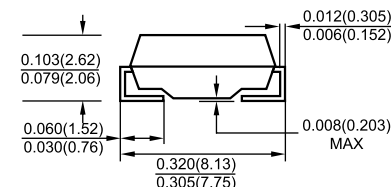
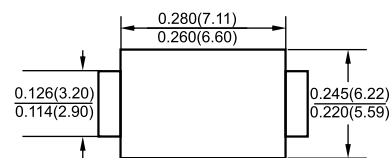


FEATURES

- Glass Passivated Chip Junction
- Excellent clamping capability
- Low inductance
- Low profile package
- Fast response time, typically less than 1ps from 0 volts to BV for unidirectional types
- Typical IR less than 1 uA above 10V
- Built-in strain relief
- Repetition rate (duty cycle): 0.01%
- High temperature soldering: 250C / 10 sec at terminals



SMC/DO-214AB

Dimensions in inches and (millimeters)

MECHANICAL DATA

- Molded Plastic Case (UL 94V-0 Rated)
- Polarity: Color Band denoted positive end (cathode) except bidirectional

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at TA = 25°C, unless otherwise specified.

Item	Symbol	5.0SMDJ	Units
Peak Power Dissipation on 10/1000 μS waveform (Note 1, 2, Fig. 1)	P PPM	Min 5000	Watts
Peak Pulse Current of ON 10/1000μS waveform (Note 1, Fig 3)	I PPM	See Table 1	Amps
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2, 3)	I FSM	400	Amps
Operating & Storage	T J	-55 ~ + 150	°C
Temperature Range	T STG	-55 ~ + 150	°C

- Note: 1. Non-repetitive current pulse per Fig. 3 and derated above TA = 25°C per Fig. 2.
 2. Mounted on 8.0 x 8.0mm copper pads for each terminal.
 3. 8.3ms single half sine-wave or equivalent square wave, Duty cycle = 4 pulses per minute maximum.

ELECTRICAL CHARACTERISTICS

(TA=25°C unless otherwise noted)

Part Number (Unidirectional)	Part Number (Bidirectional)	Device Marking Code		Working Peak Reverse Voltage V _{RWM} (V)	Break Down Voltage V _{BR} @ I _T			Maximum Clamping Voltage V _{RSM} (V)	Maximum Reverse Leakage I _R @ V _{RWM} (μA)	Maximum Reverse Surge Current I _{PP} (A)
		Uni	Bi		Min	Max	@ I _T (mA)			
5.0SMDJ11	5.0SMDJ11C	5PDW	5BDW	11	12.2	14.9	10	20.1	800	248.8
5.0SMDJ11A	5.0SMDJ11CA	5PDX	5BDX	11	12.2	13.5	10	18.2	800	274.7
5.0SMDJ12	5.0SMDJ12C	5PDY	5BDY	12	13.3	16.3	10	22	800	227.3
5.0SMDJ12A	5.0SMDJ12CA	5PDZ	5BDZ	12	13.3	14.7	10	19.9	800	251.3
5.0SMDJ13	5.0SMDJ13C	5PED	5BED	13	14.4	17.6	10	23.8	500	210.1
5.0SMDJ13A	5.0SMDJ13CA	5PEE	5BEE	13	14.4	15.9	10	21.5	500	232.6
5.0SMDJ14	5.0SMDJ14C	5PEF	5BEF	14	15.6	19.1	10	25.8	200	193.8
5.0SMDJ14A	5.0SMDJ14CA	5PEG	5BEG	14	15.6	17.2	10	23.2	200	215.5
5.0SMDJ15	5.0SMDJ15C	5PEH	5BEH	15	16.7	20.4	1	26.9	100	185.9

- Note: 1. Suffix 'A' denotes 5% tolerance device, without 'A' suffix denotes 10% tolerance device.
 2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
 3. For Bi-directional devices having V_R of 20 volts and under, the I_R limit is double.

ELECTRICAL CHARACTERISTICS - Cont'd
(TA=25°C unless otherwise noted)

