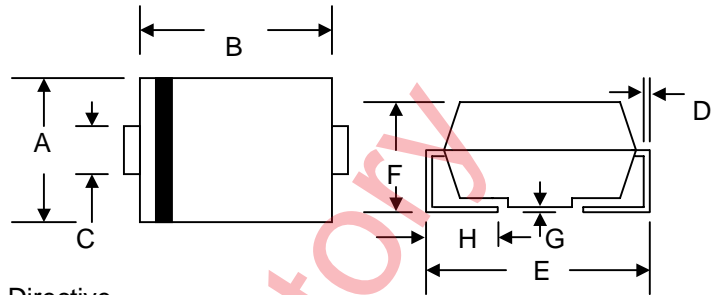


Data Sheet 5008, Rev. -

Green Products

Features

- Glass Passivated Die Construction
- 3000W 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°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation 10/1000µS Waveform (Note 1, 2) Figure 1	PPPM	3000 Minimum	W
Peak Pulse Current on 10/1000µS 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	°C

- Note: 1. Non-repetitive current pulse, per Figure 3 and derated above T_A = 25°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

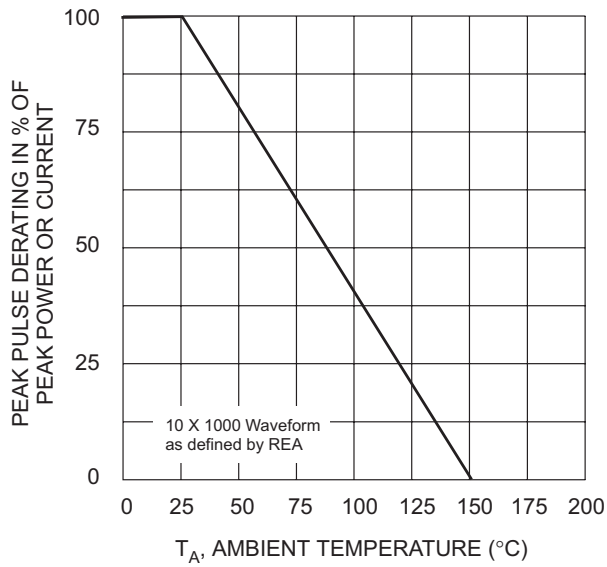


Fig. 1 Pulse Derating Curve

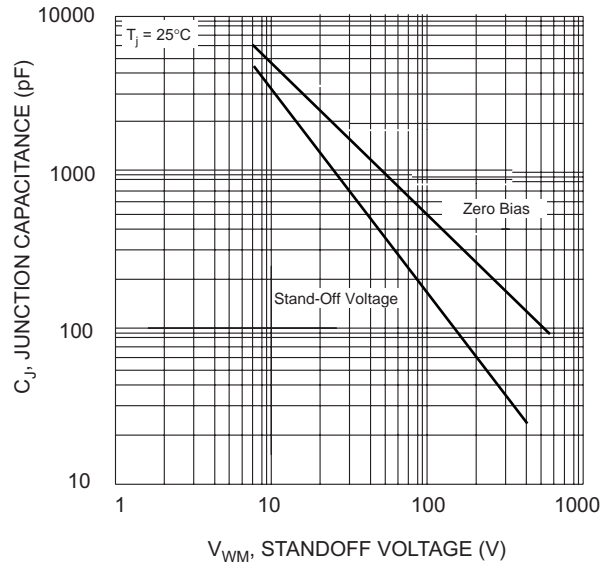


Fig. 2 Typical Junction Capacitance

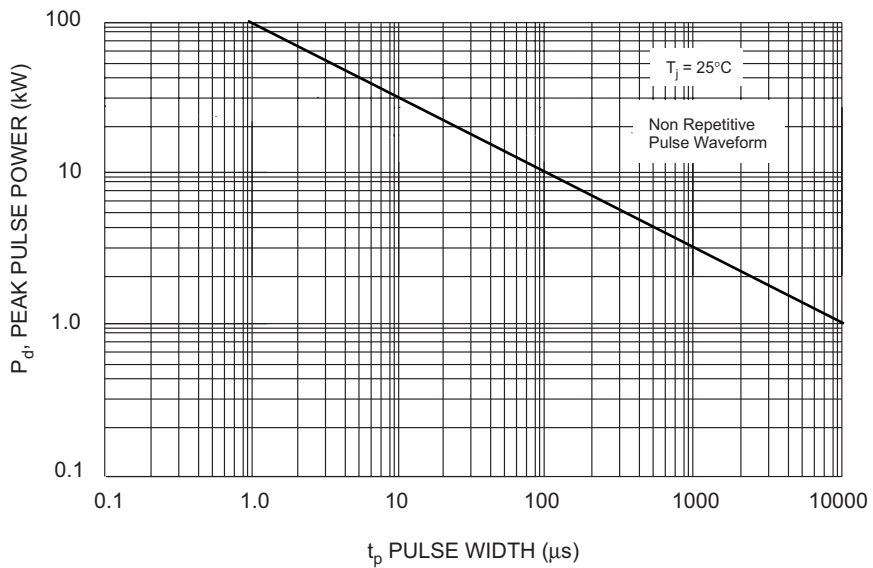


Fig. 3 Pulse Rating Curve

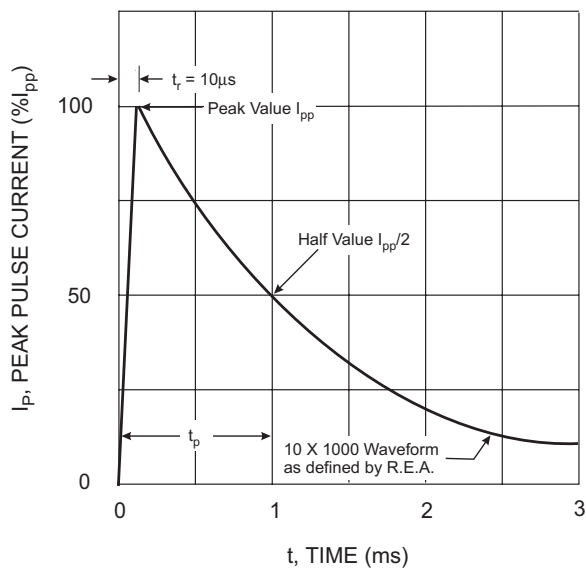


Fig. 4 Pulse Waveform

UNI-DIRECTIONAL 3000 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)
3.0SMCJ5.0-G	HDD	5.00	6.40	7.55	10	9.6	312.5	1000
3.0SMCJ5.0A-G	HDE	5.00	6.40	7.25	10	9.2	326.0	1000
3.0SMCJ6.0-G	HDF	6.00	6.67	8.45	10	11.4	263.2	1000
3.0SMCJ6.0A-G	HDF	6.00	6.67	7.67	10	10.3	291.3	1000
3.0SMCJ6.5-G	HDH	6.50	7.22	9.14	10	12.3	243.9	500
3.0SMCJ6.5A-G	HDK	6.50	7.22	8.30	10	11.2	267.9	500
3.0SMCJ7.0-G	HDL	7.00	7.78	9.86	10	13.3	225.6	200
3.0SMCJ7.0A-G	HDM	7.00	7.78	8.95	10	12.0	250.0	200
3.0SMCJ7.5-G	HDN	7.50	8.33	10.67	1	14.3	209.8	100
