TICP Series IsoVu™ Isolated Current Shunt Probes

Accurate dynamic current measurements

FACT SHEET

TICP Series IsoVu™ Isolated Current Probes are designed specifically for measuring the voltage across current shunts. In combination with precision shunt resistors or current viewing resistors, TICP probes deliver exceptional bandwidth, noise rejection, accuracy and ease of use.

Key Features

- Galvanic isolation between probe tip and the oscilloscope eliminates ground loops and enables very high common mode rejection of 140 dB CMRR at DC, up to 90 dB at 1 MHz
- Available in three bandwidths: 1 GHz, 500 MHz, and 250 MHz
- Maximum common mode voltage: 1.8 kV; For use in a Pollution Degree 1 environment; transient level not to exceed 5 kV_{pk}
- Wide current measurement range determined by the shunt used
- In a 1X configuration, the TICP Series probe's 50 Ω input offers extremely low noise of <4.7 nV / √Hz (<150 μV_{RMS} at 1 GHz)
- Compatible with the 4, 5, and 6 Series MSO oscilloscopes, including the latest B models and 5 Series MSO Low Profile digitizer
- TekVPI™ interface enables control and probe configuration from the oscilloscope front panel or programming interface

Key Applications

- High-bandwidth high side and low side drain current measurements, including double pulse testing, on half/full bridge power converters using fast rise-time SiC or GaN, FETs or IGBTs
- Low-noise, high CMRR current measurements on power rails of processor systems during specific system activities, transients and transitions from sleep to active states
- General current shunt measurements, especially on floating series shunt resistors

Standard accessories

- 1X probe tip cable with MMCX connector
- 10X probe tip cable with MMCX connector
- SMA tip adapter (1X)
- Clamp-on ferrite common mode choke
- Bipod probe holder
- Tripod adapter for ¼ in - 20 UNC thread accessories
- Probe tip adapter from MMCX to standard 0.100" spaced, 0.025" square pins.
- Soft carrying case with custom foam insert
- 1-year standard warranty

Optional Accessories

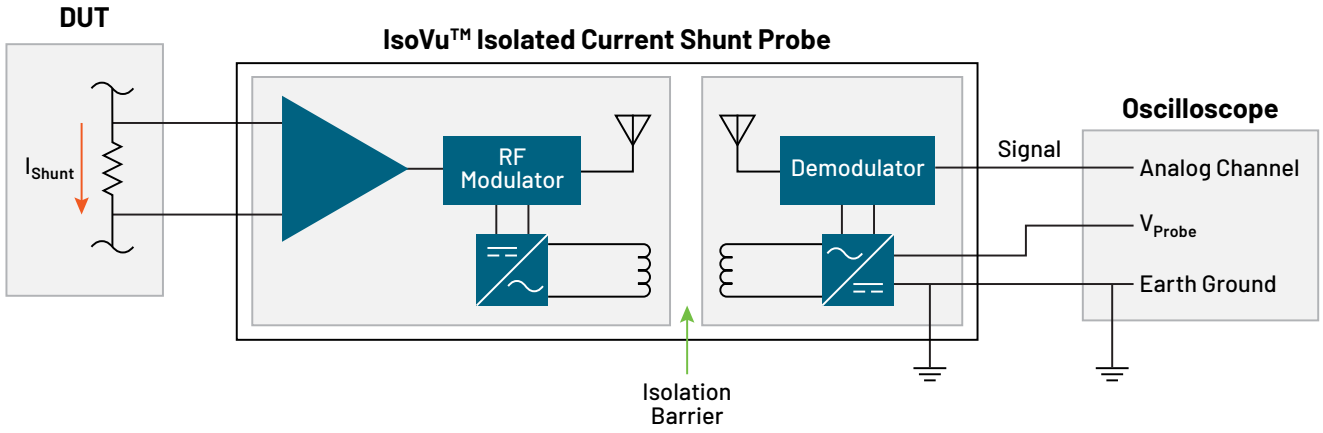
- 100X probe tip cable with MMCX connector

Isolation Enables Floating Measurements and Exceptionally Low Noise

IsoVu Isolated Current Probes (TICP) enable engineers to make accurate dynamic current measurements on oscilloscopes and go beyond traditional limits.

Unlike current transformers, Rogowski coils, or Hall effect current probes, TICP current probes enable measurements from DC to hundreds of MHz, when paired with high-performance shunts or CVRs (current viewing resistors). Complete RF isolation between the probe tip and the oscilloscope eliminates ground loops and helps deliver extraordinary common mode rejection (CMRR) of up to 90 dB at 1 MHz to dramatically reduce common mode noise. Low attenuation and low input impedance (50 Ω) are designed to limit noise contribution to less than 4.7 nV/√Hz (150 μV_{RMS} at 1 GHz) when measuring low voltages (+/- 0.5 V) across shunts.

Equipped with MMCX and SMA tips, the probes ensure proper grounding and shielding, crucial for minimizing noise and ground loops, ensuring accurate current measurements.



Complete galvanic isolation between the probe tip and the oscilloscope eliminates ground loops and delivers extraordinary common mode rejection.

Specifications Overview

Probe Model	TICP100	TICP050	TICP025
Bandwidth	1 GHz	500 MHz	250 MHz
Rise time	350 ps	700 ps	1.4 ns
Maximum common mode voltage	1800 V; For use in a Pollution Degree 1 environment; Max with transient level not to exceed 5kVpk		
	1000 V for CAT II; Pollution Degree 2		
Probe cable length	2 meters (78 inches)		

Probe tips	SMA input	1X MMCX tip	10X MMCX tip	100X MMCX tip
Dynamic range and maximum voltage	±0.5 V		± 5 V	± 50 V
Input resistance	50 Ω		500 Ω	5000 Ω
Capacitance	-		< 3 pF	

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