Laird TECHNOLOGIES

global solutions : local support

Directional Yagis Antennas
Superior Quality & Performance

Traditional Gamma Match, Silver Series Directional Yagis

Our directional gamma matched yagis, 3 elements, VHF 200MHz series are designed focus on economical and high performance. This VHF yagi series is a 7.1 dBi antenna gain operates on 216-285 MHz frequency ranges. It is manufactured using high strength 6061-T6 aluminum to withstand heavy ice, high wind and other harsh conditions.

FEATURES

- **High performance at low cost**
- **Fixed tune gamma matched design**
- **100% tested on a network analyzer**

APPLICATIONS

Designed for low cost residential and commercial applications

ELECTRICAL

Frequency Range:	see product model
VSWR:	< 2:1
Return Loss:	-10dB max
Nominal Gain:	7.1 dBi
Front to Back Ratio:	17 dB
Maximum Power:	300 W
Nominal Impedance:	50Ω
Polarization:	Vertical or Horizontal
Pattern:	Directional
Azimuthal (Vert) Beamwidth:	76°
Elevation (Horz) Beamwidth:	79°
Tuning:	fixed tuned
Transmitting / Receiving:	Both

MOUNTING

Included:	Yagi mounting kit for installation

MECHANICAL

Material:	6061-T6 Aluminum
Length:	41.5”
Height:	25.75”
Boom Diameter:	0.875”
Weight:	2 lbs
Rated Wind Velocity:	120mph (222 kph)
Temperature Rating:	-40ºC to +85ºC
Equivalent Flat Area:	0.5610 sq. ft. (max)
Cable:	None
Termination:	N–female connector
Color:	Silver
Lightning Protection:	Lightning Arrestor LABH350NN (Sold Separately)

Model and Ordering Information:

Model#	Description	Type
YS2163	216-225 MHz, 3 elements, Gamma Matched, Yagi, 7.1 dBi	Economical
YS2203	225-250 MHz, 3 elements, Gamma Matched, Yagi, 7.1 dBi	Economical
YS2503	250-285 MHz, 3 elements, Gamma Matched, Yagi, 7.1 dBi	Economical

1751 Wilkening Ct, Schaumburg, Illinois 60173
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Email: sales@lairdtech.com
Web: www.lairdtech.com

APPROVED

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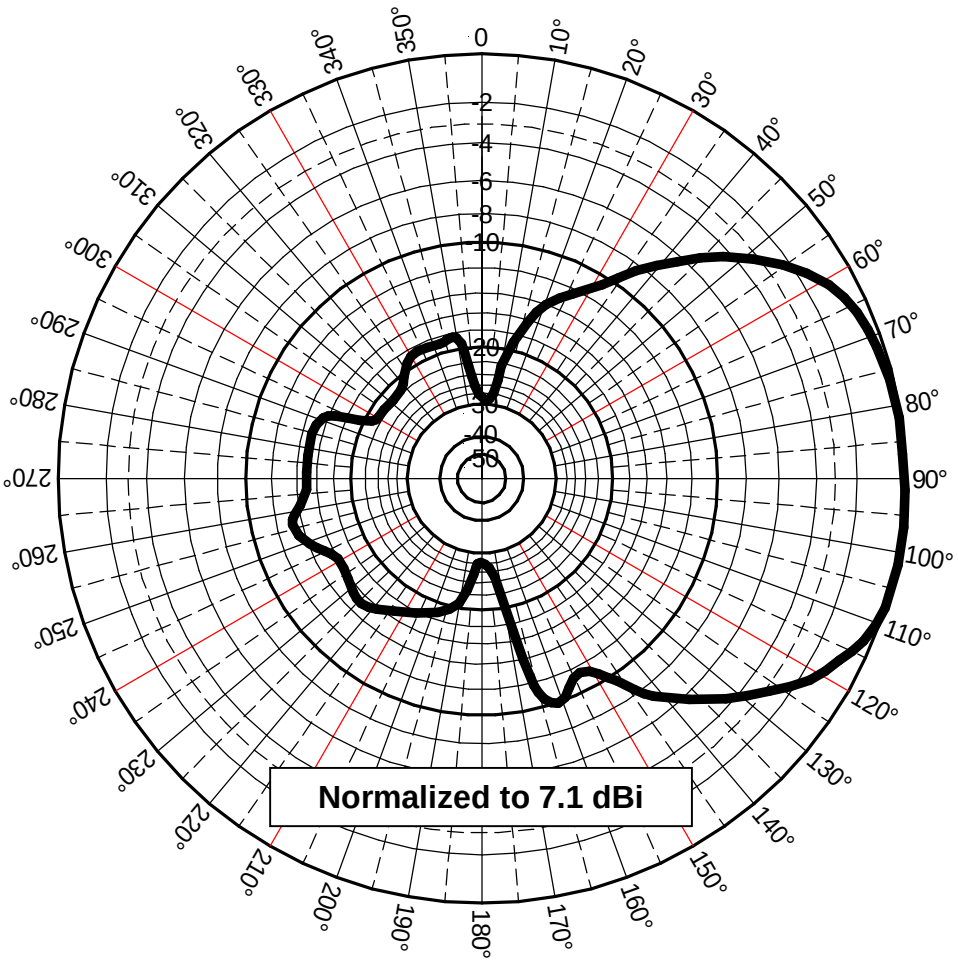
ANTENNA RADIATION PATTERN



