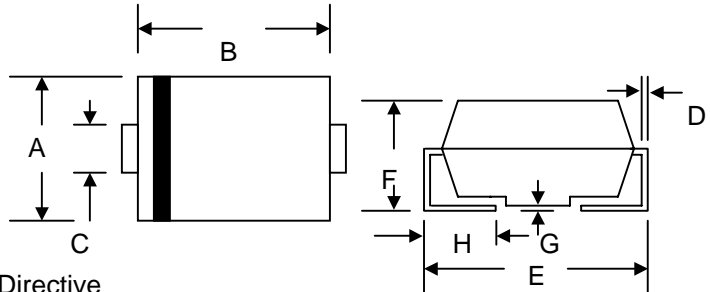


Data Sheet 5006, Rev.-

Green Products

Features

- Glass Passivated Die Construction
- 1500W Peak Pulse Power Dissipation
- 5.0V – 170V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- UL Recognized File # E224235
- Green Products in Compliance with the RoHS Directive



Mechanical Data

- Case: JEDEC DO-214AB Low Profile Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking:
Unidirectional – Device Code and Cathode Band
Bidirectional – Device Code Only
- Weight: 0.21 grams (approx.)

SMC/DO-214AB				
Dim	Min	Max	Min	Max
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.13	0.305	0.320
F	2.00	2.62	0.079	0.103
G	0.051	0.203	0.002	0.008
H	0.76	1.27	0.030	0.05
	In mm		In inch	

“C” Suffix Designates Bi-directional Devices
 “A” Suffix Designates 5% Tolerance Devices
 No Suffix Designates 10% Tolerance Devices

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

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation 10/1000 μs Waveform (Note 1, 2) Figure 1	PPPM	1500 Minimum	W
Peak Pulse Current on 10/1000 μs Waveform (Note 1) Figure 3	IPPM	See Table 1	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2, 3)	IFSM	100	A
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

- Note: 1. Non-repetitive current pulse, per Figure 3 and derated above $T_A = 25^{\circ}\text{C}$ per Figure 2
 2. Mounted on 8.0mm² copper pads to each terminal
 3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum

