

Features:

- * Inside outside precious metal plated with diamond polish.
- * Corrosion/Oxidation free welded construction for long life.
- * 100% Tested and calibrated on HP network analyser
- * Full band Gunn Oscillator, detector and other components
- * PC serial and audio communication link over microwave.
- * Low Noise High sensitivity opamp based SWR meter

1. Micrometer tunable Broadband Gunn Oscillator



Frequency: 8.2-12.4 GHz
 Power O/P: 10 mW typical
 S11: >10dB
 Calibration chart: steps of 100 MHz
 Body: Solid wire cut Aluminum for thermal stability and long life
 Tuning: Precision Micrometer Driven solid short

2. Broadband PIN Diode Modulator



S11: >15dB
 S12 off: 10dB
 S12 on: <2dB
 Bandwidth: 8.2-12.4 GHz
 Diode: Microwave SMD package

3. Broadband Ferrite Isolator



S11: >20dB
 S12: >20dB
 S21: <1.5dB
 Bandwidth: 8.2 - 12.4 GHz

4. Calibrated Precision Variable Attenuator



S11: >20dB
 S12: 1 to 25dB variable
 Resolution: 1dB
 Accuracy: ± 1.5 dB
 Calibration Chart:
 Attenuation v/s micrometer in steps of 1 dB

5. Broadband Waveguide Detector



S11: 20dB
 Sensitivity: 0.5mV/uW
 Bandwidth: 9.3 - 11.3 GHz

6. Waveguide Stands -3 Nos



Mount: E & H plane WR90

7. Digital Gunn Power Supply



Display: LCD for voltage / current
 Gunn Bias Voltage: 2-10 V
 Gunn Current: 0-500 mA
 PIN Mod. Frequency: 800-1200Hz Square wave
 PIN Mod. Voltage: 0-10 V p/p
 PIN Offset Voltage: 0-10 V
 RS 232 port: PC interface for

8. SWR Meter Square Law



Frequency: 1 KHz center
 Bandwidth-3dB: 100 Hz
 Sensitivity: 1 uV
 Display: Analog meter 85mm
 Attenuator: 70 dB in 5 dB steps
 Scale: Normal/Expand
 RS232 port: PC interface for data serial communication
 Demod. Out: For audio link
 Speaker: Inbuilt for audio link

SCOPE of Experiments:

1. Gunn oscillator
 - i) Measurement of current vs. voltage characteristic, ii) Measurement of power vs voltage iii) Measurement of Gunn frequency vs voltage.
2. Modulator and crystal detector
 - i) Operation of PIN diode modulator & crystal detector, ii) Study of square wave modulation of PIN modulator, iii) Measurement of square law behavior of detector.
3. Propagation modes, wavelength and phase velocity
 - i) Measurement of frequency of source, ii) Measurement of free space & guide wavelength
4. Fixed and Variable Attenuator
 - i) Measurement of attenuation using the Power Ratio and RF substitution method, ii) Measurement of low values of attenuation, iii) Measurement of S parameters of variable attenuator.
5. To measure insertion loss/isolation/S parameters of isolators & circulator.
6. To establish a Microwave audio & PC-PC serial data communication link.

Mfd by: Amitec Electronics Ltd.

Regd. Off: 504, Nilgiri, Barakhamba Road, New Delhi-110001, India

Works: 4/32, Site-4, Industrial Estate Sahibabad, UP-201010, India

amitec@amitecltd.com, www.amitecltd.com

+91-120-4371276, +91-98118-39949, +91-98101-93153

