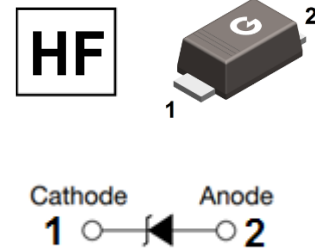


Surface Mount Rectifier

TSOD4003 - TSOD4007

Features

- For surface mounted applications
- Ideal for automated placement
- Low forward voltage drop
- High forward surge current capability
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards



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°C unless otherwise specified)

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

Thermal Characteristics

Parameter	Symbol	TSOD 4003	TSOD 4004	TSOD 4005	TSOD 4006	TSOD 4007	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

Surface Mount Rectifier

TSOD4003 - TSOD4007

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 2\mu\text{A}$, TSOD4003	200	-	-	V
		$I_R = 2\mu\text{A}$, TSOD4004	400	-	-	V
		$I_R = 2\mu\text{A}$, TSOD4005	600	-	-	V
		$I_R = 2\mu\text{A}$, TSOD4006	800	-	-	V
		$I_R = 2\mu\text{A}$, TSOD4007	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	μA
		@ $T_A = 125^\circ\text{C}$	-	-	50.0	
Junction Capacitance	C_J	$V_R = 4\text{V}$, $f = 1\text{MHz}$	-	6.0	-	pF

Surface Mount Rectifier

TSOD4003 - TSOD4007

Ratings and Characteristic Curves (@ $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

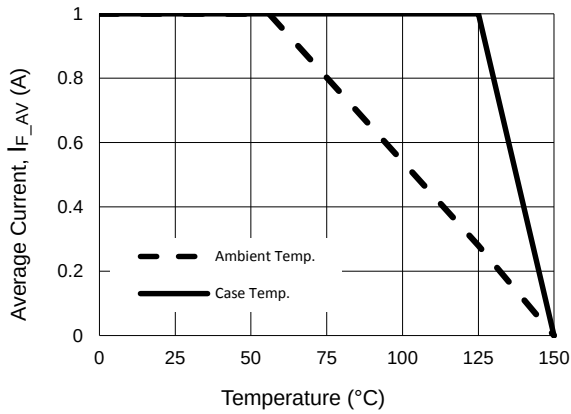


Fig.2 Surge Current Derating Curve

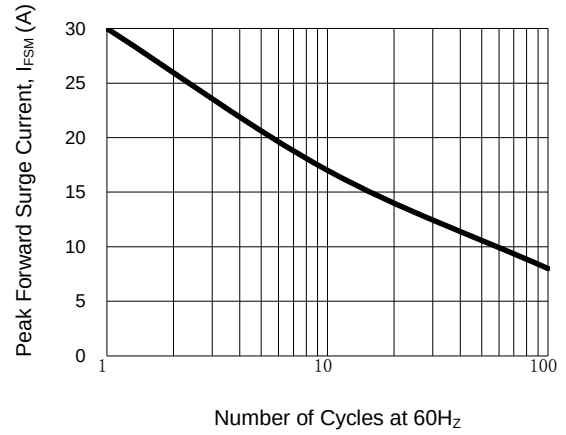


Fig.3 Typical Forward Voltage Characteristic

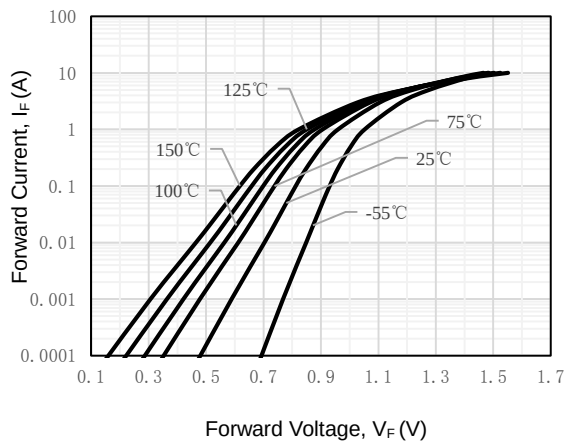
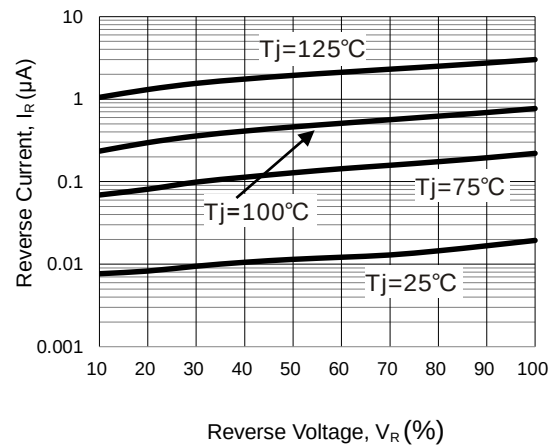


