

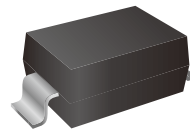


RHR1AW THRU RHR1MW

Surface Mount Fast Recovery Rectifier

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- 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
RHR1AW THR RHR1MW	8000PCS Tape&Reel	13 inchs

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	RHR1AW	RHR1BW				RHR1KW	RHR1MW	Unit
	Marking	R1AW	R1BW	R1DW	R1GW	R1JW	R1KW	R1MW	
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 at T _c = 125°C	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Maximum Forward Voltage at 1 A	V _F	1.3							V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	5 50							μA
Typical Junction Capacitance at V _R =4V, f=1MHz	C _J	15							pF
Maximum Reverse Recovery Time (Note1)	T _{RR}	150				250	500		ns
Typical Thermal Resistance (Note2)	R _{θJA}	75							°C/W
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 ~ +150							°C

Note:(1) Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$.

(2) P.C.B. mounted with 1.0" × 1.0" (2.54cm × 2.54 cm) copper pad areas.



Characteristics Curves

FIG.1 FORWARD CURRENT DERATING CURVE

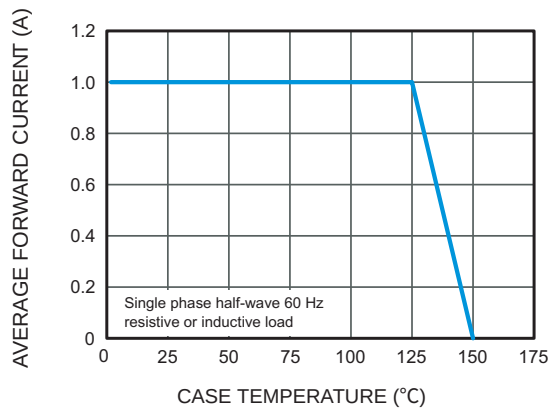


FIG.2 TYPICAL REVERSE CHARACTERISTICS

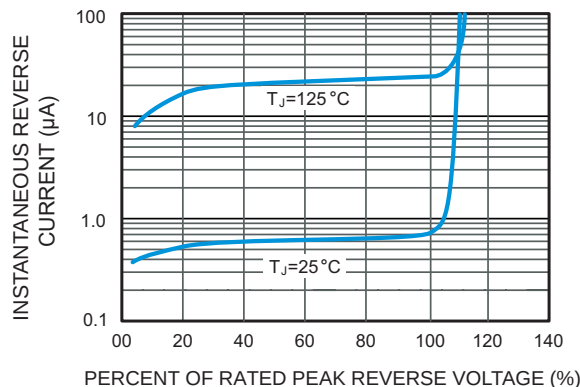


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

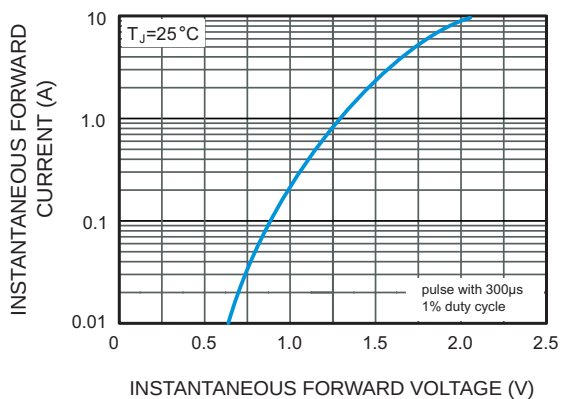


