

Accessory for YOKOGAWA DL Series Digital Oscilloscopes  
100 MHz band differential probe

YOKOGAWA ◆

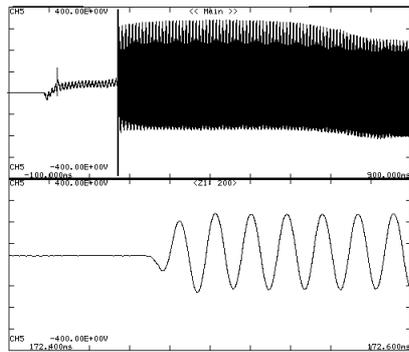
# 700924

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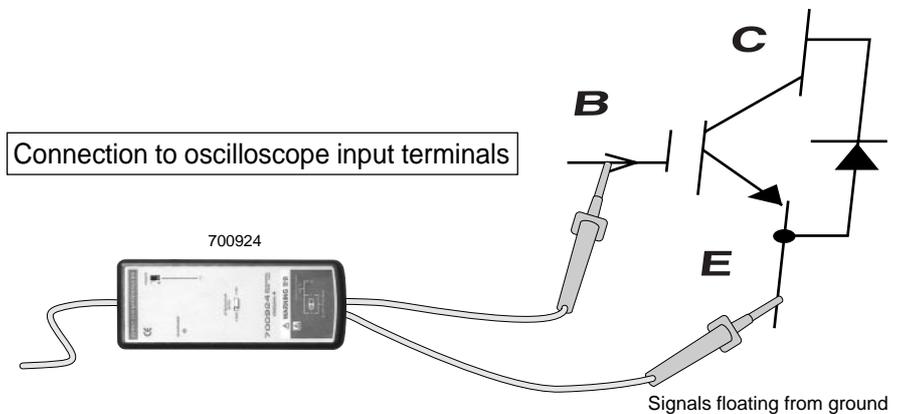


## Differential Probe Capable of Wide-Band, High-Voltage Floating Measurements

Allows you to use a single-end input oscilloscope for wide-band differential input measurements



Waveform observed on oscilloscope



Oscilloscope input amplifiers are normally single-ended. They do not provide accurate measurements when used in combination with a 10:1 passive probe for measuring the gate-to-source voltage of a switching power supply, or potential difference with a common mode voltage in elements such as Insulated Gate Bipolar Transistors (IGBTs). Furthermore, there is a risk that current will enter through the oscilloscope's ground line and damage the oscilloscope.

With increases in the speed of measured signals in recent years, it has become necessary to make floating measurements over a wide frequency band. The 700924 differential probe lets you make wide-band (100 MHz) differential input measurements. Just connect the probe to the input of a single-end input digital oscilloscope.

## 100 MHz band differential probe

# 700924



- **Overrange (outside-range) indicator**  
This light turns on when the permitted differential voltage is exceeded. During DC measurements, it turns on as an alert at voltages of 350 V and higher with a 1/100 range setting, and at voltages of 1400 V and higher with a 1/1000 range setting.
- **Power switch**
- **AC/DC adapter connector (on side of probe)**  
This DC adapter powers the probe. The probe can also be powered by four dry cells without using an AC/DC adapter.
- **1/100-1/1000 selector switch**  
This switch is used to select the input voltage attenuation ratio.



**Example of probe connection with DL1540CL digital oscilloscope**  
Two or more differential probes can be connected to measure signals with different ground levels on each channel.

### ■ Specifications

Input type:	Balanced differential input
Frequency band:	DC up to 100 MHz (-3 dB)
Input attenuation ratio:	Switched between 1/100 and 1/1000
Input impedance:	Approximately 4 M $\Omega$ , approximately 10 pF parallel
Gain accuracy:	$\pm 2\%$ (common mode voltage $\leq 400$ V) $\pm 3\%$ (common mode voltage $\leq 1000$ V)
Maximum allowed differential voltage:	$\pm 350$ V (DC + ACpeak) or 250 Vrms (1/100 range) $\pm 1400$ V (DC + ACpeak) or 1000 Vrms (1/1000 range)
Maximum common mode input voltage:	$\pm 1400$ V (DC + ACpeak) or 1000 Vrms (both 1/100 and 1/1000 ranges)
Maximum input voltage:	$\pm 1400$ V (DC + ACpeak) or 1000 Vrms (1/1000 range)
Common Mode Rejection Ratio (CMRR):	-80 dB (60 Hz), -50 dB (1 MHz)
Output voltage:	$\pm 3.5$ V
Output impedance:	Used with 1 M $\Omega$ input impedance
Power supplies:	Dry cells, four R6P (SUM-3); when using the AC/DC adapter, use an output voltage of 6 V/200 mA or greater/center plus
Dry cell life:	Approximately 2 hours under continuous use
External dimensions (approximate):	207 mm X 83 mm X 38 mm*1
Total length:	Approximately 1.5 meters
Weight:	Approximately 800 grams (excluding dry cells)
Approved standards:	
EMC:	EN55011: 1991 + A1: 1997 + A2: 1996 EN50082-1: 1992
Safety:	EN61010-1: 1993 + A2: 1995 EN61010-2-031: 1994

\*1: 38 mm is listed as the maximum value.

Note: Dry cells and AC/DC adapter not included.

### ■ Model and Codes

Model name	Code	Description
Differential probe	700924	DC to 100 MHz band

Each 700924 differential probe comes standard with red and black pincher tips (one each).

### ■ Spares

Item	Part No.	Order Q'ty
Red pincher chips	B9852MC	3
Black pincher chips	B9852MB	3



Use this product in combination with 701856 (high-speed module) when using it with DL708E or DL716. See the DL Series accessory catalog for information on selecting a conversion adapter and other components. Bulletin 7009-63E

## YOKOGAWA

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