S2AB THRU S2MB

2.0A General Purpose Rectifier

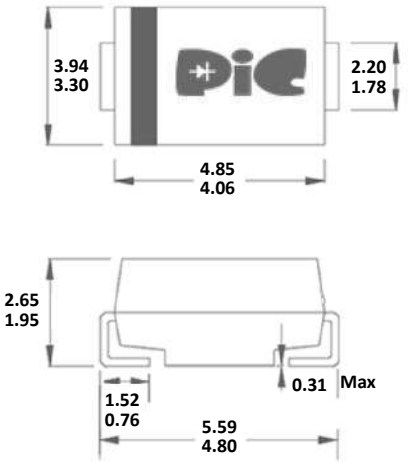
Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds at terminals
- Glass passivated chip junction

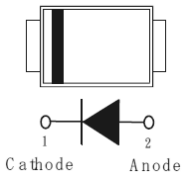
Mechanical Data

- Case: JEDEC DO-214AA 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

SMB



Dimensions in inches and millimeters



Maximum Ratings & Electrical Characteristic

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	S2AB	S2BB	S2DB	S2GB	S2JB	S2KB	S2MB	UNITS
Marking Code	-	S2AB	S2BB	S2DB	S2GB	S2JB	S2KB	S2MB	-
Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
DC Blocking Voltage	V_R	50	100	200	400	600	800	1000	Volts
Average Forward Rectified Current	$I_{F(AV)}$	2.0							Amps
Peak Forward Surge Current: 8.3ms single half sine -wave superimposed on rated load	I_{FSM}	50							Amps
Forward Voltage at 2.0A	V_F	1.15							Volts
DC Reverse Current at Rated DC Blocking Voltage T_J=25 °C	I_R	5							μA
Typical Junction Capacitance (NOTE1)	C_J	15							pF
Typical thermal Resistance (NOTE2)	$R_{\Theta JA}$	75							°C/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150							°C

Notes:

(1)Measured at 1MHZ and applied reverse voltage of 4.0V D.C.

