

Features

- Peak power dissipation
600W@10 x 1000 us Pluse
- Low incremental surge resistance
- Excellent clamping capability
- Fast response time
- Low leakage current
- Halogen free and RoHS compliant

Applications

- Personal digital assistants (PDA)
- Cellular handsets & Accessories
- Handhelds and notebooks
- Portable instrumentation

Mechanical Characteristics

- SMB surface mount package

Dimensions and Pin Configuration



DO-214AA (SMB)



Pin Configuration

Maximum Ratings& Thermal Characteristics

(Tamb=25°C unless otherwise specified)

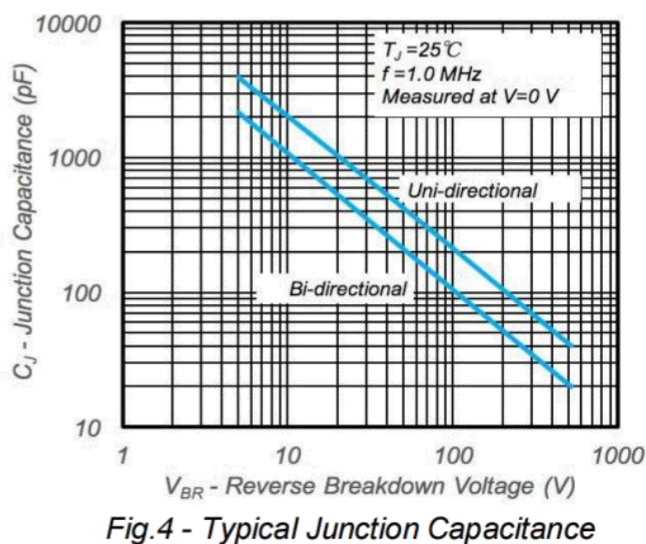
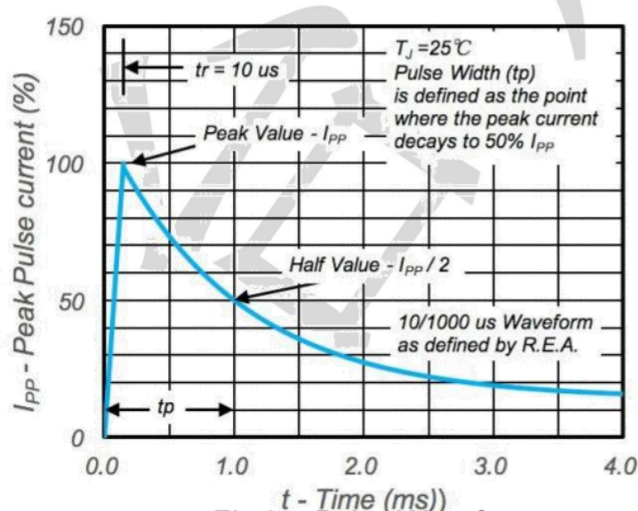
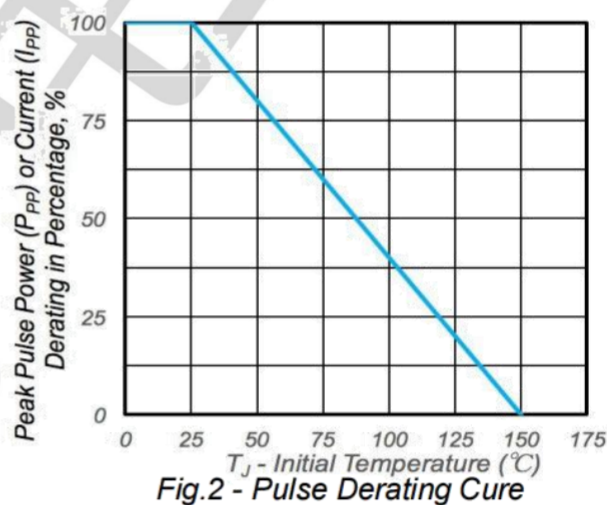
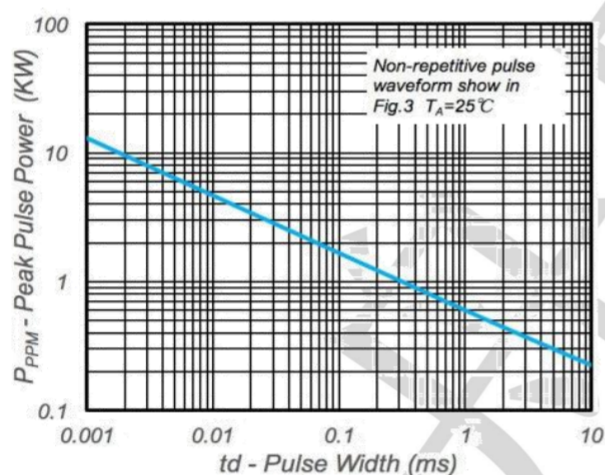
Parameter	Symbol	Value	Unit
Peak pulse power (tp=10/1000μs waveform)	PPp	600	W
Power Dissipation on Infinite Heat Sink at TL=50°C	PD	5	W
Peak Pulse Current of on 10/1000us Waveform	IPPM	1	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave	IFSM	100	A
Storage & operating temperature range	TSTG , TJ	-55~+150	°C

