

# Axial Auto Transient Suppressor

## Stand-off Voltage - 22 to 36 Volts

## 12000 Watt Peak Pulse Power

### Features

- Glass passivated junction
- Plastic package P-600
- 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
- 12KW peak pulse power capability on 10/1000us waveform
- Operating Junction and Storage Temperature Range is -55°C to 175°C
- AEC-Q101



### IEC Compatibility

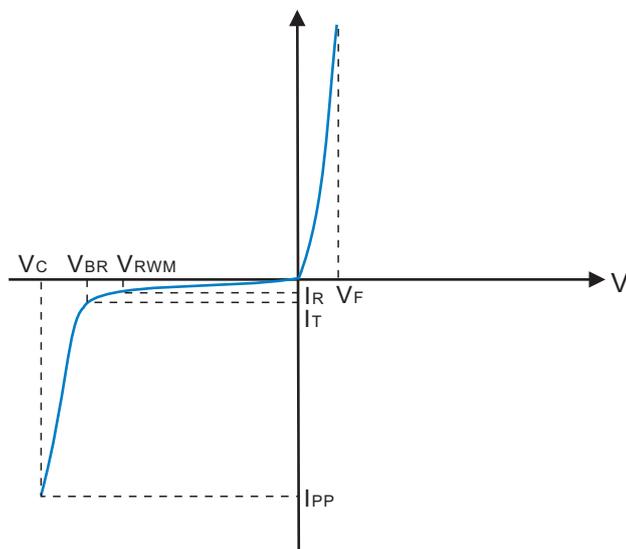
- ISO 16750-2 Test A 12V System ( 87V 0.5Ω 400ms 10c)  
24V System (200V 4Ω 350ms 10c)

### Applications

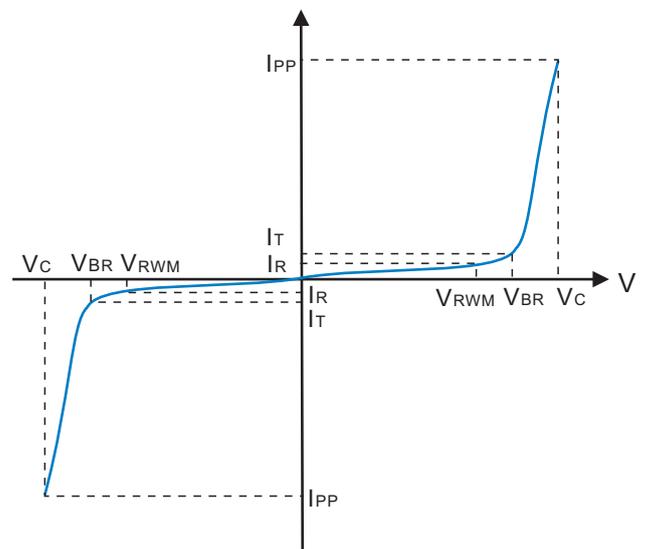
- Auto powers system
- Can-bus
- ABS powers
- Car audio and video
- Automotive instrument
- Bluetooth
- Car GPS

### I-V Curve Characteristics

Uni-directional

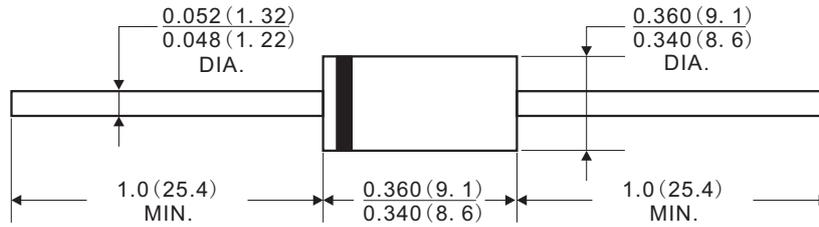


Bi-directional



## Dimensions (P600)

### Case Style P600



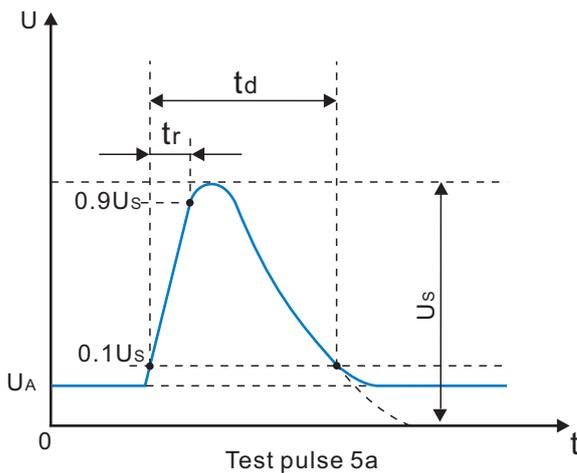
Dimensions in inches and(millimeters)