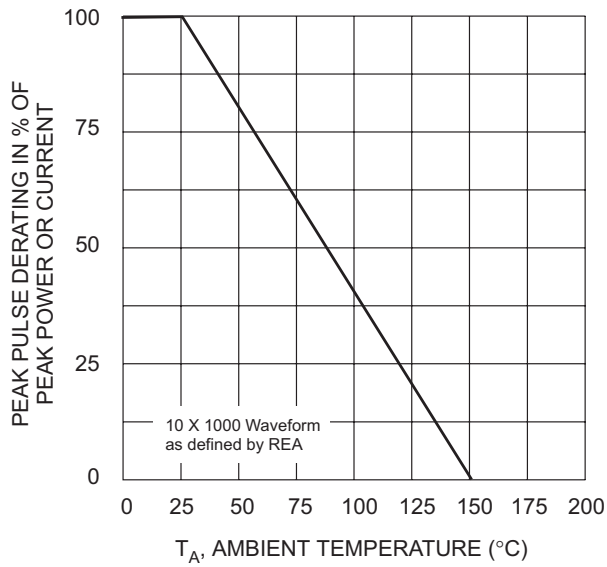


Fig. 1 Pulse Derating Curve

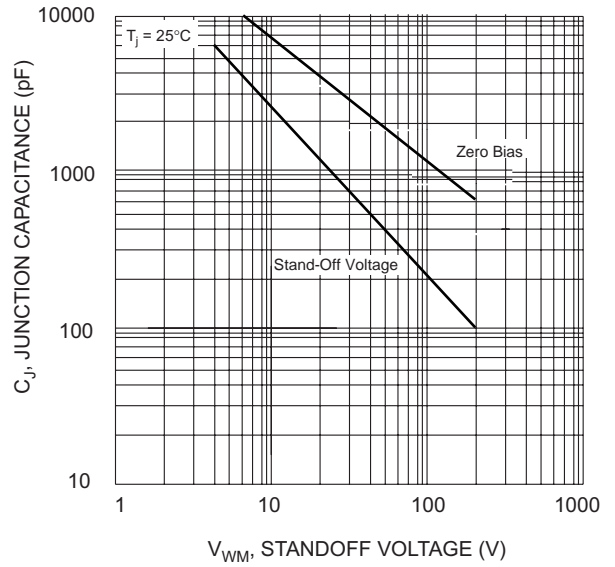


Fig. 2 Typical Junction Capacitance

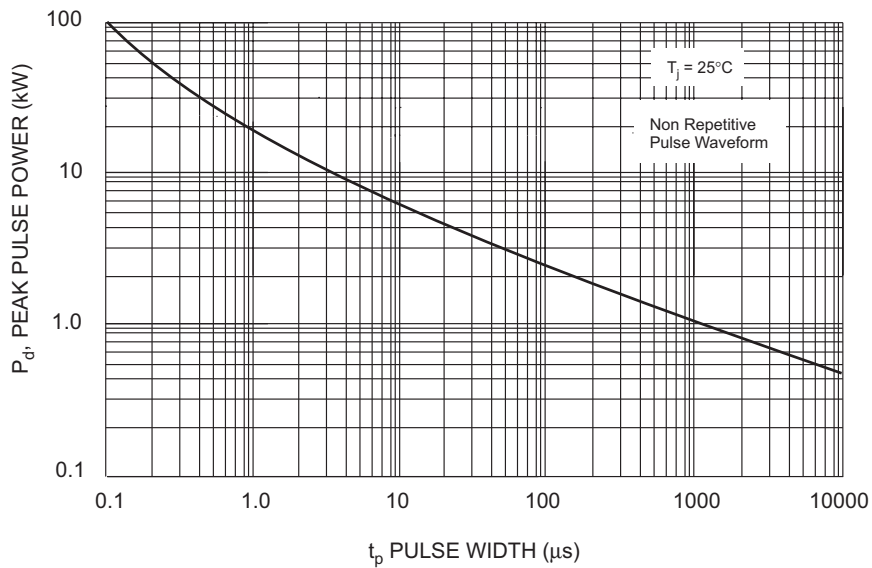


Fig. 3 Pulse Rating Curve

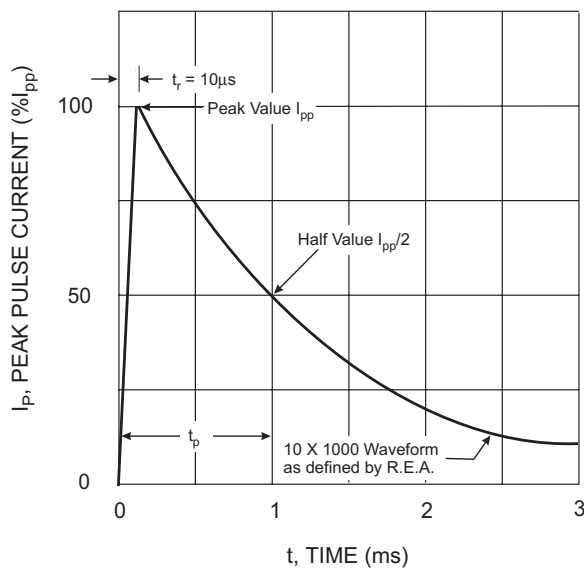


Fig. 4 Pulse Waveform

UNI-DIRECTIONAL 1500 WATT SURFACE MOUNT TVS

UNI-DIRECTIONAL PART NO.	DEVICE MARKING CODE	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR (uA)
SMCJ5.0-G	GDD	5.00	6.40	7.55	10	9.6	156.2	1000
SMCJ5.0A-G	GDE	5.00	6.40	7.25	10	9.2	163.0	1000
SMCJ6.0-G	GDF	6.00	6.67	8.45	10	11.4	131.6	1000
SMCJ6.0A-G	GDG	6.00	6.67	7.67	10	10.3	145.6	1000
SMCJ6.5-G	GDH	6.50	7.22	9.14	10	12.3	122.0	500
SMCJ6.5A-G	GDK	6.50	7.22	8.30	10	11.2	133.9	500
SMCJ7.0-G	GDL	7.00	7.78	9.86	10	13.3	112.8	200
SMCJ7.0A-G	GDM	7.00	7.78	8.95	10	12.0	125.0	200
SMCJ7.5-G	GDN	7.50	8.33	10.67	1	14.3	104.9	100
SMCJ7.5A-G	GDP	7.50	8.33	9.58	1	12.9	116.3	100
SMCJ8.0-G	GDO	8.00	8.99	11.30	1	15.0	100.0	50
SMCJ8.0A-G	GDR	8.00	8.99	10.23	1	13.6	110.3	50
SMCJ8.5-G	GDS	8.50	9.44	11.92	1	15.9	94.3	25
SMCJ8.5A-G	GDT	8.50	9.44	10.82	1	14.4	104.2	25
SMCJ9.0-G	GDU	9.00	10.00	12.60	1	16.9	88.7	10
SMCJ9.0A-G	GDV	9.00	10.00	11.50	1	15.4	97.4	10
SMCJ10-G	GDW	10.00	11.10	14.10	1	18.8	79.8	5
SMCJ10A-G	GDX	10.00	11.10	12.80	1	17.0	88.2	5
SMCJ11-G	GDY	11.00	12.20	15.40	1	20.1	74.6	5
SMCJ11A-G	GDZ	11.00	12.20	14.00	1	18.2	82.4	5
SMCJ12-G	GED	12.00	13.30	16.90	1	22.0	68.2	5
SMCJ12A-G	GEE	12.00	13.30	15.30	1	19.9	75.3	5
SMCJ13-G	GEF	13.00	14.40	18.20	1	23.8	63.0	5
SMCJ13A-G	GEG	13.00	14.40	16.50	1	21.5	69.7	5
