Multimode
FIBER OPTIC
1x13 SWITCH

OVERVIEW

The SW fiber optic switch is a very fast opto-mechanical switch based on the MEMS technology. The component makes an optical connection between an optical port and either one of 13 input or output lines. The highly reliable switching mechanism uses integrated micromirrors and features below 10 ms switching time and below 1.4 dB insertion loss. 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.

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. The small package withstands rugged environments and is well suited for direct mounting on printed circuit boards. The switch is built by cascading 1x2 switches which are qualified according to Telcordia GR1221.

FEATURES

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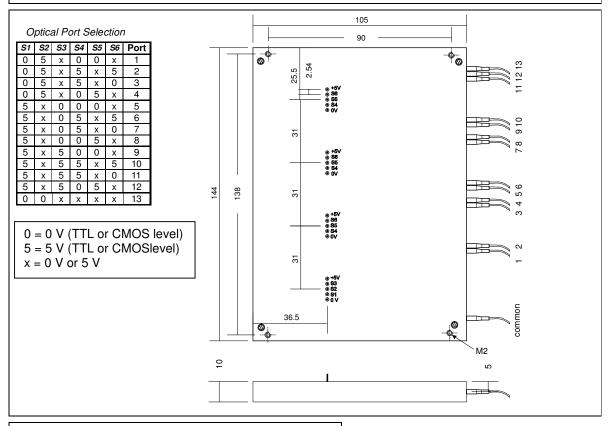- 60 dB crosstalk
- miniature size
- non-latching

APPLICATIONS

- Optical Reconfiguration
- Instrumentation
- Provisioning

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TECHNICAL SPECIFICATIONS *(multimode variant)*

	Unit	Min	Typ	Max
Switch				
Wavelength Range	nm	600		1700
Insertion Loss	dB		1.0	1.4
Crosstalk	dB		55	45
Backreflection	dB		45	35
Polarisation Dependent Loss	dB			0.25
Repeatability[1]	dB			0.002
Switching Time	ms		5	10
Switching Voltage	V			5
Fiber Pigtail	µm		62/125/900 or 50/125/900	
Durability	cycles		no wear out	
Package				
Power Consumption	mW		150	
Operation Temperature	°C	0		70
Storage Temperature	°C	-40		85
Size (L x W x H)	mm		144 x 105 x 10	

[1] *value for constant temperature and polarisation*

Optical Port Selection

S1	S2	S3	S4	S5	S6	Port
0	5	x	0	0	x	1
0	5	x	5	x	5	2
0	5	x	5	x	0	3
0	5	x	0	5	x	4
5	x	0	0	0	x	5
5	x	0	5	x	5	6
5	x	0	5	x	0	7
5	x	0	0	5	x	8
5	x	5	0	0	x	9
5	x	5	5	x	5	10
5	x	5	5	x	0	11
5	x	5	0	5	x	12
0	0	x	x	x	x	13

0 = 0 V (TTL or CMOS level)
5 = 5 V (TTL or CMOSlevel)
x = 0 V or 5 V

ORDERING INFORMATION
SW1x13 - 62n (62.5 um fiber)
SW1x13 - 50n (50 um fiber)
SW1x12 - 62n (without port 13)

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