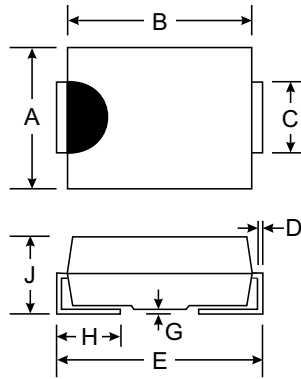


Features

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 30A Peak
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)



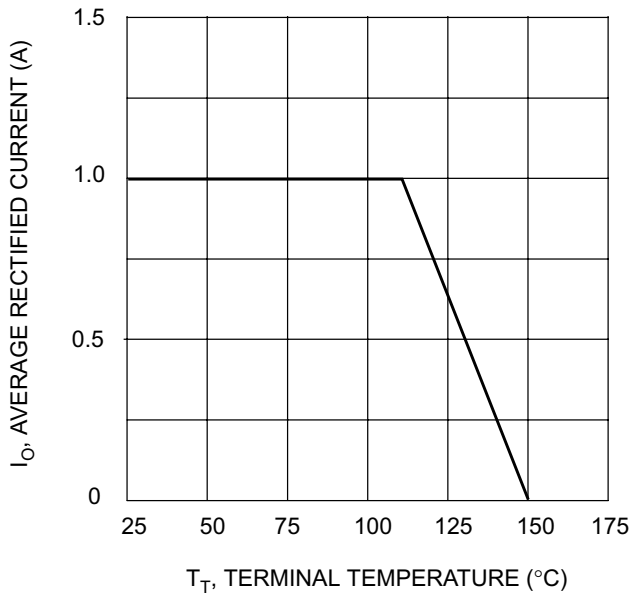
SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

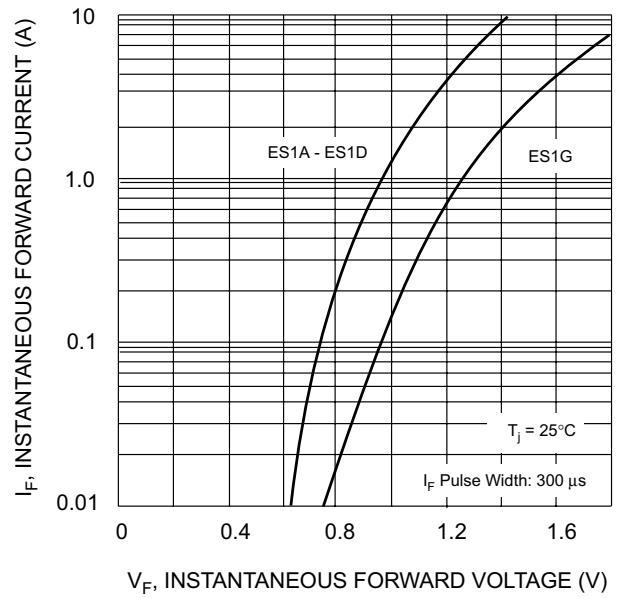
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	ES1A	ES1B	ES1C	ES1D	ES1G	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	150	200	400	V	
Working Peak Reverse Voltage	V_{RWM}							
DC Blocking Voltage	V_R							
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	280	V	
Average Rectified Output Current @ $T_T = 110^\circ\text{C}$	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 Drop @ $I_F = 0.6\text{A}$ @ $I_F = 1.0\text{A}$	V_{FM}	0.90 0.98				1.25	V	
Peak Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ\text{C}$ @ $T_A = 100^\circ\text{C}$	I_{RM}	5.0 200					μA	
Reverse Recovery Time (Note 3)	t_{rr}	20					ns	
Typical Junction Capacitance (Note 2)	C_j	10					pF	
Typical Thermal Resistance, Junction to Terminal (Note 1)	$R_{\theta JT}$	40					K/W	
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150					$^\circ\text{C}$	

