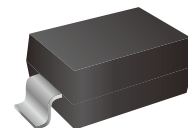




Description

RHP4200AW Thyristorsolid state protection thyristor protect telecommunications equipment such as modems, line cards, fax machines, and other CPE.

The RHP4200AW device is usedto enable equipment to meet various regulatory requirements including GR 1089, ITU K.20, K.21 and K.45, IEC 60950, and TIA-968 (formerly known as FCC Part 68).



Features

- Cannot be damaged by voltage
- Eliminate hysteresis and heat dissipati in typically found with clamping devices
- Eliminate voltage overshoot caused by fast-rising transients
- Are non-degenerative
- Will not fatigue
- Have low capacitance, making them ideal for high-speed transmission equipment
- Meets MSL level 1, per J-STD-020
- Lead free in comply with EU RoHS 2011/65/EU directives



Ordering Information

Part Number	Marking	Shipping	Reel
RHP4200AW	P420A	8000PCS Tape&Reel	13 inchs

Thermal Considerations

Parameter	Symbol	Value	Unit
Operating Junction Temperature	T_J	-40 to +150	°C
Storage Temperature Range	T_S	-40 to +150	°C
Junction to Ambient on printed circuit	$R_{\theta JA}$	90	°C/W
Non-repetitive Peak Impulse Current 10/1000 μ s	I_{PPSM}	50	A
Non-repetitive peak impulse Voltage 10/700 μ s	V_{PPSM}	2000	V

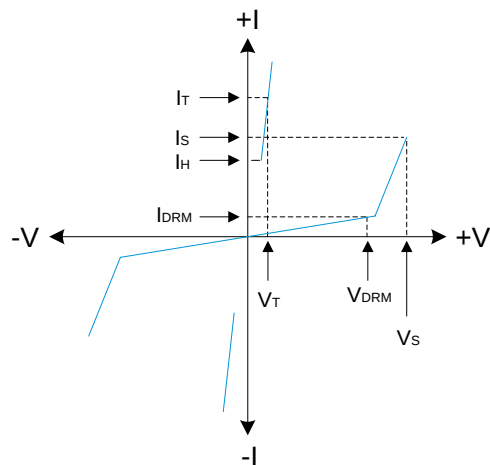
Electrical Characteristics

Part Number	V_{DRM} (V)	V_S (V)	V_T (V)	I_{DRM} (μ A)	I_S (mA)	I_T (A)	I_H (mA)	C_O (pF)
RHP4200AW	400	500	3	2	800	2.2	50	35



Electrical Parameters

Parameter	Definition
V_{DRM}	Peak Off-state Voltage – maximum voltage that can be applied while maintaining off state
V_S	Switching Voltage – maximum voltage prior to switching to on state
V_T	On-state Voltage – maximum voltage measured at rated on-state current
I_{DRM}	Leakage Current – maximum peak off-state current measured at V_{DRM}
I_S	Switching Current – maximum current required to switch to on state
I_T	On-state Current – maximum rated continuous on-state current
I_H	Holding Current – typical current required to maintain on state
C_O	Off-state Capacitance – typical capacitance measured in off state
I_{PP}	Peak Pulse Current – maximum rated peak impulse current
I_{TSM}	Peak One-cycle Surge Current – maximum rated one-cycle AC current
di/dt	Rate of Rise of Current – maximum rated value of the acceptable rate of rise in current over time



