

VOLTAGE RANGE: 50 - 600

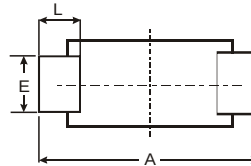
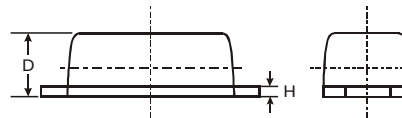
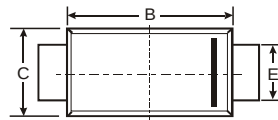
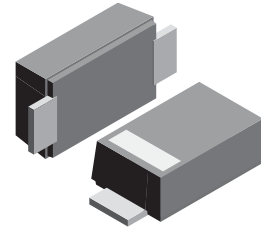
CURRENT: 1.0 A

Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Super-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case: SMAF, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0018 ounce, 0.064 grams



SMAF			
Dim	Min	Max	Typ
A	4.75	4.85	4.80
B	3.68	3.72	3.70
C	2.57	2.63	2.60
D	0.097	1.03	1.00
E	1.38	1.42	1.40
H	0.13	0.17	0.15
L	0.63	0.67	0.65
All Dimensions in mm			

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	50	100	150	200	300	400	600	V
RMS Reverse Voltage	VR(RMS)	35	70	105	140	210	280	420	V
Average Rectified Output Current @TL = 120°C	Io	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30							A
Forward Voltage @IF = 1.0A	VFM	0.95				1.25		1.7	V
Peak Reverse Current @TA = 25°C At Rated DC Blocking Voltage @TA = 100°C	IRM	5.0 500							μA
Reverse Recovery Time (Note 1)	trr	35							nS
Typical Junction Capacitance (Note 2)	Cj	10							pF
Typical Thermal Resistance (Note 3)	RθJL	35							°C/W
Operating and Storage Temperature Range	Tj, TSTG	-65 to +150							°C

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See figure 5.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. Mounted on P.C. Board with 8.0mm² land area.

