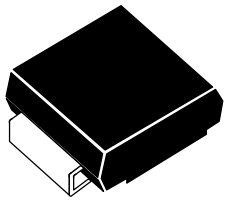
5.0SMDJ24CANR

Power Transient Voltage Suppressor

Features

- Bidirectional Protection
- Fast Response Time: Typically < 1ns
- Excellent Clamping Capability
- Built-in Strain relief
- Low inductance
- Low profile package
- High temperature solder:260℃/10 seconds at terminal



SMC
(JEDEC DO-214AB)

Mechanical Characteristics

- JEDEC DO-214AB package
- Molding compound flammability rating: UL 94V-0
- Marking : See marking code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

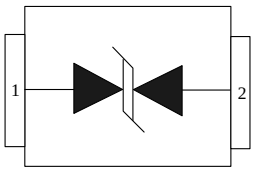
Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computers &Consumer Electronics
- Industrial Electronics

Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Non-repetitive peak impulse Voltage (1.2/50μs-8/20μs, 2Ω)(See Note1) (Fig1)	V_{PPSM}	4000	V
Power dissipation on infinite heat sink T_L = 50 °C(Fig3)	P_D	6.5	W
Operating junction temperature range	T_J	-65 to + 150	℃
storage temperature range	T_{STG}	-65 to + 150	℃

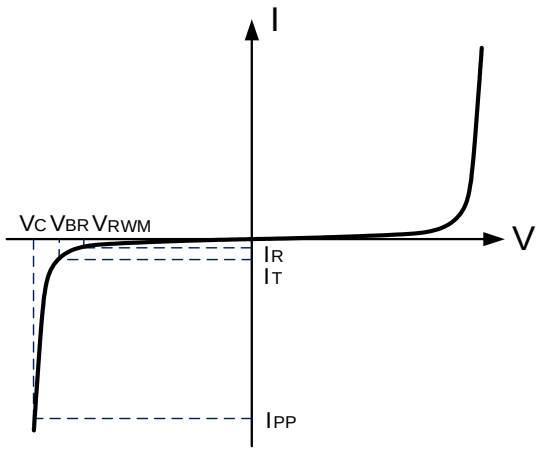
Note1: The waveform is defined in IEC 61000-4-5, Per Fig.1.

Pin Configuration



Electrical Characteristics

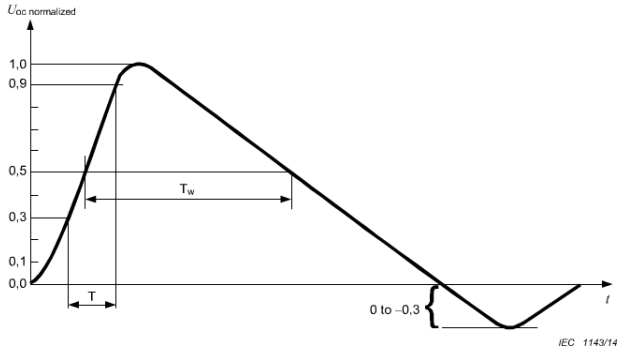
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



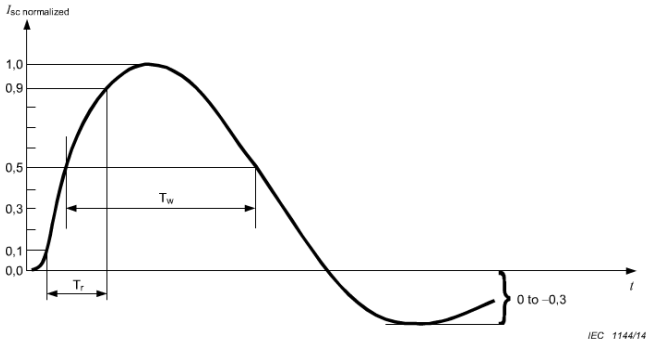
Parameter	Symbol	Conditions	Minimum	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}			24	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	24.2	29.5	V
Reverse Leakage Current	I_R	V_{RWM}=24V, T=25°C		2	μA
Clamping Voltage	V_C	V_{PPSM}=4000V, t_p=1.2/50μs-8/20μs(2Ω)		38	V

Typical Characteristics

Figure 1: 1.2/50μs voltage waveform, 8/20μs current waveform



Front time: $T_f = 1{,}67 \times T = 1{,}2\ \mu s \pm 30\ \%$
Duration: $T_d = T_w = 50\ \mu s \pm 20\ \%$



Front time: $T_f = 1{,}25 \times T_r = 8\ \mu s \pm 20\ \%$
Duration: $T_d = 1{,}18 \times T_w = 20\ \mu s \pm 20\ \%$

