

## 50 Ohm Dummy load with measuring Port – Addenda to user guide

These notes are intended to guide the user in the utilization of the additional measuring port installed on this version of the SO239 Coaxial load. For use of the load please refer to the user guide located here:

[www.electroresales.com](http://www.electroresales.com)

The ability to measure the voltage developed across an RF load allows the user to determine the power output of a transmitter under test, to do this some simple math is required. The following steps outline the procedures to follow.



### Calculate Power from Voltage at Test Points

Voltage measured at test points: 93.1  
Add on 0.4 for the diode drop : 93.5  
Divide by 1.414 to obtain RMS : 66.12  
Square this result: 4371.85  
Divide by 50: **87.43 Watts**

1. Attach the load to your transmitter output socket
2. Attach the test clips of your meter to the test points on the load, ensure positive to positive and ground to ground.
3. Set your output mode and power on the transmitter under test.
4. With your meter set to DC volts briefly key the transmitter and observe the maximum voltage reading on your meter, if the meter has a 'Hold' or 'Max/Min' function use that to ensure the measurement is captured.
5. Use the following calculation to determine the power.

In this example the voltage was measured with the transmitter RF Output power set at maximum and the mode set to FM.

To measure SSB signals talk or 'whistle' up the transmitter. Ideally a 2-Tone tester should be used to insure consistent measurement results.

**Please Note:** An additional opening will be required to clear the measurement pins if the load is to be mounted in oil can or jar.

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