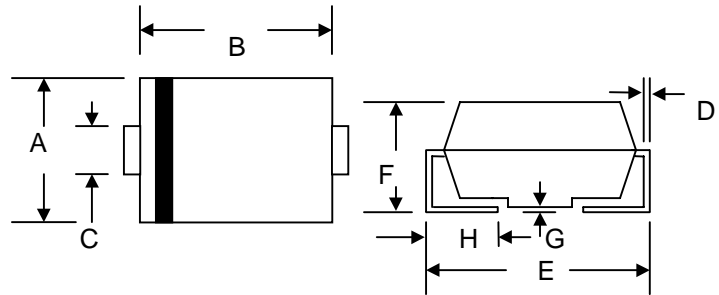


1.0A SURFACE MOUNT SUPER FAST RECTIFIER

Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 30A Peak
- Low Power Loss
- Super-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



Mechanical Data

- Case: Low Profile Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)

SMA/DO-214AC		
Dim	Min	Max
A	2.50	2.90
B	4.00	4.60
C	1.40	1.60
D	0.152	0.305
E	4.80	5.28
F	2.00	2.44
G	0.051	0.203
H	0.76	1.52
All Dimensions in mm		

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

Characteristic	Symbol	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}									
Working Peak Reverse Voltage	V_{RWM}	50	100	150	200	300	400	600	V	
DC Blocking Voltage	V_R									
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	420	V	
Average Rectified Output Current @ $T_L = 120^\circ\text{C}$	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 @ $I_F = 1.0\text{A}$	V_{FM}	0.95				1.25		1.7	V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	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								K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							$^\circ\text{C}$	

- Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$,
 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.

