



These vertically polarized antennas for FM broadcasting applications are intended for use where low wind loadings are required. They are designed to be sidemounted to a tower leg or pole and optional mounting brackets are available for this purpose.

The 818 series are fabricated from stainless steel and will handle up to 5kW per bay. Multiple element arrays are supplied as a complete package including power dividers and distribution cables. An optional input tuner ensures optimum VSWR performance after installation as it enables the effects of tower steelwork to be eliminated. Beam tilt and null fill can be provided on request.

The 818 series can be arrayed in multiple bays as required.

**FEATURES / BENEFITS**

- Rugged construction for maximum corrosion protection
- Broadband operation
- Multichannel use if required
- Optional pressurization
- Low windload to minimize tower or mast costs
- Vertical polarization
- Temperature range -40 to +60 degrees C available.



818 Series Antennas showing 818-4

**Technical features**

**STRUCTURE**

<b>Product Line</b>		Antenna TV
<b>Product Type</b>		Band II (VHF) FM 818-6 Sidemount Antennas

**ELECTRICAL SPECIFICATIONS**

<b>Frequency Range</b>	MHz	87.5 - 108
<b>Polarization</b>		Vertical
<b>Nominal Gain (Mid-band)</b>	dBd	9.74
<b>Azimuth Radiation Pattern</b>		Omni directional + 3 dB Note 1
<b>Return Loss</b>	dB	Typically 20 over 6MHZ bandwidth . Tunable within band
<b>Power Rating</b>	kW	24
<b>Input/Power Rating Comment</b>		Power ratings are for single input models. Dual input cavity versions can provide higher power ratings. Contact RFS for details. Connector types and impedance may be varied to suit customer requirements, contact RFS for details.
<b>Impedance (unbalanced)</b>	$\Omega$	50

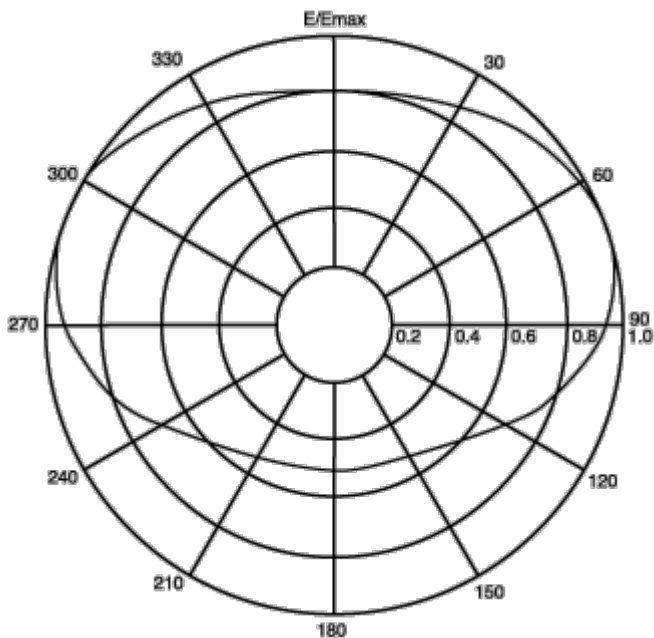


**MECHANICAL SPECIFICATIONS**

<b>Input Connector</b>		3 1/8" EIA Flange
<b>Dimensions (Height or Length)</b>	cm (in)	151(59-1/2) Single antenna
<b>Dimensions (Width)</b>	cm (in)	6 (2-3/8) Single antenna
<b>Dimensions (Depth)</b>	cm (in)	84 (33-1/8) Single antenna
<b>Mounting (Standard)</b>	mm (in)	Brackets for clamp diameter 43 - 76mm (1-3/4 - 3)
<b>Effective Area Front (full antenna) No Ice</b>	m <sup>2</sup> (ft <sup>2</sup> )	1.00 (1.08) Note 3
<b>Effective Area Front (full antenna) with 12.5mm(0.5") Radial Ice</b>	m <sup>2</sup> (ft <sup>2</sup> )	1.00 (1.08) Note 3
<b>Effective Area Power Divider</b>	m <sup>2</sup> (ft <sup>2</sup> )	0.25 (2.7) Note 3
<b>Effective Area Comment</b>		Note 3 Connecting cables are not included in calculations - 0.03sq m. per metre length should be allowed.
<b>Wind Load @ 50 m/sec Front</b>	kN (lb)	1.48 (330)
<b>Wind Load Comment</b>		Power divider included and considered adjacent to antennas. Calculated in accordance with AS1170-1989, Part 2:" SAA Loading Code - Wind Forces".
<b>Pressurization Operational</b>	kPa (psi)	10 - 25 (1.5 - 3.6) 7/8" EIA Version
<b>Pressurization Test</b>	kPa (psi)	100 (15) 7/8" EIA Version
<b>Weight</b>	kg (lb)	135 (298)

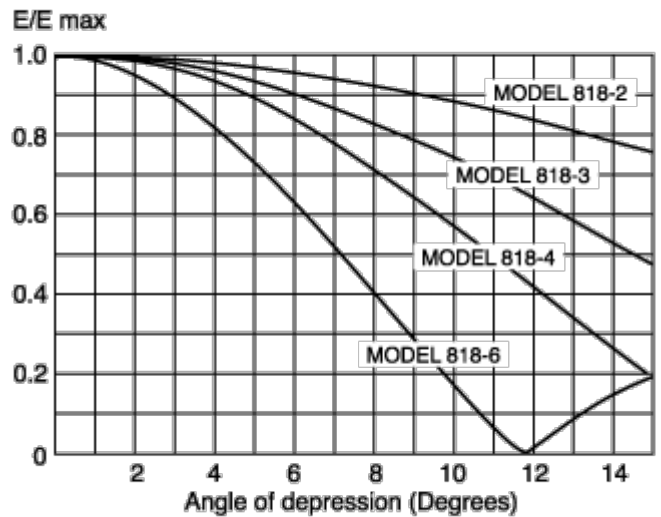
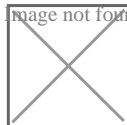
**PACKAGING INFORMATION**

<b>Shipping Weight, Kg (lb)</b>	kg (lb)	135 ( )
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Azimuth Radiation Pattern (Typical)

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Vertical Radiation Pattern

[External Document Links](#)

**Notes**

**Note 1** When antenna is mounted on a mast/tower with a face



width of less than 150mm (5.9").

**Note 2** Input power is limited to 5kW if a 7/8" connector is used, 4.0kW for 7-16 DIN connector.

**Note 3** Connecting cables are not included in calculations - 0.03sq m. per metre length should be allowed.

**Note 4** Power divider included and considered adjacent to antennas.

**Note 5** Calculated in accordance with AS1170-1981, Part 2 "SAA Loading Code - Wind Forces".