



Surface Mount 1500 Watt Transient Voltage Suppressor

DESCRIPTION

The SMC 5.0 through SMC 170A series of 1500 watt Transient Voltage Suppressors (TVSs) protects a variety of voltage-sensitive components. The gull-wing design (SMCG) in the DO-215AB package allows for visible solder connections. The J-bend design (SMCJ) in the DO-214AB package allows for greater PC board mounting density. Selections include unidirectional and bidirectional as well as RoHS compliant versions. They can protect from secondary lightning effects per IEC61000-4-5 and class levels defined herein, or for inductive switching environments and induced RF protection. Since their response time is virtually instantaneous, they can also be used in protection from ESD and EFT per IEC61000-4-2 and IEC61000-4-4. Microsemi also offers numerous other products to meet higher and lower power voltage regulation applications.

Important: For the latest information, visit our website http://www.microsemi.com.

FEATURES

- Economical surface mount design with gull-wing or J-bend terminations.
- Wide leads assure a large surface contact for good heat dissipation and a low resistance path for surge current flow to ground.
- Available in both unidirectional and bidirectional construction.
- Designed specifically for transient voltage suppression.
- Ideal for protecting sensitive components such as integrated circuits and MOS devices.
- Moisture classification is "Level 1" with no dry pack required per IPC/JEDEC J-STD-020B.
- RoHS compliant versions available.
- Axial-lead equivalent packages for thru-hole mounting are available as 1.5KE6.8A to 1.5KE200CA or 1N6267 through 1N6303A and 1N5908 (contact Microsemi for other surface mount options).

APPLICATIONS / BENEFITS

- Selections for 5.0 to 170 volts standoff voltages (V_{WM}).
- Tolerance levels of 5% or 10% available.
- Protection from switching transients and induced RF.
- Protection from ESD, and EFT per IEC 61000-4-2 and IEC 61000-4-4.
- Secondary lightning protection per IEC61000-4-5 with 42 ohms source impedance:
 - Class 1: SMC 5.0 to SMC 170A or CA
 - Class 2: SMC 5.0 to SMC 150A or CA
 - Class 3: SMC 5.0 to SMC 75A or CA
 - Class 4: SMC 5.0 to SMC 36A or CA
- Secondary lightning protection per IEC61000-4-5 with 12 ohms source impedance:
 - Class 1: SMC 5.0 to SMC 90A or CA
 - Class 2: SMC 5.0 to SMC 45A or CA
 - Class 3: SMC 5.0 to SMC 24A or CA
 - Class 4: SMC 5.0 to SMC 11A or CA
- Secondary lightning protection per IEC61000-4-5 with 2 ohms source impedance:
- Class 2: SMC 5.0 to SMC 22A or CA Class 3: SMC 5.0 to SMC 10A or CA



DO-215AB (SMCG) Package



DO-214AB (SMCJ) Package

NOTE: All SMC series are equivalent to prior SMM package identifications.

Also available in:

Hi-Rel Level <u>MSMCG(J)5.0A –</u> <u>MXLSMCG(J)170CAe3</u>

MSC – Lawrence

6 Lake Street, Lawrence, MA 01841 Tel: 1-800-446-1158 or (978) 620-2600 Fax: (978) 689-0803

MSC – Ireland

Gort Road Business Park, Ennis, Co. Clare, Ireland Tel: +353 (0) 65 6840044 Fax: +353 (0) 65 6822298

Website: <u>www.microsemi.com</u>



MAXIMUM RATINGS

Parameters/Test Conditions	Symbol	Value	Unit	
Junction and Storage Temperature	$T_{\rm J}$ and $T_{\rm STG}$	-65 to +150	°C	
Thermal Resistance Junction-to-Lead	R _{θJL}	20	°C/W	
Thermal Resistance Junction-to-Amb	R _{θJA}	80	°C/W	
Peak Pulse Power dissipation @ 25 see Figures 1, 2, and 3)	P _{PP}	1500	W	
Impulse Repetition Rate (duty factor)	df	0.01	%	
t_{clamping} (0 volts to $V_{(\text{BR})}$ min.)	Unidirectional Bidirectional		<100 <5	ps ns
Rated Average Power Dissipation	T _L = +30 °C T _A = +25 °C	P _{M(AV)}	6 1.56 ⁽¹⁾	W
Maximum Forward Surge Current ⁽²⁾	I _{FSM}	200	A (pk)	
Solder Temperature @ 10 s	T _{SP}	260	°C	

