

Keysight Technologies

A Source/Measurement Unit Based Teaching Lab Solution Package for MEMS Technologies

Keysight B2900A Series Precision Source/Measure Unit

This package can help you get your lab up and running quickly by eliminating the need to develop measurement setups and instructional slides from scratch

Keysight B2900A Series of SMU



Keysight U8201A Combo Test Lead Kit



The Keysight B2900A series teaching lab solution package provides a ready-to-use course in Micro-Electro-Mechanical Systems (MEMS) technology.

Dreamcatcher ME5000 Courseware Package

ME5000 MEMS Technologies

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The user of this courseware product and all other entities who develop for it.

Figure of Merits (cont.)

- Drift
 - Shift in the accuracy of the sensor output over time
- Calibration
 - Correcting accuracy

Circular Diaphragm Displacement

Pressure

$$w(r) = \frac{P a^2}{16 E t^3} \left(1 - \frac{r^2}{a^2} \right)^2$$

Deflection at radius "r"

$$w = \frac{P a^4}{64 E t^3} \left(1 - \frac{r^2}{a^2} \right)^2$$

Flexural rigidity

$$D = \frac{E t^3}{12(1 - \nu^2)}$$

Thickness

Poisson's ratio

Maximum deflection

$$w_{max} = \frac{2 E t^3 \nu^2 P a^4}{64 E t^3 (1 - \nu^2)^2}$$

Training kit

Teaching slides

* CAE Software is an available option

Provided by Dreamcatcher

Model	Description	Supplier	Quantity
B2902A/12A	Precision SMU (2 Ch Model)	Keysight	1
U8201A	Combo Test Lead Kit	Keysight	1
ME5000	MEMS Courseware package	Dreamcatcher	1

B2900A Series Teaching Lab Solution Features

1. The B2900A series' versatile IV measurement capabilities can meet a wide variety of educational objectives

- √ Learn semiconductor test, active/passive component test and general electronic device and material characterization
- √ Gain valuable exposure to industry standard instruments to prepare students to enter the workforce

2. No additional materials required

- √ Includes sufficient user-modifiable teaching and lab slides to cover a full one semester course
- √ Dreamcatcher offers annual courseware updates

3. Keysight can provide useful information to enhance student learning

- √ Keysight's website has numerous videos and other materials to help students learn measurement basics and ways to improve measurement efficiency. For more information please visit: http://www.keysight.com/find/basic_measurements

B2900 Precision Instrument Family

The B2900 family contains products that perform both precision sourcing and precision measurement.



For more information or inquiries, please visit:

About Keysight B2900A Series: www.keysight.com/find/precisionSMU

About Dream catcher ME5000 Courseware: <http://dreamcatcher.asia/cw/>

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www.keysight.com/go/quality

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DEKRA Certified ISO 9001:2008

Quality Management System