

SD312-H

2 dipole antenna, 5.0/5.5 dBd gain, HD, 370-512 MHz

- Covers 370-512 MHz in 2 band splits
- 5.0 dBd gain in elliptical (bi-directional) pattern (1/2 wave), 5.5 dBd gain offset pattern (1/4wave)
- Heavy duty, with 150W power handling
- Recommend using an SMK-125-A7 side mounting kit

The SD312 series is an extremely rugged 2-bay exposed dipole antenna designed for applications where moderate gain is required. These premium-quality antennas are well suited to public safety/public security applications.

The design of these antennas provides for coverage between 370 to 512 MHz in 2 sub bands, 370-460 MHz and 406-512 MHz for private mobile networks, public safety and public security networks.

The standard connector offered is N male which is terminated on a 1 foot cable. Clamps are not included but recommended is a set of #130 clamps.

Application Notes

- The SD312 is available in half-wave configuration (P2) providing 4.0 dBd gain in a bidirectional pattern, and a quarter-wave configuration (P4) providing a 4.8 dBd gain in an offset pattern.
- Sub bands:
370-460 MHz (F1)
406-512 MHz (F2)
- For lower gain applications the SD310 single dipole configuration is available. For higher gain, the SD314, 4 dipole and SD318, 8 dipole configurations are available. For medium gain applications the SD312 is ideal.



Model	Description	Pattern
SD312-HF1P2SNM	5.0 dBd gain, N (male) connector, elliptical, HD, 370-460 MHz	Bi-directional
SD312-HF1P4SNM	5.5 dBd gain, offset, HD, N (male) connector, 370-460 MHz	Offset
SD312-HF2P2SNM	5.0 dBd gain, elliptical, HD, N (male) connector, 406-512 MHz	Bi-directional
SD312-HF2P2SNM(D06)	5.0 dBd gain, elliptical, 6° DT, HD, N (male) connector, 406-512 MHz	Bi-directional
SD312-HF2P4SNM	5.5 dBd gain, offset, HD, N (male) connector, 406-512 MHz	Offset



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Product Specification Sheet		SD312-H		Dated: 05-02-10

SD312-HF1P2SNM

SD312-HF1P4SNM

SD312-HF2P2SNM

SD312-HF2P2SNM(D06)

Electrical Specifications

Frequency Range, MHz	370 to 460	370 to 460	406 to 512	406 to 512
Gain (nominal), dBd (dBi)	5 (7.1)	5.5 (7.6)	5 (7.1)	5 (7.1)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Pattern	Bi-directional	Offset	Bi-directional	Bi-directional
Horizontal beamwidth, degrees		224		
Vertical beamwidth, degrees	34	36	36	36
Average Power Input (max), W	150	150	150	150
Lightning protection	DC ground	DC ground	DC ground	DC ground
Bandwidth, MHz	90	90	106	90
Electrical tilt (available)				6

Mechanical Specifications

Connector	N (male)	N (male)	N (male)	N (male)
Length/ Height, in (mm)	80 (2032)	80 (2032)	80 (2032)	80 (2032)
Width, in (mm)	16 (406)	11 (279)	16 (406)	16 (406)
Depth, in (mm)	3.5 (89)	3.5 (89)	3.5 (89)	3.5 (89)
Base pipe diameter, in (mm)	1.9 (48)	1.9 (48)	1.9 (48)	1.9 (48)
Base pipe mounting length, in (mm)	24 (610)	24 (610)	24 (610)	24 (610)
Weight, lbs (kg)	11 (5)	10.5 (4.8)	11 (5)	11 (5)
Actual Shipping weight, lbs (kg)	18 (8.2)	20 (9.1)	20 (9.1)	20 (9.1)
Shipping dimensions, in (mm)	83x5x20 (2108x127x508)	83x5x20 (2108x127x508)	83x5x20 (2108x127x508)	83x5x20 (2108x127x508)
Mounting hardware	clamps not supplied	clamps not supplied	clamps not supplied	clamps not supplied

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SD312-HF2P4SNM

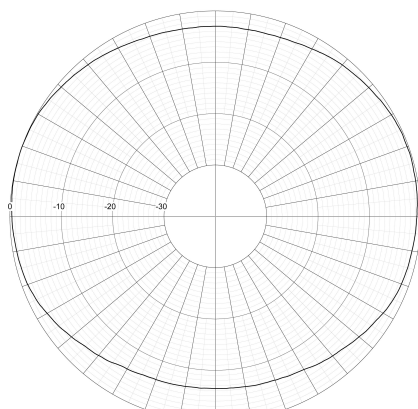
Electrical Specifications

Frequency Range, MHz	406 to 512
Gain (nominal), dBd (dBi)	5.5 (7.6)
Input VSWR (max)	1.5:1
Polarization	vertical
Pattern	Offset
Horizontal beamwidth, degrees	224
Vertical beamwidth, degrees	36
Average Power Input (max), W	150
Lightning protection	DC ground
Bandwidth, MHz	106
Electrical tilt (available)	

