

Features

- Glass passivated superfast recovery rectifiers
- Low profile package
- Built-in strain relief
- Ideal for automated placement
- High temperature soldering 250°C/10seconds at terminals
- Plastic material used carries underwriters laboratory classification 94V-0



DO-214AB (SMC)

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	ES3D	ES3G	ES3J	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	200	400	600	V
Maximum RMS Voltage	V _{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	200	400	600	V
Maximum Average Forward Rectified Current	I _{F(AV)}	3.0			A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (T _L =100°C)	I _{FSM}	100			A
Operating Junction Temperature Range	T _J	-55 to +150			°C
Storage Temperature Range	T _{STG}	-55 to +150			°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	ES3D	ES3G	ES3J	Unit
Maximum Instantaneous Forward Voltage @3.0A	V _F	0.95	1.3	1.7	V
Typical Junction Capacitance ²	C _J	50	40		pF
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R (T _A =25°C)	10			uA
	I _R (T _A =100°C)	500			uA
Typical Reverse Recovery Time ¹	t _{rr}	35			nS
Typical Thermal Resistance Junction to Ambient ³	R _{θJA}	47			°C/W
Typical Thermal Resistance Junction to Lead ³	R _{θJL}	12			°C/W

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied V_R=4.0 Volts
3. Units Mounted on P.C.B. with 0.31 x 0.31" (8.0 x 8.0mm) Copper Pad Areas

