

Features

- ◆ Glass passivated chip
- ◆ 3000W peak pulse power(10/1000us)
- ◆ High accuracy, 5% tolerance
- ◆ Uni and Bidirectional unit
- ◆ Low clamping voltage
- ◆ Low Leakage current
- ◆ Very fast response time

Applications

- ◆ Computers
- ◆ Telecom system
- ◆ Industrial equipments
- ◆ Consumer electronic applications
- ◆ Other VCC bus and I/O interfaces

Mechanical data

- ◆ Case: DO-214AB/SMC (plastic package). RoHS compliant
- ◆ Molding Compound Flammability Rating: UL 94 V-0
- ◆ Terminals: High temperature soldering guaranteed: 260 °C/10 sec. at terminals

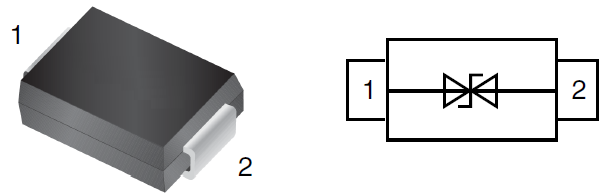
Absolute Maximum Ratings (Ratings at 25 °C, ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with a 10/1000us waveform (1)	P_{PP}	3000	W
Maximum peak reverse pulse current a 10/1000us waveform (1)	I_{PP}	See Next Table	A
Peak forward surge current 8.3ms single half sine-wave (2)	I_{FSM}	300	A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

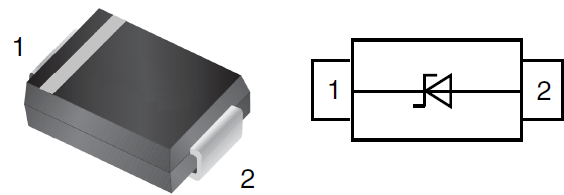
Notes:

1. Non-repetitive current pulse, per Fig.5 and detailed above $T_A=25^\circ\text{C}$ per Fig.1
2. Measured on 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minute maximum

