

UHF Directional Antennas

403-512MHz

FSA Series



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

The FSA Series arrays have approximately 130 degrees horizontal beamwidth and offer 5, 7 and 9dBd in gain. The use of the flat 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:

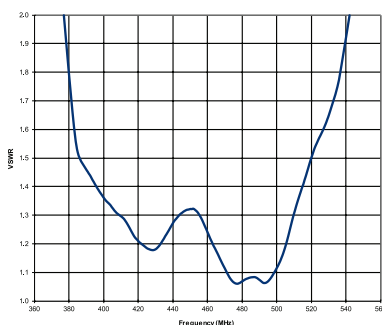
- Offset(cardioid) pattern with 130 degree nominal horizontal beamwidth
- High front to back ratio to allow frequency re-use by tailoring coverage areas
- Hermetically sealed internal PTFE based phasing harness capable of 500W continuous operation
- Shipped unassembled for ease of handling, easily assembled on site
- Direct DC grounded for lightning protection and reduction of precipitation static noise
- The screen can be purchased to retrofit to an existing OA series array. See table below;



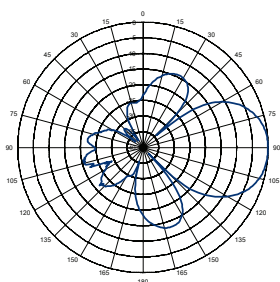
Technical Specifications

Model Number	FSA10-67-P	FSA20-67-P	FSA40-67-P
Nominal Gain dBi (dBd)	7.1 (5)	8.4 (6)	11.1 (9)
Frequency MHz	403-512		
Tuned Bandwidth MHz	Full		
VSWR (Return Loss)	<1.5:1 (14dB)		
Impedance Ω	50		
E Plane Beamwidth°	71	35	17
H Plane Beamwidth°	121	132	135
Front / Back Ratio dB	20	20	21
Input Power W	500		
Passive IM 3rd order (2x20W) dBc	-140		

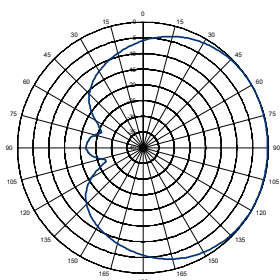
Typical VSWR FSA20-67



FSA20-67 E-Plane



FSA20-67 H-Plane



Mechanical Specifications

Model Number	FSA10-67-P	FSA20-67-P	FSA40-67-P	
Construction	Welded aluminium, alodined finish			
Length (Screen) mm	500	1000	2000	
Width (Screen) mm	600	600	600	
Weight kg	4.0	13.5	16.2	
Termination	4.3 - 10 female on cable tail 500mm			
Mounting Area	Inc clamp 30mm - 49mm dia. pole	Inc clamp to suit 60mm - 90mm pole		
Projected area cm ²	No Ice	1280	4390	5097
	With ice	2200	6970	8890
Wind Load (Thrust) 160km/h N	No Ice	152	520	604
	With ice	266	826	1054
Torque @ 160 km/h Nm	No Ice	4	8	18
	With ice	8	13.8	31.5

Complete Array Part No.	FSA10-67-P	FSA20-67-P	FSA40-67-P
Antenna Only Part No.	SMD4-67-P	OA20-67-P	OA40-67-P
Screen Only Part No.	M-8570	M-8566	M-8572