



## Product Overview

### ESDR0502B: ESD Protection Diode, Low Leakage, Fast Response Time, with Clamping Capability

For complete documentation, see the [data sheet](#)

#### Product Description

The ESDR0502B is designed to protect voltage sensitive components from damage due to ESD in applications that require ultra low capacitance to preserve signal integrity. Excellent clamping capability, low leakage and fast response time are combined with an ultra low diode capacitance of 0.5 pF to provide best in class protection from IC damage due to ESD. The small SC-75 package is ideal for designs where board space is at a premium. The ESDR0502B can be used to protect two uni-directional lines or one bi-directional line. When used to protect one bi-directional line, the effective capacitance is 0.25 pF. Because of its low capacitance, it is well suited for protecting high frequency signal lines such as USB2.0 high speed and antenna line applications.

#### Features

- Low Capacitance 0.5 pF Typical
- Low Clamping Voltage
- IEC6100042 Level 4 ESD Protection

#### Applications

- USB, HDMI, DVI

#### End Products

- Digital TV, Set Top Box, Computing, Mobile

#### Part Electrical Specifications

Product	Compliance	Status	Interface	Number of Lines	Direction	C Max (pF)	V <sub>(BR)</sub> Min (V)	V <sub>RWM</sub> Max (V)	I <sub>R</sub> Max (uA)	P <sub>PK</sub> Max (W)	Package Type
ESDR0502BT1G	AEC Qualified Pb-free Halide free	Active	USB 2.0	2	Unidirectional	0.45	5.8	5	1	20	SC-75-3
SZESDR0502BT1G	AEC Qualified PPAP Capable Pb-free Halide free	Active	USB 2.0	2	Unidirectional	0.45	5.8	5	1	20	SC-75-3

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com)

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