Description

The 1.0SMBxx(C)A is transient voltage suppressor designed to protect sensitive electronic equipment from damage induced by lightning and voltage transients.

.

Features

- 1000W Peak Pulse Power (10/1000µs)
- Fast Response Time: <1ns
- Unidirectional or Bidirectional Configuration.
- Low Profile Package
- RoHS Compliant

Mechanical Characteristics

- Package: DO-214AA
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

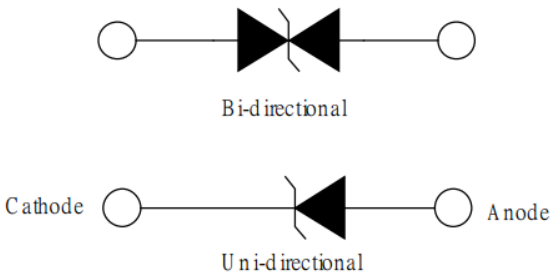
- Telecom
- Computer
- Industrial
- Consumer Electronics

Marking Information

1.0SMBxx(C)A = Device Marking Code

YYWW = Date Code

Device Schematic



Circuit and Pin Schematic

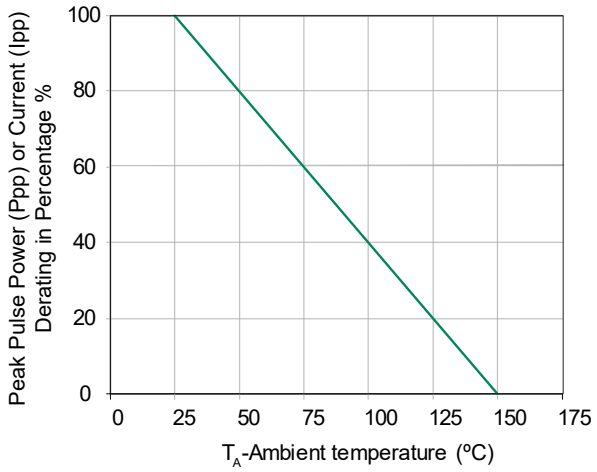
Ordering Information

Part Number	Packaging	Reel Size
1.0SMBxx(C)A	3000/Tape & Reel	13 inch

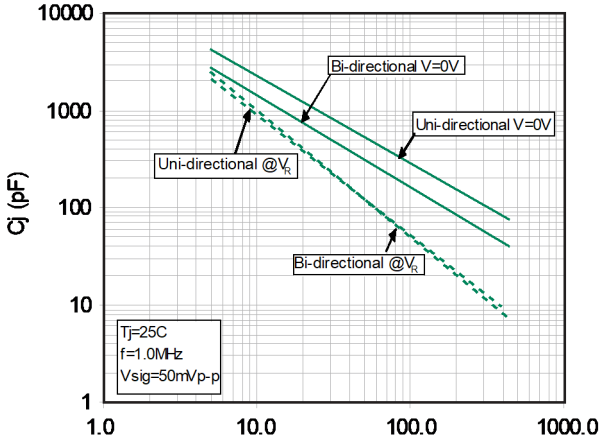
Electrical Characteristics (T_A=25°C unless otherwise specified)

