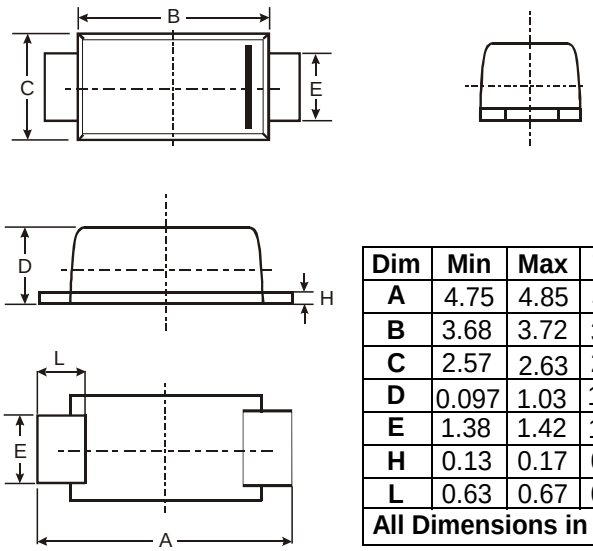
CURRENT 1.0 Ampere
VOLTAGE RANG 50 to 600 Volts

ES1AF THRU ES1JF

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

S M A F



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			

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

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	V_{RRM} V_{RWM} V_R	50	100	150	200	300	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	420	V
Average Rectified Output Current @T_L = 120°C	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @I_F = 1.0A	V_{FM}	0.95				1.25		1.7	V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	5.0 500							μA
Reverse Recovery Time (Note 1)	t_{rr}	35							nS
Typical Junction Capacitance (Note 2)	C_j	10							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	35							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-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.

CURRENT 1.0 Ampere
VOLTAGE RANG 50 to 600 Volts

ES1AF THRU ES1JF

RATING AND CHRACTERISTIC CURVES ES1AF Thru ES1JF

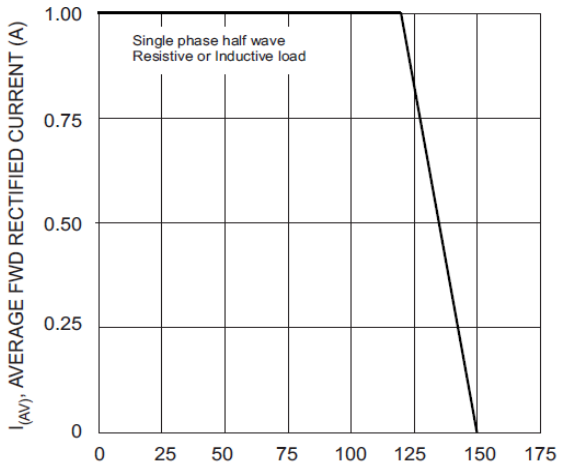


Fig. 1 Forward Current Derating Curve

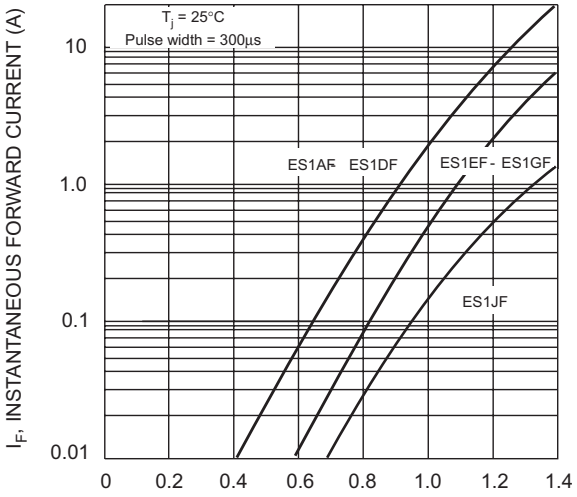


Fig. 2 Typical Forward Characteristics

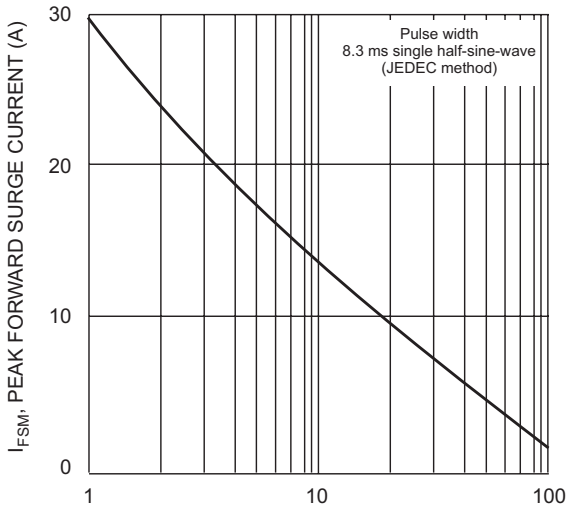


Fig. 3 Pea Forward Surge Current

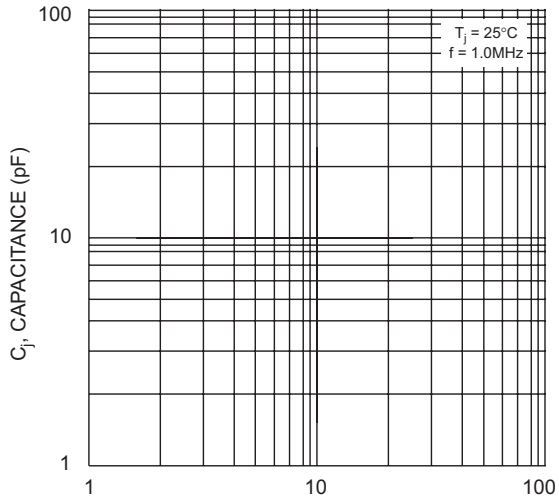
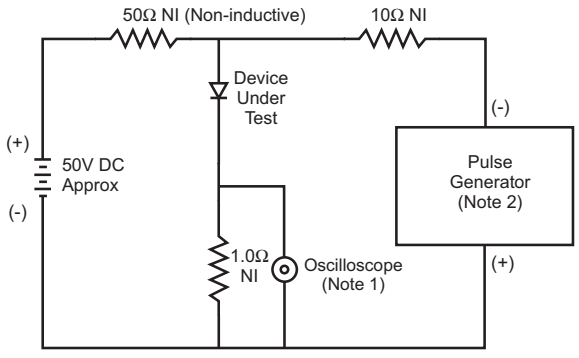


Fig. 4 Typical Junction Capacitance



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

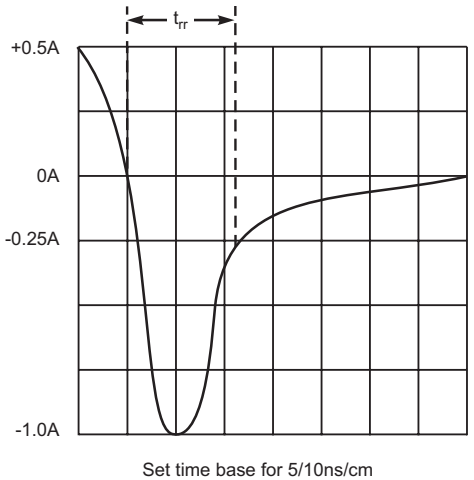


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit