

2x2 MEMS Optical Switch

Fiberer's MEMS Optical Switches are based on integrated silicon MEMS technology and is available in 1x1, 1x2 and 2x2 switch architectures. Inside the switch package both the CMOS/TTL compatible driver. The plastic package is one of the smallest in the industry. It is optimized for low cost production while maintaining highest reliability comparable to a solid-state device. The component is designed to meet Telcordia 1221 quality standards.

Features

- Reliable
- 0.5 dB insertion loss
- 0.5 ms response time
- Low PDL
- 60 dB crosstalk
- Miniature size
- Latching

Applications

- Protection Switching
- Reconfiguration
- WDM
- Optical Subsystems
- Array integration



Spec and Parameter - Single Mode

Parameter	Value
Wavelength range	1240~1640
Insertion loss	< 0.9 typ. 0.4dB
Return loss	>=50 dB typ. 55dB
Polarization dependent loss	<0.07 typ. 0.03 dB
Cross talk	>= 60dB typ. 75 dB
Repeatabilit	<=0.002dB
Switch speed	<1ms typ. 0.5ms
Durabilit	>1billion
Operating power (optical)	>300mW
Operation temperature	0~70
Storage temperature	-40~70
Size (L x W x H)	23.2 x 10.1 x 5.9mm

Spec and Parameter - Multimode

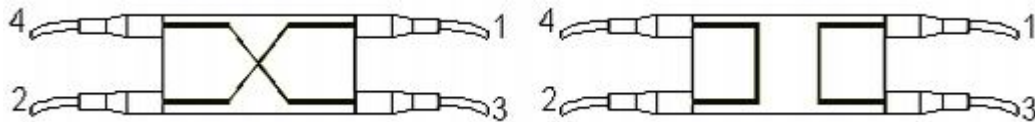
Parameter	Value
Wavelength range	600~1700nm
Insertion loss	typ.0.5dB,max 1.2dB
Return loss	Typ.45dB, Min 35dB
Polarization dependent loss	typ.0.03dB,max 0.1dB

Cross talk	Typ.60dB, Max 40dB
Repeatabilit	<=0.002dB
Switch speed	<5ms, max 10ms
Durabilit	>1billion
Operating power (optical)	>300mW
Operation temperature	0~70 C
Storage temperature	-40~70
Size (L x W x H)	23.2 x 10.1 x 5.9mm

Integrated Driver

Operating Voltage	5+/-0.25 VDC
Current Consumption	Typ.1mA, Max 10mA
Logic Level Low	<0.3VDC
Logic Level High	>3VDC
Selection Pulse Width	10ms

Pictures



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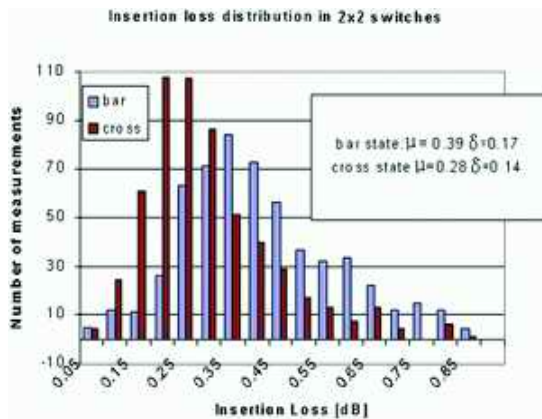


