



MICRONETIXX COMMUNICATIONS



- **Channel 7-13 (Band III) Low RFR VHF Slot Antenna**
- **Omni-directional and Directional Patterns Available**
- **Top or Side Mount Models**
- **Horizontal, Elliptical, or Circular Polarization Available**

TPV-SFN Series Low RFR VHF Slot Pylon Antennas

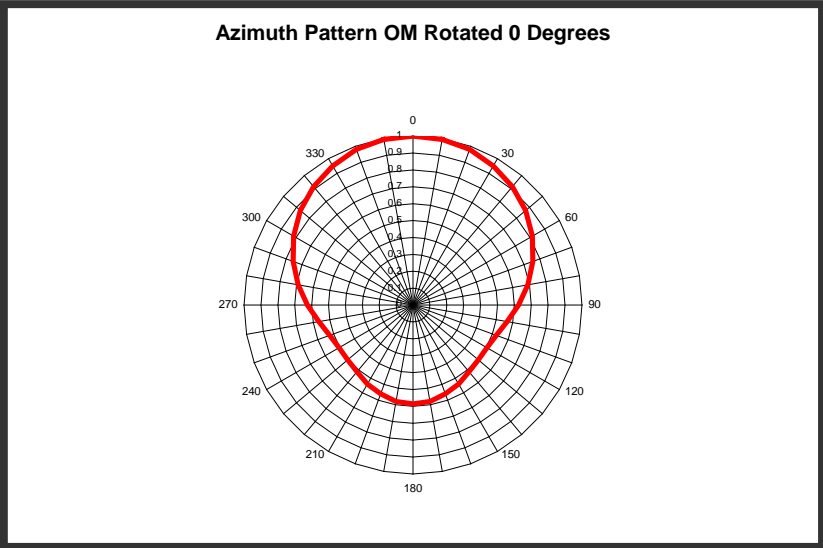
The TPV-SFN series of VHF (Band III) slot antennas delivers a low group delay single channel signal across a 6 or 8 MHz bandwidth. The TPV-SFN antenna produce up to 25 dB less radiation at high axial angles, resulting in much lower ground level RFR. Extended null fill elevation patterns are available to enhance ATSC-M/H reception.

The TPV-SFN series antennas are available in either horizontal, elliptical or circular polarized models. The TPV antennas come in 2 to 12 bay models, and have input power ratings up to 40 kW average. The side mounted version of the antenna is available in three directional azimuth patterns, the top mounted model is also available in an omni-directional pattern.

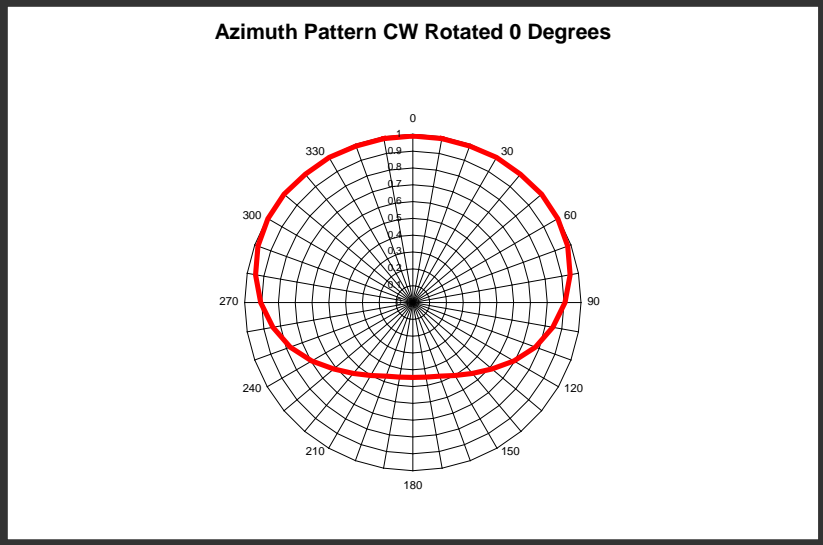
The top mounted versions of the antenna can be supplied with either a flange mount or bury mount to match the current antenna.

