

Features:

- * Low Cost for educational use with microwave bench
- * 8.2 to 12.4GHz X band measurement range
- * 0.1dB resolution
- * Digital Display on backlit LCD with bargraph
- * Wide range from +20dBm(100mW) to -30dBm(1uW)
- * dB relative mode
- * Measurement in dBm, mW, dBr, dBW, dBuW
- * Shock/Drop resistant Thermistor Sensor
- * In built X band source for scalar network analysis

Technical Specifications

Power Meter

- Frequency range : 8.2GHz to 12.4 Ghz
- Display : 16X2 Backlit LCD
- Power : +20dBm to -30dBm
- Measurement : dBm, dBr, mW, dBW, dBuW With Digital Display
- Resolution : 0.1, 0.5 and 1dB
- Offset : For relative measurement
- Level Indicator : Digital display and Bar Graph
- Power : 100-240VAC, 47-63 Hz

Power Sensor

- Frequency Range : 8.2GHz to 12.4 GHz
- Power range : +20dBm to -30dBm
- Compensation : Temperature compensated thermistor
- Cable : Sensor/meter cable 3m

Microwave Source

- Frequency : 10.3 Ghz typical
- Power level : 1mW typical

List of Experiments

1. To learn different ways of measuring power.
2. To evaluate the accuracy of the power measurements.
3. To plot the power output of Gunn/Klystron Oscillator with supply voltage.
4. To plot the power output of a Gunn/Klystron Oscillator with frequency.
5. Study of square law modulation and square law characteristics of a crystal detector.
6. To measure PIN modulator insertion loss & modulation depth.
7. To measure the accuracy of SWR meter reading.
8. To calculate the relationship between Q and bandwidth of resonance cavity.
9. To measure the insertion loss of the waveguide.
10. To measure the insertion loss in the main line of a directional coupler.
11. To measure the coupling factor of a directional coupler.
12. To measure the isolation & directivity of a directional coupler.
13. To measure the return loss of a unknown load.
14. To measure the decoupling between H and E arms of magic Tee.
15. To measure the insertion loss of the hybrid Tee.
16. To measure the return loss of H arm in a magic Tee.
17. To measure and plot the attenuation characteristics of variable attenuator.
18. To measure the attenuation of a fixed attenuator.
19. To measure the input SWR of attenuator.
20. To measure the gain of a pyramidal horn.
21. To plot the E and H Plane polar pattern of an antenna and compute the beamwidth.
22. To measure the coupling coefficient of a waveguide E & H Plane Tee.
23. To measure the isolation of a waveguide E & H plane Tee.
24. To measure the input VSWR of a E & H plane Tee.
25. To study the operation of ferrite circulator and measure its insertion loss.
26. To measure isolation of a ferrite circulator.
27. To measure the cross coupling of a circulator.
28. To study the variation of characteristics of ferrite circulator with frequency.



Note: Specifications are subject to change.

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