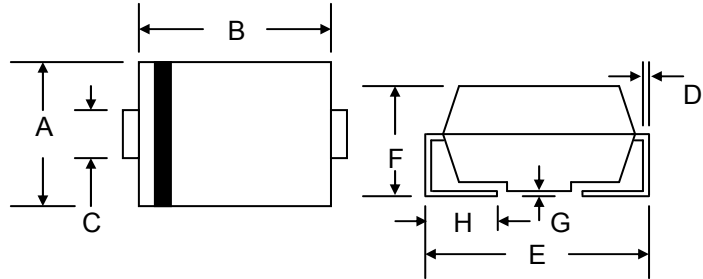


Features

- Glass Passivated Die Construction
- 3000W Peak Pulse Power Dissipation
- 5.0V – 440V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Voltage
- Typical Response Time < 1nS
- Plastic Case Material has UL Flammability Classification Rating 94V-0



Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band Except Bi-Directional
- Marking: Device Code
- Weight: 0.21 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 6**

SMC/DO-214AB		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.25
D	0.152	0.305
E	7.75	8.13
F	2.00	2.62
G	0.051	0.203
H	0.76	1.52
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 μs Waveform (Note 1, 2, 5)	PPPM	3000	W
Peak Pulse Current on 10/1000 μs Waveform (Note 1)	IPPM	See Table 1	A
Peak Forward Surge Current (Note 2, 3)	IFSM	300	A
Maximum Instantaneous Forward Voltage at 100A (Note 3, 4)	V _F	3.5 / 5.0	V
Power Dissipation on Infinite Heatsink at $T_A = 50^\circ\text{C}$	P _D	6.5	W
Typical Thermal Resistance, Junction to Ambient (Note 2)	R _{JA}	75	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance, Junction to Lead (Note 2)	R _{JL}	15	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	$^\circ\text{C}$

- Note:
1. Non-repetitive current pulse per Figure 5 and derated above $T_A = 25^\circ\text{C}$ per Figure 1.
 2. Mounted on 8.0 x 8.0mm copper pads to each terminal.
 3. Measured on 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum. For uni-directional devices only.
 4. $V_F < 3.5\text{V}$ for $V_{BR} \leq 200\text{V}$ and $V_F < 5.0\text{V}$ for $V_{BR} \geq 201\text{V}$.
 5. Peak pulse power waveform is 10/1000 μs .

3.0SMCJ SERIES

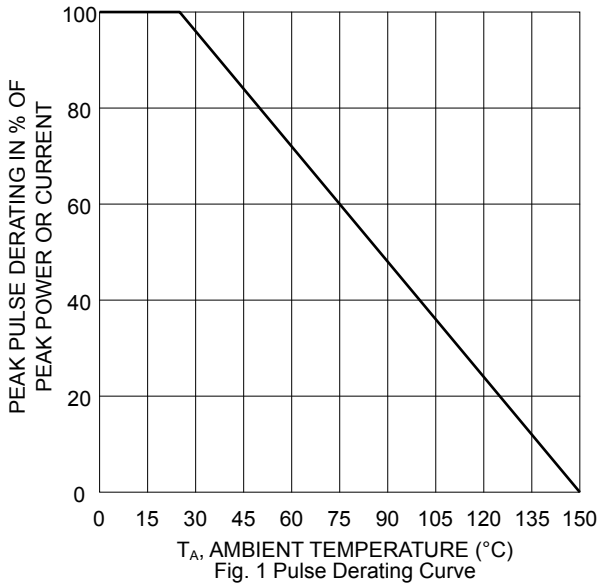


Fig. 1 Pulse Derating Curve

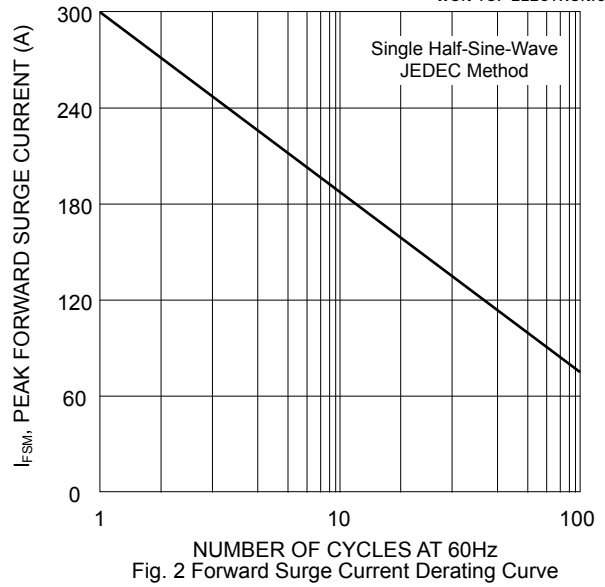


Fig. 2 Forward Surge Current Derating Curve

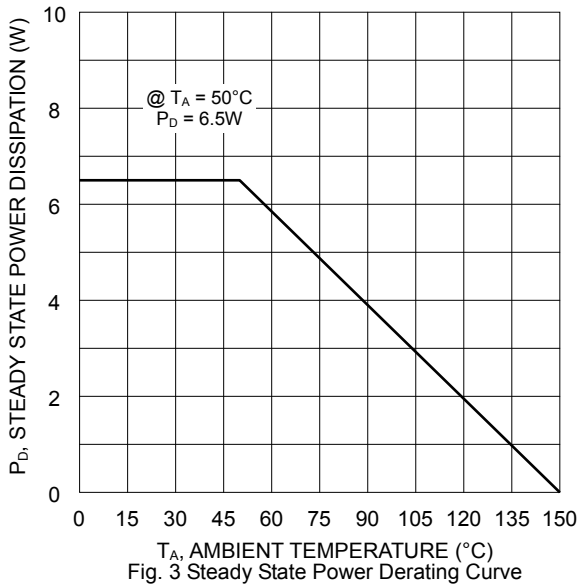


Fig. 3 Steady State Power Derating Curve

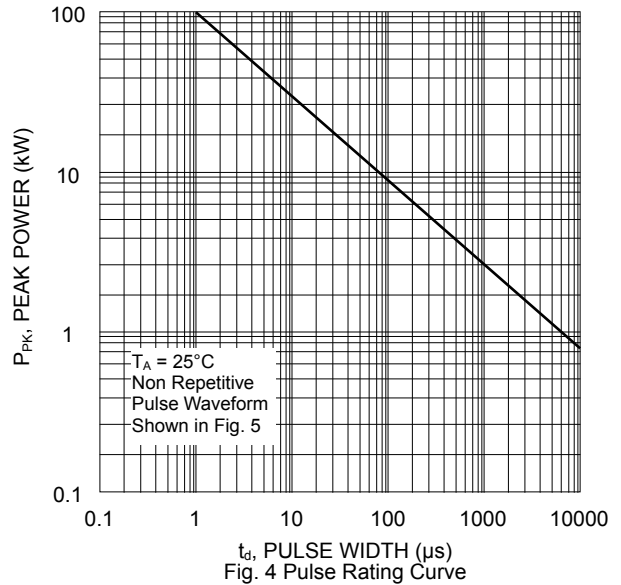


Fig. 4 Pulse Rating Curve

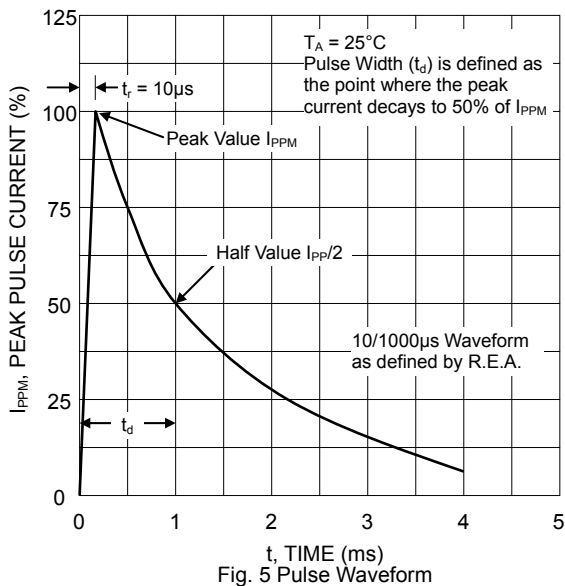


Fig. 5 Pulse Waveform

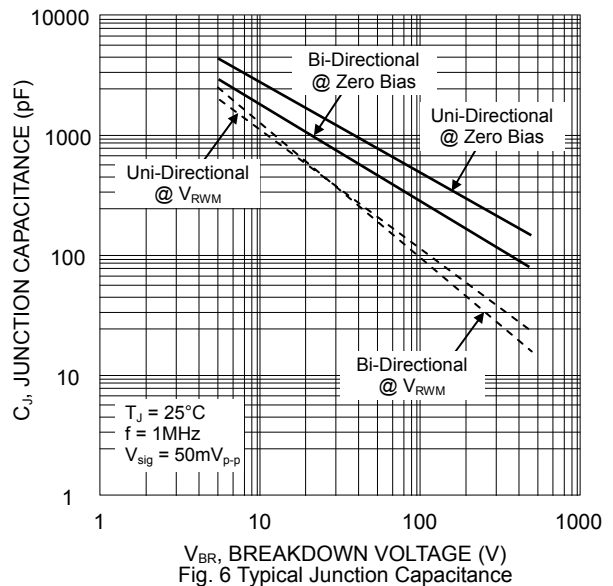


Fig. 6 Typical Junction Capacitance

Electrical Characteristics (@T_A=25°C unless otherwise specified) Table 1

Uni-Directional Part No.	Bi-Directional Part No.	Device Marking Code		Reverse Stand-Off Voltage V _{RWM} (V)	Breakdown Voltage V _{BR} (V) @I _T		Test Current I _T (mA)	Maximum Clamping Voltage @I _{PP} V _C (V)	Peak Pulse Current I _{PP} (A)	Reverse Leakage* @V _{RWM} I _R (μA)
		UNI	BI		Min.	Max.				
3.0SMCJ5.0	3.0SMCJ5.0C	HDD	IDD	5.0	6.40	7.30	10	9.6	312.50	1000
3.0SMCJ5.0A	3.0SMCJ5.0CA	HDE	IDE	5.0	6.40	7.00	10	9.2	326.09	1000
3.0SMCJ6.0	3.0SMCJ6.0C	HDF	IDF	6.0	6.67	8.15	10	11.4	263.16	1000
3.0SMCJ6.0A	3.0SMCJ6.0CA	HDG	IDG	6.0	6.67	7.37	10	10.3	291.26	1000
3.0SMCJ6.5	3.0SMCJ6.5C	HDH	IDH	6.5	7.22	8.82	10	12.3	243.90	500
3.0SMCJ6.5A	3.0SMCJ6.5CA	HDK	IDK	6.5	7.22	7.98	10	11.2	267.86	500
3.0SMCJ7.0	3.0SMCJ7.0C	HDL	IDL	7.0	7.78	9.51	10	13.3	225.56	200
3.0SMCJ7.0A	3.0SMCJ7.0CA	HDM	IDM	7.0	7.78	8.60	10	12.0	250.00	200
3.0SMCJ7.5	3.0SMCJ7.5C	HDN	IDN	7.5	8.33	10.20	1	14.3	209.79	100
3.0SMCJ7.5A	3.0SMCJ7.5CA	HDP	IDP	7.5	8.33	9.21	1	12.9	232.56	100
3.0SMCJ8.0	3.0SMCJ8.0C	HDQ	IDQ	8.0	8.89	10.90	1	15.0	200.00	50
3.0SMCJ8.0A	3.0SMCJ8.0CA	HDR	IDR	8.0	8.89	9.83	1	13.6	220.59	50