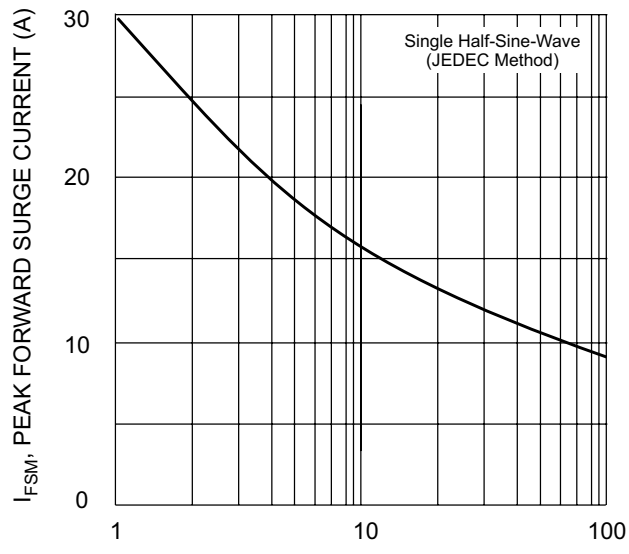
- Notes:
1. Unit mounted on PC board with 5.0 mm^2 (0.013 mm thick) copper pad as heat sink.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $t_{rr} = 0.25\mu\text{s}$. See figure 5.



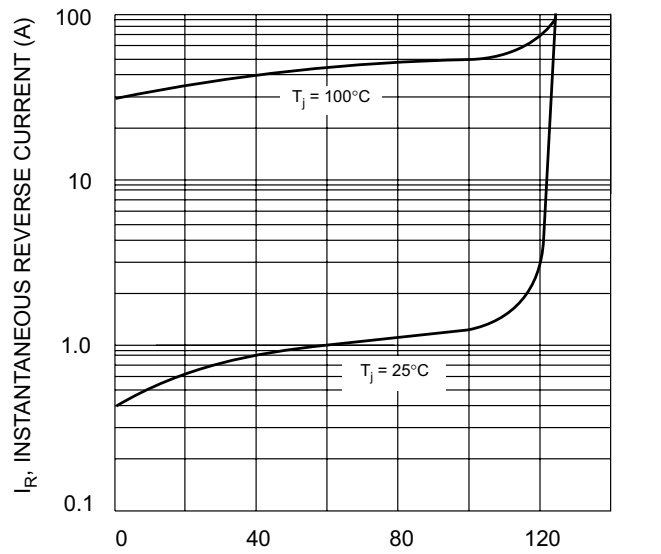
T_T , TERMINAL TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



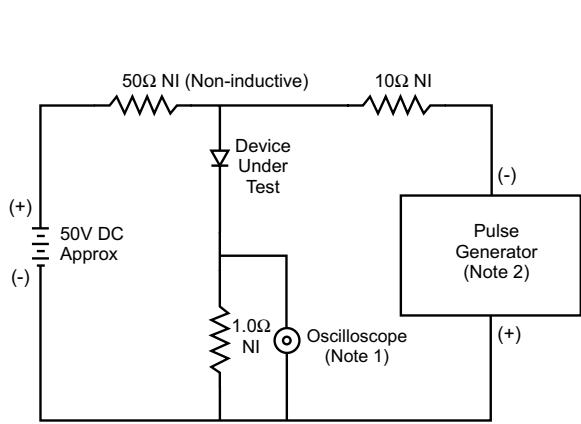
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



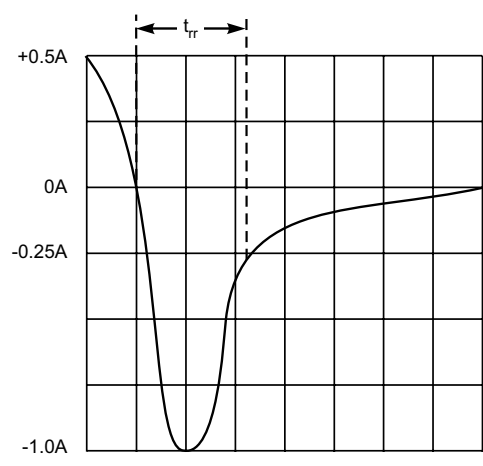
NUMBER OF CYCLES AT 60 Hz
Fig. 3 Surge Current Derating Curve



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 4 Typical Reverse Characteristics



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



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit