



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

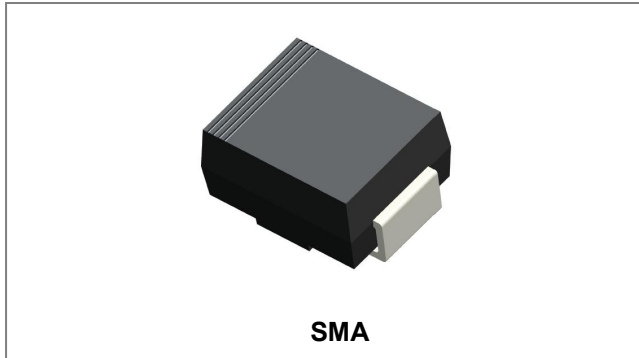
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



ES2A-ES2J SURFACE MOUNT SUPER FAST RECTIFIER



Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Overload Drop, High Efficiency
- Low Power Loss
- Super-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



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: 0.06 grams(approx)

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

Characteristic	Symbol	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	Units
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	$V_{R(RMS)}$	34	70	105	140	210	280	420	
Average Rectified Output Current @ $T_L = 110^\circ\text{C}$	I_O	2.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							A
Forward Voltage @ $I_F = 2.0\text{A}$, $T_J = 25^\circ\text{C}$	V_F	0.95				1.25		1.7	V
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	5.0 500							μA
Typical junction capacitance (Note 1)	C_J	25							pF
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35							ns
Typical thermal resistance (Note 3)	$R_{\theta JL}$	20							K/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}
 2. Measured with $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $t_r=0.25\mu\text{s}$
 3. Mounted on P.C. Board with 8.0mm² lead area