Characteristics Curves

Fig.1 $t_r \times t_d$ Pulse Wave-form

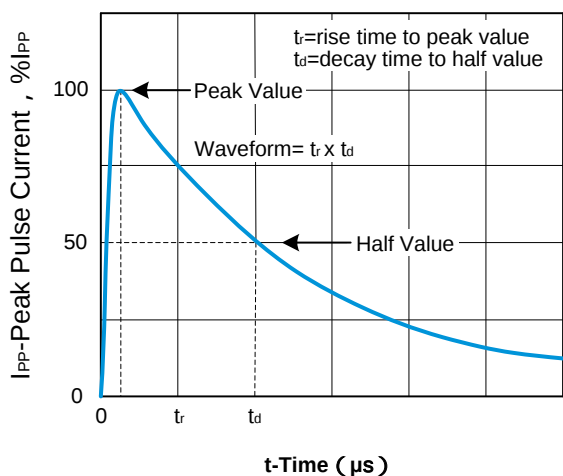


Fig.2 Normalized V_S Change versus Junction Temperature

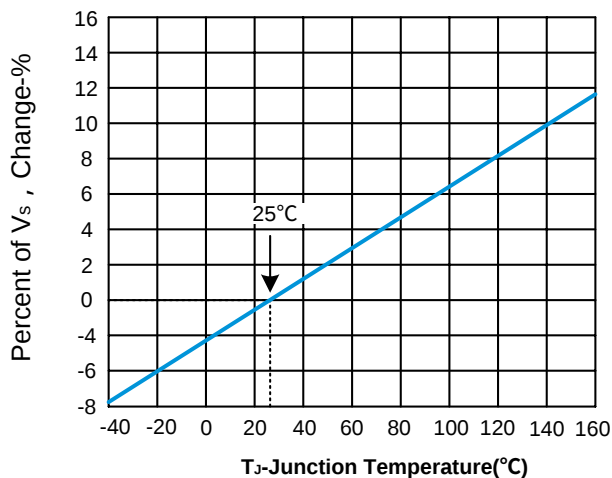
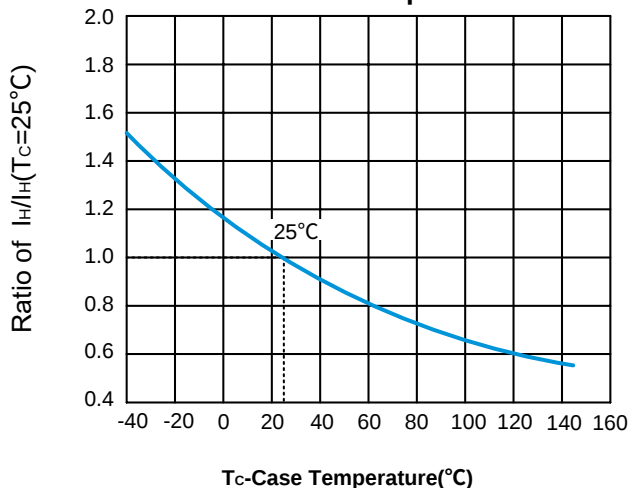
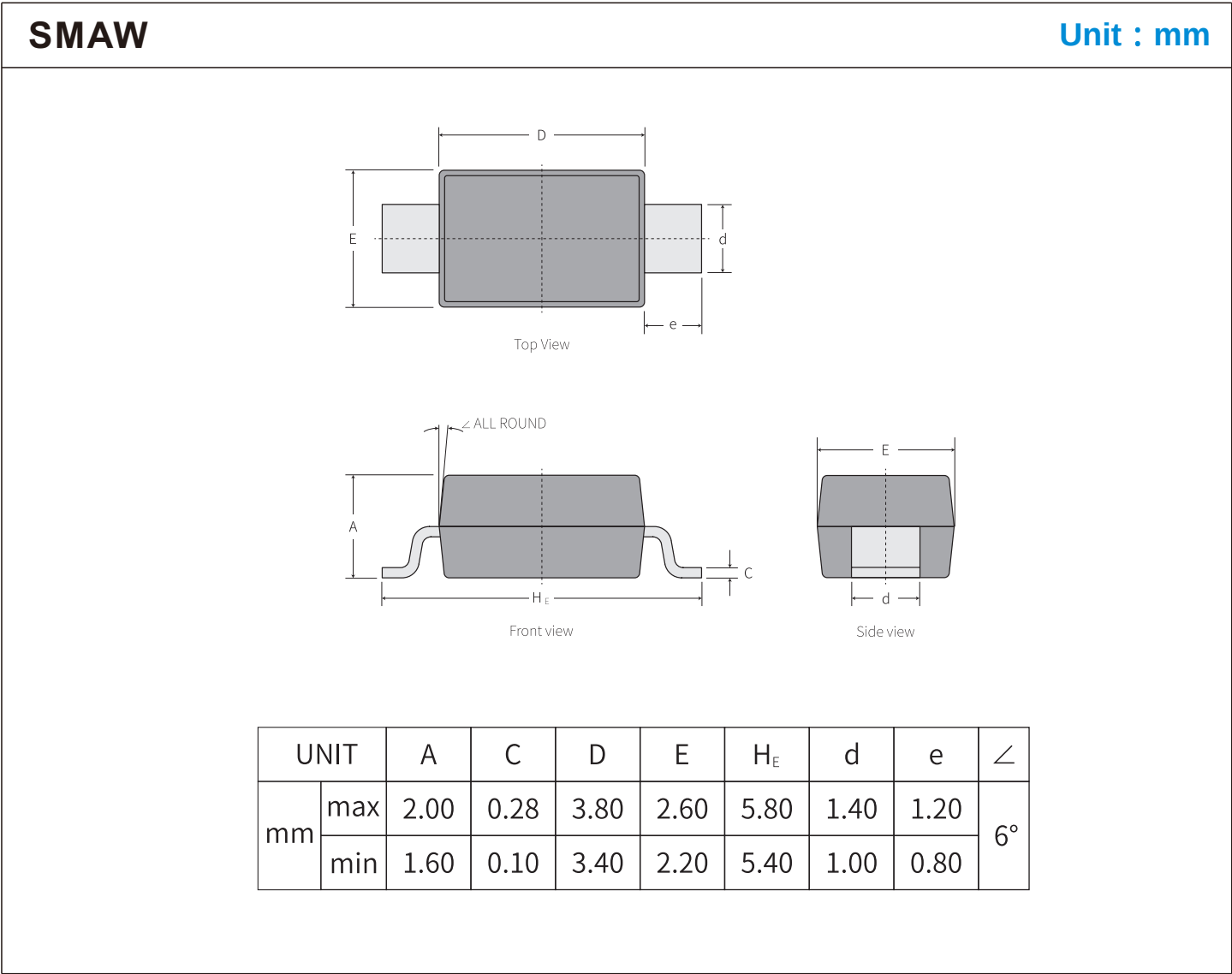


