

Features

- The plastic package carries UL Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals



SMB (DO-214AA)

Mechanical Characteristics

- Case: SMB(DO-214AA) package molded plastic body over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Absolute Maximum Ratings and Electrical Parameters (TA=25°C unless otherwise specified)

PARAMETER		SYMBOL	RS2AB	RS2BB	RS2DB	RS2GB	RS2JB	RS2KB	RS2MB	UNIT
Maximum repetitive peak reverse voltage		V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current		I _{AV}	2							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load		I _{FSM}	50							A
Maximum instantaneous forward voltage at 2A		V _F	1.3							V
Maximum DC reverse current at rated DC blocking voltage	T _A =25 °C	I _R	5							uA
	T _A =100 °C	I _{RT}	50							uA
Maximum reverse recovery time (NOTE 1)		t _{rr}	150				250	500		ns
Typical junction capacitance (NOTE 2)		C _J	30							pF
Typical Thermal Resistance Junction to Ambient (NOTE3)		R _{θJA}	65							°C/W
Typical Thermal Resistance Junction to Lead (NOTE3)		R _{θJL}	20							°C/W
Operating Temperature Range		T _J	-55 to 150							°C
Storage Temperature Range		T _{STG}	-55 to 150							°C

Note1: Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

Note2: Measured at 1MHz and applied reverse voltage of 4.0V DC.

Note3: PCB. mounted with 7x7mm copper pad areas

Rating And Characteristic Curves (TA=25°C unless otherwise noted)

