

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

SA5.0A THRU SA170A

UNI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSOR  
500 WATTS, 5.0 THRU 170 VOLTS

DO-15 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR SA5.0A Series types are Uni-Directional Glass Passivated Junction Transient Voltage Suppressors designed to protect voltage sensitive components from high voltage transients. **THIS DEVICE IS MANUFACTURED WITH A GLASS PASSIVATED CHIP FOR OPTIMUM RELIABILITY.**

Note: For Bi-directional devices, please refer to the SA5.0CA Series data sheet.

## MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

	SYMBOL		UNITS
Peak Power Dissipation	P <sub>DM</sub>	500	W
Peak Forward Surge Current (JEDEC Method)	I <sub>FSM</sub>	70	A
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

TYPE NO.	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE			MAXIMUM REVERSE LEAKAGE @ V <sub>RWM</sub>	MAXIMUM CLAMPING VOLTAGE @ I <sub>PPM</sub>	MAXIMUM PEAK PULSE CURRENT	MARKING CODE
		V <sub>BR</sub>		@ I <sub>T</sub>				
		VOLTS						
		V <sub>RWM</sub>						
VOLTS	MIN	MAX	mA	I <sub>R</sub>	V <sub>C</sub>	I <sub>PPM</sub>		
				μA	VOLTS	A		
SA5.0A	5.0	6.40	7.00	10	600	9.2	54.3	SA5.0A
SA6.0A	6.0	6.67	7.37	10	600	10.3	48.5	SA6.0A
SA6.5A	6.5	7.22	7.98	10	400	11.2	44.7	SA6.5A
SA7.0A	7.0	7.78	8.60	10	150	12.0	41.7	SA7.0A
SA7.5A	7.5	8.33	9.21	1.0	50	12.9	38.8	SA7.5A
SA8.0A	8.0	8.89	9.83	1.0	25	13.6	36.7	SA8.0A
SA8.5A	8.5	9.44	10.40	1.0	10	14.4	34.7	SA8.5A
SA9.0A	9.0	10.0	11.10	1.0	5.0	15.4	32.5	SA9.0A
SA10A	10	11.10	12.30	1.0	3.0	17.0	29.4	SA10A
SA11A	11	12.20	13.50	1.0	3.0	18.2	27.4	SA11A
SA12A	12	13.30	14.70	1.0	3.0	19.9	25.1	SA12A
SA13A	13	14.40	15.90	1.0	3.0	21.5	23.2	SA13A

(Continued on Reverse Side)

## ELECTRICAL CHARACTERISTICS Continued

TYPE NO.	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE			MAXIMUM REVERSE LEAKAGE @ $V_{RWM}$	MAXIMUM CLAMPING VOLTAGE @ $I_{PPM}$	MAXIMUM PEAK PULSE CURRENT $I_{PPM}$	MARKING CODE
		$V_{BR}$		@ $I_T$				
	$V_{RWM}$	VOLTS			$I_R$	$V_C$		
	VOLTS	MIN	MAX	mA	$\mu A$	VOLTS	A	
SA14A	14	15.60	17.20	1.0	3.0	23.2	21.5	SA14A
SA15A	15	16.70	18.50	1.0	3.0	24.4	20.6	SA15A
SA16A	16	17.80	19.70	1.0	3.0	26.0	19.2	SA16A
SA17A	17	18.90	20.90	1.0	3.0	27.6	16.1	SA17A
SA18A	18	20.00	22.10	1.0	3.0	29.2	17.2	SA18A
SA20A	20	22.20	24.50	1.0	3.0	32.4	15.4	SA20A
SA22A	22	24.40	26.90	1.0	3.0	35.5	14.1	SA22A
SA24A	24	26.70	29.50	1.0	3.0	38.9	12.8	SA24A
SA26A	26	28.90	31.90	1.0	3.0	42.1	11.9	SA26A
SA28A	28	31.10	34.40	1.0	3.0	45.4	11.0	SA28A
SA30A	30	33.30	36.80	1.0	3.0	48.4	10.3	SA30A
SA33A	33	36.70	40.60	1.0	3.0	53.3	9.4	SA33A
SA36A	36	40.00	44.20	1.0	3.0	58.1	8.6	SA36A
SA40A	40	44.40	49.10	1.0	3.0	64.5	7.8	SA40A
SA43A	43	47.80	52.80	1.0	3.0	69.4	7.2	SA43A
SA45A	45	50.00	55.30	1.0	3.0	72.7	6.9	SA45A
SA48A	48	53.30	58.90	1.0	3.0	77.4	6.5	SA48A
SA51A	51	56.70	62.70	1.0	3.0	82.4	6.1	SA51A
SA54A	54	60.00	66.30	1.0	3.0	87.1	5.7	SA54A
SA58A	58	64.40	71.20	1.0	3.0	93.6	5.3	SA58A
SA60A	60	66.70	73.70	1.0	3.0	96.8	5.2	SA60A
SA64A	64	71.10	78.60	1.0	3.0	103	4.9	SA64A
SA70A	70	77.80	86.00	1.0	3.0	113	4.4	SA70A
SA75A	75	83.30	92.10	1.0	3.0	121	4.1	SA75A
SA78A	78	86.70	95.80	1.0	3.0	126	4.0	SA78A
SA85A	85	94.40	104.00	1.0	3.0	137	3.6	SA85A
SA90A	90	100.00	111.00	1.0	3.0	146	3.4	SA90A
SA100A	100	111.00	123.00	1.0	3.0	162	3.1	SA100A
SA110A	110	122.00	135.00	1.0	3.0	177	2.8	SA110A
SA120A	120	133.00	147.00	1.0	3.0	193	2.0	SA120A
SA130A	130	144.00	159.00	1.0	3.0	209	2.4	SA130A
SA150A	150	167.00	185.00	1.0	3.0	243	2.1	SA150A
SA160A	160	178.00	197.00	1.0	3.0	259	1.9	SA160A
SA170A	170	189.00	209.0	1.0	3.0	275	1.8	SA170A

## 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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**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)



<http://www.centrasemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01020
<b>Notification Date:</b>	2/03/16
<b>Last Buy Date:</b>	8/03/16
<b>Last Shipment Date</b>	2/03/17

Summary:500 Watt Transient Voltage Supressors manufactured in the DO-15 package are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various 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 Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
SA14A BK	P6KE16A BK
SA14A TR	P6KE16A BK
SA18CA TR	P6KE22CA BK
SA20A BK	P6KE24A TR
SA20A TR	P6KE24A TR
SA20CA TR	P6KE24CA BK
SA30A BK	P6KE36A BK
SA30A TR	P6KE36A BK
SA30CA BK	P6KE36CA TR
SA33CA BK	P6KE39CA BK
SA40A TR	P6KE47A BK
SA43A TR	P6KE51A BK
SA5.0A BK	P6KE6.8A BK
SA6.0A BK	P6KE6.8A BK
SA6.0A TR	P6KE6.8A BK
SA6.5CA BK	P6KE7.5CA BK
SA6.5CA TR	P6KE7.5A BK

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. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. 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.