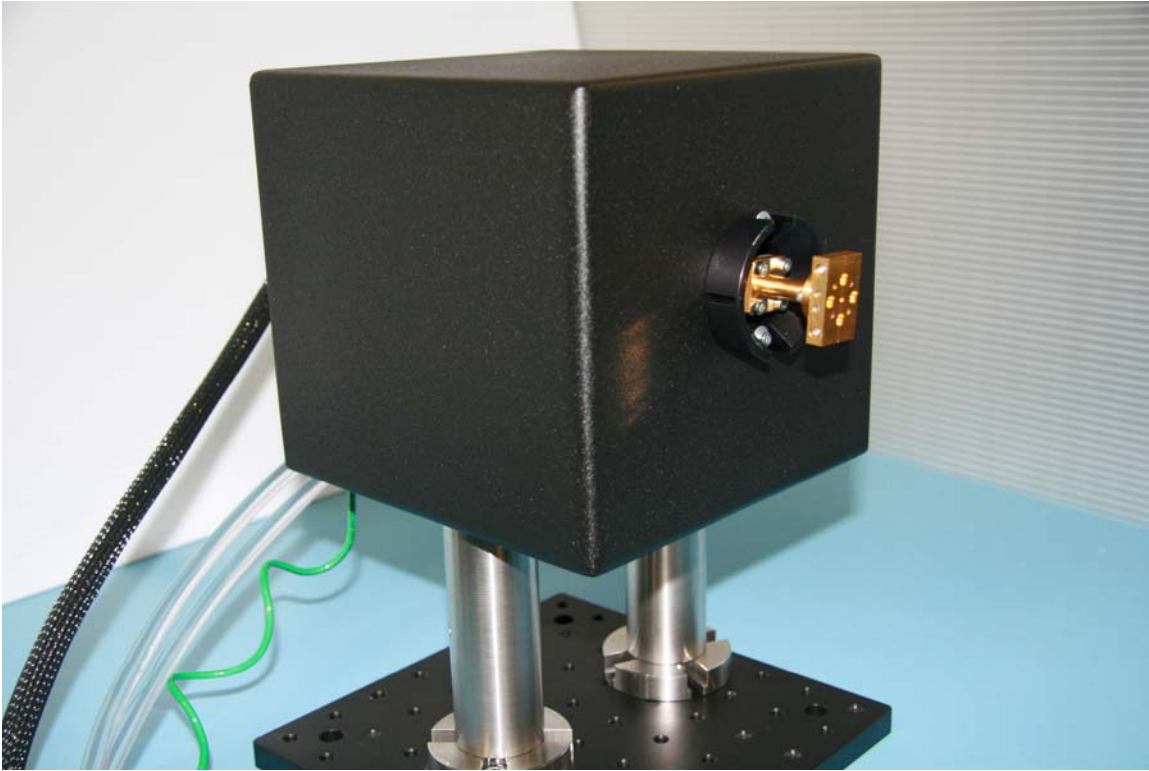


QS1-370-T Quasi-Optical Source



Frequency Range (GHz)	Power Range (mW)
210-370	1-10
630-1100	0.1-0.3

The QS1-370-T is a quasi-optical source, tunable across 210-370 GHz and 630-1100 GHz frequency ranges. The unit is rapidly configurable for any of those ranges. This makes it an excellent choice for a broad range of research and industrial applications.

The QS1-370-T quasi-optical source is a hybrid device composed of a QS1-370 (OV-30) backward wave oscillator (BWO), waveguide adapter and a Schottky diode frequency tripler.

The QS1-370 BWO can either be pre-packaged into MS-0.6 magnetic systems or used with any other MS-X.X system offered by Microtech Instruments Inc. Operation of QS1-370 also requires a high voltage power supply such as VR-6M and a water cooling system. In the baseline configuration, QS1-370 produces up to 10 mW continuous wave tunable monochromatic power with a bandwidth of 3 MHz. A typical output power spectrum of QS1-370 is shown in Figure 1.

