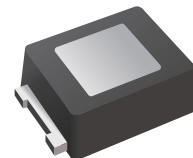




Features

- Top-side Cooling(TSC) Packaging technology
- Compact and Slim Packaging Solutions
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Low reverse leakage
- High forward surge current capability
- 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
- Mounting Position: Any

Ordering Information

Part Number	Marking	Shipping	Reel
RHM520S1--TR15K	520S	15000PCS Tape&Reel	13inchs

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	RHM520S1	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	2000	V
Maximum RMS voltage	V_{RMS}	1400	V
Maximum DC blocking voltage	V_{DC}	2000	V
Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_c=100^{\circ}C$	$I_{(AV)}$	1	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	20	A
Maximum instantaneous forward voltage at 1.0 A	V_F	1.05	V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	I_R	1 150	μA
Typical junction capacitance (Note 1)	C_J	20	pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	62	$^{\circ}C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150	$^{\circ}C$

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

(2) Thermal resistance from junction to ambient at 0.1 "(2mmx2mm) lead length,P.C.B. mounted



Characteristics Curves

FIG. 1 FORWARD CURRENT DERATING CURVE

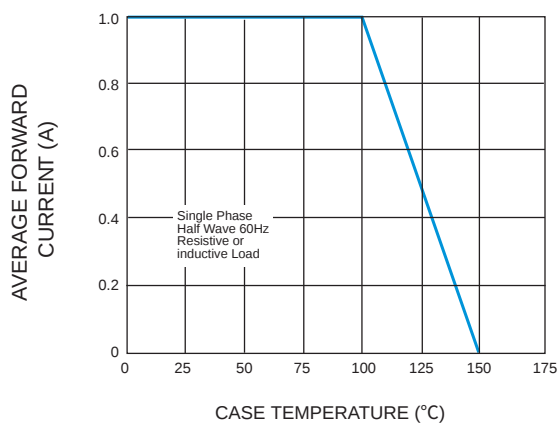


FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

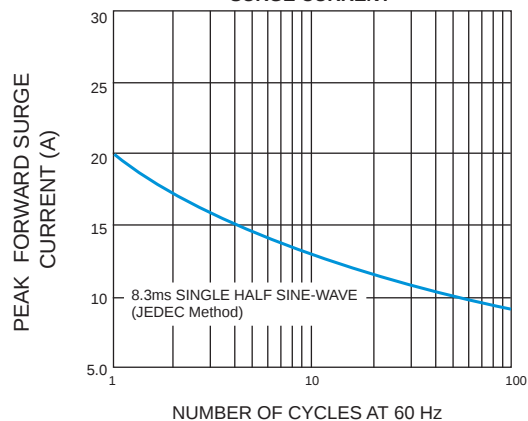


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

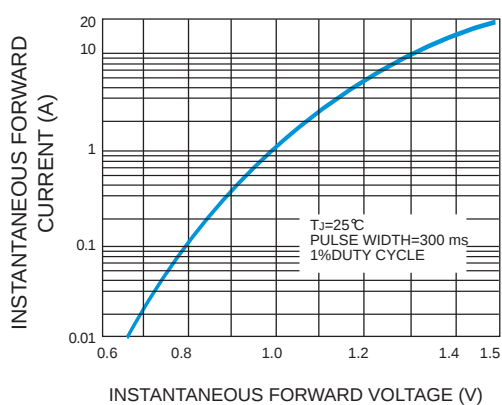


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

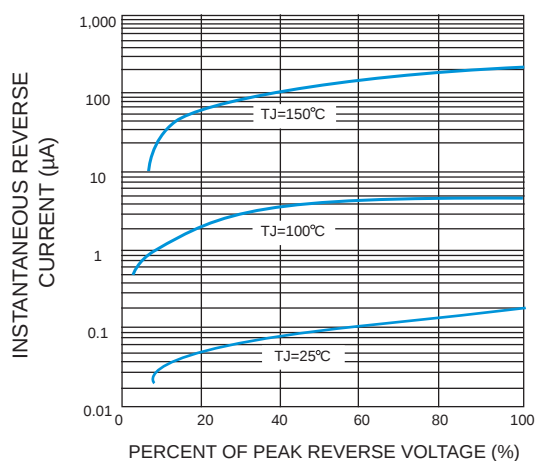
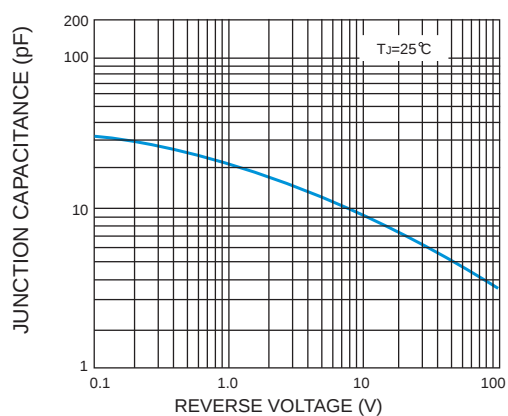


