GOOD-ARK SEMICONDUCTOR

ES2AA thru ES2JA

Super Fast Surface Mount Rectifiers
Reverse Voltage 50V- 600V Forward Current 2A

Features

- Glass passivated chip
- Super fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material used carries underwriters laboratory classification 94V-0

RoHS COMPLIANT

DO-214AC (SMA)

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

Parameter	Symbol	ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2JA	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current @ T_L=110°C	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	50							A
Typical Thermal Resistance[1]	$R_{\theta JA}$	77							°C/W
	$R_{\theta JC}$	33							
	$R_{\theta JL}$	7							
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	Test Conditions	Symbol	ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2JA	Unit
Maximum Instantaneous Forward Voltage	I_F=2.0A, DC	V_F	0.92				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_L=25°C	I_R	5							uA
	T_L=125°C		350							
Typical Reverse Recovery Time	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	t_{rr}	35							nS
Typical Junction Capacitance	4.0V 1MHz	C_J	25							pF

Notes:1. The thermal resistance from junction to ambient,case or lead,mounted on P.C.B with 5×5mm copper pads, 2 OZ, FR4 PCB.

Typical Characteristics Curves

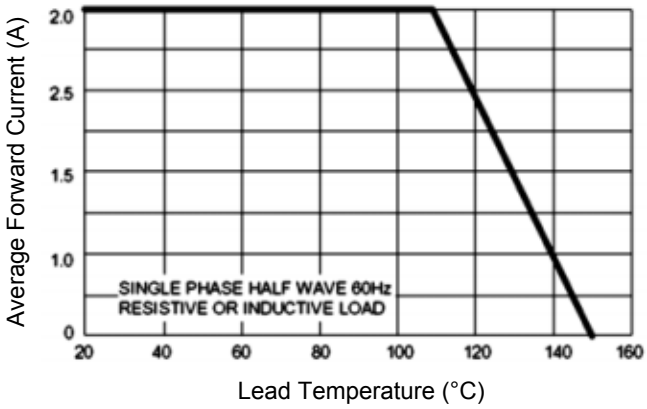

Figure 1. Forward Current Derating Curve

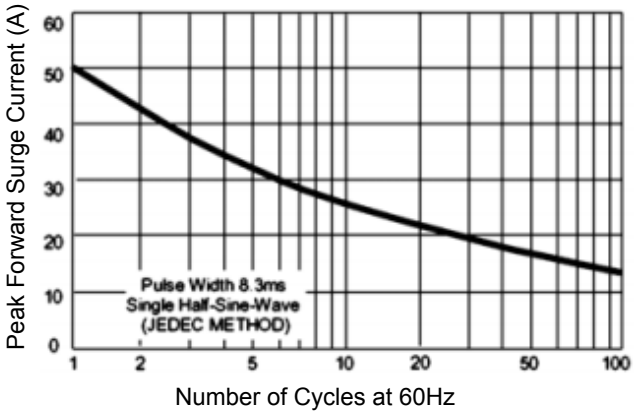

Figure 2. Maximum Non-Repetitive Surge Current

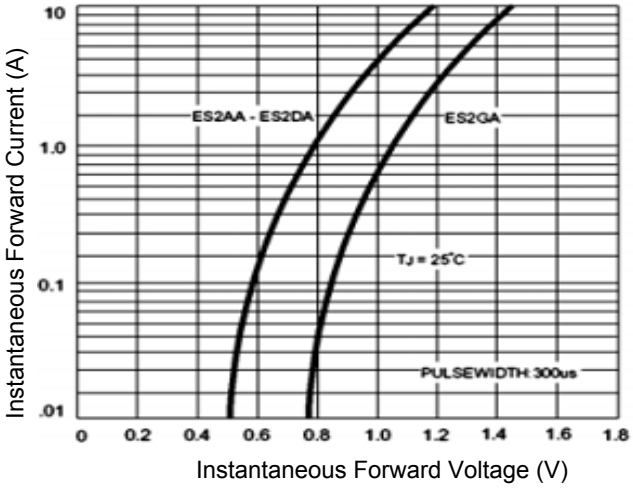

Figure 3. Typical Forward Characteristics

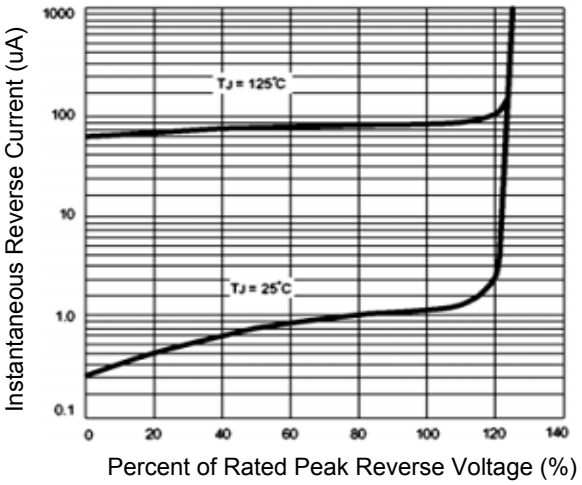

Figure 4. Typical Reverse Characteristics

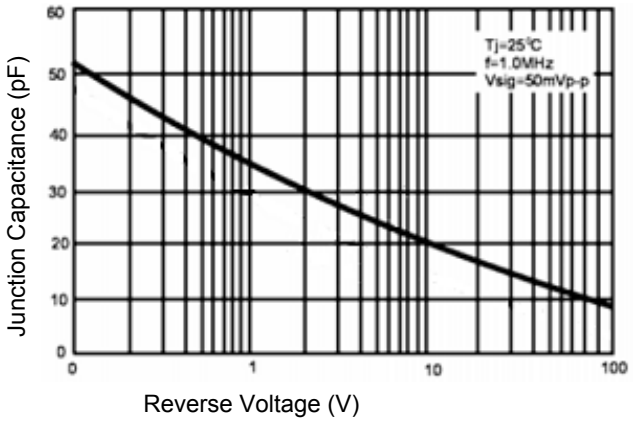

Figure 5. Typical Junction Capacitance

ES2AA thru ES2JA

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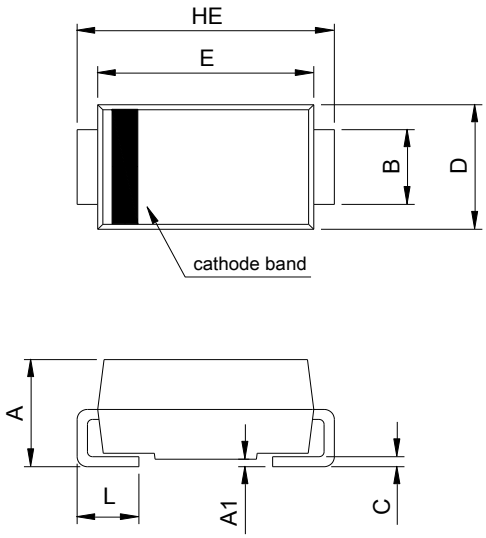
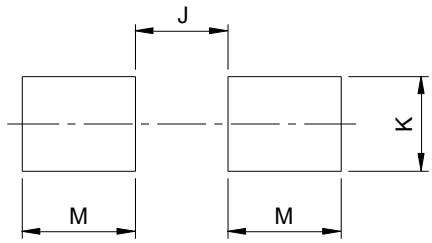
Package Outline Dimensions DO-214AC (SMA)



SMA (DO-214AC)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.30	0.075	0.091
A1	0.00	0.20	0.000	0.008
B	1.25	1.65	0.049	0.065
C	0.15	0.31	0.006	0.012
D	2.35	2.90	0.093	0.114
E	3.99	4.60	0.157	0.181
HE	4.80	5.30	0.189	0.209
L	0.76	1.52	0.030	0.060

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	-