

DFN1006-2 Plastic-Encapsulate Schottky Barrier Diode

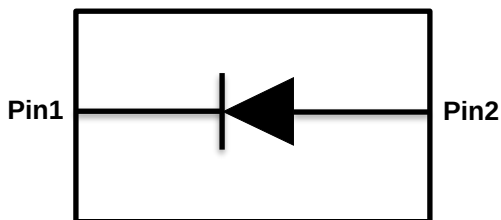
Description

General application schottky barrier diode, encapsulated in a DFN1006-2 leadless ultra small Surface-Mounted Device (SMD) plastic package.

Features

- Forward current: 1 A
- Reverse voltage: $V_R \geq 40\text{ V}$
- Low forward voltage: $V_F \leq 0.6\text{ V @1A}$
- Low reverse current: $I_R \leq 40\text{ }\mu\text{ A @ 40 V}$
- High reliability

Schematic and Pin Configuration



Graphic symbol

Package



DFN1006-2(Bottom View)

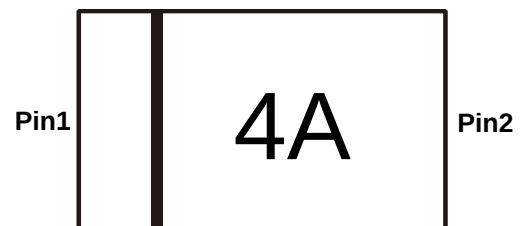
Mechanical Characteristics

- DFN1006-2 Small Outline Plastic Package
- Level 1 moisture sensitivity per J-STD-020
- Case Material: “Green” Molding Compound
- We declare that the material of product compliance with RoHS requirements and Halogen Free

Applications

- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch Mode Power Supply (SMPS)
- Low power consumption applications
- Ultra high-speed switching
- LED backlight for mobile application

Marking Information



4A = Device Marking Code
Bar denotes Cathode

Ordering Information

Part Number	Shipping	Reel Size
PSB40V1P1	10000/Tape & Reel	7 inch

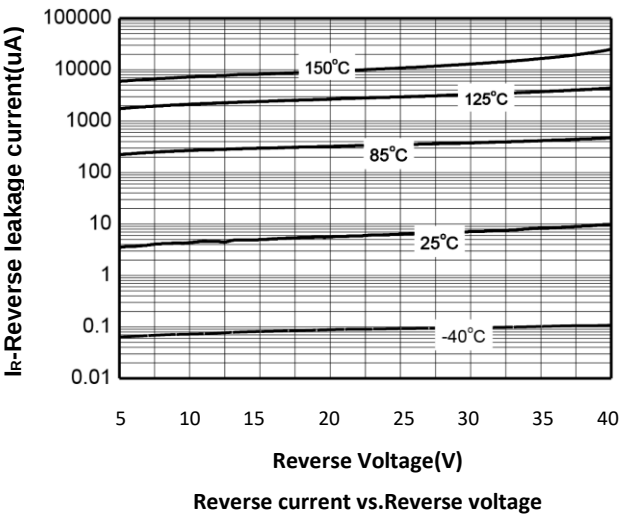
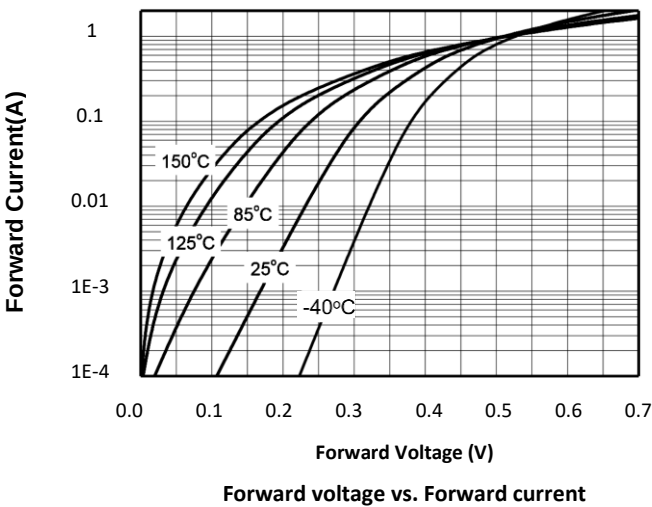
Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
DC Reverse Voltage	V _R	40	V
Mean Rectifying Current	I _O	1	A
Non-repetitive Peak Forward Surge Current @ t=8.3ms	I _{FSM}	5	A
Power Dissipation	P _D	400	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	310	°C/W
Junction Temperature	T _J	150	°C
Operating Temperature	T _{OP}	-40 ~ +85	°C
Storage Temperature	T _{STG}	-40 ~ +125	°C

