

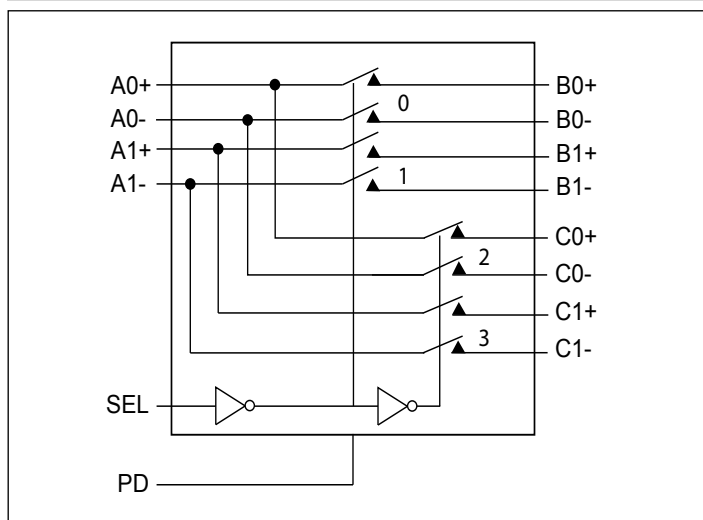
PI2DBS16212A

1.8V, 20Gbps 2-Channel 2:1 Mux/De-Mux Switch

Features

- 2 Differential Channel, 2:1 Mux/DeMux
- Support data rate up to 20Gbps
- Bi-directional operation
- -3dB bandwidth: 14 GHz
- Low Bit-to-Bit Skew, 3ps
- Low channel-to-channel skew, 20ps
- Low insertion loss: -0.94dB@5GHz, -1.16dB@8GHz, -1.25dB@10GHz
- Return loss: -20dB@5GHz, -14.7dB@8GHz, -12dB@10GHz
- Low power consumption: 200µA typ
- Supply Voltage: 1.8V±10%
- Industrial Temperature Range: -40°C to 85°C
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. “Green” Device (Note 3)
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.
<https://www.diodes.com/quality/product-definitions/>

Block Diagram



Description

The PI2DBS16212A is a generic high speed passive mux/de-mux. The configuration is 4 to 2 differential channel with data rate up to 20 Gbps. Based on a unique design technique, it optimizes dynamic electrical characteristics of the device, like low insertion loss, crosstalk and return loss.

It allows high-speed signal switching with minimum attenuation and suitable for multiple signal types like PCIe4.0, USB3.2 Gen1, USB3.2 Gen2, 10GE, Thunderbolt 4, SAS3.0, and SATA3.0 signals.

Applications

- Up to 20 Gbps for applications including USB3.2 Gen1, USB3.2 Gen2, 10GE, Thunderbolt 4, SAS3.0, and SATA3.0

Ordering Information

Part Number	Package Code	Description
PI2DBS16212AZREX	ZR	24-Contact, Very Very Thin Quad Flat No-Lead (TQFN)

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated’s definitions of Halogen- and Antimony-free, “Green” and Lead-free.
3. Halogen- and Antimony-free “Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. E = Pb-free and Green
5. X suffix = Tape/Reel