Ratings and Characteristics Curves

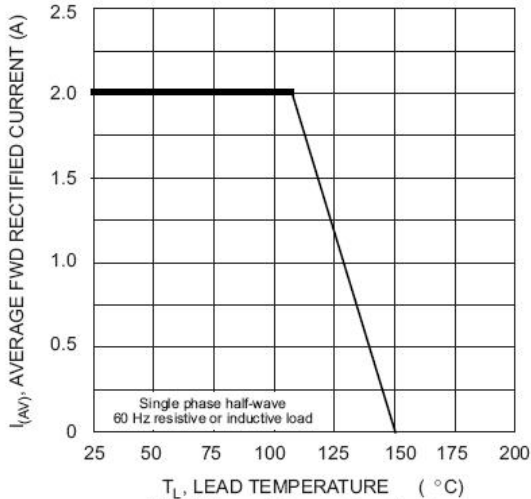


Fig. 1 Forward Current Derating Curve

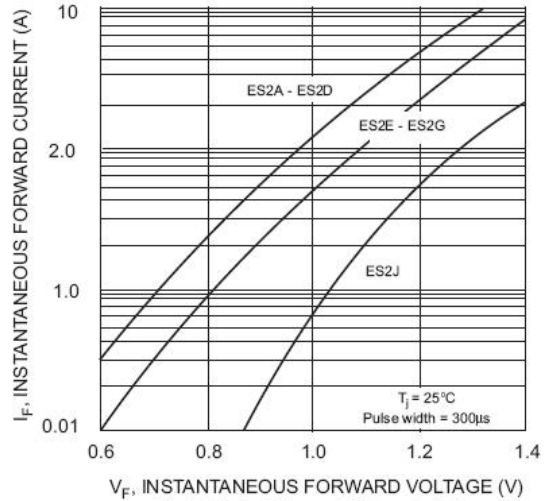


Fig. 2 Typical Forward Characteristics

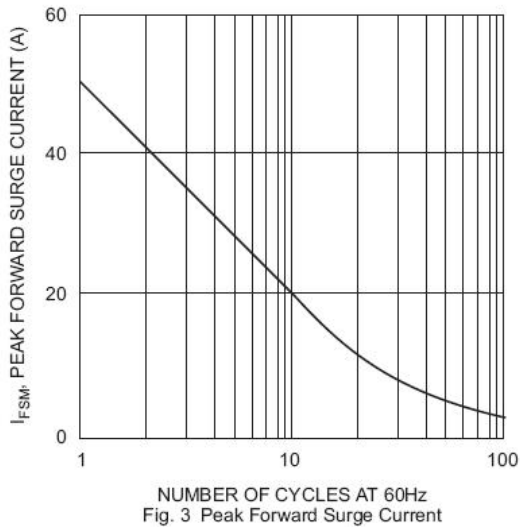


Fig. 3 Peak Forward Surge Current

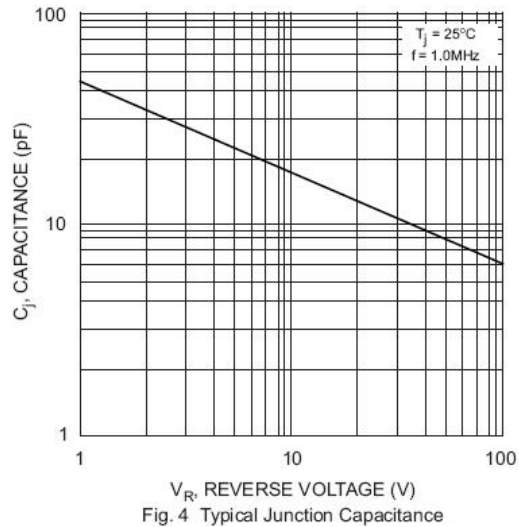
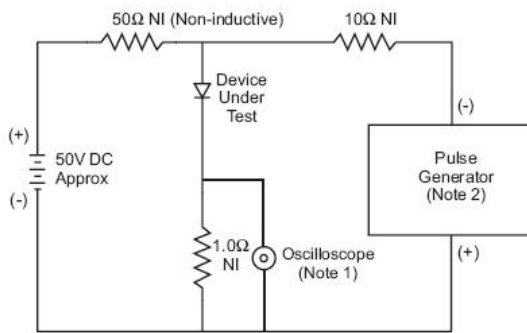


Fig. 4 Typical Junction Capacitance



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

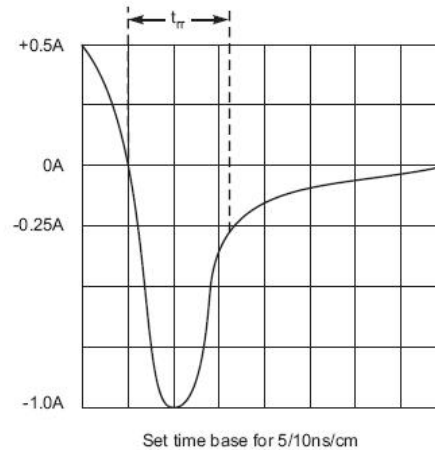
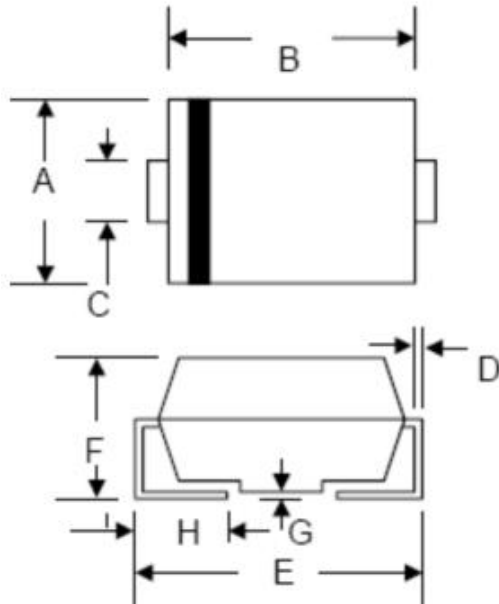


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Mechanical Dimensions SMA



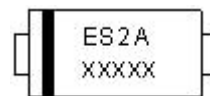
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.18	2.90	0.086	0.114
B	3.99	4.60	0.157	0.181
C	1.29	1.70	0.508	0.067
D	0.152	0.305	0.006	0.012
E	4.70	5.31	0.185	0.209
F	1.70	2.50	0.067	0.098
G	0.051	0.203	0.002	0.008
H	0.76	1.55	0.030	0.610

Ordering Information

Device	Package	Shipping
ES2A-ES2M	SMA (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

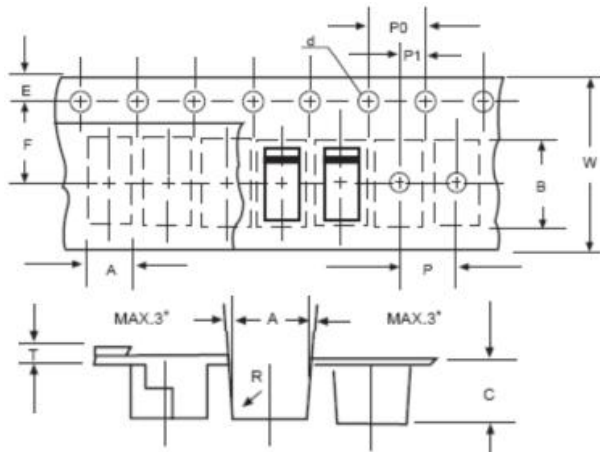


Where XXXXX is YYWWL

- ES = Device Type
- 2 = Forward Current (2A)
- A = Reverse Voltage (50V)
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification SMA



SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20

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