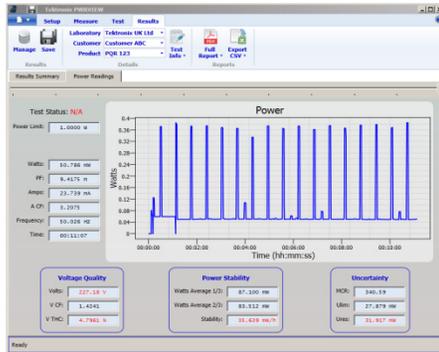


Power Analysis Solutions

Comprehensive solutions for debug, characterization and portable troubleshooting

Technology Fact Sheet

Today's power supplies are driving to a level of efficiency never seen before, requiring design engineers to perform numerous specialized power measurements that are time-consuming and complex. Tektronix offers an array of power measurement solutions to help you achieve fast, accurate results.



Confirm Power, Efficiency & Compliance to Industry Standards

- Measure with high accuracy. (From 0.01%).
- Measure standby current to comply with IEC62301 Ed.2 standard
- Measure energy consumption for compliance with ENERGY STAR standards



Analyze Switch-Mode Power Supply Behavior

- Measure power and energy losses during switching: turn-on, turn-off, and total
- Determine impact of power supply on the power line, both power quality and current harmonics
- Compare measured current harmonics to key industry standards, such as EN/IEC61000-3-2 Class A, B, C, D and MIL-STD-1399
- Analyze output signal of the power supply for ripple
- Automated procedures remove skew between voltage and current channels for accurate measurements, eliminating the effects of probe propagation delay



Troubleshoot Systems in the Field

- Measure voltage and current with high sampling rate
- Measure real and apparent power
- Measure Harmonics
- Determine impact of power supply on the power line, both power quality and current harmonics
- Analyze output of power supplies for ripple

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Technology Fact Sheet



In-depth Characterization

MSO/DPO5000B and DPO7000C Series Oscilloscopes and DPOPWR Software

- Automated power analysis:
 - Switching loss, slew rate and SOA
 - Power quality and harmonics
 - Modulation and ripple
 - Magnetic components (core loss and BH curves)
 - Spectral analysis and Hi-Power Finder
- Quickly generate customized reports
- TekVPI™ interface for easy probe connectivity



Validation and Debug

MDO/MSO/DPO4000B, MDO3000, and MSO/DPO3000 Series Oscilloscopes and DPO4PWR, MDO3PWR, or DPO3PWR Module

- Automated power analysis:
 - Switching loss, slew rate and SOA
 - Power quality and harmonics
 - Modulation and ripple
- Fast deskew of probes
- TekVPI™ interface for easy probe connectivity



Power & Compliance

PA1000 and PA4000 Series Power Analyzers

- Basic accuracy up to 0.01%
- From 1 to 4 channels. Each channel measures both voltage and current
- Automated power analysis:
 - Display watts, VA and VAR
 - Harmonics
 - Power Consumption



Portable Troubleshooting

TPS2000B Series Oscilloscope and TPS2PWR1 Module

- Isolated channels for floating or grounded measurements
- Portable design with up to 8 hours of continuous battery life
- Automated power analysis:
 - Display watts, VA and VAR
 - Harmonics
 - Switching loss

Complete Power Probing Portfolio

- **Current Probes** for AC and DC currents from 1 mA to 150 A_{RMS} or 500 A_{peak}
- **High-Speed Differential Probes** up to 1 GHz bandwidth for differential signals to ±42 V
- **High Voltage Probes** for differential signals to 6000 V or ground-referenced signals to 20 kV

Visit www.tektronix.com/probes for a complete listing.