Sample TPV-SFN Series Directional Patterns

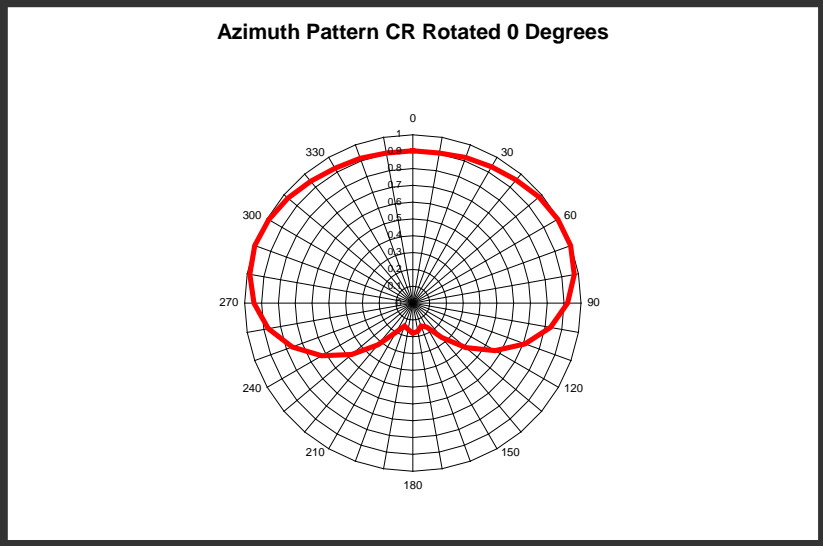
OM – Omnioid Pattern
Azimuth Gain 1.90 (2.78 dB)



CW – Wide Cardioid Pattern
Azimuth Gain 1.50 (1.76 dB)



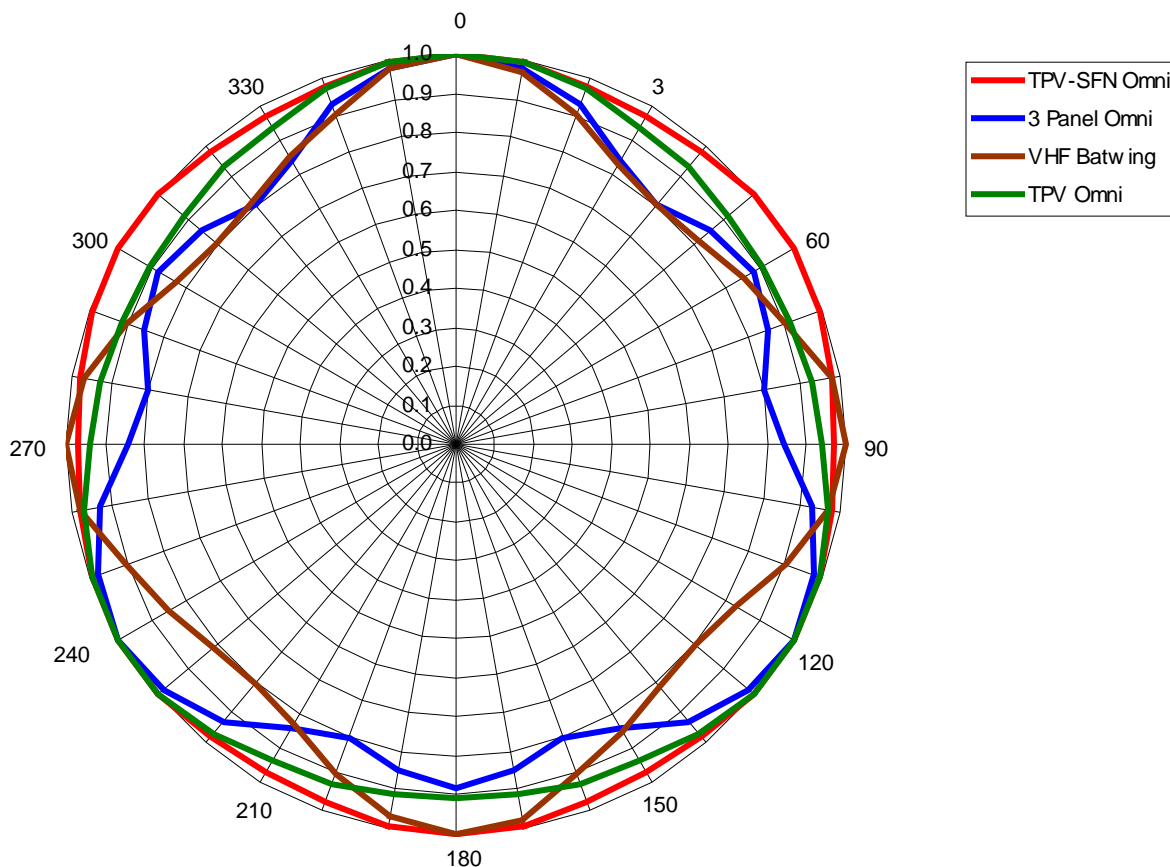
CR – Reduced Rear Cardioid Pattern
Azimuth Gain 1.70 (2.30 dB)



TPV-SFN Omni-directional Azimuth Pattern

The TPV series antenna is available in a top mounted Omni-directional pattern. The TPV-SFN Omni-directional pattern is much smoother than a panel or batwing style antenna, with the minimas on the antenna producing at least 97% of peak field.

