

**Kingtronics**®**ES2A THRU ES2J****SURFACE MOUNT SUPER FAST RECTIFIER****REVERSE VOLTAGE 50 to 600 Volts    FORWARD CURRENT 2.0 Ampere****FEATURES**

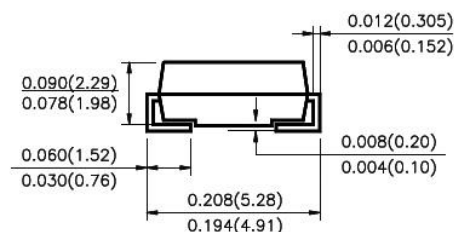
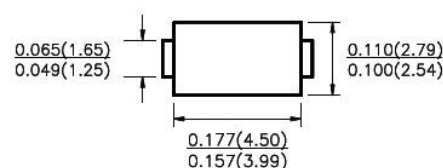
Plastic package has underwrites laboratory  
Flammability Classification 94V-0  
Glass passivated chip junction  
Built-in strain relief  
Suor Fast switching speed for high efficiency  
High temperature soldering guaranteed:  
250°C/10 seconds

**MECHANICAL DATA**

Cases: JEDED DO-214AC 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-214AC (SMA)****Dimensions in inches and (millimeters)**

	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	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 $T_L=100^\circ\text{C}$	$I_{(AV)}$	2.0							Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	50							Amps
Maximum Instantaneous Forward Voltage @ 2.0A	$V_F$	0.95				1.25		1.7	Volts
Maximum DC Reverse Current at rated DC Blocking voltage per element	$I_R$	$T_A = 25^\circ\text{C}$							uA
		$T_A = 125^\circ\text{C}$							
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)	$C_J$	25				28			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75							$^\circ\text{C/W}$
	$R_{\theta JL}$	17							
Operating Junction Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

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.

**Kingtronics**® International Company

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## RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

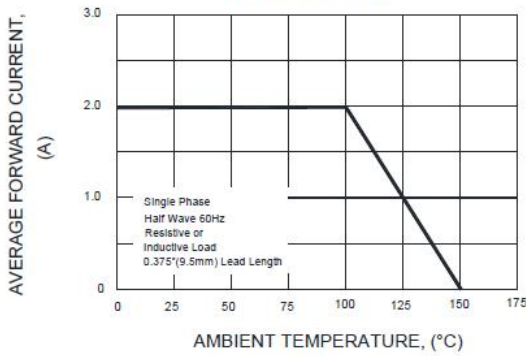


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

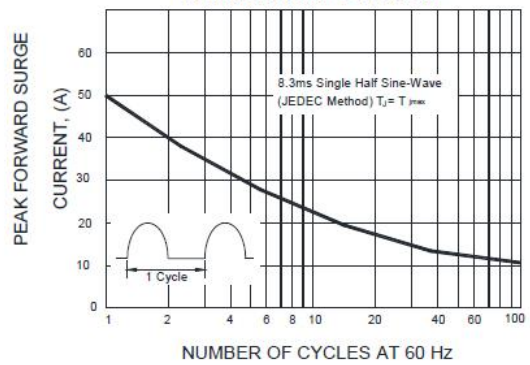


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

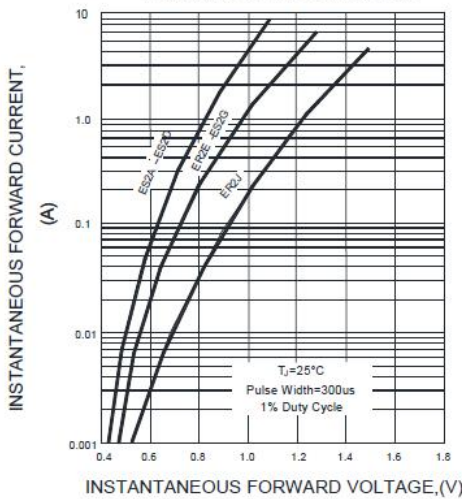


FIG.4-TYPICAL REVERSE CHARACTERISTICS

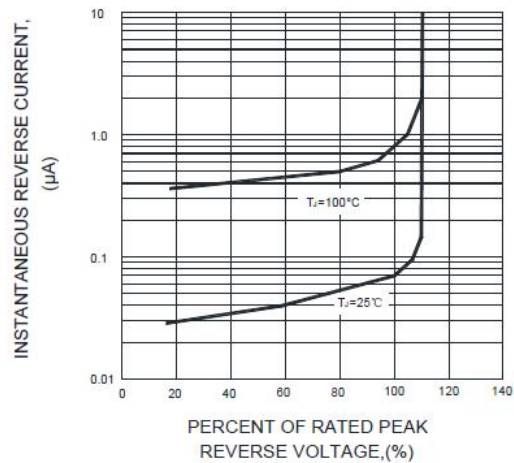


FIG.5-TYPICAL JUNCTION CAPACITANCE

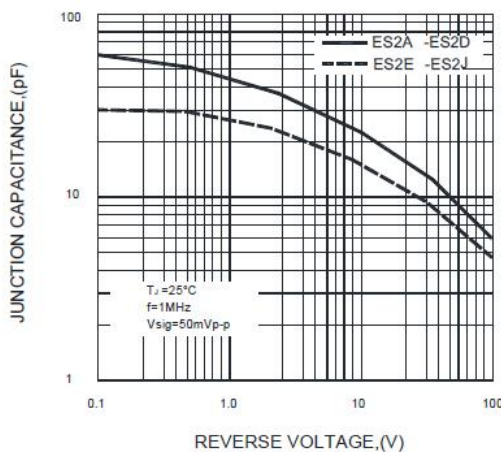
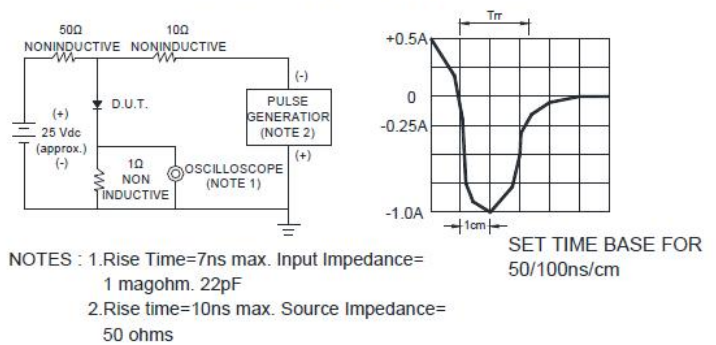


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



Note: Specifications are subject to change without notice.