Electrical Characteristics

($T_A=25^\circ\text{C}$ unless otherwise specified)

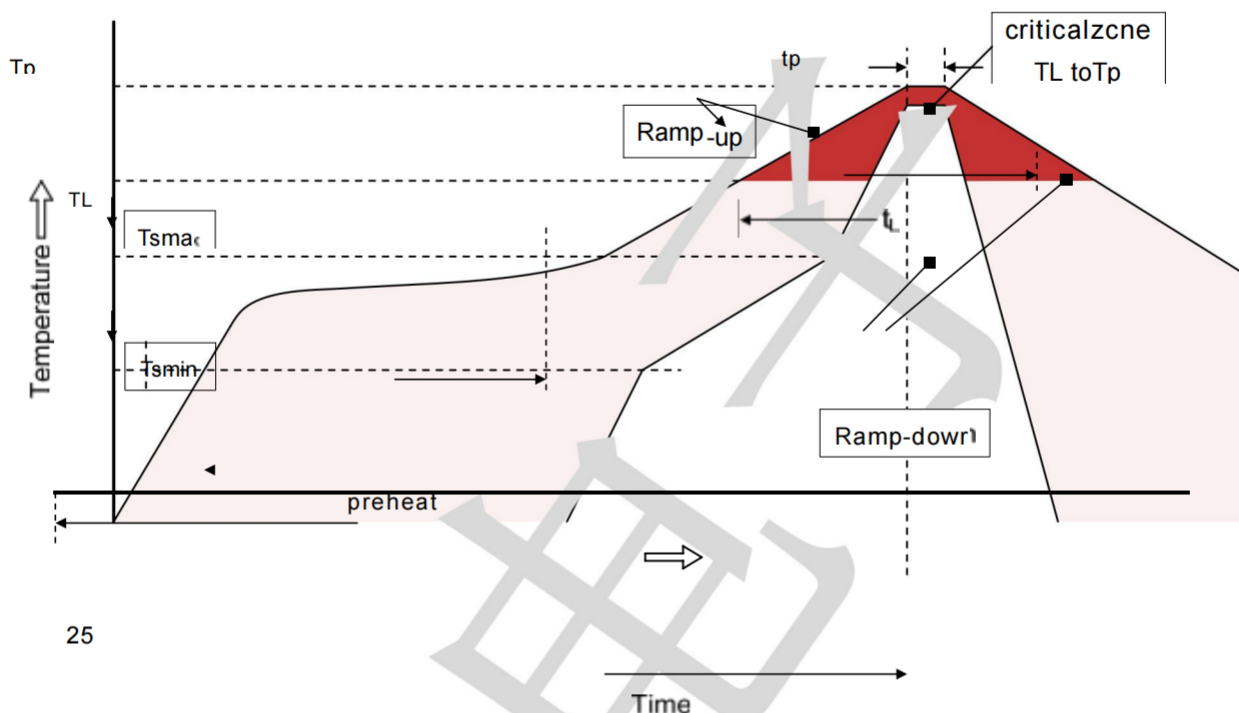
Part Number	Reverse Stand-Off Voltage	Breakdown Voltage @ I_T		Test Current	Maximum Clamping Voltage @ I_{PP}	Peak Pulse Current	Reverse Leakage @ V_{RWM}
	$V_{RWM}(V)$	$V_{BR \text{ MIN.}}(V)$	$V_{BR \text{ MAX.}}(V)$	$I_T(mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$
TPSMBJ6.8CA	6.8	6.46	7.14	10	10.5	57.1	500