Fig.3 Normalized DC Holding Current versus Case Temperature

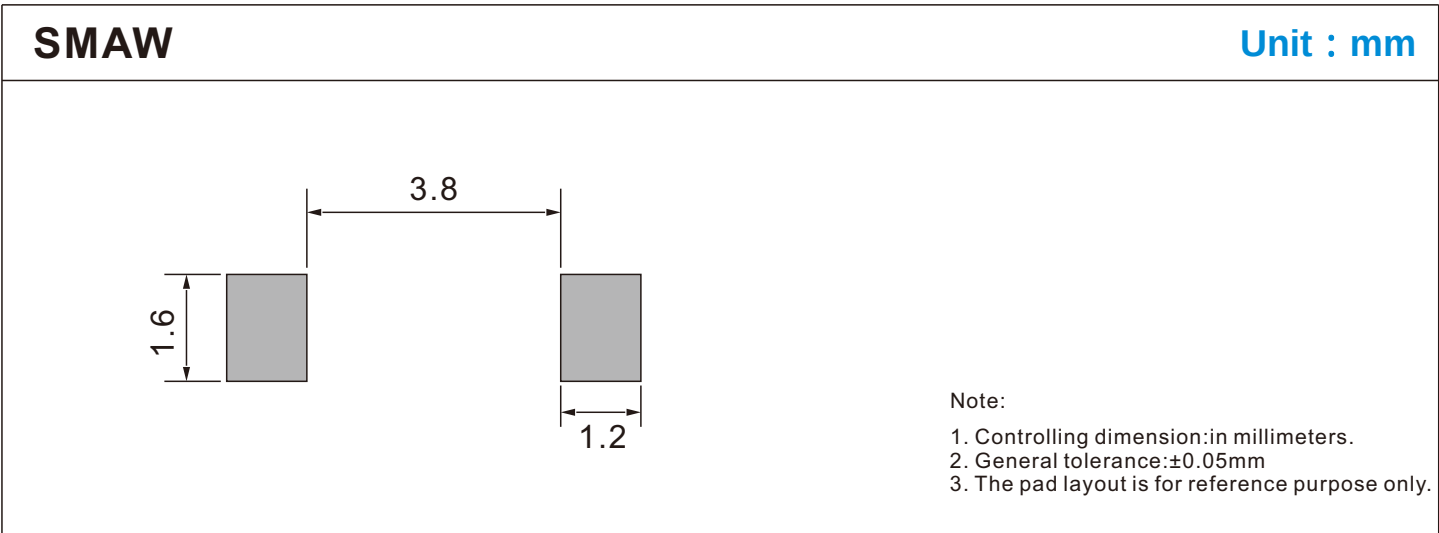




Package Outline



Suggested Pad Layout



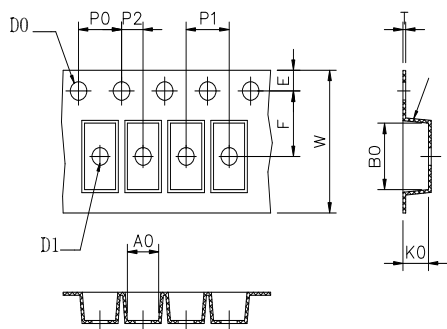


RHP4200AW

Thyristor Surge Suppressors (TSS) Data Sheet

Carrier Tape Dimensions

Unit : mm

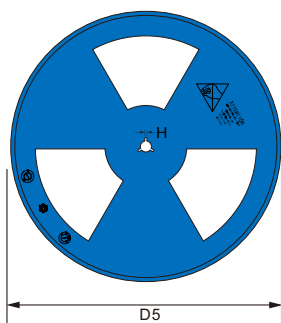


Symbol	Spec	Symbol	Spec
W	12.00±0.10	P1	4.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	5.50±0.05	T	0.25±0.02
D0	1.55±0.05	A0	2.60±0.10
D1	1.50±0.10	B0	5.70±0.10
P0	4.00±0.10	K0	2.00±0.05