Figure 2: Pulse Derating Curve

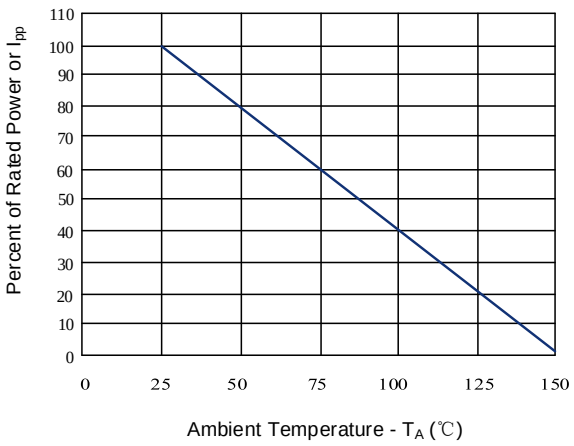
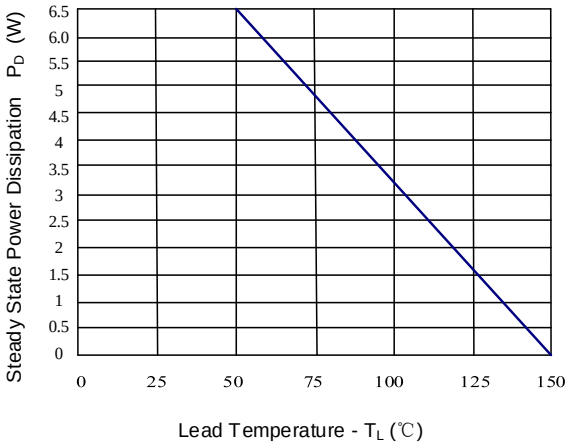
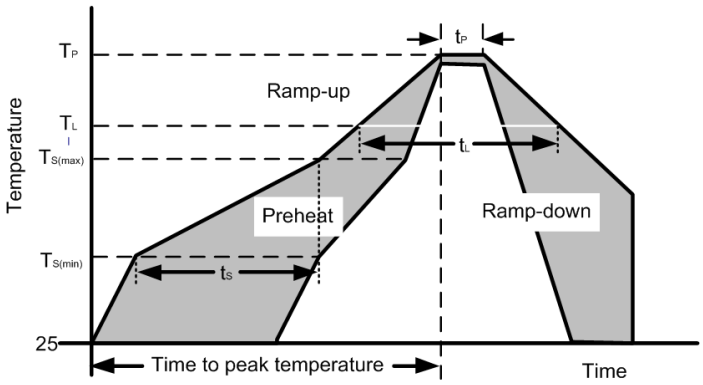


Figure 3: Steady State Power Dissipation Derating Curve



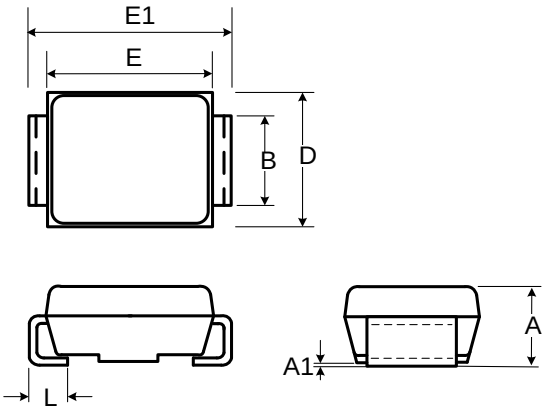
Recommended Soldering Parameters

Reflow Condition		
Pre Heat	Temp. Min ($T_{s(min)}$)	150°C
	Temp. Max ($T_{s(max)}$)	200°C
	Time (Min to Max) (t_s)	60-190 s
Average ramp up rate (Liquidus Temp.) (T_L) to peak		3°C/s max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/s max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60-150 s
Peak Temperature (T_P)		260+0/-5 °C
Time within actual peak Temperature (t_p)		20-40 s
Ramp-down Rate		5°C/s max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		260°C

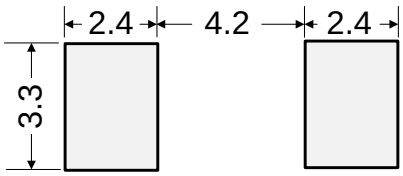


Outline Drawing – SMC (DO-214AB)

Ref.（mm）	Millimeters	
	Min.	Max.
A	2.06	2.70
A1	-	0.30
B	2.90	3.20
E	6.60	7.40
E1	7.75	8.13
D	5.59	6.22
L	0.76	1.52

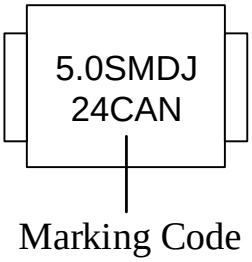


Recommended Solder Pad Layout



Dimensions in mm

Marking Code



Marking Code

Package Information

Package Type	Description	Quantity（pcs）
SMC(DO-214AB)	Tape & Reel -16mm/13″ tape	3000

Contact Information

No.1001, Shiwan(7) Road, Pudong District, Shanghai, P.R.China.201207
Tel: +86-21-68969993 Fax: 86-21-50757680 Email: market@way-on.com
WAYON website: **http://www.way-on.com**
For additional information, please contact your local Sales Representative.

WAYON ® is registered trademarks of Wayon Corporation.

Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.