

ER5J ULTRAFAST PLASTIC RECTIFIER

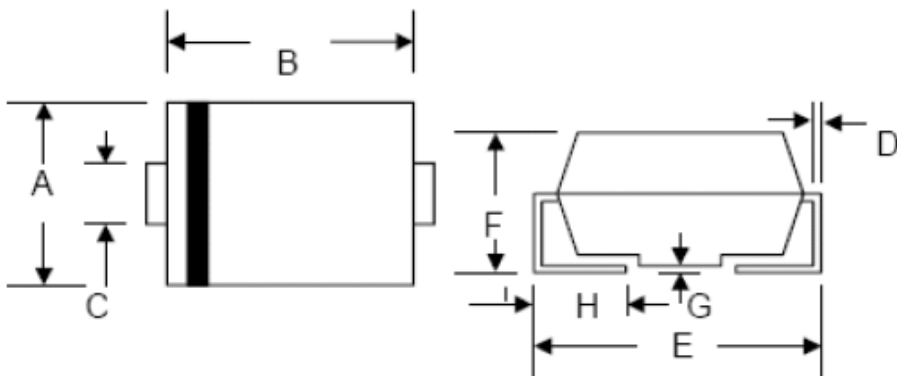
Features:

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 100 A Peak
- Low Power Loss
- Super Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- Green Products in Compliance with the ROHS Directive
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Data:

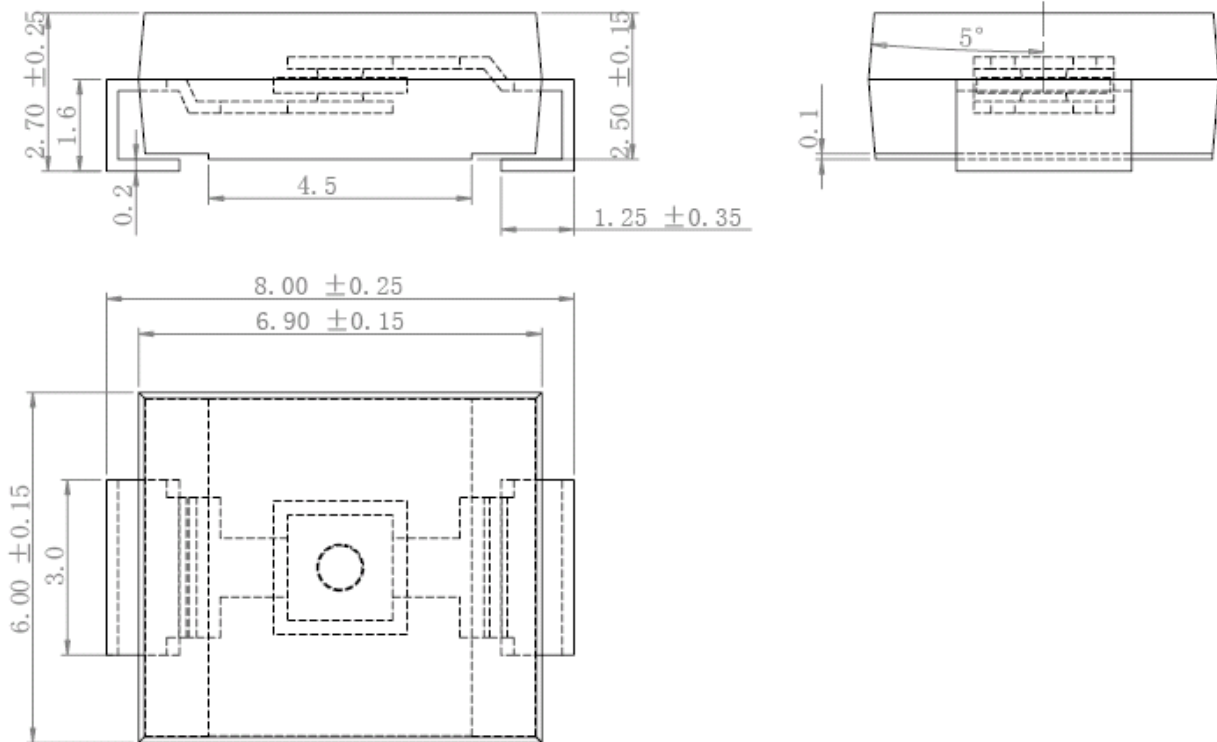
- Case: Low Profile Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity :Cathode Band or Cathode Notch
- Weight: 0.21 grams (approx.)
- Marking: Type Number

Mechanical Dimensions: In mm



Dim.	SMC/DO-214AB			
	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
	In mm		In inch	

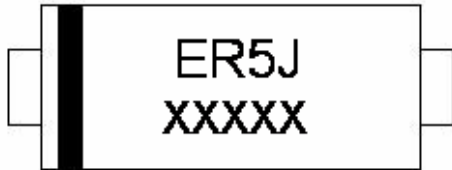
OPTION 1



OPTION 2(JK)

SMC

Marking Diagram:



Where XXXXX is YYWWL

ER = Device Type
5 = Forward Current (5A)
J = Reverse Voltage (600V)
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
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.

