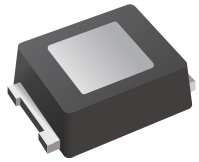
RH32HS THRU RH320HS

Surface Mount Schottky Barrier Rectifier

) H D W X U H V



- Top-side Cooling(TSC) Packaging technology
- Compact and Slim Packaging Solutions
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Meets MSL level 1, per J-STD-020
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

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

2 U G H U ■ Q Q ■ U P D W L R Q

Part Number	Shipping	Reel
RH32HS THR RH320HS	15000PCS Tape&Reel	13 inchs

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter	Symbol	RH32HS	RH34HS	RH36HS	RH310HS	RH320HS	Unit
	Marking	S32	S34	S36	S310	S320	
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)	$I_{(AV)}$	3.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80.0					A
Maximum instantaneous forward voltage at 3.0A	V_F	0.55		0.65	0.80	0.90	V
Maximum DC reverse current T_A=25℃	I_R	20		15	2		uA
at rated DC blocking voltage T_A=100℃		5			3		mA
Typical junction capacitance (Note1)	C_J	135		107	83	50	pF
Typical thermal resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$	62 6					°C/W
Operating junction temperature range	T_J	-55 to +125					°C
Storage temperature range	T_{STG}	-55 to +125					°C

Note: (1) Measured at 1MHz and applied reverse voltage of 4.0V D.C.
(2) PCB mounted with 0.08"x0.08"(5mmx5mm) copper pad areas.

Characteristics Curves

Fig.1 Forward Current Derating Curve

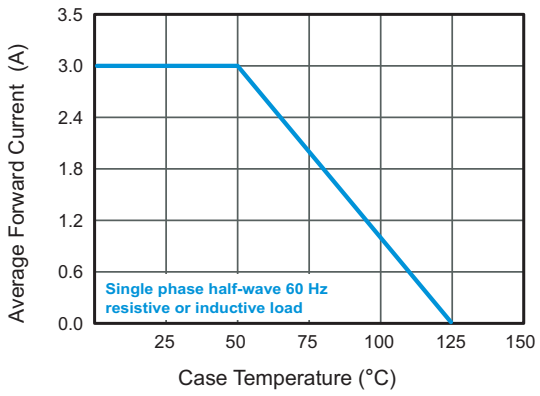


Fig.2 Typical Reverse Characteristics

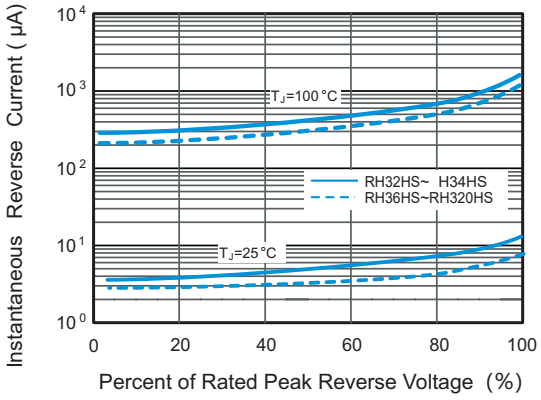


Fig.3 Typical Forward Characteristic

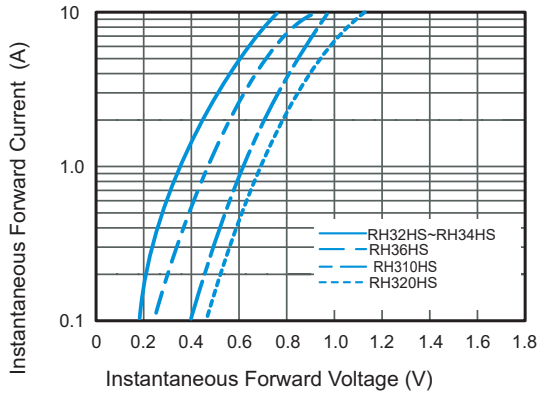


Fig.4 Typical Junction Capacitance

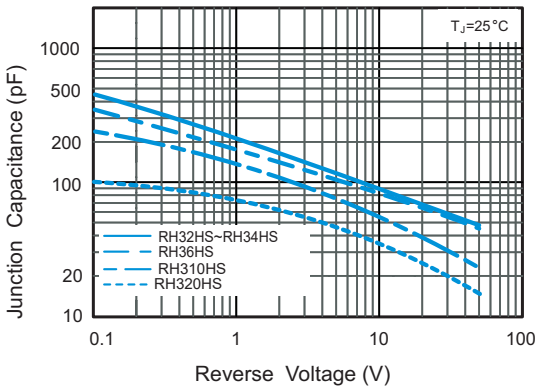
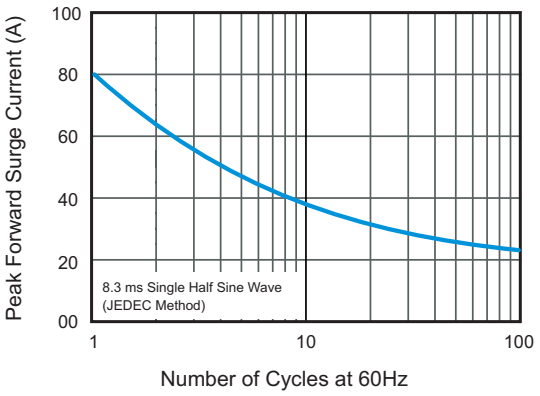