3.0SMCJ8.5	3.0SMCJ8.5C	HDS	IDS	8.5	9.44	11.50	1	15.9	188.68	25
3.0SMCJ8.5A	3.0SMCJ8.5CA	HDT	IDT	8.5	9.44	10.40	1	14.4	208.33	25
3.0SMCJ9.0	3.0SMCJ9.0C	HDU	IDU	9.0	10.00	12.20	1	16.9	177.51	10
3.0SMCJ9.0A	3.0SMCJ9.0CA	HDV	IDV	9.0	10.00	11.10	1	15.4	194.81	10
3.0SMCJ10	3.0SMCJ10C	HDW	IDW	10.0	11.10	13.60	1	18.8	159.57	5
3.0SMCJ10A	3.0SMCJ10CA	HDX	IDX	10.0	11.10	12.30	1	17.0	176.47	5
3.0SMCJ11	3.0SMCJ11C	HDY	IDY	11.0	12.20	14.90	1	20.1	149.25	2
3.0SMCJ11A	3.0SMCJ11CA	HDZ	IDZ	11.0	12.20	13.50	1	18.2	164.84	2
3.0SMCJ12	3.0SMCJ12C	HED	IED	12.0	13.30	16.30	1	22.0	136.36	2
3.0SMCJ12A	3.0SMCJ12CA	HEE	IEE	12.0	13.30	14.70	1	19.9	150.75	2
3.0SMCJ13	3.0SMCJ13C	HEF	IEF	13.0	14.40	17.60	1	23.8	126.05	2
3.0SMCJ13A	3.0SMCJ13CA	HEG	IEG	13.0	14.40	15.90	1	21.5	139.53	2
3.0SMCJ14	3.0SMCJ14C	HEH	IEH	14.0	15.60	19.10	1	25.8	116.28	2
3.0SMCJ14A	3.0SMCJ14CA	HEK	IEK	14.0	15.60	17.20	1	23.2	129.31	2
3.0SMCJ15	3.0SMCJ15C	HEL	IEL	15.0	16.70	20.40	1	26.9	111.52	2
3.0SMCJ15A	3.0SMCJ15CA	HEM	IEM	15.0	16.70	18.50	1	24.4	122.95	2
3.0SMCJ16	3.0SMCJ16C	HEN	IEN	16.0	17.80	21.80	1	28.8	104.17	2
3.0SMCJ16A	3.0SMCJ16CA	HEP	IEP	16.0	17.80	19.70	1	26.0	115.38	2
3.0SMCJ17	3.0SMCJ17C	HEQ	IEQ	17.0	18.90	23.10	1	30.5	98.36	2
3.0SMCJ17A	3.0SMCJ17CA	HER	IER	17.0	18.90	20.90	1	27.6	108.70	2
3.0SMCJ18	3.0SMCJ18C	HES	IES	18.0	20.00	24.40	1	32.2	93.17	2
3.0SMCJ18A	3.0SMCJ18CA	HET	IET	18.0	20.00	22.10	1	29.2	102.74	2
3.0SMCJ20	3.0SMCJ20C	HEU	IEU	20.0	22.20	27.10	1	35.8	83.80	2
3.0SMCJ20A	3.0SMCJ20CA	HEV	IEV	20.0	22.20	24.50	1	32.4	92.59	2
3.0SMCJ22	3.0SMCJ22C	HEW	IEW	22.0	24.40	29.80	1	39.4	76.14	2
3.0SMCJ22A	3.0SMCJ22CA	HEX	IEX	22.0	24.40	26.90	1	35.5	84.51	2
