

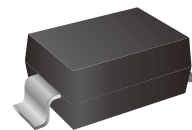


RH12AW THRU RH120AW

Surface Mount Schottky Barrier Rectifier

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- 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
RH12AW THR RH120AW	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	RH12AW	RH14AW	RH16AW	RH18AW	RH110AW	RH112AW	RH115AW	RH120AW	Unit
	Marking	S12W	S14W	S16W	S18W	S110W	S112W	S115W	S120W	
Maximum repetitive peak reverse voltage	V _{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V _{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC blocking voltage	V _{DC}	20	40	60	80	100	120	150	200	V
Maximum instantaneous forward voltage at 1A	V _F	0.55	0.55	0.7	0.85	0.85	0.85	0.9	0.9	V
Maximum average forward rectified current at T _L (see fig.1)	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 DC reverse current T _A =25℃ at rated DC blocking voltage T _A =100℃	I _R	0.3 10			0.2 5			0.1 2		mA
Typical Junction Capacitance (Note1)	C _J	110		80						pF
Typical thermal resistance (Note2)	R _{θJA}	90								℃/W
Operating junction temperature range	T _J	-55 to +125								℃
Storage temperature range	T _{STG}	-55 to +150								℃

Note: (1) Measured at 1MHz and applied reverse voltage of 4.0V D.C.
(2) P.C.B. mounted with 2.0" x 2.0" (5.0cm x 5.0cm) copper pad areas.



