Using the Model 2450 SourceMeter:
Leakage Current Test Example

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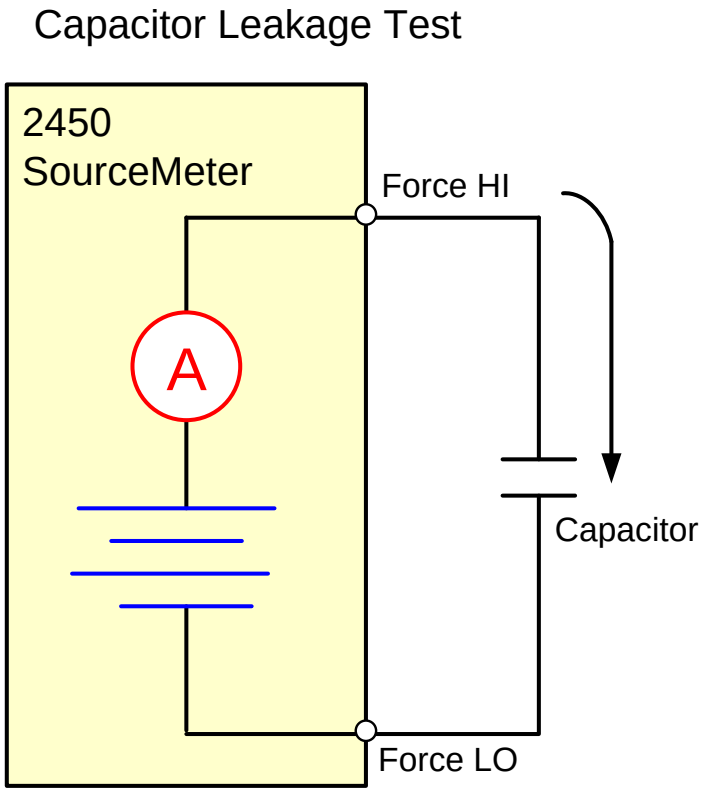
Circuit Diagram for Leakage Current

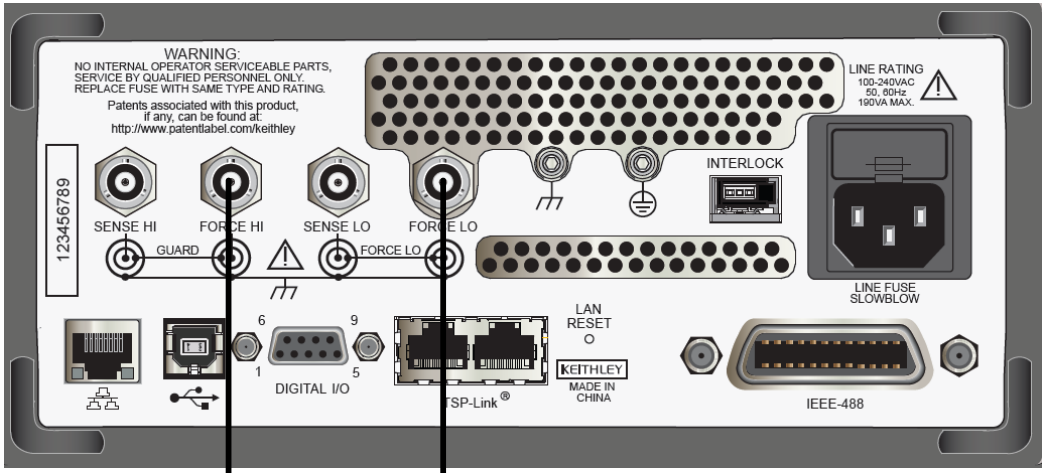


Model 2450 SourceMeter configured to source voltage, measure current.

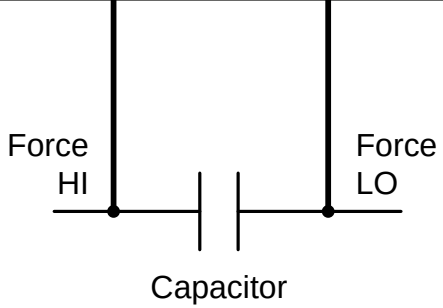
This test measures the leakage current of a capacitor using the Model 2450 SourceMeter.

In particular, a voltage is sourced, the leakage current is measured, and the resulting current and relative time stamp readings are displayed in the Instrument Console of Test Script Builder.

Model 2450 Rear Panel Connections



Model 2450 Rear Panel



The capacitor to be tested is connected between the Force HI and Force LO terminals on the rear panel using triax cables.

Because you will be measuring low current, the capacitor should be placed in a properly shielded test fixture, as described in the Model 2450 Reference Manual.

