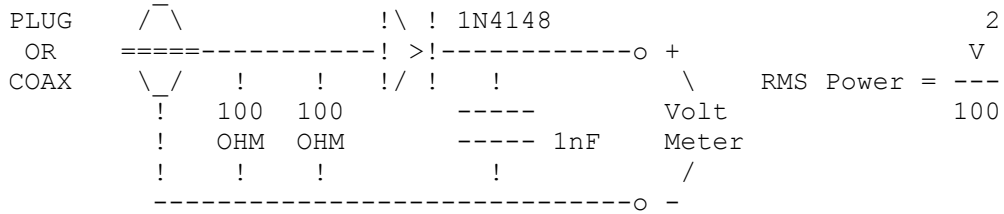


## QRP Power meter

Low Power Loads



The 2 100 Ohms can be 3 150 Ohms, or even just a 47 Ohm, but the more leads in parallel the lower the inductance & better the SWR. Build this lot into a PL259 plug, 'N', or BNC, keeping the leads as small as possible, & you will have an accurate metered load good for 1296MHz. For more than 10W use 2 diodes in series. With higher powers shorting the DC will destroy the diodes, so a series safety resistor of a 1K between the meter & the cap recommended.

Accuracy can be improved with a better diode, & by allowing for the 0.7V drop in calculations. For very low powers (nW & mW), bias the diode with a negative voltage (-9V & 1Mohm), & use this -ve as the 0 Watts starting point. In this way Powers of just a few uW can be accurately measured.

Note for sign wave carriers the RMS power is equal to the Voltage squared over 100. The peak instantaneous power (NOT PEP) is Voltage squared over 50.

Another building approach is to build it on a PCB ground plane around the socket, or Coax point, or even screen it & put it in a tin, then the 1nF can be a feed through.

One last point all resistors must be carbon, or Metal oxide, & not wire wound.

In the case on BNC mounting heat conductive past can be used to increase dissipation/ratings.