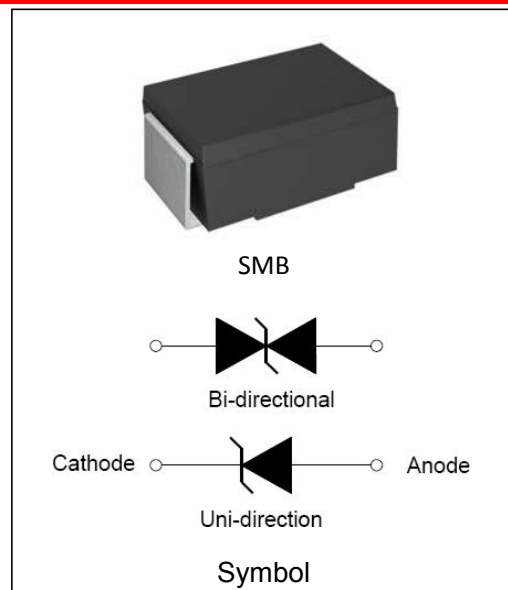


DESCRIPTION:

TVS diodes can be used in a wide range of applications which like consumer electronic products, automotive industries, munitions, telecommunications, aerospace industries, and intelligent control systems.

FEATURES:

- ✧ Glass passivated or planar junction.
- ✧ Lower clamping voltage.
- ✧ High temperature soldering: 260°C/10s at terminals.
- ✧ Plastic package has Underwriters Laboratory Flammability 94V-0.
- ✧ Surface mount DO-214AA.
- ✧ Fast response time: typically less than 1.0ps from 0V to VBR min.
- ✧ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact).



ABSOLUTE MAXIMUM RATINGS (TA=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T _{stg}	-55 to +150	°C
Operating junction temperature range	T _j	-55 to +150	°C
Peak pulse power dissipation on 10/1000µs waveform	P _{PP}	1000	W

MARKING



Screscreen and model

ELECTRICAL CHARACTERISTICS (TA=25°C)

Part Number		V _R	I _R @ V _R	V _{BR} @I _T		I _T	V _C @I _{PP}	I _{PP} ®
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
10BJ5.0A	10BJ5.0CA	5.0	200	6.40	7.00	10	9.2	108.7
10BJ6.0A	10BJ6.0CA	6.0	200	6.67	7.37	10	10.3	97.1
10BJ6.5A	10BJ6.5CA	6.5	100	7.22	7.98	10	11.2	89.3
10BJ7.0A	10BJ7.0CA	7.0	80	7.78	8.60	10	12.0	83.4
10BJ7.5A	10BJ7.5CA	7.5	50	8.33	9.21	1	12.9	77.6
10BJ8.0A	10BJ8.0CA	8.0	20	8.89	9.83	1	13.6	73.6
10BJ8.5A	10BJ8.5CA	8.5	10	9.44	10.40	1	14.4	69.5
10BJ9.0A	10BJ9.0CA	9.0	5	10.00	11.10	1	15.4	65.0
10BJ10A	10BJ10CA	10	2	11.10	12.30	1	17.0	58.9
10BJ11A	10BJ11CA	11	1	12.20	13.50	1	18.2	55.0
10BJ12A	10BJ12CA	12	1	13.30	14.70	1	19.9	50.3
10BJ13A	10BJ13CA	13	1	14.40	15.90	1	21.5	46.6
10BJ14A	10BJ14CA	14	1	15.60	17.20	1	23.2	43.1
10BJ15A	10BJ15CA	15	1	16.70	18.50	1	24.4	41.0
10BJ16A	10BJ16CA	16	1	17.80	19.70	1	26.0	38.5
10BJ17A	10BJ17CA	17	1	18.90	20.90	1	27.6	36.3
10BJ18A	10BJ18CA	18	1	20.00	22.10	1	29.2	34.3
10BJ20A	10BJ20CA	20	1	22.20	24.50	1	32.4	30.9
10BJ22A	10BJ22CA	22	1	24.40	26.90	1	35.5	28.2
10BJ24A	10BJ24CA	24	1	26.70	29.50	1	38.9	25.7
10BJ26A	10BJ26CA	26	1	28.90	31.90	1	42.1	23.8
10BJ28A	10BJ28CA	28	1	31.10	34.40	1	45.4	22.1
10BJ30A	10BJ30CA	30	1	33.30	36.80	1	48.4	20.7
10BJ33A	10BJ33CA	33	1	36.70	40.60	1	53.3	18.8
10BJ36A	10BJ36CA	36	1	40.00	44.20	1	58.1	17.3
10BJ40A	10BJ40CA	40	1	44.40	49.10	1	64.5	15.5
10BJ43A	10BJ43CA	43	1	47.80	52.80	1	69.4	14.4
10BJ45A	10BJ45CA	45	1	50.00	55.30	1	72.7	13.8
10BJ48A	10BJ48CA	48	1	53.30	58.90	1	77.4	13.0
10BJ51A	10BJ51CA	51	1	56.70	62.70	1	82.4	12.2

