



HV TECHNOLOGIES, Inc.

Partners for HV and EMC Solutions

# Antennas & RF Accessories



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## Passive Magnetic Antennas, Rx-Loop Antennas



**HFRAE 5160**  
Receiving VHF - UHF loop  
Diam. 50 mm  
2-300 MHz  
Transformer



**HFRAE 5161**  
HF RX Loop  
Diam. 100 mm  
0.07 - 120 MHz  
1 turn  
Transformer



**HFRAE 5162**  
VLF-HF RX Loop  
Diam. 250 mm  
0.05 - 30 MHz  
1 turn  
Transformer



**HFRAE 5163**  
Passive Magnetic Loop  
Diam. 50 mm  
0.009 - 300 MHz  
1 turn  
Transformer

## CISPR 15 3-Dimensional Loop Antenna Van Veen



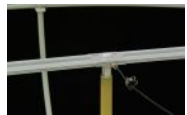
**HXYZ 9170**  
3-Dimensional Large Loop  
Diam. 2 m,  
acc. EN 55015 / CISPR 15  
Socket and Coaxial switch  
recommended



**HXYZ 9170 Socket**  
Socket and mounting  
equipment



**HXYZ 9170 Umschaltbox**  
3 in one coaxial switch for  
manual / remote operation in-  
cluding cable set (3 BNC cables  
with braid current blockers)



**HFCD 9171**  
Calibration Balun / Dipole for  
HXYZ 9170 (recommended  
accessory: AM 9144)



**CDA 9271**  
Adapter to hold HFCD 9171  
on AM 9144, 3/8" female large  
camera thread.

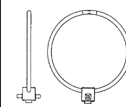


**HFRA SF02G**  
Tuneable Resonant Loop  
Generates High Magnetic Fields  
10 kHz to 30 MHz  
acc. VG95373-13:2008-11 and  
VG95373-23:2008-11.

## Passive Magnetic Antennas, Tx-Loop Antennas



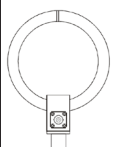
**HFRA 5148**  
Circular Transmitting Loop  
Diam. 180 mm  
1 turn



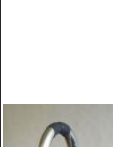
**HFRA 5149**  
Circular Transmitting Loop  
Diam. 500 mm  
9 kHz - 30 MHz  
Including 50 Ohm 20W Termination  
N-connectors



**HFRA 5152**  
Circular Transmitting Loop  
Diam. 250 mm  
DC-3 MHz



**HFRA 5153**  
Circular Transmitting Loop  
Diam. 180 mm  
0-20 (30) MHz, 5 W



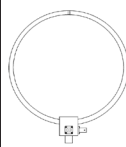
**HFRA 5154**  
Circular Transmitting Loop  
Diam. 100 mm  
0.1 - 30 MHz, 0.5 W  
Transformer 50 Ohm



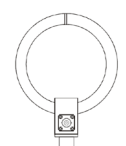
**HFRA 5155**  
Circular Transmitting  
VHF - UHF loop  
Diam. 50 mm



**HFRA 5156**  
Circular Transmitting Loop  
Diam. 50 mm  
0-5 MHz, 2 W  
10 turns



**HFRA 5157**  
Circular Transmitting Loop  
Diam. 50 mm  
0-20(30) MHz, 3 W  
2 turns



**HFRA 5158**  
Circular Transmitting Loop  
Diam. 180 mm  
0-2 MHz, 5 W  
10 turns



**HFRA 5159**  
Circular Transmitting Loop  
Diam. 250 mm  
0-400 kHz, 5 W  
28 turns

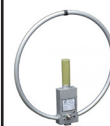


**HFRA 5170**  
Cal. Loop  
Diam. 100 mm  
0-30 MHz, 3 W, 250 Ohm  
1 turn

## Active Loop Antennas / Magnetic Field Probes



**FMZB 1513**  
Active Magnetic Loop  
To CISPR 16  
Diam. 180 mm  
9 kHz - 30 MHz, AF 20dB/m  
Built in NiMH-batteries  
Detachable glass fiber handle  
Options:  
Opt. ACS 110: Charger  
Opt. 500 mm Handle: Addi-  
tional handle  
CCA 1513 Transport case



**FMZB 1519**  
Active Magnetic Loop  
To CISPR 16  
9 kHz to 30 MHz  
Antenna factor 20 dB/m  
Built in rechargeable battery  
charger ALCS 2-24A



**HMDA 1545**  
Handheld Magnetic  
Field Meter w/LCD  
Acoustic Field Strength Indica-  
tion w/ Tone Generator  
9 kHz - 50 (80) MHz  
200µA/m - 1 A/m  
6 x Type AA NiMH  
Option: ACS 410: charger



**HFS 1546**  
Active magnetic Field Probe  
w/ shielded 50-mm-Loop  
150 kHz - 400 MHz



**FMZB 1527**  
Calibrated Hand-Held  
Magnetic Loop  
150 mm diam.  
9 kHz - 30 MHz  
For EMI Rcvrs.  
Max. Level 150 V/m (0.4 A/m)  
AF: 40 dB/m



**FMZB 1538**  
Magnetic Field Meter  
9 kHz - 30 MHz  
Max. level 75 V/m (0.2 A/m)  
Separate power supply cable



**FMZB 1548**  
Magnetic Field Meter  
9 kHz - 30 MHz  
20A/m  
Separate power supply cable



**FSH3D**  
Isotropic H-Field Antenna for  
the Rhode & Schwarz handheld  
spectrum analyzer FSH or the  
TS-EMF System.  
9 kHz - 200 (300) MHz  
Outer diameter 150 mm

## Radiating Loop Antenna



**FESP 5132**  
Radiating Loop  
Diam. 12 cm  
15 Hz - 150 kHz, max 15 A  
20 turns. Banana jack  
ISO 11452-8  
MIL-STD 461E RS101  
EN 55103 5.18.3.2  
Option:  
Opt. LoopHolder50:  
Calibration fixture to hold  
FESP 5134-40 in a distance  
of 50 mm acc. MIL461E figure  
RS101-3.



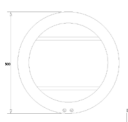
**FESP 5133**  
Loop Sensor / Antenna  
Diam. 133 mm  
0 - 200 kHz  
36 turns in 4 layers, Banana  
jacks (standard) or BNC  
EN 55103-1 A.2.b)  
EN 55103-2 A.4.1



**FESP 5133-7/41**  
Circular Shielded Loop Sensor  
To determine the magnetic field  
Diam. 133 mm  
36 turns AWG 7/41  
Distance gauge 7 cm included  
MIL 461E RE101 or RS101  
alternative test procedures.



**FESP 5134-40**  
Loop Sensor / Antenna  
Diam 4 cm  
0 - 150 kHz  
51 turns, BNC jack.  
Electrostatic Shielding



**FESP 5135**  
Radiating Coil  
Diam. 0.5 m  
20 turns in one layer  
acc. EN 55103-2 A.3.1

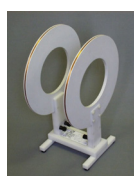


**FESP 5133 1330**  
Circular Radiating Loop  
For High Field Levels  
up to several mT  
225 turns  
To SF 01 G, VG95377

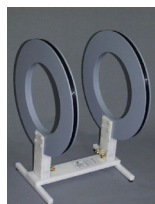


**SHUNT 9570**  
Low Inductive Precision  
High Power Shunt  
0.25, 1 Ohm 2 kW  
0.5 Ohm 1 kW  
w/ cooling fans

## Helmholtz Coils



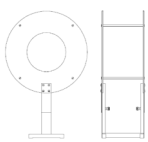
**HHS 5203-20**  
Circular Helmholtz Coils  
For Calibration or Immunity  
Diam. 300 mm  
330 A/m



**HHS 5204-36**  
Circular Helmholtz Coils  
Diam. 400 mm  
2500 A/m  
0 - 150 kHz  
MIL-STD 461E



**HHS 5204-12**  
Circular Helmholtz Coils  
Diam. 400 mm  
2500 A/m  
0 - 500 kHz  
MIL-STD 461E  
files for the MagTest software



**HHS 5204**  
Circular Helmholtz Coils  
For Calibration  
Diam. 420 mm  
5 turns, 60 A/m



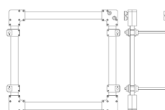
**HHS 5206-16**  
Circular pair of Helmholtz coils  
Diam. 600 mm  
Up to 2100 A/m  
Max. Current 55 A



**HHS 5210**  
Helmholtz Coils  
Up to 300 A/m constant H field  
1 m x 1 m  
10 turns per coil  
EN 61000-4-8,  
VDE 0847 part 4-8



**HHS 5210-100**  
Helmholtz Coils  
Up to 2183 A/m constant field  
1 m x 1 m  
100 turns per coil  
EN 61000-4-8,  
VDE 0847 part 4-8



**HHS 5212**  
Helmholtz Coils  
Up to 250 A/m H field  
1.20m x 1.20 m  
10 turns



**HHS 5213**  
Helmholtz Coils  
1.25 m x 1.25 m  
50 turns per coil  
(acc. EN 55103-2 A.2.1.b)



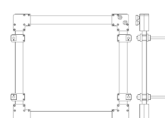
**HHS 5213-100**  
Helmholtz Coils  
1.29 m x 1.29 m  
100 turns per coil



**HHS 5215**  
Helmholtz Coils  
Up to 200 A/m constant H field  
1.5 m x 1.5 m  
10 turns per coil



**HHS 5215-100**  
Helmholtz Coils  
Up to 2000 A/m  
Constant H field  
1.5 m x 1.5 m  
100 turns per coil



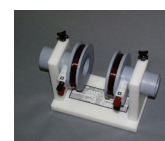
**HHS 5218**  
Helmholtz Coils  
Up to 126 A/m  
Constant H field  
1.8 m x 1.8 m  
10 turns per coil



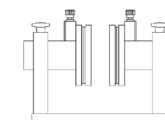
**HHS 5230-100**  
Pair of Helmholtz Coils  
According to SAE J551-17:  
2 square coils  
w/ a side length of 3 m  
100 turns, max. 650 A/m  
Each coil movable separately on  
a wheeled platform.



