

# 3VTV-02/ES (Vertical polarization) VHF PANEL ANTENNA

## FEATURES

- vertical polarization
- broadband 174 ÷ 240 MHz
- 8 dB gain
- directional pattern
- suitable as a component in various arrays
- suitable also for horizontal polarization



## ELECTRICAL DATA

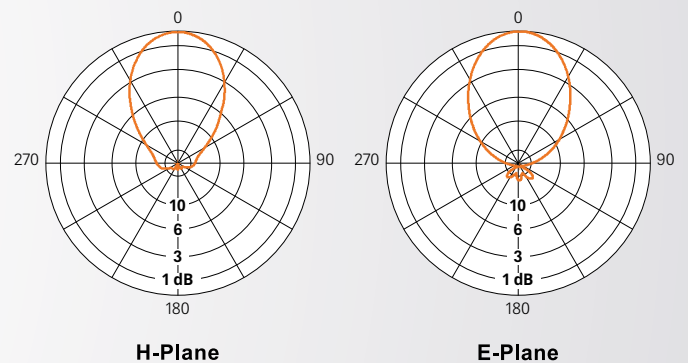
ANTENNA TYPE	3VTV-02/ES
FREQUENCY RANGE	174 ÷ 240 MHz
IMPEDANCE	50 ohm
CONNECTOR	7/8" EIA
MAX POWER	3 kW
VSWR	≤ 1.1 (174 ÷ 230 MHz) ≤ 1.2 (up to 240 MHz)*
POLARIZATION	Vertical
GAIN (referred to half wave dipole)	8 dB
HALF POWER BEAMWIDTH	E-Plane ± 32° H-Plane ± 30°
LIGHTNING PROTECTION	All Metal Parts DC Grounded

\* on request

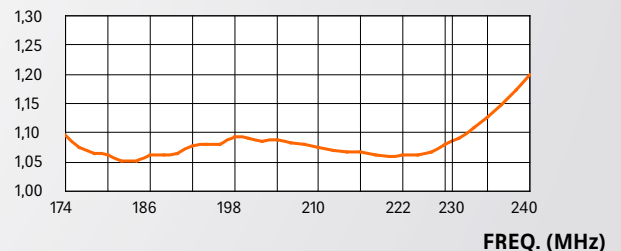
## MECHANICAL DATA

DIMENSIONS mm (in)	1300 x 1300 x 513 (51.2 x 51.2 x 20.2)
WEIGHT kg (lb)	27 (60)
WIND SURFACE m <sup>2</sup> (ft <sup>2</sup> )	0.75 (8.1) front 0.43 (4.6) side
WIND LOAD kN (lbf)	0.93 (209) front 0.53 (119) side
MAX WIND VELOCITY km/h (mph)	220 (136.7)
MATERIALS	Reflector (hot dip galvanized steel) Dipole (stainless steel) Internal parts (silver plated brass, deoxidized aluminium)
MOUNTING	Directly on supporting mast or tower

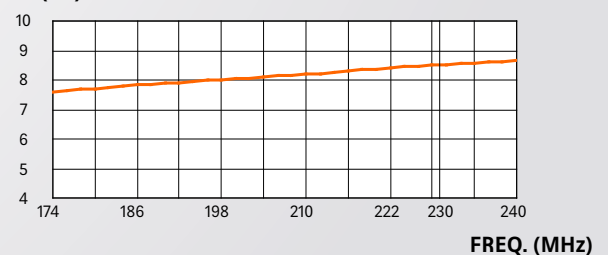
### RADIATION PATTERNS (Mid Band)



