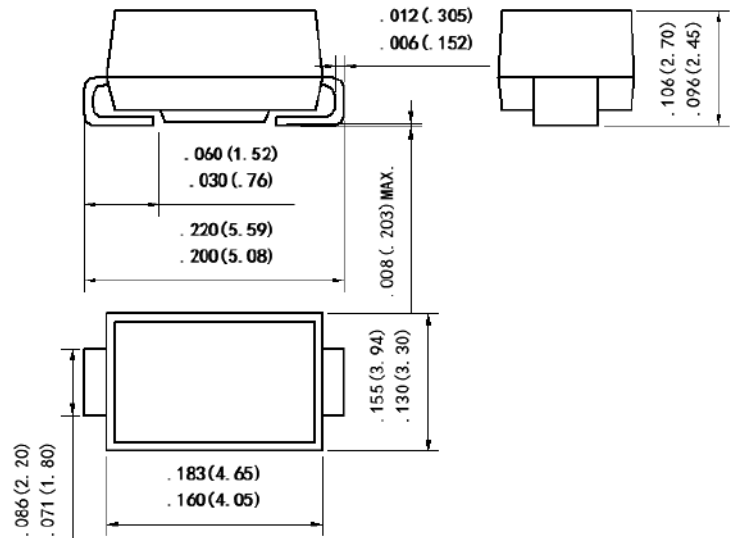


Surface Mount Transient Voltage Suppressor Rectifiers

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

DO214AA/(SMB)



Unit: inch (mm)

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
- ESD Rating of above 16 kV per Human Body Model
- ESD Rating of above 30 kV (Contact Discharge) per IEC61000-4-2
- EFT (Electrical Fast Transients) Rating of 40 A per IEC61000-4-4

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 ⁽¹⁾	P _{PP}	1500	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sine wave unidirectional only ⁽²⁾	I _{FSM}	200	A
Maximum instantaneous forward voltage at 50 A for unidirectional only ⁽³⁾	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 TA= 25 °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) VF<3.5V for devices of VBR<200V and VF<6.5V for devices of VBR>201V.

