Electric Sleeve Dipoles

Typical 3D radiation pattern
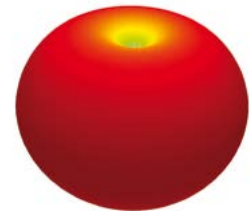
Main features

Technical performance

- Low loss and high efficiency
- Azimuth pattern symmetry is within ± 0.1 dB variation as specified by the CTIA for ripple testing according to the OTA Test Plan

Design

- End-fed sleeve dipole technology, minimizing cable and feed point interaction
- Innovative choke design further reduces cable interaction by attenuating the natural return currents from the dipole
- Azimuth pattern symmetry thanks to entirely symmetrical design

Surface treatment

- Surtec 650 according to MIL-C 5541E class 3
- Polyurethane paint

Repeatability

- Stiff and robust mechanical design
- Minimum use of dielectric material
- Precision machined
- High-reliability connector

Delivered documents

- Typical performance data (TYMEDA™)
- Measured return loss data

Product configuration

Equipment

- ■ High precision coaxial connector
- ☐ Customizable sleeve dipoles kit for OTA/WiFi testing of mobile devices

Related services

- ☐ Calibration and maintenance
- ☐ Customization

■ Included ☐ Optional

The MVG electric sleeve dipoles are widely used by the Telecom industry for CTIA Quiet Zone Accuracy Tests as per the OTA Test Plan and CWG Test Plan (Wi-Fi) and for site validation within ISO17025 accreditation (3GPP Technical Report 25.914)

Electrical characteristics

Type of antenna	Sleeve dipole
Frequency range	0.38 – 5.9 GHz
Gain variation over azimuth	<± 0.1 dB
Peak gain	1.8 dB
Efficiency	90%
VSWR (at center frequency)	< 1.2
Return loss (at center frequency)	< -20 dB
Cross polar discrimination	> 30 dB
Impedance	50 Ohms
Frequency bandwidth (ret. loss < -15 dB)	10%

SD typical elevation and azimuth radiation pattern
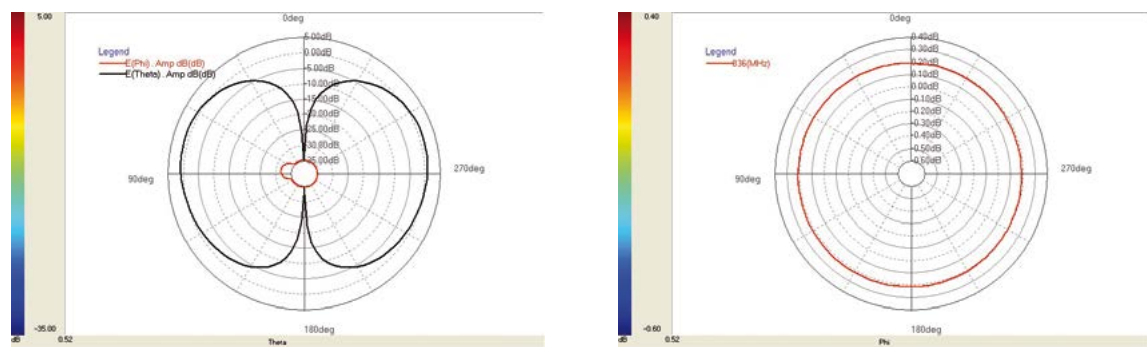
Sleeve dipoles kit for OTA/WiFi testing of mobile devices