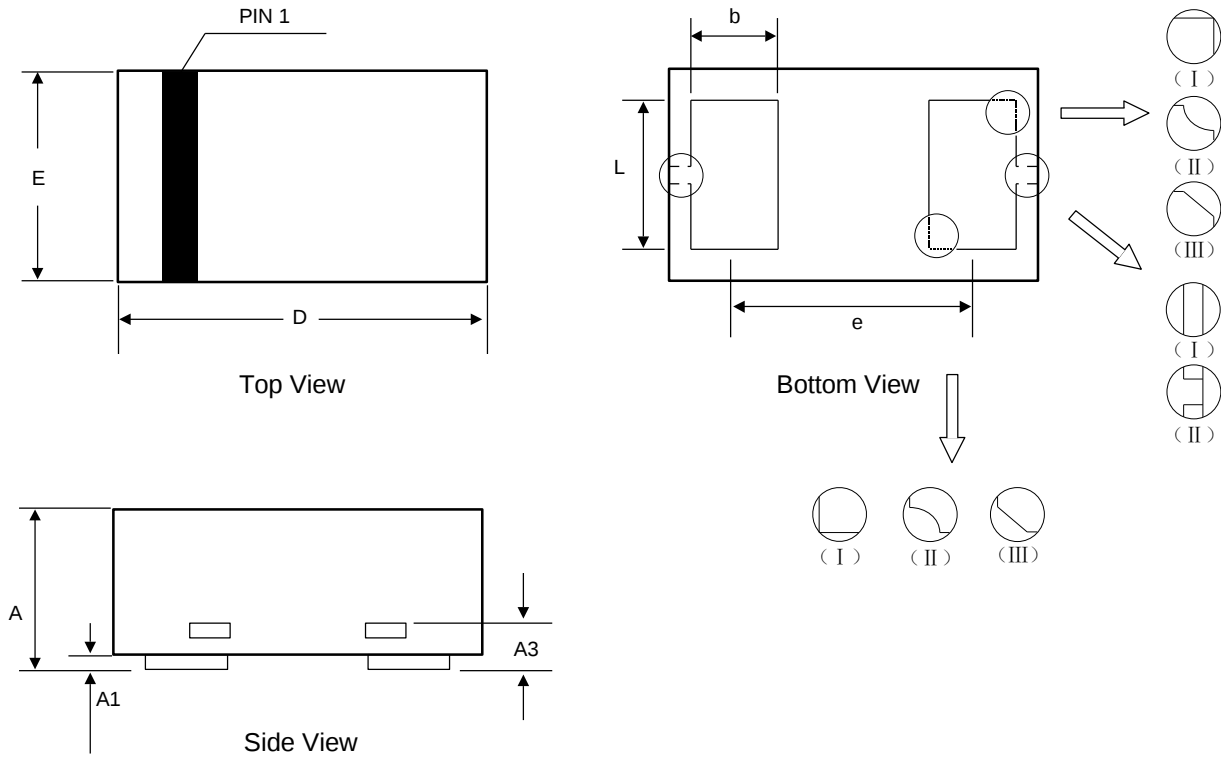
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward Voltage	V _F	-	-	0.40	V	I _F =0.1A
		-	-	0.45	V	I _F =0.2A
		-	-	0.60	V	I _F =1A
Reverse Current	I _R	-	5	15	μA	V _R = 10V
		-	10	40		V _R = 40V
Type junction capacitance	C _J		90		pF	V _R =0V, f = 1MHz

Typical Performance Characteristics(T_A=25°C unless otherwise specified)

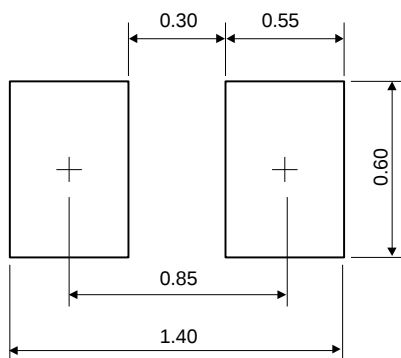


DFN1006-2 Package Outline Drawing



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.340	0.450	0.550
A1	0.000	0.020	0.050
A3	0.125 Ref.		
D	0.950	1.000	1.075
E	0.490	0.600	0.675
b	0.200	0.250	0.300
L	0.450	0.500	0.550
e	0.650 BSC		

