

Multi-Channel Mux/Demux Module 100 GHz Spacing



Key Features

- Low insertion loss
- Exceptional reliability and environmental stability
- Low polarization dependent loss (PDL)
- Flat and wide passband
- High demux channel isolation
- Customizable with tap and multi-channel or band capabilities

Applications

- Access/enterprise networks
- Metro networks
- Long haul networks
- Denser channel plans (50 GHz when used in conjunction with an optical frequency interleaver)
- Test bench/systems

Compliance

- Telcordia GR-1221

JDSU multi-channel multiplexer/demultiplexer (mux/demux) modules are available on ITU channel spacings of 200, 100, and 50 GHz, as well as on bands of ITU channels.

Manufactured using laser welding technology, the integrated mux/demux module components exceed Telcordia GR-1221 requirements. The modules, themselves, demonstrate low loss, temperature insensitivity, and reliable performance in any system application.

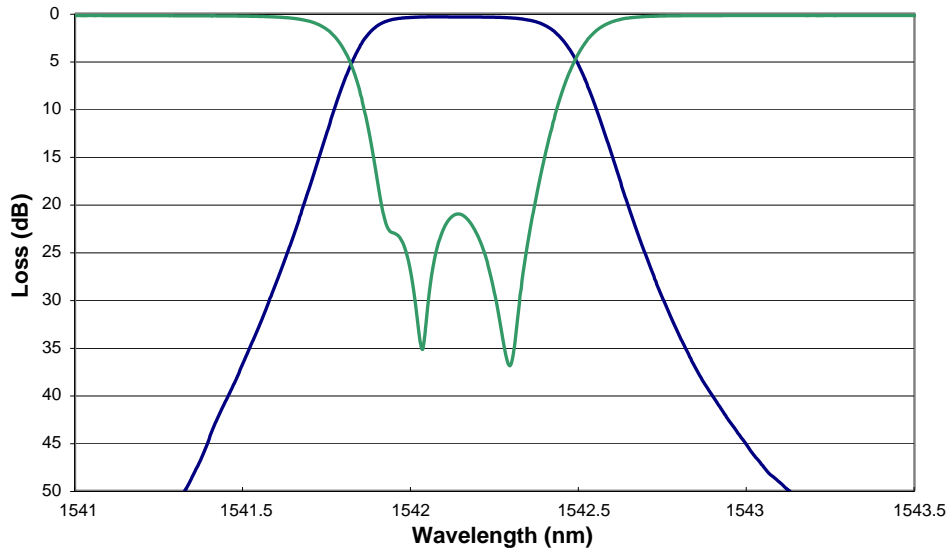
Fixed mux/demux modules offer low-cost wavelength management solutions that are suitable for long haul, metro, and access applications. Easily customizable, these devices are configured by number of channels for any customer-specific channel plan.

Packaging options include fiber type, connectors, footprint, and integration of taps and detectors for a complete dense wavelength division multiplexing (DWDM) solution.

Established volume capability and proven experience in customizing fiberoptic components and modules make JDSU the supplier of choice.

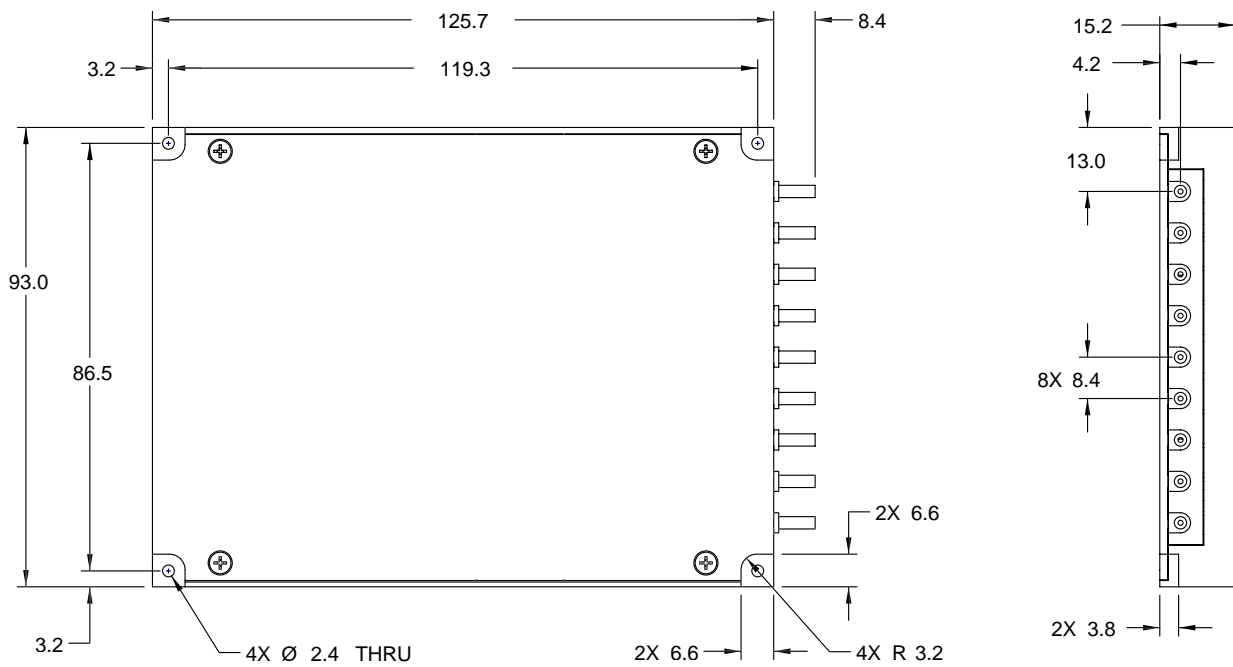
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100 GHz Coupler Spectral Plot



