

SMA6J6.0CA  
THRU  
SMA6J58CA



SILICON  
BI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSORS  
600 Watt, 6.0 THRU 58 VOLT



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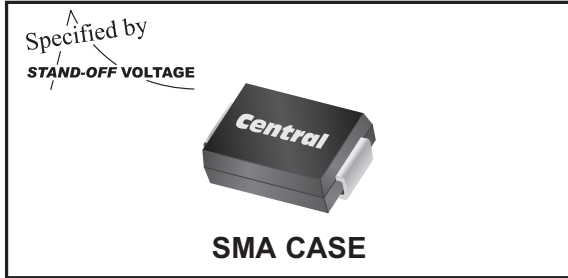
**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR SMA6J6.0CA series devices are bi-directional Transient Voltage Suppressors. Note: For uni-directional devices refer to SMA6J5.0A Series data sheet.

**MARKING: Full Part Number**

**FEATURES:**

- Glass passivated junction
- Low leakage



SMA CASE

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

	SYMBOL		UNITS
Peak Power Dissipation (Note 1)	$P_{PK}$	600	W
Power Dissipation ( $T_L=75^\circ\text{C}$ )	$P_D$	3.0	W
Peak Forward Surge Current ( $t=8.3\text{ms}$ )	$I_{FSM}$	60	A
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ )

Type	Reverse Stand-Off Voltage	Breakdown Voltage		Test Current	Maximum Reverse Leakage Current	Maximum Clamping Voltage	Peak Pulse Current (Note 1)	Marking Code
	$V_{RWM}$	$V_{BR} @ I_T$		$I_T$	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	$I_{PP}$	
	V	MIN V	MAX V	mA	$\mu\text{A}$	V	A	
SMA6J6.0CA	6.0	6.67	7.37	10	1600	10.3	58.3	CKGCA
SMA6J6.5CA	6.5	7.22	7.98	10	1000	11.2	53.6	CKKCA
SMA6J7.0CA	7.0	7.78	8.60	10	400	12.0	50.0	CKMCA
SMA6J7.5CA	7.5	8.33	9.21	1.0	200	12.9	46.5	CKPCA
SMA6J8.0CA	8.0	8.89	9.83	1.0	100	13.6	44.1	CKRCA
SMA6J8.5CA	8.5	9.44	10.4	1.0	20	14.4	41.7	CKTCA
SMA6J9.0CA	9.0	10.0	11.1	1.0	10	15.4	39.0	CKVCA
SMA6J10CA	10	11.1	12.3	1.0	2.0	17.0	35.3	CKXCA
SMA6J11CA	11	12.2	13.5	1.0	1.0	18.2	33.0	CKZCA
SMA6J12CA	12	13.3	14.7	1.0	1.0	19.9	30.2	CLECA
SMA6J13CA	13	14.4	15.9	1.0	1.0	21.5	27.9	CLGCA
SMA6J14CA	14	15.6	17.2	1.0	1.0	23.2	25.9	CLKCA
SMA6J15CA	15	16.7	18.5	1.0	1.0	24.4	24.6	CLMCA
SMA6J16CA	16	17.8	19.7	1.0	1.0	26.0	23.1	CLPCA
SMA6J17CA	17	18.9	20.9	1.0	1.0	27.6	21.7	CLRCA
SMA6J18CA	18	20.0	22.1	1.0	1.0	29.2	20.5	CLTCA
SMA6J19CA	19	21.1	23.3	1.0	1.0	30.8	19.5	CLUCA
SMA6J20CA	20	22.2	24.5	1.0	1.0	32.4	18.5	CLVCA
SMA6J22CA	22	24.4	26.9	1.0	1.0	35.5	16.9	CLXCA

Note 1: Non-repetitive 10x1,000 $\mu\text{s}$  pulse.

