

## Features

- Glass passivated chip
- 1500 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard



SMB



Bi-directional



Uni-directional

Symbol

## Mechanical Data

- Case: DO214AA/(SMB) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform <sup>(1)</sup>	$P_{PP}$	1500	W
Peak pulse current with a 10/1000 us waveform <sup>(1)</sup>	$I_{PP}$	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75\text{ }^\circ\text{C}$	$P_D$	5.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only <sup>(2)</sup>	$I_{FSM}$	100	A
Maximum instantaneous forward voltage at 50 A for unidirectional only <sup>(3)</sup>	$V_F$	3.5/6.5	V
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150	°C

Note:

- 1) Non-repetitive current pulse per Fig.5 and derated above  $T_A = 25\text{ }^\circ\text{C}$  per Fig.1 ;
- 2) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;
- 3)  $V_F < 3.5\text{V}$  for devices of  $V_{BR} < 200\text{V}$  and  $V_F < 6.5\text{V}$  for devices of  $V_{BR} > 201\text{V}$ .



Leiditech

## SMB 15J Series 1500W Transient Voltage Suppressor

Part Number		Reverse Stand-off Voltage	Breakdown Voltage $V_{BR} @ I_T$		Test Current	Max. Clamping Voltage @ $I_{PP}$	Max. Peak Pulse Current	Max. Reverse Leakage @ $V_{RWM}$
UNI-POLAR	BI-POLAR	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMB15J5.0A	SMB15J5.0CA	5.0	6.40	7.00	10	9.2	163.0	800
SMB15J6.0A	SMB15J6.0CA	6.0	6.67	7.37	10	10.3	145.7	800
SMB15J6.5A	SMB15J6.5CA	6.5	7.22	7.98	10	11.2	134.0	500
SMB15J7.0A	SMB15J7.0CA	7.0	7.78	8.60	10	12.0	125.0	200
SMB15J7.5A	SMB15J7.5CA	7.5	8.33	9.21	1	12.9	116.3	100
SMB15J8.0A	SMB15J8.0CA	8.0	8.89	9.83	1	13.6	110.3	50
SMB15J8.5A	SMB15J8.5CA	8.5	9.44	10.40	1	14.4	104.2	20
SMB15J9.0A	SMB15J9.0CA	9.0	10.00	11.10	1	15.4	97.4	10
SMB15J10A	SMB15J10CA	10.0	11.10	12.30	1	17.0	88.3	5
SMB15J11A	SMB15J11CA	11.0	12.20	13.50	1	18.2	82.5	1
SMB15J12A	SMB15J12CA	12.0	13.30	14.70	1	19.9	75.4	1
SMB15J13A	SMB15J13CA	13.0	14.40	15.90	1	21.5	69.8	1
SMB15J14A	SMB15J14CA	14.0	15.60	17.20	1	23.2	64.7	1
