

Features

- Frequency Range: 10 kHz to 400 MHz
- Accommodates cable bundle diameters up to two inches (52 mm)
- Suitable for Compliance-Level Conducted Emissions (Current) Measurements
- Individual Calibration Included
- Three-Year Warranty

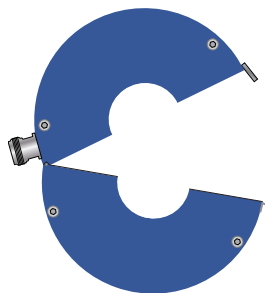
Description

The **CLCE-452** RF Current Probe is part of Com-Power's extensive line of radio frequency conducted emission/immunity test equipment and calibration accessories.

The **CLCE-452** was designed to accommodate thick cable bundles(s), up to two inches in diameter.

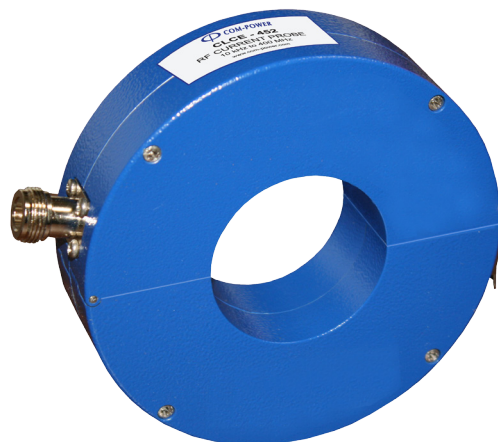
It is suitable for compliance level conducted emissions/disturbance current measurements, such as those required by CISPR 22, CISPR 32, RTCA DO-160 and MIL-STD-461 standards, to name just a few.

The **CLCE-452** incorporates a split-core ferrite into its rugged, circular enclosure. The probe enclosure is hinged, allowing the probe to be opened on one side in order to easily place the wire, cable(s) or cable bundle(s) to be tested into the probe window. This makes the **CLCE-452** much more convenient to use than other non-split core probes.



Calibration

As is the case with nearly all Com-Power products, individual NIST traceable calibration is performed on each unit, and the data is provided along with certificate of calibration. ISO 17025 accredited calibration is available for an additional charge.

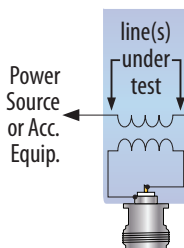


Application

In general, RF current probes are employed for the measurement of RF current flow on a wire, cable or cable bundle. The current is measured inductively by clamping the probe around the line(s) to be tested.

Essentially, a current probe is a toroidal transformer, with the lines under test acting as the primary, and the probe itself acting as the secondary.

The probe's output voltage is measured across the 50Ω input impedance of the measuring instrument. This voltage is then converted to a current quantity by applying the transfer impedance factor of the probe, respective to the frequency of the signal being measured.

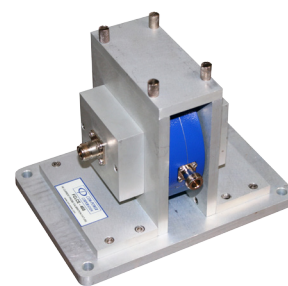


$$\begin{array}{l} \text{Measured} \\ \text{Voltage Value} \\ \text{(in dB}\mu\text{V)} \end{array} - \begin{array}{l} \text{Transfer} \\ \text{Impedance Factor} \\ \text{(in dB}\Omega\text{)} \end{array} = \begin{array}{l} \text{Current} \\ \text{Value} \\ \text{(in dB}\mu\text{A)} \end{array}$$

Calibration Fixture

Current probes are calibrated through the use of a calibration fixture with a coaxial-type arrangement.

The **CLCE-452** is designed to be used with the Com-Power **FCLCE-452** Calibration Fixture (sold separately). The fixture is required in order to perform transfer impedance calibration, as well as test level calibration according to MIL-STD-461G.

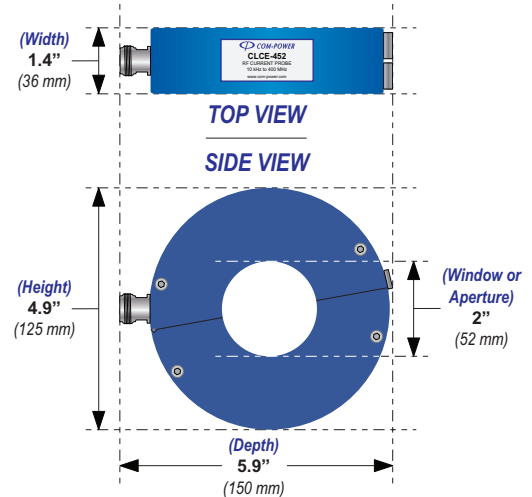


Specifications

All values are typical, unless specified.
All specifications are subject to change without notice.

Product	RF Current Probe
Frequency Range	10 kHz to 400 MHz
Transfer Impedance (typical)	0.25 to 3 ohms (-12 to 8 dBΩ)
Standard(s)	MIL-STD-461, RTCA DO-160D, CISPR 16, CISPR 22, CISPR 32, etc.
Impedance	50Ω (nominal)
Coaxial RF Connector	N-type (female)
Dimensions (H)x(W)x(D)	4.9" x 1.4" x 5.9" (125 x 36 x 150 mm)
Probe Window Diameter	2" (52 mm)
Weight	1.5 lbs (0.68 kg)
Operating Temperature	40° F to 104° F (5° C to 40° C)
Accessories Available from Com-Power	FCLCE-452 Calibration Fixture CLCI-series Bulk Current Injection Probes ACS-Series Power Amplifiers

CLCE-452 Dimensions



Typical Transfer Impedance/Insertion Loss Factors

