



# DATA SHEET

SEMICONDUCTOR

ES2A Thru ES2J

## SURFACE MOUNT SUPERFAST RECTIFIER

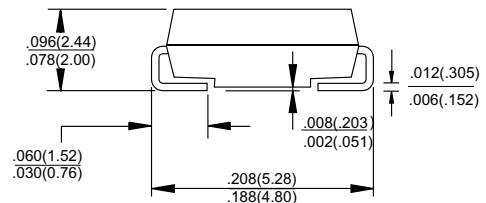
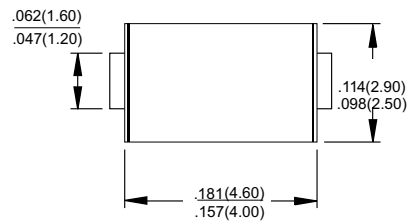


VOLTAGE - 50 to 600 Volts CURRENT - 2.0 Ampere

### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency
- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-O
- Glass passivated junction
- High temperature soldering:  
260 °C / 10 seconds at terminals
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- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

SMA/DO-214AC Unit:inch(mm)



### MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.003 ounce, 0.093 gram

### 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%.

	SYMBOLS	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current, at TL=110 °C	I(AV)	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load(JEDEC method)	IFSM	50.0							Amps
Maximum Instantaneous Forward Voltage at 2.0A	VF	0.95			1.25		1.7		Volts
Maximum DC Reverse Current TA=25 °C	IR	5.0							uA
At Rated DC Blocking Voltage TA=100 °C		100							
Maximum Reverse Recovery Time (Note 1)	TRR	35.0							nS
Typical Junction capacitance (Note 2)	CJ	25.0							pF
Typical Thermal Resistance (Note 3)	RθJA	20.0							°C/W
Operating and Storage Temperature Range	TJ,TSTG	-55 to +150							°C

#### NOTES:

1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, Irr=0.25A
2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3. 8.0mm<sup>2</sup> (.013mm thick) land areas

# DEVICE CHARACTERISTICS

## ES2A Thru ES2J

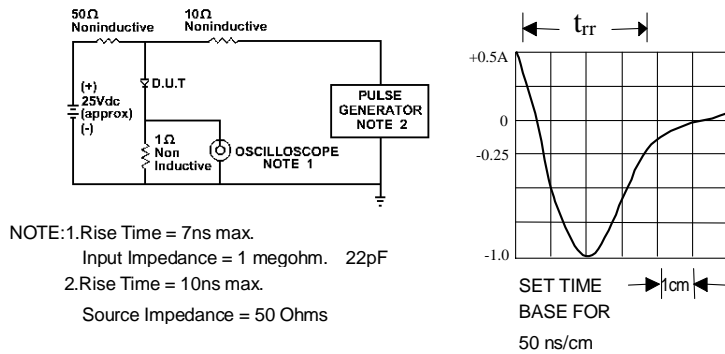


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

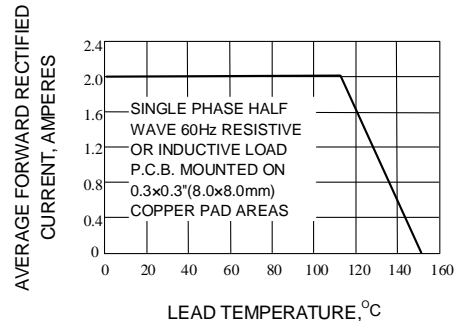


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

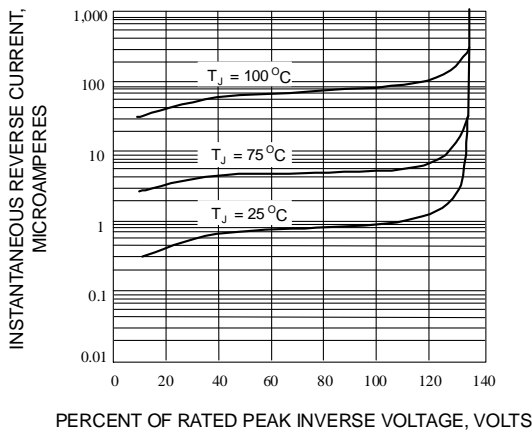


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

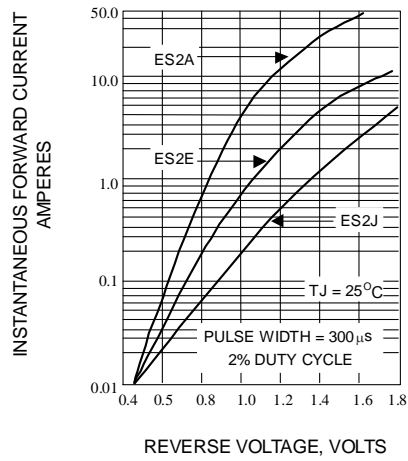


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

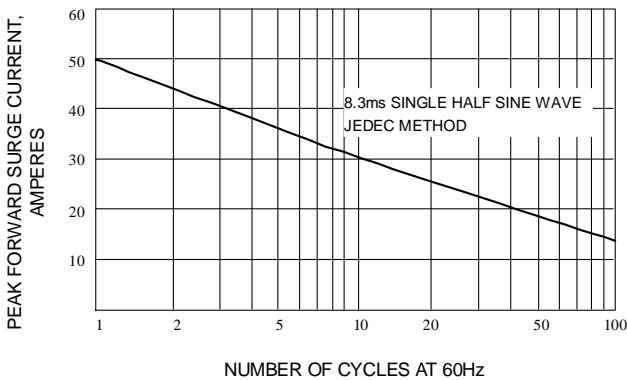


Fig. 5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

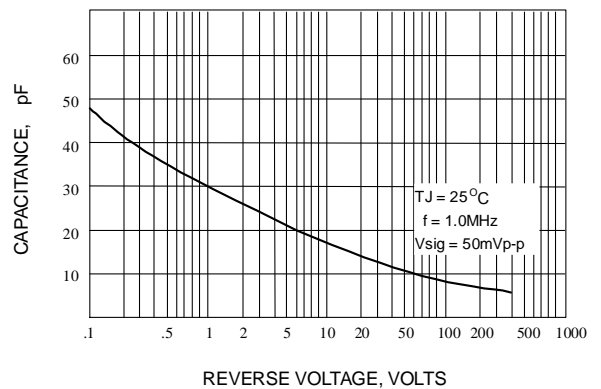


Fig. 6-TYPICAL JUNCTION CAPACITANCE