

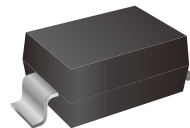


RHE1AW THRU RHE1JW

Surface Mount Superfast Recovery Rectifier

Features

- Super fast switching for high efficiency
- Glass passivated chip junction
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case:SMAW
- Terminal:Leads solderable per MIL-STD-750 Method 2026
- Polarity:Color band denotes cathode end
- Mounting Position:Any

Ordering Information

Part Number	Shipping	Reel
RHE1AW THR RHE1JW	8000PCS Tape&Reel	13 inches

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	RHE1AW				RHE1EW	RHE1GW	RHE1JW	Unit
	Marking	E1AW	E1BW	E1CW	E1DW	E1EW	E1GW	E1JW	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at T _L =55°C	I _(AV)	1							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30							A
Maximum instantaneous forward voltage at 1A	V _F	0.95				1.25		1.7	V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5 150							μA
Maximum reverse recovery time (Note1)	T _{RR}	35							ns
Typical Junction Capacitance (Note2)	C _J	15							pF
Typical thermal resistance (Note3)	R _{θJA}	75							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

Note:(1) Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$.
(2) Measured at 1MHz and applied reverse voltage of 4.0V D.C.
(3) P.C.B. mounted with 0.2" x 0.2"(5.0mm x 5.0mm) copper pad areas.



