SOCAY

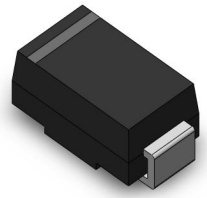
Effective Super Fast Recovery Diodes

ES1AA~ES1JA **1A** **50 to 600V** **DO-214AC(SMA)**

Features

- For surface mounted applications in order to optimize board space.
- Built-in strain relief.
- Easy pick and place.
- Super fast recovery times for high efficiency.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Glass passivated junction.
- Lead free in compliance with EU RoHS 2.0.
- Green molding compound as per IEC 61249 standard.

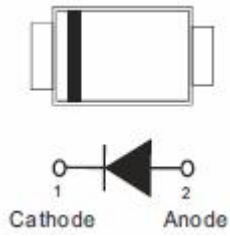
DO-214AC(SMA)



Mechanical Date

- Case: JEDEC DO-214AC molded plastic.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Standard packaging: 12mm tape (EIA-481).
- Weight: 0.0023 ounces, 0.0679 grams.

Functional Diagram



Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter		Symbol	ES1AA	ES1BA	ES1CA	ES1DA	ES1EA	ES1GA	ES1JA	Unit
Maximum Recurrent 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 Current at		$I_{F(AV)}$	1							A
Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	30							A
Maximum Forward Voltage at 1A		V_F	0.95				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25℃	I_R	5							μA
	T_J=100℃		50							
Maximum Reverse Recovery Time (Note 1)		t_{rr}	35							ns
Typical Junction Capacitance (Note 2)		C_J	15							pF
Typical Thermal Resistance (Note 3)		$R_{\theta JA}$	60							℃/W
Operating Junction and Storage Temperature Range		T_J,T_{STG}	-55 to +155							℃

NOTES:

1.Reverse Recovery Test Conditions:I_F=0.5A,I_R=1.0A,Irr=0.25A.

2.Measured at 1.0MHz and applied reverse voltage of 4.0 volt.

3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas.

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Rating and Characteristic Curves

