

# Axial Auto Surge Suppressor

## Stand-off Voltage - 24 to 48 Volts

## 18000 Watt Peak Pulse Power

### Features

- Glass passivated junction
- Plastic package P-600
- Meet AEC-Q101 requirement
- Bi-directional or Un-directional
- Very Low Clamping Voltage
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension
- Continued current transient suppressor
- RoHScompliant
- 18KW peak pulse power capability on 10/1000us waveform



### IEC Compatibility

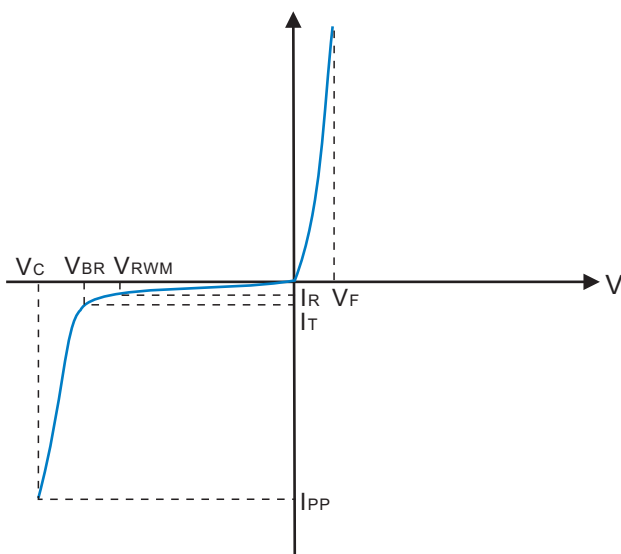
- ISO 16750-2 Test A 24V System (174V 2Ω 350ms 10c)

### Applications

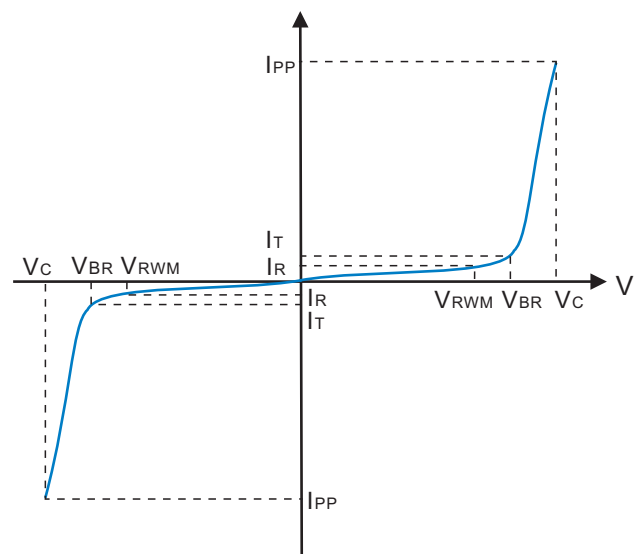
- Auto powers system
- Can-bus
- ABS powers
- Car audio and video
- Automotive instrument
- Bluetooth
- Car GPS

### I-V Curve Characteristics

Uni-directional

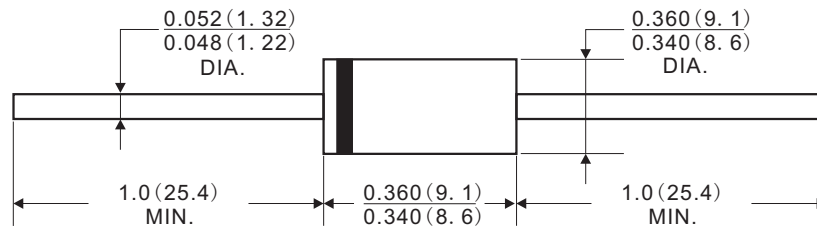


Bi-directional



## Dimensions (P600)

### Case Style P600



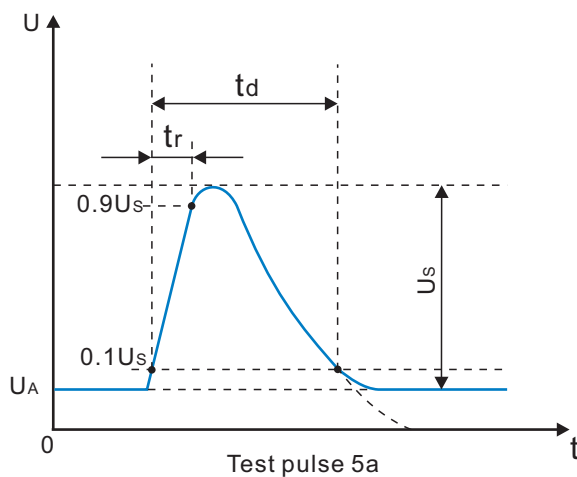
Dimensions in inches and (millimeters)