### VSWR

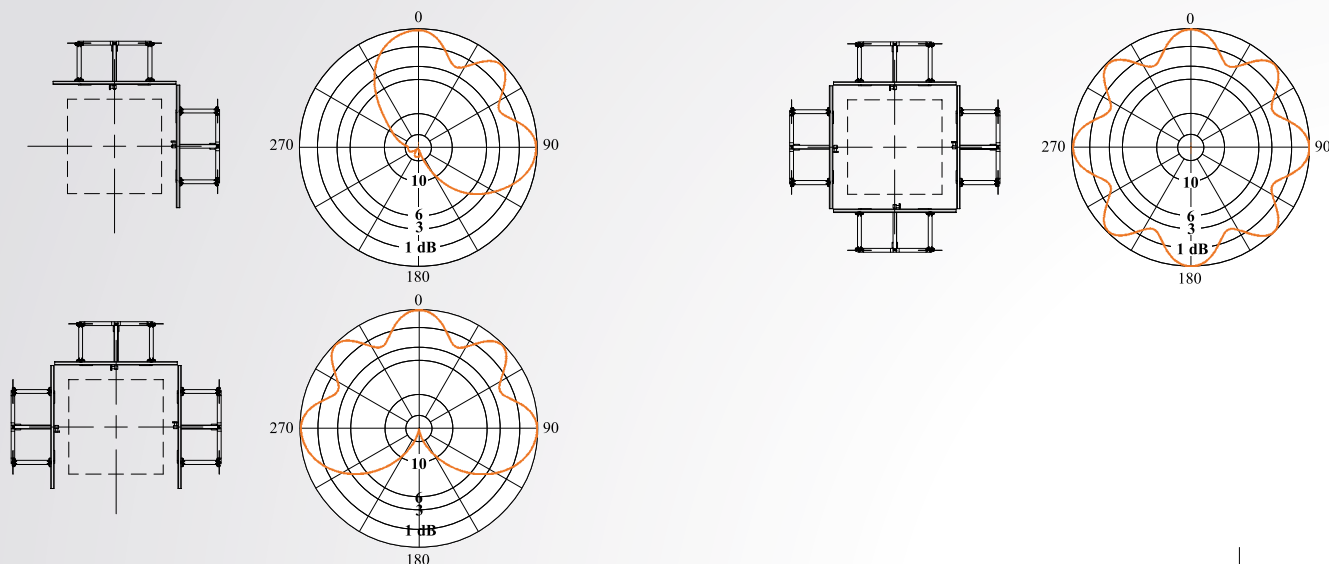


### GAIN (dB)



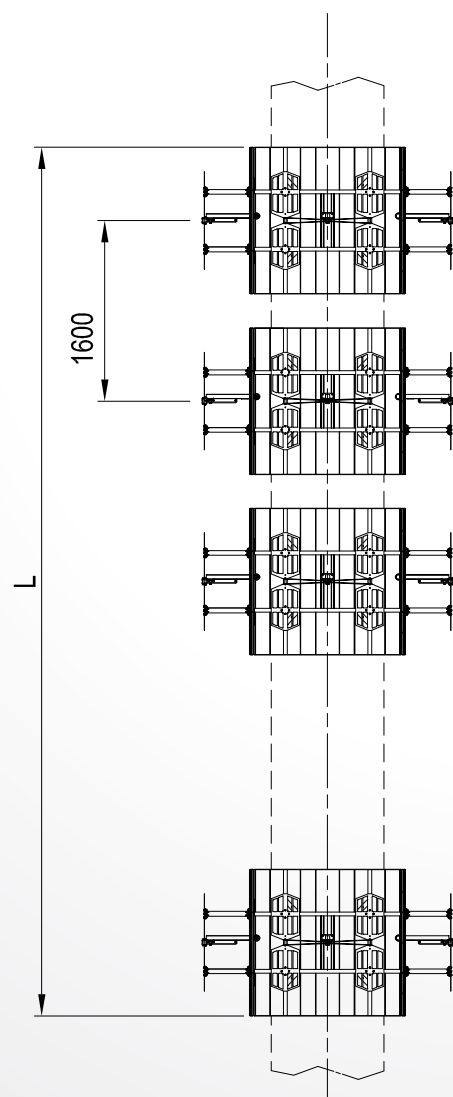
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## HORIZONTAL PATTERNS WITH 2, 3 AND 4 FACES AT 202 MHz



