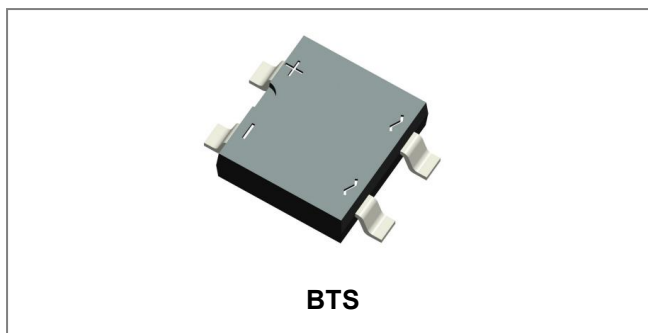


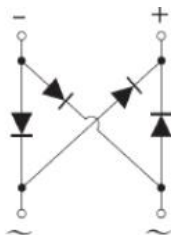
## SM05S THRU SM10S SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIERS



### Features

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- results in inexpensive product
- Lead tin plated copper
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Polarity : Symbol molded on body
- Mounting position: Any

### Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

| Type Number  | Symbol                | SM05S | SM1S | SM2S | SM4S | SM6S | SM8S | SM10S | Units |
|--|-----------------------|-------|------|------|------|------|------|-------|-------|
| Peak Repetitive Reverse Voltage<br>DC Blocking Voltage   | $V_{RRM}$<br>$V_{DC}$ | 50    | 100  | 200  | 400  | 600  | 800  | 1000  | V     |
| RMS Voltage  | $V_{RMS}$             | 35    | 70   | 140  | 280  | 420  | 480  | 700   | V     |
| Average Rectified Output Current @ $T_A=40^{\circ}\text{C}$  | $I_o$                 | 0.8   |      |      |      |      |      |       | A     |
| Non-Repetitive Peak Forward<br>Surge Current 8.3ms Single half<br>sine-wave superimposed on rated<br>load (JEDEC Method) | $I_{FSM}$             | 30    |      |      |      |      |      |       | A     |

**Electrical Characteristics: @T<sub>A</sub>=25°C unless otherwise specified**

| Type Number   | Symbol          | SM05S    | SM1S | SM2S | SM4S | SM6S | SM8S | SM10S | Units |
|---|-----------------|----------|------|------|------|------|------|-------|-------|
| Forward Voltage per element @I <sub>F</sub> =0.8A   | V <sub>FM</sub> | 1.1      |      |      |      |      |      |       | V     |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C | I <sub>R</sub>  | 5<br>500 |      |      |      |      |      |       | μA    |
| Typical Junction Capacitance (Note 1)   | C <sub>j</sub>  | 13       |      |      |      |      |      |       | pF    |

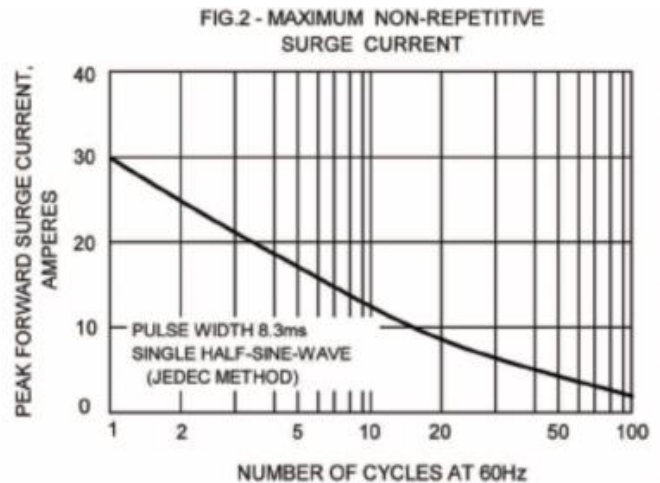
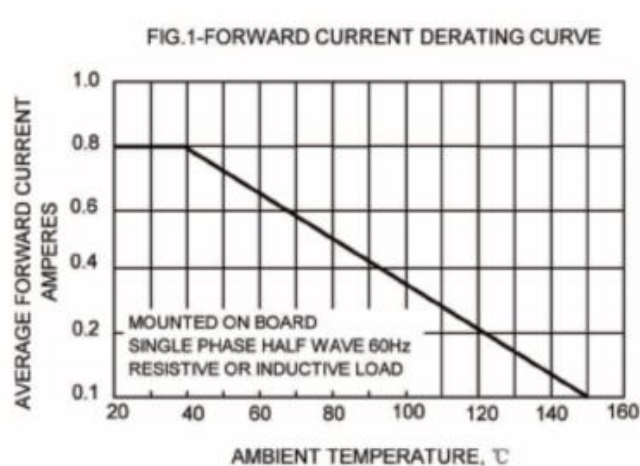
\* Pulse width < 300 μs, duty cycle < 2%

