

## Keithley Model 580 alternatives

The Keithley Model 580 was a micro-ohmmeter with optional battery power that is discontinued and no longer available for sale. Applications for it included contact resistance measurements, and also bonding resistance measurements like those done in the aerospace industry.

Below are alternative products that Keithley has to offer for performing low resistance measurement. Note that Range Accuracy is the dominant source of error for measurements at the low end of the full-scale range.

Keithley Model	Lowest range FS	Resolution	90-day Range Accuracy	Description
3706	1 Ω	0.1 μΩ	± 80μΩ	7½-digit DMM + switching, full rack
2750	1 Ω	1.0 μΩ	± 40μΩ	6½-digit DMM + switching, full rack
2010	10 Ω	1.0 μΩ	± 90μΩ	7½-digit low-noise DMM, ½ rack
2001	20 Ω	1.0 μΩ	± 140μΩ	7½-digit high precision DMM, ½ rack
2002	20 Ω	0.1 μΩ	± 120μΩ	8½-digit high precision DMM, ½ rack
1801	20 mΩ	0.1 nΩ	± 0.2μΩ	Pre-amp for 2001 or 2002 multimeters; requires additional purchase of 2001 or 2002

Perhaps the best solution for low-ohms measurement is Keithley’s Model 6220/2182A current source/nanovoltmeter integrated system. Test current is fully programmable up to 100mA. The 6220/2182A combination will automatically perform current-reversal Delta Mode measurements which can reduce measurement noise by a factor of 1000. Milli-ohm measurements can be made with resolution down to 10 nΩ and single-digit micro-ohm accuracy. Software for measurement and graphical presentation of differential conductance are also provided. Pricing for the 6220/2182A combination is roughly similar to the 2002. If device heating is a concern, the Model 6221/2182A combination offers a 50μsec source/measure pulse mode at slightly higher cost. Contact Keithley for pricing, or visit [www.keithley.com](http://www.keithley.com).

The active Keithley models mentioned in this document use line power only, i.e., no optional battery power pack is available.

The Keithley Model 5804, 5805, 5806 are Kelvin test lead sets that are still available and are typical accessories ordered with any of the active Keithley DMM models mentioned in this document.