



SURFACE MOUNT FAST RECOVERY RECTIFIER RS3AB ~ RS3MB

Surface Mount Fast Recovery Rectifier

Features

- Glass passivated chip junction
- Built in strain relief
- Fast recovery time for high efficiency
- High temperature soldering guaranteed: 250°C/10 seconds.
- RoHS and REACH Compliance



DO-214AA (SMB)



RoHS
COMPLIANT

Mechanical Data

Case:	Transfer molded plastic
Polarity:	Color band denotes cathode end
Epoxy:	UL 94V-0 rate flame retardant
Lead:	Solder plated, solderable per MIL-STD-750 method 2026
Weight:	0.09 gram – DO-214AA (SMB)

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

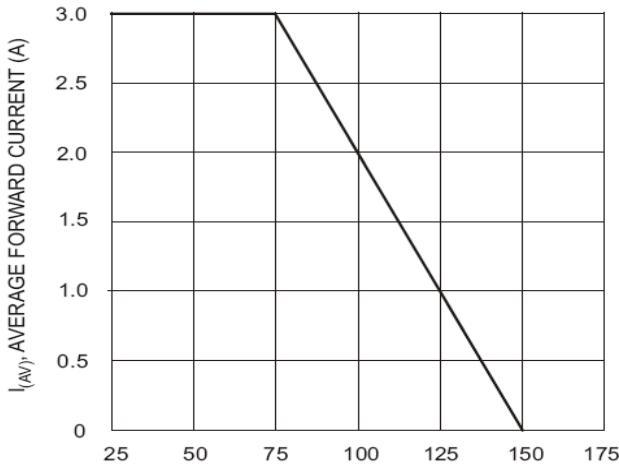
Symbol	Description	RS3AB	RS3BB	RS3DB	RS3GB	RS3JB	RS3KB	RS3MB	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
I(AV)	Max Average Forward Rectified Current	3.0							A	$T_L=75^{\circ}C$
IFSM	Peak Forward Surge Current	100							A	JEDEC method
TJ, TSTG	Operating and Storage Temperature Range	-55 to +150, -55 to +150							°C	
Rθ-JA	Typical Thermal Resistance	50							°C/W	Note 2
Rθ-JL		15								

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

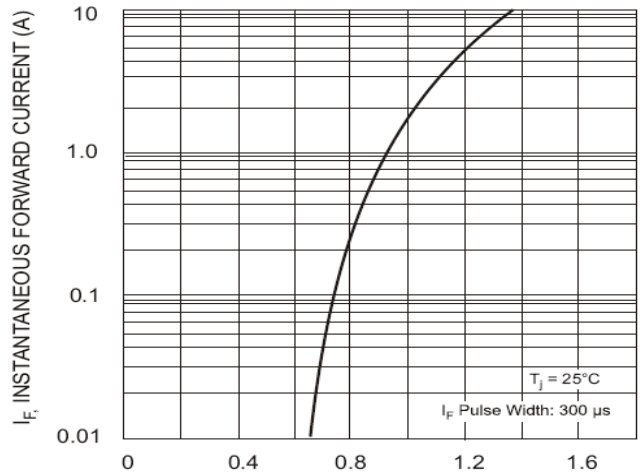
Symbol	Description	RS3AB	RS3BB	RS3DB	RS3GB	RS3JB	RS3KB	RS3MB	Unit	Conditions
V_F	Max Instantaneous Forward Voltage	1.3							V	3.0 A
I_R	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	$T_A=25^{\circ}C$
		250								$T_A=125^{\circ}C$
T_{RR}	Maximum reverse recovery time	150				250	500		nS	Note 1
C_J	Typical Junction Capacitance	60							pF	Measured at 1.0MHz / 4.0V

Note:

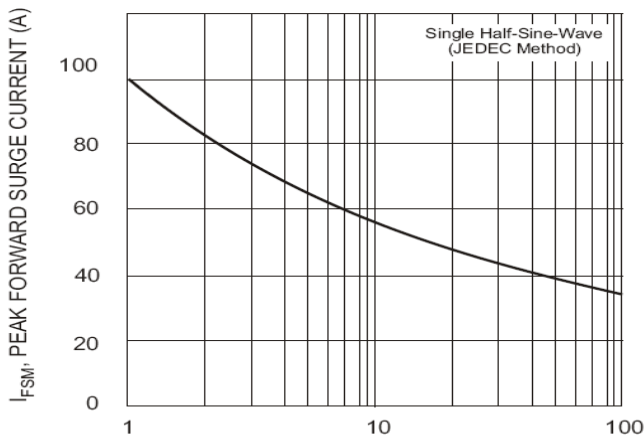
1. Reverse recovery test conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Typical Characteristics Curves


