MD 101

ESD Target
Current transducer

The MD 101 is a current transducer for the measurement and calibration of ESD pulses.

It's construction is specified in IEC 61000-4-2. This standard gives the mechanical data but does not include any data or graphs on the transfer characteristics or the insertion loss.

SCHAFFNER's MD 101 does comply entirely with the standard.

At delivery it comes with a certificate of compliance and a data plot.

Additional information to the product and the measurement technique is given in the following pages.

21-7-2003 / Ry

Calibration of the MD 101 (Pellegrini Target)

1. On our production units we measure the dc resistance with a precision Ohmmeter. No other electrical measurements are made in a routine manner.

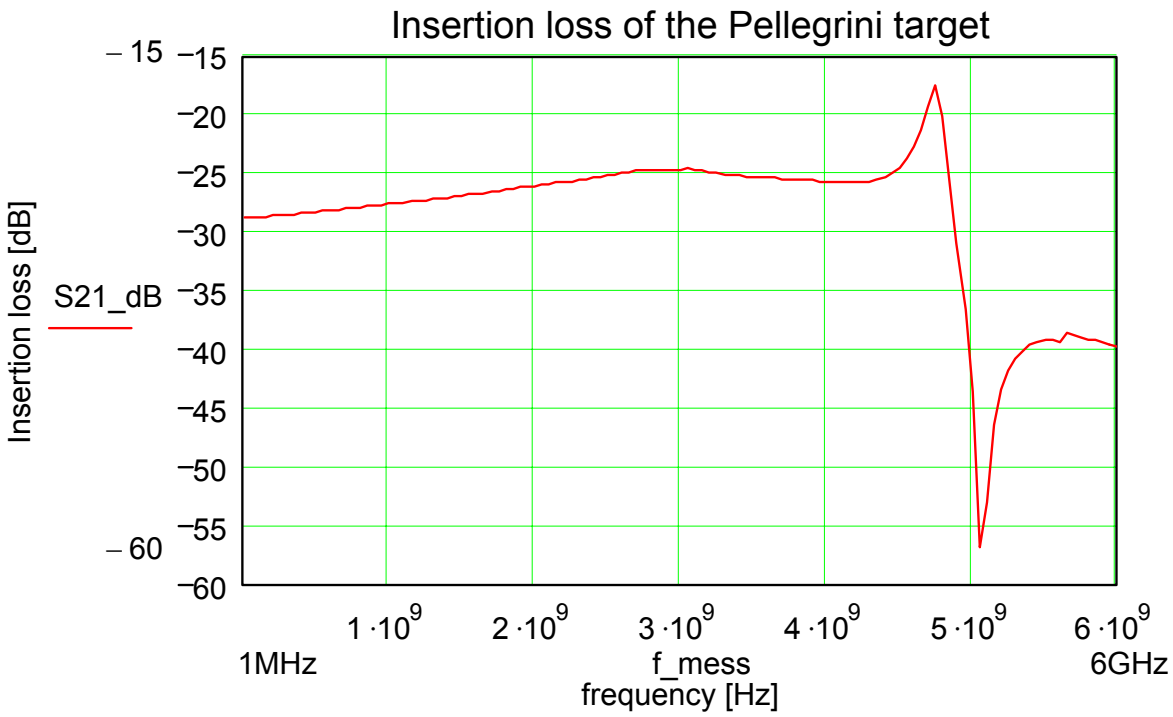
2. Our ESD calibration set-up has been calibrated by METAS (The Swiss authority on metrology) encompassing not only the target but also the cabling, the attenuator and the oscilloscope considering insertion loss parameters and reflection properties.

3. Jan Sroka developed together with the ETH Zurich (Polytechnical high school) a coaxial, conical adapter (a very elaborate, highly precise mechanical part) which allows insertion loss measurements on the ESD target (MD 101 and more advanced, new designs). This adapter and the method of measurement has been accredited in the mean time by METAS. The method is not used in an industrial or routine way.

4. Page two shows the typical transfer characteristic of a Pellegrini target (MD 101)

5. These calibration issues are not a easily handled matter. Further information may be obtained by Dr. Jan Sroka. jsroka@schaffner.com

22-11-2001
Max Ryser


Insertion loss of the Pellegrini target
Insertion loss [dB]
S21_dB
−15
−20
−25
−30
−35
−40
−45
−50
−55
−60
1·10^9
2·10^9
3·10^9
4·10^9
5·10^9
6·10^9
1MHz
f_mess
frequency [Hz]
6GHz

19.3.2001

SCHAFFNER
Test Equipment

Certificate of compliance

This equipment complies with the published specifications and has been verified to the applicable procedures.