ELECTRICAL CHARACTERISTICS (TA=25°C, continued)

Part Number		V _R	I _R @ V _R	V _{BR} @I _T		I _T	V _C @I _{PP}	I _{PP} ①
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
10BJ54A	10BJ54CA	54	1	60.00	66.30	1	87.1	11.5
10BJ58A	10BJ58CA	58	1	64.40	71.20	1	93.6	10.7
10BJ60A	10BJ60CA	60	1	66.70	73.70	1	96.8	10.4
10BJ64A	10BJ64CA	64	1	71.10	78.60	1	103.0	9.7
10BJ70A	10BJ70CA	70	1	77.80	86.00	1	113.0	8.9
10BJ75A	10BJ75CA	75	1	83.30	92.10	1	121.0	8.3
10BJ78A	10BJ78CA	78	1	86.70	95.80	1	126.0	8.0
10BJ85A	10BJ85CA	85	1	94.40	104.0	1	137.0	7.3
10BJ90A	10BJ90CA	90	1	100.0	111.0	1	146.0	6.9
10BJ100A	10BJ100CA	100	1	111.0	123.0	1	162.0	6.2
10BJ110A	10BJ110CA	110	1	122.0	135.0	1	177.0	5.7
10BJ120A	10BJ120CA	120	1	133.0	147.0	1	193.0	5.2
10BJ130A	10BJ130CA	130	1	144.0	159.0	1	209.0	4.8
10BJ150A	10BJ150CA	150	1	167.0	185.0	1	243.0	4.2
10BJ160A	10BJ160CA	160	1	178.0	197.0	1	259.0	3.9
10BJ170A	10BJ170CA	170	1	189.0	209.0	1	275.0	3.7
10BJ180A	10BJ180CA	180	1	201.0	222.0	1	292.0	3.5
10BJ190A	10BJ190CA	190	1	211.0	234.0	1	307.0	3.3
10BJ200A	10BJ200CA	200	1	224.0	247.0	1	324.0	3.1

① Surge waveform: 10/1000μs

V_R : Stand-off Voltage -- Maximum voltage that can be applied

V_{BR}: Breakdown Voltage

V_C: Clamping Voltage -- Peak voltage measured across the suppressor at a specified I_{pp}

I_R: Reverse Leakage Current

ORDERING INFORMATION

10BJ	XX	C	A
1000W SMB Series	V_R Voltage	C: Bi-directional	5% V_{BR} Voltage tolerance

RATINGS AND V - I CHARACTERISTICS CURVES ($T_A=25^\circ\text{C}$)

FIG.1:V- I curve characteristics (Uni-directional)

