

Analysis of the 118 GHz TE_{22,6} Quasi-Optical Mode Converter

- Low Power Measurements -

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Low power measurements on overmoded waveguide components and quasi-optical mode converter systems have become extremely helpful in design error detection and quality check. In the past 10 years, for that reason measurement setups have been designed to verify the design with radio frequency. The key installations are a vector network analyzer (VNWA) with high dynamics and generators for circular waveguide modes of high order.

We will show the 'cold test' equipment at FZK and explain the operating mode of the VNWA and mode generator. Further we will represent the results of the measurements on the 118 GHz TE_{22,6} system. Accordingly we will discuss what can be concluded from the outcomes and which modifications are necessary for a proper mirror system.