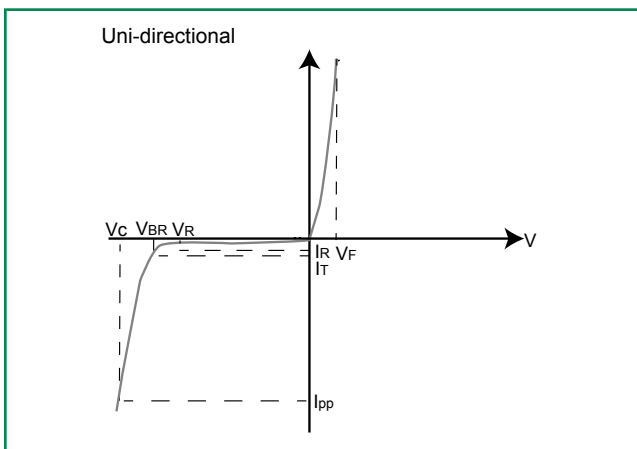


Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Part Number (Uni)	Marking Code	Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{pp} (V)	Maximum Peak Pulse Current I_{pp} (A)	Maximum Reverse Leakage Current I_R @ V_R (μA)	Agency Approval 
			MIN	MAX					
SMA6L5.0A	AE	5.0	6.40	7.00	10	9.2	65.3	800	x
SMA6L6.0A	AG	6.0	6.67	7.37	10	10.3	58.3	800	x
SMA6L6.5A	AK	6.5	7.22	7.98	10	11.2	53.6	500	x
SMA6L7.0A	AM	7.0	7.78	8.60	10	12.0	50.0	200	x
SMA6L7.5A	AP	7.5	8.33	9.21	1	12.9	46.6	100	x
SMA6L8.0A	AR	8.0	8.89	9.83	1	13.6	44.2	50	x
SMA6L8.5A	AT	8.5	9.44	10.40	1	14.4	41.7	20	x
SMA6L9.0A	AV	9.0	10.00	11.10	1	15.4	39.0	10	x
SMA6L10A	AX	10.0	11.10	12.30	1	17.0	35.3	5	x
SMA6L11A	AZ	11.0	12.20	13.50	1	18.2	33.0	1	x
SMA6L12A	BE	12.0	13.30	14.70	1	19.9	30.2	1	x
SMA6L13A	BG	13.0	14.40	15.90	1	21.5	28.0	1	x
SMA6L14A	BK	14.0	15.60	17.20	1	23.2	25.9	1	x
SMA6L15A	BM	15.0	16.70	18.50	1	24.4	24.6	1	x
SMA6L16A	BP	16.0	17.80	19.70	1	26.0	23.1	1	x
SMA6L17A	BR	17.0	18.90	20.90	1	27.6	21.8	1	x
SMA6L18A	BT	18.0	20.00	22.10	1	29.2	20.6	1	x
SMA6L20A	BV	20.0	22.20	24.50	1	32.4	18.6	1	x
SMA6L22A	BX	22.0	24.40	26.90	1	35.5	16.9	1	x
SMA6L24A	BZ	24.0	26.70	29.50	1	38.9	15.5	1	x
SMA6L26A	CE	26.0	28.90	31.90	1	42.1	14.3	1	x
SMA6L28A	CG	28.0	31.10	34.40	1	45.4	13.3	1	x
SMA6L30A	CK	30.0	33.30	36.80	1	48.4	12.4	1	x
SMA6L33A	CM	33.0	36.70	40.60	1	53.3	11.3	1	x
SMA6L36A	CP	36.0	40.00	44.20	1	58.1	10.4	1	x
SMA6L40A	CR	40.0	44.40	49.10	1	64.5	9.3	1	x
SMA6L43A	CT	43.0	47.80	52.80	1	69.4	8.7	1	x
SMA6L45A	CV	45.0	50.00	55.30	1	72.7	8.3	1	x
SMA6L48A	CX	48.0	53.30	58.90	1	77.4	7.8	1	x
SMA6L51A	CZ	51.0	56.70	62.70	1	82.4	7.3	1	x
SMA6L54A	RE	54.0	60.00	66.30	1	87.1	6.9	1	x
SMA6L58A	RG	58.0	64.40	71.20	1	93.6	6.5	1	x
SMA6L60A	RK	60.0	66.70	73.70	1	96.8	6.2	1	x
SMA6L64A	RM	64.0	71.10	78.60	1	103.0	5.9	1	x
SMA6L70A	RP	70.0	77.80	86.00	1	113.0	5.3	1	x
SMA6L75A	RR	75.0	83.30	92.10	1	121.0	5.0	1	x
SMA6L78A	RT	78.0	86.70	95.80	1	126.0	4.8	1	x
SMA6L85A	RV	85.0	94.40	104.00	1	137.0	4.4	1	x
SMA6L90A	RX	90.0	100.0	111.00	1	146.0	4.2	1	x
SMA6L100A	RZ	100.0	111.0	123.00	1	162.0	3.7	1	x
SMA6L 110A	SE	110.0	122.0	135.00	1	177.0	3.4	1	x
SMA6L120A	SG	120.0	133.0	147.00	1	193.0	3.2	1	x
SMA6L 130A	SK	130.0	144.0	159.00	1	209.0	2.9	1	x
SMA6L150A	SM	150.0	167.0	185.00	1	243.0	1.65	1	x
SMA6L160A	SP	160.0	178.0	197.00	1	259.0	L55	1	x
SMA6L170A	SR	170.0	189.0	209.00	1	275.0	1.50	1	x
SMA6L180A	ST	180.0	201.0	222.00	1	292.0	1.40	1	x
SMA6L185A	SU	185.0	209.0	231.00	1	303.0	1.40	1	x
SMA6L200A	SV	200.0	224.0	247.00	1	324.0	1.25	1	x
SMA6L215A	SW	215.0	237.0	263.00	1	344.0	1.17	1	x
SMA6L220A	SX	220.0	246.0	272.00	1	356.0	1.13	1	x
SMA6L250A	SZ	250.0	279.0	309.00	1	405.0	0.95	1	x

