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Antennas VHF band

Model	Short description	Gain, dBi	Band, MHz
	Vertical antennas		
GP 5/8 VHF	5/8λ GP 1.3 m (analog GP3E), adjustable	3,35	140-174
GP 1/4VHF	1/4λ GP, fiberglass radome	2.15	140-174
F1 VHF (L)	Vertical, collinear, fiberglass, 2.2 m	2	141-152
F1 VHF (M)	Vertical, collinear, fiberglass, 2.2 m	2	146-163
F1 VHF (H)	Vertical, collinear, fiberglass, 2.2 m	2	160-175
A5 VHF	Vertical antenna	4.5	144-174
F2 VHF (L)	Vertical, collinear, fiberglass, 3.2 m	5,15	141-153
F2 VHF(LM)	Vertical, collinear, fiberglass, 3.2 m	5,15	146-158
F2 VHF (M)	Vertical, collinear, fiberglass, 3.2 m	5,15	154-165
F2 VHF (H)	Vertical, collinear, fiberglass, 3.2 m	5,15	163-174
F2 VM	Vertical, collinear, fiberglass, 3.2 m	5,15	148-151/169-173
	Dipole antennas		
D1 VHF	Single folded dipole	2,15-5,15	136-174
D2 VHF	Two dipoles and power divider	5,15-8,15	136-174
D4 VHF	Four dipoles and power divider	8,15-11,15	136-174
D8 VHF	Eight dipoles and power dividers	11,15-14,15	136-174
D2 VHF I	Two dipoles inegrated with power divider	5,15-8,15	136-174
D4 VHF I	Four dipoles inegrated with power divider	8,15-11,15	136-174
DS2 VHF(M)	System of 2 dipoles	3,15	140-163
DS2 VHF(H)	System of 2 dipoles	3,15	153-177
DS4 VHF(M)	Two systems of 2 dipoles and power divider	6,15	143-163
DS4 VHF(H)	Two systems of 2 dipoles and power divider	6,15	155-177
DS8 VHF(M)	Four systems of 2 dipoles and power divider	9,15	143-163
DS8 VHF(H)	Four systems of 2 dipoles and power divider	9,15	155-177
DP1 VHF	Single folded dipole	5,15	150-174
DP2 VHF	Two dipoles and power divider	8.15	150-174
DP4 VHF	Four dipoles and power divider	11,15	150-174
DH1 VHF	One half-wave continuous dipole with gamma-transformer, adjusted	5,15	136-174
DH2 VHF	Two half-wave continuous dipole with gamma-transformer, adjusted	8,15	136-174
DH4 VHF	Four half-wave continuous dipole with gamma-transformer, adjusted	11,15	136-174
PA-153	Quarter wave folded vibrator	2,15	148,5-157
PA-156	Quarter wave folded vibrator	2,15	154-164
LA-156	Lowprofil , quarter wave folded vibrator	2,15	150-156
	Directional antennas		
Y3 VHF (L)	3-element yagi with folded dipole as feed element	7,15	140-153
Y3 VHF (M)	3-element yagi with folded dipole as feed element	7,15	150-172
Y3 VHF (H)	3-element yagi with folded dipole as feed element	7.15	157-179
Y5 VHF-148	5-element yagi with folded dipole as feed element	10,15	143-156
Y5 VHF (L)	5-element yagi with folded dipole as feed element	10.15	148-157
Y5 VHF (M)	5-element yagi with folded dipole as feed element	10.15	153-168
Y5 VHF (H)	5-element yagi with folded dipole as feed element	10.15	161-178
Y3 VHFy	3-element yagi with γ-match, adjusted, SO-239	7,65	144-170
Y5 VHFy	5-element yagi with γ-match, adjusted, SO-239	10,15	144-170
Y9 VHFy	9-element yagi with γ-match, adjusted, SO-239	13,65	150-170

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140 - 174 MHz
Vertical antenna GP 5/8 VHF

Electrical specifications

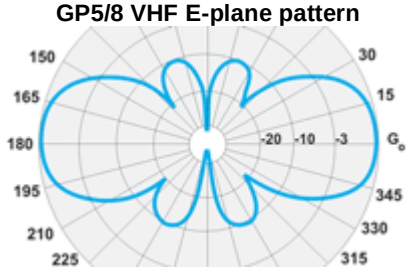
Model	GP 5/8 VHF
Operating Frequency band, MHz	140-174
Frequency bandwidth, MHz	5
VSWR, not more than	1.5
Gain,dBi	3.35
Impedance, Ohm	50
Max. Power input, W	100
Lightning protection	yes
Adjustable	needed

Mechanical specifications

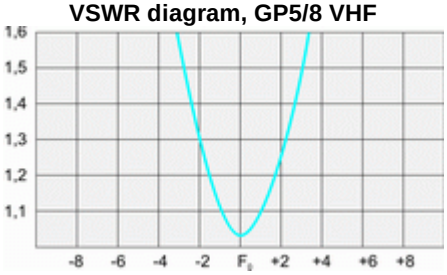
Model	GP 5/8 VHF
Weight, kg	0295
Height/Length, M	1.02 to 1.45
Mast diameter, mm	25-55
Construction material	aluminium alloy
Rated Wind Velocity, m/s	40
Temperature Range, °C	from -50 to +50
Connector	SO-239

Antenna GP5/8 has quite a big number of analogues: GP3E, Sirio, Alan and others. This indicates its popularity, especially among radioamateurs, since it is very easy to adjust and suits perfectly for any telecommunications systems without particular operational requirements. At present time these antennas are produced in new ruggedized modification.

GP5/8 VHF E-plane pattern



VSWR diagram, GP5/8 VHF



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140-174 MHz
Vertical antenna GP 1/4 VHF

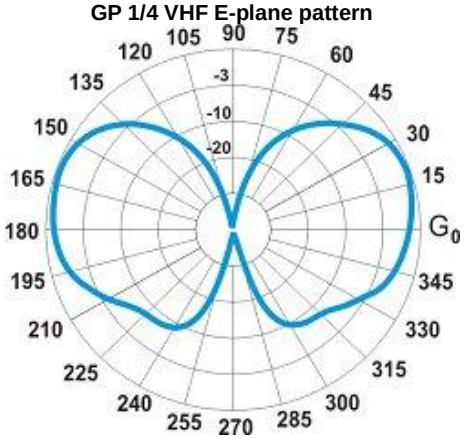
Electrical specifications

Model	GP 1/4 VHF
Operating Frequency band, MHz	140-174
Frequency bandwidth, MHz	10
VSWR, not more than	1.5
Gain,dBi	2.5
Impedance, Ohm	50
Max. Power input, W	200
Lightning protection	absent
Adjustable	no need

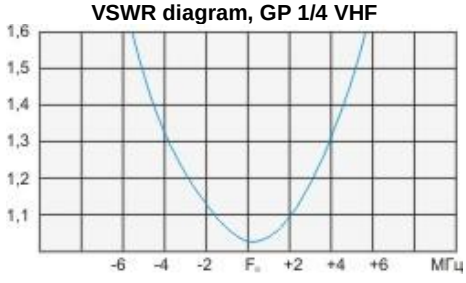
Mechanical specifications

Model	GP 1/4 VHF
Weight, kg	0.7
Height/Length, M	0.5
Mast diametr, mm	25-55 (CP-55) or 35-70 (CPK-70)
Construction material	brass
Rated Wind Velocity, m/s	40
Temperature Range, °C	from -50 to +50
Connector	N-female

GP 1/4 VHF E-plane pattern



VSWR diagram, GP 1/4 VHF



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141.5-175 MHz
Vertical antennas F1 VHF

Electrical specifications

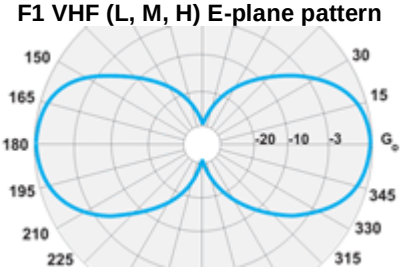
Model	F1 VHF(L)	F1 VHF(M)	F1 VHF(H)
Operating frequency band, MHz	141.5-152	146-163	160-175
VSWR, not more than		1.5	
Gain,dBi		2	
Sector in vertical plane , -3dB		70°	
Impedance, Ohm		50	
Max. power input, W		200	
Lightning protection		yes	
Adjustable		no need	