Ratings and Characteristics Curves

FIG.1 FORWARD CURRENT DERATING CURVE

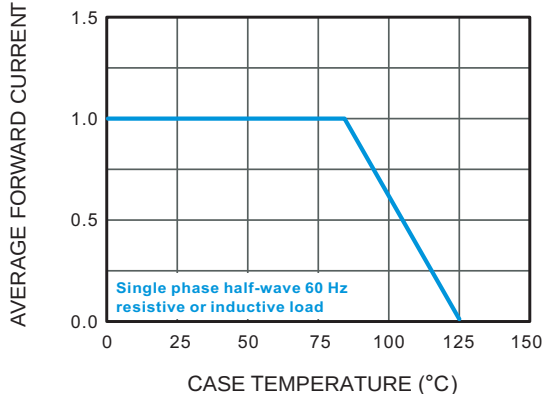


FIG.2 TYPICAL REVERSE CHARACTERISTICS

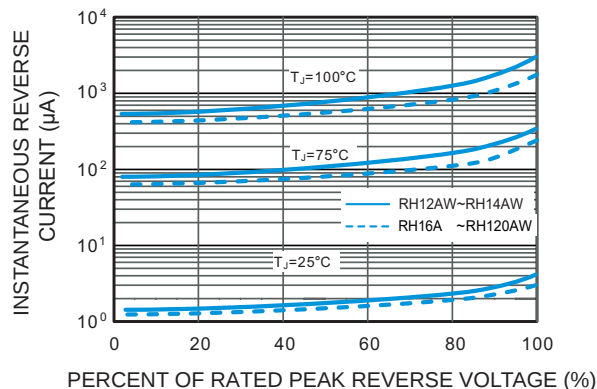


FIG.3 TYPICAL FORWARD CHARACTERISTICS

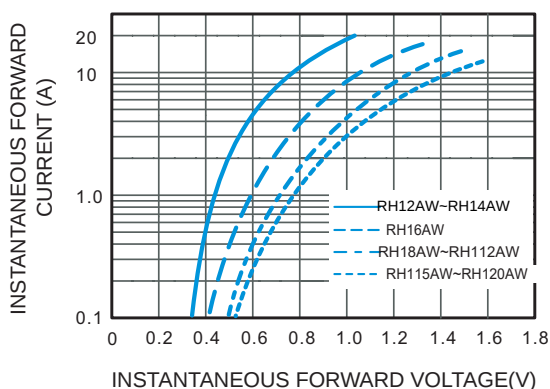


FIG.4 TYPICAL JUNCTION CAPACITANCE

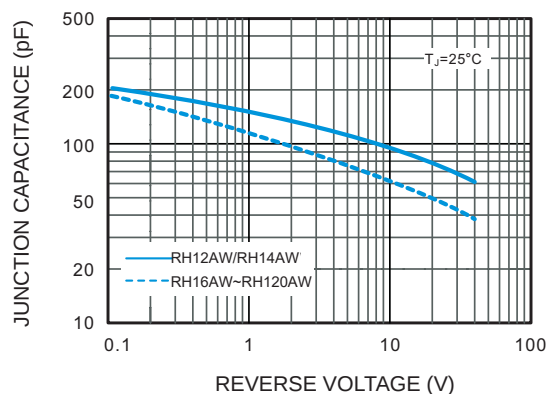


FIG.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

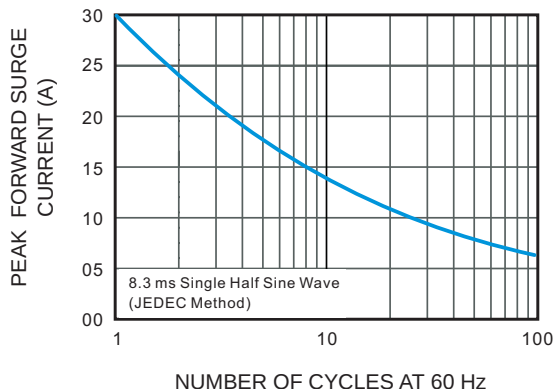
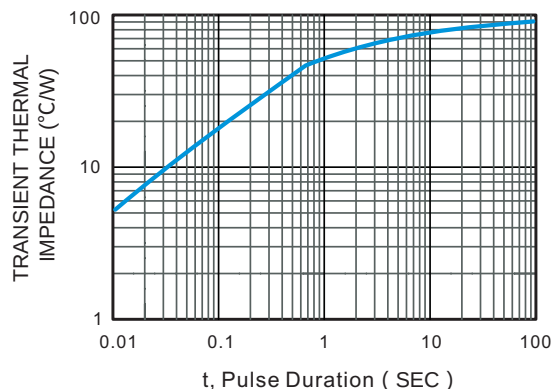


FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE

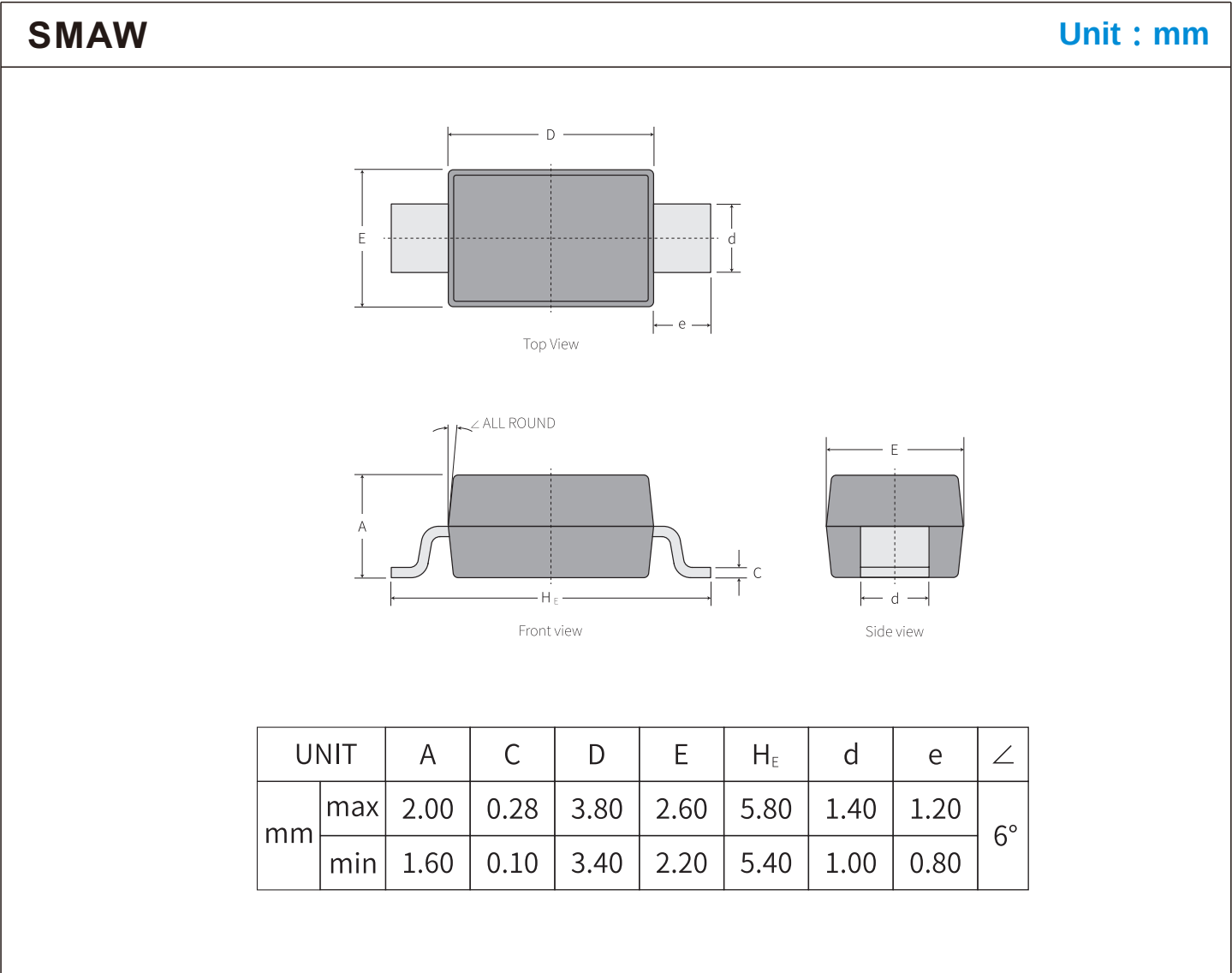




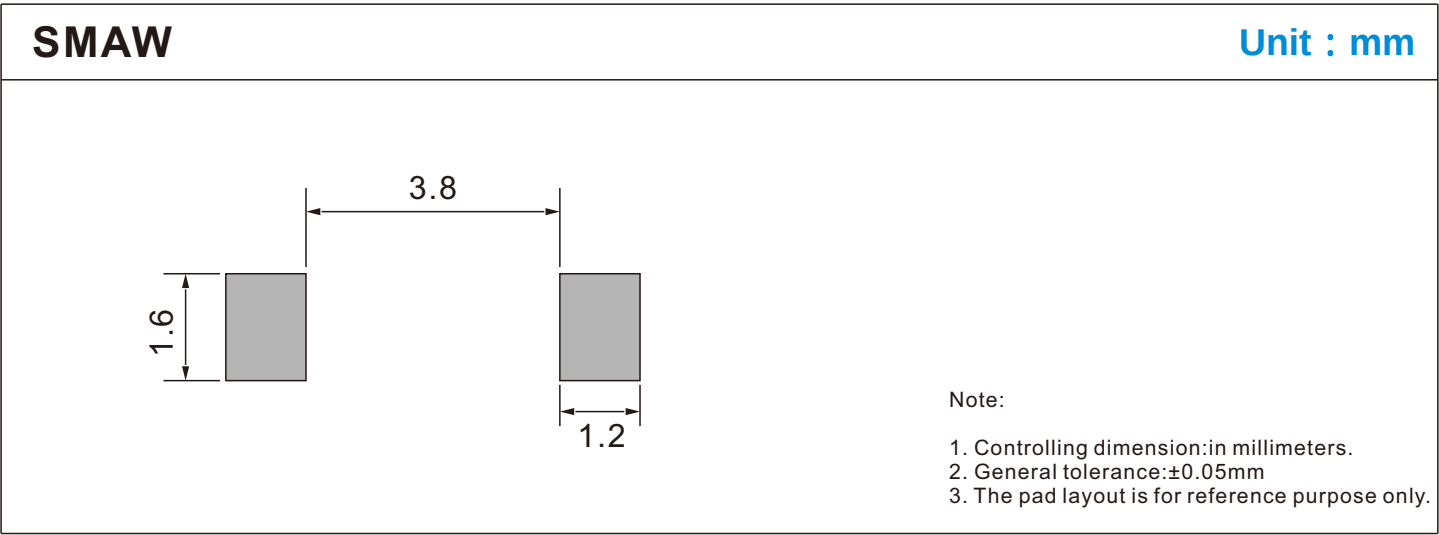
RH12AW THRU RH120AW

Surface Mount Schottky Barrier Rectifier

Package Outline



Suggested Pad Layout



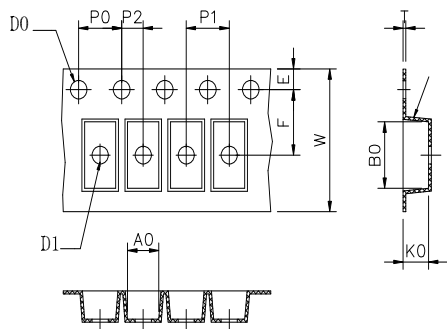


RH12AW THRU RH120AW

Surface Mount Schottky Barrier Rectifier

Carrier Tape Dimensions

Unit : mm

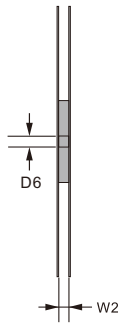
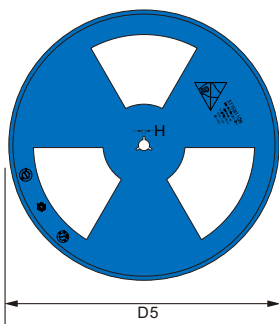


Symbol	Spec	Symbol	Spec
W	12.00±0.10	P1	4.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	5.50±0.05	T	0.25±0.02
D0	1.55±0.05	A0	2.60±0.10
D1	1.50±0.10	B0	5.70±0.10
P0	4.00±0.10	K0	2.00±0.05

Reel Dimensions

Unit : mm

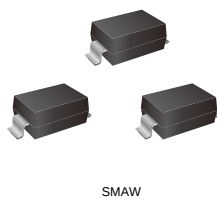
13" Reel



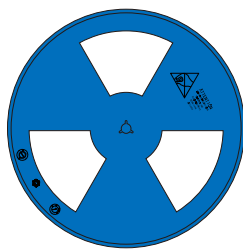
D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0

Quantity: 8000PCS

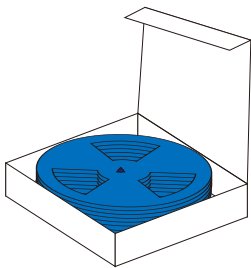
Packaging



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.