Fiber Optics

Multichannel Optical Switch

MCS412

The MCS412 consists of four individual 1x2 optical switches that can be used separately as four bidirectional 1x2 switches or in conjunction with each other to form a bidirectional 1x5 optical switch.

Channel selection can be performed manually from the front panel simply by pressing one of four control switches or remotely by applying a TTL signal to the DB9 connector located on the rear panel.

The active output fiber is indicated on an array of eight LEDs on the front panel and TTL signals are available on the rear panel DB9 connector.

Features

- Bidirectional MEMS Switch Architecture
- Four 1x2 Optical Switches
- Configurable to a 5:1 Optical Multiplexer
- Remote Controlled Using Standard TTL Signals
- Simple Front Panel and Remote Control

General Specifications

Number of Switches ................. Four
Switch Types .................. Bidirectional MEMS
Fiber Type .................. Corning SMF-28 or Equivalent
Fiber Connection ........ FC/PC Style Fiber Optic Connector
External Interface ......... DB9 (TTL Logic)
Line Voltage ............. 115/230VAC @ 50-60Hz
(Switch Selectable)

Performance Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength</td>
<td>1520</td>
<td>1550</td>
<td>1610</td>
<td>nm</td>
</tr>
<tr>
<td>Insertion Loss @ 1550nm</td>
<td>0.4</td>
<td>0.7</td>
<td>1</td>
<td>dB</td>
</tr>
<tr>
<td>Cross Talk</td>
<td>-40</td>
<td>-50</td>
<td>-70</td>
<td>dB</td>
</tr>
<tr>
<td>Switching Speed</td>
<td>—</td>
<td>7</td>
<td>30</td>
<td>ms</td>
</tr>
<tr>
<td>Return Loss</td>
<td>-55</td>
<td>-65</td>
<td>-70</td>
<td>dB</td>
</tr>
<tr>
<td>Maximum Optical Power</td>
<td>—</td>
<td>—</td>
<td>24.8</td>
<td>dBm</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0</td>
<td>—</td>
<td>70</td>
<td>°C</td>
</tr>
<tr>
<td>Repeatability</td>
<td>—</td>
<td>—</td>
<td>0.01</td>
<td>dB</td>
</tr>
</tbody>
</table>

Switching Time – 7ms to Switch On
2.5 ms/div

Optical Signal

Drive Pulse

Switching Time – 3.5ms to Switch Off
2.5 ms/div

Transition Time – 7ms
1 ms/div

Item# | $ | £ | € | RMB | Description | Connectors
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MCS412 | $3,995.00 | £2,516.90 | €3,715.40 | ¥38,152.30 | Multichannel Optic Switch | FC/PC

www.thorlabs.com