

# Axial Auto Surge Suppressor

## Stand-off Voltage - 18 to 43 Volts

## 6000 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
- RoHS compliant
- 6KW peak pulse power capability on 10/1000us waveform



### IEC Compatibility

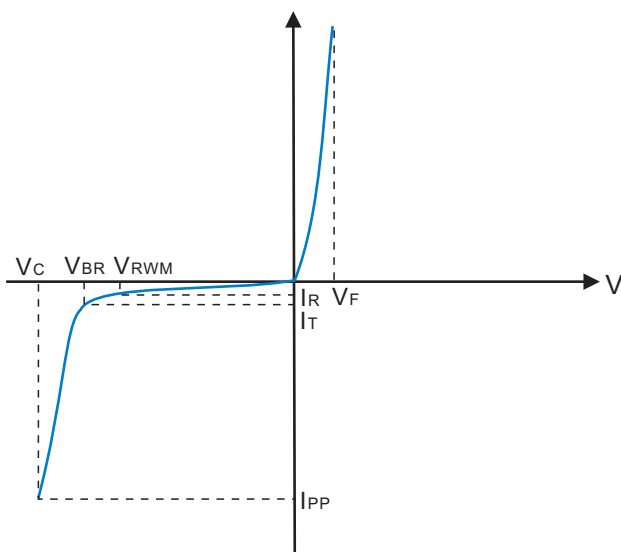
- ISO 16750-2 Test A 12V System ( 87V 1Ω 400ms 10c)  
24V System (174V 4Ω 350ms 10c)

### Applications

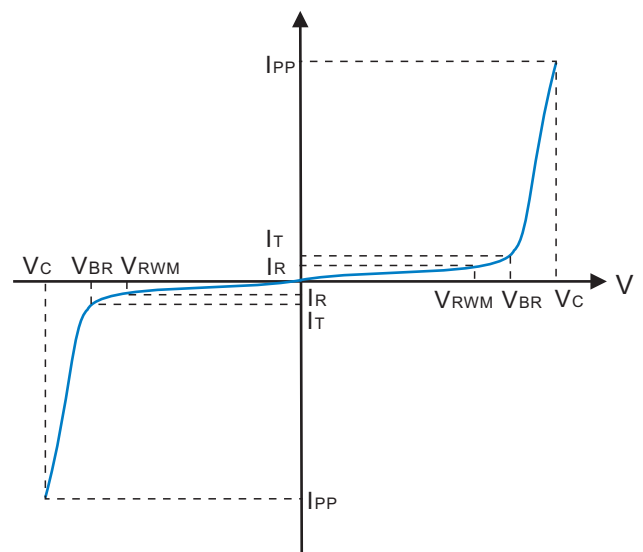
- Auto powers system
- Can-bus
- ABS powers
- Car audio and video
- Automotive instrument
- Bluetooth
- Car GPS

### I-V Curve Characteristics

Uni-directional

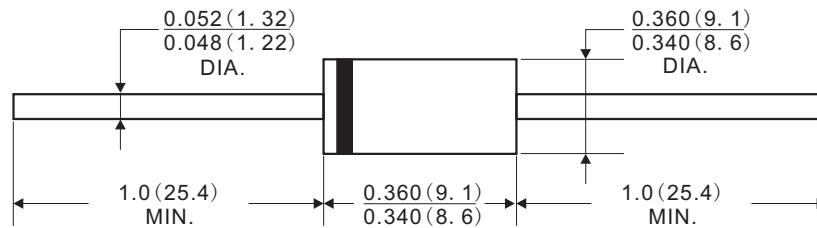


Bi-directional



## Dimensions (P600)

### Case Style P600



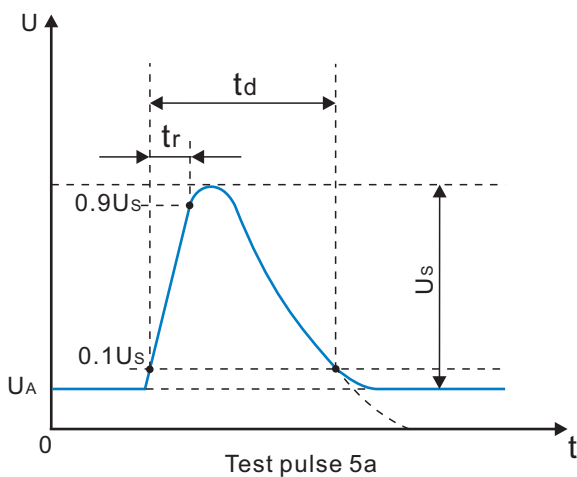
Dimensions in inches and (millimeters)

