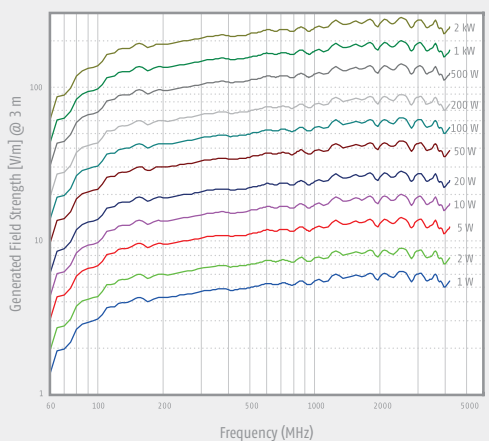
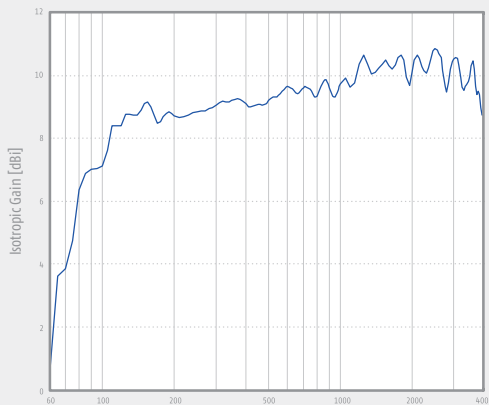
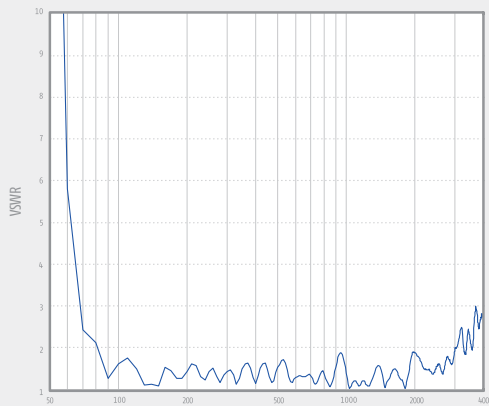
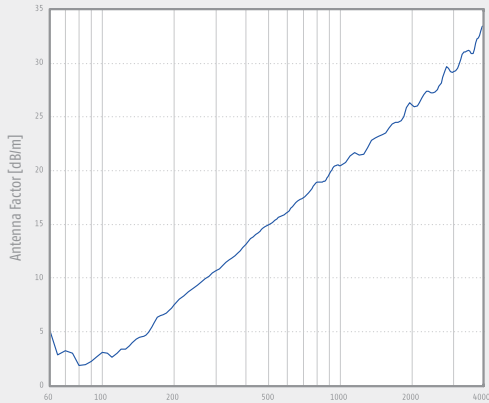


DOUBLE STACKED LOG.-PERIODIC ANTENNA – AXL-80, 70 MHz – 4 GHz

for immunity tests and emission measurements



Description

Double-stacked log.-periodic antennas have mainly been developed in order to reach the highest field strength levels acc. to automotive-, avionics- and military standards with as less as possible input power. Antenna gain saves amplifier power!

The stacked design helps to focus the directional pattern of the H-plane somewhat, resulting in a typical gain improvement of 2.5dB compared to an ordinary LP antenna. This is especially important for immunity testing, where a maximum field strength and a good field uniformity is required. The beam-width in the E-plane and the H-plane are nearly identical, providing an optimized illumination of the EUT with minimized ground reflection influence.

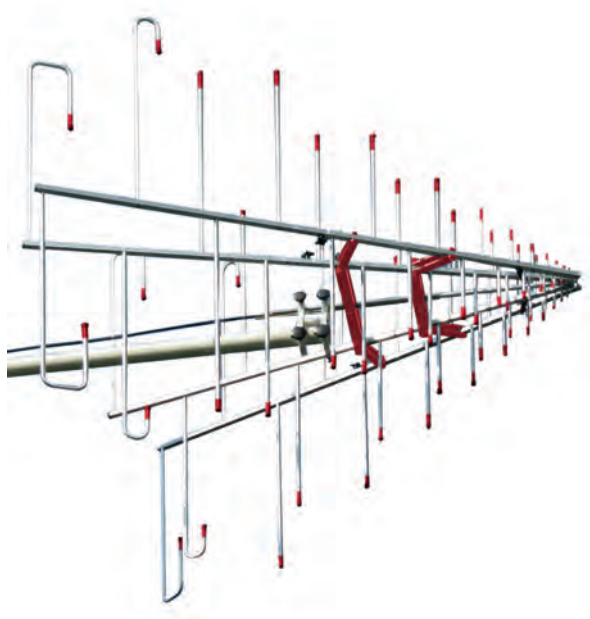
Further the cross polar rejection of the AXL-80 is excellent and the high and flat gain of about 9dBi over a broad frequency range is the main advantage of the AXL-80. Because of its physical dimensions the main application of the AXL-80 is in bigger anechoic chambers / test sites for radiated immunity tests and emission measurements. From its technical / mechanical design it is a double-stacked log.-periodic antenna, consisting of two excellent ordinary log.-periodic structures. For easy transport and storage it is possible to remove the rear elements of the antenna, which are fixed by fast links.