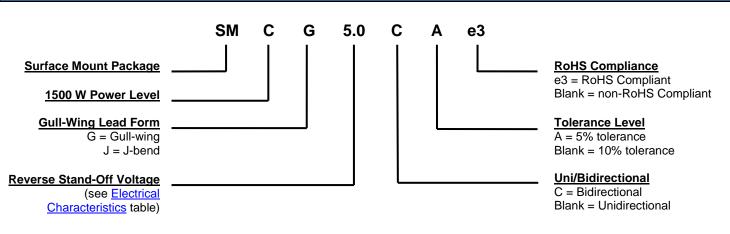
Notes: 1. When mounted on FR4 PC board (1oz Cu) with recommended footprint (see last page).

2. Peak impulse of 8.3 ms half-sine wave at 25 °C (unidirectional only).

MECHANICAL and PACKAGING

- CASE: Void-free transfer molded thermosetting epoxy body meeting UL94V-0.
- TERMINALS: Tin-lead or RoHS compliant annealed matte-tin plating. Solderable to MIL-STD-750, method 2026.
- MARKING: Part number without "SM" prefix (e.g. C5.0A, C5.0CA, 5.0Ae3, C5.0CAe3, C36A, C36CAe3, etc.).
- POLARITY: Cathode indicated by band. No marking on bi-directional devices.
- TAPE & REEL option: Standard per EIA-481-2 with 16 mm tape (add "TR" suffix to part number). Consult factory for quantities.
- WEIGHT: Approximately 0.25 grams.
- See <u>package dimensions</u> on last page.

PART NOMENCLATURE





	SYMBOLS & DEFINITIONS				
Symbol	Definition				
I _(BR)	Breakdown Current: The current used for measuring breakdown voltage V(BR).				
Ι _D	Standby Current: The current at the rated standoff voltage (V_{WM}).				
١ _F	Forward Current: The forward current dc value, no alternating component.				
Ι _Ο	Average Rectified Output Current: The output current averaged over a full cycle with a 50 Hz or 60 Hz sine-wave input and a 180 degree conduction angle.				
I _{PP}	Peak Impulse Current: The peak current during the impulse.				
P _{PP}	Peak Pulse Power: The peak power dissipation resulting from the peak impulse current IPP.				
Vc	Clamping Voltage: The maximum clamping voltage at specified I _{PP} (Peak Pulse Current) at the specified pulse conditions.				
V _(BR)	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.				
V _{WM}	Working Peak Voltage: The maximum peak voltage that can be applied over the operating temperature range. This is also referred to as standoff voltage.				