Mechanical specifications

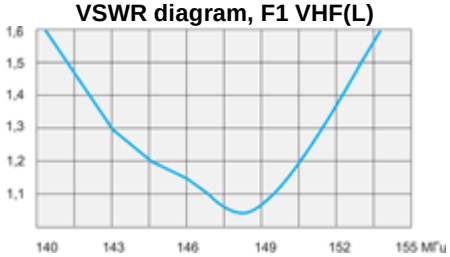
Model	F1 VHF(L)	F1 VHF(M)	F1 VHF(H)
Weight, no more, kg		3	
Height/Length, mm		2200	
Mast diametr, mm		50-110	
Radome		fiberglass	
Rated wind velocity, m/s		40	
Wind loading area, m^2		0.132	
Load of side wind 40 m/s, H		180	
Temperature range, °C		from -50 to +50	
Connector		N-female	

Antenna F1 VHF has less gain than F2 VHF, but in contrast to the popular antennas of Anli and Diamond companies it possesses more reliable design - its diameter is 2 times larger, the case made of glass-fiber material is more thick, the mounting is massive and the counterpoise are replaced for the cutting balancing barrel hidden inside. Thus, it is not risky to install antenna F1 VHF in most severe climate conditions, "hanging" on it the data transmission or any professional duplex communications.

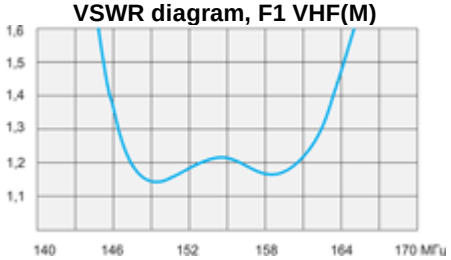
F1 VHF (L, M, H) E-plane pattern



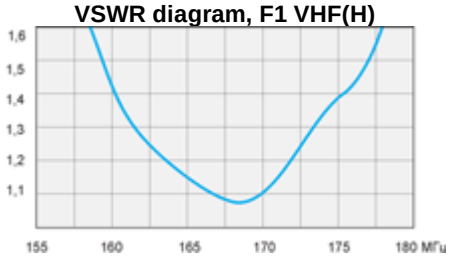
VSWR diagram, F1 VHF(L)

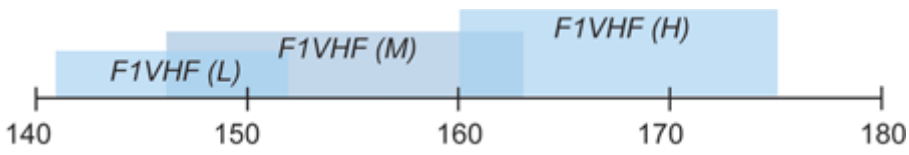


VSWR diagram, F1 VHF(M)



VSWR diagram, F1 VHF(H)





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144-174 MHz
Vertical antenna A5 VHF

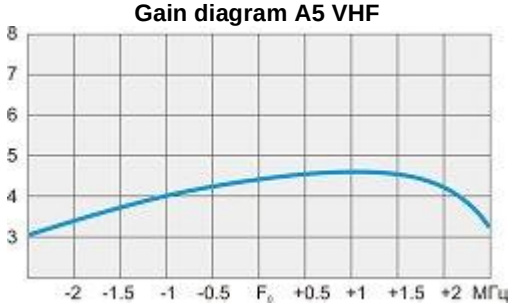
Electrical specifications

Model	A5 VHF
Operating Frequency band, MHz	144-174
Frequency bandwidth, MHz	5
VSWR, not more than	1.5
Gain,dBi	4.5
Impedance, Ohm	50
Max. Power input, W	200
Lightning protection	DC grounded
Adjustable	need

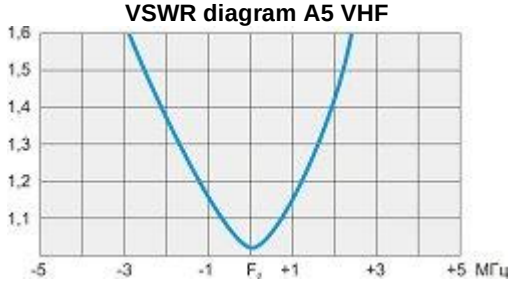
Mechanical specifications

Model	A5 VHF
Height/Length, M	2.5
Mast diametr, mm	35-70 (CPK-70)
Construction material	brass
Rated Wind Velocity, m/s	40
Temperature Range, °C	from -50 to +50
Connector	N-female

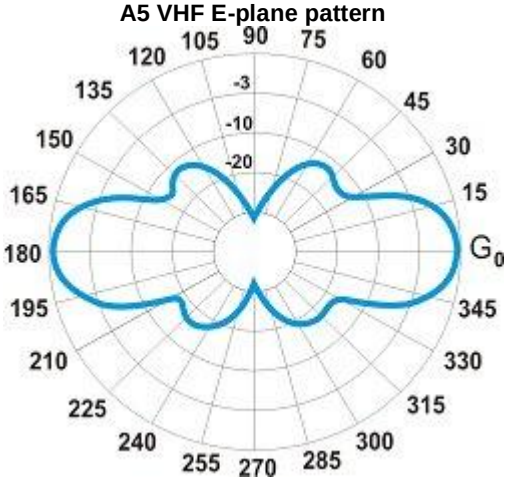
Gain diagram A5 VHF



VSWR diagram A5 VHF



A5 VHF E-plane pattern



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141-174 MHz
Vertical antennas F2 VHF (L, LM, M, H)

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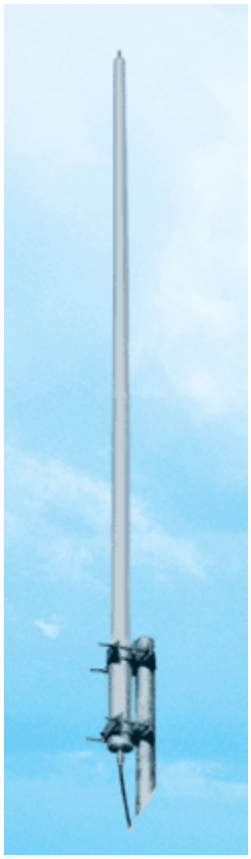


Electrical specifications

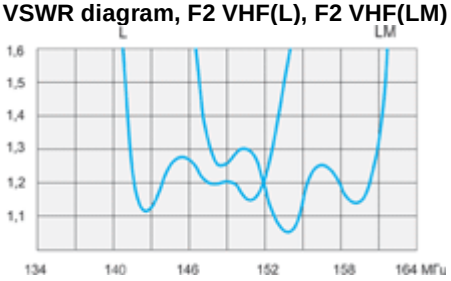
Model	F2 VHF (L)	F2 VHF(LM)	F2 VHF (M)	F2 VHF (H)
Operating frequency band, MHz	141-153	146-158	154-165	163-174
VSWR, not more than	1.5			
Gain,dBi	5.15			
Sector in vertical plane , -3dB	38°			
Impedance, Ohm	50			
Max. power input, W	400			
Lightning protection	yes			
Adjustable	no need			

Mechanical specifications

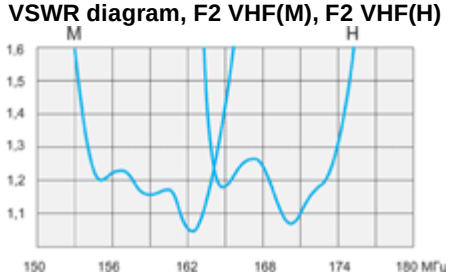
Model	F2 VHF (L)	F2 VHF(LM)	F2 VHF (M)	F2 VHF (H)
Weight, kg	3.15			
Height/Length, mm	3160			
Mast diametr, mm	50-110			
Radome	fiberglass			
Rated wind velocity, m/s	40			
Wind loading area, m^2	0.16			
Load of side wind 40 m/s, H	180			
Temperature range, °C	from -50 to +50			
Connector	N-female, (7/16 DIN-optional)			

Antenna F2 VHF is used in telecommunications systems, which are required to provide operation in satisfactory wide bandwidth at omni directional pattern. This antenna will be irreplaceable for operation of single-feeder design trunking and conventional repeaters. Radioparent, weatherproof, high-strength radome is made using fiberglass material on polyester binding substances. The radome has polyurethane coating protecting from ultraviolet radiation and icing. Antenna has protection from lightning and does not demand additional adjustment.