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage VBR @IT		Test Current	Max.Clamp-ing Voltage @IPP	Max. Peak Pulse Current	Max.Reverse Leakage @V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	V_{RWM}(V)	Min.(V)	Max.(V)	I_T(mA)	V_{CMAX}.(V)	I_{PP}(A)	I_R(uA)
1.0SMB6.8A	1.0SMB6.8CA	K6V8A	K6V8C	5.8	6.45	7.14	10	10.5	97.50	1000
1.0SMB7.5A	1.0SMB7.5CA	K7V5A	K7V5C	6.4	7.13	7.88	10	11.3	90.75	500
1.0SMB8.2A	1.0SMB8.2CA	K8V2A	K8V2C	7.0	7.79	8.61	10	12.1	84.75	200
1.0SMB9.1A	1.0SMB9.1CA	K9V1A	K9V1C	7.8	8.65	9.55	1	13.4	76.50	50
1.0SMB10A	1.0SMB10CA	K10A	K10C	8.6	9.50	10.50	1	14.5	70.75	10
1.0SMB11A	1.0SMB11CA	K11A	K11C	9.4	10.50	11.60	1	15.6	65.75	5
1.0SMB12A	1.0SMB12CA	K12A	K12C	10.2	11.40	12.60	1	16.7	61.50	5
1.0SMB13A	1.0SMB13CA	K13A	K13C	11.1	12.40	13.70	1	18.2	56.25	1
1.0SMB15A	1.0SMB15CA	K15A	K15C	12.8	14.30	15.80	1	21.2	48.25	1
1.0SMB16A	1.0SMB16CA	K16A	K16C	13.6	15.20	16.80	1	22.5	45.50	1
1.0SMB18A	1.0SMB18CA	K18A	K18C	15.3	17.10	18.90	1	25.5	40.25	1
1.0SMB20A	1.0SMB20CA	K20A	K20C	17.1	19.00	21.00	1	27.7	37.00	1
1.0SMB22A	1.0SMB22CA	K22A	K22C	18.8	20.90	23.10	1	30.6	33.50	1
1.0SMB24A	1.0SMB24CA	K24A	K24C	20.5	22.80	25.20	1	33.2	30.75	1
1.0SMB27A	1.0SMB27CA	K27A	K27C	23.1	25.70	28.40	1	37.5	27.25	1
1.0SMB30A	1.0SMB30CA	K30A	K30C	25.6	28.50	31.50	1	41.4	24.75	1
1.0SMB33A	1.0SMB33CA	K33A	K33C	28.2	31.40	34.70	1	45.7	22.50	1
1.0SMB36A	1.0SMB36CA	K36A	K36C	30.8	34.20	37.80	1	49.9	20.50	1
1.0SMB39A	1.0SMB39CA	K39A	K39C	33.3	37.10	41.00	1	53.9	19.00	1
1.0SMB43A	1.0SMB43CA	K43A	K43C	36.8	40.90	45.20	1	59.3	17.25	1
1.0SMB47A	1.0SMB47CA	K47A	K47C	40.2	44.70	49.40	1	64.8	15.75	1