**NFCN 9731-100**  
Matching Network  
For HHS 5230-100  
For the following frequencies:  
16.666 Hz; 50 Hz; 60 Hz; 150  
Hz; 180 Hz.  
Recommended amplifiers:  
2 units of AE Techron 7224.



**HHS 5201-98**  
Helmholtz Coils Circular  
Up to 64 kA/m  
200 kHz for DuT size 45 mm



**HHS 5201-6**  
Helmholtz Coils Circular  
Up to 2860 A/m  
5 MHz for DuT size 45 mm



**AGEM 5520**  
Air Gap Electromagnet  
For extreme high magnetic field  
strengths  
Of up to 2.2 Tesla.

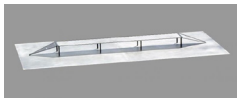
## Strip lines / TEM-Cells



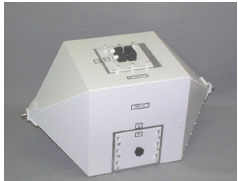
**TEMZ 5231**  
50 Ohm Strip Line  
ISO 11452-5 for automotive  
4.3 x 1.5 x 0.15 m  
N-connectors  
Wooden base construction & termination required



**TEMZ 5232**  
90 Ohm Strip Line  
ISO 11452-5 for automotive  
3.5 x 0.9 x 0.15 m  
N-connector  
Built-in termination  
90 Ohm, 50 W  
Wooden base construction required



**TEMZ C25**  
Open Unsymmetrical  
90 Ohm - Strip Line  
To CISPR 25 Ed3 CDV  
Without dummy load



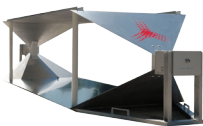
**TEMZ 5233**  
Closed, Unsymmetrical  
50 Ohm - Strip Line  
DC - 420 (600) MHz  
Crawford TEM Cell for E-field probe and H-field probe calibration & for immunity  
ISO 11452-3, IEEE 1309 and EN 61000-4-20



**TEMZ 5236**  
Symmetrical Strip Line  
0.96 x 0.6 x 0.6 m  
BNC-connectors  
Including 4:1 transformer and 50 W dummy load  
Option: for 100 Watts



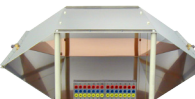
**TEMZ 5238**  
Symmetrical Strip Line  
acc. to CISPR  
20 up to 120 MHz



**PPL200-70S**  
Parallel Plate Line  
Vertical polarization  
10 kHz -30 MHz  
70 cm between plates



**PPL200**  
Parallel Plate Line  
Horizontal & Vertical Pol.  
10 kHz -30 MHz  
106 cm between plates



Open TEM CELLS  
**TEM220** DC-220 MHz, 33cm  
**TEM500** DC-500 MHz, 14.7cm  
**TEM1000** DC-1 GHz, 7.4cm  
**TEM3000** DC-3 GHz, 2.5cm



## Rod Antennas

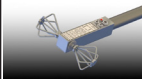


**VAMP 9243**  
Vertical Active Rod Antenna  
9 kHz - 30 MHz, BNC  
Reduced noise floor with mounting nut for AM 9144 and rechargeable battery  
Options:  
Opt. GP: Aluminium-ground plane, 0.6 x 0.6 m  
Opt. ACS 410: Charger  
Opt. VT: 20 dB plug in divider to measure high field strength  
Opt. CA 9243: Calibration Adapter  
Opt. MIL461F bonding kit: Consisting of a BNC cable double shielded ca. 70 cm, with braid current blocking ferrite in the center, elbow aluminium angle with BNC bulkhead adapter.



**VPMP 9242**  
Vertical Passive Rod Antenna  
10 - 40 MHz  
Possible rods: FBAB 9177, FBAL 9178, BBA 9106, BBAL 9136 (rod must be ordered extra)  
Options:  
Opt. GP: Aluminium ground plane 0.6 x 0.6 m

## Active Antennas

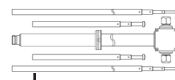


**EFS 9218**  
Active Electric Field Probe w/Biconical Elements  
9 kHz - 300 MHz  
12  $\mu$ V/m - 65 V/m  
Constant. antenna factor typ. 46 dB/m high symmetry  
Built in rechargeable battery  
The switchable preamplifier improves the antenna factor to 20 dB/m.  
Option:  
Opt. ACS 410: Automatic charger



**EFS 9219**  
Active Antenna Holder  
High Sensitivity  
9 kHz-30 MHz  
1  $\mu$ V/m ... 3 V/m  
BBUK 9139 biconical elements required  
Option:  
Opt. Rohr: Isolating tube with braid chokes  
Opt. ACS 410: Automatic charger Ansmann

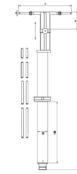
## Dipoles



**VHA 9103**  
VHF Half-Wave Dipole  
w/ 2 sets of telescopic elements  
30-300 MHz



**UHA 9105**  
Tune able UHF - Half - Wave Dipole  
300 - 1000 MHz  
w/ telescopic elements



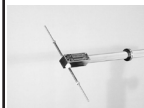
**UHA 9125 C**  
Tune able UHF - Half - Wave Dipole w/ EMI -Balun w/ 4 sets of elements  
0.75 - 2 GHz  
LE = 180, 140, 100, 80 mm



**UHA 9125 D**  
Tune able UHF - Half - Wave Dipole w/ EMI - Balun w/ 6 sets of elements  
1.0 - 3 (4) GHz  
LE = 140, 114, 90, 72, 60, 48 mm



**VHAP**  
VHF Precision Dipole  
30-300 MHz  
2 sets of telescopic elements (mostly required in pairs)  
CISPR 16-1-5



**UHAP**  
UHF Precision Dipole  
300-1000 MHz  
(VHAP & UHAP mostly required in pairs)  
CISPR 16-1-5

**CCA**  
Carrying and Storing Case  
For 2 x VHAP or 2 x UHAP  
Cases for other antennas also available.

**VHAPA**  
Calibration Adaptor for VHAP Precision Dipoles

**UHAPA**  
Calibration Adaptor for UHAP Precision Dipoles



## E/H Field Generator 10 kHz -30 MHz

**GENE-H-15-1K** 1.5 -2.5 m, max. power : 1 kW  
**GENE-H-15-3K** 1.5 -2.5 m, max. power : 3 kW  
**GENE-H-30-1K** 2.5 -3.5 m, max. power : 1 kW  
**GENE-H-30-3K** 2.5 -3.5 m, max. power : 3 kW

# Biconical Antennas

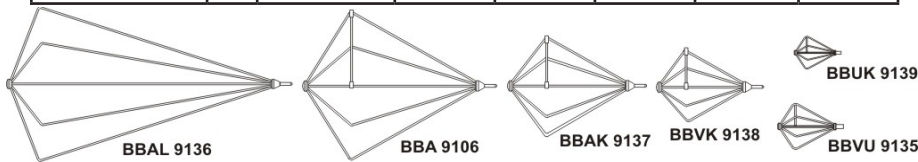
Balun (ratio)		Elements	Freq. (MHz)	AF (dB/m)	Length (m)	Diam. (m)	Power (Watts)
VHA 9103 (1:1)	Rx	BBA 9106 BBAL 9136 BBAK 9137 BBVK 9138	30-300 20-200 45-450 60-600	6-20 3-17 9-24 12-27	1.32 1.94 0.92 0.72	0.52 0.57 0.35 0.26	10
VHBA 9123 (4:1)	Tx	BBA 9106 BBAL 9136	30-300 20-200	8-20 4-16	1.36 1.98	0.52 0.57	100
VHBB 9124 (4:1)	Rx	BBA 9106 BBAL 9136 BBAK 9137 BBVK 9138	30-300 20-200 45-450 60-600	9-20 5-17 12-24 14-27	1.32 1.94 0.92 0.72	0.52 0.57 0.35 0.26	10
VHBC 9133 (4:1)	Tx	BBA 9106 BBAL 9136 BBFA 9146 BBAE 9179	30-300 20-200 20-200 20-220	9-25 5-16 NA NA	1.32 1.94 4 1.5	0.52 0.57 0.57	1000
VHBD 9134 (4:1)	Tx	BBA 9106 BBAL 9136 BBFA 9146 BBAE 9179	30-300 20-200 20-200 20-220	9-25 5-16 NA NA	1.32 1.94 4 1.5	0.52 0.57 0.57	3000
VHBD 9134-4 (4:1)	Tx	BBAL 9136 BBFA 9146 BBAE 9179	20-200 20-200 20-220	5-16 NA NA	1.94 4 1.5	0.57 0.57	4000
UBAA 9114 (4:1)	Rx	BBVU 9135 BBUK 9139	30-1000 30-1200	19-38 22-37	0.44 0.33	0.19 0.13	5
UBAA 9115 (4:1)	Rx	BBVU 9135 BBUK 9139	30-1000 30-1200	21-40 24-40	0.44 0.33	0.19 0.13	5



**BBAE 9179**

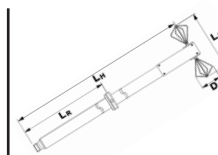


**FBAB 9177**



**Collapsible Element Vs. Equivalent Standard Bicon Elements:**

FBAB 9177 ≈ BBA9106 / FBAL 9178 ≈ BBAL 9136  
BAOC 9216 ≈ BBVU 9135 / BBOC 9217 ≈ BBUK 9139



**SBA 9113 B**  
Small Biconical Antenna  
80 MHz - 3 GHz  
For harmonics measurements  
To IEC 61000-4-3



**SBA 9113**  
Small Biconical Microwave  
0.5 - 3 GHz, 20 W  
Miniversion on request  
CISPR 16-1-4:2007-02 Ed. 2.0  
Site validation above 1 GHz



**420 NJ**  
Elements for radiated immunity caused by hand portable transmitters  
w/ SBA 9113 or SBA 9113 mini version for the Ford standard RI115 (Ford EMC CS 2009)  
Option:  
Opt: Spacer 50  
Spacer made of Polystyrene to set the 420 NJ elements test distance to 50 mm.



