



SURFACE MOUNT FAST RECOVERY RECTIFIER

RS3A THRU RS3M

VOLTAGE RANGE
CURRENT

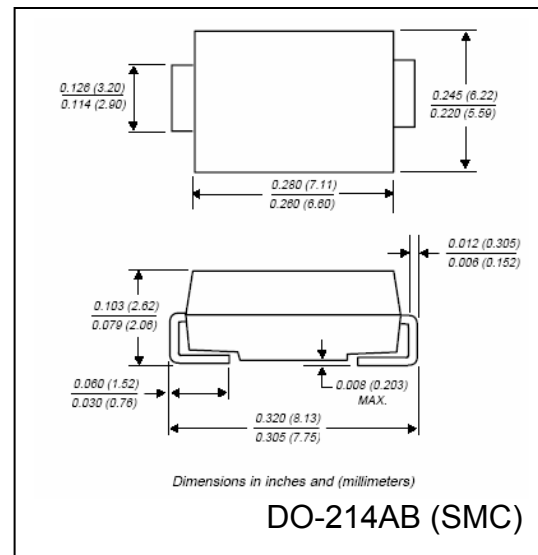
50 to 1000 Volts
3.0 Ampere

FEATURES

- Glass passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature soldering guaranteed:
250°C / 10 seconds at terminals

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounce, 0.25 gram – DO-214AB (SMC)



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%

	SYMBOLS	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNIT
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 $T_L = 75^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	100							Amps
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	I_R	10							μA
$T_A = 25^\circ\text{C}$		25							
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	t_{rr}	150				250	500		nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	60							pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
	$R_{\theta JL}$	15							
Operating Junction Temperature Range	T_J	(-55 to +150)							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)							$^\circ\text{C}$

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on PCB



RATINGS AND CHARACTERISTIC CURVES RS3A THRU RS3M

Fig. 1 – Forward Current Derating Curve

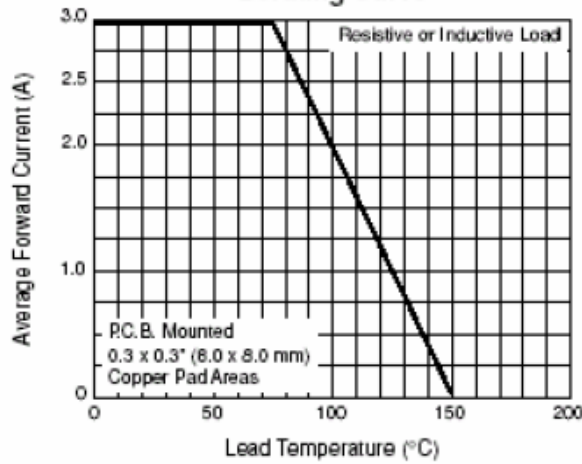


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

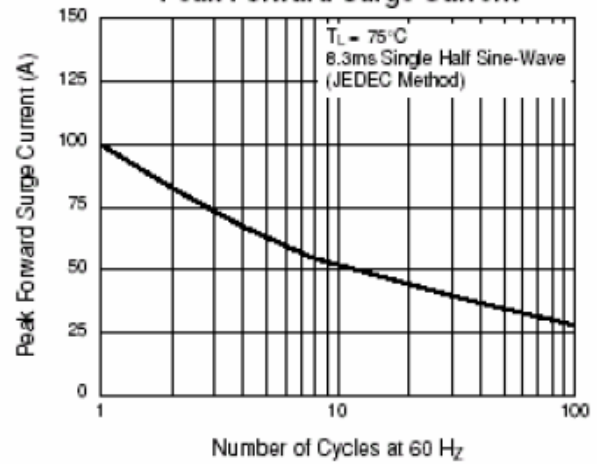


Fig. 3 – Typical Instantaneous Forward Characteristics

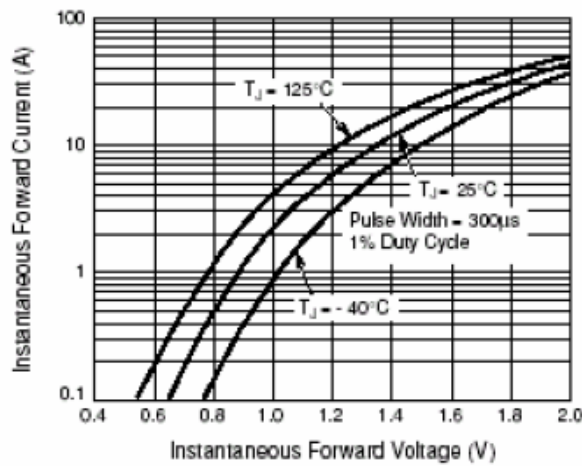


Fig. 4 – Typical Reverse Characteristics

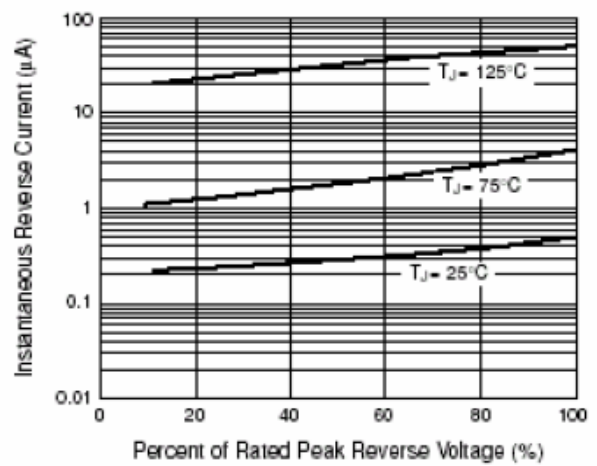


Fig. 5 – Typical Junction Capacitance

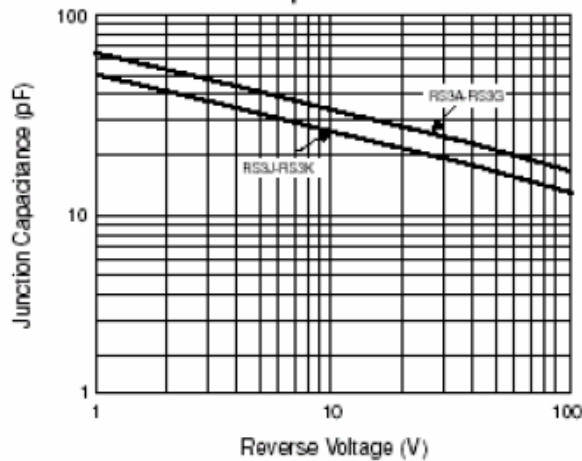


Fig. 6 – Typical Transient Thermal Impedance