### TECHNICAL DATA

NUMBER OF BAYS	PANELS PER BAY	GAIN dB (1)	GAIN TIMES (1)	WEIGHT (2) kg (lb)	ANTENNA HEIGHT L m (ft)	WIND LOAD (3) kN (lbf)
2	1	11	12.6	66 (146)		1.85 (416)
	2	8	6.3	127 (280)	2.9	3.12 (701)
	3	6.2	4.2	188 (414)	(9.5)	4.10 (922)
	4	5	3.2	254 (560)		5.0 (1124)
4	1	14	25.1	127 (280)		3.7 (832)
	2	11	12.6	254 (560)	6.1	6.2 (1394)
	3	9.2	8.3	396 (873)	(20)	8.17 (1837)
	4	8	6.3	578 (1274)		10 (2248)
6	1	15.9	38.9	188 (414)		5.57 (1252)
	2	12.9	19.5	396 (873)	9.3	9.42 (2118)
	3	11.1	12.8	654 (1442)	(30.5)	12.25 (2754)
	4	9.9	9.8	812 (1790)		16.18 (3637)
8	1	17	50.1	254 (560)		7.43 (1670)
	2	14	25.1	578 (1274)	12.5	12.57 (2826)
	3	12.2	16.6	812 (1790)	(41)	16.34 (3673)
	4	11	12.6	1050 (2315)		20.1 (4519)
12	1	18.9	77.6	396 (873)		11.15 (2507)
	2	15.9	38.9	812 (1790)	18.9	18.9 (4249)
	3	14.1	25.7	1310 (2888)	(62)	24.5 (5508)
	4	12.9	19.5	1625 (3582)		30.1 (6767)
16	1	20	100	578 (1274)		14.9 (3350)
	2	17	50.1	1050 (2315)	25.3	25.1 (5643)
	3	15.2	33.1	1625 (3582)	(83)	32.65 (7340)
	4	14	25.1	2100 (4630)		45.96 (10332)