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SMA6J58CA



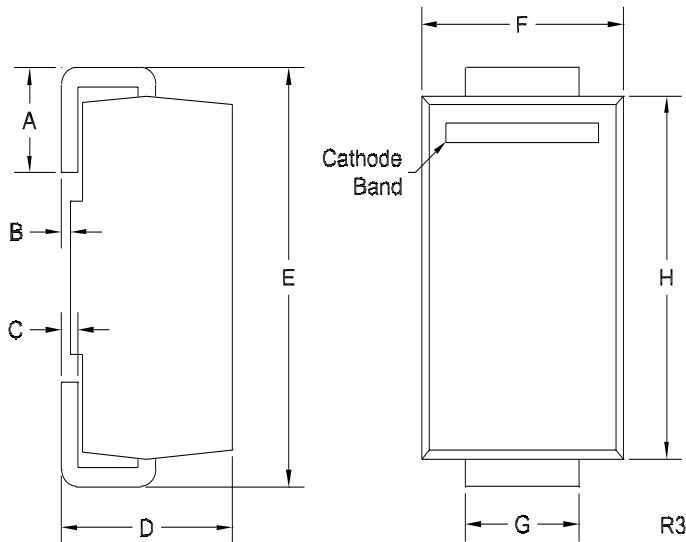
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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )

Type	Reverse Stand-Off Voltage	Breakdown Voltage		Test Current	Maximum Reverse Leakage Current	Maximum Clamping Voltage	Peak Pulse Current (Note 1)	Marking Code
	$V_{RWM}$	$V_{BR} @ I_T$		$I_T$	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	$I_{PP}$	
	V	MIN V	MAX V	mA	$\mu\text{A}$	V	A	
SMA6J24CA	24	26.7	29.5	1.0	1.0	38.9	15.4	CLZCA
SMA6J26CA	26	28.9	31.9	1.0	1.0	42.1	14.3	CMECA
SMA6J28CA	28	31.1	34.4	1.0	1.0	45.4	13.2	CMGCA
SMA6J30CA	30	33.3	36.8	1.0	1.0	48.4	12.4	CMKCA
SMA6J33CA	33	36.7	40.6	1.0	1.0	53.3	11.3	CMMCA
SMA6J36CA	36	40.0	44.2	1.0	1.0	58.1	10.3	CMPCA
SMA6J40CA	40	44.4	49.1	1.0	1.0	64.5	9.3	CMRCA
SMA6J43CA	43	47.8	52.8	1.0	1.0	69.4	8.65	CMTCA
SMA6J45CA	45	50.0	55.3	1.0	1.0	72.7	8.25	CMVCA
SMA6J48CA	48	53.3	58.9	1.0	1.0	77.4	7.75	CMXCA
SMA6J51CA	51	56.7	62.7	1.0	1.0	82.4	7.28	CMZCA
SMA6J54CA	54	60.0	66.3	1.0	1.0	87.1	6.89	CNECA
SMA6J58CA	58	64.4	71.2	1.0	1.0	93.6	6.41	CNGCA

**SMA CASE - MECHANICAL OUTLINE**



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.002	0.008	0.05	0.20
C	0.006	0.012	0.15	0.30
D	0.078	0.103	1.98	2.62
E	0.188	0.220	4.78	5.59
F	0.090	0.115	2.29	2.92
G	0.050	0.070	1.27	1.78
H	0.157	0.181	3.99	4.60

SMA (REV:R3)

**LEAD CODE:**

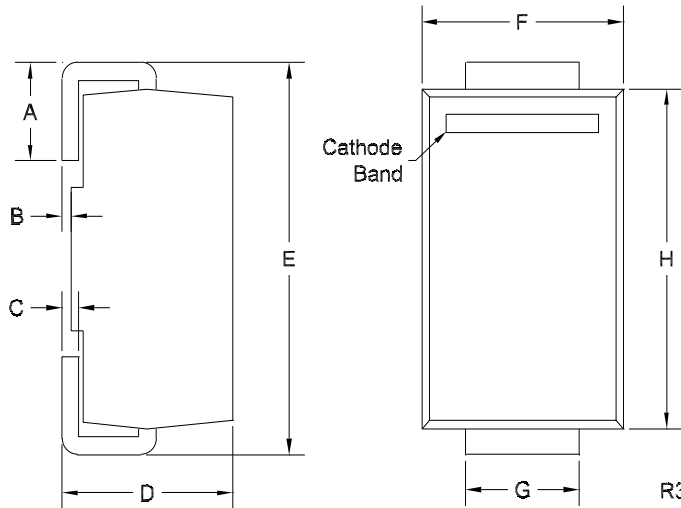
Both leads are Anodes.