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Using the 2450_Lkg_Curr.tsp file

Based on your test requirements, you can change the test parameters that are programmed in the code. Here is a list of some of the test parameters:

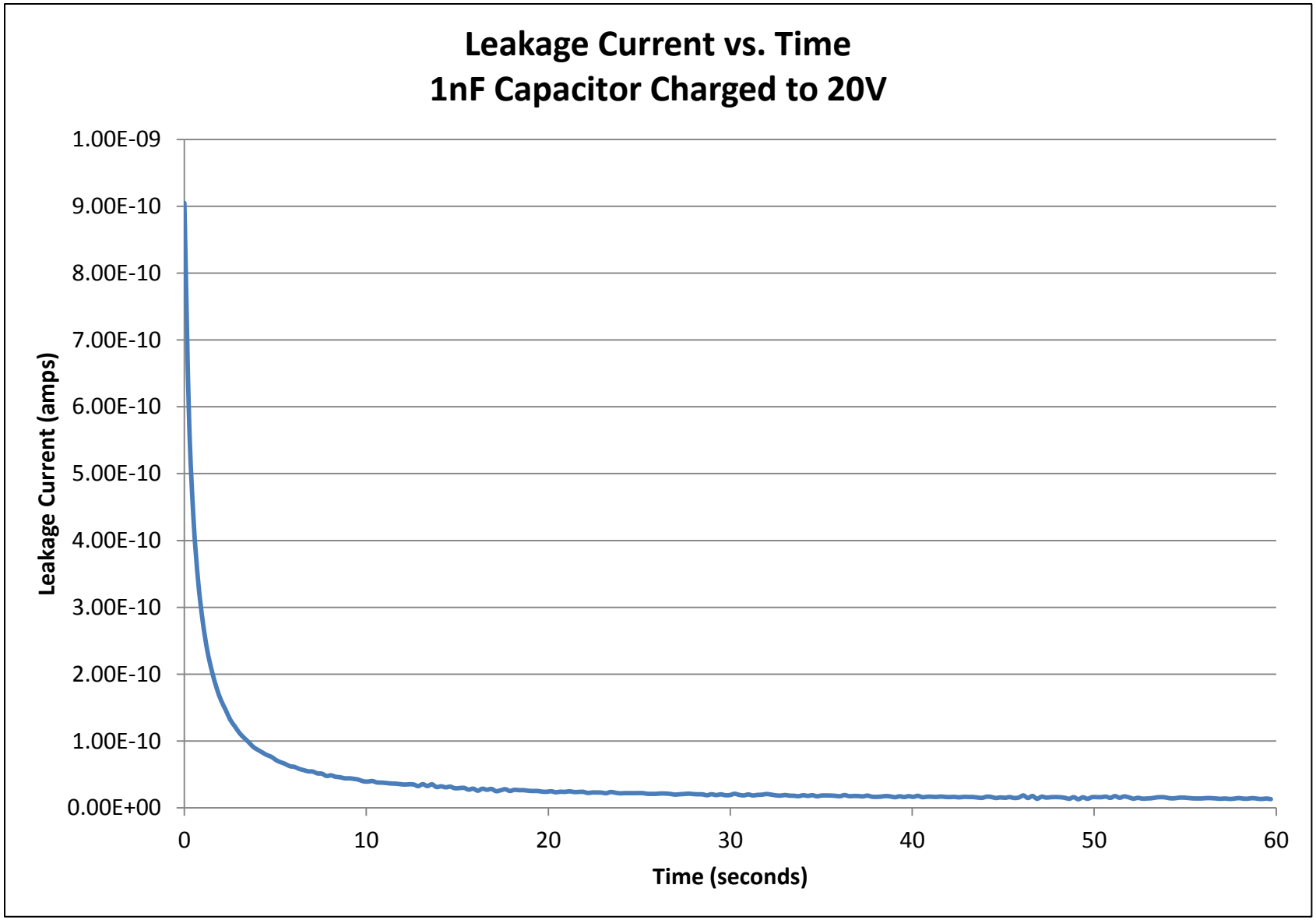
Test Parameter	Command	Default
Voltage Source Level	smu.source.level	20 V
Source Delay Time	smu.source.delay	0.2 s
High Capacitance Mode	smu.source.highc	off
Duration Time	trigger.model.load("DurationLoop", 60)	60 s
Discharge Time	delay	2 s

NOTE: You must assert the interlock to output voltages greater than 37 V.

Make sure the Model 2450 is using the TSP command set before running the code.

After the code is executed, the measurement results are displayed in the Instrument Console. From the Instrument Console, the data can be copied and pasted into a spreadsheet for graphing.

Microsoft Excel Graph of Test Results



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