CX3300 Series Device Current Waveform Analyzer

Measure Dynamic Current and Voltage with Confidence

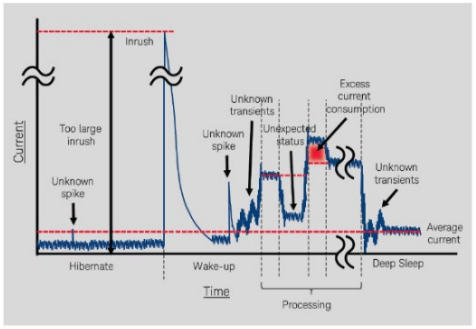
Precision Scope
- Wide bandwidth
- Fast sampling rate

DMM
- High sensitivity
- Low noise

Data Logger
- Long measurement

Power Rail Characterization is Challenge

Power rail characterization, validation, and debugging is an industry-wide need in electronic devices. It helps designers optimize circuit design to withstand peak and in-rush currents, optimize power management, decrease power consumption, and guard against malicious security intrusions.



CX3300A is a New Solution for Power Rail Characterization

The Keysight CX3300 gives you precise dynamic current and voltage characterization.
It is an all-in-one current and voltage measurement and analysis solution.
It integrates an oscilloscope's bandwidth and sampling rate, a DMM's sensitivity and low noise, and a data logger's long measurement recording capabilities with waveform analytics.

Key Features

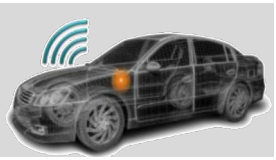
- Wide bandwidth at 200 MHz
- High-resolution/high-speed sampling at 14-bit (1 GSa/s)/16-bit (75M Sa/s)
- Low noise and a wide dynamic range with high sensitivity from sub-nA and sub-µV
- Long-duration measurement capabilities up to 100 hours maximum
- Waveform analytics, current profiler and more efficient analysis functions on mainframe and PC

Applications

IoT/mobile

- Smartphone
- Smart watch
- Wearable device
- Digital eyewear
- Chipset

Automotive



- MCU/ECU
- ADAS/infotainment
- Keyless smart entry
- Tire pressure monitoring

Medical/healthcare

- Pacemaker
- Vital signs monitor
- Wearable medical device

Mainframe Characteristics

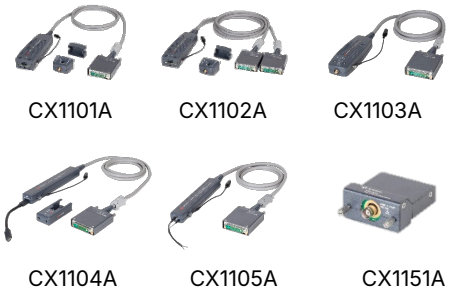
	CX3322A	CX3324A
Number of analog channels	2	4
Number of digital channels	N/A	8 with CX1152A
Maximum analog bandwidth [1]	50 MHz, 100 MHz, or 200 MHz	
Maximum memory depth	4 Mpts, 16 Mpts, 64 Mpts, or 256 Mpts	

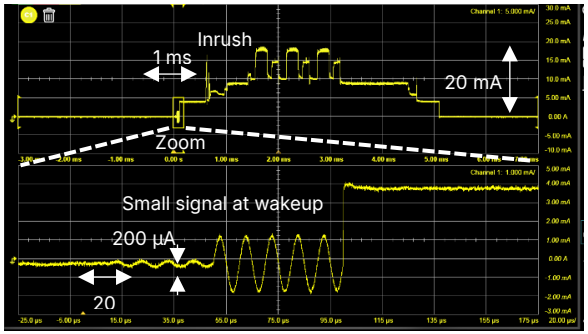
Measurement Mode Characteristics

	Measurement Mode	
	Scope Mode	Data Logger Mode (Option)
Data storage	Embedded memory	Internal/external HDD/SSD
Maximum sampling rate	1GSa/s (14-bit) 75MSa/s (16-bit)	10MSa/s (14-bit) 7.5MSa/s (16-bit)
Maximum measurement duration	Memory size/sampling rate	100 hours
Maximum measurement point	256 Mpts	Sampling rate x 100 hours
Measurement window control	Trigger and memory size	Start trigger and stop time
Role of trigger	Measurement	Segmentation for analysis
Analysis features	Math function, FFT, current profiler	Waveform analytics, waveform trend analyzer, math function, FFT, current profiler

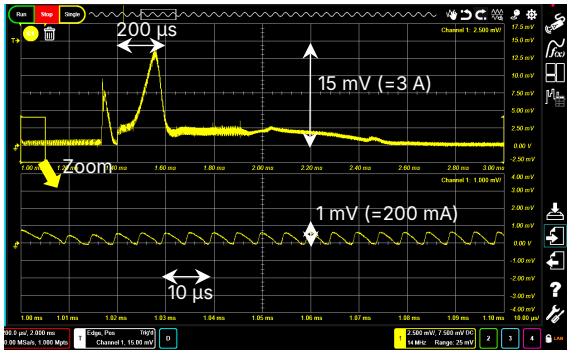
Current and Voltage Sensors

Sensor / Adapter	RMS Noise at 20 MHz NBW	Maximum Range	Maximum Bandwidth	Maximum Common Mode Voltage
CX1101A Single channel	40 nA	10 A	100 MHz	± 40 V
CX1102A Dual channel	40 nA	1 A	100 MHz	± 12 V
CX1103A Low side	150 pA	20 mA	200 MHz	± 0.5 V
CX1104A Selectable shunt	22 µA	15 A	20 MHz	± 40 V
CX1105A Low noise differential	20 µV	2.5 V	100 MHz	± 40 V ± 6 V
CX1151A Passive probe adapter	90 µV	8 V (1:1) 80V (10:1)	300 MHz	N/A

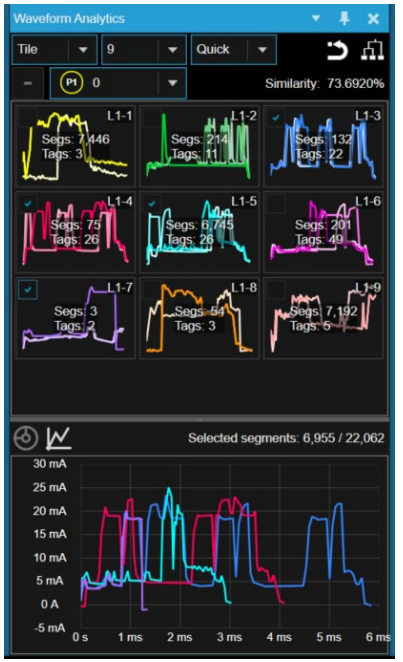




Precise current measurement using current sensor



Precise voltage (current) measurement using differential sensor



Waveform analysis

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