3.0SMCJ7.5A-G	HDP	7.50	8.33	9.58	1	12.9	232.6	100
3.0SMCJ8.0-G	HDQ	8.00	8.99	11.30	1	15.0	220.0	50
3.0SMCJ8.0A-G	HDR	8.00	8.99	10.23	1	13.6	220.6	50
3.0SMCJ8.5-G	HDS	8.50	9.44	11.92	1	15.9	188.8	25
3.0SMCJ8.5A-G	HDT	8.50	9.44	10.82	1	14.4	208.4	25
3.0SMCJ9.0-G	HDU	9.00	10.00	12.60	1	16.9	177.4	10
3.0SMCJ9.0A-G	HDV	9.00	10.00	11.50	1	15.4	194.8	10
3.0SMCJ10-G	HDW	10.00	11.10	14.10	1	18.8	159.6	5
3.0SMCJ10A-G	HDX	10.00	11.10	12.80	1	17.0	176.4	5
3.0SMCJ11-G	HDY	11.00	12.20	15.40	1	20.1	149.2	5
3.0SMCJ11A-G	HDZ	11.00	12.20	14.00	1	18.2	184.8	5
3.0SMCJ12-G	HED	12.00	13.30	16.90	1	22.0	136.4	5
3.0SMCJ12A-G	HEE	12.00	13.30	15.30	1	19.9	150.6	5
3.0SMCJ13-G	HEF	13.00	14.40	18.20	1	23.8	126.0	5
3.0SMCJ13A-G	HEG	13.00	14.40	16.50	1	21.5	139.4	5
3.0SMCJ14-G	HEH	14.00	15.60	19.80	1	25.8	116.2	5
3.0SMCJ14A-G	HEK	14.00	15.60	17.90	1	23.2	129.4	5
3.0SMCJ15-G	HEL	15.00	16.70	21.10	1	26.9	111.6	5
3.0SMCJ15A-G	HEM	15.00	16.70	19.20	1	24.4	123.0	5
3.0SMCJ16-G	HEN	16.00	17.80	22.60	1	28.8	104.2	5
3.0SMCJ16A-G	HEP	16.00	17.80	20.50	1	26.0	115.4	5
3.0SMCJ17-G	HEQ	17.00	18.90	23.90	1	30.5	98.4	5
3.0SMCJ17A-G	HER	17.00	18.90	21.70	1	27.6	106.6	5
3.0SMCJ18-G	HES	18.00	20.00	25.30	1	32.2	93.2	5
3.0SMCJ18A-G	HET	18.00	20.00	23.30	1	29.2	102.8	5
3.0SMCJ20-G	HEU	20.00	22.20	28.10	1	35.8	83.8	5
3.0SMCJ20A-G	HEV	20.00	22.20	25.50	1	32.4	92.6	5
3.0SMCJ22-G	HEW	22.00	24.40	30.90	1	39.4	76.2	5
