

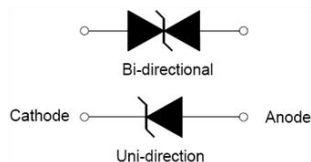
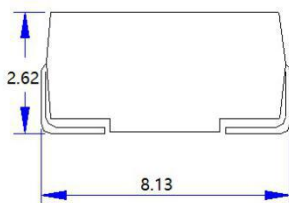
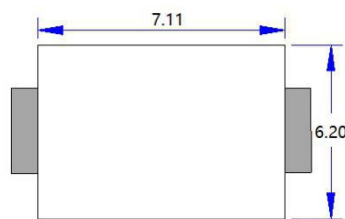
Description

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
- Excellent clamping capability
- Repetition rate (duty cycle): 0.01%
- Low profile package and low inductance
- 3000W Peak Pulse power capability at 10×1000μs waveform.
- Fast response time: typically less than 1.0ps from 0V to V_{BR} min.
- High temperature soldering: 260°C/10s at terminals.
- Plastic package has Underwriters Laboratory Flammability 94V-0.
- For surface mounted applications in order to optimize board space.
- AEC-Q101

Dimensions & Symbol (Unit: mm Max)



Mechanical Characteristics

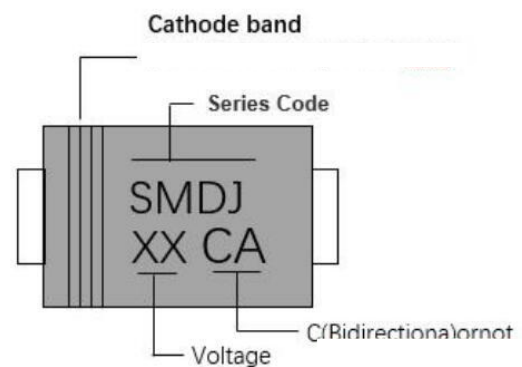
Package: SMC/DO-214AB

- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Polarity: Color band denotes cathode except bi-directional models
- Standard Packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.28g
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

- I/O Interface.
- AC/DC Power supply
- Low frequency signal transmission line (RS232, RS485, etc.)

Marking Information



Ordering information

Out line	Reel (pcs)	Per carton (pcs)	Reel diameters (mm)
Taping	3K	48K	330

Electrical characteristics ($T_A=25^\circ\text{C}$)

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{\text{①}}$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMDJ15A -AT	SMDJ15CA -AT	DYLP	DZLP	5	800	6.4	7	10	9.2	326.1
SMDJ16A -AT	SMDJ16CA -AT	DYLQ	DZLQ	6	800	6.67	7.37	10	10.3	291
SMDJ18A -AT	SMDJ18CA -AT	DYLS	DZLS	6.5	500	7.22	7.98	10	11.2	267.9
SMDJ20A -AT	SMDJ20CA -AT	DYMY	DZMY	7	200	7.78	8.6	10	12	250
SMDJ22A -AT	SMDJ22CA -AT	DYMM	DZMM	7.5	100	8.33	9.21	1	12.9	232.6
SMDJ24A -AT	SMDJ24CA -AT	DYMO	DZMO	8	50	8.89	9.83	1	13.6	220.6
SMDJ26A -AT	SMDJ26CA -AT	DYMQ	DZMQ	8.5	20	9.44	10.4	1	14.4	208.3
SMDJ28A -AT	SMDJ28CA -AT	DYMS	DZMS	9	5	10	11.1	1	15.4	194.8
SMDJ30A -AT	SMDJ30CA -AT	DYNY	DZNY	10	1	11.1	12.3	1	17	176.5
SMDJ33A -AT	SMDJ33CA -AT	DYNN	DZNN	11	1	12.2	13.5	1	18.2	164.8
SMDJ36A -AT	SMDJ36CA -AT	DYNQ	DZNQ	12	1	13.3	14.7	1	19.9	150.8
SMDJ40A -AT	SMDJ40CA -AT	DYQY	DZQY	13	1	14.4	15.9	1	21.5	139.5
SMDJ43A -AT	SMDJ43CA -AT	DYON	DZON	14	1	15.6	17.2	1	23.2	129.3

① Surge waveform: 10/1000 μs

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

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$
Operating junction temperature range	T_j	-55 to +150	$^\circ\text{C}$
Steady state power dissipation at $T_L=75^\circ\text{C}$	$P_{M(AV)}$	8.0	W
Peak pulse power dissipation on 10/1000 μs waveform	P_{PP}	3000	W
Maximum Instantaneous Forward Voltage at 30A for Unidirectional	V_F	5.0	V

Ratings And V-I Characteristics Curves ($T_A=25^\circ\text{C}$, unless otherwise noted)

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

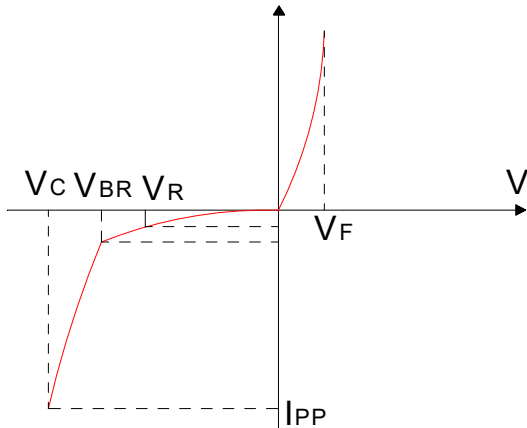
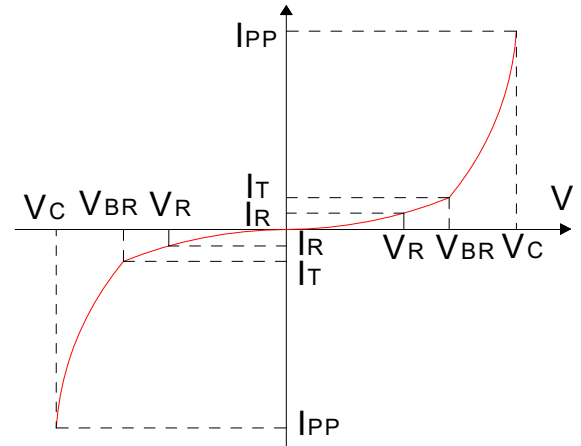