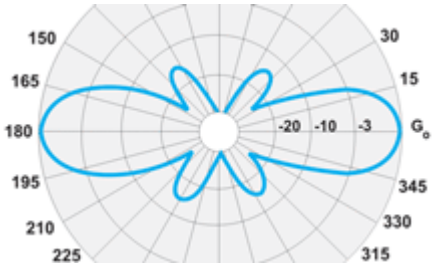
VSWR diagram, F2 VHF(L), F2 VHF(LM)



VSWR diagram, F2 VHF(M), F2 VHF(H)



F2 VHF (L, M, H) E-plane pattern



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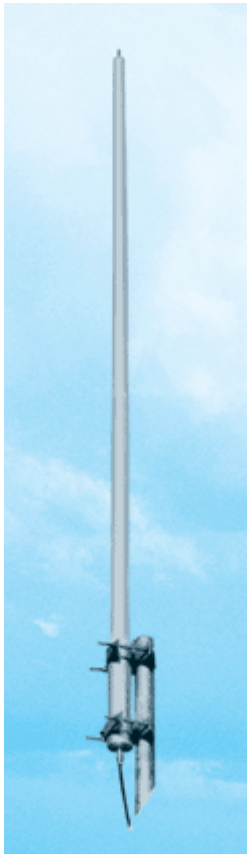
148/172 MHz
Vertical antenna F2 VM



Electrical specifications

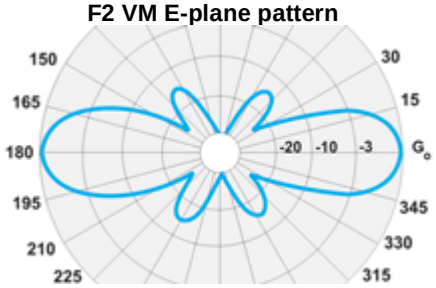
Model	F2 VM
Operating Frequency band, MHz	148-151/169-173
VSWR, not more than	2
Gain,dBi	5.15
Sector in vertical plane , -3dB	38°
Impedance, Ohm	50
Max. Power input, W	400
Lightning protection	yes
Adjustable	no need

Mechanical specifications

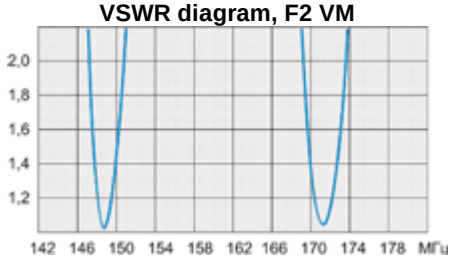
Model	F2 VM
Weight, kg	3,15
Height/Length, mm	3160
Mast diametr, mm	50-110
Radome	fiberglass diam.50 mm
Rated Wind Velocity, m/s	40
Wind Loading area, m^2	0,16
Load of side wind 40 m/s, H	180
Temperature Range, °C	-50 to +60
Connector	N-female

Operating frequency band of 148 and 172 MHz enables easy implementation of radio repeater telecommunications systems. Our company offers to the market new unique collinear antenna, designed specifically for use in 148/172 MHz telecommunications systems. It has two resonance points at the frequency band of 148-149 and 171 172 MHz (insignificant factory readjustment is allowable). Two active dipoles, jacketed into durable fiberglass radome, provide 3 dBd gain due to phasing. Thus you can make perfect single or multichannel antenna-feeder circuit with circular radiation and high selectivity and decoupling level between TX and RX circuits using this antenna together with duplexer DPF5-3V, DPF2-6VM or MDF-6VM.

F2 VM E-plane pattern



VSWR diagram, F2 VM



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136-174 MHz
Dipole antennas D1 VHF, D2 VHF, D4 VHF, D8 VHF

D1 VHF

D2 VHF

D4 VHF

D8 VHF

Electrical specifications

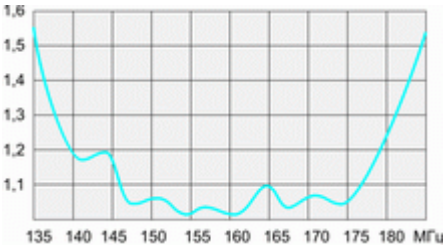
Model	D1 VHF	D2 VHF	D4 VHF	D8 VHF
Operating frequency band, MHz			136-174	
VSWR, not more than			1.5	
Gain OMNI, dBi	2.15	5.15	8.15	11.15
OFFSET, dBi	5.15	8.15	11.15	14.15
Sector in vertical plane , -3dB	70°	37°	18°	9°
Impedance, Ohm			50	
Max. power input, W	400	400	400	400 (800 optional)

Mechanical specifications

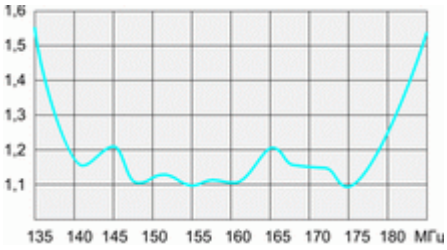
Model	D1 VHF	D2 VHF	D4 VHF	D8 VHF
Weight, kg	2.3	5.2	10.4	21.5
Height/Length, M	0.85	2.1	5	9.5
Construction material			Aluminium alloy	
Mast diametr, mm			38-65	
Rated wind velocity, m/s			45	
Wind loading area, m^2	0.07	0.14	0.29	0.6
Load of side wind 45 m/s, H	80	165	335	675
Rated wind velocity with 0.5" icing, m/s			28	
Temperature range, °C			from -50 to +50	
Connector			N-female	

Antenna D1 VHF represents folded Pistolcors dipole. Its main advantages are wide band and relatively low susceptibility to technical born interference. Collapsible construction allows easy antenna mounting and dismounting, and welded dipole eliminates intermodulation. Emitting unit directional pattern can be slightly corrected by changing distance from it to mast. Antenna has reliable polymeric coating, which protects from hostile environment and icing. All-metal construction provides reliable lightning protection.

