

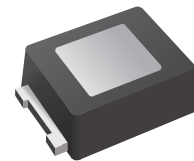


RH12HS THRU RH120HS

Surface Mount Schottky Barrier Rectifier

Features

- Top-side Cooling(TSC) Packaging technology
- Compact and Slim Packaging Solutions
- 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
- High forward surge current capability
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SMHS
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Ordering Information

Part Number	Shipping	Reel
RH12HS THR RH120HS	15000PCS 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	RH12HS	RH14HS	RH16HS	RH110HS	RH120HS	Unit
	Marking	S12	S14	S16	S110	S120	
Maximum repetitive peak reverse voltage	V _{RRM}	20	40	60	100	200	V
Maximum RMS voltage	V _{RMS}	14	28	42	70	140	V
Maximum DC blocking voltage	V _{DC}	20	40	60	100	200	V
Maximum average forward rectified current at T _L (see fig.1)	I _(AV)	1.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30.0					A
Maximum instantaneous forward voltage at 1.0A	V _F	0.55		0.65	0.80	0.85	V
Maximum DC reverse current T _A =25℃ at rated DC blocking voltage T _A =100℃	I _R	20		5	2		uA
		5			3		mA
Typical junction capacitance (Note1)	C _J	140					pF
Typical thermal resistance (Note2)	R _{θJA}	65					℃/W
	R _{θJC}	7					
Operating junction temperature range	T _J	-55 to +125					℃
Storage temperature range	T _{STG}	-55 to +125					℃

Note:(1) Measured at 1MHz and applied reverse voltage of 4.0V D.C.

(2) P.C.B. mounted with 0.08" × 0.08"(2mmx2mm) copper pad areas.



