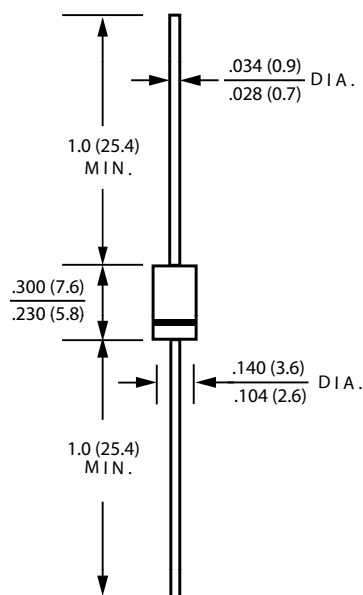




DO-15

Dimensions in inches and (millimeters)



### Features

- Glass passivated chip
- 500W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetitive rate (duty cycle): 0.01%
- Low leakage
- Excellent clamping capability
- Very fast response time
- RoHS compliant

### Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method 2026 guaranteed
- Polarity: Color band denotes TVS cathode end
- Mounting position: Any

### Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                                                                 | Symbol         | Value          | Unit             |
|---------------------------------------------------------------------------|----------------|----------------|------------------|
| Peak power dissipation with a 10/1000 $\mu$ s waveform <sup>(1)</sup>     | $P_{PP}$       | 500            | W                |
| Power dissipation on infinite heatsink at $T_L=75^\circ\text{C}$ (Fig.2)  | $P_D$          | 3              | W                |
| Peak pulse current with a 10/1000 $\mu$ s waveform (Fig.2) <sup>(1)</sup> | $I_{PP}$       | See Next Table | A                |
| Operating junction and storage temperature range                          | $T_J, T_{STG}$ | -55 ~ +150     | $^\circ\text{C}$ |

Note:

(1) Non-repetitive current pulse per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2

