ER5J ULTRAFAST RECTIFIER

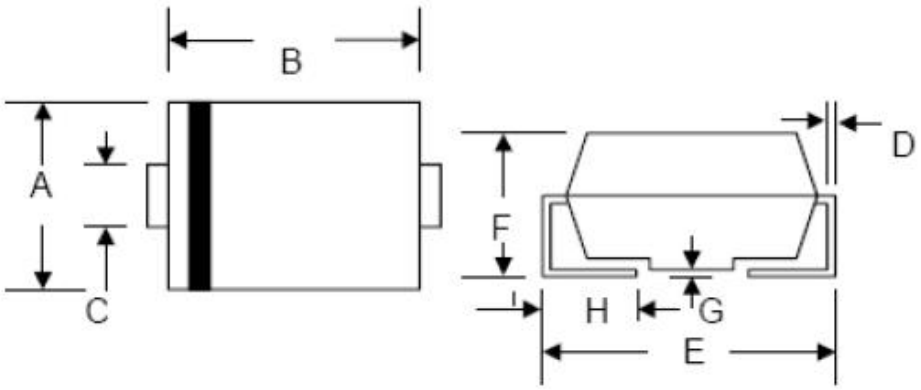
Features:

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- 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:

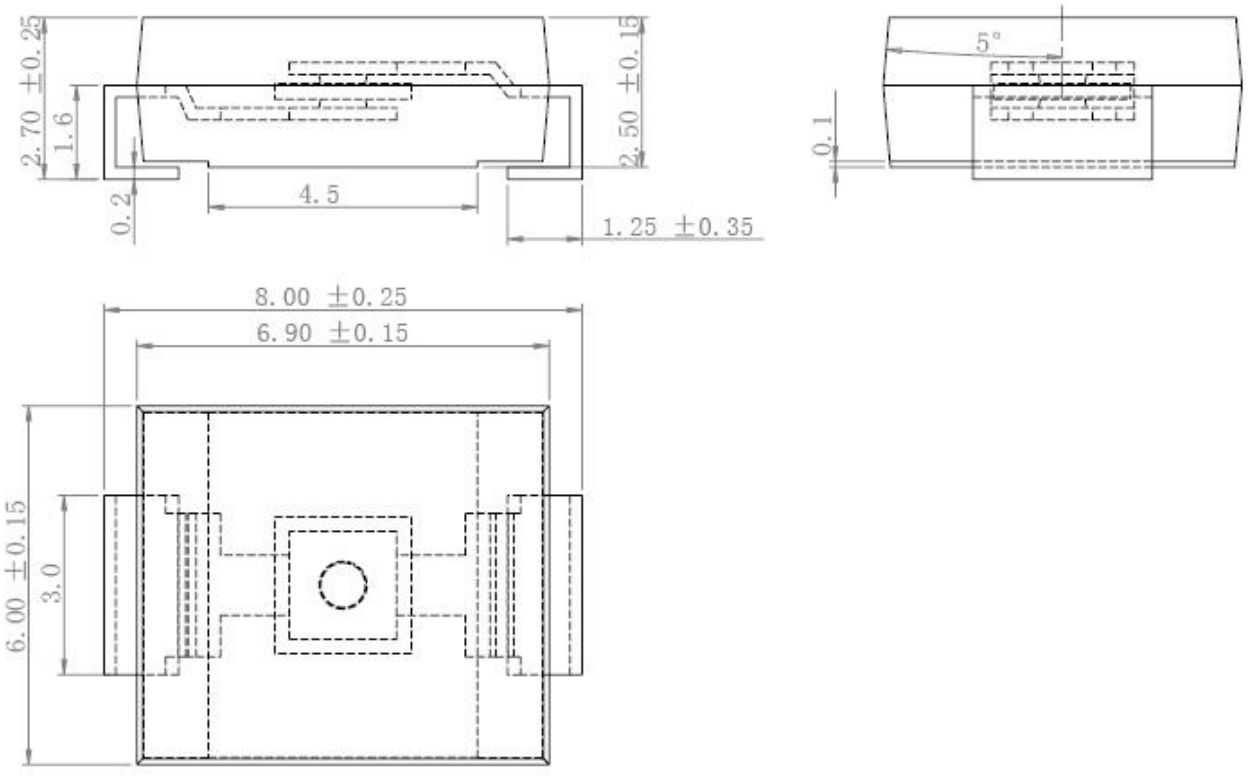
- Case: Low Profile Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity :Cathode Band or Cathode Notch
- Weight: 0.23 grams (approx.)
- Marking: Type Number

Mechanical Dimensions: In mm



	SMC/DO-214AB			
Dim.	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

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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°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°C	Io	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 = 5.0A, T_J=25°C	V_F	1.7	V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°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)	Trr	35	ns
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C
Case Style	SMC		