ELECTRICAL CHARACTERISTICS @ 25 °C unless otherwise stated

SMCG5.0A S SMCG6.0 S SMCG6.0A S SMCG6.5A S SMCG7.0 S SMCG7.0A S SMCG7.0A S SMCG7.0A S SMCG7.0A S SMCG7.5A S SMCG8.0 S SMCG8.0A S SMCG8.5A S SMCG8.5A S SMCG9.0 S	J-Bend SMCJ5.0 SMCJ5.0A SMCJ6.0 SMCJ6.0A SMCJ6.5 SMCJ6.5A SMCJ7.0 SMCJ7.0A SMCJ7.5A SMCJ7.5A SMCJ7.5A SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5A	V WM Volts 5.0 5.0 6.0 6.0 6.5 6.5 7.0 7.0 7.0 7.5 7.5 8.0 8.0	MIN. MAX. 6.40 - 7.30 6.40 - 7.00 6.67 - 8.15 6.67 - 7.37 7.22 - 8.82 7.22 - 7.98 7.78 - 9.51 7.78 - 8.60 8.33 - 10.2 8.33 - 9.21 8.89 - 10.9 10.9	I _(BR) mA 10 10 10 10 10 10 10 10 10 10 1 1	@ Ipp 9.6 9.2 11.4 10.3 12.3 11.2 13.3 12.0 14.3	IPP Amps 156.2 163.0 131.6 145.6 122.0 133.9 112.8 125.0 104.9	@ V _{WM} I _D μA 1000 1000 1000 500 500 200 200 200 100
SMCG5.0 S SMCG5.0A S SMCG6.0 S SMCG6.0A S SMCG6.5A S SMCG7.0 S SMCG7.0A S SMCG7.0A S SMCG7.5A S SMCG8.0 S SMCG8.0A S SMCG8.0A S SMCG8.5A S SMCG8.5A S SMCG8.5A S SMCG8.5A S SMCG9.0 S	SMCJ5.0 SMCJ5.0A SMCJ6.0 SMCJ6.5 SMCJ6.5A SMCJ7.0 SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ7.5A SMCJ8.0A SMCJ8.0A SMCJ8.5A	5.0 5.0 6.0 6.5 6.5 7.0 7.0 7.5 7.5 8.0 8.0	$\begin{array}{c} 6.40 - 7.30\\ 6.40 - 7.00\\ 6.67 - 8.15\\ 6.67 - 7.37\\ \hline 7.22 - 8.82\\ 7.22 - 7.98\\ 7.78 - 9.51\\ \hline 7.78 - 8.60\\ \hline 8.33 - 10.2\\ \hline 8.33 - 9.21\\ \end{array}$	10 10 10 10 10 10 10 10 10	9.6 9.2 11.4 10.3 12.3 11.2 13.3 12.0	156.2 163.0 131.6 145.6 122.0 133.9 112.8 125.0	1000 1000 1000 1000 500 500 200 200
SMCG5.0A S SMCG6.0 S SMCG6.0A S SMCG6.5A S SMCG7.0 S SMCG7.0A S SMCG7.0A S SMCG7.0A S SMCG7.0A S SMCG7.5A S SMCG8.0 S SMCG8.0A S SMCG8.5A S SMCG8.5A S SMCG9.0 S	SMCJ5.0A SMCJ6.0 SMCJ6.5 SMCJ6.5A SMCJ7.0 SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ8.0A SMCJ8.0A SMCJ8.5	5.0 6.0 6.5 6.5 7.0 7.0 7.5 7.5 8.0 8.0	$\begin{array}{c} 6.40 - 7.00\\ 6.67 - 8.15\\ 6.67 - 7.37\\ \hline 7.22 - 8.82\\ 7.22 - 7.98\\ 7.78 - 9.51\\ \hline 7.78 - 8.60\\ \hline 8.33 - 10.2\\ \hline 8.33 - 9.21\\ \end{array}$	10 10 10 10 10 10 10 10 10	9.2 11.4 10.3 12.3 11.2 13.3 12.0	163.0 131.6 145.6 122.0 133.9 112.8 125.0	1000 1000 500 500 200 200