Technical specifications

Frequency range	70 MHz - 4 GHz
Max. input power	1.5 kW (intermitt.)
(N-connector):	1 kW (cont.)
Max. input power	3 kW (intermitt.)
(7 / 16-connector)	2 kW (cont.)
Nominal impedance:	50 Ω
Isotropic gain:	9 ± 2 dBi
Antenna factor	2 ... 32 dB/m
Standing wave ratio SWR typ.:	1.6 (f < 3GHz)
Front to back ratio:	8 - 22 dB
Cross polarization	> 30 dB
3 dB beamwidth typ. (E-Plane):	60° - 75°
3 dB beamwidth typ. (H-Plane):	50° - 65°
Dimensions (W x L x D) in mm:	1480 x 1480 x 1340
Weight:	8.1 kg
Fixation	∅ 22mm mounting tube
Use:	Emission measurements Radiated immunity tests

DOUBLE STACKED LOG.-PERIODIC ANTENNA – AXL-80S, 70 MHz – 4 GHz

with folded elements for immunity tests and emission measurements with limited space

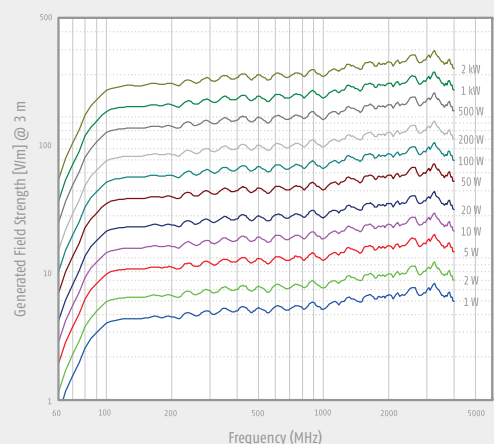
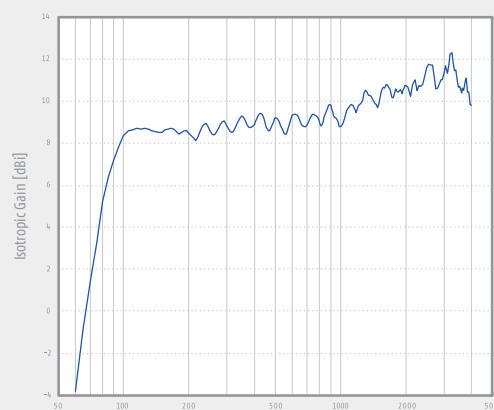
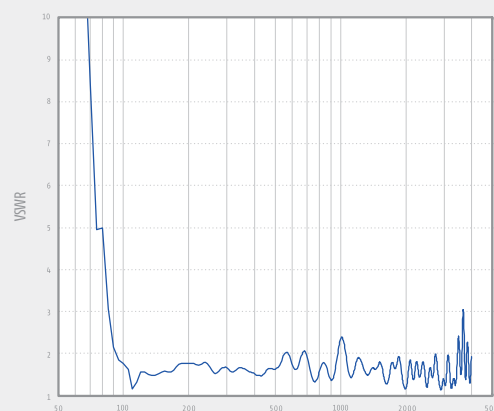
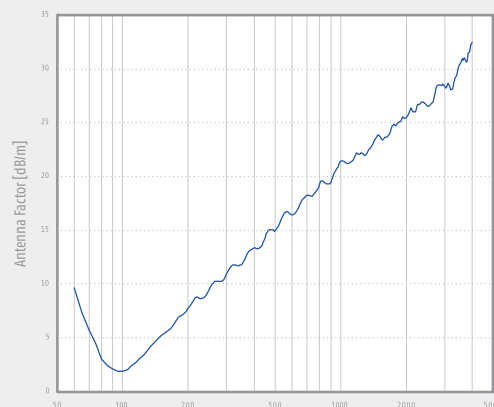


