



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

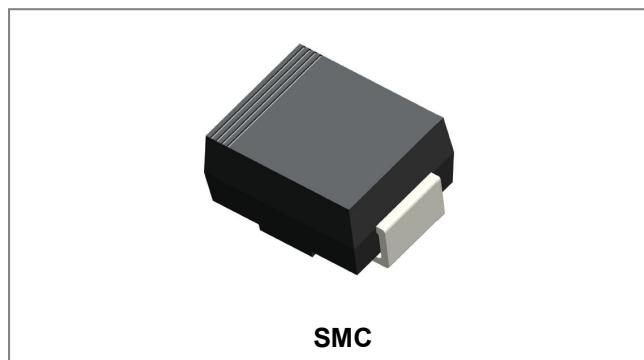
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ER5A-ER5J SURFACE MOUNT SUPER FAST RECTIFIER



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:** 0.23grams(approx)

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	ER5A	ER5B	ER5C	ER5D	ER5E	ER5G	ER5J	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 =75°C	I _O	5.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150							A
Forward Voltage @I _F = 5.0A, T _J =25°C	V _F	0.95				1.25		1.7	V
Maximum DC reverse current T _A = 25°C at rated DC blocking voltage T _A = 100°C	I _R	5.0 100							µA
Typical junction capacitance (Note 1)	C _J	58							pF
Maximum Reverse Recovery Time (Note 2)	T _{rr}	35							ns
Typical thermal resistance (Note 3)	R _{θJL}	47							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

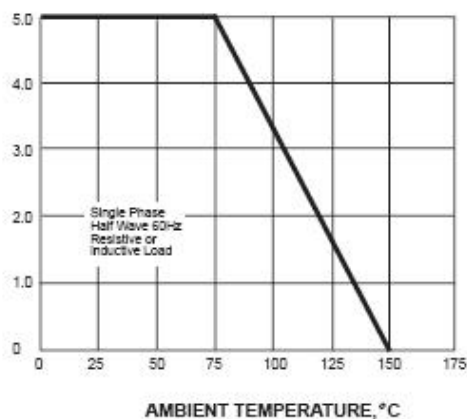
Note:

1. Measured at 1.0 MHZ and applied reverse voltage of 4.0 V_{DC}
2. Measured with I_F=0.5A, I_R=1.0A, I_{rr}=0.25A,
3. Mounted on P.C. Board with 8.0mm² lead area

Ratings and Characteristics Curves

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

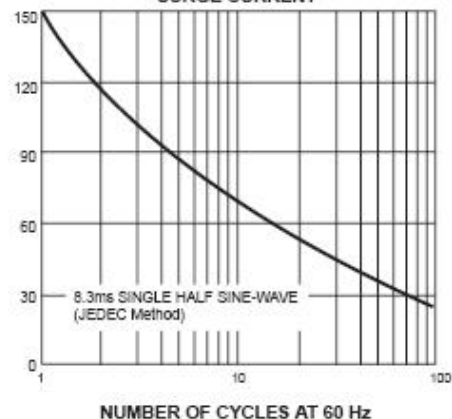
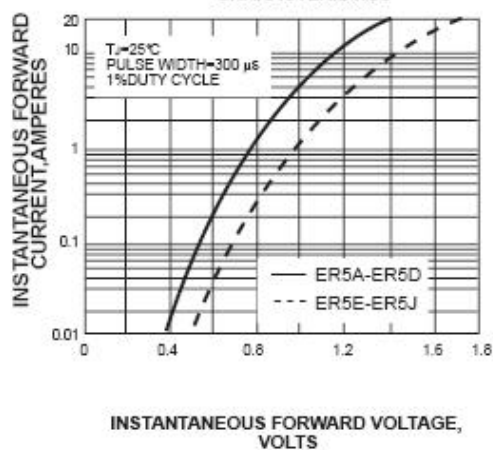


