

Testing Total Insertion Loss & Total Return Loss with the OP925

In this video, a receive cable is used to perform throughput insertion loss (IL) and return loss (RL) testing with the OP925 Continuous Wave RL and IL meter.

Next we're going to look at testing the total IL and total RL of the DUT using the OP925.

To do this you're going to need to start with your instrument properly referenced with your launch cord connected from the source to the power meter. You see we're getting zeros and 14.6dB as a return loss for this measurement. We are also going to need a receive cable, which will connect up to the back end of the DUT.

This receive cable needs to have a connector that's similar to the DUT's connector and also a connector that on the back end that is angled. What this is going to do is eliminate some of the back reflection from the back end of the cable.

So because I have an unlike connector here which is an APC 2.5mm ferrule, I need to change out the adapter here from the 1.25 to the 2.5mm ferrule adapter.

I'm going to connect this into here, and you'll see I don't have anything connected between my two cables. So now I'm going to connect the DUT in between both of these.

I am going to clean this and connect it up to the front end of the DUT, and I'm going to clean this and connect this up to the receive cable.

Once I do this, we'll see that we get almost instantaneous insertion loss and return loss values for this entire cable. This cable is giving us a 0.52dB insertion loss at 850, 0.42dB at 1300, and the return loss of 35.3 and 41.7 for 850 and 1300.