Azimuthal Pattern (X, Y or E-Plane)
Representation Pattern

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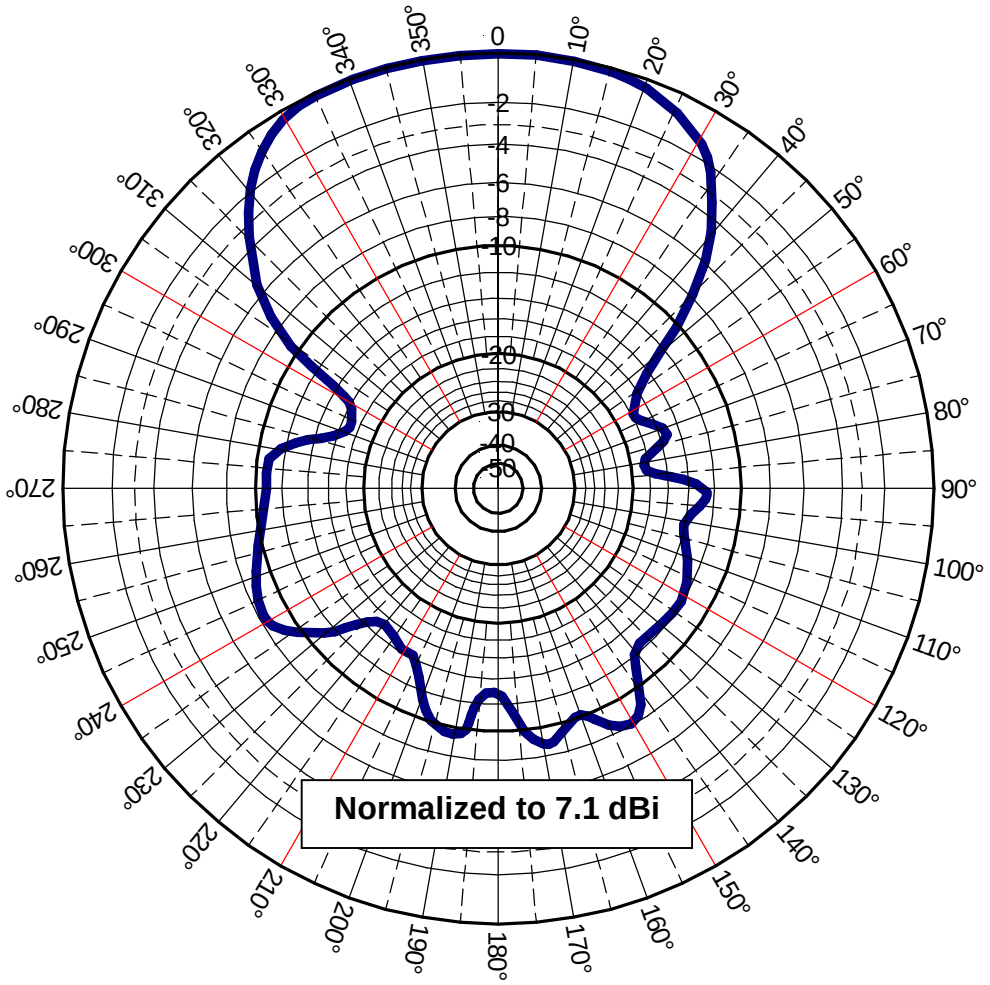