## Electrical Characteristics

\*\*\*Stand for commonly used models

PKT Part Number		Stand-Off Voltage	Reverse Leakage @V <sub>RWM</sub>	Breakdown Voltage @I <sub>T</sub>		Test Current	Max. Clamping Voltage @I <sub>pp</sub> 10/1000μs	
UNI-Polar	BI-Polar	V <sub>RWM</sub> (V)	I <sub>R</sub> (μA)	V <sub>BR</sub> (V)Min.	V <sub>BR</sub> (V)Max.	I <sub>T</sub> (mA)	V <sub>c</sub> (V)	I <sub>pp</sub> (A)
PKT24A	PKT24CA	24	10	26.7	29.5	5	38.9	462.7
* PKT30A	* PKT30CA	30	10	33.3	36.8	5	48.4	371.9
PKT33A	PKT33CA	33	2	36.7	40.6	5	53.3	337.7
* PKT36A	* PKT36CA	36	2	40.0	44.2	5	58.1	309.8
PKT48A	PKT48CA	48	2	53.6	58.7	5	77.7	231.7

## Test ISO 16750-2 Test A



Parameter	12V System	24V System
U <sub>s</sub>	79V to 101V	151V to 202V
R <sub>i</sub>	0.5Ω to 4Ω	1Ω to 8Ω
t <sub>d</sub>	40ms to 400ms	100ms to 350ms
t <sub>r</sub>	$(10^{0}_{-5})$ ms	

Ratings and Characteristic Curves (TA=25 °C unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

