

DFN1610-2 Plastic-Encapsulate Schottky Barrier Diode

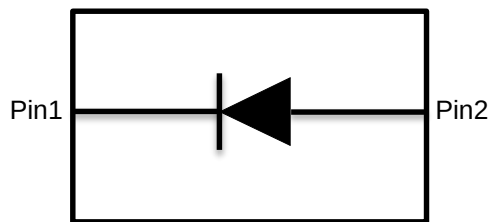
Description

General application schottky barrier diode, encapsulated in a DFN1610-2 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

Mechanical Characteristics

- DFN1610-2 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



S14 = Device Marking Code
Bar denotes Cathode

Package



DFN1610-2(Bottom View)

Ordering Information

Part Number	Shipping	Reel Size
PSBD40V1P6	3000/Tape & Reel	7 inch

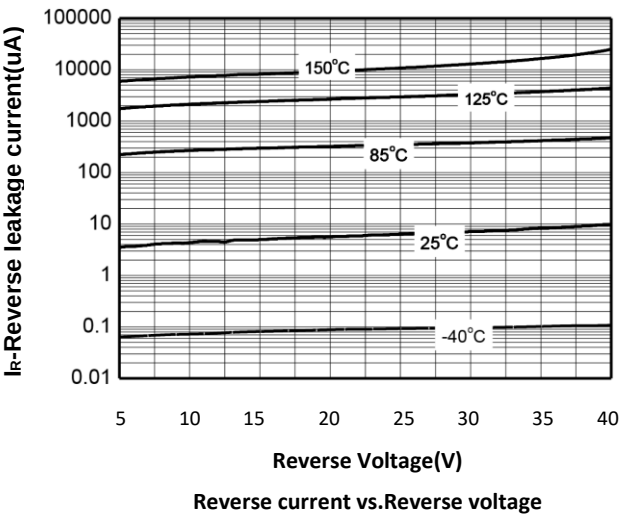
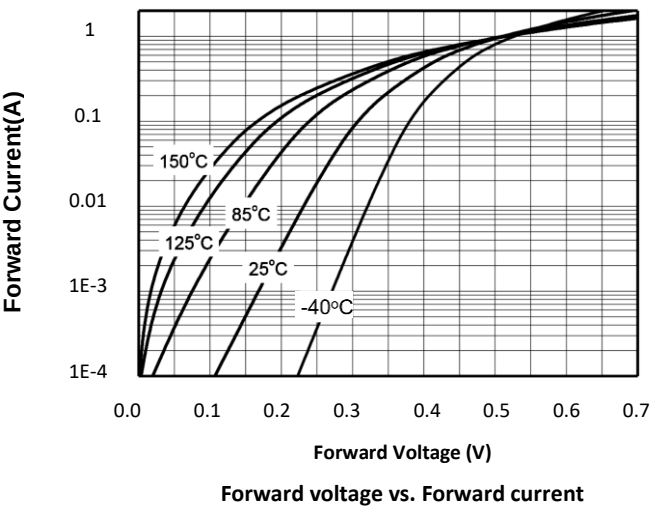
Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
DC Reverse Voltage	V_R	40	V
Mean Rectifying Current	I_O	1	A
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	5	A
Power Dissipation	P_D	400	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	125	$^{\circ}\text{C}$
Operating Temperature	T_{OP}	$-40 \sim +125$	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	$-40 \sim +125$	$^{\circ}\text{C}$

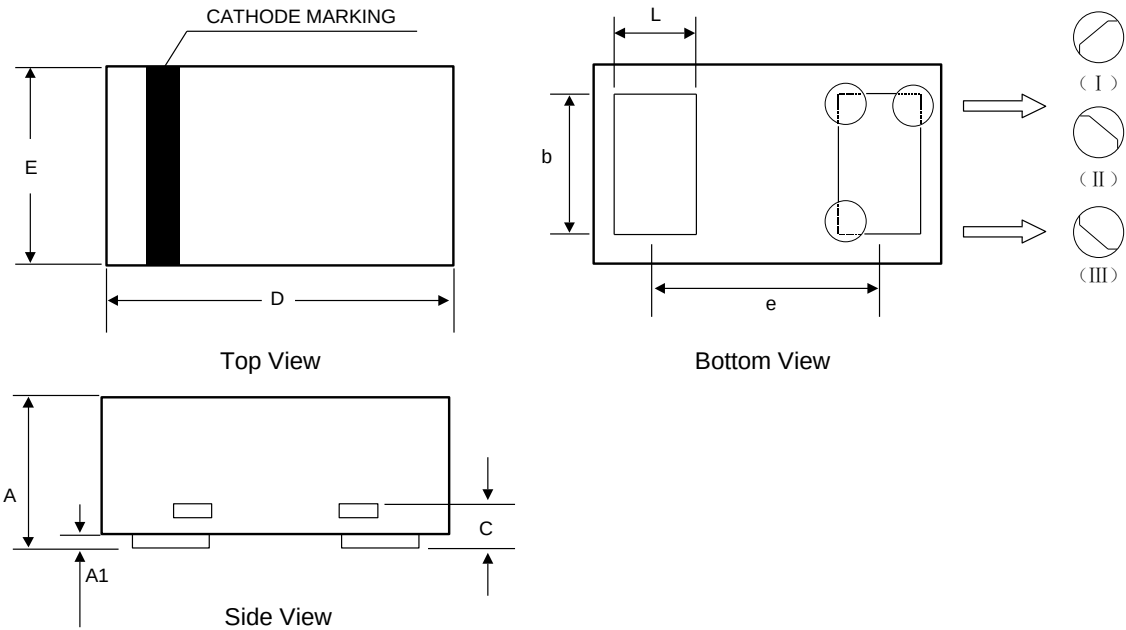
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward Voltage	V_F	-	-	0.40	V	$I_F=0.1\text{A}$
		-	-	0.45	V	$I_F=0.2\text{A}$
		-	-	0.60	V	$I_F=1\text{A}$
Reverse Current	I_R	-	5	15	μA	$V_R=10\text{V}$
		-	10	40		$V_R=40\text{V}$

