

STRIPLINE FOR IMMUNITY TESTS Mod. EMC-STPL



Description

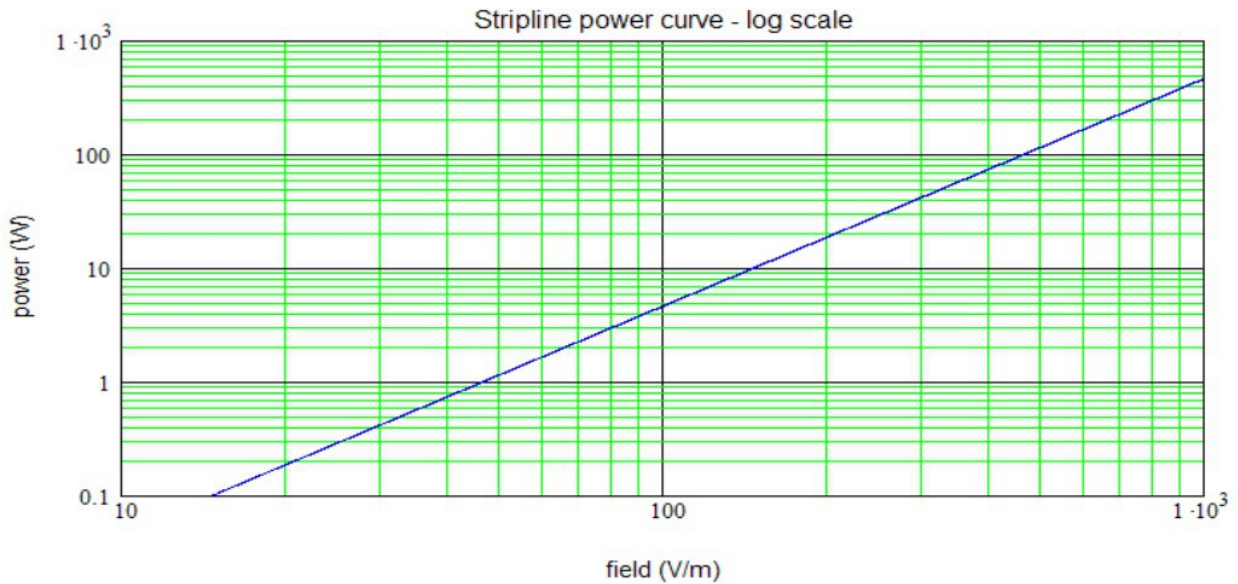
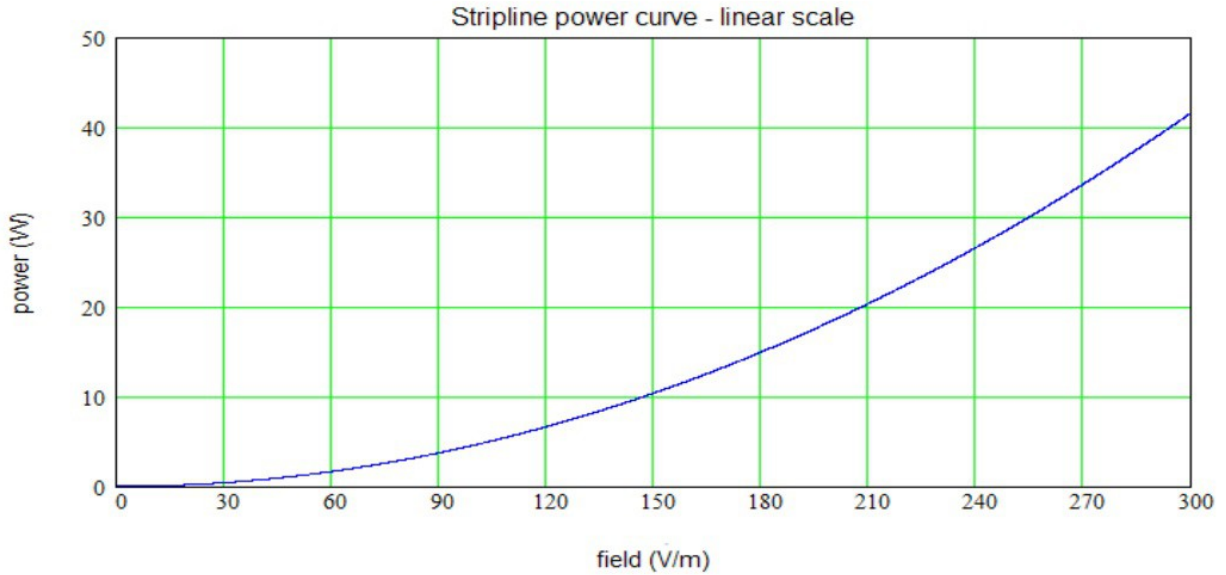
The EMC-STPL striplines are designed for automotive immunity testing of components according to the standards ISO 11452-5 and SAE J1113-23. Striplines are a variation of TEM lines which allow an application of electromagnetic fields with a good homogeneity in the test volume.