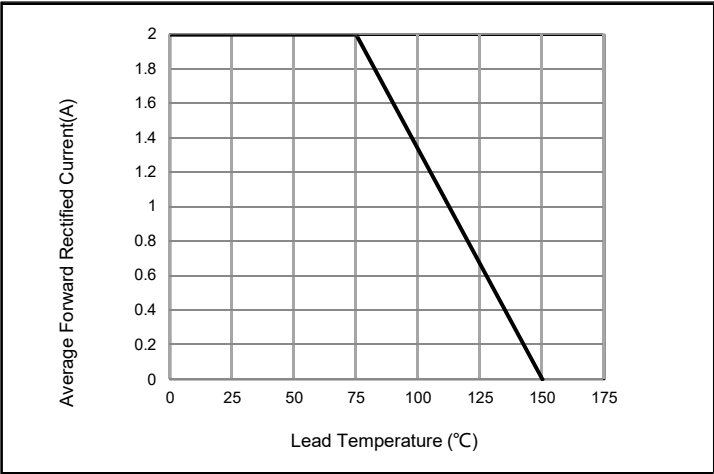


Fig. 1 - Forward Current Derating Curve

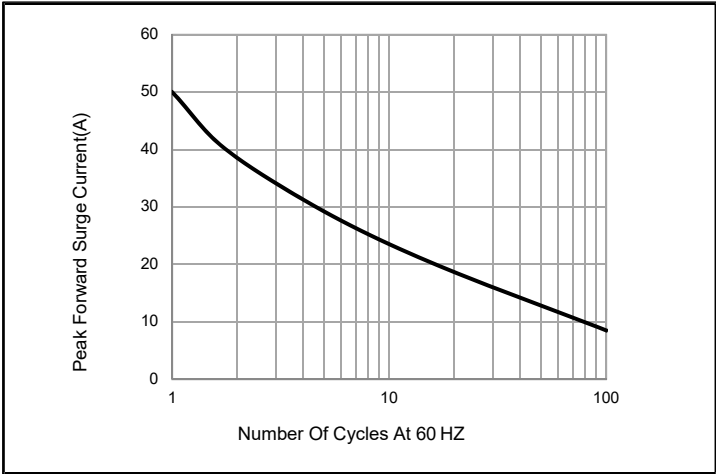


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

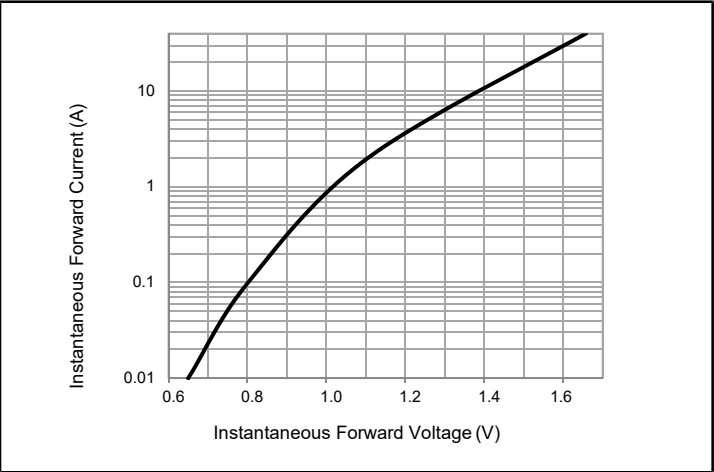


Fig. 3 - Typical Instantaneous Forward Characteristics

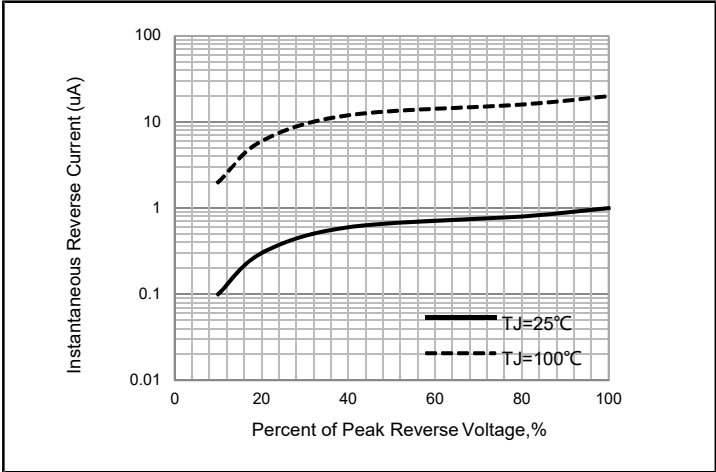


Fig. 4 - Typical Reverse Characteristics

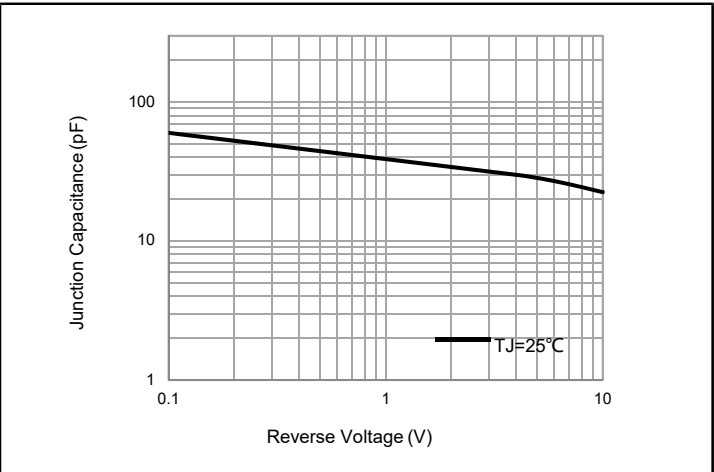


Fig. 5 - Typical Junction Capacitance

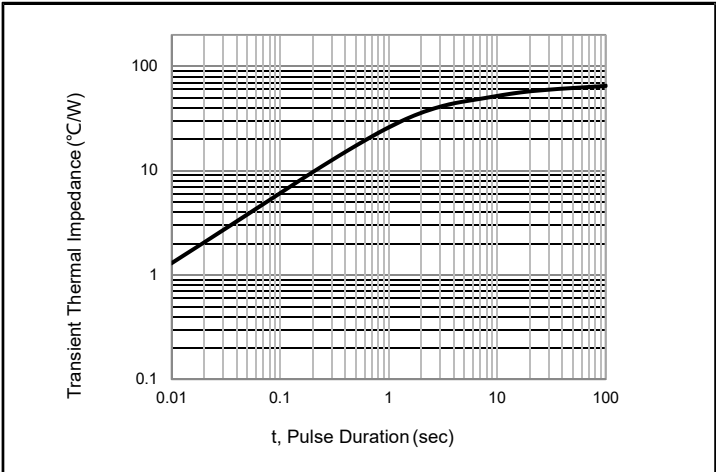
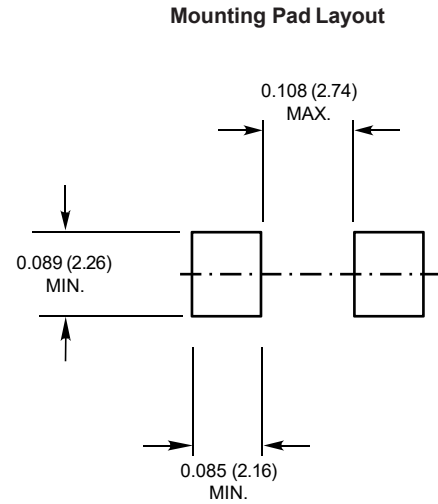
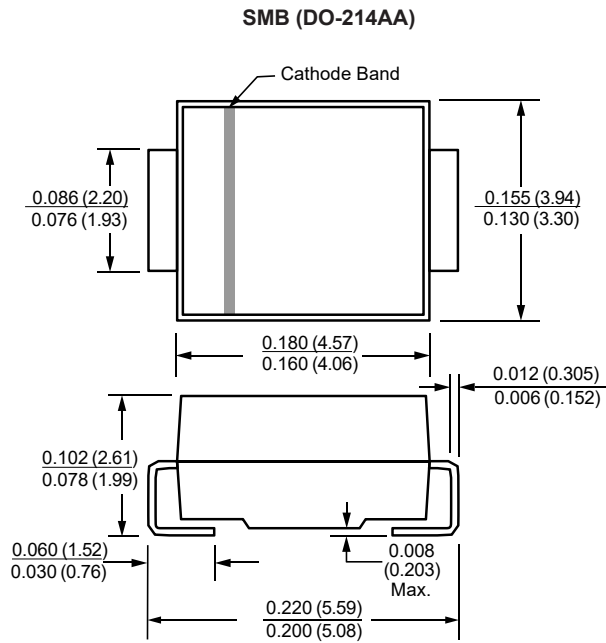
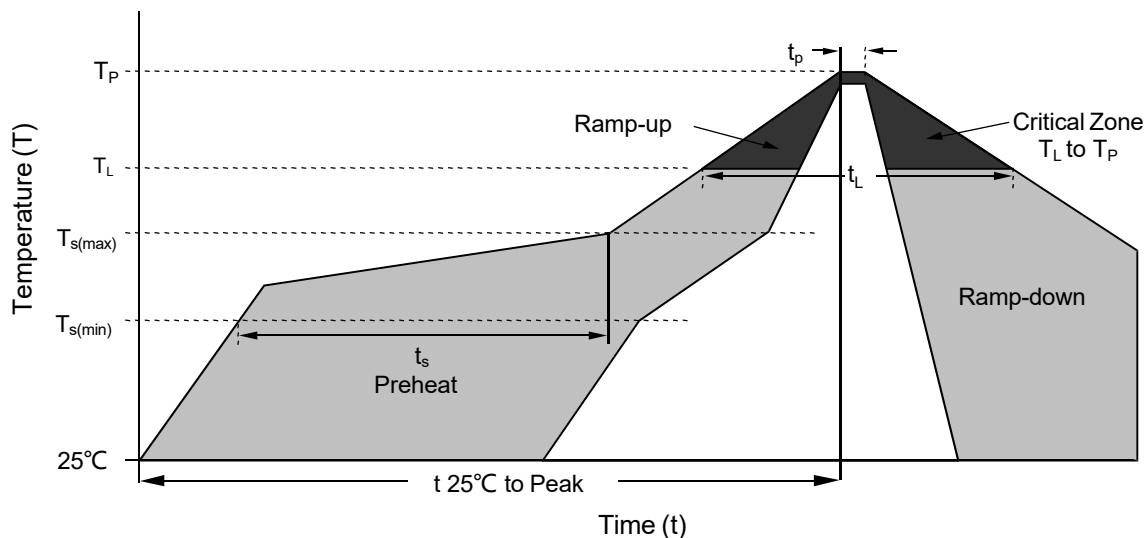


Fig. 6 - Typical Transient Thermal Impedance

Package Outline Dimensions in inches (millimeters)

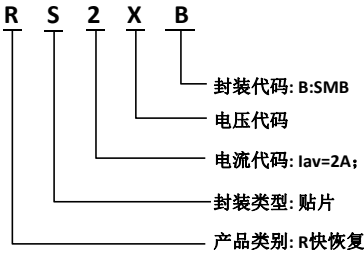


Soldering Parameters

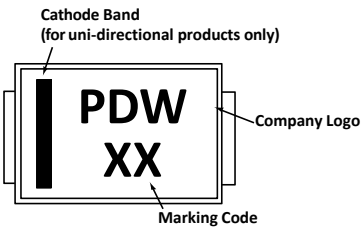


Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Time (t_L)	60 – 150 secs
Peak Temperature (T_P)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 secs
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (t)		8 minutes Max.
Do not exceed		260°C

Part Numbering System



Part Marking System



Summary of Packing Options

Package	Packing Description	Packing Quantity
SMB	Tape/Reel, 13" reel	3000

Tape and Reel Specification