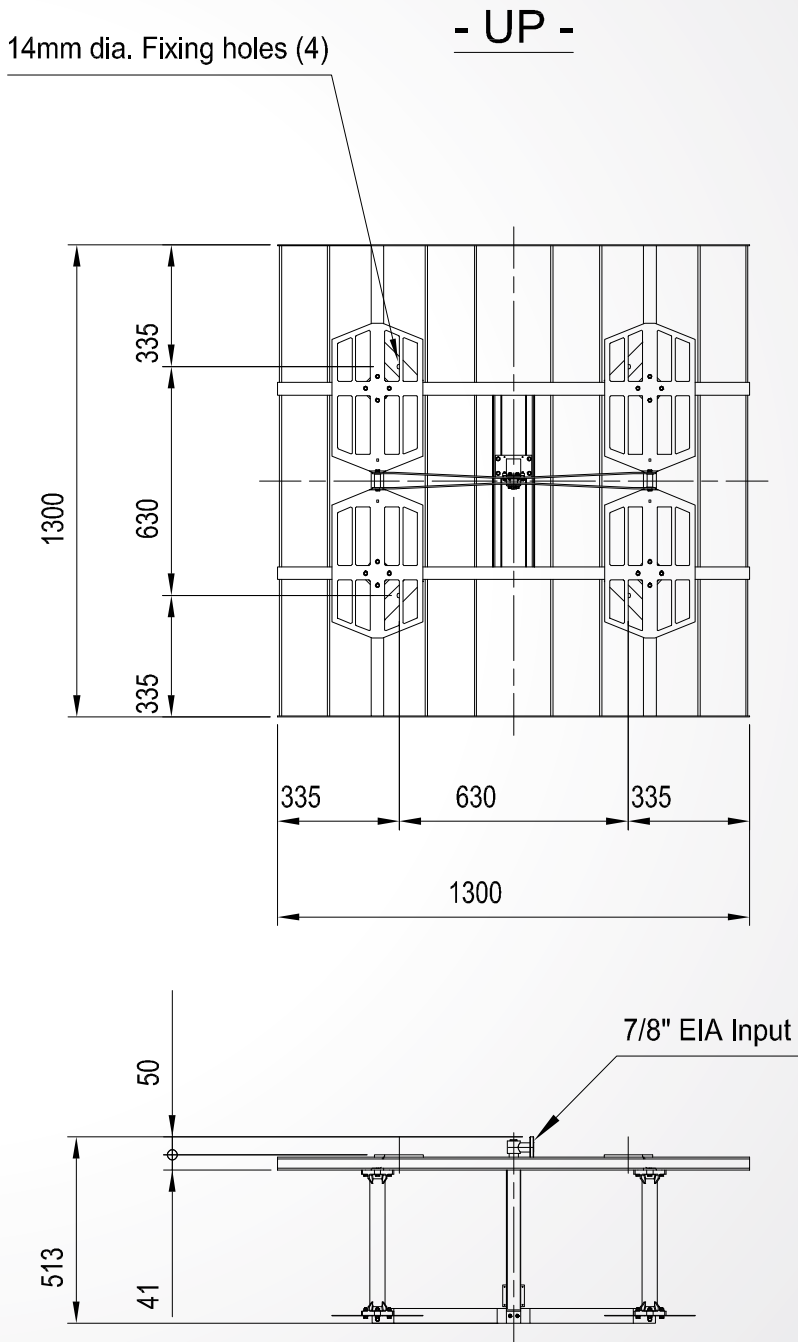


(1) referred to half wave dipole. Losses of power distribution network not included.  
 (2) without mounting hardware.  
 (3) v= 160 km/h (100 mph).

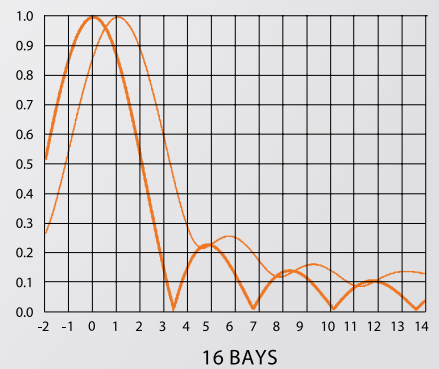
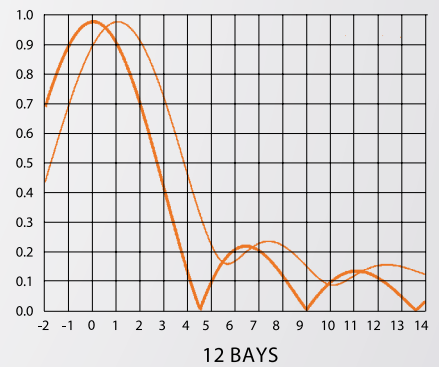
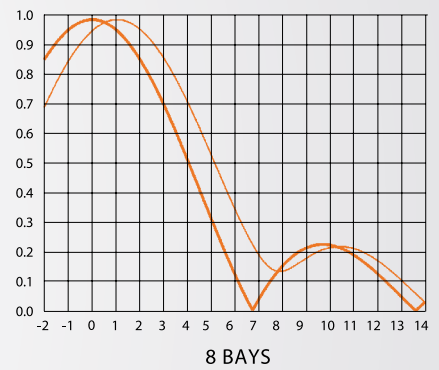
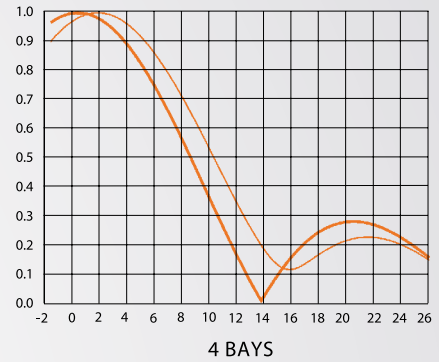
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## DIMENSIONAL DETAILS

## VERTICAL PATTERN



— Without null fill  
— With null fill and beam tilt



All dimensions are in millimeters