I-V Curve Characteristics



P_{PPM} Peak Pulse Power Dissipation – Max power dissipation

V_R Stand-off Voltage – Maximum voltage that can be applied to the TVS without operation

V_{BR} Breakdown Voltage – Maximum voltage that flows through the TVS at a specified test current (I_T)

V_C Clamping Voltage – Peak voltage measured across the TVS at a specified I_{PPM} (peak impulse current @ 10/1000)

I_R Reverse Leakage Current – Current measured at V_R

V_F Forward Voltage Drop for Uni-directional

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 - TVS Transients Clamping Waveform

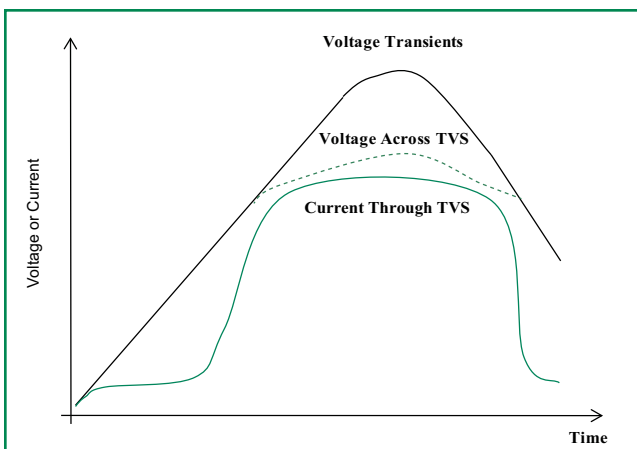
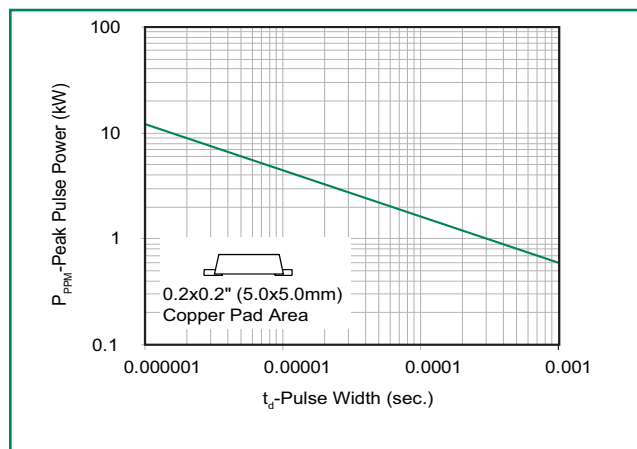


Figure 2 - Peak Pulse Power Rating Curve



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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted) (Continued)

