T_{RR} | Maximum Reverse Recovery Time (Note 2) | 35 | ns |
| $R_{\theta JC}$ | Typical Thermal Resistance (Note 3) | 1.5 | $^\circ\text{C/W}$ |
| 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-220AB molded plastic
- * Polarity: As marked on the body
- * Weight: 0.08 ounces, 2.24 grams
- * Mounting position: Any



STPRF1605CT thru STPRF1620CT

Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

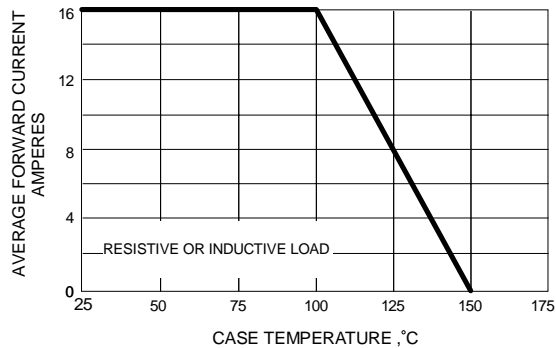


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

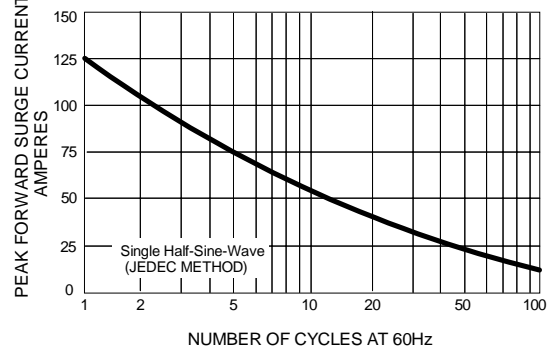


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

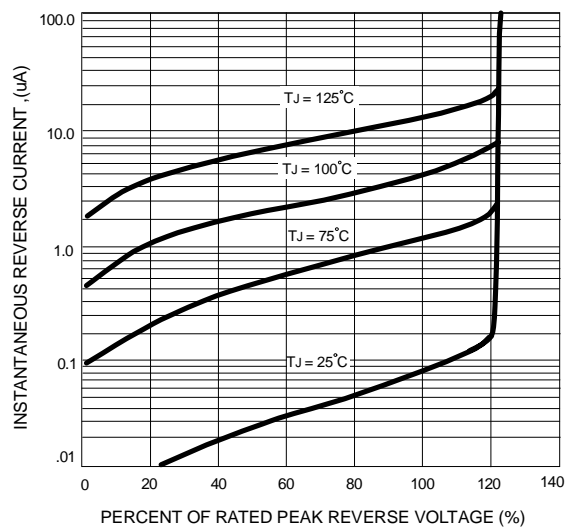


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

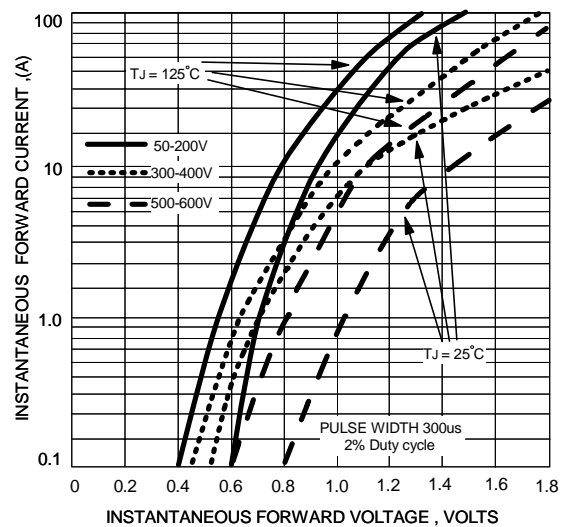


FIG.5 - TYPICAL JUNCTION CAPACITANCE