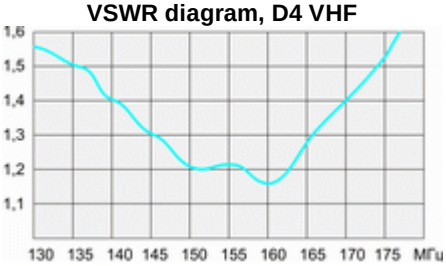
VSWR diagram, D1 VHF



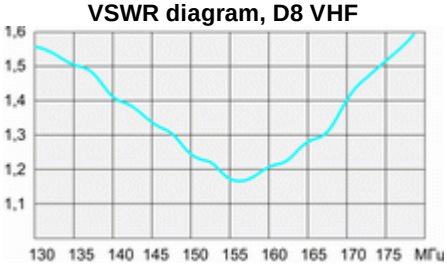
VSWR diagram, D2 VHF



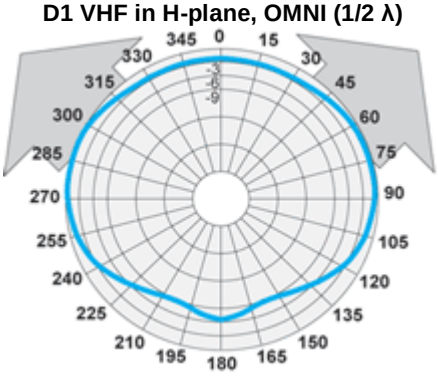
VSWR diagram, D4 VHF



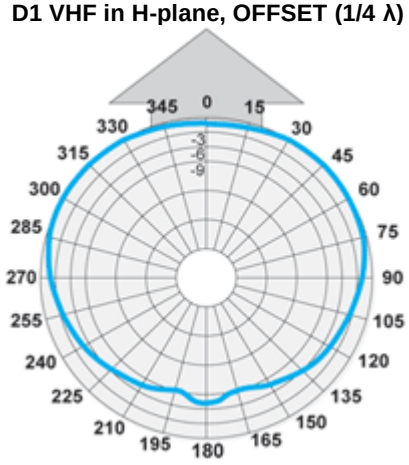
VSWR diagram, D8 VHF



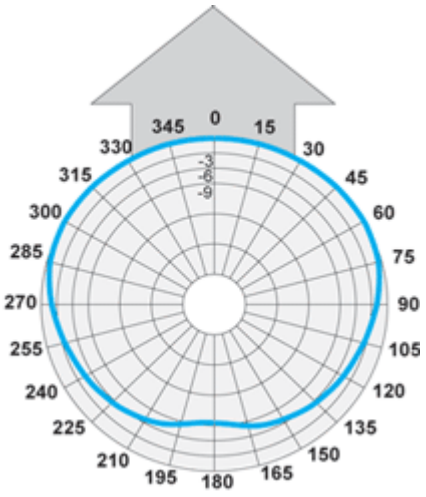
D1 VHF in H-plane, OMNI (1/2 λ)



D1 VHF in H-plane, OFFSET (1/4 λ)



D1 VHF in H-plane, OFFSET (1/8 λ)



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136-174 MHz
Dipole antennas D2 VHF I, D4 VHF I

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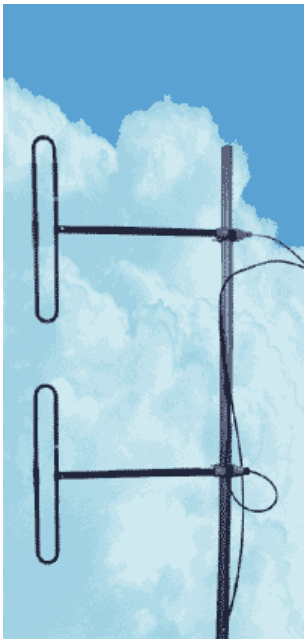


Electrical specifications

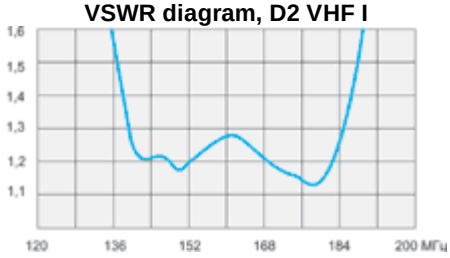
Model	D2 VHF I	D4 VHF I
Operating frequency band, MHz	136-174	
VSWR, not more than	1.5	
Gain OMNI, dBi	5.15	8.15
OFFSET, dBi	8.15	11.15
Sector in vertical plane , -3dB	35°	15-20°
Impedance, Ohm	50	
Max. power input, W	400	400

Mechanical specifications

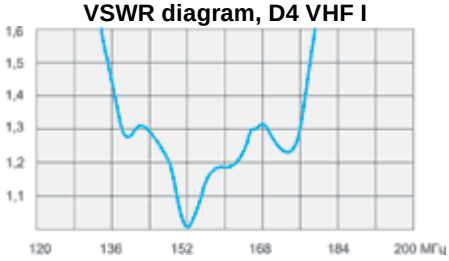
Model	D2 VHF I	D4 VHF I
Weight, kg	5.2	10.4
Height/Length, M	2.1	5
Construction material	Aluminium alloy	
Mast diametr, mm	40-65	
Rated wind velocity, m/s	45	
Wind loading area, m^2	0.14	0.29
Load of side wind 45 m/s, H	165	335
Rated wind velocity with 0.5" icing, m/s	28	
Temperature range, °C	from -50 to +50	
Connector	N-female	

Antenna arrays of series "I" (letter "I" - from "integrated"), namely, D2 VHF I and D4 VHF I consist of two and four dipoles D1 VHF, correspondingly, fixed on a mast and connected by all-soldered cable integrators without connectors. In addition to all the advantages of antennas of "D" series (broad bandwidth, low sensitivity to the noise of industrial origin, the possibility to slightly change the radiation pattern of the antenna array, the steady polymeric coating) an enhanced reliability of the antenna is provided due to all-soldered wiring.

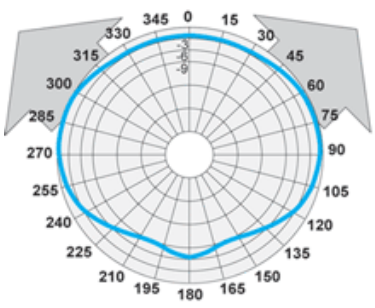
VSWR diagram, D2 VHF I



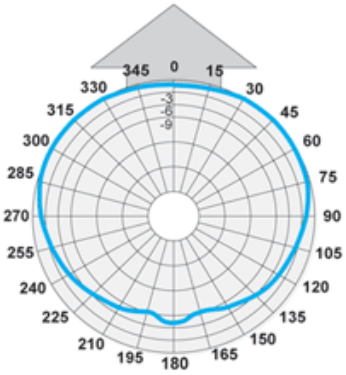
VSWR diagram, D4 VHF I



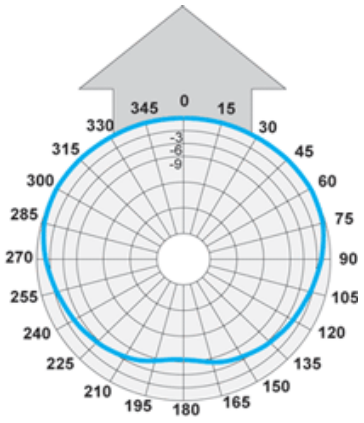
D1 VHF in H-plane, OMNI (1/2λ)



D1 VHF in H-plane, OFFSET (1/4λ)



D1 VHF in H-plane, OFFSET (1/8λ)



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140-177 MHz Dipole antennas DS2 VHF, DS4 VHF, DS8 VHF

DS2 VHF DS4 VHF

Electrical specifications

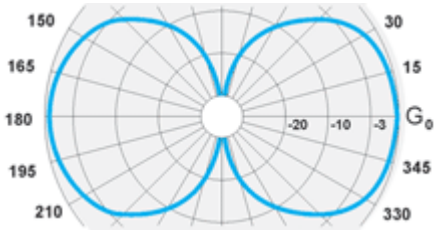
Model	DS2 VHF		DS4 VHF		DS8 VHF	
.	(M)	(H)	(M)	(H)	(M)	(H)
Operating frequency band, MHz	140-163	153-177	143-163	155-177	143-163	155-177
VSWR, not more than	1.5					
Gain,dBi	3.15		6.15		9.15	
Sector in vertical plane , -3dB	86°		43°		18°	
Impedance, Ohm	50					
Max. power input, W	500					

Mechanical specifications

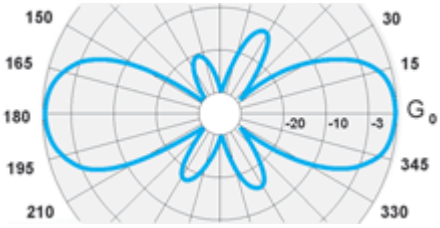
Model	DS2 VHF	DS4 VHF	DS8 VHF
Weight, kg	2.4	5.2	10.7
Height/Length, M	0.87	2.1	4.5
Construction material	Aluminium alloy		
Mast diametr, mm	50-60		
Rated wind velocity, m/s	55		
Wind loading area, m^2	0.05	0.1	0.2
Load of side wind 45 m/s, H	58	116	232
Rated wind velocity with 0.5" icing, m/s	28		
Temperature range, °C	from -50 to +50		
Connector	N-female		

Dipole pair DS2 VHF was designed according to special technical specifications, including strict requirements on operating frequency bandwidth, circular pattern, low VSWR, high power conduction, maximum lightning protection and corrosion stability. This construction is the main component for high VSWR antenna array building.
DS4 VHF and DS8 VHF antennas represent array antenna with heightened gain assembled using two or four DS2 VHF antenna pairs connected by adders. These antennas are very easy to transport due to their collapsible construction, in spite of large overall dimension in assembly.

