INTRODUCTION

The TA049 is a passive high-impedance oscilloscope probe designed and calibrated for use on instruments having an input impedance of 1 MΩ shunted by 15 pF. However, it may be compensated for use with instruments having an input capacitance of 10 to 35 pF. Behind the cover of the box located near the BNC are three trimmers for high-frequency compensation adjustment. Consult a professional engineer for assistance with these.

LOW-FREQUENCY COMPENSATION ADJUSTMENT

Low-frequency response can be matched to the oscilloscope by adjusting the compensation trimmer on the head of the probe.

- Connect the probe to the oscilloscope and to a 1 kHz square waveform source.
- Set the oscilloscope to display two to three cycles and two to six vertical divisions.
- Carefully adjust the trimmer tool to obtain the flattest tops to the square waves displayed on the oscilloscope. See the following illustrations.

HIGH-FREQUENCY COMPENSATION ADJUSTMENT

The high-frequency compensation box is located near the BNC connector. Using a BNC adapter, connect the probe to a square-wave generator operating between 10 kHz and 1 MHz and terminated into 50 Ω. The square-wave generator rise time should be approximately 125 ns. Adjust each control until the leading edge of the waveform is as flat, square and horizontal as possible.

SPECIFICATIONS

- Attenuation ratio: 10:1
- Bandwidth: DC to 500 MHz
- Rise time: 0.7 ns
- Input resistance: 10 MΩ when used with oscilloscopes with 1 MΩ input
- Input capacitance: Approx. 11 pF
- Compensation range: 10 to 35 pF
- Working voltage: Max. 600 V (DC+Peak AC)
- Safety: Conforms to IEC-1010
- Cable length: 1.5 metre
- Operating temperature: 0 °C to 50 °C, 80% RH
- Storage temperature: 0 °C to 50 °C, 80% RH
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VOLTAGE DERATING CURVE

[Graph showing voltage derating curve]

User’s Manual

Oscilloscope probe