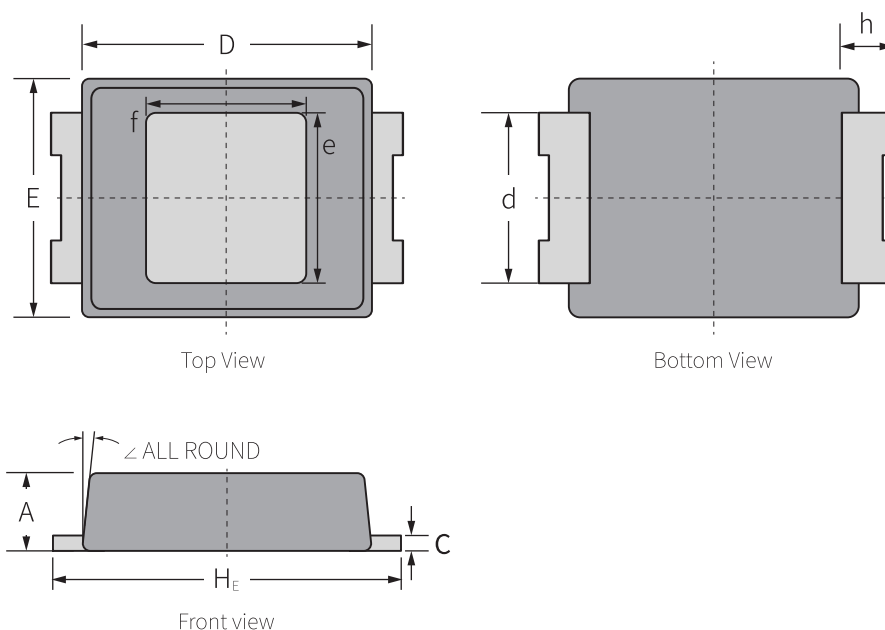
FIG. 5 TYPICAL JUNCTION CAPACITANCE





SMHS

Unit : mm

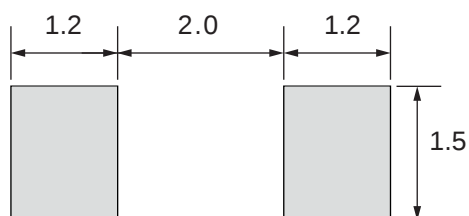


UNIT		A	C	D	E	H _E	d	e	f	h	∠
mm	max	0.99	0.25	2.90	2.10	3.50	1.30	1.30	1.25	0.70	6°
	min	0.83	0.15	2.50	1.70	2.90	1.10	1.10	1.05	0.50	

Suggested Pad Layout

SMHS

Unit : mm



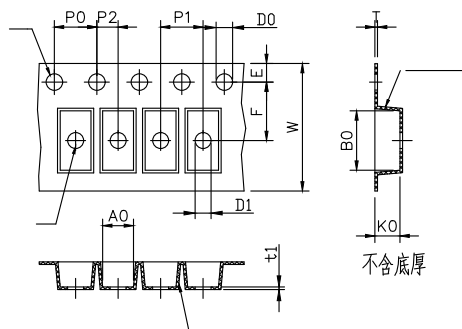
Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.



Carrier Tape Dimensions

Unit : mm

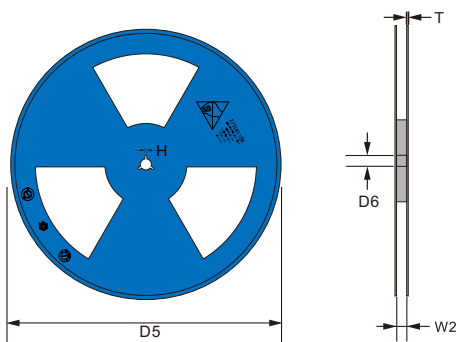


Symbol	Spec	Symbol	Spec
W	8.00±0.10	P2	2.00±0.10
E	1.75±0.10	t	0.22±0.02
F	3.50±0.10	t1	Min. 0.05
D0	1.55±0.10	A0	2.15±0.10
D1	1.10±0.10	B0	3.40±0.10
P0	4.00±0.10	K0	1.15±0.10
P1	4.00±0.10		

Reel Dimensions

Unit : mm

13" Reel

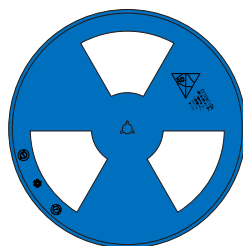


D5	Φ330.0±5.0
D6	Φ13.5±0.5
H	2.3±0.2
T	1.95±0.5
W2	8.0±2.0
Quantity: 15000PCS	

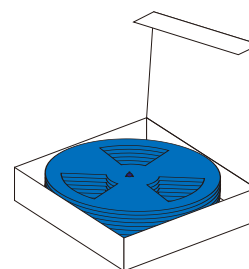
Packaging



15000 PCS/Reel



5 Reel/Inner Box
75K PCS/Inner Box



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

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



4 Boxes per carton
300K PCS 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.