Ratings and Characteristics Curves

FIG. 1 FORWARD CURRENT DERATING CURVE

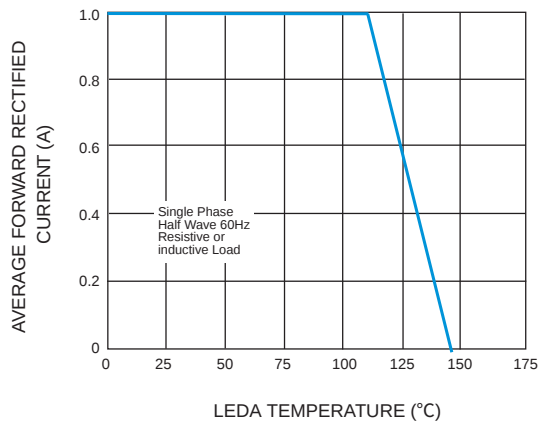


FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

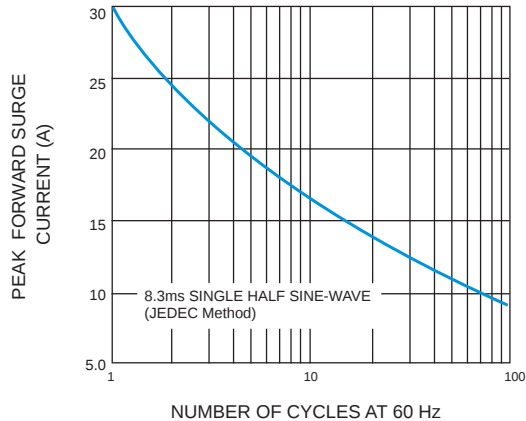


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

