

Ethernet-APL Test Guide

Test Type (Data or Power): Power

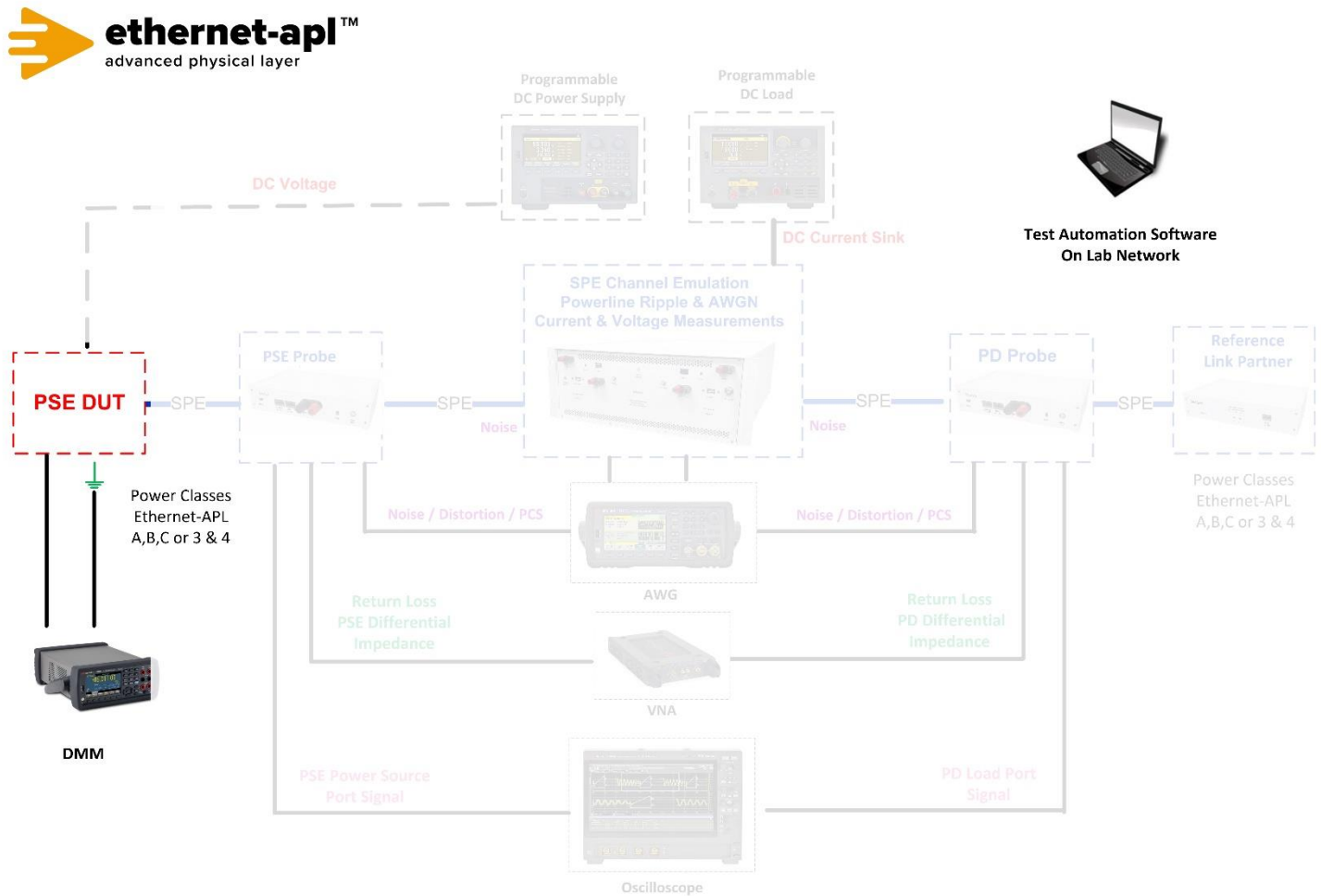
Test Name: TP.3.2 Shielding Options

Purpose/Description: To verify that a Trunk Power Source port implements a direct shielding connection to ground at the port interface.

Required Test Equipment:

1. Digital Multimeter
2. Test Automation Software

Test Setup / Connection Diagram:



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Device Under Test Setup:

- It is expected that all tests are performed with PHY communication abilities disabled. This is achieved by disabling Auto-Negotiation and setting the PHY to SLAVE mode. Regardless of the PHY state, each data line of the port under test shall be terminated with a 50 Ohm resistance behind a 1 μ F series capacitor in the Telebyte Probe.
- Enter the Power Class for the Device Under Test (Class 3 or 4) into the test automation software.

Expected Results (Pass/Fail Criteria):

TP.3.2 Step	Status	Description
5, 7	PASS	a. The port provides a direct shielding connection with a resistance less than 200 mOhm and b. If the port provides a capacitive shielding connection (optional), the connection capacitance is in the range of 3 – 10 nF
5	FAIL	The port provides a direct shielding connection, the resistance is greater than 200 mOhm
7	FAIL	If the port provides a capacitive shielding connection(optional) the connection capacitance is not in the range of 3 – 10 nF

Notes:

References:

- [1] APL Port Profile 1.1 Section 6.2
- [2] APL Port Profile 1.1 Section A.1, A.3, A.4
- [3] Methods Annex – Shield Capacitance and Resistance Measurements
- [4] Methods Annex – Disabling PHY