Part Number (Unidirectional)	Part Number (Bidirectional)	Device Marking Code		Working Peak Reverse Voltage V _{RWM} (V)	Break Down Voltage V _{BR} @ I _T			Maximum Clamping Voltage V _{RSM} (V)	Maximum Reverse Leakage I _R @ V _{RWM} (µA)	Maximum Reverse Surge Current I _{PP} (A)
		Uni	Bi		Min	Max	@ I _T (mA)			
5.0SMDJ15A	5.0SMDJ15CA	5PEK	5BEK	15	16.97	18.5	1	24.4	100	204.
5.0SMDJ16	5.0SMDJ16C	5PEL	5BEL	16	17.8	21.8	1	28.8	50	173.6
5.0SMDJ16A	5.0SMDJ16CA	5PEM	5BEM	16	17.8	19.7	1	26	50	192.3
5.0SMDJ17	5.0SMDJ17C	5PEN	5BEN	17	18.9	23.1	1	30.5	20	163.9
5.0SMDJ17A	5.0SMDJ17CA	5PEP	5BEP	17	18.9	20.9	1	27.6	20	181.2
5.0SMDJ18	5.0SMDJ18C	5PEQ	5BEQ	18	20	24.4	1	32.2	10	155.3
5.0SMDJ18A	5.0SMDJ18CA	5PER	5BER	18	20	22.1	1	29.2	10	171.2
5.0SMDJ19	5.0SMDJ19C	5PES	5BES	19	21.1	25.8	1	34	10	147.0
5.0SMDJ19A	5.0SMDJ19CA	5PET	5BET	19	21.1	23.3	1	30.8	10	162.4
5.0SMDJ20	5.0SMDJ20C	5PEU	5BEU	20	22.2	27.1	1	35.8	5	139.7
5.0SMDJ20A	5.0SMDJ20CA	5PEV	5BEV	20	22.2	24.5	1	32.4	5	154.3
5.0SMDJ22	5.0SMDJ22C	5PEW	5BEW	22	24.4	29.8	1	39.4	5	126.9
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22	24.4	26.9	1	35.5	5	140.8
5.0SMDJ24	5.0SMDJ24C	5PEY	5BEY	24	26.7	32.6	1	43	5	116.3
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24	26.7	29.5	1	38.9	5	128.5
5.0SMDJ26	5.0SMDJ26C	5PFD	5BFD	26	28.9	35.3	1	46.6	5	107.3
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26	28.9	31.9	1	42.1	5	118.8
5.0SMDJ28	5.0SMDJ28C	5PFF	5BFF	28	31.1	38	1	50	5	100.0
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28	31.1	34.4	1	45.4	5	110.1
5.0SMDJ30	5.0SMDJ30C	5PFH	5BFH	30	33.3	40.7	1	53.5	5	93.5
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30	33.3	36.8	1	48.4	5	103.3
5.0SMDJ33	5.0SMDJ33C	5PFL	5BFL	33	36.7	44.9	1	59	5	84.7
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33	36.7	40.6	1	53.3	5	93.8
5.0SMDJ36	5.0SMDJ36C	5PFN	5BFN	36	40	48.9	1	64.3	5	77.8
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36	40	44.2	1	58.1	5	86.1
5.0SMDJ40	5.0SMDJ40C	5PFQ	5BFQ	40	44.4	54.3	1	71.4	5	70.0
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40	44.4	49.1	1	64.5	5	77.5
5.0SMDJ43	5.0SMDJ43C	5PFS	5BFS	43	47.8	58.4	1	76.7	5	65.2
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43	47.8	52.8	1	69.4	5	72.0
5.0SMDJ45	5.0SMDJ45C	5PFU	5BFU	45	50	61.1	1	80.3	5	62.3
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	45	50	55.3	1	72.7	5	68.8
5.0SMDJ48	5.0SMDJ48C	5PFW	5BFW	48	53.3	65.1	1	85.5	5	58.5
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48	53.3	58.9	1	77.4	5	64.6
5.0SMDJ51	5.0SMDJ51C	5PFY	5BFY	51	56.7	69.3	1	91.1	5	54.9
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51	56.7	62.7	1	82.4	5	60.7
5.0SMDJ54	5.0SMDJ54C	5PGD	5BGD	54	60	73.3	1	96.3	5	51.9
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54	60	66.3	1	87.1	5	57.4
5.0SMDJ58	5.0SMDJ58C	5PGF	5BGF	58	64.4	78.7	1	103	5	48.5
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58	64.4	71.2	1	93.6	5	53.4
5.0SMDJ60	5.0SMDJ60C	5PGH	5BGH	60	66.7	81.5	1	107	5	46.7
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60	66.7	73.7	1	96.8	5	51.7
5.0SMDJ64	5.0SMDJ64C	5PGL	5BGL	64	71.1	86.9	1	114	5	43.9
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64	71.1	78.6	1	103	5	48.5

- Note: 1. Suffix 'A' denotes 5% tolerance device, without 'A' suffix denotes 10% tolerance device.
 2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
 3. For Bi-directional devices having V_R of 20 volts and under, the I_R limit is double.

