

# Keysight Technologies

## 8473D Planar-Doped Barrier Detector

Data Sheet



This Planar-Doped Barrier (PDB) detector, combines the best characteristics of point-contact and low barrier Schottky to provide performance never before achievable. This new PDB diode technology provides detectors with broadband-flatness, excellent square-law response, and low SWR. These specifications plus the rugged design of the detector make it an excellent value.

#### 8473D Specifications<sup>1</sup>

Frequency range	0.01 to 33.0 GHz
Frequency response <sup>2</sup>	± 0.25 dB (0.01 to 14.0 GHz) ± 0.4 dB (0.01 to 26.5 GHz) ± 1.25 dB (0.01 to 33.0 GHz) (± 2.0 dB typical to 40 GHz)
SWR	1.2 (0.01 to 14 GHz) 1.4 (14 to 26.5 GHz) 3.0 (26.5 to 33.0 GHz) (3.0 typical to 40 GHz)
Low level sensitivity	> 0.4 mV/mW
Maximum operating input	200 mW
Typical short-term maximum input (less than 1 minute)	1 watt
Noise (peak to peak with CW power applied to produce 100 mV output, 400 kHz BW)	< 50 mV
Output polarity	(Standard) Negative Option 003: Positive
RF connector	APC-3.5 Male (SMA compatible)
Output connector	BNC (Female)
<b>Environmental capabilities</b>	
Operating temperature <sup>3</sup>	-65 °C to +100 °C
Temperature cycling	MIL-STD-883. Method 1010.1: (-6 °C to +10 °C)

#### Notes:

1. Measured at 25 °C and -20 dBm unless otherwise specified.
2. Below 1 GHz RF may leak through the video connector. If objectionable, this may be eliminated with a low pass filter.
3. Tested only to 50,000 ft (15,240 m), capable of much higher performance.

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