**UBA 9116**  
Biconical UHF  
(160) 300 -1000 (1100) MHz



**RE 1790**  
Vertical Polarized VHF- UHF  
(170) 230 - 1000 (1100) MHz  
Omnidirectional H-plane pattern



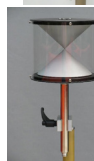
**VUBA 9117**  
Biconical VHF-UHF  
(30) 150 -1000 MHz



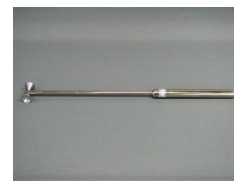
**RE 4590**  
Vertical Polarized VHF- UHF  
(330) 450 - 1000 (1100) MHz  
Omnidirectional H-plane pattern



**RS 16**  
Vertical Polarized Biconical  
(0,5) 1 - 6 (8,5) GHz  
Omnidirectional H-plane pattern



**RS 0460**  
Vertically Polarized Symmetrical Biconical  
0,4 - 6 GHz  
Omnidirectional H-plane pattern



**SBA 9119**  
Small Biconical Microwave  
1 - 6 GHz, 20 W  
The SBA 9119 are compliant to CISPR 16-1-4 for site validation above 1 GHz.  
Including transport case.



**SBA 9112**  
Small Biconical Microwave  
(1) 3 - 18 GHz, 10 W  
Including transport case  
CISPR16-1-4:2007-02 Ed. 2.0  
Site validation above 1 GHz.  
(Site-VSWR)  
Mini version on request  
For harmonics measurements acc. to IEC61000-4-3

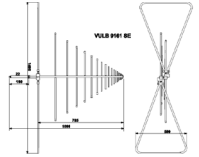
## Biconical Logarithmic Periodic Antennas (Hybrid)



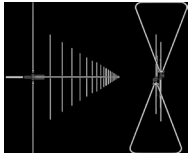
**VULB 9160**  
TRILOG Super Broadband  
(25) 30 - 1000 (1700) MHz  
10 W



**VULB 9161**  
TRILOG Super Broadband  
30 - 1000 (2000) MHz  
1 kW  
Opt. Triext.:  
Triangle Extensions increase  
gain by typ. 6 dB below 70  
MHz



**VULB 9161 SE**  
TRILOG Super Broadband  
30 - 1000 (2000) MHz  
1 kW  
w/ Short Triangle Elements  
Diameter < 150 cm  
Opt. Triext.:  
Triangle Extensions increase  
gain by typ. 6 dB below 70  
MHz



**VULB 9162**  
TRILOG Super Broadband  
30 MHz - 7 GHz  
100 W  
Diameter < 150 cm



**VULB 9163**  
TRILOG Super Broadband  
(25) 30 - 3000 (4000) MHz  
100 W (200 W)  
Opt. Triext.:  
Triangle Extensions Increase  
gain by typ. 6 dB below 70  
MHz.



**VULB 9168**  
TRILOG Super Broadband  
(25) 30-1000 (2000) MHz  
10 W  
Reduced width,  
Diameter < 1.5 m

## Standard Log-Periodic Dipole Array



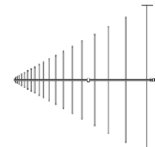
**UHALP 9108 A**  
Log.-Periodic Antenna  
250 - 2400 MHz  
low loss  
1 kW



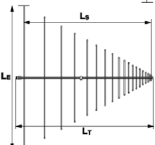
**VULP 9118 A**  
Log.-Periodic Antenna  
180 - 1500 (2000) MHz  
1 kW



**VULP 9118 B**  
Log.-Periodic Antenna  
160-1500 (2000) MHz  
1 kW



**VULP 9118 D**  
Log.-Periodic Antenna  
(80) 95 - 1500 (1800) MHz  
1 kW power



**VULP 9118 E**  
Log.-Periodic Antenna  
75 (50)-1500 MHz  
1 kW

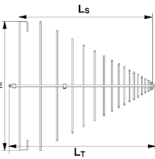


**VULP 9118 E special**  
Nearly identical gain as VULP  
9118 E  
but with reduced width.  
Special = folded longest ele-  
ments.

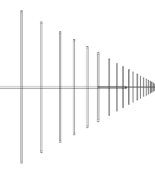
**VULP 9118 E High Power**  
Log.-Periodic Antenna  
75 (50)-1500 MHz  
7/16-connector

**VULP 9118 F**  
Log.-Periodic Antenna  
end discs  
55 - 1800 MHz  
1 kW

**VULP 9118 G**  
Log.-Periodic Antenna  
end discs  
45 - 1500 MHz  
1 kW



**VULP 9118 D/E/F/G Special**  
Nearly identical gain as VULP  
9118 D/E/F/G  
but with reduced width.  
Extra charge added to the  
basic model.  
Special = folded longest ele-  
ments.

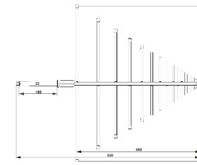


**VULP 9118 H**  
Log.-Periodic Antenna  
(26) 30 - 1500 (1800) MHz  
1 kW power  
N-connector gain 6 dBi  
VSWR<3  
width 5.2 m  
length 4.8 m  
weight 35 kg

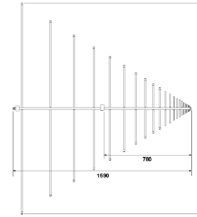


**VUSLP 9111**  
Log.-Periodic Antenna  
200 - 2300 (4000) MHz  
low loss  
1 kW

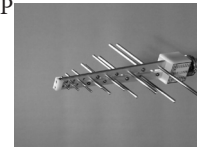
## Standard Log-Periodic Dipole Array



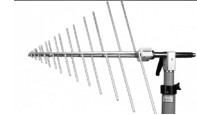
**VUSLP 9111 B**  
Log.-Periodic Antenna  
(180) 200 - 3000 (4000) MHz  
low loss  
1 kW



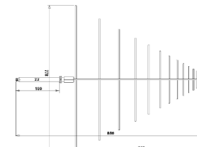
**VUSLP 9111 E**  
Log.-Periodic Antenna  
70 (65)-3000 (4000) MHz  
1 kW  
Recommended adapter: KG  
9201  
EN 61000-4-3



**USLP 9142**  
UHF - SHF  
Log.-Periodic Antenna  
0.7 - 5 (8) GHz



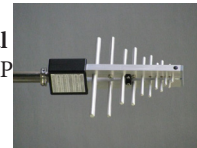
**USLP 9143**  
UHF - SHF  
Log.-Periodic Antenna  
(0.25) 0.3 - 5 (7) GHz



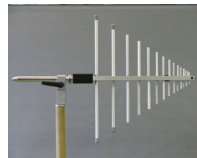
**USLP 9143 B**  
UHF - SHF  
Log.-Periodic Antenna  
(0.18) 0.2 - 7 (8) GHz



**ESLP 9145**  
UHF - EHF  
Log.-Periodic Antenna  
(0.7) 1- 18 (20) GHz  
N-connector  
For older models with S/  
N<184 check manual!