## Electrical Characteristics

\*\*\*Stand for commonly used models

PKS Part Number		Stand-Off Voltage	Reverse Leakage @ $V_{RWM}$	Breakdown Voltage @ $I_T$		Test Current	Max. Clamping Voltage @ $I_{pp}$ 10/1000 $\mu$ s	
UNI-Polar	BI-Polar	$V_{RWM}(V)$	$I_R(\mu A)$	$V_{BR}(V)Min.$	$V_{BR}(V)Max.$	$I_T(mA)$	$V_c(V)$	$I_{pp}(A)$
PKS22A	PKS22CA	22	2	24.0	26.9	5	35.5	338.0
PKS24A	PKS24CA	24	2	26.7	29.5	5	38.9	308.5
PKS26A	PKS26CA	26	2	28.9	31.9	5	42.1	285.0
PKS30A	PKS30CA	30	2	33.3	36.8	5	48.4	247.9
PKS33A	PKS33CA	33	2	36.7	40.6	5	53.3	225.1
PKS36A	* PKS36CA	36	2	40.0	44.2	5	58.1	206.5

## Test ISO 16750-2 Test A



Parameter	12V System	24V System
$U_s$	79V to 101V	151V to 202V
$R_i$	0.5 $\Omega$ to 4 $\Omega$	1 $\Omega$ to 8 $\Omega$
$t_d$	40ms to 400ms	100ms to 350ms
$t_r$	$(10^0_{-5})ms$	

