

## Features

- Glass passivated junction chip
- For surface mounted application
- Solder dip 260°C, 10s
- Built-in strain relief, ideal for automated placement
- Fast switching for high efficiency
- Halogen-free according to IEC 61249-2-21 definition
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	1200	V
Maximum RMS Voltage	$V_{RMS}$	840	V
Maximum DC Blocking Voltage	$V_{DC}$	1200	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 ( $t < 8.3\text{ms}$ )	$I^2t$	3.7	$\text{A}^2\text{sec}$
Typical Thermal Resistance <sup>1</sup>	$R_{\theta JA}$	90	$^\circ\text{C/W}$
	$R_{\theta JC}$	20	$^\circ\text{C/W}$
	$R_{\theta JL}$	25	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Value	Unit
Maximum Instantaneous Forward Voltage	$V_F$	$I_F=1.0\text{A}, T_A=25^\circ\text{C}$	1.9	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_A=25^\circ\text{C}$	5	$\mu\text{A}$
		$T_A=125^\circ\text{C}$	100	
Maximum Reverse Recovery Time	$t_{rr}$	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}$	75	nS
Typical Junction Capacitance	$C_J$	4.0V, 1MHz	6.5	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)

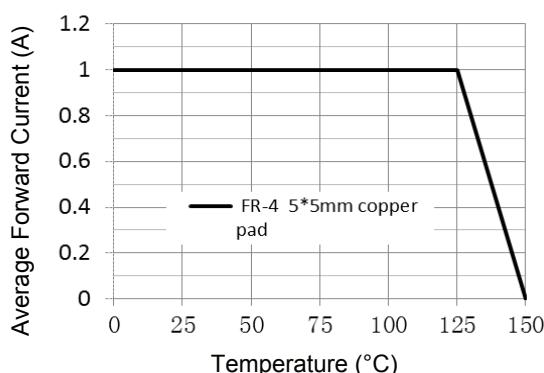


Figure 1. Forward Current Derating Curve

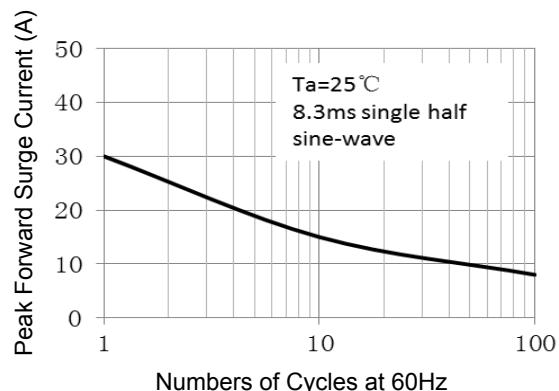


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

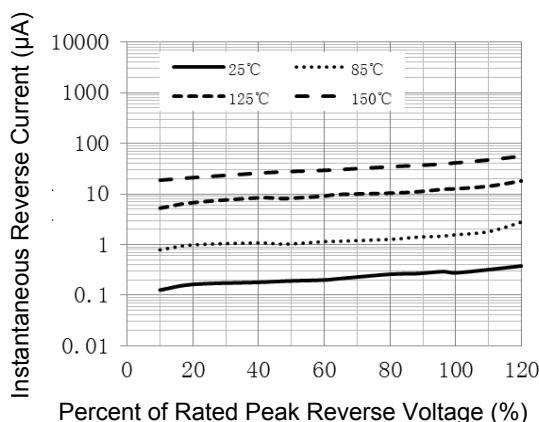


Figure 3. Typical Reverse Characteristics

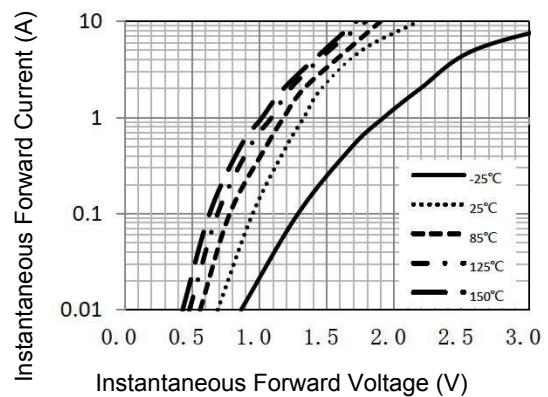


Figure 4. Typical Instantaneous Forward Characteristics

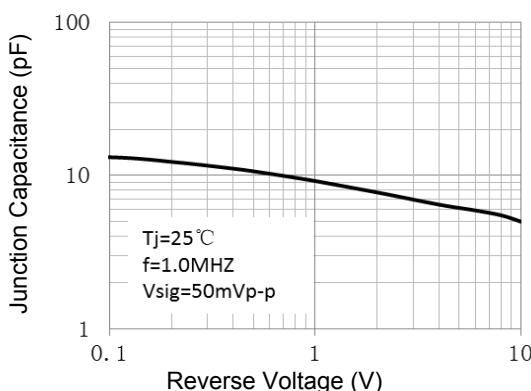
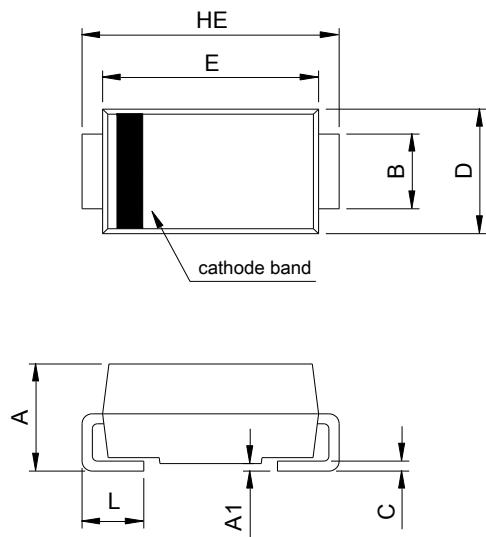


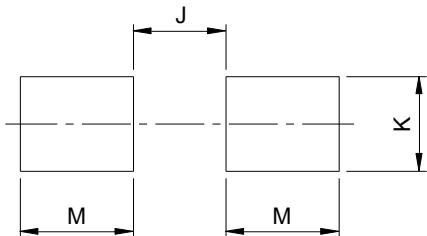
Figure 5. Typical Junction Capacitance

## 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	-