

**Kingtronics**®**RS1A THRU RS1M****SURFACE MOUNT ULTRA FAST RECTIFIER****REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 1.0 Ampere****FEATURES**

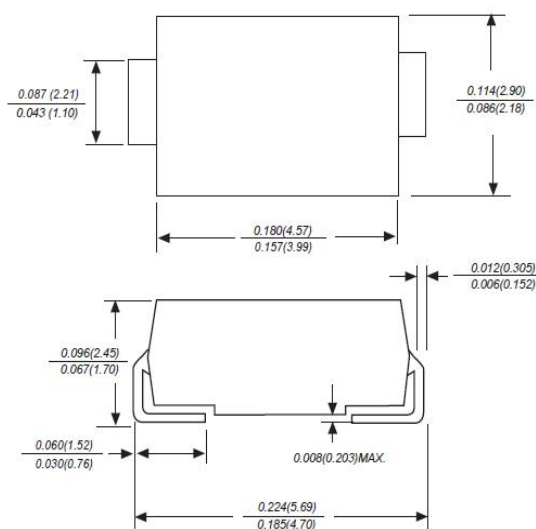
The plastic package carries Underwriters Laboratory Flammability Classification 94V-0  
 For surface mounted applications  
 Fast switching for high efficiency  
 Low reverse leakage  
 Built-in strain relief, ideal for automated placement  
 High forward surge current capability  
 High temperature soldering guaranteed:  
 250°C/10 seconds at terminals

**MECHANICAL DATA**

Case: JEDEC SMA-J molded plastic body  
 Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denotes cathode end  
 Mounting position: Any

**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%

**SMA-J****Dimensions in inches and (millimeters)**

PARAMETER	SYMBOL	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	$V_{RMS}$	100	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 $T_L = 75^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3							VOLTS
Maximum DC Reverse Current $T_A = 25^\circ\text{C}$ at Rated DC blocking voltage $T_A = 100^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	150				250	500		ns
Typical Junction Capacitance (Note 2)	$C_J$	15.0							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50.0							$^\circ\text{C}/\text{W}$
Operating junction and Storage temperature range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

1- Reverse recovery condition  $I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$ 

2- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

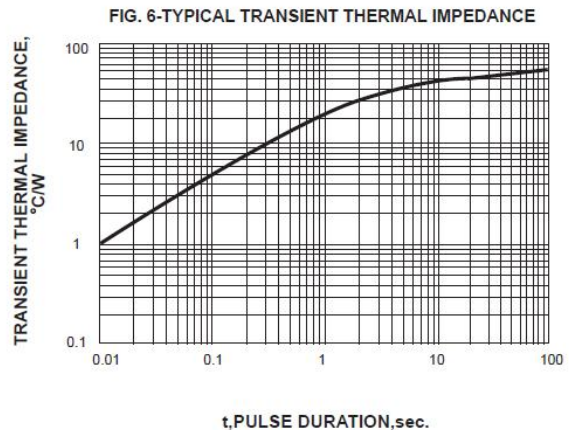
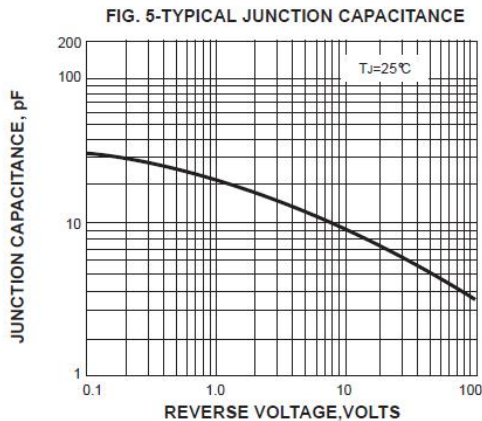
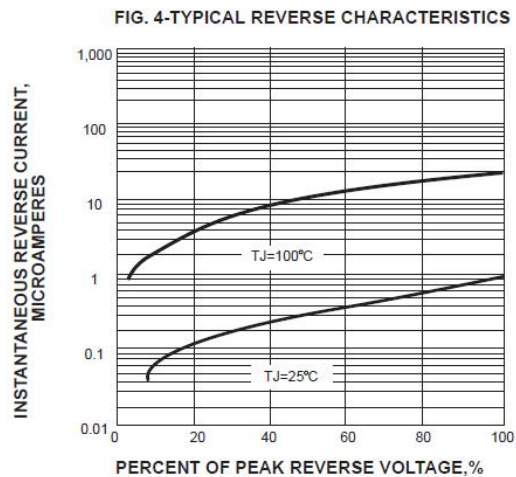
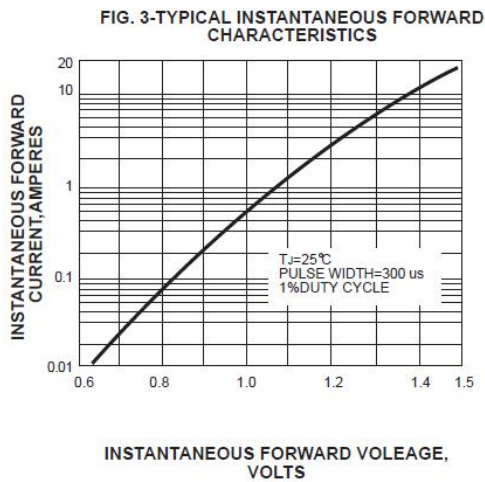
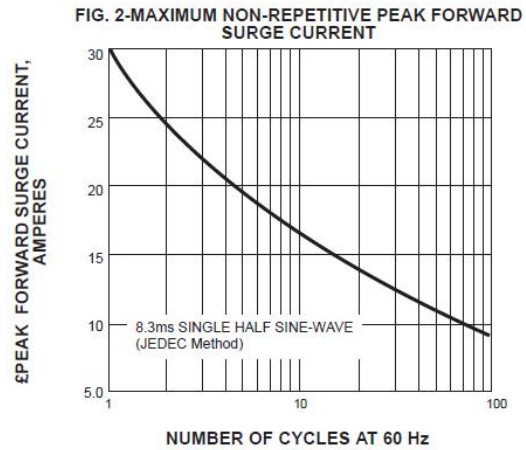
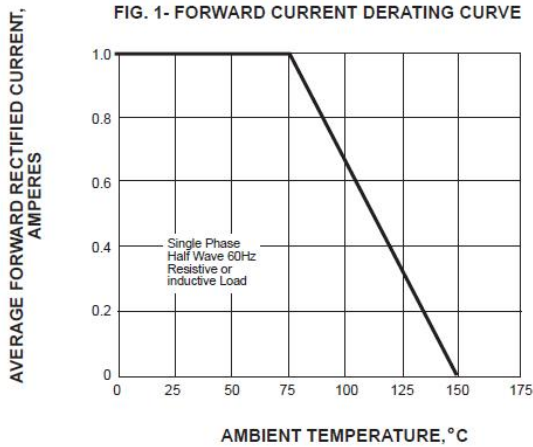
3- P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

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# RS1A THRU RS1M

## RATINGS AND CHARACTERISTIC CURVES



Note: Specifications are subject to change without notice.

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