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

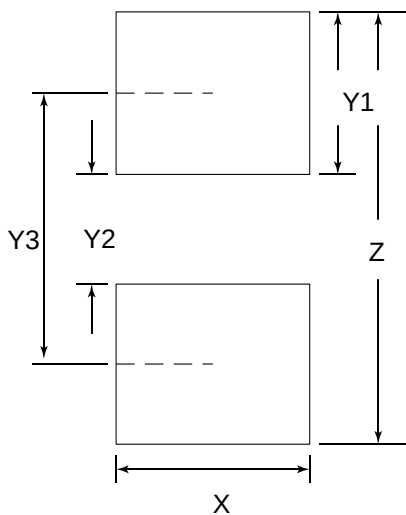


DFN1610-2 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1		0.02	0.05		0.001	0.002
b	0.75	0.80	0.85	0.030	0.032	0.034
c	0.10	0.15	0.20	0.004	0.006	0.008
D	1.55	1.60	1.65	0.062	0.064	0.066
e	1.10 BSC			0.044 BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018

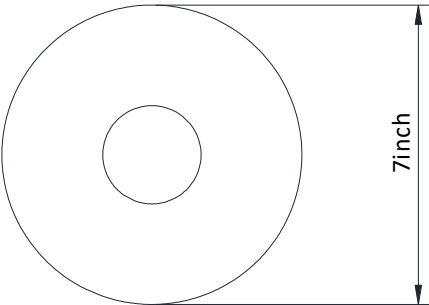
Suggested Land Pattern



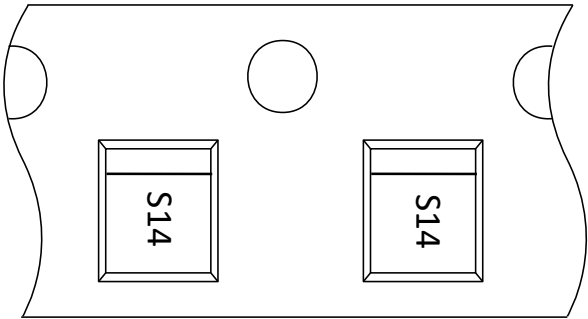
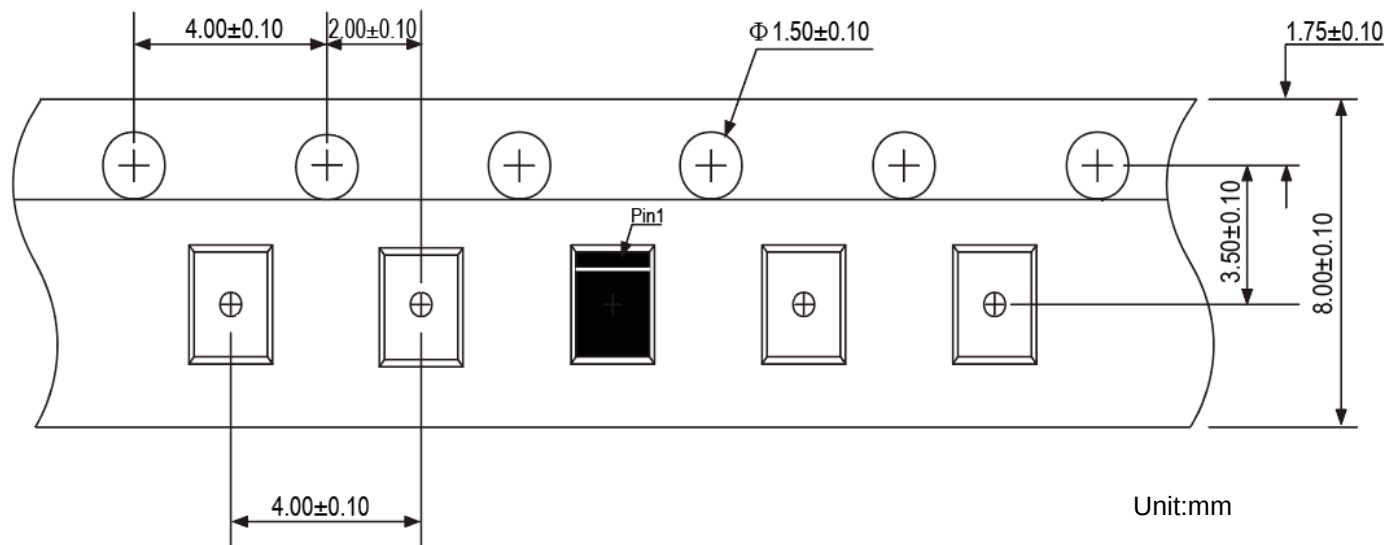
SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.00	0.040
Y1	0.62	0.025
Y2	0.60	0.024
Y3	1.22	0.049
Z	1.85	0.074

TAPE AND REEL INFORMATION

Reel Dimensions



Tape Dimensions



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.