

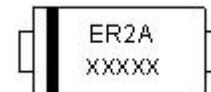
## ER2A-ER2J SURFACE MOUNT SUPER FAST RECTIFIER

**Features:**

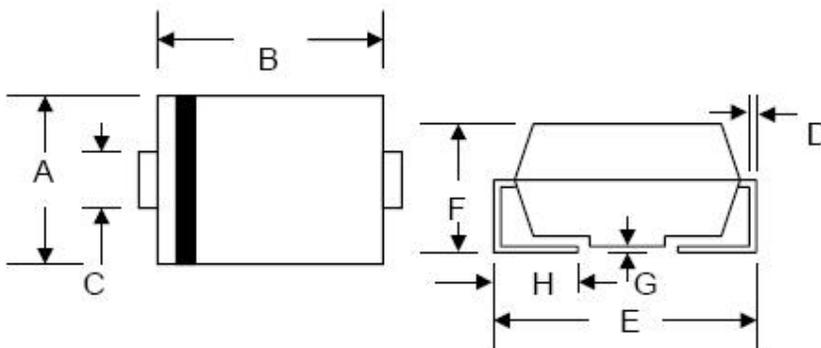
- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Overload Drop, High Efficiency
- Low Power Loss
- Super-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- This is a Pb – Free Device
- All SMC parts are traceable to the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

**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: 0.68 grams(approx)



ER2A

**Mechanical Dimensions: In mm / Inches**

**SMB**

Dim.	SMB/DO-214AA			
	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	2.13	2.44	0.084	0.096
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060
	In mm		In inch	

**MARKING, MOLDING RESIN**

 Marking for ER2A/B/C/D/E/G/J, 1<sup>st</sup> row ER2A/B/C/D/E/G/J, 2<sup>nd</sup> row YYWWL

Where YY is the manufacture year

WW is the manufacture week code

L is the wafer's Lot Number

**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.

**Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified

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

Characteristic	Symbol	ER2A	ER2B	ER2C	ER2D	ER2E	ER2G	ER2J	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	$V_{R(RMS)}$	35	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	$I_R$				5.0 100				$\mu\text{A}$
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	$T_J, T_{STG}$				-65 to +150				$^\circ\text{C}$