SMB15J15A	SMB15J15CA	15.0	16.70	18.50	1	24.4	61.5	1
SMB15J16A	SMB15J16CA	16.0	17.80	19.70	1	26.0	57.7	1
SMB15J17A	SMB15J17CA	17.0	18.90	20.90	1	27.6	54.4	1
SMB15J18A	SMB15J18CA	18.0	20.00	22.10	1	29.2	51.4	1
SMB15J20A	SMB15J20CA	20.0	22.20	24.50	1	32.4	46.3	1
SMB15J22A	SMB15J22CA	22.0	24.40	26.90	1	35.5	42.3	1
SMB15J24A	SMB15J24CA	24.0	26.70	29.50	1	38.9	38.6	1
SMB15J26A	SMB15J26CA	26.0	28.90	31.90	1	42.1	35.7	1
SMB15J28A	SMB15J28CA	28.0	31.10	34.40	1	45.4	33.1	1
SMB15J30A	SMB15J30CA	30.0	33.50	36.80	1	48.4	31.0	1
SMB15J33A	SMB15J33CA	33.0	36.70	40.60	1	53.3	28.2	1
SMB15J36A	SMB15J36CA	36.0	40.00	44.20	1	58.1	25.9	1
SMB15J40A	SMB15J40CA	40.0	44.40	49.10	1	64.5	23.3	1
SMB15J43A	SMB15J43CA	43.0	47.80	52.80	1	69.4	21.7	1
SMB15J45A	SMB15J45CA	45.0	50.00	55.30	1	72.7	20.6	1
SMB15J48A	SMB15J48CA	48.0	53.30	58.90	1	77.4	19.4	1
SMB15J51A	SMB15J51CA	51.0	56.70	62.70	1	82.4	18.2	1
SMB15J54A	SMB15J54CA	54.0	60.00	66.30	1	87.1	17.3	1
SMB15J58A	SMB15J58CA	58.0	64.40	71.20	1	93.6	16.1	1
SMB15J60A	SMB15J60CA	60.0	66.70	73.70	1	96.8	15.5	1
SMB15J64A	SMB15J64CA	64.0	71.10	78.60	1	103.0	14.6	1
SMB15J70A	SMB15J70CA	70.0	77.80	86.00	1	113.0	13.3	1
SMB15J75A	SMB15J75CA	75.0	83.30	92.10	1	121.0	12.4	1
SMB15J78A	SMB15J78CA	78.0	86.70	95.80	1	126.0	11.9	1
SMB15J85A	SMB15J85CA	85.0	94.4	104.0	1	137.0	11.0	1
SMB15J90A	SMB15J90CA	90.0	100.0	111.0	1	146.0	10.3	1
SMB15J100A	SMB15J100CA	100.0	111.0	123.0	1	162.0	9.3	1
SMB15J110A	SMB15J110CA	110.0	122.0	135.0	1	177.0	8.5	1
SMB15J120A	SMB15J120CA	120.0	133.0	147.0	1	193.0	7.8	1
SMB15J130A	SMB15J130CA	130.0	144.0	159.0	1	209.0	7.2	1
SMB15J150A	SMB15J150CA	150.0	167.0	185.0	1	243.0	6.2	1
SMB15J160A	SMB15J160CA	160.0	178.0	197.0	1	259.0	5.8	1
SMB15J170A	SMB15J170CA	170.0	189.0	209.0	1	275.0	5.5	1
SMB15J180A	SMB15J180CA	180.0	201.0	222.0	1	292.0	5.1	1
SMB15J190A		190.0	209.0	243.0	1	308.0	4.8	1
SMB15J200A		200.0	224.0	247.0	1	324.0	4.6	1
SMB15J210A		210.0	231.0	268.0	1	340.0	4.4	1
SMB15J220A		220.0	246.0	272.0	1	356.0	4.2	1



Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

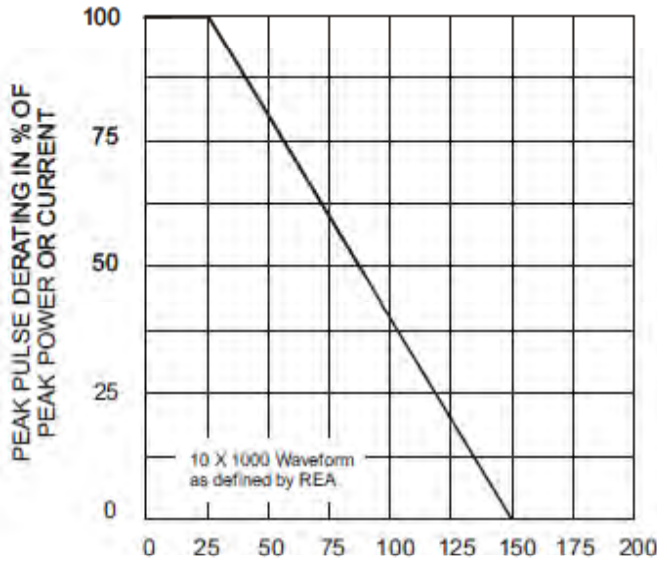


Fig. 1 - Pulse Derating Curve

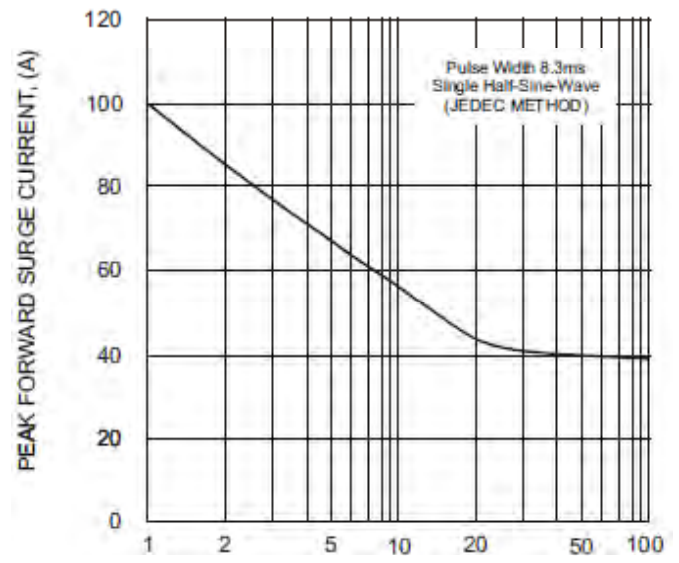


Fig. 2 - Maximum Non-Repetitive Surge Current

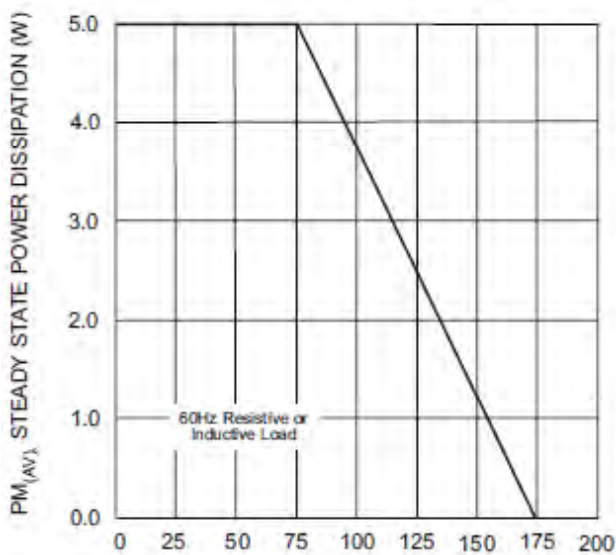


Fig. 3 - Steady State Power Derating Curve

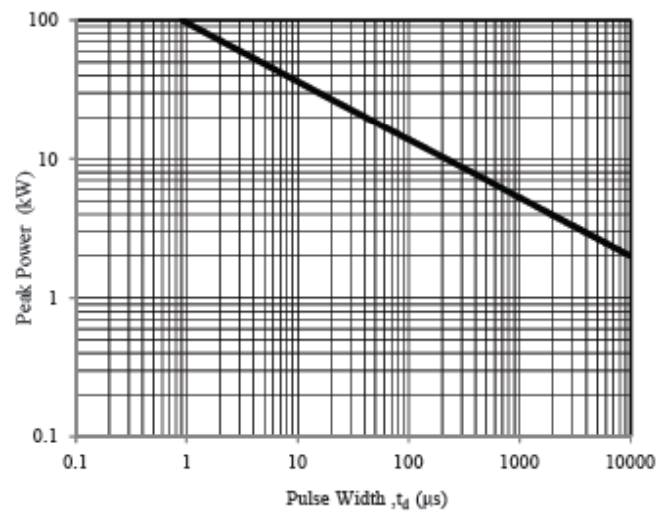


Fig. 4 - Peak Pulse Power Rating Curve

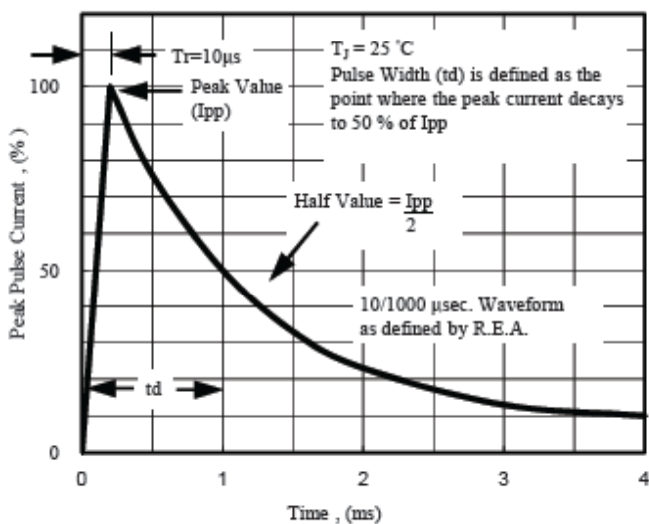


Fig. 5 - Pulse Waveform

