

2x1(1x1,2x2) MEMS Optical Switch

Opneti'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

Compact Size
Fast response time
TTL or CMOS logic

Applications

Protection Switching
Reconfiguration
Optical Subsystems
Array integration

Specifications

Parameter	Single mode	Multimode
Wavelength range (nm)	1240~1640	600~1700
Insertion loss (dB)	≤1.0 (Typ 0.4)	≤1.2 (Typ 0.4)
Polarization dependent loss (dB)	≤0.07	≤0.15
Return Loss (dB)	≥ 50 (Typ 55)	≥ 30 (Typ 40)
Cross talk (dB)	≥ 60 (Typ 75)	≥ 40 (Typ 60)
Switch speed (ms)	≤1, (Typ 0.5)	≤20, (Typ 2)
Repeatability (dB)	≤0.002	≤0.005
Durability (cycles)	10 ⁹	10 ⁹
Fiber type	SMF-28e	50/125, 62.5/125 MM
Operation temperature(°C)	0~70	0~70 C
Storage temperature (°C)	-40~70	-40~70
Package Size (L x W x H) (mm)	23.2 x 10.1 x 5.9	23.2 x 10.1 x 5.9

Integrated Drive

Supply Voltage Vcc (PIN 1) (V)	3.2 ~ 5.25 (Typ. 3.3 or 5.)
Current Consumption Lcc (PIN 1) (mA)	≤45, (Typ. 1)
Logic Level low(PINS 3,4) (V)	0.3
Logic Level High(PINS 3,4) (V)	3.0
Selection Pulse Width (ms)	≥2. Typ 10.

