

Surface Mount Auto Surge Suppressor

Stand-off Voltage - 15 to 60 Volts

6600 Watt Peak Pulse Power

Features

- Glass passivated junction
- Surface mount DO-214AB
- Bi-directional or Un-directional
- Very low clamping voltage
- High temperature soldering: 260°C/10 seconds at terminals
- Continued current transient suppressor
- RoHS compliant
- 6.6KW peak pulse power capability on 10/1000µs waveform
- Operating Junction and Storage Temperature Range is -55°C to 150°C
- AEC-Q101



IEC Compatibility

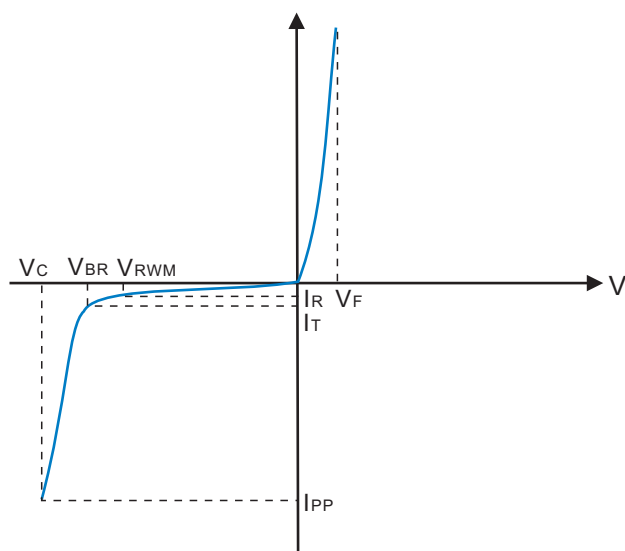
- ISO 16750-2 Test A 12v System (87V 2Ω 150ms 10c)

Applications

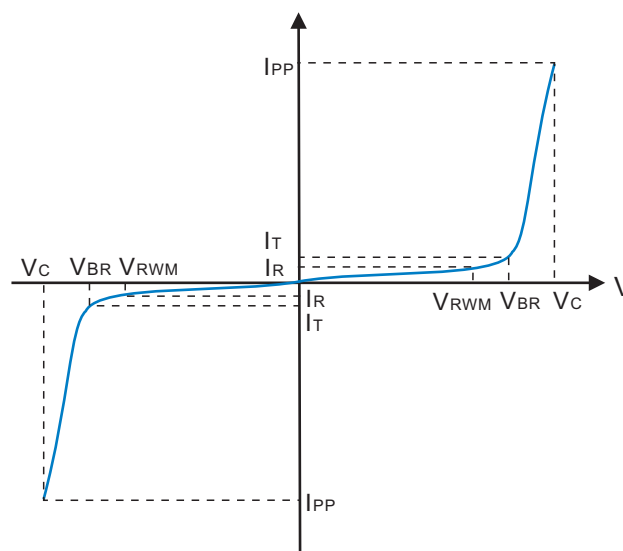
- Auto powers system
- Can-bus
- ABS powers
- Car audio and video
- Automotive instrument
- Bluetooth
- Car GPS

I-V Curve Characteristics

Uni-directional

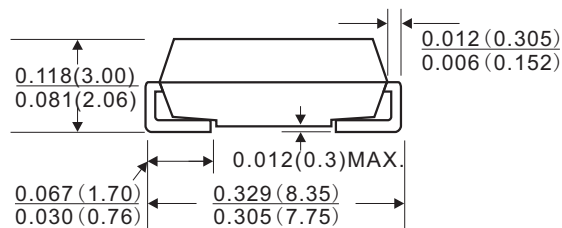
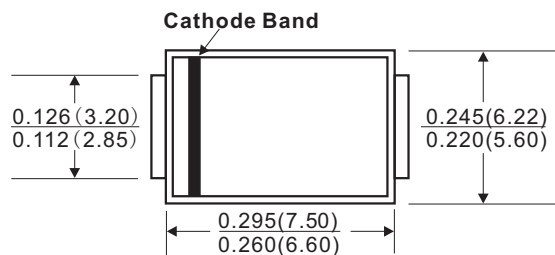


