

Testing In-line Attenuators with a BR5

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This document will explain the correct procedure to measure IL and BR of an in-line attenuator with a BR5. In this example, a single-mode SC/APC 7 dB attenuator will be tested.



Begin by taking a power reference of your MTJ.

Shown here is an FC/APC-SC/APC 3m jumper.

Inspect and connect the jumper from the output to the detector.

Press and hold the *Power* button until *Ref All WL* appears

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Press *BR*, remove the jumper from the detector and terminate the light near the connector by using the appropriate diameter on the mandrel wrap for each wavelength. When the BR stops decreasing, press *BR₀*.



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There are two ways of measuring the IL of an attenuator: the *1-connector* or *2-connector* methods.

Each connector will add more loss to the system. The amount will depend on the quality of the connector and how well the two connectors mate.

Depending on the application, one may prefer to know the 1-connector or 2-connector IL of an attenuator.

1-connector IL = (MTJ₁ to attenuator mating) + (attenuator)

2-connector IL = (MTJ₁ to attenuator mating) + (attenuator) + (attenuator to MTJ₂ mating)

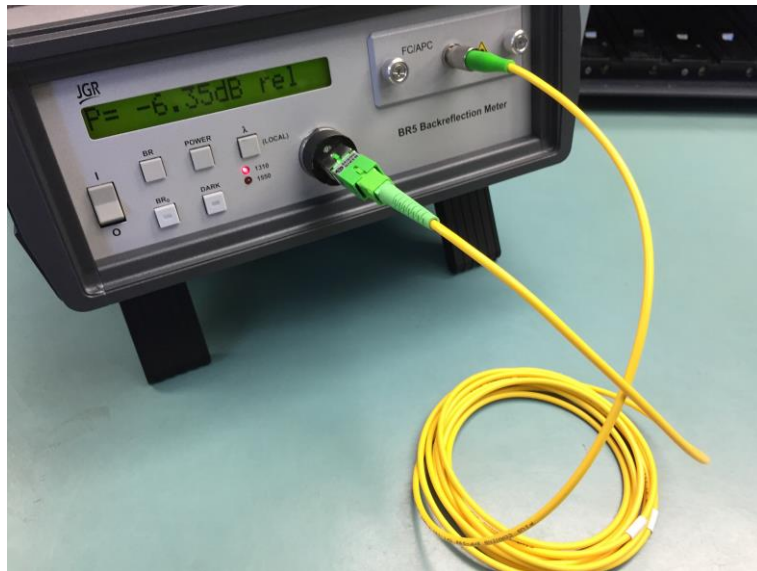
To measure the IL of the attenuator, put the BR5 in relative power mode by pressing *Power*.

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1-connector IL

Inspect and connect the MTJ to the attenuator.

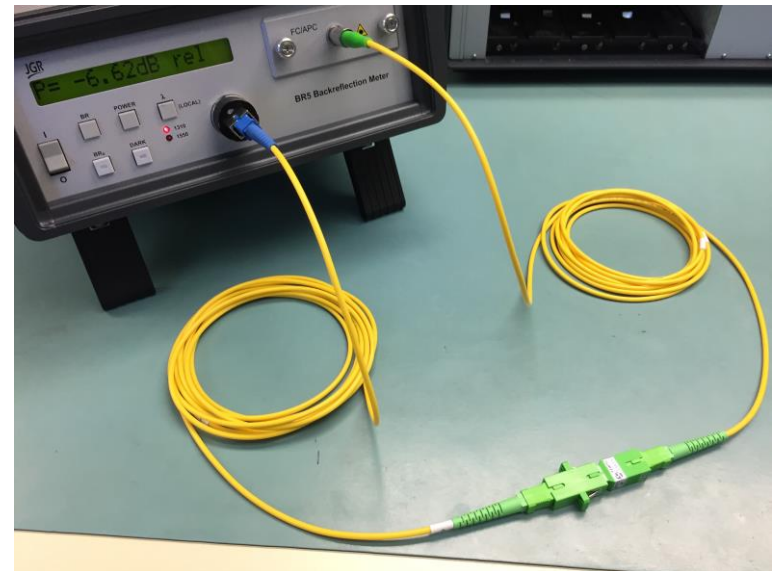
Insert the attenuator into the detector.



2-connector IL

Inspect and connect the MTJ to the attenuator and the attenuator into a second receive MTJ (shown here is an SC/APC-SC/UPC 3m jumper).

Insert the receive MTJ into the detector.



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If not already connected, inspect and connect a second receive MTJ to the attenuator. Go to BR mode by pressing *BR*. Terminate the light near the connector on the receive MTJ using the appropriate diameter on the mandrel wrap for each wavelength.

