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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 including 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

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
0-3 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: Additional 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 Indication 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 Receivers.
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 jacks
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 - 300 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

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

EFS 9218
Active Electric Field Probe
w/ Biconical Elements
9 kHz - 300 MHz
12 µV/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 µV/m ... 3 V/m
BRUK 9139 biconical elements required
Option:
Opt. Rohr: Isolating tube with braid chokes
Opt. ACS 410: Automatic charger Ansmann

**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

**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
UHF 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

<table>
<thead>
<tr>
<th>Balun (ratio)</th>
<th>Elements</th>
<th>Freq. (MHz)</th>
<th>AF (dB/m)</th>
<th>Length (m)</th>
<th>Diam. (m)</th>
<th>Power (Watts)</th>
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<tbody>
<tr>
<td>VHA 9103 (1:1) Rx</td>
<td>BBA 9106</td>
<td>30-300</td>
<td>6-20</td>
<td>1.32</td>
<td>0.52</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>BBAL 9136</td>
<td>20-200</td>
<td>3-17</td>
<td>1.94</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BBAK 9137</td>
<td>45-450</td>
<td>9-24</td>
<td>0.92</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BBVK 9138</td>
<td>60-600</td>
<td>12-27</td>
<td>0.72</td>
<td>0.26</td>
<td></td>
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<tr>
<td>VHBA 9123 (4:1) Tx</td>
<td>BBA 9106</td>
<td>30-300</td>
<td>8-20</td>
<td>1.36</td>
<td>0.52</td>
<td>100</td>
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<td>BBAL 9136</td>
<td>20-200</td>
<td>4-16</td>
<td>1.98</td>
<td>0.57</td>
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<tr>
<td>VHBB 9124 (4:1) Rx</td>
<td>BBA 9106</td>
<td>30-300</td>
<td>9-20</td>
<td>1.32</td>
<td>0.52</td>
<td>10</td>
</tr>
<tr>
<td></td>
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<td>5-17</td>
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<tr>
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<td>BBVK 9138</td>
<td>60-600</td>
<td>14-27</td>
<td>0.72</td>
<td>0.26</td>
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<tr>
<td>VHBC 9133 (4:1) Tx</td>
<td>BBA 9106</td>
<td>30-300</td>
<td>9-25</td>
<td>1.32</td>
<td>0.52</td>
<td>1000</td>
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<td>5-16</td>
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<tr>
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<td>BBFA 9146</td>
<td>20-200 NA</td>
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<tr>
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<td>BBAE 9179</td>
<td>20-220 NA</td>
<td>1.5</td>
<td>0.57</td>
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<td></td>
</tr>
<tr>
<td>VHD 9134 (4:1) Tx</td>
<td>BBA 9106</td>
<td>30-300</td>
<td>9-25</td>
<td>1.32</td>
<td>0.52</td>
<td>3000</td>
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<tr>
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<td>BBAL 9136</td>
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<td>5-16</td>
<td>1.94</td>
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<td>BBFA 9146</td>
<td>20-200 NA</td>
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<tr>
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<td>BBAE 9179</td>
<td>20-220 NA</td>
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<td>0.57</td>
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<td></td>
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<tr>
<td>VHD 9134-4 (4:1) Tx</td>
<td>BBAL 9136</td>
<td>20-200</td>
<td>5-16</td>
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<td>0.57</td>
<td>4000</td>
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<td>BBFA 9146</td>
<td>20-200 NA</td>
<td>4</td>
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</tr>
<tr>
<td></td>
<td>BBAE 9179</td>
<td>20-220 NA</td>
<td>1.5</td>
<td>0.57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

UBAA 9114 (4:1) Rx

UBAA 9115 (4:1) Rx

Collapsible Element Vs. Equivalent Standard Bicon Elements:

FBAB 9177 ≈ BBA 9106 / FBAL 9178 ≈ BBAL 9136
BAOC 9216 ≈ BBVU 9135 / BBOC 9217 ≈ BBUK 9139

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

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

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

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

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

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

SBA 9113 B
Small Biconical Antenna
80 MHz - 3 GHz
For harmonics measurements acc. to IEC61000-4-3

SBA 9113
Small Biconical Microwave 0.5 - 3 GHz, 20 W
Mini version 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.