Figure 3 - Peak Pulse Power Derating Curve

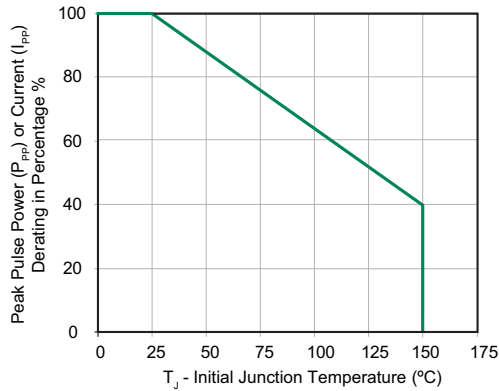


Figure 4 - Pulse Waveform

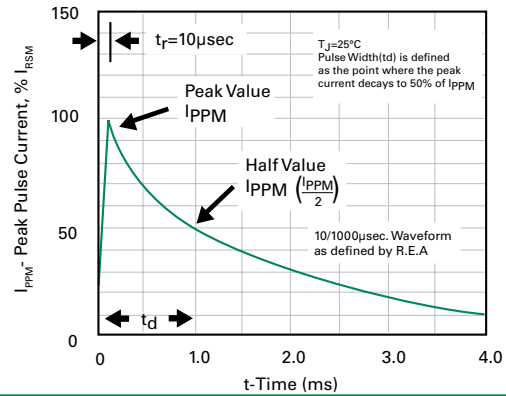


Figure 5 - Typical Junction Capacitance

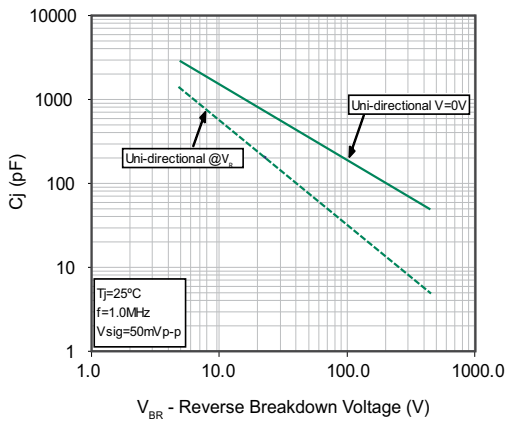


Figure 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

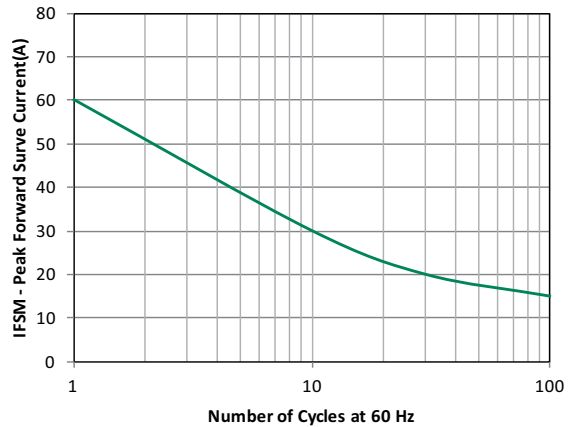
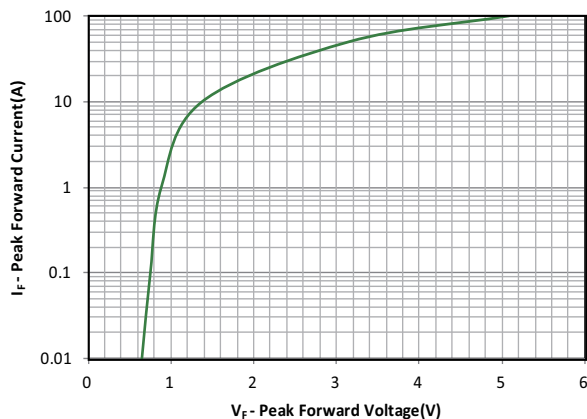
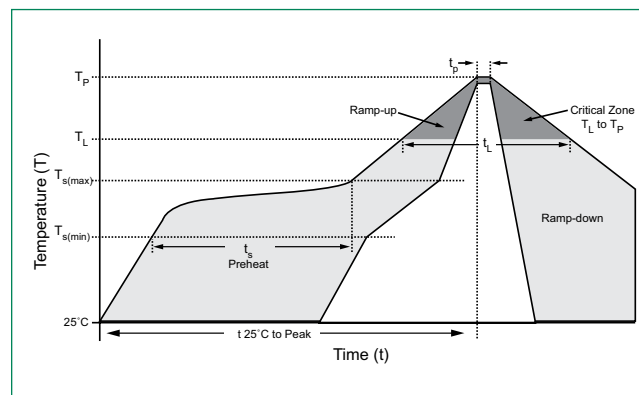


Figure 7 - Peak Forward Voltage Drop vs Peak Forward Current (typical values)



Soldering Parameters

Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_A) to peak)		3°C/second max
$T_{s(max)}$ to T_A - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_A) (Liquidus)	217°C
	- Time (min to max) (t_s)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



