



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!



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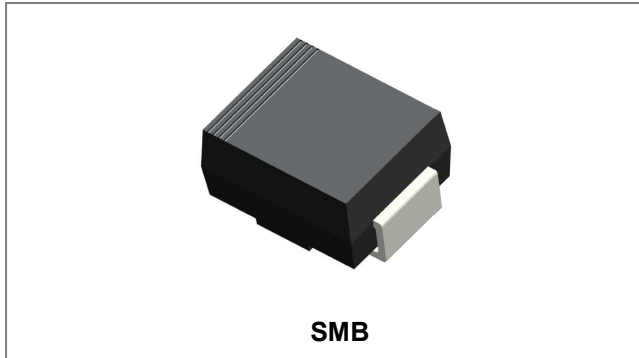
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## ER2A-ER2J SURFACE MOUNT SUPER FAST RECTIFIER



### 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: 0.09grams(approx)

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	ER2A	ER2B	ER2C	ER2D	ER2E	ER2G	ER2J	Units
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V
Working Peak Reverse Voltage	V <sub>RWM</sub>								
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	105	140	210	280	420	
Average Rectified Output Current @T <sub>L</sub> =110°C	I <sub>O</sub>	2.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50							A
Forward Voltage @I <sub>F</sub> = 2.0A, T <sub>J</sub> =25°C	V <sub>F</sub>	0.95				1.25		1.7	V
Maximum DC reverse current T <sub>A</sub> = 25°C at rated DC blocking voltage T <sub>A</sub> = 125°C	I <sub>R</sub>	5.0 100							µA
Typical junction capacitance (Note 1)	C <sub>J</sub>	25							pF
Maximum Reverse Recovery Time (Note 2)	T <sub>rr</sub>	35							ns
Typical thermal resistance (Note 3)	R <sub>θJL</sub>	20							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							°C

**Note:** 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 V<sub>DC</sub>  
2. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A,  
3. Mounted on P.C. Board with 8.0mm<sup>2</sup> lead area



