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ER5(A-J) SURFACE MOUNT SUPER FAST RECTIFIER

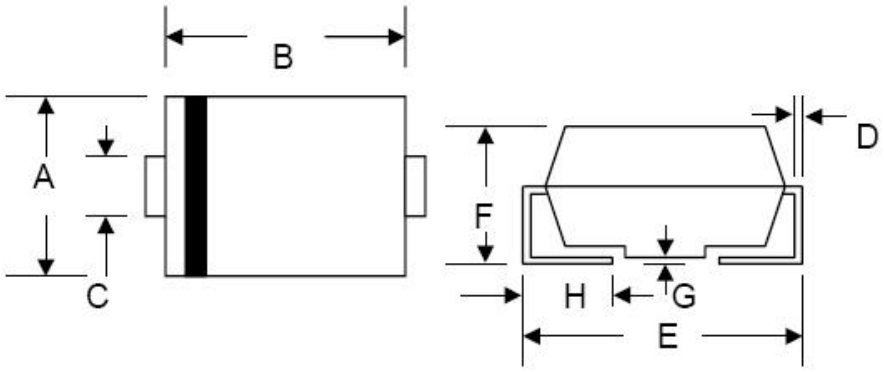
Features:

- **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: 0.21 grams(approx)**

Mechanical Dimensions: In mm / Inches



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	8.13	0.305	0.320
F	2.00	2.62	0.079	0.103
G	0.051	0.203	0.002	0.008
H	0.76	1.27	0.030	0.05
	In mm		In inch	

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
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.

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	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	$V_{R(RMS)}$	34	70	105	140	210	280	420	
Average Rectified Output Current @T_L = 75°C	Io	5.0							V
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)	Trr	35							ns
Typical thermal resistance (Note 3)	$R_{\theta JL}$	47							K/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 VDC
2. Measured with I_F=0.5A, I_R=1.0A, I_{rr}=0.25A,
3. Mounted on P.C. Board with 8.0mm^2 lead area

FIG. 1- FORWARD CURRENT DERATING CURVE

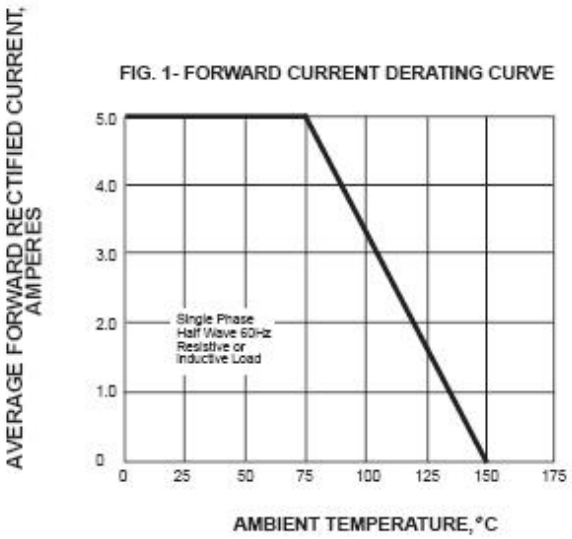


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

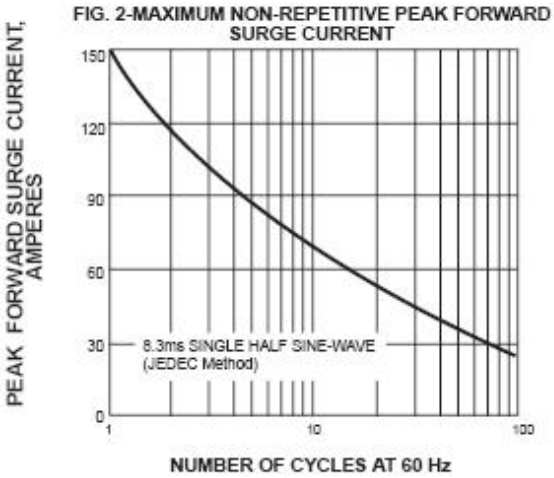


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

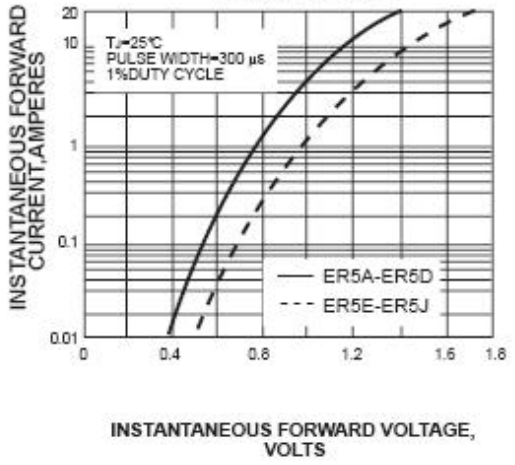


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

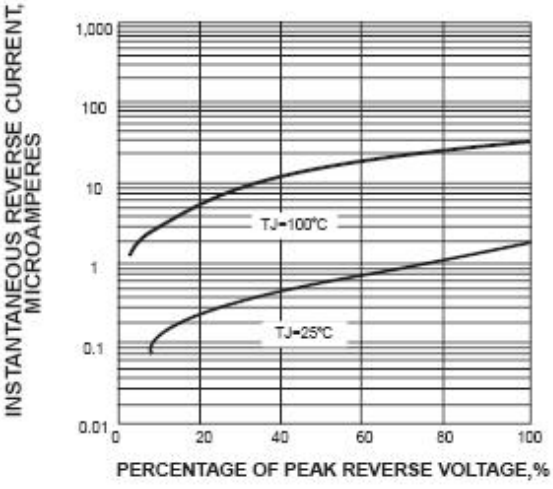


FIG. 5-TYPICAL JUNCTION CAPACITANCE

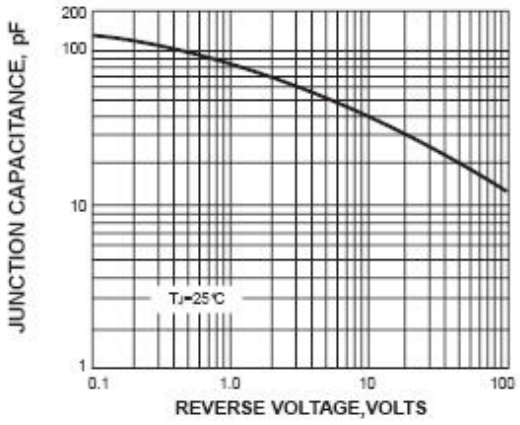
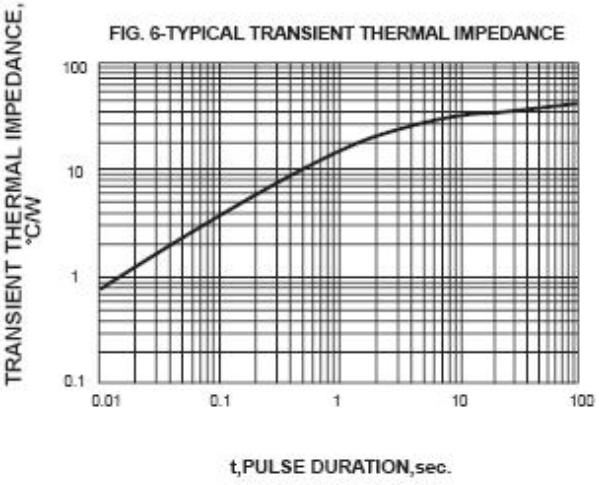


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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