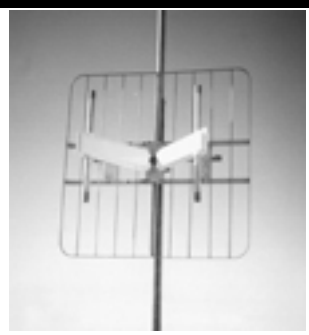
174-240MHz TV/DAB Panel Arrays 659, 660 Series

Product Description

This series of panel antennas is ideal for four sided array design to provide a customized coverage for vertically polarized use in Band III. Model 659 has a nominal gain of 8dBd and the model 660 has a nominal gain of 11dBd.
Construction from thick walled tube and solid steel bar gives a heavy duty panel which is designed for operation in very harsh environments. This design also ensures ideal hot dip galvanizing for optimum corrosion protection.
The coaxial feed system can be fully pressurized and features twin 'O' ring seals on the feed point insulators. The panels are tolerant of light icing (radomes are available for use under heavy icing conditions down to -40 degrees C) and have a very low VSWR (typically less than 1.05:1) over the entire 174 - 230MHz band depending on the system configuration.
These panels are ideal array elements having low sidelobes, low mutual couplings between panels and high power ratings across the full band. This results in complete antenna systems that have very wide VSWR and pattern bandwidth.
The ability to utilize larger tower cross sections allows support for a top mounted UHF antenna such as our PHP or PVP UHF antenna arrays. This provides a powerful combination for delivering DTV and/or DAB systems customized to suit the coverage requirements of the customer.



659 Panel

Features/Benefits

- Suitable for multi station use, DAB and DTV
- Vertical polarization
- Cyclone rated
- Rugged galvanized steel construction for maximum corrosion protection
- Low wind load
- Pressurizable coaxial feed
- Low VSWR full band operation
- Ideal array element allowing for a number of standard horizontal radiation patterns as well as customized patterns, contact RFS for details
- Medium power, unpressurized version available
- Temperature range -40 to +60 degrees C available

For detailled technical information use the external document link below.

Technical Specifications

Product Line	Antenna TV/DAB
Product Type	Band III (High VHF) TV/DAB Panel Arrays
Frequency Range, MHz	174 - 240
Polarization	Vertical
Number of Channels	Multichannel
Nominal Gain (Mid-band), dBd	8
Half Power Beamwidth Azimuth, degrees	64
Return Loss, dB	26
Input Connector	7-16 DIN; 7/8" EIA Flange
Power Rating, kW	3; 4 Note#1
Impedance, ohms	50 unbalanced
Weight, kg (lb)	35 (77)
Mounting (Standard), mm (in)	4 x 12mm (1/2) bolts
Effective Area Front (full antenna), sq m (sq ft)	0.40 (4.30)
Effective Area Side (full antenna), sq m (sq ft)	0.50 (5.38)
Design Wind Speed (max), km/h (mph)	240 (150)
Pressurization Operational, kPa (psi)	10 - 25 (1.5 - 3.6) 7/8" EIA Version
Pressurization Test, kPa (psi)	100 (15) 7/8" EIA Version
Material - Insulators	PTFE
Material - Radiators	Hot Dipped Galvanised steel
Material - Reflecting Screen	Hot Dipped Galvanised steel

Notes

Note1 Power rating is limited by the input connector type. 3.0kW for 7-16 DIN, 4kW for 7/8" EIA
Note2 The 659 antenna has been primarily designed as a vertically polarized array element where low levels of mutual coupling exist between vertically stacked radiators. It may be used as a horizontally polarized panel in situations where a single bay (or level) of panels is used. This will provide better array VSWR in that circumstance. Where multiple levels of horizontally polarized antennas are needed, the 655 panel is recommended.

Other Documentation

174-240MHz TV/DAB Panel Arrays 659, 660 Series

659 Array Application Guide: 659 array application guide.pdf