

LECROY

SDA-TPS TRIGGER PRESCALER



OPERATOR'S MANUAL

NOVEMBER 2005



LeCroy Corporation

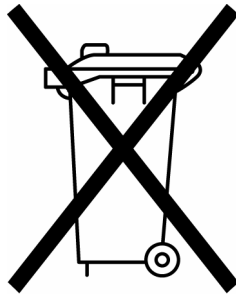
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SDA-TPS-OM-E Rev A
913675-00 Rev A

Operator's Manual

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SDA-TPS Trigger Prescaler

SAFETY REQUIREMENTS

This symbol may appear on the product: 

It refers you to additional information contained in the *Operator's Manual*. The corresponding information in this manual is similarly denoted.

Before using this product, ensure that its operating environment will be maintained within these parameters:

Temperature: 5 to 40 °C

Humidity: ≤ 80% RH (non-condensing)

Altitude: Up to 2000 m (6561 ft)



CAUTION

To avoid personal injury or damage to the SDA-TPS or any equipment connected to it, review and comply with the following safety precautions.

- **Use only as intended.** The SDA-TPS hardware is intended to be used only with the LeCroy oscilloscope. Use of the SDA-TPS and/or the equipment it is connected to in a manner other than specified may impair the protection mechanisms.
- **Do not apply any potential to the input that exceeds the maximum ratings of the product (refer to specifications section).**
- **Connect and disconnect properly.** Avoid damage to cables thru excessive bending.
- **Do not use in wet/damp or explosive atmospheres.**
- **For indoor use only.** The SDA-TPS is intended for indoor use and should be operated in a clean, dry, environment.
- **Do not operate with suspected failures.** Do not use the SDA-TPS if any part is damaged. All maintenance should be referred to qualified service personnel.
- **Keep product surfaces clean and dry.**

Cleaning

The outside of the SDA-TPS hardware should be cleaned with a soft cloth dampened with either deionized / distilled water or isopropyl alcohol. Allow the surface to dry completely before returning the SDA-TPS to service.

Use and Maintenance

The SDA-TPS is a high quality, precision instrument. To maintain accuracy and signal fidelity, mechanical shock should be avoided, as well as damage to the cables through excessive bending. All maintenance and component replacement should be referred to qualified personnel.

INTRODUCTION

Warranty

The instrument is warranted for normal use and operation, within specifications, for a period of one year from shipment. LeCroy will either repair or, at our option, replace any product returned to one of our authorized service centers within this period. However, in order to do this we must first examine the product and find that it is defective due to workmanship or materials and not due to misuse, neglect, accident, or abnormal conditions or operation.

LeCroy shall not be responsible for any defect, damage, or failure caused by any of the following: a) attempted repairs or installations by personnel other than LeCroy representatives, or b) improper connection to incompatible equipment or c) for any damage or malfunction caused by the use of non-LeCroy supplies. Furthermore, LeCroy shall not be obligated to service a product that has been modified or integrated where the modification or integration increases the task duration or difficulty of servicing the oscilloscope. Spare and replacement parts, and repairs, all have a 90-day warranty.

Description

The SDA-TPS Prescaler is a general purpose test accessory designed for microwave applications, communications, and test equipment.

The SDA-TPS simultaneously provides divide-by-2, divide-by-4, and divide-by-8 outputs for use in various applications.

The single-ended input (2.9 mm connector) is located at the rear of the unit, while the outputs (SMA connectors) are located at the front. Input and outputs are AC coupled.

The prescaler is self contained and plugs into a standard AC power source.

Front

Outputs: The divide-by-2, divide-by-4, and divide-by-8 outputs are available at the SMA connectors simultaneously.



CAUTION: ESD Sensitive

The SDA-TPS inputs are sensitive to Electrostatic Discharge (ESD). To avoid causing damage to the unit, always follow anti-static procedures (wear wrist strap, etc.) when making connections.



CAUTION

Use only the supplied SMA-SMA 12-inch (30.48-cm) cable to connect to the oscilloscope.

Led Indicator: An LED at the front indicates that the prescaler is powered.



Figure 2. Front of SDA-TPS

Rear

Input: A 2.9 mm input connector is provided at the rear of the SDA-TPS.

Power in: An AC plug-in power supply is provided (-5 V).



CAUTION

Use only the power supply provided.



Figure 3. Rear of SDA-TPS

SDA-TPS Trigger Prescaler

SPECIFICATIONS

Product Specifications

Nominal Characteristics

Nominal characteristics describe parameters and attributes that are guaranteed by design, but do not have associated tolerances.

