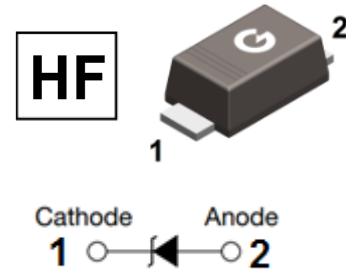


Fast Recovery Rectifier

TSOD1F8 - TSOD1F10

Features

- Low forward voltage drop
- High forward surge current capability
- Low-profile SMD ideal for automated manufacturing
- 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 (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	TSOD1F8	TSOD1F10	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	800	1000	V
RMS Reverse Voltage	V_{RMS}	560	700	V
DC Blocking Voltage	V_{DC}	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	TSOD1F8	TSOD1F10	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

Fast Recovery Rectifier

TSOD1F8 - TSOD1F10

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

Parameter	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 2\mu\text{A}$, TSOD1F8		800	-	-	V
		$I_R = 2\mu\text{A}$, TSOD1F10		1000	-	-	V
Maximum Instantaneous Forward Voltage	V_F	$I_F = 1.0\text{A}$		-	-	1.3	V
Maximum Reverse Current	I_R	Rated V_R	@ $T_A = 25^\circ\text{C}$	-	-	5	μA
			@ $T_A = 125^\circ\text{C}$	-	-	50	
Maximum Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{A}$, $I_{RM} = 1\text{A}$, $I_{R(REC)} = 0.25\text{A}$		-	-	500	ns

Fast Recovery Rectifier

TSOD1F8 - TSOD1F10

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

Fig. 1 Forward Current Derating Curve

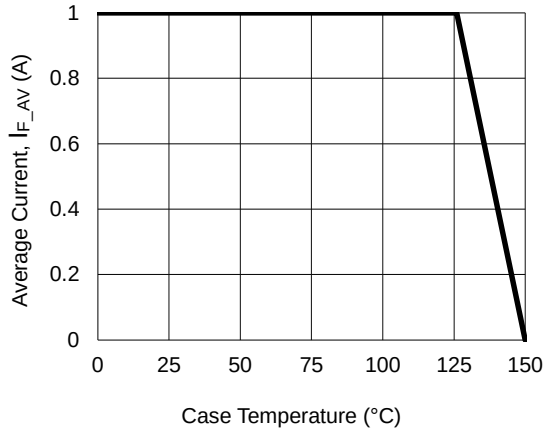


Fig. 2 Surge Current Derating Curve

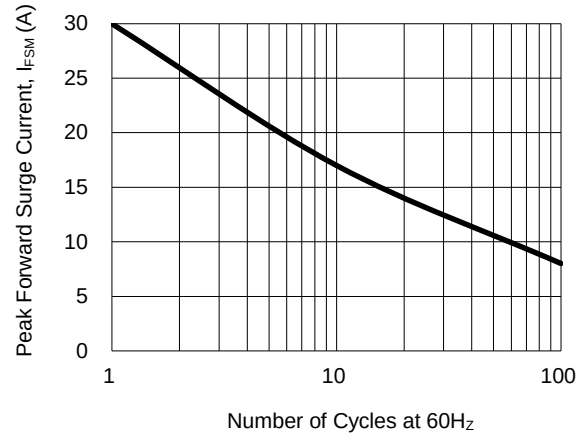


Fig. 3 Typical Forward Voltage Characteristics

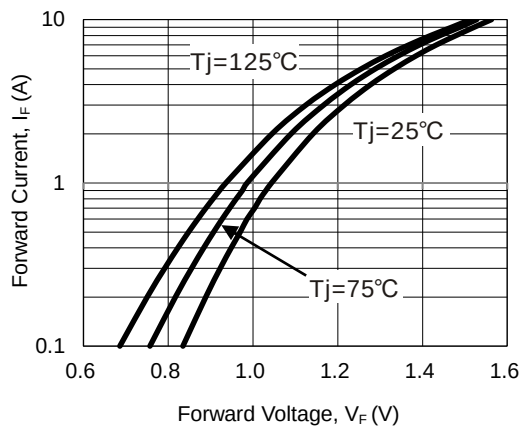
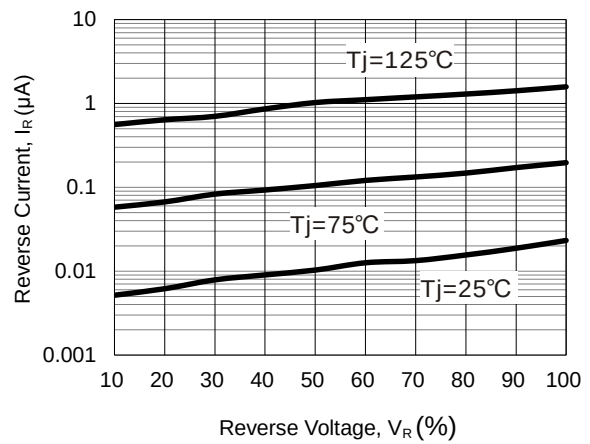


