

## 2x2 High Speed Lithium Niobate Interferometric Switch



### Key Features

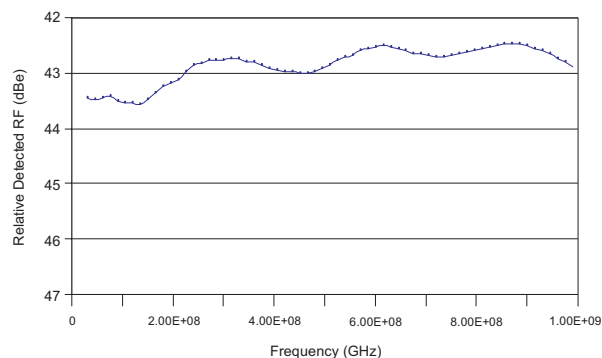
- High polarization extinction
- Low drive voltage
- Low fiber-to-fiber insertion loss
- 1550 nm operation

### Applications

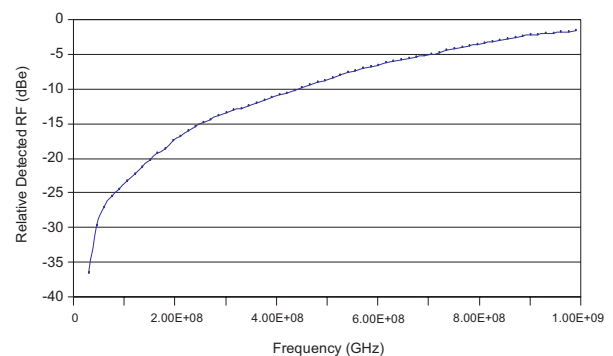
- Nanosecond switching

The JDSU 2x2 Interferometric Switch is a high extinction, high speed switch. Because the waveguides are polarizing, control of the input light polarization is required. Switching speeds in excess of 1 ns are attainable. Input and output fibers are polarization maintaining.

### Typical Frequency Response, S21



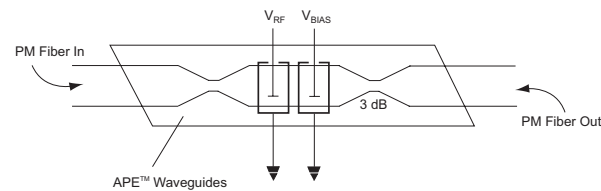
### Typical Return Loss Curve, S11



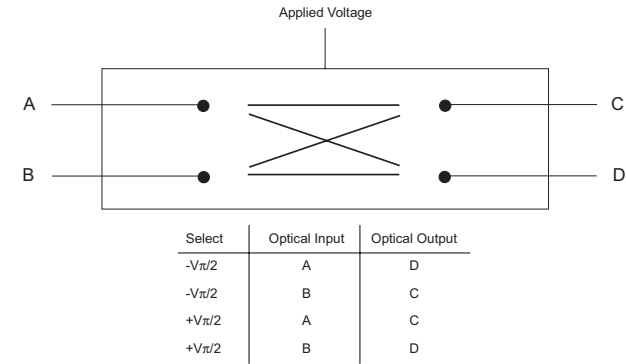
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Device Schematic

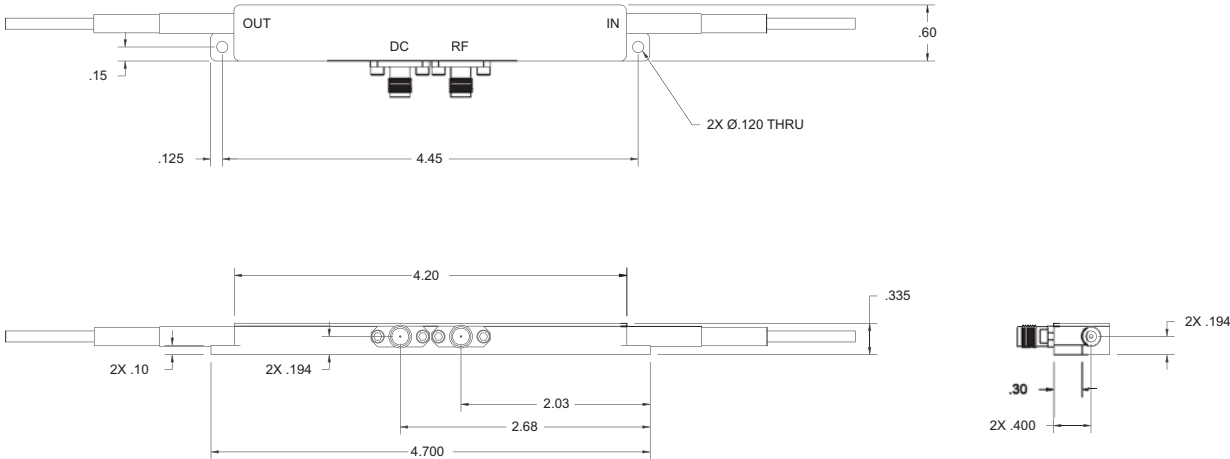


Functional Schematic



2x2 Interferometric Switch Dimensions Diagram

(Specifications in inches [mm] unless otherwise noted.)



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**Specifications****Parameter****Specification****General**

Material	Lithium niobate
Crystal orientation	X-cut, y-propagating

**Optical<sup>1</sup>**

Maximum input optical power	200 mW
Operating wavelength	1545 to 1555 nm
Insertion loss	≤5.0 dB
On/off extinction ratio, low frequency	≥18 dB
Optical return loss	≤-45 dB
Rise and fall time	≤0.2 ns

**Electrical<sup>1</sup>**

RF port	
$V_{\pi}$ at DC	≤7.0 V
Impedance	50 $\Omega$ typical
RF power	≤27 dBm
RF electrode capacitance, $C_e$	6.3 pF typical

**Bias port**

$V_{\pi}$ at DC	≤3.5 V
Impedance	>10 k $\Omega$

**Mechanical**

Electrical connectors (package)	SMA connectors
PM input and output fiber	Fujikura SM-15-P-8/125-UV/UV-400

**Environmental**

Operating temperature	0 to 70 °C
Storage temperature	-40 to 85 °C

1. All measurements made at 23°C unless otherwise noted.

**Ordering Information**

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at [customer.service@jdsu.com](mailto:customer.service@jdsu.com).

**Sample: 10022467**

Product Code	Description
10022467	2x2 Interferometric Switch, no optical connectors
10020457	2x2 Interferometric Switch, FC/PC optical connectors

Fujikura SM-P-8/125-UV-400 is a trademark of Corning Incorporated.

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