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

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

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

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

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

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

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

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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 C
Log.-Periodic Antenna
100-1400 (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 elements.

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 elements.

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

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

VULP 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

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
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

**BBHX 9120 E**
Dual polarized Broad-Band Horn Antenna
(0.8) 1 - 8 (10.5) GHz
N-connectors

Dual polarized Broadband Horn

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

Nissan and Renault Antenna Set
to test immunity against handy transmitters acc. to Nissan specification 28401NDS02 [5] and RE-Nault 36-00-808/L 2010 (combined set) consisting of normal mode helical antennas dipoles counterphase 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
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.

**BBHX 9120 LF**
Dual polarized Broad-Band Horn Antenna
(0.8) 1 - 8 (10.5) GHz
N-connectors

**BBHX 9120 LF**
Dual polarized 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.
<table>
<thead>
<tr>
<th>Type</th>
<th>Tests</th>
<th>Impedance</th>
<th>Current</th>
<th>Voltage</th>
<th>Paths</th>
<th>Cal Adpt.</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Automotive &amp; DO160</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NNBM 8124</td>
<td>CISPR 25, ISO 7637-2, BCI</td>
<td>(5µH + 1Ω)</td>
<td></td>
<td>50 Ω</td>
<td>70A AC/DC/100A Max</td>
<td>250V AC, 130V 400Hz, 500V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBM 8124-200</td>
<td>CISPR 25, ISO 7637-2, BCI</td>
<td>(5µH + 1Ω)</td>
<td></td>
<td>50 Ω</td>
<td>200A AC/DC/280A Max</td>
<td>700V AC, 700V 400Hz, 1000V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBM 8124-400</td>
<td>CISPR 25, ISO 7637-2, BCI</td>
<td>(5µH + 1Ω)</td>
<td></td>
<td>50 Ω</td>
<td>250A AC/DC/500A Max</td>
<td>700V AC, 700V 400Hz, 1000V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBM 8126 A</td>
<td>CISPR 16, DO160</td>
<td>5 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>70A AC/DC/100A Max</td>
<td>250V AC, 110V 400Hz, 500V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBM 8126 A 890</td>
<td>CISPR 16, DO160</td>
<td>5 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>70A AC/DC/100A Max</td>
<td>530V 400Hz, 270V 890Hz, 500V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBM 8126 D</td>
<td>CISPR 16, Hybrid drives</td>
<td>5 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>200A AC/DC/500A Max</td>
<td>250V AC, 110V 400Hz, 500V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBM 8126 F</td>
<td>CISPR 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MIL-STD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NNBL 8225</td>
<td>Mil. Std. 461/462</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>20 A</td>
<td>250V AC, 140V 400Hz, 250V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBL 8226</td>
<td>Mil. Std. 461/462</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>70A AC/DC/100A Max</td>
<td>250V AC, 140V 400Hz, 350V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBL 8226-HV</td>
<td>Mil. Std. 461/462</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>70A AC/DC/100A Max</td>
