

Kingtronics®**ES3A THRU ES3J****SURFACE MOUNT SUPER FAST RECTIFIER****REVERSE VOLTAGE 50 to 600 Volts FORWARD CURRENT 3.0 Ampere****FEATURES**

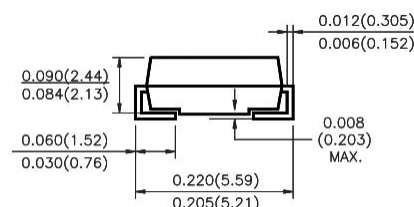
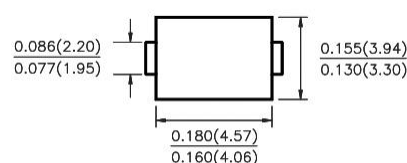
Plastic package has underwrites laboratory
Flammability Classification 94V-0
Glass passivated chip junction
Built-in strain relief
Suor Fast switching speed for high efficiency
High temperature soldering guaranteed:
260°C/10 seconds

MECHANICAL DATA

Cases: JEDED DO-214AA transfer molded plastic
Terminals: Solder plated, solderable per MIL-STD-750
Method 2026
Polarity: Color band denotes cathode end

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%**

DO-214AA (SMB)**Dimensions in inches and (millimeters)**

	SYMBOL	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	VOLTS
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	VOLTS
Maximum Average Forward Rectified Current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100							Amps
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	0.95			1.25		1.7		Volts
Maximum DC Reverse Current at Rated DC Blocking voltage	$T_A = 25^\circ\text{C}$	5.0							uA
	$T_A = 125^\circ\text{C}$	300							
Typical 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}	35							ns
Typical Junction Capacitance(Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	45			30				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	55							°C/W
	$R_{\theta JL}$	17							
Operating Junction Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	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" (8.0mm × 8.0mm) copper pad areas.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

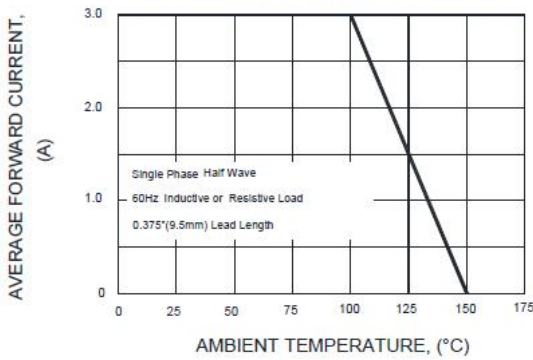


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

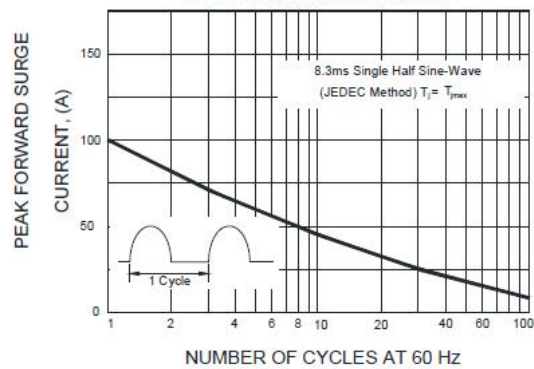


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

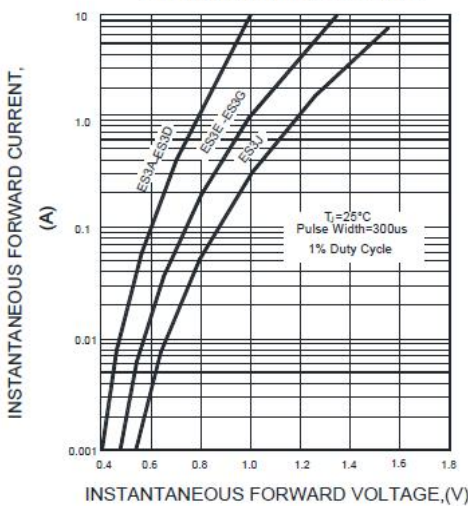


FIG.4-TYPICAL REVERSE CHARACTERISTICS

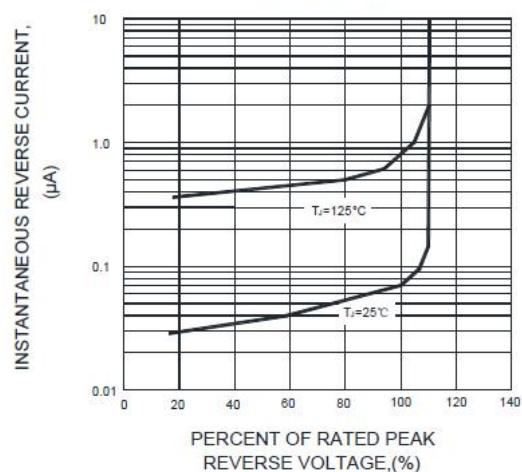


FIG.5-TYPICAL JUNCTION CAPACITANCE

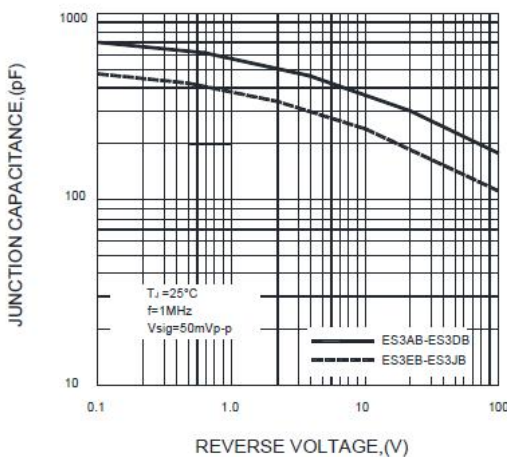
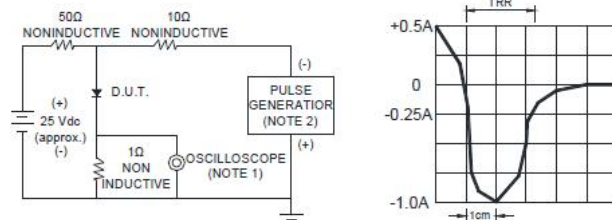


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

Note: Specifications are subject to change without notice.