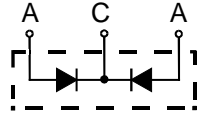
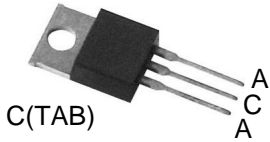


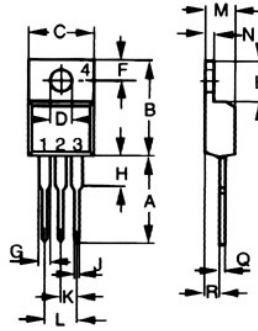
STPR1640CT

Ultra Fast Recovery Diodes



A=Anode, C=Cathode, TAB=Cathode

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_{RMS} | V_{DC} |
|-------------------|-----------|-----------|----------|
| | V | V | V |
| STPR1640CT | 400 | 280 | 400 |

| Symbol | Characteristics | Maximum Ratings | Unit |
|-----------------|---|-----------------|--------------|
| I_{AV} | Maximum Average Forward Rectified Current @ $T_C=120^\circ C$ | 16 | A |
| I_{FSM} | Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal (JEDEC METHOD) $T_P=10ms$ $T_P=8.3ms$ | 80 90 | A |
| V_F | Maximum Forward Voltage Pulse Width=300us Duty Cycle $I_F=16A$ @ $T_J=25^\circ C$ | 1.5 | V |
| I_R | Maximum DC Reverse Current At Rated DC Blocking Voltage @ $T_J=100^\circ C$ | 5 500 | μA |
| C_J | Typical Junction Capacitance Per Element (Note 1) | 80 | pF |
| T_{RR} | Maximum Reverse Recovery Time (Note 2) | 35 | ns |
| $R_{\theta JC}$ | Typical Thermal Resistance | 3.0 | $^\circ C/W$ |
| T_J, T_{STG} | Operating and Storage Temperature Range | -55 to +150 | $^\circ C$ |

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

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

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



STPR1640CT

Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

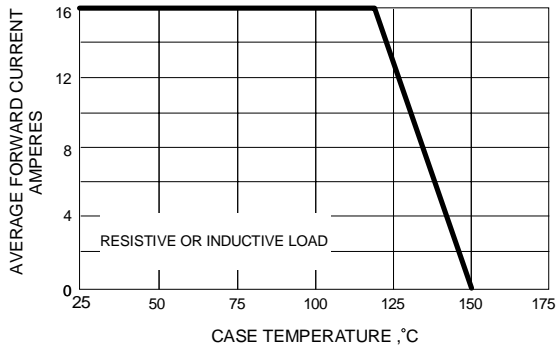


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

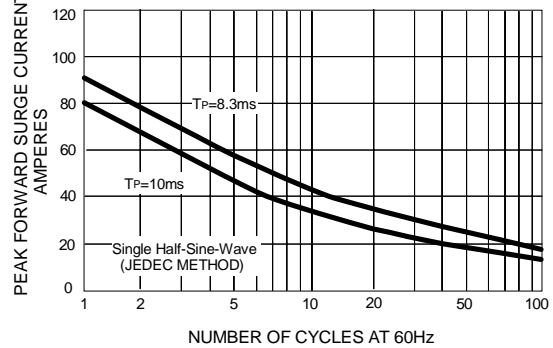


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

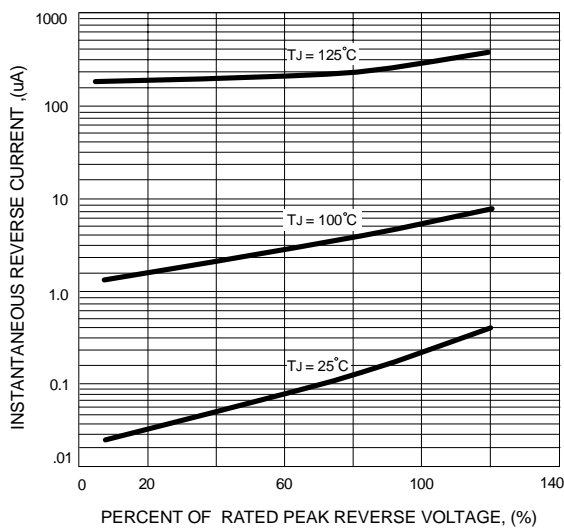


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

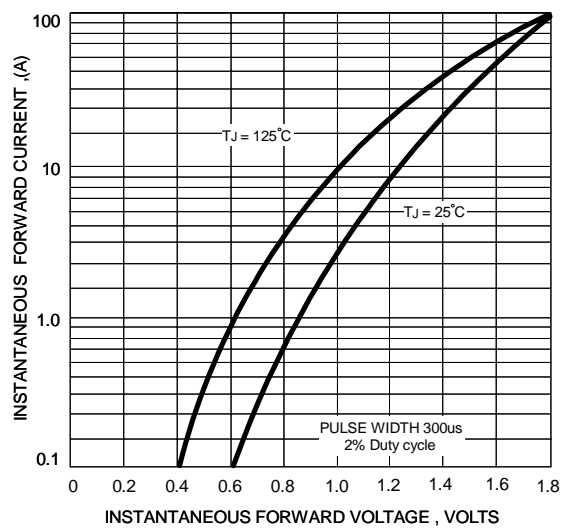


FIG.5 - TYPICAL JUNCTION CAPACITANCE