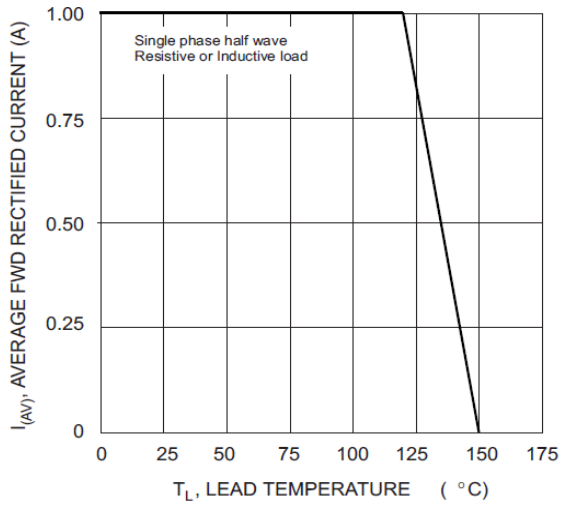


Fig. 1 Forward Current Derating Curve

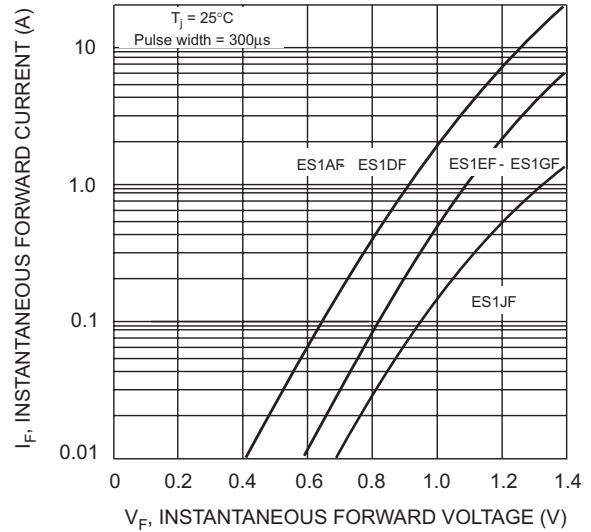


Fig. 2 Typical Forward Characteristics

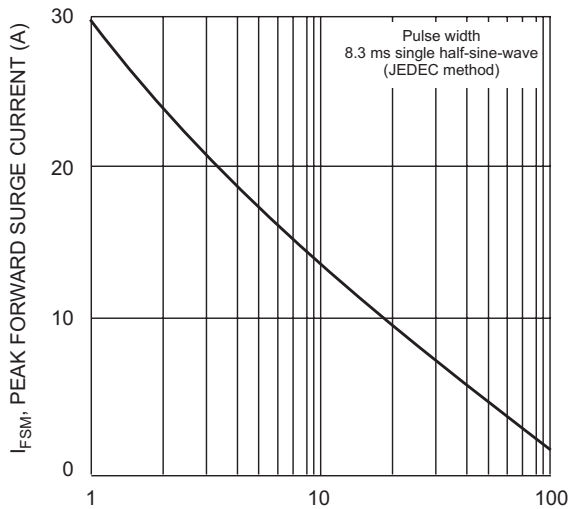


Fig. 3 Peak Forward Surge Current

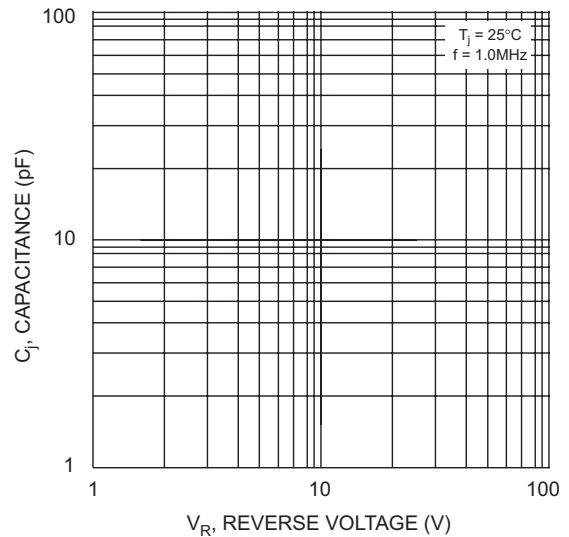
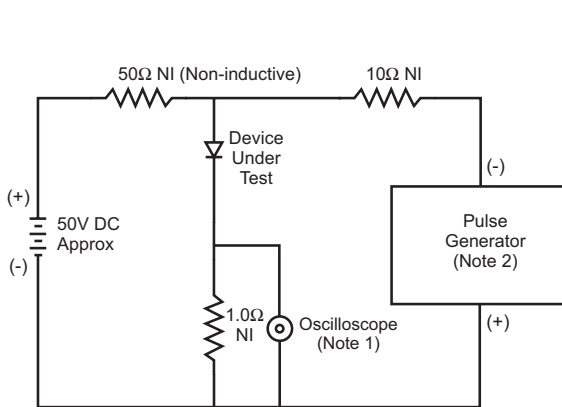
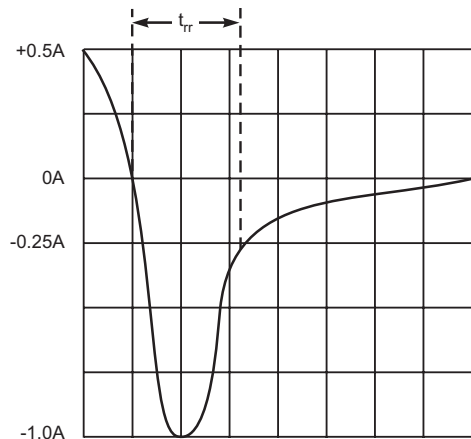


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0M Ω , 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50 Ω .



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit