

- 33-170 GHz in 7 bands
- Frequency accuracy 0.01%
- Full waveguide sweep in all bands
- Fully packaged and automated
- Managed from front panel or GPIB bus
- Remote controlled, phase lockable
- Bias tuneable for AFC
- High output power

Applications

1. Instrumentation automated subsystems
2. Laboratory measurement and test equipment
3. Source for Network Analyzers, Plasma diagnostics and spectrometry
4. Sweeping Heterodyne Receivers, frequency and spectrum analysis for gyrotrons

Description

SGMW-x series



The SGMW- X series is fully packaged sweeper source. The sweeper consists of external module with BWO- X series and power supply. There are all the electronic circuitry and power supplies required to provide the operation of BWO. The sweeper self-tests at turn-on. BWO tube is fully protected against improper voltage connections. There are two inputs for external frequency and power control. Phase locking possibility is provided. Minimal built-in full band sweep time is 10ms.

One power supply can be used with different BWO. Particularly, the remote module with BWO tube allows using it at hard-to-reach places and can be installed quite away, somewhere near a scientist's work desk. Another great advantage of this series of BWO sweepers is its power supply unit, that allows feed up to few BWO tubes even with different working frequencies.

Specifications

Parameter							
BWO modules for SGMW	BWO-Q	BWO-U	BWO-V	BWO-E	BWO-W	BWO-F	BWO-D
Frequency Range, GHz	33-54	40-60	50-75	60-90	75-110	90-140	110-170
Output waveguide type	WR22	WR19	WR15	WR12	WR10	WR8	WR6
Waveguide Flange	UG-383/U	UG-383/U-M	UG-385/U	UG-387/U	UG-387/U-M	UG-387/U-M	UG-387/U-M
Minimum CW power, mW	50	100	25	25	20	40	20
Typical peak power, mW	150	200	80	80	80	80	60

Common specifications

Frequency accuracy in the CW mode, %	±0.01
Built-in Sweep Time, ms	10*
Maximum CW frequency stability for 15 min	±2·10 ⁻⁴
Residual FM max	±2·10 ⁻⁵
Output power regulation range, dB	0-10...20**
Output VSWR	1.5
Internal square-wave modulation frequencies, kHz	1-100
External square-wave modulation frequencies, kHz	1-100
Voltage for External Frequency Control, VDC	0...+10
Voltage for External Power Control, VDC	0...+10
Operating temperature range, C	+5...+40
AC Input Voltages:	220 V, 50 Hz (110V/60Hz*)
Consumed power, VA	400
Size Power Supply SGMW, mm	490 x 480 x 272
Weight Power Supply SGMW, kg	38
Size BWO module for SGMW, mm	260 x 170 x 185
Weight BWO module for SGMW, kg	6
Length of connection cable for SGMW, m	1...2 (specify in order)

* Full one band sweep time: less then 200 microseconds with external frequency control

** Uncontrolled (not specified) parameter

How to Order

Specify Model Number SGMW-X-A, where

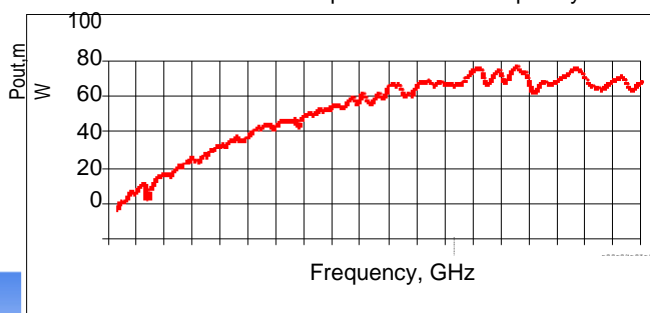
- **X** - type of BWO tubes`
- **W** - power supply with BWO-W, **WD** - power supply with BWO-W and BWO-D
- **A** - length of cable in meters.

Example

To order BWO sweeper meets the following specification: operation frequency 75-110 and 110-170 GHz 1.5m connection cable, should be ordered as **SGMW -WD-1.5**

Typical Data

W-band BWO Output Power vs Frequency



D-band BWO Output Power vs Frequency

