A Product Line of Diodes Incorporated | LITE-ON SEMICONDUCTOR

# STPR560D

## SUPER FAST GLASS PASSIVATED RECTIFIERS

## REVERSE VOLTAGE – 600 Volts FORWARD CURRENT – 5.0 Ampere

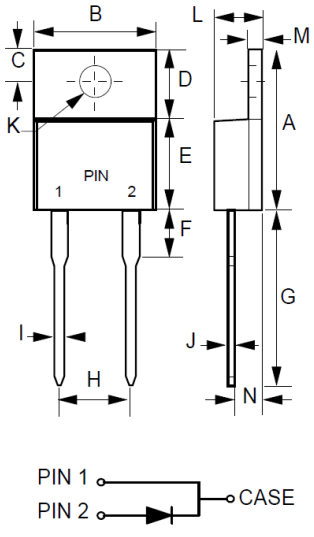
### FEATURES

- Glass passivated chip
- Superfast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

### MECHANICAL DATA

- Package: TO-220AC molded plastic
- Polarity: As marked on the body
- Weight: 0.08 ounces, 2.24 grams
- Mounting position: Any
- Maximum mounting torque = 0.5N.m (5.1Kgf.cm)

### TO-220AC




| TO-220AC | | |
|---|---|---|
| DIM. | MIN. | MAX. |
| A | 14.22 | 15.88 |
| B | 9.65 | 10.67 |
| C | 2.54 | 3.43 |
| D | 5.84 | 6.86 |
| E | 8.26 | 9.28 |
| F | - | 6.35 |
| G | 12.70 | 14.73 |
| H | 4.83 | 5.33 |
| I | 0.51 | 1.14 |
| J | 0.30 | 0.64 |
| K | 3.53 ∅ | 4.09 ∅ |
| L | 3.56 | 4.83 |
| M | 1.14 | 1.40 |
| N | 2.03 | 2.92 |
| All Dimensions in millimeter | | |

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| CHARACTERISTICS | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 600 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 600 | V |
| Maximum Average Forward Rectified Current @$T_C$=100°C | $I_{(AV)}$ | 5 | A |
| Non Repetitive Peak Forward Surge Current Per Diode $T_P$=8.3ms | $I_{FSM}$ | 55 | A |
| Maximum Forward Voltage at 5.0A DC @ Tj=25°C<br>@ Tj=125°C | $V_F$ | 1.5<br>1.4 | V |
| Maximum DC Reverse Current @ Tj=25°C<br>at Rated DC Blocking Voltage @ Tj=125°C | $I_R$ | 10<br>500 | uA |
| Typical Junction Capacitance (Note 3) | $C_J$ | 78 | pF |
| Maximum Reverse Recovery Time (Note 4) | $T_{RR}$ | 50 | ns |
| Typical Thermal Resistance (Note 5) | $R_{\Theta JC}$ | 4.0 | °C/W |
| Operating and Storage Temperature Range | $T_J$ ,$T_{STG}$ | -55 to +150 | °C |

**Notes:**

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
4. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.
5. Thermal Resistance Junction to case.