Typical Characteristics Curves

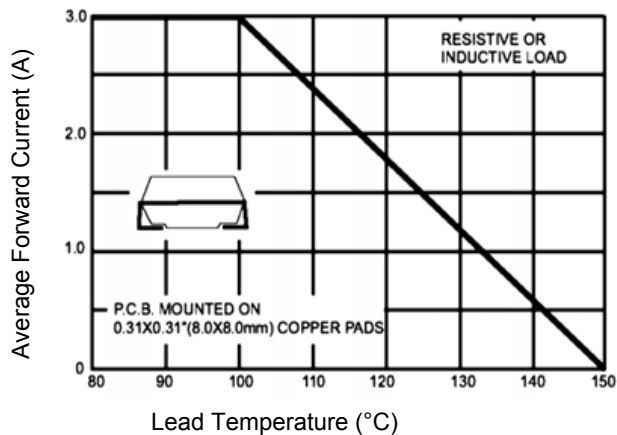


Figure 1. Forward Current Derating Curve

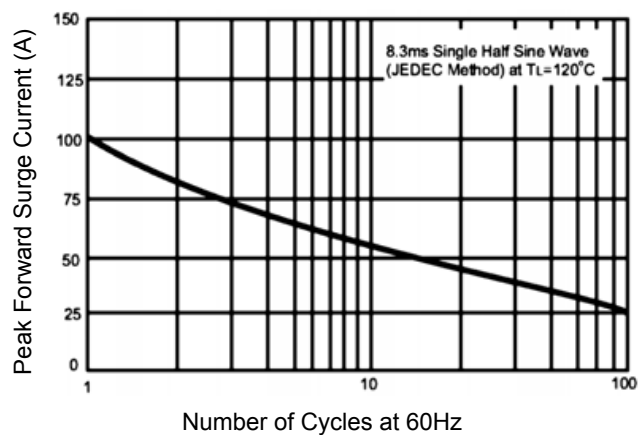


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

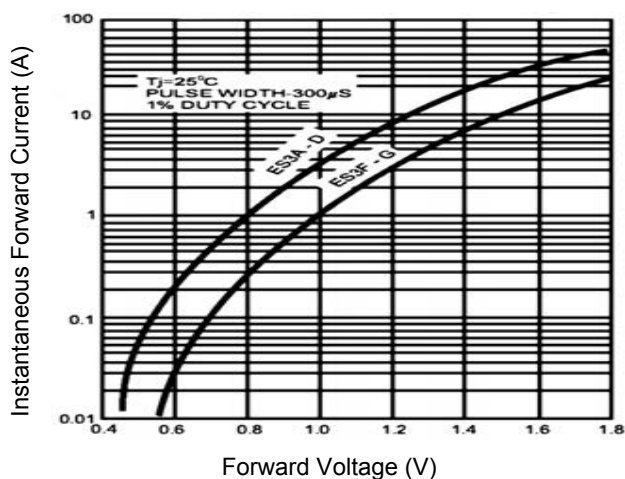


Figure 3. Typical Instantaneous Forward Characteristics

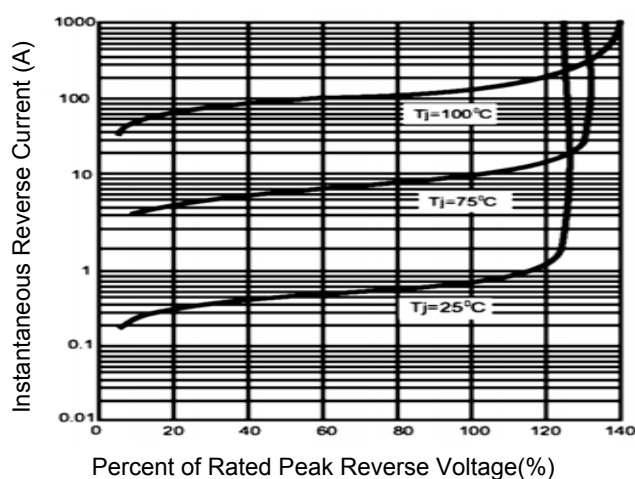


Figure 4. Typical Reverse Characteristics

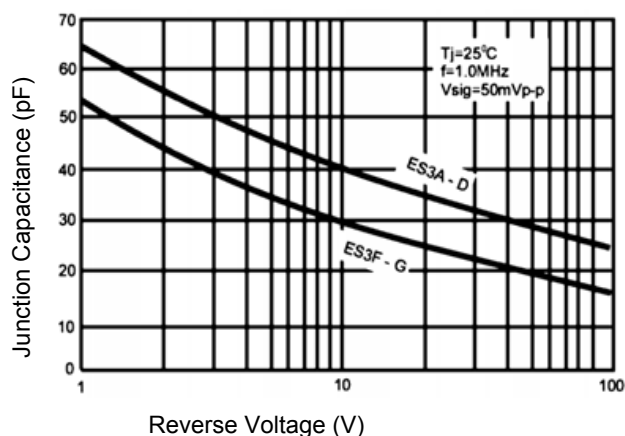
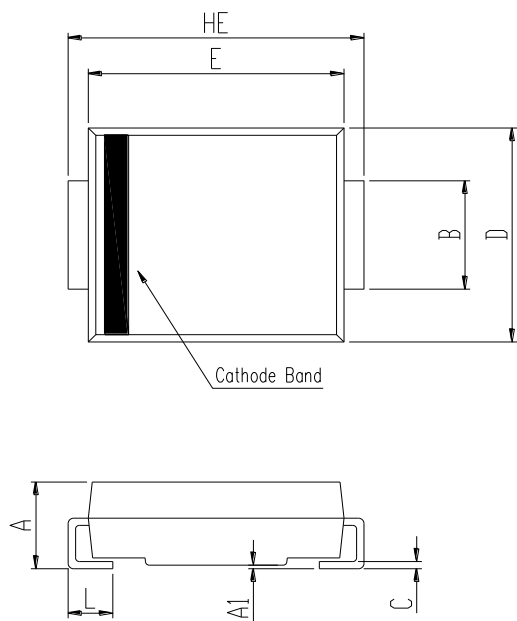


Figure 5. Typical Junction Capacitance

ES3D thru ES3J

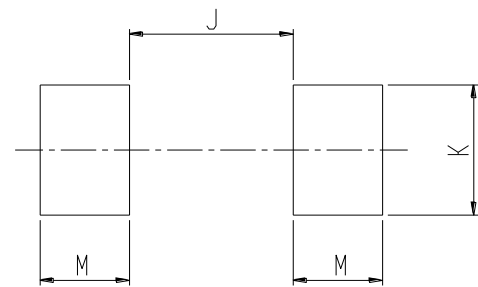
Super Fast Recovery Rectifiers
Reverse Voltage 200V-600V Forward Current 3A

Package Outline Dimensions DO-214AB (SMC)



SMC (DO-214AB)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.62	0.079	0.103
A1	0.00	0.20	0.000	0.008
B	2.92	3.07	0.115	0.121
C	0.15	0.31	0.006	0.012
D	5.59	6.22	0.220	0.245
E	6.60	7.11	0.260	0.280
HE	7.75	8.13	0.305	0.320
L	0.76	1.52	0.030	0.060

Recommended Pad Layout



SMC Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	4.60	-	0.181
K	3.20	-	0.126	-
M	2.00	-	0.079	-