Mechanical Specifications

Connector	N (male)
Length/ Height, in (mm)	80 (2032)
Width, in (mm)	11 (279)
Depth, in (mm)	3.5 (89)
Base pipe diameter, in (mm)	1.9 (48)
Base pipe mounting length, in (mm)	24 (610)
Weight, lbs (kg)	10.5 (4.8)
Actual Shipping weight, lbs (kg)	20 (9.1)
Shipping dimensions, in (mm)	83x5x20 (2108x127x508)
Mounting hardware	clamps not supplied

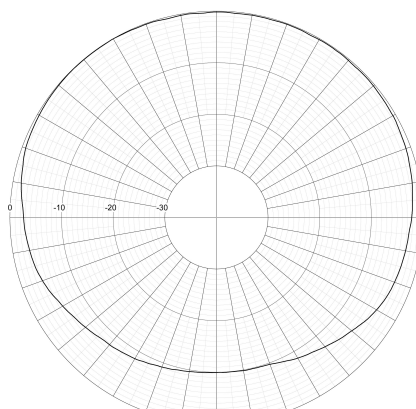
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MEASURED RADIATION PATTERN
Horizontal
Relative Gain - 10 dB per Division

SD312-HF1P2SNM

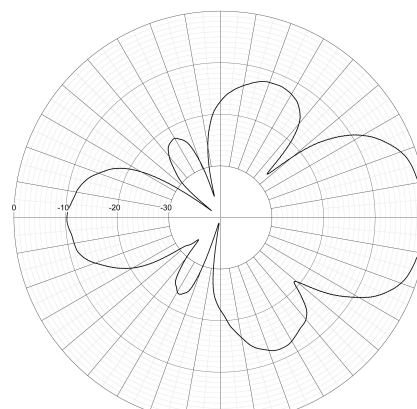
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MEASURED RADIATION PATTERN
Horizontal
Relative Gain - 10 dB per Division

SD312-HF1P4SNM

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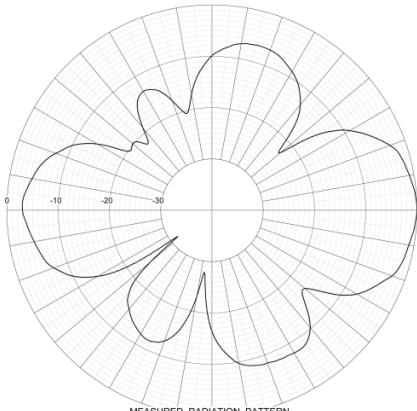


MEASURED RADIATION PATTERN
Vertical
Relative Gain - 10 dB per Division

SD312-HF1P4SNM

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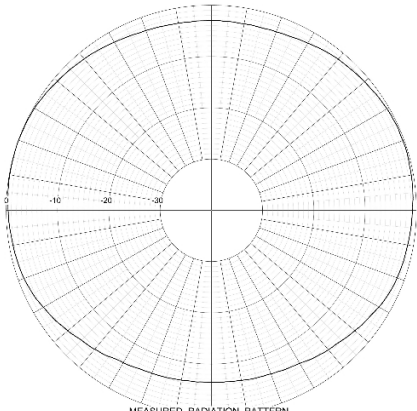
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MEASURED RADIATION PATTERN
Vertical
Relative Gain - 10 dB per Division

SD312-HF2P2SNM

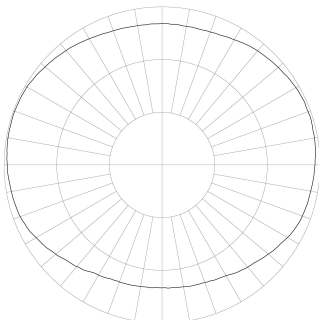
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MEASURED RADIATION PATTERN
Horizontal
Relative Gain - 10 dB per Division

SD312-HF2P2SNM

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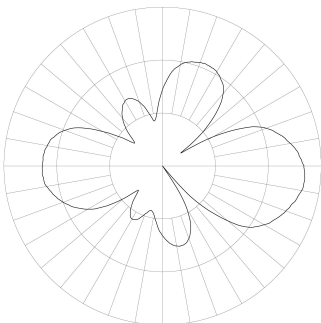


MEASURED RADIATION PATTERN
VERTICAL POLARIZATION

Azimuth
Relative Gain - 10 dB per Division

SD312-HF2P2SNM(D06)

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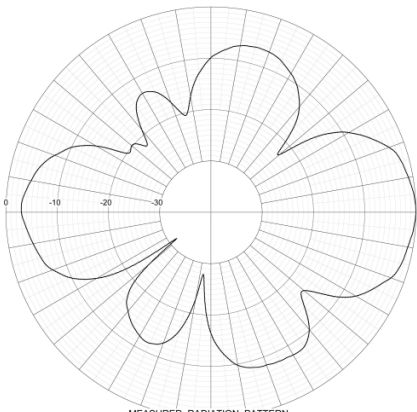


MEASURED RADIATION PATTERN
VERTICAL POLARIZATION

Elevation
Relative Gain - 10 dB per Division

SD312-HF2P2SNM(D06)

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MEASURED RADIATION PATTERN
Vertical
Relative Gain - 10 dB per Division

SD312-HF2P4SNM

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