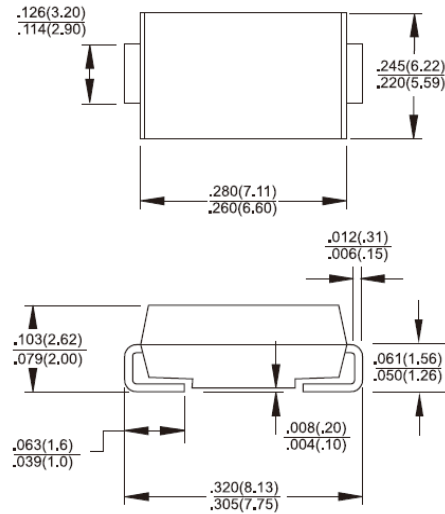




RS3A - RS3M 3.0 AMP. Surface Mount Fast Recovery Rectifiers

SMC/DO-214AB



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-0
- ✧ Fast switching for high efficiency
- ✧ High temperature soldering: 260°C / 10 seconds at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, Lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.21 grams

Dimensions in inches and (millimeters)

Marking Diagram



- RS3X = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

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	Unit
Maximum Repetitive 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 @ T _L =75°C	I _{F(AV)}	3							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 (Note 1) @ 3 A	V _F	1.3							V
Maximum Reverse Current @ Rated VR T _A =25 °C T _A =125 °C	I _R	10 250							uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	150				250	500		nS
Typical Junction Capacitance (Note 3)	C _j	60							pF
Typical Thermal Resistance	R _{θJA} R _{θJL}	50 15							°C/W
Operating Temperature Range	T _J	- 55 to + 150							°C
Storage Temperature Range	T _{STG}	- 55 to + 150							°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (RS3A THRU RS3M)

FIG.1 FORWARD CURRENT DERATING CURVE

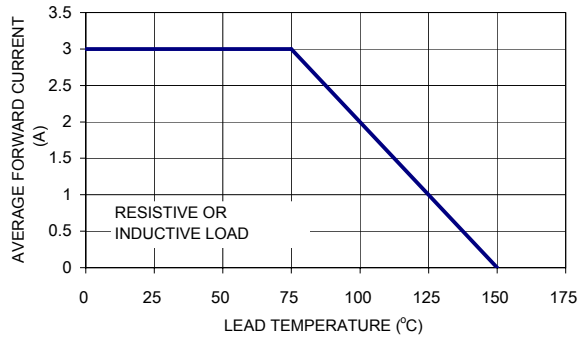


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

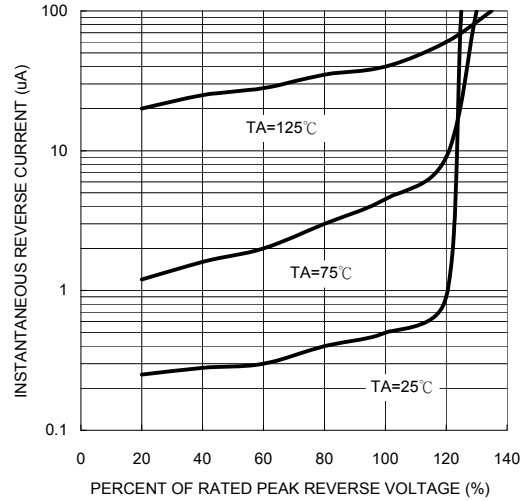


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

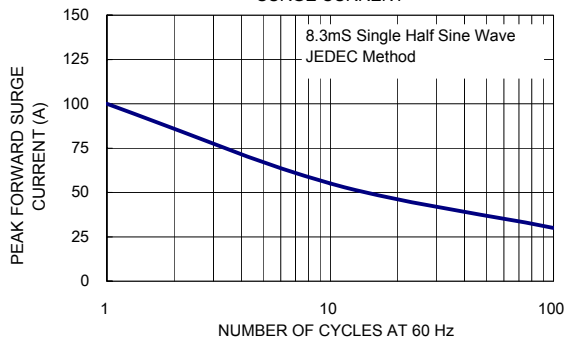


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

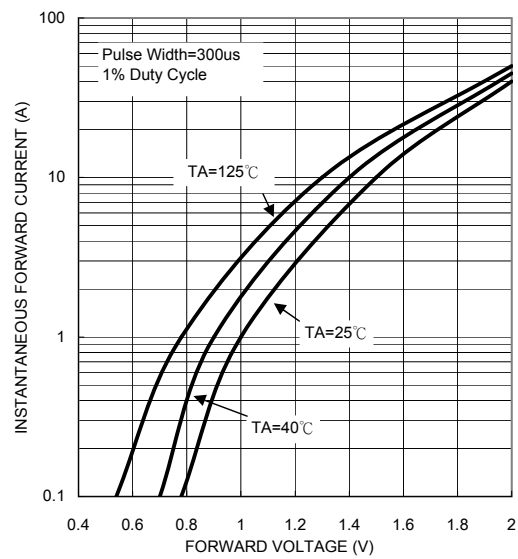


FIG. 4 TYPICAL JUNCTION CAPACITANCE

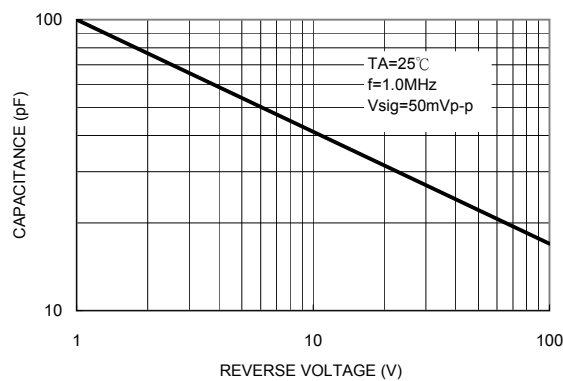


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