Fig1. Typical Junction Capacitance

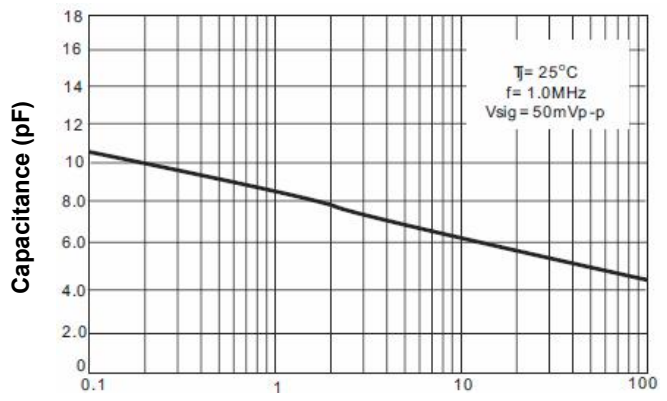


Fig2. Maximum Average Forward Current Derating

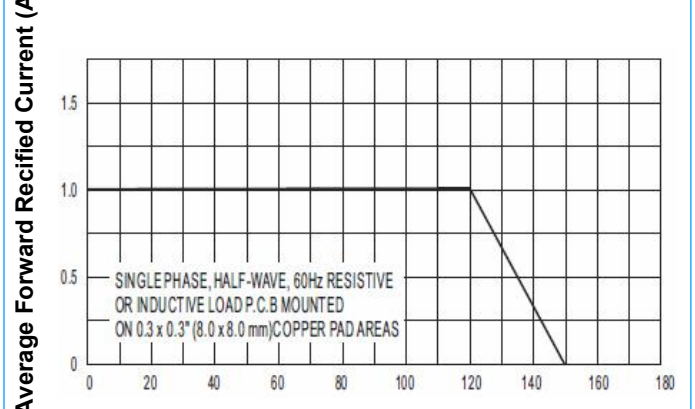


Fig3. Typical Reverse Characteristics

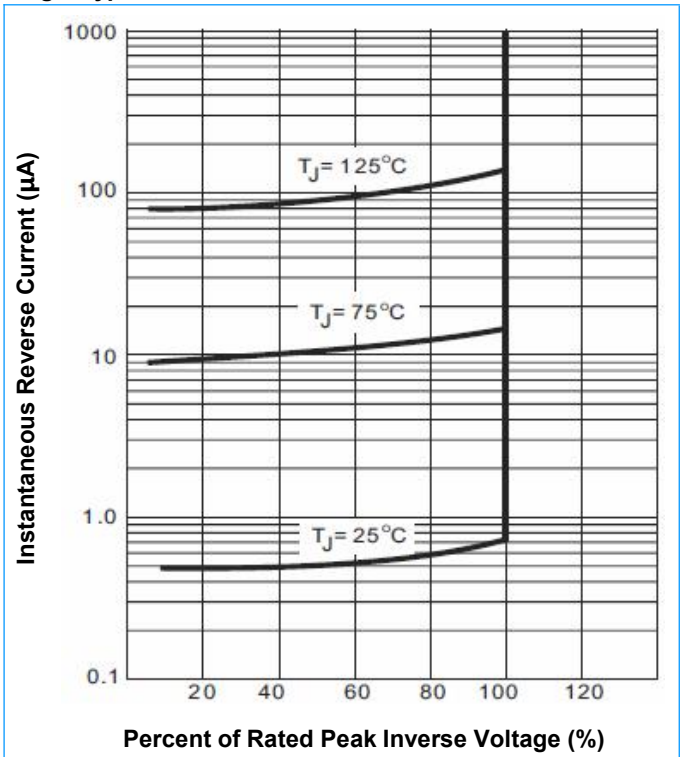
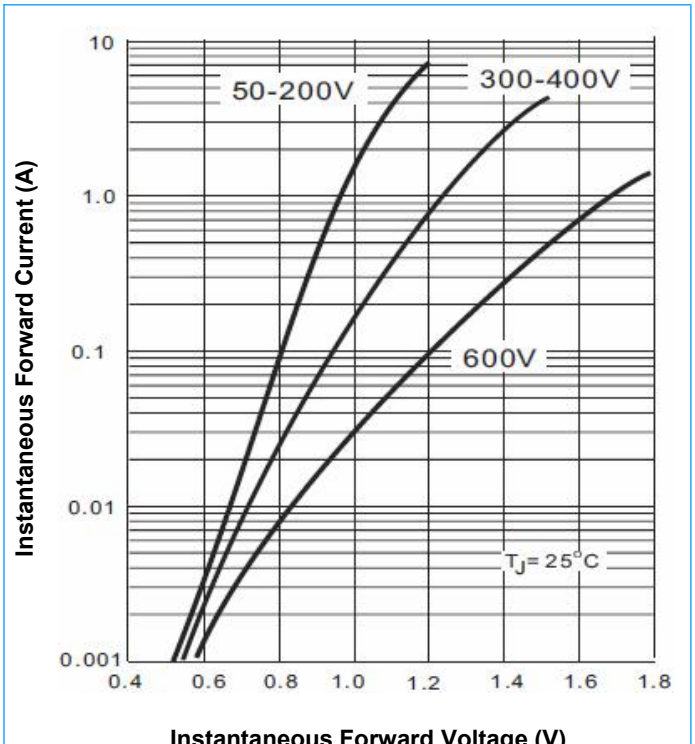