Part Number		Device Marking Code		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	UNI	BI	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMB15J5.0A	SMB15J5.0CA	GDE	BDE	5.0	6.40	7.00	10	9.2	163.0	800
SMB15J6.0A	SMB15J6.0CA	GDG	BDG	6.0	6.67	7.37	10	10.3	145.7	800
SMB15J6.5A	SMB15J6.5CA	GDK	BDK	6.5	7.22	7.98	10	11.2	134.0	500
SMB15J7.0A	SMB15J7.0CA	GDM	BDM	7.0	7.78	8.60	10	12.0	125.0	200
SMB15J7.5A	SMB15J7.5CA	GDP	BDP	7.5	8.33	9.21	1	12.9	116.3	100
SMB15J8.0A	SMB15J8.0CA	GDR	BDR	8.0	8.89	9.83	1	13.6	110.3	50
SMB15J8.5A	SMB15J8.5CA	GDT	BDT	8.5	9.44	10.40	1	14.4	104.2	20
SMB15J9.0A	SMB15J9.0CA	GDV	BDV	9.0	10.00	11.10	1	15.4	97.4	10
SMB15J10A	SMB15J10CA	GDX	BDX	10.0	11.10	12.30	1	17.0	88.3	5
SMB15J11A	SMB15J11CA	GDZ	BDZ	11.0	12.20	13.50	1	18.2	82.5	1
SMB15J12A	SMB15J12CA	GEE	BEE	12.0	13.30	14.70	1	19.9	75.4	1
SMB15J13A	SMB15J13CA	GEG	BEG	13.0	14.40	15.90	1	21.5	69.8	1
SMB15J14A	SMB15J14CA	GEK	BEK	14.0	15.60	17.20	1	23.2	64.7	1
SMB15J15A	SMB15J15CA	GEM	BEM	15.0	16.70	18.50	1	24.4	61.5	1
SMB15J16A	SMB15J16CA	GEP	BEP	16.0	17.80	19.70	1	26.0	57.7	1
SMB15J17A	SMB15J17CA	GER	BER	17.0	18.90	20.90	1	27.6	54.4	1
SMB15J18A	SMB15J18CA	GET	BET	18.0	20.00	22.10	1	29.2	51.4	1
SMB15J20A	SMB15J20CA	GEV	BEV	20.0	22.20	24.50	1	32.4	46.3	1
SMB15J22A	SMB15J22CA	GEX	BEX	22.0	24.40	26.90	1	35.5	42.3	1
SMB15J24A	SMB15J24CA	GEZ	BEZ	24.0	26.70	29.50	1	38.9	38.6	1
SMB15J26A	SMB15J26CA	GFE	BFE	26.0	28.90	31.90	1	42.1	35.7	1
SMB15J28A	SMB15J28CA	GFG	BFG	28.0	31.10	34.40	1	45.4	33.1	1
SMB15J30A	SMB15J30CA	GFK	BFK	30.0	33.50	36.80	1	48.4	31.0	1
SMB15J33A	SMB15J33CA	GFM	BFM	33.0	36.70	40.60	1	53.3	28.2	1
SMB15J36A	SMB15J36CA	GFP	BFP	36.0	40.00	44.20	1	58.1	25.9	1
SMB15J40A	SMB15J40CA	GFR	BFR	40.0	44.40	49.10	1	64.5	23.3	1
SMB15J43A	SMB15J43CA	GFT	BFT	43.0	47.80	52.80	1	69.4	21.7	1
SMB15J45A	SMB15J45CA	GFV	BFV	45.0	50.00	55.30	1	72.7	20.6	1
SMB15J48A	SMB15J48CA	GFX	BFX	48.0	53.30	58.90	1	77.4	19.4	1
SMB15J51A	SMB15J51CA	GFZ	BFZ	51.0	56.70	62.70	1	82.4	18.2	1
SMB15J54A	SMB15J54CA	GGE	BGE	54.0	60.00	66.30	1	87.1	17.3	1
SMB15J58A	SMB15J58CA	GGG	BGG	58.0	64.40	71.20	1	93.6	16.1	1
SMB15J60A	SMB15J60CA	GGK	BGK	60.0	66.70	73.70	1	96.8	15.5	1
SMB15J64A	SMB15J64CA	GGM	BGM	64.0	71.10	78.60	1	103.0	14.6	1
SMB15J70A	SMB15J70CA	GGP	BGP	70.0	77.80	86.00	1	113.0	13.3	1
SMB15J75A	SMB15J75CA	GGR	BGR	75.0	83.30	92.10	1	121.0	12.4	1
SMB15J78A	SMB15J78CA	GGT	BGT	78.0	86.70	95.80	1	126.0	11.9	1
SMB15J85A	SMB15J85CA	GGV	BGV	85.0	94.4	104.0	1	137.0	11.0	1
SMB15J90A	SMB15J90CA	GGX	BGX	90.0	100.0	111.0	1	146.0	10.3	1
SMB15J100A	SMB15J100CA	GGZ	BGZ	100.0	111.0	123.0	1	162.0	9.3	1
SMB15J110A	SMB15J110CA	GHE	BHE	110.0	122.0	135.0	1	177.0	8.5	1
SMB15J120A	SMB15J120CA	GHG	BHG	120.0	133.0	147.0	1	193.0	7.8	1
SMB15J130A	SMB15J130CA	GHK	BHK	130.0	144.0	159.0	1	209.0	7.2	1
SMB15J150A	SMB15J150CA	GHM	BHM	150.0	167.0	185.0	1	243.0	6.2	1
SMB15J160A	SMB15J160CA	GHP	BHP	160.0	178.0	197.0	1	259.0	5.8	1
SMB15J170A	SMB15J170CA	GHR	BHR	170.0	189.0	209.0	1	275.0	5.5	1
SMB15J180A	SMB15J180CA	GHT	BHT	180.0	201.0	222.0	1	292.0	5.1	1
SMB15J190A		GHU		190.0	209.0	243.0	1	308.0	4.8	1
SMB15J200A		GHV		200.0	224.0	247.0	1	324.0	4.6	1
SMB15J210A		GHW		210.0	231.0	268.0	1	340.0	4.4	1
SMB15J220A		GHX		220.0	246.0	272.0	1	356.0	4.2	1