Bi-directional



Dimensions (DO-214AB)

DO-214AB(SMC J-Bend)



Dimensions in inches and(millimeters)

Electrical Characteristics

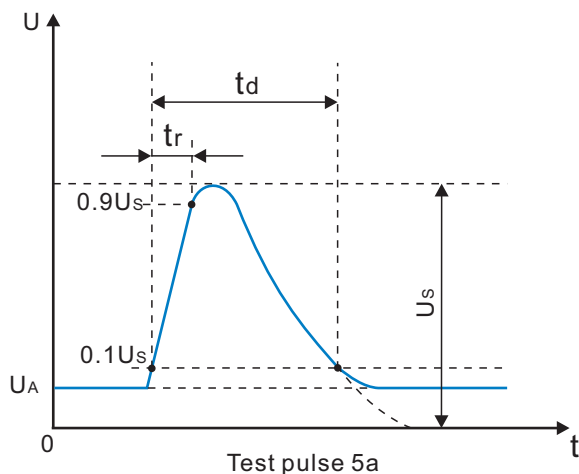
“*” Stand for commonly used models

PKA Part Number		Device Marking Code		Stand-Off Voltage	Reverse Leakage @VRWM	Breakdown Voltage @IT		Test Current	Max. Clamping Voltage @Ipp 10/1000μs	
UNI-Polar	BI-Polar	UNI	BI	VRWM(V)	IR(μA)	VBR(V)Min.	VBR(V)Max.	IT(mA)	Vc(V)	Ipp(A)
PKA15A	PKA15CA	6PES	6BES	15	100	16.7	18.5	1	24.4	270.4
PKA16A	PKA16CA	6PET	6BET	16	50	17.8	19.7	1	26.0	253.8
PKA20A	PKA20CA	6PEW	6BEW	20	10	22.2	24.5	1	32.4	203.7
PKA22A	PKA22CA	6PEX	6BEX	22	2	24.0	26.9	1	35.5	185.9
* PKA26A	PKA26CA	6PFE	6BFE	26	2	28.9	31.9	1	42.1	156.8
PKA30A	PKA30CA	6PFK	6BFK	30	2	33.3	36.8	1	48.4	136.4
PKA33A	PKA33CA	6PFM	6BFM	33	2	36.7	40.6	1	53.3	123.8
* PKA36A	PKA36CA	6PFP	6BFP	36	2	40.0	44.2	1	58.1	113.6
PKA43A	PKA43CA	6PFT	6BFT	43	2	47.8	52.8	1	69.4	95.1
PKA60A	PKA60CA	6PGK	6DGK	60	2	66.7	73.7	1	96.8	68.2

Notes :

For bidirectional type having Vrwm of 18 volts and less, the IR limit is double.

Test ISO 16750-2 Test A



Parameter	12V System	24V System
Us	79V to 101V	151V to 202V
Ri	0.5 Ω to 4 Ω	1 Ω to 8 Ω
td	40ms to 400ms	100ms to 350ms
tr	(10 ⁰ / ₋₅)ms	