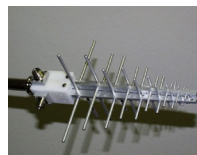


**VUSLP9111-1000**  
Log.-Periodic Antenna  
1000 - 3000 (4000) MHz  
low loss  
1 kW

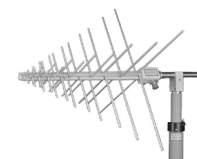


**VUSLP 9111-400**  
Log.-Periodic Antenna  
400 - 3000 (4000) MHz  
low loss  
1 kW

## Dual Polarized LPDA



**XSLP 9142**  
Dual Polarized UHF-SHF  
Log.-Per. Antenna  
800 MHz - 3(5) GHz  
50 W



**XSLP 9143**  
Dual Polarized UHF-SHF  
Log.-Per. Antenna  
300 MHz - 3(5.5) GHz  
50 W

## Stacked Logarithmic Periodic Broadband Antennas

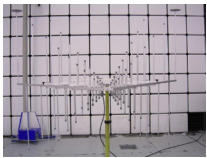


**STLP 9128 C**  
Stacked Double Log.-Periodic  
typ. gain: 9 dBi, high power  
(150) 200 - 1500 (4000) MHz  
N-connector, 1 kW  
Opt: w/ 7/16-connector 3 kW  
Opt: w/13-30-connector 8 kW  
limited to 2500 MHz



**STLP 9128 D**  
Stacked Double Log.-Periodic  
typ. gain: 9 dBi, high power  
80 - 3000 (4000) MHz  
N-connector  
Rec. Adapter: AA 9209.  
Opt: w/ 7/16-connector 3 kW

**STLP 9128 D special**  
w/ Folded Elements  
Diameter < 150 cm.  
Opt: with 7/16-connector 3 kW



**STLP 9128 E**  
Stacked Double Log.-Periodic  
typ. gain: 9 dBi  
(65) 80 - 1500 (3000) MHz  
N-connector, 1 kW, Fast Links  
Rec. Adapter: AA 9209  
Opt: with 7/16-connector 3 kW



**STLP 9128 E special**  
w/ Folded Elements  
Diameter < 150 cm.  
Fast Links  
Rec. Adapter: AA 9209  
Ideal for IEC 61000-4-3  
Opt: with 7/16 connector 3 kW



**STLP 9148**  
Stacked Double Log.-Periodic  
typ. gain: 9 dBi  
(0.7) 1 - 18 (20) GHz  
N-connector

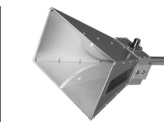


**STLP 9149**  
Stacked Double Log.-Periodic  
For IEC 61000-4-3  
typ. gain 10.3 dBi  
(0,6) 0,7 - 9 (10,5) GHz  
N-connector female



**STLP 100-500**  
Stacked Double Log.-Periodic  
typ. Gain: 11 dBi  
(75) 100 - 500 (550) MHz  
13/30 (f)-connector 5 kW  
dimensions: 166x178x402 cm  
52 kg

## Broadband Horn Antennas



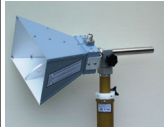
**BBHA 9120 A**  
Broad-Band Horn Antenna  
(0,8) 1 - 5 (10) GHz  
N-connector



**BBHA 9120 B**  
Broad-Band Horn Antenna  
1 - 10 GHz  
N-connector



**BBHA 9120 C**  
Broad-Band Horn Antenna  
2 - 18 (20) GHz  
SMA-connector



**BBHA 9120 D**  
Broad-Band Horn Antenna  
(0,8) 1 - 18 GHz  
N-connector



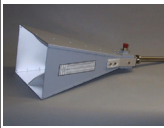
**BBHA 9120 E**  
Broad-Band Horn Antenna  
0.5 - 6 GHz  
N-connector



**BBHA 9120 F**  
Broad-Band Horn Antenna  
0.2 - 2 GHz  
N-connector  
Option:  
Opt. w/ 7/16-connector 3 kW  
Opt. 1m - Short telescopic  
tube to be inserted into the  
steel foot of AM 9144 to set  
BBHA 9120 F to a height of  
1 m referring to the antenna  
center in both polarizations.



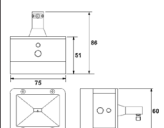
**BBHA 9120 G**  
Broad-Band Horn Antenna  
0.4 - 2.8 GHz  
7/16-connector



**BBHA 9120 LF**  
Broad-Band Horn Antenna  
0.7 - 6 GHz  
N-connector



**BBHA 9120 L3F**  
Broad-Band Horn Antenna  
0.5 - 2.8 GHz  
N-connector

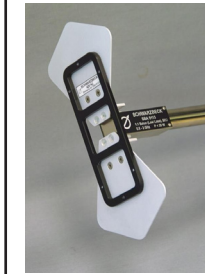


**BBHA 9170**  
Broad-Band Horn Antenna  
15-26.5 (40) GHz  
SMA

## Automotive Specific Antennas



**Nissan and Renault Antenna Set** to test immunity against hand transmitters acc. to Nissan specification 28401NDS02 [5] and RE-NAULT 36-00-808/L 2010 (combined set) consisting of normal mode helical antennas dipoles counterpoise and transport case (see extra list)



**420 NJ**  
Elements for radiated immunity caused by hand portable transmitters with SBA 9113 or SBA 9113 mini version for the Ford standard RI115 (Ford EMC CS 2009)  
Option:  
Opt: Spacer 50  
Spacer made of Polystyrene to set the 420 NJ elements test distance to 50 mm.



**WAND0918**  
Wireless Immunity -Wand-Antenna  
Option:  
Dell Specification -SYSTEM IMMUNITY TO WIRELESS GSM TEST REQUIREMENT-800 MHz -2 GHz

