

VHF Directional Screened Dipole Array Antennas

148-174MHz

CSA Series



The CSA Series arrays are based on the popular OA Series dipole array antennas. Supplied in “kit” form the these antennas are delivered in flat-pack packaging to minimise freight and warehousing issues and allow for simplified assembly at time of installation..

The CSA Series arrays have approximately 60 degrees horizontal beamwidth and offer 7 or 9dBd in gain. The use of the corner screen reflector boosts the front to back ratio considerably allowing for tailoring antenna patterns for frequency re-use in extended networks.

With all welded construction and superior internal harness construction the antennas provide not only excellent radiation characteristics but also defined, high levels of intermodulation and noise suppression. IM performance is -140dBc based on a two carrier test. The entire array rests at ground potential and offers the ultimate in lightning resistant antennas..

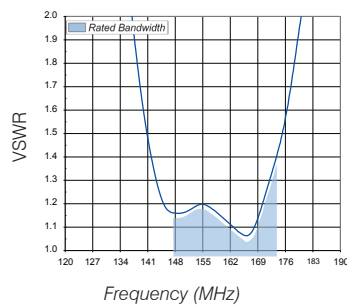
Features:

- Offset (cardioid) pattern with 60 Degree nominal Horizontal Beamwidth
- High front to back ratio to allow frequency re-use by tailoring coverage areas
- Hermetically sealed internal PTFE based phasing harness capable of 750W continuous operation
- Shipped unassembled for ease of handling, easily assembled on site
- Direct DC grounded for lightning protection and reduction of precipitation static noise
- Industry leading PIM rating (-140dBc) providing low IM and low noise characteristics for optimum performance
- The screen can be purchased to retrofit to an existing OA series array or side mount dipole. See table below;



Technical Specifications

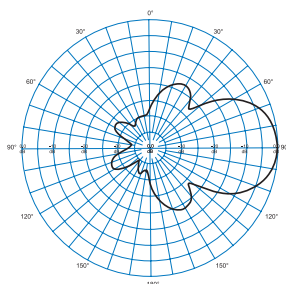
Typical VSWR Response (CSA10-41)



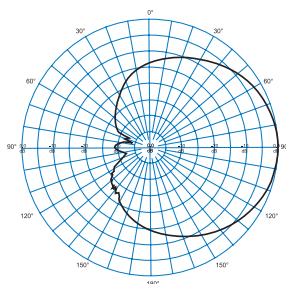
Model Number	CSA10-41-P	CSA20-41-P
Nominal Gain dBd (dBi)	7 (9.1)	9 (11.1)
Frequency MHz	148 - 174	
Tuned Bandwidth MHz	Full	
VSWR (Return Loss)	< 1.5 :1 (14dB)	< 1.7 :1 (11.7dB)
Nominal Impedance Ω	50	
E Plane Beamwidth°	66	35
H Plane Beamwidth°	64	62
Front / Back Ratio dB	23	24
Input Power W	750	
Passive IM 3rd order (2x20W)- dBc	-140	

Frequency (MHz)

CSA20-41 - E Plane



CSA20-41 - H Plane



Mechanical Specifications

Model Number	CSA10-41-P	CSA20-41-P
Construction	Fully welded aluminium, alodined finish	
Length (Screen) mm	1300	2600
Width (Screen) mm	2085	2080
Weight kg	22	78
Termination	4.3 - 10 female on cable tail 500mm	
Mounting Area	Clamps included to suit pole diameter 50-90mm	
Projected Area cm ²	No ice	10548
	With ice	17301
Wind Load (Thrust) @ 160km/h N	No ice	1250
	With ice	2050
Wind Gust Rating km/h	No ice	>240
	With ice	>240
Torque @160 km/h Nm	No ice	609
	With ice	999

Complete Array Part No.	CSA-10-41-P	CSA20-41-P
Antenna Only Part No.	M-8648-P	OA20-41-P
Screen Only Part No.	M-8569	M-8567