



Application Note

Increasing Power Level Accuracy

Applicable Product

Model(s)
SF800
SF800E

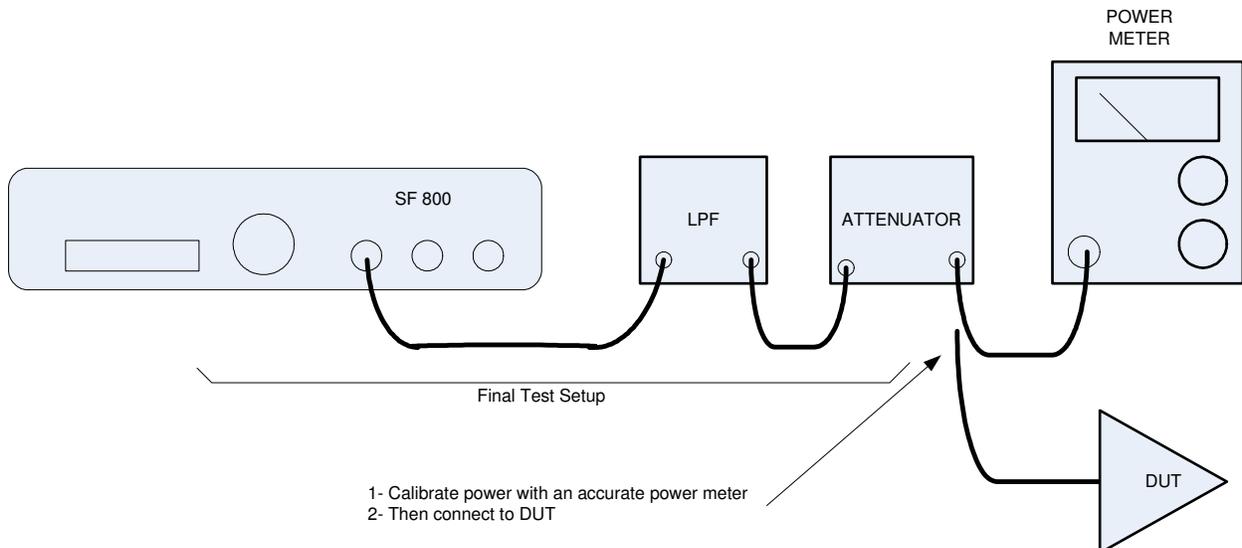
Description

The accuracy of your measurement may be improved by using a power meter to adjust the signal level driven by the Signal Forge 800 (SF800 and SF800E) to the Device Under Test (DUT). This procedure enables you to compensate for devices and cable in the signal path.

Operation

In any RF/Analog test setup, there are likely to be interconnect devices such as cables, attenuators, filters or switches between your source (the SF800) and the DUT. The accuracy of the signal level that arrives at the DUT is affected by the sum of these components. To guarantee that the desired power is applied to the DUT, first perform the following test prior to making the actual DUT measurements.

Assemble the complete test setup (the Final Test Setup in the example below) including the SF800 signal generator, the cables, filters or switches that are needed and perform a power measurement and adjustment using an accurate power meter.



Implementation Notes

Connect the power meter in place of your DUT as indicated above and measure the power level. If there is a difference between the power meter's reading and the indicated level on the source, use the power offset feature (dBm Offset) on the *Edit Parameters* screen of the SF800's embedded Wave manager software to make the necessary adjustments.

Match the displayed power level of the SF800 to the power meter's reading. Once you adjust the amplitude at a particular frequency, then the SF800 will display the now correct value (which is output power + offset) for different dBm power levels at that same frequency.

Appropriate calibration of the power meter is essential. The accuracy of the power meter measurement depends on the calibration factors of the meter sensor.