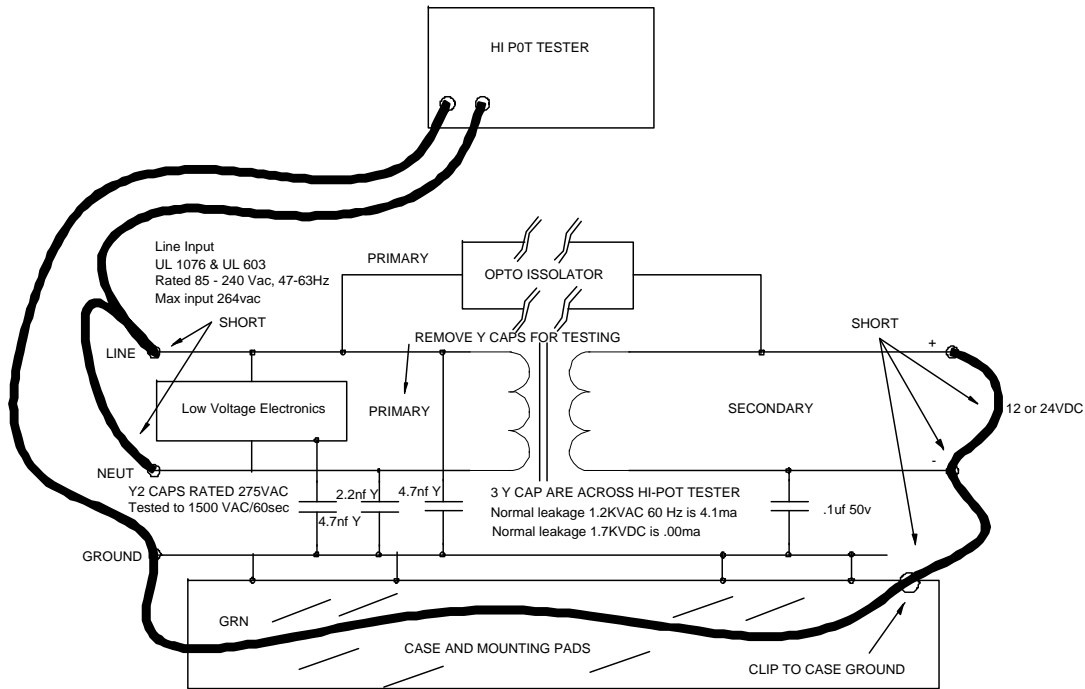


The figure below shows test setup for production dielectric testing for SPS-510 series power supplies. The shorts are important to prevent damage to electronics.



- 1) Rev 5 pcb-510 2/20/01 - All trace spaces have been adjusted to meet UL 1950 worldwide safety standards. The European safety standards are more stringent than our listings with UL. The changes were OK'd with Allan Sanedrin at UL. Allan viewed sample PCB and written approval is on file.
- 2) Due to printed circuit board and rigid case assembly, production Hi-Pot testing is not required by UL on any SPS-510 products. Dielectric tests are not required by OEM's incorporating it into their product, except where wiring to the high voltage input, such as adding another terminal block for the installer to connect too. UL is concerned that the primary wires added are not a safety hazard to the secondary.
- 3) To conform to UL 1950 standards CE models have the following changes:
 - a. ON/OFF power switch removed
 - b. Two low voltage primary traces leading to power switch are notched open.
 - c. Conformal coating Humiseal Type 1B73 1-3 mil thickness is applied to R19, R21, M1, AC LED, C17, R40 and RT1. This is to ensure dielectric where marginal clearances exist.
- 4) ESD performs periodic tests per UL1076 and UL603 standard under the heading: "Production Standard for units rated 250vac or less. Set up for this test is show in figure above.
 - a. 1000VAC and 1414VDC were applied for more than 60 Seconds.
or 1200VAC and 1697VDC were both applied for 1 second.
 - b. DC leakage for either test above should be zero for DC test. We set alarm at .5ma so if there is a failure it may save unit from mass destruction.
 - c. AC leakage for the 1000VAC test will read about 4ma. and about 4.25ma for 1200VAC test.
- 5) CE models are periodically tested with Y caps C14, C15, C16 & 50v C19 removed, all pins of C5, C1, Q1 shorted, pins 6-10 of TX-1 shorted, then primary to ground is tested with 2121vdc for 1 minute, and primary to secondary is tested with 4242vdc for 1 minute.

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