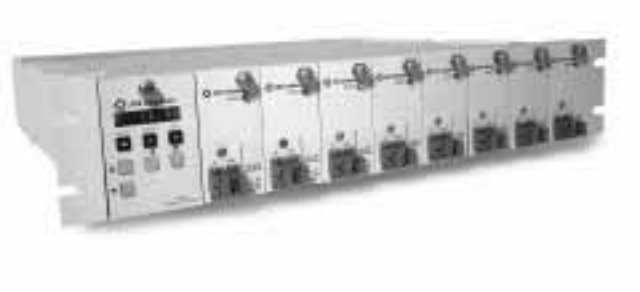
datasheet

# Attenuator Shelves



## MTA Series

The JDS Uniphase Attenuator Shelf holds up to eight attenuators and one control cassette in a low profile 19 inch (48.26 cm) rack-mounting shelf. It is ideal for controlling the optical launch conditions of DWDM system test beds and offers the lowest cost per channel for DWDM applications. It is optimized for the 1550 nm window but can be used over the 1200-1700 nm range with resolution of 0.05 dB nominal and accuracy better than ± 0.1 dB.

The system is designed to provide standard 60 dB attenuation range with good resolution for power equalization applications such as eight-channel DWDM systems. The inherent linear design and low polarization sensitivity allow the attenuators to be inserted directly at the output of an array of laser sources to stabilize or adjust optical power for each channel. Each attenuator cassette is available with a retractable connector plate to facilitate connector cleaning and maintenance and a beam block to simulate broken fiber conditions.

The shelves can be stacked to provide higher channel testing capacities, such as 16, 32, and 40 channels.

Each attenuator is controlled from the front panel keypad or by the GPIB remote interface. The commands are SCPI compatible, and LabVIEW drivers simplify remote control. The individual attenuators are etalon-free for low distortion and feature low polarization dependent loss (PDL) and return loss.

## Key Features & Benefits

*Holds up to eight programmable attenuator cassettes in one shelf*

*0.05 dB resolution*

*Low polarization sensitivity*

*One attenuator per channel*

*Remote control*

*Beam blocking switch*

*CE and cULus compliant*

## Applications

*Adjust detectors in DWDM systems to their optimal dynamic range*

*Develop and test power equalization between eight-channel DWDM systems*

*Reduce or test excessive channel signal-to-noise ratios after optical amplification*

*Factory testing of multichannel transmission equipment*

*General test systems requiring multiple attenuators*

## Technical Specifications

| PARAMETER | | SPECIFICATION |
|---|---|---|
| **MTA300 ATTENUATOR CASSETTE** | | |
| Operating wavelength range | | 1200-1700 nm |
| Attenuation | range | > 60 dB |
| | resolution | 0.05 dB nominal |
| | repeatability[1] | ± 0.005 dB typical, ± 0.02 dB maximum |
| | change rate | < 6 s, 0-60 dB |
| | accuracy | ± 0.05 dB typical, ± 0.1 dB maximum |
| Insertion loss[2,3] | | 2.2 dB typical, ≤ 2.5 dB maximum |
| Return loss[2,3] | | > 60 dB typical, > 57 dB maximum |
| Maximum optical input power | | 200 mW |
| Recalibration period (recommended) | | 2 years |
| Polarization dependent loss | | ≤ 0.05 dB typical, ≤ 0.10 dB maximum |
| Polarization dependent loss at 1545-1565 nm | | ≤ 0.03 dB typical, ≤ 0.05 dB maximum |
| Beam block isolation | | > 90 dB |
| Beam block speed | | < 20 ms |
| **MTA150 CONTROL CASSETTE** | | |
| Local control | | front panel keypad and LCD display |
| Remote control | | GPIB |
| Command set | | SCPI compatible |
| **MTA100 AC POWERED RACK-MOUNT SHELF** | | |
| Input voltage | | 100-240 V AC, 50-60 Hz |
| Power consumption | | 80 VA maximum |
| Dimensions W x H x D | | 48.3 x 8.9 x 49.7 cm |
| 19 inch rack mounting | | 2U high, standard 19 inch (48.26 cm) width |
| Weight | | approximately 16 kg |
| Operating temperature | | 0 to 40 °C |
| Storage temperature | | - 40 to 60 °C |
| Humidity | | maximum 95 % up to 40 °C decreasing at 5 % per °C from 40 to 60 °C |

1. At constant temperature, wavelength, and polarization state after half hour warm-up.
2. Measured at 23 °C with a laser source.
3. Including two SC/APC connectors.

## Ordering Information

### Sample Order: MTAS7+1118SU1

**MTAS7+1** ☐ ☐ ☐ ☐ ☐ ☐

| code | rack-mount shelf |
|---|---|
| 0 | No |
| 1 | Yes |

| code | control cassette |
|---|---|
| 0 | No |
| 1 | Yes |

| code | number of cassettes |
|---|---|
| 0 | No cassettes |
| 1 | 1 cassette |
| 2 | 2 cassettes |
| 3 | 3 cassettes |
| 4 | 4 cassettes |
| 5 | 5 cassettes |
| 6 | 6 cassettes |
| 7 | 7 cassettes |
| 8 | 8 cassettes |

| code | connector type |
|---|---|
| FP | FC/HPC |
| FA | FC/APC |
| SC | SC/HPC |
| SU | SC/APC |
| SP | ST/HPC |
| NC | No connector |

| code | port type (on front) |
|---|---|
| 1 | Bulkheads |
| 3 | Pigtails |
| N | Not applicable |

**10109632 Rev. 000 03/02 Preliminary**

Indicate your requirements by selecting one option from each configuration table. Print the corresponding codes in the available boxes to form your part number.

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