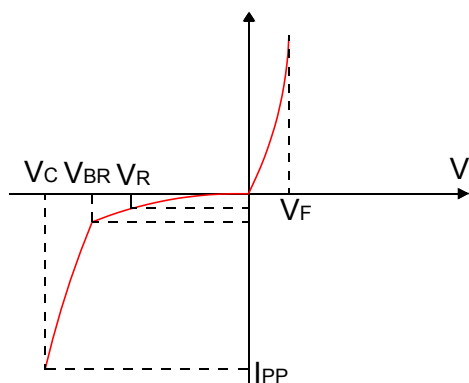


FIG.2:V- I curve characteristics (Bi-directional)

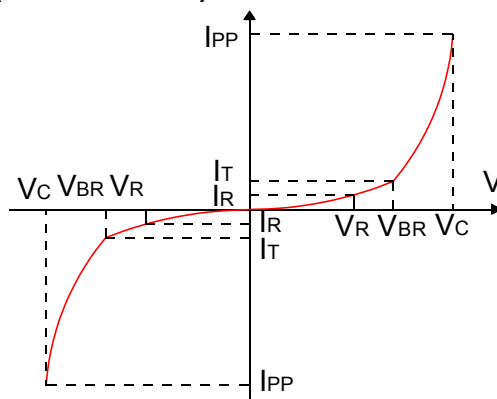


FIG.3: Pulse waveform

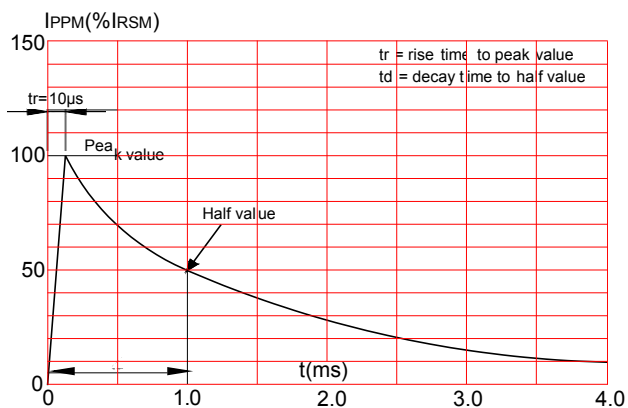
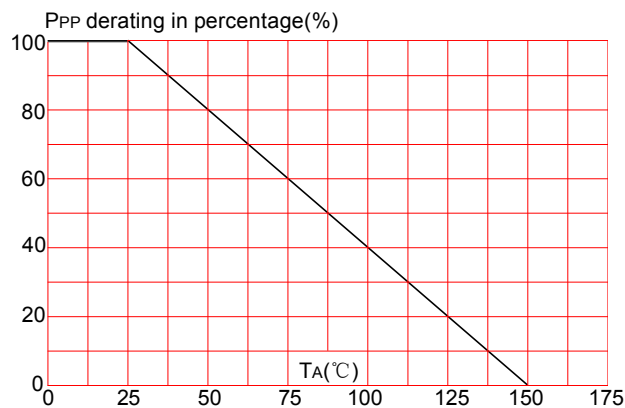
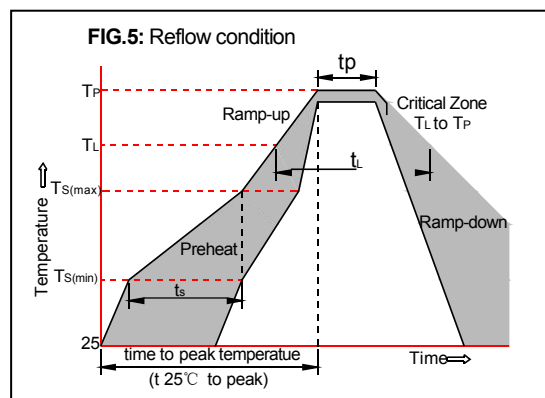
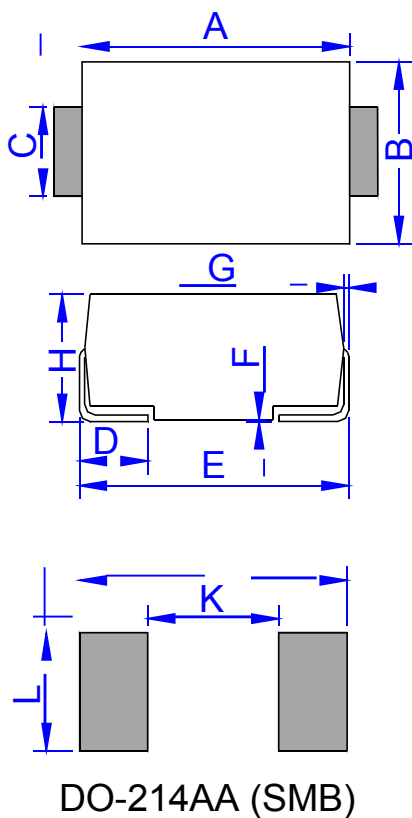


