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# SFULCE136

## ULTRA LOW CAPACITANCE TRANSIENT VOLTAGE SUPPRESSOR

**PRV : 700 Volts**
**$V_{RWM}$ : 160 Volts**
**$P_{PK}$ : 600 Watts**

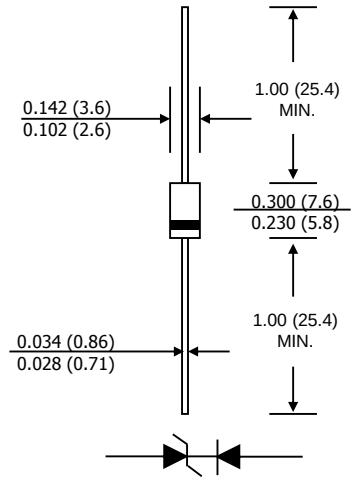
### FEATURES :

* Glass passivated junction chip
* Excellent clamping capability
* Low incremental surge resistance
* High reliability
* Super fast recovery time
* Pb / RoHS Free

### MECHANICAL DATA

* Case : DO-15 Molded plastic
* Epoxy : UL94V-0 rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Mounting position : Any
* Weight : 0.4 gram

**DO-15**




**Dimensions in inches and ( millimeters )**

### MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified.

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| Peak Pulse Power Dissipation at $T_a$ = 25°C, $T_P$ = 1ms (Note1) | $P_{PPM}$ | Minimum 600 | W |
| Steady State Power Dissipation at TL = 90 °C<br>Lead Lengths 0.375", (9.5mm) (Note 2) | $P_D$ | 1.5 | W |
| Storage and Operating Temperature Range | $T_{STG}$ ,$T_J$ | - 65 to + 175 | °C |

**Notes :**

(1) Non-repetitive Current pulse, per Fig. 5 and derated above Ta = 25 °C per Fig. 1

(2) Mounted on Copper Leaf area of 1.57 $in^2$ (40$mm^2$).

## ELECTRICAL CHARACTERISTICS TRANSIL

Rating at 25 °C ambient temperature unless otherwise specified.

| RATING | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Breakdown Voltage @ $I_T$ 1mA Min. | $V_{BR}$ | 150 | V |
| Typ. | | 160 | |
| Max. | | 170 | |
| Working Peak Reverse Voltage | $V_{RWM}$ | 136 | V |
| Maximum Reverse Leakage @ $V_{RWM}$ | $I_R$ | 5.0 | μA |
| Maximum Clamping Voltage @ $I_{RSM}$ | $V_{RSM}$ | 219 | V |
| Maximum Reverse Current | $I_{RSM}$ | 2.7 | A |
| Maximum Temperature Co-efficient of $V_{BR}$ | | 0.108 | %/°C |

## ELECTRICAL CHARACTERISTICS DIODE

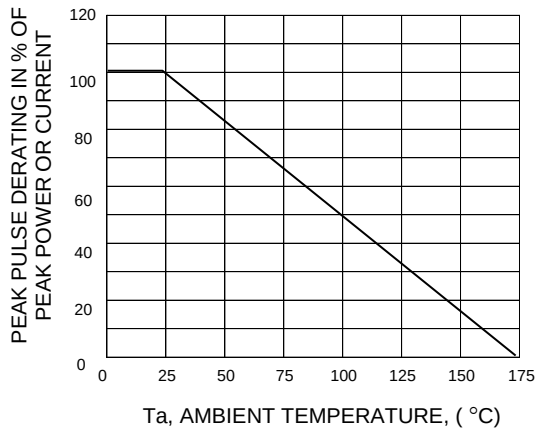
| RATING | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 700 | V |
| Maximum DC Reverse Current Tj = 25 °C | $I_R$ | 5 | μA |
| at Rated DC Blocking Voltage Tj = 100 °C | $I_{R(H)}$ | 50 | |
| Maximum Reverse Recovery Time ( Note 1 ) | Trr | 35 | ns |
| Peak Forward Voltage @ $I_F$ = 3A Tj = 25 °C | $V_F$ | 12 | V |
| Typical Junction Capacitance | $C_J$ | 35 | pF |
| Typical Thermal Resistance (Junction to ambient) | $R_{th(J-A)}$ | 105 | °C/W |
| Typical Thermal Resistance (Junction to leads) | $R_{th(J-L)}$ | 40 | °C/W |