3.0SMCJ24	3.0SMCJ24C	HEY	IEY	24.0	26.70	32.60	1	43.0	69.77	2
3.0SMCJ24A	3.0SMCJ24CA	HEZ	IEZ	24.0	26.70	29.50	1	38.9	77.12	2
3.0SMCJ26	3.0SMCJ26C	HFD	IFD	26.0	28.90	35.30	1	46.6	64.38	2
3.0SMCJ26A	3.0SMCJ26CA	HFE	IFE	26.0	28.90	31.90	1	42.1	71.26	2
3.0SMCJ28	3.0SMCJ28C	HFF	IFF	28.0	31.10	38.00	1	50.0	60.00	2
3.0SMCJ28A	3.0SMCJ28CA	HFG	IFG	28.0	31.10	34.40	1	45.4	66.08	2
3.0SMCJ30	3.0SMCJ30C	HFH	IFH	30.0	33.30	40.70	1	53.5	56.07	2
3.0SMCJ30A	3.0SMCJ30CA	HFK	IFK	30.0	33.30	36.80	1	48.4	61.98	2
3.0SMCJ33	3.0SMCJ33C	HFL	IFL	33.0	36.70	44.90	1	59.0	50.85	2
3.0SMCJ33A	3.0SMCJ33CA	HFM	IFM	33.0	36.70	40.60	1	53.3	56.29	2
3.0SMCJ36	3.0SMCJ36C	HFN	IFN	36.0	40.00	48.90	1	64.3	46.66	2
3.0SMCJ36A	3.0SMCJ36CA	HFP	IFP	36.0	40.00	44.20	1	58.1	51.64	2
3.0SMCJ40	3.0SMCJ40C	HFQ	IFQ	40.0	44.40	54.30	1	71.4	42.02	2
3.0SMCJ40A	3.0SMCJ40CA	HFR	IFR	40.0	44.40	49.10	1	64.5	46.51	2
3.0SMCJ43	3.0SMCJ43C	HFS	IFS	43.0	47.80	58.40	1	76.7	39.11	2
3.0SMCJ43A	3.0SMCJ43CA	HFT	IFT	43.0	47.80	52.80	1	69.4	43.23	2
3.0SMCJ45	3.0SMCJ45C	HFU	IFU	45.0	50.00	61.10	1	80.3	37.36	2
3.0SMCJ45A	3.0SMCJ45CA	HFV	IFV	45.0	50.00	55.30	1	72.7	41.27	2
3.0SMCJ48	3.0SMCJ48C	HFW	IFW	48.0	53.30	65.10	1	85.5	35.09	2
3.0SMCJ48A	3.0SMCJ48CA	HFX	IFX	48.0	53.30	58.90	1	77.4	38.76	2
3.0SMCJ51	3.0SMCJ51C	HFY	IFY	51.0	56.70	69.30	1	91.1	32.93	2
3.0SMCJ51A	3.0SMCJ51CA	HFZ	IFZ	51.0	56.70	62.70	1	82.4	36.41	2
3.0SMCJ54	3.0SMCJ54C	HGD	IGD	54.0	60.00	73.30	1	96.3	31.15	2
3.0SMCJ54A	3.0SMCJ54CA	HGE	IGE	54.0	60.00	66.30	1	87.1	34.44	2
3.0SMCJ58	3.0SMCJ58C	HGF	IGF	58.0	64.40	78.70	1	103.0	29.13	2
3.0SMCJ58A	3.0SMCJ58CA	HGG	IGG	58.0	64.40	71.20	1	93.6	32.05	2

