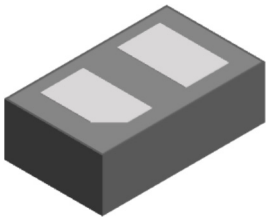
Prisemi®

PSBD2FD70V01

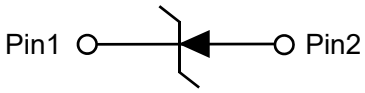
Schoktty Barrier Diode

Feature

- Forward Current: 100mA
- Reverse voltage: 70V
- Low forward voltage
- Low leakage current
- Trench MOS barrier Schottky technology
- Ultra Small mold type. (DFN1006-2L)



DFN1006-2L(Bottom View)



Circuit Diagram

Applications

- Low current rectification
- Voltage clamping
- Protection circuits
- Ultra high-speed switching

Marking (Top View)

Mechanical Characteristics

- Mounting position: Any
- Qualified max reflow temperature:260℃
- Device meets MSL 1 requirements
- DFN1006-2L without plating

Electrical characteristics per line@25℃ (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward voltage	V_F	I_F = 1mA	-	0.28	0.32	V
		I_F = 10mA	-	0.36	0.42	
		I_F = 15mA	-	0.40	0.45	
		I_F = 50mA	-	0.50	0.55	
		I_F = 70mA	-	0.55	0.60	
Reverse current	I_R	V_R = 50V	-	-	5	μA
		V_R = 70V	-	-	10	
Junction Capacitance	C_J	V_R = 0V,f = 1MHz	-	16	25	pF

Absolute maximum rating@25℃

Rating	Symbol	Value	Units
Reverse voltage (DC)	V_{RM}	70	V
Average rectified forward current	I_o	100	mA
Non-Repetitive Peak Forward SurgeCurrent(8.3ms single half sine-wave superimposed on rated load)	I_{FSM}	2	A
Junction and Storage Temperature Range	T_J,T_{STG}	-55~+125	℃