Description

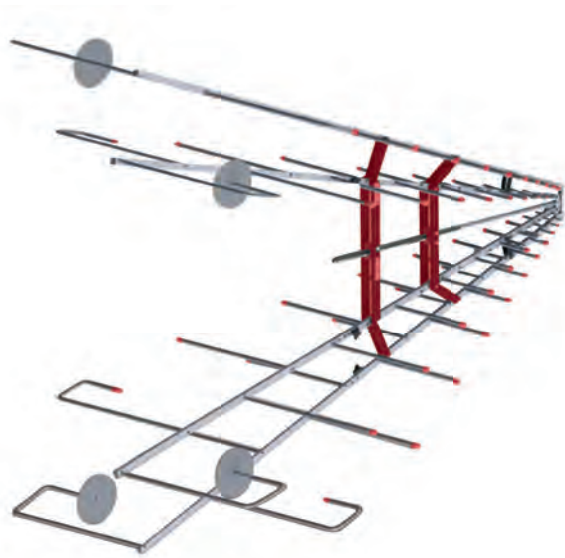
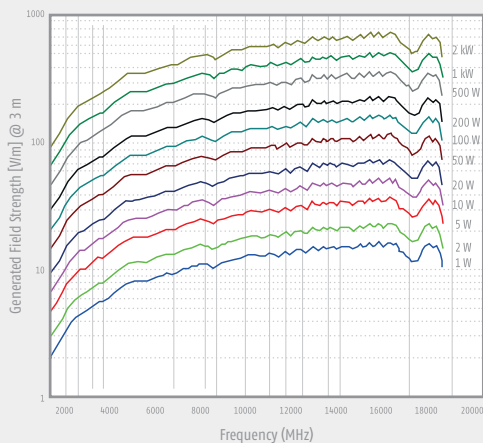
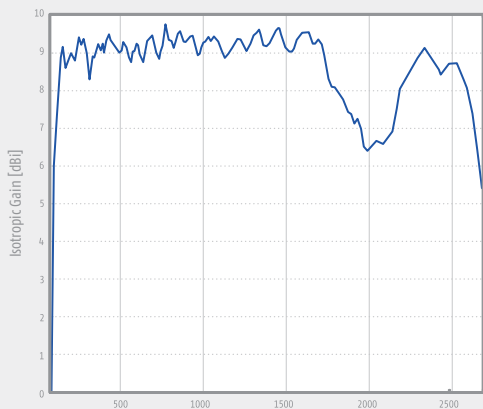
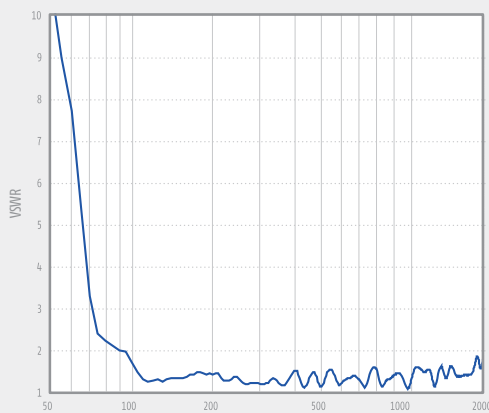
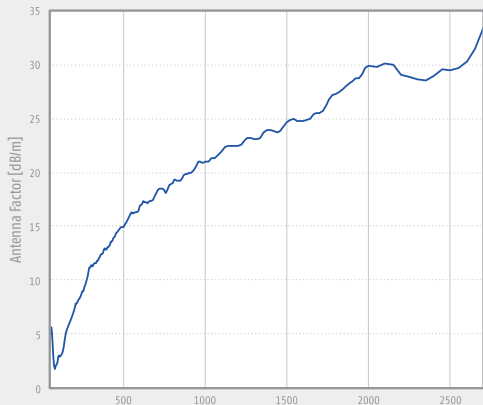
The AXL-80S has the same antenna design as the AXL-80 (see page 4), but with folded rear elements. The folded rear elements reduce the width of the AXL-80S to 1,480 mm. That is important for some standards, in order to keep the minimum distance of 25cm to the floor when testing in vertical polarization. But also for applications in smaller anechoic chambers the reduced dimensions might be an advantage.

