

# TekVPI® Deskew Pulse Generator Signal Source

► TEK-DPG



## ► Features & Benefits

An easy-to-use, plug-on accessory for oscilloscopes that feature the TekVPI interface

Generates source signals to enable precise deskew between current and voltage probes in power measurement applications

LED status indicator for quick identification of generator state

Multiple output signals enable use with a variety of oscilloscopes and probes

Output can be turned off to reduce power consumption when not in use

Easy access to oscilloscope menu display to control settings from the oscilloscope front panel

## ► Applications

Power supply design

Measurements requiring accurate timing measurements between channels

## TEK-DPG Deskew Pulse Generator

The TEK-DPG Deskew Pulse Generator is a signal-generating accessory for Tektronix instruments that feature the TekVPI® interface, including DPO3000 Series and DPO/MSO4000 Series oscilloscopes.

The TEK-DPG generator provides a source signal to the Power Measurement Deskew Fixture (Tektronix part number 067-1686-xx), used to deskew popular Tektronix probes. The generator and deskew fixture allow you to precisely deskew the time differences between instrument channels of current and voltage probes, necessary when you are using the probes in power measurement applications.

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## ► Characteristics

Mode	Amplitude	Frequency <i>(all values are Typical)</i>	Rise Time
Mode 1	1V <sub>p-p</sub> (-1V .. 0V)	1 kHz	0.8 ns
Mode 2	2V <sub>p-p</sub> (-2V .. 0V)	1 kHz	1.6 ns
Mode 3	2V <sub>p-p</sub> (-1V .. +1V)	1 MHz	2 ns
Mode 4	8V <sub>p-p</sub> (-4V .. +4V)	1 MHz	4 ns

Terminates Into –  
50 Ω.

Expected Load –  
50 Ω.

### Status LED Values

Status LED Color	Description
Amber	The generator is powered and the output at the BNC cable <i>is not enabled</i> <i>This is the default status at power-on</i>
Green	The generator is powered and the output at the BNC cable <i>is enabled</i>
Red	A fault condition may have occurred Disconnect and reconnect the generator to clear the fault condition

### Recommended Output Mode

The recommended output mode is determined by the combination of oscilloscope model, voltage probe and current probe, according to the following table. See the user instructions for the Power Measurement Deskew Fixture, Tektronix part number 067-1686-xx, for deskew fixture operation.

Probe*1	Operation	TEK-DPG Output Mode*2	067-1686-xx Input Port
<b>Passive voltage probes</b>			
P6139A, P5050 and other 10X passive probes	Compensate timing with respect to current probes	DPO3000: Mode 2 DPO/MSO4000: Mode 1	A or B, depending on current probe type
<b>Active voltage probes</b>			
TAP1500, TAP2500, TAP3500, TDP0500, TDP1000, TDP1500, P6243, P6245, P6246, P6247, P6248, P6250, P6251	Compensate timing with respect to current probes	DPO3000: Mode 2 DPO/MSO4000: Mode 1	A or B, depending on current probe type
<b>High voltage probes</b>			
P5200, P5205, P5210, P6135A	Compensate timing with respect to current probes	DPO3000: Mode 2 or 4*3 DPO/MSO4000 : Mode 1 or 4*3	A or B, depending on current probe type
<b>Small current probes</b>			
TCP0030, TCP202, TCP312, TCP305, A6302, A6312	Compensate timing with respect to voltage probes	DPO3000: Mode 2 or 4*3 DPO/MSO4000: Mode 1 or 4*3	A
<b>Large current probes</b>			
TCP0150, TCP303, A6303	Compensate timing with respect to voltage probes	DPO3000: Mode 4 DPO/MSO4000: Mode 4	B

\*1 Note that some probe models listed do not utilize the TekVPI interface. Probes which use the TekProbe-BNC interface require the TPA-BNC adapter to connect to a TekVPI oscilloscope.

\*2 TEK-DPG is not supported by the DP07000 Series. The Probe Calibration output from the DP07000 Series generates the appropriate source signal for the Power Measurement Deskew Fixture.

\*3 Mode 4 is a universal mode for high attenuation probes. High-voltage probes and current probes can always use Mode 4.

## Physical Characteristics

Dimensions	cm.	in.
Height	3.048	1.20
Width	4.064	1.60
Length	11.73	4.62
Cable Length	41.225	16.2
Weight	kg	lbs.
Shipping	0.325	0.7175

## Standard Warranty

One year parts and labor.

## ► Environmental

## Temperature

Operating	0° C to +50° C
Non-Operating	-40° C to +71° C

## Humidity

Operating	5% to 90% relative humidity (% RH) at up to +40° C,
	5% to 60% RH above +40° C up to +50° C, non-condensing
Non-Operating	5% to 90% RH (Relative Humidity) at up to +40° C,
	5% to 60% RH above +40° C up to +50° C, non-condensing

## Altitude

Operating	Up to 3000 meters (9,843 feet)
Non-Operating	Up to 12,000 meters (39,370 feet)

## Regulatory

Emissions Compliance	EN 55011, Class A
EMC Compliance	EN61326, Class A
Compliance Labeling	WEEE (European Union)

## Power Requirements

- TEK-DPG is powered directly from DPO3000, DPO/MSO4000 and DPO7000 Series Oscilloscopes, using the TekVPI probe interface

## Recommended Oscilloscopes

- DPO3000 and DPO/MSO4000 Series Oscilloscopes with TekVPI probe interface
- TEK-DPG is not supported by the DPO7000 Series Oscilloscopes, as these models provide the appropriate source signal at the Probe Calibration output on the front-panel BNC connector

## ► Ordering Information

TEK-DPG

TEK-DPG Deskew Pulse Generator Signal Source

**Includes:** User manual (071-2341-xx).

## Recommended Accessories

**Tektronix Power Deskew/ Calibration Fixture – (067-1686-xx).**

## Service Options

## Options

**R3** – Repair Service 3 Years.

**R5** – Repair Service 5 Years.

**Additional Service Products Available During Warranty (DW) or Post Warranty (PW)**

**TEK-DPG-R1PW** – Repair service coverage one year post warranty.

**TEK-DPG-R2PW** – Repair service coverage two year post warranty.

**TEK-DPG-R3DW** – Repair service coverage three years (includes product warranty period) three year period starts at time of customer instrument purchase.

**TEK-DPG-R5DW** – Repair service coverage five years (includes product warranty period) five year period starts at time of customer instrument purchase.

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### For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit [www.tektronix.com](http://www.tektronix.com)



Product(s) are manufactured in ISO registered facilities.

Product(s) complies with IEEE Standard 488.1-1987, RS-232-C and with Tektronix Standard Codes and Formats.

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