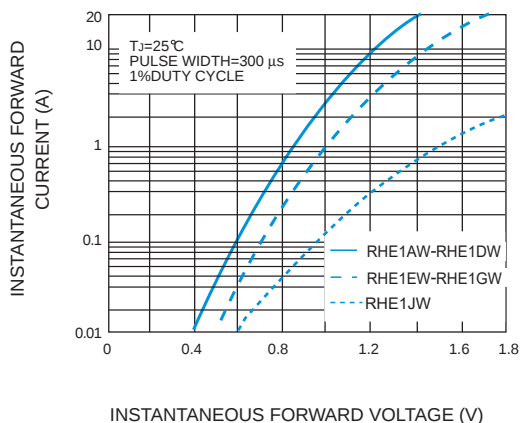


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

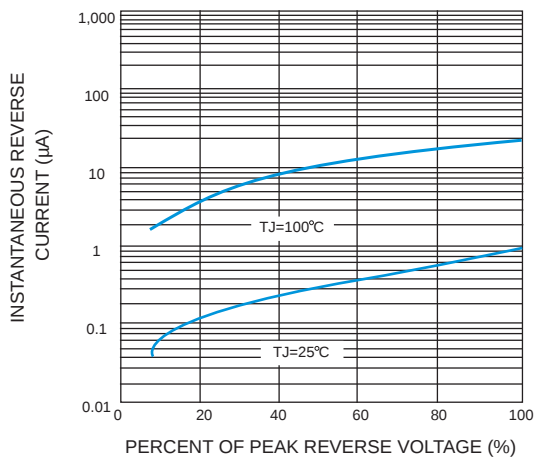


FIG. 5 TYPICAL JUNCTION CAPACITANCE

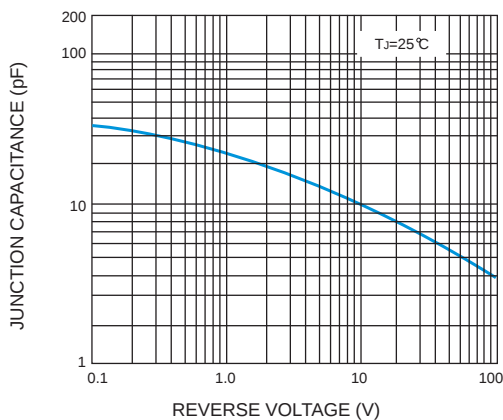
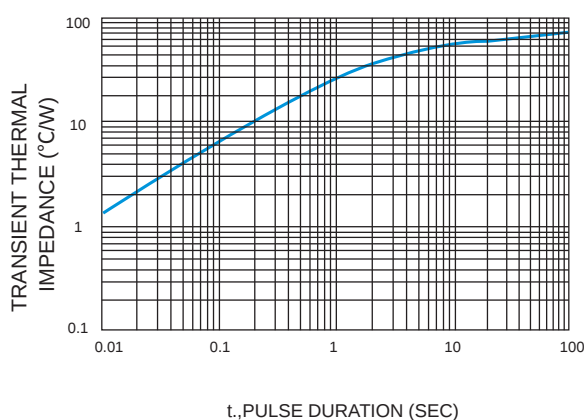
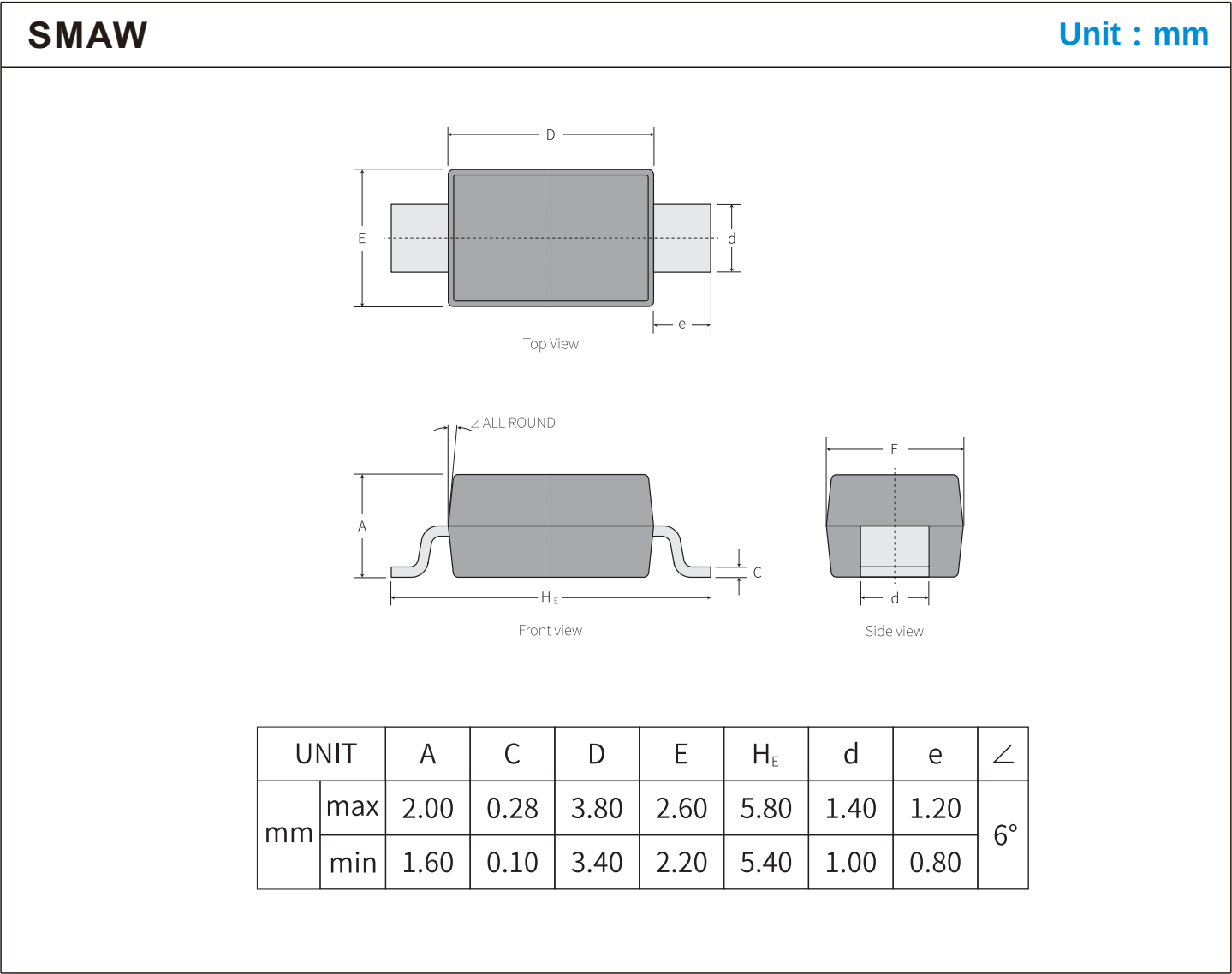


