

# VHF Side Mounted Dipole Antennas

108-200 MHz

SMD2 Series



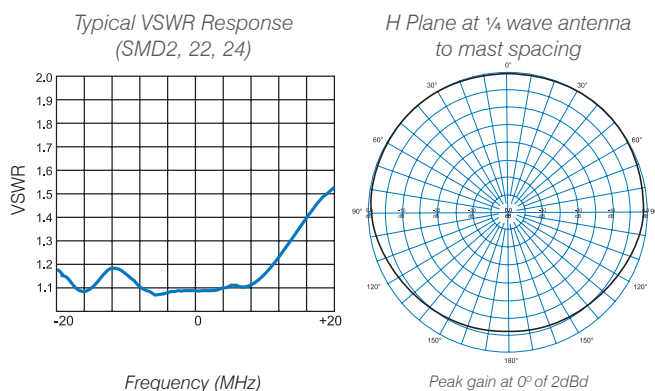
The SMD2 Series side mounted dipoles are broad band antennas which, through different phasing and mounting arrangements can offer a variety of patterns (generally cardioid) tailored to specific coverage requirements. These antennas can be mounted in dual arrays for 3dB gain, or four-stack arrays for 6dB gain over a single dipole.

The SMD22 is a ruggedised antenna featuring extremely heavy walled tubing, all welded aluminium construction and a black epoxy coating to aid in solar heat retention. The SMD24 is a stainless steel version and is ideal in corrosive marine environments. All of the antennas are electrically identical.



## Features:

- Can be phased to provide 3 dBd or 6 dBd gain, in a variety of patterns tailored to suit specific requirements. An extensive range of phasing harnesses available.
- Full bandwidth coverage for both single antennas and phased arrays - ideal in community sites
- High strength - SMD2 features anodised aluminium construction and high pressure cast aluminium centrepiece
- Rugged and stainless steel versions also available
- Low PIM models available
- DC grounded for lightning protection and dissipation of static noise



## Electrical

| Model Number                           | SMD2  | SMD22 | SMD24 | SMD2-99       |
|--|---|-------|-------|---------------|
| Nominal Gain <i>dBi</i> ( <i>dBd</i> ) | Nominally 2 (Unity) but varies with mounting arrangements     |       |       |               |
| Frequency <i>MHz</i>                   | 148 - 175   |       |       | 108 - 200     |
| Tuned Bandwidth                        | Entire band   |       |       | 10%           |
| VSWR (Return Loss)                     | <1.5 :1 (14dB)  |       |       | <1.5:1 (14dB) |
| Nominal Impedance $\Omega$             | 50  |       |       |               |
| Vertical Beamwidth $^{\circ}$          | Typically 74 at $\frac{1}{4} \lambda$ antenna - mast spacing  |       |       |               |
| Horizontal Beamwidth $^{\circ}$        | Typically 230 at $\frac{1}{4} \lambda$ antenna - mast spacing |       |       |               |
| Input Power <i>W</i>                   | 250   |       |       |               |

## Mechanical

| Model Number                          | SMD2   | SMD22  | SMD24                                   | SMD2-99  |
|---------------------------------------|--|--|---|--|
| Construction                          | Thick walled aluminium with cast aluminium hub | Heavy duty aluminium with black epoxy finish | Stainless steel with cast aluminium hub | Thick walled aluminium with cast aluminium hub |
| Length <i>m</i>                       | 0.9  |  |   | 1.3  |
| Weight <i>kg</i>                      | 1.5  | 2.0  | 3.0                                     | 2.0  |
| Termination                           | N female with RG213 cable tail                 |  |   |  |
| Mounting Area                         | 300mm x 40mm diam. aluminium                   |  | 300mm x 38mm diam. stainless steel      | 300mm x 40mm diam. aluminium                   |
| Suggested Clamps                      | 1 x UCR1 or UCR2                               |  |   |  |
| Projected Area <i>cm</i> <sup>2</sup> | No ice   | 849  | 927                                     | 810  |
|                                       | With ice                                       | 1644   | 1633                                    | 1604   |
| Wind Load (Thrust) @ 160km/h <i>N</i> | No ice   | 101  | 110                                     | 96   |
|                                       | With ice                                       | 195  | 194                                     | 190  |
| Wind Gust Rating <i>km/h</i>          | >240   |  |   |  |
| Torque @ 160 <i>km/h Nm</i>           | No ice   | 50   | 57                                      | 48   |
|                                       | With ice                                       | 97   | 101                                     | 95   |