

DS1221A Notch Filter and Demodulator

Analog filter and demodulator for electromagnetic (EMA-RF) and radio frequency analysis (RFA) on contactless solutions (ISO/IEC 14443)

Introduction

When testing for side channel leakage in a contactless solution, the reader's 13.56 MHz carrier wave introduces significant noise in the measurements. The DS1221A Notch Filter and Demodulator consists of analog filters that reduce the radio frequency (RF) signal while preserving the leakage signal from a contactless smartcard. This results in a reduction of the input voltage range of the digital oscilloscope, which then minimizes quantization error and consequently leads to a better signal-to-noise ratio. While the DS1221A Notch Filter and Demodulator is designed to be used with the Keysight High Precision Electromagnetic Probe or Micropross MP300 TCL2 RF antenna for RFA, it can be used with any side channel test system.