Typical Characteristics Curves



Recommended Soldering Conditions

Reflow Soldering

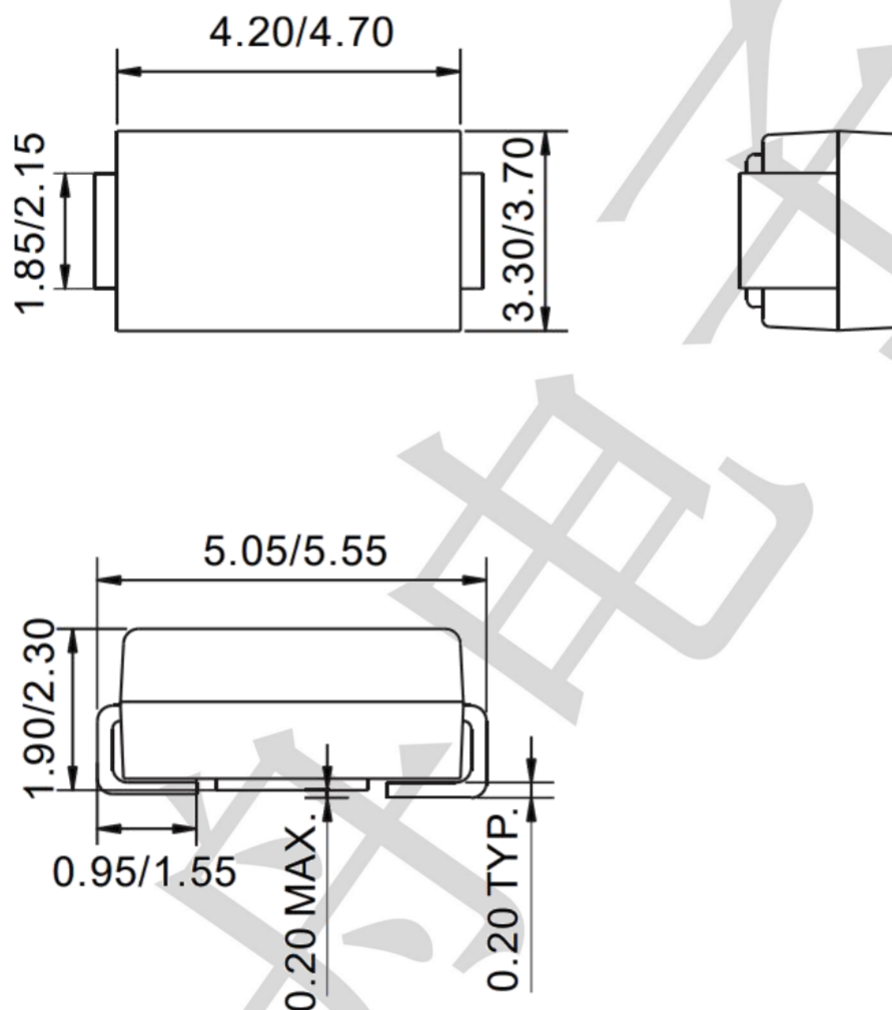


Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min (T_{Smin})	150°C
-Temperature Max (T_{Smax})	200°C
-Time (min to max) (t_s)	60-180 seconds
T_{Smax} 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.

Package Outline Dimensions (unit: mm)

SMB



Mounting Pad Layout (unit: mm)

