



RHR3AM THRU RHR3MM

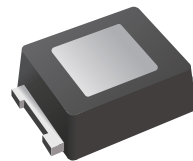
Surface Mount Fast Recovery Rectifiers

Features

- Top-side Cooling(TSC) Packaging technology
- Compact and Slim Packaging Solutions
- For surface mounted applications
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case: SMHM
- Terminals: leads solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end



Ordering Information

Part Number	Shipping	Reel
RHR3AM THR RHR3MM	15000PCS Tape&Reel	13 inchs

Absolute Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter	Symbol	RHR3AM	RHR3BM	RHR3DM	RHR3GM	RHR3JM	RHR3KM	RHR3MM	Unit
	Marking	R3A	R3B	R3D	R3G	R3J	R3K	R3M	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	3							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100							A
Maximum instantaneous forward voltage at 3.0A	V _F	1.3							V
Maximum DC reverse current T _A =25°C at rated DC reverse voltage T _A =100°C	I _R	1 100							μA
Typical junction capacitance (Note1)	C _j	32							pF
Maximum reverse recovery time (Note2)	t _{rr}	150				250	500		ns
Typical thermal resistance (Note3)	R _{θJA} R _{θJC}	54 6							°C/W
Operating and StorageTemperature Range	T _j , T _{stg}	-55 to +150							°C

Note: (1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Measured with $I_F = 0.5 A$, $I_R = 1 A$, $t_{rr} = 0.25 A$.

(3) P.C.B. mounted with 0.08" × 0.08"(2mm × 2mm) copper pad areas.



