JXND ELECTRONICS CO.,LTD

Transient Voltage Suppressor
4.0SMDJ5.0A(CA)-4.0SMDJ170A(CA)

Power 4000Watts
Stand-Off Voltage: 5.0V~170V

Pinning

1.Cathode	2.Anode





DO-214AB/SMC

FEATURES

- Peak power dissipation 4000w @10 x 1000 us Pulse
- Low profile package.
- Excellent clamping capability.
- Typical I_R less than 2uA when V_{BR} above 12V.
- Glass passivated junction.
- Fast response time: typically less than 1.0ps from 0 Volts to BV min
- IEC 61000-4-2 ESD 30KV(Air), 30KV(Contact)
- ESD protection of data lines in accordance with IEC 61000-4-2
- EFT protection of data lines in accordance with IEC 61000-4-4
- Halogen free and ROHS compliant
- Lead-free finish

MECHANICAL CHARACTERISTICS

- Case: SMC (DO-214AB) Molded Plastic over glass passivated junction.
- Mounting Position: Any
- Polarity: by cathode band denotes UNI-directional device, none cathode band denotes bi-directional device.
- Terminal: Solder plated

Maximum Ratings and Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 us waveform (Note 1, 2, FIG.1)	P_{PPM}	4000	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave (Note 2. 3)	I_{FSM}	300	A
Peak Pulse Current of on 10/1000us Waveform (Note 1, FIG.3)	I_{PPM}	See Next Table	A
Power dissipation on Infinite heat sink at T_L=50 °C	P_D	6.5	W
Operating Junction Temperature and Storage Temperature Range	T_J,T_{STG}	-65 to +150	°C

NOTES:
1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
2.Mounted on 8.0x8.0mm^2 (0.03mm thick) Copper Pads to each terminal.
3.Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

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Transient Voltage Suppressor
4.0SMDJ5.0A(CA)-4.0SMDJ170A(CA)