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

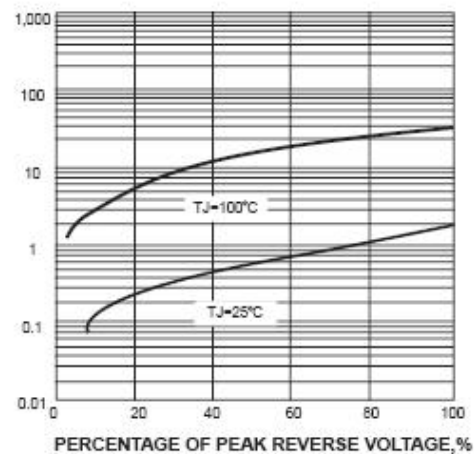
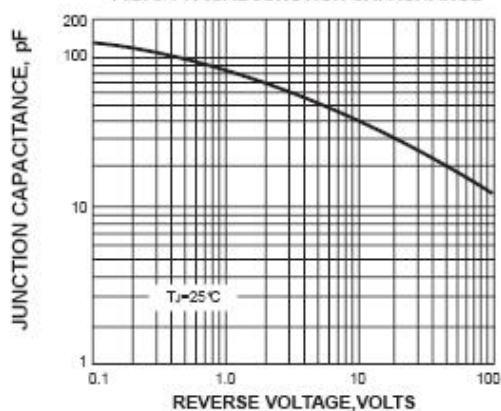
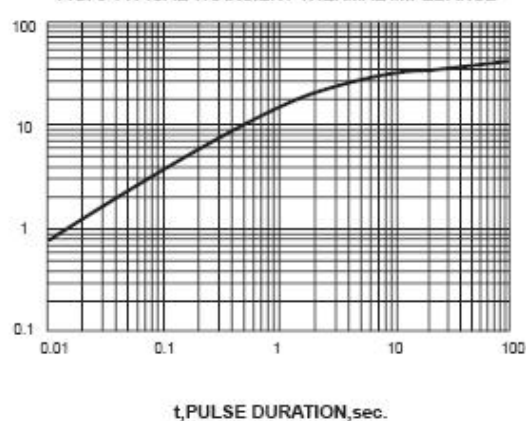


FIG. 5-TYPICAL JUNCTION CAPACITANCE

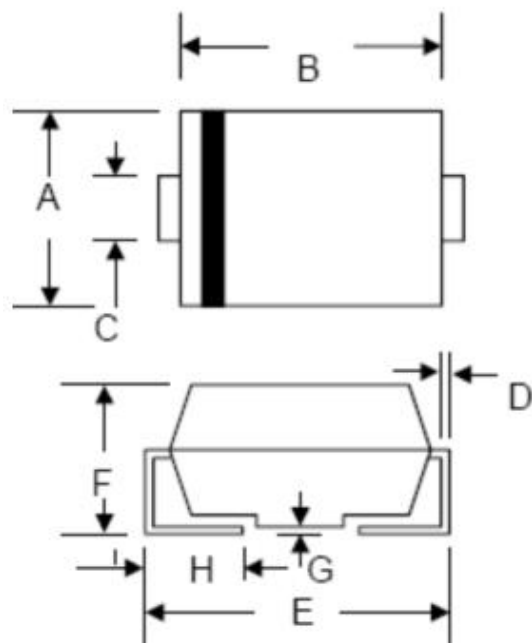


TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Mechanical Dimensions SMC



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.25	0.305	0.325
F	2.00	2.95	0.079	0.116
G	0.051	0.203	0.002	0.008
H	0.76	1.60	0.030	0.063

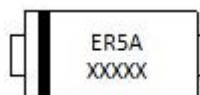
Ordering Information

Device	Package	Shipping
ER5A-ER5J	SMC (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

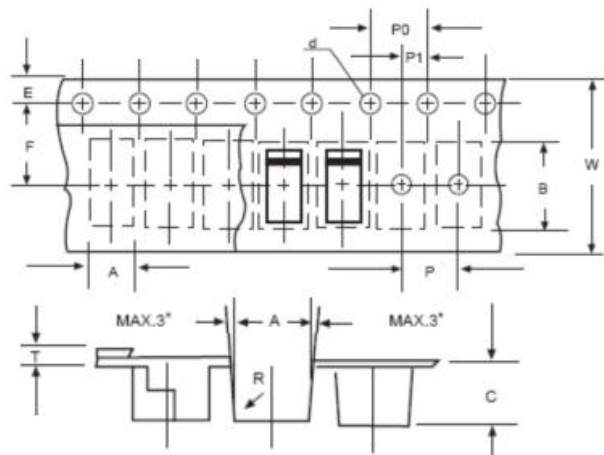
Where XXXXX is YYWWL



ER = Device Type
5 = Forward Current (5A)
A = Reverse Voltage (50V)
YY = Year
WW = Week
L = Lot Number

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

Carrier Tape Specification SMC



SYMBOL	Millimeters	
	Min.	Max.
A	5.90	6.10
B	8.20	8.40
C	2.40	2.60
d	1.40	1.60
E	1.40	1.60
F	7.60	7.70
P	7.90	8.10
P0	3.90	4.10
P1	3.90	4.10
T	-	0.600
W	15.80	16.20

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