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

Fig.1 Peak Pulse Power Rating Cure

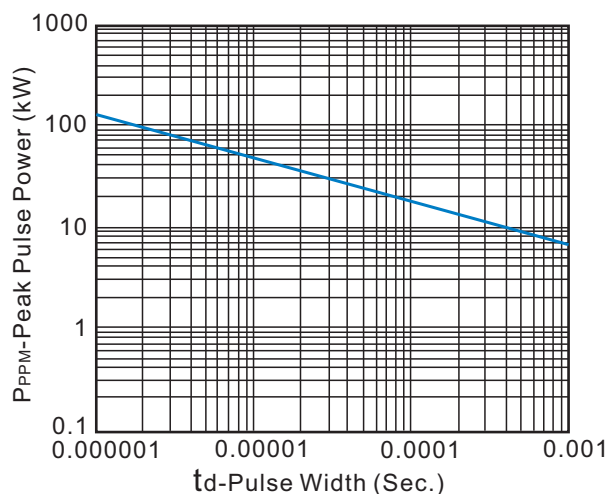


Fig.2 Typical Junction Capacitance

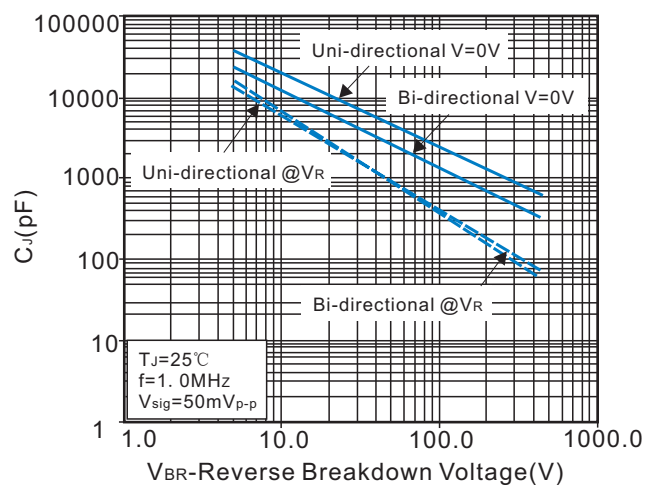


Fig.3 Pulse Waveform

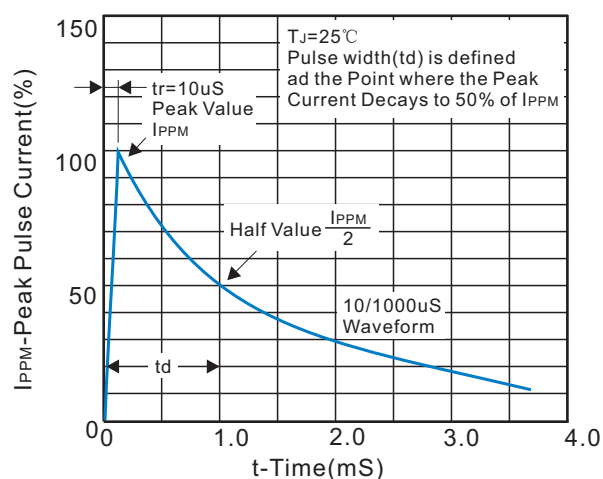


Fig.4 Maximum Non-repetitive Forward Surge

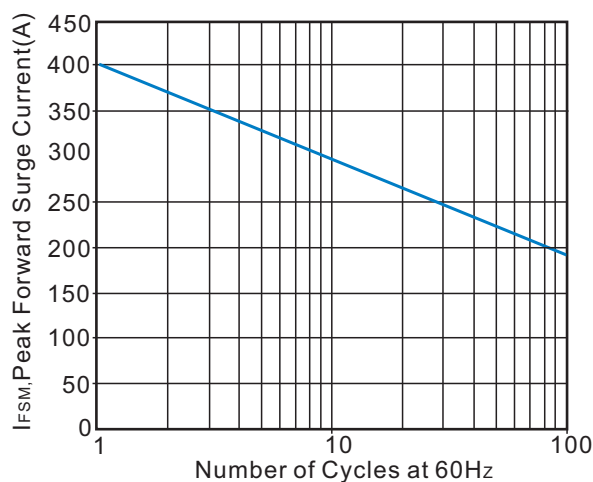


Fig.5 Ri-Vs chart for ISO-16750-2 Test A : 12V System

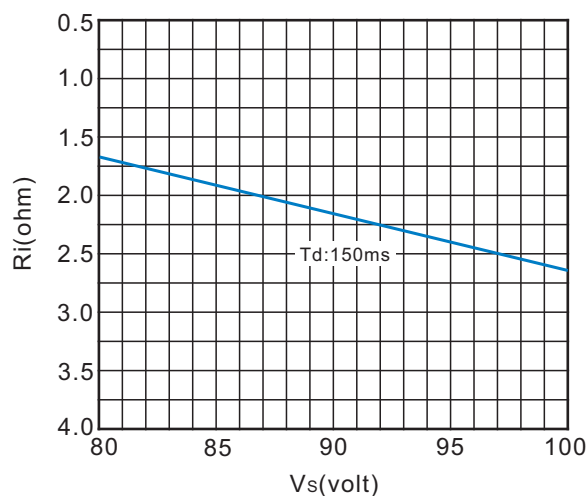
