

### 02590 - VHF Hi Band Discone Base Station Antenna

#### Description

The 02590 Discone Antenna is a broad frequency antenna suited to applications across the frequency range 110-400 MHz (Transmit) and 100-400 MHz (Receive). All radiation patterns have been tested and verified on an antenna test range. Its stable radiation pattern across the 100-400 MHz band allows for accurate EMI / RFI testing.

Robust construction of both the central feed section and matching radials makes for a reliable and attractive antenna.

#### Applications

Broad Band Transmit and Receive applications requiring coverage of numerous commercial frequency bands.

#### Construction

- Hub matching section is constructed of Aluminium and Delrin.
- Mounting tube is constructed of Aluminium.
- Radials are constructed of Aluminium.

#### Specifications

##### Electrical

Model	Frequency MHz	*Gain (dB)	Tuned Bandwidth	Operating VSWR	Input Impedance	Vertical Beamwidth	Horizontal Beamwidth
02590	100-400	See Below	110-400 MHz	<2.0:1	50 Ohms (Nominal)	See Below	See Below
	100	0				85 Deg	Omni
	200	0				85 Deg	Omni
	300	-3				60 Deg	Omni
	400	-3				See Pattern	Omni

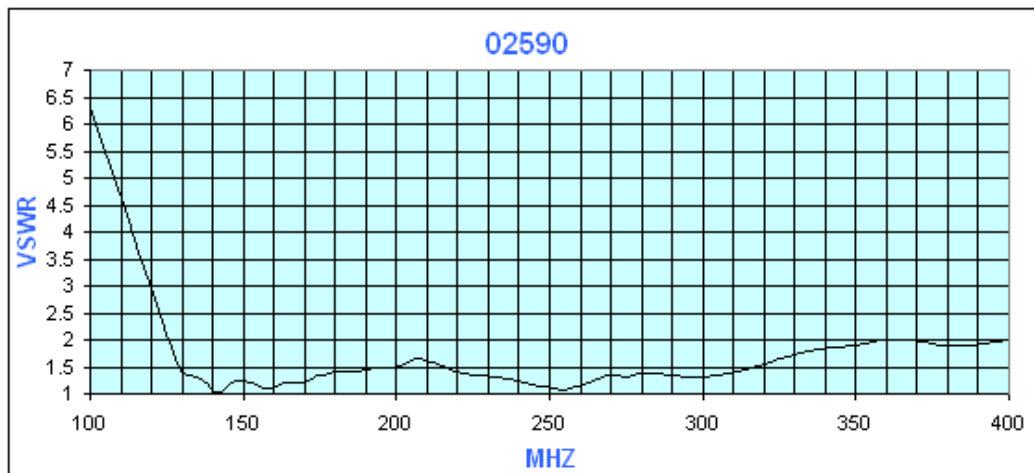
\* Gain Referenced to 1/2 Wave Dipole Antenna.

##### Mechanical

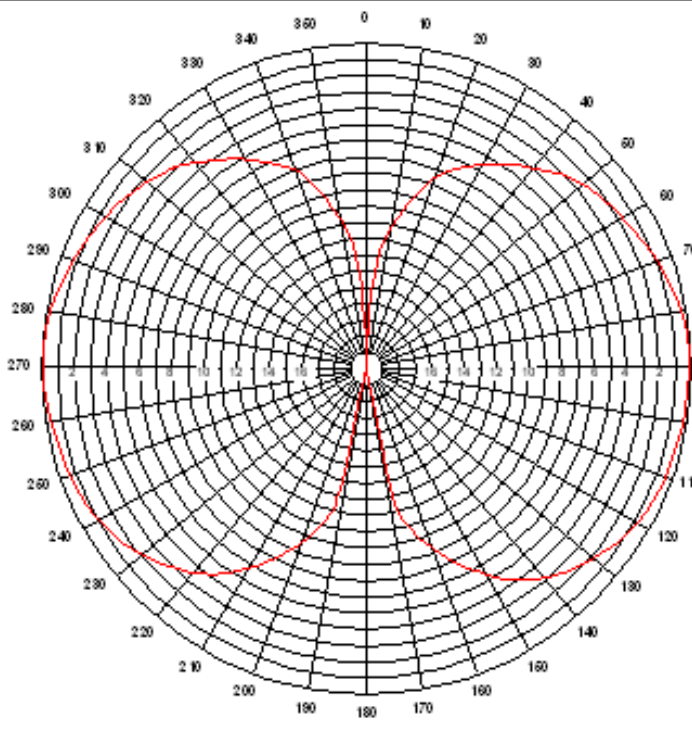
Model	Construction	Length (m)	Width (m)	Weight (kg)	Termination	Projected Area	Wind Loading @160 KPH
02590	Delrin, Aluminium, Aluminium Radials.	0.7	#0.78	1.75	RG213, Cable Tail, N Female	0.0791 SQM	9.61 Kg

#Width across base of cone.