Reel Dimensions

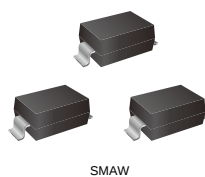
Unit : mm

13" Reel



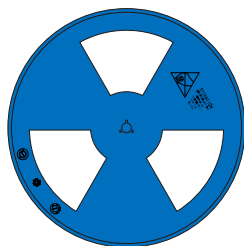
D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 8000PCS	

Packaging

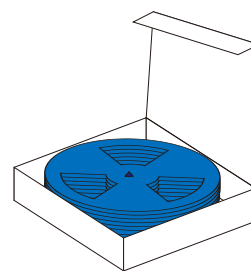


SMAW

8000PCS/Reel

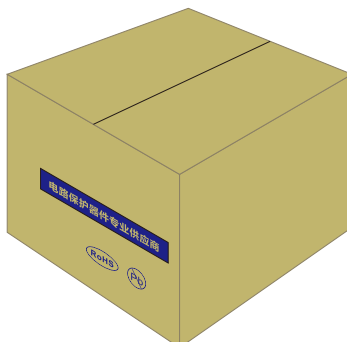


5Reel/Inner Box
40KPCS/Inner Box



Dim(Unit:mm)
340mm*340mm*85mm

Dim(Unit:mm)
360mm*360mm*355mm

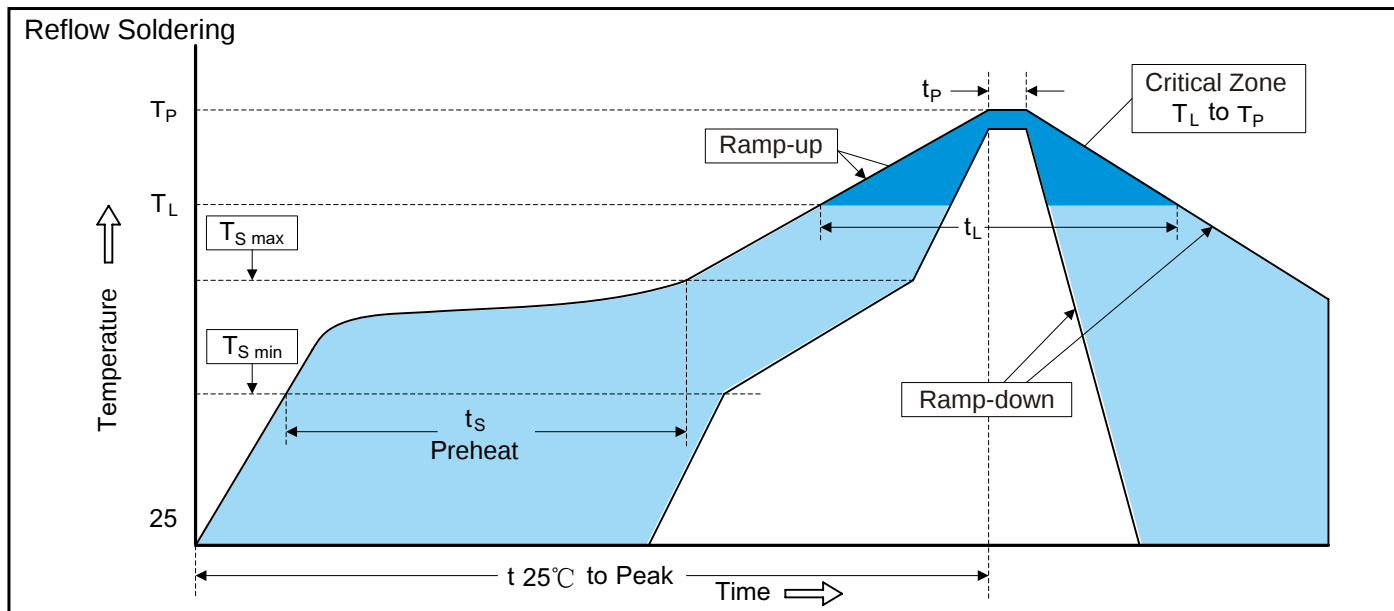


4 Boxes per carton
160KPCS per carton

13 inches Reel



Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S\ min}$)	150°C
-Temperature Max ($T_{S\ max}$)	200°C
-Time (min to max) (t_s)	60-180 seconds
$T_{S\ max}$ to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.