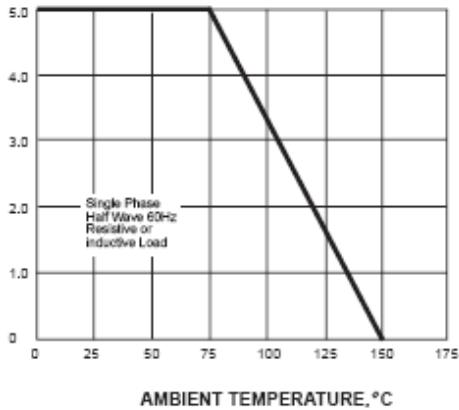
Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	ER5J	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	V
Average Rectified Output Current @ $T_L = 75^\circ\text{C}$	I_o	5.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150	A
Forward Voltage @ $I_F = 5.0\text{A}$, $T_J=25^\circ\text{C}$	V_F	1.7	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	5.0 100	μA
Typical Thermal Resistance Junction to Lead (Note 1)	$R_{\theta JL}$	47	K/W
Typical Junction Capacitance (Note 2)	C_J	58	pF
Maximum Reverse Recovery Time (Note 3)	T_{rr}	35	ns
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$
Case Style	SMC		

- Note: 1. Mounted on P.C. Board with 8.0mm² lead area
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC.
 3. Measured with $I_F=0.5\text{A}$; $I_R=1.0\text{A}$; $I_{RR}=0.25\text{A}$

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

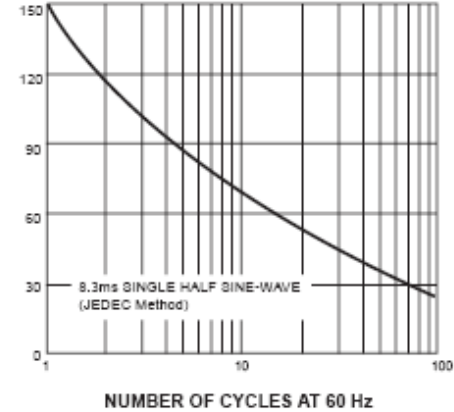
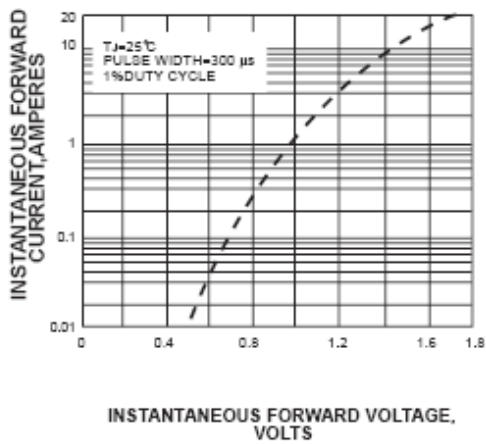


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

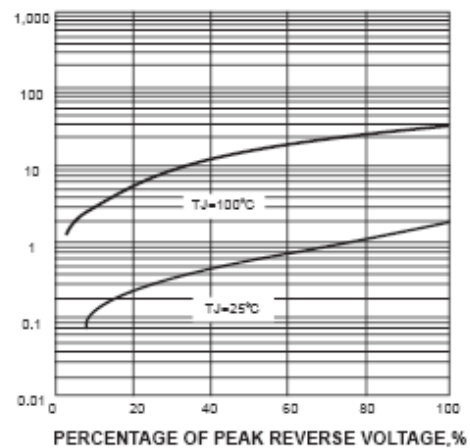
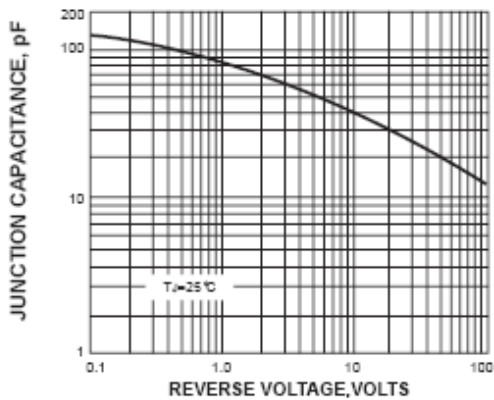
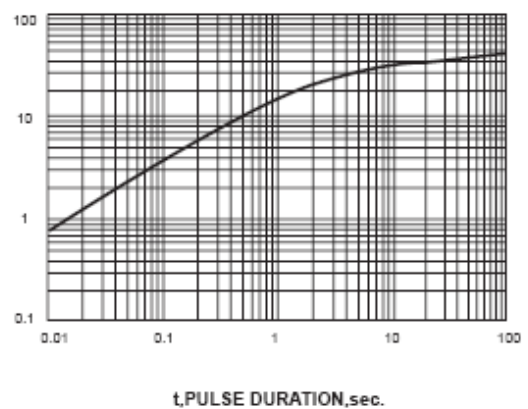


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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