

ES1A thru ES1M

Super Fast Recovery Rectifiers
 Reverse Voltage 50V-1000V Forward Current 1A

Features

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



DO-214AC (SMA)

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

Parameter	Symbol	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1J	ES1K	ES1M	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current	I _{F(AV)}	F.0									A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I _{FSM}	H0									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	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1J	ES1K	ES1M	Unit
Maximum Instantaneous Forward Voltage @F.0A	V _F	0.95			1.3			1.7			V
Typical Junction Capacitance ^F	C _J	F€			ì						pF
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R (T _A =25°C)	5.0									uA
	I _R (T _A =100°C)	100									uA
Typical Reverse Recovery Time ^G	t _{rr}	35									nS
Typical Thermal Resistance Junction to Ambient ³	R _{θJA}	85									°C/W
Typical Thermal Resistance Junction to Lead ³	R _{θJL}	35									°C/W

Note:

1. Measured at 1 MHz and Applied V_R=4.0 Volts
2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
3. P.C.B. Mounted on 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Area.

Typical Characteristics Curves

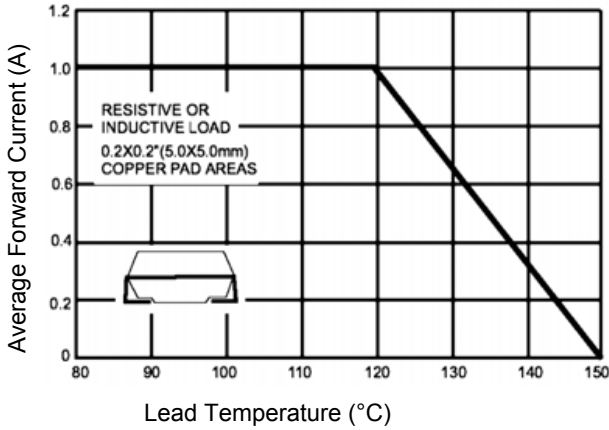


Figure 1. Forward Current Derating Curve

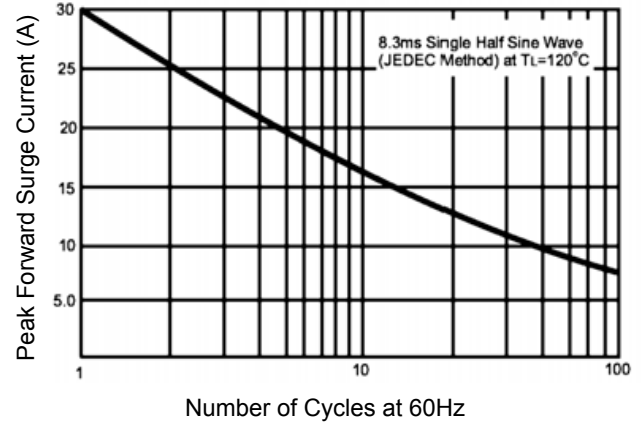


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

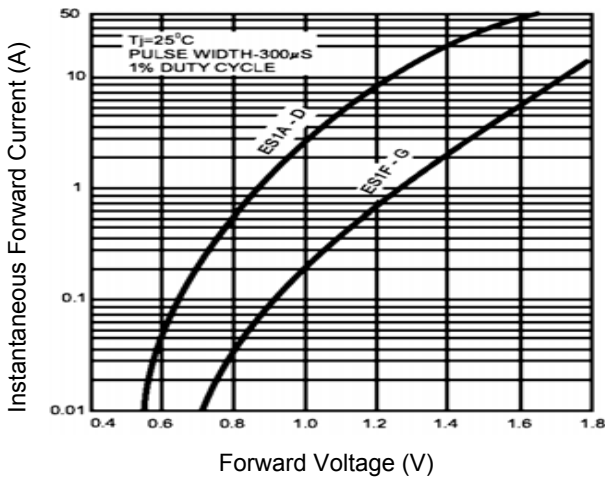


Figure 3. Typical Instantaneous Forward Characteristics

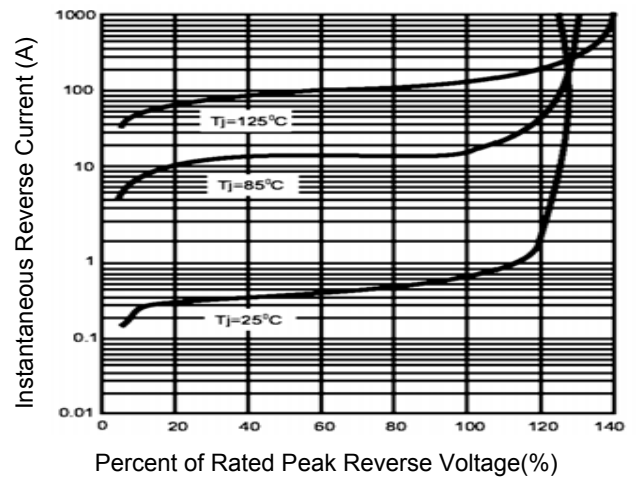


Figure 4. Typical Reverse Characteristics

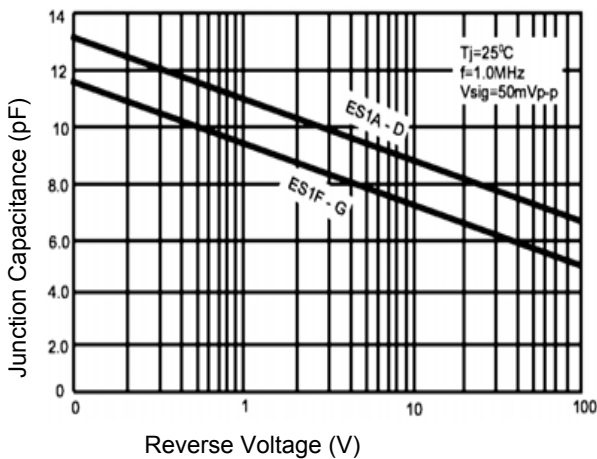
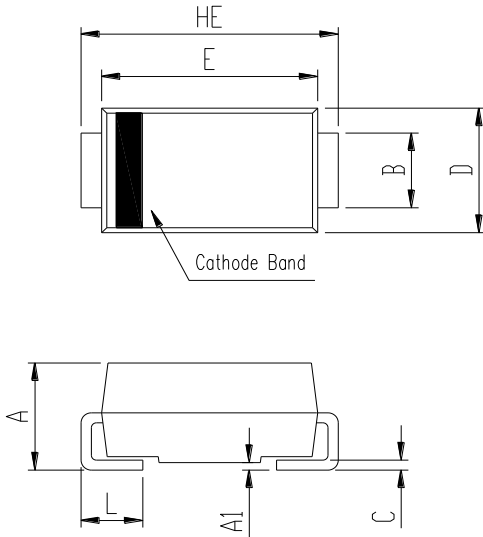


Figure 5. Typical Junction Capacitance

ES1A thru ES1M

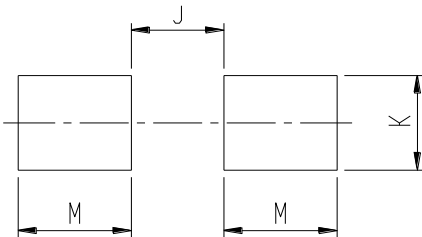
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Package Outline Dimensions DO-214AC (SMA)



SMA (DO-214AC)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.25	0.075	0.089
A1	0.00	0.20	0.000	0.008
B	1.27	1.63	0.050	0.064
C	0.15	0.31	0.006	0.012
D	2.40	2.65	0.094	0.104
E	4.00	4.60	0.157	0.181
HE	4.80	5.20	0.189	0.205
L	0.80	1.50	0.031	0.059

Recommended Pad Layout



Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.20	-	0.087
K	1.72	-	0.068	-
M	2.00	-	0.079	-