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

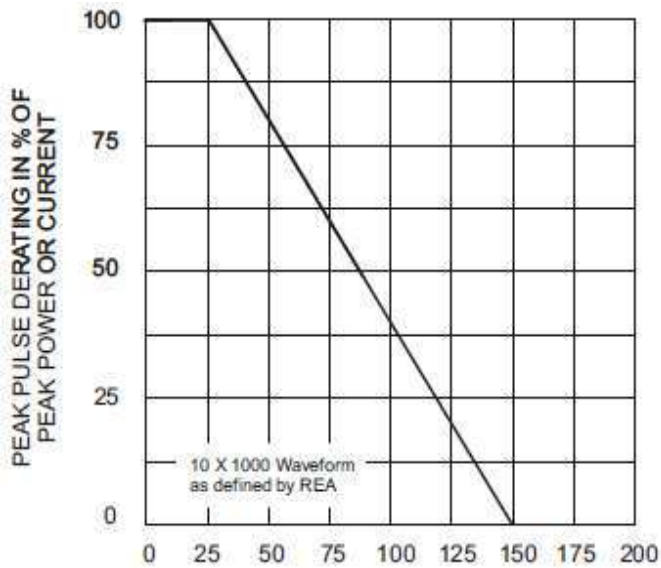


Fig. 1 - Pulse Derating Curve

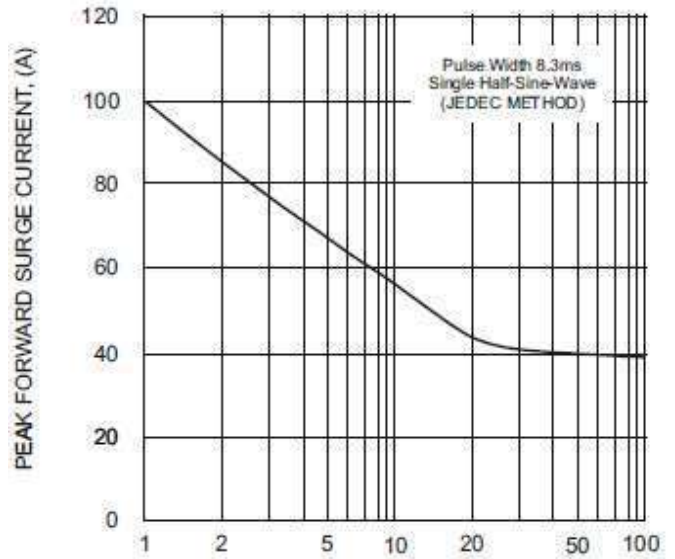


Fig. 2 - Maximum Non-Repetitive Surge Current

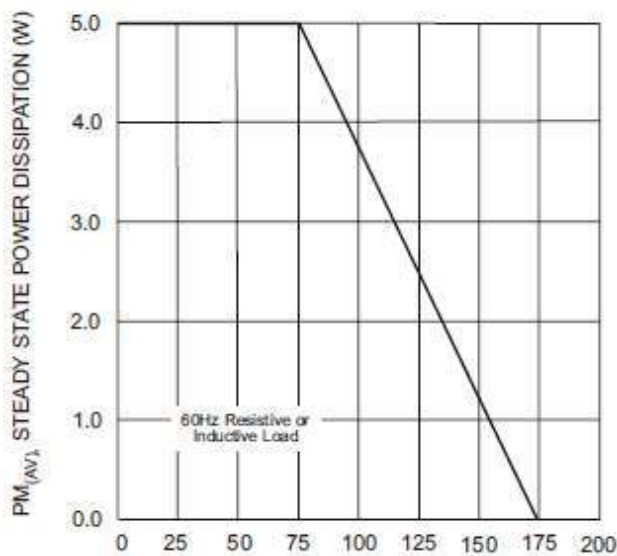