3.0SMCJ22A-G	HEX	22.00	24.40	28.00	1	35.5	84.4	5
3.0SMCJ24-G	HEY	24.00	26.70	33.80	1	43.0	69.8	5
3.0SMCJ24A-G	HEZ	24.00	26.70	30.70	1	38.9	77.2	5
3.0SMCJ26-G	HFD	26.00	28.90	36.60	1	46.6	64.4	5
3.0SMCJ26A-G	HFE	26.00	28.90	33.20	1	42.1	71.2	5
3.0SMCJ28-G	HFF	28.00	31.10	39.40	1	50.0	60.0	5
3.0SMCJ28A-G	HFG	28.00	31.10	35.80	1	45.4	66.0	5
3.0SMCJ30-G	HFH	30.00	33.30	42.20	1	53.5	56.0	5
3.0SMCJ30A-G	HFK	30.00	33.30	38.30	1	48.4	62.0	5
3.0SMCJ33-G	HFL	33.00	36.70	46.50	1	59.0	50.4	5
3.0SMCJ33A-G	HFM	33.00	36.70	42.20	1	53.3	56.2	5
3.0SMCJ36-G	HFN	36.00	40.00	50.70	1	64.3	46.6	5
3.0SMCJ36A-G	HFP	36.00	40.00	46.00	1	58.1	51.6	5
3.0SMCJ40-G	HFQ	40.00	44.40	56.30	1	71.4	42.0	5
3.0SMCJ40A-G	HFR	40.00	44.40	51.10	1	64.5	46.4	5
3.0SMCJ43-G	HFS	43.00	47.80	60.50	1	76.6	39.2	5
3.0SMCJ43A-G	HFT	43.00	47.80	54.90	1	69.4	43.2	5
3.0SMCJ45-G	HFU	45.00	50.00	63.30	1	80.3	37.4	5
3.0SMCJ45A-G	HFV	45.00	50.00	57.50	1	72.7	41.2	5
3.0SMCJ48-G	HFW	48.00	53.30	67.50	1	85.5	35.0	5
3.0SMCJ48A-G	HFY	48.00	53.30	61.30	1	77.4	38.8	5
3.0SMCJ51-G	HFZ	51.00	56.70	71.80	1	91.1	37.0	5
3.0SMCJ51A-G	HFZ	51.00	56.70	65.20	1	82.4	36.4	5
3.0SMCJ54-G	HGD	54.00	60.00	76.00	1	96.3	31.2	5
3.0SMCJ54A-G	HGE	54.00	60.00	69.00	1	87.1	34.4	5
3.0SMCJ58-G	HGF	58.00	64.40	81.60	1	103.0	29.2	5
3.0SMCJ58A-G	HGG	58.00	64.40	74.10	1	93.6	32.0	5
3.0SMCJ60-G	HGH	60.00	66.70	84.50	1	107.0	28.0	5
3.0SMCJ60A-G	HGK	60.00	66.70	76.70	1	96.8	31.0	5
