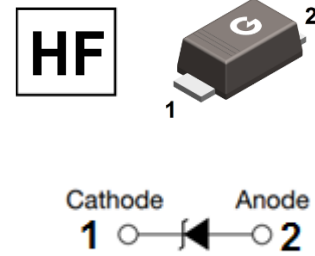


## Surface Mount Rectifier

## SOD4003 - SOD4007

### Features

- For surface mounted applications
- Ideal for automated placement
- Low forward voltage drop
- High forward surge current capability
- 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<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	SOD 4003	SOD 4004	SOD 4005	SOD 4006	SOD 4007	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>RMS</sub>	140	280	420	560	700	V
DC Blocking Voltage	V <sub>DC</sub>	200	400	600	800	1000	V
Average Forward Output Current	I <sub>F_AV</sub>	1.0					A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	I <sub>FSM</sub>	30					A

### Thermal Characteristics

Parameter	Symbol	SOD 4003	SOD 4004	SOD 4005	SOD 4006	SOD 4007	Unit
Typical Thermal Resistance *1	R <sub>θJA</sub>	85					°C/W
	R <sub>θJC</sub>	23					
	R <sub>θJL</sub>	15					
Operating Junction Temperature Range	T <sub>J</sub>	-55 ~ +150					°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150					°C

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

## Surface Mount Rectifier

## SOD4003 - SOD4007

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

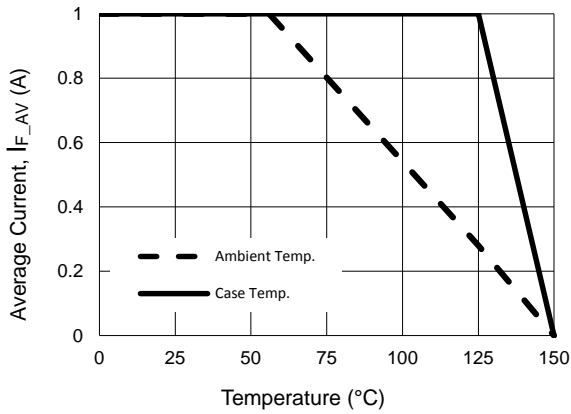
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 2\mu\text{A}$ , SOD4003	200	-	-	V	
		$I_R = 2\mu\text{A}$ , SOD4004	400	-	-	V	
		$I_R = 2\mu\text{A}$ , SOD4005	600	-	-	V	
		$I_R = 2\mu\text{A}$ , SOD4006	800	-	-	V	
		$I_R = 2\mu\text{A}$ , SOD4007	1000	-	-	V	
Instantaneous Forward Voltage	$V_F$	$I_F = 1.0\text{A}$	-	-	1.1	V	
Reverse Current	$I_R$	Rated $V_R$	@ $T_A = 25^\circ\text{C}$	-	-	5.0	$\mu\text{A}$
			@ $T_A = 125^\circ\text{C}$	-	-	50.0	
Junction Capacitance	$C_J$	$V_R = 4\text{V}, f = 1\text{MHz}$	-	6.0	-	pF	

# Surface Mount Rectifier

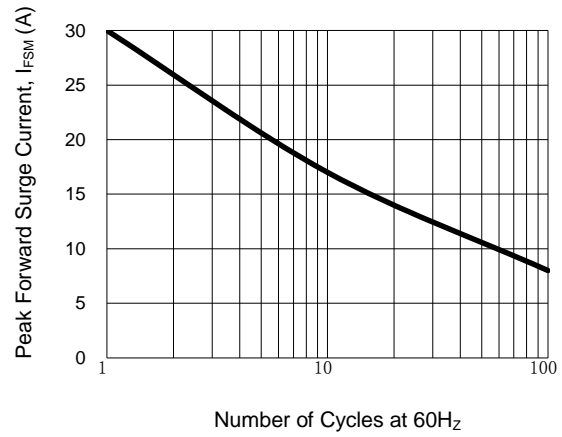
# SOD4003 - SOD4007

## Ratings and Characteristic Curves (@T<sub>A</sub>=25°C unless otherwise noted)

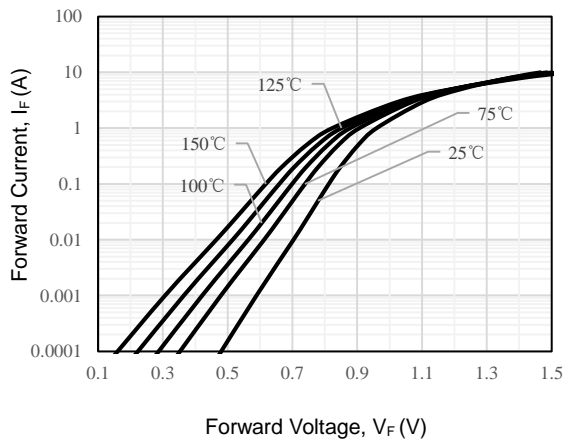
**Fig.1 Forward Current Derating Curve**