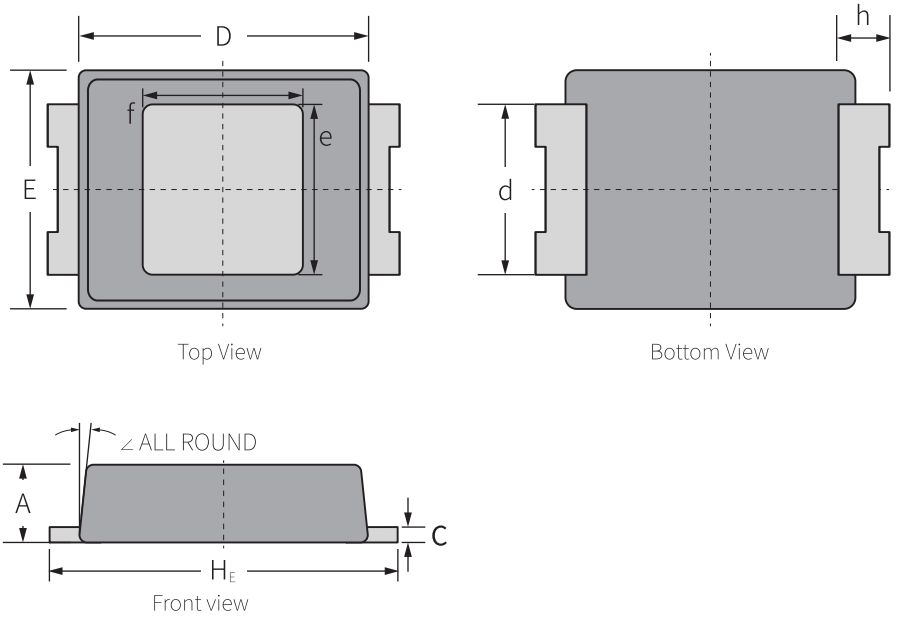
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

SMHS

Unit：mm

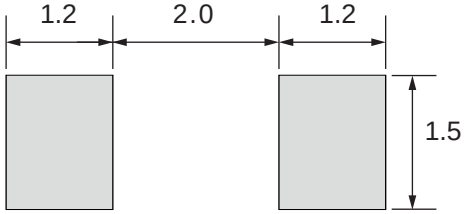


UNIT		A	C	D	E	H_E	d	e	f	h	∠
mm	max	0.99	0.25	2.90	2.10	3.50	1.30	1.30	1.25	0.70	6°
	min	0.83	0.15	2.50	1.70	2.90	1.10	1.10	1.05	0.50	

Suggested Pad Layout

SMHS

Unit：mm

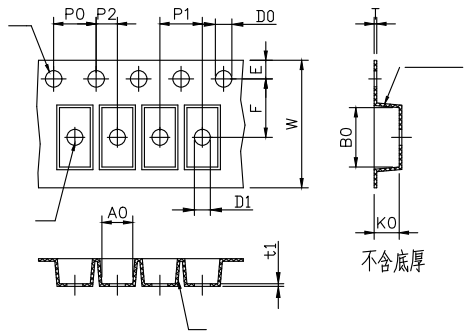


Note:

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

Carrier Tape Dimensions

Unit：mm

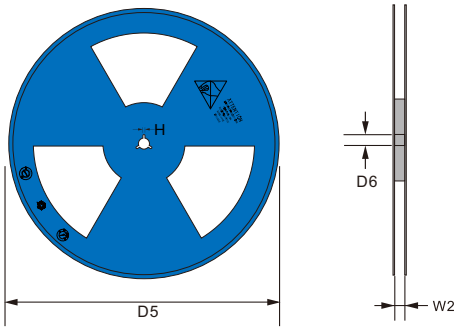


Symbol	Spec	Symbol	Spec
W	8.00±0.10	P2	2.00±0.10
E	1.75±0.10	t	0.22±0.02
F	3.50±0.10	t1	Min. 0.05
D0	1.55±0.10	A0	2.15±0.10
D1	1.05±0.10	B0	3.40±0.10
P0	4.00±0.10	K0	1.15±0.10
P1	4.00±0.10		

