

Features

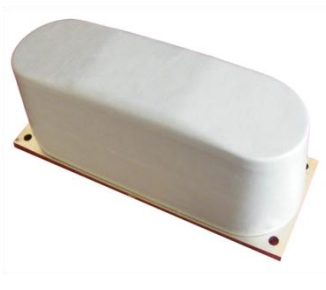
- ✓ 500 - 3000 MHz Frequency Range
- ✓ Up to 100 W peak power handling capability
- ✓ Metal plated plastic design minimizes weight (0.75 lb ea)
- ✓ ModuSTAK™ system promotes cost effective array synthesis and technology insertion/refresh capabilities



GreenWave Scientific's new *ELITE* series modular antenna system provides multi-octave broadband performance, significantly reduced weight, lower costs and provides complete antenna array configuration flexibility.

GreenWave's new line of ModuSTAK™ broadband plastic antennas promote user array synthesis and provide cost-effective technology insertion/refresh capabilities

With new digital beamforming and smart antenna systems, broadband antennas have become more in demand. GreenWave Scientific has designed a new highly modular, nickel coated copper plated plastic antenna system that is truly broadband and handles up to 100 W peak power per element. The antenna employs a novel 3D radiator technology that minimizes antenna depth and provides continuous coverage across a very wide band. The antenna utilizes techniques that shrink the physical size while increasing its effective size which extends the performance near the band edges. The Greenwave proprietary balun design is coupled to a balanced arm radiator that provides over two octaves of operating bandwidth resulting in a multi-octave, high power, lightweight, low-cost antenna that is ideal for today's software defined radios and digital beamforming radio architectures.



GreenWave has developed a ModuSTAK™ antenna connection system that allows the end-user complete flexibility in the configuration of the antenna array. Because Software Defined Radio architectures are becoming prevalent in today's radio designs – a paradigm shift is needed in antenna array design and deployment. Currently, antenna array costs are extensive with limited flexibility and no practical means for technology insertion or refresh. Because the ModuSTAK™ antennas are molded from plastic, manufacturing costs are kept to a minimum. Moreover, element swap-out capabilities mean minimal downtime impact on communication or EW systems. By leveraging a true three dimensional antenna design, we've been able to

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develop contours in all three dimensions leading to an optimum antenna design. Our specially engineered radiator eliminates resonant and energy storage structures. The Elite-0530 has achieved extremely broadband performance without suffering from “cross-over” frequency transitions found in conventional multi-mode, resonant or multiple radiator designs.

The Elite-0530 has a clean radiation pattern with a well-defined main lobe across its operating bandwidth, a good front-to-back ratio and moderate gain. Whether used individually or in an array, the clean pattern characteristics are maintained.

Applications:

- ❖ UAV applications
- ❖ JTRS Airborne, Maritime, Fixed Station (AMF)
- ❖ Legacy communications
- ❖ Ground vehicle electronic warfare applications
- ❖ Advanced radar systems
- ❖ Airborne electronic warfare
- ❖ Shipboard electronic warfare
- ❖ Wireless Infrastructure Systems

Electrical Specifications

Frequency Range	VSWR	Peak Power	Connector	Nominal Impedance
500-3000 MHz	<i>See graph</i>	100 W	N-type	50 Ω

Physical Specifications (*single radiator*)

Length	Width	Height	Weight (w/o radome)**
13.0 in	4.7 in	5.5 in	0.75 lb
33.0 cm	11.9 cm	14.0 cm	0.34 kg