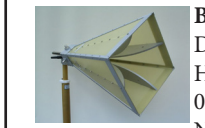


**TF 130-150**  
Test Fixture for Ford RI 130/150 Per EMC-CS-2009



**CCC 9224**  
Capacitive Coupling Clamp For transients To ISO 7637-3 or DC-10614 B.5.

## Dual polarized Broadband Horn

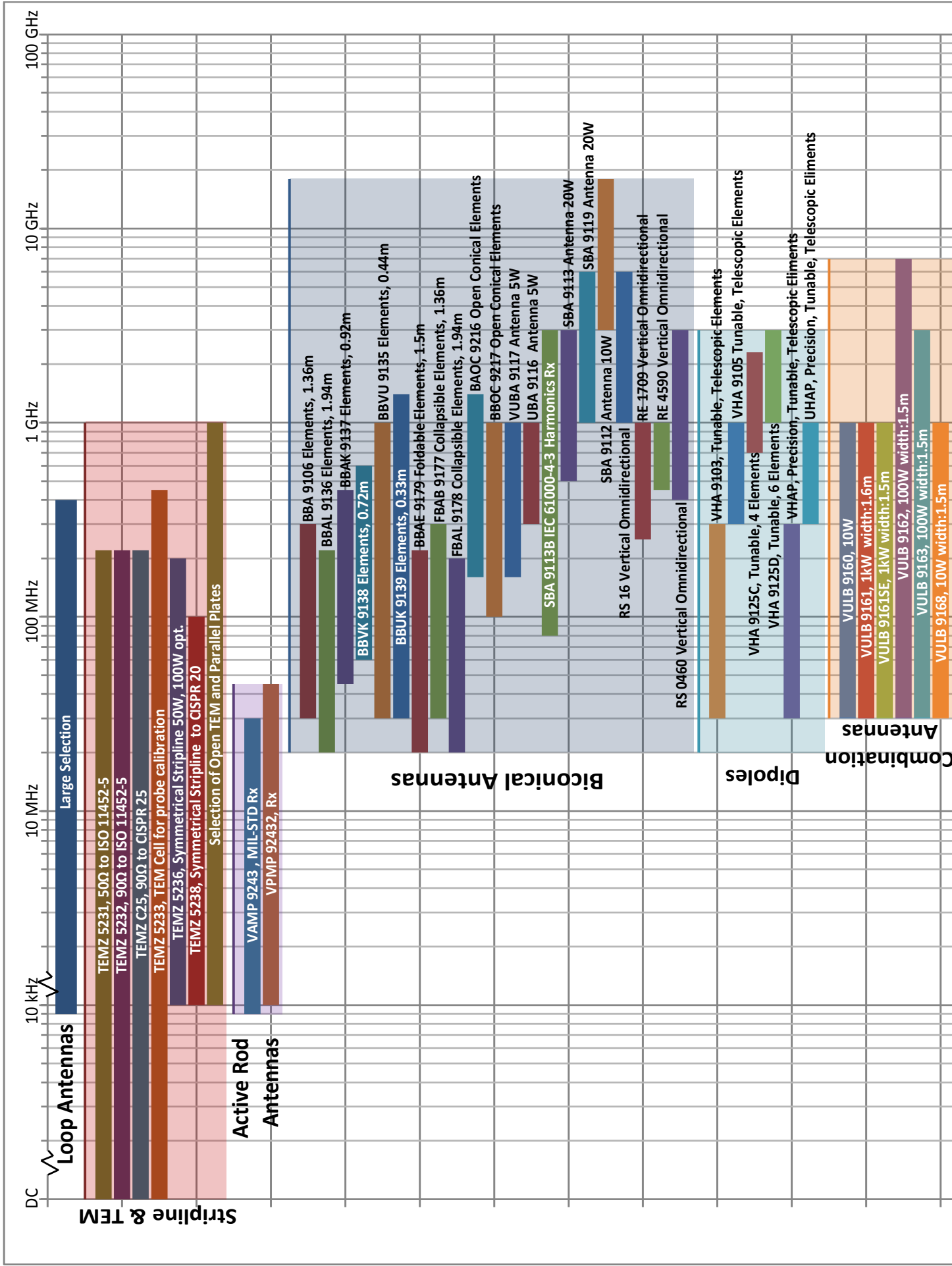


**BBHX 9120 E**  
Dual polarized Broad-Band Horn Antenna  
0.4 - 10 GHz  
N-connectors

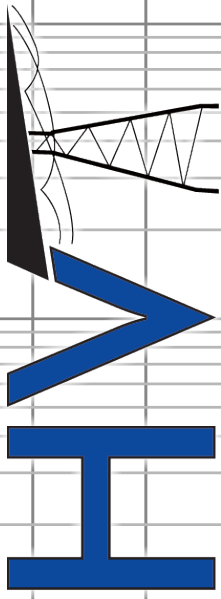


**BBHX 9120 LF**  
Dual polarized Broad-Band Horn Antenna  
(0,8) 1 - 8 (10,5) GHz  
N-connectors

# Antenna Selection Guide

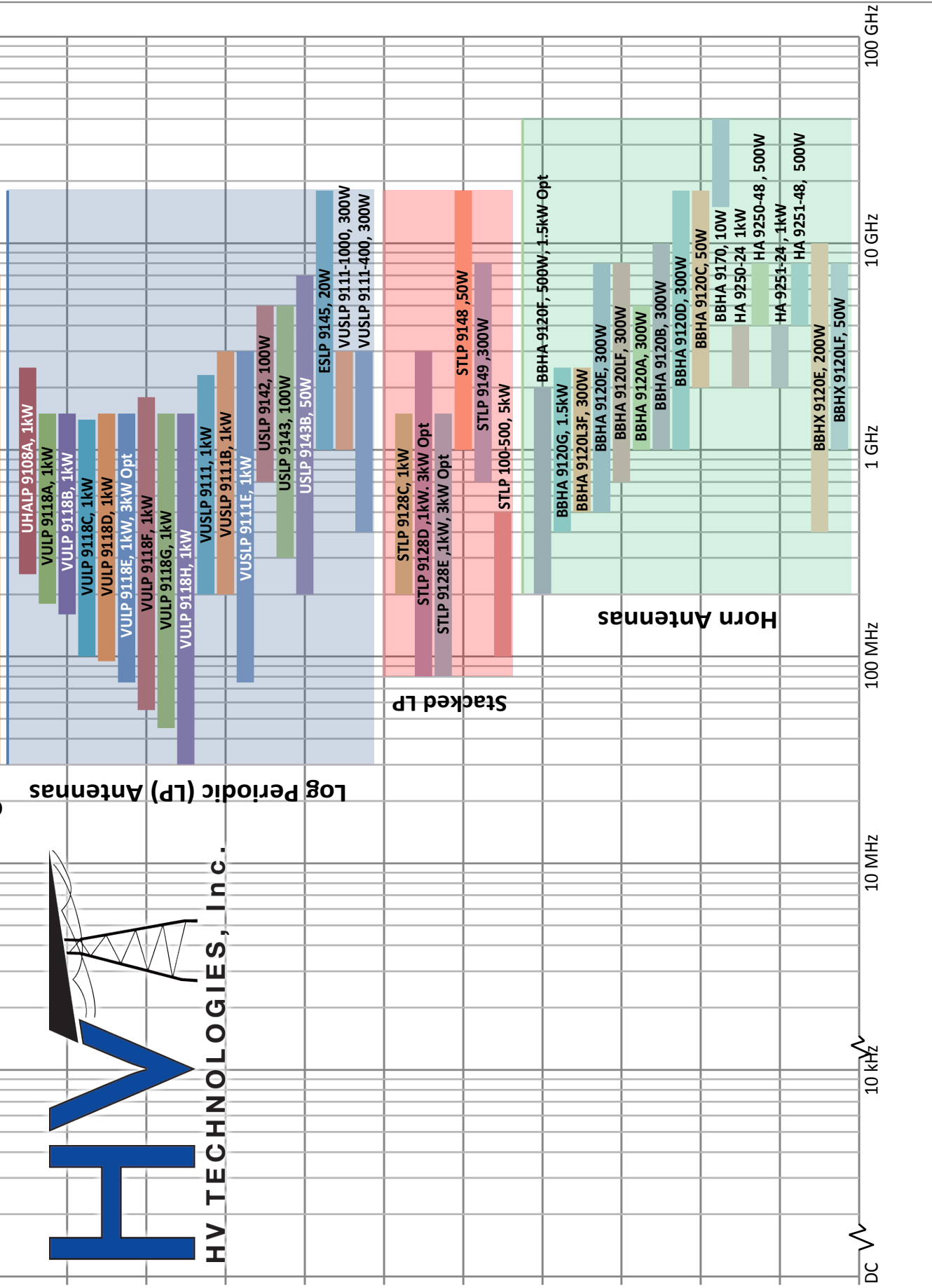






**HV TECHNOLOGIES, Inc.**

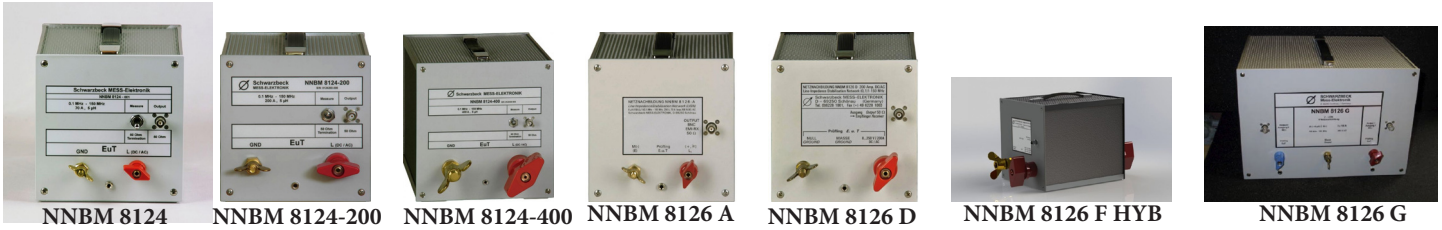
Log Periodic (LP) Antennas



Type	Tests	Impedance	Current	Voltage	Paths	Cal Adpt.	Options
<b>Automotive &amp; DO160</b>							
NNBM 8124	CISPR 25, ISO 7637-2, BCI	$(5\mu\text{H} + 1\ \Omega) \parallel 50\ \Omega$	70A AC 100A Max	250V AC, 130V 400Hz 500V DC	1	KA 8125	N-connector
NNBM 8124-200	CISPR 25, ISO 7637-2, BCI	$(5\mu\text{H} + 1\ \Omega) \parallel 50\ \Omega$	200A AC/DC 280A Max	700V AC, 700V 400Hz 1000V DC	1	KA 8126 D	N-connector
NNBM 8124-400	CISPR 25, ISO 7637-2, BCI	$(5\mu\text{H} + 1\ \Omega) \parallel 50\ \Omega$	250A AC/DC 500A Max	700V AC, 700V 400Hz 1000V DC	1	KA 8125	N-connector
NNBM 8126 A	CISPR 16, DO160	$5\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	70A AC/DC 100A Max	250V AC, 110V 400Hz 500V DC	1	KA 8125	DO-160
NNBM 8126 A 890	CISPR 16, DO160	$5\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	70A AC/DC 100A Max	530V 400Hz, 270V 890Hz 500V DC	1		DO-160
NNBM 8126 D	CISPR 16,	$5\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	200 A	250V AC, 110V 400Hz 500V DC	1	KA 8126 D	
NNBM 8126 F HYB	CISPR 16 Hybrid drives	$5\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	400A AC/DC 500A Max	500V AC, 200V 400Hz 1000V DC	1	KA 8126 F HYB	
NNBM 8126 G	CISPR 16	$5\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	70A AC/DC 100A Max	250V AC, 110V 400Hz 500V DC	2	KA 8126 D	
<b>MIL-STD</b>							
NNBL 8225	Mil. Std. 461/462	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	20 A	250V AC, 140V 400Hz 250V DC	1	KA 8125	
NNBL 8226	Mil. Std. 461/462	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	70A AC/DC 100A Max	250V AC, 140V 400Hz 250V DC	1	KA 8126 D	
NNBL 8226-HV	Mil. Std. 461/462	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	70A AC/DC 100A Max	800V AC, 140V 400Hz 800V DC	1	KA 8126 D	
NNBL 8226-2	Mil. Std. 461/462	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	70A AC/DC 100A Max	250V AC, 140V 400Hz 500V DC	2		
NNBL 8230	Mil. Std. 461/462	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	300A AC/DC 500A Max	250V AC, 140V 400Hz 500V DC	1		
Montena LISN50-500	Mil. Std. 461/462	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	500A AC 1000A Max	250V AC, 30V 400Hz	1		
Montena LISN50-1000	Mil. Std. 461/462	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	1000A AC 2000A Max	250V AC, 30V 400Hz	1		
<b>CISPR 16-1-2 socket</b>							
NSLK 8127	CISPR 16	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	2 x 16 A Schuko	250V AC, 400V DC	2	KA 8127	RC, PLC
NSLK 8126	CISPR 16	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	2 x 16 A Schuko 4 x 16 A CEKON	250V AC, 400V 3P, 400V DC	4	KA 8127, KA 8126	RC
NSLK 8128	CISPR 16	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	2 x 16 A Schuko 4 x 32 A CEKON	250V AC, 400V 3P, 400V DC	4	KA 8127, KA 8128	RC
<b>CISPR 16-1-2 Wing Terminals</b>							
NNLK 8121	CISPR 16	$50\ \mu\text{H} + 5\ \Omega \parallel 50\ \Omega$	4 x 50 (100) A	250V AC, 400V 3P, 400V DC	4	KA 8121	RC, 400/700V, Hochstrom, Fans
NNLK 8129	CISPR 16	$50\ \mu\text{H} \parallel 50\ \Omega$	4 x 200 (300) A	250V AC, 400V 3P, 400V DC	4	KA 8129	RC, 400/700V, Fans
NNLK 8130	CISPR 16	$50\ \mu\text{H} \parallel 50\ \Omega$	4 x 400 (500) A	250V AC, 400V 3P, 400V DC	4	KA 8130	RC
NNLK 8140	CISPR 16	$50\ \mu\text{H} \parallel 50\ \Omega$	800 (1000) A	650V AC, 150V 400Hz, 1000V DC	1		
<b>T-ISN</b>							
NTFM 8131	CISPR 22	$150\ \Omega \pm 10\%$	3 A (AC)	400V AC	2		
NTEM 8158	CISPR 22	$150\ \Omega \pm 20\ \Omega$	600 mA DC (pair)	63VAC, 100VDC	2		
CAT5 8158	CISPR 22	$150\ \Omega \pm 20\ \Omega$	600 mA DC (pair)	63VAC, 100VDC	2		
CAT3 8158	CISPR 22	$150\ \Omega \pm 20\ \Omega$	600 mA DC (pair)	63VAC, 100VDC	2		
ISN S8	CISPR 22	$150\ \Omega \pm 20\ \Omega$ $150\ \Omega + 60\ \Omega / -45\ \Omega$	1 A (DC)	100VAC, 150VDC	8		
ISN S1	CISPR 22	$150\ \Omega \pm 20\ \Omega$ $150\ \Omega + 60\ \Omega / -45\ \Omega$	1 A (DC)	VAC, 150VDC	1		
<b>PV-/ Tempest-LISN</b>							
NDTV 8160	Universal Delta-, T-, V-LISN		4 x 100 A	250V AC, 400V 3P, 400V DC	4		
PVDC 8300	PV-LISN Universal	150 $\Omega$ common 100 $\Omega$ differential	50 A (100 A with opt. fans)	1500V DC	2		Fans
PVDC 8301	PV-LISN Universal	150 $\Omega$ common 100 $\Omega$ differential	200 A	1500V DC	2		
TEMP 8400	Tempest- V-LISN	1.4 k $\Omega$	16 A	250V AC	2		TEMP 8401

