

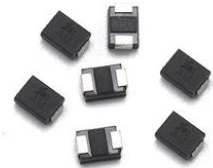


## DO-214AA(SMBJ) Transient Suppression Diode (TVS) SMBJ58CA Components

Our Product Introduction

### Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: SMBJ58CA
- Minimum Order Quantity: 5000PCS
- Price: Negotiable
- Packaging Details: tape reel
- Delivery Time: 1-2weeks
- Payment Terms: T/T, Western Union, MoneyGram
- Supply Ability: 1000000pcs



### Product Specification

- Component Name: TVS Diodes
- SMBJ58CA Package Type: DO-214AA/SMB
- SMBJ58CA V<sub>rw</sub>m: 58V
- V<sub>br</sub>@I<sub>t</sub> (Min.): 64.4V
- SMBJ58CA V<sub>br</sub>@I<sub>t</sub> (Max.): 71.2V
- SMBJ58CA I<sub>t</sub>: 1mA
- V<sub>c</sub>@I<sub>pp</sub>: 93.6V
- SMBJ58CA I<sub>pp</sub>: 6.2A

for more products please visit us on [socaydiode.com](http://socaydiode.com)

## Product Description

### DO-214AA(SMBJ) Transient Suppression Diode (TVS) SMBJ58CA Components

**Transient Suppression Diode (TVS) SMBJ58CA DATASHEET: [SMBJ\\_v88.2.pdf](#)**

#### Transient Suppression Diode (TVS) SMBJ58CA Explain:

SOCAY's main products include a full range of Ceramic Gas Discharge Tubes (GDT), Transient Suppression Diodes (TVS Diodes), ESD Suppressor, Thyristor Surge Suppressors (TSS), Spark Gap Protectors (SPG), Varistors (MOV), Chip Varistors (MLV), PTC Resettable Fuse, Negative Temperature Coefficient thermistors (NTC Thermistors), Chip Bead, Schottky Diodes, Zener Diode, etc. From circuit design to product testing (and provide test reports), we will provide you with one-stop services in the field of circuit protection. With excellent quality and service, SOCAY has won extensive praise from customers and respect from the industry. Transient Suppression Diode (TVS) SMBJ58CA's Peak Pulse Power Dissipation with a 10/1000μs waveform is 600W.

The product adopts SMB surface mount technology, which has extremely fast response time (sub-nanosecond level) and fairly high surge absorption capability. Designed to protect sensitive electronic equipment in circuit applications from voltage transients caused by lightning strikes and other transient voltage events.

characteristic:

- > Adopts standard surface mount SMB package
- > Peak pulse power at 10×1000μs waveform is 1500W, repetition frequency (duty cycle): 0.01%
- > Fast response time: typically less than 1.0ps from 0 volts to VBR minimum
- > Excellent clamping capability
- > Small leakage current
- > High temperature welding guaranteed: terminal 260°C/40 seconds
- > Halogen-free and compliant with RoHS and Reach test standards

application:

- > i/o interface
- > ac/dc power supply
- > low frequency signal transmission line (rs232, rs485, etc.)

