



SANYO Semiconductors

DATA SHEET

SSPD Series Silicon Bidirectional Diode

VS002E4 — Noise clamp for signal line (For low voltage, USB1.1)

Features

- Low voltage (4.0V) , overshoot clamp.
- USB1.1 signal line overshoot/undershoot clamp.
- Usable in signal line due to small capacitance.
- Allows high-density mounting and compact designing.
- Halogen free compliance (UL94 HB).

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Allowable Power Dissipation	P		100	mW
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V _R	I _R =1μA	3.4			V
		I _R =1mA			4.0	V
Forward Voltage	V _F	I _F =1mA			0.35	V
Reverse Current	I _R	V _R =2.5V			1.0	μA
Interterminal Capacitance	C	V _R =0V, f=1MHz		16		pF

Marking : EB

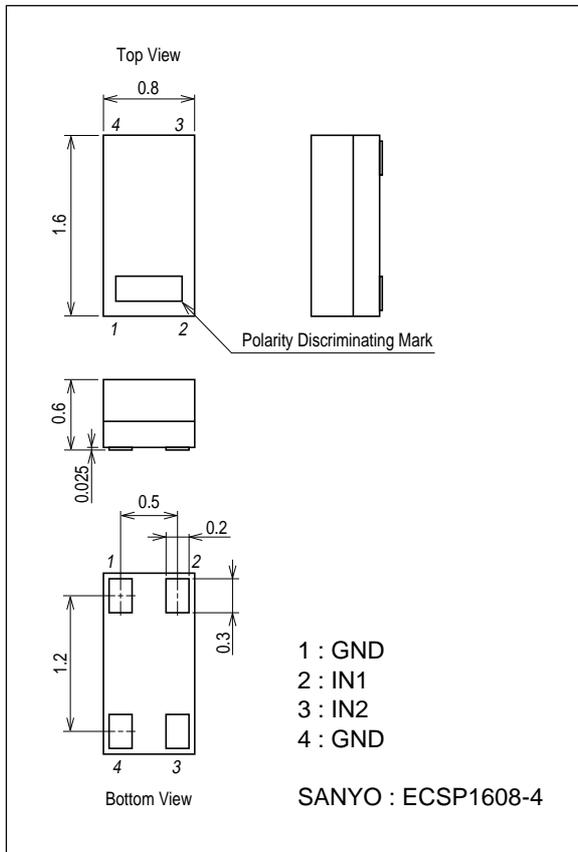
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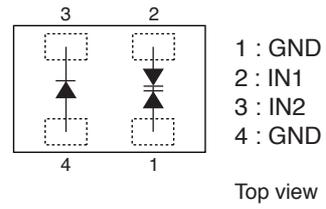
VS002E4

Package Dimensions

unit : mm (typ)
7033A-002

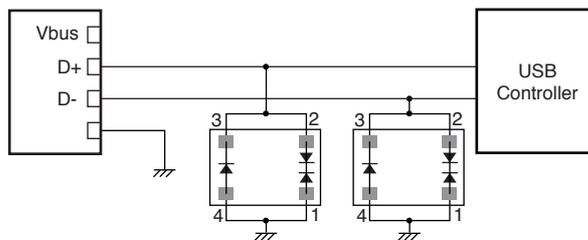


Electrical Connection



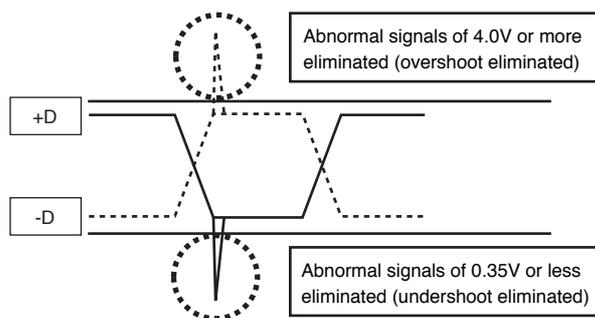
Example of use

Connect the device between data line and GND. At this time, short 1-4 and 2-3 when in use.