Elevation Pattern (Y, Z or H-Plane)
Representation Pattern

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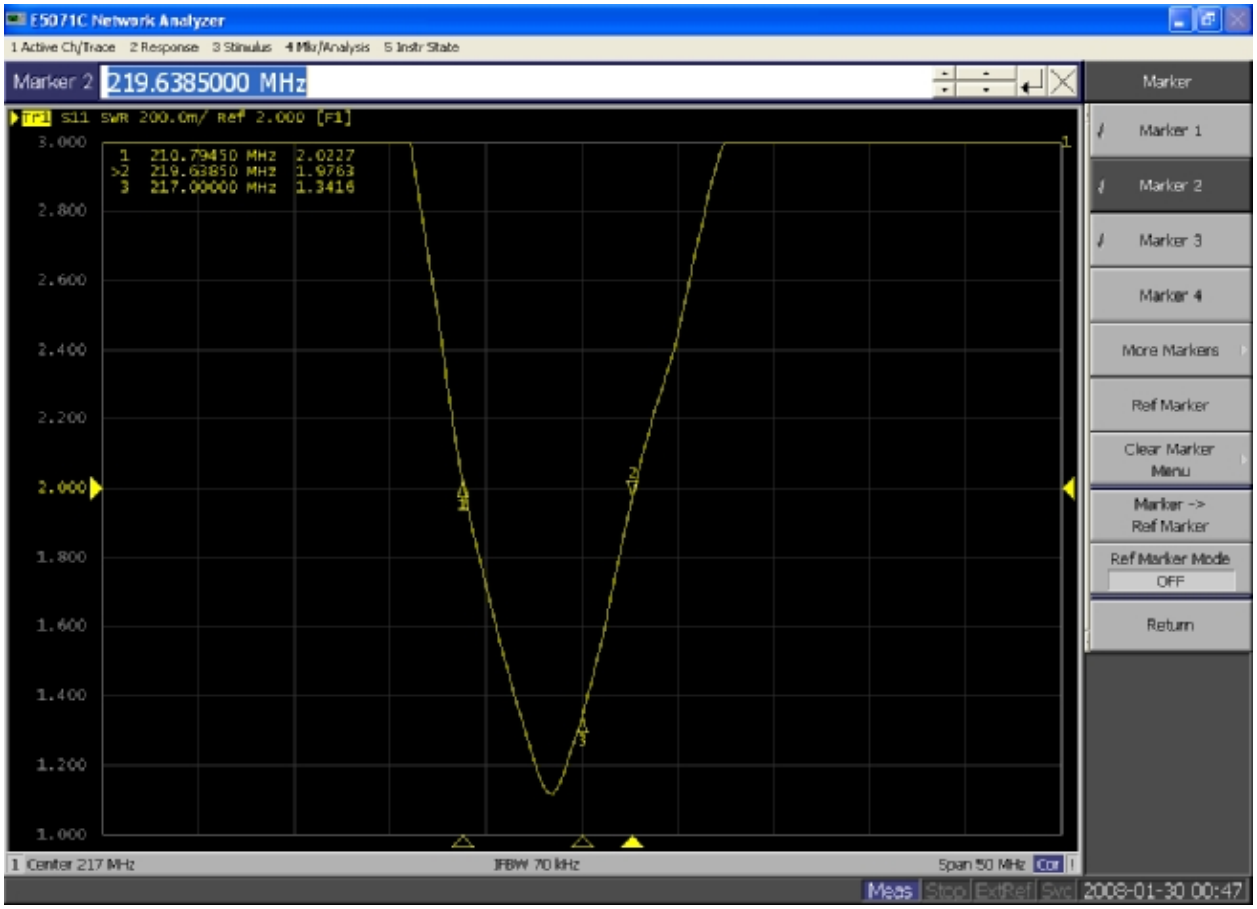
VSWR of Y(B)2203 (See Cutting Chart per requirement)



