Product Data Sheet **RD32-662806**

UHF Wideband Antennas RD Series

Product Description

The RD Series of wideband UHF antennas are lightweight in design, yet rugged in approach. They solve the critical question of using a single UHF antenna for multi-channel Analog and DTV Broadcasting.
Utilizing slot cavity geometry, the RD series antenna, is capable of wideband, low VSWR transmission for up to 120 MHz depending on the selected cavity group and radiation pattern. This capability makes it possible for stations to utilize a single antenna for Analogue and DTV channel allocation and relocation assignments which fall within 120 MHz of each other. Cavities are segmented into four groups. The bandwidth of B, G, H and OM pattern versions is limited to 20MHz within the selected cavity group. A and SK pattern antennas may have a bandwidth up to 120MHz depending on the selected cavity group.
A unique, one-piece aluminium extrusion integrates the antenna cavity and tower mounting backstructure, providing each four bay section with greater strength and power handling.
Considering the requirements of tomorrow's broadcasting needs, the RD Series antenna combined with HELIFLEX transmission line, provides an alternative systems solution to heavy, stacked, slotted antennas and panel array antennas, minimizing tower load and maximizing tower space.
The RD antenna can also be used in various stacked arrangements especially in situations where adjacent channel combining may not be desired. By stacking an RD antenna either atop a panel antenna or another RD, increased channel capacity is obtained without pattern degradation as occurs in some other systems where an external feed is used to the top antenna.

Features/Benefits

- Multichannel operation
- Wide bandwidth/ Low VSWR
- Power rating up to 160kW Average
- Top or Side mount
- Light weight/ Low wind load
- Single or Dual input
- Customized Vertical Pattern
- Multi pattern capacity

Technical Specifications

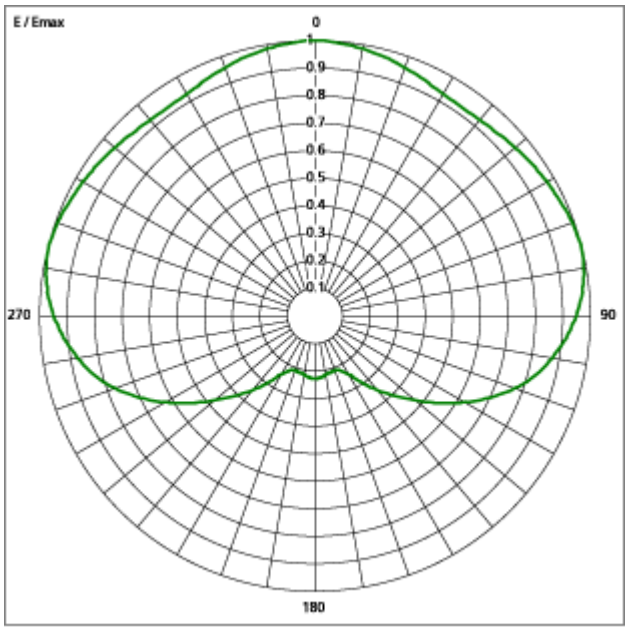
Product Line	Antenna TV
Product Type	Band IV/V (UHF) TV Slot Antennas
Frequency Range, MHz	662 - 806
Polarization	Horizontal
Number of Levels	8
Number of Channels	Multichannel
Number of Elements / Bays	32
Nominal Gain (Mid-band), dBd	A 17.5;B 19.2;G/H 20.0;OM 17.5;SK 18.6
Bandwidth, MHz	Up to 120 Note# 4
Azimuth Radiation Pattern	A, B, G, H, OM, SK, Other Patterns on request.
Input Connector	Lo Pwr 3-1/8" EIA; Med Pwr 6-1/8" EIA; Hi Pwr 6-1/8"EIA Note#2
Power Rating, kW	Lo Pwr 16 Ave; Med Pwr 32 Ave; Hi Pwr 60 Ave Note#2
Impedance, ohms	50 unbalanced
Weight, kg (lb)	Top mount 2704.5 (5950);Side mount 879.1 (1934)
Dimensions (Height or Length), cm (in)	Top mount 1369 (538.8);Side mount 1335 (525.6)
Effective Area Front (full antenna), sq m (sq ft)	Top mount 8.22 (88.5);Side mount 5.60 (60.2)

Notes

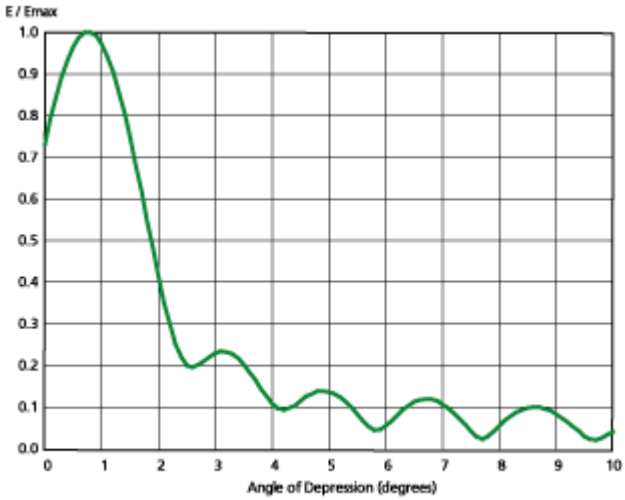
Note 1 Azimuth Radiation Patterns.
The RD series is available in several radiation pattern options. Pattern A - Broad cardiod; Pattern B - Medium cardiod; Pattern G/H - Peanut/Skewed Peanut; Pattern OM - Offset Omnidirectional; Pattern SK – skull shaped. For information relating to the various patterns contact RFS. Pattern A is shown below.
Note 2 Power ratings
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.
Note 3 Mechanical data
Quoted weights and dimensions are for Pattern A high power versions. For full mechanical data contact RFS.
Structural design to TIA/EIA-222-f code with 136km/h (85mph) basic windspeed. For use in areas with basic windspeed greater than 136km/h (85mph) contact RFS.
Note 4 Antenna Bandwidth
For B,G,H and OM pattern antennas the Bandwidth is restricted to 20MHz within the selected cavity group. For A and SK pattern antennas the Bandwidth may be up to 120MHz depending on the selected cavity group. For further details contact RFS.

Other Documentation

RDSeries_patterns.pdf



Pattern A Horizontal



Elevation Pattern - 32 Bay