# Package Details

## SMA Case



### Mechanical Drawing



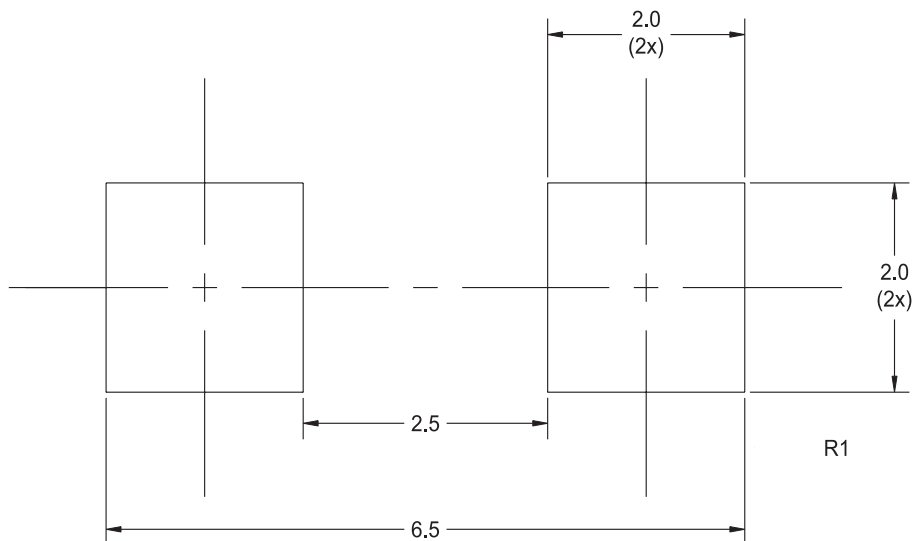
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SMA (REV:R3)

**Lead Code:**  
Reference individual  
device datasheet.

**Part Marking:** 4-6 Character Alpha/Numeric Code

### Mounting Pad Geometry (Dimensions in mm)



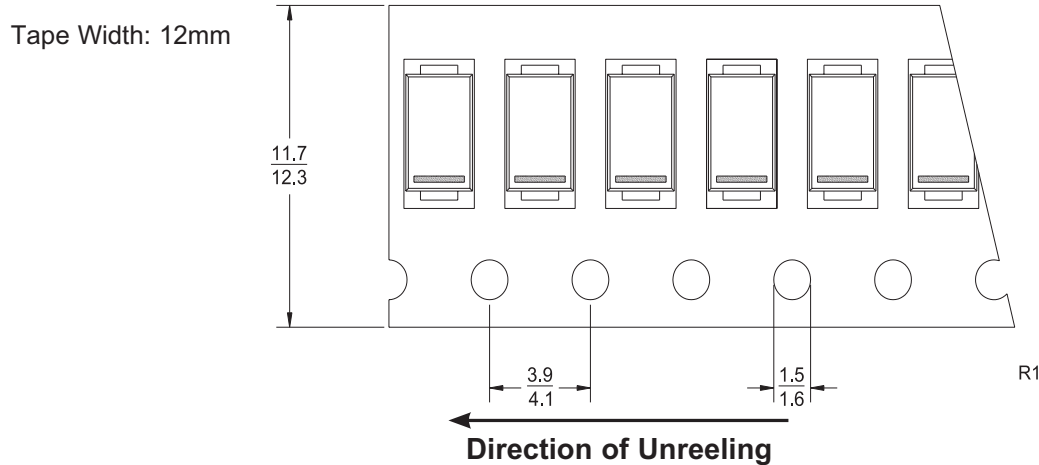
R4(26-June 2023)

# Package Details

## SMA Case



### Tape Dimensions and Orientation (Dimensions in mm)



Devices are taped in accordance with Electronic Industries Association Standard EIA-481-D

### Packaging Base

13" Reel = 5,000 pcs.