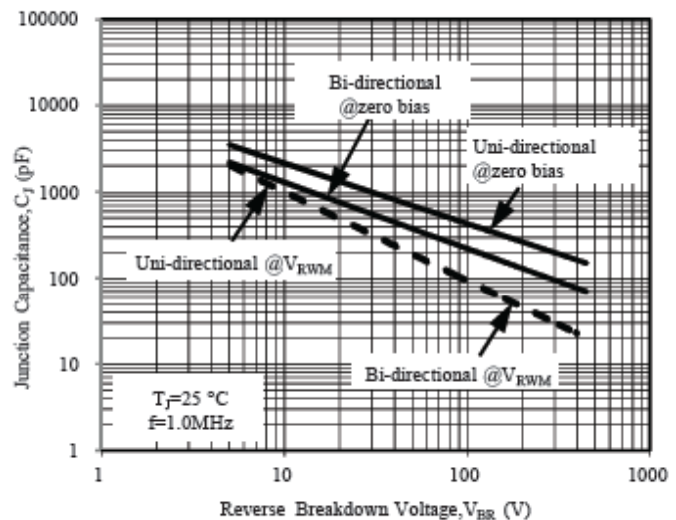
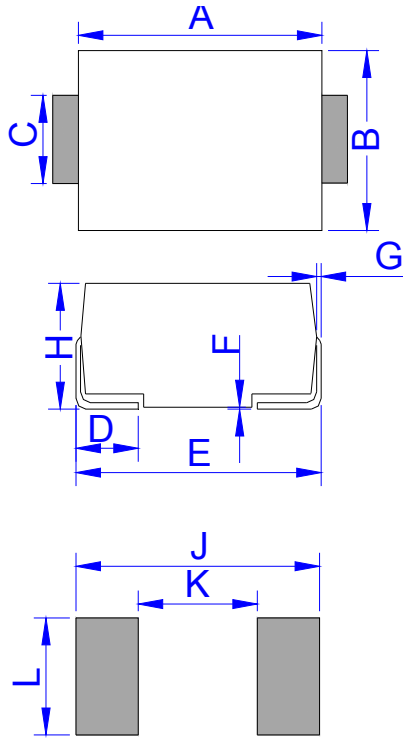


Fig. 6 - Typical Junction Capacitance

### PACKAGE MECHANICAL DATA



DO-214AA (SMB)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.05	4.65	0.160	0.183
B	3.30	3.94	0.130	0.155
C	1.80	2.20	0.071	0.086
D	0.76	1.52	0.030	0.060
E	5.08	5.59	0.200	0.220
F	0.051	0.203	0.002	0.008
G	0.152	0.305	0.006	0.012
H	2.45	2.70	0.096	0.106
J	6.80		0.270	
K		2.60		0.100
L	2.40		0.090	