



RS3A THRU RS3M

SURFACE MOUNT FAST RECOVERY RECTIFIER

REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 3.0 AMPERE

FEATURES

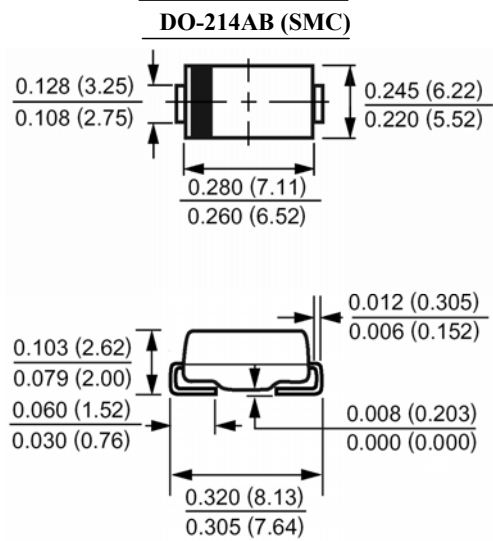
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Fast Recovery times for high efficiency
- Suffix "H" indicates Halogen-free parts, ex. RS3AH

MECHANICAL DATA

Case : Molded plastic, DO-214AB (SMC)

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

Polarity : Color band denotes cathode end



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, derate current by 20%.

Parameter	Symbols	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	Units	
Maximum Recerrent 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							Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100							Amp	
Maximum Forward Voltage at 3.0A	V_F	1.3							Volts	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	I_R	10.0 300							mAmp	
Typical Junction Capacitance (Note 1)	C_J	60							pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 10.0							°C/W	
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150				250		500		nS
Operating Junction Temperature Range	T_J	-65 to +150							°C	
Storage Temperature Range	T_{stg}	-65 to +150							°C	

- NOTES:
- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
 - 2- Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas
 - 3- Reverse Recovery Test Conditions: $I_F=5A$, $I_R=1A$, $I_{RR}=25A$.



RS3A THRU RS3M

SURFACE MOUNT FAST RECOVERY RECTIFIER

RATINGS AND CHARACTERISTIC CURVES

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

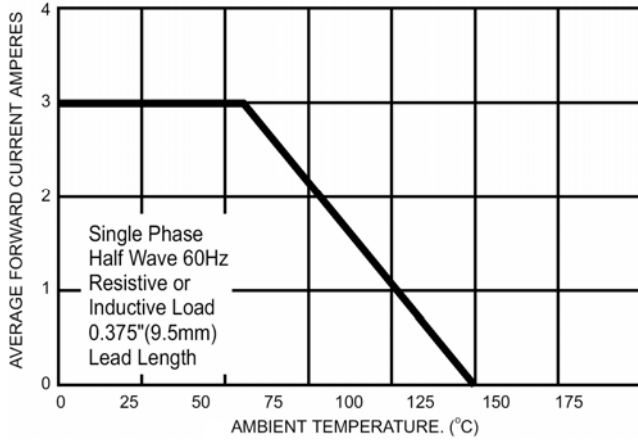


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

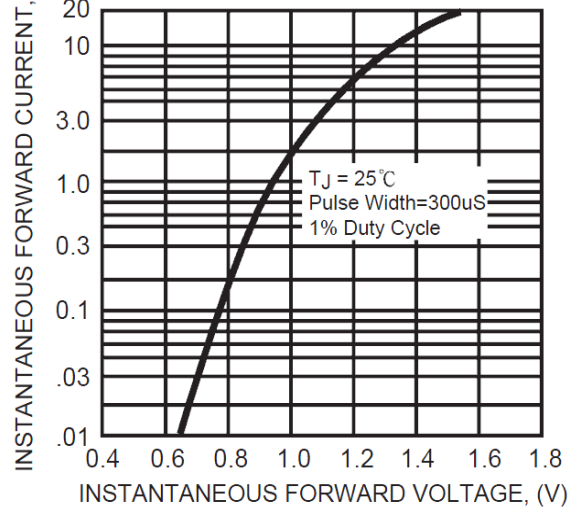


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

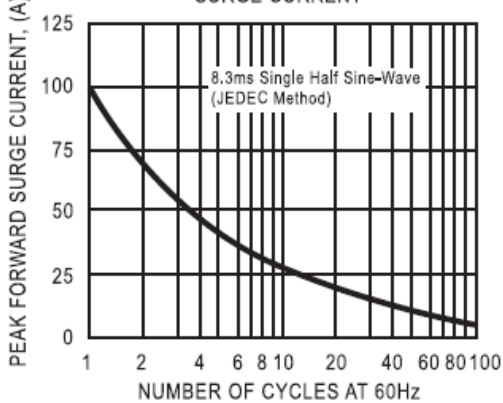


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

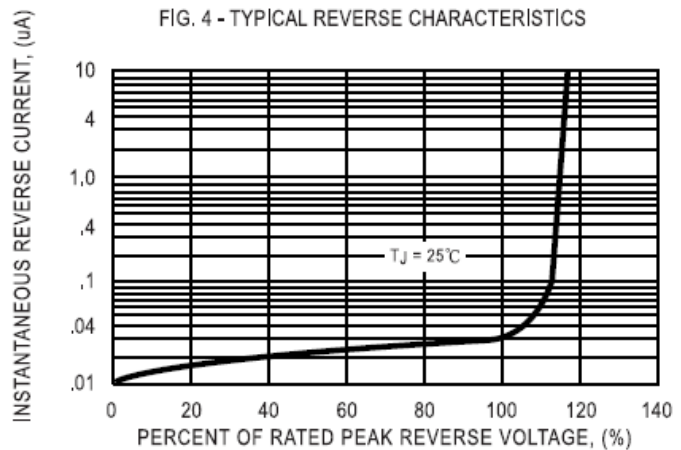


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

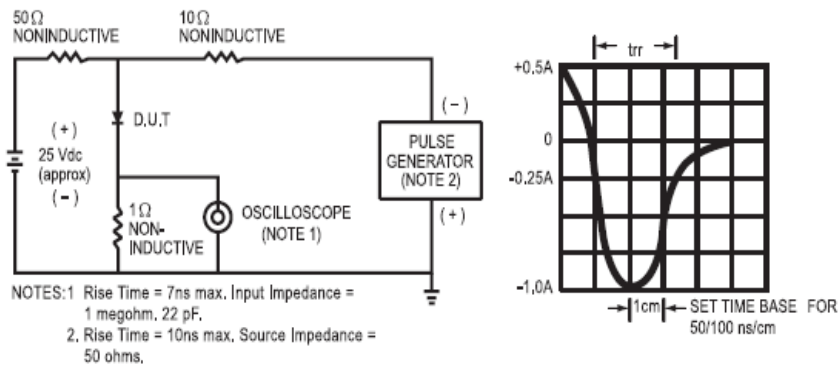


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