The stripline is fixed on a table and it is easy to move. It is assembled on 2 joined table with foldable legs in order to reduce the occupied space when storage or during the transport. It is the only stripline on the market able to carry out test up to 1 GHz with excellent return loss. Manufactured in hot galvanized steel and aluminum with Alodine treatment and Teflon dielectric supports. The Striplines are available with 50 Ohm or 90 Ohm impedance.

Technical Specifications	STPL-50	STPL-90
Frequency range	DC to 1 GHz	DC to 1 GHz
Max. input power	1000W	1000W (200W with impedance adaptor)
Wave impedance	377 Ohm	377 Ohm
Impedance	50 Ohm +/- < 5 Ohm	90 Ohm +/- < 6 Ohm
Typical VSWR	Better than 1.3	< 1.92
Return Loss	Better than 20 dB	>10dB up to 1GHz
Connector type	N female 50 Ohm	N female 75 Ohm
Typical CW input power for 10V/m	1.1W (20dBm)	1.1W (20dBm)
Net Power for 10V/m as computed according to ISO 11452-5	0.045W (16.5 dBm)	0.045W (16.5 dBm)
Voltage/Field strength relation	1V=6.67 V/m	1V=6.67 V/m
Maximum field strength	500V/m	500V/m
Field strength ripple	< +/- 2dB	< +/- 2dB
Field homogeneity	About 2x0.37x0.05m (LxWxH)	About 2x0.37x0.05m (LxWxH)
Height of the septum	15cm over the Ground Plane.	15cm over the Ground Plane.
Size (LxWxH)	430x150x90cm (service position)	350x90x90cm (service position)
Height of the table	80cm	80cm
Weight	Approx. 140Kg	Approx. 100Kg
Options	Filter box	Filter box, Impedance adapter

Striplines – Typical power requirements

The following diagrams shows the power requirements of the amplifiers for a VSWR of 1:4 (without modulation, no accessories and without computing the mismatch of the dummy load). The calculated values are referred at the field in the centre of the test area. (For the STPL-90 the calculation doesn't take into account an optional impedance adapter 50 to 90 Ohm).



Impedance adapter for 50 Ohm Striplines

Because the RF amplifier available on the market have an impedance of 50 Ohm, the direct connection to a 90 Ohm stripline cause a mismatch that can lead to dysfunction of some amplifiers. To avoid this problem we suggest an impedance adapter to normalize the impedance between the input of the stripline and the output of the amplifier.

Specifications

Type	50/90 Matching Pad
Frequency range	DC to 1GHz
Maximum input power	200 W
Input impedance	50 Ohm (N connector)
Output impedance	90 Ohm (N connector)
VSWR	Better than 1:1,3
Correction factor	2,5 dB
Weight	2 Kg