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SD212

2 dipole antenna, 5.0/5.5 dBd gain, 118-225 MHz

- Covers 118-225 MHz in 3 band splits
- 5.0 dBd gain at elliptical (bi-directional) pattern (1/2 wave), 5.5 dBd gain at offset pattern (1/4 wave)
- 250W power handling
- Recommend using an SMK-125-A3 side mounting kit

The SD212 series is a 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 118 to 225 MHz in 3 sub bands, 118-138 MHz for civil aviation applications, 138-174 MHz for private mobile networks, public safety and public security and 220-225 MHz for transportation networks.

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

1/4 wave shown

Application Notes

- The SD212 is available in half-wave configuration (P2) providing 5.0 dBd gain in a bidirectional pattern, and a quarter-wave configuration (P4) providing a 5.5 dBd gain in an offset pattern (gain varies slightly with frequency).

- Sub bands:
  118-138 MHz (F1)
  138-174 MHz (F2)
  216-225 MHz (F3)

Model	Description	Pattern
SD212-SF1P2SNM	5.0 dBd gain, elliptical, N (male) connector, 118-138 MHz	Bi-directional
SD212-SF1P4SNM	5.5 dBd gain, offset, N (male) connector, 118-138 MHz	Offset
SD212-SF2P2SNM	5.0 dBd gain, elliptical, N (male) connector, 138-174 MHz	Bi-directional
SD212-SF2P4SNM(D00)	5.5 dBd gain, offset, N (male) connector, 138-174 MHz	Offset
SD212-SF2P4SNM(D00B-W5B)	5.5 dBd gain, offset, welded, anodized, 138-174 MHz	Offset
SD212-SF2P4SNM(D00S-W5B)	5.5 dBd gain, offset, welded, anodized, 138-174 MHz	Offset
SD212-SF2PASNM	5.0/5.5 dBd gain, field adjustable, N (male) connector, 138-174 MHz	Offset or Bi-directional
SD212-SF3P2SNM(D00B)	5.0 dBd gain, elliptical, N (male) connector, 216-225 MHz	Bi-directional
SD212-SF3P4SNM(D00B)	5.5 dBd gain, elliptical, N (male) connector, 216-225 MHz	Offset

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	SD212-SF1P2SNM	SD212-SF1P4SNM	SD212-SF2P2SNM	SD212-SF2P4SNM(D00)
Electrical Specifications				
Frequency Range, MHz	118 to 138	118 to 138	138 to 174	138 to 174
Gain (nominal), dBd (dBi)	5 (7.1)	5.5 (7.6)	5 (7.1)	5.5 (7.6)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Impedance, Ω				
Pattern	Bi-directional	Offset	Bi-directional	Offset
Horizontal beamwidth, degrees	210	210		210
Vertical beamwidth, degrees	34	34	34	34
Average Power Input (max), W	300	300	300	300
Lightning protection	DC ground	DC ground	DC ground	DC ground
Electrical tilt (available)				0, 10
Mechanical Specifications				
Connector	N (male)	N (male)	N (male)	N (male)
Length/ Height, in (mm)	144 (3658)	144 (3658)	120 (3048)	120 (3048)
Width, in (mm)	46.8 (1187)	25.3 (641)	40 (1016)	23 (584)
Depth, in (mm)	1.9 (48)	2 (51)	3 (76)	2.5 (64)
Base pipe diameter, in (mm)	1.9 (48)	1.9 (48)	1.9 (48)	1.9 (48)
Base pipe mounting length, in (mm)	38 (965)	36 (914)	36 (914)	36 (914)
Weight, lbs (kg)	25 (11.4)	23 (10.4)	22.5 (10.2)	21 (9.5)
Finish				
Weight iced, lbs (kg)				48 (21.8)
Actual Shipping weight, lbs (kg)	50 (22.7)	50 (22.7)	45 (20.4)	
Shipping dimensions, in (mm)	146x4x48 (3708x102x1219)	146x4x48 (3708x102x1219)	124x4x44 (3150x102x1118)	126x25.2x3.6 (3200x640x91)
Mounting hardware	clamps not supplied	clamps not supplied	clamps not supplied	clamps not supplied
Boom mast junction				

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	SD212-SF2P4SNM(D00B-WABK)	SD212-SF2P4SNM(D00S-WABK)	SD212-SF2PASNM	SD212-SF3P2SNM(D00B)
Electrical Specifications				
Frequency Range, MHz	138 to 174	138 to 174	138 to 174	216 to 225
Gain (nominal), dBd (dBi)	5.5 (7.6)	5.5 (7.6)	5.5 (7.6)	5 (7.1)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Impedance, Ω				
Pattern	Offset	Offset	Offset or Bi-directional	Bi-directional
Horizontal beamwidth, degrees	210	210	210	
Vertical beamwidth, degrees	34	34	34	35
Average Power Input (max), W	300	300	300	250
Lightning protection	DC ground	DC ground	DC ground	DC ground
Electrical tilt (available)	0, 10	0, 10		
Mechanical Specifications				
Connector	N (male)	N (male)	N (male)	N (male)
Length/ Height, in (mm)	120 (3048)	120 (3048)	120 (3048)	100 (2540)
Width, in (mm)	23 (584)	23 (584)	23 (584)	31.5 (800)
Depth, in (mm)	2.5 (64)	2.5 (64)	3 (76)	5 (127)
Base pipe diameter, in (mm)	1.9 (48)	1.9 (48)	1.9 (48)	1.9 (48)
Base pipe mounting length, in (mm)	36 (914)	36 (914)	36 (914)	24 (610)
Weight, lbs (kg)	21 (9.5)	21 (9.5)	16 (7.3)	23 (10.4)
Finish	black anodized Mil A-8625F	black anodized Mil A-8625F		
Weight iced, lbs (kg)	48 (21.8)	48 (21.8)		49 (22.2)
Actual Shipping weight, lbs (kg)			50 (22.7)	46 (20.9)
Shipping dimensions, in (mm)	126x25.2x3.6 (3200x640x91)	126x25.2x3.6 (3200x640x91)	51x15x13 (1295x381x330)	124x6x44 (3150x152x1118)
Mounting hardware	clamps not supplied	clamps not supplied	clamps not supplied	clamps not supplied
Boom mast junction	welded	welded		

