

Features

- Glass passivated junction chip
- Fast switching for high efficiency
- Low reverse leakage
- High surge capability
- Solder dip 260°C, 10s
- Built-in strain relief, high reliability



DO-214AC (SMA)

Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power suppliers and other consumer applications.

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	1600	V
Maximum RMS Voltage	V _{RMS}	1120	V
Maximum DC Blocking Voltage	V _{DC}	1600	V
Maximum Average Output Rectified Current	I _{F(AV)}	1	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	30	A
Rating for Fusing (t<8.3ms)	I ² t	3.74	A ² S
Typical Thermal Resistance ¹	R _{θJA}	90	°C/W
	R _{θJC}	20	°C/W
	R _{θJL}	25	°C/W
Operating Junction Temperature Range	T _J	-65 to +150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

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

Parameter	Symbol	Conditions	Value	Unit
Maximum Instantaneous Forward Voltage	V _F	I _F =1.0A, T _A =25°C	2.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	T _A =25°C	3	μA
		T _A =100°C	10	
Maximum Reverse Recovery Time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	75	nS
Typical Junction Capacitance	C _J	4.0V, 1MHz	15	pF

Notes: 1. The thermal resistance from junction to ambient, case and lead, mounted on FR-4 P.C.B with 5x5mm copper pads, 2OZ.

Ratings and Characteristics Curves

($T_A=25^\circ\text{C}$ unless otherwise noted)

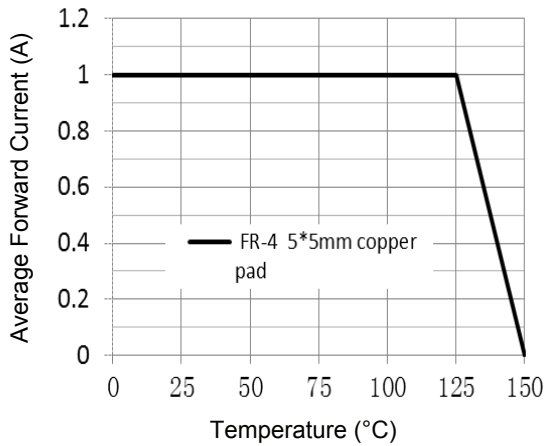


Figure 1. Forward Current Derating Curve

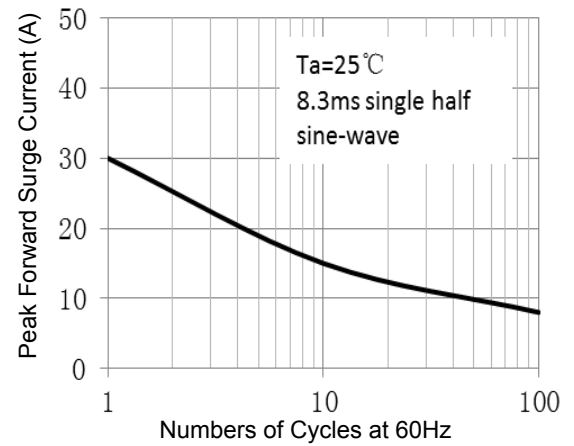


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

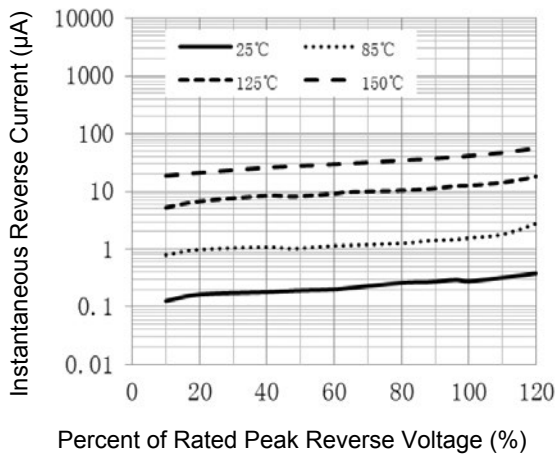


Figure 3. Typical Reverse Characteristics

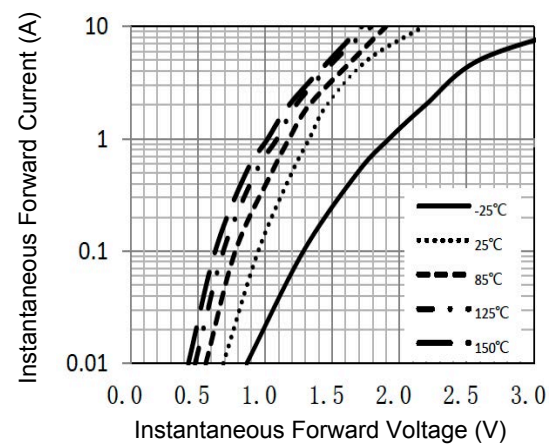


Figure 4. Typical Instantaneous Forward Characteristics

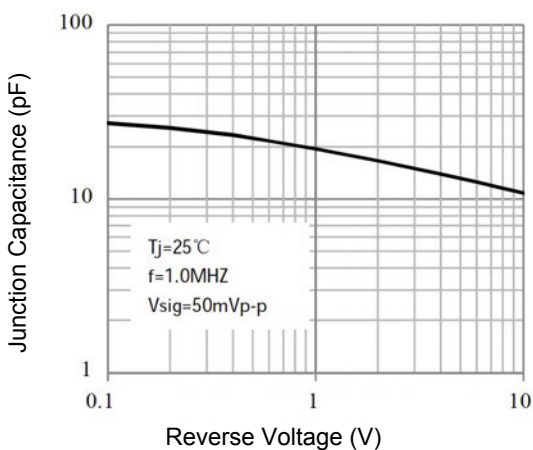
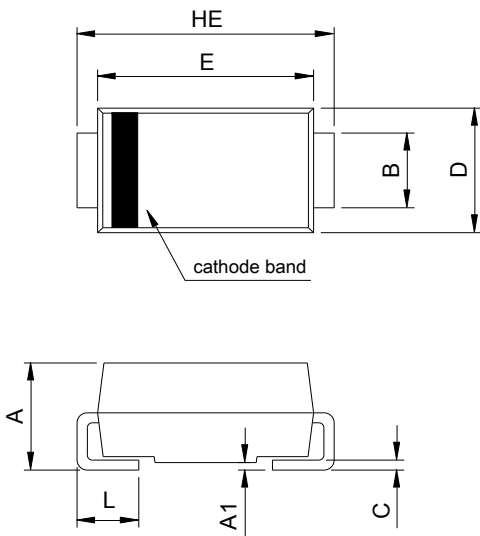


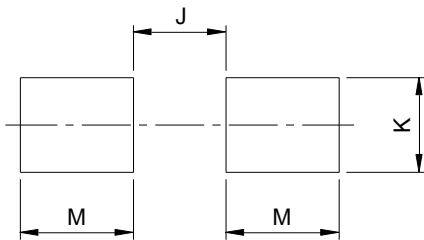
Figure 5. Typical Junction Capacitance

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	-