Loop characteristics of switching power supplies

Key words

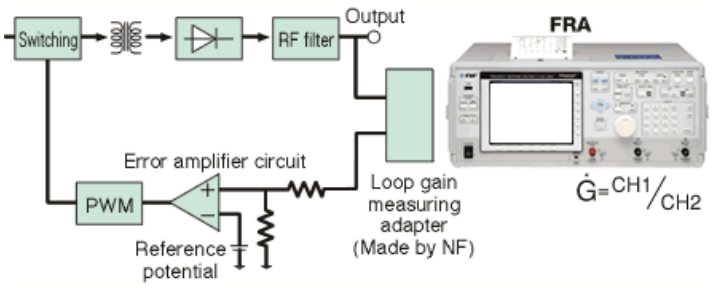
- Switching power supply
- Inverter
- Converter

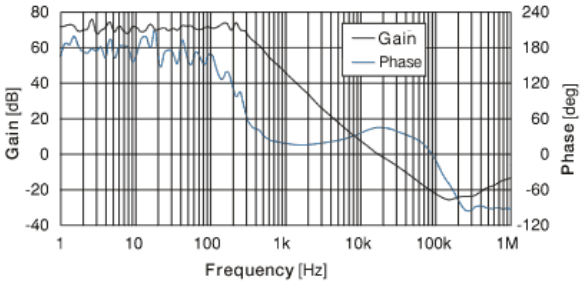
Frequency Response Analyzer

FRA5087 / FRA5097

OUTLINE

In order to operate as a low output impedance constant-voltage power supply, switching power supply consists of a negative feedback circuit. Although Negative feedback circuit is a useful technology, it may suffer from, such as an undesirable oscillation. So, the evaluation of the stability is very important. Loop gain measurement to quantitatively evaluate the stability of the negative feedback circuit is essential.





▲ Loop characteristics

POINT

- The measurement can be done with the actually operating circuit output up to 250Vrms or ±350Vpk.
- FRA can measure the loop characteristics during the operation of switching power supply up to 200Vdc output.
- Due to the wide dynamic range, FRA can do measurement even the input level varies by more than 100 dB.
- Loop gain measuring adapter make the measurement easier
- The detail technical booklet also available

Frequency Response Analyzer FRA5087 / FRA5097

- Frequency range 0.1mHz to 10MHz / 15MHz
- Gain accuracy : ±0.05 dB
  Phase accuracy : ±0.3°
- Dynamic range : 140 dB
- Isolation: 250Vrms (INPUT-OUTPUT)
- Auto ranging