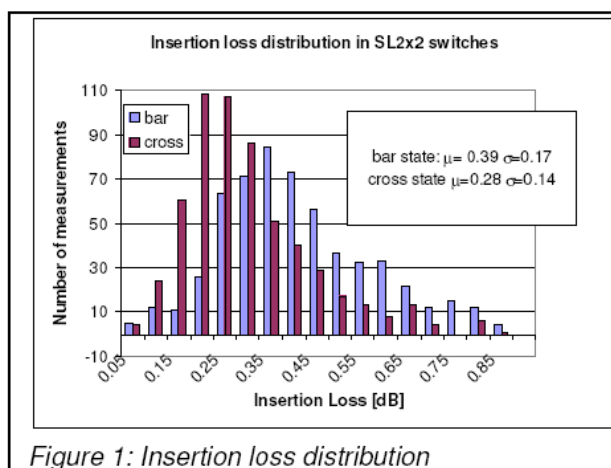


Figure 1: Insertion loss distribution

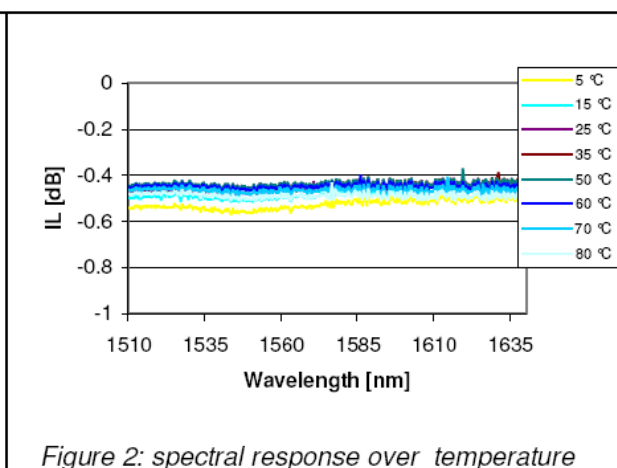
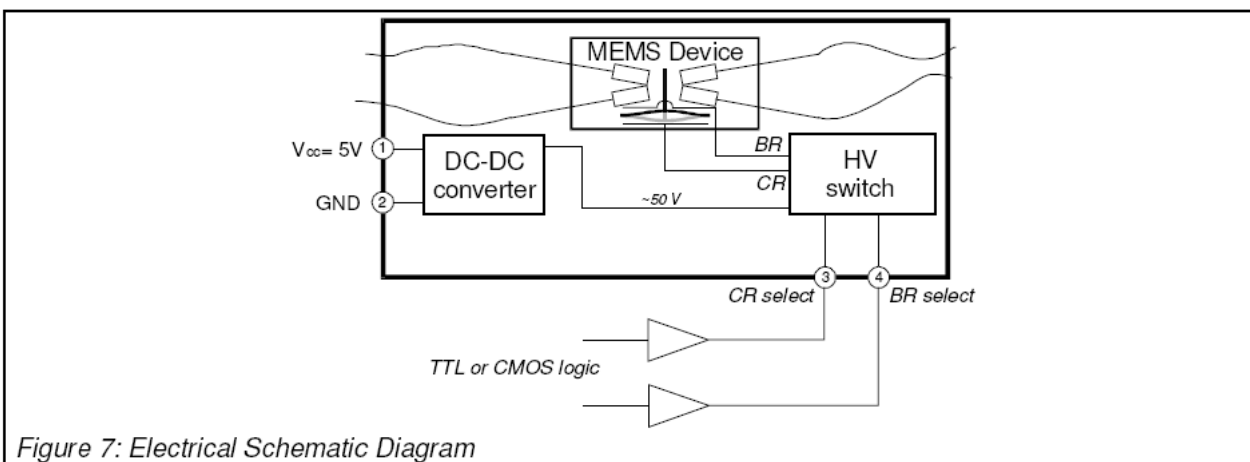
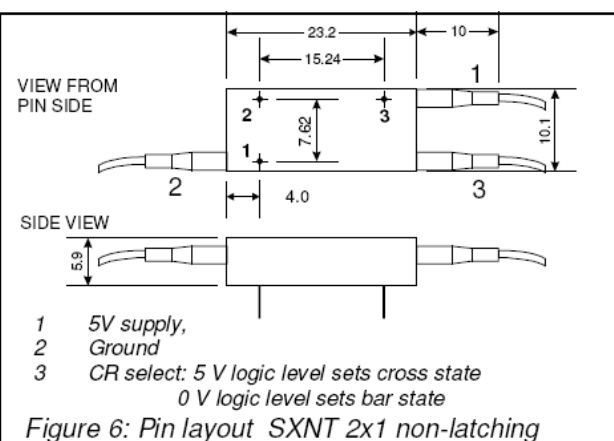
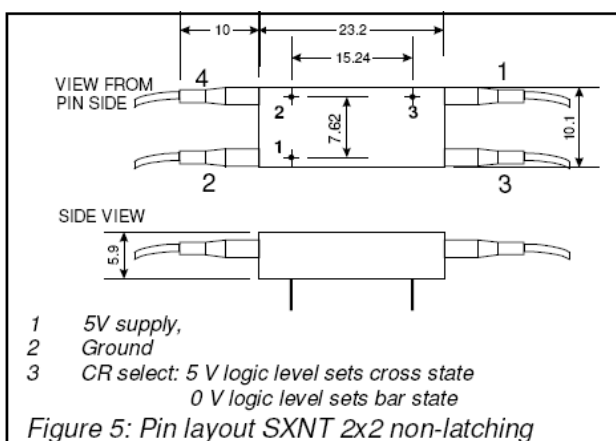
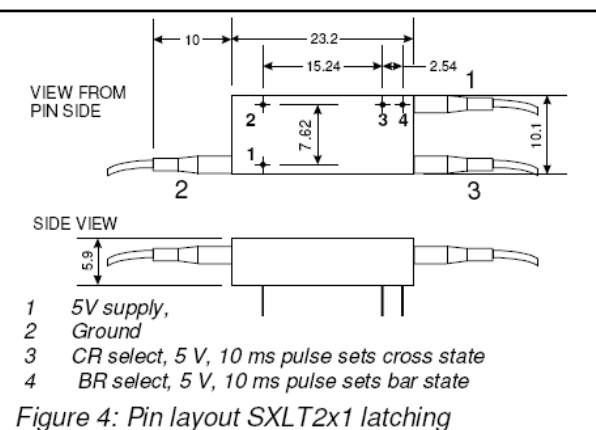
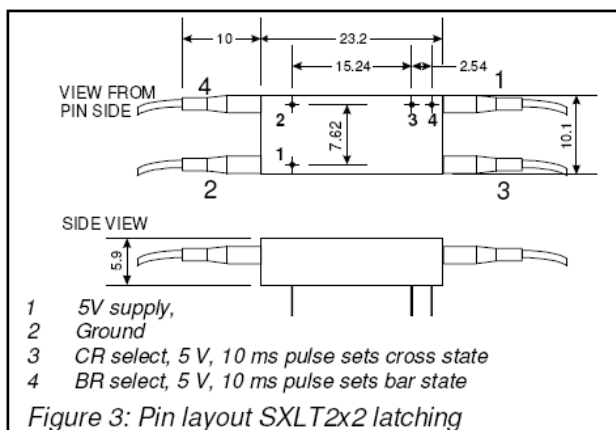


Figure 2: spectral response over temperature



Ordering Information

MSW	Port Type	Wavelength	Mode	Pigtail Type	Fiber Type	Length	Connector
	2x1 (no port 4) 1x1 (no ports 4, 2) 2x2	850 1310 1310/1550	L=Latching N=Non-Latching	250=250um baer fiber 900=900um loose tube	1=SMF-28e 2=50/125 3=62.5/125	1=1.0m	NE=None FA=FC/APC FC=FC/PC SA=SC/APC SC=SC/PC XX: Specify