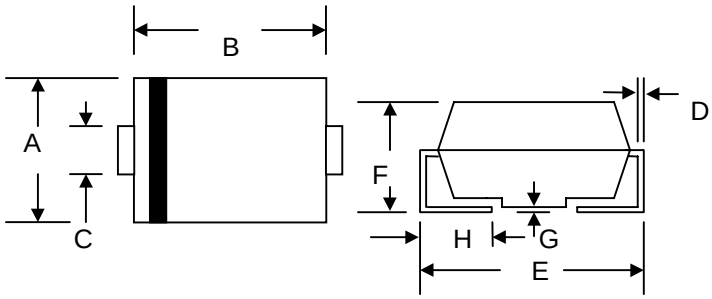
ES1A – ES1J

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°C unless otherwise specified

Characteristic	Symbol	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	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							K/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,
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
3. Mounted on P.C. Board with 8.0mm^2 land area.

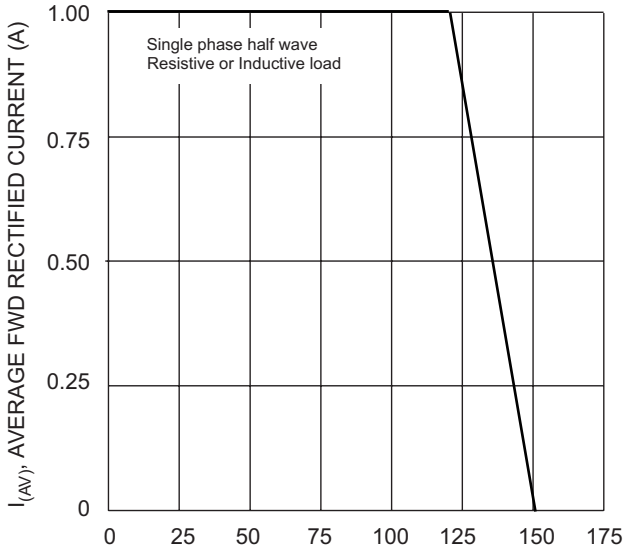


Fig. 1 Forward Current Derating Curve

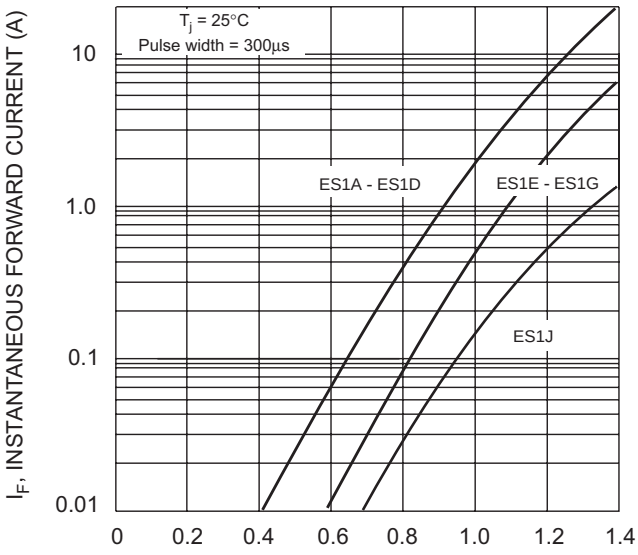


