

Super-Fast Recovery Rectifier

SOD1A2E7 - SOD1A2E8

Features

- Low forward voltage drop
- High forward surge current capability
- Low-profile SMD ideal for automated manufacturing
- RoHS compliant with Halogen-free



Mechanical Data

- Case: SOD-123FL molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated; solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end

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

Parameter	Symbol	SOD1A2E7	SOD1A2E8	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	500	600	V
RMS Reverse Voltage	V_{RMS}	350	420	V
DC Blocking Voltage	V_{DC}	500	600	V
Average Forward Output Current	I_{F_AV}	1.2		A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	I_{FSM}	40		A

Thermal Characteristics

Parameter	Symbol	SOD1A2E7	SOD1A2E8	Unit
Typical Thermal Resistance *1	R _{θJA}	85		°C/W
	R _{θJC}	23		
	R _{θJL}	15		
Operating Junction Temperature Range	T _J	-55 ~ +150		°C
Storage Temperature Range	T _{STG}	-55 ~ +150		°C

Note *1: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1mm copper pad area

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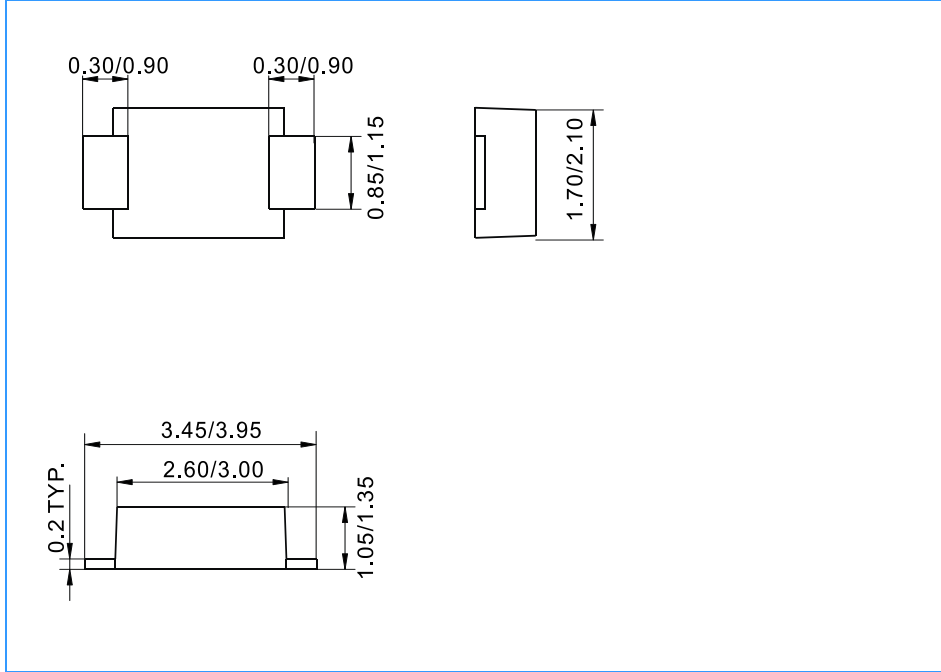
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition		Typ.	Max.	Unit
Instantaneous Forward Voltage	V_F	$I_F = 1.2\text{A}$		-	1.7	V
Reverse Current	I_R	Rated V_R	@ $T_A = 25^\circ\text{C}$	-	5.0	μA
			@ $T_A = 125^\circ\text{C}$	-	100	
Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{A}$, $I_{RM} = 1\text{A}$, $I_{R(REC)} = 0.25\text{A}$		-	35	ns

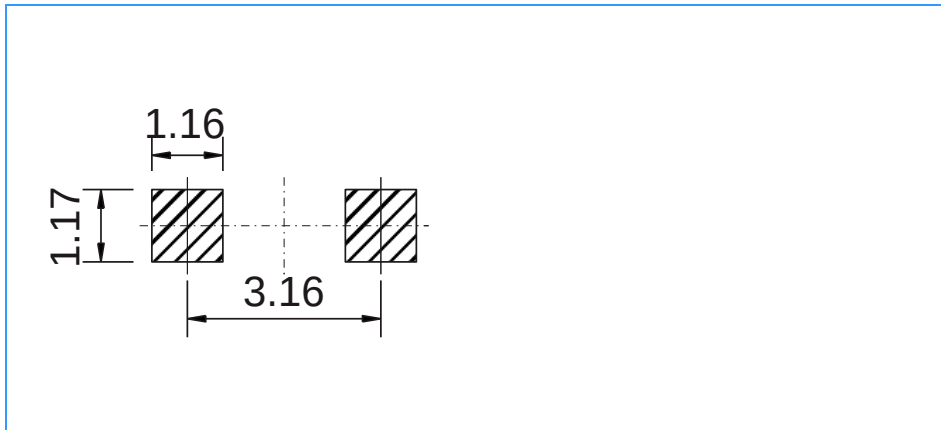
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Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
SOD1A2E7	12E7	SOD-123FL	10 kpcs / Tape & Reel
SOD1A2E8	12E8	SOD-123FL	10 kpcs / Tape & Reel