Figure 1: Insertion loss distribution

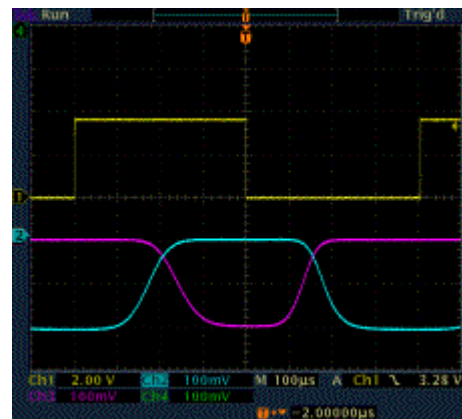


Figure 2: response time at 1.2 kHz cycling

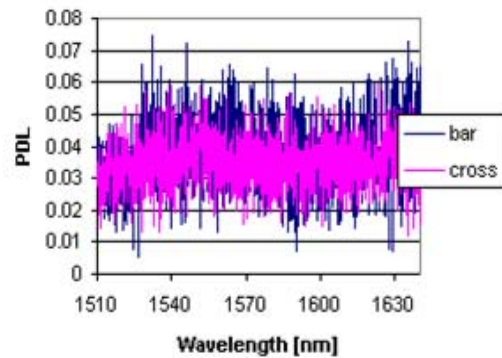
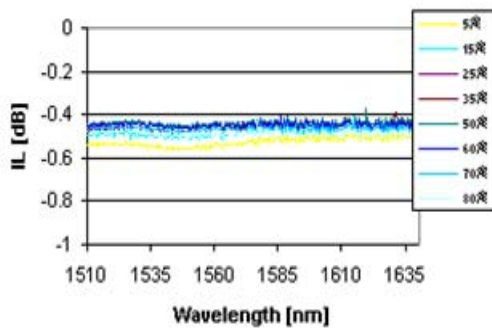
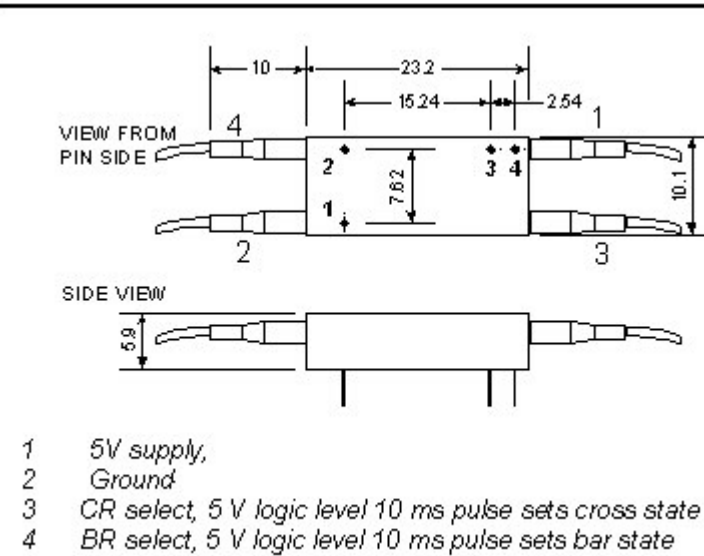
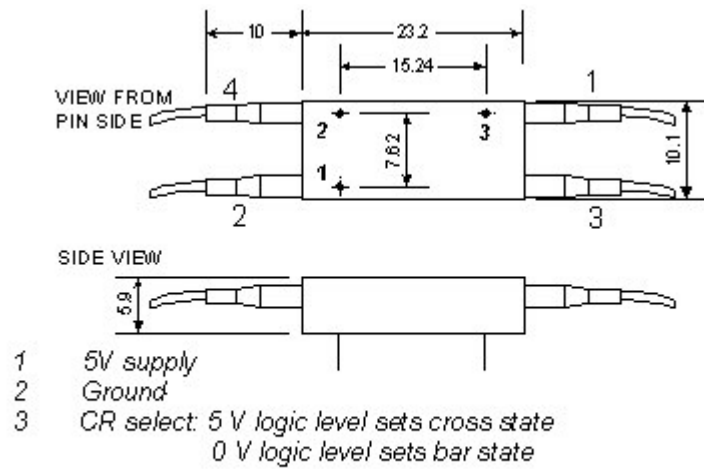
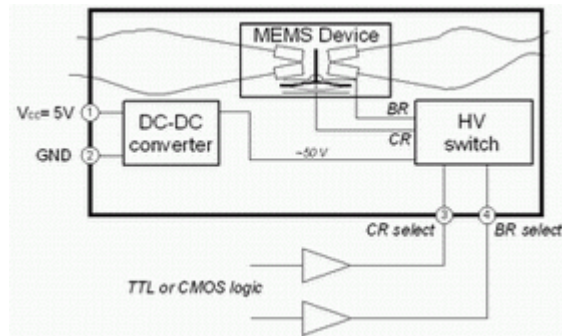


Figure 3: spectral response over temperature

Figure 4: PDL at different wavelengths





Information of Order to offer

MSW	Switch channel	Latching or Non-Latching	Fiber Type	Fiber Length	Connector
	11=1x1	L=Latching	S9=SMF 900um	1=1.0m	NE=None
	12=1x2	N=Non-Latching	M5=MMF 50/125/900um	2=2.0m	FA=FC/APC
	22=2x2		M6=MMF 62.5/125/900um		FC=FC/PC
					SA=SC/APC
					SC=SC/PC
					ST=ST/PC
					LA=LC/APC
					LC=LC/PC
					XX=others