Characteristics Curves

Fig.1 Forward Current Derating Curve

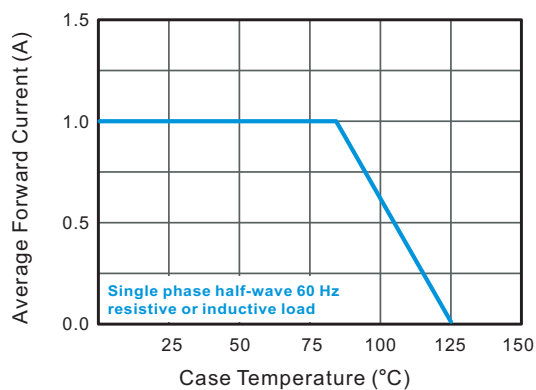


Fig.2 Typical Reverse Characteristics

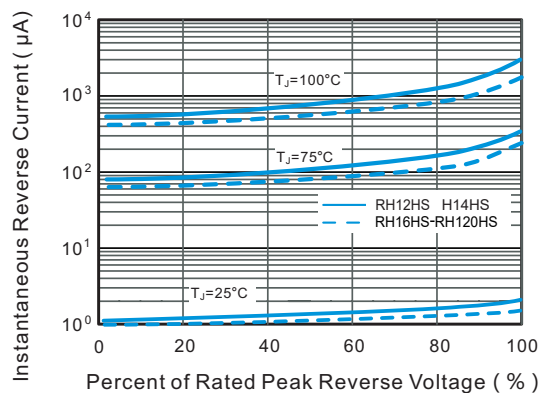


Fig.3 Typical Forward Characteristic

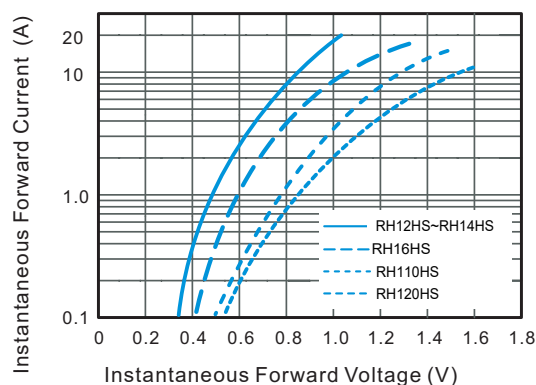


Fig.4 Typical Junction Capacitance

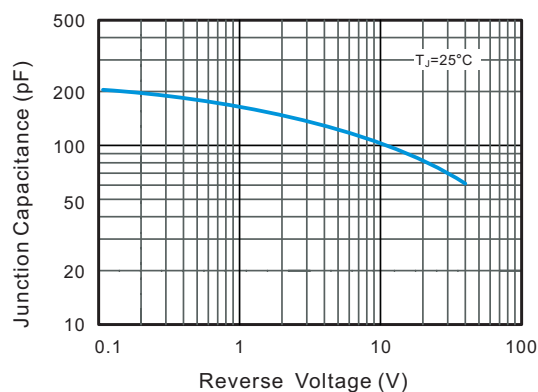
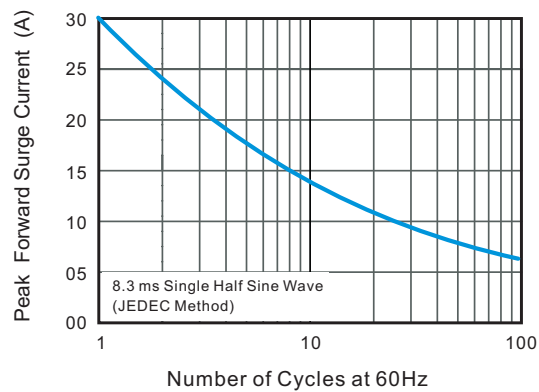


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

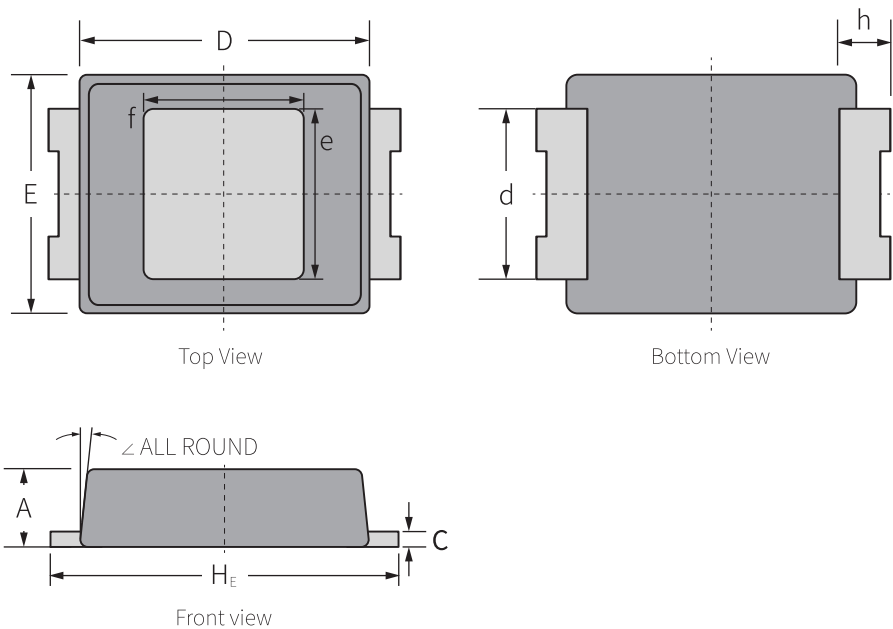




Package Outline

SMHS

Unit : mm

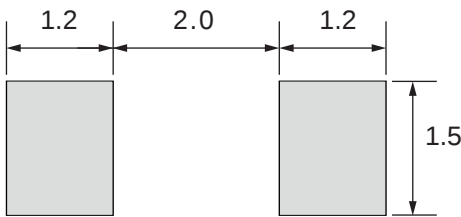


UNIT		A	C	D	E	H _E	d	e	f	h	∠
mm	max	0.99	0.25	2.90	2.10	3.50	1.30	1.30	1.25	0.70	6°
	min	0.83	0.15	2.50	1.70	2.90	1.10	1.10	1.05	0.50	

Suggested Pad Layout

SMHS

Unit : mm



- Note:
- 1. Controlling dimension: in millimeters.
 - 2. General tolerance: ±0.05mm
 - 3. The pad layout is for reference purpose only.

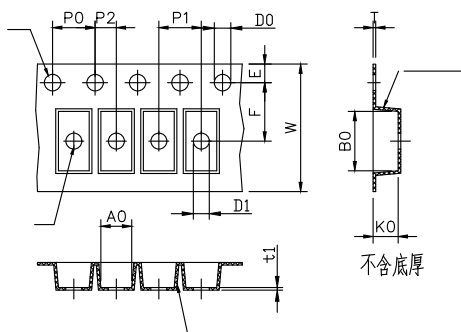


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Surface Mount Schottky Barrier Rectifier

