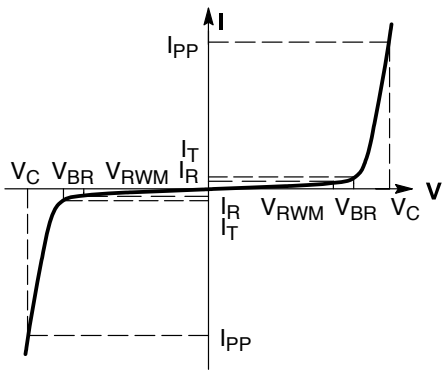
I-V Curve Characteristics (T_A = 25°C unless otherwise noted, V_F = 3.5 V Max @ I_F = 100 A) (Note 5)



Bi–Directional TVS

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
VF	Forward Voltage @ I_F

Electrical Characteristics (TA = 25°C unless otherwise noted)

Device*	Device Marking	V_{RWM} (Note 6)	I_R @ V_{RWM}	Breakdown Voltage				V_C @ I_{PP} (Note 8)		C Typ. (Note 7)
				V_{BR} (V) (Note 7)			@ I_T	V_C	I_{PP}	
		Volts	µA	MIN	NOM	MAX	mA	Volts	Amps	pF
1SMA10CAT3G	QXC	10	2.5	11.1	11.69	12.27	1.0	17.0	23.5	580
1SMA12CAT3G	REC	12	2.5	13.3	14.00	14.70	1.0	19.9	20.1	490
1SMA13CAT3G	RGC	13	2.5	14.4	15.16	15.92	1.0	21.5	18.6	455
1SMA15CAT3G	RMC	15	2.5	16.7	17.58	18.46	1.0	24.4	16.4	400
1SMA16CAT3G	RPC	16	2.5	17.8	18.74	19.67	1.0	26.0	15.4	375
1SMA18CAT3G	RTC	18	2.5	20	21.06	22.11	1.0	29.2	13.7	335
1SMA20CAT3G	RVC	20	2.5	22.2	23.37	24.54	1.0	32.4	12.3	305
1SMA24CAT3G	RZC	24	2.5	26.7	28.11	29.51	1.0	38.9	10.3	260
1SMA26CAT3G	SEC	26	2.5	28.9	30.42	31.94	1.0	42.1	9.5	240
1SMA28CAT3G	SGC	28	2.5	31.1	32.74	34.37	1.0	45.4	8.8	225
1SMA30CAT3G	SKC	30	2.5	33.3	35.06	36.81	1.0	48.4	8.3	210
1SMA33CAT3G	SMC	33	2.5	36.7	38.63	40.56	1.0	53.3	7.5	190
1SMA36CAT3G	SPC	36	2.5	40	42.11	44.21	1.0	58.1	6.9	175
1SMA40CAT3G	SRC	40	2.5	44.4	46.74	49.07	1.0	64.5	6.2	160
1SMA48CAT3G	SXC	48	2.5	53.3	56.11	58.91	1.0	77.4	5.2	135
1SMA58CAT3G	TGC	58	2.5	64.4	67.79	71.18	1.0	93.6	4.3	115
1SMA60CAT3G	TKC	60	2.5	66.7	70.21	73.72	1.0	96.8	4.1	110
1SMA70CAT3G	TPC	70	2.5	77.8	81.90	85.99	1.0	113	3.5	95
1SMA78CAT3G	TTC	78	2.5	86.7	91.27	95.83	1.0	126	3.2	90

4. A transient suppressor is normally selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level
5. VBR measured at pulse test current IT at an ambient temperature of 25°C
6. Surge current waveform per Figure 2 and derate per Figure 3
7. Bias voltage = 0 V, F = 1.0 MHz, T_J = 25°C.

†Please see 1SMA5.0AT3 to 1SMA78AT3 for Unidirectional devices.

* Include SZ-prefix devices where applicable.