Mechanical characteristics

Part number	Frequency range	Dimensions [mm]				Weight (approx.) [g]	RF connector
		A	B	C	D		
SD390	380 – 410 MHz	546.8	378.8	8.2	33	700	3.5 mm Female[2]
SD433	410 – 450 MHz	503.7	344.3	8.2	33	600	3.5 mm Female[2]
SD450	435 – 470 MHz	472.1	326.3	8.2	33	600	3.5 mm Female[2]
SD473	450 – 500 MHz	459.8	321.3	8.2	33	600	3.5 mm Female[2]
SD530	500 – 560 MHz	383.8	260.7	8.2	33	500	3.5 mm Female[2]
SD590	560 – 625 MHz	343.2	232.6	8.2	33	450	3.5 mm Female[2]
SD665	625 – 700 MHz	306.6	207.8	8.2	33	400	3.5 mm Female[2]
SD740[1]	690 – 800 MHz	272.2	185.1	8.2	33	400	3.5 mm Female[2]
SD836[1]	810 – 875 MHz	266.7	186.2	8.2	19	150	3.5 mm Female[2]
SD850	820 – 890 MHz	265.8	185.9	8.2	19	150	3.5 mm Female[2]
SD880	850 – 920 MHz	249.8	172.9	8.2	19	150	3.5 mm Female[2]
SD900	865 – 930 MHz	245.2	170.2	8.2	19	150	3.5 mm Female[2]
SD945	910 – 980 MHz	233.5	161.5	8.2	19	150	3.5 mm Female[2]
SD1230	1165 – 1295 MHz	178.7	123.2	9.8	15	75	3.5 mm Female[3]
SD1450	1390 – 1540 MHz	156.1	109	9.8	15	75	3.5 mm Female[3]
SD1575[1]	1500 – 1630 MHz	148.6	105.2	9.8	15	75	3.5 mm Female[3]
SD1730[1]	1640 – 1830 MHz	132.7	93.2	9.8	15	75	3.5 mm Female[3]
SD1800	1710 – 1930 MHz	131.4	93.2	9.8	15	75	3.5 mm Female[3]
SD1900[1]	1810 – 2030 MHz	129.7	93.2	9.8	15	75	3.5 mm Female[3]
SD2050	1910 – 2170 MHz	127.9	93.2	9.8	15	75	3.5 mm Female[3]
SD2140[1]	1990 – 2330 MHz	126.7	93.2	9.8	15	75	3.5 mm Female[3]
SD2450[1]	2330 – 2650 MHz	122.3	93.2	9.8	15	75	3.5 mm Female[3]
SD2600	2380 – 2950 MHz	121.4	93.2	9.8	15	60	3.5 mm Female[3]
SD3150-A	3000 – 3300 MHz	175.8	156	8.2	14	90	3.5 mm Female[2]
SD3600-A	3450 – 3800 MHz	172.1	156	8.2	14	90	3.5 mm Female[2]
SD4000-A	3800 – 4200 MHz	171.6	156	8.2	14	90	3.5 mm Female[2]
SD5150-A	4900 – 5400 MHz	170.1	156	8.2	14	90	3.5 mm Female[2]
SD5650-A[1]	5400 – 5900 MHz	168.2	156	8.2	14	90	3.5 mm Female[2]

(1) Selected models for Quiet Zone Accuracy Test as per CTIA Test Plan for Wireless Device Over-the-Air Performance and CTIA/WiFi Alliance Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices
(2) Huber+Suhner type 23 PC35-50-0-51/199UE
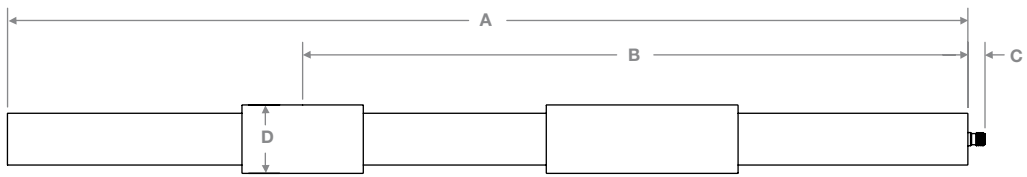(3) Huber+Suhner type 31 PC35-50-0-1/199UE
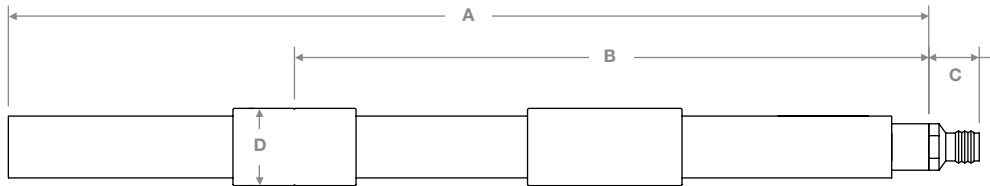A = Total length
B = Phase center position
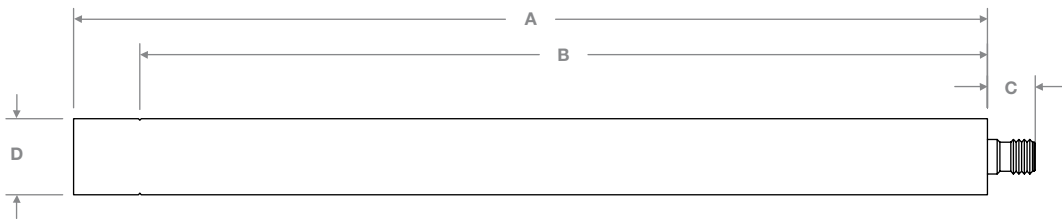C = Connector length
D = Diameter

Mechanical drawing SD390 to SD945

A

B

C

D

Mechanical drawing SD1230 to SD2600

A

B

C

D

Mechanical drawing SD3150-A to SD5650-A

A

B

C

D

Contact your local sales representative for more information
www.mvg-world.com/antennas
salesteam@mvg-world.com