## RATING AND CHARACTERISTIC CURVES
## STPR560D

FIG.1 - FORWARD CURRENT DERATING CURVE

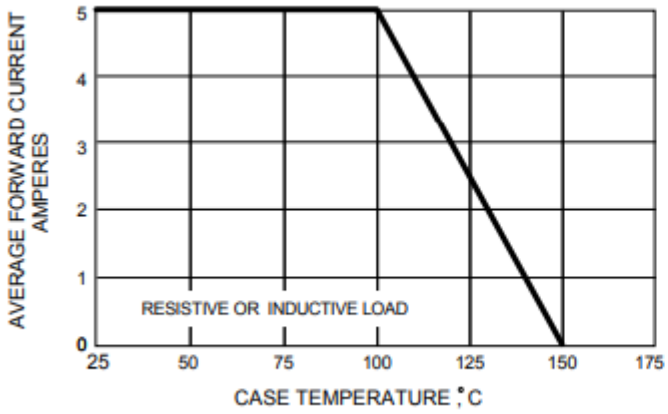



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

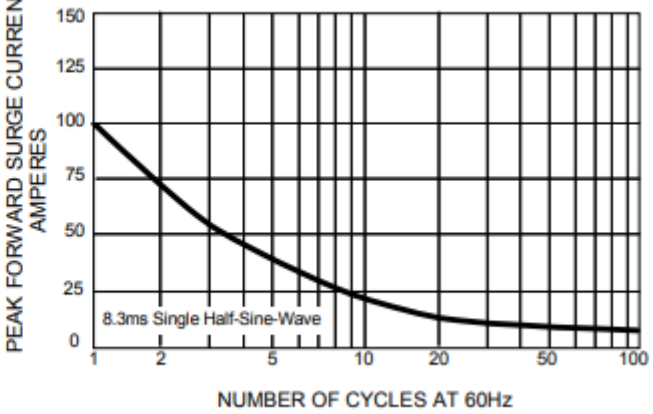



FIG.3 - TYPICAL REVERSE CHARACTERISTICS

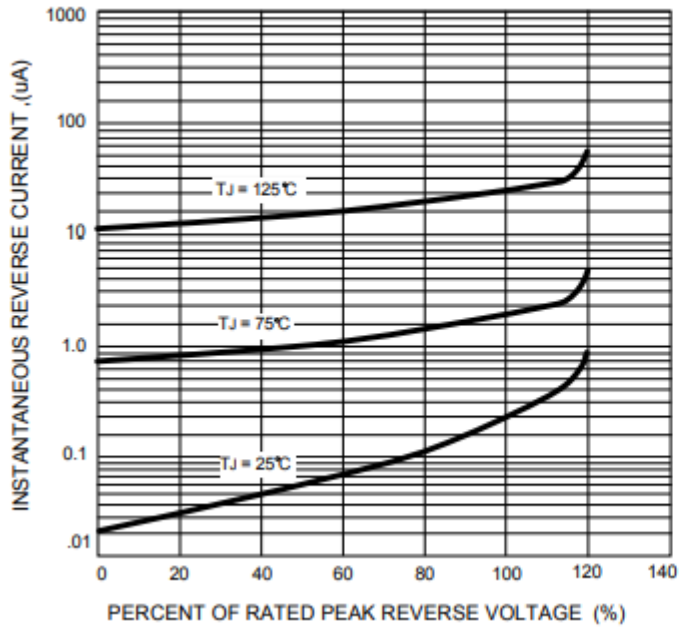



FIG.4 - TYPICAL FORWARD CHARACTERISTICS

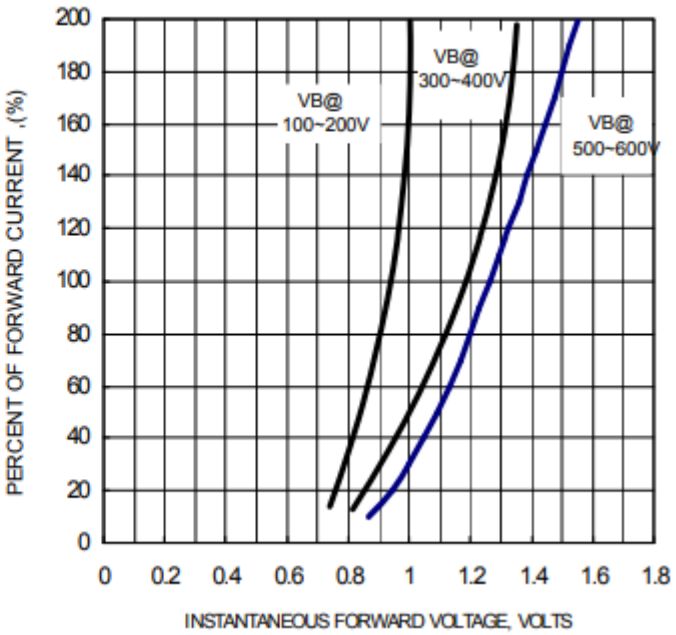
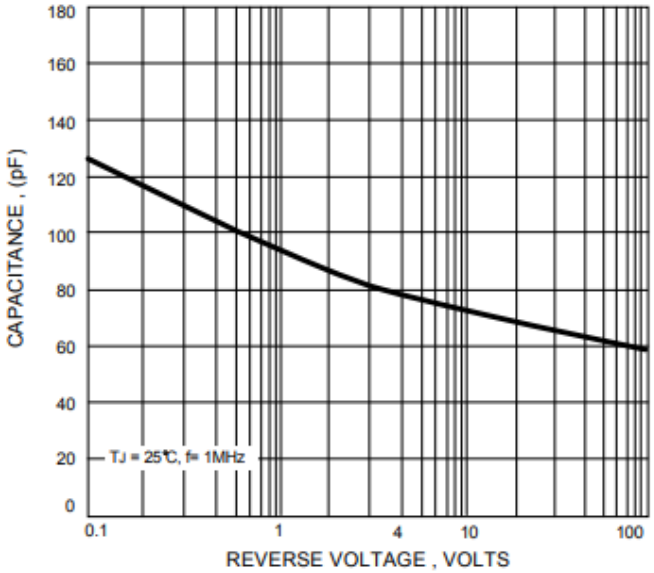