3.0SMCJ64-G	HGL	64.00	71.10	90.10	1	114.0	26.4	5
3.0SMCJ64A-G	HGM	64.00	71.10	81.80	1	103.0	29.2	5
3.0SMCJ70-G	HGN	70.00	77.80	98.60	1	125.0	24.0	5
3.0SMCJ70A-G	HGP	70.00	77.80	89.50	1	113.0	26.6	5
3.0SMCJ75-G	HGQ	75.00	83.30	105.70	1	134.0	22.4	5
3.0SMCJ75A-G	HGR	75.00	83.30	95.80	1	121.0	24.8	5
3.0SMCJ78-G	HGS	78.00	86.70	109.80	1	139.0	21.6	5
3.0SMCJ78A-G	HGT	78.00	86.70	99.70	1	126.0	22.8	5
3.0SMCJ85-G	HGU	85.00	94.40	119.20	1	151.0	19.8	5
3.0SMCJ85A-G	HGV	85.00	94.40	108.20	1	137.0	20.8	5
3.0SMCJ90-G	HGW	90.00	100.00	126.50	1	160.0	18.8	5
3.0SMCJ90A-G	HGX	90.00	100.00	115.50	1	146.0	20.6	5
3.0SMCJ100-G	HGY	100.00	111.00	141.00	1	179.0	16.6	5
3.0SMCJ100A-G	HGZ	100.00	111.00	128.00	1	162.0	18.6	5
3.0SMCJ110-G	HHD	110.00	122.00	154.50	1	196.0	15.4	5
3.0SMCJ110A-G	HHE	110.00	122.00	140.50	1	177.0	16.8	5
3.0SMCJ120-G	HHF	120.00	133.00	169.00	1	214.0	14.0	5
3.0SMCJ120A-G	HHG	120.00	133.00	153.00	1	193.0	15.6	5
3.0SMCJ130-G	HHH	130.00	144.00	182.50	1	231.0	13.0	5
3.0SMCJ130A-G	HHK	130.00	144.00	165.50	1	209.0	14.4	5
3.0SMCJ150-G	HHL	150.00	167.00	211.50	1	269.0	11.2	5
3.0SMCJ150A-G	HHM	150.00	167.00	192.50	1	243.0	12.4	5
3.0SMCJ160-G	HHN	160.00	178.00	226.00	1	287.0	10.4	5
3.0SMCJ160A-G	HHP	160.00	178.00	205.00	1	259.0	11.6	5
3.0SMCJ170-G	HHQ	170.00	189.00	239.50	1	304.0	9.8	5
3.0SMCJ170A-G	HHR	170.00	189.00	217.50	1	275.0	11.0	5