Bidirectional



Unidirectional





Power TVS in DO-214AB/SMC

Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Part Number	Direction	Maximum Working Voltage V_{RWM} (V)	Maximum Reverse Current@ V_{RWM} I_R max(μA)	Breakdown Voltage@ I_T			Peak Surge Current I_{PP} (A)	Maximum Clamping Voltage@ I_{PP} V_C (V)
				V_{BR} min(V)	V_{BR} max(V)	I_T (mA)		
SMDJ5.0A	Uni-Dir	5.0	5000	6.4	7.00	50	326.09	9.2
SMDJ5.0CA	Bi-Dir	5.0	10000	6.4	7.00	50	326.09	9.2
SMDJ6.0A	Uni-Dir	6.0	5000	6.7	7.37	50	291.26	10.3
SMDJ6.0CA	Bi-Dir	6.0	10000	6.7	7.37	50	291.26	10.3
SMDJ6.5A	Uni-Dir	6.5	2000	7.2	7.98	50	267.86	11.2
SMDJ6.5CA	Bi-Dir	6.5	4000	7.2	7.98	50	267.86	11.2
SMDJ7.0A	Uni-Dir	7.0	1000	7.8	8.60	50	250.00	12.0
SMDJ7.0CA	Bi-Dir	7.0	2000	7.8	8.60	50	250.00	12.0
SMDJ7.5A	Uni-Dir	7.5	250	8.3	9.21	5	232.56	12.9
SMDJ7.5CA	Bi-Dir	7.5	500	8.3	9.21	5	232.56	12.9
SMDJ8.0A	Uni-Dir	8.0	150	8.9	9.83	5	220.59	13.6
SMDJ8.0CA	Bi-Dir	8.0	300	8.9	9.83	5	220.59	13.6
SMDJ8.5A	Uni-Dir	8.5	50	9.4	10.40	5	208.33	14.4
SMDJ8.5CA	Bi-Dir	8.5	100	9.4	10.40	5	208.33	14.4
SMDJ9.0A	Uni-Dir	9.0	20	10.0	11.10	5	194.81	15.4
SMDJ9.0CA	Bi-Dir	9.0	40	10.0	11.10	5	194.81	15.4
SMDJ10A	Uni-Dir	10.0	15	11.1	12.30	5	176.47	17.0
SMDJ10CA	Bi-Dir	10.0	30	11.1	12.30	5	176.47	17.0
SMDJ11A	Uni-Dir	11.0	2	12.2	13.50	5	164.84	18.2
SMDJ11CA	Bi-Dir	11.0	2	12.2	13.50	5	164.84	18.2
SMDJ12A	Uni-Dir	12.0	2	13.3	14.70	5	150.75	19.9
SMDJ12CA	Bi-Dir	12.0	2	13.3	14.70	5	150.75	19.9
SMDJ13A	Uni-Dir	13.0	2	14.4	15.90	5	139.53	21.5
SMDJ13CA	Bi-Dir	13.0	2	14.4	15.90	5	139.53	21.5
SMDJ14A	Uni-Dir	14.0	2	15.6	17.20	5	129.31	23.2
SMDJ14CA	Bi-Dir	14.0	2	15.6	17.20	5	129.31	23.2
SMDJ15A	Uni-Dir	15.0	2	16.7	18.50	5	122.95	24.4
SMDJ15CA	Bi-Dir	15.0	2	16.7	18.50	5	122.95	24.4
SMDJ16A	Uni-Dir	16.0	2	17.8	19.70	5	115.38	26.0
SMDJ16CA	Bi-Dir	16.0	2	17.8	19.70	5	115.38	26.0
SMDJ17A	Uni-Dir	17.0	2	18.9	20.90	5	108.70	27.6
SMDJ17CA	Bi-Dir	17.0	2	18.9	20.90	5	108.70	27.6
SMDJ18A	Uni-Dir	18.0	2	20.0	22.10	5	102.74	29.2
SMDJ18CA	Bi-Dir	18.0	2	20.0	22.10	5	102.74	29.2
SMDJ19A	Uni-Dir	19.0	2	21.1	23.30	5	97.47	30.8
SMDJ19CA	Bi-Dir	19.0	2	21.1	23.30	5	97.47	30.8
SMDJ20A	Uni-Dir	20.0	2	22.2	24.50	5	92.59	32.4
SMDJ20CA	Bi-Dir	20.0	2	22.2	24.50	5	92.59	32.4