(2)P.C.B. mounted with 0.2x0.2”(5.0x5.0mm) copper pad areas

Rating and Characteristics Curves

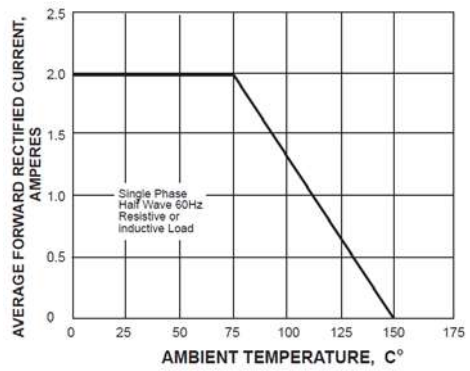


Fig. 1 Forward Current Derating Curve

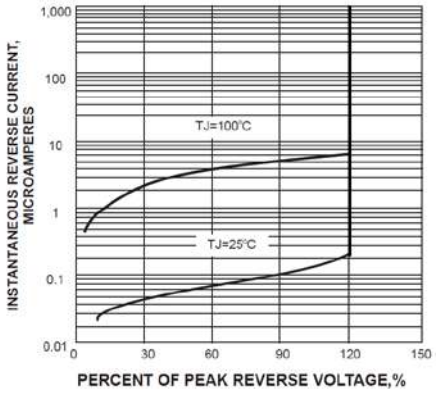


Fig. 2 Typical Reverse Characteristics

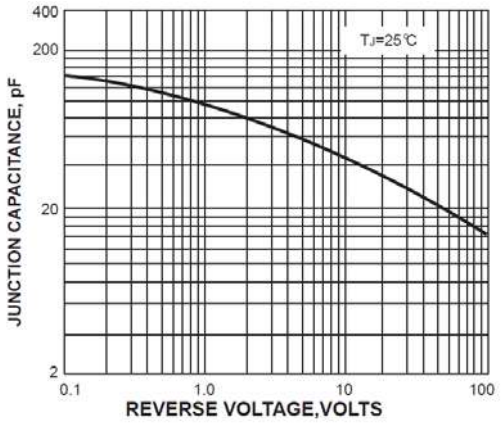


Fig. 3 Typical Junction Capacitance

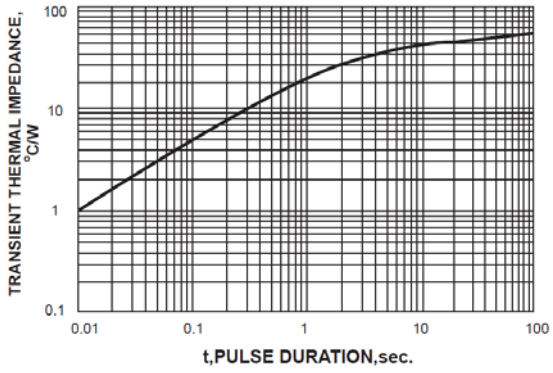


Fig. 4 Typical Transient Thermal Impedance

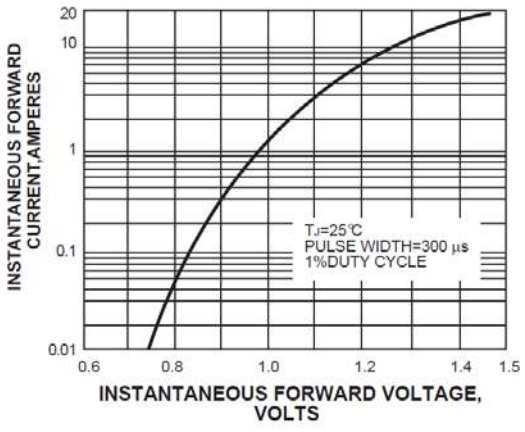


Fig. 5 Typical Instantaneous Forward Characteristics

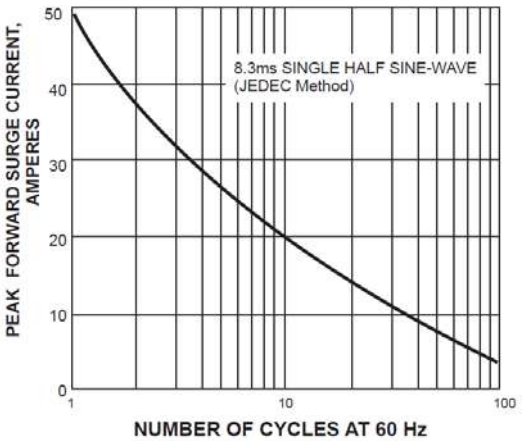
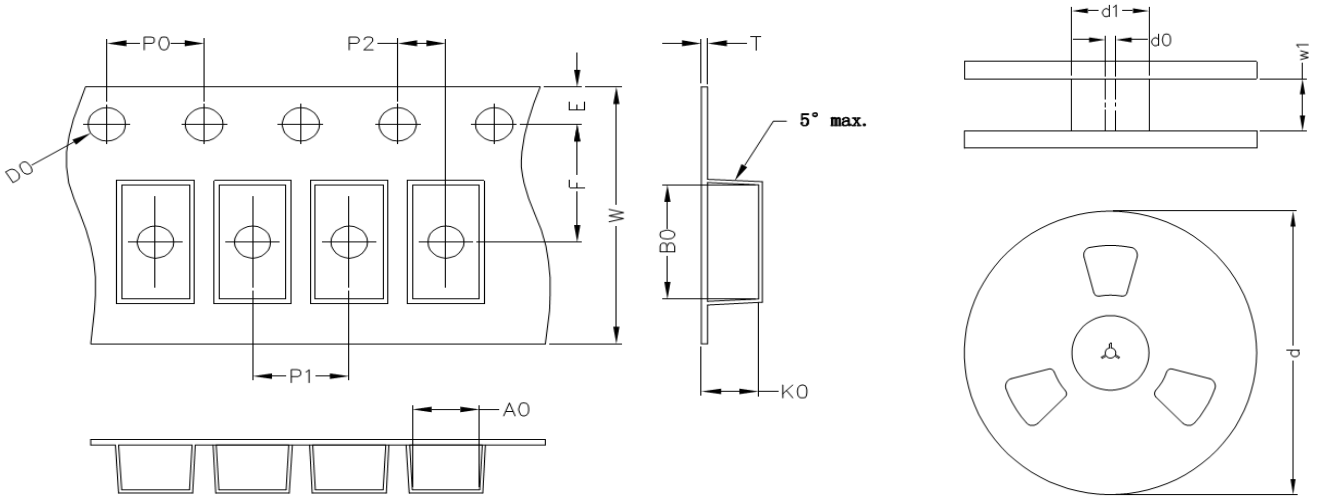


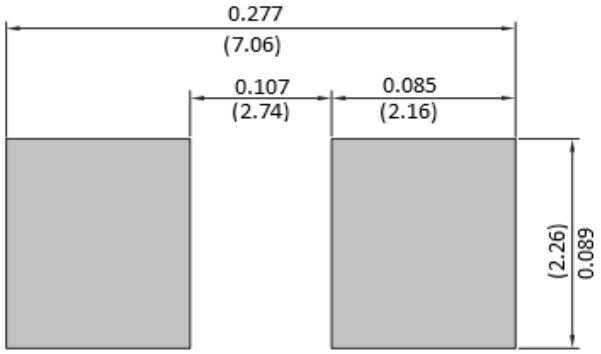
Fig. 6 Max. Non Repetitive Peak Forward Surge Current

Packaging Specifications

Package	A0 (mm)	B0 (mm)	K0 (mm)	D0 (mm)	E (mm)	F (mm)	P0 (mm)	P1 (mm)	P2 (mm)	T (mm)	W (mm)
SMA	2.8±0.1	5.33±0.1	2.36±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	4.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMB	3.8±0.1	5.40±0.1	2.45±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	8.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMC	6.05±0.1	8.31±0.1	2.54±0.1	1.55±0.1	1.75±0.1	7.50±0.1	4.0±0.1	8.0±0.05	2±0.1	0.25±0.1	12±0.1