Characteristics Curves

Fig.1 Maximum Average Forward Current Rating

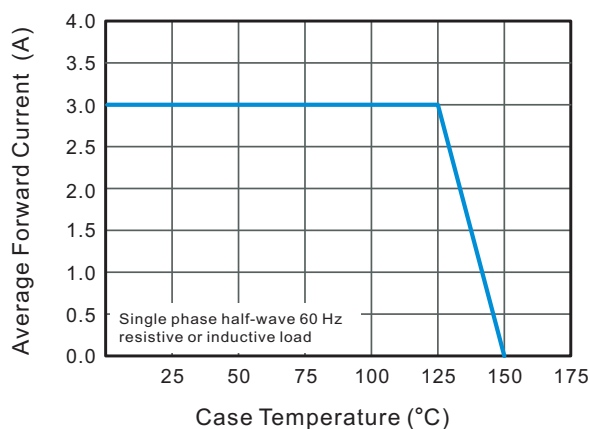


Fig.2 Typical Reverse Characteristics

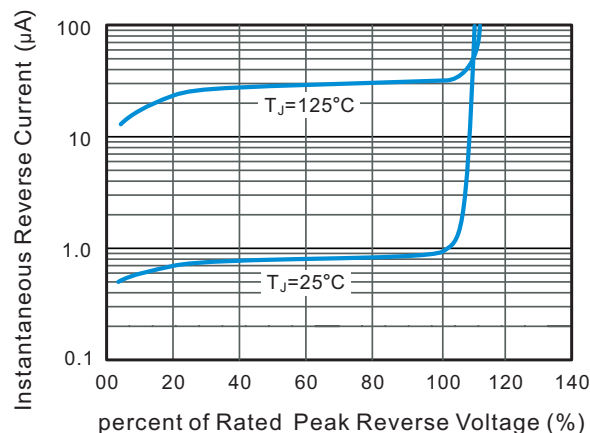


Fig.3 Typical Instantaneous Forward Characteristics

