OVERVIEW

The sercalo SW switches are very fast optomechanical switches based on the MEMS technology. The component is designed for optical cross connect switching in single mode fiber networks. The highly reliable switching mechanism uses an integrated micromirror and features 0.5 ms switching time and only 0.5 dB insertion loss.

The miniature package withstands rugged environments and is well suited for direct mounting on printed circuit boards. The switch is qualified according to Telcordia GR 1221.

FEATURES

- reliable
- 0.5 dB insertion loss
- 0.5 ms response time
- 60 dB crosstalk
- miniature size
- non-latching

APPLICATIONS

- Optical Reconfiguration
- Protection Switching
- Network Restoration

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>SW2x2-9N</td>
<td>SW2x1-9N (without port 2)</td>
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</table>

CONTACT

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Information in this datasheet is believed to be correct but Sercalo reserves the right to change specifications without notice at any time. [90-1005-7]
DESCRIPTION

The sercalo non-latching SW switch modules are fast and reliable switches designed for single mode fiber communication networks. The device is based on the latest silicon technology and uses a micro-mechanical mirror to switch light. Operated by an electrostatic actuator, the switch features fast switching below 1 ms and high crosstalk attenuation above 50 dB. The switch is powered by a 5 V supply voltage. A 5 V TTL or CMOS drive signal is used to control the switching state.

With 0 V on the drive pin (No 2) the switch is in its bar state. When 5 V are applied to the drive pin, the micromirror is moved out of the optical path, which puts the switch into its cross state. At power off, i.e. when either the supply voltage or the drive signal falls to 0 V, the switch returns into its bar state. The switching mechanism offers the reliability of a solid-state device; it neither wears out nor degrades over time. Even after billions of cycles the switching quality stays constant.

### TECHNICAL SPECIFICATIONS

<table>
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<th></th>
<th>Unit</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
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<tbody>
<tr>
<td>Switch</td>
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<tr>
<td>Wavelength Range</td>
<td>nm</td>
<td>1240</td>
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<tr>
<td>Insertion Loss</td>
<td>dB</td>
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<tr>
<td>Crosstalk</td>
<td>dB</td>
<td>75</td>
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<tr>
<td>Backreflection</td>
<td>dB</td>
<td>55</td>
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<td>Polarisation Dependent Loss</td>
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<td>Switching Time</td>
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<tr>
<td>Fiber Pigtail</td>
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<tr>
<td>Durability</td>
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### PIN CONNECTIONS

1. Supply 5 V
2. Drive Signal 5 V TTL
3. Ground 0 V

view from pin side