SMCG6.0 S SMCG6.0A S SMCG6.5A S SMCG7.0 S SMCG7.0A S SMCG7.5A S SMCG8.0 S SMCG8.0 S SMCG8.0 S SMCG8.0A S SMCG8.5 S SMCG8.5 S SMCG8.5A S SMCG9.0 S	SMCJ6.0 SMCJ6.0A SMCJ6.5 SMCJ7.0 SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ8.00 SMCJ8.0A SMCJ8.5A	6.0 6.0 6.5 6.5 7.0 7.0 7.5 7.5 8.0 8.0	$\begin{array}{c} 6.67 - 8.15 \\ 6.67 - 7.37 \\ \hline 7.22 - 8.82 \\ 7.22 - 7.98 \\ 7.78 - 9.51 \\ \hline 7.78 - 8.60 \\ \hline 8.33 - 10.2 \\ \hline 8.33 - 9.21 \end{array}$	10 10 10 10 10 10 10 1	11.4 10.3 12.3 11.2 13.3 12.0	131.6 145.6 122.0 133.9 112.8 125.0	1000 1000 500 500 200 200
SMCG6.0ASSMCG6.5SSMCG7.0SSMCG7.0ASSMCG7.5ASSMCG8.0SSMCG8.0ASSMCG8.5SSMCG8.5ASSMCG9.0S	SMCJ6.0A SMCJ6.5 SMCJ7.0 SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5 SMCJ8.5A	6.0 6.5 6.5 7.0 7.0 7.5 7.5 8.0 8.0	6.67 - 7.37 7.22 - 8.82 7.22 - 7.98 7.78 - 9.51 7.78 - 8.60 8.33 - 10.2 8.33 - 9.21	10 10 10 10 10 10 1	10.3 12.3 11.2 13.3 12.0	145.6 122.0 133.9 112.8 125.0	1000 500 500 200 200
SMCG6.5SSMCG6.5ASSMCG7.0SSMCG7.0ASSMCG7.5ASSMCG8.0SSMCG8.0ASSMCG8.5SSMCG8.5ASSMCG9.0S	SMCJ6.5 SMCJ6.5A SMCJ7.0 SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5 SMCJ8.5A	6.5 6.5 7.0 7.0 7.5 7.5 8.0 8.0	7.22 - 8.82 7.22 - 7.98 7.78 - 9.51 7.78 - 8.60 8.33 - 10.2 8.33 - 9.21	10 10 10 10 10 1	12.3 11.2 13.3 12.0	122.0 133.9 112.8 125.0	500 500 200 200
SMCG6.5A S SMCG7.0 S SMCG7.0A S SMCG7.5A S SMCG8.0 S SMCG8.0A S SMCG8.5A S SMCG8.5A S SMCG8.5A S SMCG9.0 S	SMCJ6.5A SMCJ7.0 SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5 SMCJ8.5A	6.5 7.0 7.0 7.5 7.5 8.0 8.0	7.22 - 7.98 7.78 - 9.51 7.78 - 8.60 8.33 - 10.2 8.33 - 9.21	10 10 10 10 1	11.2 13.3 12.0	133.9 112.8 125.0	500 200 200
SMCG7.0SSMCG7.0ASSMCG7.5SSMCG7.5ASSMCG8.0SSMCG8.0ASSMCG8.5ASSMCG8.5ASSMCG9.0S	SMCJ7.0 SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5A	7.0 7.0 7.5 7.5 8.0 8.0	7.78 - 9.51 7.78 - 8.60 8.33 - 10.2 8.33 - 9.21	10 10 1	13.3 12.0	112.8 125.0	200 200
