

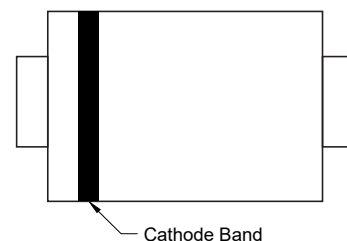
SURFACE MOUNT GENERAL PURPOSE RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 2.0 Ampere

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

DO-214AC/SMA 



Mechanical Data

Case : DO-214AC/SMA molded plastic body

Terminals :Solderable per MIL-STD-750,Method2026

Approx. Weight : 0.055grams / 0.002oz

Equivalent circuit



Maximum Ratings And Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	S3A	S3B	S3D	S3G	S3J	S3K	S3M	Units
Marking code		S3A	S3B	S3D	S3G	S3J	S3K	S3M	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_c = 115^\circ\text{C}$	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	80							A
Maximum Instantaneous Forward Voltage at 3 A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	5 125							μA
Typical Junction Capacitance ⁽¹⁾	C_j	32							pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$	50 16							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

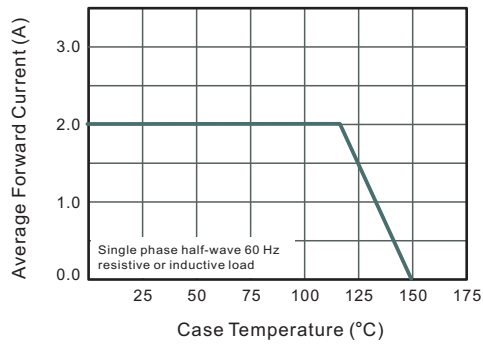


Fig.2 Typical Instantaneous Reverse Characteristics

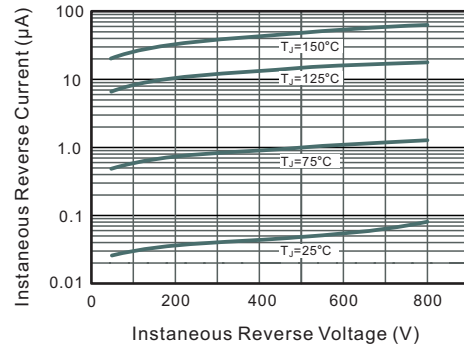


Fig.3 Typical Forward Characteristic

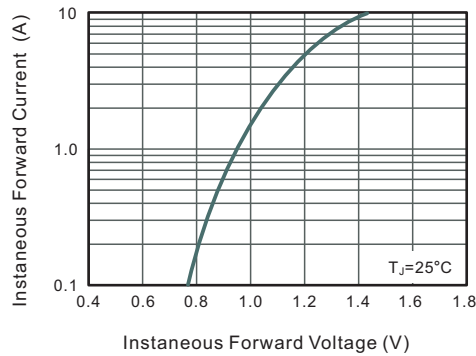


Fig.4 Typical Junction Capacitance

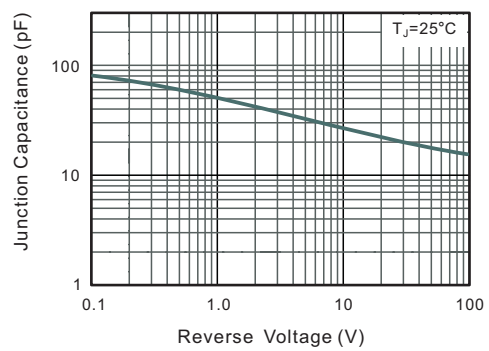
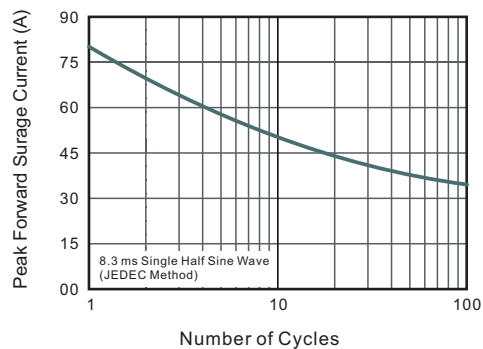
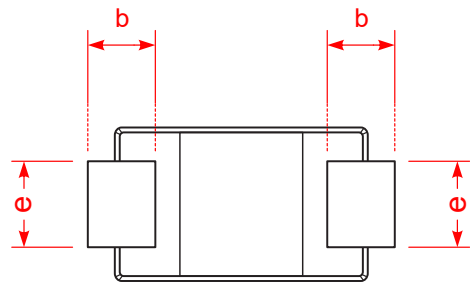
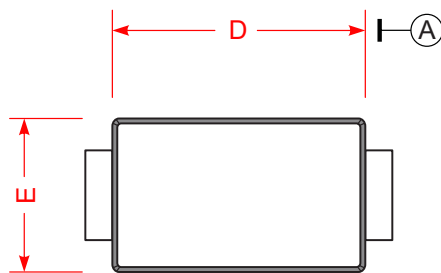
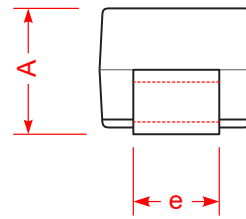
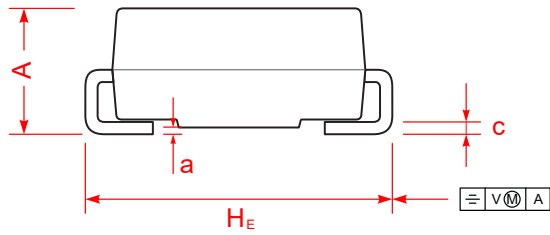


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

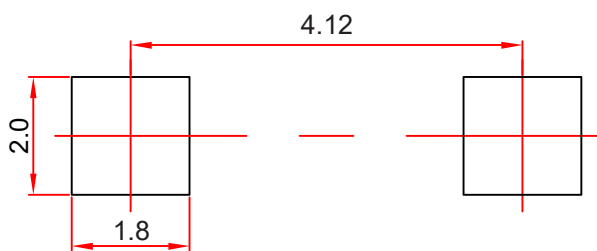


DO-214AC/SMA Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.90	2.20	0.075	0.087
c	0.15	0.31	0.006	0.012
D	4.00	4.50	0.157	0.177
E	2.30	2.70	0.091	0.106
e	1.30	1.60	0.051	0.063
b	0.90	1.50	0.035	0.059
H _E	4.70	5.20	0.185	0.205
a	0.2 REF		0.008 REF	

DO-214AC/SMA Suggested Pad Layout



Note:

1. Controlling dimension: in/millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.