



RS3AB THRU RS3MB

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

3.0 Ampere

Features



- Plastic package has underwrites laboratory flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Fast switching for high efficiency
- Glass passivated chip junction
- High temperature soldering 250°C/10 second at terminals



DO-214AA (SMB J-Bend)

Mechanical Data

- Case: JEDED DO-214AA molded plastic over glass passivated chip
- Terminals: Solder plated, Solderable per MIL-STD-750, method 2026
- Polarity: Laser band denote cathode band
- Weight: 0.003ounce, 0.093 gram

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 derate current by 20%

TYPE NUMBER		SYMBOL S	RS 3AB	RS 3BB	RS 3DB	RS 3GB	RS 3JB	RS 3KB	RS 3MB	UNITS
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _L =100°C		I _(AV)	3.0							Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)		I _{FSM}	80							Amps
Maximum Instantaneous Forward Voltage @ 3.0A		V _F	1.30							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A = 25°C	I _R	5.0							μA
	T _A = 125°C		50							
Typical Reverse Recovery Time ^(Note 3)		T _{RR}	150				250	500		nS
Typical Junction Capacitance ^(Note 1)		C _J	20				17			pF
Typical Thermal Resistance ^(Note 2)		R _{θJA}	55							°C/W
		R _{θJL}	18							
Operating Junction Temperature Range		T _J	-55 to +150							°C
Storage Temperature Range		T _{STG}	-55 to +150							°C

Notes:

- Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
- Thermal resistance from Junction to ambient and from junction to lead mounted on PCB. with 0.3×0.3"(8.0 × 8.0mm) copper pad areas.
- Reverse Recovery Test Conditions: $I_F = 0.5\text{mA}$, $I_R = 1.0\text{mA}$, $I_{RR} = 0.25\text{A}$.



SURFACE MOUNT FAST SWITCHING RECTIFIER

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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