Fig. 2 Typical Forward Characteristics

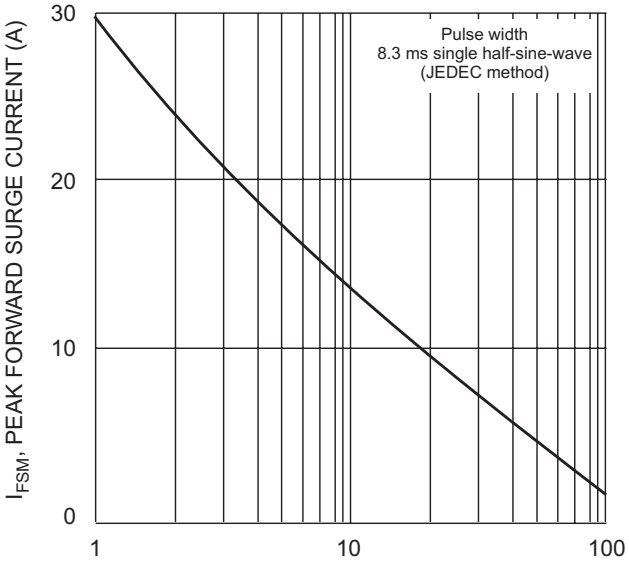


Fig. 3 Pea Forward Surge Current

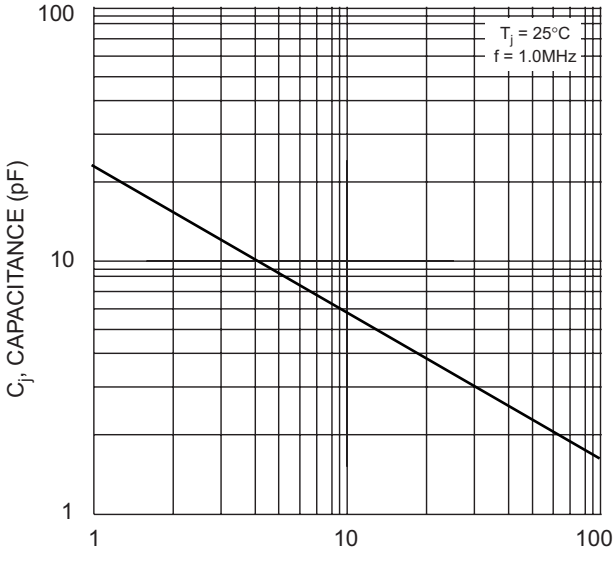
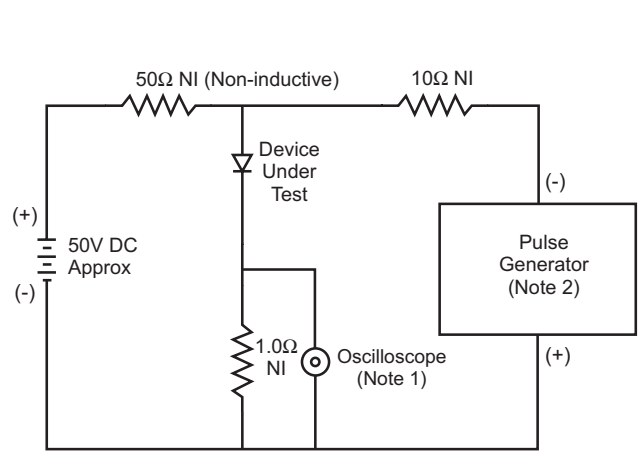


Fig. 4 Typical Junction Capacitance



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

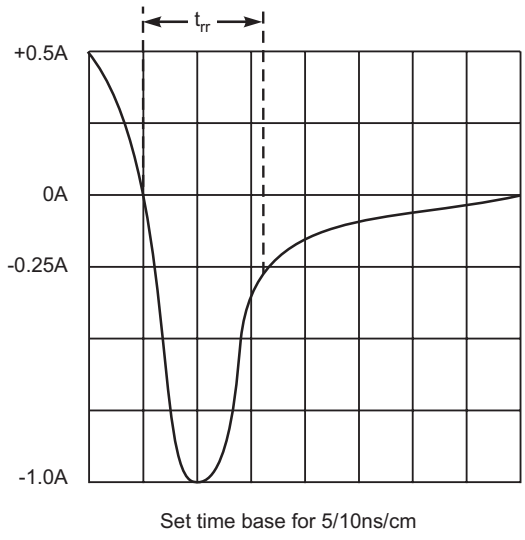


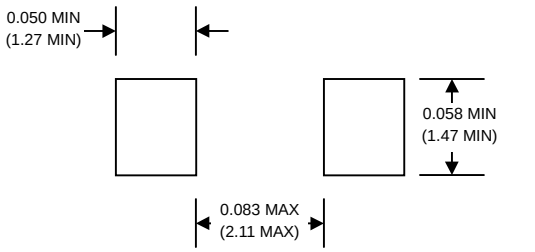
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

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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