Options: RC= Remot control, 400/700V= Higher Voltage (400V L-G / 700V L-L), Hochstrom = Higher Current

## Automotive & DO160 LISN



## MIL-STD LISN



## CISPR 16-1-2 LISN



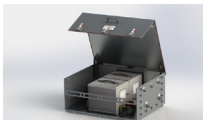
## T-ISN CISPR 22



## PV-/ Tempest-LISN



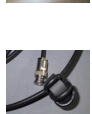
**HVSE 8600**  
Shielded Enclosure  
For Automotive LISN  
To increase the shielding effectiveness typ. >100dB  
Necessary for measurements of electric- or hybrid vehicles.  
Used With:  
NNBM 8124\*, NNBM 8124-200\*, NNBM 8124-400\*, NNBM 8126 F HYB\*, NNHV 8123, NNHV 8123-200, NNHV 8123-400



KA 8127 NSLK 8126 - NSLK 8128



KA 8126 (3p) NSLK 8126



KA 8128 (3p) NSLK 8128



KA 8121 NNLK 8121, NDTV 610  
KA 8129 NNLK 8129  
KA 8130 NNLK 8130, NNLK 8140  
KA 8125 NNBM 8124, 8125, 8126A, 8125BCI, NNBL 8225  
KA 8126D NNBM 8126D, NNBL8226(, -HV, -), NNBM 8125BCI 200A  
KA 8126F NNBM 8126(E, F)  
KA 8126F HYB NNBM 8124-400, NNBM 8126F HYB

MSS 9630 Current Blocking Cable. to avoid the effects of braid currents  
N(m)-N(f) 0.2-0.3m length



**VTSD 9561 D**  
Diode Pulse Limiter  
+ 20 dB Attenuation  
Fuse Lamp  
N or BNC please Specify



**VTSD 9561 F**  
Diode Pulse Limiter  
+ 10 dB Attenuation  
Fuse Lamp  
N or BNC please Specify

**VTSD 9562**  
Bandpass and Limiter  
for Partial Discharge Measurements  
BNC

# Coupling / Decoupling Networks (CDN)

## M-Type CDN for Main Lines

Current	No. of Lines in CDN				
	1	2	3	4	5
<b>16 Amps</b>	M1	M2/M3 M2 M2-500V M2-750V M2-1000V	M3 M3-500V M3-400V Delta	M4 PE M4 N	M5
<b>32 Amps</b>	M1-32A M1-32A/1000V	M2-32A M2-32A/500V M2-32A/750V M2-32A/1000V	M3-32A M3-32A/750V Delta M3-32A/750V	M4 PE-32A M4 N-32A M4 PE-32A/750V M4 N-32A/750V	M5-32A M5-32A/750V
<b>50 Amps</b>	M1-50A	M2-50A M2-50A/750V	M3-50A		
<b>75 Amps</b>	M1-75A	M2-75A	M3-75A	M4 PE-75A M4 N-75A	M5-75A M5-75A/750V
<b>100 Amps</b>	M1-100A	M2-100A	M3-100A	M4 PE-100A M4 N-100A M4 N-100A/750V	M5-100A

### CDN Selection

When using a CDN; the # of lines to be tested needs to match up with the CDNs # of lines. For Example: a M3, M4, or M5 CDN can not be used to test a product with 2 main lines. A M2 CDN must be used. An exception is the S-Type CDNs. Since in this case the immunity is only coupled and decoupled onto one point, the shield, a higher conductor CDN can be used to test less lines.

### S-Type for Shielded Lines and Coaxial Cable

Model	EUT Connector	Voltage	Current
S1-50 BNC	BNC (50 Ohm)	100 V AC / 100 V DC	0.25 A
S1-50 N	N (50 Ohm)	100 V AC / 100 V DC	0.25 A
S1-50 SMA	SMA (50 Ohm)	100 V AC / 100 V DC	0.25 A
S1-75 BNC	BNC (75 Ohm)	100 V AC / 100 V DC	0.25 A
S1-75 N	N (75 Ohm)	100 V AC / 100 V DC	0.25 A
S2 BNC	BNC	100 V AC / 100 V DC	1.5 A
S4 BNC	BNC	100 V AC / 100 V DC	1.5 A
S4 USB	USB-A	100 V AC / 100 V DC	1.5 A
S4-3A BNC	BNC (50 Ohm)	100 V AC / 100 V DC	1.5 A
S8 RJ45	RJ 45 Jacks Cat 6 screened	100 V AC / 100 V DC	1.5 A
S9	Sub-D9 female	125 V AC / 125 V DC	1.5 A
S15	Sub-D15 female	125 V AC / 125 V DC	1.5 A
S15	VGA	125 V AC / 125 V DC	1.5 A
S25	Sub-D25 female	125 V AC / 125 V DC	1.5 A
S37	Sub-D37 female	125 V AC / 125 V DC	0.25 A
S50	Sub-D50 female	125 V AC / 125 V DC	0.25 A

### AF-Type for Non Balanced Data Lines

Model	EUT Connector	Voltage	Current
AF2	4 mm Banana	63 V AC / 100 V DC	1.5 A
AF2-250V	4 mm Banana	250 V AC / 250 V DC	1.5 A
AF3	4 mm Banana	63 V AC / 100 V DC	1.5 A
AF3-3A	4 mm Banana	63 V AC / 100 V DC	3 A
AF3-250V	4 mm Banana	250 V AC / 250 V DC	1.5 A
AF4	4 mm Banana	63 V AC / 100 V DC	1.5 A
AF5	4 mm Banana	63 V AC / 100 V DC	1.5 A
AF6	4 mm Banana	63 V AC / 100 V DC	1.5 A
AF6-250V	4 mm Banana	250 V AC / 250 V DC	1.5 A
AF8	4 mm Banana	63 V AC / 100 V DC	1.5 A
AF10	Sub-D15	63 V AC / 100 V DC	1.5 A
AF15	Sub-D15	63 V AC / 100 V DC	1.5 A
AF25	Sub-D25	63 V AC / 100 V DC	1.5 A

### T-Type for Balanced Unscreened Communication Lines

Model	EUT Connector	Voltage	Current
T2	RJ11 / 2xBanana	63 V AC / 100 V DC	1.5 A
T2-3A	4 mm Banana	63 V AC / 100 V DC	3 A
T2-5A	4 mm Banana	63 V AC / 100 V DC	5 A
T4 Banana	4 mm Banana	63 V AC / 100 V DC	1.5 A
T4 XLR	XLR female	50 V AC / 50 V DC	1.5 A
T4 RJ45	RJ45	63 V AC / 100 V DC	1.5 A
T4-3A	4 mm Banana	63 V AC / 100 V DC	3 A
T8 RJ45	RJ45	63 V AC / 100 V DC	1.5 A
T8-3A	4 mm Banana	63 V AC / 100 V DC	3 A

### CDNs for IEC 60945 or EN 61326-3-2 10kHz - 80MHz

Model	EUT Connector	Voltage	Current
M1-10kHz	4 mm Bananav	250 V AC / 1000 V DC	16 A
M2-10kHz	4 mm Banana	250 V AC / 1000 V DC	16 A
M2-10kHz/500V	4 mm Banana	500 V AC / 1000V DC	16 A
M3-10kHz	4 mm Banana	250 V AC / 1000 V DC	16 A
T2-10kHz	RJ11 / 2xBanana	63V AC / 100V DC	1.5 A
T8-10kHz	RJ45	63V AC / 100V DC	1.5 A
AF2-10kHz	4 mm Banana	63V AC / 100V DC	1.5 A
AF3-10kHz	4 mm Banana	63V AC / 100V DC	1.5 A
AF4/10kHz	4 mm Banana	63V AC / 100V DC	1.5 A
AF6-10kHz	4 mm Banana	63V AC / 100V DC	1.5 A
AF8-10kHz	4 mm Banana	63V AC / 100V DC	1.5 A