## Ratings and Characteristics Curves

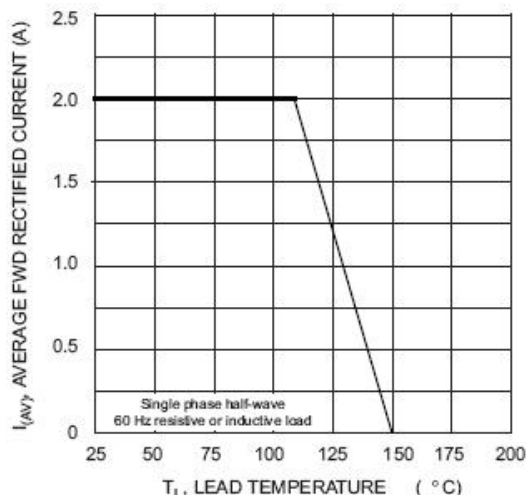


Fig. 1 Forward Current Derating Curve

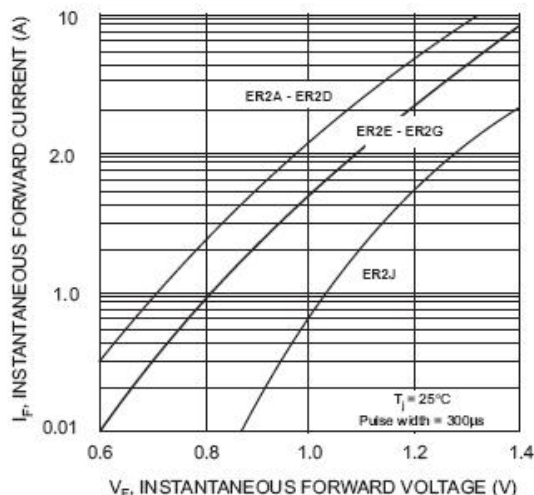


Fig. 2 Typical Forward Characteristics

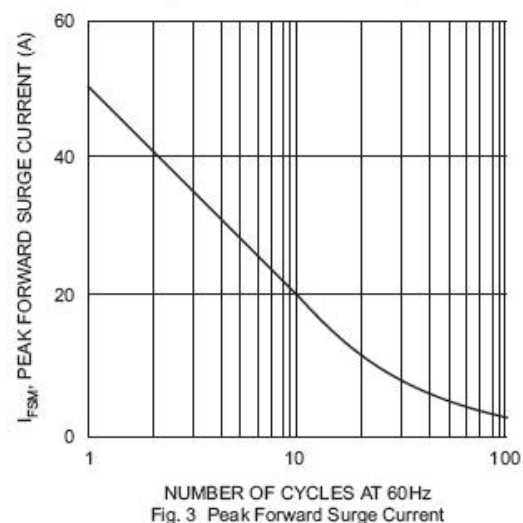


Fig. 3 Peak Forward Surge Current

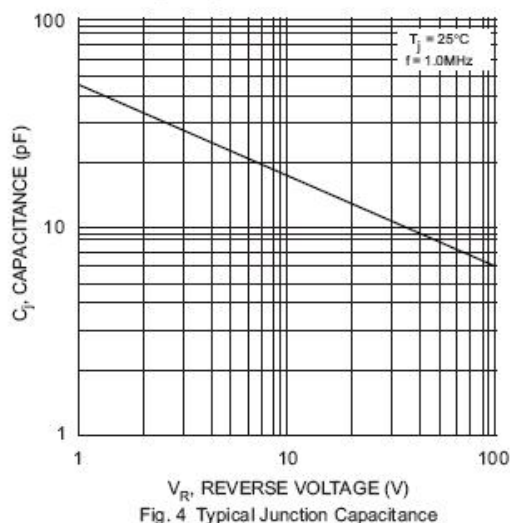
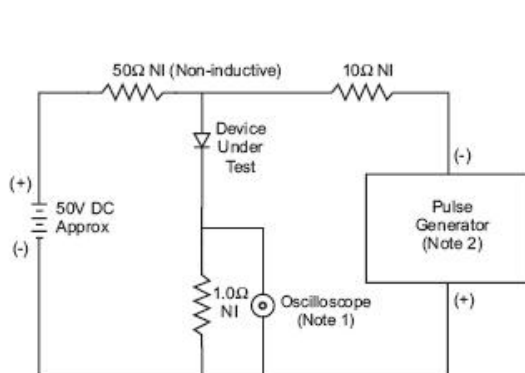


Fig. 4 Typical Junction Capacitance



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

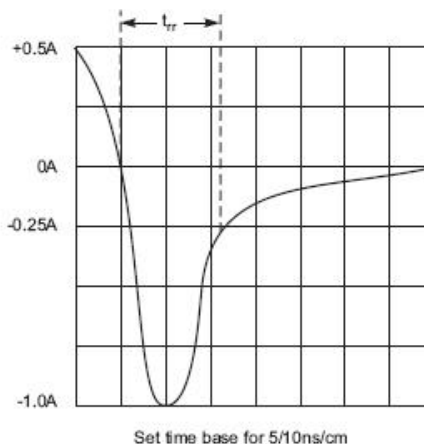
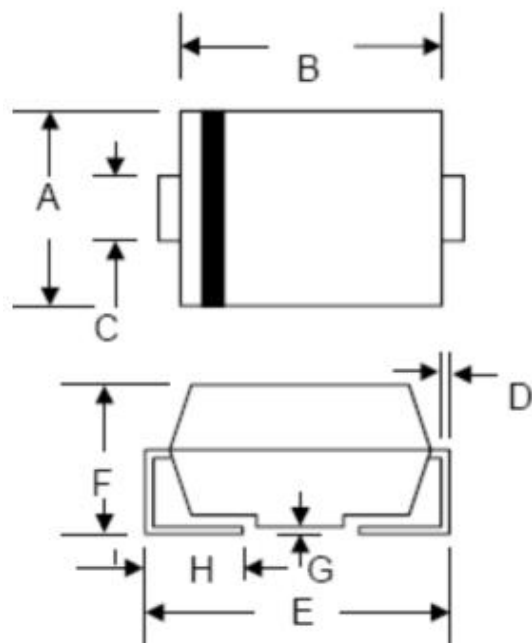