Recommended PCB Layout (Unit: mm)

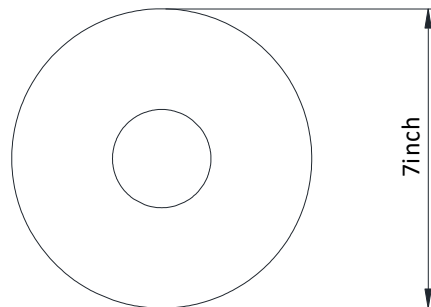


Notes:

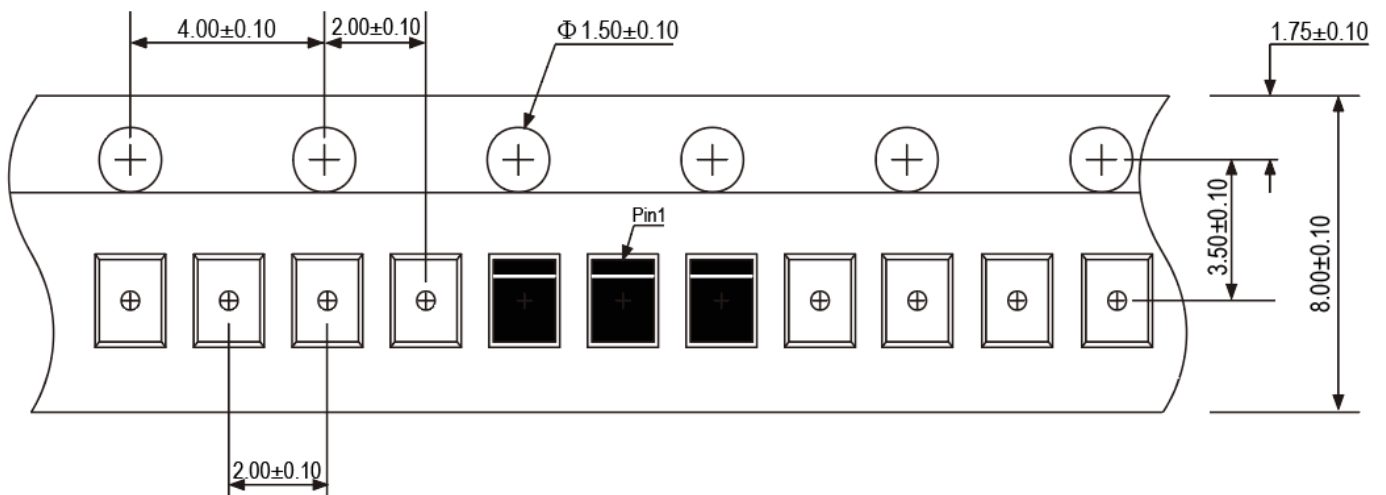
This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

TAPE AND REEL INFORMATION

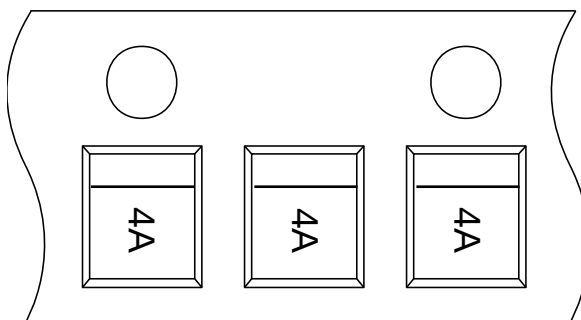
Reel Dimensions



Tape Dimensions



Unit:mm



User Direction of Feed

IMPORTANT NOTICE

The information given in this document is believed to be accurate and reliable but shall in no event be regarded as a guarantee of conditions or characteristics. PN-Silicon assumes no responsibility for any errors in this document, or for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of PN-Silicon.

The product listed in this document are designed to be used with ordinary electronic equipment or devices and are not authorized to used with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, aerospace machinery, nuclear-reactor controllers, automotive and other safety device.)

The  logo is a registered trademark of PN-Silicon co., ltd which reserves the right to make changes to the product or this document at any time without notice. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. PN-Silicon makes no warranty, representation or guarantee, express or implied, regarding the suitability of its products for any particular purpose. All rights reserved.