Part Number		Marking		Reverse Stand-Off Voltage $V_{R0V}$ (V)	Breakdown Voltage $V_{BR}$ (V) @ $I_R$		Test Current $I_R$ (mA)	Maximum Clamping Voltage $V_C$ @ $I_{CP}$ (V)	Maximum Peak Pulse Current $I_{PP}$ (A)	Maximum Reverse Leakage $I_R$ @ $V_{R0V}$ (μA)
Uni	Bi	Uni	Bi		MIN	MAX				
SMBJ3.3A	—	K1	—	3.3	5.20	6.50	10	8.0	75.00	600
SMBJ5.0A	SMBJ5.0CA	KE	AE	5.0	6.40	7.00	10	9.2	65.22	800
SMBJ6.0A	SMBJ6.0CA	KG	AG	6.0	6.67	7.37	10	10.3	58.25	800
SMBJ6.5A	SMBJ6.5CA	KK	AK	6.5	7.22	7.98	10	11.2	53.57	500
SMBJ7.0A	SMBJ7.0CA	KM	AM	7.0	7.78	8.60	10	12.0	50.00	200
SMBJ7.5A	SMBJ7.5CA	KP	AP	7.5	8.33	9.21	1	12.9	46.51	100
SMBJ8.0A	SMBJ8.0CA	KR	AR	8.0	8.89	9.83	1	13.6	44.12	50
SMBJ8.5A	SMBJ8.5CA	KT	AT	8.5	9.44	10.40	1	14.4	41.67	10
SMBJ9.0A	SMBJ9.0CA	KV	AV	9.0	10.00	11.10	1	15.4	38.96	5
SMBJ10A	SMBJ10CA	KX	AX	10.0	11.10	12.30	1	17.0	35.29	5
SMBJ11A	SMBJ11CA	KZ	WZ	11.0	12.20	13.50	1	18.2	32.97	5
SMBJ12A	SMBJ12CA	LE	BE	12.0	13.30	14.70	1	19.9	30.15	5
SMBJ13A	SMBJ13CA	LG	BG	13.0	14.40	15.90	1	21.5	27.91	5
SMBJ14A	SMBJ14CA	LK	BK	14.0	15.60	17.20	1	23.2	25.86	5
SMBJ15A	SMBJ15CA	LM	BM	15.0	16.70	18.50	1	24.4	24.59	5
SMBJ16A	SMBJ16CA	LP	BP	16.0	17.80	19.70	1	26.0	23.08	5
SMBJ17A	SMBJ17CA	LR	BR	17.0	18.90	20.90	1	27.6	21.74	5
SMBJ18A	SMBJ18CA	LT	BT	18.0	20.00	22.10	1	29.2	20.55	5
SMBJ19A	SMBJ19CA	LB	BB	19.0	21.10	23.30	1	30.8	19.49	5
SMBJ20A	SMBJ20CA	LV	BV	20.0	22.20	24.50	1	32.4	18.52	5
SMBJ22A	SMBJ22CA	LX	BX	22.0	24.40	26.90	1	35.5	16.90	5
SMBJ24A	SMBJ24CA	LZ	BZ	24.0	26.70	29.50	1	38.9	15.42	5
SMBJ26A	SMBJ26CA	ME	CE	26.0	28.90	31.90	1	42.1	14.25	5
SMBJ28A	SMBJ28CA	MG	CG	28.0	31.10	34.40	1	45.4	13.22	5
SMBJ30A	SMBJ30CA	MK	CK	30.0	33.30	36.80	1	48.4	12.40	5
SMBJ33A	SMBJ33CA	MM	CM	33.0	36.70	40.60	1	53.3	11.26	5
SMBJ36A	SMBJ36CA	MP	CP	36.0	40.00	44.20	1	58.1	10.33	5
SMBJ40A	SMBJ40CA	MR	CR	40.0	44.40	49.10	1	64.5	9.30	5
SMBJ43A	SMBJ43CA	MT	CT	43.0	47.80	52.80	1	69.4	8.65	5

# Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted) (Continue)