Fig. 3 - Steady State Power Derating Curve

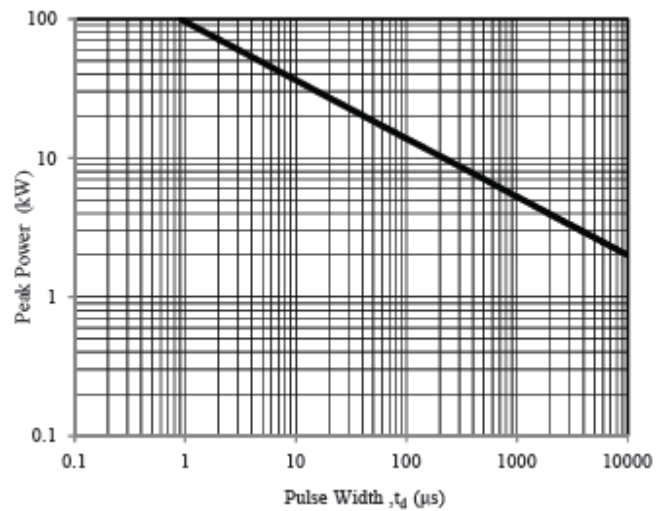


Fig. 4 - Peak Pulse Power Rating Curve

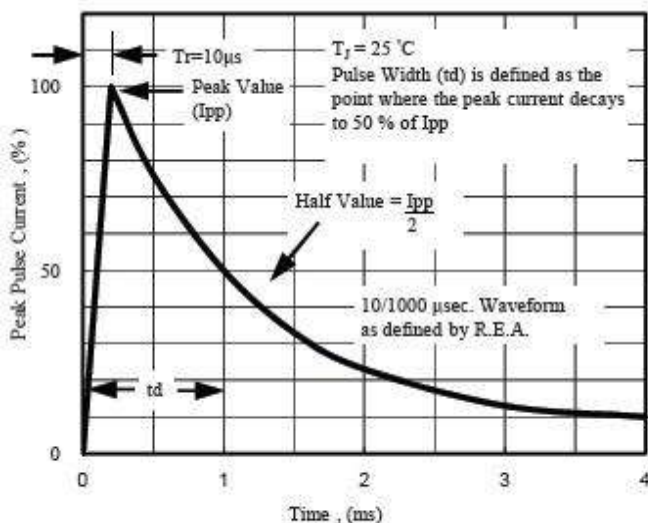


Fig. 5 - Pulse Waveform

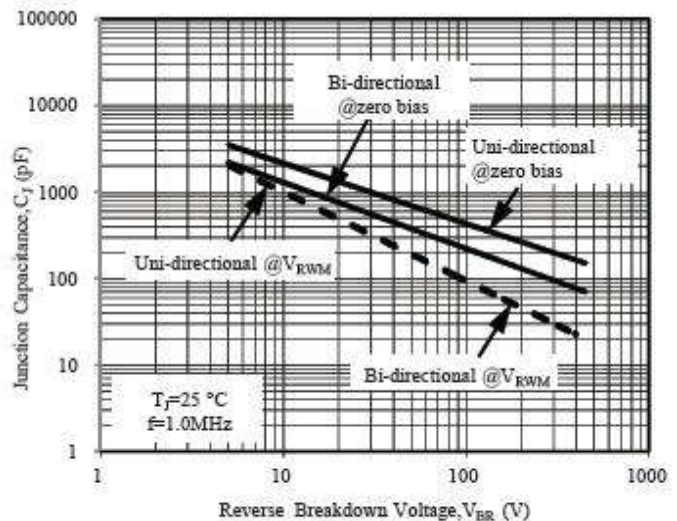
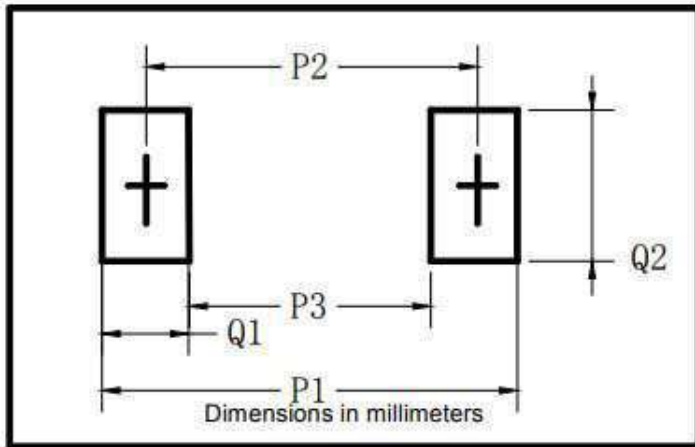


Fig. 6 - Typical Junction Capacitance

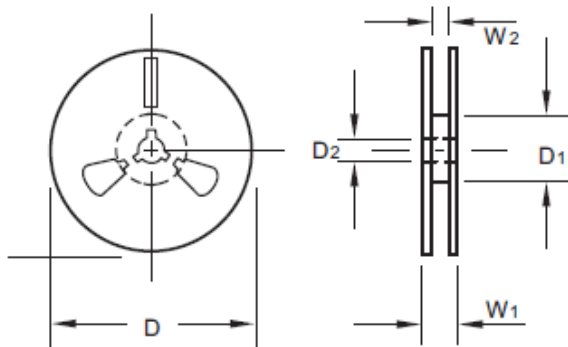
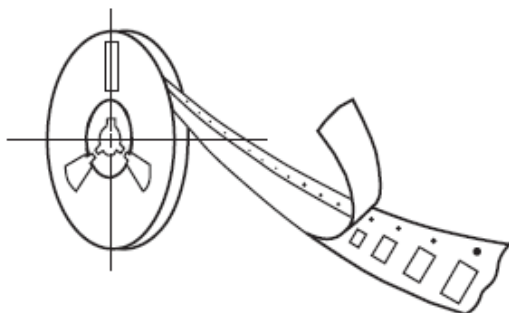
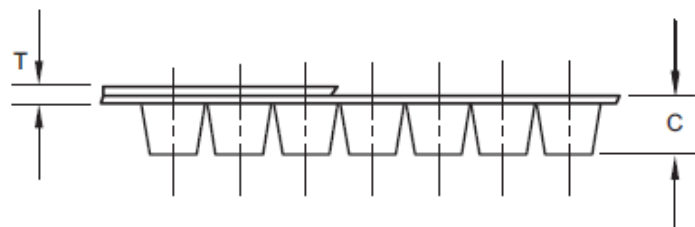
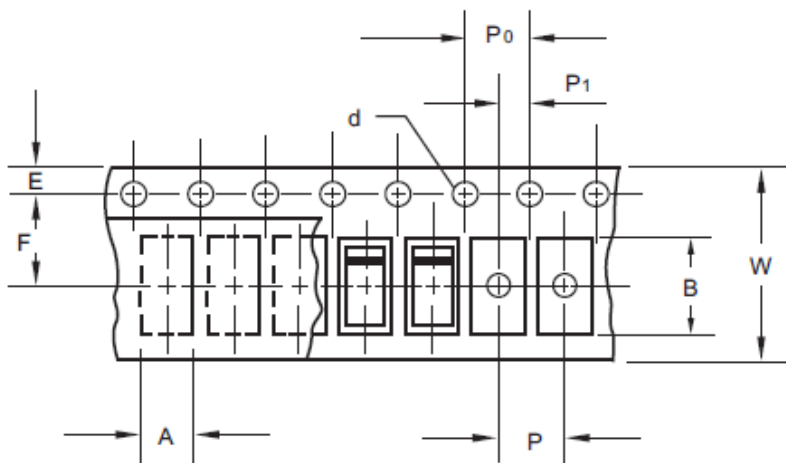
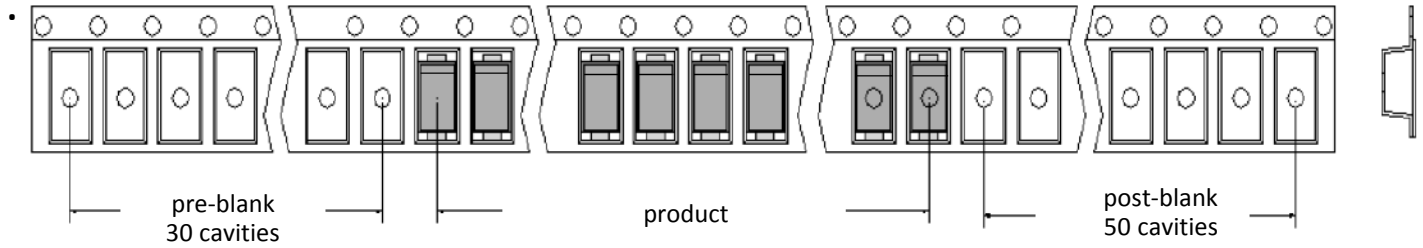
■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3

PACKAGING SPECIFICATION OF SMB PRODUCT

1 Packing



REF	mm
A	3.77±0.10
B	5.70±0.10
C	2.45±0.10
d	1.55±0.10
D	178/330.0±1.0
D1	54/75±1.0
D2	13.5±1.0
E	1.75±0.10
F	5.50±0.05
P	8.00±0.10
P ₀	4.00±0.10
P ₁	2.00±0.10
T	0.25±0.10
W	12.00±0.15
W ₁	18.1±1.5
W ₂	13.5±1.0