

**Feature**

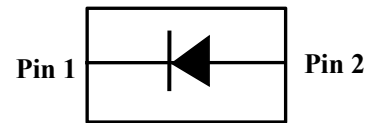
- Ultra Small mold type. (SOD-123FL)
- Low  $V_F$
- High reliability.


**SOD-123FL (Top View)**
**Construction**

- Silicon epitaxial planar

**Mechanical Characteristics**

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um


**Circuit Diagram**

**Marking (Top View)**
**Electrical characteristics per line@25°C**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	$V_F$	-	0.31	0.35	V	$I_F=1A$
Forward voltage	$V_F$	-	0.35	0.38	V	$I_F=2A$
Reverse current	$I_R$	-	90	500	$\mu A$	$V_R=40V$

**Absolute maximum rating@25°C**

Parameter	Symbol	limits	Unit
Reverse voltage (DC)	$V_{RM}$	40	V
Average rectified forward current	$I_o$	2	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	50	A
Operating Junction temperature Range	$T_j$	-55 to 125	°C
Storage temperature	$T_{stg}$	-40 to +125	°C

Typical Characteristics

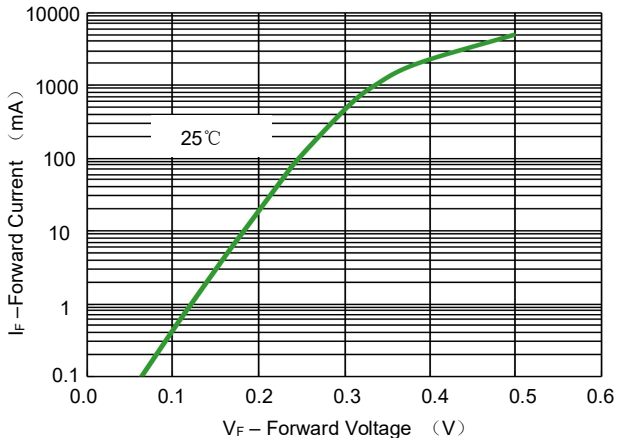


Fig 1. Forward Voltage

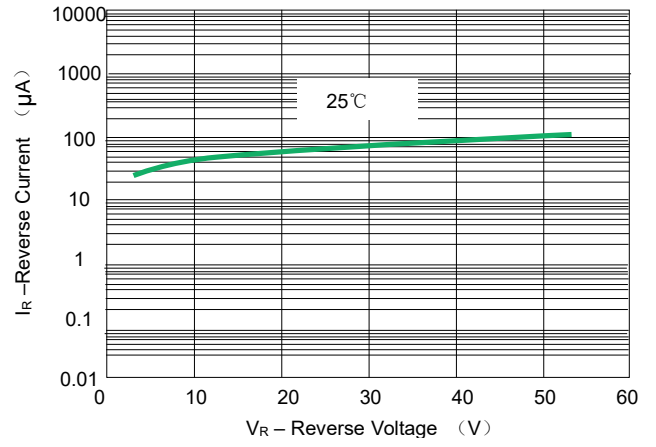


Fig 2. Leakage Current

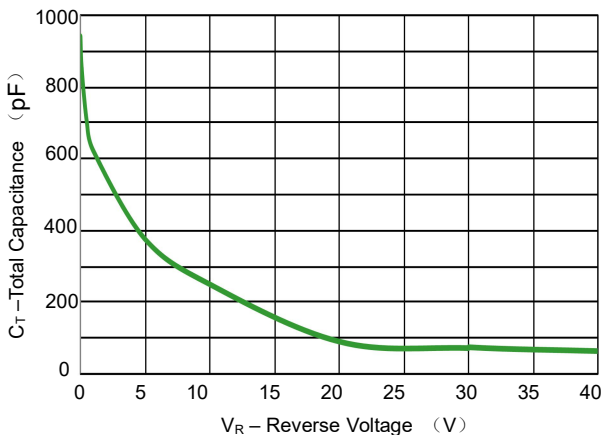
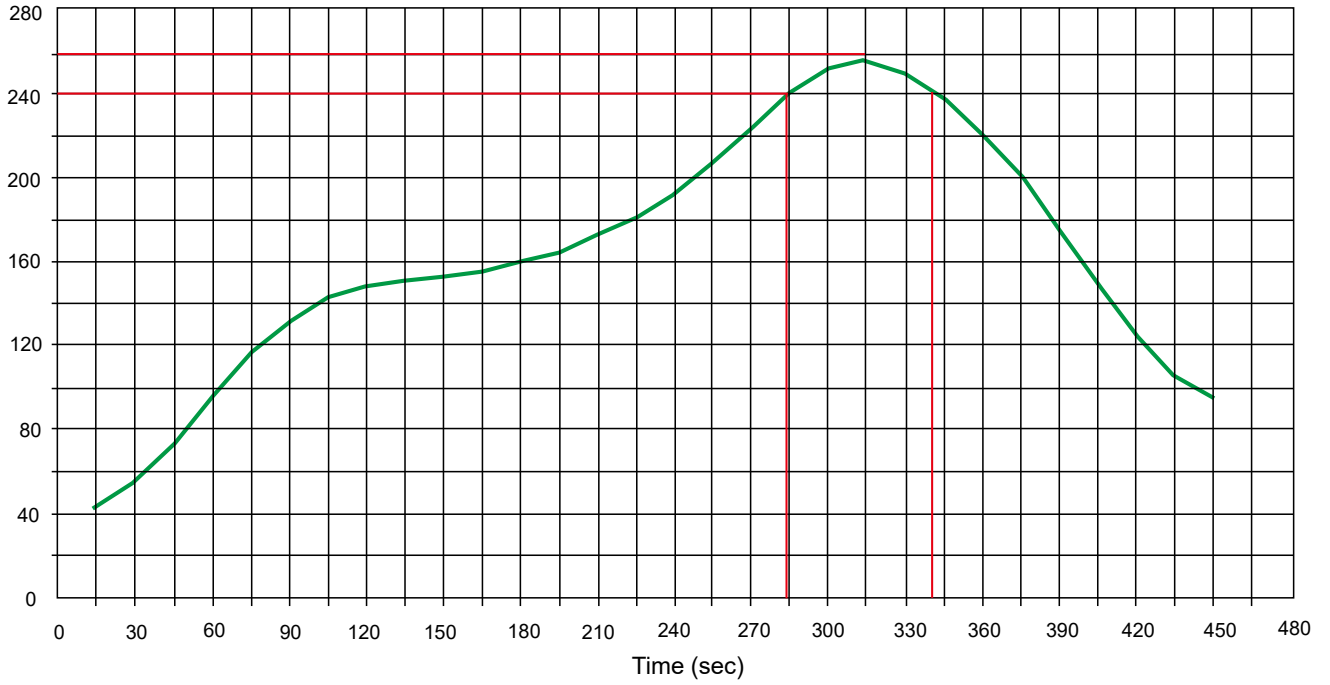


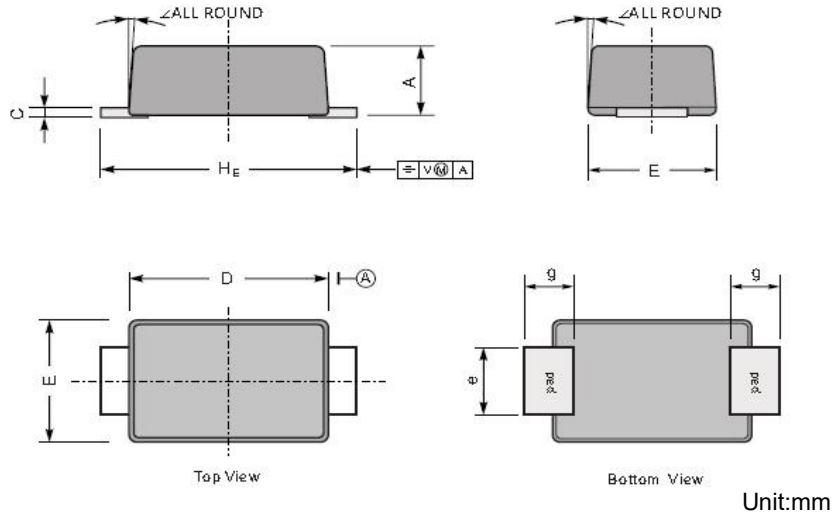
Fig 3. Total Capacitance

Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec

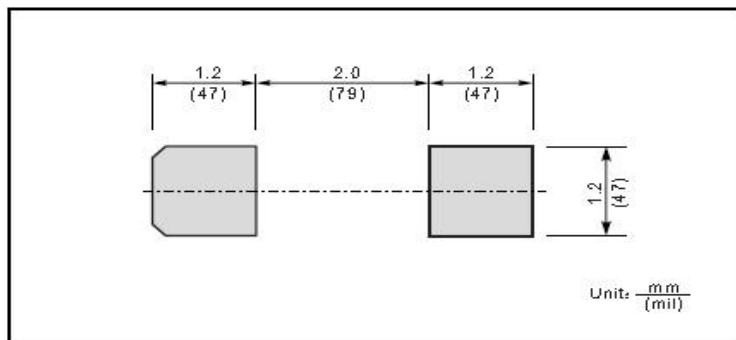


Product dimension (SOD-123FL)



UNIT		A	C	D	E	e	g	H <sub>E</sub>	$\angle$
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	


The recommended mounting pad size



Ordering information

Device	Package	Reel	Shipping
PSBD1DF40V2L	SOD-123FL (Pb-Free)	7"	3000 / Tape & Reel


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