Fig. 4 TYPICAL JUNCTION CAPACITANCE

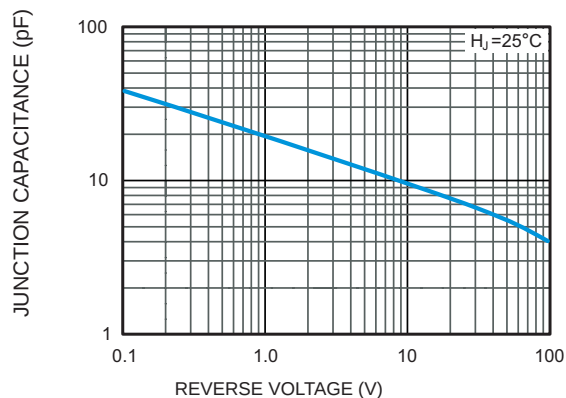
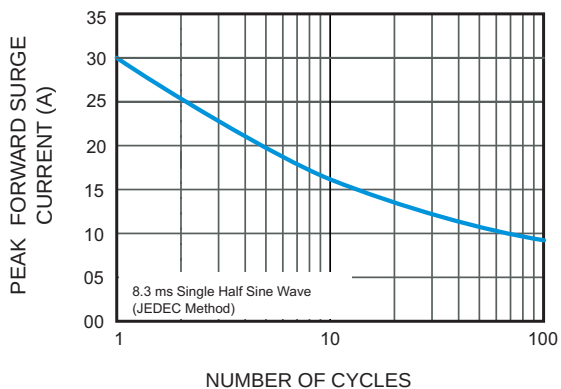


FIG.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT





Package Outline

SMAW

Unit : mm

Top View

Front view

Side view

UNIT		A	C	D	E	H _E	d	e	∠
mm	max	2.00	0.28	3.80	2.60	5.80	1.40	1.20	6°
	min	1.60	0.10	3.40	2.20	5.40	1.00	0.80	

Suggested Pad Layout

SMAW		Unit : mm							
3.8 1.6 1.2									
Note: 1. Controlling dimension:in millimeters. 2. General tolerance:±0.05mm 3. The pad layout is for reference purpose only.									

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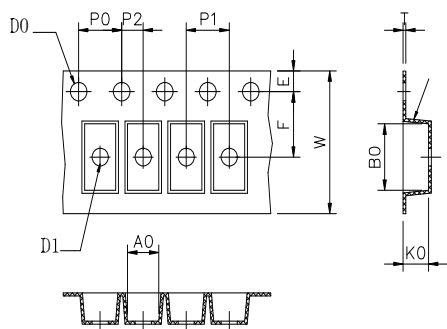


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Carrier Tape Dimensions

Unit : mm

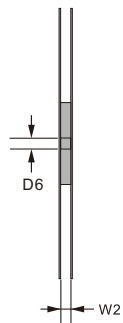
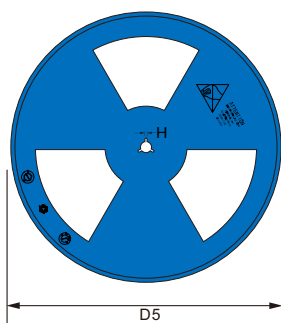


Symbol	Spec	Symbol	Spec
W	12.00±0.10	P1	4.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	5.50±0.05	T	0.25±0.02
D0	1.55±0.05	A0	2.60±0.10
D1	1.50±0.10	B0	5.70±0.10
P0	4.00±0.10	K0	2.00±0.05

Reel Dimensions

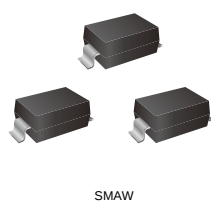
Unit : mm

13" Reel

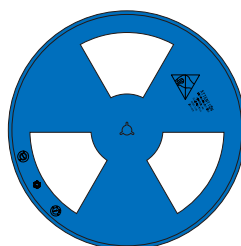


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 8000PCS	

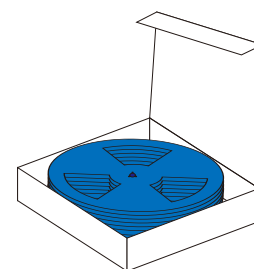
Packaging



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.