**Thermal-Mechanical Specifications: @T<sub>A</sub>=25°C unless otherwise specified**

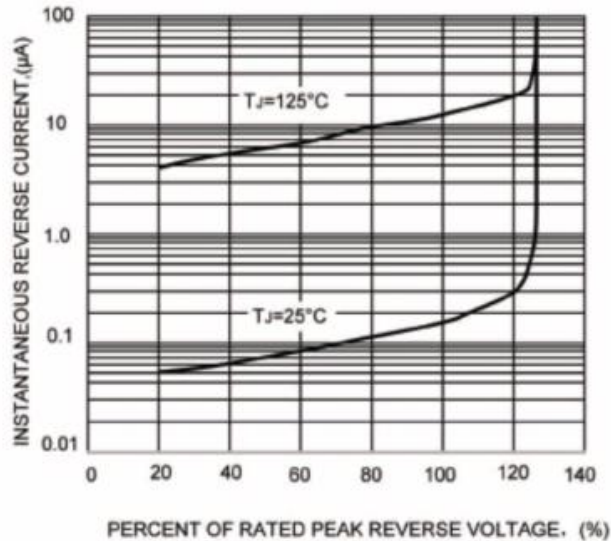
| Type Number                                      | Symbol                            | SM05S   | SM1S | SM2S | SM4S | SM6S | SM8S | SM10S | Units |
|--|-----------------------------------|---------|------|------|------|------|------|-------|-------|
| Typical Thermal Resistance per leg (Note 2)      | R <sub>θJC</sub>                  | 75      |      |      |      |      |      |       | °C/W  |
| Operating Junction and Storage Temperature Range | T <sub>J</sub> , T <sub>STG</sub> | -55+150 |      |      |      |      |      |       | °C    |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC  
2. Thermal resistance junction to case

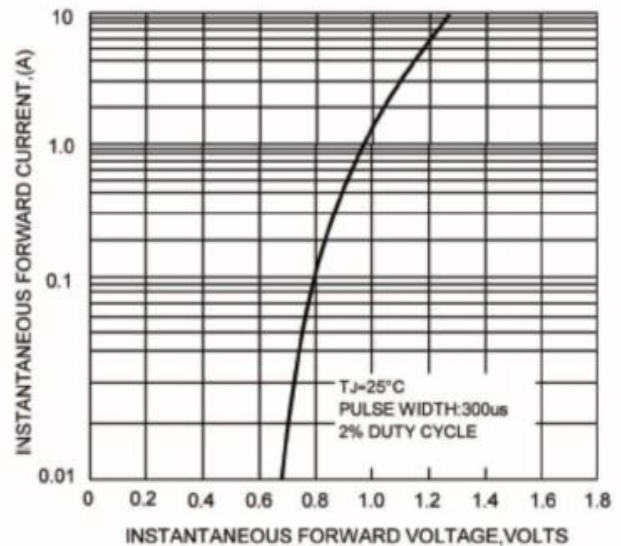
**Ratings and Characteristics Curves**



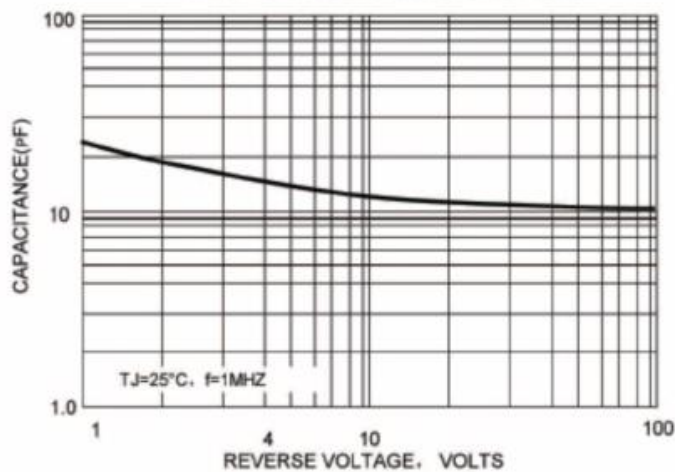
**FIG.3-TYPICAL REVERSE CHARACTERISTICS**



