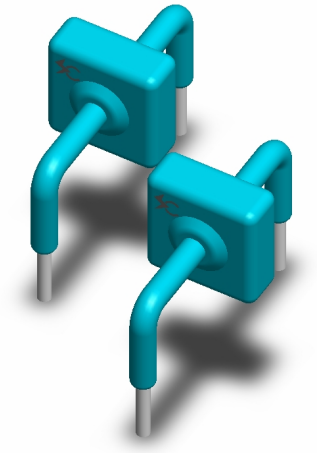
Radial Lead Transient Voltage Suppressors (TVS)

KA Series

Description

The KA Series of high current transient suppressors have been specially designed for use in A.C. line protection and any demanding applications (AC or DC). Any voltage rise due to increased current conduction is contained to a minimum, providing the best possible protection level. They can also be connected in series and/or parallel to create very high capacity protection solutions.



Features

- Axial lead terminals
- High current transient suppressor
- Excellent Clamping Capability
- Glass Passivated Junction
- Bi-directional
- Low Slope Resistance
- Repetition Rate (duty cycle):0.01%
- Hazardous Substances Free
- RoHS Compliant
- High Temperature soldering: 260°C/10 seconds at terminals
- Epoxy Encapsulated
- Silver plated leads
- Solderable per MIL-STD-202 Method 208

Functional Diagram



Bi-directional

Maximum Ratings (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Operating junction	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Current Rating[1]	I_{PP}	3	KA

Notes:

1. Rated IPP measured with 8 × 20μs pulse.

@ SOCAY Electronics Co., Ltd. 2013
Specifications are subject to change without notice.
Please refer to www.socay.com for current information.

Radial Lead Transient Voltage Suppressors (TVS)

KA Series

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Part Number	Reverse Stand-Off Voltage		Breakdown Voltage	Test Current	Current Rating	Maximum Energy	Maximum Clamping Voltage	Reverse Leakage
	VAC(V)	VDC(V)	V_{BR}(V) MIN.@I_T	I_T (mA)	I_{PP} 8/20μs (KA)	10/1000μs (A)	V_C(V) @I_{PP}	I_R (μA) @VDC
KA-012	8.5	12.8	14	1	3	500	28	20
KA-015	11	15	17	1	3	650	30	20
KA-020	14	20	22	1	3	800	40	20
KA-025	17	25	28	1	3	950	50	20
KA-030	21	30	33	1	3	1200	60	20
KA-042	30	42	47	1	3	1700	77	20
KA-058	40	58	64	1	3	2450	110	20
KA-066	45	66	70	1	3	2600	125	20
KA-076	54	76	85	1	3	2800	140	20
KA-100	72	100	110	1	3	4250	165	20
KA-133	100	133	147	1	3	5300	220	20
KA-170	130	170	180	1	3	7000	260	20
KA-190	145	190	200	1	3	8400	290	20
KA-200	150	200	222	1	3	8600	330	20
KA-240	180	240	250	1	3	9100	340	20

@ SOCAY Electronics Co., Ltd. 2013
Specifications are subject to change without notice.
Please refer to www.socay.com for current information.

Radial Lead Transient Voltage Suppressors (TVS)

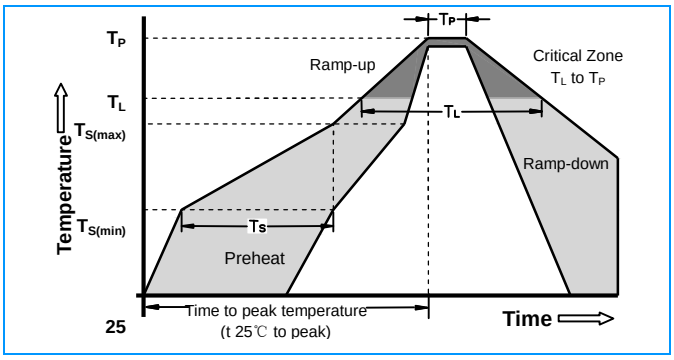
KA Series

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

Physical Specifications

Weight	Contact manufacturer
Case	Epoxy encapsulated
Terminal	Silver plated leads, solderable per MIL-STD-750, Method 2026