SMCG7.0ASSMCG7.5SSMCG7.5ASSMCG8.0SSMCG8.0ASSMCG8.5ASSMCG8.5ASSMCG9.0S	SMCJ7.0A SMCJ7.5 SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5 SMCJ8.5A	7.0 7.5 7.5 8.0 8.0	7.78 - 8.60 8.33 - 10.2 8.33 - 9.21	10 1	12.0	125.0	200
SMCG7.5SSMCG7.5ASSMCG8.0SSMCG8.0ASSMCG8.5ASSMCG8.5ASSMCG9.0S	SMCJ7.5 SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5 SMCJ8.5A	7.5 7.5 8.0 8.0	8.33 – 10.2 8.33 – 9.21	1	-		
SMCG7.5A S SMCG8.0 S SMCG8.0A S SMCG8.5A S SMCG8.5A S SMCG9.0 S	SMCJ7.5A SMCJ8.0 SMCJ8.0A SMCJ8.5 SMCJ8.5A	7.5 8.0 8.0	8.33 – 9.21	-	14.0		
SMCG8.0 S SMCG8.0A S SMCG8.5 S SMCG8.5A S SMCG9.0 S	SMCJ8.0 SMCJ8.0A SMCJ8.5 SMCJ8.5A	8.0 8.0		1	12.9	116.3	100
SMCG8.0ASSMCG8.5SSMCG8.5ASSMCG9.0S	SMCJ8.0A SMCJ8.5 SMCJ8.5A	8.0			15.0	100.0	50
SMCG8.5 S SMCG8.5A S SMCG9.0 S	SMCJ8.5 SMCJ8.5A		8.89 - 9.83		13.6	110.3	50
SMCG8.5A S SMCG9.0 S	SMCJ8.5A	8.5	9.44 - 11.5	1	15.9	94.3	20
SMCG9.0 S		8.5	9.44 - 10.4		14.4	104.2	20
	SMCJ9.0	9.0	10.0 - 12.2		16.9	88.7	10
SMCG9.0A S	SMCJ9.0A	9.0	10.0 - 11.1		15.4	97.4	10
	SMCJ10	10	11.1 – 13.6	1	18.8	79.8	5
	SMCJ10A	10	11.1 - 12.3		17.0	88.2	5
	SMCJ11	10	12.2 - 14.9		20.1	74.6	5
	SMCJ11A	11	12.2 - 13.5	1	18.2	82.4	5
	SMCJ12	12	13.3 - 16.3	1	22.0	68.2	5
	SMCJ12A	12	13.3 - 14.7	1	19.9	75.3	5
	SMCJ13	13	14.4 – 17.6	1	23.8	63.0	1
	SMCJ13A	13	14.4 – 15.9	1	21.5	69.7	1
	SMCJ14	14	15.6 - 19.1	1	25.8	58.1	1
	SMCJ14A	14	15.6 - 17.2	1	23.2	64.7	1
	SMCJ15	15	16.7 - 20.4	1	26.9	55.8	1
SMCG15A S	SMCJ15A	15	16.7 – 18.5	1	24.4	61.5	1
SMCG16 S	SMCJ16	16	17.8 – 21.8	1	28.8	52.1	1
SMCG16A S	SMCJ16A	16	17.8 – 19.7	1	26.0	57.7	1
SMCG17 S	SMCJ17	17	18.9 – 23.1	1	30.5	49.2	1
SMCG17A S	SMCJ17A	17	18.9 – 20.9	1	27.6	53.3	1
	SMCJ18	18	20.0 - 24.4	1	32.2	46.6	1
	SMCJ18A	18	20.0 - 22.1	1	29.2	51.4	1
SMCG20 S	SMCJ20	20	22.2 - 27.1	1	35.8	41.9	1
SMCG20A S	SMCJ20A	20	22.2 - 24.5	1	32.4	46.3	1
SMCG22 S	SMCJ22	22	24.4 - 29.8	1	39.4	38.1	1
SMCG22A S	SMCJ22A	22	24.4 - 26.9	1	35.5	42.2	1
SMCG24 S	SMCJ24	24	26.7 - 32.6	1	43.0	34.9	1
SMCG24A S	SMCJ24A	24	26.7 – 29.5	1	38.9	38.6	1