<td>800V AC, 140V 400Hz, 800V DC</td>
<td>1</td>
</tr>
<tr>
<td>NNBL 8230</td>
<td>Mil. Std. 461/462</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>300A AC/DC/500A Max</td>
<td>250V AC, 140V 400Hz, 500V DC</td>
<td>1</td>
</tr>
<tr>
<td>Montena LSN50-500</td>
<td>Mil. Std. 461/462</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>500A AC/DC/1000A Max</td>
<td>250V AC, 30V 400Hz</td>
<td>1</td>
</tr>
<tr>
<td>Montena LSN50-1000</td>
<td>Mil. Std. 461/462</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>1000A AC/DC/2000A Max</td>
<td>250V AC, 30V 400Hz</td>
<td>1</td>
</tr>
<tr>
<td><strong>CISPR 16-1-2 socket</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSLK 8127</td>
<td>CISPR 16</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>2 x 16 A Schuko</td>
<td>250V AC, 400V DC</td>
<td>2</td>
</tr>
<tr>
<td>NSLK 8126</td>
<td>CISPR 16</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>2 x 16 A Schuko</td>
<td>4 x 16 A CEKON</td>
<td>2</td>
</tr>
<tr>
<td>NSLK 8128</td>
<td>CISPR 16</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>2 x 16 A Schuko</td>
<td>4 x 32 A CEKON</td>
<td>4</td>
</tr>
<tr>
<td><strong>CISPR 16-1-2 Wing Terminals</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>NNLK 8121</td>
<td>CISPR 16</td>
<td>50 µH + 5 Ω</td>
<td></td>
<td>50 Ω</td>
<td>4 x 50 (100) A</td>
<td>250V AC, 400V 3P, 400V DC</td>
<td>4</td>
</tr>
<tr>
<td>NNLK 8129</td>
<td>CISPR 16</td>
<td>50 µH</td>
<td></td>
<td>50 Ω</td>
<td>4 x 200 (300) A</td>
<td>250V AC, 400V 3P, 400V DC</td>
<td>4</td>
</tr>
<tr>
<td>NNLK 8130</td>
<td>CISPR 16</td>
<td>50 µH</td>
<td></td>
<td>50 Ω</td>
<td>4 x 400 (500) A</td>
<td>250V AC, 400V 3P, 400V DC</td>
<td>4</td>
</tr>
<tr>
<td>NNLK 8140</td>
<td>CISPR 16</td>
<td>50 µH</td>
<td></td>
<td>50 Ω</td>
<td>800 (1000) A</td>
<td>850V AC, 150V 400Hz, 1000V DC</td>
<td>1</td>
</tr>
<tr>
<td><strong>T-ISN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTSM 8131</td>
<td>CISPR 22</td>
<td>150 Ω ± 10%</td>
<td>3 A (AC)</td>
<td>400V AC</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTLM 8158</td>
<td>CISPR 22</td>
<td>150 Ω ± 20 Ω</td>
<td>600 mA DC (pair)</td>
<td>63VAC, 100VDC</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CATS 8158</td>
<td>CISPR 22</td>
<td>150 Ω ± 20 Ω</td>
<td>600 mA DC (pair)</td>
<td>63VAC, 100VDC</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CATS 8158</td>
<td>CISPR 22</td>
<td>150 Ω ± 20 Ω</td>
<td>600 mA DC (pair)</td>
<td>63VAC, 100VDC</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISN 58</td>
<td>CISPR 22</td>
<td>150 Ω ±20 Ω / 50 Ω / 70 Ω</td>
<td>1 A (DC)</td>
<td>100VAC, 150VDC</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISN 51</td>
<td>CISPR 22</td>
<td>150 Ω ±20 Ω / 50 Ω / 70 Ω</td>
<td>1 A (DC)</td>
<td>VAC, 150VDC</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PV-/ Tempest-LISN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDTV 8160</td>
<td>Universal Delta-, T- V-LISN</td>
<td>4 x 100 A</td>
<td>250V AC, 400V 3P, 400V DC</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVDC 8300</td>
<td>PV-LISN Universal</td>
<td>150 Ω common 100 Ω differential</td>
<td>50 A (100 A with opt. fans)</td>
<td>1500V DC</td>
<td>2</td>
<td></td>
<td>Fans</td>
</tr>
<tr>
<td>PVDC 8301</td>
<td>PV-LISN Universal</td>
<td>150 Ω common 100 Ω differential</td>
<td>200 A</td>
<td>1500V DC</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEMP 8400</td>
<td>Tempest- N-LISN</td>
<td>1.4 kΩ</td>
<td>16 A</td>
<td>250V AC</td>
<td>2</td>
<td>TEMP 8401</td>
<td></td>
</tr>
</tbody>
</table>

Options: RC= Remote control, 400/700V= Higher Voltage (400V L-G / 700V L-L), Hochstrom = Higher Current
### Automotive & DO160 LISN