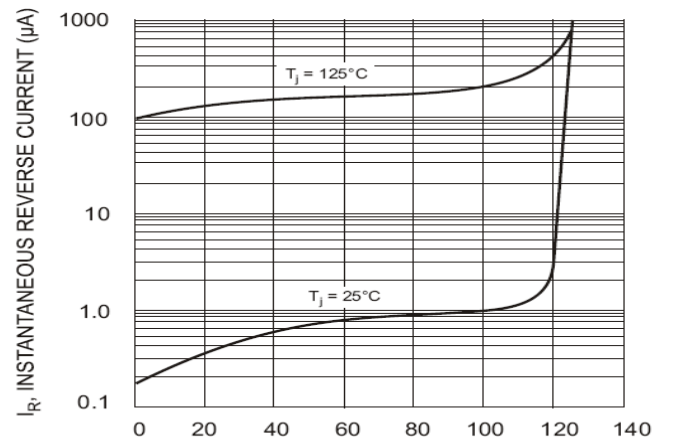
T_T , TERMINAL TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



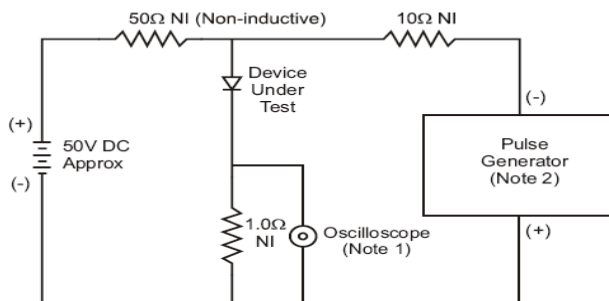
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz
Fig. 3 Forward Surge Current Derating Curve

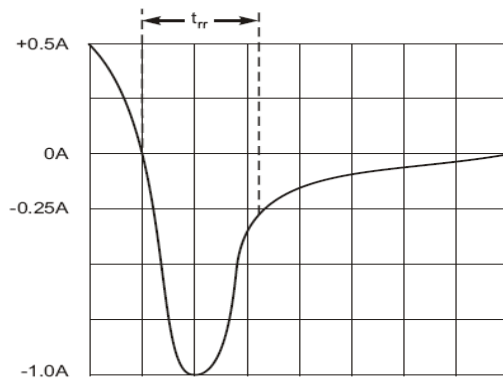


PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 4 Typical Reverse Characteristics

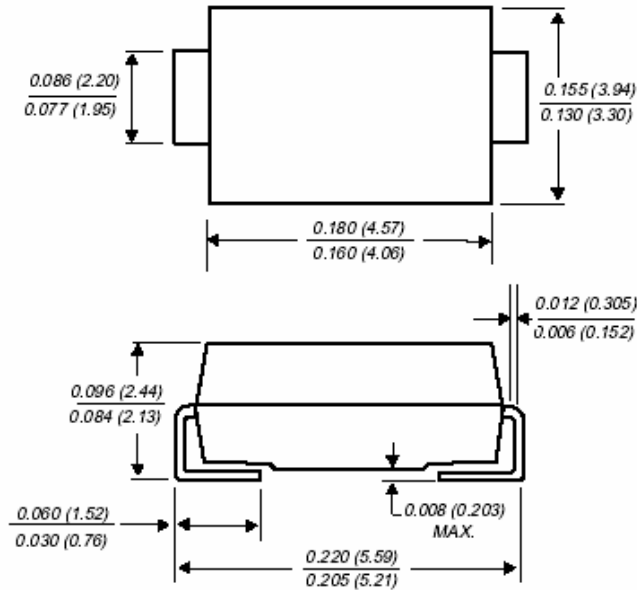


Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



Set time base for 50/100 ns/cm

Dimensions in inches (mm)*Dimensions in inches and (millimeters)***DO-214AA(SMB)****Contact us:****US HEADQUARTERS****MEI SEMI INC.****2902** Corvin Drive, Santa Clara, CA95051, USA

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