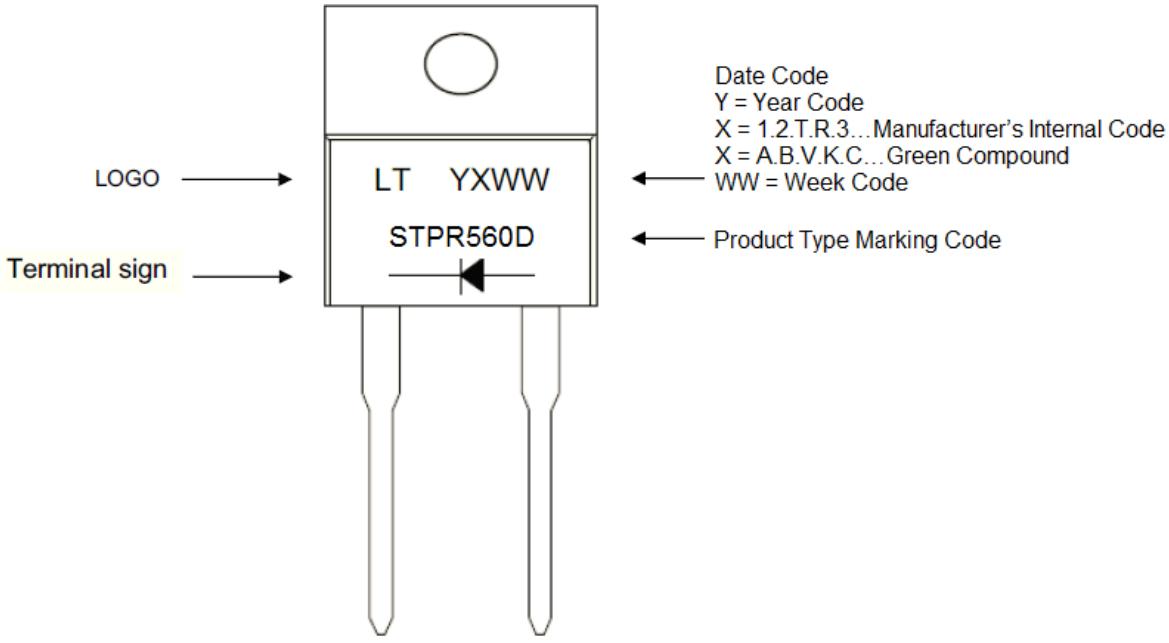

FIG.5 - TYPICAL JUNCTION CAPACITANCE



## Ordering Information :

| Part Number | Package | Packing | |
|---|---|---|---|
| | | Qty. | Carrier |
| STPR560D | TO-220AC | 50 pcs | Tube |

## Marking Information :



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