



L3HARRIS™
FAST. FORWARD.

P/N 54460

6" C-/E-Band Sinuous Antenna

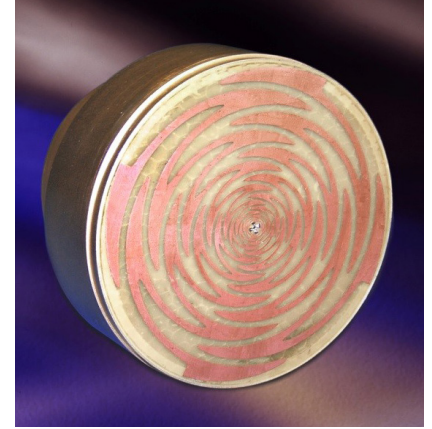
To meet the challenge posed by hostile signals that can be arbitrarily polarized, L3Harris has developed a common aperture element capable of simultaneously receiving or transmitting radio frequencies of any two orthogonal polarized signals on two isolated ports.

The 6" model 54460 antenna derives its dual circular polarization from the natural dual linear polarization of the sinuous antenna via an internal quadrature hybrid. The result is low ellipticity over wide spatial angles verifying that the E- and H-plane patterns are produced from collocated phase centers.

Originally designed for RWR Direction Finding (DF) applications, the characteristics of this antenna make it

an ideal choice for an ESM interferometer, SIGINT, polarimeter or any application requiring stable phase centers with frequency independent performance.

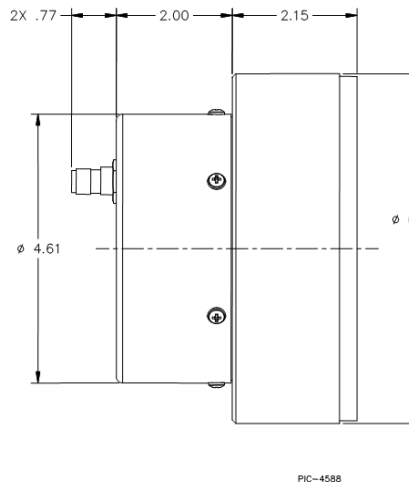
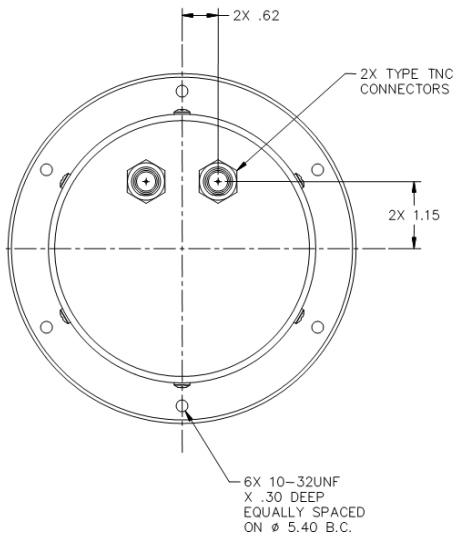
The performance of the antenna is similar to the cavity-backed spiral antenna except the sinuous antenna beamwidths vary less with the frequency due to the lack of higher order modes associated with spiral antennas. The VSWR is typically less than 2:1. Power handling is typically 10 Watts CW. Actual performance depends on installation and environmental conditions. The antenna can be provided with or without an aperture environmental radome cover.



KEY FEATURES

- > 0.5–4 GHz Frequency Operation
- > Dual Circular Polarization
- > Designed for RWR Application
- > Designed for Military Airborne Environment