Soldering Parameters



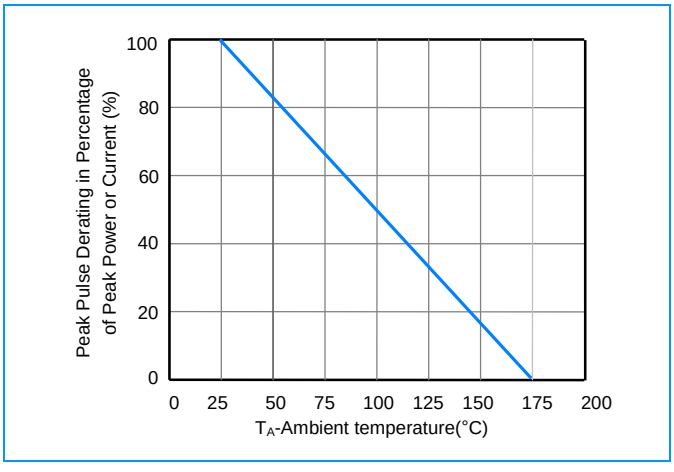
Reflow Condition		Lead–free assembly
Pre Heat	**-Temperature Min ($T_{S(min)}$)**	150°C
	-Temperature Max ($T_{S(max)}$)	200°C
	- Time (min to max) (T_S)	60 -180 Seconds
Average ramp up rate (Liquidus Temp T_L) to peak		3°C/second max
$T_{S(max)}$ to TL - Ramp-up Rate		3°C/second max
Reflow	**- Temperature (T_L) (Liquidus)**	217°C
	- Time (min to max) (T_L)	60 -150 Seconds
Peak Temperature (T_P)		260 +0/-5°C
Time within 5°C of actual peak Temperature (t_p)		20 -40 Seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max
Do not exceed		280°C

Flow/Wave Soldering (Solder Dipping)

Peak Temperature :	265°C
Dipping Time :	10 seconds
Soldering :	1 time

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

Pulse Derating Curve

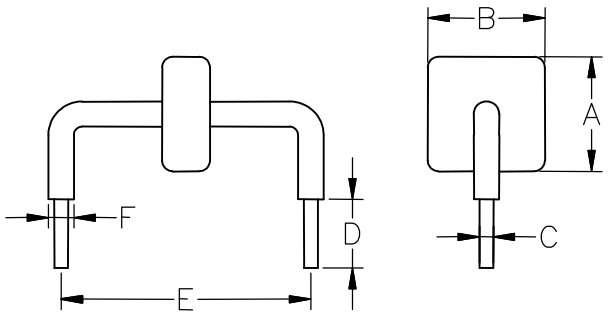


@ SOCAY Electronics Co., Ltd. 2013
Specifications are subject to change without notice.
Please refer to www.socay.com for current information.

Radial Lead Transient Voltage Suppressors (TVS)

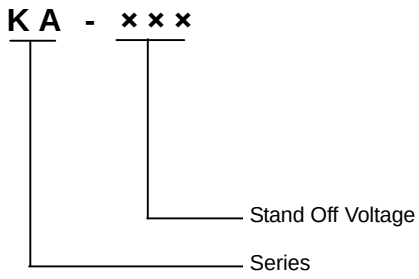
KA Series

Dimensions

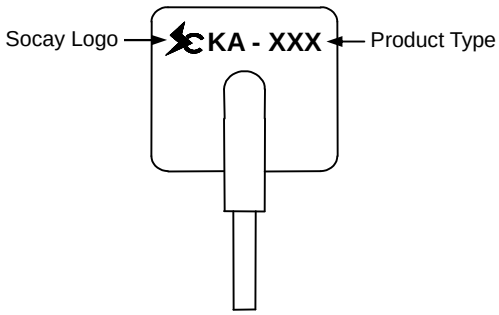


Dimensions	Inches	Millimeters
A	max 0.571	max 14.5
B	Max0.500	max 12.7
C	Φ0.051±0.004	Φ1.30±0.1
D	0.236±0.040	6.0±1.0
E	0.950±0.028	24.15±0.7
F	max 0.10	max 2.5

Part Numbering



Part Marking



@ SOCAY Electronics Co., Ltd. 2013
Specifications are subject to change without notice.
Please refer to www.socay.com for current information.