



# PS150 SERIES

## PLASTIC SILICON RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 1.5 Amperes

**DO-15**

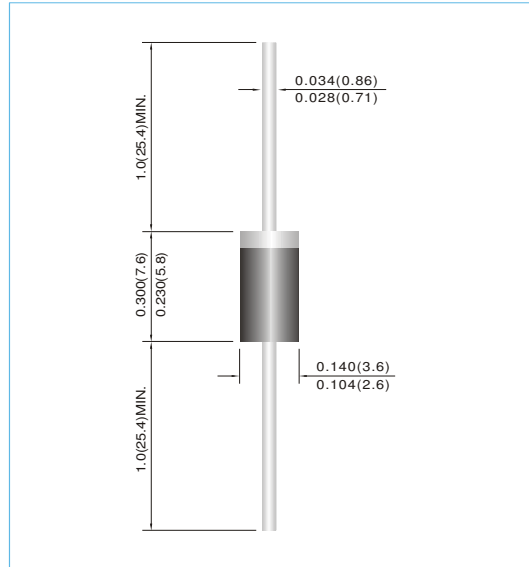
Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.
- Lead free in comply with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: Molded plastic, DO-15
- Terminals: Axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end
- Mounting Position: Any
- Weight: 0.014 ounce, 0.397 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz, Single phase, half wave, For capacitive load, derate current by 20%

| PARAMETER   | SYMBOL                             | PS150       | PS151 | PS152 | PS154 | PS156 | PS158 | PS1510 | UNITS                       |
|---|------------------------------------|-------------|-------|-------|-------|-------|-------|--------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                          | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                           |
| Maximum RMS Voltage   | $V_{RMS}$                          | 35          | 70    | 140   | 280   | 420   | 560   | 700    | V                           |
| Maximum DC Blocking Voltage   | $V_{DC}$                           | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                           |
| Maximum Average Forward Current .375"(9.5mm) lead length at $T_A=60^\circ\text{C}$                        | $I_{F(AV)}$                        | 1.5         |       |       |       |       |       |        | A                           |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)        | $I_{FSM}$                          | 50          |       |       |       |       |       |        | A                           |
| Maximum Forward Voltage at 1.5A   | $V_F$                              | 1.1         |       |       |       |       |       |        | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$<br>$T_J=100^\circ\text{C}$ | $I_R$                              | 1<br>500    |       |       |       |       |       |        | $\mu\text{A}$               |
| Typical Junction Capacitance (Notes 1)  | $C_J$                              | 25          |       |       |       |       |       |        | pF                          |
| Typical Thermal Resistance (Notes 2)  | $R_{\theta JA}$<br>$R_{\theta JL}$ | 45<br>28    |       |       |       |       |       |        | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range  | $T_J, T_{STG}$                     | -55 to +150 |       |       |       |       |       |        | $^\circ\text{C}$            |