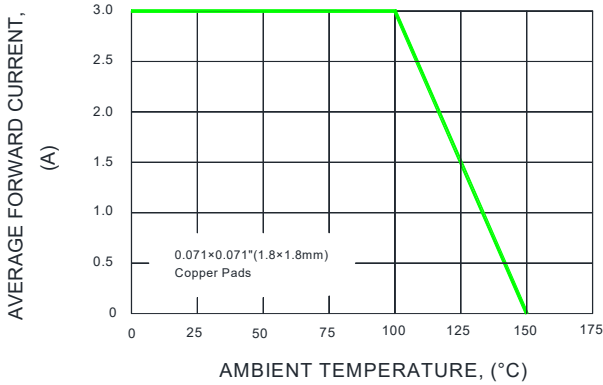


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

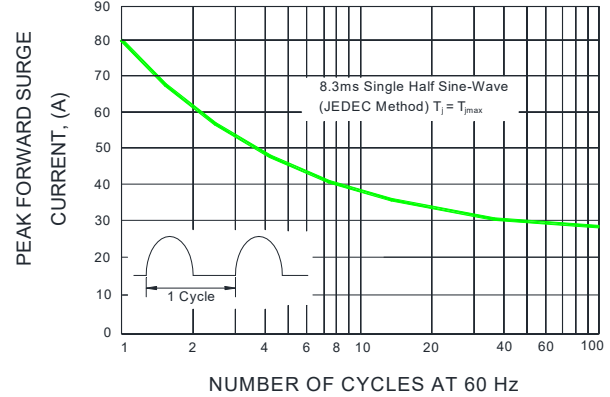


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

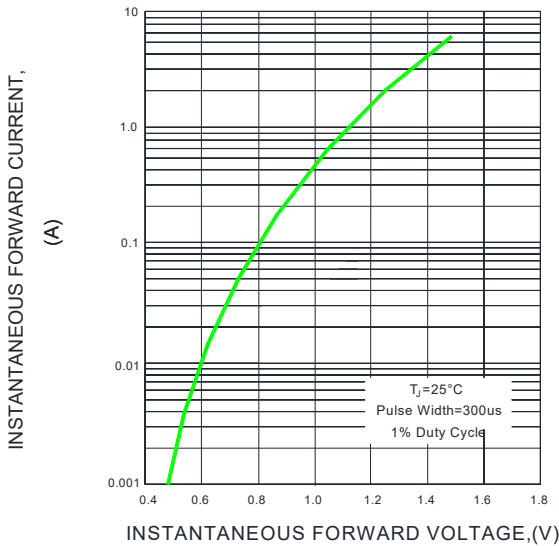


FIG.4-TYPICAL REVERSE CHARACTERISTICS

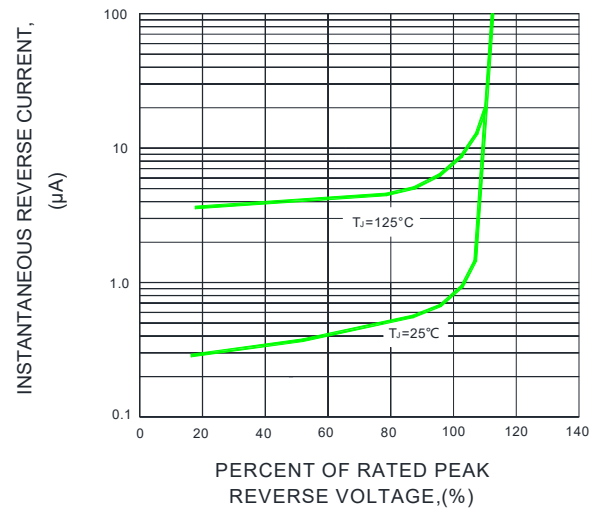


FIG.5-TYPICAL JUNCTION CAPACITANCE

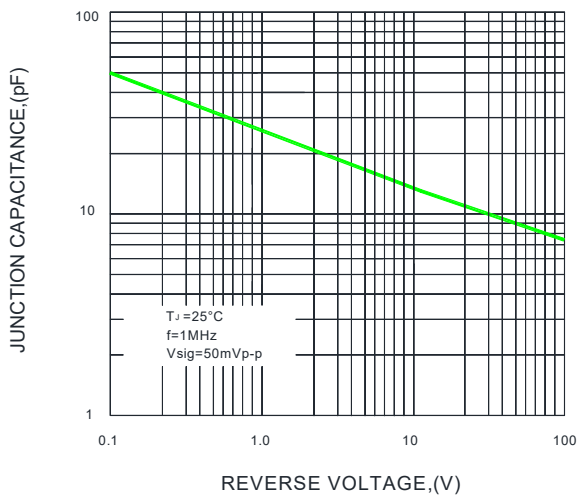
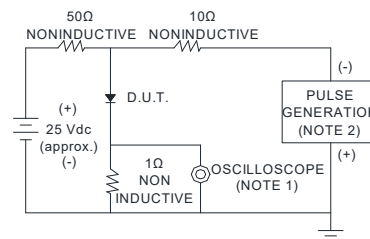
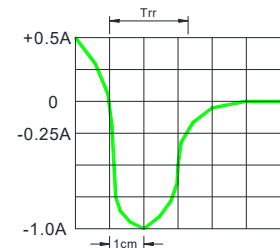


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES : 1.Rise Time=7ns max. Input Impedance= 1 magohm. 22pF
2.Rise time=10ns max. Source Impedance= 50 ohms





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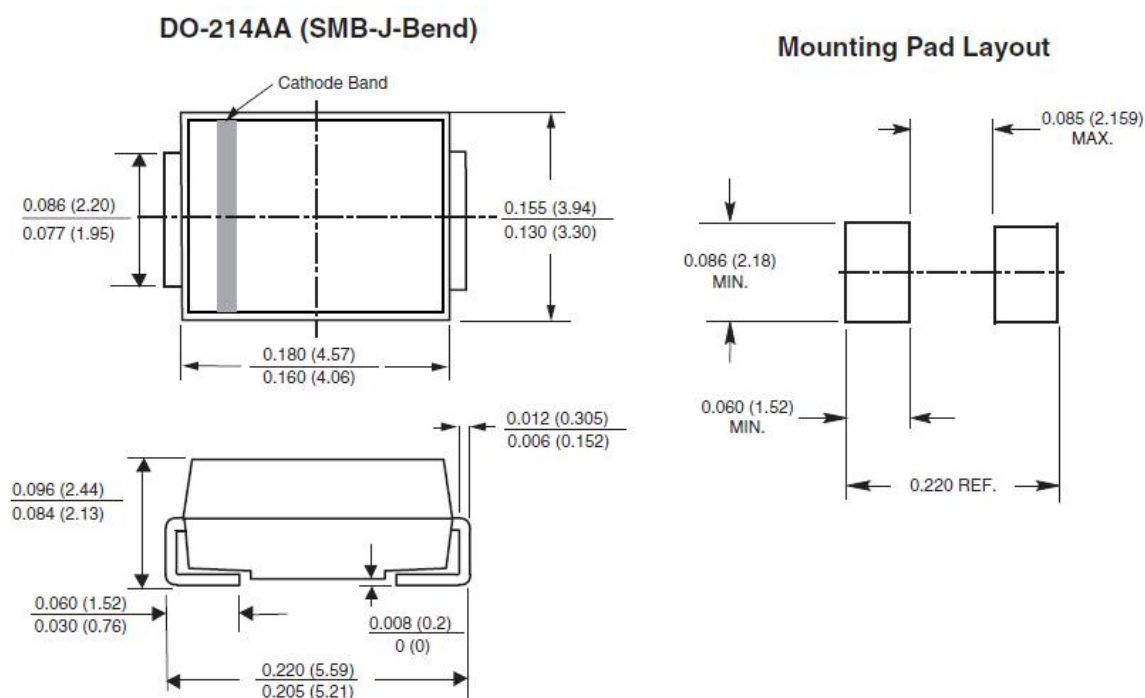
VOLTAGE RANGE