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NNBM 8124</td>
<td></td>
</tr>
<tr>
<td>NNBM 8124-200</td>
<td></td>
</tr>
<tr>
<td>NNBM 8124-400</td>
<td></td>
</tr>
<tr>
<td>NNBM 8126 A</td>
<td></td>
</tr>
<tr>
<td>NNBM 8126 D</td>
<td></td>
</tr>
<tr>
<td>NNBM 8126 F HYB</td>
<td></td>
</tr>
<tr>
<td>NNBM 8126 G</td>
<td></td>
</tr>
</tbody>
</table>

### MIL-STD LISN

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NNBL 8225</td>
<td></td>
</tr>
<tr>
<td>NNBL 8226</td>
<td></td>
</tr>
<tr>
<td>NNBL 8226-HV</td>
<td></td>
</tr>
<tr>
<td>NNBL 8230</td>
<td></td>
</tr>
</tbody>
</table>

### CISPR 16-1-2 LISN

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSSLK 8127</td>
<td></td>
</tr>
<tr>
<td>NSSLK 8126</td>
<td></td>
</tr>
<tr>
<td>NSSLK 8128</td>
<td></td>
</tr>
<tr>
<td>NNLK 8121</td>
<td></td>
</tr>
<tr>
<td>NNLK 8129</td>
<td></td>
</tr>
<tr>
<td>NNLK 8130</td>
<td></td>
</tr>
<tr>
<td>NNLK 8140</td>
<td></td>
</tr>
</tbody>
</table>

### T-ISON CISPR 22

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTFM 8131</td>
<td></td>
</tr>
<tr>
<td>NTFM 8158 CAT5, 4 pairs</td>
<td></td>
</tr>
<tr>
<td>CAT5 8158 CAT6, 4 pair</td>
<td></td>
</tr>
<tr>
<td>CAT3 8158 CAT3 4 pairs</td>
<td></td>
</tr>
<tr>
<td>ISN S8 RJ45 Screened 2, 4 or 8 wire</td>
<td></td>
</tr>
<tr>
<td>ISN S1 Coax Screened</td>
<td></td>
</tr>
</tbody>
</table>

### PV-/Tempest-LISN

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVDC 8300</td>
<td></td>
</tr>
<tr>
<td>PVDC 8301</td>
<td></td>
</tr>
<tr>
<td>TEMP 8400 w/ TEMP 8401 adaptor</td>
<td></td>
</tr>
</tbody>
</table>

### 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

### 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

<table>
<thead>
<tr>
<th>Current</th>
<th>No. of Lines in CDN</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Amps</td>
<td>M1, M2/M3, M3, M4 PE/M4 N, M5</td>
</tr>
<tr>
<td>50 Amps</td>
<td>M1-50A, M2-50A/M2-50A/750V, M3-50A</td>
</tr>
<tr>
<td>75 Amps</td>
<td>M1-75A, M2-75A, M3-75A, M4 PE-75A, M4 N-75A, M5-75A, M5-75A/750V</td>
</tr>
<tr>
<td>100 Amps</td>
<td>M1-100A, M2-100A, M3-100A, M4 PE-100A, M4 N-100A, M4 N-100A/750V, M5-100A</td>
</tr>
</tbody>
</table>

## 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

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

### T-Type for Balanced Unscreened Communication Lines

<table>
<thead>
<tr>
<th>Model</th>
<th>EUT Connector</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2</td>
<td>RJ11 / 2xBanana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>T2-3A</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>3 A</td>
</tr>
<tr>
<td>T2-5A</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>5 A</td>
</tr>
<tr>
<td>T4 Banana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
<td></td>
</tr>
<tr>
<td>T4 XLR</td>
<td>XLR female</td>
<td>50 V AC / 50 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>T4 RJ45</td>
<td>RJ45</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>T4-3A</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>3 A</td>
</tr>
<tr>
<td>T8 RJ45</td>
<td>RJ45</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>T8-3A</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>3 A</td>
</tr>
</tbody>
</table>

