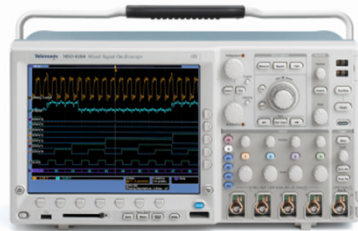


# MSO/DPO5000B Advanced Power Measurement and Analysis Solutions

Fact Sheet



## MSO/DPO5000B Series

- 350 MHz to 2 GHz
- 4 Analog Channels
- 16 Digital Channels (MSO)
- Up to 250 M Record Length
- Up to 10 GS/s Sample Rate
- TekVPI® probe interface to support power probes



## THDP0100/THDP0200/ TMDP0200

- High voltage differential probe
- 100 MHz, 200 MHz Bandwidth
- 100X/1000X, 50X/500X, 25X/250X Switchable range
- 6 kV, 1.5 kV, 750V Voltage range
- Bandwidth Limiting Filters



## TDP0500/TDP1000

- Mid-voltage differential probe
- 500 MHz / 1 GHz Bandwidth
- ±42 V (DC + pk AC) Differential Input Voltage Range
- 100 Hz, 10 kHz, and 1 MHz Bandwidth Limiting Filters



## TCP0030A

- AC/DC current probe
- DC to >120 MHz Bandwidth
- 1 mA sensitivity
- 30 A<sub>RMS</sub> / 50 A<sub>peak</sub> Pulse Current Capability

## Recommended Power Analysis Options and Probing Accessories

	MSO/DPO5000B Series
Power Measurement and Analysis Solutions	Opt. PWR (DPOPWR)
AC/DC Current Probes	TCP0030A, TCP0150, TCP0020
Differential Probes	TDP0500, TDP1000
High-Voltage Differential Probes	THDP0200, THDP0100, TMDP0200
High-Voltage Passive Probe	P5100A, P6015A
Probe Deskew Accessories	TEK-DPG and 067-1686-xx
Power Solution Bundle	Opt. PS2 or PS3

SAVE!

## Power Solution Bundles – Save 40% off list prices

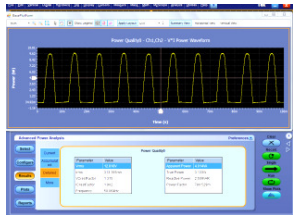
Includes a suite of products to perform common power analysis measurements:

	Opt. PS2	Opt PS3
Power Analysis Application	DPOPWR	DPOPWR
High-voltage Differential Probe	THDP0200	TMDP0200
AC/DC Current Probe	TCP0030A	TCP0020
Probe Deskew Fixture	067-1686-xx	067-1686-xx

# MSO/DPO5000B with Optional DPOPWR

## A Quick Guide to Common Power Supply Measurements

## Fact Sheet



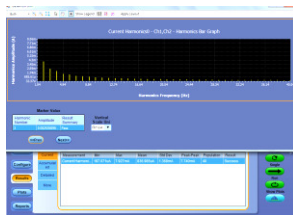
### Power Quality Measurements

- RMS, crest factor, true power, reactive power, apparent power, power factor, phase angle and frequency measurements on voltage and current



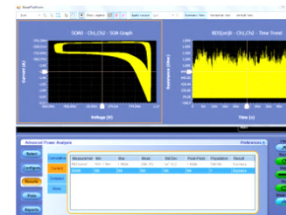
### Switching Loss Measurements

- Turn-on, turn-off, conduction and total power and energy losses per cycle



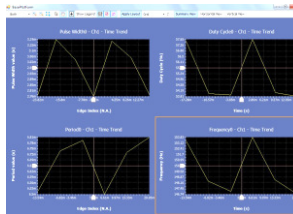
### Harmonics Measurements

- THD-F, THD-R, and RMS measurements, and magnitude and phase of each voltage or current harmonic
- Pre-compliance Testing to IEC 61000-3-2 and MIL-STD-1399



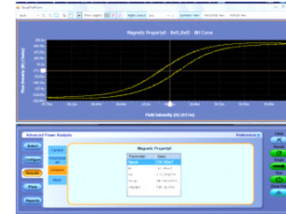
### Safe Operating Area (SOA)

- X-Y display of the switching device voltage and current
- Mask pass/fail testing of the signals relative to a graphical description of device specification limits



### Modulation Analysis

- Graphical display of the cycle-to-cycle variations in the modulated switching signal
- +/- pulse width, +/- duty cycle, frequency, and period



### Magnetic Loss Measurements

- Measure Total Magnetic Loss
- Derive core loss from vendor's data sheet
- Inductance
- Shows relationship between **B** and **H** Curve

### MSO/DPO5000B Series Oscilloscopes Offer:

- **Automated power measurements** such as power quality, switching loss, harmonics, safe operating area, magnetic measurements, modulation, ripple, and slew rate for fast, accurate results.

### Complete Power Probing Portfolio:

- **Current Probes** for AC and DC currents from 1 mA to 150 A<sub>RMS</sub> or 500 A<sub>peak</sub>
- **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

### Learn More...

Power supplies and converters pose significant challenges to the embedded system designer.

Get the **Power Application Note** to learn more about common power supply measurements, challenges, and how to overcome them.