### Special CDNs

Model	EUT Connector	Voltage	Current
CAN-4	Sub-D9	48V, 2A (supply lines, pins 3 (GND) and 9 (V+)) and 48V, 2A (CAN-BUS lines, pins 2 CAN-L and 7 CAN-H)	
CDNE for emission measurement on luminaries acc. EN 55015:			
CDNE M2	4 mm Banana	250 V AC / 400 V DC	16 A DC
CDNE M3	4 mm Banana	250 V AC / 400 V DC	16 A DC

## CDN & EM Clamp Calibration Adaptors

Adaptors	Compatible CDNs	Notes:
CWS-CAL	ALL	Basic Cal kit: R-100N, 50cm BNC Coax, Plastic Case
R-100N	ALL	150-50Ω Adapter
CA M1	All CDN M1 models	4mm Bananna
CA M2/M3/AF3(N)	CDN M2-32A (AE only), [M3, M3-32A, CDN M2/M3(EUT only)], CDN AF3	4mm Bananna
CAA M2/M3N	CND M2/M3, CDN M2 & M3 (AE only)	Adaptor IEC 60320 R-100N, T-50
CA T2/AF2/M2N	CDN T2, AF2, M2(EUT only), M2-32A(EUT only)	4mm Bananna
CA M2/50-100	CDN M2-50A, M2-75A, and M2-100A	
CA M3/50-100	CDN M3-50A, M3-75A, M3-100A	
CA T4/AF4/M4	CDN T4, CDN AF4, CDN M4(AE only), CDN M4-32A(AE only)	4mm Bananna
CA M4N	CDN M4 N, CDN M4 PE (EUT port)	4mm Bananna
CA M4/50-100	CDN M4-50A, M4-75A, M4-100A	
CA M5N	CDN M5 and M5-32A (EUT port)	4mm Bananna
CA M5/50-100	CDN M5-50A, M5-75A, M5-100A	
CA T8RJ45	CDN T8RJ45	RJ45
CA AF8	CDN AF8, T8-3A	4mm Bananna
CA AF10	CDN AF10, AF15	Sub-D15
CA S1	CDN S1 All	Coax Connector
CA S2/S4	CDN S2 BNC, CDN S4 BNC	BNC
CA S4-USB	CDN S4-USB	USB
CA S8-RJ45	CDN S8RJ45	RJ45
CA S9/S15/S25	CDN S9, CDN S15, CDN S25	D-Sub Shell
CA S37	CDN S37	D-Sub Shell
CA EM	EM101 & EM101 Cal Kit	R-100N, T-50, Coax Req. CWS-CAL or R-100N
Cable EM/FTC 101	EM 101 and FTC 101 Together	cable 1750mm Option to EM 101 Calo Kit

## Absorbing Clamps



**MDS 21 B**  
EMI Absorbing Clamp  
30 - 1000 MHz  
To CISPR 16 for interference power w/ silicon coated rolls  
Also for shielding measurements on coax. cables



**MDS 22**  
Absorbing Clamp  
300 MHz - 2.5 (3)GHz  
as per CISPR 16

**FT14X15**  
Surface Current Blocking Filter 100 - 1000 MHz

**FT33X15**  
Surface Current Blocking Filter 10 - 1000 MHz

**FT34X15**  
Surface Current Blocking Filter 1 - 1000 MHz

**FT 32**  
Surface Current Blocking Filter 0.01 - 1000 MHz



**FTC40X15C**  
Absorbing Clamp  
10 - 1000 MHz

**FTC40X15E**  
Absorbing Clamp  
1 - 1000 MHz  
CISPR 22

## EM Clamps for Conducted Immunity

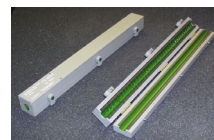


**EM 101**  
Current Injection Clamp  
0.15 - 1000 MHz  
100 W  
4kV max.  
max. cable diameter 22mm



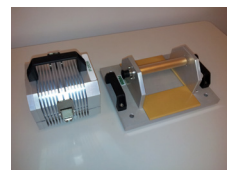
**EM 101 Cal Kit**  
Calibration kit  
2ea CR 100  
1 safety lab cable 10 cm  
1ea cable 80 cm  
both sides banana

**EM 101 + FTC 101**  
System Injection Clamp  
EM 101 and  
Braid Current Blocking Clamp FTC 101



**FTC 101**  
Surface current blocking Filter clamp  
(Used in combination w. EM 101)

## Bulk Current Injection (BCI) Probe



**IP-DR250**  
Injection Probe  
10kHz - 500MHz  
500Watts  
Inside Diameter:  
43.8mm/1.72"

**CJ-DR250**  
Calibration Jig  
IEC61000-4-6,  
MIL-STD-461 CS114,  
DO160 Section 20 BCI,  
ISO

## Accessories



**CVP 9222**  
High Impedance Capacitive Voltage Probe  
acc. to CISPR 22  
EN 55022 C 1.3  
Frequency 9 kHz - 100 MHz  
Options:  
Option ACS 110:Charger ACS 110 for CVP 9222  
Option CAL 9222: Calibration Adapter for CVP 9222



**SW 9602**  
Current Transformer Shielded  
0.01 - 200 MHz  
Transfer Impedance: 1 Ohm  
for wires up to 6.5 mm

**SW 9603**  
Current Transformer Shielded  
9 kHz - 150 MHz  
Transfer Impedance: 1 Ohm  
for wires up to 14 mm

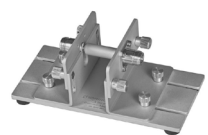


**SW 9605**  
Current Transformer Clamp  
CISPR 22  
9 kHz - 80 MHz  
Transfer Impedance: 1 Ohm  
for wires up to 23 mm

**SW 9606**  
Current Injection Clamp  
for RF current injection  
9 kHz - 200 MHz, 5W  
23 mm diameter  
Transducer 18 dB



**CA 9607**  
Universal Calibration Adapter  
For current clamps  
& Test Jig for ferrites



**CA 9608**  
Universal Calibration Adapter  
for e.g. the following current clamps:  
R&S ESV-Z1, Prodyn, IT-050-1  
length and height settable

## Near Field Probe Set



**FS-SET 7100**  
Near Field Probe Set including  
HFSL 7101  
Mag, 9kHz - 30MHz  
HFSH 7102  
Mag, 4MHz - 1GHz  
EFS 7103  
E 9kHz - 1GHz  
Separator EW 7110  
DC Separator  
ACDC 7110  
AC/DC adaptor  
Carrying Case



**CISPR 17 Equipment Transformers**  
Fixtures and adapters to measure filters, ferrites and other passive components.  
Detailed product list and data sheets on request.

**BD 9501**  
IEEE-488 Bus-Feed Through  
For flange mounting (shielded rooms) (other feed throughs on request)



**HPF**  
High Pass Filter  
35 - 1000 MHz  
Insertion loss at 27.12 MHz typ. 100 dB



**VDHH 9502**  
Van der Hoofden Test Head w/ protection network  
acc. IEC62493  
or VDE 0848-493.



**SG 9301**  
Spectrum Generator  
30-1000 MHz  
spectrum lines switchable  
100 Hz - 1 MHz  
N-female connector  
charger ACS 110 required  
main application: reference radiator (antenna required e.g. UBAA 9114 with BBVU 9135)



**SG 9302**  
Comb generator  
0.1 - 18 GHz  
spectrum lines every 100 MHz  
battery driven  
including charger

## Antenna Impedance Converter



**VHIC 9260**  
Antenna Impedance Converter acc. CISPR 25  
9 kHz - 30 (120) MHz.  
Option ACS 110: Charger

## PreAmplifiers



**BBV 9743**  
Broadband Coaxial Preamp  
Gain max. 30 dB  
10 MHz - 6 GHz  
Low noise floor  
N-jack N-plug  
including power supply

## PreAmplifiers Cont.



**BBV 9744**  
Broadband Coaxial Preamp  
Gain max. 30 dB  
9 kHz - 6 GHz  
Low noise floor  
N-jack N-plug  
including power supply



**BBV 9745**  
Broadband Coaxial Preamp  
Gain max. 30 dB  
9 kHz - 2 GHz  
Low noise floor  
N-jack N-plug  
improved ESD protection  
including power supply



**BBV 9718**  
Broadband Coaxial Preamp  
Gain typ. 33 dB  
1 - 18 GHz  
with fixture for 22 mm  
Options:  
Option Akku: Rechargeable battery pack  
Option ALCS 2-24A: Battery charger  
Option PS: Power supply

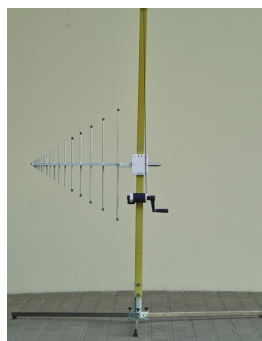


**BBV 9719**  
Broadband Coaxial Preamp  
Gain typ. 33 dB  
18-26.5 GHz  
power supply 12 V 300 mA.  
w/ short cable with SMA connect. to connect to the antenna (for example BBHA 9170)  
Options:  
Option Akku: Rechargeable battery pack  
Option ALCS 2-24A: Battery charger  
Option PS: Power supply



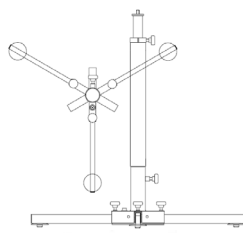
**BBV 9721**  
Broadband Coaxial Preamp  
Gain typ. 30 dB  
18-40 GHz  
w/ short cable with 2.92 connect. to connect to antenna (for example BBHA 9170)  
Noise figure 5.5 dB  
P1dBmin=15 dBm  
VSWR max in/out = 2.6  
Options:  
Option PS 9721: Power supply including cables with security plugs can be used for 110 and 230 V

