



## Antennas of AVIA 118-136 MHz band

107497, Moscow Chernicinsky pr-d 7/1  
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Model	Short description	Gain, dBi
V0 AVIA	Vertical $5/8\lambda$ GP 1.77 m	2,15
F2 AVIA	Collinear antenna	4.5
D1 AVIA	Single folded dipole	2,15-5,15
D2 AVIA	Two dipoles and power divider	5,15-8,15
D4 AVIA	Four dipoles and power divider	8,15-11,15
D8 AVIA	Eight dipoles and power dividers	11,15-14,15
Y5 AVIA	Directional 5-element yagi with folded dipole as feed element	10,15

2009



## 118-136 MHz Vertical antenna V0 AVIA



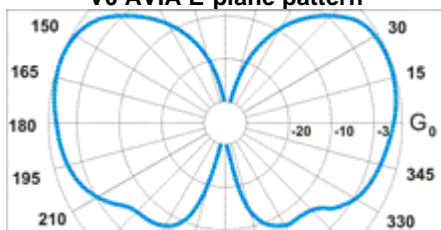
### Electrical specifications

Model	V0 AVIA
Operating frequency band, MHz	118-136
VSWR, not more than	1.5
Gain, dBi	2.15
Sector in vertical plane, -3dB	80°
Impedance, Ohm	50
Max. power input, W	100
Lightning protection	yes
Adjustable	need

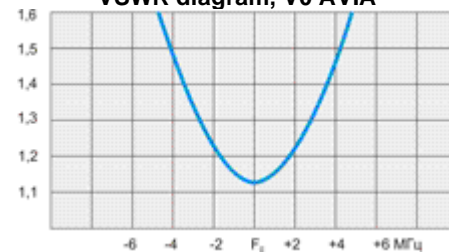
### Mechanical specifications

Model	V0 AVIA
Weight, kg	2.05
Height/Length, mm	1770
Mast diametr, mm	25-55
Rated wind velocity, m/s	40
Temperature range, °C	from -50 to +50
Connector	N-female

V0 AVIA E-plane pattern



VSWR diagram, V0 AVIA





## 118-136 MHz Vertical antenna F2 AVIA



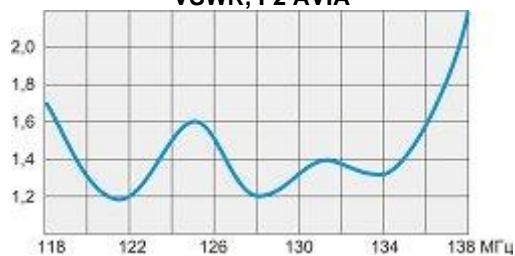
### Electrical specifications

Model	F2 AVIA
Operating Frequency band, MHz	118-136
VSWR, not more than	1.7
Gain, dBi	4.5
Sector in vertical plane, -3dB	38°
Impedance, Ohm	50
Max. Power input, W	200
Lightning protection	yes
Adjustable	no need

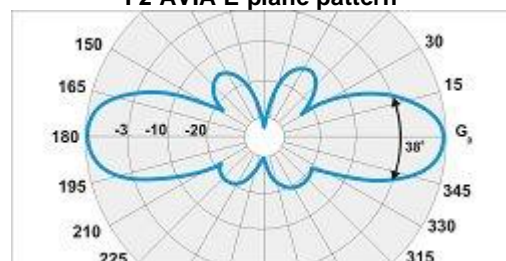
### Mechanical specifications

Model	F2 AVIA
Weight, kg	10
Height/Length, m	4
Mast diametr, mm	50-110
Radome	fiberglass diam.110 mm
Rated Wind Velocity, m/s	40
Temperature Range, °C	-50 to +50
Connector	N-female

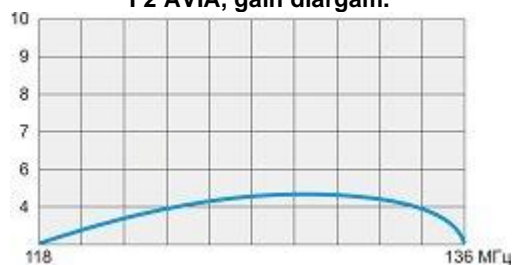
VSWR, F2 AVIA



F2 AVIA E-plane pattern



F2 AVIA, gain diagram.