Power TVS in DO-214AB/SMC

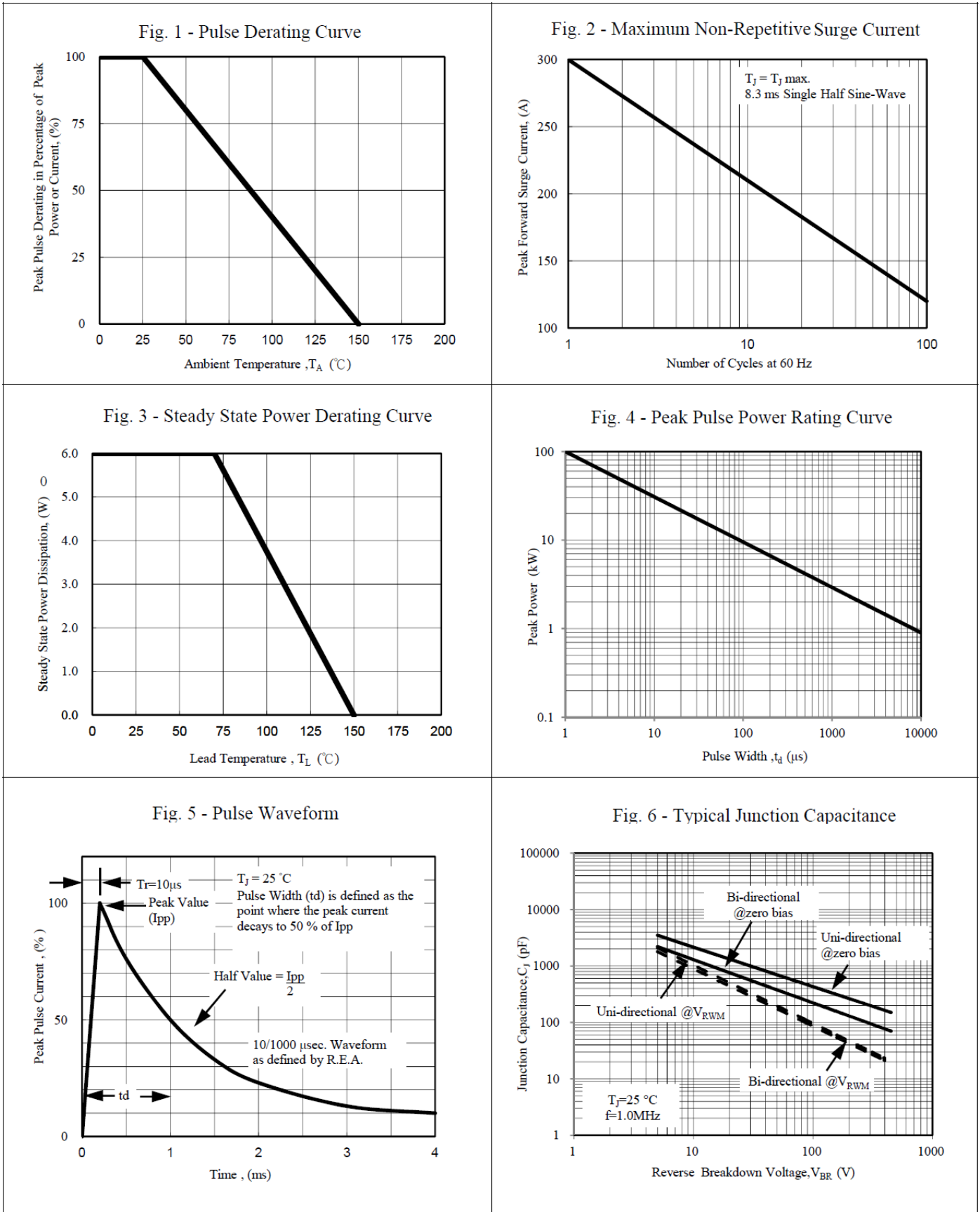
Part Number	Direction	Maximum Working Voltage V_{RWM} (V)	Maximum Reverse Current@ V_{RWM} I_R max(μ A)	Breakdown Voltage@ I_T			Peak Surge Current I_{PP} (A)	Maximum Clamping Voltage@ I_{PP} V_C (V)
				V_{BR} min(V)	V_{BR} max(V)	I_T (mA)		
SMDJ22A	Uni-Dir	22.0	2	24.4	26.90	5	84.51	35.5
SMDJ22CA	Bi-Dir	22.0	2	24.4	26.90	5	84.51	35.5
SMDJ24A	Uni-Dir	24.0	2	26.7	29.50	5	77.12	38.9
SMDJ24CA	Bi-Dir	24.0	2	26.7	29.50	5	77.12	38.9
SMDJ26A	Uni-Dir	26.0	2	28.9	31.90	5	71.26	42.1
SMDJ26CA	Bi-Dir	26.0	2	28.9	31.90	5	71.26	42.1
SMDJ28A	Uni-Dir	28.0	2	31.1	34.40	5	66.08	45.4
SMDJ28CA	Bi-Dir	28.0	2	31.1	34.40	5	66.08	45.4
SMDJ30A	Uni-Dir	30.0	2	33.3	36.80	5	61.98	48.4
SMDJ30CA	Bi-Dir	30.0	2	33.3	36.80	5	61.98	48.4
SMDJ33A	Uni-Dir	33.0	2	36.7	40.60	5	56.29	53.3
SMDJ33CA	Bi-Dir	33.0	2	36.7	40.60	5	56.29	53.3
SMDJ36A	Uni-Dir	36.0	2	40.0	44.20	5	51.64	58.1
SMDJ36CA	Bi-Dir	36.0	2	40.0	44.20	5	51.64	58.1
SMDJ40A	Uni-Dir	40.0	2	44.4	49.10	5	46.51	64.5
SMDJ40CA	Bi-Dir	40.0	2	44.4	49.10	5	46.51	64.5