Electrical Specification @ Ta=25°C

Type Number		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
(Uni)	(Bi)	(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
4.0SMDJ5.0A	4.0SMDJ5.0CA	HDE	IDE	5.0	6.40	7.00	10	9.2	554.3	800
4.0SMDJ6.0A	4.0SMDJ6.0CA	HDG	IDG	6.0	6.67	7.37	10	10.3	495.1	800
4.0SMDJ6.5A	4.0SMDJ6.5CA	HDK	IDK	6.5	7.22	7.98	10	11.2	455.4	500
4.0SMDJ7.0A	4.0SMDJ7.0CA	HDM	IDM	7.0	7.78	8.60	10	12.0	425.0	200
4.0SMDJ7.5A	4.0SMDJ7.5CA	HDP	IDP	7.5	8.33	9.21	1	12.9	395.3	100
4.0SMDJ8.0A	4.0SMDJ8.0CA	HDR	IDR	8.0	8.89	9.83	1	13.6	375.0	50
4.0SMDJ8.5A	4.0SMDJ8.5CA	HDT	IDT	8.5	9.44	10.40	1	14.4	354.2	20
4.0SMDJ9.0A	4.0SMDJ9.0CA	HDV	IDV	9.0	10.00	11.10	1	15.4	331.2	10
4.0SMDJ10A	4.0SMDJ10CA	HDX	IDX	10.0	11.10	12.30	1	17.0	300.0	5
4.0SMDJ11A	4.0SMDJ11CA	HDZ	IDZ	11.0	12.20	13.50	1	18.2	280.2	2
4.0SMDJ12A	4.0SMDJ12CA	HEE	IEE	12.0	13.30	14.70	1	19.9	256.3	2
4.0SMDJ13A	4.0SMDJ13CA	HEG	IEG	13.0	14.40	15.90	1	21.5	237.2	2
4.0SMDJ14A	4.0SMDJ14CA	HEK	IEK	14.0	15.60	17.20	1	23.2	219.8	2
4.0SMDJ15A	4.0SMDJ15CA	HEM	IEM	15.0	16.70	18.50	1	24.4	209.0	2
4.0SMDJ16A	4.0SMDJ16CA	HEP	IEP	16.0	17.80	19.70	1	26.0	196.2	2
4.0SMDJ17A	4.0SMDJ17CA	HER	IER	17.0	18.90	20.90	1	27.6	184.8	2
4.0SMDJ18A	4.0SMDJ18CA	HET	IET	18.0	20.00	22.10	1	29.2	174.7	2
4.0SMDJ20A	4.0SMDJ20CA	HEV	IEV	20.0	22.20	24.50	1	32.4	157.4	2
4.0SMDJ22A	4.0SMDJ22CA	HEX	IEX	22.0	24.40	26.90	1	35.5	143.7	2
4.0SMDJ24A	4.0SMDJ24CA	HEZ	IEZ	24.0	26.70	29.50	1	38.9	131.1	2
4.0SMDJ26A	4.0SMDJ26CA	HFE	IFE	26.0	28.90	31.90	1	42.1	121.1	2
4.0SMDJ28A	4.0SMDJ28CA	HFG	IFG	28.0	31.10	34.40	1	45.4	112.3	2
4.0SMDJ30A	4.0SMDJ30CA	HFK	IFK	30.0	33.30	36.80	1	48.4	105.4	2
4.0SMDJ33A	4.0SMDJ33CA	HFM	IFM	33.0	36.70	40.60	1	53.3	95.7	2
4.0SMDJ36A	4.0SMDJ36CA	HFP	IFP	36.0	40.00	44.20	1	58.1	87.8	2
4.0SMDJ40A	4.0SMDJ40CA	HFR	IFR	40.0	44.40	49.10	1	64.5	79.1	2
4.0SMDJ43A	4.0SMDJ43CA	HFT	IFT	43.0	47.80	52.80	1	69.4	73.5	2
4.0SMDJ45A	4.0SMDJ45CA	HFV	IFV	45.0	50.00	55.30	1	72.7	70.2	2
4.0SMDJ48A	4.0SMDJ48CA	HFX	IFX	48.0	53.30	58.90	1	77.4	65.9	2
4.0SMDJ51A	4.0SMDJ51CA	HFZ	IFZ	51.0	56.70	62.70	1	82.4	61.9	2
4.0SMDJ54A	4.0SMDJ54CA	HGE	IGE	54.0	60.00	66.30	1	87.1	58.6	2
4.0SMDJ58A	4.0SMDJ58CA	HGG	IGG	58.0	64.40	71.20	1	93.6	54.5	2
4.0SMDJ60A	4.0SMDJ60CA	HGK	IGK	60.0	66.70	73.70	1	96.8	52.7	2
4.0SMDJ64A	4.0SMDJ64CA	HGM	IGM	64.0	71.10	78.60	1	103.0	49.5	2
4.0SMDJ70A	4.0SMDJ70CA	HGP	IGP	70.0	77.80	86.00	1	113.0	45.1	2
4.0SMDJ75A	4.0SMDJ75CA	HGR	IGR	75.0	83.30	92.10	1	121.0	42.1	2

※ For Bi-directional type having V_{RWM} of 10 Volts and less, the I_R limit is double

※ For parts without A, the VBR is ± 10% and VC is 5% higher than with A parts.

