# Tunable, Ultra-Wideband Microwave Photonic Notch Filter

## PRODUCT BRIEF

### KEY FEATURES

- Ultra-high suppression
- Continuously tunable centre frequency and bandwidth
- Dynamically-tunable computer-controlled filter characteristics
- Extendable to multiple, independent notches
- Capability to switch between bandpass/notch response

### POSSIBLE APPLICATIONS

- Radar
- Test and Measurement
- Electronic Warfare
- Cognitive Radio
- Radioastronomy

### CONTACT

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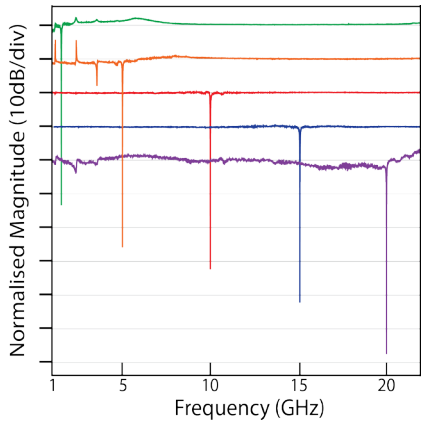
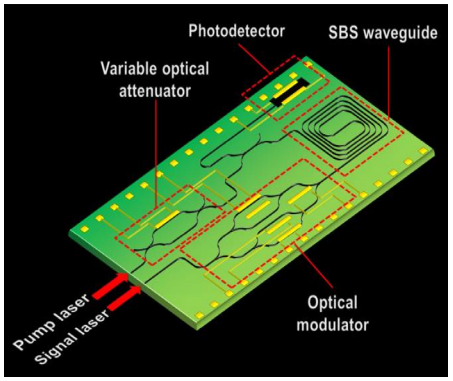
## OVERVIEW

The CUDOS Microwave Photonic Notch Filter employs ingenious manipulation of nonlinear optical effects to enable unprecedented performance compared to conventional electronic devices. The filter can be continuously tuned over tens of gigahertz, with no degradation of bandwidth and rejection depth. The current device exists in a standard rack mount configuration, requiring only RF input and external computer control. In addition, the underlying technology has the capacity for cm-scale integration, and can be extended to multiple, independent notches.




## PRELIMINARY SPECIFICATIONS

| | |
|---|---|
| Centre frequency | 1 GHz – 50 GHz |
| 3-dB bandwidth | 10 MHz – 100 MHz |
| Standard notch depth | 50 dB |
| Dimensions (WxLxH) | 436 mm x 348 mm x 128mm |
| Weight | 10 KG |
| Connector types | K type |

### PAPER

David Marpaung et al, "A Tunable RF Photonic Notch Filter with Record 55 dB Suppression using Sub-1 dB On-Chip Brillouin Gain", Frontiers in Optics Postdeadline OSA 2013

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