Part Number		Marking		Reverse Stand-Off Voltage V <sub>RRM</sub> (V)	Breakdown Voltage V <sub>BR</sub> (V) @I <sub>R</sub>		Test Current I <sub>T</sub> (mA)	Maximum Clamping Voltage V <sub>C</sub> @I <sub>CC</sub> (V)	Maximum Peak Pulse Current I <sub>PPM</sub> (A)	Maximum Reverse Leakage I <sub>R</sub> @V <sub>RRM</sub> (μA)
Uni	BI	Uni	BI		MIN	MAX				
SMBJ45A	SMBJ45CA	MV	CV	45.0	50.00	55.30	1	72.7	8.25	5
SMBJ48A	SMBJ48CA	MX	CX	48.0	53.30	58.90	1	77.4	7.75	5
SMBJ51A	SMBJ51CA	MZ	CZ	51.0	56.70	62.70	1	82.4	7.28	5
SMBJ54A	SMBJ54CA	NE	DE	54.0	60.00	66.30	1	87.1	6.89	5
SMBJ58A	SMBJ58CA	NG	DG	58.0	64.40	71.20	1	93.6	6.41	5
SMBJ60A	SMBJ60CA	NK	DK	60.0	66.70	73.70	1	96.8	6.20	5
SMBJ64A	SMBJ64CA	NM	DM	64.0	71.10	78.60	1	103.0	5.83	5
SMBJ70A	SMBJ70CA	NP	DP	70.0	77.80	86.00	1	113.0	5.31	5
SMBJ75A	SMBJ75CA	NR	DR	75.0	83.30	92.10	1	121.0	4.96	5
SMBJ78A	SMBJ78CA	NT	DT	78.0	86.70	95.80	1	126.0	4.76	5
SMBJ80A	SMBJ80CA	NB	DB	80.0	88.80	97.60	1	129.6	4.63	5
SMBJ85A	SMBJ85CA	NV	DV	85.0	94.40	104.00	1	137.0	4.38	5
SMBJ90A	SMBJ90CA	NX	DX	90.0	100.00	111.00	1	146.0	4.11	5
SMBJ100A	SMBJ100CA	NZ	DZ	100.0	111.00	123.00	1	162.0	3.70	5
SMBJ110A	SMBJ110CA	PE	EE	110.0	122.00	135.00	1	177.0	3.39	5
SMBJ120A	SMBJ120CA	PG	EG	120.0	133.00	147.00	1	193.0	3.11	5
SMBJ130A	SMBJ130CA	PK	EK	130.0	144.00	159.00	1	209.0	2.87	5
SMBJ140A	SMBJ140CA	PB	EB	140.0	155.00	171.00	1	226.8	2.65	5
SMBJ150A	SMBJ150CA	PM	EM	150.0	167.00	185.00	1	243.0	2.47	5
SMBJ160A	SMBJ160CA	PP	EP	160.0	178.00	197.00	1	259.0	2.32	5
SMBJ170A	SMBJ170CA	PR	ER	170.0	189.00	209.00	1	275.0	2.18	5
SMBJ180A	SMBJ180CA	PT	ET	180.0	201.00	220.00	1	291.6	2.06	5
SMBJ190A	SMBJ190CA	PV	EV	190.0	211.00	232.00	1	307.8	1.95	5
SMBJ200A	SMBJ200CA	PW	EW	200.0	224.00	247.00	1	324.0	1.85	5
SMBJ220A	SMBJ220CA	PX	EX	220.0	246.00	272.00	1	356.0	1.69	5
SMBJ250A	SMBJ250CA	PZ	EZ	250.0	279.00	309.00	1	405.0	1.48	5
SMBJ300A	SMBJ300CA	QE	FE	300.0	335.00	371.00	1	486.0	1.23	5
SMBJ350A	SMBJ350CA	QG	FG	350.0	391.00	432.00	1	567.0	1.06	5
SMBJ400A	SMBJ400CA	QK	FK	400.0	447.00	494.00	1	648.0	0.93	5
SMBJ440A	SMBJ440CA	QM	FM	440.0	492.00	543.00	1	713.0	0.84	5

