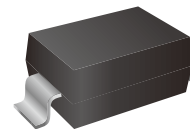




Features

- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- 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
- Approx. Weight: 0.04g

Ordering Information

Part Number	Marking	Shipping	Reel
RH3S60W	3S60	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%.

Rating	Symbol	RH3S60W	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	60	V
Maximum RMS voltage	V_{RMS}	42	V
Maximum DC blocking voltage	V_{DC}	60	V
Maximum average forward rectified current at $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	3	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	70	A
Maximum instantaneous forward voltage at 3A	V_F	0.5	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	0.5 5	mA
Typical junction capacitance (Note1)	C_J	400	pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	60	$^\circ\text{C/W}$
Operating junction temperature range	T_J	-50 to +125	$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 to +150	$^\circ\text{C}$

Note: (1) Measured at 1 MHz and applied reverse voltage of 4V D.C.
(2) P.C.B. mounted with 2.0" × 2.0" (5cm × 5cm) copper pad areas.



Characteristics Curves

FIG.1 FORWARD CURRENT DERATING CURVE

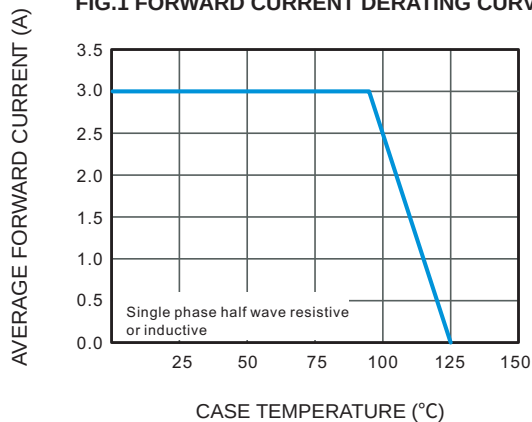


FIG.2 TYPICAL REVERSE CHARACTERISTICS

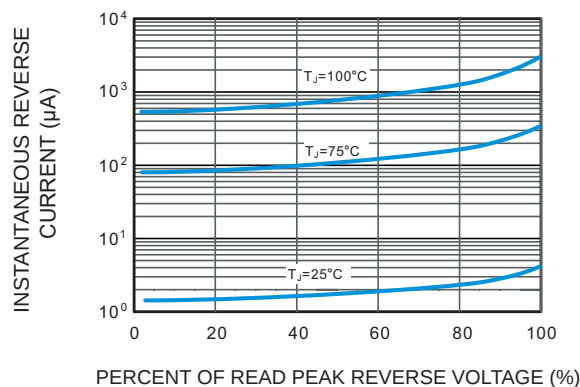


FIG.3 TYPICAL FORWARD CHARACTERISTICS

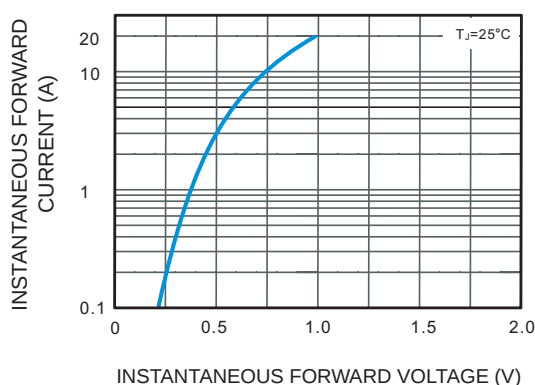


FIG.4 TYPICAL JUNCTION CAPACITANCE

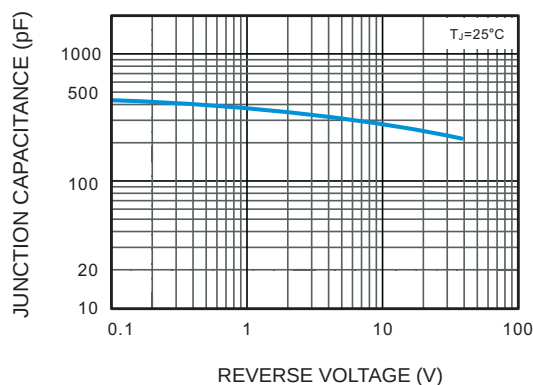


FIG.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

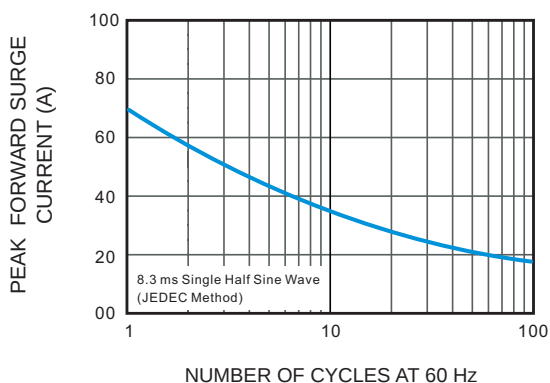
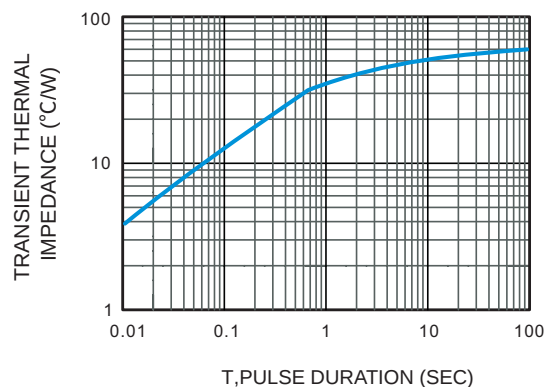
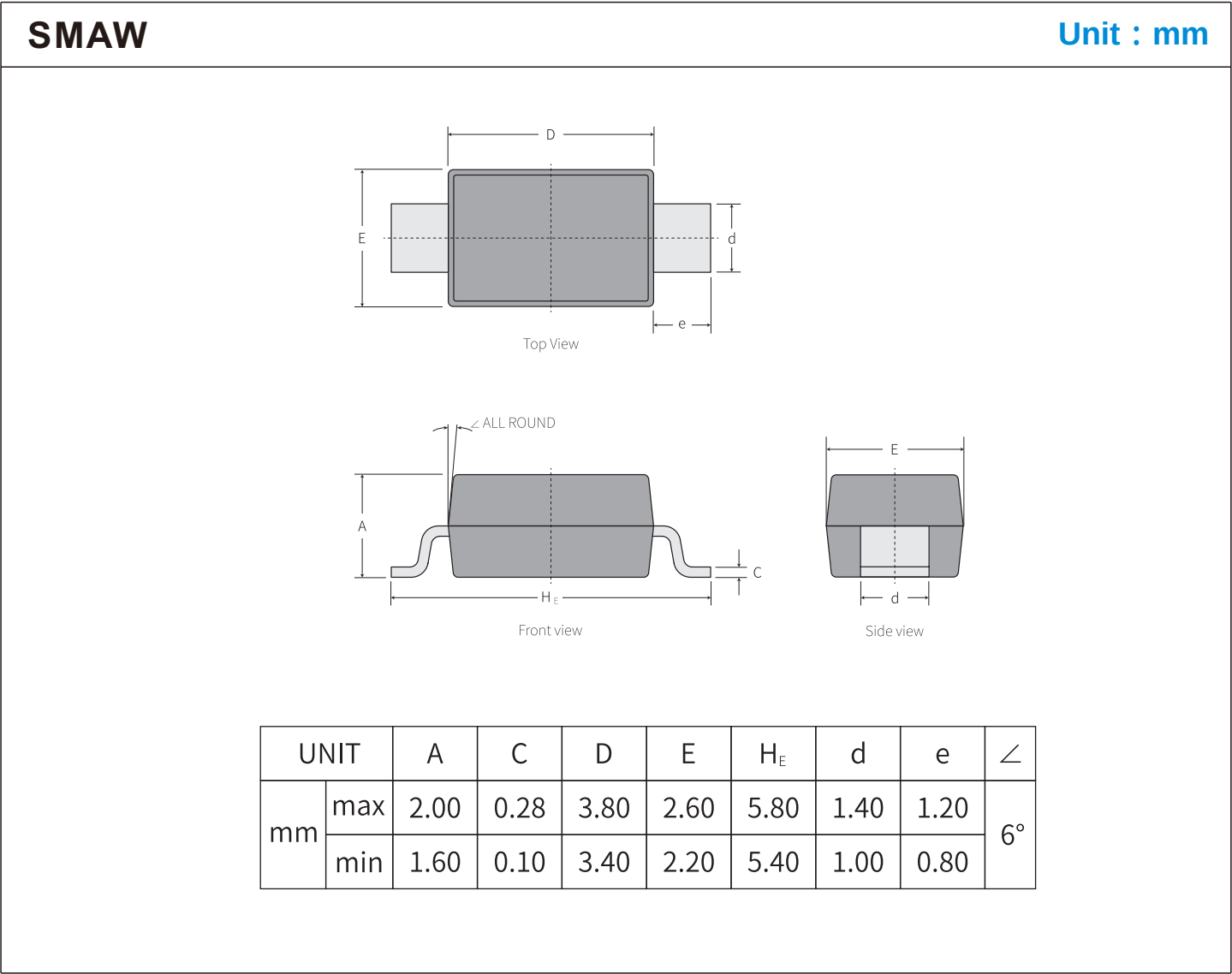


FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE

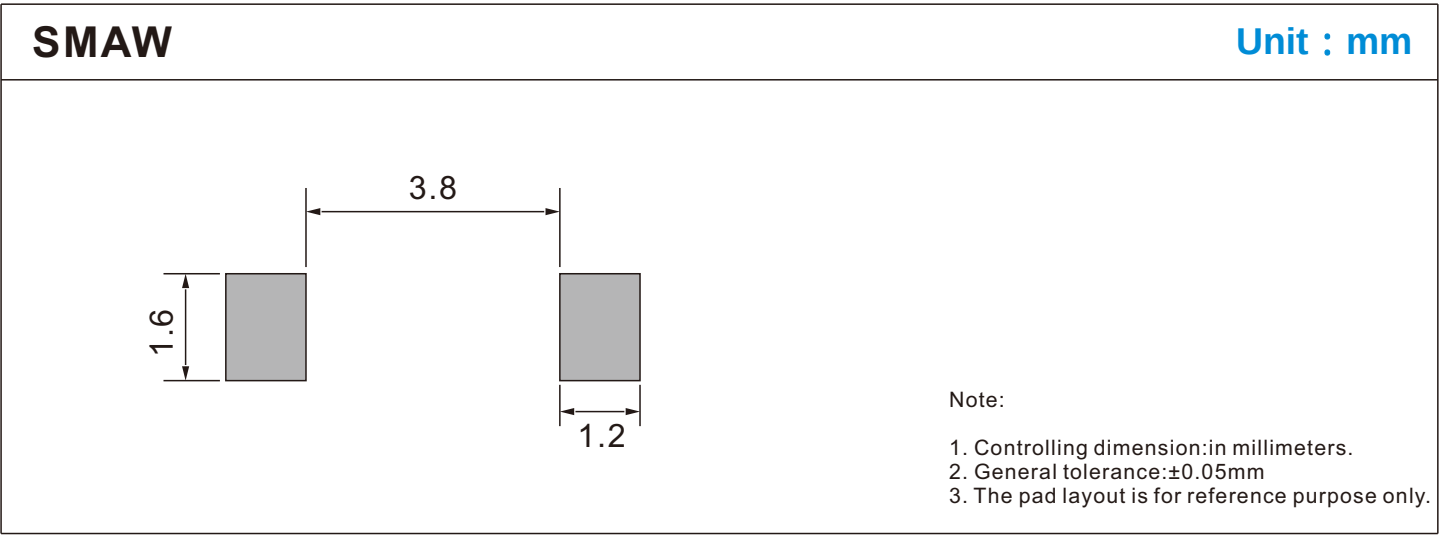




Package Outline



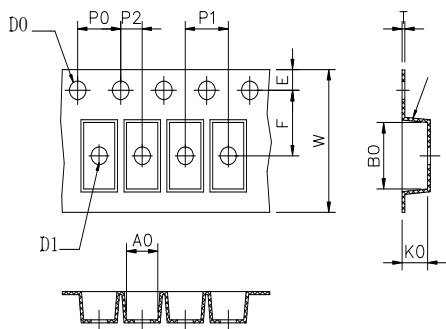
Suggested Pad Layout





Carrier Tape Dimensions

Unit : mm

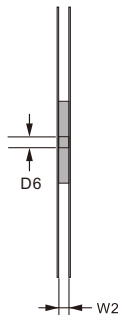
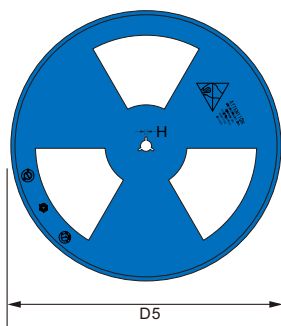