Fig4. Typical Forward Characteristics



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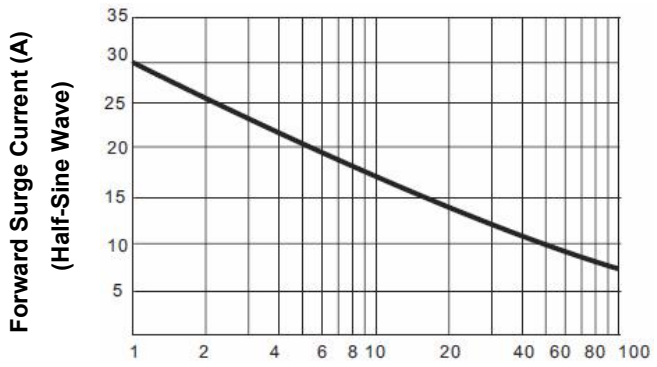
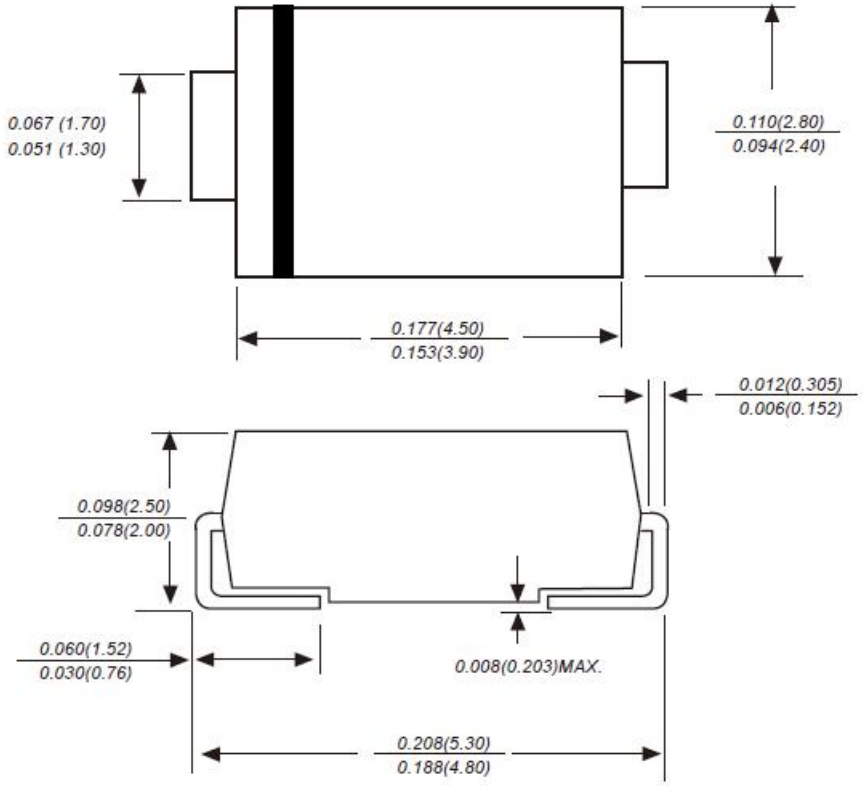
Rating and Characteristic Curves (Continue)

Fig5. Maximum Non-Repetitive Surge Current



Package Outline (Unit: inch(mm))

DO-214AC(SMA)



Dimensions in inches and (millimeters)

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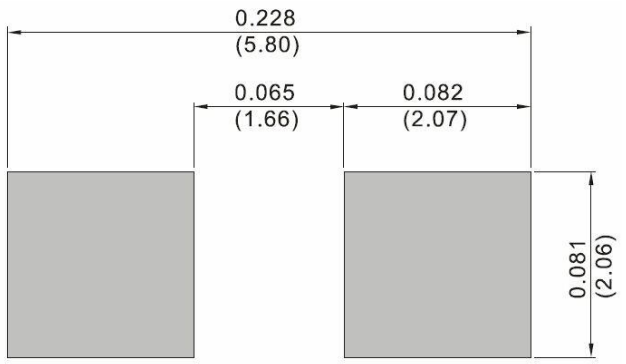
Mounting Pad Layout (Unit: inch(mm))

DO-214AC(SMA)



Packaging Information

Part Number	Component Package	Quantity
ES1AA~ES1JA	DO-214AC (SMA)	5000 PCS

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