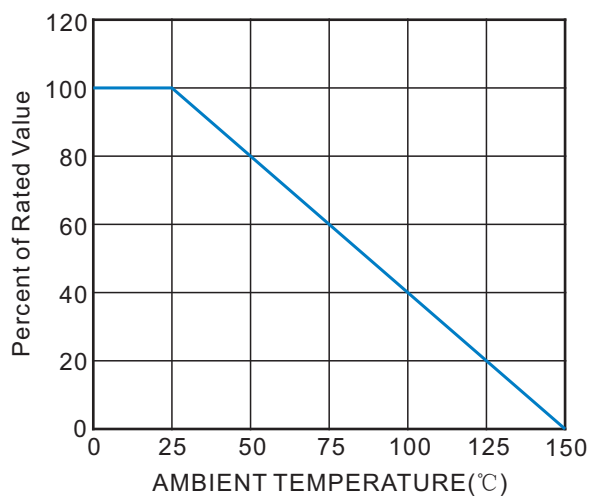


Fig.6 Power Derating Cure

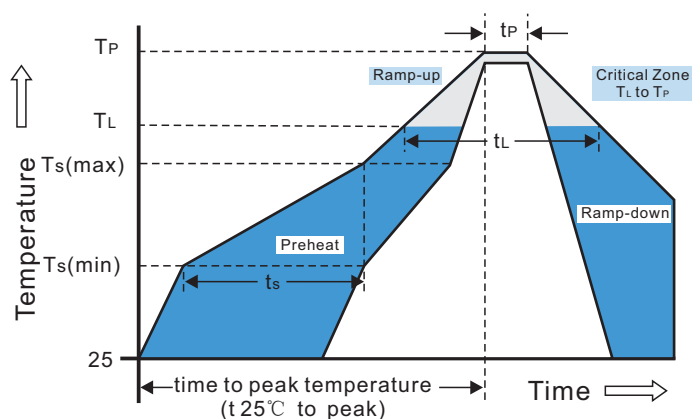


Recommended Soldering Conditions

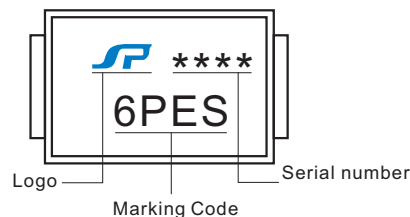
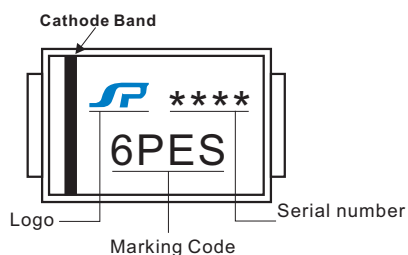
Recommended Conditions

Reflow Condition		Pb-Free assembly (see Fig.1)
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



Tape And Reel Specification

Symbol	Ea Per Reel	REEL DIA (mm)	Industry Standard
PKA***	500/3000	178/330	EIA RS-481