1.0SMB51A	1.0SMB51CA	K51A	K51C	43.6	48.50	53.60	1	70.1	14.50	1
1.0SMB56A	1.0SMB56CA	K56A	K56C	47.8	53.20	58.80	1	77.0	13.25	1
1.0SMB62A	1.0SMB62CA	K62A	K62C	53.0	58.90	65.10	1	85.0	12.00	1
1.0SMB68A	1.0SMB68CA	K68A	K68C	58.1	64.60	71.40	1	92.0	11.25	1
1.0SMB75A	1.0SMB75CA	K75A	K75C	64.1	71.30	78.80	1	103.0	10.00	1
1.0SMB82A	1.0SMB82CA	K82A	K82C	70.1	77.90	86.10	1	113.0	9.00	1
1.0SMB91A	1.0SMB91CA	K91A	K91C	77.8	86.50	95.50	1	125.0	8.25	1
1.0SMB100A	1.0SMB100CA	K100A	K100C	85.5	95.0	105.0	1	137.0	7.50	1
1.0SMB110A	1.0SMB110CA	K110A	K110C	94.0	105.0	116.0	1	152.0	6.75	1
1.0SMB120A	1.0SMB120CA	K120A	K120C	102.0	114.0	126.0	1	165.0	6.25	1
1.0SMB130A	1.0SMB130CA	K130A	K130C	111.0	124.0	137.0	1	179.0	5.75	1
1.0SMB150A	1.0SMB150CA	K150A	K150C	128.0	143.0	158.0	1	207.0	5.00	1
1.0SMB160A	1.0SMB160CA	K160A	K160C	136.0	152.0	168.0	1	219.0	4.75	1
1.0SMB170A	1.0SMB170CA	K170A	K170C	145.0	162.0	179.0	1	234.0	4.50	1
1.0SMB180A	1.0SMB180CA	K180A	K180C	154.0	171.0	189.0	1	246.0	4.25	1
1.0SMB200A	1.0SMB200CA	K200A	K200C	171.0	190.0	210.0	1	274.0	3.75	1
1.0SMB220A	1.0SMB220CA	K220A	K220C	185.0	209.0	231.0	1	328.0	3.25	1
1.0SMB250A	1.0SMB250CA	K250A	K250C	214.0	237.0	263.0	1	344.0	3.00	1
1.0SMB300A	1.0SMB300CA	K300A	K300C	256.0	285.0	315.0	1	414.0	2.50	1
1.0SMB350A	1.0SMB350CA	K350A	K350C	300.0	332.0	368.0	1	482.0	2.25	1
1.0SMB400A	1.0SMB400CA	K400A	K400C	342.0	380.0	420.0	1	548.0	2.00	1
1.0SMB440A	1.0SMB440CA	K440A	K440C	376.0	418.0	462.0	1	602.0	1.75	1
1.0SMB480A	1.0SMB480CA	K480A	K480C	408.0	456.0	504.0	1	658.0	1.50	1
1.0SMB510A	1.0SMB510CA	K510A	K510C	434.0	485.0	535.0	1	698.0	1.50	1
1.0SMB530A	1.0SMB530CA	K530A	K530C	450.0	503.0	556.0	1	725.0	1.50	1