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

Fig.1 Peak Pulse Power Rating Curve

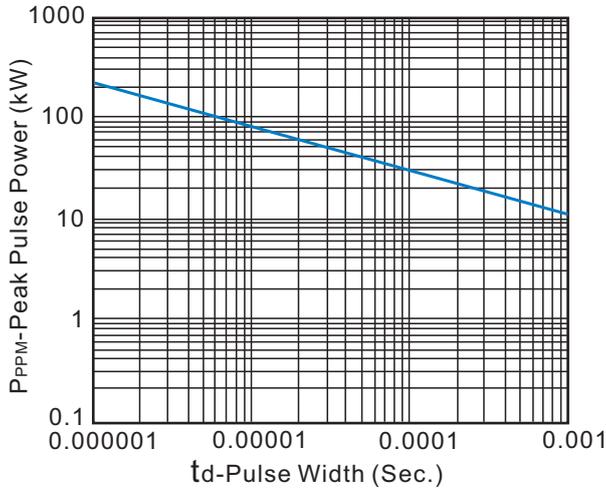


Fig.2 Typical Junction Capacitance

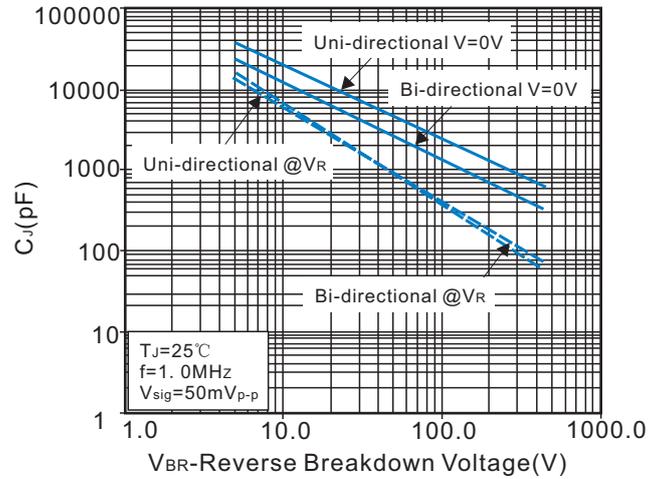


Fig.3 Pulse Waveform

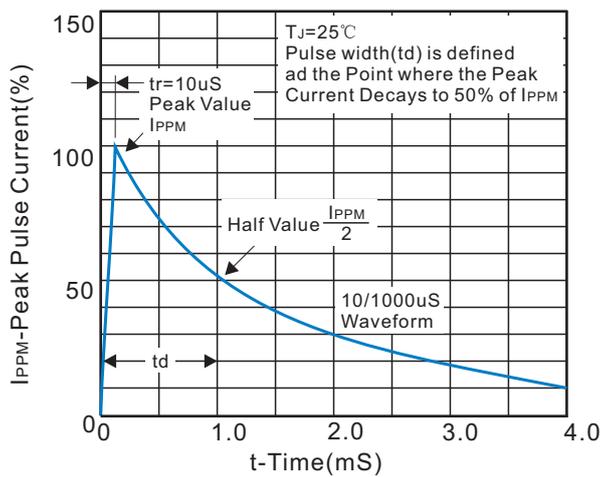


Fig.4 Maximum Non-repetitive Forward Surge

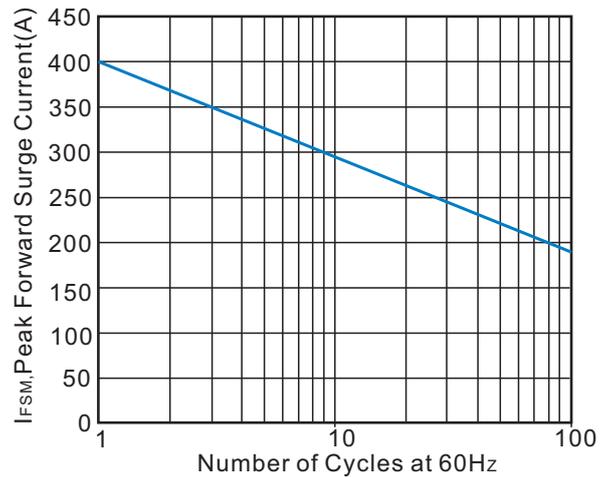


Fig.5 Ri-Vs chart for ISO-16750-2 Test A : 12V System

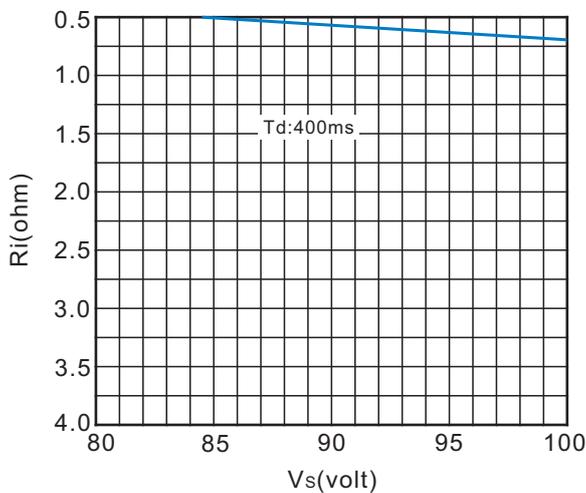
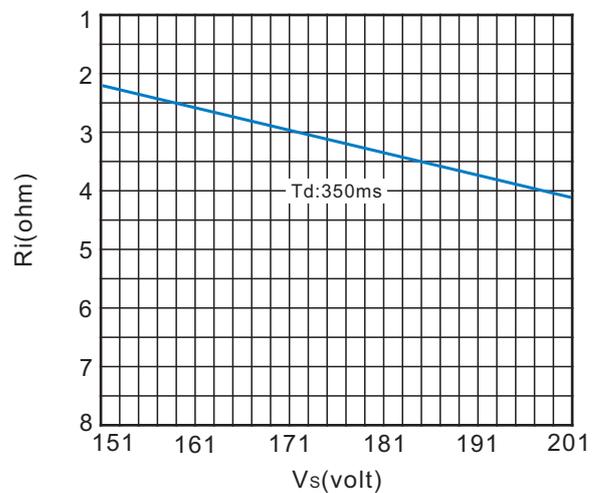
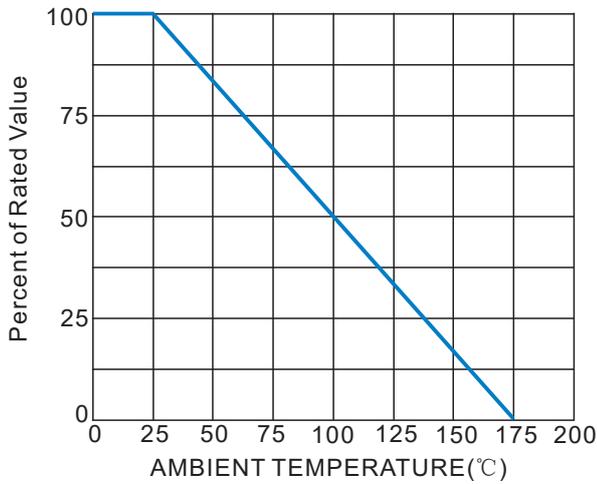


