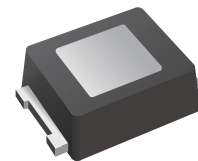




Features

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

Ordering Information

Part Number	Shipping	Reel
RH54HM	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	RH54HM	Unit
	Marking	S54	
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)	$I_{(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0	A
Maximum instantaneous forward voltage at 5.0A	V_F	0.55	V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^{\circ}C$ $T_A=100^{\circ}C$	I_R	30	uA
		50	mA
Typical junction capacitance (Note1)	C_J	650	pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	39	°C/W
	$R_{\theta JC}$	6	
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"(2mmx2mm) copper pad areas.



Characteristics Curves

Fig.1 Forward Current Derating Curve

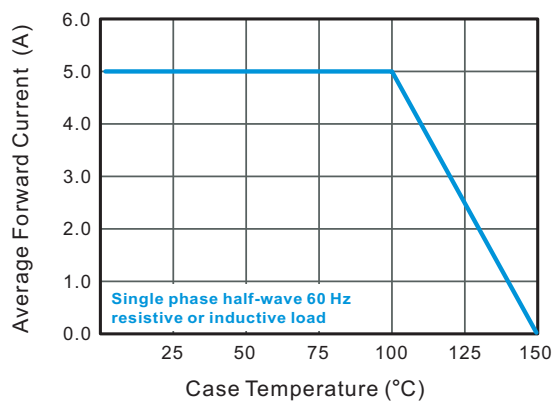


Fig.2 Typical Reverse Characteristics

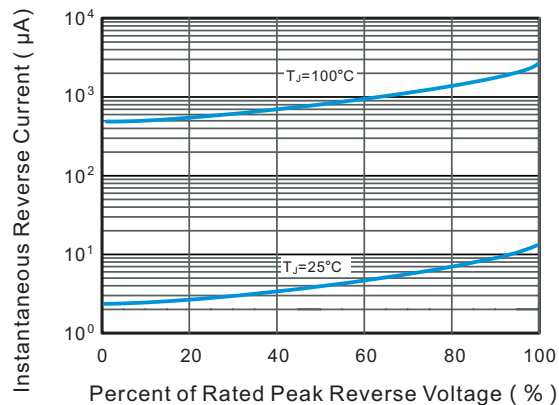


Fig.3 Typical Forward Characteristic

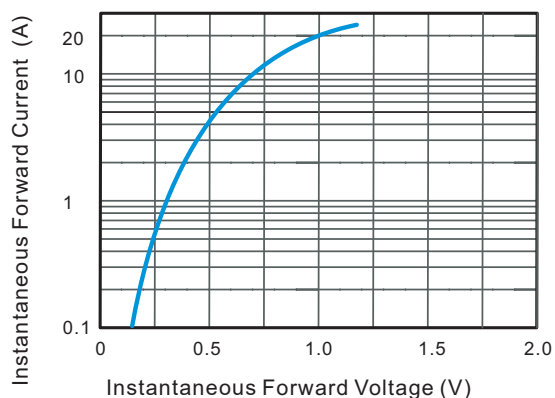


Fig.4 Typical Junction Capacitance

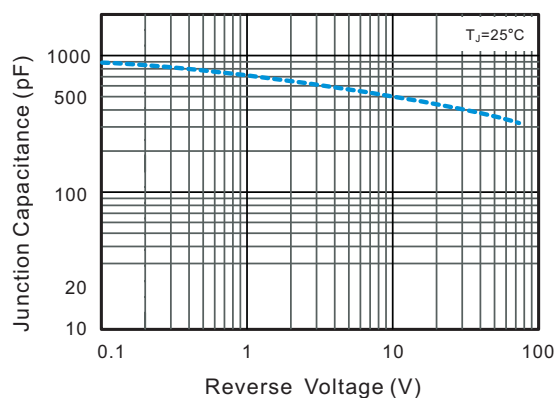
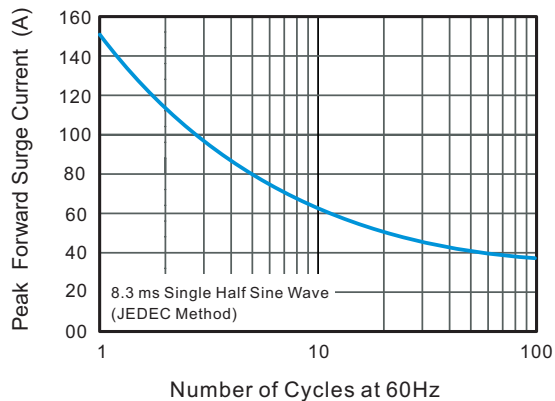


