

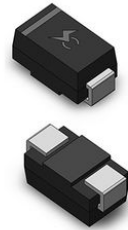


SMA Package Transient Voltage Suppressor TVS SMAJ6.5A Low Leakage

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: SMAJ6.5A
- Minimum Order Quantity: 5000PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



Product Specification

- Product Name: TVS Diodes
- Package Type: DO-214AC/SMA
- Vrwm: 6.5V
- Vbr@It (Min.): 7.22V
- Vbr@It (Max.): 7.98V
- It: 10mA
- Vc@Ipp: 11.2V
- Ipp: 35.71A
- Ir@Vrwm: 500μA
- Storage Temperature Range: -55 To +150
- Highlight: **SMA Transient Voltage Suppressor TVS,
Low Leakage Transient Voltage Suppressor
TVS
, SMA TVS**



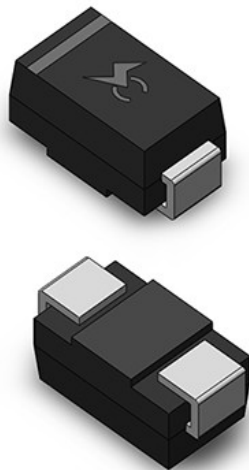
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Product Description

SOCAY Transient Voltage Suppressor SMAJ6.5A, SMA Package, Excellent Clamping Capability

DATASHEET: [SMAJ_v2207.1.pdf](#)

Part Number		Marking		Reverse Stand-Off Voltage $V_{RWM}(V)$	Breakdown Voltage $V_{BR}(V)$ @ I_T		Test Current $I_T(mA)$	Maximum Clamping Voltage $V_C @ I_{PP}(V)$	Maximum Peak Pulse Current $I_{PP}(A)$	Maximum Reverse Leakage $I_R @ V_{RWM}(\mu A)$
Uni	Bi	Uni	Bi		MIN	MAX				
SMAJ6.5A	SMAJ6.5CA	AK	WK	6.5	7.22	7.98	10	11.2	35.71	500



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Our Product Introduction

Description

The SMAJ series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

- ◆ For surface mounted applications in order to optimize board space
- ◆ Low leakage
- ◆ Uni and Bidirectional unit
- ◆ Glass passivated junction
- ◆ Low inductance
- ◆ Excellent clamping capability
- ◆ 400W Peak power capability at $10 \times 1000\mu\text{s}$ waveform Repetition rate (duty cycle):0.01%
- ◆ Fast response time: typically less than 1.0ps from 0 Volts to V_{BR} min
- ◆ Typical I_R less than 5 μA above 12V
- ◆ High Temperature soldering: 260°C/40 seconds at terminals
- ◆ Typical maximum temperature coefficient $\Delta V_{BR} = 0.1\% \times V_{BR}@25^\circ\text{C} \times \Delta T$
- ◆ Plastic package has Underwriters Laboratory Flammability 94V-0
- ◆ Matte tin lead-free Plated
- ◆ Halogen free and RoHS compliant
- ◆ Typical failure mode is short from over-specified voltage or current
- ◆ Whisker test is conducted based on JEDEC JESD201A per its table 4a and 4c
- ◆ IEC-61000-4-2 ESD 15kV(Air), 8kV (Contact)
- ◆ ESD protection of data lines in accordance with IEC 61000-4-2 (IEC801-2)
- ◆ EFT protection of data lines in accordance with IEC 61000-4-4 (IEC801-4)