#### VSWR Plots



(Logarithmic) Frequency - 100 MHz



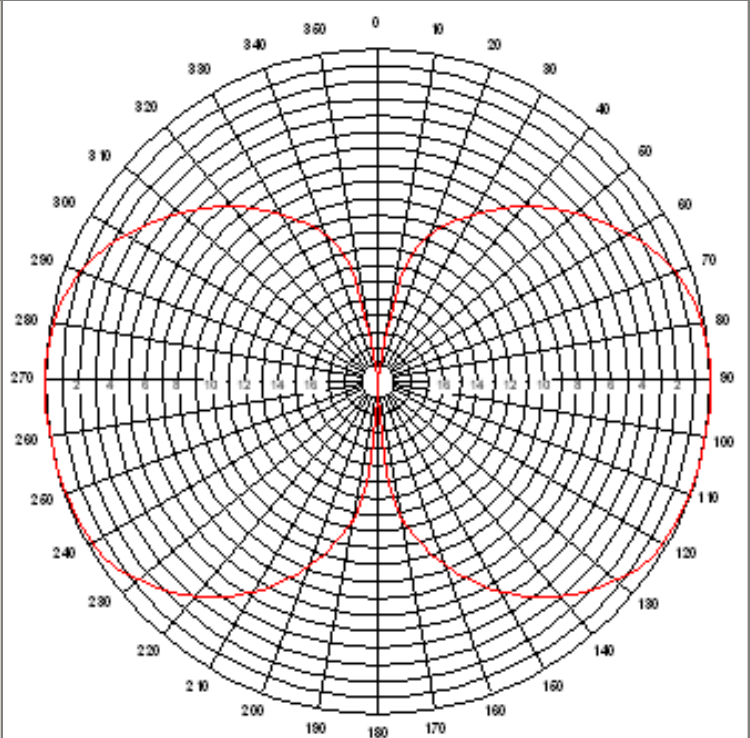
**3 DB E Plane Beamwidth: 85 Deg**

**Frequency: 100 MHz**

**Gain: 0 dB**

[Dwg 607] [Rev -]

(Logarithmic) Frequency - 200 MHz



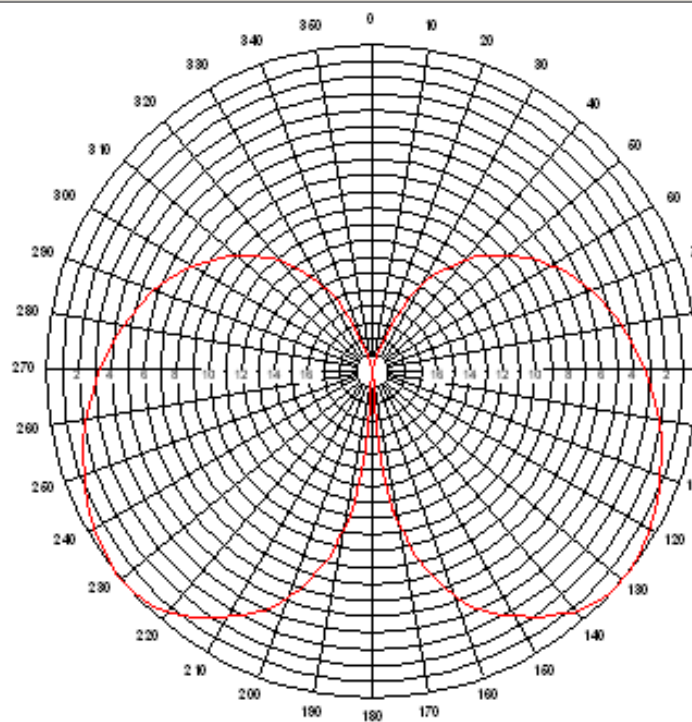
**3 DB E Plane Beamwidth: 85 Deg**

**Frequency: 200 MHz**

**Gain: 0 dB**

[Dwg 608] [Rev -]

(Logarithmic) Frequency - 300 MHz



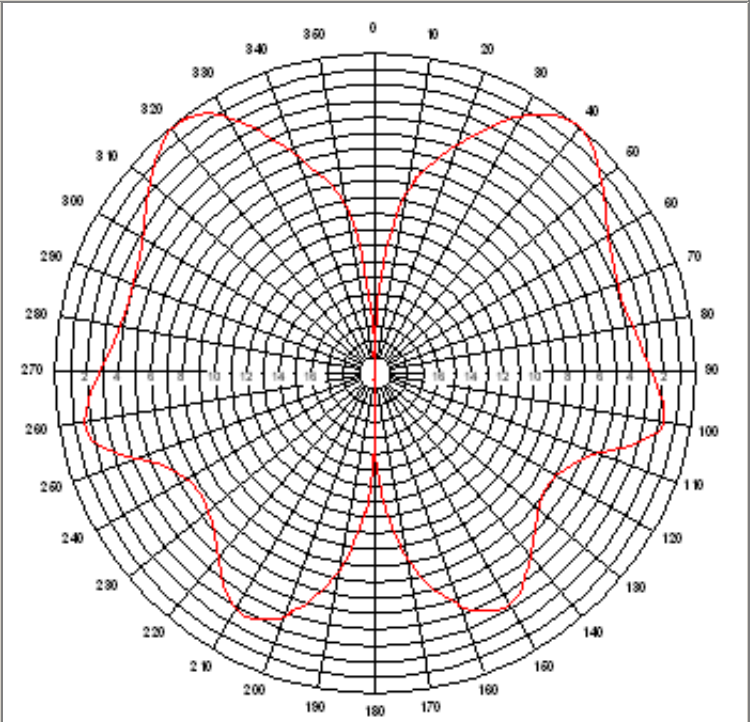
**3 DB E Plane Beamwidth: 60 Deg**

**Frequency: 300 MHz**

**Gain: -3 dB**

[Dwg 609] [Rev -]

(Logarithmic) Frequency - 400 MHz



**3 DB E Plane Beamwidth:**

**Frequency: 400 MHz**

**Gain: -3 dB**

[Dwg 610] [Rev -]