**Notes :**

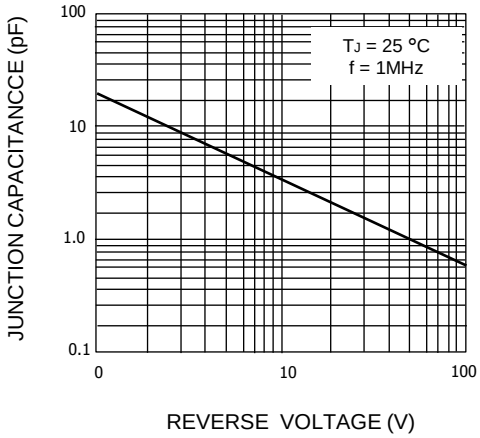
( 1 ) Reverse Recovery Test Conditions : $I_F$ = 0.5 A, $I_R$ = 1.0 A, Irr = 0.25 A.

## RATING AND CHARACTERISTIC CURVES ( SFULCE136 )

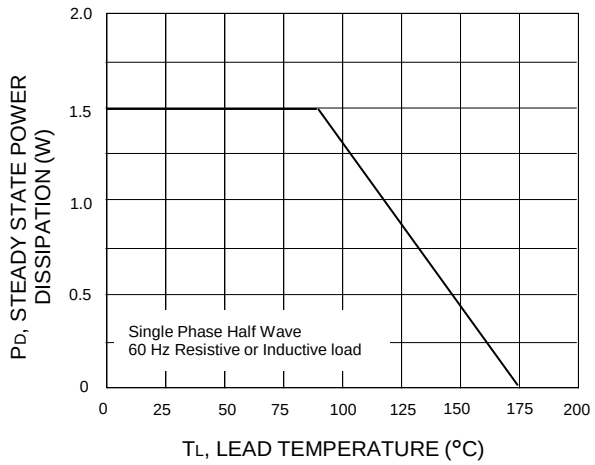
### FIG.1 - PULSE DERATING CURVE



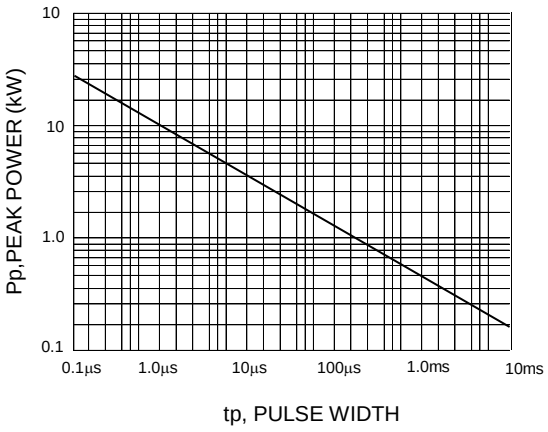

### FIG.2 - TYPICAL JUNCTION CAPACITANCE



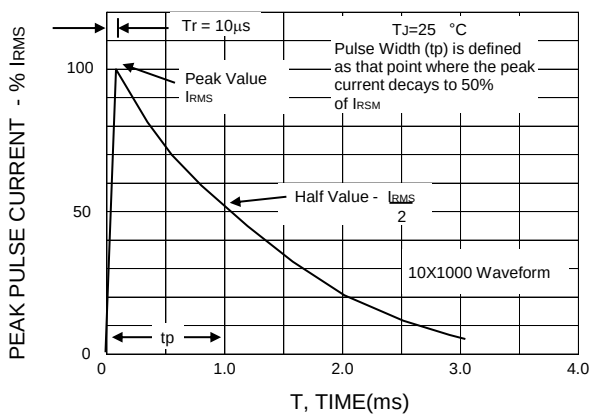

### FIG.3 - STEADY STATE POWER DERATING




### FIG.4 - PULSE RATING CURVE




### FIG.5 - PULSE WAVEFORM




### FIG.6 - TYPICAL REVERSE CHARACTERISTICS