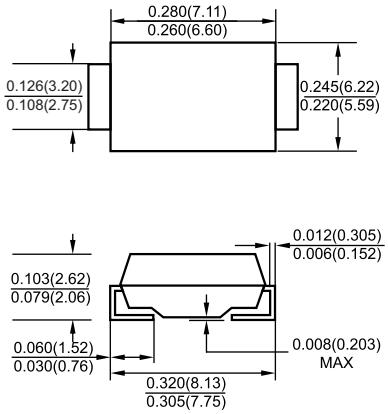
SURFACE MOUNT RECTIFIER
RS3A Thru RS3M: Fast Recovery 3.0 Amps

RoHS

FEATURES

- Voltage range 50~1000 volts
- Low forward voltage drop
- Low profile package
- High surge current capability
- Built-in strain relief
- Fast recovery time
- Epitaxial construction
- High temperature soldering: 250°C /10 seconds at terminals



SMC / DO-214AB
Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 Per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish), Solderable MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: SMC - 0.211 grams

MAXIMUM RATINGS & THERMAL CHARACTERISTICS

Parameter	Symbol	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	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 @ Ta = 50ºC	$I_{F(AV)}$	3.0							A
Peak Forward Surge (Non-Repetitive) Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage @ 3.0A	V_{FM}	1.3							V
Maximum DC Reverse Current @ TA = 25ºC At rated DC blocking voltage @ TA = 125ºC	I_{RRM1} I_{RRM2}	5 250							µA
Reverse Recovery Time (Note 1)	T_{RR}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C_J	50							pF
Junction Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	10 50							ºC / W
Operating Temperature Range	T_J	-55 to +150							ºC
Storage Temperature Range	T_{STG}	-55 to +150							ºC

NOTE: 1. Reverse Recovery Test conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0 VDC.
3. $R_{\theta JA}$ - Thermal Resistance Junction to Lead; $R_{\theta JL}$ - Thermal Resistance Junction to Ambient

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PACKAGING INFORMATION

FIG.1-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

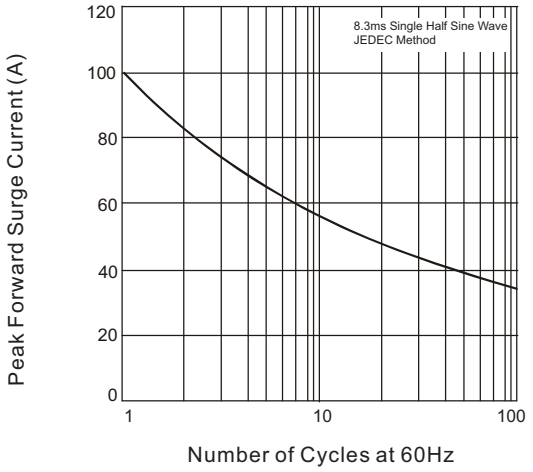


FIG.2-MAXIMUM CURRENT DERATING CURVE

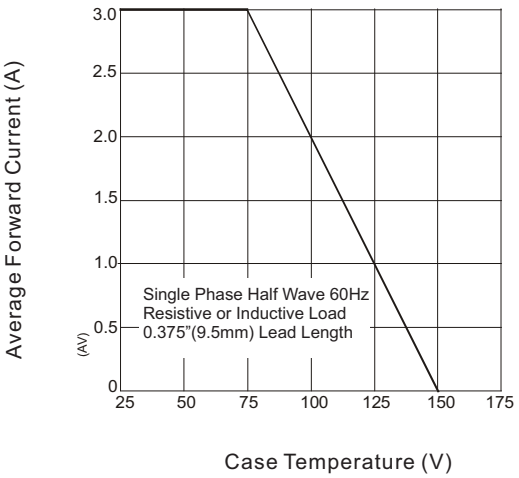


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

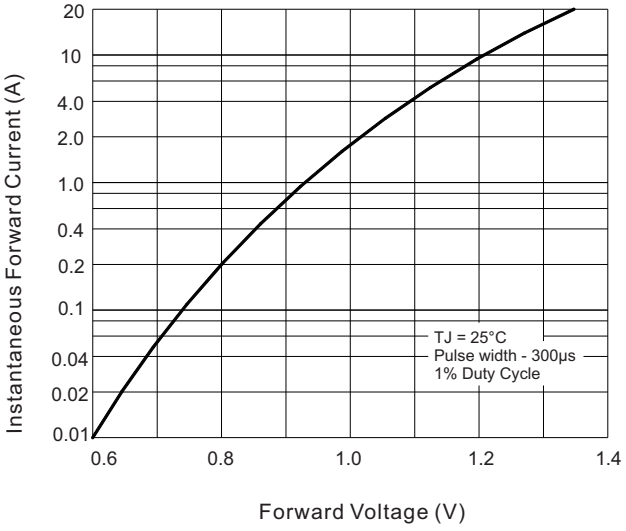


FIG.4-TYPICAL REVERSE CHARACTERISTICS

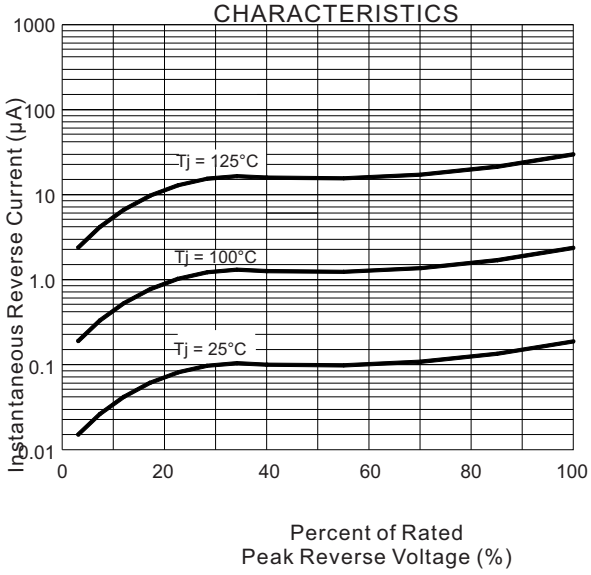
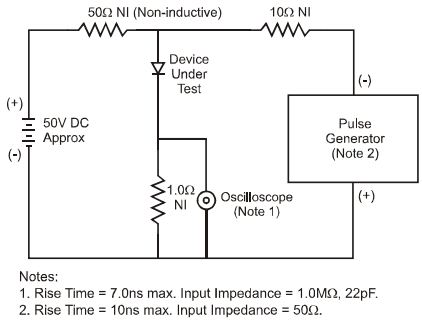
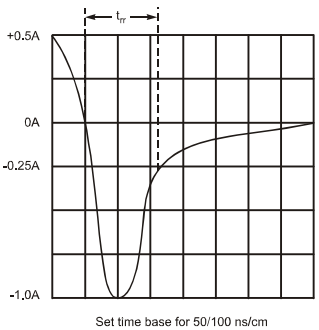


FIG.5-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT



Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.



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