The azimuth plot below is a comparison of a batwing antenna (Brown Trace), a panel antenna (Blue Trace), a TPV O3 pattern (Green Trace), and a TPV-SFN Omni (RED Trace).



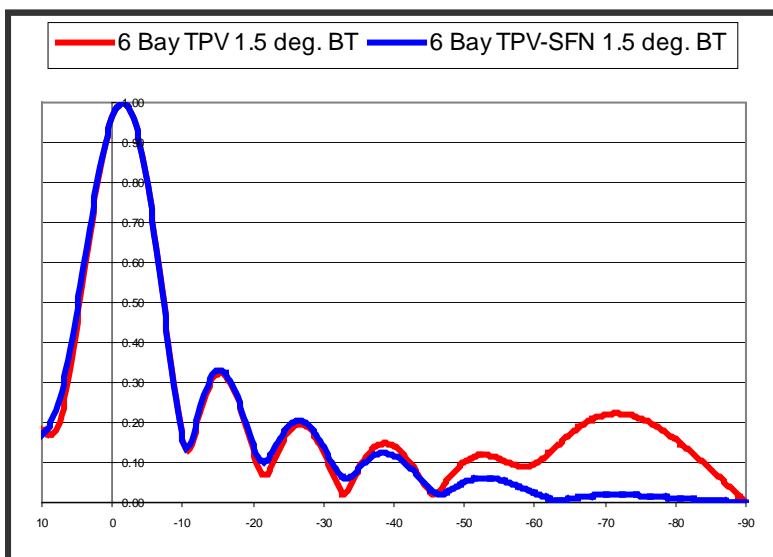
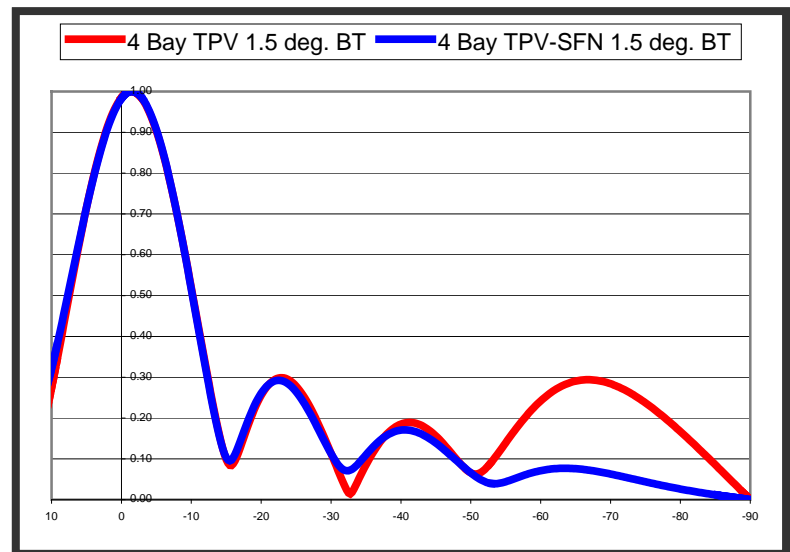
If you are going to transmit either a circular or elliptical polarized signal, the TPV series Omni-directional pattern is much fuller than a panel antenna in both the horizontal and vertical planes. On the average the TPV Omni-directional pattern provides an average of 18% more signal in any azimuth than a batwing or panel style antenna.

TPV-SFN Elevation Patterns

In addition to producing much less RFR, the unit elevation gains of the TPV-SFN antennas are 12 to 15% higher than a standard spaced slot antenna. In many cases the gain of the TPV-SFN pattern is high enough to allow you to use a one bay smaller antenna. Using the smaller antenna produces a broader main beam and lessens the mechanical loads on the tower.

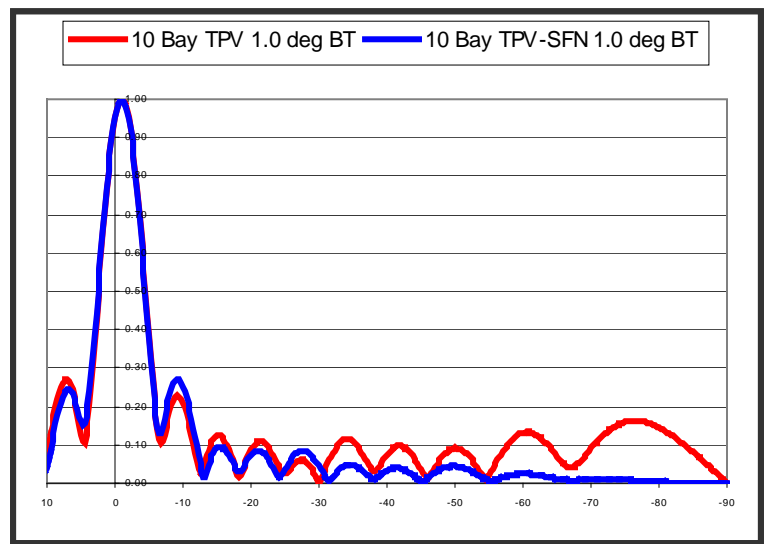
Below are some sample elevation plots of TPV-SFN versus standard spaced TPV series antennas. In each plot the TPV-SFN elevation plot is in blue and the standard antenna in red.