ELECTRICAL CHARACTERISTICS - Cont'd
(TA=25°C unless otherwise noted)

Part Number (Unidirectional)	Part Number (Bidirectional)	Device Marking Code		Working Peak Reverse Voltage V _{RWM} (V)	Break Down Voltage V _{BR} @ I _T			Maximum Clamping Voltage V _{RSM} (V)	Maximum Reverse Leakage I _R @ V _{RWM} (μA)	Maximum Reverse Surge Current I _{PP} (A)
		Uni	Bi		Min	Max	@ I _T (mA)			
5.0SMDJ70	5.0SMDJ70C	5PGN	5BGN	70	77.8	95.1	1	125	5	40.0
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70	77.8	86	1	113	5	44.2
5.0SMDJ75	5.0SMDJ75C	5PGQ	5BGQ	75	83.3	102	1	134	5	37.3
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75	83.3	92.1	1	121	5	41.3
5.0SMDJ78	5.0SMDJ78C	5PGS	5BGS	78	86.7	106	1	139	5	36.0
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78	86.7	95.8	1	126	5	39.7
5.0SMDJ80	5.0SMDJ80C	5PGA	5BGA	80	89	109	1	143.2	5	34.9
5.0SMDJ80A	5.0SMDJ80CA	5PGB	5BGB	80	88.8	97.6	1	129.6	5	38.6
5.0SMDJ85	5.0SMDJ85C	5PGU	5BGU	85	94.4	115	1	151	5	33.1
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85	94.4	104	1	137	5	36.5
5.0SMDJ90	5.0SMDJ90C	5PGW	5BGW	90	100	122	1	160	5	31.3
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90	100	111	1	146	5	34.2
5.0SMDJ100	5.0SMDJ100C	5PGY	5BGY	100	111	136	1	179	5	27.9
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100	111	123	1	162	5	30.9
5.0SMDJ110	5.0SMDJ110C	5PHD	5BHD	110	122	149	1	196	5	25.5
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	110	122	135	1	177	5	28.2
5.0SMDJ120	5.0SMDJ120C	5PHF	5BHF	120	133	163	1	214	5	23.4
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	120	133	147	1	193	5	25.9
5.0SMDJ130	5.0SMDJ130C	5PHH	5BHH	130	144	176	1	231	5	21.6
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	130	144	159	1	209	5	23.9
5.0SMDJ140	5.0SMDJ140C	5PHA	5BHA	140	156	190	1	250.6	5	20.0
5.0SMDJ140A	5.0SMDJ140CA	5PHB	5BHB	140	155	171	1	226.8	5	22.0
5.0SMDJ150	5.0SMDJ150C	5PHL	5BHL	150	167	204	1	268	5	18.7
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	150	167	185	1	243	5	20.6
5.0SMDJ160	5.0SMDJ160C	5PHN	5BHN	160	178	218	1	287	5	17.4
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHP	160	178	197	1	259	5	19.3
5.0SMDJ170	5.0SMDJ170C	5PHQ	5BHQ	170	189	231	1	304	5	16.4
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	170	189	209	1	275	5	18.2
5.0SMDJ180	5.0SMDJ180C	5PHS	5BHS	180	200	245	1	322.2	5	15.5
5.0SMDJ180A	5.0SMDJ180CA	5PHT	5BHT	180	200	220	1	291.6	5	17.1
5.0SMDJ190	5.0SMDJ190C	5PHU	5BHU	190	211	258	1	340.1	5	14.7
5.0SMDJ190A	5.0SMDJ190CA	5PHV	5BHV	190	211	232	1	307.8	5	16.2
5.0SMDJ200A	5.0SMDJ200CA	5PHW	5BHW	200	224	247	1	324	5	15.4
5.0SMDJ220A	5.0SMDJ220CA	5PHX	5BHX	220	246	272	1	356	5	14.0
5.0SMDJ250A	5.0SMDJ250CA	5PHZ	5BHZ	250	279	309	1	405	5	12.3
5.0SMDJ300A	5.0SMDJ300CA	5PJE	5BJE	300	335	371	1	486	5	10.3
5.0SMDJ350A	5.0SMDJ350CA	5PJG	5BJG	350	391	432	1	567	5	8.8
5.0SMDJ400A	5.0SMDJ400CA	5PJK	5BJK	400	447	494	1	648	5	7.7
5.0SMDJ440A	5.0SMDJ440CA	5PJM	5BJM	440	492	543	1	713	5	7.0

Note: 1. Suffix 'A' denotes 5% tolerance device, without 'A' suffix denotes 10% tolerance device.
 2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
 3. For Bi-directional devices having V_R of 20 volts and under, the I_R limit is double.

RATINGS & CHARACTERISTICS CURVES
($T_A = 25^\circ\text{C}$ Unless otherwise noted)