Fig.6 Ri-Vs chart for ISO-16750-2 Test A : 24V System



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

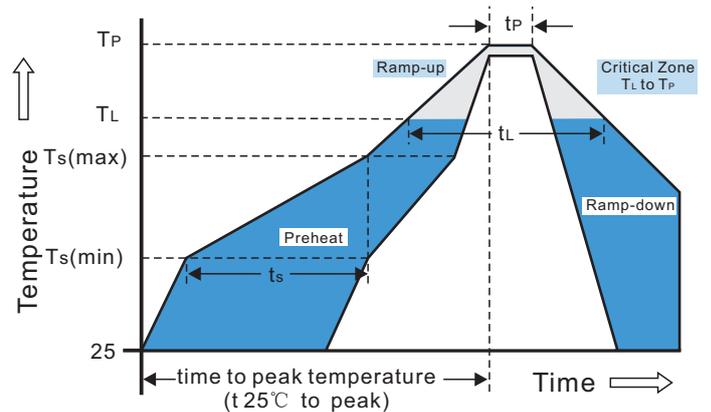
Fig.7 Power Derating Curve



Recommended Soldering Conditions

Recommended Conditions

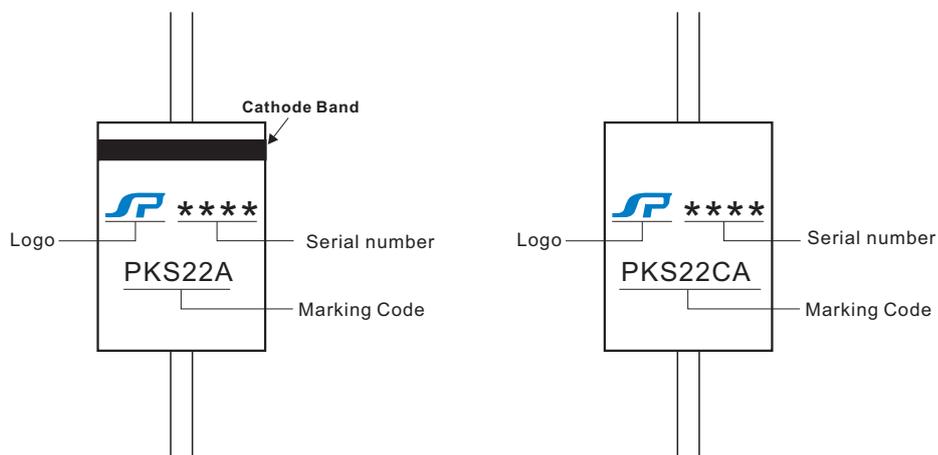
Reflow Condition		
Pre Heat	-Temperature Min(T <sub>s(min)</sub> )	+150°C
	-Temperature Max(T <sub>s(max)</sub> )	+200°C
	-Time(Min to Max)(t <sub>s</sub> )	60-180secs
Average ramp up rate (Liquidus Temp(T <sub>L</sub> ) to peak)		3°C/sec.Max.
T <sub>s(max)</sub> to T <sub>L</sub> -Ramp-up Rate		3°C/sec.Max.
Reflow	-Temperature(T <sub>L</sub> )(Liquidus)	+217°C
	-Temperature(t <sub>L</sub> )	60-150secs
Peak Temp(T <sub>P</sub> )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp(t <sub>P</sub> )		30 secs.Max.
Ramp-down Rate		6°C/sec.Max.
Time 25°C to Peak Temp(T <sub>P</sub> )		8 min.Max.
Do not exceed		+260°C



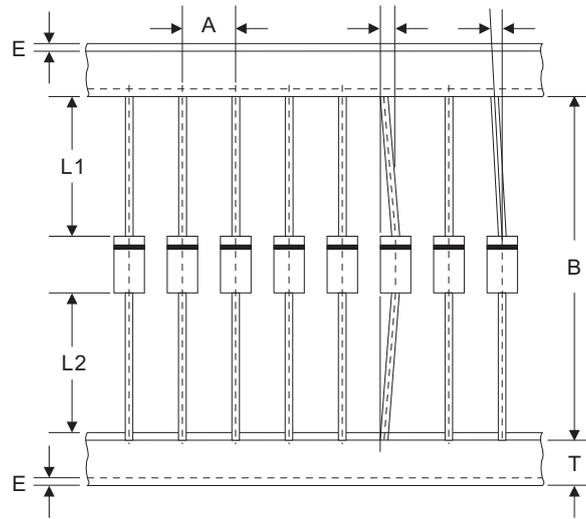
Reflow/Wave Soldering(Solder Dipping)

Peak Temperature	260°C
Dipping Time	10seconds
Soldering	1time

Marking Code



Packaging



Dimensions in millimeters

A	B	Z	T	E	L1-L2	Quantity
10.0±0.5	52.0±0.5	1.2Max	6.0±0.4	1.0Max	1.0Max	300/800PCS