

Kingtronics®**S1A THRU S1M****GENERAL PURPOSE RECTIFIER****REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 1.0 Ampere****FEATURES**

Low forward voltage drop
 Low leakage current
 High forward surge capability

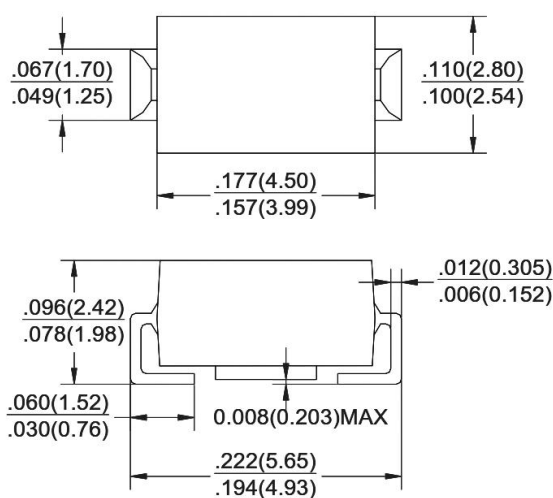
MECHANICAL DATA

Case: SMA-J mold plastic
 Epoxy: UL94V-0 rate flame retardant
 Polarity: Indicated by cathode band
 Lead: Solder plated, solderable per MIL-STD-750 method 2026
 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 (DO-214AC)

Dimensions in inches and (millimeters)

PARAMETER	SYMBOL	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNIT	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	V_{RMS}	35	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 $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0							Amps	
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps	
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.1							Volts	
Maximum Reverse Current at Rated DC Blocking Voltage	I_R	$T_A = 25^\circ\text{C}$	2.5							uA
		$T_A = 125^\circ\text{C}$	50							
Typical Junction Capacitance (NOTE 1)	C_J	12							pF	
Typical Thermal Resistance (NOTE 2)	$R_{\theta JA}$	55							°C/W	
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150							°C	

1- Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.

2- Thermal Resistance from Junction to Ambient at $8.0 \times 8.0 \text{mm}^2$ copper pad areas.

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S1A THRU S1M

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

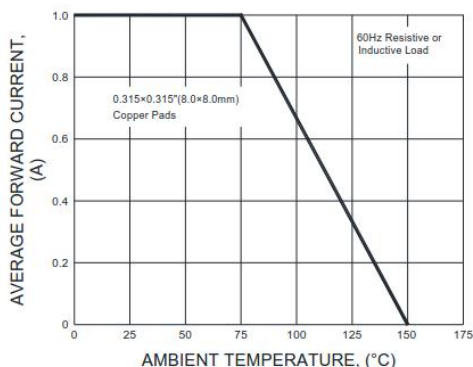


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

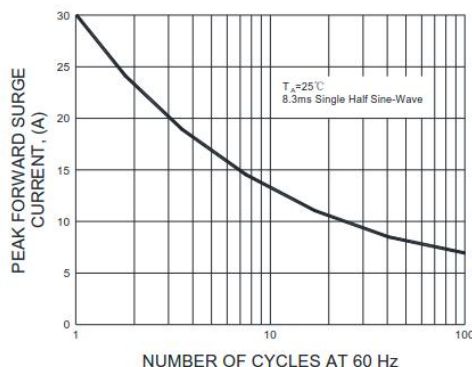


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

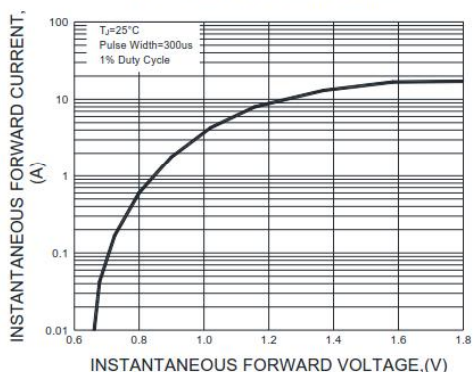


FIG.4-TYPICAL REVERSE CHARACTERISTICS

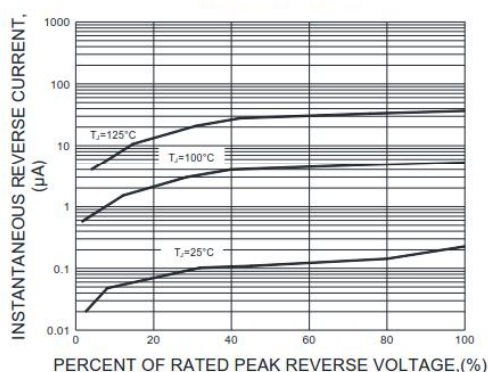
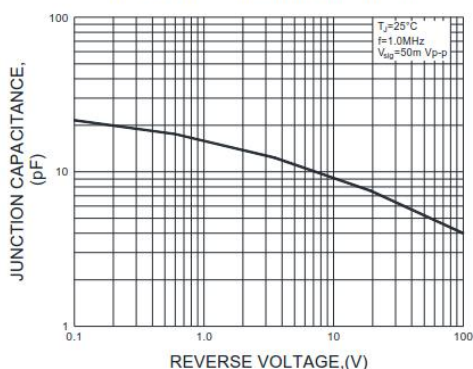


FIG.5-TYPICAL JUNCTION CAPACITANCE



Note: Specifications are subject to change without notice.

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