

The FSA Series arrays are based on the popular OA Series dipole array antennas. Supplied in "kit" form these antennas are delivered in flat-pack 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.

FSA Series Arrays feature the same solid construction as the standard array series. The folded dipoles utilise an internal phasing harness in PTFE based double screened coaxial cable with a polyethylene jacket. The screens themselves are also made of fully welded aluminum to assist in minimising PIM.

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.

- 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
- Industry leading dual sectioned antenna PIM ratings (-140dBc) providing low IM and low noise characteristics for optimum performance
- **The screen can be purchased to retrofit to an existing OA series array. See table below;**



#### Kitted components available for individual sale

Complete Array Part Number	FSA10-67-DIN	FSA20-67-DIN	FSA40-67-DIN
Antenna Only Part Number	SMD40-67-DIN	OA20-67-DIN	OA40-67-DIN
Screen Only Part Number	M-8570	M-8562	M-8563

**FSA20-67-DIN**

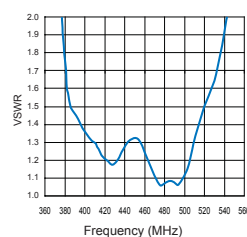
### Electrical Specifications

Model Number	FSA10-67-DIN	FSA20-67-DIN	FSA40-67-DIN
Nominal Gain <i>dBd</i>	5	7	9
Frequency <i>MHz</i>	406-512		
Tuned Bandwidth <i>MHz</i>	Full		
VSWR (Return Loss)	<1.5 :1 (14)		
Nominal Impedance $\Omega$	50		
Vertical Beamwidth	71°	35°	17°
Horizontal Beamwidth	130°	129°	132°
Front / Back Ratio <i>dB</i>	18	20	22
Input Power ( <i>Watts</i> )	500		
Passive IM 3rd order (2x20W) <i>dBc</i>	<-140		

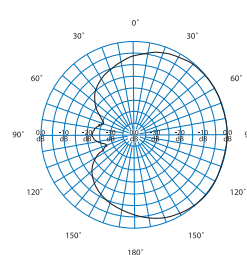
### Mechanical Specifications

Model Number	FSA10-67-DIN	FSA20-67-DIN	FSA40-67-DIN
Construction	Welded aluminum, corrosion protection plating		
Screen Length <i>inches</i>	20	39.5	79
Screen Width <i>inches</i>	23.5	23.5	23.5
Total Weight <i>lbs</i>	9	30	40
Shipping Weight <i>lbs</i>	19	Screen = 31 + Array = 35 (Total=66)	
Shipping Dimensions <i>inches</i>	H	Screen = 10	Screen = 36 + Array = 44 (Total=80)
	W	Array = 15	Screen = 10
	L	Array = 7	Array = 17
Termination	7/16 DIN female on a 20" cable tail		
Mounting	Clamps included to suit pole diameter 2.0" to 3.5"		
Projected Area <i>ft²</i>	No ice	4.7	5.5
	With ice	7.5	9.6
Lateral Thrust @ 100mph <i>lbs</i>	No ice	117	136
	With ice	186	237
Wind Gust Rating <i>mph</i>	No ice	>150	>150
	With ice	>150	>150
Rotational Torque @ 100mph <i>ft-lbs</i>	No ice	6	13
	With ice	10	23

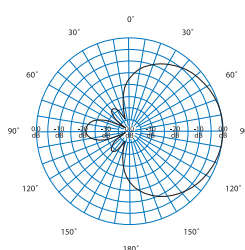
Typical VSWR response (FSA20-67-DIN)



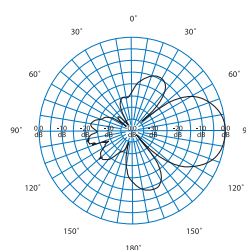
Typical H Plane (FSA20-67-DIN)



Typical E Plane (FSA10-67-DIN)



Typical E Plane (FSA20-67-DIN)



Typical E Plane (FSA40-67-DIN)

