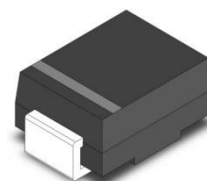


FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Available in uni-directional and bi-directional
- 2000W peak pulse power capability with
- Excellent clamping capability
- Very fast response time

DO-214AA (SMB)



TYPICAL APPLICATIONS

computer
 industrial
 automotive andtelecommunication.
 Power Over Ethernet

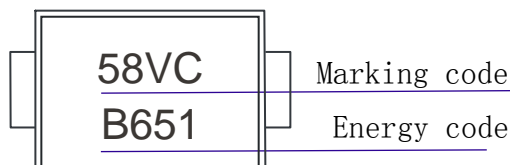
MECHANICAL DATA

Case: DO-214AA (SMB)

Epoxy meets UL 94V-0 flammability rating

Polarity: Color band denotes cathode end

Printing description



Ordering Information

Packaging	Reel Size
3000/Tape & Reel	13 inch

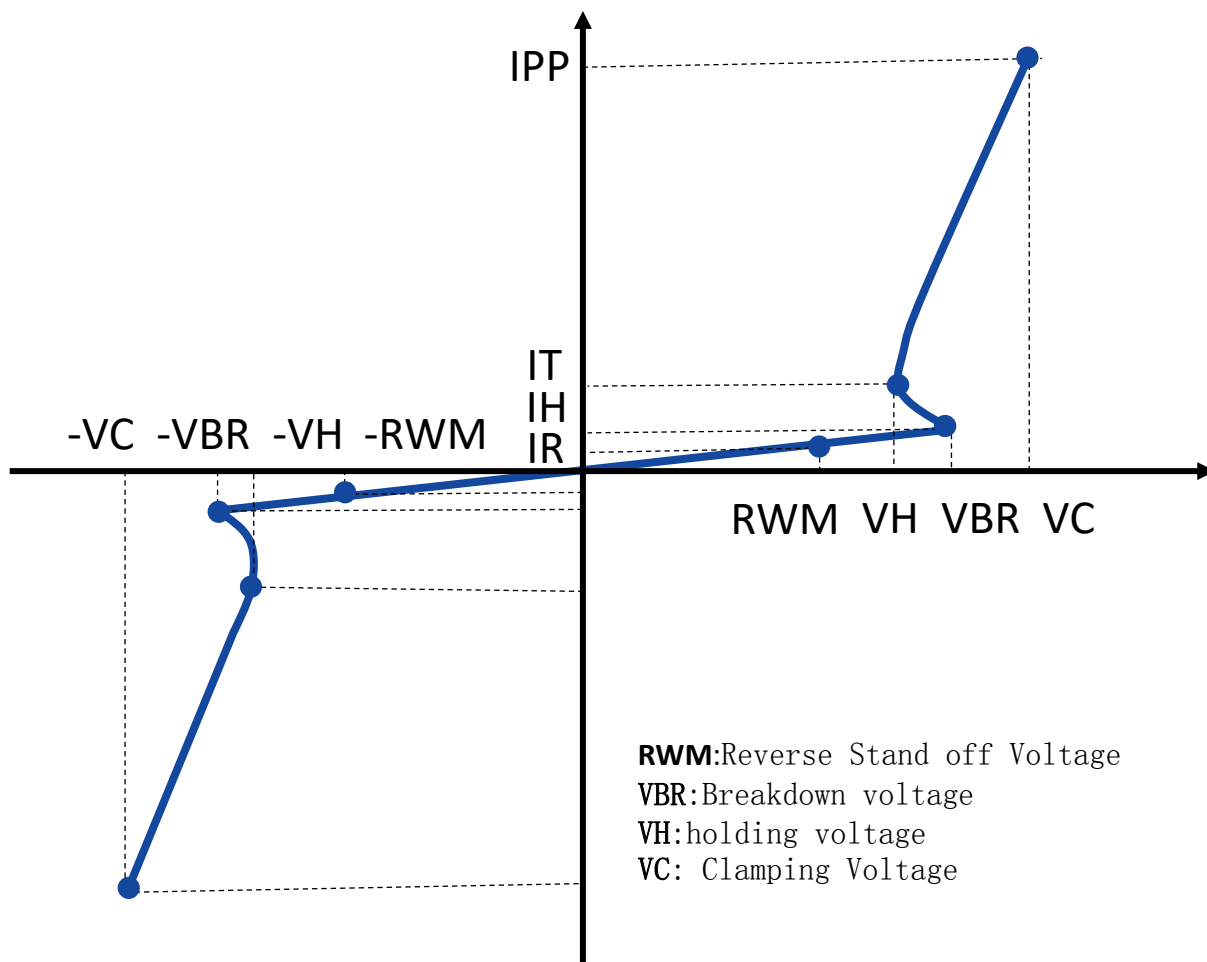
MAXIMUM RATINGS (TA=25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power dissipation with a 10/1000 μ s waveform	PPPM	2000	W
Peak surge voltage on 10/700us waveform	VPP	4500	V
Peak pulse current on 8/20us waveform	Ipp	600	A
Operating junction and storage temperature range	TJ, TSTG	-55to+150	°C