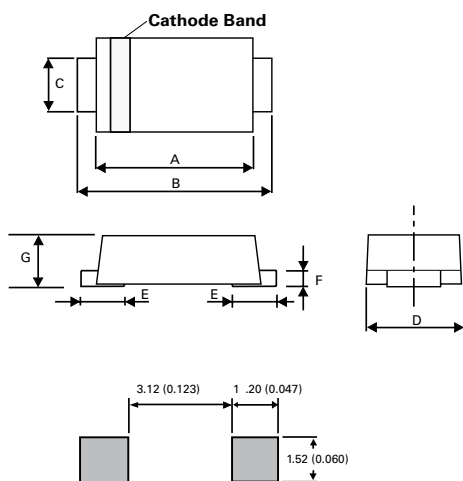
Physical Specifications

Weight	0.002 ounce, 0.032 gram
Case	JEDEC DO-221AC Molded Plastic over glass passivated junction
Polarity	Color band denotes cathode except Bipolar
Terminal	Matte Tin-plated leads, Solderable per JESD22-B102

Environmental Specifications

High Temp. Storage	JESD22-A103
HTRB	JESD22-A108
Temperature Cycling	JESD22-A104
MSL	JEDEC-J-STD-020, Level 1
H3TRB	JESD22-A101
RSH	JESD22-A111

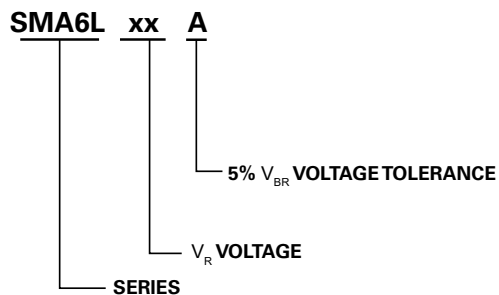
Dimensions



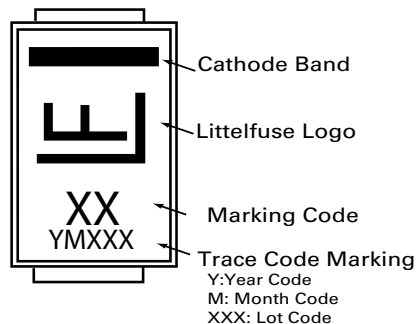
Mounting Pad Layout

Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.156	0.181	3.950	4.600
B	0.189	0.220	4.800	5.600
C	0.049	0.069	1.250	1.750
D	0.088	0.116	2.250	2.950
E	0.030	0.059	0.750	1.500
F	0.005	0.010	0.125	0.250
G	0.035	0.043	0.900	1.100

Part Numbering System



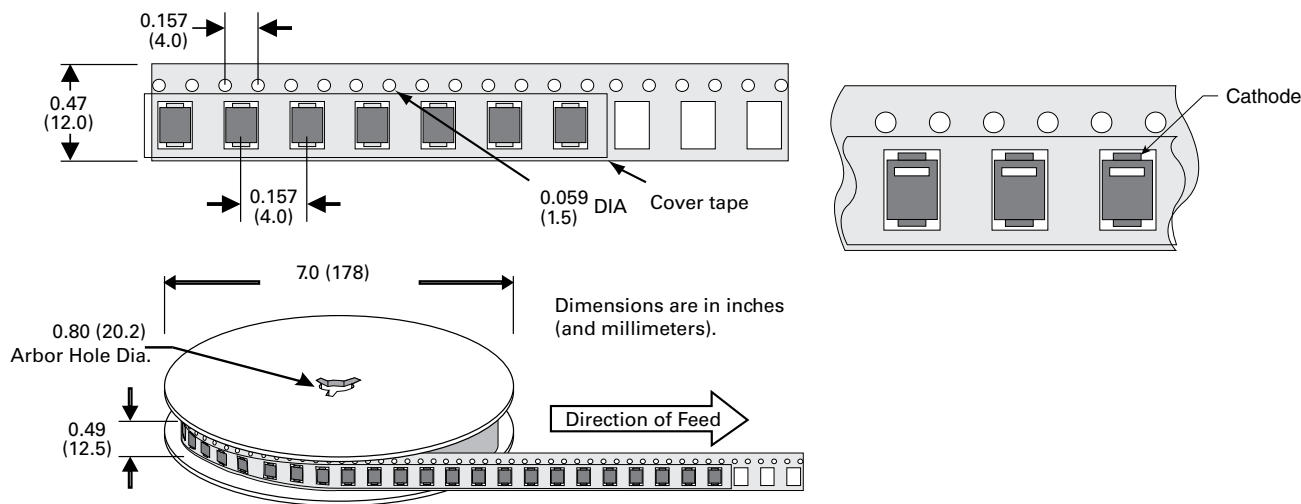
Part Marking System



Packaging

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
SMA6LxxA	DO-221AC	3000	Tape & Reel – 12mm/7" tape	EIA RS-481

Tape and Reel Specification



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