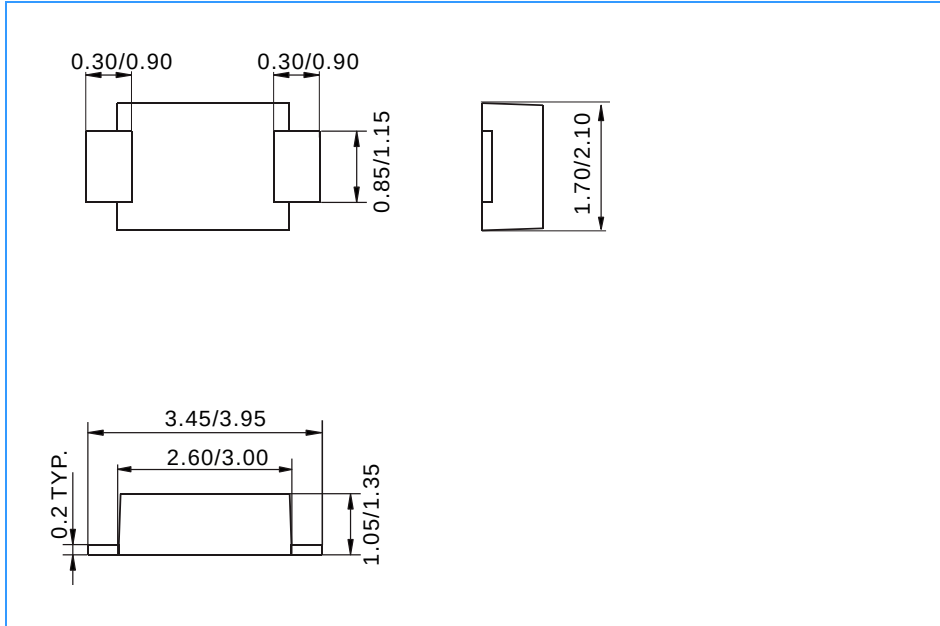
Fig.4 Typical Reverse Characteristic



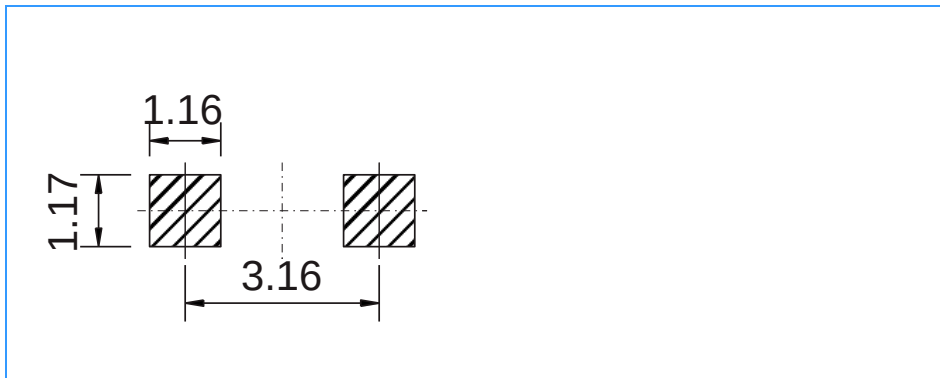
Surface Mount Rectifier

TSOD4003 - TSOD4007

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
TSOD4003	D3	SOD-123FL	10000 pcs / Tape & Reel
TSOD4004	D4	SOD-123FL	10000 pcs / Tape & Reel
TSOD4005	D5	SOD-123FL	10000 pcs / Tape & Reel
TSOD4006	D6	SOD-123FL	10000 pcs / Tape & Reel
TSOD4007	D7	SOD-123FL	10000 pcs / Tape & Reel