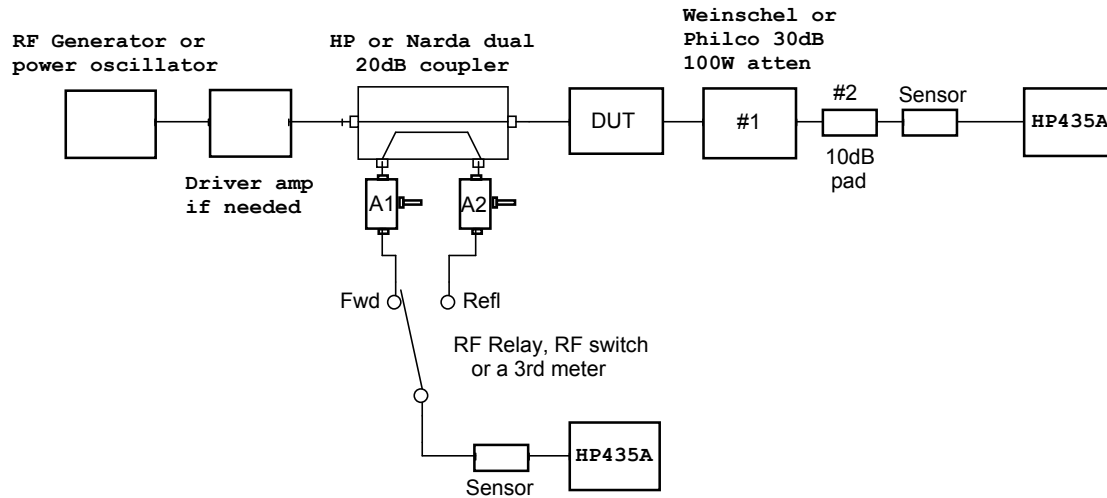


Pin vs. Pout Setup WA3JUF 1982



A1, A2 = Merrimac variable attenuators used to calibrate the Fwd and Reflected power at the frequency of operation.

The power attenuator (#1) and pad (#2) are ANA swept for exact attenuation.

The HP8481A power sensor is good to 18GHz and +20dBm (100mW). Used with an HP432A meter, an HP478A sensor is +10dBm (10mW).

A good rule of thumb is to have 10dB reserve attenuation in front of the power sensor. For example: with 40dB of output attenuation, the 435A will read 100W F.S. on the 10mW range (10dB below the maximum rating).

If the output is more than 100W, you need an appropriately larger load attenuator and you should use a 20dB pad.

In lieu of a 500W or larger load, an appropriate length of good coax can be inserted in front of a 100 watt load, for short key down periods, which will reduce the power into the 100 watt load.

The measured cable loss is added to the loss of #1 and #2 and the power meter reading is adjusted accordingly. For example, 200W will indicate 100W on the power meter with 3dB of cable attenuation.

Loss calculator: <http://www.timesmicrowave.com/calculator>