LISN

LINE IMPEDANCE STABILISATION NETWORKS

Automotive LISN to CISPR25

THE FULL SPECIFICATION ACCESSORY FOR AUTOMOTIVE CONDUCTED EMISSIONS TESTING

- **Two versions, rated to 10 or 100A continuous.**
- **Rigorous, accredited calibration to 108MHz**
- **Full calibration data included with each LISN.**
- **Commercial, military and other special types available to order.**

The automotive CISPR25 LISNs are part of a wide range of EMC test equipment available from Laplace. These automotive LISNs are characterised by a demanding performance specification extending above 100MHz. Rigorous design and calibration techniques ensure that they fully meet the demanding requirements of CISPR25.
25Amp and 100Amp versions can be supplied.

PURPOSE
In order to provide accurate and repeatable measurements, the EMC test standards require the supply to a unit-under-test to have a defined power source impedance. This impedance is provided by a Line Impedance Stabilisation Network (LISN).

CONFIGURATION
The LISN is conventionally a single-line, three terminal device, with one terminal and the case earthed. The other two terminals are connected in series with the supply. The RF output connector is a BNC socket. A 50ohm co-axial, non-inductive resistor can be supplied as an option when a current probe is used to take measurements and when the LISN is in the non-measured side of the supply. The two line version is as above but with another line added..

CONSTRUCTION
This LISN is a particularly robust and stable design. The case is constructed from aluminium sheet with a flanged base to facilitate direct bonding to a ground plane.

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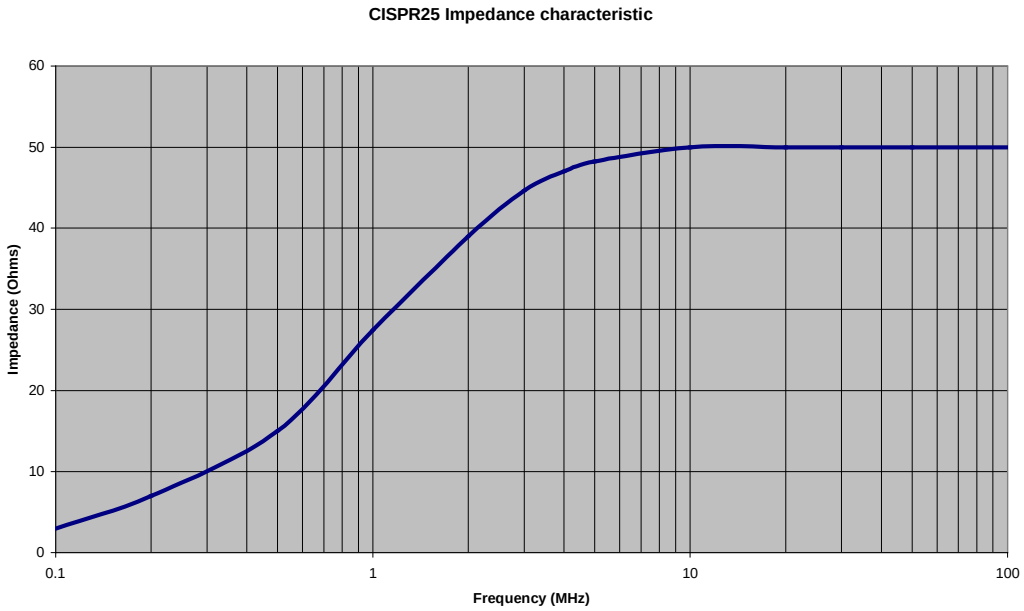
SPECIFICATION

General specifications

Current rating (Continuous)	10 or 100Amps, rms ac or dc.
RF Output socket:	50ohm, BNC
RF load:	50ohm co-axial non-inductive hi-surge resistor (option).
Frequency range:	100KHz - 108MHz .
Impedance-frequency Characteristic:	See impedance plots below.
Inductance:	5uH ±10%
Calibration:	In accordance with CISPR25, clause 6.5.1.1.
Construction:	Aluminium case with base mounting flanges. Alochrom treated, durable black paint finish on top surfaces. Integral 1uF shielded capacitor fitted.
Ground bonding:	Qty 4 M8 screw locations in flange.
EUT line connections:	6mm, Shrouded 'snap-lock' single pole sockets. Mating plugs included with LISN.
Line voltage:	Up to 100V dc.
Environmental: Working:	5 - 35°C, up to 85% RH
Storage: -	10 - 45°C, up to 95% RH
Size:	500mm wide x 180mm deep x 100mm high.
Weight:	6kg

Impedance Characteristics



Note:

1. Generally, each line of a power feed to an EUT will need a LISN. Thus for a dc supply, two LISNs are required. The RF measurements are taken from one LISN and the other must have a 50ohm load connected to the output BNC socket.
2. Any ancillary equipment used with the EUT will also require a LISN in series with each line.
3. When used in accordance with CISPR25, current probe method, this LISN is used to stabilise the source impedance of a supply and the RF terminal is only used to attach the 50ohm load. Measurements of the RFI interference are taken from the EUT connection with a current probe.

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