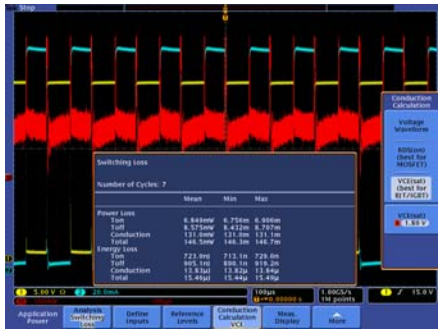
Power Analysis Solutions

Comprehensive solutions for debug, characterization and portable troubleshooting

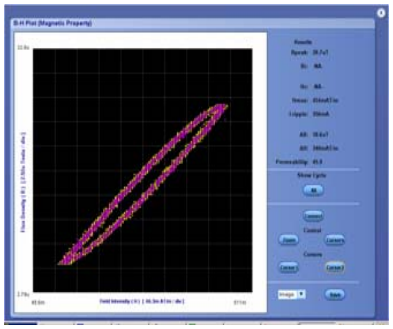
Technology Fact Sheet

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.



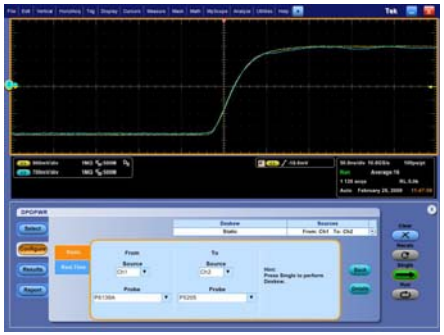
Analyze Switch-Mode Power Supply Behavior

- Measure power and energy losses during switching: turn-on, turn-off, conduction, 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



Characterize Magnetics Performance

- Determine the power loss in magnetic components like transformers and inductors
- Characterize performance over different conditions



Deskew Probes

- Remove skew between voltage and current channels for accurate measurements, eliminating the effects of probe propagation delay

www.tektronix.com/power

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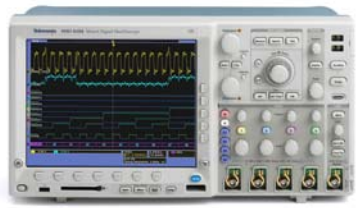
In-depth Characterization

DPO7000 and TDS5000B Series Oscilloscopes and DPOPWR/TDSPWR3 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
- Automatically deskew a wide-range of probes
- TekVPI™ interface for easy probe connectivity



Validation and Debug

MSO/DPO4000 and MSO/DPO3000 Series Oscilloscopes and DPOxPWR 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

Portable Troubleshooting

TPS2000 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 5600 V or ground-referenced signals to 20 kV

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

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