	ELECTRIC			20 0 0)
MICROSEMI P	ART NUMBER	REVERSE STAND-OFF VOLTAGE	BREAKDOV VOLTAG V _(BR) @ I _{(E} Volts	E	MAXIMUM CLAMPING VOLTAGE @ IPP	PEAK PULSE CURRENT (See Fig. 2) I _{PP}	MAXIMUM STANDBY CURRENT @ V _{WM}
		V _{WM}		I _(BR)			ID
Gull-Wing	J-Bend	Volts	MIN. MAX.	mA	Volts	Amps	μΑ
SMCG26	SMCJ26	26	28.9 - 35.3	1	46.6	32.2	1
SMCG26A	SMCJ26A	26	28.9 - 31.9	1	42.1	35.6	1
SMCG28	SMCJ28	28	31.1 – 38.0	1	50.0	30.0	1
SMCG28A	SMCJ28A	28	31.1 - 34.4	1	45.4	33.0	1
SMCG30	SMCJ30	30	33.3 - 40.7	1	53.5	28.0	1
SMCG30A SMCG33	SMCJ30A SMCJ33	30 33	33.3 - 36.8 36.7 - 44.9	1	48.4 59.0	31.0 25.2	1
SMCG33A	SMCJ33A SMCJ33A	33	36.7 - 44.9 36.7 - 40.6		53.3	23.2	1
SMCG36	SMCJ36	36	40.0 - 48.9	1	64.3	23.3	1
SMCG36A	SMCJ36A	36	40.0 - 44.2	1	58.1	25.8	1
SMCG40	SMCJ40	40	44.4 - 54.3	1	71.4	21.0	1
SMCG40A	SMCJ40A	40	44.4 - 49.1	1	64.5	23.2	1
SMCG43	SMCJ43	43	47.8 - 58.4	1	76.7	19.6	1
SMCG43A	SMCJ43A	43	47.8 – 52.8	1	69.4	21.6	1
SMCG45	SMCJ45	45	50.0 - 61.1	1	80.3	18.7	1
SMCG45A	SMCJ45A	45	50.0 - 55.3	1	72.7	20.6	1
SMCG48	SMCJ48	48	53.3 – 65.1	1	85.5	17.5	1
SMCG48A	SMCJ48A	48	53.3 - 58.9	1	77.4	19.4	1
SMCG51	SMCJ51	51	56.7 - 69.3	1	91.1	18.5	1
SMCG51A	SMCJ51A	51	56.7 - 62.7	1	82.4	18.2	1
SMCG54	SMCJ54	54	60.0 - 73.3	1	96.3	15.6	1
SMCG54A	SMCJ54A	54 58	60.0 - 66.3	1	87.1	17.2	1
SMCG58 SMCG58A	SMCJ58 SMCJ58A	58	64.4 – 78.7 64.4 – 71.2	1	103.0 93.6	14.6 16.0	1
SMCG58A SMCG60	SMCJ58A SMCJ60	60	66.7 - 81.5	1	107.0	14.0	1
SMCG60A	SMCJ60A	60	66.7 - 73.7		96.8	15.5	1
SMCG64	SMCJ64	64	71.1 - 86.9	1	114.0	13.2	1
SMCG64A	SMCJ64A	64	71.1 – 78.6	1	103.0	14.6	1
SMCG70	SMCJ70	70	77.8 – 95.1	1	125	12.0	1
SMCG70A	SMCJ70A	70	77.8 - 86.0	1	113	13.3	1
SMCG75	SMCJ75	75	83.3 - 102.0	1	134	11.2	1
SMCG75A	SMCJ75A	75	83.3 – 92.1	1	121	12.4	1
SMCG78	SMCJ78	78	86.7 - 106.0	1	139	10.8	1
SMCG78A	SMCJ78A	78	86.7 – 95.8	1	126	11.4	1
SMCG85	SMCJ85	85	94.4 - 115.0	1	151	9.9	1
SMCG85A	SMCJ85A	85	94.4 - 104.0	1	137	10.4	1
SMCG90	SMCJ90	90	100 - 122	1	160	9.4	1
SMCG90A	SMCJ90A	90	100 - 111	1	146	10.3	1
SMCG100 SMCG100A	SMCJ100 SMCJ100A	100 100	111 – 136 111 – 123	1	179 162	8.4 9.3	
SMCG100A SMCG110	SMCJ100A SMCJ110	110	122 – 149	1	196	<u>9.3</u> 7.7	1
SMCG110A	SMCJ110A	110	122 - 149	1	190	8.4	1
SMCG120	SMCJ120	120	133 – 163	1	214	7.0	
SMCG120A	SMCJ120A	120	133 – 147	1	193	7.8	1
SMCG130	SMCJ130	130	144 – 176	1	231	6.5	1
SMCG130A	SMCJ130A	130	144 – 159	1	209	7.2	1
SMCG150	SMCJ150	150	167 – 204	1	268	5.6	1
SMCG150A	SMCJ150A	150	167 – 185	1	243	6.2	1
SMCG160	SMCJ160	160	178 – 218	1	287	5.2	1
SMCG160A	SMCJ160A	160	178 – 197	1	259	5.8	1
SMCG170	SMCJ170	170	189 – 231	1	304	4.9	1
SMCG170A	SMCJ170A	170	189 – 209	1	275	5.5	1