Typical Characteristics

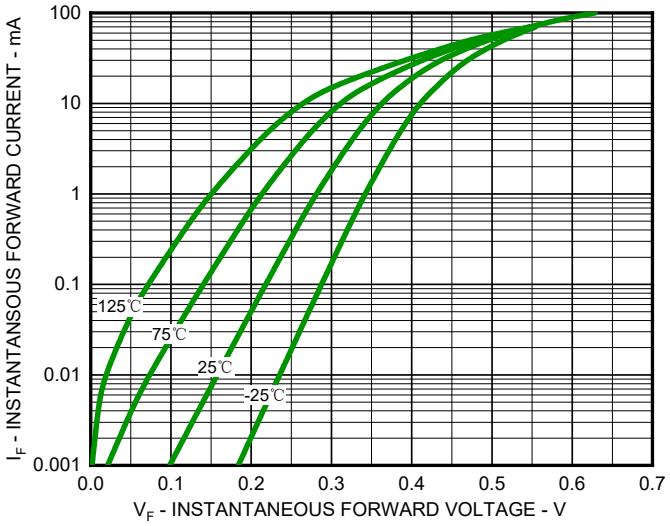


Fig.1 Typical Forward Characteristics

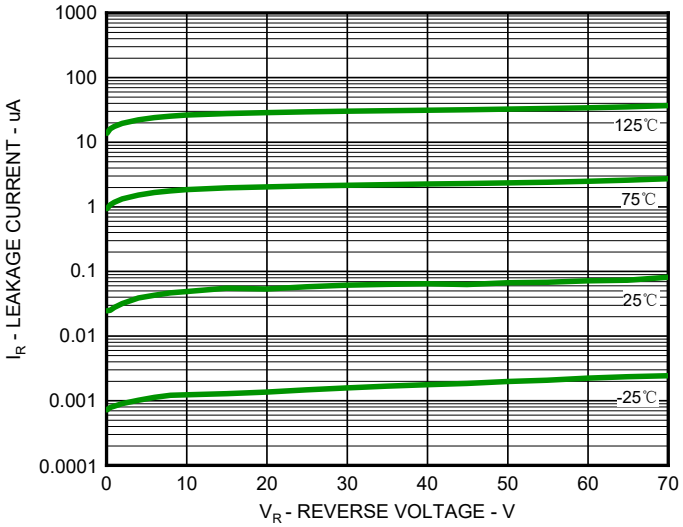


Fig 2.Leakage Current

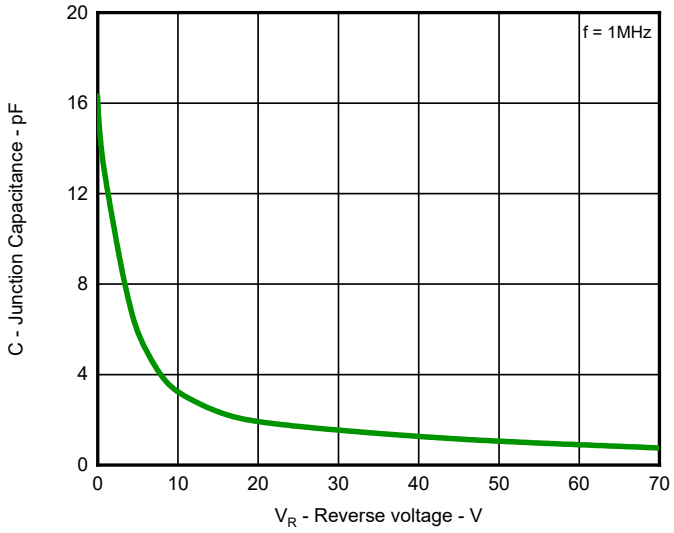
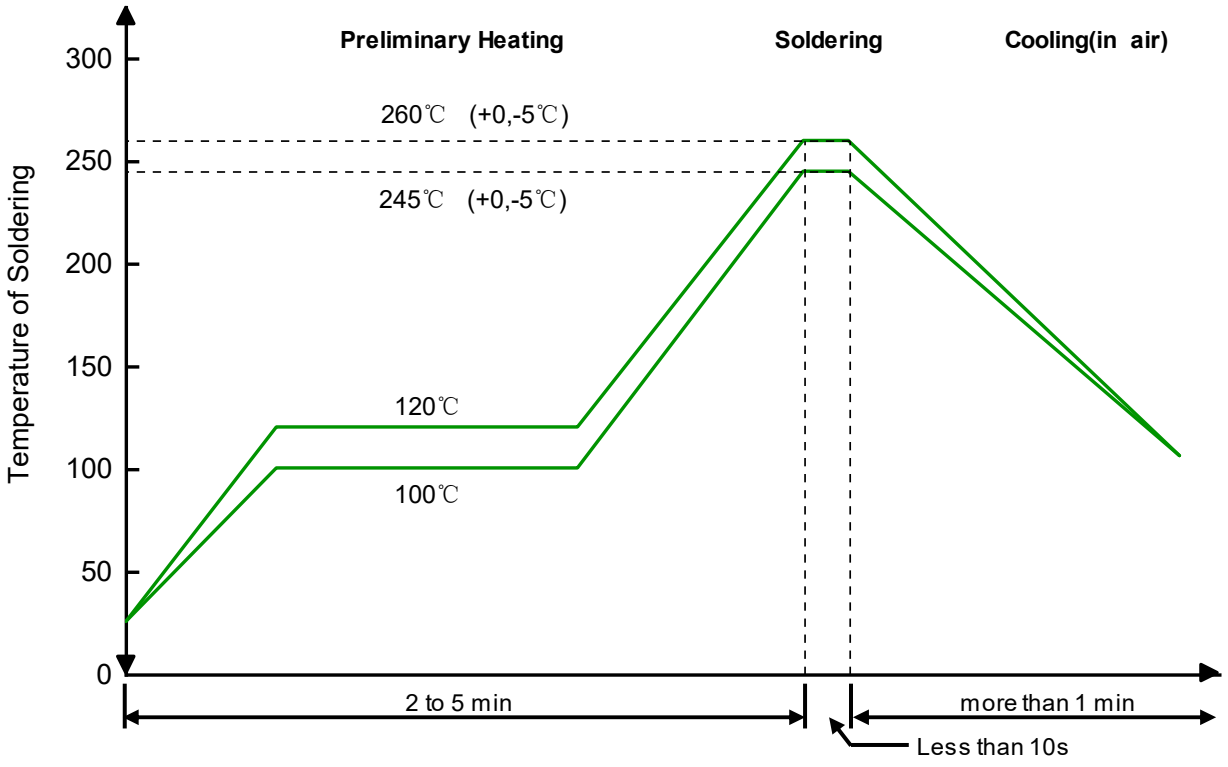


Fig 3.Capacitance vs. Reveres voltage

Solder Reflow Recommendation



Remark: Pb free for 260℃; Pb for 245℃.