4 Bay Elevation Pattern
1.5 Degrees Beam Tilt
TPV-SFN Gain is 4.77 (6.78 dB)
TPV Gain is 4.12 (6.15 dB)



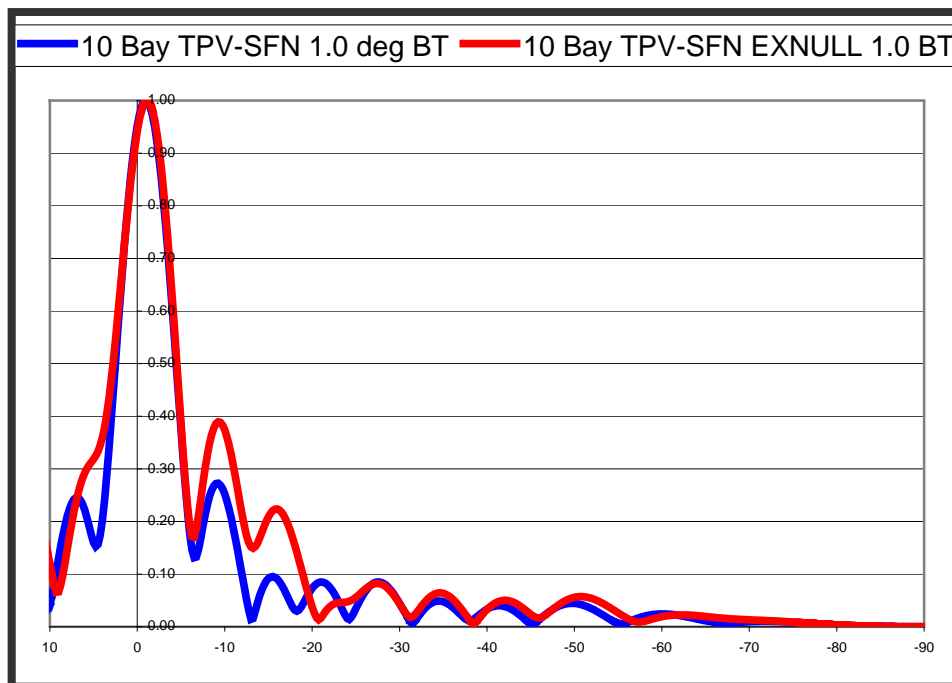
6 Bay Elevation Pattern
1.5 Degrees Beam Tilt
TPV-SFN Gain is 6.69 (8.25 dB)
TPV Gain is 6.02 (7.80 dB)

10 Bay Elevation Pattern
1.0 Degree Beam Tilt
TPV-SFN Gain is 11.70 (10.68 dB)
TPV Gain is 10.12 (10.05 dB)



TPV-SFN Extended Null Fill Antennas

The TPV-SFN antennas can also be designed for extended null fill. Extended null fill antennas are great for urban and areas with very hilly terrain. The extended null fill pattern greatly improves close in reception, which can greatly help ATSC-M/H reception. In flat terrain areas, where there is close in population to the tower, A sample of extended null fill on a 10 Bay TPV-SFN antenna is below.



The elevation gain of the extended null fill antenna is 10.08 (10.03 dB) versus 11.70 (10.68 dB) for the standard null fill antenna.

TPV-SFN Antenna Mounting Options

Side Mount Antennas

All TPV-SFN antennas come with custom designed, stainless steel mounting brackets. The antenna and mount can be ruggedized for up to 130 M.P.H. (209 K.P.H.) wind zones.

Top Mount Antennas

Top mounted versions of the TPV and TPV-SFN antennas can be supplied with either a flange or bury mount section. The TPV-SFN antennas can be stacked with other antennas, such as our DL series of UHF slot antennas.



3 Bay TPV-SFN Side Mount Antenna

Need a new VHF antenna ?

The TPV-SFN series low-RFR antennas from Micronetixx Communications deliver the best wideband, low group delay signal to your viewers. Each TPV-SFN antenna is built to the specifications needed to give you the best coverage. There is never an extra charge for custom beam tilt and null fill modifications.



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