## Electrical Characteristics

\*\*\*Stand for commonly used models

PKR 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	$V_{RWM}(V)$	$I_R(\mu A)$	$V_{BR}(V)Min.$	$V_{BR}(V)Max.$	$I_T(mA)$	$V_c(V)$	$I_{pp}(A)$
PKR18A	PKR18CA	18	2	20.0	22.1	5	29.2	205.5
PKR20A	PKR20CA	20	2	22.2	24.5	5	32.4	185.2
* PKR22A	PKR22CA	22	2	24.0	26.9	5	35.5	169.0
PKR24A	PKR24CA	24	2	26.7	29.5	5	38.9	154.2
PKR26A	PKR26CA	26	2	28.9	31.9	5	42.1	142.5
* PKR30A	PKR30CA	30	2	33.3	36.8	5	48.4	124.0
PKR33A	PKR33CA	33	2	36.7	40.6	5	53.3	112.6
* PKR36A	PKR36CA	36	2	40.0	44.2	5	58.1	103.3
PKR43A	PKR43CA	43	2	47.8	52.8	5	69.4	86.5

## 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

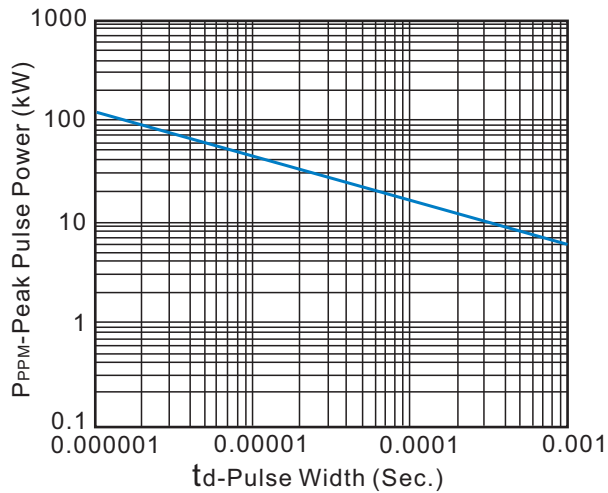


Fig.2 Typical Junction Capacitance

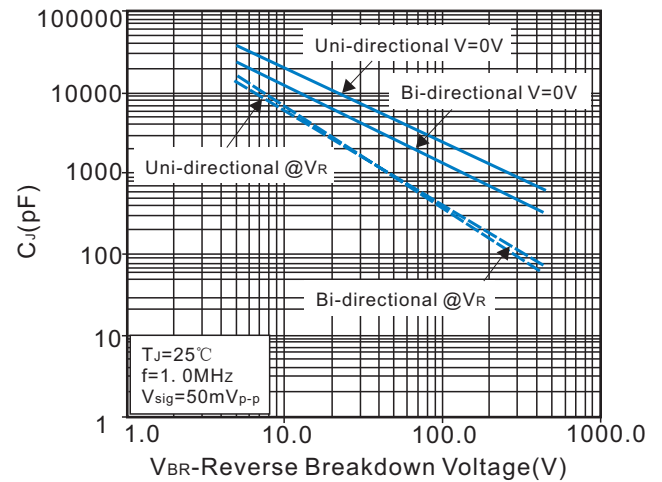


Fig.3 Pulse Waveform

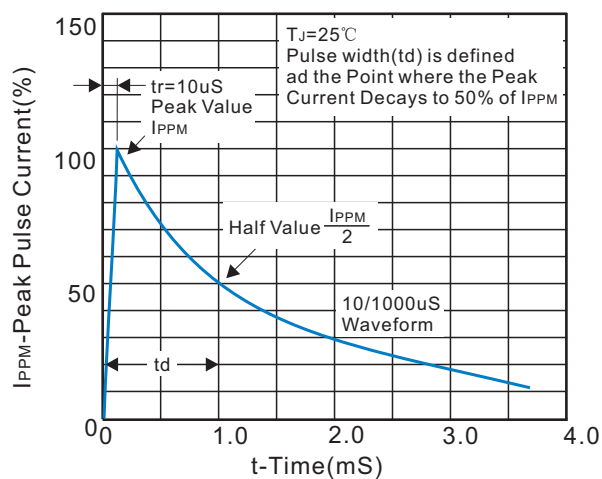


Fig.4 Maximum Non-repetitive Forward Surge

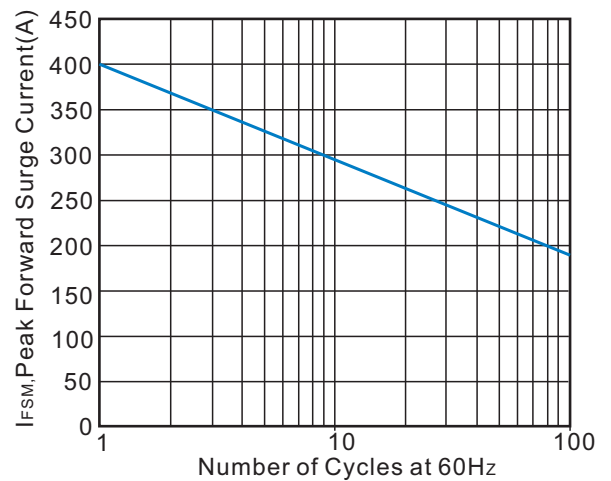


Fig.5 Ri-Vs chart for ISO-16750-2 Test A : 12V System

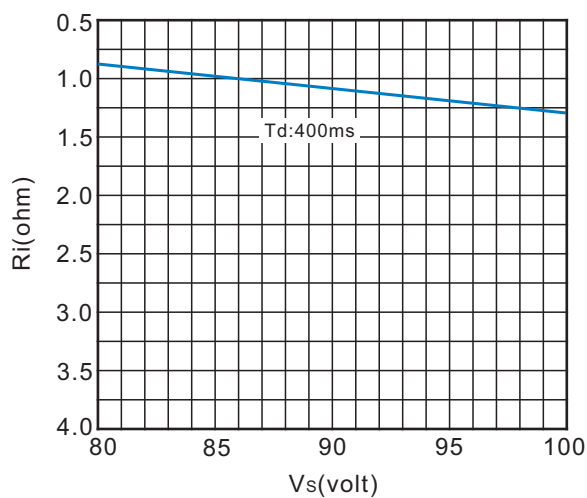
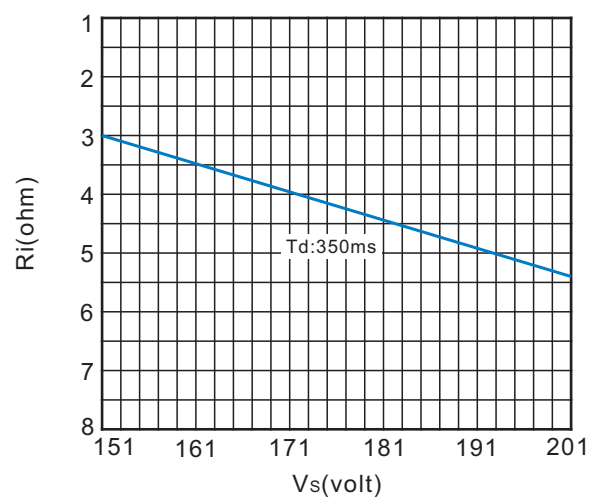
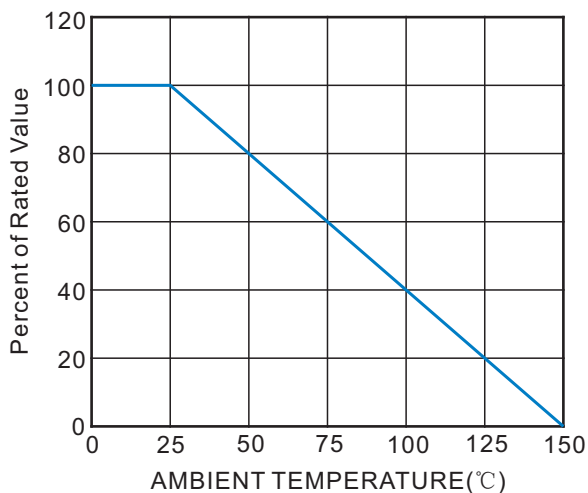