PCB Design

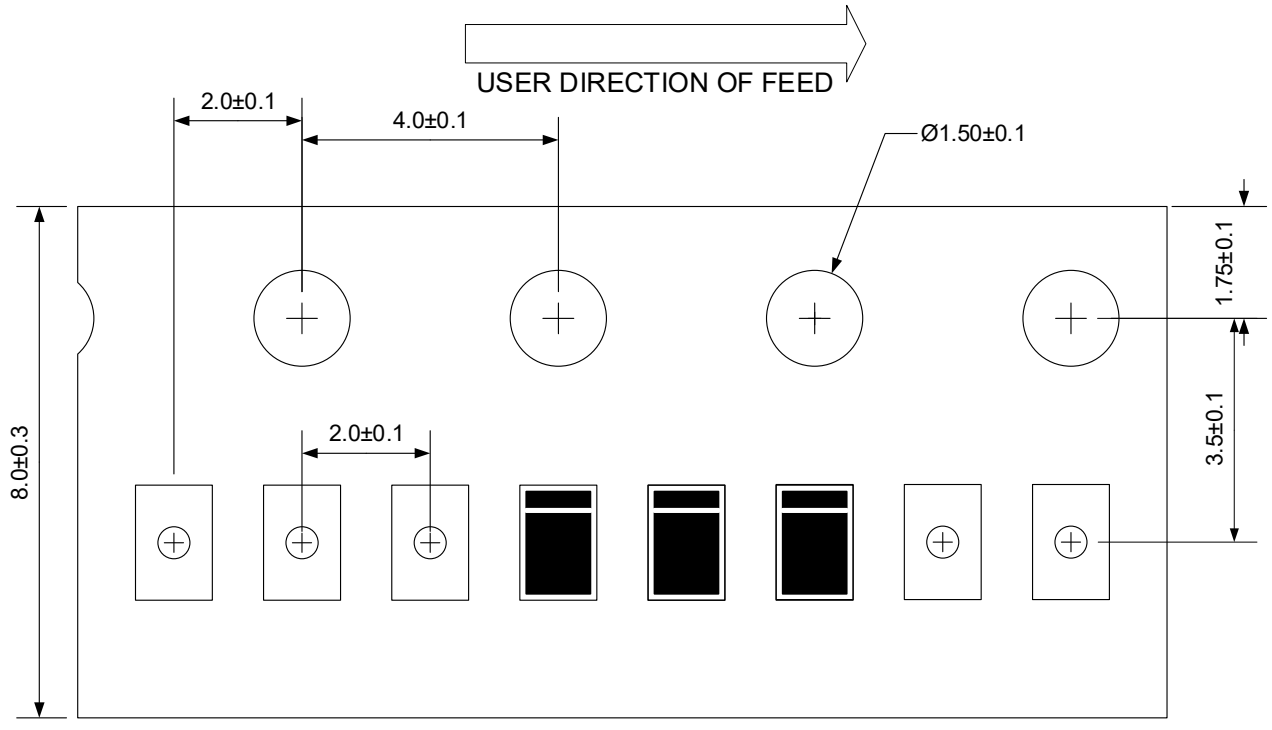
For TVS diodes a low-ohmic and low-inductive path to chassis earth is absolutely mandatory in order to achieve good ESD protection. Novices in the area of ESD protection should take following suggestions to heart:

- Do not use stubs, but place the cathode of the TVS diode directly on the signal trace.
- Do not make false economies and save copper for the ground connection.
- Place via holes to ground as close as possible to the anode of the TVS diode.
- Use as many via holes as possible for the ground connection.
- Keep the length of via holes in mind! The longer the more inductance they will have.

Ordering information

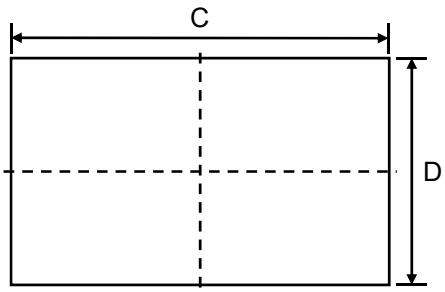
Device	Package	Reel	Shipping
PSBD2FD70V01	DFN1006-2L (Pb-Free)	7"	10000 / Tape & Reel

Load with information

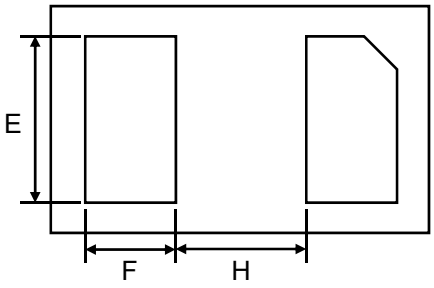


Unit:mm

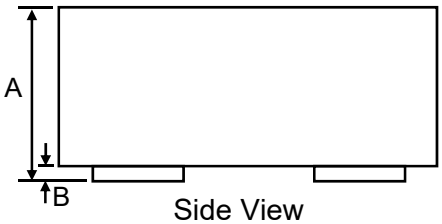
Product dimension (DFN1006-2L)



Top View

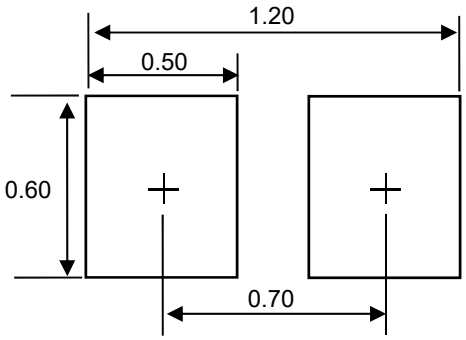


Bottom View



Side View

Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	0.340	0.498	0.013	0.020
B	0.000	0.050	0.000	0.002
C	0.950	1.080	0.037	0.043
D	0.550	0.680	0.022	0.027
E	0.400	0.600	0.016	0.024
F	0.200	0.300	0.008	0.012
H	0.400 Typ.		0.015 Typ.	



Unit:mm

Suggested PCB Layout

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