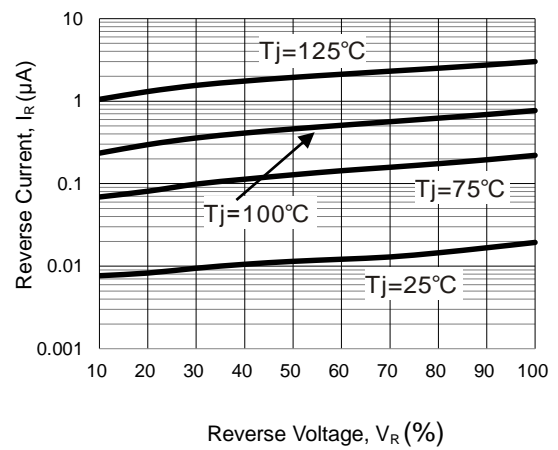
**Fig.2 Surge Current Derating Curve**



**Fig.3 Typical Forward Voltage Characteristic**



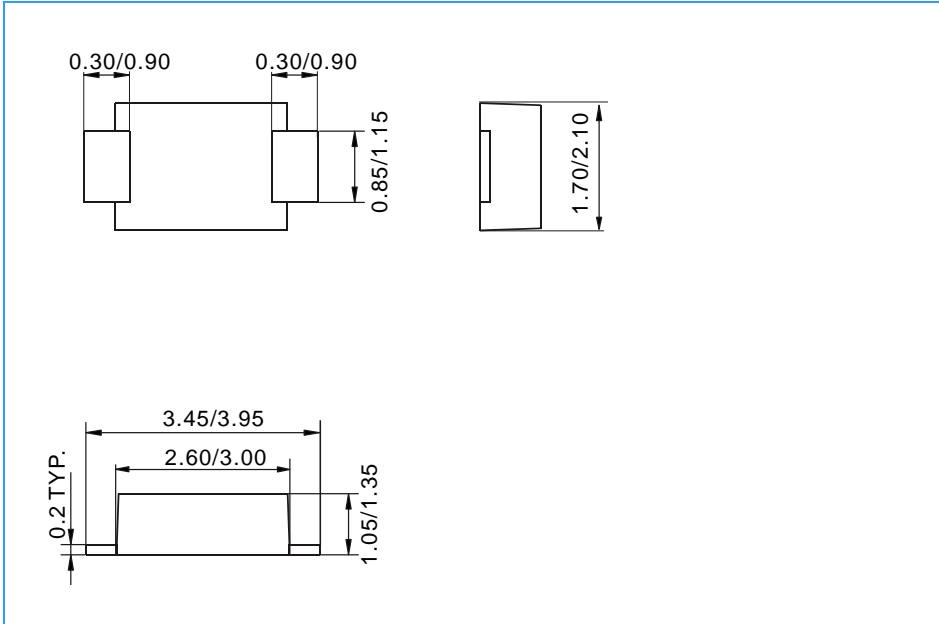
**Fig.4 Typical Reverse Characteristic**



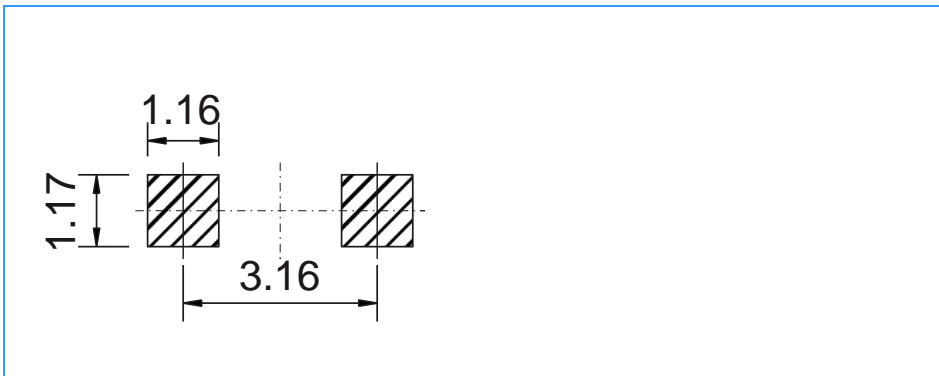
## Surface Mount Rectifier

## SOD4003 - SOD4007

### Package Outline Dimensions (Unit: mm)



### Mounting Pad Layout (Unit: mm)



### Ordering Information

Part Number	Marking	Package	Shipping Quantity
SOD4003	D3	SOD-123FL	10000 pcs / Tape & Reel
SOD4004	D4	SOD-123FL	10000 pcs / Tape & Reel
SOD4005	D5	SOD-123FL	10000 pcs / Tape & Reel
SOD4006	D6	SOD-123FL	10000 pcs / Tape & Reel
SOD4007	D7	SOD-123FL	10000 pcs / Tape & Reel