*For bi-directional devices V_{RWM} ≤ 10V, the I_R limit is double.

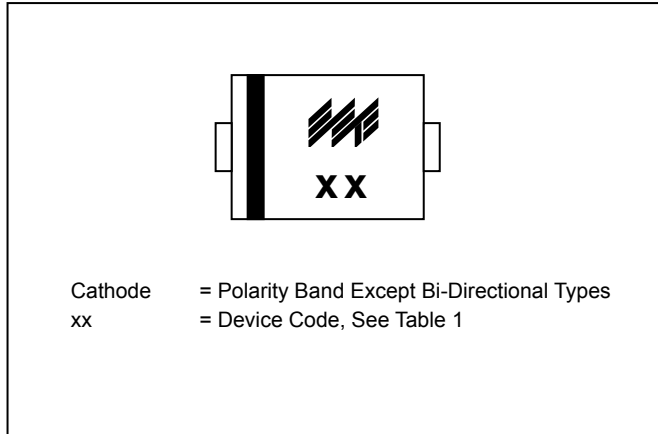
3.0SMCJ SERIES



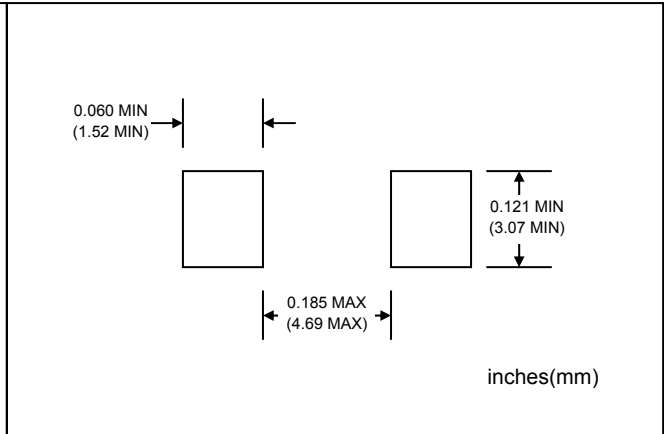
Electrical Characteristics (@T_A=25°C unless otherwise specified) Table 1 (Cont'd)