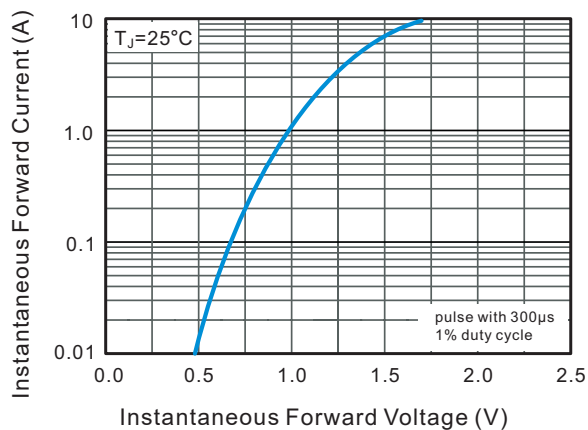


Fig.4 Typical Junction Capacitance

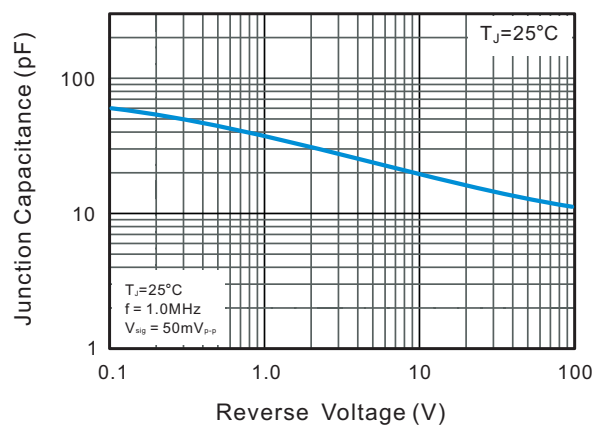
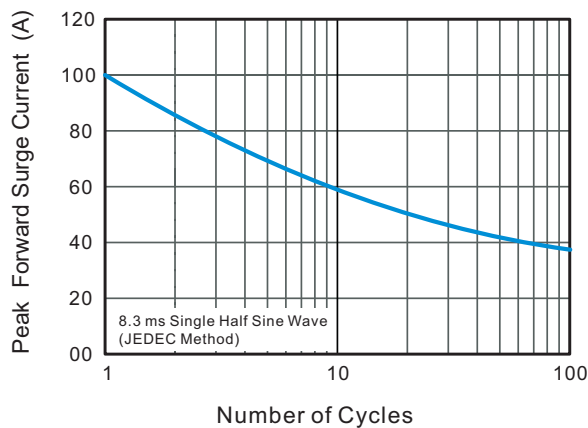
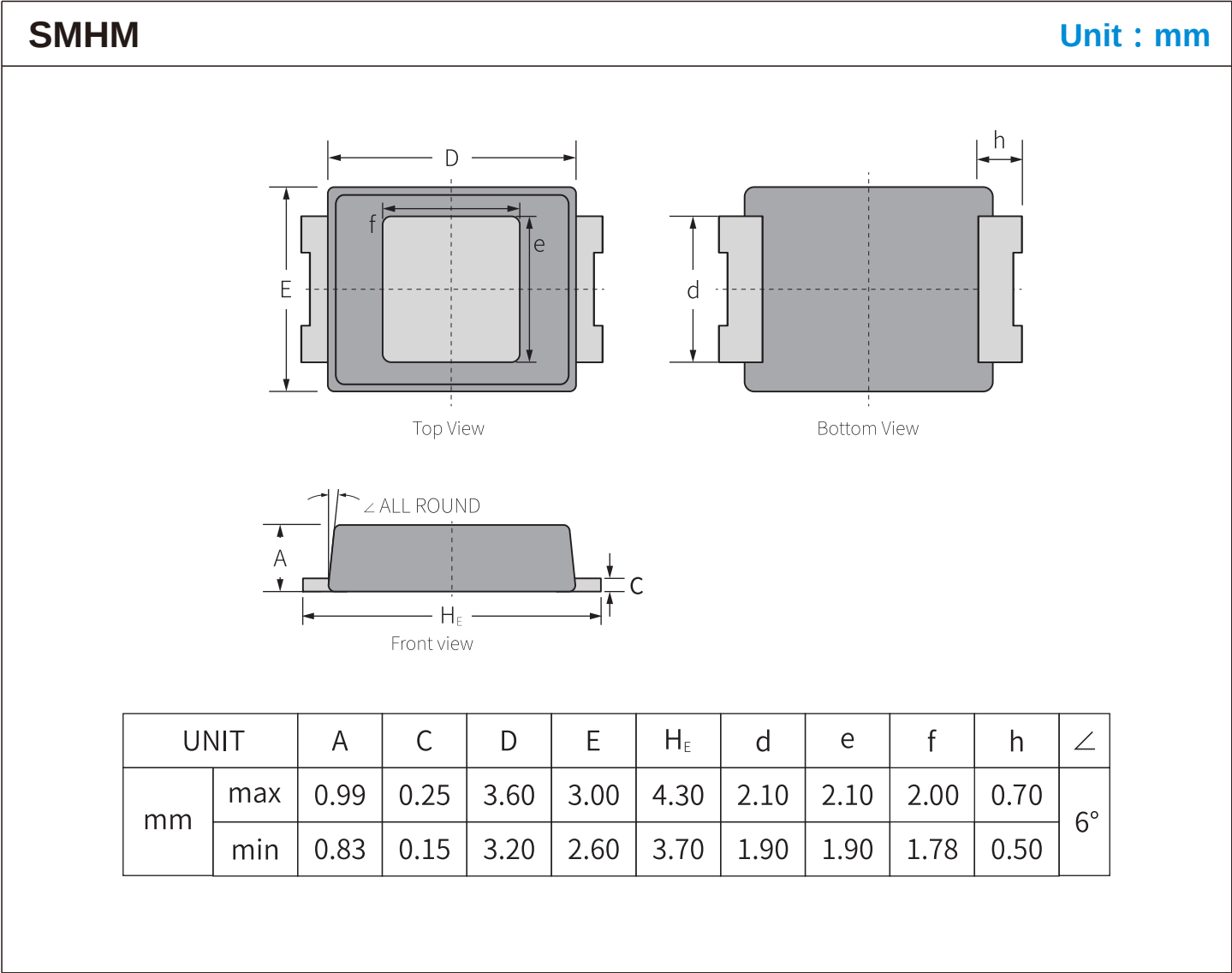