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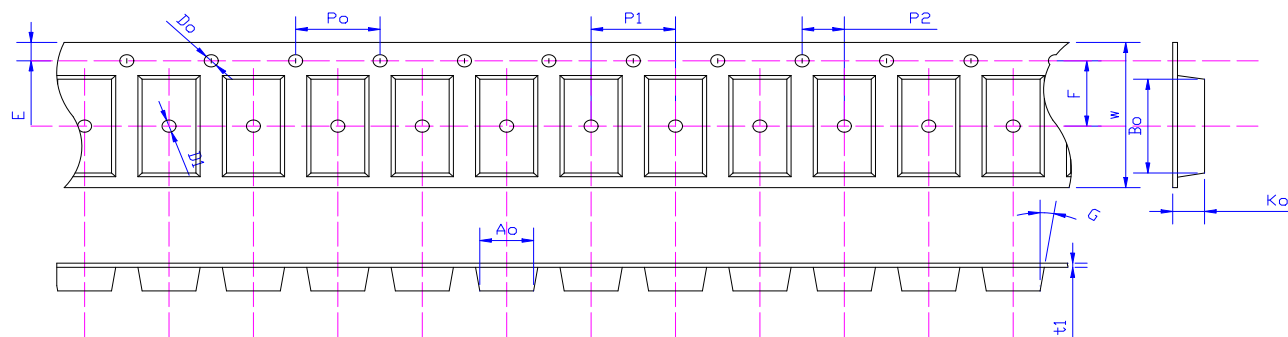
CURRENT

3.0 Ampere

Package Outline Dimensions in inches (millimeters)



Package Reel Information



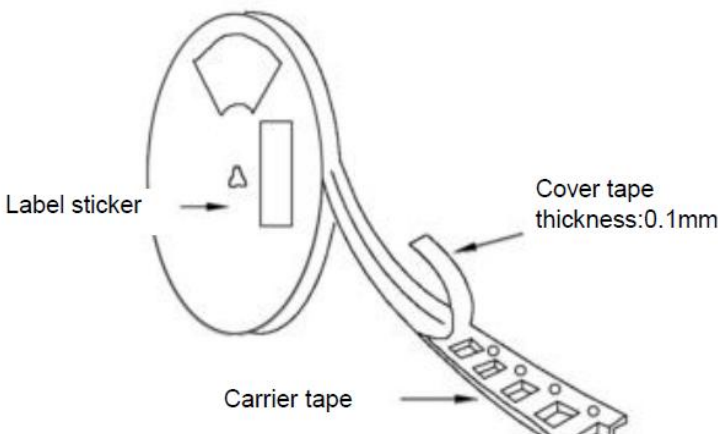
Specifications	A_o	B_o	K_o	P_o	W	t_1
SMB	3.77 ± 0.10	5.70 ± 0.10	2.67 ± 0.10	4.00 ± 0.1	12.0 ± 0.05	0.23 ± 0.02



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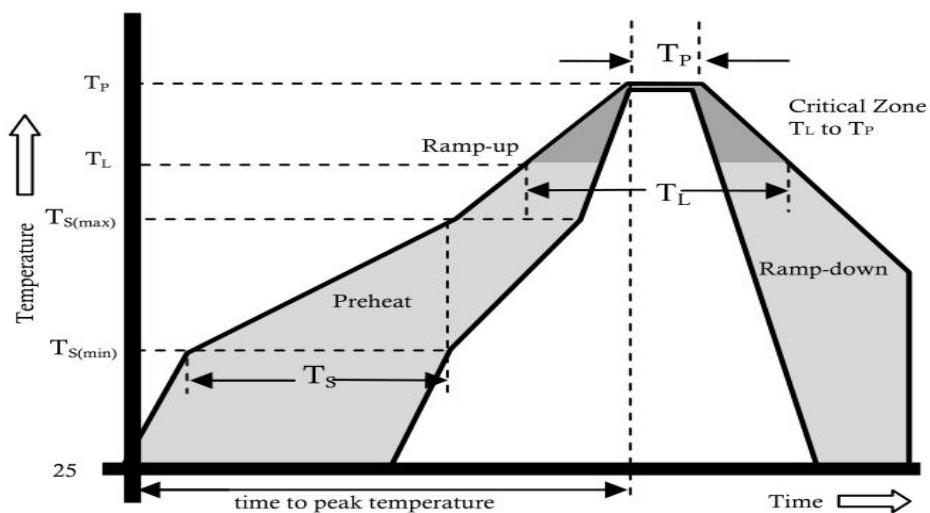
DEVICE TYPE	Tape Width	13"Reel			07"Reel			
		Q'TY/REEL(pcs)	BOX/CARTOON	Q'TY/CARTON (pcs)	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOON	Q'TY/CARTON (pcs)
SMB	12mm	3000	8	48000	NA	NA	NA	NA

Marking code

Type number	Marking code
RS3AB	RS3A
RS3BB	RS3B
RS3DB	RS3D
RS3GB	RS3G
RS3JB	RS3J
RS3KB	RS3K
RS3MB	RS3M



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_L)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C



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