FIG.2:V- I curve characteristics (Bi-directional)



Typical Characteristics

FIG.3: Pulse waveform

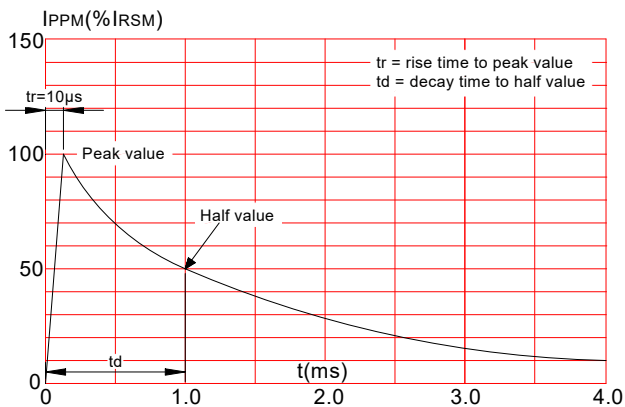
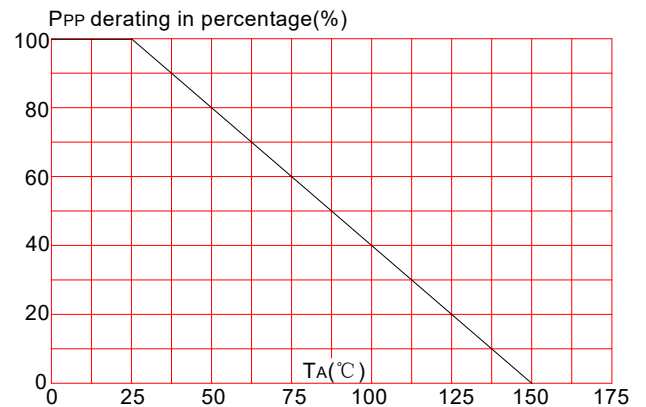
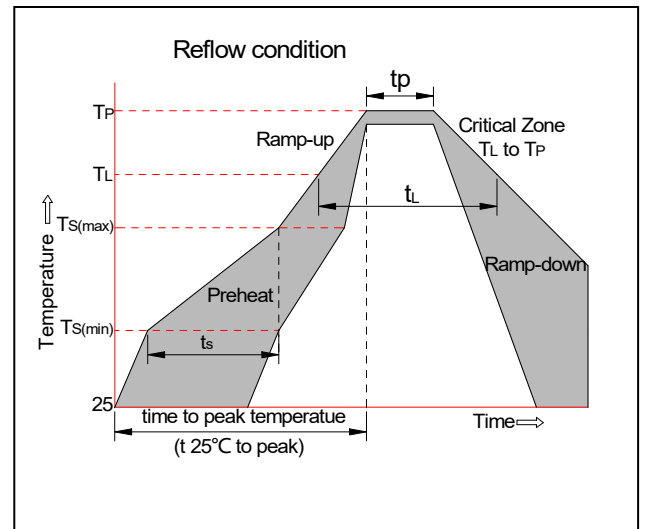


FIG.4: Pulse derating curve

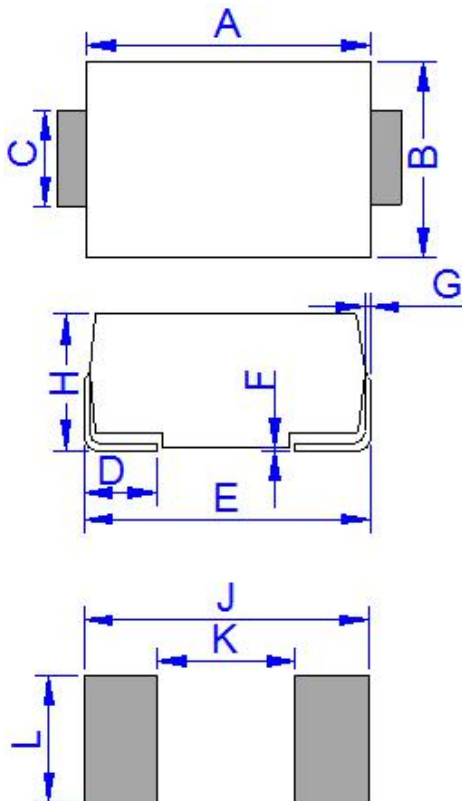


Soldering Parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	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



DO-214AB (SMC)

Ref	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	6.60	7.11	0.260	0.280
B	5.59	6.20	0.220	0.24
C	2.75	3.20	0.108	0.126
D	0.76	1.52	0.030	0.060
E	7.71	8.13	0.305	0.320
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.06	2.62	0.085	0.103
J	8.12		0.32	
K		4.69		0.185
L	3.07		0.121	



Leading Circuit Protection
Products and Solutions

SMDJXXA/CA-AT Series
3000W Transient Voltage Suppressor

Contact Information

ShenZhen Salltech Microelectronics Co.,Ltd.

610 Room, No.1 Buliding,Duocai Science Park,Guanlan High Tech Park,Longhua District, Shenzhen.

TEL: +86-0755-21053994

FAX: +86-0755-21053994