

- 26.5 to 220 GHz
- High sensitivity
- No bias
- Compact design
- High reliability, rugged construction

Applications

- Laboratory measurement and test equipment
- Sensors of mm-wave power

Description

ZBD-series Zero Biased Detectors are available in both polarities. Using a Schottky barrier beam lead diode design these detectors offer a cost-effective solution for broadband power detection systems. They provide high sensitivity to small signals and linear response up to -15 dBm.

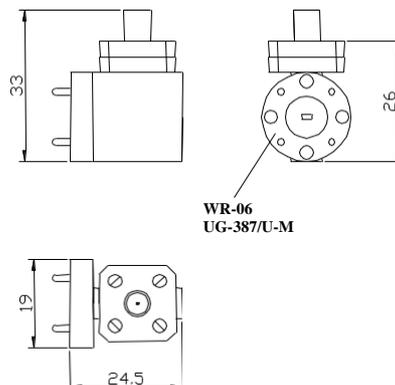


Specifications

Model Number*	ZBD-28	ZBD-22	ZBD-19	ZBD-15	ZBD-12	ZBD-10	ZBD-08	ZBD-06
Frequency Range (GHz)	26.5-40	33-50	40-60	50-75	60-90	75-110	90-140	110-170
Input Waveguide	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10	WR-08	WR-06
Waveguide Flange	UG-599/U	UG-383/U	UG-383 /U-M	UG-385/U	UG-387/U	UG-387 /U-M	UG-387 /U-M	UG-387 /U-M
Typical I Min Video Sensitivity at -20 dBm Input, 1 MOhm load(mVImW)	3500/2000	3000/1500	2500/1300	2000/1000	1700/800	1500/700	1300/500	500/200
Typical Flatness (dB)	±1.5	±1.5	±1.5	±1.5	±2.0	±2.0	±2.5	±2.5
Typical Video Bandwidth (MHz)	10	10	10	10	10	10	10	10
Incident CW RF Power (typ, dBm)	+3	+3	+3	+3	+3	+3	+4	+5

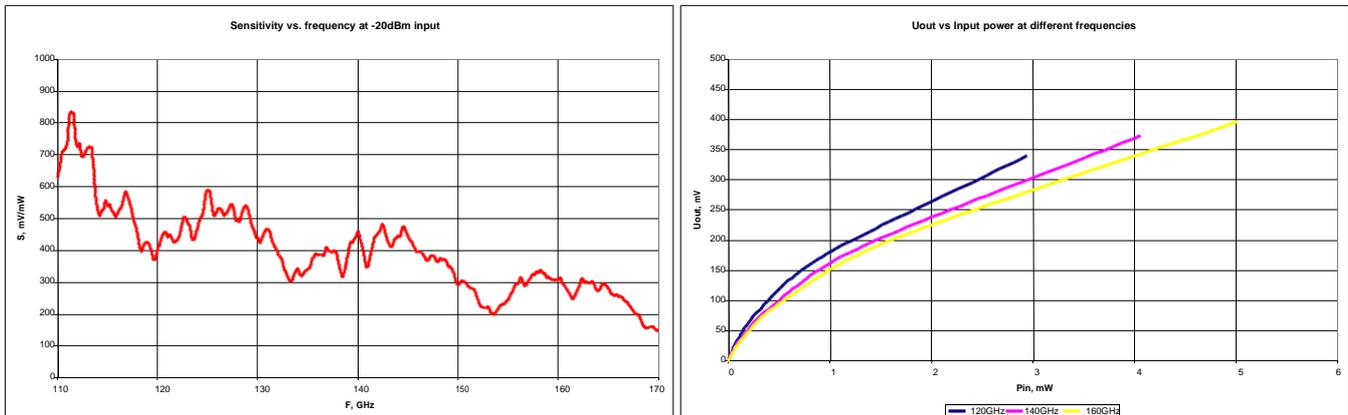
Note: Max input power level into a detector can be increased with installation of built-in attenuator. It will cause decreasing of sensitivity correspondingly.

* ZBD-05 detectors can be produced by special request.



Outline drawing of ZBD-06 detector

Typical sensitivity and linearity data presented in the plot below.



Detectors of ZBDA-XX series supplied with built-in buffer amplifier at ZBD output. The amplifier protects Schottky diode against wrong actions (short circuit at output, static electricity) and helps increase reliability of ZBDA-XX detectors. The ZBDA-XX detectors are fed with DC bias voltage (+5VDC...+10VDC).



How to Order

Specify Model Number ZBD(A)-XX/F/P, where

- **XX** – symbol **A** means output power amplifier exists
- **XX** – number of waveguide standard (Ex. 10 for WR-10 and 06 for WR-06)
- **F**- central frequency (or operating range), nothing if full band
- **P** – max input power level in mW

Example

ZBD-10/20 (W-band detector, full operating bandwidth, max input power 20 mW)

ZBD-10/92-96/10 (W-band detector, operating bandwidth 92-96 GHz, max input power 10 mW)

ZBDA-06/140/70 (D-band detector with built-in power amplifier, central frequency 140 GHz, max input power 70 mW)