

Kingtronics®**US3A THRU US3M**

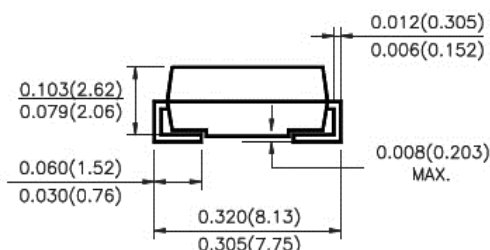
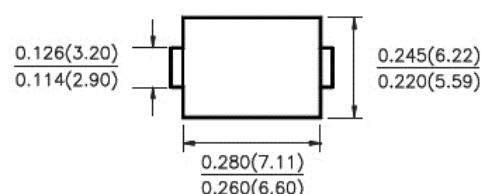
SURFACE MOUNT HIGH EFFICIENCY RECTIFIER
REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 3.0 Ampere

FEATURES

Plastic package has UL flammability
 Classification 94V-0
 Glass Passivated chip junction
 Built in strain relief
 Fast switching speed for high efficiency
 High temperature soldering guaranteed:
 250°C/10 seconds

MECHANICAL DATA

Case: JEDED DO-214AB transfer molded plastic
 Terminals: Solder plated, Solderable per
 MIL-STD-750, Method 2026
 Polarity: Color band denotes cathode end
 Weight: 0.007 ounce, 0.25 gram

DO-214AB (SMC)**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified ,
 Single phase, half wave, 60Hz, resistive or inductive load.

Dimensions in inches and (millimeters)

For capacitive load derate current by 20%

PARAMETER	SYMBOL	US3A	US3B	US3D	US3G	US3J	US3K	US3M	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 $T_L=105^\circ\text{C}$ (NOTE 1)	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							Amps
Maximum instantaneous forward voltage at 3.0A	V_F	1.0		1.3		1.7			VOLTS
Maximum DC Reverse Current at Rated DC blocking voltage at	I_R	$T_A=25^\circ\text{C}$							uA
		$T_A=125^\circ\text{C}$							
Maximum Reverse Recovery Time Test conditions $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$	t_{rr}	50				100			nS
Typical Junction Capacitance(Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	80				50			pF
Typical Thermal Resistance (NOTE 1)	$R_{\theta JA}$	55							°C/W
	$R_{\theta JL}$	17							
Operating Junction Temperature	T_J	-55 to +150							°C
Storage Temperature Rang	T_{STG}	-55 to +150							°C

1- Thermal resistance from Junction to ambient and from junction to lead mounted on
 P.C.B. with 0.3 × 0.3" (8.0 × 8.0mm) copper pad areas

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RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

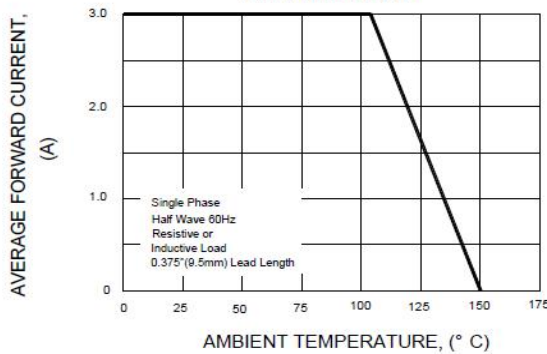


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

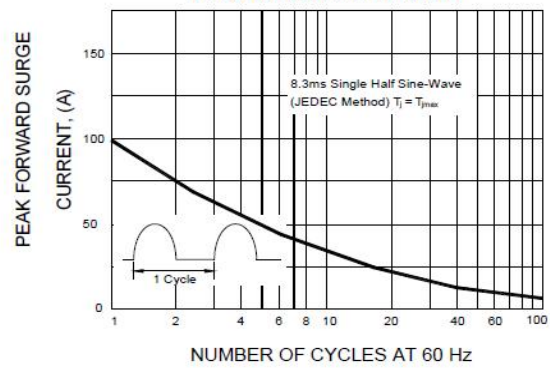


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

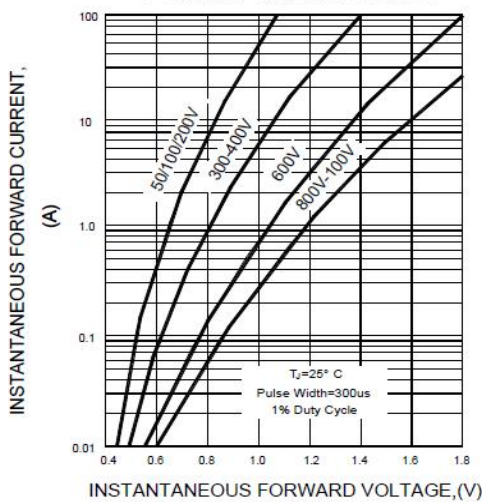


FIG.4-TYPICAL REVERSE CHARACTERISTICS

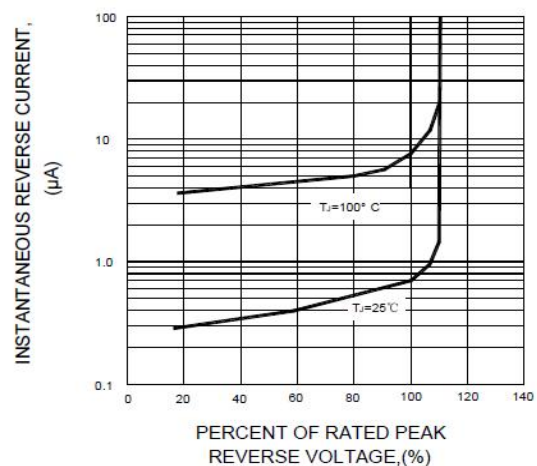


FIG.5-TYPICAL JUNCTION CAPACITANCE

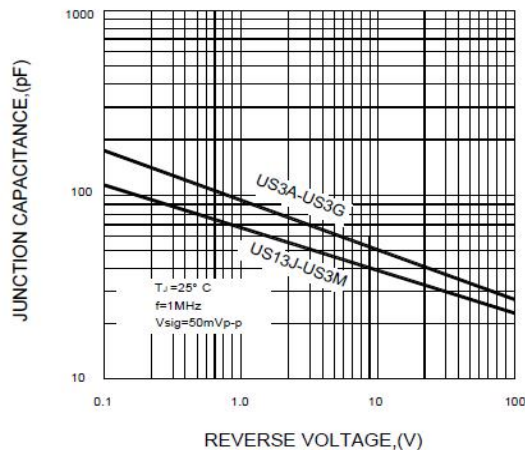
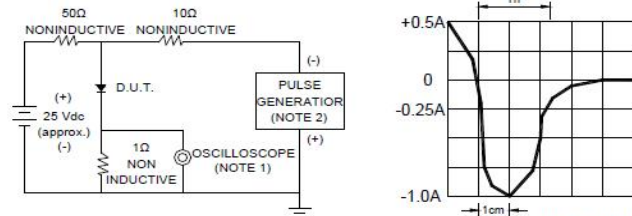


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES : 1. Rise Time=7ns max. Input Impedance= 1 megohm. 22pF
 2. Rise time=10ns max. Source Impedance= 50 ohms

SET TIME BASE FOR 50/100ns/cm

Note: Specifications are subject to change without notice.