Notes:

- (1) Non-repetitive current pulse, per Fig. 3 and derated above TA = 25°C per
- (2) Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted)

Part Number	Marking code	Breakdown voltage VBR@IT		Test Current IT (mA)	Reverse Stand off Voltage RWMV (V)	Max. Reverse Leakage IR@VRWM (uA)	Max. Clamping Voltage	
		MIN(V)	MAX(V)				10/700us 4KV/40Ω (V)	8/20us 600A (V)
P/N	MK	MIN(V)	MAX(V)	(mA)	V	uA	V	V
SMBT58CA-L	58VC	60	72	1	58	1	85	85



RATINGS AND CHARACTERISTICS CURVES

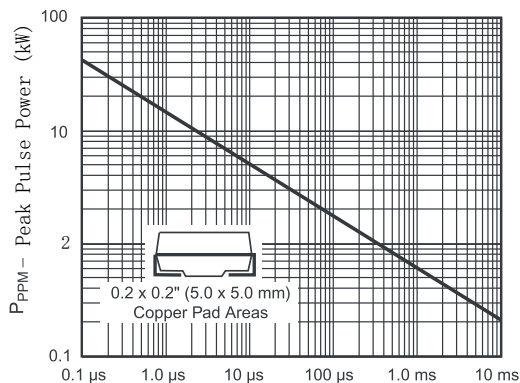


Figure 1. Peak Pulse Power Rating Curve

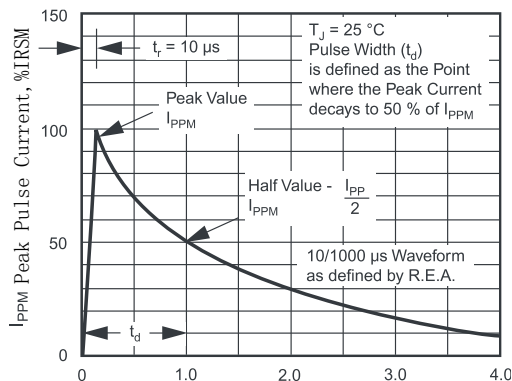


Figure 3. Pulse Waveform

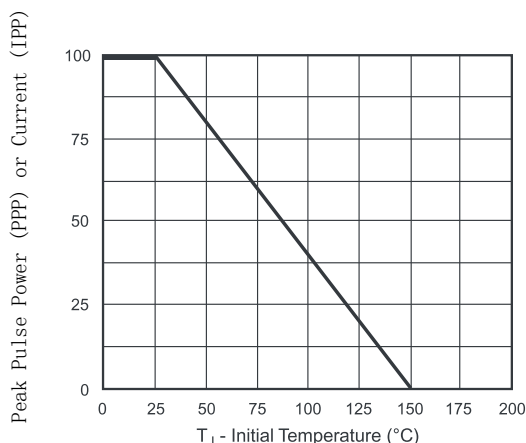


Figure 2. Pulse Power or Current vs. Initial Junction Temperature

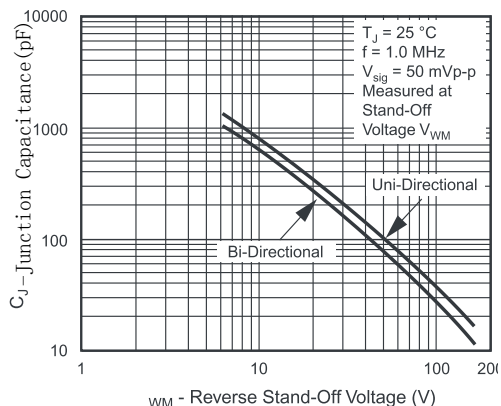


Figure 4. Typical Junction Capacitance

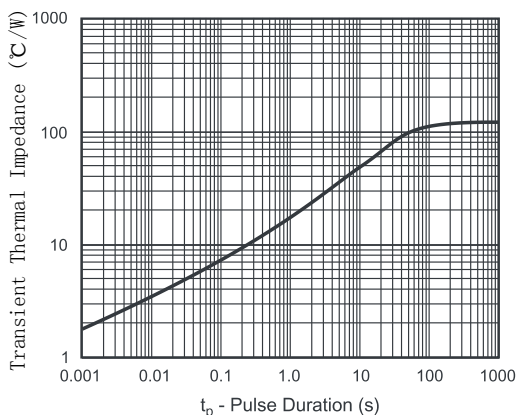