SMCJ14-G	GEH	14.00	15.60	19.80	1	25.8	58.1	5
SMCJ14A-G	GEK	14.00	15.60	17.90	1	23.2	64.7	5
SMCJ15-G	GEL	15.00	16.70	21.10	1	26.9	55.8	5
SMCJ15A-G	GEM	15.00	16.70	19.20	1	24.4	61.5	5
SMCJ16-G	GEN	16.00	17.80	22.60	1	28.8	52.1	5
SMCJ16A-G	GEP	16.00	17.80	20.50	1	26.0	57.7	5
SMCJ17-G	GEQ	17.00	18.90	23.90	1	30.5	49.2	5
SMCJ17A-G	GER	17.00	18.90	21.70	1	27.6	53.3	5
SMCJ18-G	GES	18.00	20.00	25.30	1	32.2	46.6	5
SMCJ18A-G	GET	18.00	20.00	23.30	1	29.2	51.4	5
SMCJ20-G	GEU	20.00	22.20	28.10	1	35.8	41.9	5
SMCJ20A-G	GEV	20.00	22.20	25.50	1	32.4	46.3	5
SMCJ22-G	GEW	22.00	24.40	30.90	1	39.4	38.1	5
SMCJ22A-G	GEX	22.00	24.40	28.00	1	35.5	42.2	5
SMCJ24-G	GEY	24.00	26.70	33.80	1	43.0	34.9	5
SMCJ24A-G	GEZ	24.00	26.70	30.70	1	38.9	38.6	5
SMCJ26-G	GFD	26.00	28.90	36.60	1	46.6	32.2	5
SMCJ26A-G	GFE	26.00	28.90	33.20	1	42.1	35.6	5
SMCJ28-G	GFF	28.00	31.10	39.40	1	50.0	30.0	5
SMCJ28A-G	GFG	28.00	31.10	35.80	1	45.4	33.0	5
SMCJ30-G	GFH	30.00	33.30	42.20	1	53.5	28.0	5
SMCJ30A-G	GFK	30.00	33.30	38.30	1	48.4	31.0	5
SMCJ33-G	GFL	33.00	36.70	46.50	1	59.0	25.2	5
SMCJ33A-G	GFM	33.00	36.70	42.20	1	53.3	28.1	5
SMCJ36-G	GFN	36.00	40.00	50.70	1	64.3	23.3	5
SMCJ36A-G	GFP	36.00	40.00	46.00	1	58.1	25.8	5
SMCJ40-G	GFQ	40.00	44.40	56.30	1	71.4	21.0	5
SMCJ40A-G	GFR	40.00	44.40	51.10	1	64.5	23.2	5
SMCJ43-G	GFS	43.00	47.80	60.50	1	76.6	19.6	5
SMCJ43A-G	GFT	43.00	47.80	54.90	1	69.4	21.6	5
SMCJ45-G	GFU	45.00	50.00	63.30	1	80.3	18.7	5
SMCJ45A-G	GFV	45.00	50.00	57.50	1	72.7	20.6	5
SMCJ48-G	GFW	48.00	53.30	67.50	1	85.5	17.5	5
SMCJ48A-G	GFY	48.00	53.30	61.30	1	77.4	19.4	5
SMCJ51-G	GFY	51.00	56.70	71.80	1	91.1	18.5	5