## Ratings and Characteristic Curves (T<sub>A</sub>=25°C unless otherwise noted)

Figure 1 - Peak Pulse Power Rating Curve

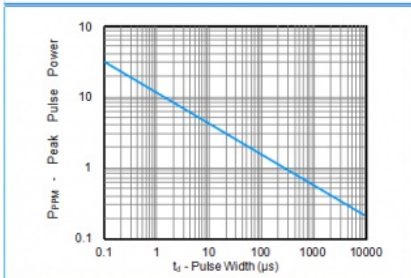


Figure 2 - Pulse Derating Curve

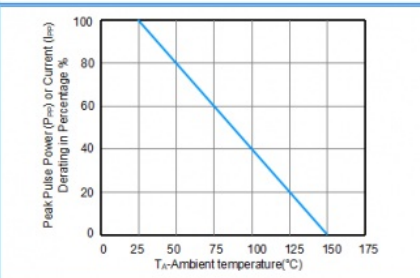


Figure 3 - Pulse Waveform

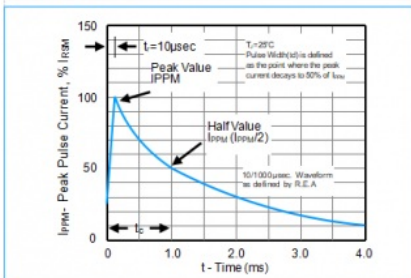


Figure 4 - Typical Junction Capacitance

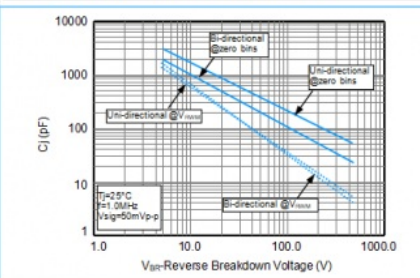




Figure 5 - Steady State Power Derating Curve

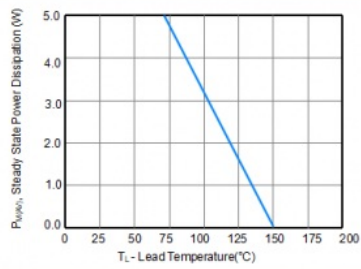
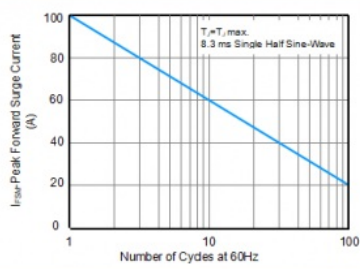
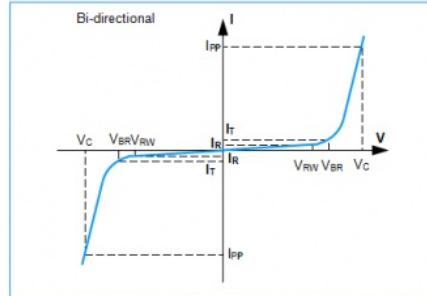
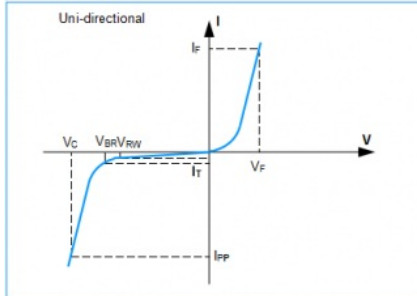


Figure 6 - Maximum Non-Repetitive Surge Current



## I-V Curve Characteristics



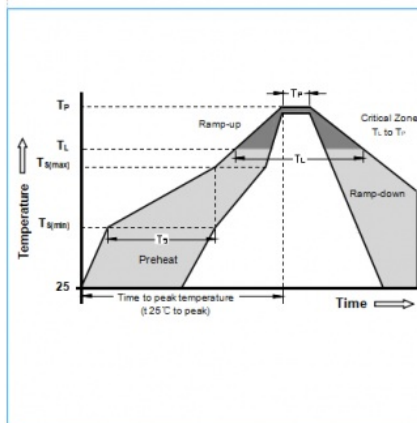
## Physical Specifications

Weight	0.003 ounce, 0.093 gram
Case	JEDEC DO-214AA Molded Plastic over glass passivated junction
Polarity	Color band denotes cathode except Bipolar
Terminal	Matte Tin-plated leads, Solderable per JESD22-B102D

## Environmental Specifications

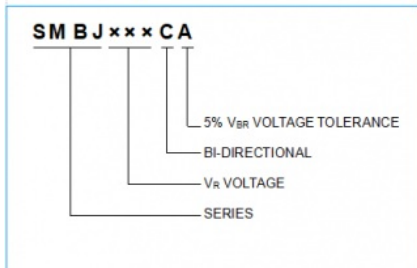
Temperature Cycle	JESD22-A104
Pressure Cooker	JESD22-A102
High Temp. Storage	JESD22-A103
HTRB	JESD22-A108
Thermal Shock	JESD22-A106