# 118-136 MHz Dipole antennas D1 AVIA, D2 AVIA, D4 AVIA, D8 AVIA

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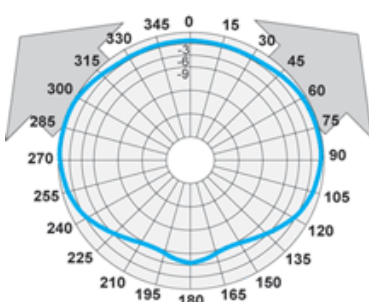
Electrical specifications

Model	D1 AVIA	D2 AVIA	D4 AVIA	D8 AVIA
Operating frequency band, MHz			118-136	
VSWR, not more than			1.5	
Gain OMNI, dBi	2.15	5.15	8.15	11.15
OFFSET, dBi	5.15	8.15	11.15	14.15
Sector in vertical plane, -3dB	70°	37°	18°	9°
Impedance, Ohm			50	
Max. power input, W	100	200	400	400

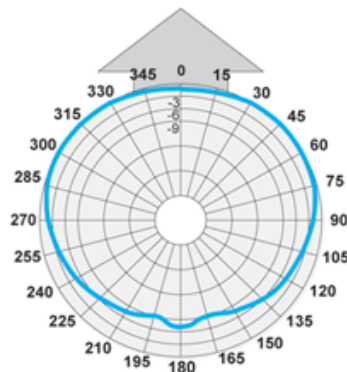
Mechanical specifications

Model	D1 VHF	D2 VHF	D4 VHF	D8 VHF
Weight, kg	3.8	8.2	16.6	33.2
Height/Length, M	1.1	2.5	5.3	14.5
Construction material			Aluminium alloy	
Mast diameter, mm			38-65	
Rated wind velocity, m/s			45	
Wind loading area, m <sup>2</sup>	0.16	0.28	0.55	1.23
Load of side wind 45 m/s, H	98	199	400	803
Rated wind velocity with 0.5" icing, m/s			28	
Temperature range, °C			from -50 to +50	
Connector			N-female	

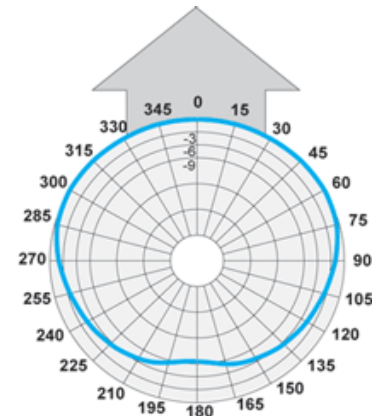
**D1 AVIA in H-plane, OMNI (1/2λ)**



**D1 AVIA in H-plane, OFFSET (1/4λ)**



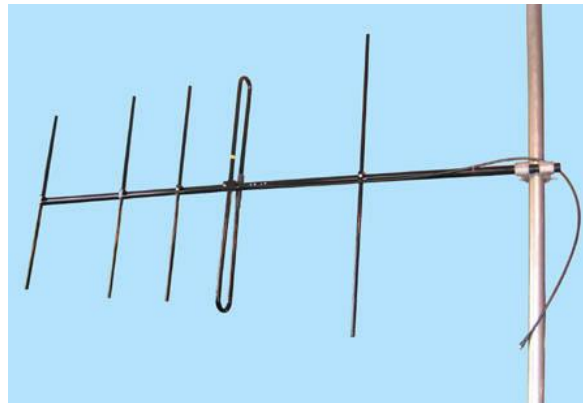
**D1 AVIA in H-plane, OFFSET (1/8λ)**





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## 118-136 Directional antenna Y5 AVIA



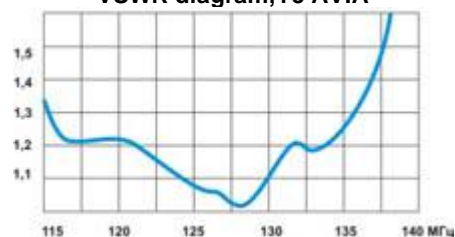
### Electrical specifications

Model	Y5 AVIA
Operating frequency band, MHz	118-136
VSWR, not more than	1.5
Gain, dBi	10.15
Sector , -3dB in vertical plane	60 <sup>0</sup>
in horizontal plane	90 <sup>0</sup>
Impedance, Ohm	50
Max. power input, W	200

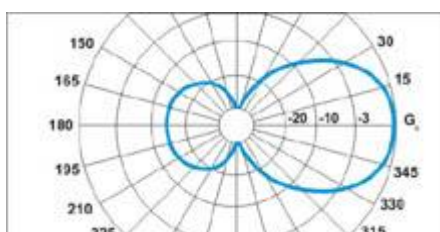
### Mechanical specifications

Model	Y5 AVIA
Weight, kg	4.2
Size, mm	2450x1280x110
Construction material	Aluminium alloy
Mast diameter, mm	38-65
Rated wind velocity, m/s	45
Wind loading area, m <sup>2</sup>	0.135
Load of side wind 45 m/s, H	150
Rated wind velocity with 0.5" icing, m/s	28
Temperature range, °C	from -50 to +50
Connector	N-female

**VSWR diagram, Y5 AVIA**



**Y5 AVIA E-plane pattern**



**Y5 AVIA H-plane pattern**

