Surface Mount Rectifiers

SOF4003--SOF4007

Features



- For surface mounted applications
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- RoHS Compliant

Mechanical Data

- Case: SOD-123F 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)

Characteristic		Symbol	SOF 4003	SOF 4004	SOF 4005	SOF 4006	SOF 4007	Units
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	@T_J= 25°C	I_{FSM}	30					A

Thermal Characteristics

Parameter	Symbol	SOF 4003	SOF 4004	SOF 4005	SOF 4006	SOF 4007	Units
Typical thermal resistance (Note 1)	$R_{\Theta JA}$	85					°C /W
	$R_{\Theta JC}$	23					
	$R_{\Theta JL}$	15					
Operating junction temperature range	T_J	- 55 ---- + 150					°C
Storage temperature range	T_{STG}	- 55 ---- + 150					°C

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Maximum instantaneous forward voltage	V_F	I_F=1.0A		--	1.1	V
Maximum Reverse current	I_R	Rated V_R	@T_A=25°C	--	5	μ A
			@T_A=125°C	--	50	

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Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

Fig.1-Forward Current Derating Curve

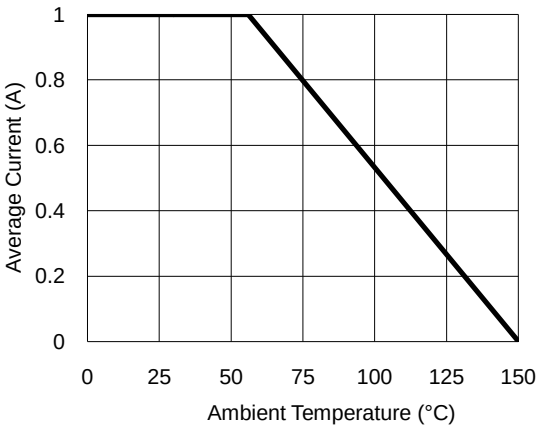


Fig.2- Surge Current Derating Curve

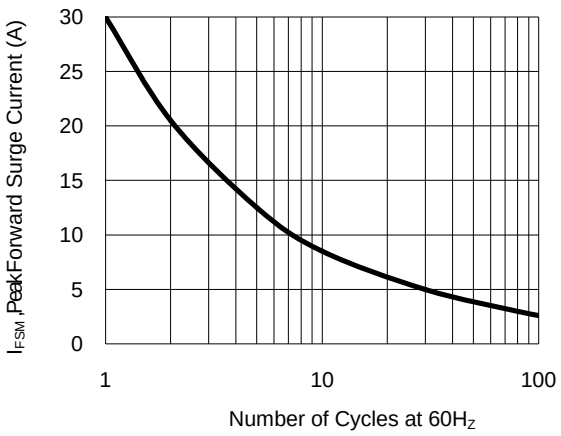


Fig.3- Typical Forward Voltage Characteristic

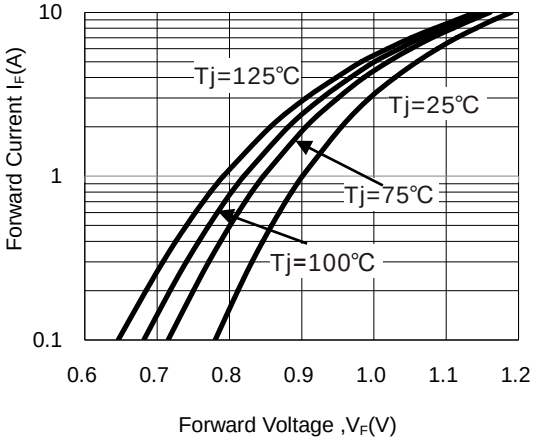
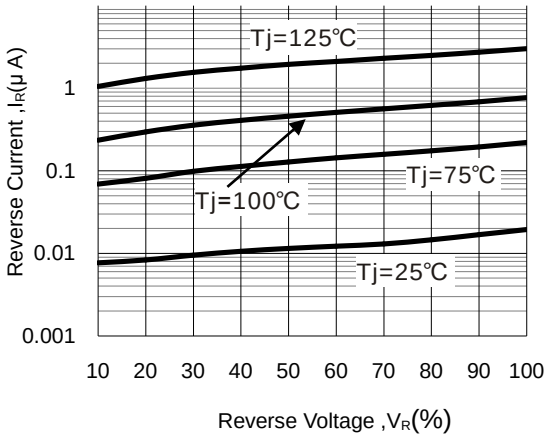
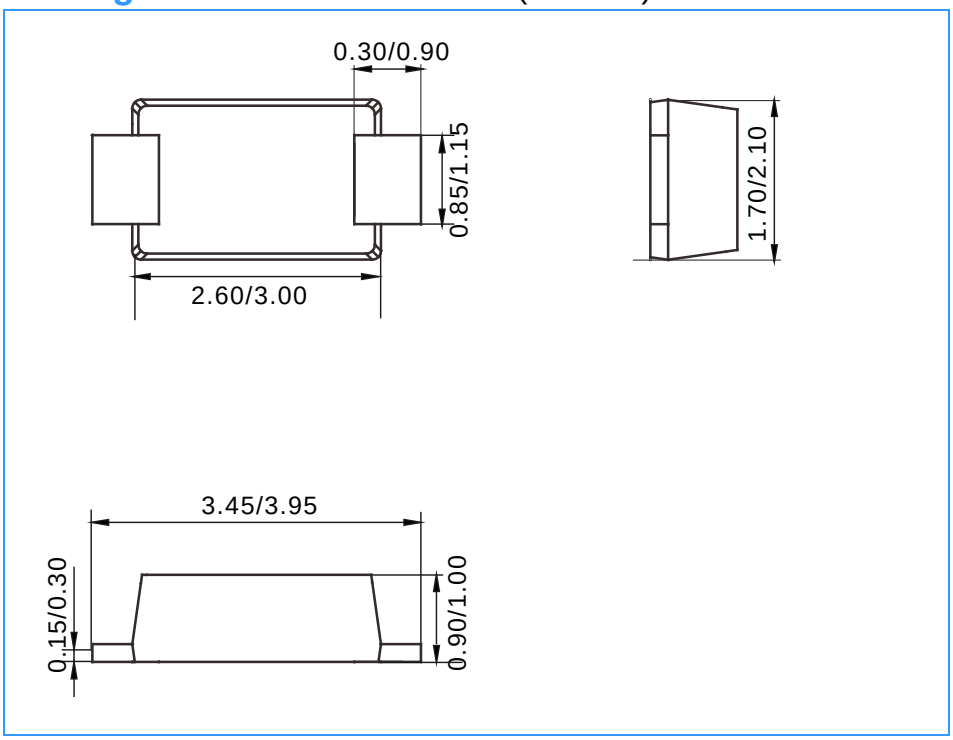


Fig.4- Typical Reverse Characteristic

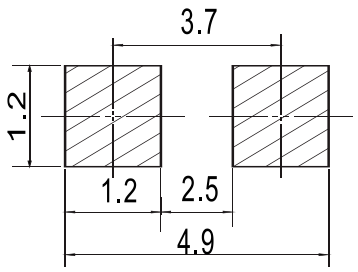


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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Ordering Information

Part No.	Marking	Package	Shipping
SOF4003	D3	SOD-123F	10000 /Tape&Reel
SOF4004	D4	SOD-123F	10000 /Tape&Reel
SOF4005	D5	SOD-123F	10000 /Tape&Reel
SOF4006	D6	SOD-123F	10000 /Tape&Reel
SOF4007	D7	SOD-123F	10000 /Tape&Reel