**Note:** 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

2. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ ,

3. Mounted on P.C. Board with 8.0mm<sup>2</sup> lead area

**Technical Data**  
**Data Sheet N0132, Rev. E**

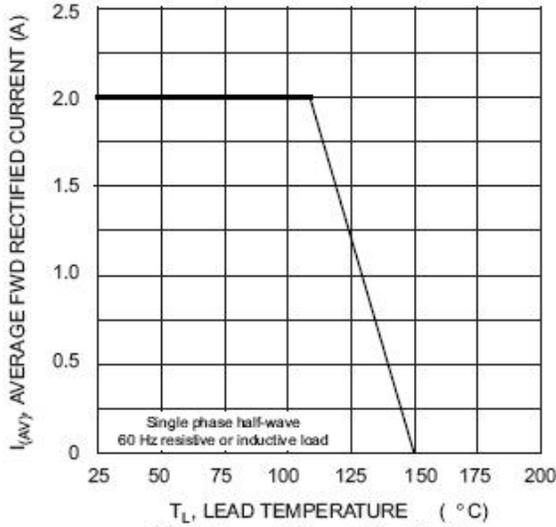


Fig. 1 Forward Current Derating Curve

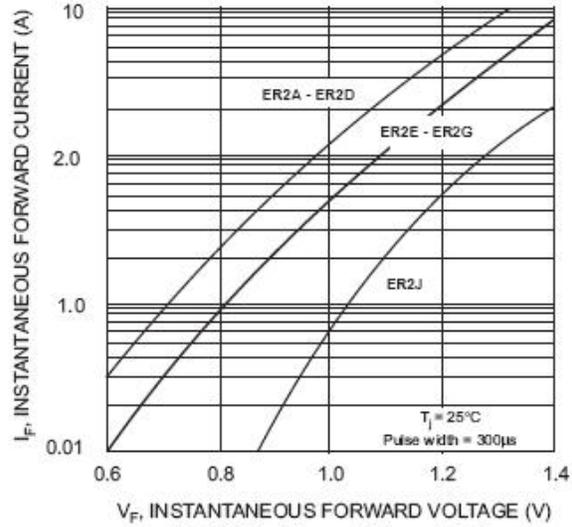


Fig. 2 Typical Forward Characteristics

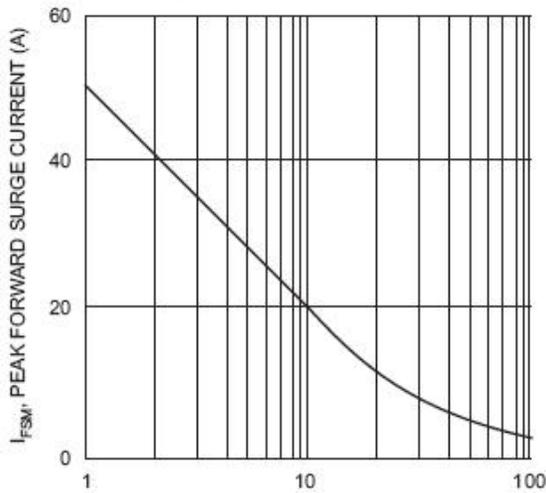


Fig. 3 Peak Forward Surge Current

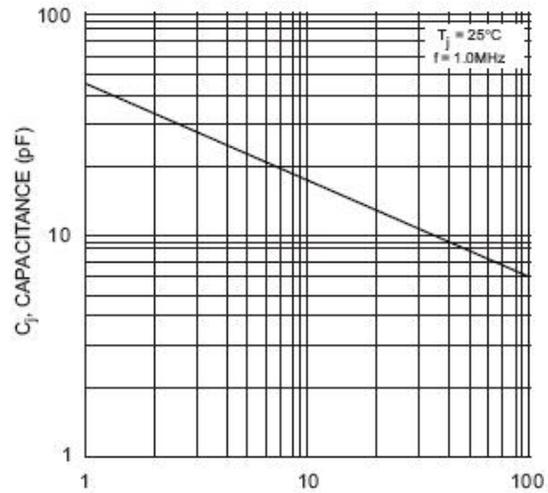
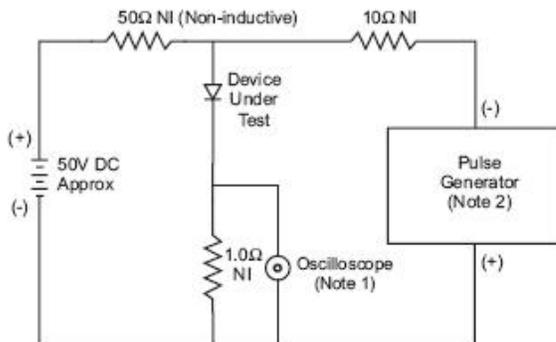
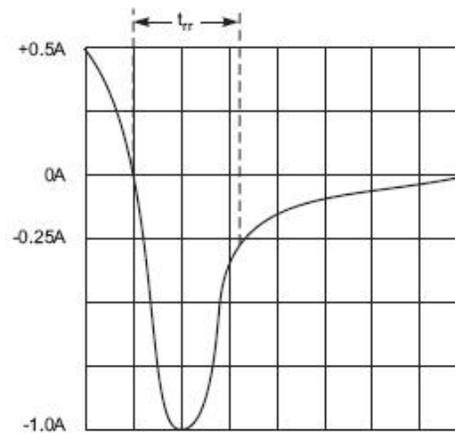


Fig. 4 Typical Junction Capacitance



- 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

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