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SD212-SF3P4SNM(D00B)

Electrical Specifications	
Frequency Range, MHz	216 to 225
Gain (nominal), dBd (dBi)	5.5 (7.6)
Input VSWR (max)	1.5:1
Polarization	vertical
Impedance, Ω	50
Pattern	Offset
Horizontal beamwidth, degrees	210
Vertical beamwidth, degrees	34
Average Power Input (max), W	250
Lightning protection	DC ground
Electrical tilt (available)	

Mechanical Specifications	
Connector	N (male)
Length/ Height, in (mm)	100 (2540)
Width, in (mm)	16.9 (428)
Depth, in (mm)	3 (76)
Base pipe diameter, in (mm)	1.9 (48)
Base pipe mounting length, in (mm)	24 (610)
Weight, lbs (kg)	18 (8.2)
Finish	
Weight iced, lbs (kg)	42 (19.1)
Actual Shipping weight, lbs (kg)	42 (19.1)
Shipping dimensions, in (mm)	103.2x36x6inches258x90x15cm ()
Mounting hardware	clamps not supplied
Boom mast junction	

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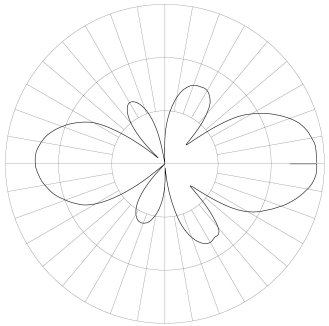

MEASURED RADIATION PATTERN
VERTICAL POLARIZATION

Elevation
Relative Gain - 10 dB per Division

SD212-SF1P2SNM

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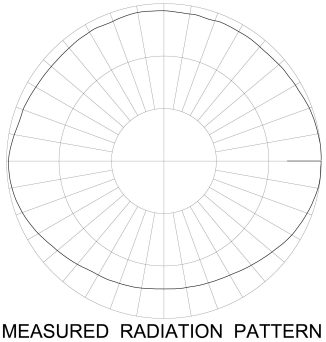

MEASURED RADIATION PATTERN
VERTICAL POLARIZATION

Azimuth
Relative Gain - 10 dB per Division

SD212-SF1P2SNM

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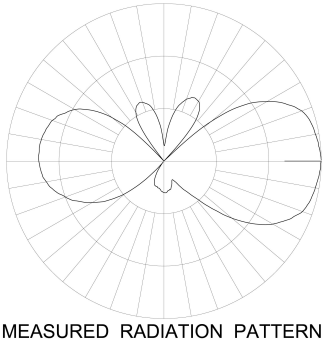

MEASURED RADIATION PATTERN
VERTICAL POLARIZATION

Elevation
Relative Gain - 10 dB per Division

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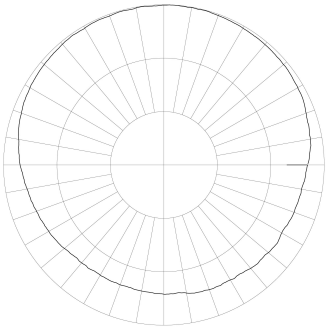
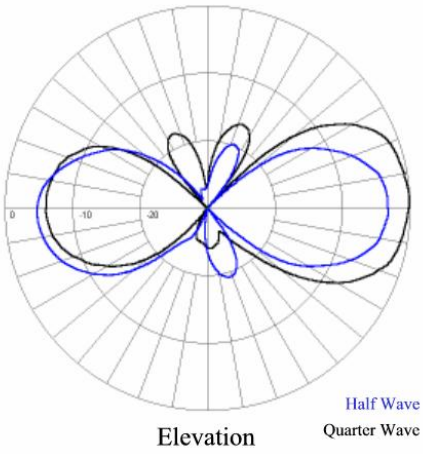


MEASURED RADIATION PATTERN
VERTICAL POLARIZATION

Azimuth
Relative Gain - 10 dB per Division

SD212-SF1P4SNM



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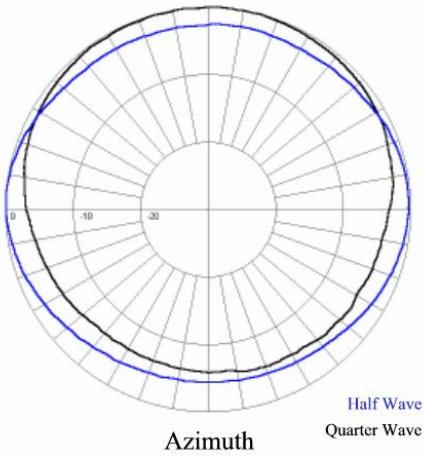

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