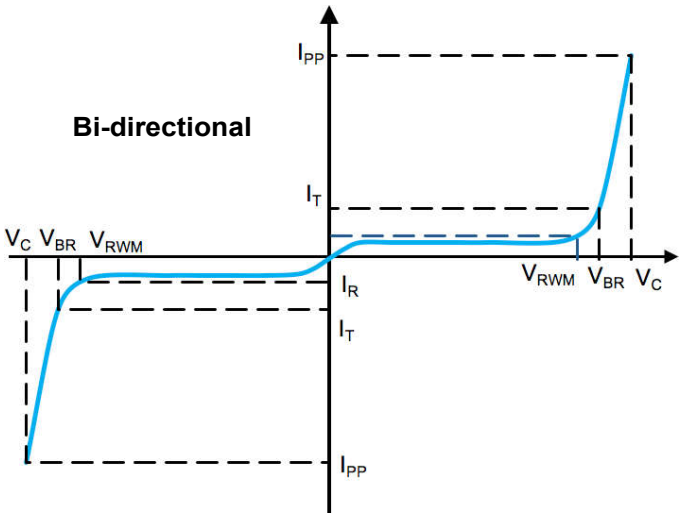
Electrical Specification @ Ta=25°C

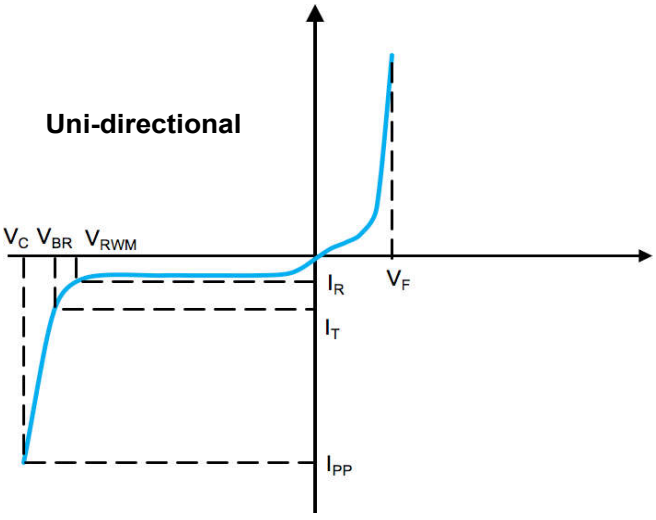
Type Number		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
(Uni)	(Bi)	(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
4.0SMDJ78A	4.0SMDJ78CA	HGT	IGT	78.0	86.70	95.80	1	126.0	40.5	2
4.0SMDJ85A	4.0SMDJ85CA	HGV	IGV	85.0	94.40	104.00	1	137.0	37.2	2
4.0SMDJ90A	4.0SMDJ90CA	HGX	IGX	90.0	100.00	111.00	1	146.0	34.9	2
4.0SMDJ100A	4.0SMDJ100CA	HGZ	IGZ	100.0	111.00	123.00	1	162.0	31.5	2
4.0SMDJ110A	4.0SMDJ110CA	HHE	IHE	110.0	122.00	135.00	1	177.0	28.8	2
4.0SMDJ120A	4.0SMDJ120CA	HHG	IHG	120.0	133.00	147.00	1	193.0	26.4	2
4.0SMDJ130A	4.0SMDJ130CA	HHK	IHK	130.0	144.00	159.00	1	209.0	24.4	2
4.0SMDJ150A	4.0SMDJ150CA	HHM	IHM	150.0	167.00	185.00	1	243.0	21.0	2
4.0SMDJ160A	4.0SMDJ160CA	HHP	IHP	160.0	178.00	197.00	1	259.0	19.7	2
4.0SMDJ170A	4.0SMDJ170CA	HHR	IHR	170.0	189.00	209.00	1	275.0	18.5	2

※ For Bi-directional type having V_{RWM} of 10 Volts and less, the I_R limit is double.

※ For parts without A, the V_{BR} is ± 10% and V_C is 5% higher than with A parts.

I-V Curve Characteristics





P_{PPM} **Peak Pulse Power Dissipation** - Max power dissipation

V_{RWM} **Reverse Stand-off Voltage** - Maximum voltage that can be applied to TVS without operation

V_{BR} **Breakdown Voltage** – Maximum voltage that flows though the TVS at a specified current (I_T)

V_C **Clamping Voltage** – Peak voltage measured across the TVS at a specified I_{PPM} (peak impulse current)