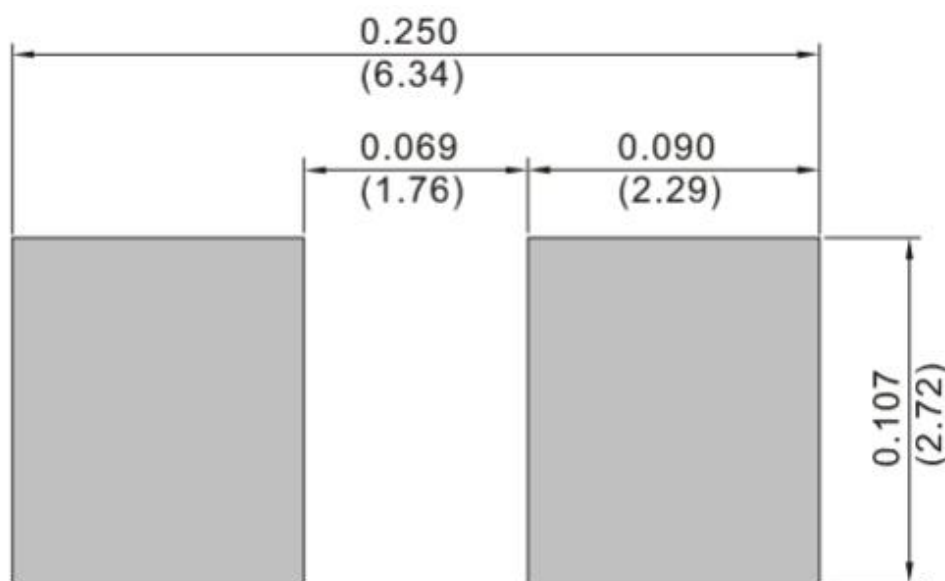
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

**Mechanical Dimensions SMB**



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.06	4.70	0.160	0.185
C	1.80	2.20	0.071	0.087
D	0.152	0.305	0.006	0.012
E	4.80	5.59	0.189	0.220
F	2.10	2.60	0.083	0.102
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060

**Suggested Solder Pad Layout (Millimeters/Inches)**

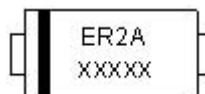


## Ordering Information

Device	Package	Shipping
ER2A-ER2J	SMB (Pb-Free)	3000pcs / 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

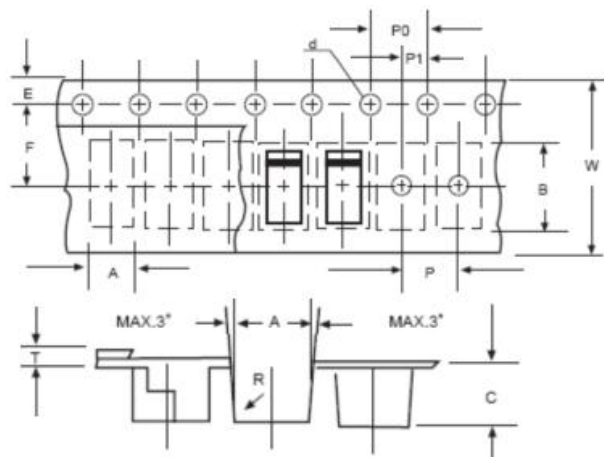


Where XXXXX is YYWWL

ER = 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 SMB



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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