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

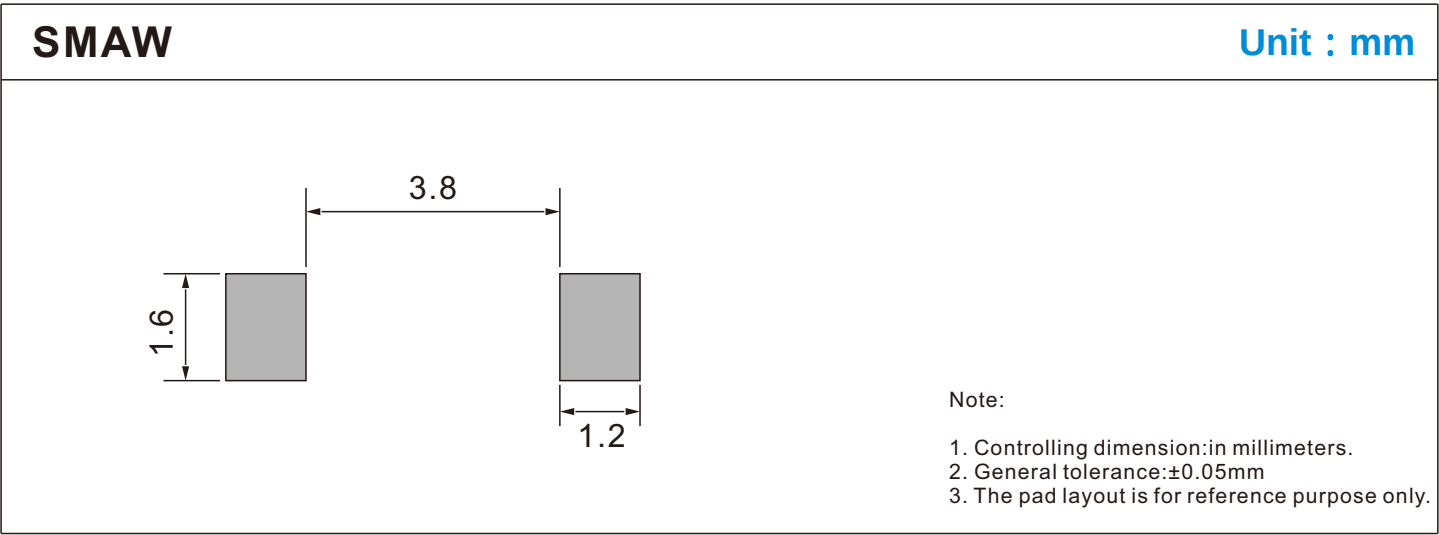




Package Outline



Suggested Pad Layout



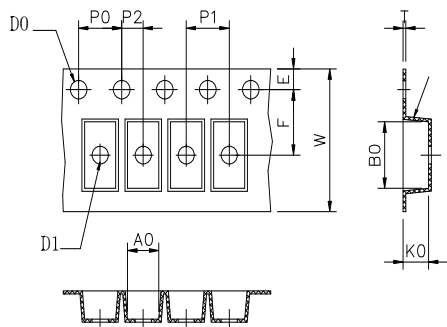


RHE1AW THRU RHE1JW

Surface Mount Superfast Recovery Rectifier

Carrier Tape Dimensions

Unit : mm

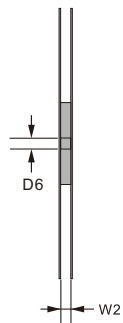
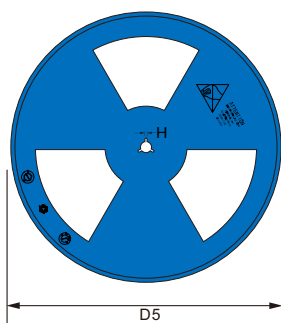


Symbol	Spec	Symbol	Spec
W	12.00±0.10	P1	4.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	5.50±0.05	T	0.25±0.02
D0	1.55±0.05	A0	2.60±0.10
D1	1.50±0.10	B0	5.70±0.10
P0	4.00±0.10	K0	2.00±0.05

Reel Dimensions

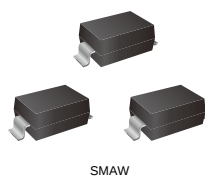
Unit : mm

13" Reel

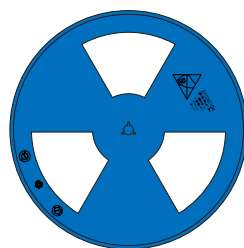


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 8000PCS	

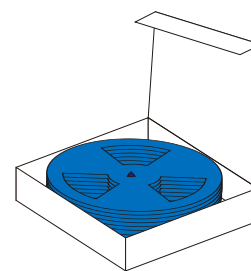
Packaging



8000PCS/Reel

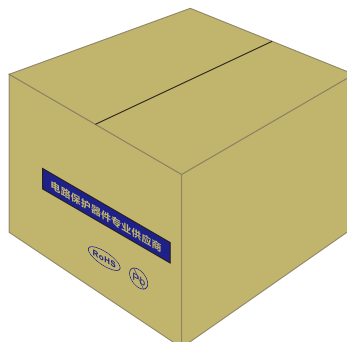


5Reel/Inner Box
40KPCS/Inner Box

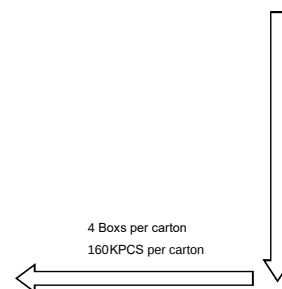


Dim(Unit:mm)
340mm*340mm*85mm

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.