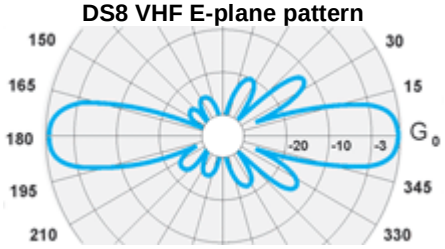
DS2 VHF E-plane pattern



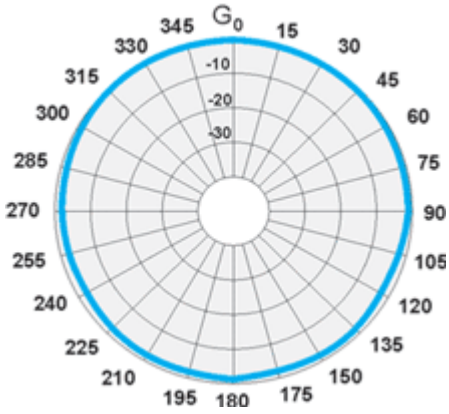
DS4 VHF E-plane pattern



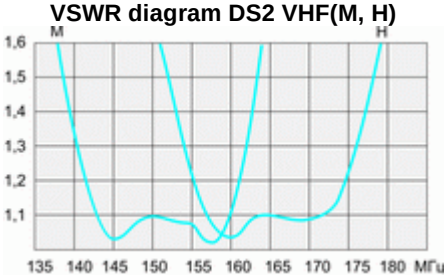
DS8 VHF E-plane pattern



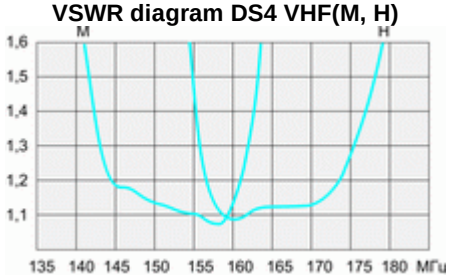
DS2 VHF H-plane pattern



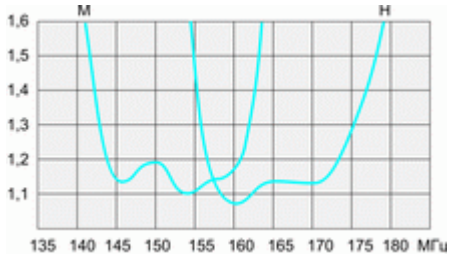
VSWR diagram DS2 VHF(M, H)



VSWR diagram DS4 VHF(M, H)



VSWR diagram DS8 VHF(M, H)



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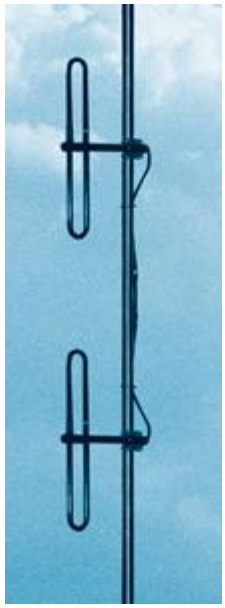
150-174 MHz Dipole antennas DP1 VHF, DP2 VHF, DP4 VHF

DP1 VHF

DP2 VHF



DP4 VHF

Electrical specifications

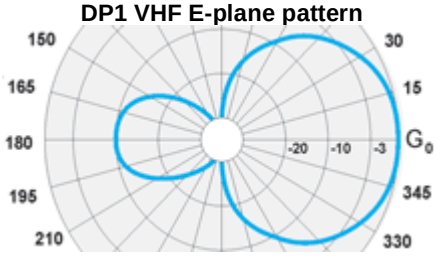
Model	DP1 VHF	DP2 VHF	DP4 VHF
Operating frequency band, MHz	149-174	150-174	
VSWR, not more than	1.5		
Gain OFFSET, dBi	5.15	8.15	11.15
Sector in vertical plane , -3dB	75°	37°	18°
Impedance, Ohm	50		
Max. power input, W	400	400	400

Mechanical specifications

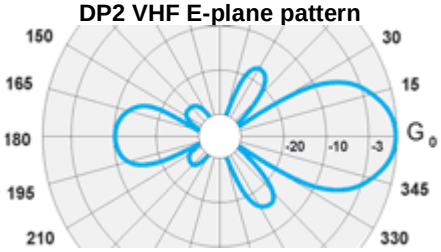
Model	DP1 VHF	DP2 VHF	DP4 VHF
Weight, kg	1.2	2.8	6
Height/Length, M	0.8	2	4.4
Construction material	Aluminium alloy		
Mast diametr, mm	25-55		
Rated wind velocity, m/s	45		
Wind loading area, m^2	0.045	0.09	0.18
Load of side wind 45 m/s, H	51	102	205
Rated wind velocity with 0.5" icing, m/s	28		
Temperature range, °C	from -50 to +50		
Connector	N-female		

Antenna DP1 VHF represents all-welded nonseparable folded Pistolcors dipole. Antenna is designed exclusively for lateral mount on 25-55 mm diameter masts at 1/8 λ distance from mast. Antenna has reliable polymeric coating, which protects from hostile environment. Antenna is recommended to use in maritime climatic zone and locations with increased acidity.
DP2 VHF and DP4 VHF antennas represent collinear dipole system, with antenna DP1 VHF as the main structural component. These antennas are shipped together with adders TK-52V and TK-54V.

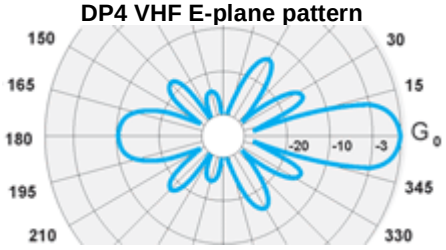
DP1 VHF E-plane pattern



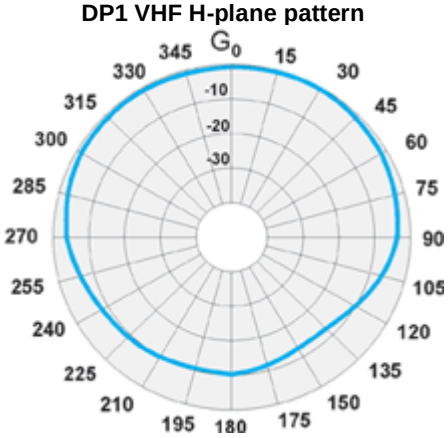
DP2 VHF E-plane pattern



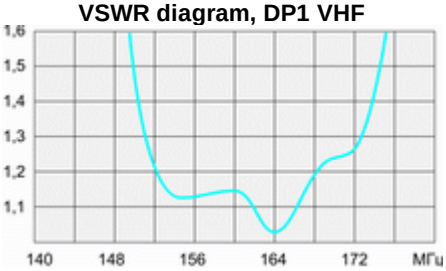
DP4 VHF E-plane pattern



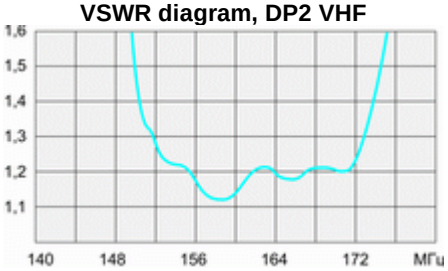
DP1 VHF H-plane pattern



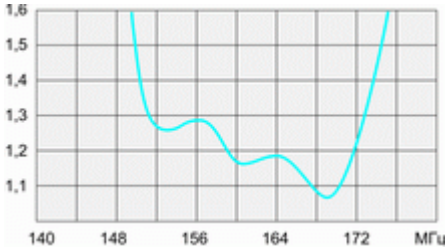
VSWR diagram, DP1 VHF



VSWR diagram, DP2 VHF



VSWR diagram, DP4 VHF



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136-174 MHz Dipole antennas DH1 VHF, DH2 VHF, DH4 VHF