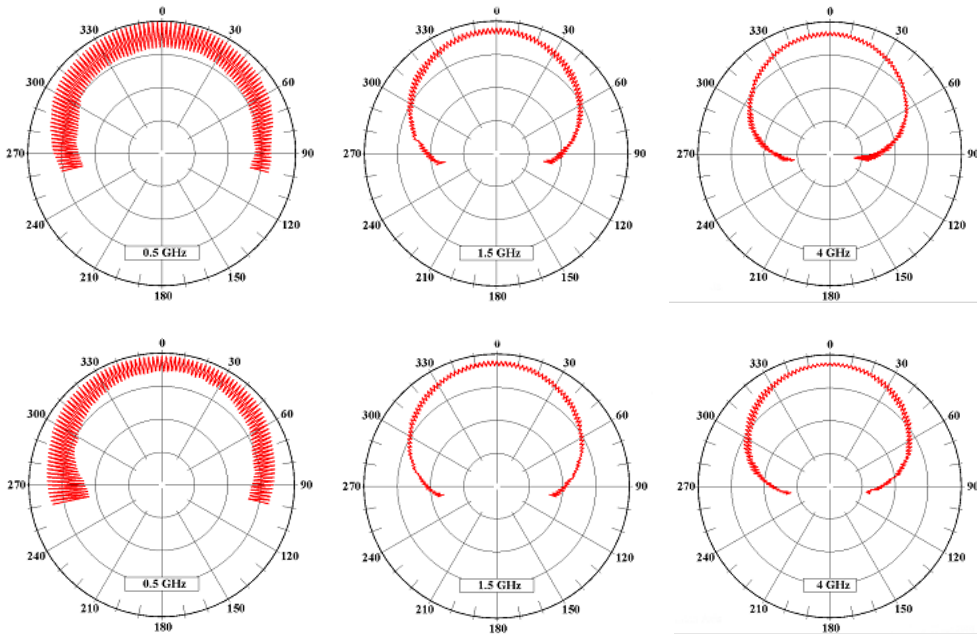
PHYSICAL DIMENSIONS (TYPICAL UNIT)



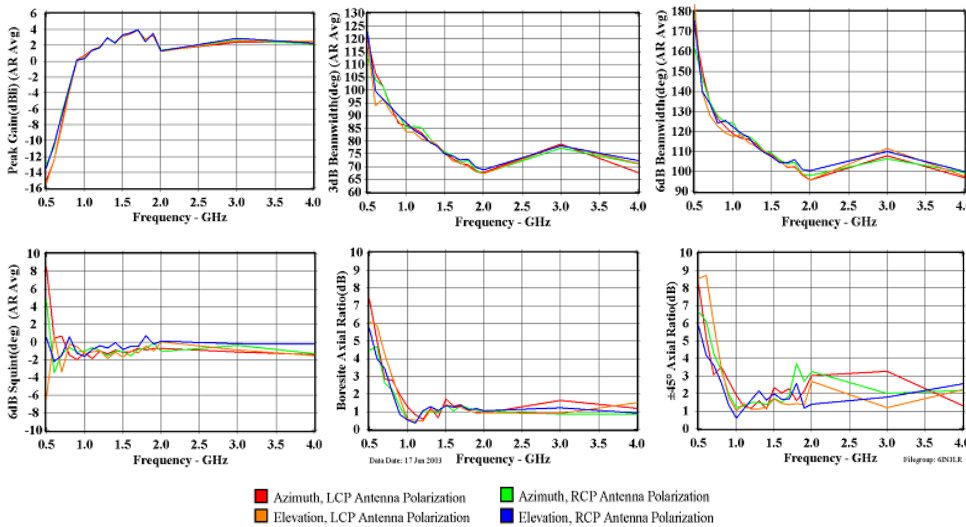
WEIGHT: 2.75 lbs.

TYPICAL MEASURED PERFORMANCE

Performance varies with radome design, manufacturing tolerances, installation, and environmental conditions. Data shown is typical for the antenna without radome.



Azimuth Radiation Pattern Response to Rotating Linear Polarization (10 dB Rings)
 LHCP Polarization (above) compared to RHCP Polarization (below)



Antenna Performance Summary

P/N 54460

© 2021 L3Harris Technologies, Inc. | 08/2021

PUBLIC RELEASE. Cleared by DoD/OSR for public release under 07-S-1139 on November 18, 2014.

Data, including specifications contained within this document, are summary in nature and subject to change at any time without notice at L3Harris Technologies' discretion. All brand names and product names referenced are registered trademarks, or trade names of their respective holders. Use of U.S. DoD visual information does not imply or constitute DoD endorsement.

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



1025 W. NASA Boulevard
 Melbourne, FL 32919
 t 866 900 7270 | f 650 326 1033
 Antennas@L3Harris.com