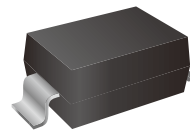




Features

- 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	Marking	Shipping	Reel
RH1S40W	1S40	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%.

Rating	Symbol	RH1S40W	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	40	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	A
Maximum instantaneous forward voltage at 1A	V_F	0.45	V
Maximum DC reverse current $T_A=25^{\circ}C$ at rated DC blocking voltage $T_A=100^{\circ}C$	I_R	0.2 10	mA
Maximum Thermal Resistance (Note1)	$R_{\theta JL}$	28	$^{\circ}C/W$
Typical thermal resistance (Note2)	$R_{\theta JA}$	88	$^{\circ}C/W$
Maximum Operating junction temperature range	T_J	-55 to +125	$^{\circ}C$
Storage temperature range	T_{STG}	-55 to +125	$^{\circ}C$

Note: (1) Pulse Test with $PW=300\mu s$, 2% Duty Cycle.

(2) Mounted on P.C.Board with 5.0mm² (0.13mm thick) copper pad areas.



Characteristics Curves

FIG.1 FORWARD CURRENT DERATING CURVE

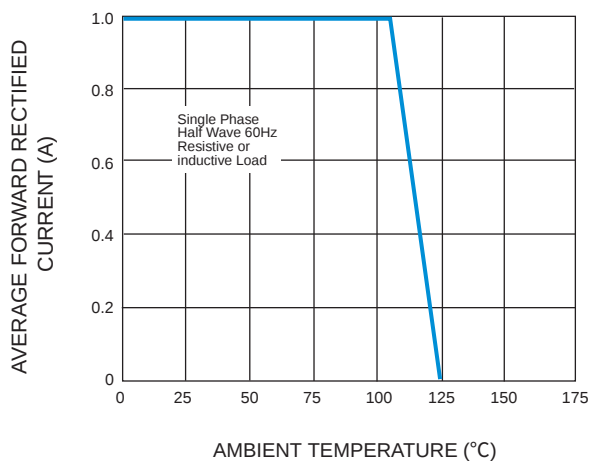


FIG.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

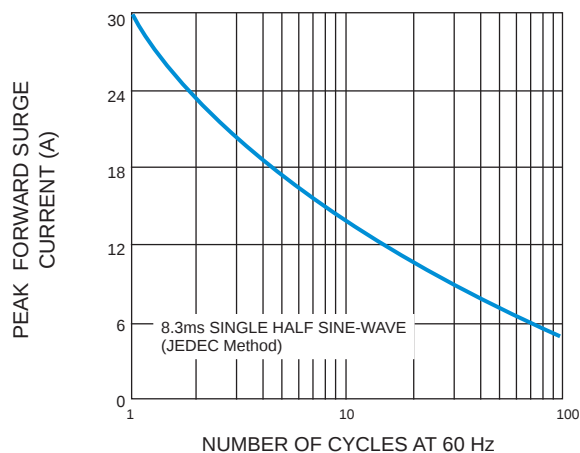


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

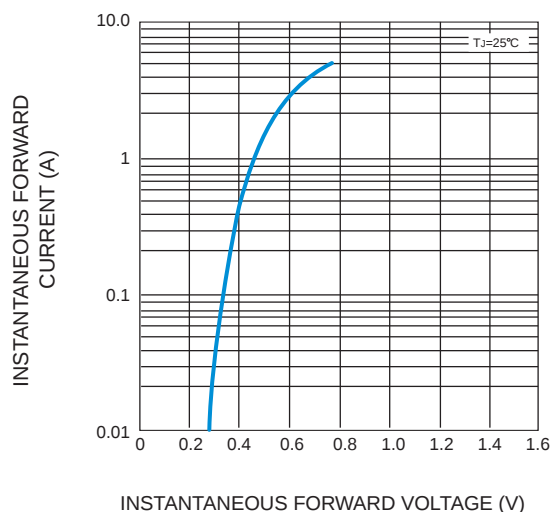


FIG.4 TYPICAL REVERSE CHARACTERISTICS

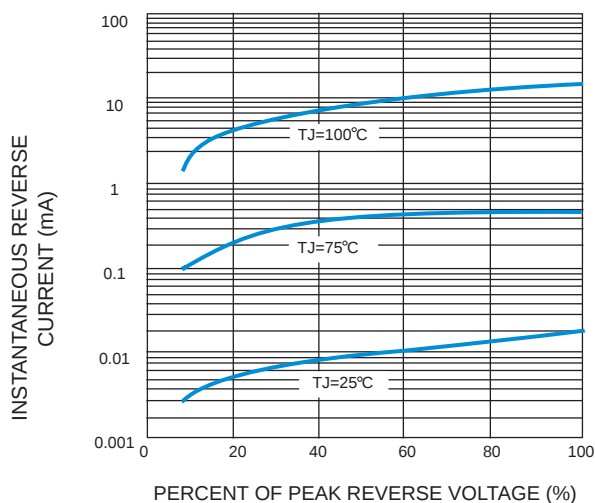


FIG.5 TYPICAL JUNCTION CAPACITANCE

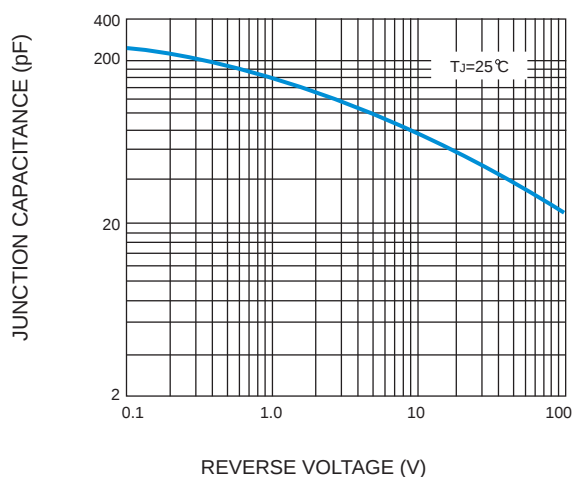
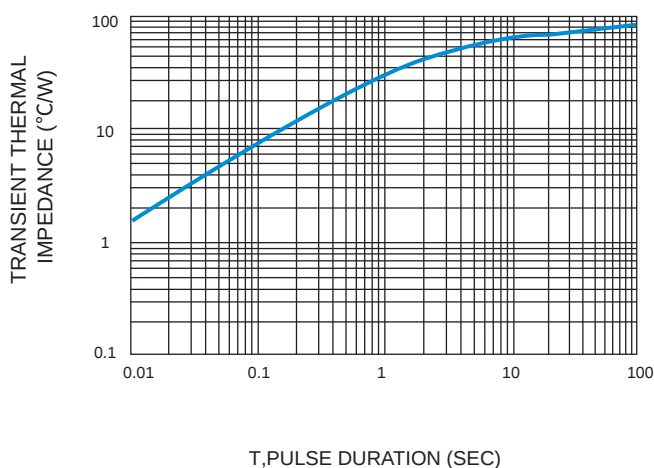
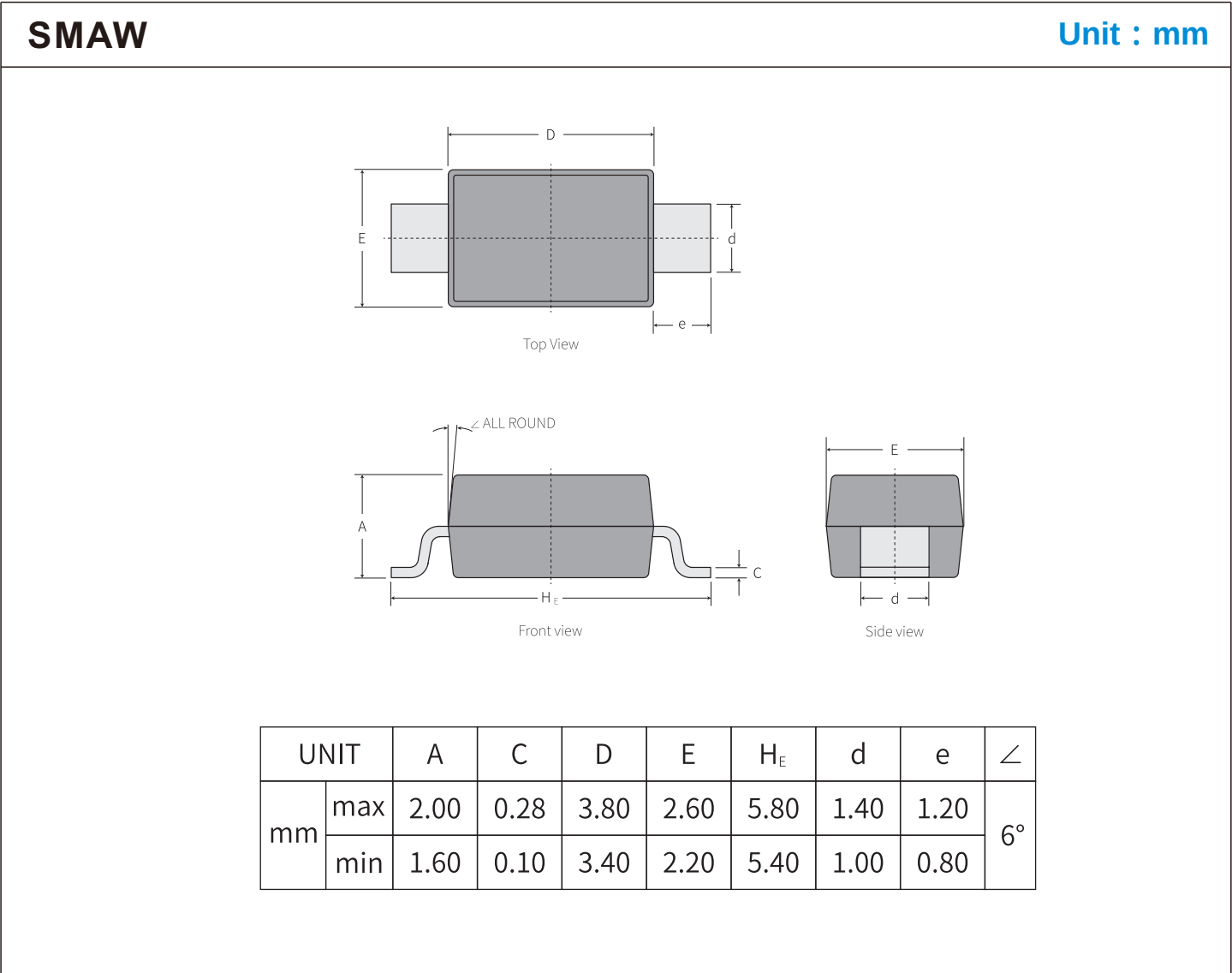


FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE

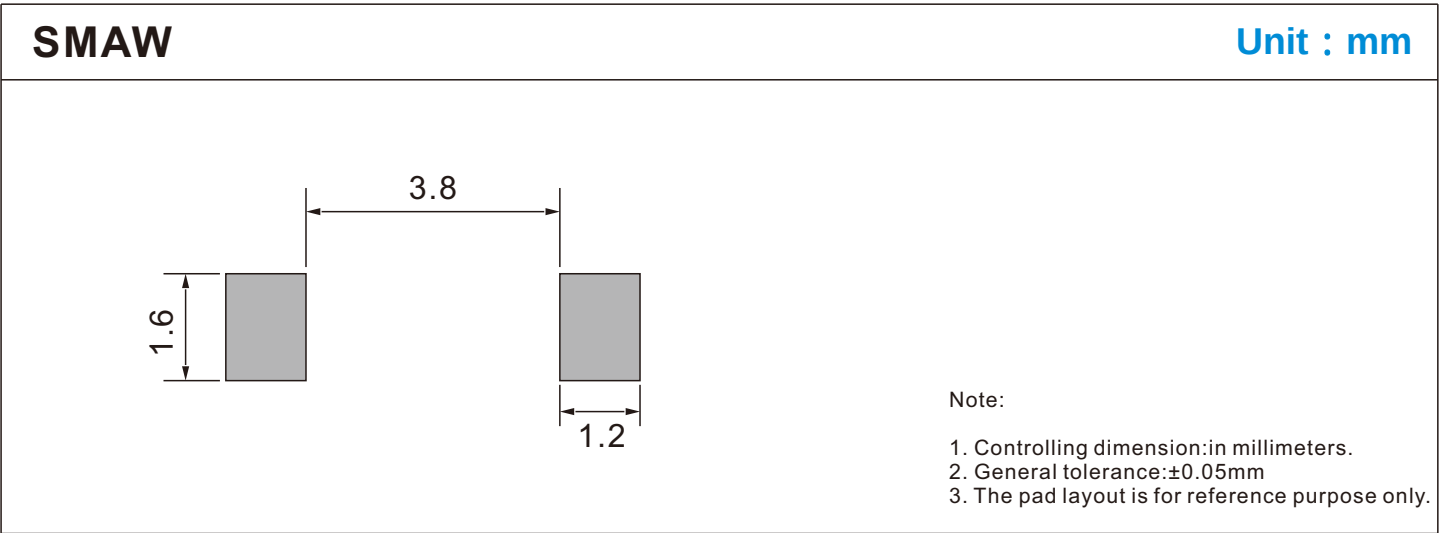




Package Outline



Suggested Pad Layout



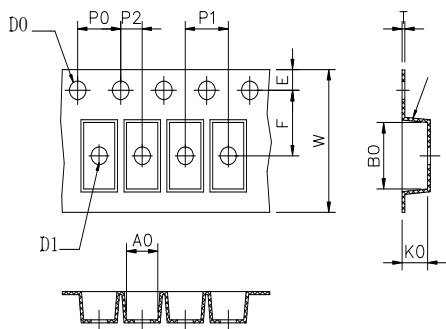


RH1S40W

Surface Mount Schottky Barrier Rectifier

Carrier Tape Dimensions

Unit : mm

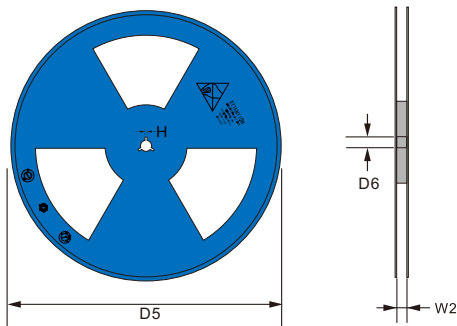


Symbol	Spec	Symbol	Spec
W	12.00±0.10	P1	4.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	5.50±0.05	T	0.25±0.02
D0	1.55±0.05	A0	2.60±0.10
D1	1.50±0.10	B0	5.70±0.10
P0	4.00±0.10	K0	2.00±0.05