DH1 VHF DH2 VHF

Electrical specifications

Model	DH1 VHF	DH2 VHF	DH4 VHF
Operating frequency band, MHz		136-174	
VSWR, not more than		1.5	
Gain OFFSET, dBi	5.15	8.15	11.15
Sector , -3dB:			
in vertical plane	75°	37°	18°
in horizontal plane		132°	
Impedance, Ohm		50	
Max. power input, W		100	

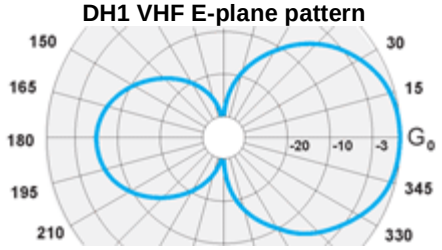
Mechanical specifications

Model	DH1 VHF	DH2 VHF	DH4 VHF
Weight, kg	0.75	2	4.1
Height/Length, M	0.82-1.05	2.2	4.6
Construction material		Aluminium alloy, D16T	
Mast diametr, mm		25-55	
Rated wind velocity, m/s		45	
Wind loading area, m^2	0.022	0.045	0.09
Load of side wind 45 m/s, H	25	51	102
Rated wind velocity with 0.5" icing, m/s		28	
Temperature range, °C		from -50 to +50	
Connector		SO-239	

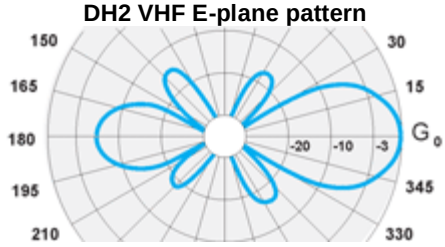
Antenna DH1 VHF is half-wave continuous dipole with shunt power supply (gamma-transformer). It is designed for lateral mounting and array antenna constructing. Antenna has collapsible construction and grounded totally. Tuning is conducted by setting vibrator length according to that specified in supplied diagram. Gamma-transformer usage provides perfect antenna tuning. Steel zinc-coated mounting device provides reliable mounting.

Antenna DH2 VHF and DH4 VHF is two and four-component array antenna, with DH1 VHF as main structural component. These antennas can be used for circular pattern generation as panel antennas for lateral mount on radiopaque towers. Supplied with adders TK-72V and TK-74V.

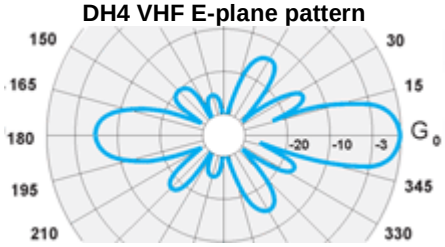
DH1 VHF E-plane pattern



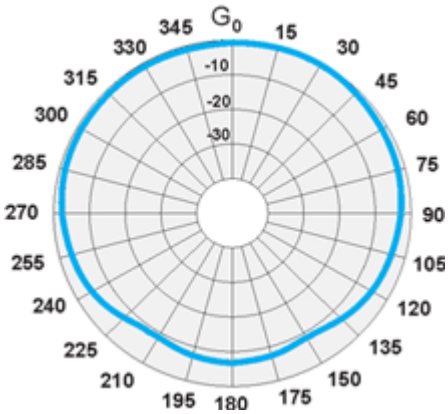
DH2 VHF E-plane pattern



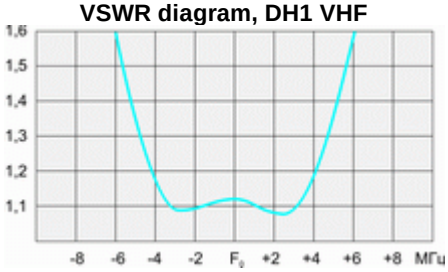
DH4 VHF E-plane pattern



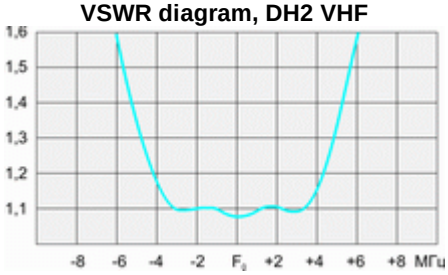
DH1 VHF H-plane pattern



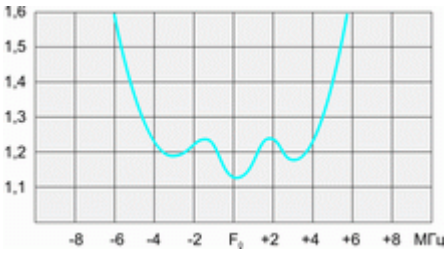
VSWR diagram, DH1 VHF



VSWR diagram, DH2 VHF



VSWR diagram, DH4 VHF



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149-164 MHz Lokomotive antennas PA-153, PA-156, LA-156

PA-153

PA-156

LA-156

Electrical specifications

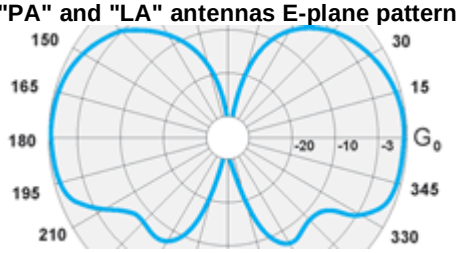
Model	PA-153	PA-156	LA-156
Operating frequency band, MHz	148.5-157	154-164	150-156
VSWR, not more than	1.5	1.5	1.5
Gain OFFSET, dBi	2.15	2.15	2.15
Sector in vertical plane , -3dB	65°	65°	65°
Impedance, Ohm	50	50	50
Max. power input, W	300	300	300

Mechanical specifications

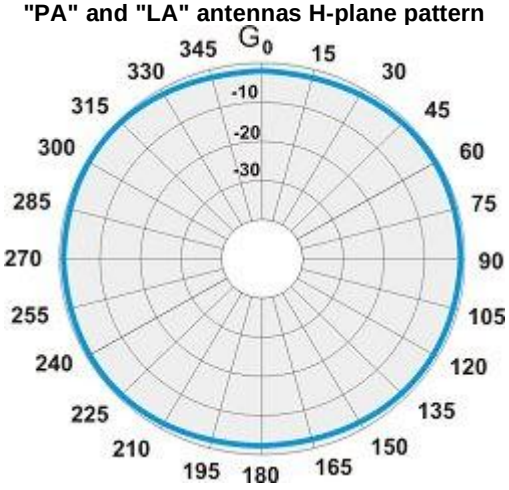
Model	PA-153	PA-156	LA-156
Weight, kg	0.8	0.6	0.9
Height/Length, mm	545	500	215
Construction material		Aluminium alloy	
Standard mounting		horizontal metal plane	
Rated wind velocity, m/s	55	55	55
Wind loading area, m^2	0.022	0,02	0.016
Rated wind velocity with 0.5" icing, m/s	42	42	42
Temperature range, °C		from -50 to +50	
Connector		N-female	

Locomotive antenna PA-156 with full grounding provided by all-metal construction ensures safety for motorman and equipment. Antenna is highly efficient at different communication ranges. It is mounted directly onto locomotive top employing four 8 mm diameter mounting holes. Long coupling cable enables to connect antenna directly to equipment. Wide bandwidth of antenna PA-156 assumes operation of radio station at any frequency, allocated by your local authorities.