Technical specifications

Frequency range	70 MHz – 4 GHz
Max. input power	1.5 kW (intermitt.)
(N-connector):	1 kW (cont.)
Max. input power	3 kW (intermitt.)
(7 / 16-connector)	2 kW (cont.)
Nominal impedance:	50 Ω
Isotropic gain:	9 \pm 3 dBi
Antenna factor	2 ... 32 dB/m
Standing wave ratio SWR typ.:	1.6 (f < 3GHz)
Front to back ratio:	8 – 22 dB
Cross polarization	> 30 dB
3 dB beamwidth typ. (E-Plane):	60° – 75°
3 dB beamwidth typ. (H-Plane):	50° – 65°
Dimensions (W x L x D) in mm:	1480 x 1480 x 1340
Weight:	8.1 kg
Fixation	\varnothing 22mm mounting tube
Use:	Emission measurements Radiated immunity tests



STACKED LOG.-PERIODIC ANTENNA – AXL-80ES, 80 MHZ – 2.7 GHz



Description

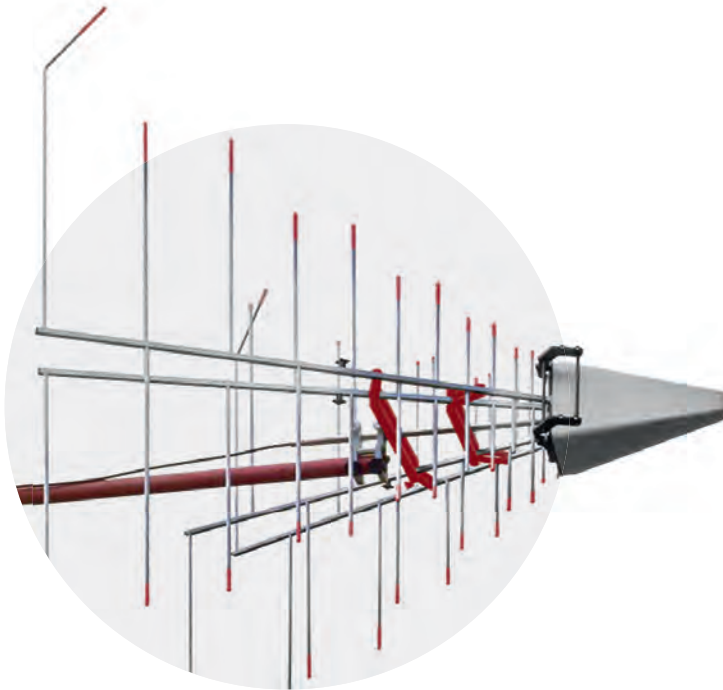
The AXL-80ES special is nearly identical like the AXL-80E but with folded longest elements and smaller structure angle.

The stacked Log Periodic Dipole Antenna (Stacked LPDA) consists of two ordinary Log.-Per. structures. The excellent characteristics (flat gain over a large bandwidth, low SWR) of the ordinary LPDA designs could be maintained using the stacked LPDA design. The stacked design helps to focus the directional pattern of the H-plane somewhat, resulting in a typical gain improvement of 2.5 dB compared to an ordinary LP antenna. This is especially important for immunity testing, where a maximum field-strength and a good field uniformity is required. The beam width in the E-Plane and the H-plane are nearly identical, providing an optimized illumination of the EUT with minimized ground reflection influence. Further the cross polar rejection of the AXL-80ES is excellent. The fast-links allows to disassemble the rear elements without any need for further tools within a few seconds. These fast-links divide the antenna into five parts, which can be stored and transported easily.

Technical specifications

Frequency range	80 MHz - 2.7 GHz
Max. input power (N-connector)	1 kW (const.) 1.5 kW (intermitt.)
Max. input power (7 / 16-connector)	2 kW (cont.) 3 kW (intermitt.)
Nominal impedance:	50 Ω
Standing wave ratio SWR typ.:	< 1.5
3 dB beamwidth typ. (E-Plane):	47°-87°
3 dB beamwidth typ. (H-Plane):	41°-107°
Dimensions (W x L x D) in mm:	1500x1740x1400
Weight:	9.8 kg
Fixation	∅ 22mm mounting tube

