

Active current probe 1A range

Datasheet



Key features:

- Two ranges: 10mA/V & 100mA/V
- Maximum current measurement range: $\pm 1A$
- High bandwidth: up to 2MHz (-3dB)
- Bandwidth limiter: 22.5kHz
- Common mode voltage range: -9.7V to 10.2V
- Very low offset error: typically 0.008% or 0.08%
- Powered by a standard USB mini connector.

Application:

The active differential probe is a low cost measurement equipment which can be used together with an oscilloscope for precise low current profile measurements up to 1A. Typical measurement cases are:

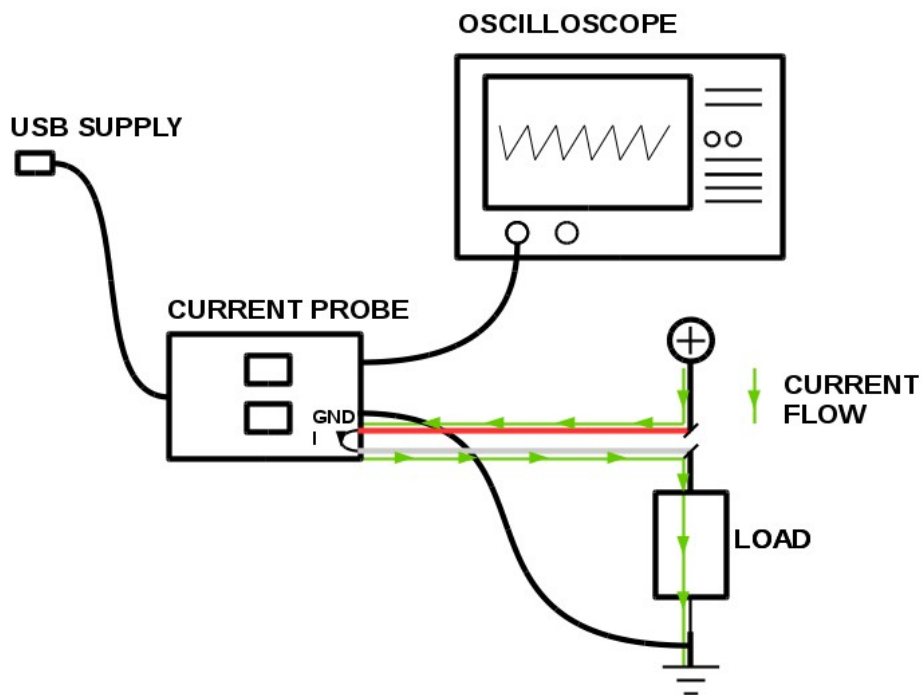
- Power estimations for battery powered devices
- IC testing / verification
- Inrush current measurements
- Rechargeable systems testing / verification

Specification:

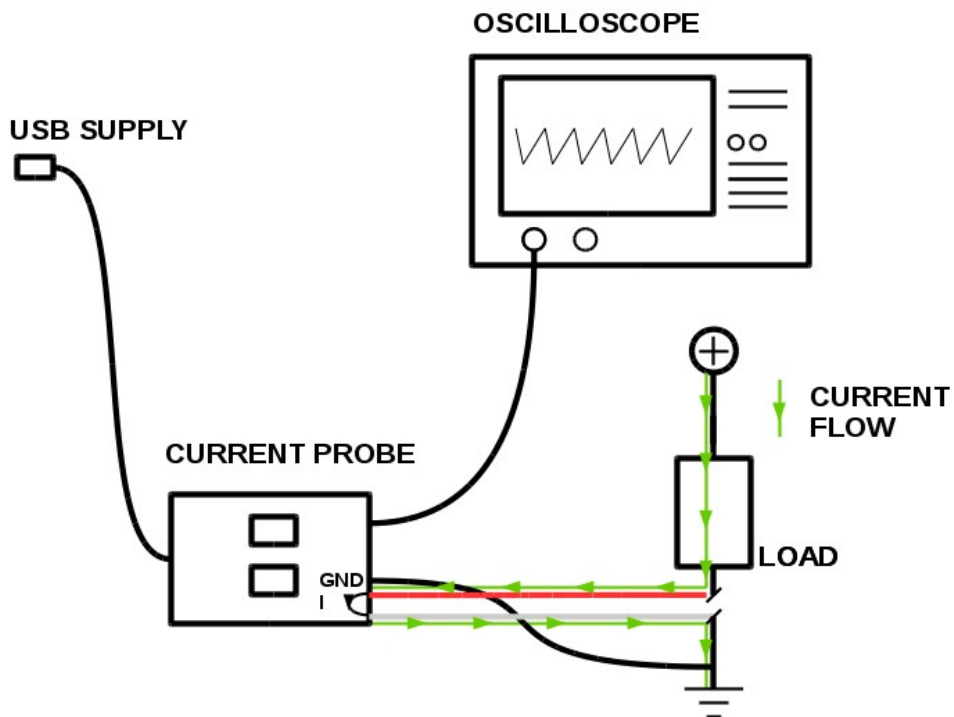
Table 1.

Parameter	Condition	10mA/V			100mA/V			Unit
		Min	Typ	Max	Min	Typ	Max	
Dynamic Response: Full Bandwidth	-3dB		0.2			2		MHz
Bandwidth limiter	-3dB		22.5			22.5		kHz
Shunt Resistor			0.1			0.1		Ω
Gain: Voltage Gain			1000			100		
Gain Error			1			1		%
Input: Input operating voltage range		-9.7		10.2	-9.7		10.2	V
Current range		-100		100	-1000		1000	mA
Bias current			0.1	0.5		0.1	0.5	nA
Output voltage swing		-10.8		10.4	-10.8		10.4	V
Offset Error: Absolute	$V_{in+}, V_{in-}=0V$		80	252.5		80	275	μA
Percent from range			0.08			0.008		%
Power supply	USB mini	4.5		5.5	4.5		5.5	V

Typical Setup High Side Measurement:



Typical Setup Low Side Measurement:



To achieve the best performance the low side measurement setup is recommended.