** Separate modular radome (semi- hermetic) also available

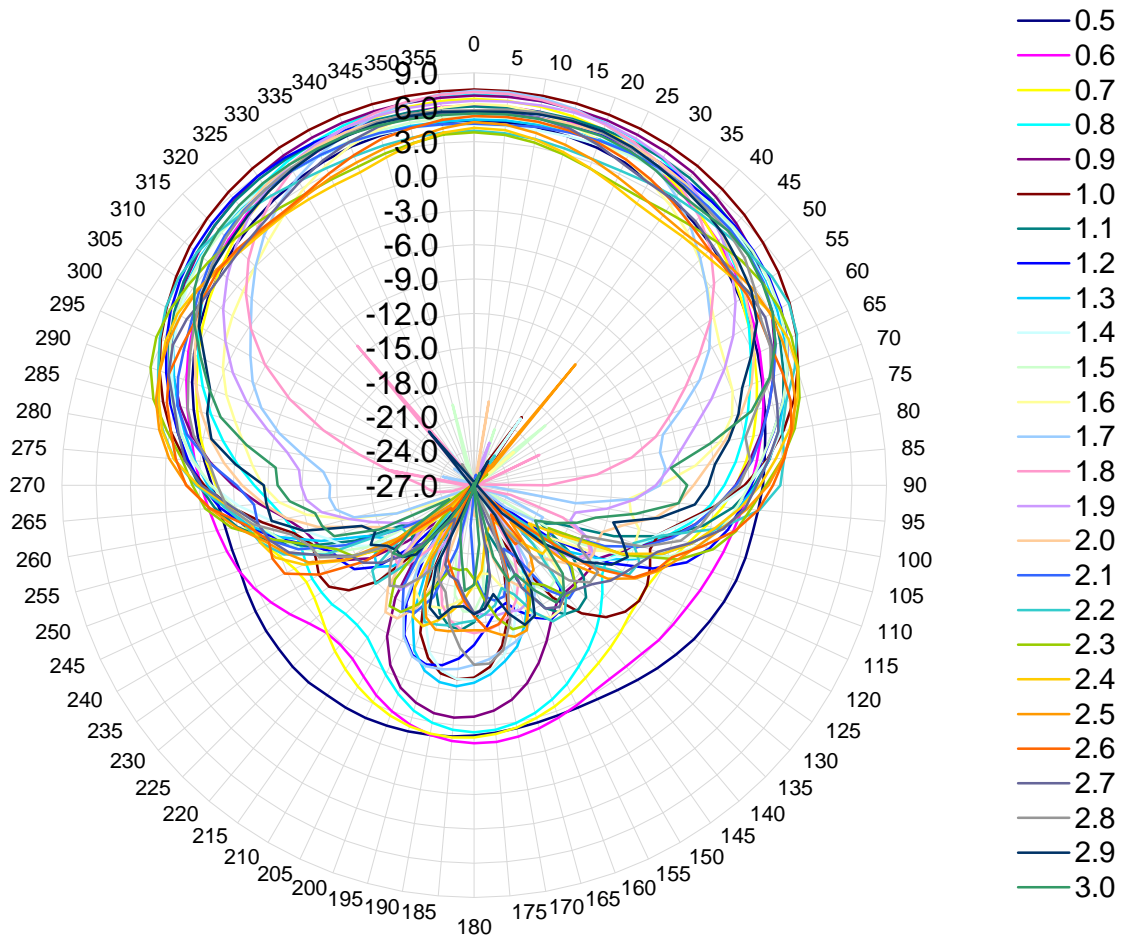
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Azimuth Patterns



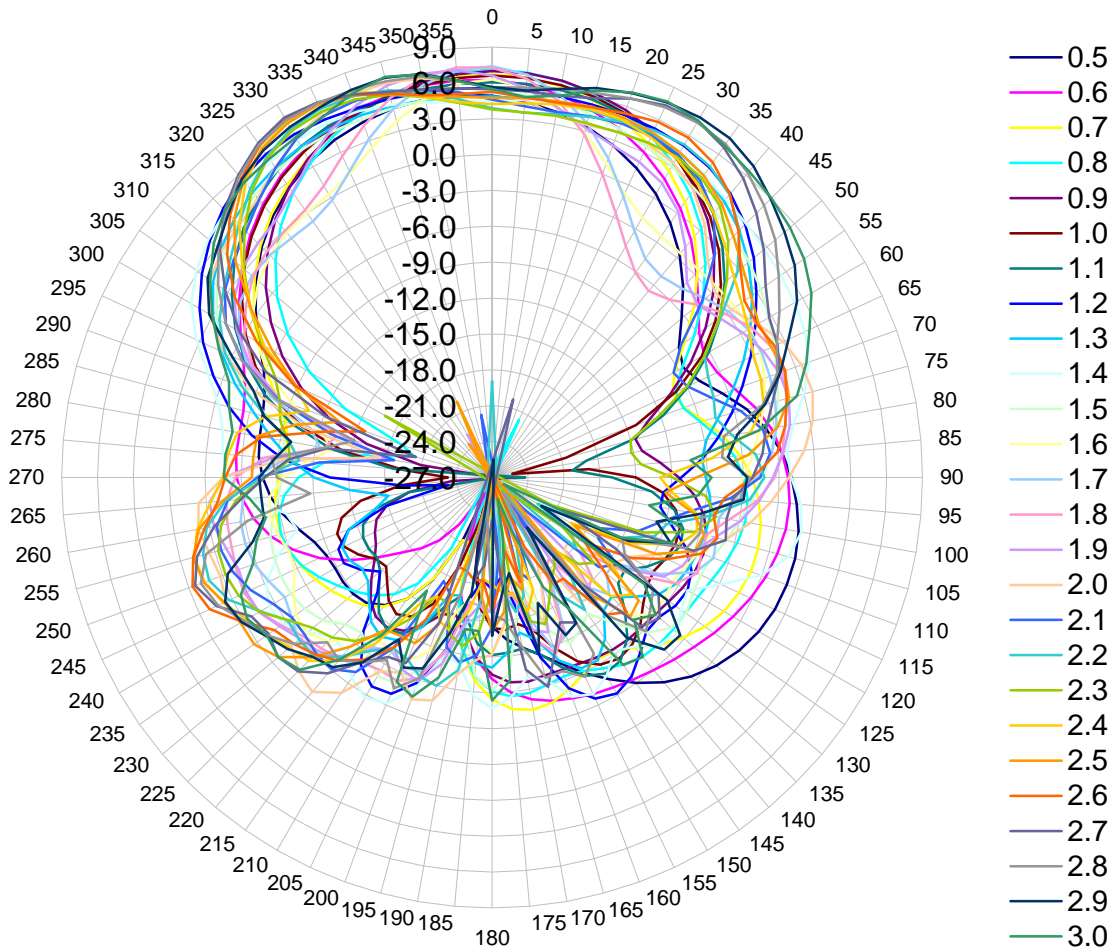
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Elevation Patterns