## Antenna Mast



**AM 9104**  
 Detachable Antenna Mast System (glass-fibre tubing) for VHF-UHF Antennas  
 manual height scanning  
 0.4 m to 4 m  
 insulated mast and antenna box with 0°/90° detents  
 zinc-plated / stainless steel 3-leg mast foot  
 Options:  
 AM 9104 Opt. Rollen: Caster Wheels and Brakes for zinc-plated/ stainless steel 3-leg mast foot  
 AM 9104 Opt. GFK-Fuß: Non metallic (glass-epoxy) mast foot

## Tripod



**AM 9144**  
 Glass - Epoxy tube Antenna Mast System  
 height set by screw 1.2 - 2m  
 3/8" thread on top zinc-plated / stainless steel 3-leg mast foot  
 Options:  
 Opt. GFK-Fuß: Non metallic (glass-epoxy) mast foot for AM 9144



Opt. Rollen: Caster Wheels and Brakes for 3-leg mast foot



Opt. Kurz height set range from 0.90 - 1.60 m (shorter version)

## Pneumatic Polarization Shifter



**PPS 9208**  
 Pneumatic polarisation shifter with 2-way pneumatic cylinder for all Schwarzbeck antennas with 22 mm tube on AM 9144.  
 Compressed air required.  
 Assembly of antenna

## Antenna Adaptors



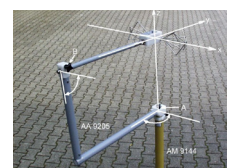
**AA 9202**  
 Mast Adapter for Antenna Mast System AM 9144 with 22 mm hole for most Antenna models.  
 3/8" and 1/4" camera threads  
 polarisation continuously adjustable



**AA 9202 POM**  
 Non Metallic Mast Adapter for most light weight Antenna models with 22 mm tube minimizes reflections  
 3/8" camera thread  
 polarisation continuously adjustable



**AA 9203**  
 Mast Adapter for AM 9144 with 22 mm hole for most Antenna models  
 3/8" and 1/4" camera threads  
 polarisation and elevation continuously adjustable



**AA 9205**  
 Orthogonal Swivel Adapter for positioning in 3 perpendicular directions  
 Application: determination of the magnitude of the fieldstrength



**AA 9209**  
 Antenna Adapter to fix STLP 9128 E STLP 9128 E special, STLP 9128 D, STLP 9128 D special on AM 9144.  
 Allows antenna rotation without height adjustment.  
 Antenna can be fixed in the center of gravity without any collision  
 Adapters with the AM 9144 during polarisation change.



**AA 9213**  
 Adapter to convert a 3/8" female thread to 22 mm tube  
 e.g. to fix BBHA 9170 on AM 9104.

## POSITIONER

Positioner for light weight antennas like SBA 9113 with 420 NJ.  
 The positioner consists of: 1 piece of glass fiber tube 22 mm thick, 1000 mm long, an adapter AA 9203 is mounted to the tube.  
 The other end of the tube carries a 3/8 inch male camera thread.



**R&S Flange**  
 R&S Flange for Schwarzbeck antenna with 22 mm tube.



**RS 9214**  
 Adapter to convert the R&S Aluminium Flange into 22 mm tube with indexing ring.



**KG 9201**  
 Mast Adapter (swivel, 90° vertical/horizontal polarisation for AM 9144) for VULP 9118 D,E,F,G and VUSLP 9111 E only



**SWHA 9204**  
 Swivel handle for light antennas



**EA 9207**  
 Adapter for Schwarzbeck antennas with 22 mm tube on EMCO mast.



**TA 9204**  
 Thread Adapter with 3/8" female and 1/4" male threads. Mainly for American antenna brands.



**TA 9205**  
 TA 9205 Thread Adapter with 1/4" female and 3/8" male threads.  
 (For camera tripods, not for AM 9144)



**TA 9206**  
 Thread Adapter with 3/8" female and 5/8" male threads. (Geodesy)

## Signal Generators



**APGEN3000**  
Compact Module w/Software  
9 kHz - 3 GHz  
-65 to +10 dBm  
AM, FM, Phase, and Pulse  
Communication: LAN, USB



**APSIN6010HC**  
Portable w/Control & Software  
9 kHz - 6.1 GHz  
-30 (-135 option) to +13 dBm  
AM, FM, Phase, and Pulse  
Communication: LAN, USB,  
(GPIB Option)



**APSIN12G**  
Portable w/Control & Software  
100 kHz - 12 GHz  
-20 (-90 option) to +8 dBm  
AM, FM, Phase, and Pulse  
Communication: LAN, USB,  
(GPIB Option)



**APSIN3000HC**  
Portable w/Control & Software  
9 kHz - 3.3 GHz  
-30 (-135 option) to +13 dBm  
AM, FM, Phase, and Pulse  
Communication: LAN



**APSIN6010RM**  
1U Rack mount w/Software  
9 kHz - 6.1 GHz  
-30 (-135 option) to +13 dBm  
AM, FM, Phase, and Pulse  
Communication: LAN, USB,  
(GPIB Option)



**APSIN20G**  
Portable w/Control & Software  
100 kHz - 20 GHz  
-20 (-90 option) to +8 dBm  
AM, FM, Phase, and Pulse  
Communication: LAN, USB,  
(GPIB Option)



**APSIN26G**  
Portable w/Control & Software  
100 kHz - 26 GHz  
-20 (-90 option) to +8 dBm  
AM, FM, Phase, and Pulse  
Communication: LAN, USB,  
(GPIB Option)

These Signal Generator are ideally suited for EMC use. Contains all of the standard modulations used. Meets and exceeds the requirements of: IEC6100-4-3, MIL-STD-461E, DO160, ISO, ...

Suggested Models	Description	Pg.
<b>MIL-STD-461F RS101</b>		
FESP 5132	Radiating Loop 12cm Diam	3
FESP 5134-40	Loop Sensor	3
Opt. LoopHolder 50	Loop Sensor Holder per MIL-STD	3
<b>MIL-STD-461F RS103</b>		
GENE-H-15-3K or PPL200	E/H-Field Generator 10kHz - 30MHz Large EUT Parallel Plate 10kHz - 30MHz Small EUT	4
VHBC 9133 or VHBD 9134 or VHBD 9134-4	1kW balun, w/ BBA 9106 & BBAE 9179 elements 3kW balun, w/ BBA 9106 & BBAE 9179 elements 4kW balun, w/ BBAL9136 & BBAE 9179 elements	5
STLP 9128 E Special	Stacked LP 80-1000MHz 3dB better gain then standard LP	7
BBHA 9120 E	Broad-Band Horn 0.5-6 GHz	7
BBHA 9120 D	Double ridged Horn 1-18 GHz	7
BBHA 9170	Broad-Band Horn 18-40 GHz	7
<b>MIL-STD-461F CS114</b>		
IP-DR250/CJ-DR250	BCI Injection Probe for larger cable bundles	13
<b>MIL-STD-461F RE101</b>		
FESP 5133	<b>Loop Sensor 36 Turns 13.3cm Diam</b>	3
<b>MIL-STD-461F RE101</b>		
NNBL xxxx	Selection of MIL designed LISNs sized for mains power	10
VAMP 9243 Opt: GP, ACS, CA9243, MIL461F Bonding Kit	Vertical Active rod antenna 9kHz - 30MHz	4
VHA9103 + BBA9106	Biconical antenna	5
BBHA 9120 F	Double ridged Horn 200 MH-2 GHz	7
BBHA 9120 D	Double ridged Horn 1-18 GHz	7
BBHA 9170	Double ridged Horn 18-40 GHz	7

Suggested Models	Description	Pg.
<b>IEC 61000-4-3 Radiated Immunity</b>		
STLP 9128 E Special	Stacked LP 80-1000MHz 3dB better gain then standard LP	7
STLP 9149 or BBHA 9120 D	Stacked LP 0.8-10GHz 3dB better gain then standard LP Double ridged Horn 1-18GHz	7
<b>IEC 61000-4-3 Harmonic Measurement</b>		
SBA 9113B	Small Broad-Band Bicon 80-3000MHz 3rd Harmonic of 1GHz	5
SBA 9112	Small Broad-Band Bicon 1-18MHz 3rd Harmonic of 6GHz	5
<b>IEC 61000-4-6 Conducted Immunity</b>		
CDN M#	CDN type for Main lines sized for the correct # of lines & V/A	12
CDN AFTS	selection of CDNs for IO lines	12
EM101+FTC101	IO Line injection more efficient then BCI probe	13
IP-DR250/CJ-DR250	BCI Injection Probe for larger cable bundles	13
<b>CISPR11/22 EN55011/22 Radiated Emmissions</b>		
VULB 9162	TRILOG Super Broad-Band 30MHz - 7 GHz	6
<b>CISPR11/22 EN55011/22 NSA (Normalized Site Attenuation)</b>		
VHAP	Precision Dioples 30-300 MHz, 2 sets needed	4
UHAP	Precision Dioples 300-1000 MHz, 2 sets needed	4
CCA	Carring case for 2 VHAP or 2 UHAP, 2 required	4
<b>CISPR11/22 EN55011/22 Conducted Emmissions</b>		
NSLKxxxx/NNLKxxxx	Selection of CISPR 16-1-2 designed LISNs sized for mains power	10
T-ISN	Selection of T-ISN for IO measurements	10



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