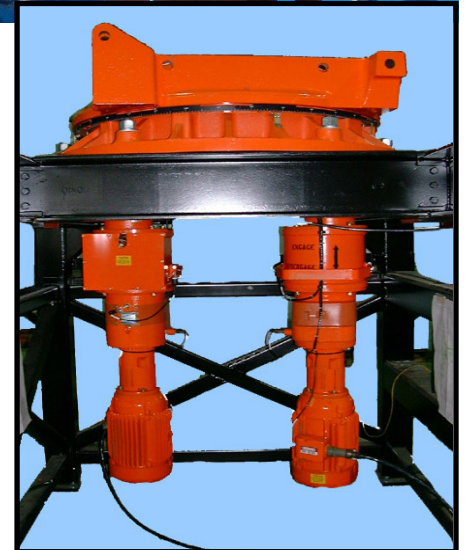


S-Band Digital Airport Primary Surveillance Radar Antenna System

S-Band Digital Airport Primary Surveillance Radar Antenna System ASR11

The Kratos S-Band Airport Primary Surveillance Radar Antenna is an improved version of the field proven ASR8 Primary Radar Antenna. The design incorporates structural enhancement to accommodate a Large Vertical Aperture (LVA) Secondary Radar Antenna. The antennas have both High and Low beam elevation radiation patterns and have switchable linear/circular polarization. The dual drive Pedestal rotator is also a proven product, designed to support the primary and LVA Secondary Radar under adverse weather conditions. The antenna and pedestal system is manufactured to stringent specifications and performs to the exacting standards demanded of them.



Overview

Antenna Description: Prime focus antenna with dual offset feeds

Antenna Type: One piece reflector with formed aluminum mesh.

Designed to operate without the need for a Radome enclosure.

Environmental

Wind Loading: Operational: 100 mph (160 km/h) with 0.5 in. (1.27 cm) ice on non-radiating surface.

Survival: 145 mph (230 km/h) with 0.5 in. (1.27 cm) ice

Temperature: -50 °C to +70 °C

Waveguide Flange Type: CPR284 at output

Technical Summary; Antenna System

Frequency Band: 2.7-2.9 GHz

Feed Horns: Dual, High & Low Beam

Polarization: Switchable Circular/Linear

Gain (min.): High Beam, 32.5 dBi

Low Beam, 33.5 dBi

Beamwidth: Elevation (nominal), 4.8 degrees

Azimuth (nominal), 1.35 degrees

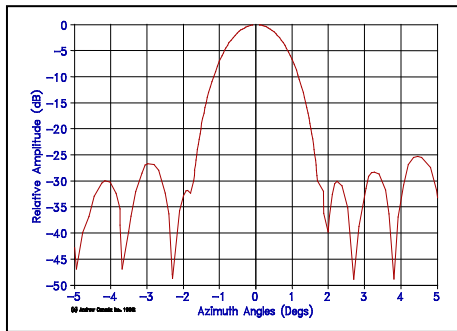
VSWR: Low Beam: 1.3:1

High Beam: 1.4:1

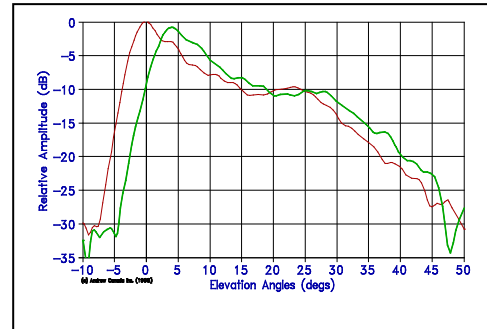
Antenna Finish

Aluminum Treatment: Conversion coat
Drawing specifies: conversion coat per MIL-DTL-5541, Type II Class 1A
Clear RoHS compliant

Paint Specification: Antenna is to be painted
Primer: Sigmafast 278 Epoxy Primer
Finish Paint: Siloxane epoxy finish paint; Color, International Orange, color # 12197
per FED-STD-595B



Typical Low Beam Azimuth
Pattern at 2.8 GHz



Typical Low/High Beam Elevation
Pattern at 2.8 GHz

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