

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

Amitec XPM10 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

E-Manual: Installation Video for ease of Learning



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 a 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.

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