NOTES: 1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

2. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted



# PS150 SERIES

## RATING AND CHARACTERISTIC CURVES

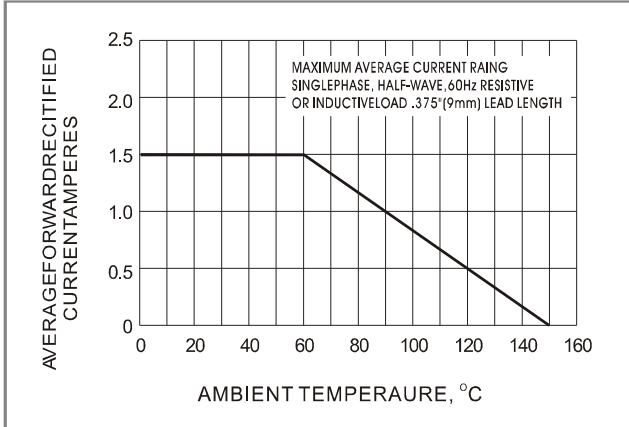


Fig.1- FORWARD CURRENT DERATING CURVE

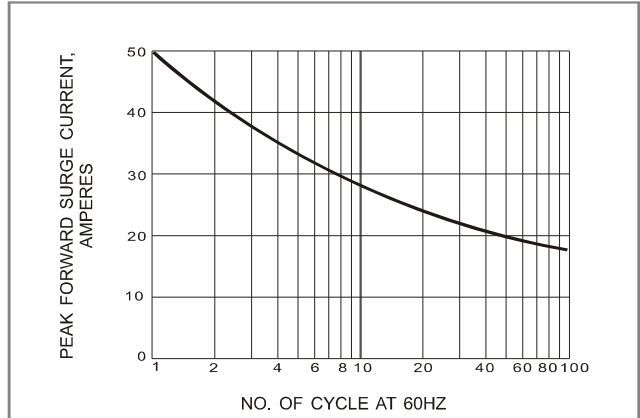


Fig.2- MAXIMUM OVERLOAD SURGE CURRENT

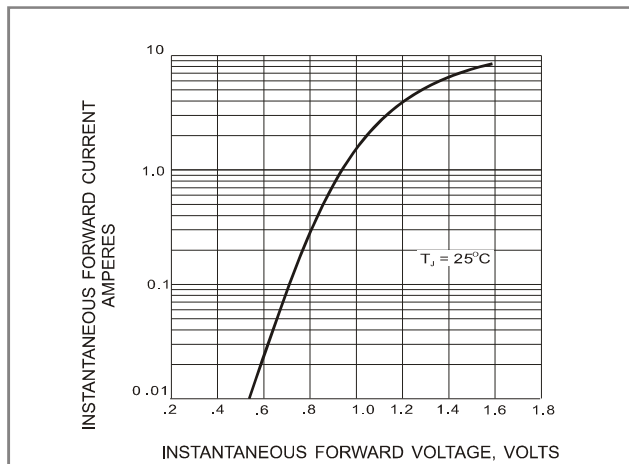


Fig.3- TYPICAL FORWARD CHARACTERISTIC

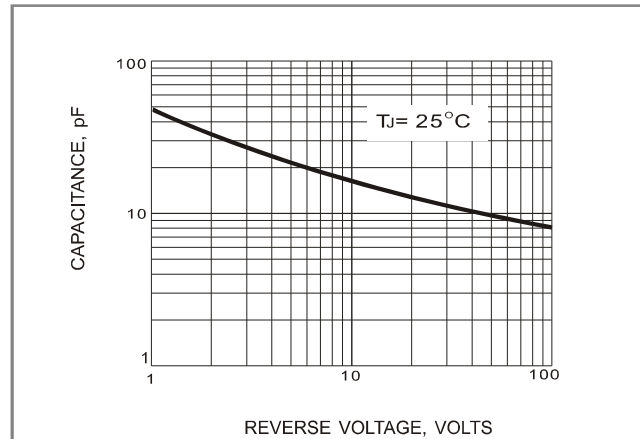


Fig.4- TYPICAL JUNCTION CAPACITANCE

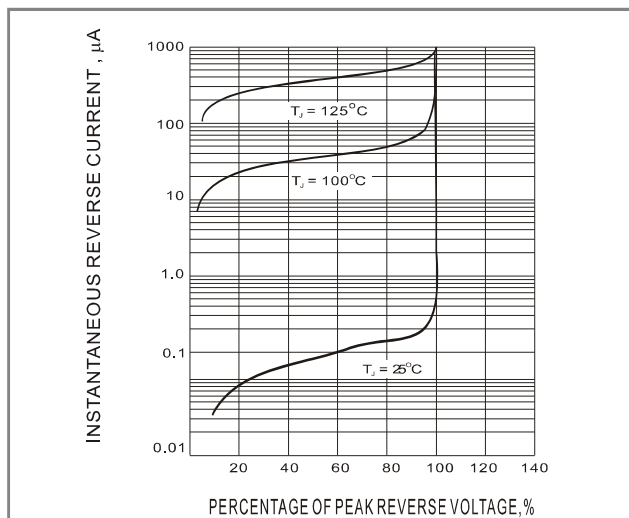


Fig.5- TYPICAL REVERSE CHARACTERISTIC

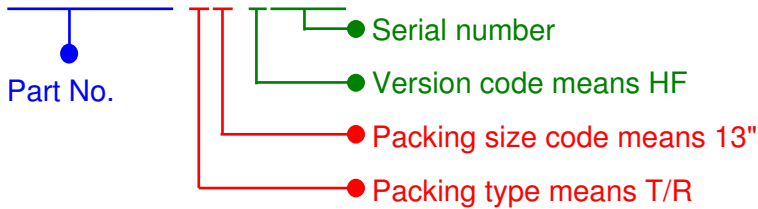


# PS150 SERIES

**Part No\_packing code\_Version**

For example :

**RB500V-40 R2 00001**



| Packing Code <b>XX</b> |                      |                   |                      | Version Code <b>XXXXX</b> |                      |                                       |
|------------------------|----------------------|-------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type           | 1 <sup>st</sup> Code | Packing size code | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| T/B                    | <b>A</b>             | N/A               | <b>0</b>             | HF                        | <b>0</b>             | <b>serial number</b>                  |
| T/R                    | <b>R</b>             | 7"                | <b>1</b>             | RoHS                      | <b>1</b>             | <b>serial number</b>                  |
| B/P                    | <b>B</b>             | 13"               | <b>2</b>             |                           |                      |                                       |
| T/P                    | <b>T</b>             | 26mm              | <b>X</b>             |                           |                      |                                       |
| TRR                    | <b>S</b>             | 52mm              | <b>Y</b>             |                           |                      |                                       |
| TRL                    | <b>L</b>             | PBCU              | <b>U</b>             |                           |                      |                                       |
| FORMING                | <b>F</b>             | PBCD              | <b>D</b>             |                           |                      |                                       |