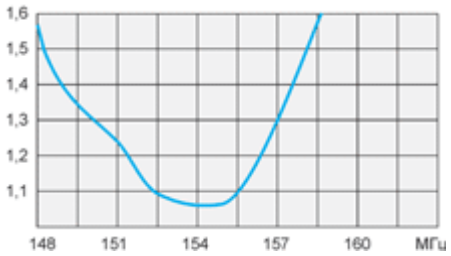
"PA" and "LA" antennas E-plane pattern



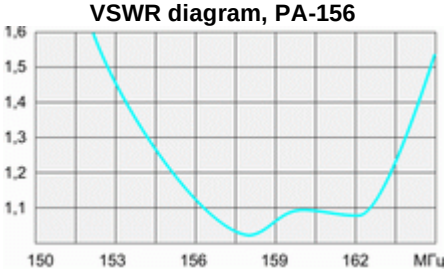
"PA" and "LA" antennas H-plane pattern



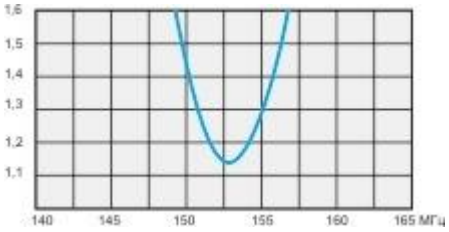
VSWR diagram, PA-153



VSWR diagram, PA-156



VSWR diagram, LA-156



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140-179 MHz Directional antennas Y3 VHF (L, M, H)

Electrical specifications

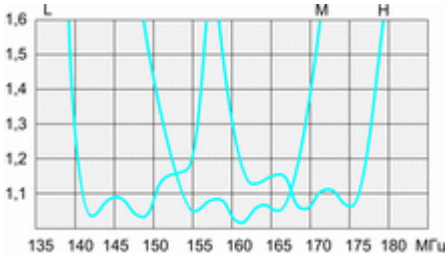
Model	Y3 VHF(L)	Y3 VHF(M)	Y3 VHF(H)
Operating frequency band, MHz	140-153	150-172	157-179
VSWR, not more than		1.5	
Gain, dBi		7.15	
Sector , -3dB			
in vertical plane		65°	
in horizontal plane		120°	
Impedance, Ohm		50	
Max. power input, W		400	

Mechanical specifications

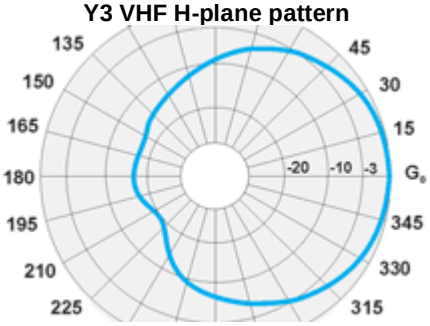
Model	Y3 VHF(L)	Y3 VHF(M)	Y3 VHF(H)
Weight, kg	2.85	2.8	2.75
Size mm		1100x950x60	
Construction material		Aluminium alloy	
Mast diametr, mm		38-65	
Rated wind velocity, m/s		50	
Wind loading area, m^2	0.11	0.08	0.07
Load of side wind 45 m/s, H	122	98	83
Rated wind velocity with 0.5" icing, m/s		28	
Temperature range, °C		from -50 to +50	
Connector		N-female	
Size of box, mm		1200x120x120	

Antenna Y3 VHF is three-component Yagi antenna. Due to folded dipole usage in combination with symmetric power supply, antenna has comparatively wide operating frequency band. It is recommended for construction of array antennas with high gain factor and remote subscriber stations. Three models designed specifically for operation at frequencies with centers at 148 MHz (L), 159.975 MHz (M) and 165 MHz (H) are produced now. Antenna is produced in collapsible version for the ease of transportation.

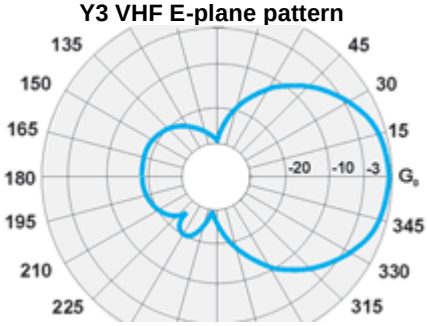
VSWR diagram,Y3 VHF(L, M, H)



Y3 VHF H-plane pattern



Y3 VHF E-plane pattern



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143-178 MHz
Directional antennas Y5 VHF
(148,L,M,H)

Electrical specifications

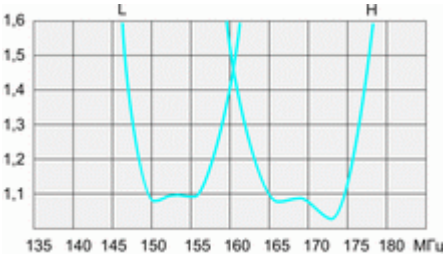
Model	Y5-148	Y5 VHF(L)	Y5 VHF(M)	Y5 VHF(H)
Operating frequency band, MHz	143-156	148-157	153-168	161-178
VSWR, not more than			1.5	
Gain OFFSET, dBi			10.15	
Sector , -3dB				
in vertical plane			55°	
in horizontal plane			74°	
Impedance, Ohm			50	
Max. power input, W			200	

Mechanical specifications

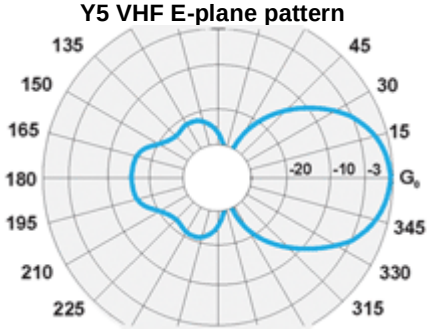
Model	Y5-148	Y5 VHF(L)	Y5 VHF(M)	Y5 VHF(H)
Weight, kg	3.7	3.44	3.5	3.59
Size, mm			1680x950x60	
Construction material			Aluminium alloy	
Mast diametr, mm			38-65	
Rated wind velocity, m/s			45	
Wind loading area, m^2		0.12	0.13	0.12
Load of side wind 45 m/s, H		140	145	140
Rated wind velocity with 0.5" icing, m/s			28	
Temperature range, °C			from -50 to +50	
Connector			N-female	
Size of box, mm			1800x120x120	

Antenna Y5 VHF is five-component Yagi antenna. Due to folded dipole usage in combination with symmetric power supply, antenna has comparatively wide operating frequency band. Three different models will provide coverage for every VHF subrange: model "L" for railroad transport, model "M" for paging, model "H" for trunking communication. Antenna is produced in collapsible version for the ease of transportation.

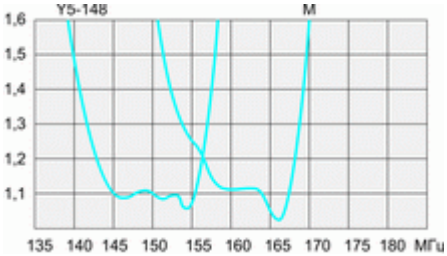
VSWR diagram,Y5 VHF(L, H)



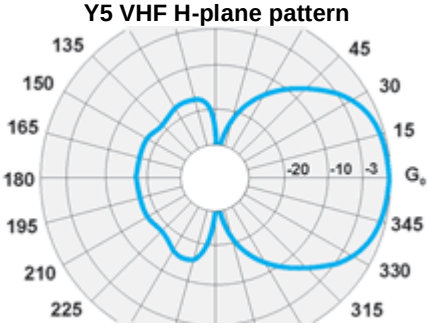
Y5 VHF E-plane pattern



VSWR diagram,Y5-148, Y5 VHF(M)



Y5 VHF H-plane pattern



2009

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Tel.: (495) 775-43-19,462-44-14
Tel./fax: 462-44-14
E-mail: radial@radial.ru
www.radial.ru