Fig.6 Ri-Vs chart for ISO-16750-2 Test A : 24V System



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

Fig.7 Power Derating Curve

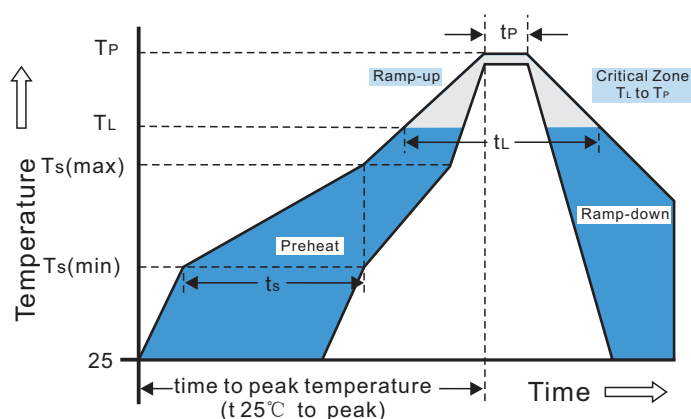


Recommended Soldering Conditions

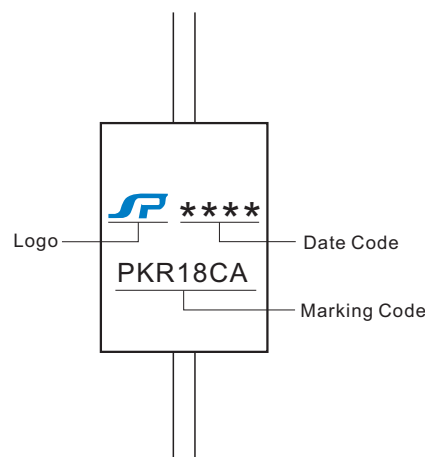
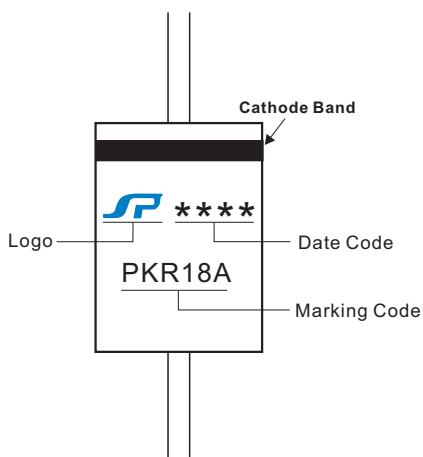
Recommended Conditions

Reflow Condition		
Pre Heat	-Temperature Min( $T_{s(min)}$ )	+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

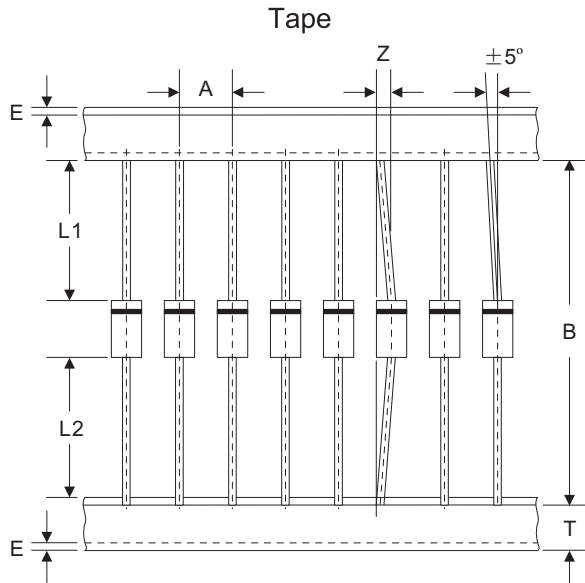
Reflow Soldering



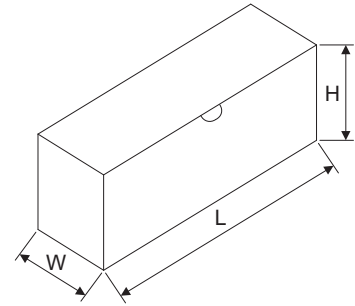
Marking Code



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