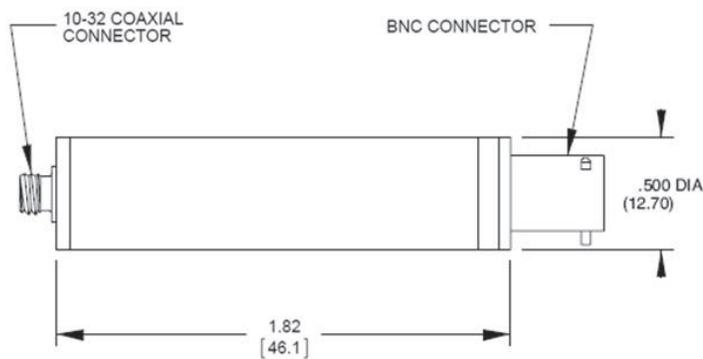


Calibration capacitor

Model 2947C



STANDARD TOLERANCE
 INCHES [MILLIMETERS]
 .XX = ± .02 [X = ± .5]
 .XXX = ± .010 [XX = ± .25]

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

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

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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

Physical

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.

Contact

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