LISN

Military Specification versions to UK and US standards

LINE IMPEDANCE STABILISATION NETWORKS

THE FULL MILITARY SPECIFICATION ACCESSORY FOR CONDUCTED EMISSIONS TESTING

- **Rated up to 100A continuous.**
- **Rigorous, accredited calibration to 400MHz**
- **Full calibration data included with each LISN.**
- **Commercial, automotive and other special types available to order.**

The military specification LISNs are part of a wide range of EMC test equipment available from Laplace. These Mil Standard LISNs are characterised by a demanding performance specification extending up to 400MHz. Rigorous design and calibration techniques ensure that they fully meet the demanding requirements of Def Stan 59-41.
100amp LISNs to the US military requirements (Mil461E) can also 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 a three terminal device, with one terminal and the case earthed. The other two terminals are connected in series with the supply. The RF load is provided via a 50ohm co-axial, non-inductive resistor. Supplied with the LISN..

CHARACTERISTICS
The key parameters of the LISN are defined by the impedance/frequency characteristics measured between the EUT terminal and case for the condition (a) supply terminal connected to case and (b) supply terminal unconnected. These characteristics are shown overleaf.

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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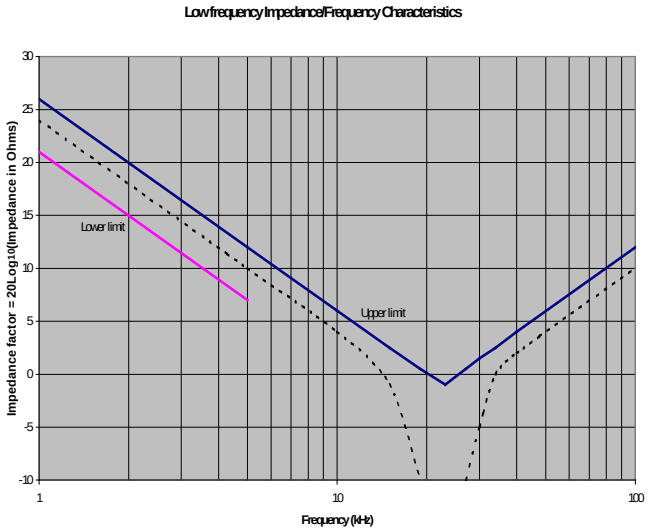
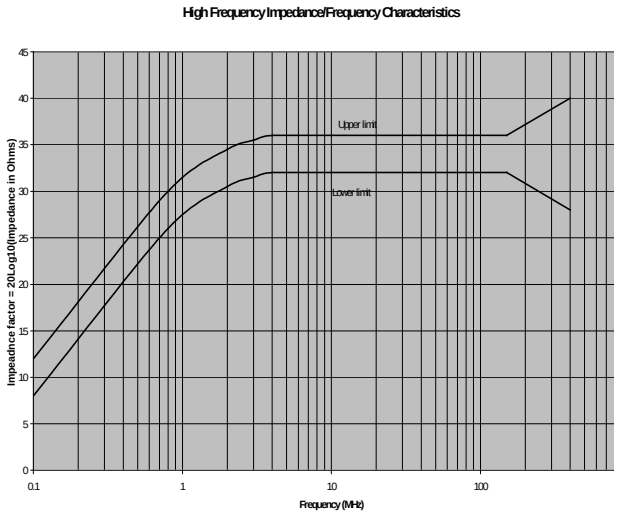
SPECIFICATION

General specifications

Current rating (Continuous)	100Amps, rms ac or dc.
Power Frequency	up to 400Hz
RF Output socket:	50ohm, BNC
RF load:	50ohm co-axial non-inductive hi-surge resistor included.
Frequency range:	DefStan59-41: 20Hz - 400MHz (Calibration data 1KHz – 400MHz) MilSpec461E:
Impedance-frequency Characteristic:	See impedance plots below.
Inductance:	5uH
Calibration:	In accordance with Def Stan59-41, (Part 5)/2, clause 10.3. Or MilSpec461E
Construction:	Aluminium case with base mounting flanges. Alochrom treated, durable black paint finish on top surfaces. Integral 10uF sheilded 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 450V ac rms, 850v 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:	10kg

Impedance Characteristics





Note:

1. Generally, each line of a power feed to an EUT will need a LISN. Thus for a dc or single phase supply, two LISNs are required. For a three phase feed, three or four LISNs will be required (the fourth LISN for any Neutral line, if connected).
2. Any ancillary equipment used with the EUT will also require a LISN in series with each line.
3. When used in accordance with DefStan59-41, 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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