Optical Coupler Directivity Test

To test a directional coupler, apply a 0 dBm signal and measure key parameters. For instance, verify coupling factor (-20 dBm for 20 dB coupling), insertion loss (-1 dBm for 1 dB loss), and directivity (30 ...

Directivity is defined as the ratio of the leakage of the incident signal to the fully reflected signal. The lower the leakage signal, the higher the accuracy of the reflection measurement. Two devices that ...

The directivity refers to the fraction of input light that is lost in the internally terminated fiber end within the coupler housing when port 1 is used as the input.

We will use RF Explorer SNA to measure directivity of these couplers. This same process can be used to measure the directivity of any directional coupler with unknown directivity, or to check the ...

Directivity is a measure of how well the coupler isolates two opposite-travelling (forward and reverse) signals. In the case of measuring reflection coefficient (return loss) of a device under test, directivity ...

Directional couplers are passive reciprocal networks, which you can read more about on our page on basic network theory. All four ports are (ideally) matched, and the circuit is (ideally) lossless. ...

The directional coupler"s directivity can be used to estimate the expected error when measuring the reflected power. As the magnitude of the directivity decreases, we are able to make more accurate ...

In this article, we"ll discuss how the directivity factor of a coupler can introduce error when measuring reflected power. Figure 1 illustrates a generic directional coupler measuring the power ...

In the terminology of the directional coupler, we say that port 1 is the input port, port 2 is the through port, port 3 is the coupled port, and port 4 is the isolation port.

The purpose of this example is to show how to use the PNA Equation Editor to create a directivity measurement trace, in order to measure a directional coupler"s directivity easily.

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