Input Frequency Range: 200 MHz – 38 GHz

Input Impedance: 50 ohms



Max. Input Voltage: 2 V_{p-p} (10 dBm), refer to Figure 5 for frequency derating

Nominal Input Voltage Range: 500–630 mV_{p-p} (\approx 0 dBm)

Connector Type: 2.9 mm

Power Adapter – For indoor use only

Input: 100–240 V \sim (\pm 10%), 0.4 A, 47–63 Hz

Typical Characteristics

Typical characteristics are parameters with no guaranteed performance.

Input Sensitivity: Refer to Figure 4

Output RMS Jitter (J_{rms}): < 400 fs typical, 500 fs max.

Output Rise/Fall Times (T_{rf}): 30 ps typical, 35 ps max.

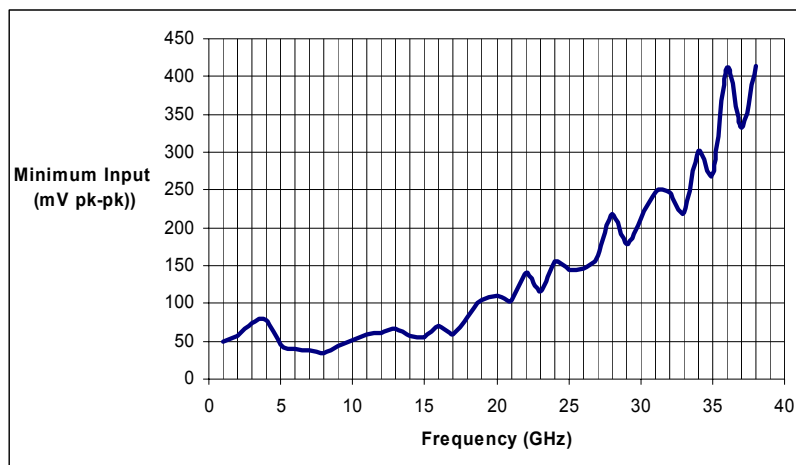


Figure 4. Typical Input Sensitivity

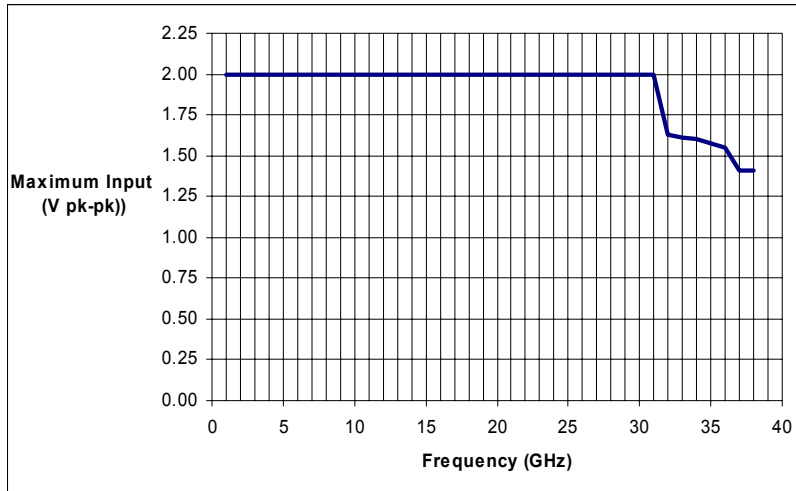


Figure 5. Maximum Non-destruct Input Voltage

Environmental Characteristics

Before using this product, ensure that its operating environment will be maintained within these parameters:

Temperature: 5 to 40 °C

Humidity: ≤ 80% RH (non-condensing)

Physical Dimensions

L x W x H: 101.6 x 88.9 x 25.4 mm (4.0 x 3.5 x 1 inches)

Certifications

EC Declaration of Conformity	<p>Meets intent of the European Council Directive 89/336/EEC with Amendments 92/31 EEC and 93/68/EEC for Electromagnetic Compatibility. This declaration is based upon compliance of the SDA-TPS Trigger Prescaler to the following standards:</p> <p>EN 61326:1997+A1:1998</p> <p>EMC requirements for electrical equipment for measurement, control, and laboratory use.</p> <p>EN 55022:1998+A1:2000+A2:2003 Radiated Emissions (Class A)</p> <p>EN 61000-4-2:1995+A1:1998+A2:2001</p>
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SDA-TPS Trigger Prescaler

	Electrostatic discharge(±4 kV contact discharge; ±8 kV air discharge) EN61000-4-3:2002 Radio-frequency electromagnetic field 3 V/m (unmodulated, rms) 80% AM (1 kHz)
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