

DD122: Directional Detector for R-32 Waveguide

General description

DD122 is a miniature directional detector intended for sampling incident or reflected waves in high-power 2450 MHz industrial applications using R-32 rectangular waveguide. The directional detector combines three components:

- directional coupler
- attenuator
- zero-bias Schottky diode detector

The detector delivers well-scaled DC voltage proportional to the power of the wave propagating in one direction in the main waveguide. The coupler is fixed to the waveguide with six M3 or similar-diameter screws after machining of appropriate holes in

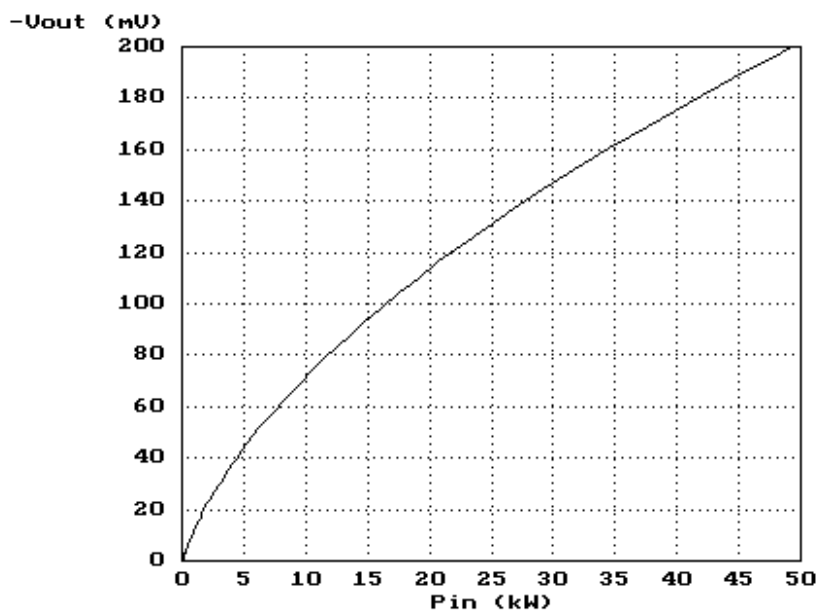
the broad waveguide wall. Simple reversing the DD122 causes it to sample the wave propagating in the opposite direction.



Specifications

Frequency range	2425 – 2475 MHz
Directivity	25 dB min
Statistical spread of output voltage	±1 dB (3- σ deviation)
Polarity	Negative
Video resistance (typ)	5 k Ω
DC output connector	SMA-F
Waveguide of destination	R-32 (72.14 mm x 34.04 mm, wall thickness 2 mm)

Typical transfer characteristics



Dimensional drawing (all units in millimeters)