SMCJ51A-G	GFZ	51.00	56.70	65.20	1	82.4	18.2	5
SMCJ54-G	GGD	54.00	60.00	76.00	1	96.3	15.6	5
SMCJ54A-G	GGE	54.00	60.00	69.00	1	87.1	17.2	5
SMCJ58-G	GGF	58.00	64.40	81.60	1	103.0	14.6	5
SMCJ58A-G	GGG	58.00	64.40	74.10	1	93.6	16.0	5
SMCJ60-G	GGH	60.00	66.70	84.50	1	107.0	14.0	5
SMCJ60A-G	GGK	60.00	66.70	76.70	1	96.8	15.5	5
SMCJ64-G	GGL	64.00	71.10	90.10	1	114.0	13.2	5
SMCJ64A-G	GGM	64.00	71.10	81.80	1	103.0	14.6	5
SMCJ70-G	GGN	70.00	77.80	98.60	1	125.0	12.0	5
SMCJ70A-G	GGP	70.00	77.80	89.50	1	113.0	13.3	5
SMCJ75-G	GGQ	75.00	83.30	105.70	1	134.0	11.2	5
SMCJ75A-G	GGR	75.00	83.30	95.80	1	121.0	12.4	5
SMCJ78-G	GGS	78.00	86.70	109.80	1	139.0	10.8	5
SMCJ78A-G	GGT	78.00	86.70	99.70	1	126.0	11.4	5
SMCJ85-G	GGU	85.00	94.40	119.20	1	151.0	9.9	5
SMCJ85A-G	GGV	85.00	94.40	108.20	1	137.0	10.4	5
SMCJ90-G	GGW	90.00	100.00	126.50	1	160.0	9.4	5
SMCJ90A-G	GGX	90.00	100.00	115.50	1	146.0	10.3	5
SMCJ100-G	GGY	100.00	111.00	141.00	1	179.0	8.4	5
SMCJ100A-G	GGZ	100.00	111.00	128.00	1	162.0	9.3	5
SMCJ110-G	GHD	110.00	122.00	154.50	1	196.0	7.7	5
SMCJ110A-G	GHE	110.00	122.00	140.50	1	177.0	8.4	5
SMCJ120-G	GHF	120.00	133.00	169.00	1	214.0	7.0	5
SMCJ120A-G	GHG	120.00	133.00	153.00	1	193.0	7.9	5
SMCJ130-G	GHH	130.00	144.00	182.50	1	231.0	6.5	5
SMCJ130A-G	GHK	130.00	144.00	165.50	1	209.0	7.2	5
SMCJ150-G	GHL	150.00	167.00	211.50	1	269.0	5.6	5
SMCJ150A-G	GHM	150.00	167.00	192.50	1	243.0	6.2	5
SMCJ160-G	GHN	160.00	178.00	226.00	1	287.0	5.2	5
SMCJ160A-G	GHP	160.00	178.00	205.00	1	259.0	5.8	5
SMCJ170-G	GHQ	170.00	189.00	239.50	1	304.0	4.9	5
SMCJ170A-G	GHR	170.00	189.00	217.50	1	275.0	5.5	5