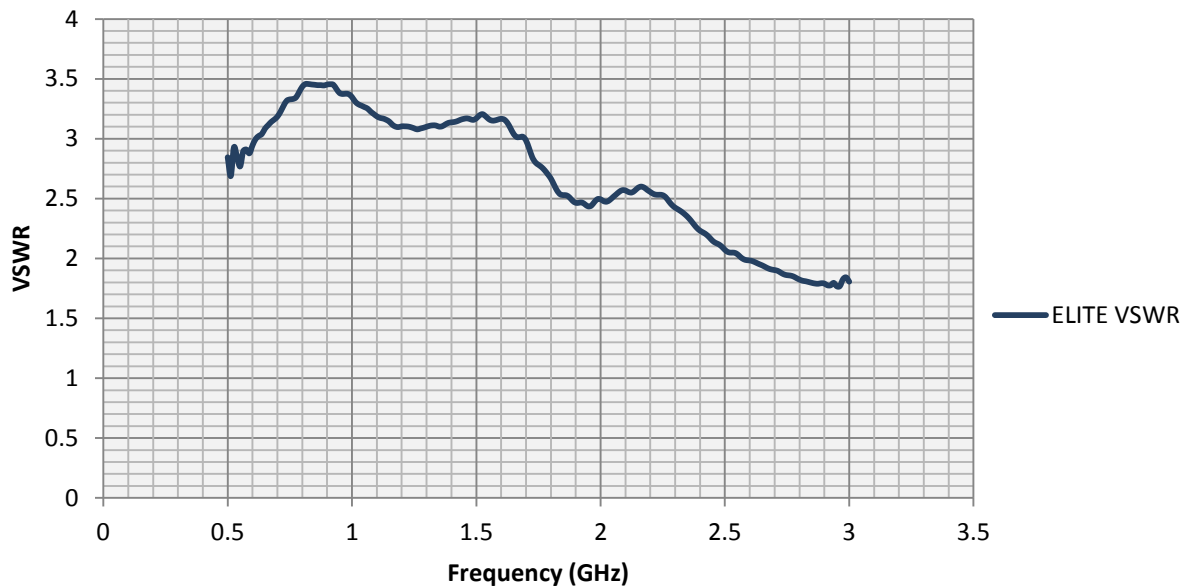
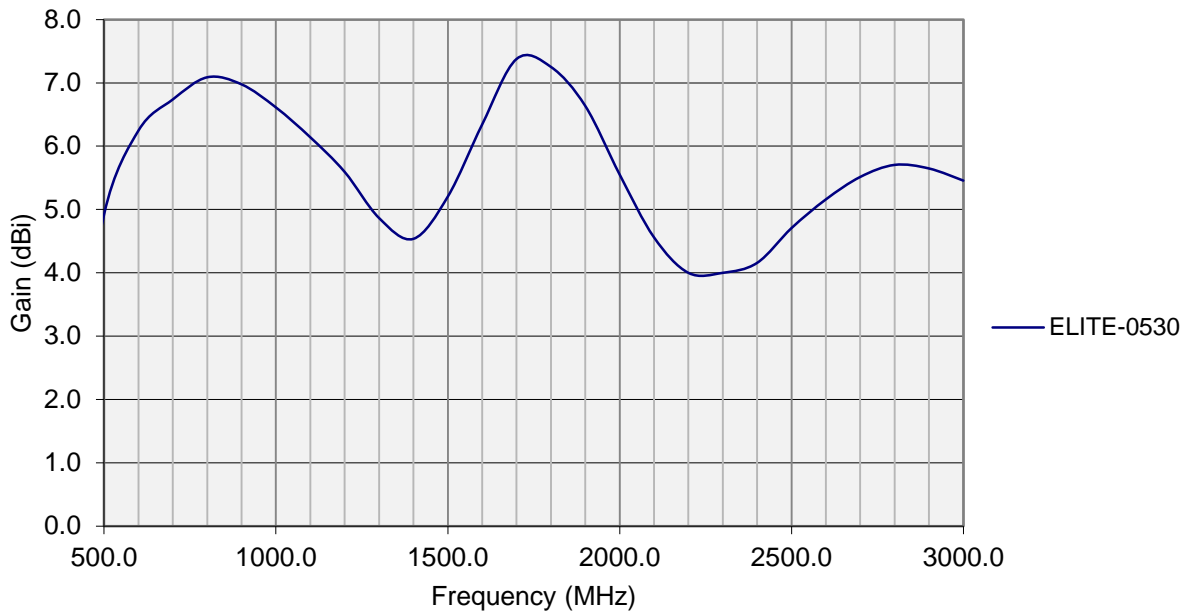
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Boresight Gain (dBi) – single element



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