144-170 MHz
Directional antenna Y3 VHFγ

Electrical specifications

Model	Y3 VHFγ
Operating frequency band, MHz	144-170
VSWR, not more than	1.5
Gain, dBi	7.65
Front-to-back ratio, dB	14
Sector , -3dB	
E-plane pattern	50°
H-plane	112°
Polarization	vertical./horizont.
Impedance, Ohm	50
Max. power input, W	100

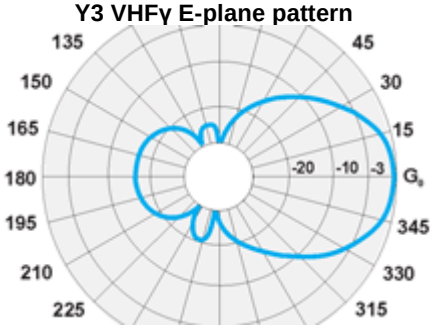
Mechanical specifications

Model	Y3 VHFγ
Weight, kg	1.35
Size, mm	1050x1050x83
Construction material	Aluminium alloy
Mast diametr, mm	25-55
Rated wind velocity, m/s	45
Wind loading area, m^2	0.07
Load of side wind 45 m/s, H	76
Rated wind velocity with 0.5" icing, m/s	28
Temperature range, °C	from -50 to +50
Connector	SO-239
Size of box, mm	1100x120x120

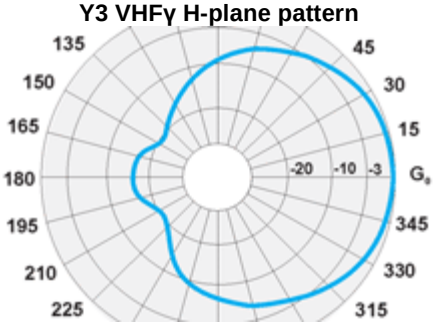
Antenna Y3 VHFγ is the most inexpensive and effective antenna for remote subscriber radio stations (up to 40-50 km) and telemetry systems, also. In the last case it is recommended to use it in horizontal polarization.

This is the most popular antenna for communication at a short distance among wireless communications enthusiasts.

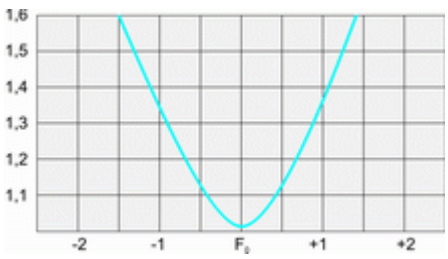
Y3 VHFγ E-plane pattern



Y3 VHFγ H-plane pattern



VSWR diagram, Y3 VHFγ



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144-170 MHz
Directional antenna Y5 VHFγ

Electrical specifications

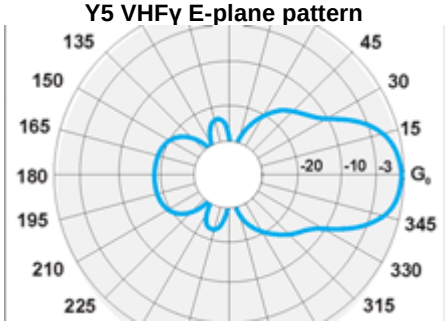
Model	Y5 VHFγ
Operating frequency band, MHz	144-170
VSWR, not more than	1.5
Gain, dBi	10.15
Front-to-back ratio, dB	20
Sector, -3dB	
E-plane	40°
H-plane	46°
Polarization	vertical./horizont.
Impedance, Ohm	50
Max. power input, W	100

Mechanical specifications

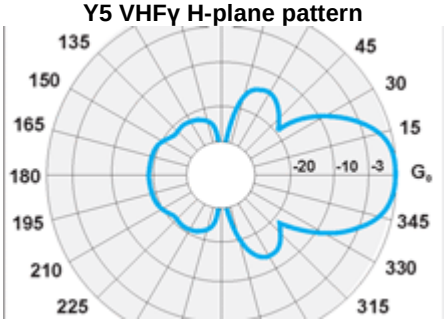
Model	Y5 VHFγ
Weight, kg	1.95
Size, mm	1800x1050x83
Construction material	Aluminium alloy
Mast diametr, mm	25-55
Rated wind velocity, m/s	45
Wind loading area, m^2	0.11
Load of side wind 45 m/s, H	130
Rated wind velocity with 0.5" icing, m/s	28
Temperature range, °C	from -50 to +50
Connector	SO-239
Size of box, mm	1800x120x120

Antenna Y5 VHFγ was developed by American wireless enthusiast K8CC using computer optimizer and has the highest technical capabilities (gain and low fringe radiation) peculiar to five-component antennas.
After the number of field studies being conducted our engineers can confirm this. Such antenna provides stable radio communication at distances up to 80 km long at cross-country.
Highly-directional pattern enables to use antenna as receiving antenna in order to "turn aside" from interference, since front/side attenuation constitutes only 20dB!

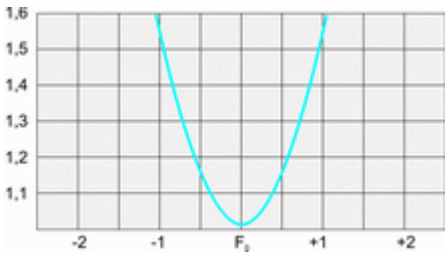
Y5 VHFγ E-plane pattern



Y5 VHFγ H-plane pattern



VSWR diagram, Y5 VHFγ



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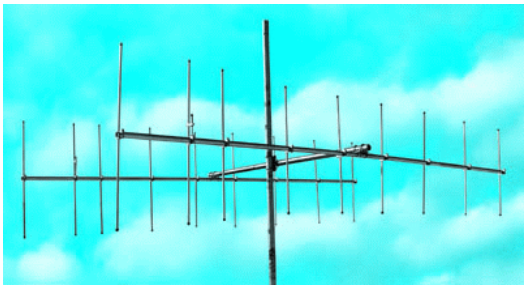
150-170 MHz
Directional antenna Y9 VHFγ



Electrical specifications

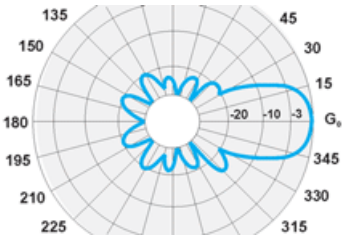
Model	Y9 VHFγ
Operating frequency band, MHz	150-170
VSWR, not more than	1.5
Gain, dBi	13.65
Front-to-back ratio, dB	20
Sector, -3dB	
E-plane	34°
H-plane	39°
Polarization	vertical/horizontal
Impedance, Ohm	50
Max. power input, W	100

Mechanical specifications

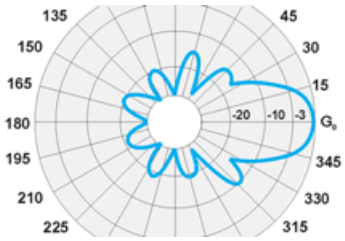
Model	Y9 VHFγ
Weight, kg	5.1
Size, mm	4000x1000x100
Construction material	Aluminium alloy
Mast diametr, mm	25-55
Rated wind velocity, m/s	42
Wind loading area, m^2	0.2
Load of side wind 42 m/s, H	230
Rated wind velocity with 0.5" icing, m/s	28
Temperature range, °C	from -50 to +50
Connector	SO-239
Size of box, mm	2005x120x120

Due to its high gain (up to 11 dBd), nine-component Yagi antenna Y9 VHFg is implemented for communication between subscriber stations and repeater, between subscriber stations, and between remote telemetry systems transmitters, also.

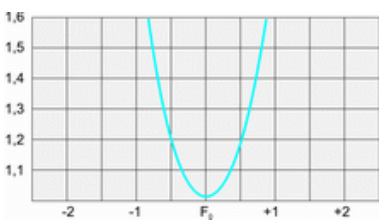
Y9 VHFγ E-plane pattern



Y9 VHFγ H-plane pattern



VSWR diagram, Y9 VHFγ



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