Symbol	Spec	Symbol	Spec
W	12.00±0.10	P1	4.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	5.50±0.05	T	0.25±0.02
D0	1.55±0.05	A0	2.60±0.10
D1	1.50±0.10	B0	5.70±0.10
P0	4.00±0.10	K0	2.00±0.05

Reel Dimensions

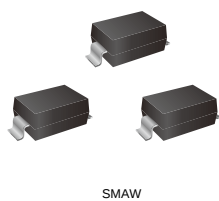
Unit : mm

13" Reel



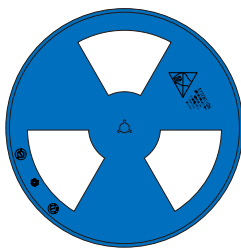
D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 8000PCS	

Packaging

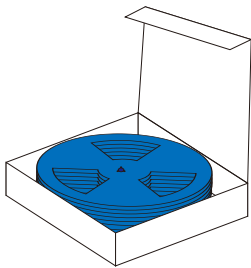


SMAW

8000PCS/Reel



5Reel/Inner Box
40KPCS/Inner Box



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

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

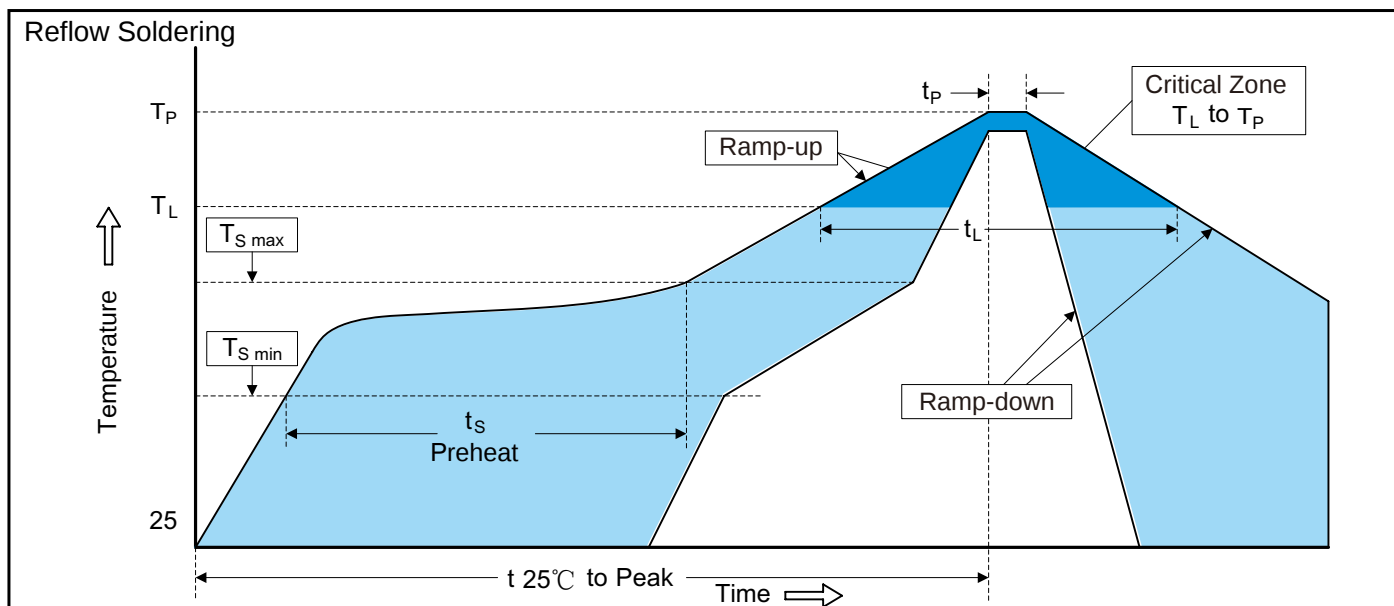


4 Boxes per carton
160KPCS per carton

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 ($T_{S\ min}$)	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.