Suggested Pad Layout



Package	D1 (mm)	D0 (mm)	W1 (mm)	D (mm)
SMA	75	13.5	13.5	330
SMB	75	13.5	13.5	330
SMC	75	13.5	17.0	330

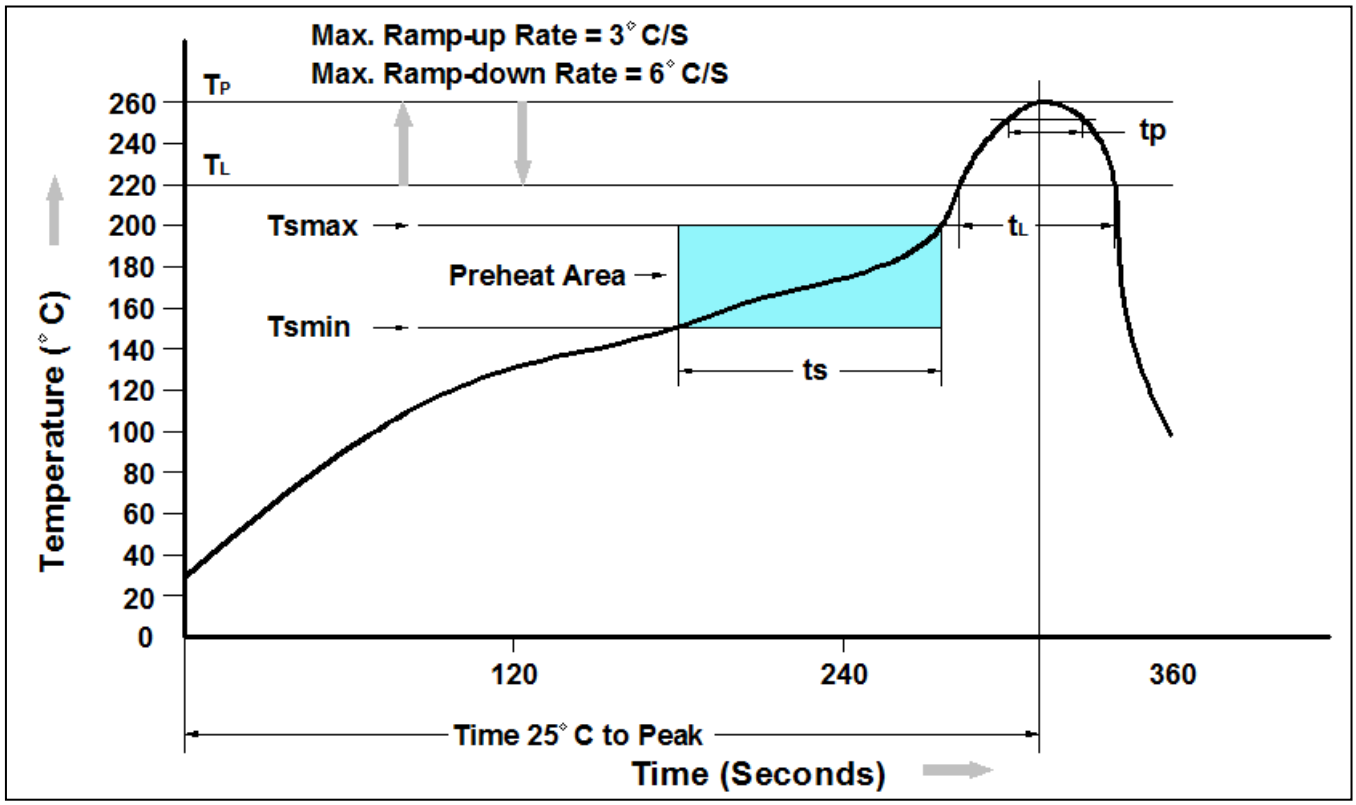
NOTE：The tolerance of reel is ±2mm

Unit: inch (mm)

Ordering Information

Part Number	Description	Quantity
S2AB~S2MB	SMB Reel	3000 pcs

Recommand IR Reflow Soldering Thermal Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (Tsmin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (Tsmin to Tsmax)	60-120 seconds
Average Ramp-up Rate (tL to tP)	3°C/second max.
Liquidous Temperature (TL)	217°C
Time (tL) Maintained Above (TL)	60 – 150 seconds
Peak Temperature	260°C +0°C / -5°C
Time (tP) within 5°C of actual Peak Temperature	30 seconds
Ramp-down Rate (TP to TL)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

DISCLAIMER

- The information in this document and any product described herein are subject to change without notice and should not be construed as a commitment by Paceleader, Paceleader reserve the right to make changes to the information in this document.

- Though Paceleader make effort to improve product quality and reliability, Product can malfunction and fail due to their inherent electrical sensitivity and vulnerability to physical stress, it is the responsibility of the customer, when utilizing Paceleader products, to comply with the standards of safety in making a safe design for entire system and to avoid situation in which a malfunction or failure., In developing a new designs, customer should ensure that the device which shown in this documents are used within specified operating ranges.

- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by Paceleader for any infringements of patents or other rights of the third parties which may result from its use.