

TekVPI™ Deskew Pulse Generator Signal Source

TEK-DPG Datasheet



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.

Characteristics

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

Terminates Into – 50 Ω

Expected Load – 50 Ω

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 |
|---|--|---|---|
| Passive Voltage Probes | | | |
| 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 |
| Active Voltage Probes | | | |
| 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 |
| High-voltage Probes | | | |
| 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 |
| Small Current Probes | | | |
| 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 |
| Large Current Probes | | | |
| 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 DPO7000 Series. The Probe Calibration output from the DPO7000 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 | lb. |
| Shipping | 0.325 | 0.7175 |

Status LED Values

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

Power Requirements

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

Environmental

| Characteristic | Description |
|----------------------|--|
| Temperature | |
| Operating | 0 °C to +50 °C |
| Nonoperating | -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, noncondensing |
| Nonoperating | 5% to 90% RH (relative humidity) at up to +40 °C 5% to 60% RH above +40 °C up to +50 °C, noncondensing |
| Altitude | |
| Operating | Up to 3000 meters (9,843 feet) |
| Nonoperating | 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) |

Standard Warranty

One-year parts and labor.

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

| Option | Description |
|---------|---------------------------------------|
| R3 | Repair Service 3 Years |
| R5 | Repair Service 5 Years |
| SILV600 | Standard Warranty Extended to 5 Years |

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

| | |
|--------------|--|
| TEK-DPG-R1PW | Repair service coverage 1-year post warranty |
| TEK-DPG-R2PW | Repair service coverage 2-year post warranty |
| TEK-DPG-R3DW | Repair service coverage 3 years (includes product warranty period). 3-year period starts at time of customer instrument purchase |
| TEK-DPG-R5DW | Repair service coverage 5 years (includes product warranty period). 5-year period starts at time of customer instrument purchase |



Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.



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

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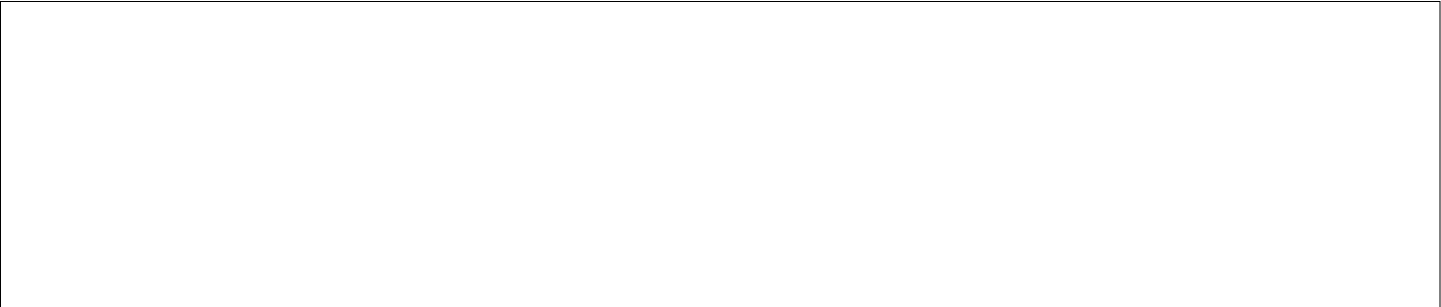
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