

QS1-710-T



Terahertz Generator

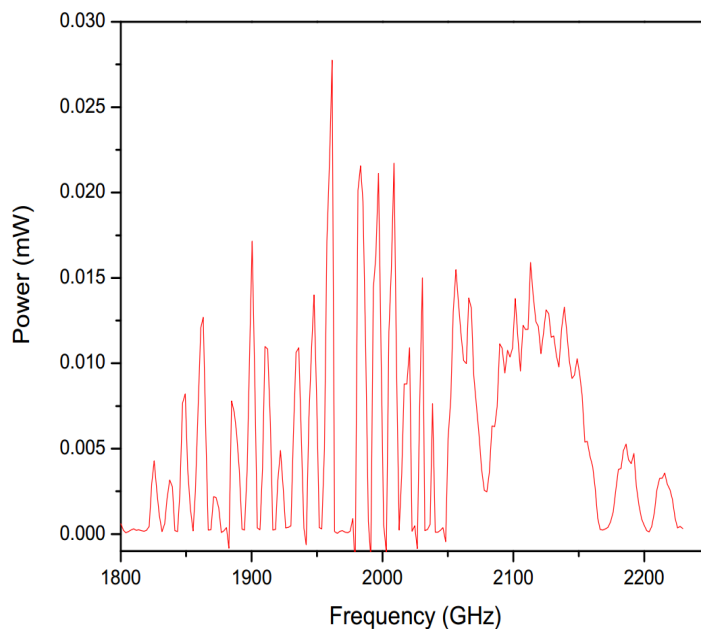
Product Description:

One of our mid range sources is the QS1-710-T which has a maximum output frequency of 710 GHz. This system can be combined with multipliers to achieve a functional range above 2 THz. It has the highest output power of any of our sources above 2 THz

Key features include:

- Spectral range: 500-2100 GHz
- Spectral resolution: 3 - 20 MHz
- Water cooled system
- User choice of compact magnet for single tube or larger universal BWO magnet

Transmission Setup:



Product Specifications:

Model	Highest Spectral Range (GHz)	Output Power (mW)
QS1-710	500-710	up to 5
QS1-710-T	1800-2100	up to 0.025

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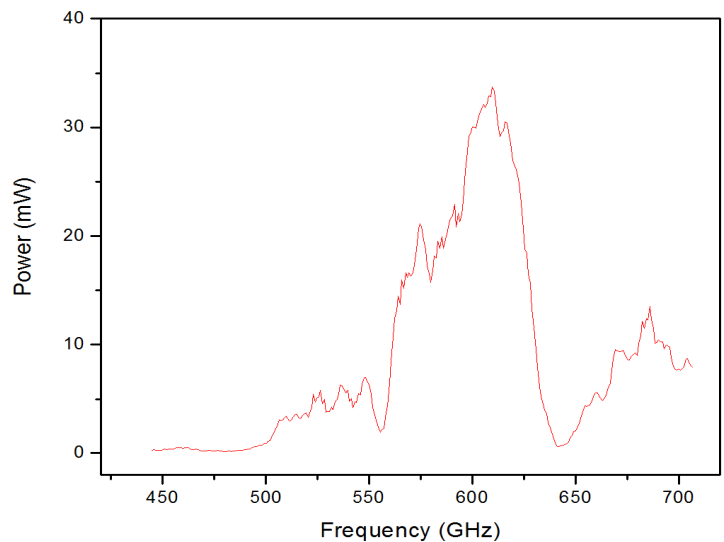
Product Details:

The QS1-710-T quasi-optical source is a hybrid device composed of a QS1-710 (OV-80) backward wave oscillator (BWO), waveguide adapter, and a Schottky diode multiplier, a tripler. It is tunable across 500-710 GHz and 1800-2100 GHz frequency ranges.

The unit is rapidly configurable for any of the above ranges. This makes it an excellent choice for a broad range of research and industrial applications.

The QS1-710 BWO can be used with any MS-1.2 system offered by Microtech Instruments Inc. Operation of QS1-710 also requires a high voltage power supply such as VR-6M and a water cooling system. In the baseline configuration, QS1-710 produces up to 5 mW of continuous wave tunable monochromatic power with a bandwidth of 3 MHz.

A typical output power spectrum of QS1-710 is shown in the figure above on this page.

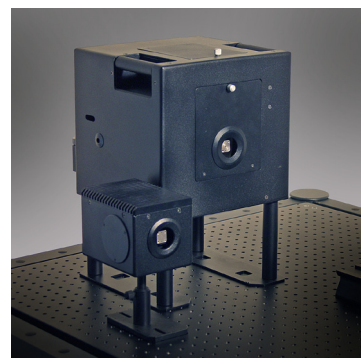


Operation of the QS1-710 BWO system requires the use of a VR6 high voltage power supply. This power supply provides a voltage of up to 6 kV with very low line ripple. The power supply also has the option of adding a small modulating voltage to broaden the spectral line in order to help prevent standing waves in the optical setup.

Use of the QS1 system is greatly enhanced through the use of Microtech's DAU control device. This data acquisition unit controls the power supply voltage, allowing the user to control the frequency output of the system. It also includes an interface for THz detectors, a large aperture chopper, and software which can be used to analyze frequency spectra to calculate dielectric constants of a material.



VR6-MU power supply for operating QS1 BWO's



Various magnet housings for QS1-710