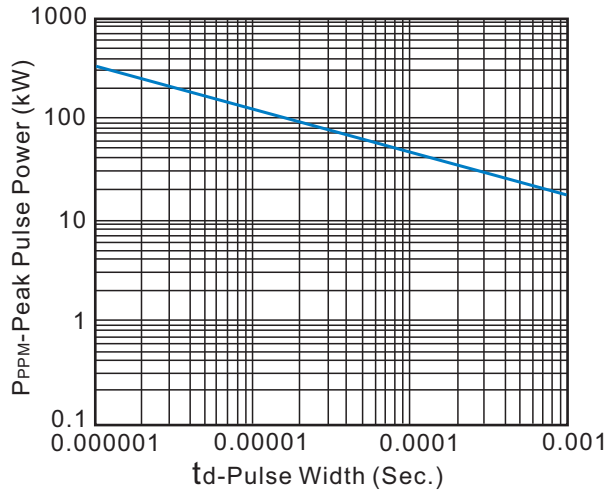


Fig.2 Typical Junction Capacitance

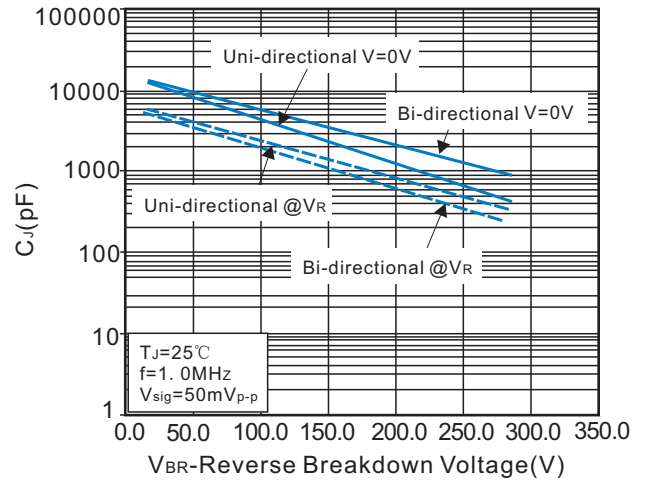


Fig.3 Pulse Waveform

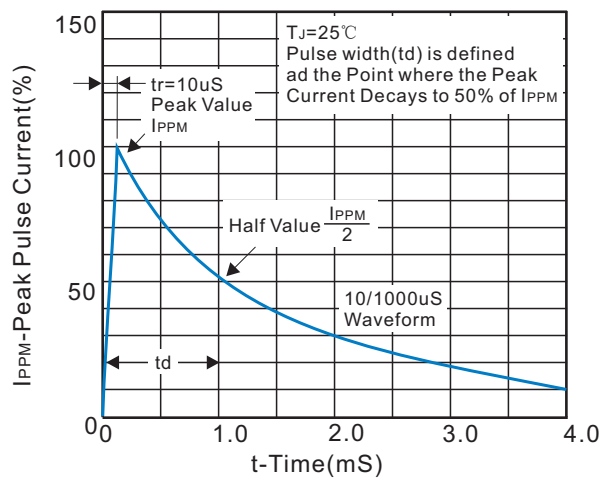


Fig.4 Maximum Non-repetitive Forward Surge

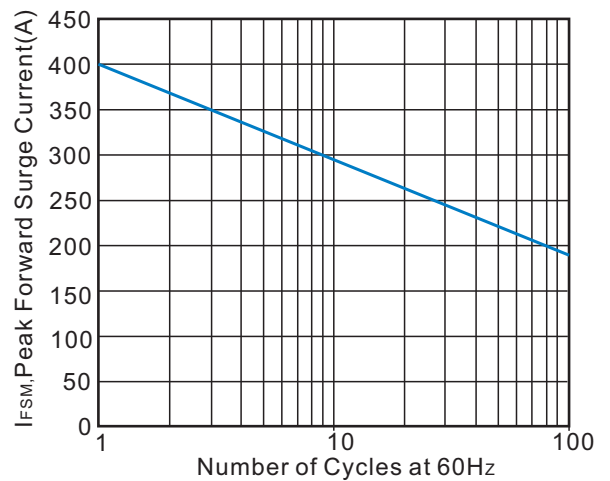


Fig.5 Ri-Vs chart for ISO-16750-2 Test A : 24V System

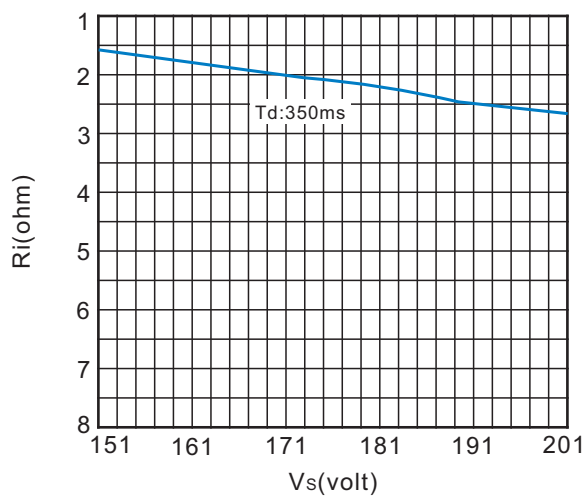
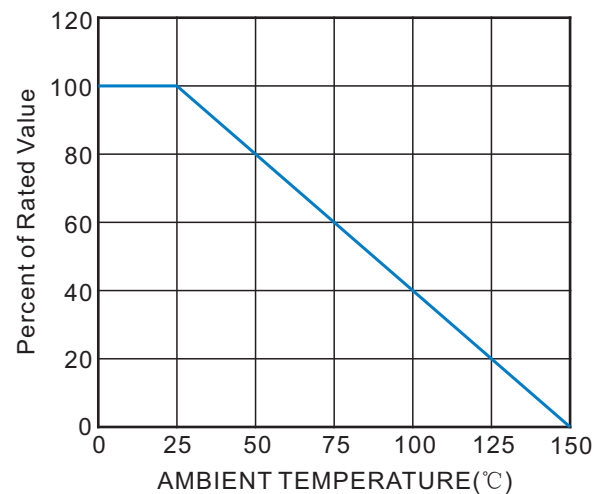