Dimensions Diagram

(Specifications in mm unless otherwise noted.)



3

Specifications

Parameter		4 Ch	8 Ch	16 Ch
Wavelength range		C or L band ITU channels 186.6 to 196.1 THz		
Passband	Minimum	12.5 GHz ($\approx \pm 0.10$ nm)		
Passband ripple	Maximum	0.35 dB	0.35 dB	0.35 dB
Insertion loss ^{1,2}	Maximum	2.0 dB	3.2 dB	4.4 dB
Isolation (adjacent channel) ³	Minimum	25 dB	25 dB	25 dB
Isolation (non-adjacent channel) ³	Minimum	50 dB	50 dB	50 dB
Return loss	Minimum	45 dB	45 dB	45 dB
Directivity	Minimum	50 dB	50 dB	50 dB
Polarization dependent loss	Maximum	0.2 dB	0.2 dB	0.2 dB
Polarization mode dispersion	Maximum	0.15 ps	0.15 ps	0.15 ps
Optical power handling	Maximum	1 W	1 W	1 W
Operating temperature range		0 to 70 °C		
Storage temperature range		-40 to 85 °C		
Fiber type		9/125/900 μ m fiber		
Pigtail length		1.0 \pm 0.1 m		
Package size (L x W x H)		125.7 x 93.0 x 9.9 mm	125.7 x 93.0 x 9.9 mm	125.7 x 93.0 x 15.2 mm

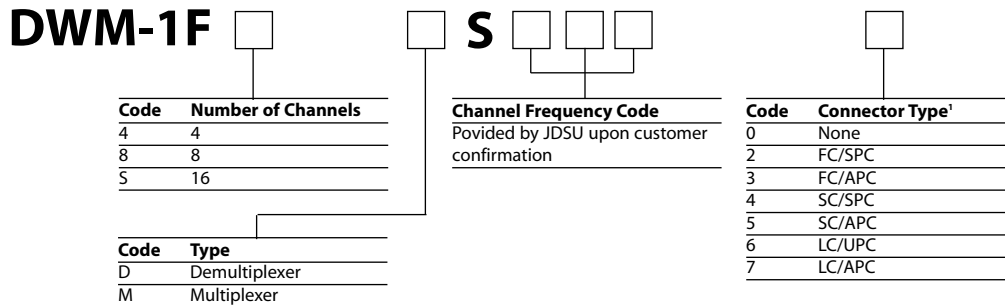
1. Losses include one connector.

2. Losses are for demultiplexers; multiplexer losses are 0.3 dB lower (i.e. 4 Ch Mux loss is 2.3 dB). If no connector option is selected, the maximum loss should be 0.2 dB lower.

3. Isolation values stated are for demultiplexers only.

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.