Ratings and Characteristic Curves

Figure 1. Pulse Rating Curve

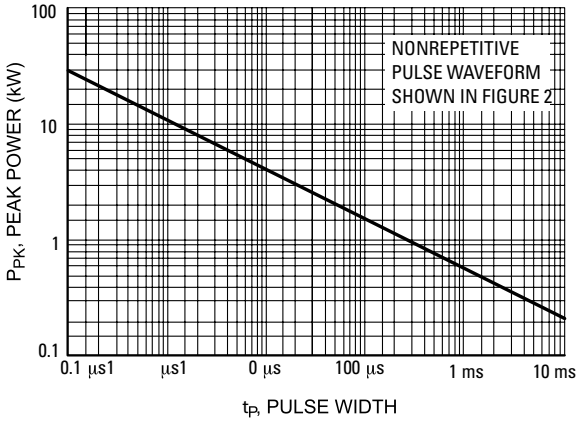


Figure 2. Pulse Waveform

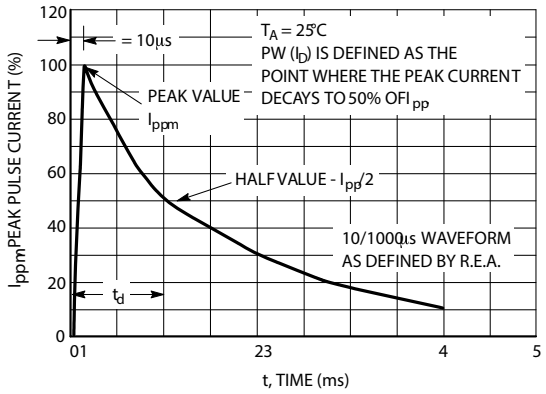


Figure 3. Pulse Derating Curve

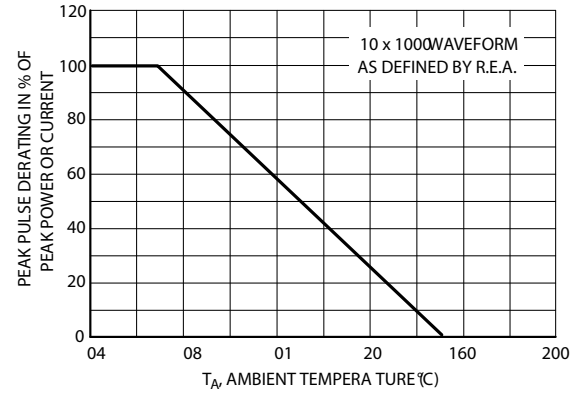
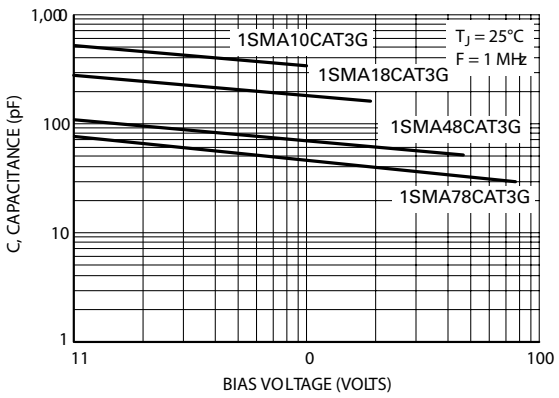
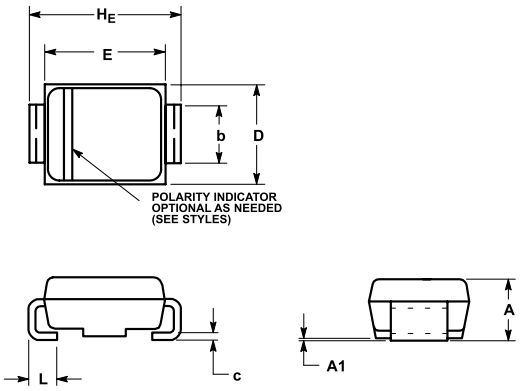


Figure 4. Dynamic Impedance



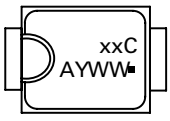
Dimensions



Dim	Inches			Millimeters		
	Min	Nom	Max	Min	Nom	Max
A	0.078	0.083	0.087	1.97	2.10	2.20
A1	0.002	0.004	0.008	0.05	0.10	0.20
b	0.050	0.057	0.064	1.27	1.45	1.63
c	0.006	0.011	0.016	0.15	0.28	0.41
D	0.090	0.103	0.115	2.29	2.60	2.92
E	0.160	0.170	0.180	4.06	4.32	4.57
H_E	0.190	0.205	0.220	4.83	5.21	5.59
L	0.030	0.045	0.060	0.76	1.14	1.52
L1	0.020 REF			0.51 REF		

NOTES
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P.
4. 403-01 THRU -02 OBSOLETE, NEW STANDARD 403-03.

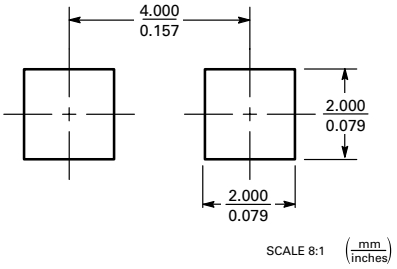
Part Marking System



xxC= Device Code (Refer to page 3)
A= Assembly Location
Y= Year
WW = Work Week
= Pb–Free Package

*Bidirectional devices will not be available in this series.

Soldering Footrpint



ORDERING INFORMATION

Device	Package	Shipping†
1SMAxxCAT3G	SMa (Pb–Free)	5,000 / Tape & Reel
SZ1SMAxxCAT3G	SMA (Pb–Free)	5,000 / Tape & Reel

Flow/Wave Soldering (Solder Dipping)

Peak Temperature :	260°C
Dipping Time :	10 seconds

Physical Specifications

Case	Void-free, transfer-molded, thermosetting plastic
Polarity	Cathode indicated by polarity band
Mounting Position	Any
Finish	All external surfaces are corrosion resistant and leads are readily solderable
Leads	Modified L–Bend providing more contact area to bond pads