SMDJ43A	Uni-Dir	43.0	2	47.8	52.80	5	43.23	69.4
SMDJ43CA	Bi-Dir	43.0	2	47.8	52.80	5	43.23	69.4
SMDJ45A	Uni-Dir	45.0	2	50.0	55.30	5	41.27	72.7
SMDJ45CA	Bi-Dir	45.0	2	50.0	55.30	5	41.27	72.7
SMDJ48A	Uni-Dir	48.0	2	53.3	58.90	5	38.76	77.4
SMDJ48CA	Bi-Dir	48.0	2	53.3	58.90	5	38.76	77.4
SMDJ51A	Uni-Dir	51.0	2	56.7	62.70	5	36.41	82.4
SMDJ51CA	Bi-Dir	51.0	2	56.7	62.70	5	36.41	82.4
SMDJ54A	Uni-Dir	54.0	2	60.0	66.30	5	34.44	87.1
SMDJ54CA	Bi-Dir	54.0	2	60.0	66.30	5	34.44	87.1
SMDJ58A	Uni-Dir	58.0	2	64.4	71.20	5	32.05	93.6
SMDJ58CA	Bi-Dir	58.0	2	64.4	71.20	5	32.05	93.6
SMDJ60A	Uni-Dir	60.0	2	66.7	73.70	5	30.99	96.8
SMDJ60CA	Bi-Dir	60.0	2	66.7	73.70	5	30.99	96.8
SMDJ64A	Uni-Dir	64.0	2	71.1	78.60	5	29.13	103.0
SMDJ64CA	Bi-Dir	64.0	2	71.1	78.60	5	29.13	103.0
SMDJ70A	Uni-Dir	70.0	2	77.8	86.00	5	26.55	113.0
SMDJ70CA	Bi-Dir	70.0	2	77.8	86.00	5	26.55	113.0
SMDJ75A	Uni-Dir	75.0	2	83.3	92.10	5	24.79	121.0
SMDJ75CA	Bi-Dir	75.0	2	83.3	92.10	5	24.79	121.0
SMDJ78A	Uni-Dir	78.0	2	86.7	95.80	5	23.81	126.0
SMDJ78CA	Bi-Dir	78.0	2	86.7	95.80	5	23.81	126.0



