

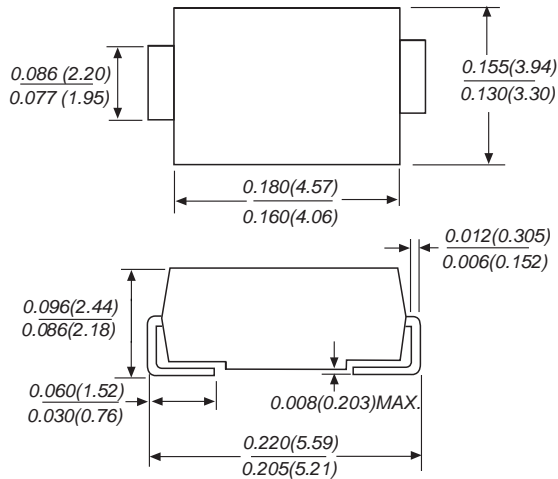
RS3A THRU RS3M

Fast Recovery Surface Mount Rectifiers

Voltage Range 50 to 1000 Volts Current 3.0 Amperes

SMB

DO-214AA



Dimensions in inches and (millimeters)

Features

- ◇ For surface mounted application
- ◇ Glass passivated junction chip
- ◇ Built-in strain relief, ideal for automated placement
- ◇ Plastic material used carries Underwriters Laboratory Classification 94V-O
- ◇ Fast switching for high efficiency
- ◇ High temperature soldering: 260°C /10 seconds at terminals

Mechanical Data

- ◇ Cases: Molded plastic
- ◇ Terminals: Solder plated
- ◇ Polarity: Indicated by cathode band
- ◇ Packing: 16mm tape per E1A STD RS-481
- ◇ Weight: 0.09 gram

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	RS 3A	RS 3B	RS 3D	RS 3G	RS 3J	RS 3K	RS 3M	Units
Maximum Recurrent 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 See Fig. 1 @ $T_L=75^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	1.3							V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	10 250							μA 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 (Note 3)	$R_{\theta_{JA}}$ $R_{\theta_{JL}}$	50.0 15.0							$^\circ\text{C}/\text{W}$ $^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

2. Measured at 1 MHz and Applied $V_R=4.0$ Volts

3. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.6"x0.6" (16 x 16 mm) Copper Pad Areas.

RS3A THRU RS3M

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

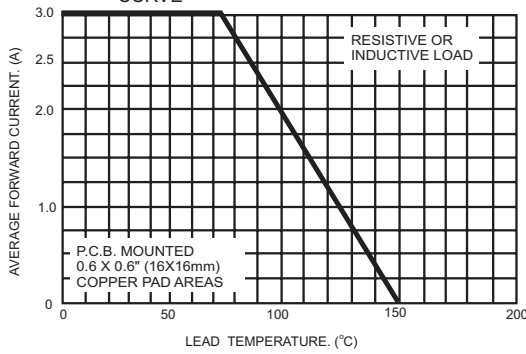


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

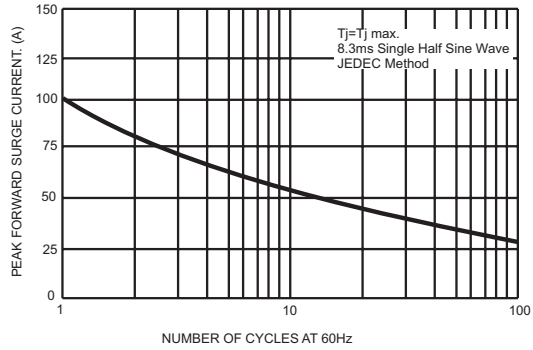


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

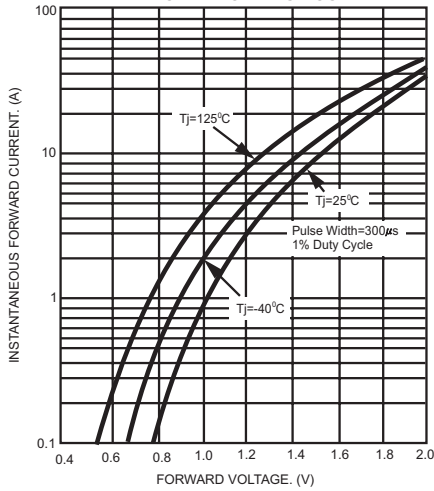


FIG.4- TYPICAL REVERSE CHARACTERISTICS

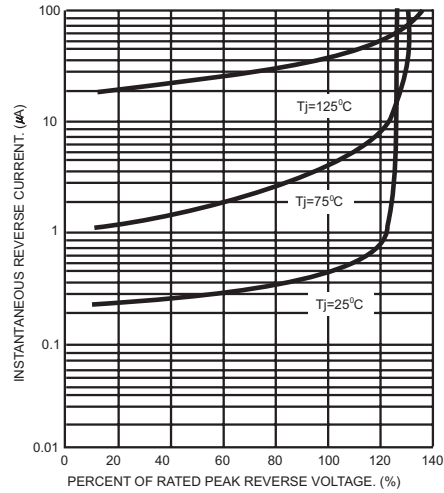


FIG.5- TYPICAL JUNCTION CAPACITANCE

