



Application Note

Testing Amplifiers with the SF800

Applicable Product

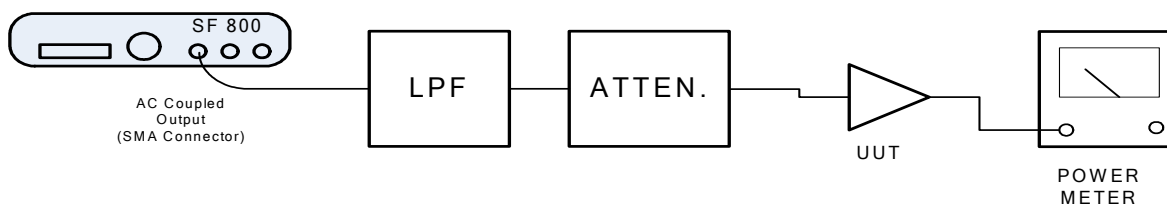
Model
SF800
SF800E

Description

The Signal Forge Digitally Synthesized Signal Generator is a low cost signal generator that has many uses in the testing of digital and analog designs. This application note describes a low cost way to test amplifiers for gain as well as for the 1dB compression point.

Operation

The SF800 can output a sinewave with a range from 1 Hz to 800 MHz, usable to 1 GHz. This output is 50 ohm, AC coupled and is programmable for the power level at the output (from -7dB to 11 dB). The range provided internally by the SF800 plus an external attenuator makes it possible to build a very low cost amplifier tester. An external low pass filter (available online at www.signalforge.com) is also recommended for removal of any harmonics that may affect the power measurement. The diagram below shows the interconnect recommended for this testing:



Notes:

- The LPF cutoff frequency is to be set at the end of the octave of operation for the device under test.
- The attenuator (plus the power range of the SF800) is used to test the 1dB compression point.