



SANYO Semiconductors

DATA SHEET

SSPD Series Silicon Bidirectional Diode

VS003E4 — Noise clamp for signal line (For low voltage, USB2.0)

Features

- Low voltage (4.5V), overshoot clamp.
- USB2.0 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	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	VR1	IR=1μA	3.4			V
	VR2	IR=1mA			4.5	V
Forward Voltage	VF	IF=1mA			0.65	V
Reverse Current	IR	VR=3.4V			1.0	μA
Interterminal Capacitance	C	VR=0V, f=1MHz			3.2	pF

Marking : EA

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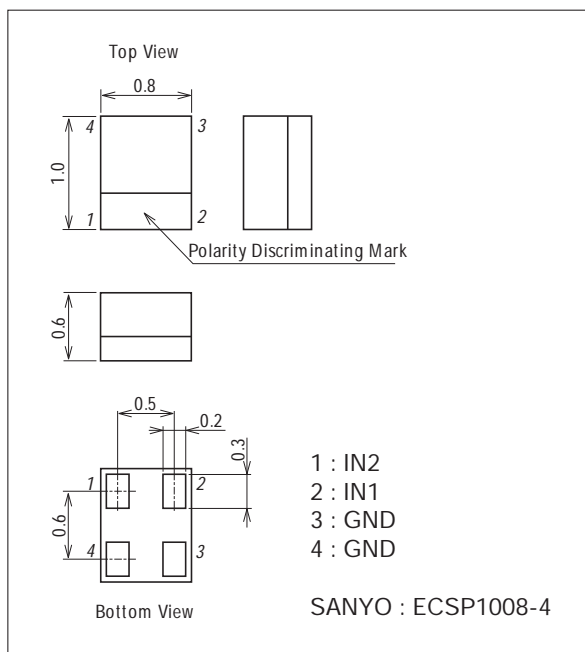
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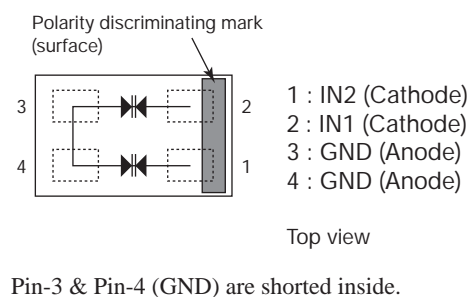
Package Dimensions

unit : mm (typ)

7036-005

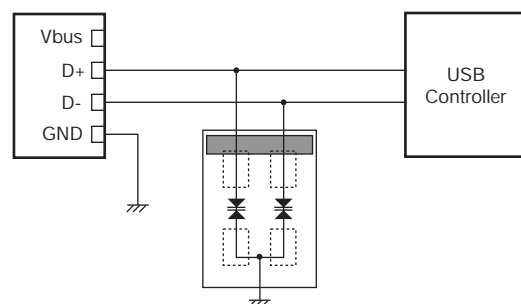


Electrical Connection



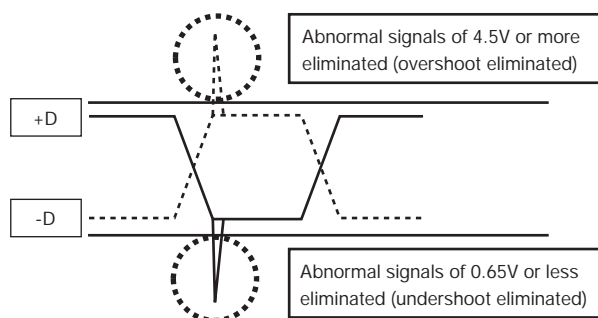
Example of Use

Connect the device between data line and GND.

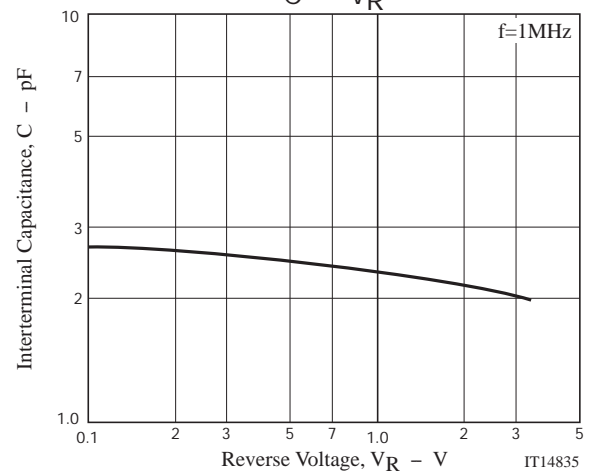
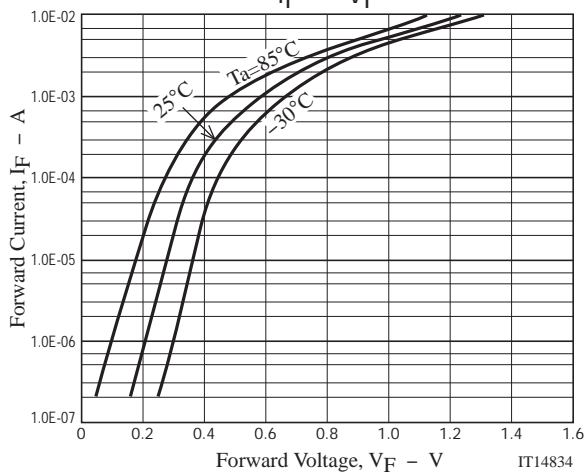
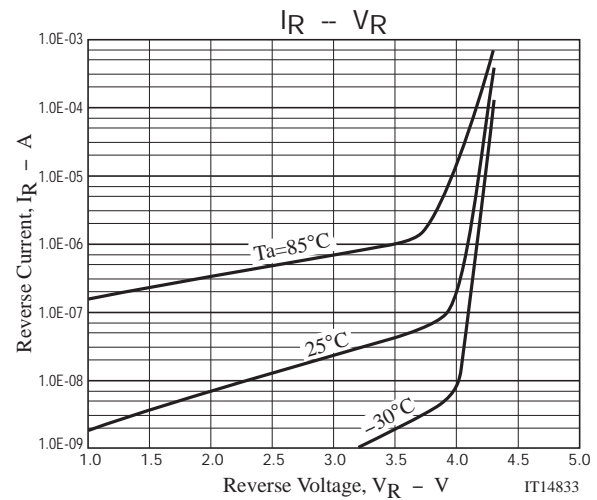
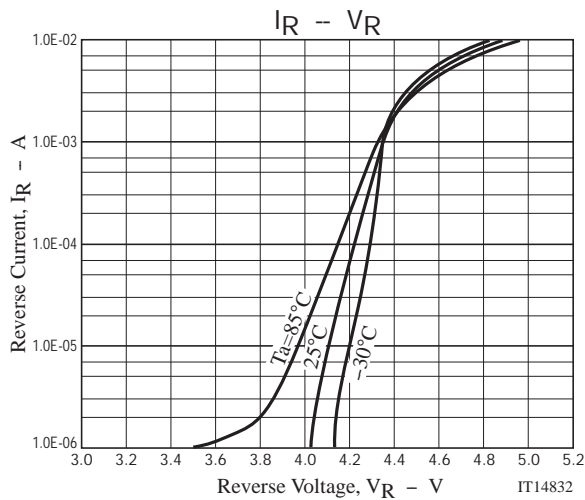


Function

Below is USB2.0 data signal (eye pattern).



Data transmission errors can be decreased by abnormal signals cutting.



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