I_R **Reverse Leakage Current** – Current measured at V_R

V_F **Forward Voltage Drop for Uni-directional**

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

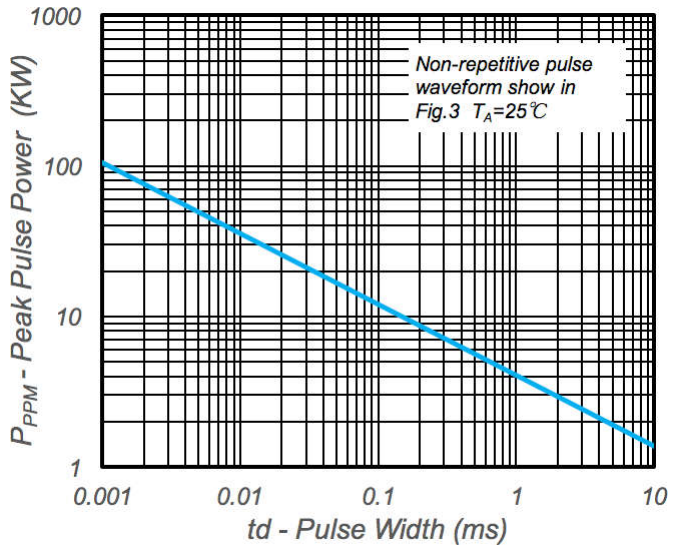


Fig.1 - Peak Pulse Power Rating

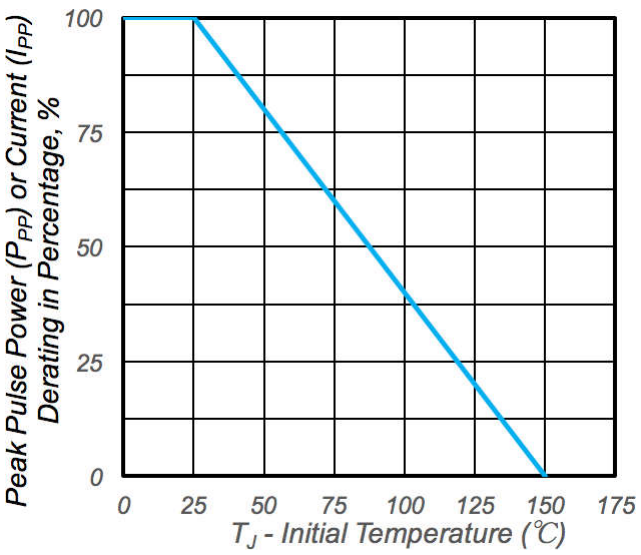


Fig.2 - Pulse Derating Cure

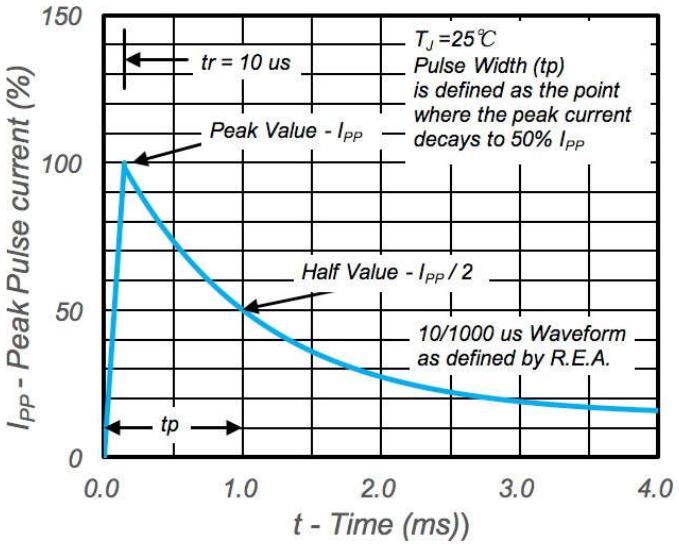


Fig.3 – Pulse Waveform

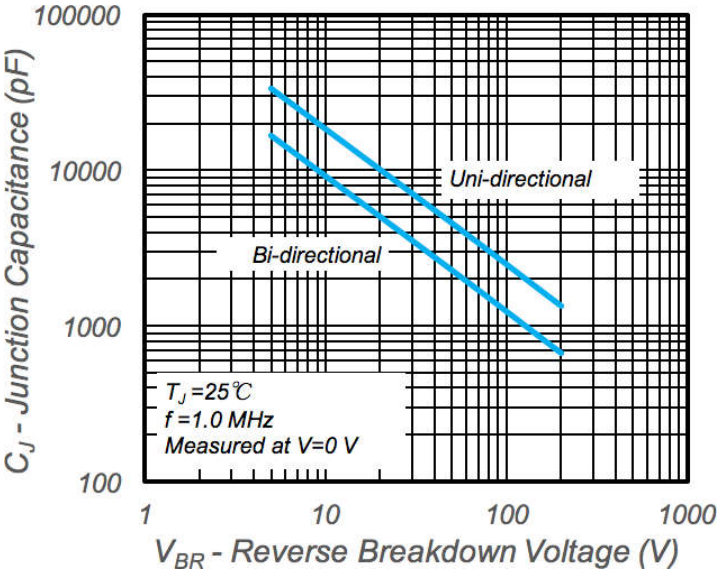
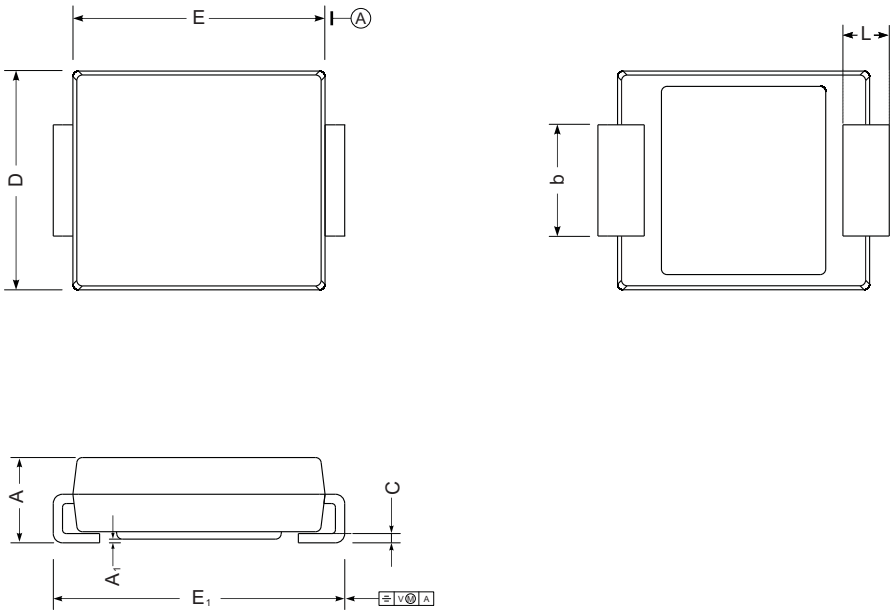


Fig.4 - Typical Junction Capacitance

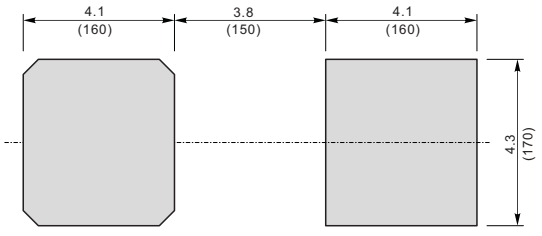
Package Outline DO-214AB SMC

Plastic surface mounted package; 2 leads



UNIT		A	E	D	E_1	A_1	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108

The recommended mounting pad size



Unit : mm (mil)

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-214AB SMC	Tape/Reel,13”reel	3000	EIA-481-1

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

JXND:

SMBJ28CA SMCJ18CA SMCJ20CA DSK34 SMAJ200A SMAJ64A SMDJ15A SMF30A SMF6.0A SMCJ14A BZT52C10S BZX84C4V7 SMAJ40CA SMCJ58CA ES2JA SMAFJ8.5CA SMCJ7.5CA BZT52C3V0 BZX84C24 P6KE39CA S8050 BZT52C20 SMAJ26CA SMCJ14CA SMCJ5.0CA SMF45A 1SMA4746A SMBJ40CA SMCJ60A SS24