

# Network Analyser Measurements for Millimetre-wave and Terahertz Electronics Applications

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## **Abstract**

In recent years, there has been a significant growth in the number of technologies making use of the millimetre-wave and terahertz parts of the electromagnetic spectrum (i.e. from 30 GHz to 3 THz). This is due, in part, to electronic components and circuits that are now available that can operate at these frequencies. This growth has been accompanied by a similar growth in the need for reliable measurements to characterise these new technologies. This has led to major developments with measuring instruments, particularly network analysers. This talk will review how the capabilities of network analysers have been extended to cater for the need for reliable measurements to support electronics applications at millimetre-wave and terahertz frequencies. The talk will also describe recent work at the National Physical Laboratory (NPL) to provide state-of-the-art measurement capability at these frequencies.

This talk is based on a lecture given in the Department of Electronic Engineering at the University of Birmingham in January 2019.