Fig.6 Power Derating Curve

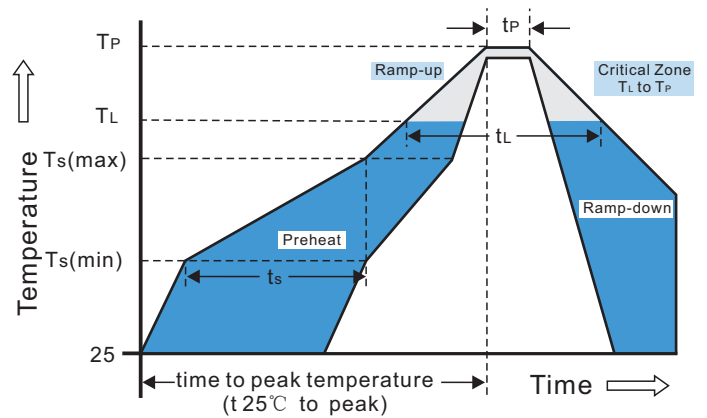


## Recommended Soldering Conditions

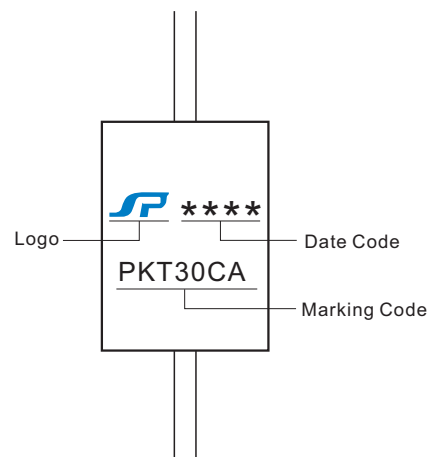
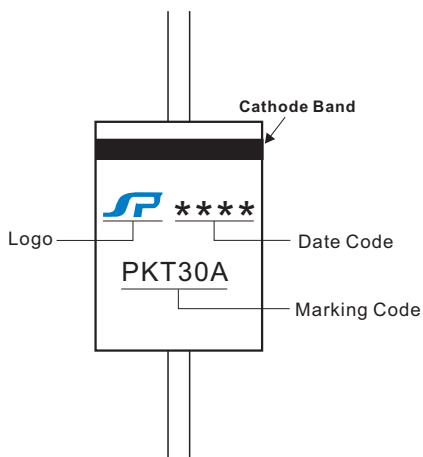
### Recommended Conditions

Reflow Condition		
Pre Heat	-Temperature Min( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time(Min to Max)( $t_s$ )	60-180secs
Average ramp up rate (Liquidus Temp( $T_L$ ) to peak)		3°C/sec.Max.
$T_{s(max)}$ to $T_L$ -Ramp-up Rate		3°C/sec.Max.
Reflow	-Temperature( $T_L$ )(Liquidus)	+217°C
	-Temperature( $t_L$ )	60-150secs
Peak Temp( $T_P$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp( $t_P$ )		30 secs.Max.
Ramp-down Rate		6°C/sec.Max.
Time 25°C to Peak Temp( $T_P$ )		8 min.Max.
Do not exceed		+260°C

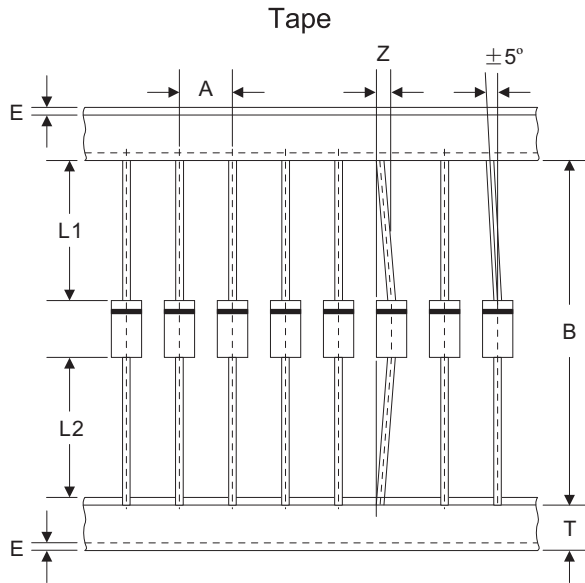
### Reflow Soldering



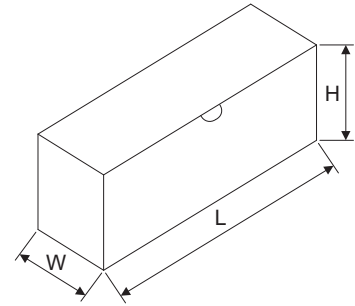
## Marking Code



Packaging



Box



Dimensions in millimeters

A	B	Z	T	E	L1-L2
10.0±0.5	52.0±0.5	1.2Max	6.0±0.4	1.0Max	1.0Max

L	W	H	Quantity
250.0±5.0	78.0±5.0	114.0±5.0	300PCS