Uni-Directional Part No.	Bi-Directional Part No.	Device Marking Code		Reverse Stand-Off Voltage V _{RWM} (V)	Breakdown Voltage V _{BR} (V) @I _T		Test Current I _T (mA)	Maximum Clamping Voltage @I _{FP} V _C (V)	Peak Pulse Current I _{PP} (A)	Reverse Leakage @V _{RWM} I _R (μA)
		UNI	BI		Min.	Max.				
3.0SMCJ60	3.0SMCJ60C	HGH	IGH	60.0	66.70	81.50	1	107.0	28.04	2
3.0SMCJ60A	3.0SMCJ60CA	HGK	IGK	60.0	66.70	73.70	1	96.8	30.99	2
3.0SMCJ64	3.0SMCJ64C	HGL	IGL	64.0	71.10	86.90	1	114.0	26.32	2
3.0SMCJ64A	3.0SMCJ64CA	HGM	IGM	64.0	71.10	78.60	1	103.0	29.13	2
3.0SMCJ70	3.0SMCJ70C	HGN	IGN	70.0	77.80	95.10	1	125.0	24.00	2
3.0SMCJ70A	3.0SMCJ70CA	HGP	IGP	70.0	77.80	86.00	1	113.0	26.55	2
3.0SMCJ75	3.0SMCJ75C	HGQ	IGQ	75.0	83.30	102.00	1	134.0	22.39	2
3.0SMCJ75A	3.0SMCJ75CA	HGR	IGR	75.0	83.30	92.10	1	121.0	24.79	2
3.0SMCJ78	3.0SMCJ78C	HGS	IGS	78.0	86.70	106.00	1	139.0	21.58	2
3.0SMCJ78A	3.0SMCJ78CA	HGT	IGT	78.0	86.70	95.80	1	126.0	23.81	2
3.0SMCJ85	3.0SMCJ85C	HGU	IGU	85.0	94.40	115.00	1	151.0	19.87	2
3.0SMCJ85A	3.0SMCJ85CA	HGV	IGV	85.0	94.40	104.00	1	137.0	21.90	2
3.0SMCJ90	3.0SMCJ90C	HGW	IGW	90.0	100.00	122.00	1	160.0	18.75	2
3.0SMCJ90A	3.0SMCJ90CA	HGX	IGX	90.0	100.00	111.00	1	146.0	20.55	2
3.0SMCJ100	3.0SMCJ100C	HGY	IGY	100.0	111.00	136.00	1	179.0	16.76	2
3.0SMCJ100A	3.0SMCJ100CA	HGZ	IGZ	100.0	111.00	123.00	1	162.0	18.52	2
3.0SMCJ110	3.0SMCJ110C	HHH	IHD	110.0	122.00	149.00	1	196.0	15.31	2
3.0SMCJ110A	3.0SMCJ110CA	HHE	IHE	110.0	122.00	135.00	1	177.0	16.95	2
3.0SMCJ120	3.0SMCJ120C	HHF	IHF	120.0	133.00	163.00	1	214.0	14.02	2
3.0SMCJ120A	3.0SMCJ120CA	HHG	IHG	120.0	133.00	147.00	1	193.0	15.54	2
3.0SMCJ130	3.0SMCJ130C	HHH	IHH	130.0	144.00	176.00	1	231.0	12.99	2
3.0SMCJ130A	3.0SMCJ130CA	HHK	IHK	130.0	144.00	159.00	1	209.0	14.35	2
3.0SMCJ150	3.0SMCJ150C	HHL	IHL	150.0	167.00	204.00	1	268.0	11.19	2
3.0SMCJ150A	3.0SMCJ150CA	HHM	IHM	150.0	167.00	185.00	1	243.0	12.35	2
3.0SMCJ160	3.0SMCJ160C	HHN	IHN	160.0	178.00	218.00	1	287.0	10.45	2
3.0SMCJ160A	3.0SMCJ160CA	HHP	IHP	160.0	178.00	197.00	1	259.0	11.58	2
3.0SMCJ170	3.0SMCJ170C	HHQ	IHQ	170.0	189.00	231.00	1	304.0	9.87	2
3.0SMCJ170A	3.0SMCJ170CA	HHR	IHR	170.0	189.00	209.00	1	275.0	10.91	2
3.0SMCJ180	3.0SMCJ180C	HHS	IHS	180.0	200.00	244.80	1	322.2	9.31	2
3.0SMCJ180A	3.0SMCJ180CA	HHT	IHT	180.0	200.00	220.00	1	291.6	10.29	2
3.0SMCJ190	3.0SMCJ190C	HHU	IHU	190.0	211.00	258.40	1	340.1	8.82	2
3.0SMCJ190A	3.0SMCJ190CA	HHV	IHV	190.0	211.00	232.00	1	307.8	9.75	2
3.0SMCJ200A	3.0SMCJ200CA	HHX	IHX	200.0	224.00	247.00	1	324.0	9.26	2
3.0SMCJ220A	3.0SMCJ220CA	HIE	IIE	220.0	246.00	272.00	1	356.0	8.43	2
3.0SMCJ250A	3.0SMCJ250CA	PHZ	DHZ	250.0	279.00	309.00	1	405.0	7.41	2
3.0SMCJ300A	3.0SMCJ300CA	PJE	DJE	300.0	335.00	371.00	1	486.0	6.17	2
3.0SMCJ350A	3.0SMCJ350CA	PJG	DJG	350.0	391.00	432.00	1	567.0	5.29	2
3.0SMCJ400A	3.0SMCJ400CA	PJK	DJK	400.0	447.00	494.00	1	648.0	4.63	2
3.0SMCJ440A	3.0SMCJ440CA	PJM	DJM	440.0	492.00	543.00	1	713.0	4.21	2