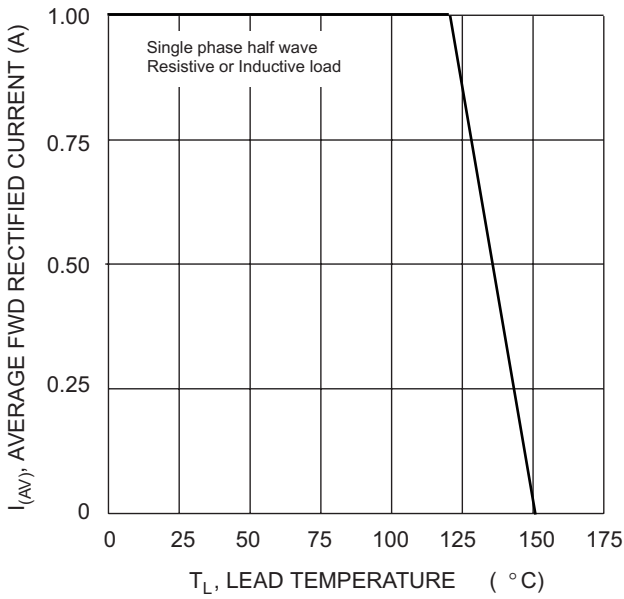


Fig. 1 Forward Current Derating Curve

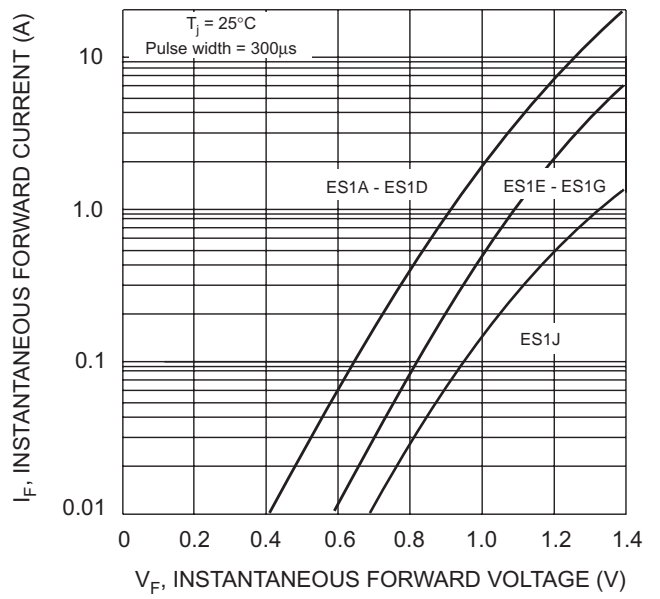


Fig. 2 Typical Forward Characteristics

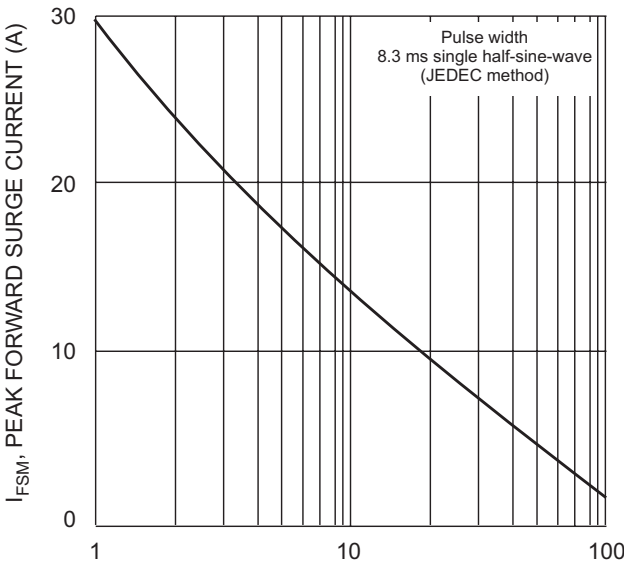


Fig. 3 Peak Forward Surge Current

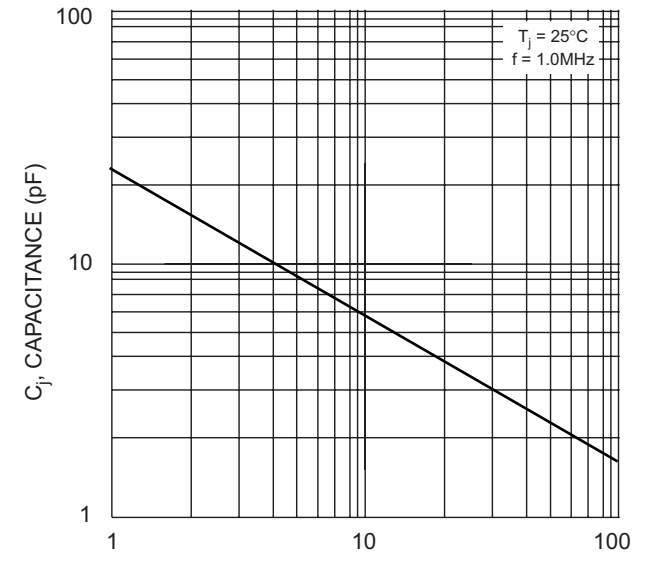
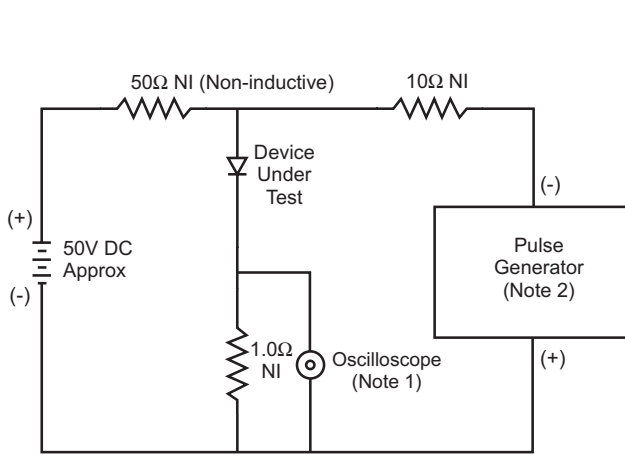
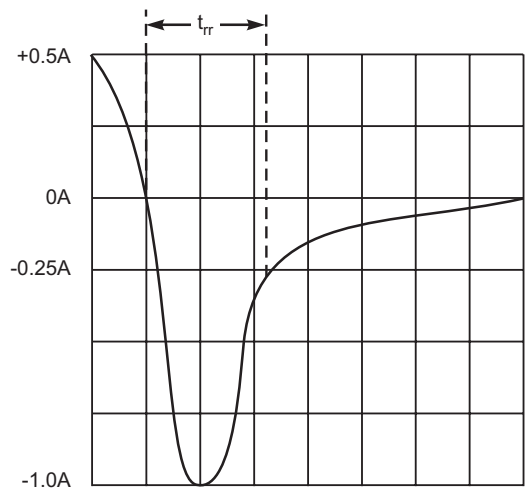


Fig. 4 Typical Junction Capacitance



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



Set time base for 5/10ns/cm

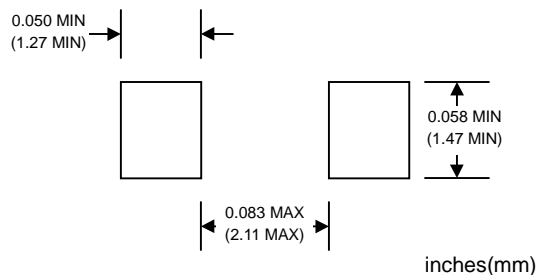
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

ORDERING INFORMATION

Product No.♦	Package Type	Shipping Quantity
ES1A-T1	SMA	1800/Tape & Reel
ES1A-T3	SMA	7500/Tape & Reel
ES1B-T1	SMA	1800/Tape & Reel
ES1B-T3	SMA	7500/Tape & Reel
ES1C-T1	SMA	1800/Tape & Reel
ES1C-T3	SMA	7500/Tape & Reel
ES1D-T1	SMA	1800/Tape & Reel
ES1D-T3	SMA	7500/Tape & Reel
ES1E-T1	SMA	1800/Tape & Reel
ES1E-T3	SMA	7500/Tape & Reel
ES1G-T1	SMA	1800/Tape & Reel
ES1G-T3	SMA	7500/Tape & Reel
ES1J-T1	SMA	1800/Tape & Reel
ES1J-T3	SMA	7500/Tape & Reel

Products listed in **bold** are WTE Preferred devices.
 ♦T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.
 Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

RECOMMENDED FOOTPRINT



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