FIG.4: Pulse derating curve

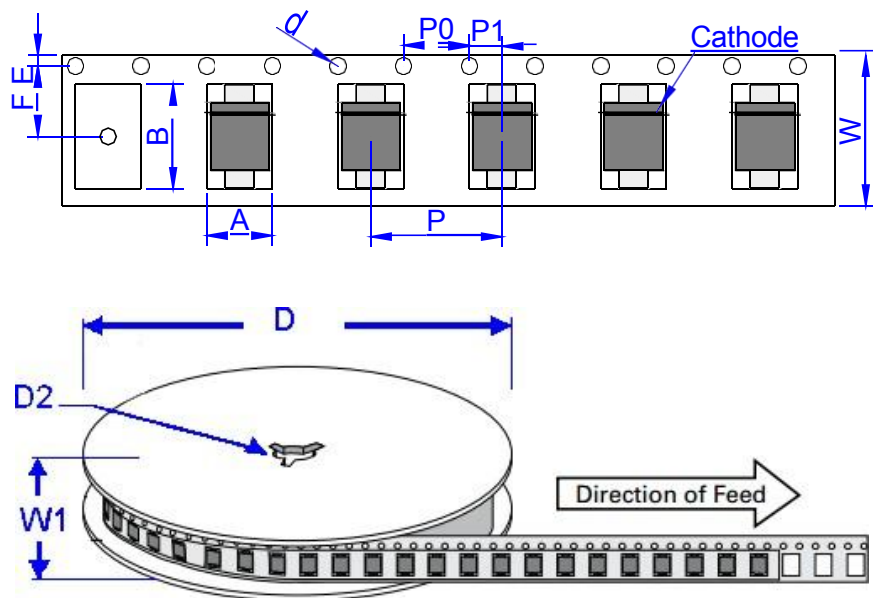


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.5)
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 (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C


PACKAGE MECHANICAL DATA


Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.75	0.167	0.187
B	3.30	3.94	0.130	0.155
C	1.85	2.21	0.073	0.087
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	0.15	0.31	0.006	0.012
H	2.11	2.44	0.083	0.096
J	6.80		0.270	
K		2.60		0.100
L	2.40		0.090	

TAPE AND REEL SPECIFICATION - SMB


Ref.	Dimensions	
	Millimeters	Inches
A	3.76 ± 0.2	0.144 ± 0.012
B	5.69 ± 0.2	0.244 ± 0.012
d	1.5 ± 0.25	0.059 ± 0.004
D	330.0	13.0
D2	13 ± 1	0.512 ± 0.039
E	1.75 ± 0.2	0.059 ± 0.008
F	5.5 ± 0.1	0.222 ± 0.008
P	8.0 ± 0.2	0.315 ± 0.008
P0	4.0 ± 0.2	0.157 ± 0.008
P1	2.0 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.3	0.472 ± 0.008
W1	16.8 ± 2.0	0.661 ± 0.079

PART No.	PACKAGE	QUANTITY	TAPE & REEL
SMCJxxCA/A	SMC(DO214AB)	3,000	13inch