Reel Dimensions

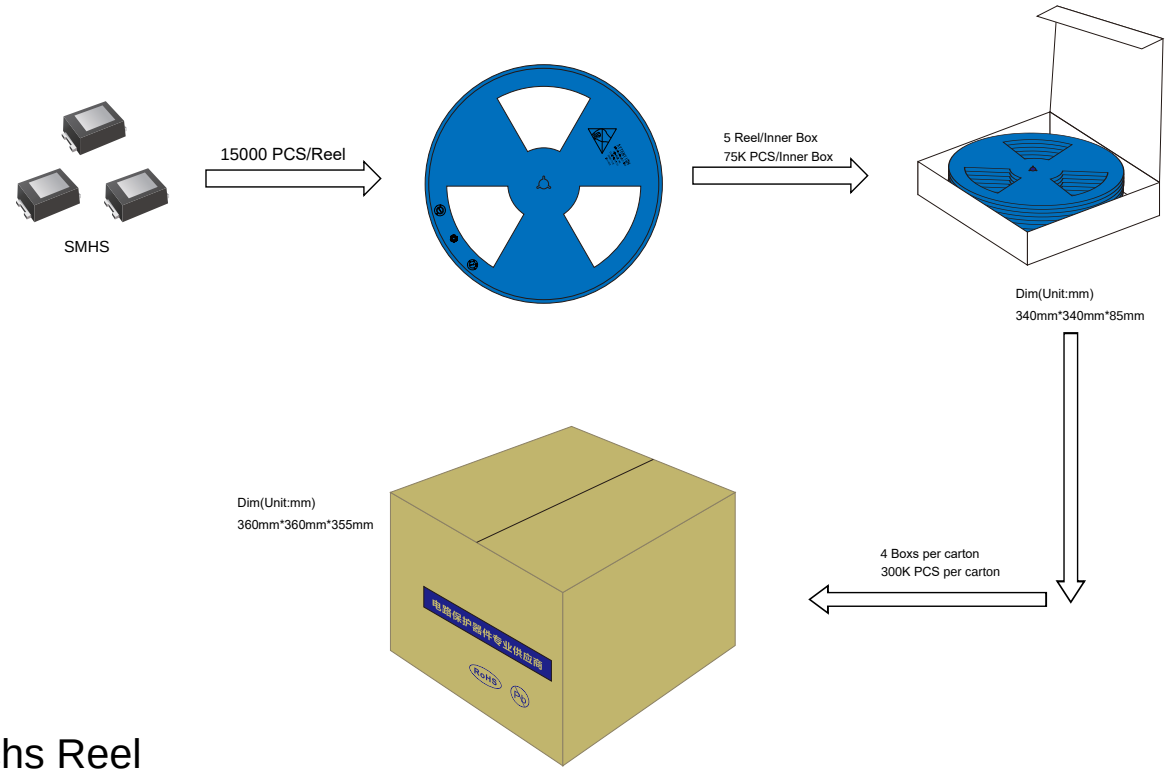
Unit：mm

13” Reel



D5	Φ330.0±5.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	8.0±2.0
Quantity: 15000PCS	

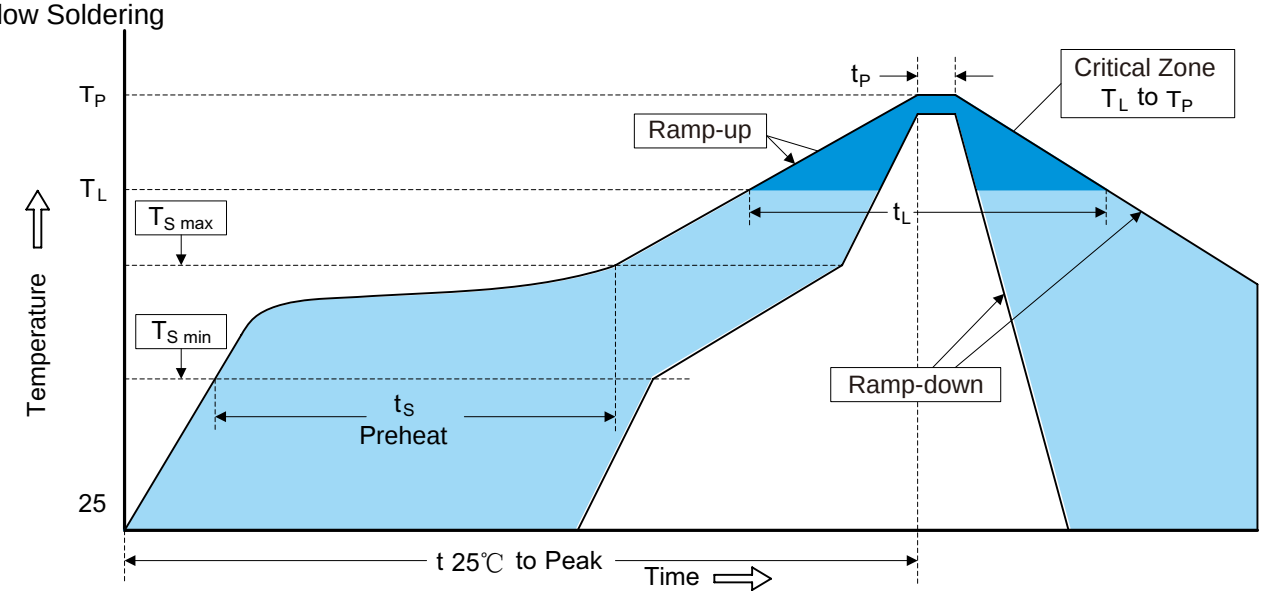
Packaging



13 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.