

## 2-MM INTERFEROMETER FOR PLASMA DIAGNOSTIK

### Technical information:

- Operating frequency	139-140 GHz
- Output power	5 dBm
- Dinamic range	60 dB
- Phase resolution	1 deg
- Unumbiguous channel	Yes



### Device description:

Among the methodology of plasma diagnostic an important role plays a microwave method. It allows to define one of the most important characteristics - electron density of the plasma.

2-mm interferometer for plasma diagnostics has been developed for the Prague Institute of Plasma in the context of their research related to the occurrence of controlled thermonuclear fusion, produced by Tokomak.

The system is included in one of the rings of Tokomak security and simultaneously performs two functions:

1. on the testimony of the plasma density it starts the inclusion of sources of plasma heating
2. on the testimony of an interferometer if a critical level is exceeded or when the plasma density below the minimum level of underreporting it switches off neutral beam injectors.

The basic interferometer has been modified, to it was created a new digital phase detector.