BI-DIRECTIONAL 3000 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)
3.0SMCJ5.0C-G	IDD	5.00	6.40	7.55	10	9.6	312.5	2000
3.0SMCJ5.0CA-G	IDE	5.00	6.40	7.25	10	9.2	326.0	2000
3.0SMCJ6.0C-G	IDF	6.00	6.67	8.45	10	11.4	263.2	2000
3.0SMCJ6.0CA-G	IDG	6.00	6.67	7.67	10	10.3	291.3	2000
3.0SMCJ6.5C-G	IDH	6.50	7.22	9.14	10	12.3	243.9	1000
3.0SMCJ6.5CA-G	IDK	6.50	7.22	8.30	10	11.2	267.9	1000
3.0SMCJ7.0C-G	IDL	7.00	7.78	9.86	10	13.3	225.6	400
3.0SMCJ7.0CA-G	IDM	7.00	7.78	8.95	10	12.0	250.0	400
3.0SMCJ7.5C-G	IDN	7.50	8.33	10.67	1	14.3	209.8	200
3.0SMCJ7.5CA-G	IDP	7.50	8.33	9.58	1	12.9	232.6	200
3.0SMCJ8.0C-G	IDQ	8.00	8.99	11.30	1	15.0	220.0	100
3.0SMCJ8.0CA-G	IDR	8.00	8.99	10.23	1	13.6	220.6	100
3.0SMCJ8.5C-G	IDS	8.50	9.44	11.92	1	15.9	188.8	50
3.0SMCJ8.5CA-G	IDT	8.50	9.44	10.82	1	14.4	208.4	50
3.0SMCJ9.0C-G	IDU	9.00	10.00	12.60	1	16.9	177.4	20
3.0SMCJ9.0CA-G	IDV	9.00	10.00	11.50	1	15.4	194.8	20
3.0SMCJ10C-G	IDW	10.00	11.10	14.10	1	18.8	159.6	5
3.0SMCJ10CA-G	IDX	10.00	11.10	12.80	1	17.0	176.4	5
3.0SMCJ11C-G	IDY	11.00	12.20	15.40	1	20.1	149.2	5
3.0SMCJ11CA-G	IDZ	11.00	12.20	14.00	1	18.2	184.8	5
3.0SMCJ12C-G	IED	12.00	13.30	16.90	1	22.0	136.4	5
3.0SMCJ12CA-G	IEE	12.00	13.30	15.30	1	19.9	150.6	5
3.0SMCJ13C-G	IEF	13.00	14.40	18.20	1	23.8	126.0	5
3.0SMCJ13CA-G	IEG	13.00	14.40	16.50	1	21.5	139.4	5
3.0SMCJ14C-G	IEH	14.00	15.60	19.80	1	25.8	116.2	5
3.0SMCJ14CA-G	IEK	14.00	15.60	17.90	1	23.2	129.4	5
3.0SMCJ15C-G	IEL	15.00	16.70	21.10	1	26.9	111.6	5
3.0SMCJ15CA-G	IEM	15.00	16.70	19.20	1	24.4	123.0	5
3.0SMCJ16C-G	IEN	16.00	17.80	22.60	1	28.8	104.2	5
3.0SMCJ16CA-G	IEP	16.00	17.80	20.50	1	26.0	115.4	5
3.0SMCJ17C-G	IEQ	17.00	18.90	23.90	1	30.5	98.4	5
3.0SMCJ17CA-G	IER	17.00	18.90	21.70	1	27.6	106.6	5
3.0SMCJ18C-G	IES	18.00	20.00	25.30	1	32.2	93.2	5
3.0SMCJ18CA-G	IET	18.00	20.00	23.30	1	29.2	102.8	5
3.0SMCJ20C-G	IEU	20.00	22.20	28.10	1	35.8	83.8	5
3.0SMCJ20CA-G	IEV	20.00	22.20	25.50	1	32.4	92.6	5
3.0SMCJ22C-G	IEW	22.00	24.40	30.90	1	39.4	76.2	5
3.0SMCJ22CA-G	IEX	22.00	24.40	28.00	1	35.5	84.4	5
3.0SMCJ24C-G	IEY	24.00	26.70	33.80	1	43.0	69.8	5
3.0SMCJ24CA-G	IEZ	24.00	26.70	30.70	1	38.9	77.2	5
3.0SMCJ26C-G	IFD	26.00	28.90	36.60	1	46.6	64.4	5
3.0SMCJ26CA-G	IFE	26.00	28.90	33.20	1	42.1	71.2	5
3.0SMCJ28C-G	IFF	28.00	31.10	39.40	1	50.0	60.0	5
3.0SMCJ28CA-G	IFG	28.00	31.10	35.80	1	45.4	66.0	5
3.0SMCJ30C-G	IFH	30.00	33.30	42.20	1	53.5	56.0	5
3.0SMCJ30CA-G	IFK	30.00	33.30	38.30	1	48.4	62.0	5
