



RS3AB THRU RS3MB

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Ampere

SURFACE MOUNT FAST RECOVERY RECTIFIER

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Open Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C / 10 seconds at terminals
- ◆ Glass passivated chip junction

Mechanical Data

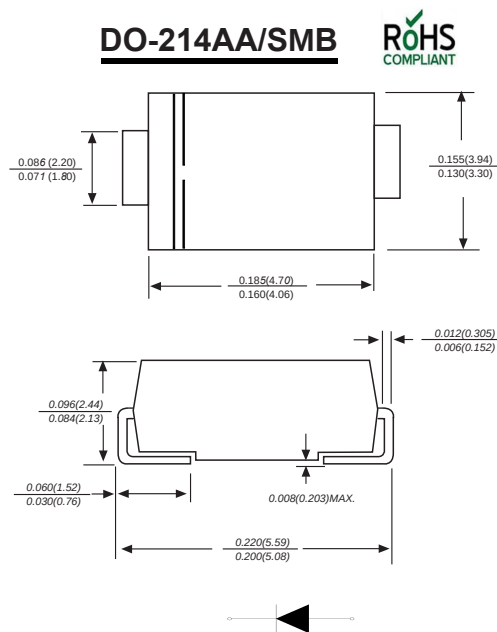
Case : JEDEC DO-214AA/SMB Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.003 ounce, 0.098grams



Dimensions in inches and (millimeters)

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 current derate by 20%.

Parameter	SYMBOLS	MDD RS3AB	MDD RS3BB	MDD RS3DB	MDD RS3GB	MDD RS3JB	MDD RS3KB	MDD RS3MB	UNITS
Marking Code									
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)	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	90							A
Maximum instantaneous forward voltage at 3.0A	V _F	1.3							V
Maximum DC reverse current T _A =25℃ at rated DC blocking voltage T _A =125℃	I _R	5 100							μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	150				250	500		ns
Typical junction capacitance (NOTE 2)	C _J	40							pF
Typical thermal resistance (NOTE 3)	R _{θJA}	48							℃/W
	R _{θJC}	16							
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							℃

Note: 1. Reverse recovery condition $I_F=0.5A, I_R=1.0A, t_{rr}=0.25A$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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



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Ratings And Characteristic Curves