Certificate no	**80910514726**
Equipment	**MD 101**
Serial no.	**1051**
Verification	**successful**
Test procedure no.	**501-090**
Specification conformance to	**IEC 1000-4-2**
Recommended verification interval	**-**

SCHAFFNER EMV AG
SWITZERLAND
Quality control

Sig.

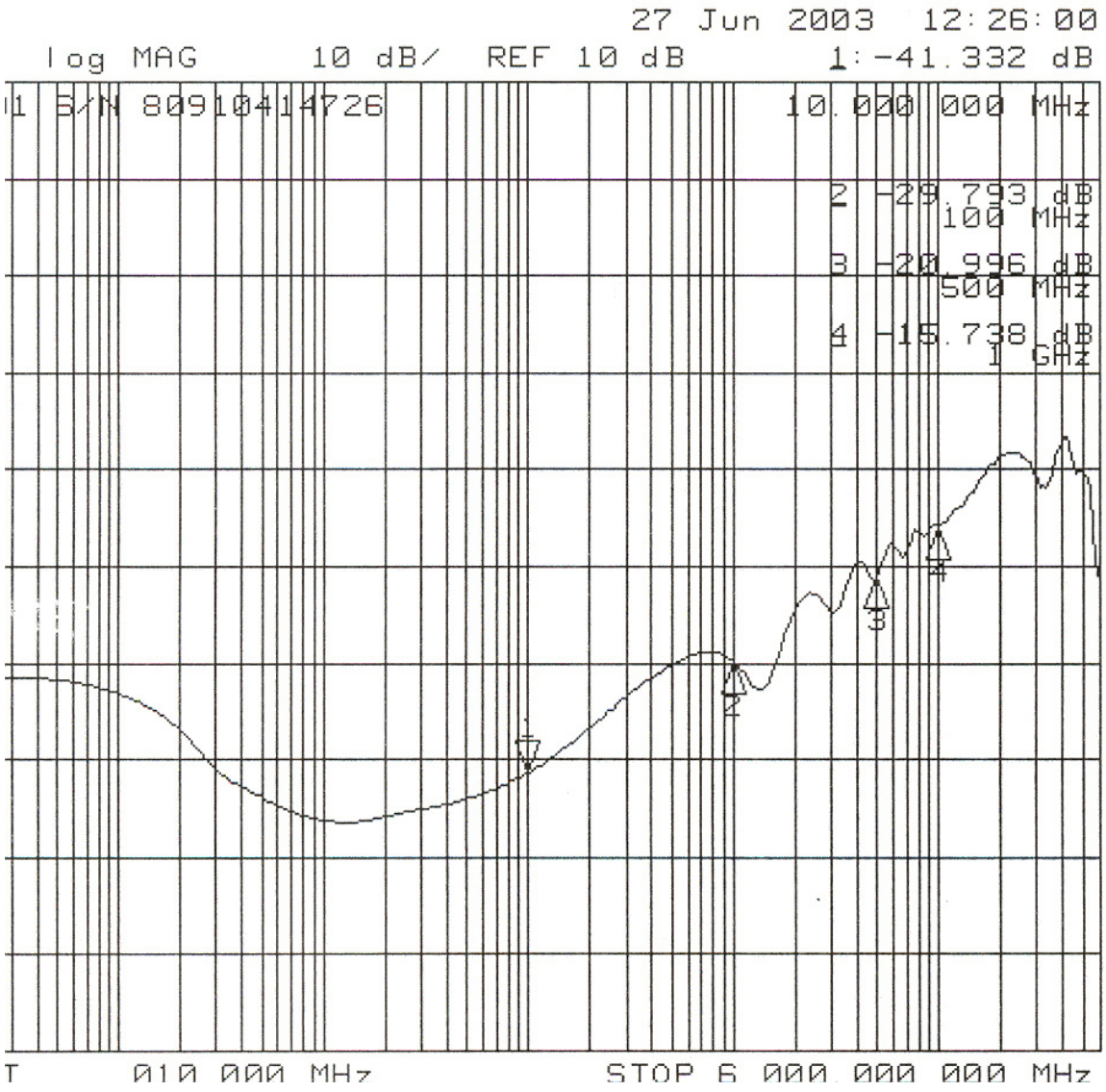
W.Schaad

SCHAFFNER EMV AG
TESTEQIPMENT
NORDSTRASSE 11
CH - 4542 LUTERBACH

Date:

