

Neiko 0-16V Battery tester

100A @12V

Resistance off: $15k\Omega$

$$\frac{12V}{15k\Omega} = 0.8mA$$

Resistance on: 1.5Ω small clips
 0.158Ω Big alligator clips.

$$\frac{12V}{0.158} = 76A \text{ Now!!}$$

↓ 0.03Ω

Real Battery test

$$\frac{14.2V}{0.158} = 89.87A$$

Test 1: with no PCB

Voltage 14.236V

95A

Test 2: $38mm \times 2 = 76mm$ trace 1oz copper
@ distance 30mm trace length
Ambient temperature $21^{\circ}C$

Temperature of Trace = $21^{\circ}C$

Under Load

Temperature of trace =

Battery 2: Voltage 16.7V

Remind to test resistance of the load

$$\frac{16.7V}{0.158} = 106A$$

14.92k Ω off warm