

Kingtronics®

RS3A THRU RS3M

SURFACE MOUNT FAST SWITCHING RECTIFIER

REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 3.0 Ampere

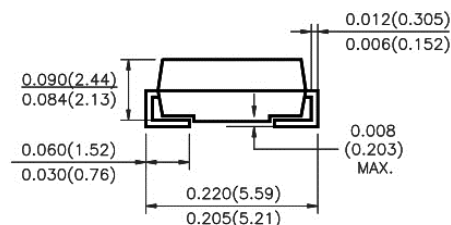
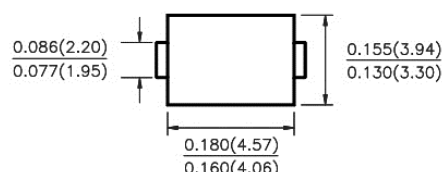
FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Fast switching for high efficiency
- Glass passivated chip junction
- High temperature soldering
- 250°C/10 second at terminals

MECHANICAL DATA

- Case: JEDED DO-214AA molded plastic over glass passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end

DO-214AA (SMB)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified ,
MAXIMUM RATINGS & THERMAL CHARACTERISTICS

Dimensions in inches and (millimeters)

	SYMBOLS	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNIT
Maximum Repetitive 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 $T_L = 90^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L = 90^\circ\text{C}$	I_{FSM}	100							Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	55							°C/W
	$R_{\theta JL}$	18							
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

ELECTRICAL CHARACTERISTICS

	SYMBOLS	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNIT
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.30							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	I_R	$T_A = 25^\circ\text{C}$							uA
		$T_A = 125^\circ\text{C}$							
Typical Reverse Recovery Time at $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$	t_{rr}	150				250	500	ns	

1- Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with $0.27 \times 0.27''$ ($7.0 \times 7.0\text{mm}$) copper pad areas.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

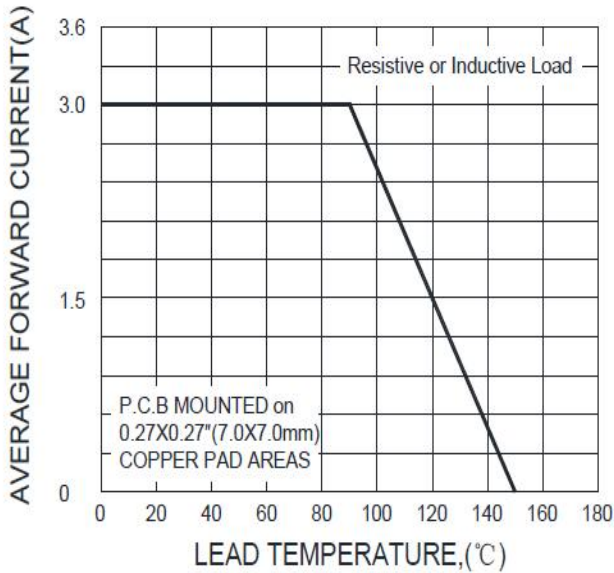


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

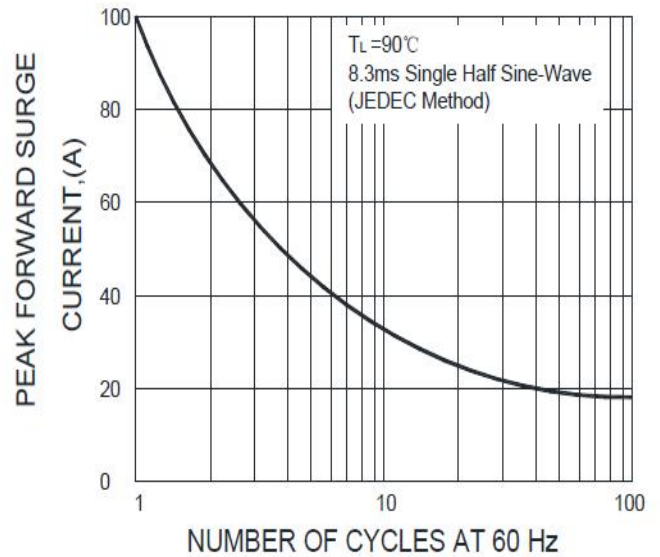


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

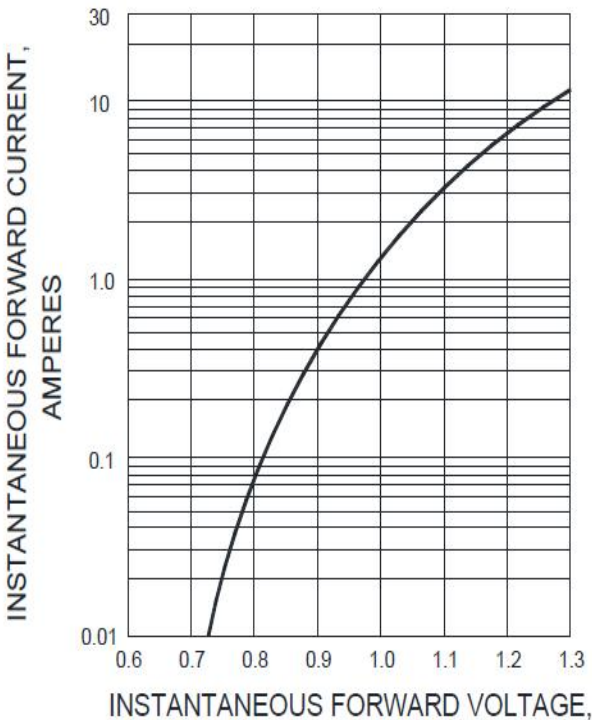
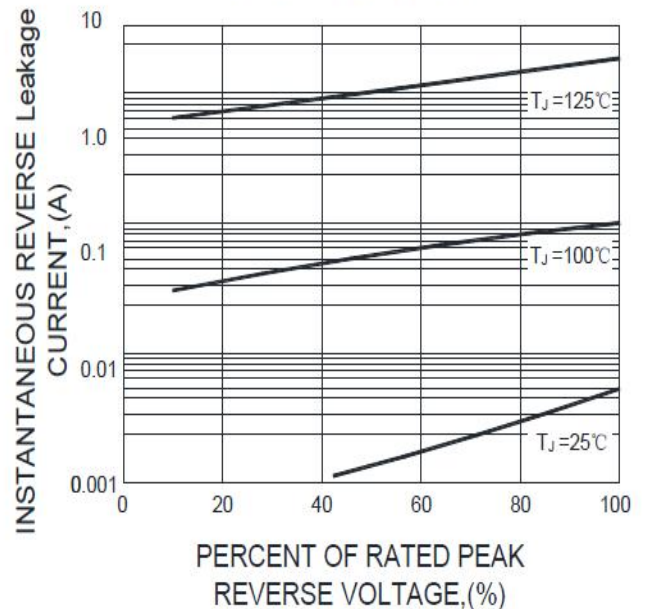


FIG.4-TYPICAL REVERSE CHARACTERISTICS



Note: Specifications are subject to change without notice.

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