MARKING INFORMATION

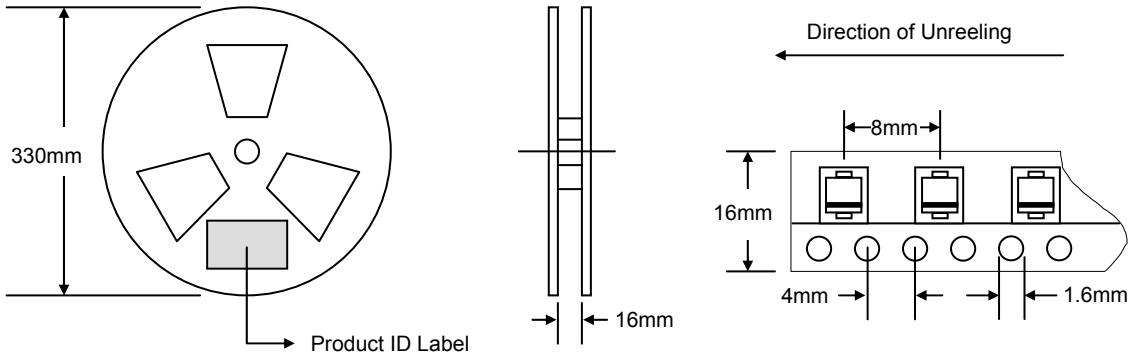


RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL




Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	3,000	340 x 337 x 45	6,000	370 x 370 x 420	48,000	19.0

Note: 1. Paper reel, white or gray color.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
3.0SMCJxx-T3	SMC	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, 3.0SMCJ5.0-T3-LF.**

WON-TOP ELECTRONICS and  are registered trademarks of Won-Top Electronics Co., Ltd (WTE). WTE has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.
No. 44 Yu Kang North 3rd Road,
Chine Chen Dist., Kaohsiung 806, Taiwan
Phone: 886-7-822-5408 or 886-7-822-5410
Fax: 886-7-822-5417
Email: sales@wontop.com
Internet: <http://www.wontop.com>

We power your everyday.