Reel Dimensions

Unit : mm

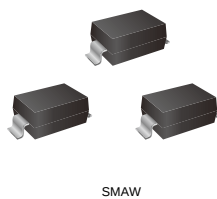
13" Reel



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

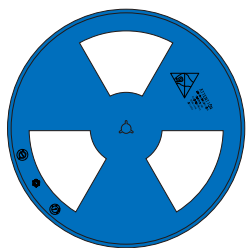
Quantity: 8000PCS

Packaging

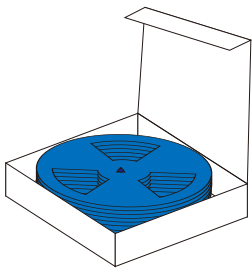


SMAW

8000PCS/Reel

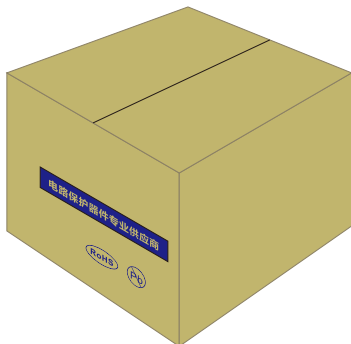


5Reel/Inner Box
40KPCS/Inner Box



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

Dim(Unit:mm)
360mm*360mm*355mm

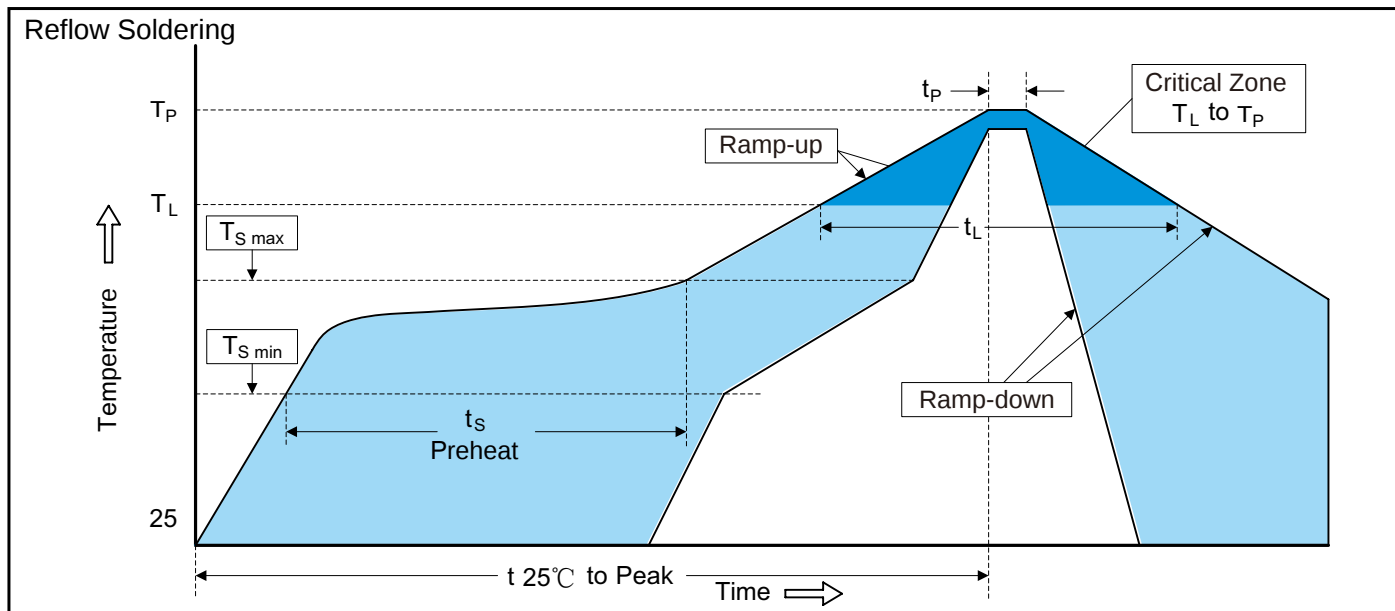


4 Boxes per carton
160KPCS per carton

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 ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 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.