STACKED LOG.-PERIODIC ANTENNA – AXL-80-6G, 70 MHz – 10 GHz

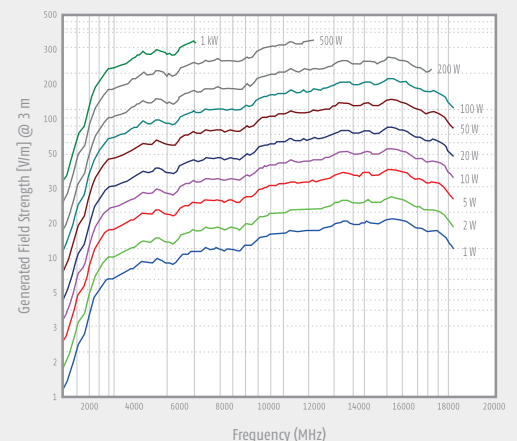
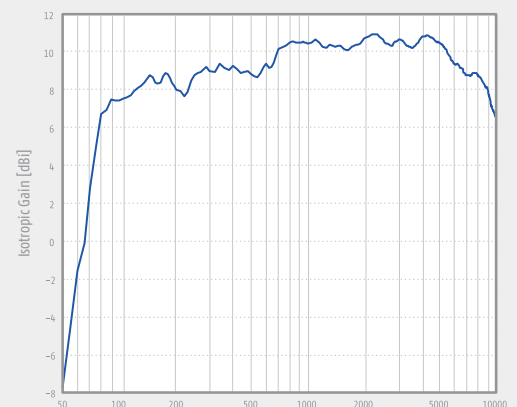
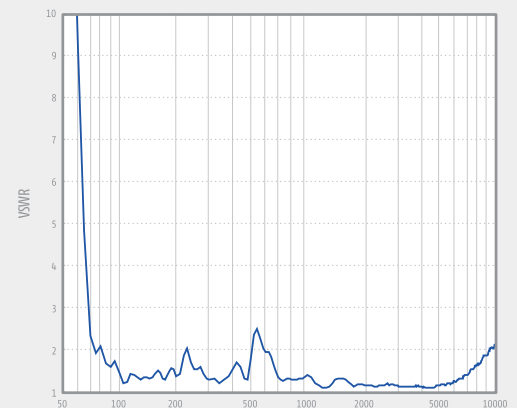
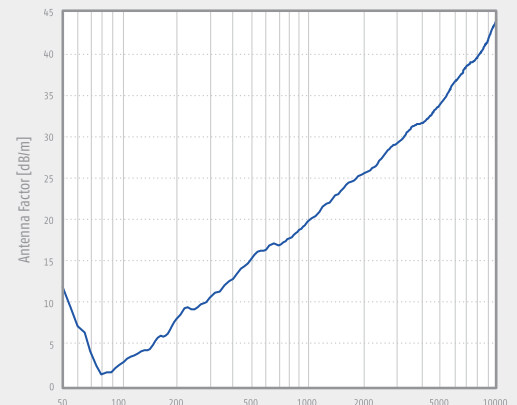


Description

The AXL-80-6G was especially designed for wideband immunity tests. The unique AXL-80-6G is able to cover the entire frequency range from 80 MHz to 10 GHz with a typical isotropic farfield gain of 8.6 dBi with a ripple of less than ± 2.3 dB only. This unrivaled bandwidth was achieved by combining the both well proven antenna designs AXL-80 and the MAX-9. The AXL-80-6G does provide the optimum out of gain and field uniformity at the same time as well as both basic antennas do. For mechanical reasons the antenna comes with an ultra-low loss radome cover to protect the radiating elements at the antenna tip. By default, the AXL-80-6G is equipped with fast links for the rear radiating elements, which are responsible for the low frequency range between 70 MHz and 180 MHz. These unique fast links allow the quick disassembly of the antenna within less than a minute into five handling-friendly parts. The rear radiating elements can be omitted if there is no need to cover the frequency range from 70 MHz to 180 MHz.

