ELVA-1
Millimeter Wave Division

- **High performance**
- **Real time measurement**
- **GPIB control**

- **Original Software**
- **Full waveguide frequency operation**
- **Time window analyze 10ms**

Applications

- Gyrotron frequency measurement
- Plasma diagnostics

Description

When millimeter-wave applications came into many domains of human activity, a need for precise measurements of signal frequency spectrum has become critical. This need is quite understandable when, for example, it concerns to exploring extraterrestrial radio-sources or micro/mm-wave background emission in radio-astronomy, or measuring chemical composition of the atmosphere through the molecular emission of different its components, plasma diagnostics or many military applications. Moreover, in some cases the spectrum measurements have to be implemented in the real time scale. For example, the high temperature plasma physics research is just the case because of short plasma life time in experimental devices and poor plasma parameter reproducibility from discharge to discharge; also it is important for plasma feedback control purposes. As well, the real time spectrum measurements are very needed in electronic warfare applications, such as object recognizing or electronic countermeasures to millimeter-wave weapons. However, real time broad band analyzers with direct frequency spectrum measuring continue to be a rare bird in catalogues of leading world manufacturers of mm-wave products.

Common specifications

Operation frequency range, GHz	V, W,F or D band
IF Bandwidth, MHz	4-16.5
Basic frequency resolution, MHz	operation bandwidth / 4096
Minimum time of the spectrum analysis, ms	10
Minimum time of single frequency measurement, ms	0.0024
Power of the input signal, mW	1 to 1000
Quartz Calibrator Frequencies	built-in
Calibrator Stability	1 ppm
Voltage of the output video signal, V	0 to 5
Input waveguide	standard according to frequency
Input waveguide flange	standard UG- series
Supply	100-240V AC

Software short screens.

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