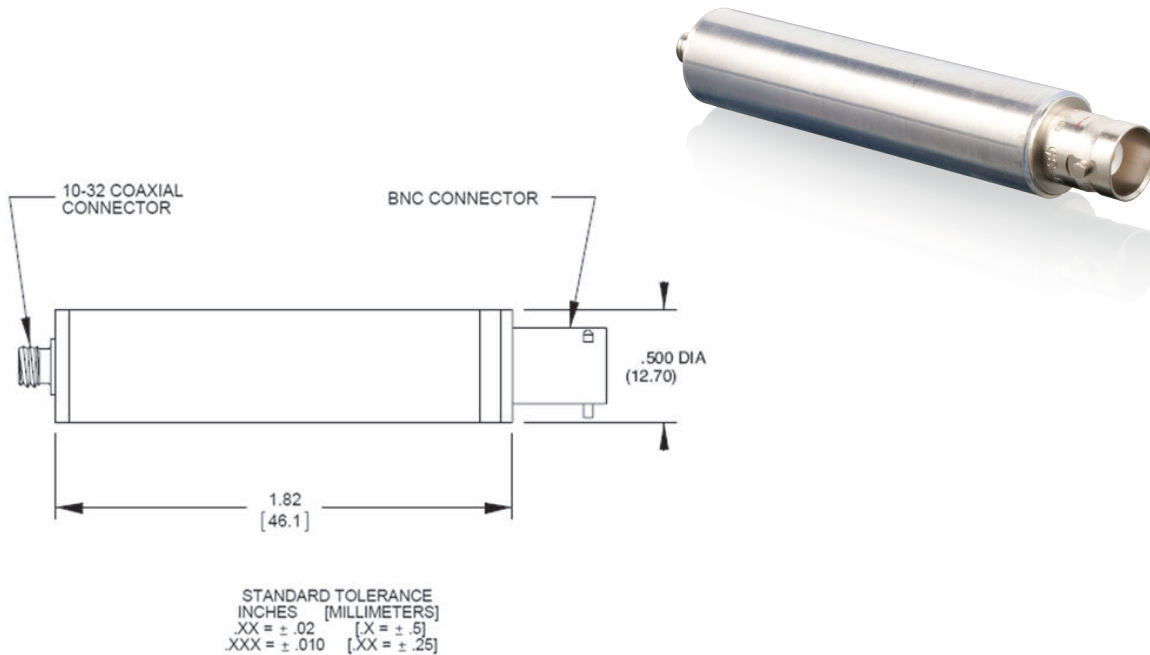


Calibration capacitor

Model 2947C



Key features

- Allows simulation of a piezoelectric transducer charge output
- Precision 1000 pF shielded capacitor
- Used for charge amplifier calibration
- Converts voltage to charge
- Easy to use

Description

The Endevco® model 2947C is a stable, precision, 1000 pF shielded capacitor designed specifically for calibrating charge sensing amplifiers. The voltage output from a signal generator is readily converted to a charge signal by connecting a capacitor in series between the generator and charge amplifier.

The transfer function is: $Q = EC$
Where:
Q = Charge, in picocoulombs (pC)
E = Voltage, in volts (V)
C = Capacitance, in picofarads (pF)

Since the capacitor is exactly 1000 pF, the transfer function simplifies to $Q \text{ (pC)} = E \text{ (mV)}$. The charge must be expressed in units of pC pk if the voltage is expressed in peak units. Similarly, voltage rms converts to pC rms.

Calibration capacitor | Model 2947C

Specifications	
Inputs	
Type	Input is a signal from a voltage source
Outputs	
Type	Output is a charge signal designed to go to a charge sensing amplifier
Electrical	
Capacitance	
Typical	1000 pF ±1%
Marked	Actual capacitance measured at 72°F (22°C)
Voltage	100 VDC, or VAC pk, maximum
Environmental	
Temperature range	32°F to 122°F (0°C to 50°C)
Temperature coefficient	±0.003%/°C, typical
Humidity	Epoxy sealed, 95% R.H. maximum
Environmental	
Dimensions	1/2" d x 1.8" l (13 mm x 46 mm)
Connector	J1 Coaxial receptacle, 10-32 NF-2A threads, mates with Endevco model 3090C cable assembly J2 BNC type coaxial receptacle

Calibration data supplied

Capacitance, in pF, measured at 72°F (22°C) is marked on each unit. Estimated uncertainty of the measurement is ±1 pF

Notes

1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.



10869 NC Highway 903, Halifax, NC 27839 USA

endevco.com | sales@endevco.com | 866 363 3826

© 2021 PCB Piezotronics - all rights reserved. PCB Piezotronics is a wholly-owned subsidiary of Amphenol Corporation. Endevco is an assumed name of PCB Piezotronics of North Carolina, Inc., which is a wholly-owned subsidiary of PCB Piezotronics, Inc. Accumetrics, Inc. and The Modal Shop, Inc. are wholly-owned subsidiaries of PCB Piezotronics, Inc. IMI Sensors and Larson Davis are Divisions of PCB Piezotronics, Inc. Except for any third party marks for which attribution is provided herein, the company names and product names used in this document may be the registered trademarks or unregistered trademarks of PCB Piezotronics, Inc., PCB Piezotronics of North Carolina, Inc. (d/b/a Endevco), The Modal Shop, Inc. or Accumetrics, Inc. Detailed trademark ownership information is available at www.pcb.com/trademarkownership.

031922