ELECTRICAL CHARACTERISTICS @ 25 °C unless otherwise stated (continued)

• For bidirectional device types, indicate a C or CA suffix after the part number. (i.e.: SMCG170CA). Bidirectional capacitance is half that shown in Figure 4 at zero volts.



SMCG5.0 – SMCG170CA, SMCJ5.0 – SMCJ170CA

GRAPHS

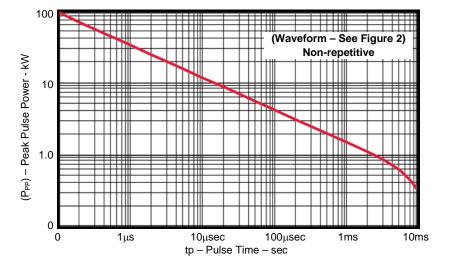


FIGURE 1 - Peak Pulse Power vs. Pulse Time

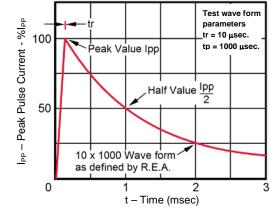


FIGURE 2 - Pulse Waveform

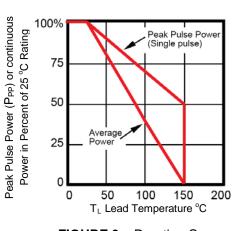
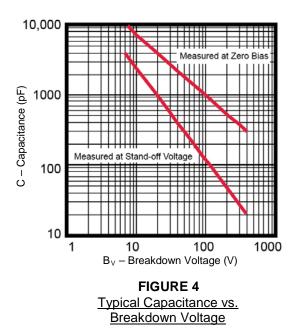


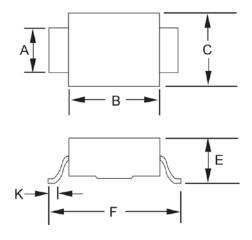
FIGURE 3 – Derating Curve





SMCG5.0 – SMCG170CA, SMCJ5.0 – SMCJ170CA

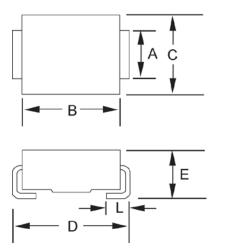
PACKAGE DIMENSIONS



SMCG (DO-215AB)

		Dimer	nsions	ions		
Ltr	Inch		Millim	neters		
	Min	Max	Min	Max		
Α	0.115	0.121	2.92	3.07		
В	0.260	0.280	6.60	7.11		
С	0.220	0.245	5.59	6.22		
Е	0.077	0.110	1.95	2.80		
F	0.380	0.400	9.65	10.16		
Κ	0.025	0.040	0.635	1.016		

NOTES: Dimension "E" exceeds the JEDEC outline in height as shown. Typical Standoff Height: 0.004" – 0.008" (0.1 mm – 0.2 mm).



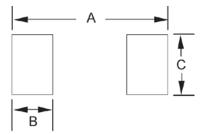
SMCJ (DO-214AB)

	Dimensions						
Ltr	Inch		Millin	neters			
	Min	Max	Min	Max			
Α	0.115	0.121	2.92	3.07			
В	0.260	0.280	6.60	7.11			
С	0.220	0.245	5.59	6.22			
D	0.305	0.320	7.75	8.13			
E	0.077	0.110	1.95	2.80			
L	0.030	0.060	.760	1.52			

NOTES: Dimension "E" exceeds the JEDEC outline in height as shown. Typical Standoff Height: 0.004" – 0.008" (0.1 mm – 0.2 mm).



PAD LAYOUT



	SMCG (DO-215AB)				
Ltr	tr Inch Millimeters				
Α	0.510	12.95			
В	0.110	2.79			
С	0.150	3.81			

SMCJ (DO-214AB)				
Ltr	Ltr Inch Millimeters			
Α	0.390	9.90		
В	0.110	2.79		
С	0.150	3.81		