BI-DIRECTIONAL 1500 WATT SURFACE MOUNT TVS

BI-DIRECTIONAL PART NO.	DEVICE MARKING CODE	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR (uA)
SMCJ5.0C-G	BDD	5.00	6.40	7.55	10	9.6	156.2	2000
SMCJ5.0CA-G	BDE	5.00	6.40	7.25	10	9.2	163.0	2000
SMCJ6.0C-G	BDF	6.00	6.67	8.45	10	11.4	131.6	2000
SMCJ6.0CA-G	BDG	6.00	6.67	7.67	10	10.3	145.6	2000
SMCJ6.5C-G	BDH	6.50	7.22	9.14	10	12.3	122.0	1000
SMCJ6.5CA-G	BDK	6.50	7.22	8.30	10	11.2	133.9	1000
SMCJ7.0C-G	BDL	7.00	7.78	9.86	10	13.3	112.8	400
SMCJ7.0CA-G	BDM	7.00	7.78	8.95	10	12.0	125.0	400
SMCJ7.5C-G	BDN	7.50	8.33	10.67	1	14.3	104.9	200
SMCJ7.5CA-G	BDP	7.50	8.33	9.58	1	12.9	116.3	200
SMCJ8.0C-G	BDQ	8.00	8.99	11.30	1	15.0	100.0	100
SMCJ8.0CA-G	BDR	8.00	8.99	10.23	1	13.6	110.3	100
SMCJ8.5C-G	BDS	8.50	9.44	11.92	1	15.9	94.3	50
SMCJ8.5CA-G	BDT	8.50	9.44	10.82	1	14.4	104.2	50
SMCJ9.0C-G	BDU	9.00	10.00	12.60	1	16.9	88.7	20
SMCJ9.0CA-G	BDV	9.00	10.00	11.50	1	15.4	97.4	20
SMCJ10C-G	BDW	10.00	11.10	14.10	1	18.8	79.8	5
SMCJ10CA-G	BDX	10.00	11.10	12.80	1	17.0	88.2	5
SMCJ11C-G	BDY	11.00	12.20	15.40	1	20.1	74.6	5
SMCJ11CA-G	BDZ	11.00	12.20	14.00	1	18.2	82.4	5
SMCJ12C-G	BED	12.00	13.30	16.90	1	22.0	68.2	5
SMCJ12CA-G	BEE	12.00	13.30	15.30	1	19.9	75.3	5
SMCJ13C-G	BEF	13.00	14.40	18.20	1	23.8	63.0	5
SMCJ13CA-G	BEG	13.00	14.40	16.50	1	21.5	69.7	5
SMCJ14C-G	BEH	14.00	15.60	19.80	1	25.8	58.1	5
SMCJ14CA-G	BEK	14.00	15.60	17.90	1	23.2	64.7	5
SMCJ15C-G	BEL	15.00	16.70	21.10	1	26.9	55.8	5
SMCJ15CA-G	BEM	15.00	16.70	19.20	1	24.4	61.5	5
SMCJ16C-G	BEN	16.00	17.80	22.60	1	28.8	52.1	5
SMCJ16CA-G	BEP	16.00	17.80	20.50	1	26.0	57.7	5
SMCJ17C-G	BEQ	17.00	18.90	23.90	1	30.5	49.2	5
SMCJ17CA-G	BER	17.00	18.90	21.70	1	27.6	53.3	5
SMCJ18C-G	BES	18.00	20.00	25.30	1	32.2	46.6	5
SMCJ18CA-G	BET	18.00	20.00	23.30	1	29.2	51.4	5
SMCJ20C-G	BEU	20.00	22.20	28.10	1	35.8	41.9	5
SMCJ20CA-G	BEV	20.00	22.20	25.50	1	32.4	46.3	5
SMCJ22C-G	BEW	22.00	24.40	30.90	1	39.4	38.1	5
SMCJ22CA-G	BEX	22.00	24.40	28.00	1	35.5	42.2	5
SMCJ24C-G	BEY	24.00	26.70	33.80	1	43.0	34.9	5
SMCJ24CA-G	BEZ	24.00	26.70	30.70	1	38.9	38.6	5
SMCJ26C-G	BFD	26.00	28.90	36.60	1	46.6	32.2	5
SMCJ26CA-G	BFE	26.00	28.90	33.20	1	42.1	35.6	5
SMCJ28C-G	BFF	28.00	31.10	39.40	1	50.0	30.0	5
SMCJ28CA-G	BFG	28.00	31.10	35.80	1	45.4	33.0	5
SMCJ30C-G	BFH	30.00	33.30	42.20	1	53.5	28.0	5