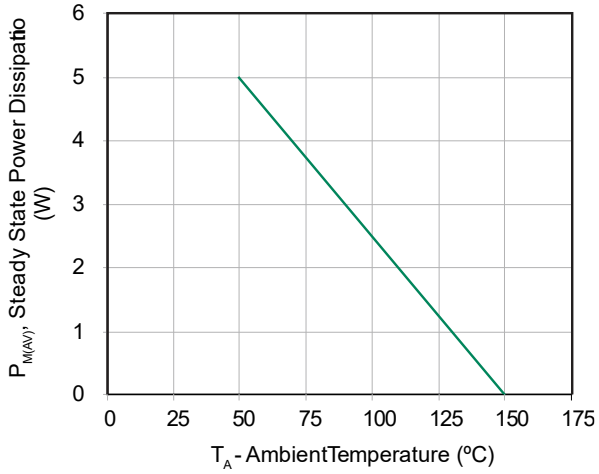
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



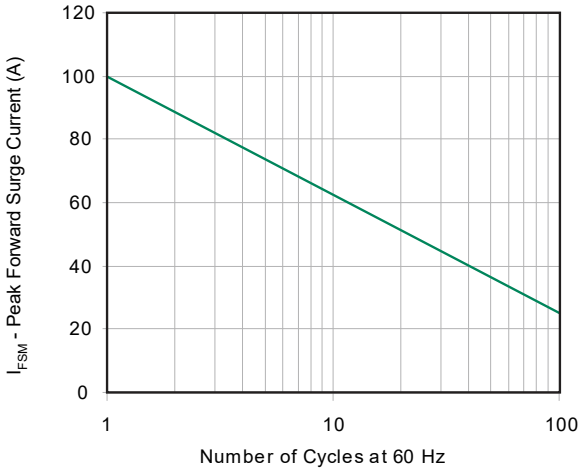
Pulse Derating Curve



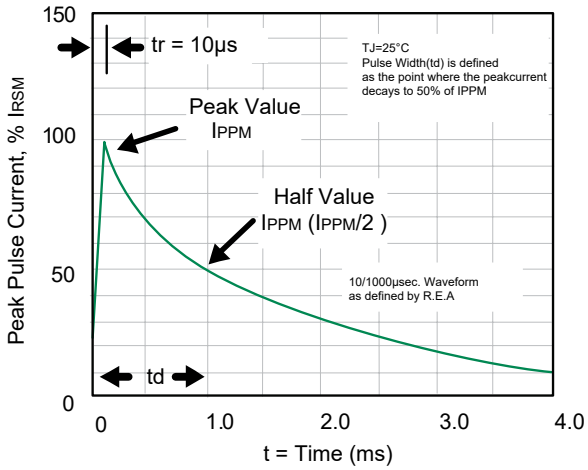
Typical Junction Capacitance



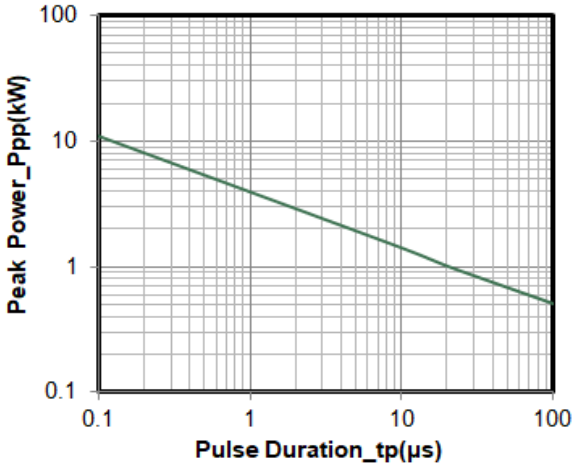
Steady State Power Dissipation Derating Curve



Peak Forward Surge Current

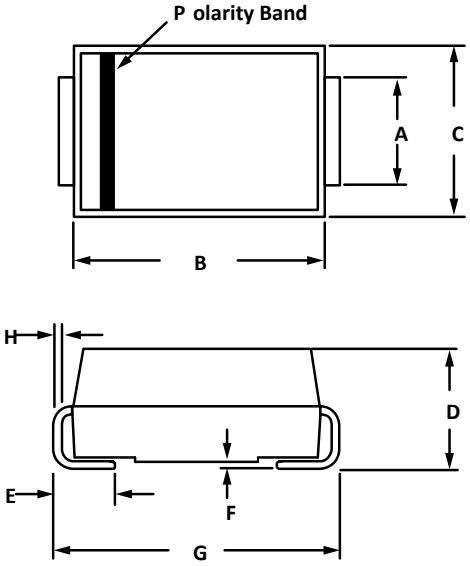


Pulse Waveform



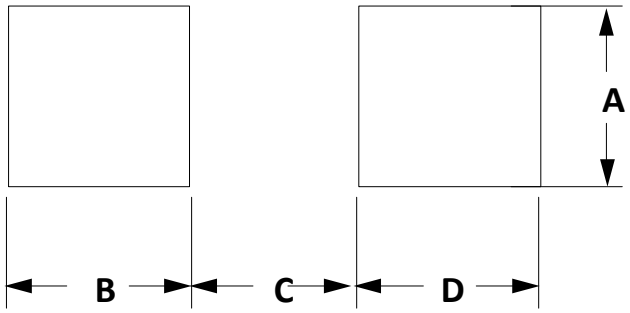
Peak Pulse Power Rating

DO-214AA Package Outline Drawing



OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.96	2.21	0.077	0.087
B	4.06	4.57	0.160	0.180
C	3.30	3.94	0.130	0.155
D	2.00	2.50	0.079	0.098
E	0.76	1.52	0.030	0.060
F	0.10	0.20	0.004	0.008
G	5.08	5.59	0.200	0.220
H	0.15	031	0.006	0.012

Suggested Land Pattern



PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.15	-	0.084	-
B	1.45	-	0.057	-
C	-	2.55	-	0.100
D	1.45	-	0.057	-

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