

ES2A THRU ES2J

SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 2.0 Ampere

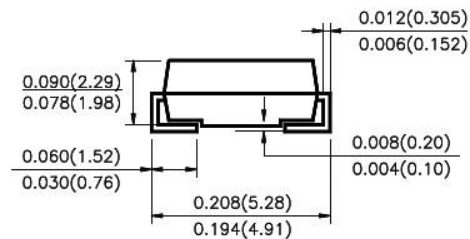
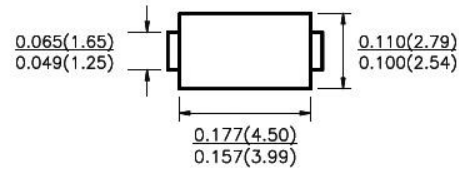
FEATURES

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

Mechanical Data

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

DO-214AC (SMA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

	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	$T_A = 25^\circ\text{C}$	5.0							uA
	$T_A = 125^\circ\text{C}$	200							
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				208			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75							°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

Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with $0.3 \times 0.3''$ ($8.0 \times 8.0\text{mm}$) copper pad areas

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RATING AND CHARACTERISTIC CURVES ES2A THRU ES2J

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

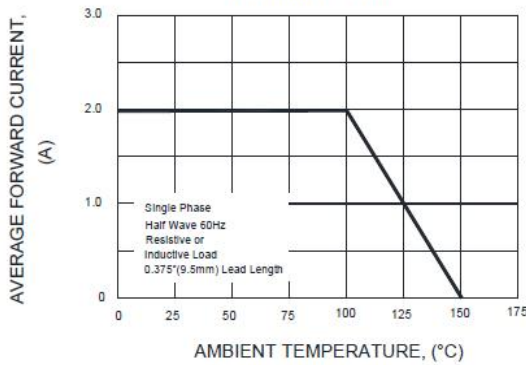


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

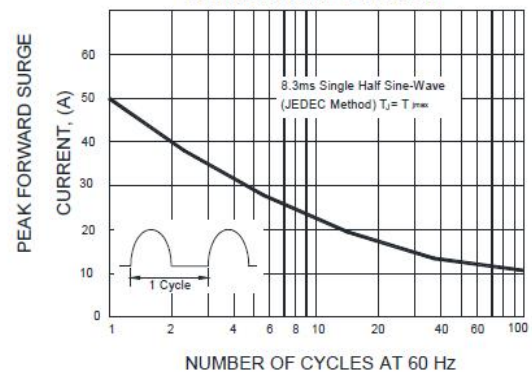


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

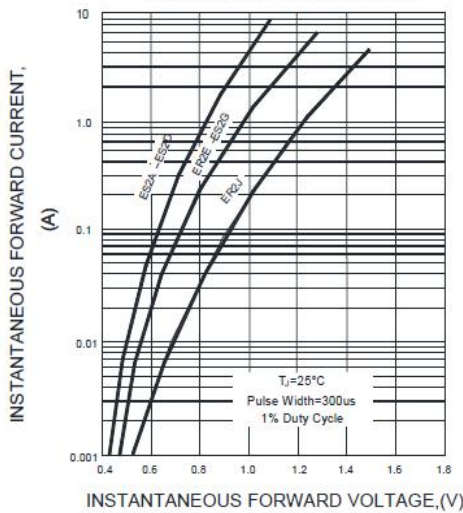


FIG.4-TYPICAL REVERSE CHARACTERISTICS

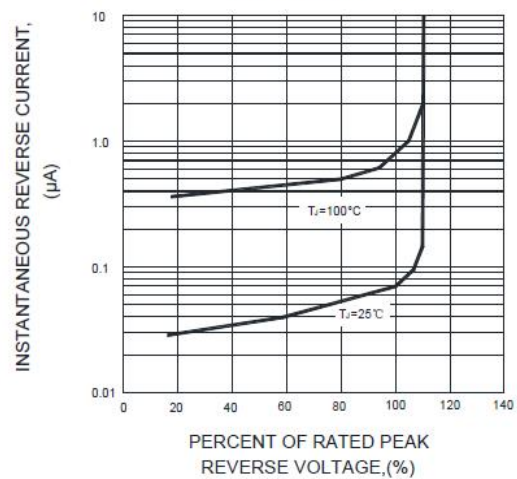


FIG.5-TYPICAL JUNCTION CAPACITANCE

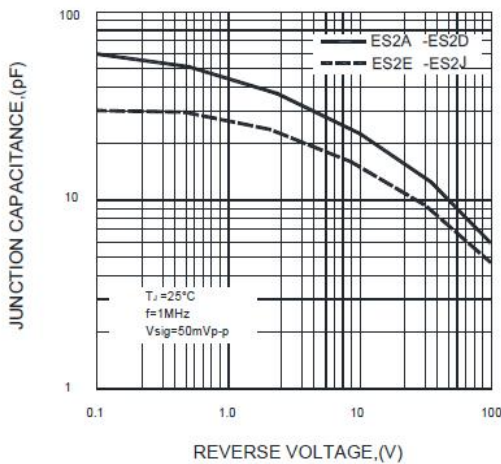
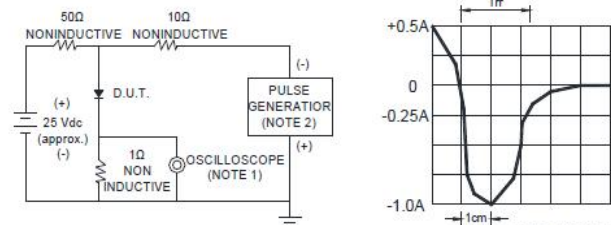


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES : 1. Rise Time=7ns max. Input Impedance= 1 magohm. 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. For more detail and update, please visit our website.