## Soldering Parameters

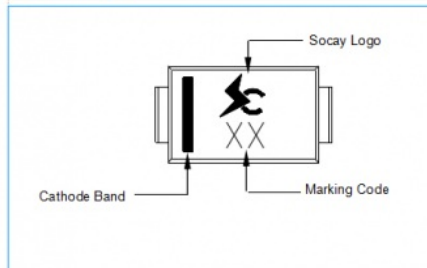


Reflow Condition	Lead-free assembly
Pre Heat	-Temperature Min ( $T_{S(min)}$ ) 150°C
	-Temperature Max ( $T_{S(max)}$ ) 200°C
	-Time (min to max) ( $T_S$ ) 60 - 180 Seconds
Average ramp up rate (Liquidus Temp $T_L$ to peak)	3°C/second max
$T_{S(max)}$ to $T_L$ - Ramp-up Rate	3°C/second max
Reflow	-Temperature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

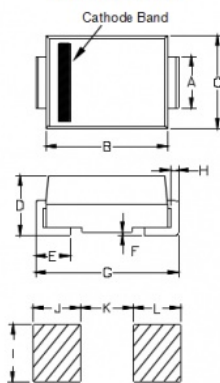


## Part Marking



## Dimensions

DO-214AA (SMB)

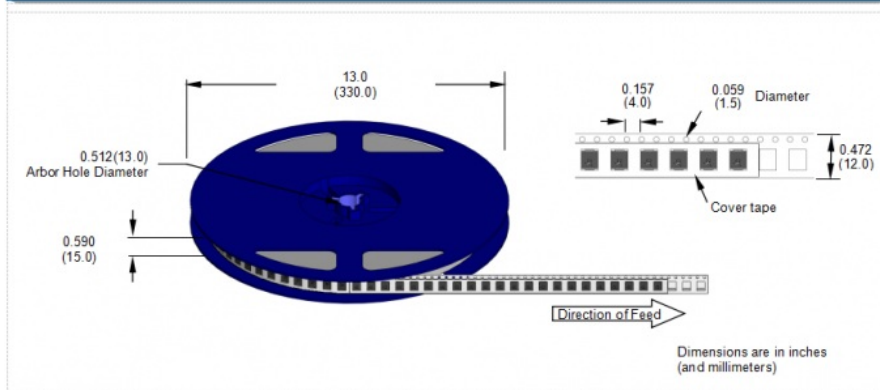


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.073	0.087	1.85	2.21
B	0.167	0.191	4.25	4.85
C	0.130	0.155	3.30	3.94
D	0.085	0.104	2.15	2.65
E	0.030	0.060	0.75	1.52
F	--	0.008	--	0.203
G	0.200	0.220	5.08	5.59
H	0.006	0.012	0.15	0.31
I	0.089	-	2.26	-
J	0.085	-	2.10	-
K	-	0.107	-	2.74
L	0.085	-	2.10	-

## Packaging

Part Number	Component Package	Reel (PCS)	Per Carton (PCS)	Packaging Option	Reel Diameters (mm)
SMBJXXXXX	DO-214AA (SMB)	3000	48000	Tape & Reel -15mm*13"tape	330.0

## Tape and Reel Specifications



**Also, Please email me for quotation if you have needs for our electronic components below.**

Gas Discharge Tube	PTC Resettable Fuse	NTC Thermistor	Zener Diodes
TVS Diodes	VARISTOR	Rectifier diodes	Switching Diodes
TVS Arrays (ESD Suppressor)	Thyristor Surge Suppressors	Schottky diodes.....	

 **SOCAY® Shenzhen Socay Electronics Co., Ltd.**

+8618126201429

sylvia@socay.com

socaydiode.com

4/F, Block C, HeHengXing Science & Technology Park, 19 MinQing Road, LongHua District, Shenzhen City, Guangdong Province, China