

RS3A THRU RS3M SURFACE MOUNT FAST RECOVERY RECTIFIER

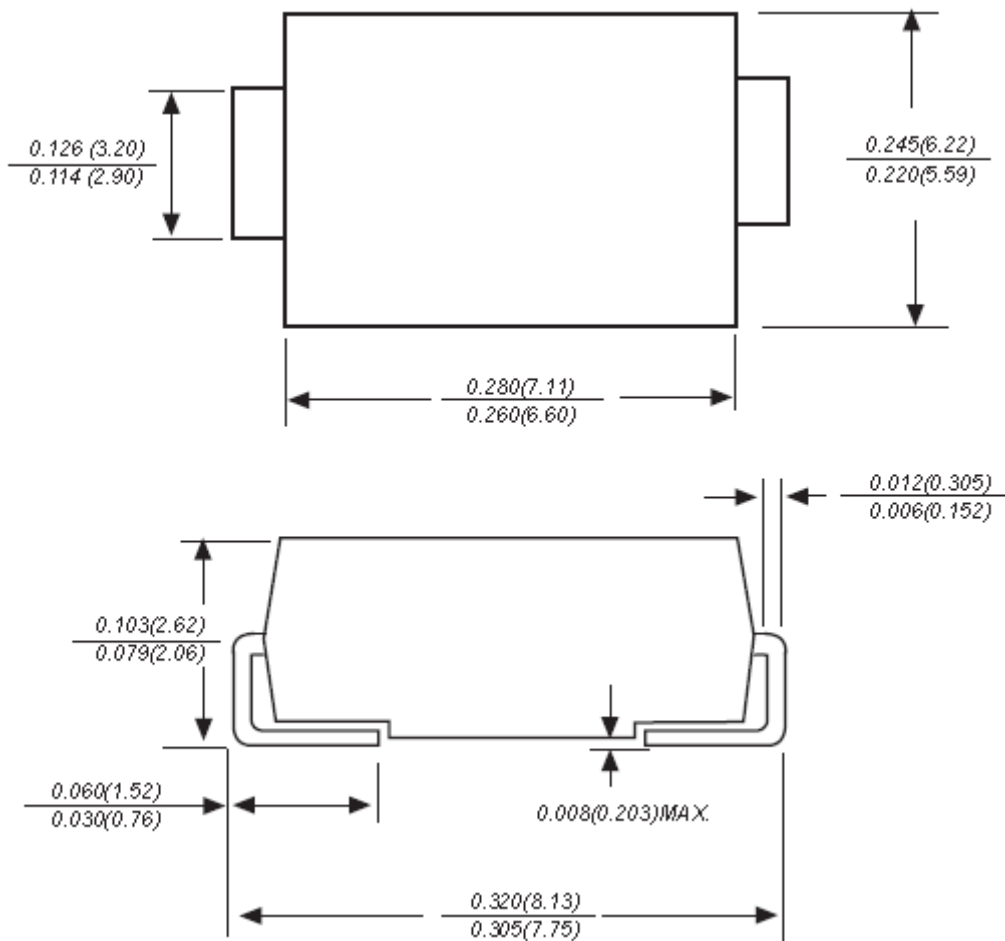
Features

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

Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solder plated, solderable per MIL-STD-202E method208C
- Polarity: Color band denotes cathode end

Mechanical Dimensions (In Inches/mm)



SMC

Marking Diagram:



Where XXXXX is YYWWL

RS3A	= Part Name
YY	= Year
WW	= Week
L	= Lot Number

Cautions : Molding resin
Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
RS3ATHRU RS3M	SMC	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

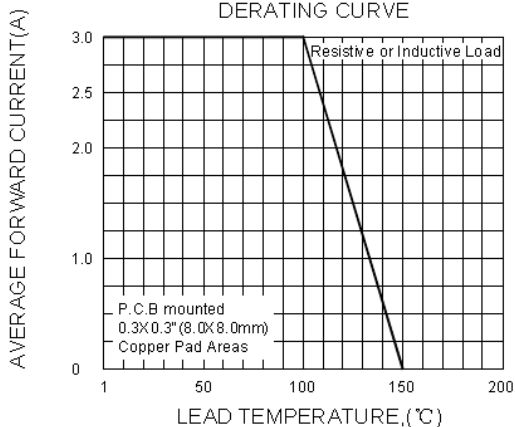
Absolute Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