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current







Carrier Tape Dimensions

Unit : mm

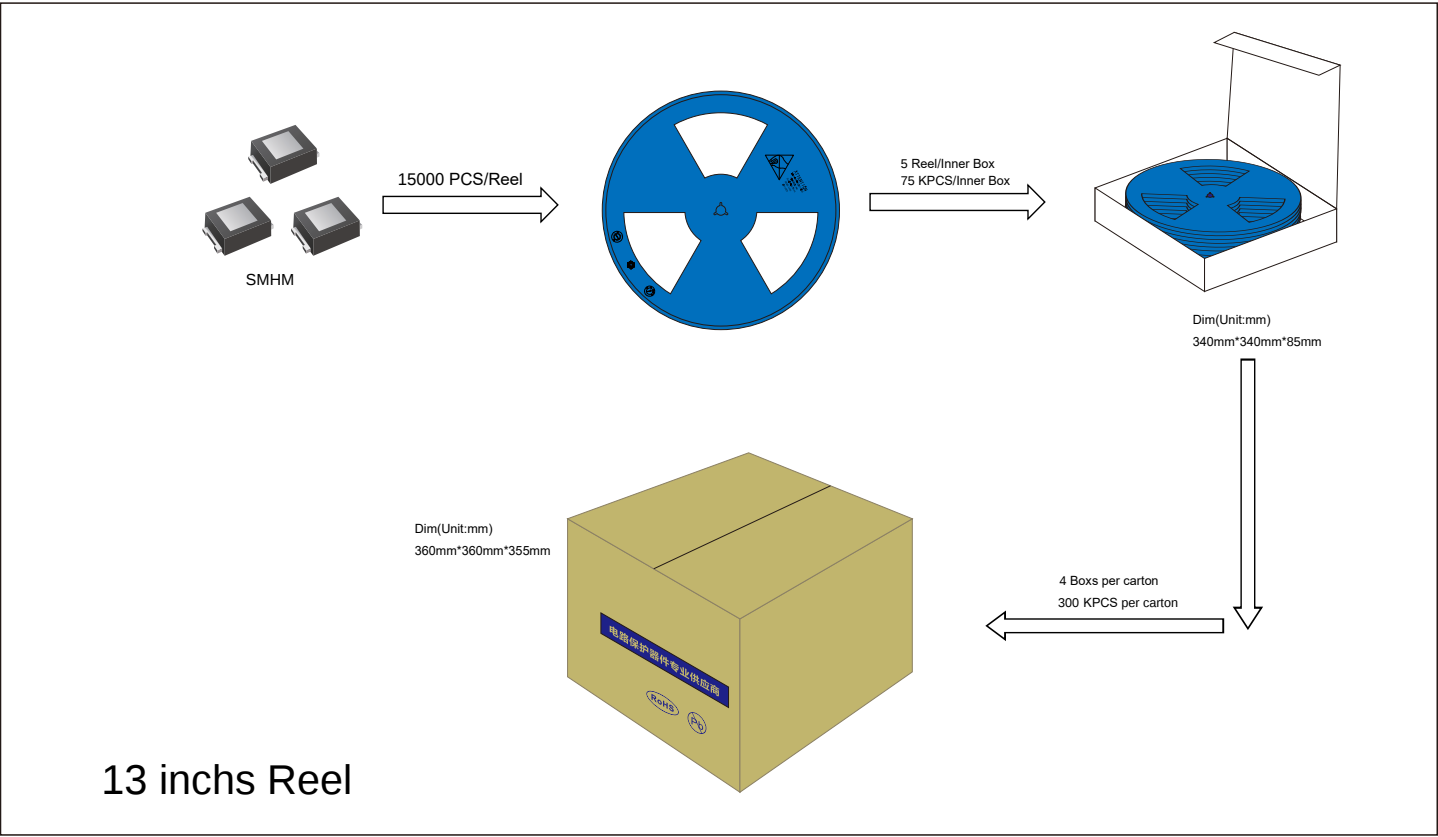
Symbol	Spec	Symbol	Spec
W	12.0±0.10	P2	2.00±0.10
E	1.75±0.10	t	0.25±0.03
F	5.50±0.10	t1	0.05+
D0	1.55±0.10	A0	3.05±0.10
D1	1.50±0.10	B0	4.15±0.10
P0	4.00±0.10	K0	1.15±0.10
P1	4.00±0.10		