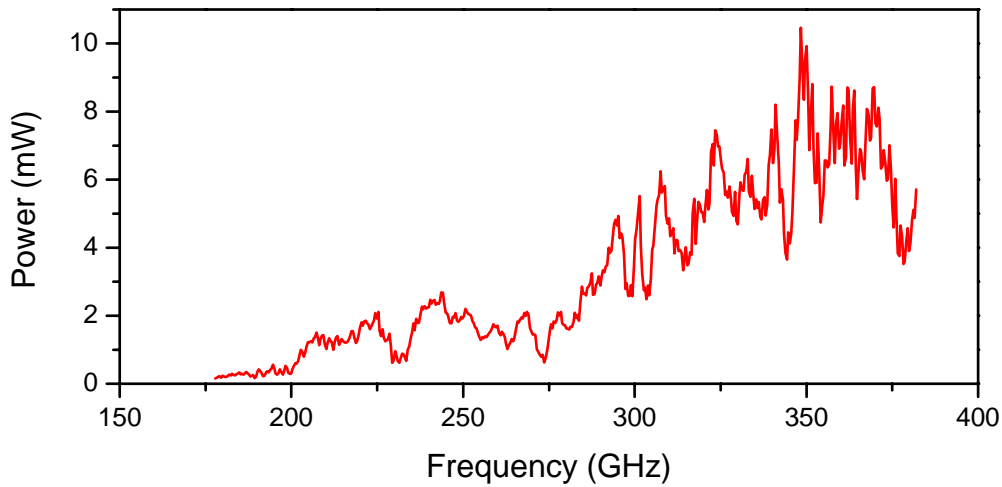


Figure 1: typical power spectrum from a QS1-370 BWO source

The Schottky diodes attach easily to the wave guide adapter for quick range changes. With the frequency tripler the power spectrum has a broad usable range 630-1100 GHz with power up to 0.3 mW. The frequency doubled configuration has a bandwidth of 10 MHz. A typical spectrum in QS1-370-T is shown below in Figure 2.

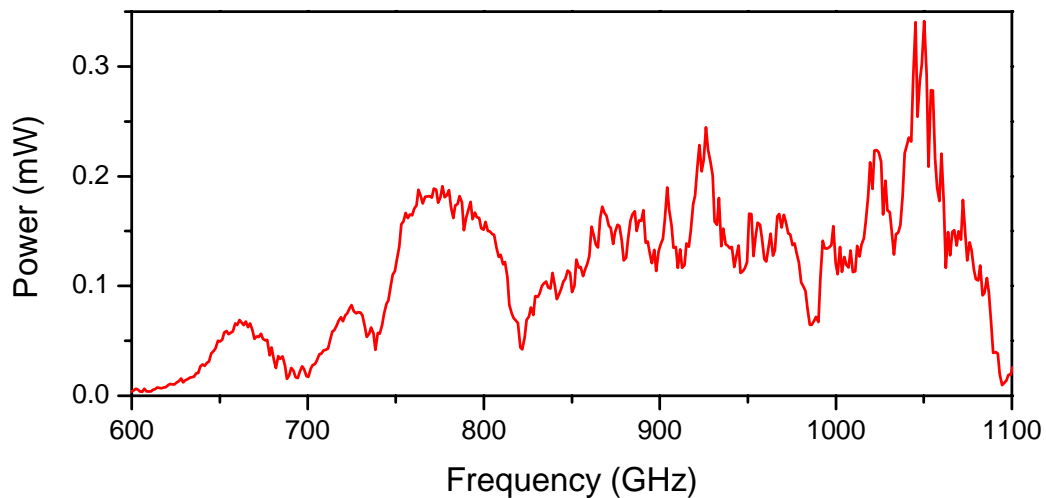


Figure 2: The doubled spectral power output for the QS2 with a frequency doubler. The power is above 3 mW for most of the range from 230 to 290 GHz.

For those applications that don't require high power in 600-1100 GHz range, QS1-370-T offers a very attractive alternative to more expensive and complex QS1-900, QS1-1000 and QS1-1100 BWOs.