

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Fast switching speed

### MECHANICAL DATA

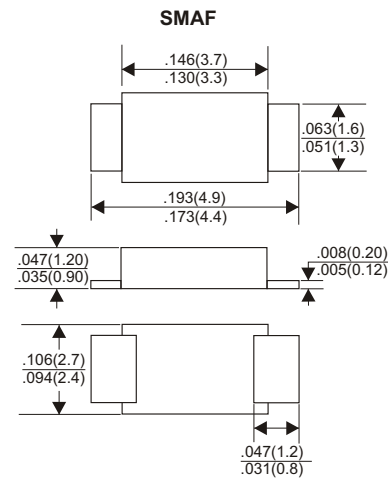
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

50 to 600 Volts

### CURRENT

1.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

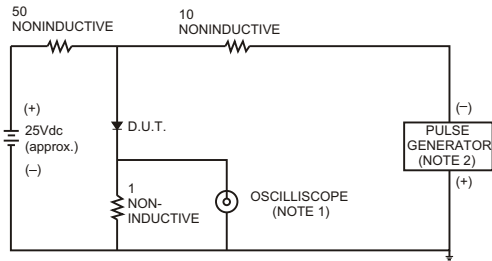
Rating 25°C ambient temperature unless otherwise specified.  
 Single phase half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

TYPE NUMBER	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at Ta=25°C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	25							A
Maximum Instantaneous Forward Voltage at 1.0A	0.95		1.25			1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0			500				µA
Maximum Reverse Recovery Time (Note 1)	35			80				nS
Typical Junction Capacitance (Note 2)	15			80				pF
Typical Thermal Resistance R JA (Note 3)	80			80				°C/W
Operating and Storage Temperature Range Tj, Tstg	-65 — +150							°C
Marking Code								

- NOTES:**
1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
  2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  3. Thermal Resistance from Junction to Ambient.

## RATING AND CHARACTERISTIC CURVES ( ES1AF THRU ES1JF )

FIG.1- 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.

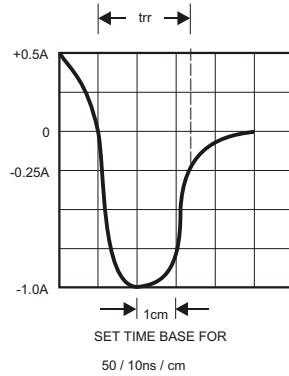


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

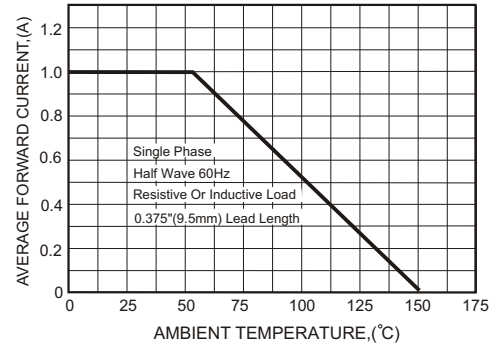


FIG.3-TYPICAL FORWARD CHARACTERISTICS

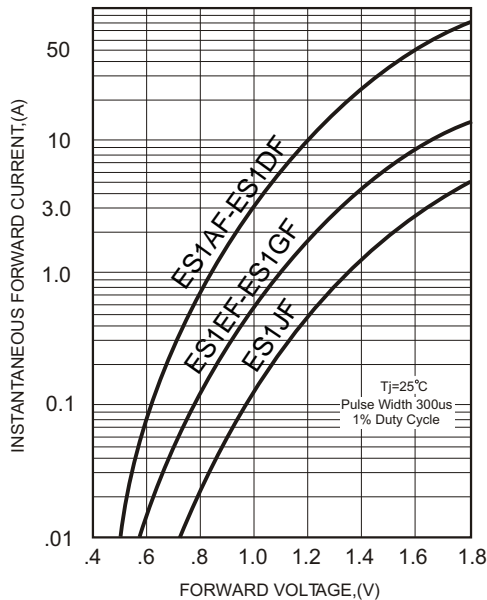


FIG.4-TYPICAL REVERSE CHARACTERISTICS

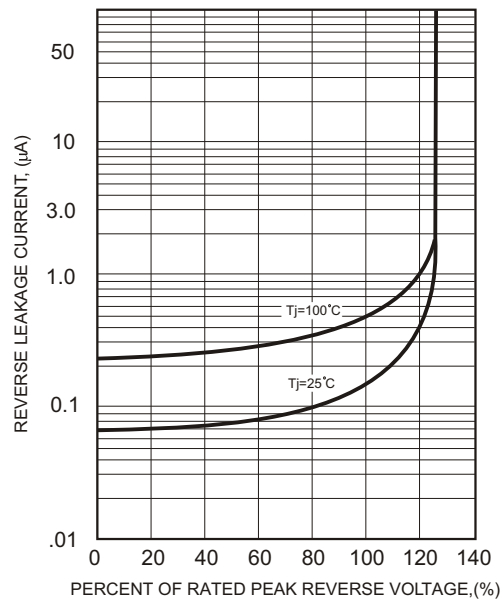


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

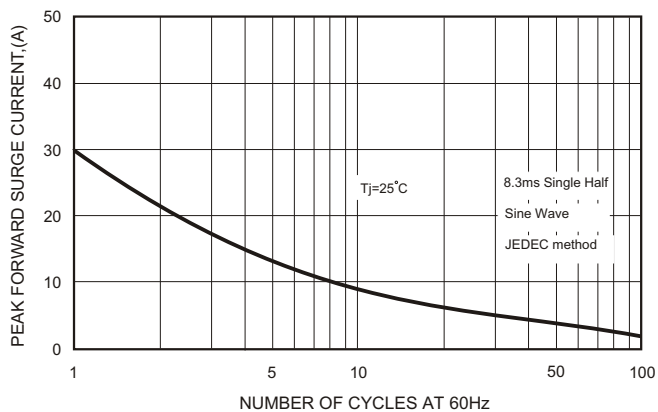


FIG.6-TYPICAL JUNCTION CAPACITANCE