## Ratings and Characteristics Curves ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

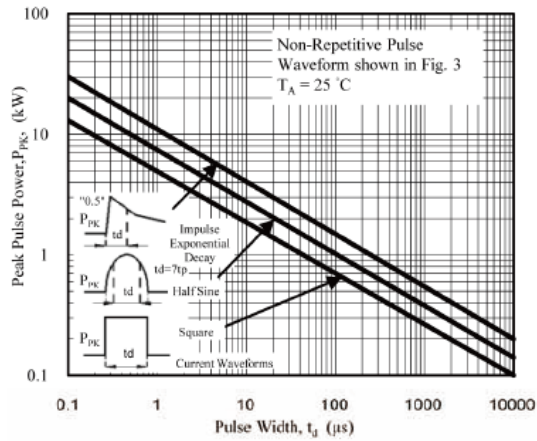


Fig. 1 - Peak Pulse Power Rating Curve

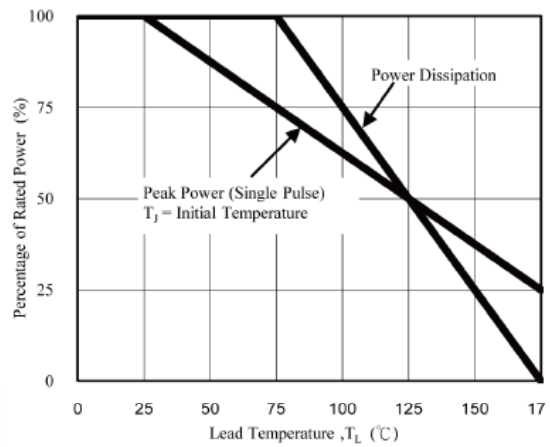


Fig. 2 - Power Derating Curve  
Surge Current

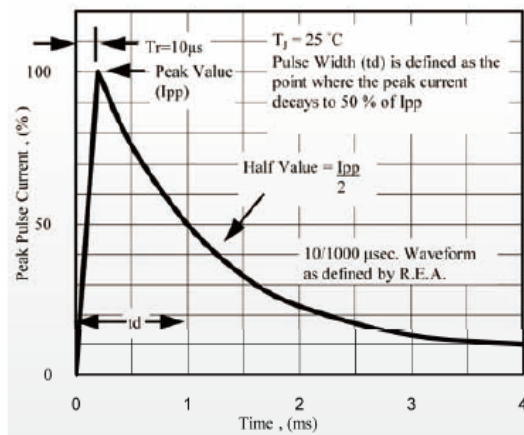
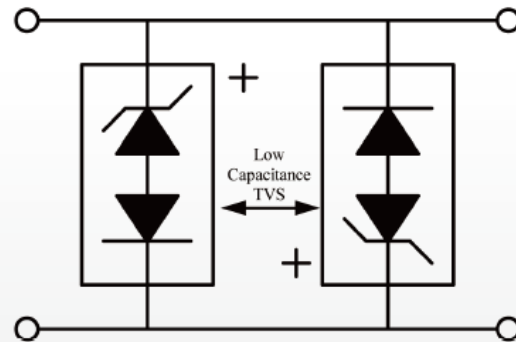


Fig. 3 - Pulse Waveform



**Application Note:** Device must be used with two units in parallel, opposite in polarity as shown in circuit for AC signal line protection.

Fig. 4 - AC Line Protection Application

## Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Part Number | Stand-Off Voltage | Minimum Breakdown Voltage | Maximum Reverse Leakage | Maximum Clamping Voltage | Maximum Reverse Surge Current | Maximum Junction Capacitance | Working Inverse Blocking Voltage | Inverse Blocking Leakage Current | Peak Inverse Voltage |
|-------------|-------------------|---------------------------|-------------------------|--------------------------|-------------------------------|------------------------------|----------------------------------|----------------------------------|----------------------|
|             | $V_{WM}$          | $V_{BR} @ I_T=1\text{mA}$ | $I_R @ V_{WM}$          | $V_C @ I_{PP}$           | $I_{PP}$                      | @ 0V                         | $V_{WM}$                         | $I_{IB} @ V_{WIB}$               | $V_{PIB}$            |
|             | (V)               | (mA)                      | (μA)                    | (V)                      | (A)                           | (pF)                         | (V)                              | (mA)                             | (V)                  |
| SACB5.0     | 5.0               | 7.60                      | 300                     | 10.0                     | 44.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB6.0     | 6.0               | 7.90                      | 300                     | 11.2                     | 41.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB7.0     | 7.0               | 8.33                      | 300                     | 12.6                     | 38.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB8.0     | 8.0               | 8.89                      | 100                     | 13.4                     | 36.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB8.5     | 8.5               | 9.44                      | 50                      | 14.0                     | 34.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB10      | 10.0              | 11.10                     | 5                       | 16.3                     | 29.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB12      | 12.0              | 13.30                     | 5                       | 19.0                     | 25.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB15      | 15.0              | 16.70                     | 5                       | 23.6                     | 20.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB18      | 18.0              | 20.00                     | 5                       | 28.8                     | 15.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB22      | 22.0              | 24.40                     | 5                       | 35.4                     | 14.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB26      | 26.0              | 28.90                     | 5                       | 42.3                     | 11.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB30      | 30.0              | 33.30                     | 5                       | 48.6                     | 10.0                          | 50                           | 75                               | 1                                | 100                  |
| SACB36      | 36.0              | 40.00                     | 5                       | 60.0                     | 8.6                           | 50                           | 75                               | 1                                | 100                  |
| SACB45      | 45.0              | 50.00                     | 5                       | 77.0                     | 6.8                           | 50                           | 150                              | 1                                | 200                  |
| SACB50      | 50.0              | 55.50                     | 5                       | 88.0                     | 5.8                           | 50                           | 150                              | 1                                | 200                  |