3.0SMCJ33C-G	IFL	33.00	36.70	46.50	1	59.0	50.4	5
3.0SMCJ33CA-G	IFM	33.00	36.70	42.20	1	53.0	56.2	5
3.0SMCJ36C-G	IFN	36.00	40.00	50.70	1	64.3	46.6	5
3.0SMCJ36CA-G	IFP	36.00	40.00	46.00	1	58.1	51.6	5
3.0SMCJ40C-G	IFQ	40.00	44.40	56.30	1	71.4	42.0	5
3.0SMCJ40CA-G	IFR	40.00	44.40	51.10	1	64.5	46.4	5
3.0SMCJ43C-G	IFS	43.00	47.80	60.50	1	76.6	39.2	5
3.0SMCJ43CA-G	IFT	43.00	47.80	54.90	1	69.4	43.2	5
3.0SMCJ45C-G	IFU	45.00	50.00	63.30	1	80.3	37.4	5
3.0SMCJ45CA-G	IFV	45.00	50.00	57.50	1	72.7	41.2	5
3.0SMCJ48C-G	IFW	48.00	53.30	67.50	1	85.5	35.0	5
3.0SMCJ48CA-G	IFX	48.00	53.30	61.30	1	77.4	38.8	5
3.0SMCJ51C-G	IFY	51.00	56.70	71.80	1	91.1	37.0	5
3.0SMCJ51CA-G	IFZ	51.00	56.70	65.20	1	82.4	36.4	5
3.0SMCJ54C-G	IGD	54.00	60.00	76.00	1	96.3	31.2	5
3.0SMCJ54CA-G	IGE	54.00	60.00	69.00	1	87.1	34.4	5
3.0SMCJ58C-G	IGF	58.00	64.40	81.60	1	103.0	29.2	5
3.0SMCJ58CA-G	IGG	58.00	64.40	74.10	1	93.6	32.0	5
3.0SMCJ60C-G	IGH	60.00	66.70	84.50	1	107.0	28.0	5
3.0SMCJ60CA-G	IGK	60.00	66.70	76.70	1	96.8	31.0	5
3.0SMCJ64C-G	IGL	64.00	71.10	90.10	1	114.0	26.4	5
3.0SMCJ64CA-G	IGM	64.00	71.10	81.80	1	103.0	29.2	5
3.0SMCJ70C-G	IGN	70.00	77.80	98.60	1	125.0	24.0	5
3.0SMCJ70CA-G	IGP	70.00	77.80	89.50	1	113.0	26.6	5
3.0SMCJ75C-G	IGQ	75.00	83.30	105.70	1	134.0	22.4	5
3.0SMCJ75CA-G	IGR	75.00	83.30	95.80	1	121.0	24.8	5
3.0SMCJ78C-G	IGS	78.00	86.70	109.80	1	139.0	21.6	5
3.0SMCJ78CA-G	IGT	78.00	86.70	99.70	1	126.0	22.8	5
3.0SMCJ85C-G	IGU	85.00	94.40	119.20	1	151.0	19.8	5
3.0SMCJ85CA-G	IGV	85.00	94.40	108.20	1	137.0	20.8	5
3.0SMCJ90C-G	IGW	90.00	100.00	126.50	1	160.0	18.8	5
3.0SMCJ90CA-G	IGX	90.00	100.00	115.50	1	146.0	20.6	5
3.0SMCJ100C-G	IGY	100.00	111.00	141.00	1	179.0	16.6	5
3.0SMCJ100CA-G	IGZ	100.00	111.00	128.00	1	162.0	18.6	5
3.0SMCJ110C-G	IHD	110.00	122.00	154.50	1	196.0	15.4	5
3.0SMCJ110CA-G	IHE	110.00	122.00	140.50	1	177.0	16.8	5
3.0SMCJ120C-G	IHF	120.00	133.00	169.00	1	214.0	14.0	5
3.0SMCJ120CA-G	IHG	120.00	133.00	153.00	1	193.0	15.6	5
3.0SMCJ130C-G	IHH	130.00	144.00	182.50	1	231.0	13.0	5
3.0SMCJ130CA-G	IHK	130.00	144.00	165.50	1	209.0	14.4	5
3.0SMCJ150C-G	IHL	150.00	167.00	211.50	1	269.0	11.2	5
3.0SMCJ150CA-G	IHM	150.00	167.00	192.50	1	243.0	12.4	5
3.0SMCJ160C-G	IHN	160.00	178.00	226.00	1	287.0	10.4	5
3.0SMCJ160CA-G	IHP	160.00	178.00	205.00	1	259.0	11.6	5
3.0SMCJ170C-G	IHQ	170.00	189.00	239.50	1	304.0	9.8	5
3.0SMCJ170CA-G	IHR	170.00	189.00	217.50	1	275.0	11.0	5

DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.