**FIG.4-TYPICAL FORWARD CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

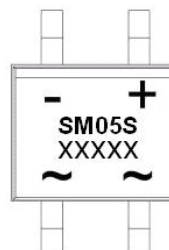


**Ordering Information**

| Device                 | Package          | Shipping       |
|------------------------|------------------|----------------|
| SM05S<br>THRU<br>SM10S | BTS<br>(Pb-Free) | 5000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**

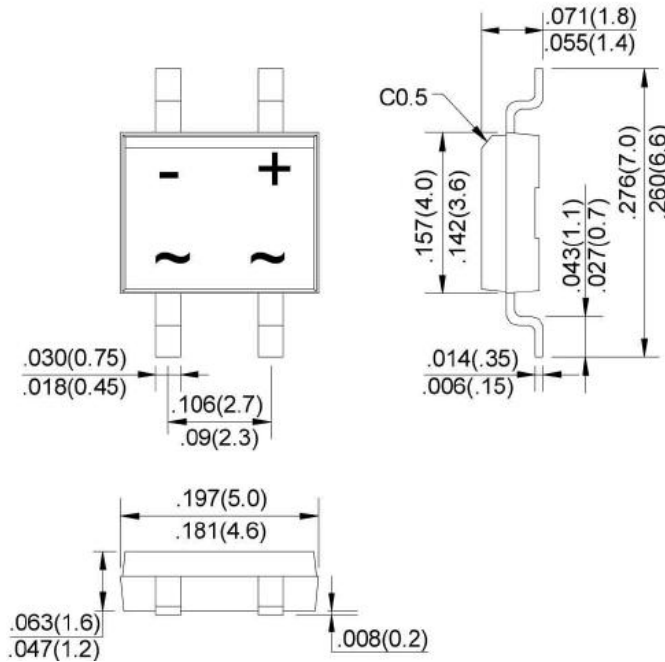


Where XXXXX is YYWWL

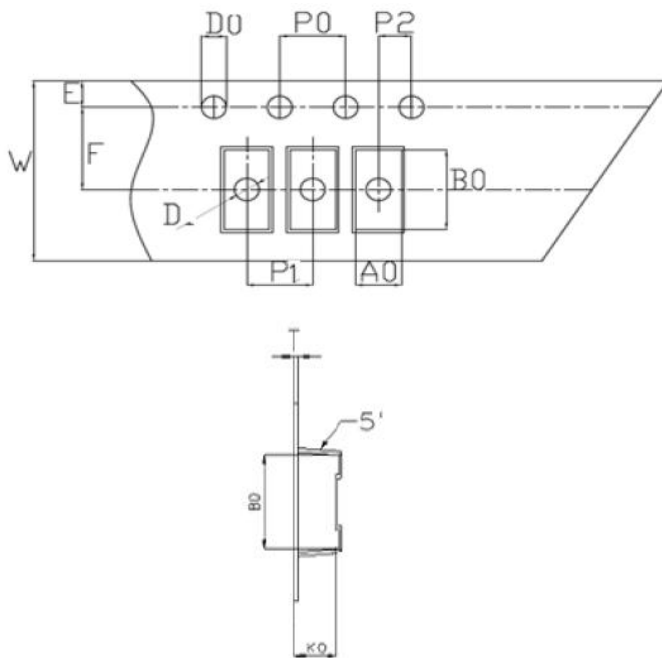
SM05S = Type Number  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**Mechanical Dimensions BTS(Inches/Millimeters)**



**Carrier Tape Specification BTS**



| SYMBOL | Millimeters |       |
|--------|-------------|-------|
|        | Min.        | Max.  |
| A0     | 4.92        | 5.12  |
| B0     | 7.12        | 7.32  |
| D0     | 1.50        | 1.60  |
| D1     | 1.40        | 1.60  |
| P0     | 3.90        | 4.10  |
| P1     | 7.90        | 8.10  |
| P2     | 1.95        | 2.05  |
| E      | 1.65        | 1.85  |
| K0     | 2.78        | 2.98  |
| F      | 5.45        | 5.55  |
| W      | 11.90       | 12.10 |
| T      | 0.24        | 0.30  |
| 10P0   | 39.80       | 40.20 |
| 抗拉拉力   | ≥3KG        |       |

**Technical Data  
Data Sheet N1008, Rev. B**



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