MEAN WELL ENTERPRISES CO., LTD.
No.28, Wu-Chuan 3rd Road, Wu Ku Ind. Park,
Taipei Hsien, Taiwan, 248

TEL:886-2-2299-6100
FAX:886-2-2299-6200
http://www.meanwell.com

EMI testing of component power supplies

20th Dec. 2023

This Switching Power Supply (SPS) is a "Component power supply" and therefore EMC cannot be tested independently. It needs to be installed into the end system and connected to the load. Only then the EMC check of the system as a whole can be performed. The test result will be significantly influenced by the application or assembly of the end system. Based on the explanatory document "Guide for the EMC Directive 2014/30/EU" published by the European Union, only products "intended for the end user" (such as external power supply - adaptor) should comply with the EMC directive. Component power supplies like our enclosed type open frame type SPS, which are intended for incorporation into an apparatus by professional system integrators and then be sold to the end users, are basically excluded from the EMC directive. However, in order to enable to customers' end system to comply with the EMC Directive, MEAN WELL's component SPS are still designed to meet the requirements of the EMC Directive.

MEAN WELL switching power supplies are standard products that are widely used in all kinds of applications, so it's hard to confirm the EMC characteristics of all possible installations.

1. Considering most component power supplies will be built into a metal cabinet of customers' system assemble the power supply on a defined metal plate (as shown in Figure 1)
2. Execute the tests to simulate a representative of normal use in the intended applications (as defined in the EMC Directive). We use resistive load that are fixed on the metal plane to test the Full load, 50% load, MEAN WELL specific load. The output wire should be twisted and flatly placed on and within the range of the metal plate (as shown in Figure 2).
3. For specific applications such as LED lighting or battery charging, we use our chosen standard lamps (lighting) or battery loads for verification.
4. The deployment of the test system will refer to the actual application and will define whether the power supply and the load should be put together or separated apart.

The EMI tests described above are executed by the lab of authorized third party and preserve suitable margin (technical construction file prepared). Our CE declaration is also been signed based on this report and we'll check regularly the conformity of our power supplies from time to time. For more detailed information on the EMI tests, please contact MEAN WELL or one of our authorized distributors.

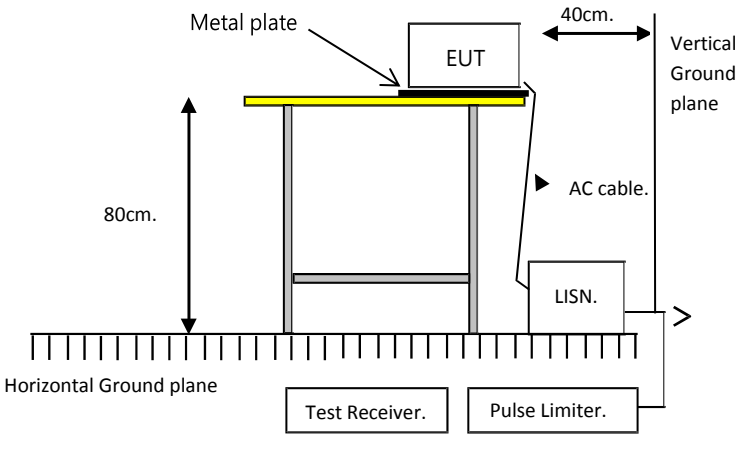


Figure 1 : System Deployment of EMI Test

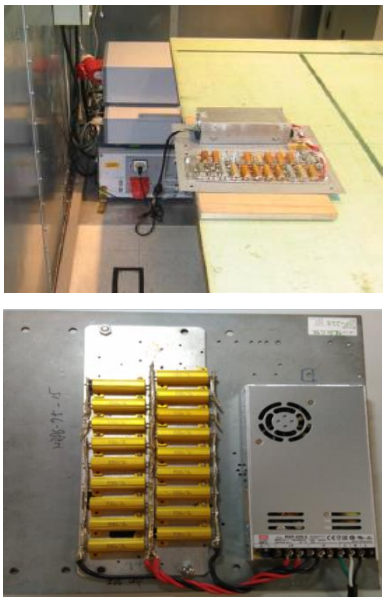


Figure 2 : Example of Test Setup

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000