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

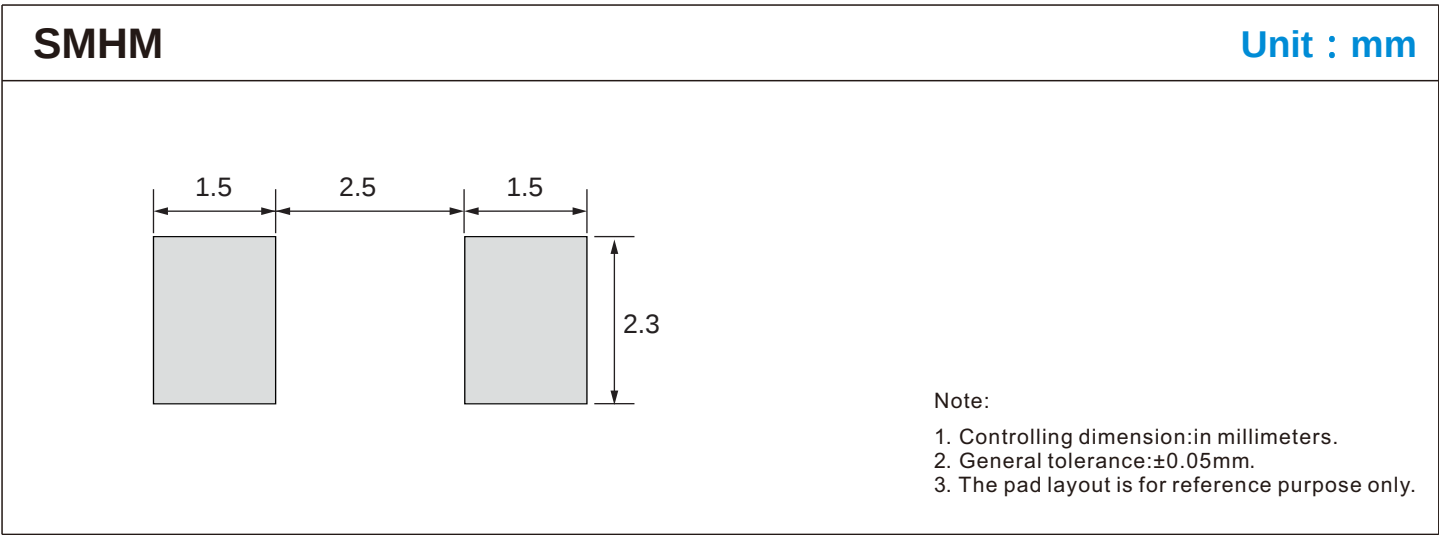




Package Outline



Suggested Pad Layout



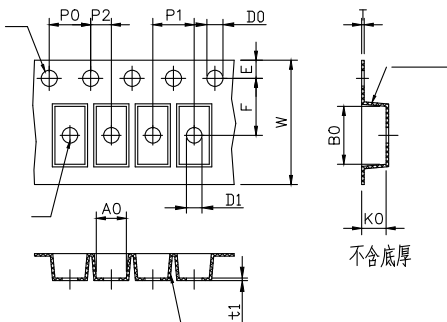


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Carrier Tape Dimensions

Unit : mm



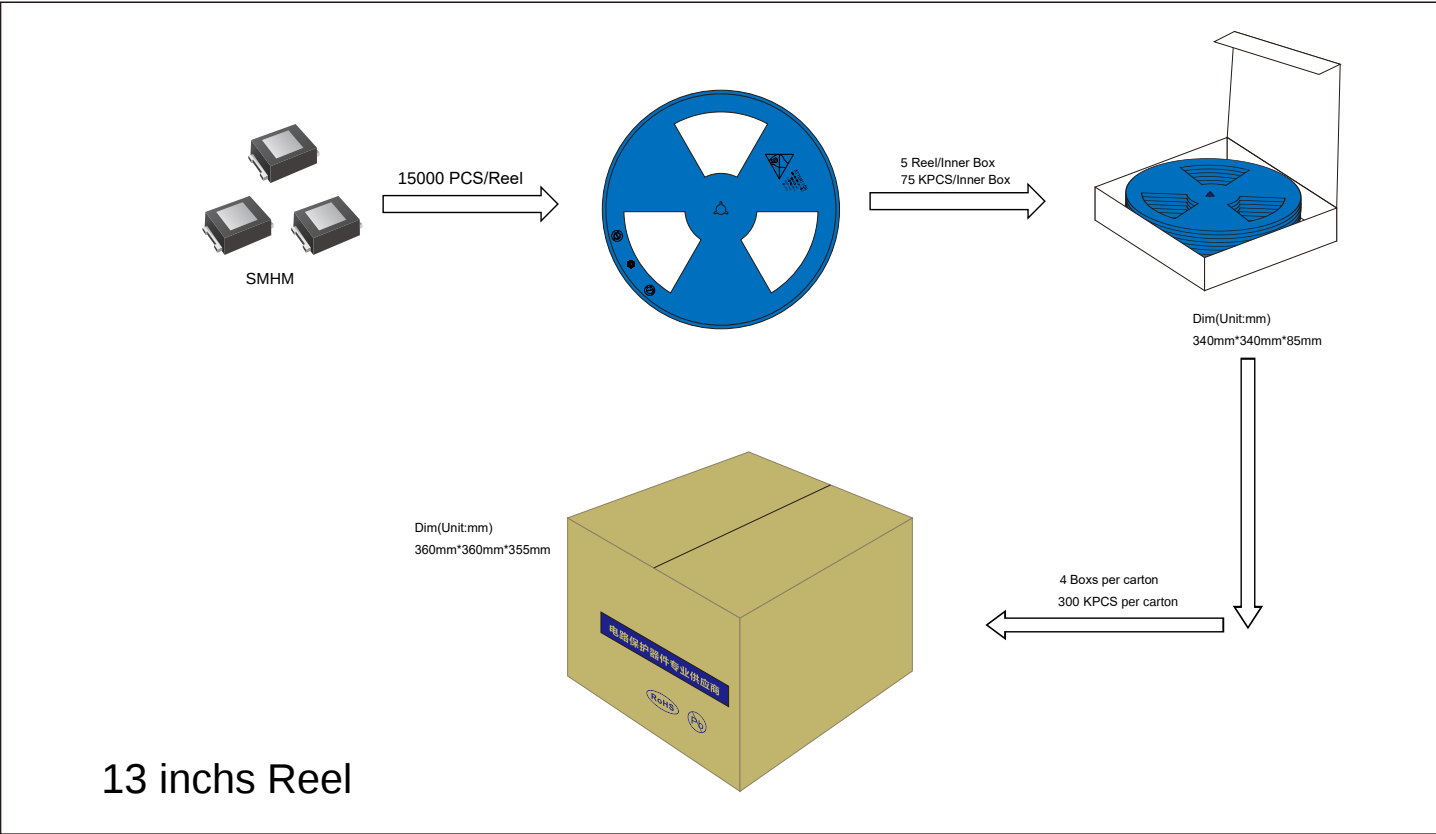
Symbol	Spec	Symbol	Spec
W	12.0±0.10	P2	2.00±0.10
E	1.75±0.10	t	0.25±0.03
F	5.50±0.10	t1	0.05+
D0	1.55±0.10	A0	3.05±0.10
D1	1.50±0.10	B0	4.15±0.10
P0	4.00±0.10	K0	1.15±0.10
P1	4.00±0.10		

Reel Dimensions

Unit : mm

13" Reel 	D5	Φ330.0±5.0
	D6	Φ13.5±0.5
	H	2.5±1.0
	W2	12±2.0
	Quantity: 15000PCS	

Packaging





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.