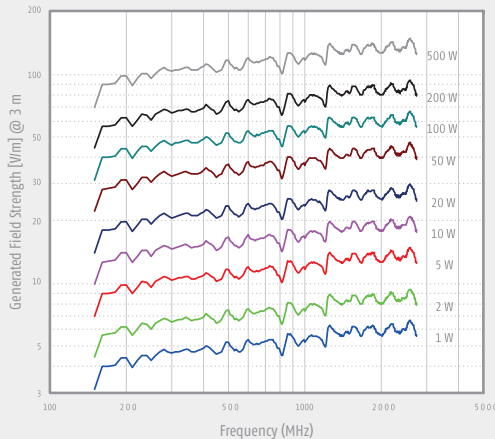
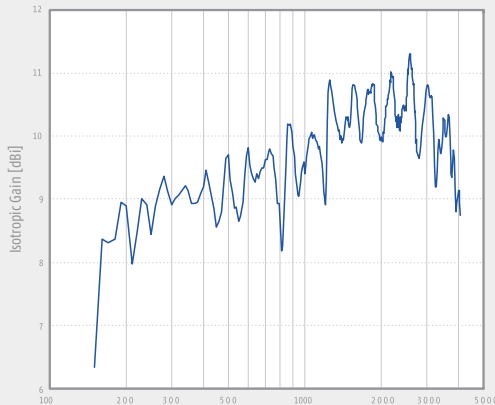
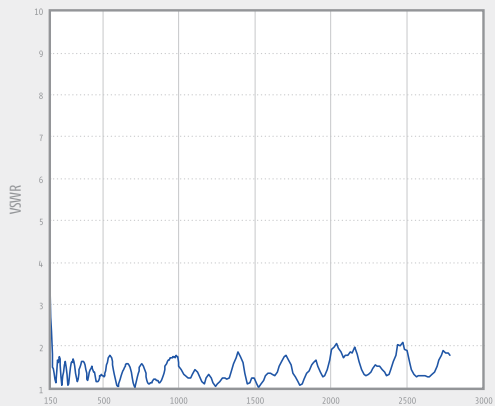
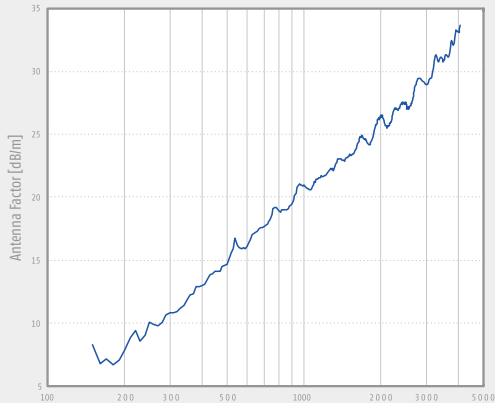
Technical specifications

Frequency range	70 MHz – 10 GHz
Max. contin. Power	1.5 kW (f < 100 MHz) 500 W (f < 1 GHz) 200 W (f < 8 GHz)
Nominal impedance:	50 Ω
Pattern Type	directional
Isotropic Gain	8.6 dBi \pm 2.3 dB
VSWR typ.:	< 2
Dimensions (W x L x D) in mm:	1690 x 1640 x 2002
Weight:	10.2 kg
Fixation	\varnothing 22mm mounting tube
Connector	Typ N



DOUBLE STACKED LOG.-PERIODIC ANTENNA – AXL-200, 150 MHz – 4 GHz

for immunity tests acc. to automotive standards



Description

The AXL-200 has especially been designed for the generation of high field strength levels acc. to automotive immunity standards. The small dimensions of the antenna does also allow to keep the min. required distance of 25cm to the floor, when testing in vertical polarization.

From the mechanical design it's a double-stacked logarithmic periodic antenna, consisting of two excellent ordinary log.-periodic structures. This design guarantees a high and flat gain of 9-10dBi over a large bandwidth and a low SWR.

The stacked design helps to focus the directional pattern of the H-plane somewhat, resulting in a typical gain improvement of ca. 2 dB compared to an ordinary LP antenna. This is especially important for immunity testing, where a maximum field strength and a good field uniformity is required. The beamwidth in the E-plane and the H-plane are nearly identical, providing an optimized illumination of the EUT with minimized ground reflection influence. Further the AXL-200 has an excellent cross-polar rejection.

Technical specifications

Frequency range	150 MHz – 4 GHz
Max. input power (N-connector):	2 kW (intermitt.) 1 kW (cont.)
Max. input power (7 / 16-connector)	3 kW (intermitt.) 2 kW (cont.)
Nominal impedance:	50 Ω
Isotropic gain:	9 ... 10 ± 1 dBi
Antenna factor	8 ... 24 dB/m
Standing wave ratio SWR typ.:	< 1.5
Front to back ratio:	> 16 dB
Cross polarization	>30 dB (200 MHz ... 1 GHz)
3 dB beamwidth typ. (E-Plane):	64° - 53°
3 dB beamwidth typ. (H-Plane):	63° - 44°
Dimensions (W x L x D) in mm:	930 x 890 x 940
Weight:	4.6 kg
Fixation	Ø 22mm mounting tube
Use:	Radiated immunity tests and Emmission measurements acc. to automotive standards