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ST221

Mobile omni antenna, 0 dBd gain, low profile, 138-222 MHz

- Low profile for a wide range of mobile applications
- Cast aluminum
- 2.5 MHz bandwidth
- Applications include: trains, taxis, police cars, emergency vehicles, buses and trucks

Sinclair's Excaliber ST221 series of antennas are low profile antennas designed for a wide range of mobile applications. Their design renders them relatively inconspicuous and resistant to damage. They have become a North American standard antenna for railroad locomotive service.



A minimum 48" x 48" ground plane is required.

Model	Description	Pattern
ST221-SF1SNF(FXXXX)	0 dBd gain, N-female connector, 138-163 MHz	Omni-directional
ST221-SF1SUF(FXXXX)	0 dBd gain, UHF- female connector, 138-163 MHz	Omni-directional
ST221-SF2SNF(FXXXX)	0 dBd gain, N-female connector, 162-174 MHz	Omni-directional
ST221-SF2SUF(FXXXX)	0 dBd gain, UHF-female connector, 162-174 MHz	Omni-directional
ST221-SF3SNF	220-222 MHz	Omni-directional
ST221-SF3SUF	220-222 MHz	Omni-directional

www.sinctech.com



Australian Representatives
ROJONE, PTY LTD.
Tel: 02 9829 1555
E: sales@rojone.com.au
www.rojone.com.au

Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1223 42 03 03	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com
Product Specification Sheet		ST221		Dated: 05-02-10

[ST221-SF1SNF\(FXXXX\)](#)

[ST221-SF1SUF\(FXXXX\)](#)

[ST221-SF2SNF\(FXXXX\)](#)

[ST221-SF2SUF\(FXXXX\)](#)

Electrical Specifications

	ST221-SF1SNF(FXXXX)	ST221-SF1SUF(FXXXX)	ST221-SF2SNF(FXXXX)	ST221-SF2SUF(FXXXX)
Frequency Range, MHz	138 to 163	138 to 163	162 to 174	162 to 174
Gain (nominal), dBd (dBi)	unity (2.1)	unity (2.1)	unity (2.1)	unity (2.1)
Input VSWR (max)	1.5:1	1.5:1	1.5:1	1.5:1
Polarization	vertical	vertical	vertical	vertical
Impedance, Ω	50	50	50	50
Pattern	Omni-directional	Omni-directional	Omni-directional	Omni-directional
Average Power Input (max), W	300	300	300	300
Lightning protection	DC ground	DC ground	DC ground	DC ground
Bandwidth, MHz	2.5	2.5	2.5	2.5

Mechanical Specifications

	ST221-SF1SNF(FXXXX)	ST221-SF1SUF(FXXXX)	ST221-SF2SNF(FXXXX)	ST221-SF2SUF(FXXXX)
Connector	N (female)	UHF (female)	N (female)	UHF (female)
Length/ Height, in (mm)	4 (102)	4 (102)	4 (102)	4 (102)
Width, in (mm)	2.2 (56)	2.2 (56)	2.2 (56)	2.2 (56)
Depth, in (mm)	24.5 (622)	24.5 (622)	21.5 (546)	21.5 (546)
Weight, lbs (kg)	6 (2.7)	6 (2.7)	6 (2.7)	6 (2.7)
Actual Shipping weight, lbs (kg)	7 (3.2)	7 (3.2)	7 (3.2)	7 (3.2)
Shipping dimensions, in (mm)	3x5x25 (76x127x635)	3x5x25 (76x127x635)	3x5x25 (76x127x635)	3x5x25 (76x127x635)
Ground Plane, in (mm)				
Mounting hardware	Supplied	Supplied	Supplied	Supplied

Environmental Specifications

	ST221-SF1SNF(FXXXX)	ST221-SF1SUF(FXXXX)	ST221-SF2SNF(FXXXX)	ST221-SF2SUF(FXXXX)
Temperature range, °F (°C)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)	-22 to +140 (-30 to +60)

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E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com
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ST221-SF3SNF

ST221-SF3SUF

Electrical Specifications

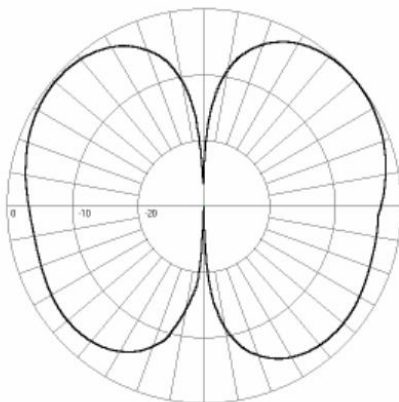
Frequency Range, MHz	220 to 222	220 to 222
Gain (nominal), dBd (dBi)	unity (2.1)	unity (2.1)
Input VSWR (max)	1.5:1	1.5:1
Polarization	vertical	vertical
Impedance, Ω	50	50
Pattern	Omni-directional	Omni-directional
Average Power Input (max), W	300	300
Lightning protection	DC ground	DC ground
Bandwidth, MHz	2.5	2.5

Mechanical Specifications

Connector	N (female)	UHF (female)
Length/ Height, in (mm)	4 (102)	4 (102)
Width, in (mm)	2.2 (56)	2.2 (56)
Depth, in (mm)	17 (432)	17 (432)
Weight, lbs (kg)	6 (2.7)	6 (2.7)
Actual Shipping weight, lbs (kg)	5.5 (2.5)	5.5 (2.5)
Shipping dimensions, in (mm)		
Ground Plane, in (mm)	30x36x0.5 (762x914x13)	30x36x0.5 (762x914x13)
Mounting hardware	Supplied	Supplied

Environmental Specifications

Temperature range, °F (°C)	-40 to +158 (-40 to +70)	-40 to +158 (-40 to +70)
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Elevation

ST221-SF1SNF(FXXXX)

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