Fig.1 Maximum Average Forward Current Rating

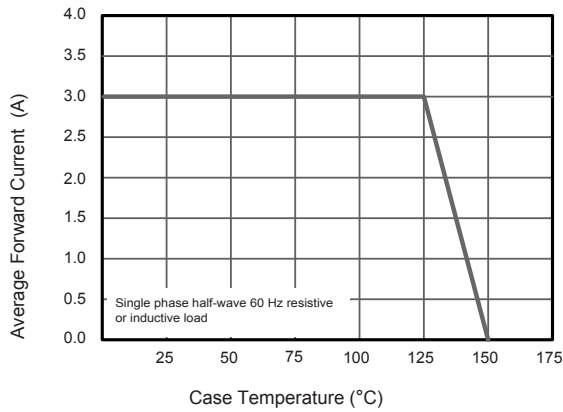


Fig.2 Typical Reverse Characteristics

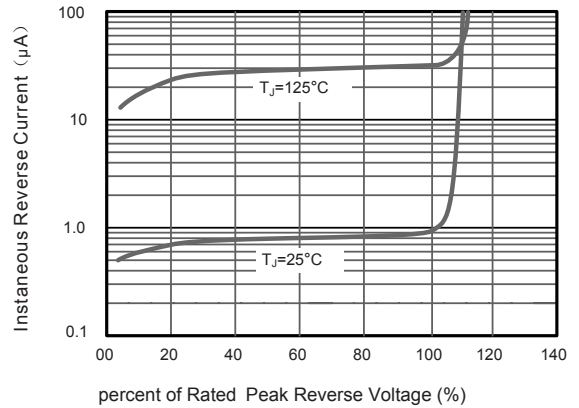


Fig.3 Typical Instantaneous Forward Characteristics $T_J=25^{\circ}$

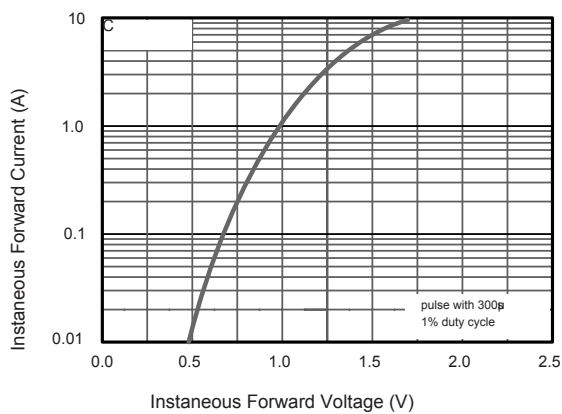


Fig.4 Typical Junction Capacitance

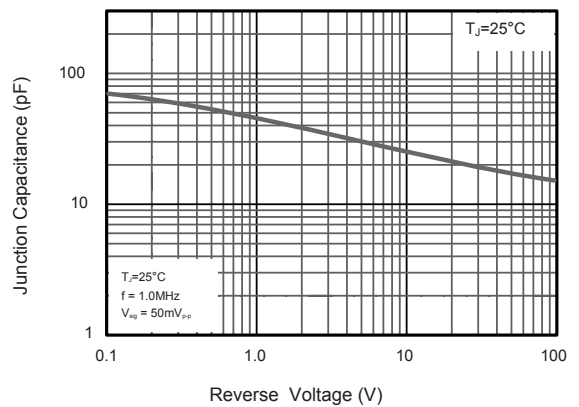
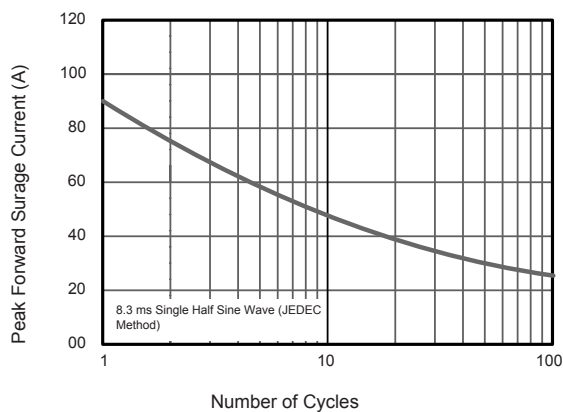


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



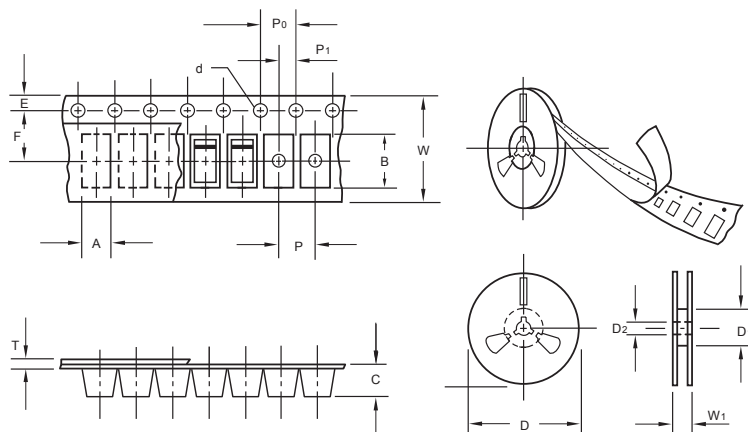
The curve above is for reference only.



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Packing information



unit:mm

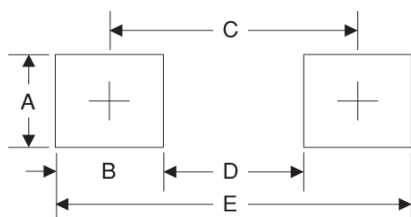
Item	Symbol	Tolerance	SMB
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.41
Carrier depth	C	0.1	2.42
Sprocket hole	d	0.05	1.5.0
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D ₁	min	50.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.55
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	12.00
Reel width	W ₁	1.0	12.30

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMB	13"	3,000	4.0	6,000	190*190*41	330	365*365*360	48,000	14.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.8	0.110
B	2.4	0.094
C	4.6	0.181
D	2.2	0.086
E	7.0	0.276