

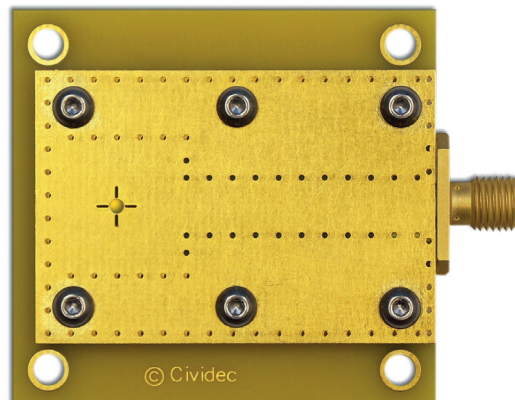
## B7 Fast-Neutron Diamond Detector

The **Fast-Neutron Diamond Detector** is optimized for the detection of fast neutrons at extremely high neutron-flux rates.

This detector is in use at the ITER nuclear fusion facility for fast-neutron flux monitoring at neutron rates of 50 MHz in combination with the C6 Fast Charge Amplifier.

### Parameters:

Substrate material:	sCVD diamond
Substrate size:	4.5 mm x 4.5 mm
Substrate thickness:	500 µm
Active area:	4 mm x 4 mm
Calibration aperture:	1 mm in diameter
Particle rate:	50 MHz (in combination with C6 amplifier)
Radiation hardness:	1 MGy



### Housing:

Box size:	44 mm x 47 mm x 5 mm
Material:	FR4, gold metallized, completely RF shielded
Connector:	SMA female

**NEW**

Option 1:	Slim Design with ø12 mm
Option 2:	Temperature resistant up to 500 K
Option 3:	Vacuum compatible up to UHV