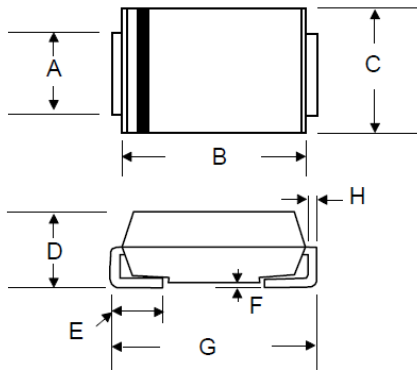
Power TVS in DO-214AB/SMC

Part Number	Direction	Maximum Working Voltage V_{RWM} (V)	Maximum Reverse Current@ V_{RWM} I_R max(μ A)	Breakdown Voltage@ I_T			Peak Surge Current I_{PP} (A)	Maximum Clamping Voltage@ I_{PP} V_C (V)
				V_{BR} min(V)	V_{BR} max(V)	I_T (mA)		
SMDJ80A	Uni-Dir	80.0	2	88.8	97.60	5	23.15	129.6
SMDJ80CA	Bi-Dir	80.0	2	88.8	97.60	5	23.15	129.6
SMDJ85A	Uni-Dir	85.0	2	94.4	104.00	5	21.90	137.0
SMDJ85CA	Bi-Dir	85.0	2	94.4	104.00	5	21.90	137.0
SMDJ90A	Uni-Dir	90.0	2	100.0	111.00	5	20.55	146.0
SMDJ90CA	Bi-Dir	90.0	2	100.0	111.00	5	20.55	146.0
SMDJ100A	Uni-Dir	100.0	2	111.0	123.00	5	18.52	162.0
SMDJ100CA	Bi-Dir	100.0	2	111.0	123.00	5	18.52	162.0
SMDJ110A	Uni-Dir	110.0	2	122.0	135.00	5	16.95	177.0
SMDJ110CA	Bi-Dir	110.0	2	122.0	135.00	5	16.95	177.0
SMDJ120A	Uni-Dir	120.0	2	133.0	147.00	5	15.54	193.0
SMDJ120CA	Bi-Dir	120.0	2	133.0	147.00	5	15.54	193.0
SMDJ130A	Uni-Dir	130.0	2	144.0	159.00	5	14.35	209.0
SMDJ130CA	Bi-Dir	130.0	2	144.0	159.00	5	14.35	209.0
SMDJ140A	Uni-Dir	140.0	2	155.0	171.00	5	13.23	226.8
SMDJ140CA	Bi-Dir	140.0	2	155.0	171.00	5	13.23	226.8
SMDJ150A	Uni-Dir	150.0	2	167.0	185.00	5	12.35	243.0
SMDJ150CA	Bi-Dir	150.0	2	167.0	185.00	5	12.35	243.0
SMDJ160A	Uni-Dir	160.0	2	178.0	197.00	5	11.58	259.0
SMDJ160CA	Bi-Dir	160.0	2	178.0	197.00	5	11.58	259.0
SMDJ170A	Uni-Dir	170.0	2	189.0	209.00	5	10.91	275.0
SMDJ170CA	Bi-Dir	170.0	2	189.0	209.00	5	10.91	275.0
SMDJ180A	Uni-Dir	180.0	2	200.0	220.00	5	10.29	291.6
SMDJ180CA	Bi-Dir	180.0	2	200.0	220.00	5	10.29	291.6
SMDJ190A	Uni-Dir	190.0	2	211.0	232.00	5	9.75	307.8
SMDJ190CA	Bi-Dir	190.0	2	211.0	232.00	5	9.75	307.8
SMDJ200A	Uni-Dir	200.0	2	224.0	247.00	5	9.26	324.0
SMDJ200CA	Bi-Dir	200.0	2	224.0	247.00	5	9.26	324.0
SMDJ220A	Uni-Dir	220.0	2	246.0	272.00	5	8.43	356.0
SMDJ220CA	Bi-Dir	220.0	2	246.0	272.00	5	8.43	356.0
SMDJ250A	Uni-Dir	250.0	2	279.0	309.00	5	7.41	405.0
SMDJ250CA	Bi-Dir	250.0	2	279.0	309.00	5	7.41	405.0
SMDJ300A	Uni-Dir	300.0	2	335.0	371.00	5	6.17	486.0
SMDJ300CA	Bi-Dir	300.0	2	335.0	371.00	5	6.17	486.0
SMDJ350A	Uni-Dir	350.0	2	391.0	432.00	5	5.29	567.0
SMDJ350CA	Bi-Dir	350.0	2	391.0	432.00	5	5.29	567.0
SMDJ400A	Uni-Dir	400.0	2	447.0	494.00	5	4.63	648.0
SMDJ400CA	Bi-Dir	400.0	2	447.0	494.00	5	4.63	648.0
SMDJ440A	Uni-Dir	440.0	2	492.0	543.00	5	4.21	713.0
SMDJ440CA	Bi-Dir	440.0	2	492.0	543.00	5	4.21	713.0

Typical Characteristics (Tamb = 25°C unless otherwise specified)



Package Dimensions



Symbol	Dimensions in millimeters	
	Min	Max
A	2.92	3.07
B	6.60	7.11
C	5.59	6.22
D	2.00	2.62
E	0.76	1.52
F	0.10	0.20
G	7.75	8.13
H	0.15	0.31

Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
SMDJ Series	DO-214AB/SMC	Tape and reel	3000pcs / reel	EIA STD RS-481