



904VPS

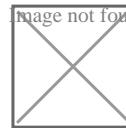
Band II Panel Arrays

904 Series

The 904 series of panels are designed as building blocks for broadband, high power FM arrays for broadcasting in the FM band (87.5 -108MHz). Panels in this series include 904CP, 904CPX, 904HP, 904VP, 904HPS and 904VPS models.

- The 904CP panels comprise a pair of horizontal and a pair of vertical dipoles in a square configuration mounted off a reflective screen. In this configuration RH or LH circular polarization is possible. There are four input connectors on each panel.
- The 904VP and 904HP panels are supplied with either a vertical or horizontal pair of dipoles for vertical or horizontal polarization. Radomes are available for these models.
- The 904HPS panel comprises a radiator dipole assembly mounted off a reflective screen. In this configuration vertical or horizontal polarization is possible. These panels have a single input connector to simplify the feed system. An integrated feed-point radome is supplied.
- The 904CPX panels comprise two crossed dipoles mounted off a reflective screen. This configuration provides circular polarization. There are two input connectors on each panel.

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904VPS Series Panel

The extremely low VSWR performance of all models together with high power capacity provides the broadcaster with the optimum solutions for multi-channel operation.

The design utilizes stainless steel radiators with galvanized screen and ensures a very long trouble free life, even when installed in remote hostile environments. All panels are suitable to be used as elements in an array on a 4-sided tower.

The 904 panels can be arranged to provide the required coverage for a particular service area. Array design can be carried out by RFS engineers.

Both directional and omnidirectional patterns are available and beam tilt and null fill can be customised to specification. Panels are fed through a power divider network that is designed to meet the power handling requirements of the array.

FEATURES / BENEFITS

- Full band (87.5 - 108MHz) operation
- Low VSWR over full band
- Ideal for multichannel use
- Horizontal, vertical or circular polarization depending on model
- Solid stainless steel construction, galvanized screen
- Cyclone rated
- Optional radome available for icing conditions
- Temperature range -40 to +60 degrees C available.

Technical features

STRUCTURE

|              |  |                                      |
|--------------|--|--------------------------------------|
| Product Line |  | Antenna TV                           |
| Product Type |  | Band II (VHF) 904VPS FM Panel Arrays |

ELECTRICAL SPECIFICATIONS

|                                |         |            |
|--------------------------------|---------|------------|
| Frequency Range                | MHz     | 87.5 - 108 |
| Polarization                   |         | Vertical   |
| Gain per Plane of Polarization | dBd     | 7.5        |
| Half Power Beamwidth Azimuth   | degrees | 65         |
| Return Loss                    | dB      | 20         |
| Impedance (unbalanced)         | Ω       | 50         |



**MECHANICAL SPECIFICATIONS**

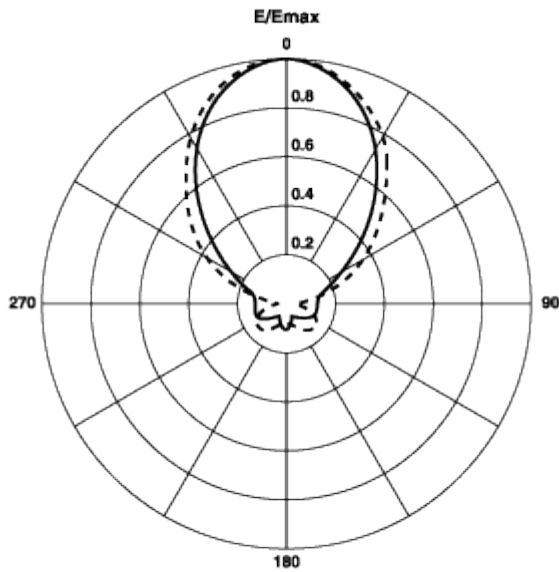
|   |                                   |                                      |
|---|-----------------------------------|--------------------------------------|
| <b>Input Connector</b>  |                                   | 7-16 DIN<br>7/8" EIA Flange          |
| <b>Mounting (Standard)</b>  | mm (in)                           | 4 mounting points at 1030mm centres  |
| <b>Effective Area Front (full antenna) No Ice</b>                       | m <sup>2</sup> (ft <sup>2</sup> ) | 1.08 (11.63)                         |
| <b>Effective Area Front (full antenna) with 12.5mm(0.5") Radial Ice</b> | m <sup>2</sup> (ft <sup>2</sup> ) | 1.08 (11.63)                         |
| <b>Effective Area Side (full antenna) No Ice</b>                        | m <sup>2</sup> (ft <sup>2</sup> ) | 0.89 (9.58)                          |
| <b>Effective Area Side (full antenna) 12.5mm (0.5") Radial Ice</b>      | m <sup>2</sup> (ft <sup>2</sup> ) | 0.89 (9.58)                          |
| <b>Design Wind Speed</b>  | km/h (mph)                        | 240 (150)                            |
| <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)                           | 76 (168)                             |

**PACKAGING INFORMATION**

|                                 |         |        |
|---------------------------------|---------|--------|
| <b>Shipping Weight, Kg (lb)</b> | kg (lb) | 76 ( ) |
|---------------------------------|---------|--------|

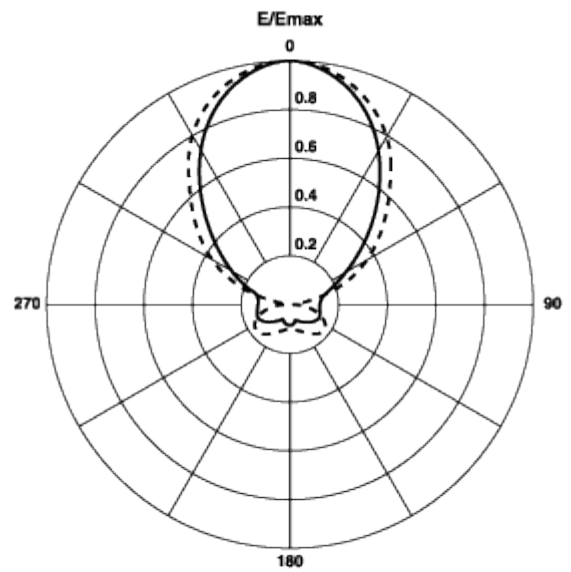
**MATERIAL**

|                                     |  |                  |
|-------------------------------------|--|------------------|
| <b>Material - Insulators</b>        |  | PTFE             |
| <b>Material - Reflecting Screen</b> |  | Galvanised steel |



———— Vertical Polarisation  
 - - - - - Horizontal Polarisation

Horizontal Radiation Patterns per plane of Polarization



———— Vertical Polarisation  
 - - - - - Horizontal Polarisation

Vertical Radiation Patterns per Plane of Polarization

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