

Analyzers Measure Device Microcurrents

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Visitors to the [Keysight Technologies](#) booth (Booth 1239) at the [2016 IMS Exhibition](#) will see an impressive array of high-frequency test instruments. However, they will also come upon something they have never seen before: the Keysight CX3300 Series of device current waveform analyzers.

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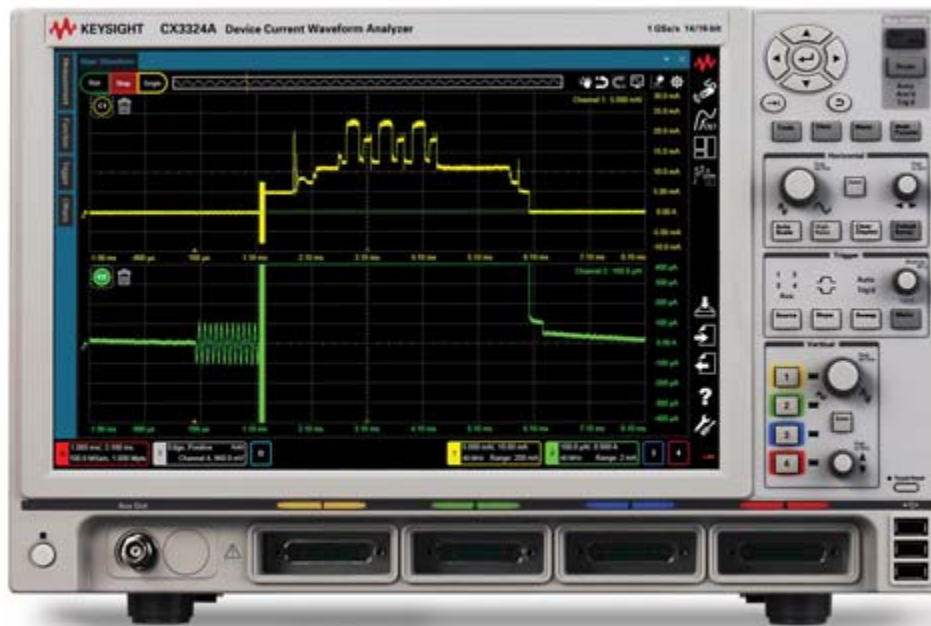
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For the instrument maker, this new category of analyzer has never before been available. The instruments provide transient current measurements at extremely low levels—100 pA and less across maximum analysis bandwidths of 200 MHz. Device designers and researchers will embrace these new analyzers for their ability to provide accurate analysis of semiconductor device behavior in quest of improved performance, including reduced power/current consumption in low-power devices.

Existing measurement tools are challenged to detect low levels of dynamic device current (below 1 μ A) due to limited bandwidths and dynamic ranges. The CX3300 Series of device current waveform analyzers (*see figure*) captures input current information at a sampling rate of 1 Gsample/s with 14- or 16-b resolution. In fact, a single instrument can simultaneously measure wideband and low-level current waveforms, and provide advanced signal analysis, via an intuitive graphical user interface (GUI) shown on a 14.1-in. multi-touch display screen.



The CX3300 analyzer can measure transient current even at pulse durations as short as 100 ns or less. Masaki Yamamoto, General Manager of Keysight's Wafer Test Solutions in Industrial Solutions Group, says, "The CX3300, with its ability to measure wideband and low-level dynamic current, represents a significant breakthrough in meeting our customers' needs. In addition to complementing the existing Keysight instrument portfolio, the new analyzer provides our customers with a more complete solution for device analysis."

Visitors to the Keysight Technologies booth at IMS can see a demonstration of the new analyzers and learn more about the different current probes available for use with them. (Note: Don't miss the next issue of *Microwaves & RF* for the full-length review of the new CX3300 Series device current waveform analyzers.)

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