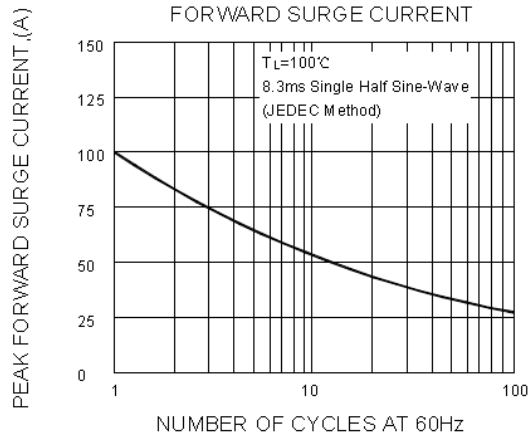
Characteristic	Symbol	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	Unit
Peak Repetitive Reverse Voltage DC Blocking Voltage	V_{RRM} V_{DC}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum Average Forward Rectified Current @ $T_L = 100^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A
Max Instantaneous Forward Voltage at 3 A	V_F	1.3							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	I_{RM}	10 250							μA
Maximum Reverse Recovery Time(Note 1)	T_{rr}	150				250	500		ns
Typical Junction Capacitance(Note 2)	C_J	60							pF
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	50 15							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

- Note: 1. Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$
 2. Measured at 1MHz and applied reverse voltage of 4V D.C
 3. Thermal resistance from Junction to ambient and from junction to lead mounted on PCB with 0.3x0.3" (8.0 × 8.0mm) copper pad areas

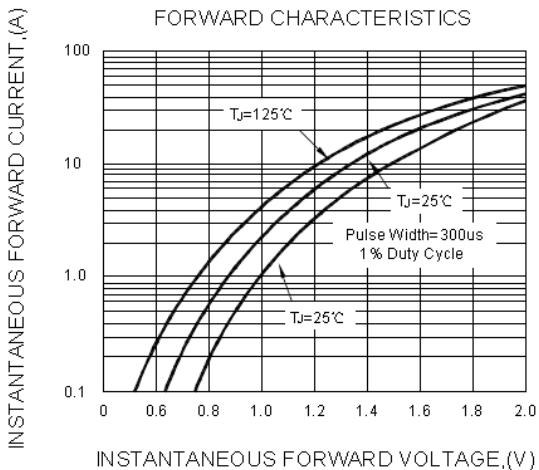
**FIG. 1-FORWARD CURRENT
DERATING CURVE**



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



**FIG. 3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS**



**FIG. 4-TYPICAL REVERSE
CHARACTERISTICS**

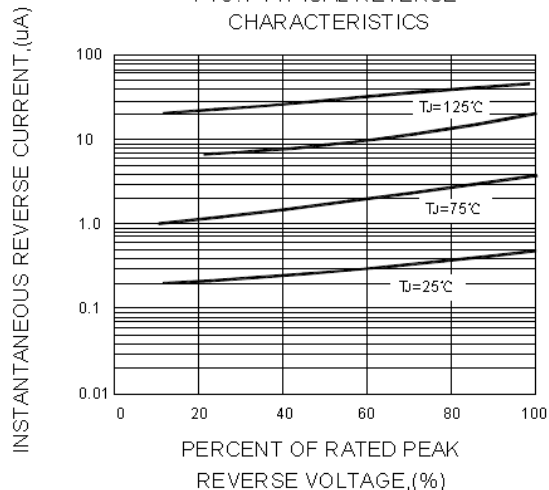


FIG. 5-TYPICAL JUNCTION CAPACITANCE

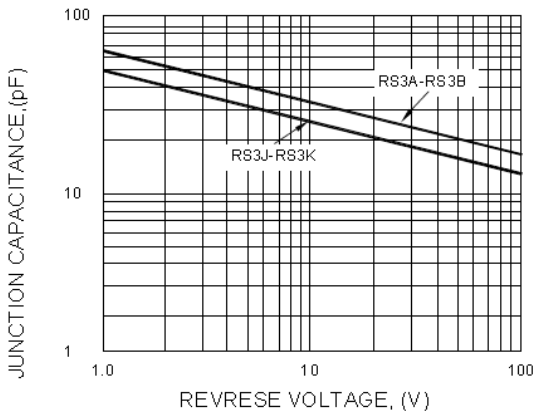
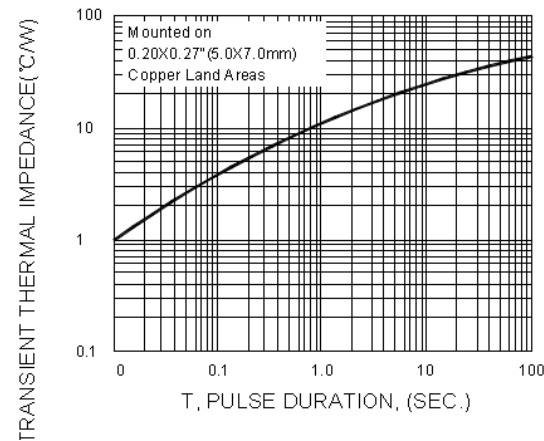


FIG. 6-TRANSIENT THERMAL IMPEDANCE





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