Figure 5. Typical Transient Thermal Impedance

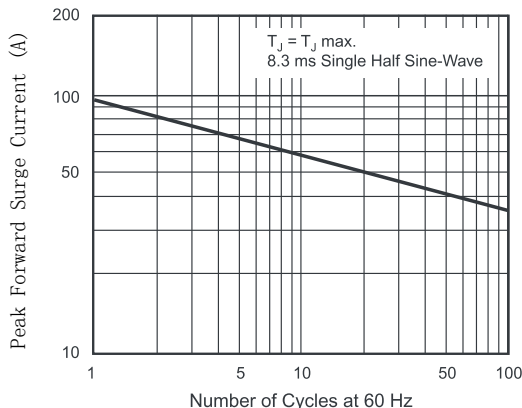
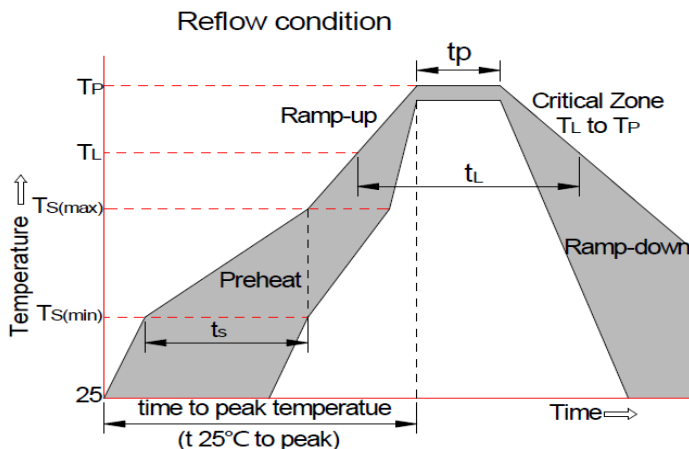


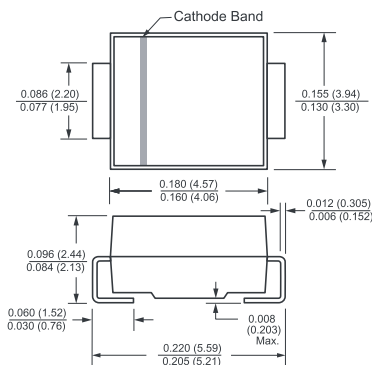
Figure 6. Maximum Non-Repetitive Forward Surge Current
 Uni-Directional Only

Soldering Parameters

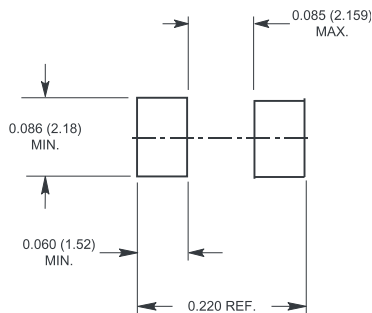


Reflow Condition		PbFree assembly (see asbellow)
Pre Heat	-Temperature Min (Ts(Min))	+150°C
	-Temperature Max(Ts(max))	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (TL) to peak)		3°C/sec. Max
	Ts(max) to TL -Ramp-up Rate	3°C/sec. Max
Reflow	-Temperature(TL)(Liquid us)	+217°C
	-Temperature(tL)	60-150 secs.
Peak Temp (Tp)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (tp)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (Tp)		8 min. Max
Do not exceed		+260°C

PACKAGE OUTLINE DIMENSIONS
 in inches (millimeters)



Mounting Pad Layout



Unmarked tolerance: +0.2mm