### AF-Type for Non Balanced Data Lines

<table>
<thead>
<tr>
<th>Model</th>
<th>EUT Connector</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF2</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF2-250V</td>
<td>4 mm Banana</td>
<td>250 V AC / 250 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF3</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF3-3A</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>3 A</td>
</tr>
<tr>
<td>AF3-250V</td>
<td>4 mm Banana</td>
<td>250 V AC / 250 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF4</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF5</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF6</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF6-250V</td>
<td>4 mm Banana</td>
<td>250 V AC / 250 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF8</td>
<td>4 mm Banana</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF10</td>
<td>Sub-D15</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF15</td>
<td>Sub-D15</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF25</td>
<td>Sub-D25</td>
<td>63 V AC / 100 V DC</td>
<td>1.5 A</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model</th>
<th>EUT Connector</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-10kHz</td>
<td>4 mm Banana</td>
<td>250 V AC / 1000 V DC</td>
<td>16 A</td>
</tr>
<tr>
<td>M2-10kHz</td>
<td>4 mm Banana</td>
<td>250 V AC / 1000 V DC</td>
<td>16 A</td>
</tr>
<tr>
<td>M2-10kHz/500V</td>
<td>4 mm Banana</td>
<td>500 V AC / 1000 V DC</td>
<td>16 A</td>
</tr>
<tr>
<td>M3-10kHz</td>
<td>4 mm Banana</td>
<td>250 V AC / 1000 V DC</td>
<td>16 A</td>
</tr>
<tr>
<td>T2-10kHz</td>
<td>RJ11 / 2xBanana</td>
<td>63 V AC / 1000 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>T8-10kHz</td>
<td>RJ45</td>
<td>63 V AC / 1000 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF2-10kHz</td>
<td>4 mm Banana</td>
<td>63 V AC / 1000 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF4/10kHz</td>
<td>4 mm Banana</td>
<td>63 V AC / 1000 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF4/10kHz</td>
<td>4 mm Banana</td>
<td>63 V AC / 1000 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF6-10kHz</td>
<td>4 mm Banana</td>
<td>63 V AC / 1000 V DC</td>
<td>1.5 A</td>
</tr>
<tr>
<td>AF8-10kHz</td>
<td>4 mm Banana</td>
<td>63 V AC / 1000 V DC</td>
<td>1.5 A</td>
</tr>
</tbody>
</table>

### Special CDNs

<table>
<thead>
<tr>
<th>Model</th>
<th>EUT Connector</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN-4</td>
<td>Sub-D9</td>
<td>48V, 2A (supply lines, pins 3 (GND) and 9 (V+)) and 48V, 2A (CAN-BUS lines, pins 2 CAN-L and 7 CAN-H)</td>
<td></td>
</tr>
</tbody>
</table>

CDNE for emission measurement on luminaries acc. EN 55015:

<table>
<thead>
<tr>
<th>CDNE</th>
<th>4 mm Banana</th>
<th>250 V AC / 400 V DC</th>
<th>16 A DC</th>
</tr>
</thead>
</table>