Sample: DWM-1F4DS2724


1. Other connectors available upon request.

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Part Number: WD1508RD1-SM2
Serial Number: FD153577
Temperature: 23.0 °C
Fiber Type: SMF-28 9/125/900 μm
Connectors: E2000

02-20-2001

Siemens Part Number: V50017-Q240-K810
Siemens Specification: V50017-Q243-K899-*-7625 Issue 03
S/N: 

OPTICAL PERFORMANCE

Channel	Nominal Center (nm)	Actual Center (nm)	Loss Over Passband (dB)	Loss Over Guardband (dB)	Ripple Over Guardband (dB)	Adjacent Isolation (dB)	Non-Adjacent Isolation (dB)
λ1-λ8 Out	-	-	-	1.47	0.05	-	-
λ9	1554.134	1554.153	2.66	2.66	0.61	27.9	54.9
λ10	1553.329	1553.306	2.91	2.91	0.18	27.7	57.0
λ11	1552.524	1552.536	3.43	3.43	0.50	45.0	60.0
λ12	1551.721	1551.721	2.14	2.14	0.18	31.5	60.0
λ13	1550.918	1550.952	2.86	2.86	0.31	31.3	54.9
λ14	1550.116	1550.143	4.12	4.12	0.69	39.3	57.5
λ15	1549.315	1549.326	1.86	1.86	0.34	29.1	55.6
λ16	1548.515	1548.563	2.39	2.39	0.75	38.8	54.5

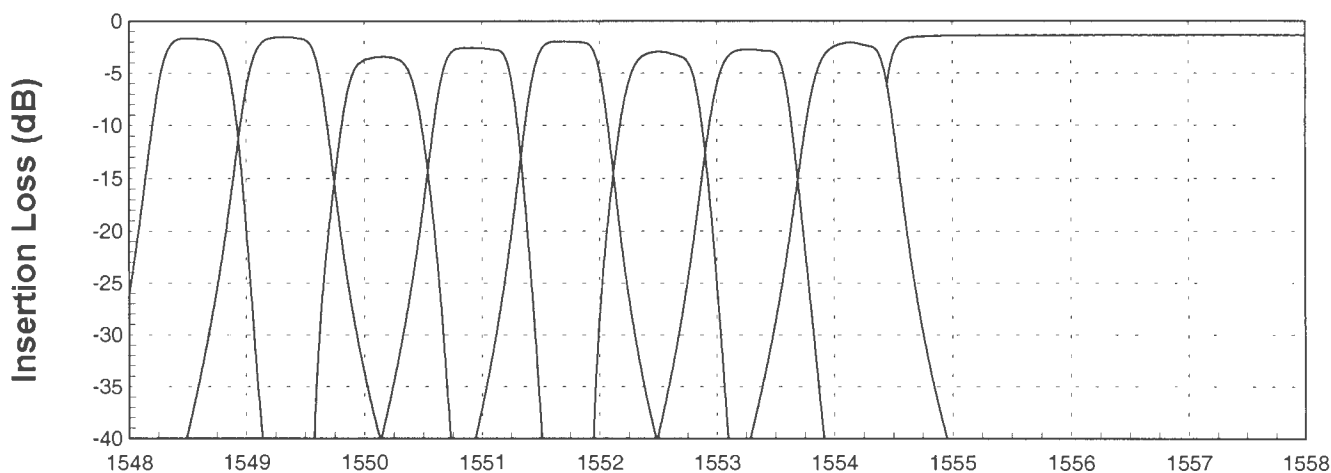
Insertion Loss Uniformity (Channels 1-8) (dB) = 0.15
 Insertion Loss Uniformity (Channels 9-16) (dB) = 2.59

Passband = Nominal Center +/- 0.11 nm
 Guardband = Nominal Center - 0.165 nm / + 0.140 nm
 All losses include one connector loss.

OTHER PARAMETERS

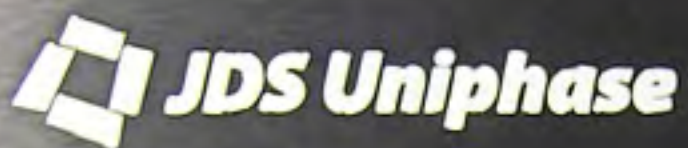
Operating Temperature (°C)
0 to 65

SPECTRAL PLOT



Test Inspector JOHN L

Wavelength (nm) / Date 27 / 2 / 01



WD1508RD1-SM2
8 Channel 100GHz
Demultiplexer
V50017-Q240-K810

S/N FD153577

1548.515nm (CH16)

1549.315nm (CH15)

1550.116nm (CH14)

1550.918nm (CH13)

1551.721nm (CH12)

1552.524nm (CH11)

1553.329nm (CH10)

1554.134nm (CH9)

COMMON IN

Upgrade (CH1-CH8)