### Reel Labeling Information

Each reel is labeled with the following information:

Central Part Number, Customer Part Number, Purchase Order Number, Quantity, Lot Number, Date Code and Ship Date.

### Reel Packing Information

Reel Size	Reels per Box (Maximum)	Parts per Box (Maximum)	Box Dimensions		Shipping Weight (Max.)	
			INCH	CM	LB	KG
13"	5	25,000	15x4x15	38x10x38	9	5
	14	70,000	15x15x9	38x38x23	23	11
	26	130,000	15x15x18	38x38x46	42	20

### Ordering Information

- For devices taped and reeled on 13" reels, add TR13 suffix to part number.
- All SMDs are available in small quantities for prototype and manual placement applications.

R4(26-June 2023)

# Material Composition Specification

## SMA Case



Device average mass ..... 67.9 mg  
 Fluctuation margin ..... +/-10%

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	1.12%	0.76	Si	7440-21-3	1.12%	0.76	11,193
leadframe	copper	40.64%	27.59	Cu	7440-50-8	40.64%	27.59	406,351
die attach	high temperature solder paste	3.31%	2.25	Pb	7439-92-1	3.06%	2.081	30,649
				Sn	7440-31-5	0.17%	0.113	1,664
				Ag	7440-22-4	0.08%	0.056	825
encapsulation*	EMC	54.04%	36.69	silica	7631-86-9	36.75%	24.95	367,468
				epoxy resin	29690-82-2	10.81%	7.338	108,075
				phenol resin	9003-35-4	5.4%	3.669	54,038
				Sb <sub>2</sub> O <sub>3</sub>	1309-64-4	0.54%	0.367	5,405
				Br	7726-95-6	0.54%	0.367	5,405
	EMC GREEN	54.04%	36.69	silica (fused)	60676-86-0	41.61%	28.253	416,116
				epoxy resin	29690-82-2	5.4%	3.669	54,038
				phenol resin	9003-35-4	5.24%	3.559	52,418
				carbon black	1333-86-4	0.16%	0.11	1,620
				metal hydroxide	1309-42-8	1.62%	1.1	16,201
plating**	tin/lead process	0.89%	0.61	Sn	7440-31-5	0.71%	0.485	7,143
				Pb	7439-92-1	0.18%	0.121	1,782
	matte tin	0.89%	0.61	Sn	7440-31-5	0.89%	0.606	8,925

\*EMC GREEN molding compound is Halogen-Free.

\*\*For Lead Free plating, add suffix "PB FREE" to part number.

For Tin/Lead plating, add suffix "TIN/LEAD" to part number.

No suffix designation allows for the supply of either lead-free or tin/lead plated product depending on availability.

### Disclaimer

The information provided in this Material Composition data sheet is, to the best of our knowledge, correct. However, there is no guarantee to completeness or accuracy, as some information is derived from data sources outside the company.

R5 (16-July 2018)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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Main Fax: (631) 435-1824  
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[www.centrasemi.com](http://www.centrasemi.com)

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[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

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# Product End of Life Notification

<b>PDN ID:</b>	PDN01285
<b>Notification Date:</b>	2/10/26
<b>Last Buy Date:</b>	Stock Only
<b>Last Shipment Date</b>	Stock Only

<https://www.centrasemi.com>

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. Orders can only be accepted for products with available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor, LLC

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DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.



# Product End of Life Notification

<https://www.centalsemi.com>

<b>PDN ID:</b>	PDN01285
<b>Notification Date:</b>	2/10/26
<b>Last Buy Date:</b>	Stock Only
<b>Last Shipment Date</b>	Stock Only

Summary: The SMA6J43CA Transient Voltage Suppressor is discontinued and now classified as End Life (EOL).

Although Central Semiconductor makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

**\* All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

<b>Central Part Number</b>	<b>Suggested Replacement</b>
SMA6J43CA BK	N/A
SMA6J43CA TR13	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit <https://my.centalsemi.com/submit-inquiry?type=ER> to submit an online inquiry.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.