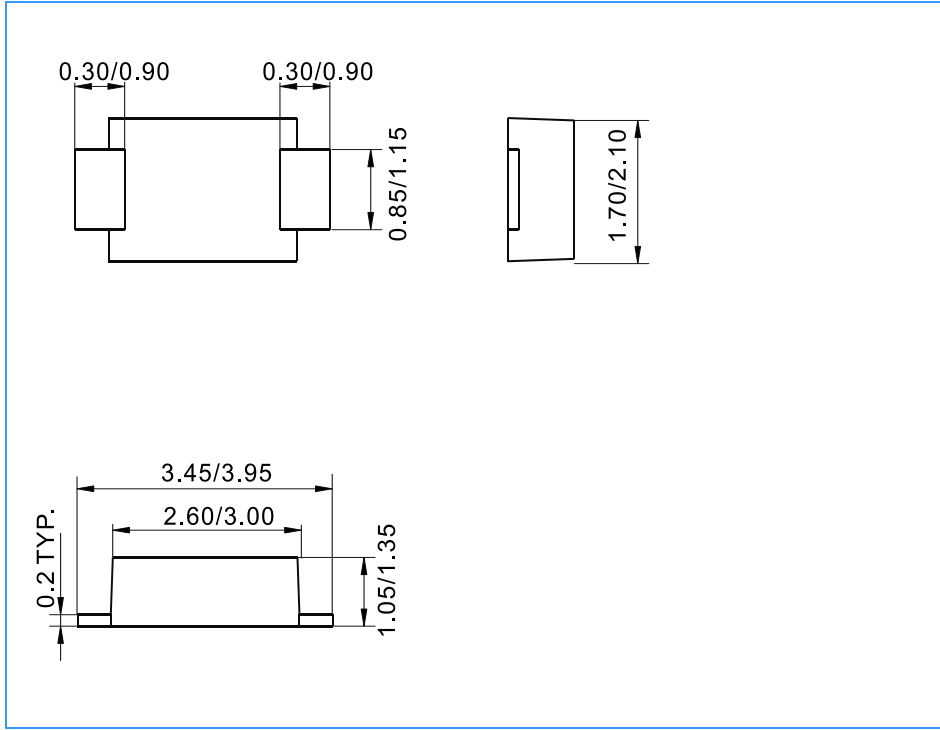
Fig. 4 Typical Reverse Characteristics



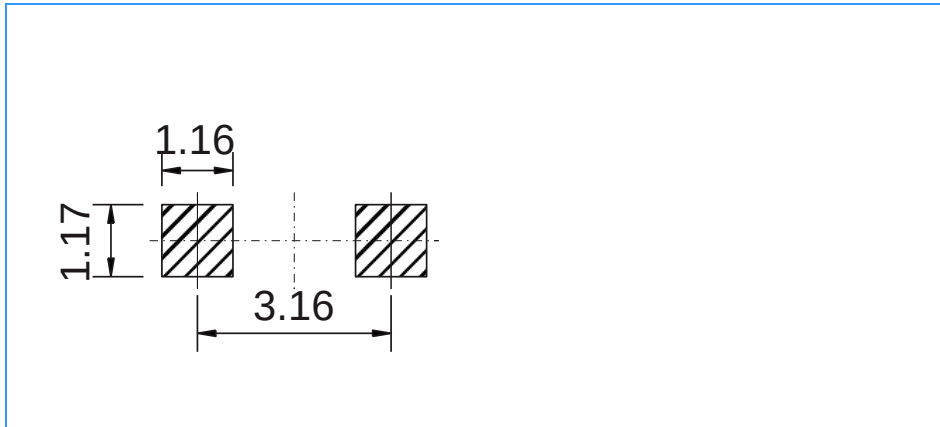
Fast Recovery Rectifier

TSOD1F8 - TSOD1F10

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
TSOD1F8	FK	SOD-123FL	10000 pcs / Tape & Reel
TSOD1F10	FM	SOD-123FL	10000 pcs / Tape & Reel