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

FIG. 1- FORWARD CURRENT DERATING CURVE

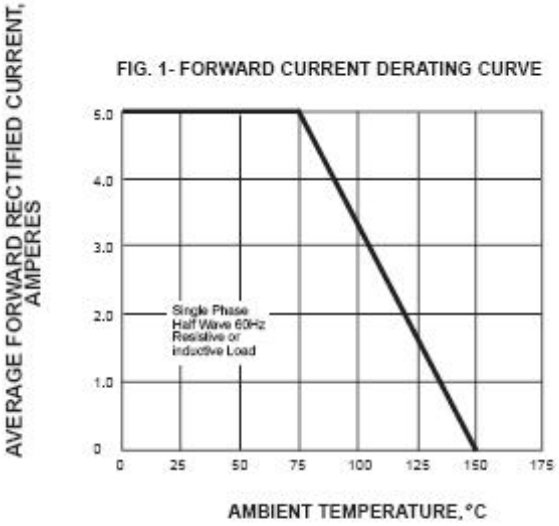


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

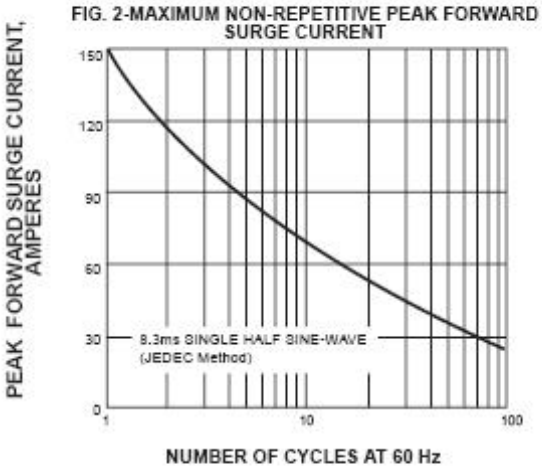


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

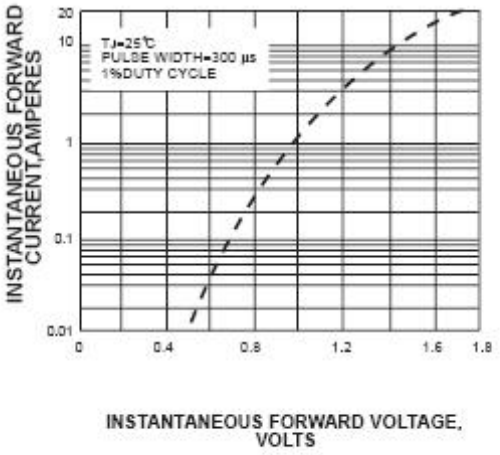


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

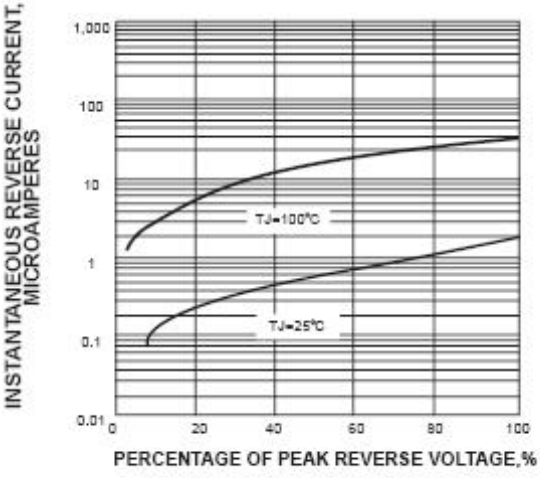


FIG. 5-TYPICAL JUNCTION CAPACITANCE

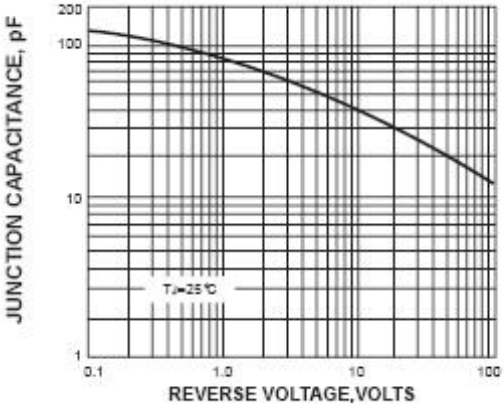
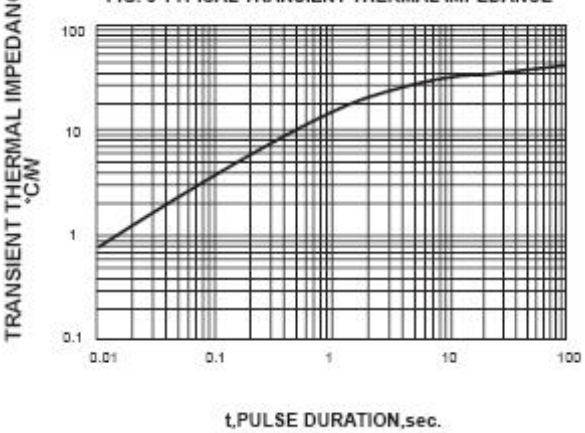


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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