SMCJ30CA-G	BFK	30.00	33.30	38.30	1	48.4	31.0	5
SMCJ33C-G	BFL	33.00	36.70	46.50	1	59.0	25.2	5
SMCJ33CA-G	BFM	33.00	36.70	42.20	1	53.3	28.1	5
SMCJ36C-G	BFN	36.00	40.00	50.70	1	64.3	23.3	5
SMCJ36CA-G	BFP	36.00	40.00	46.00	1	58.1	25.8	5
SMCJ40C-G	BFQ	40.00	44.40	56.30	1	71.4	21.0	5
SMCJ40CA-G	BFR	40.00	44.40	51.10	1	64.5	23.2	5
SMCJ43C-G	BFS	43.00	47.80	60.50	1	76.6	19.6	5
SMCJ43CA-G	BFT	43.00	47.80	54.90	1	69.4	21.6	5
SMCJ45C-G	BFU	45.00	50.00	63.30	1	80.3	18.7	5
SMCJ45CA-G	BFV	45.00	50.00	57.50	1	72.7	20.6	5
SMCJ48C-G	BFW	48.00	53.30	67.50	1	85.5	17.5	5
SMCJ48CA-G	BFX	48.00	53.30	61.30	1	77.4	19.4	5
SMCJ51C-G	BFY	51.00	56.70	71.80	1	91.1	18.5	5
SMCJ51CA-G	BFZ	51.00	56.70	65.20	1	82.4	18.2	5
SMCJ54C-G	BGD	54.00	60.00	76.00	1	96.3	15.6	5
SMCJ54CA-G	BGE	54.00	60.00	69.00	1	87.1	17.2	5
SMCJ58C-G	BGF	58.00	64.40	81.60	1	103.0	14.6	5
SMCJ58CA-G	BGG	58.00	64.40	74.10	1	93.6	16.0	5
SMCJ60C-G	BGH	60.00	66.70	84.50	1	107.0	14.0	5
SMCJ60CA-G	BGK	60.00	66.70	76.70	1	96.8	15.5	5
SMCJ64C-G	BGL	64.00	71.10	90.10	1	114.0	13.2	5
SMCJ64CA-G	BGM	64.00	71.10	81.80	1	103.0	14.6	5
SMCJ70C-G	BGN	70.00	77.80	98.60	1	125.0	12.0	5
SMCJ70CA-G	BGP	70.00	77.80	89.50	1	113.0	13.3	5
SMCJ75C-G	BGQ	75.00	83.30	105.70	1	134.0	11.2	5
SMCJ75CA-G	BGR	75.00	83.30	95.80	1	121.0	12.4	5
SMCJ78C-G	BGS	78.00	86.70	109.80	1	139.0	10.8	5
SMCJ78CA-G	BGT	78.00	86.70	99.70	1	126.0	11.4	5
SMCJ85C-G	BGU	85.00	94.40	119.20	1	151.0	9.9	5
SMCJ85CA-G	BGV	85.00	94.40	108.20	1	137.0	10.4	5
SMCJ90C-G	BGW	90.00	100.00	126.50	1	160.0	9.4	5
SMCJ90CA-G	BGX	90.00	100.00	115.50	1	146.0	10.3	5
SMCJ100C-G	BGY	100.00	111.00	141.00	1	179.0	8.4	5
SMCJ100CA-G	BGZ	100.00	111.00	128.00	1	162.0	9.3	5
SMCJ110C-G	BHD	110.00	122.00	154.50	1	196.0	7.7	5
SMCJ110CA-G	BHE	110.00	122.00	140.50	1	177.0	8.4	5
SMCJ120C-G	BHF	120.00	133.00	169.00	1	214.0	7.0	5
SMCJ120CA-G	BHG	120.00	133.00	153.00	1	193.0	7.9	5
SMCJ130C-G	BHH	130.00	144.00	182.50	1	231.0	6.5	5
SMCJ130CA-G	BHK	130.00	144.00	165.50	1	209.0	7.2	5
SMCJ150C-G	BHL	150.00	167.00	211.50	1	269.0	5.6	5
SMCJ150CA-G	BHM	150.00	167.00	192.50	1	243.0	6.2	5
SMCJ160C-G	BHN	160.00	178.00	226.00	1	287.0	5.2	5
SMCJ160CA-G	BHP	160.00	178.00	205.00	1	259.0	5.8	5
SMCJ170C-G	BHQ	170.00	189.00	239.50	1	304.0	4.9	5
SMCJ170CA-G	BHR	170.00	189.00	217.50	1	275.0	5.5	5

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