Functional Diagram

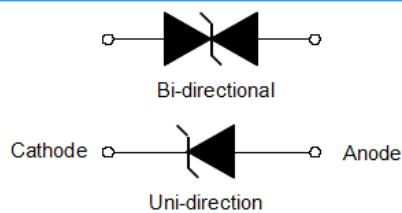


Figure 1 - Peak Pulse Power Rating Curve

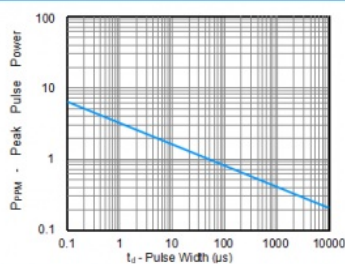


Figure 2 - Pulse Derating Curve

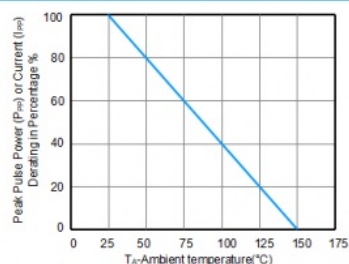


Figure 3 - Pulse Waveform

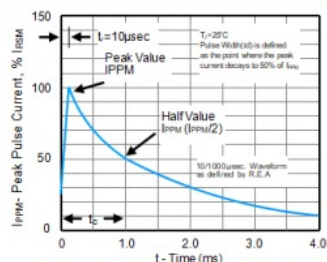


Figure 4 - Typical Junction Capacitance

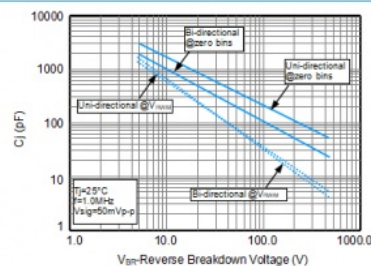


Figure 5 - Steady State Power Derating Curve

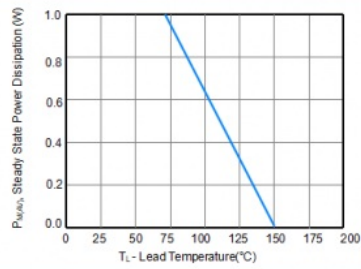
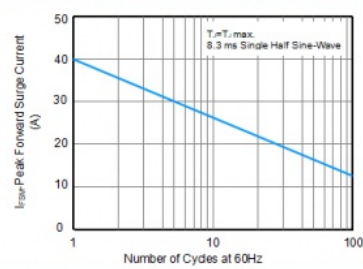
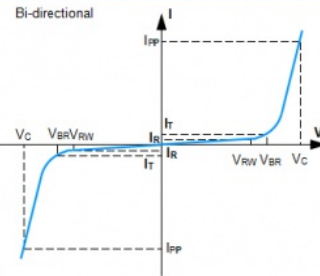
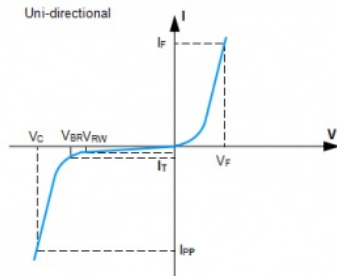


Figure 6 - Maximum Non-Repetitive Surge Current



I-V Curve Characteristics



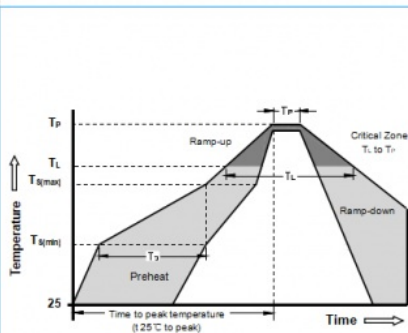
Physical Specifications

Weight	0.002 ounce, 0.061 gram
Case	JEDEC DO-214AC Molded Plastic over glass passivated junction
Polarity	Color band denotes cathode except Bipolar
Terminal	Matte Tin-plated leads, Solderable per JESD22-B102D

Environmental Specifications

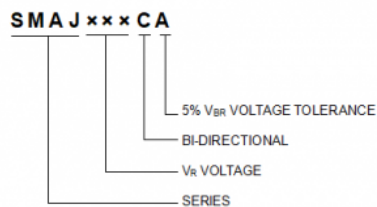
Temperature Cycle	JESD22-A104
Pressure Cooker	JESD22-A102
High Temp. Storage	JESD22-A103
HTRB	JESD22-A108
Thermal Shock	JESD22-A106

Soldering Parameters

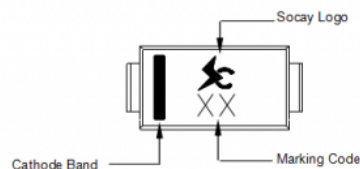


Reflow Condition		Lead-free assembly
Pre Heat	-Temperature Min ($T_{s(min)}$)	150°C
	-Temperature Max ($T_{s(max)}$)	200°C
	-Time (min to max) (T_s)	60 - 180 Seconds
Average ramp up rate (Liquidus Temp T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (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

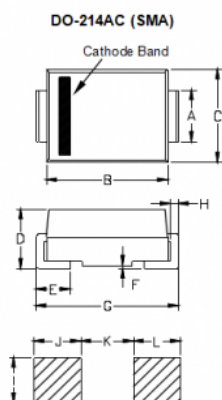
Part Numbering



Part Marking



Dimensions

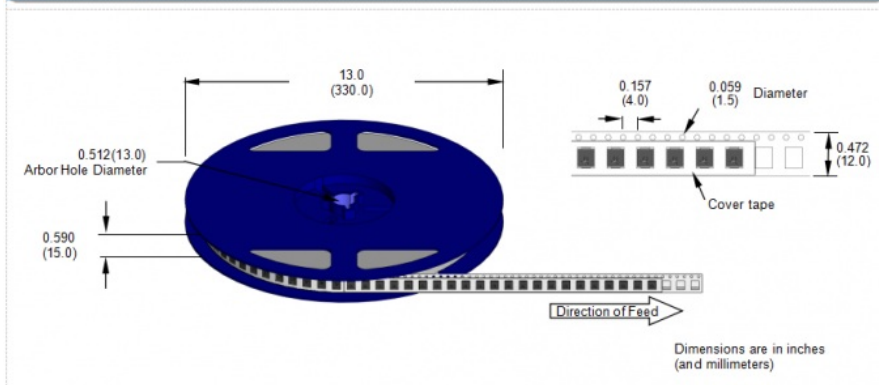


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.049	0.065	1.25	1.65
B	0.156	0.183	3.95	4.65
C	0.093	0.112	2.35	2.85
D	0.078	0.095	1.98	2.41
E	0.030	0.060	0.76	1.52
F	-	0.008	-	0.203
G	0.185	0.209	4.70	5.30
H	0.006	0.012	0.15	0.31
I	0.067	-	1.70	-
J	0.082	-	2.10	-
K	-	0.090	-	2.30
L	0.082	-	2.10	-

Packaging

Part Number	Component Package	Reel (pcs)	Per Carton (pcs)	Packaging Option	Reel Diameters (mm)
SMA.JXXXXX	DO-214AC (SMA)	5000	80000	Tape & Reel -15mm/13*tape	330.0

Tape and Reel Specifications



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