Reel Dimensions

Unit : mm

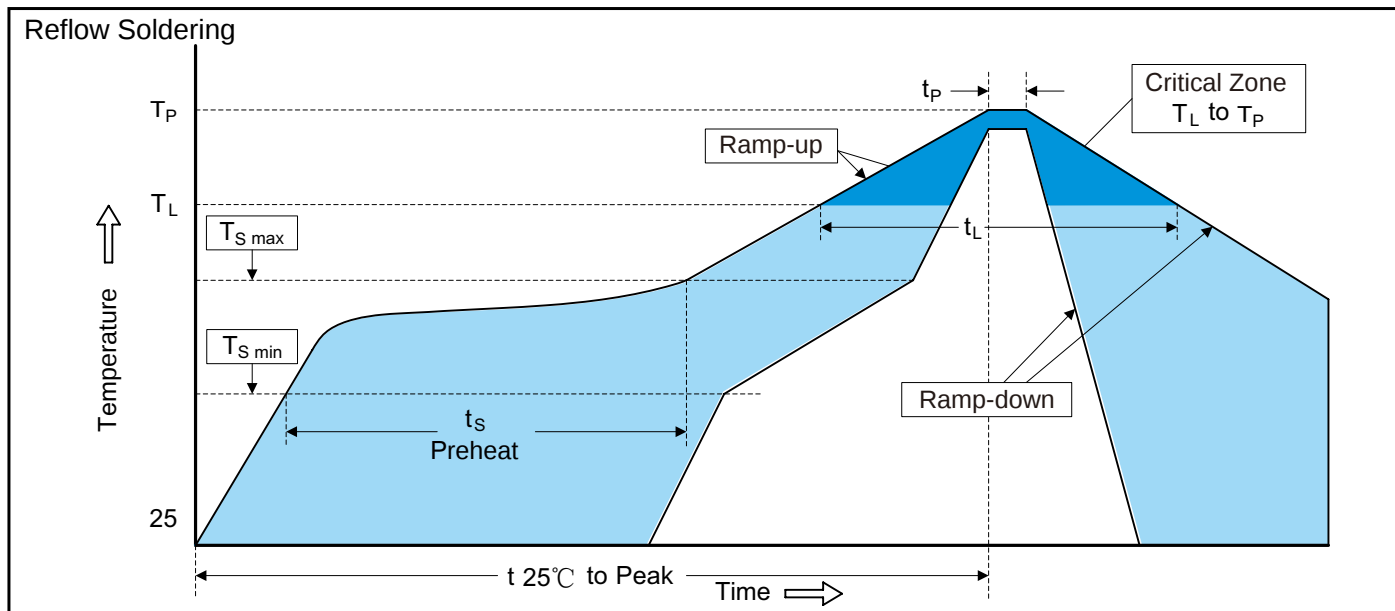
13" Reel	D5	Φ330.0±5.0
	D6	Φ13.5±0.5
	H	2.5±1.0
	W2	12±2.0
	Quantity: 15000PCS	

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.