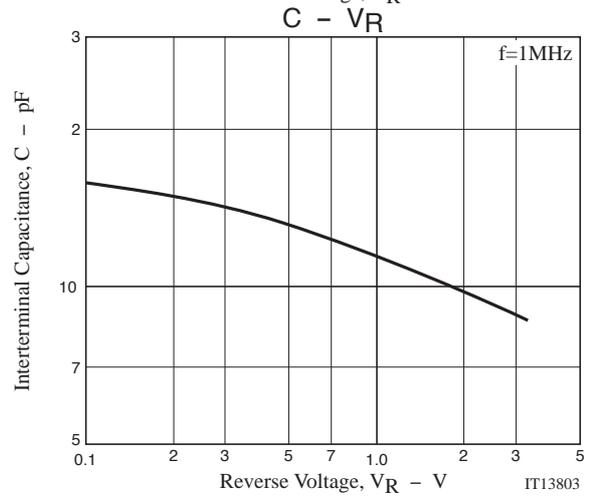
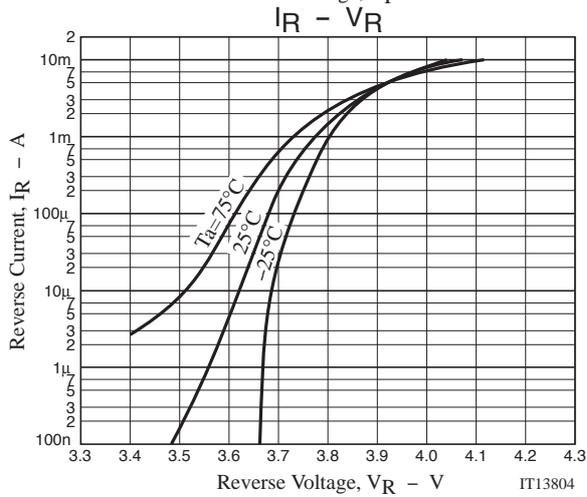
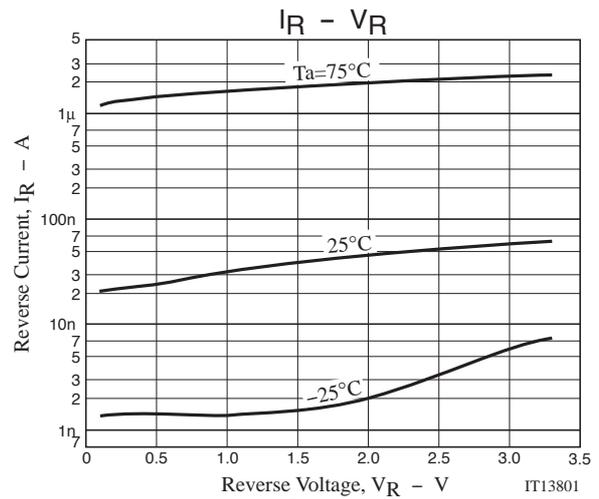
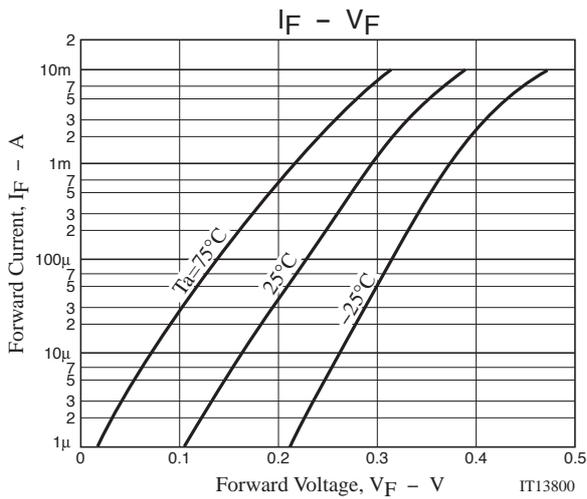
Function

Below is USB1.1 data signal (eye pattern).



Data transmission errors can be decreased by abnormal signals cutting.

VS002E4



* The above graphs show the characteristics when in use by shorting 1-4 and 2-3. (1-4, 2-3 characteristics)

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