Carrier Tape Dimensions

Unit : mm



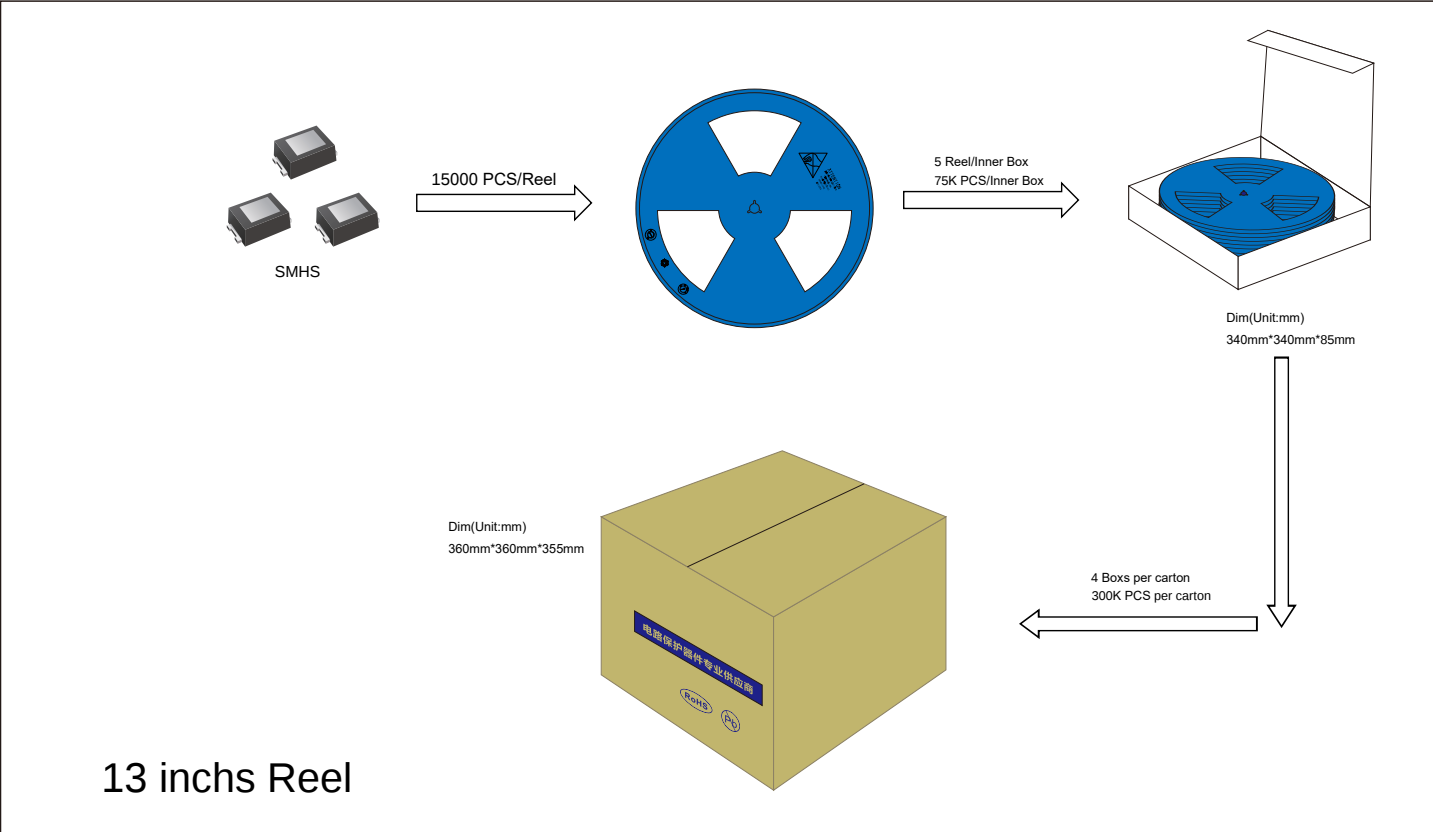
Symbol	Spec	Symbol	Spec
W	8.00±0.10	P2	2.00±0.10
E	1.75±0.10	t	0.22±0.02
F	3.50±0.10	t1	Min. 0.05
D0	1.55±0.10	A0	2.15±0.10
D1	1.10±0.10	B0	3.40±0.10
P0	4.00±0.10	K0	1.15±0.10
P1	4.00±0.10		

Reel Dimensions

Unit : mm

13" Reel 	D5	Φ330.0±5.0
	D6	Φ13.5±0.5
	H	2.3±0.2
	T	1.95±0.5
	W2	8.0±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.