Sig.:

MD 101
Example of a plot as delivered with the product



The following are pages from IEC 61000-4-2

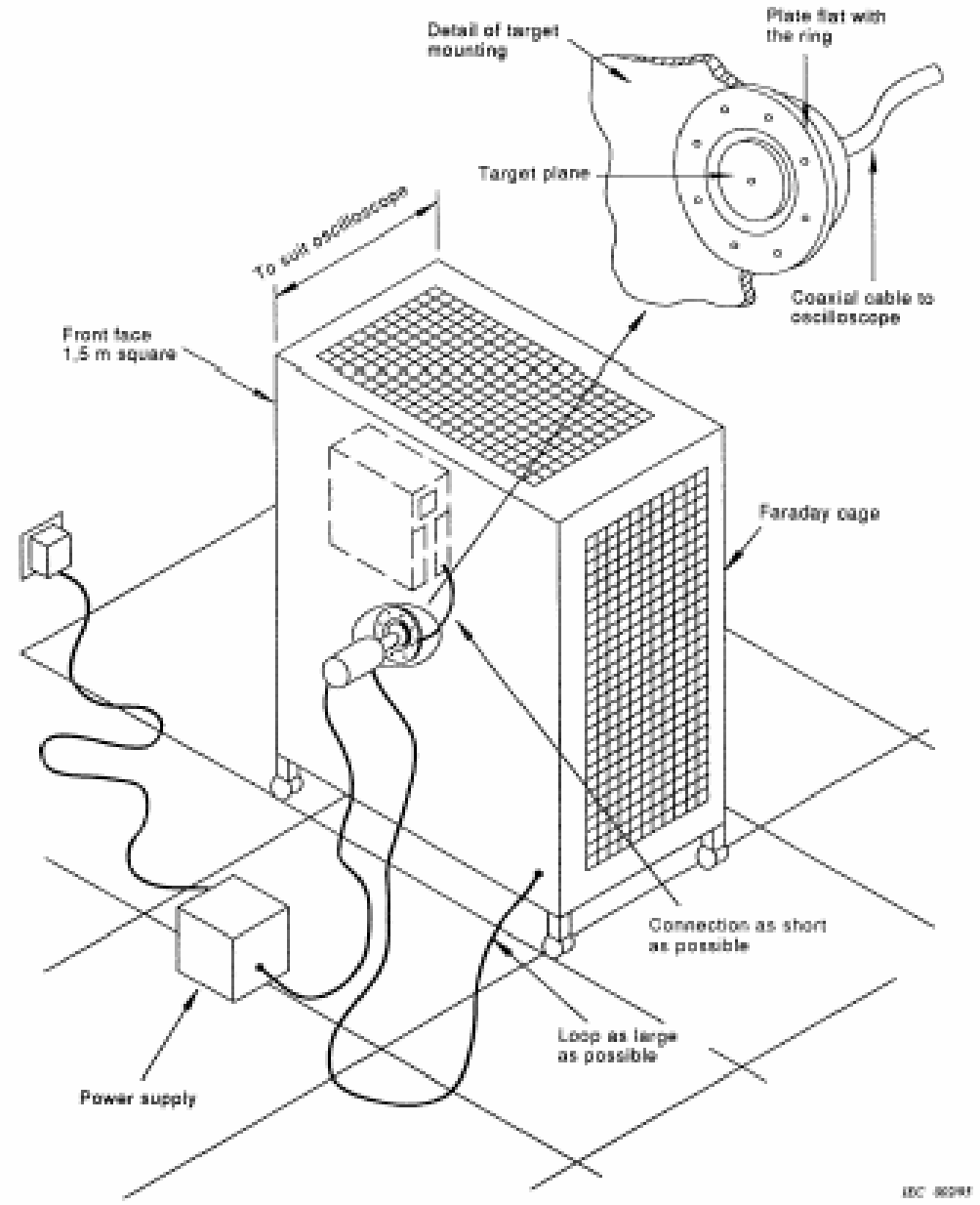


Figure 2 – Example of arrangement for verification of the ESD generator