---

**CDN & EM Clamp Calibration Adaptors**

<table>
<thead>
<tr>
<th>Adaptors</th>
<th>Compatible CDNs</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWS-CAL</td>
<td>ALL</td>
<td>Basic Cal kit: R-100N, 50cm, BNC, Coax, Plastic Case</td>
</tr>
<tr>
<td>R-100N</td>
<td>ALL</td>
<td>150-50Ω Adapter</td>
</tr>
<tr>
<td>CA M1</td>
<td>All CDN M1 models</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M2/M3/AF3(N)</td>
<td>CDN M2-32A (AE only), CDN M2/M3 (EUT only), CDN AF3</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M2/M3N</td>
<td>CDN M2/M3, CDN M2 &amp; M3 (AE only)</td>
<td>Adaptor IEC 60320 R-100N, T-50</td>
</tr>
<tr>
<td>CA T2/AF2/M2N</td>
<td>CDN T2, AF2, M2 (EUT only), M2-32A (EUT only)</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M2/50-100</td>
<td>CDN M2-50A, M2-75A, and M2-100A</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M3/50-100</td>
<td>CDN M3-50A, M3-75A, M3-100A</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA T4/AF4/M4</td>
<td>CDN T4, CDN AF4, CDN M4 (AE only), CDN M4-32A (AE only)</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M4N</td>
<td>CDN M4 N, CDN M4 PE (EUT port)</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M4/50-100</td>
<td>CDN M4-50A, M4-75A, M4-100A</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M5N</td>
<td>CDN M5 and M5-32A (EUT port)</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA M5/50-100</td>
<td>CDN M5-50A, M5-75A, M5-100A</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA T8RJ45</td>
<td>CDN T8RJ45</td>
<td>RJ45</td>
</tr>
<tr>
<td>CA AF8</td>
<td>CDN AF8, T8-3A</td>
<td>4mm Banana</td>
</tr>
<tr>
<td>CA AF10</td>
<td>CDN AF10, AF15</td>
<td>Sub-D15</td>
</tr>
<tr>
<td>CA S1</td>
<td>CDN S1 All</td>
<td>Coax Connector</td>
</tr>
<tr>
<td>CA S2/S4</td>
<td>CDN S2 BNC, CDN S4 BNC</td>
<td>BNC</td>
</tr>
<tr>
<td>CA S4-USB</td>
<td>CDN S4-USB</td>
<td>USB</td>
</tr>
<tr>
<td>CA S8-RJ45</td>
<td>CDN S8RJ45</td>
<td>RJ45</td>
</tr>
<tr>
<td>CA S9/S15/S25</td>
<td>CDN S9, CDN S15, CDN S25</td>
<td>D-Sub Shell</td>
</tr>
<tr>
<td>CA S37</td>
<td>CDN S37</td>
<td>D-Sub Shell</td>
</tr>
<tr>
<td>CA EM</td>
<td>EM101 &amp; EM101 Cal Kit</td>
<td>R-100N, T-50, Coax Req, CWS-CAL or R-100N</td>
</tr>
<tr>
<td>Cable EM/FTC101</td>
<td>EM101 and FTC101 Together</td>
<td>cable 1750mm Option to EM 101 Calo Kit</td>
</tr>
</tbody>
</table>

**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 + FTC101**
  - System Injection Clamp
  - EM 101 and Braid Current Blocking Clamp FTC 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  
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  
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 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.

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)

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.

Antenna Adaptors

Pneumatic Polerization 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.

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.

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)

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.

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.
Signal Generators

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

APGEN3000HC
Portable w/Control & Software
9 kHz - 3 GHz
-65 to +10 dBm
AM, FM, Phase, and Pulse
Communication: LAN

APGEN610HC
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)

APGEN6101RM
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)

APGEN612G
Portable w/Control & Software
100 kHz - 12 GHz
-20 (-90 option) to +8 dBm
AM, FM, Phase, and Pulse
Communication: LAN, USB, (GPIB Option)

APGEN20G
Portable w/Control & Software
100 kHz - 20 GHz
-20 (-90 option) to +8 dBm
AM, FM, Phase, and Pulse
Communication: LAN, USB, (GPIB Option)

APGEN26G
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-461F, DO160, ISO, ...

<table>
<thead>
<tr>
<th>Suggested Models</th>
<th>Description</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FESP 5132</td>
<td>Radiating Loop 12cm Diam</td>
<td>3</td>
</tr>
<tr>
<td>FESP 5134-40</td>
<td>Loop Sensor</td>
<td>3</td>
</tr>
<tr>
<td>Opt. LoopHolder 50</td>
<td>Loop Sensor Holder per MIL-STD</td>
<td>3</td>
</tr>
<tr>
<td>STLP 9128 E Special</td>
<td>Stacked LP 80-1000MHz 3dB better gain then standard LP</td>
<td>7</td>
</tr>
<tr>
<td>BBHA 9120 E</td>
<td>Broad-Band Horn 0.5-6 GHz</td>
<td>7</td>
</tr>
<tr>
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<td>FESP 5133</td>
<td>Loop Sensor 36 Turns 13.3cm Diam</td>
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<td>Double ridged Horn 200 MHz-2 GHz</td>
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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-461F, DO160, ISO, ...

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