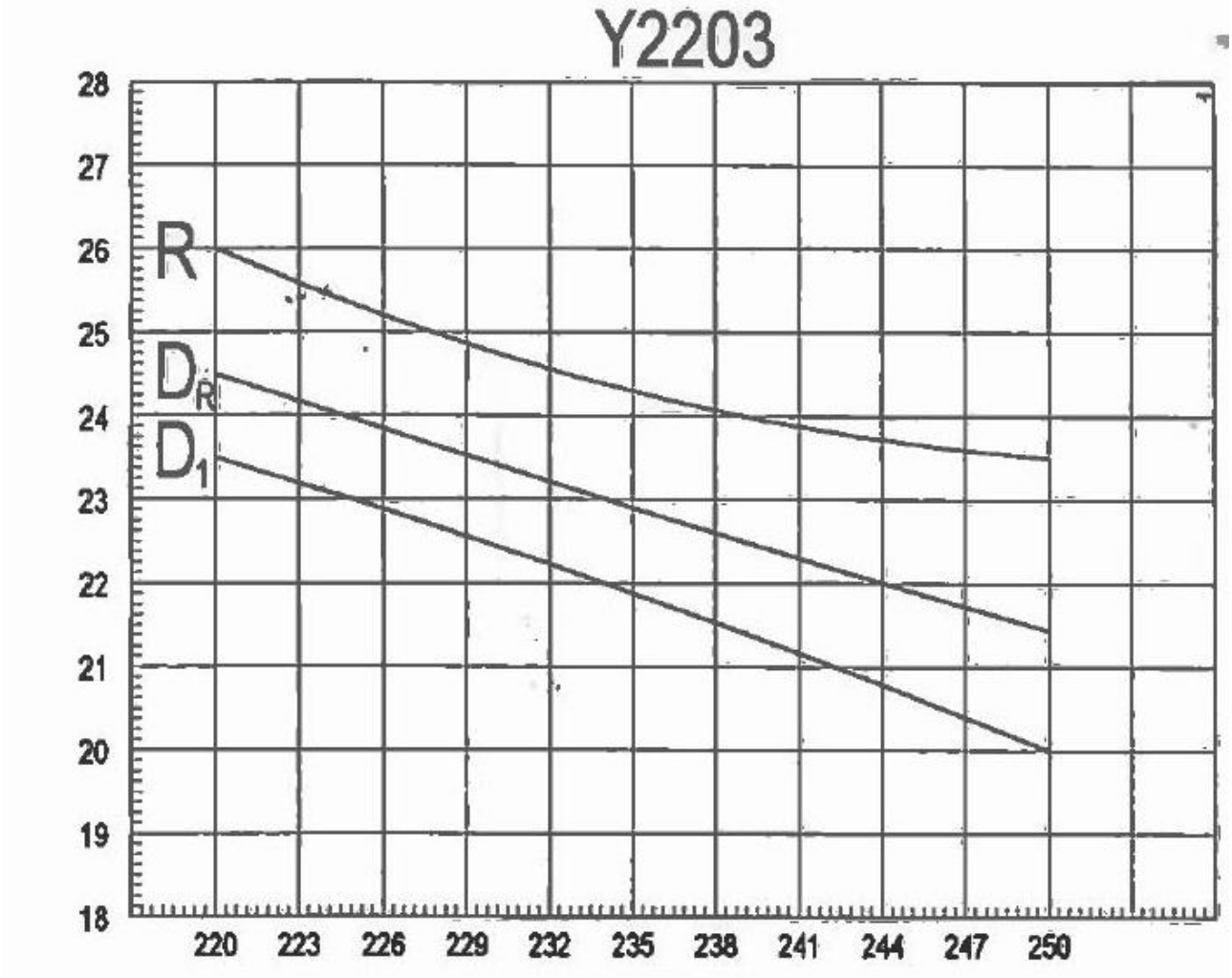
Y(B)2203 Typical VSWR sweeps on a heavy duty mounting bracket

Sample Bandwidth per VSWR Plot (VSWR < 2:1)

Marker 1: VSWR 2.0227 to 1 @ 210.7945 MHz
Marker 2: VSWR 1.9763 to 1 @ 219.6385 MHz
Marker 3: VSWR 1.3416 to 1 @ 217.000 MHz

01/30/2008

Cutting Chart & Instructions



<u>Tuning Instructions:</u> (Bandwidth is ~9MHz)

1. For example, select frequency of interest at center frequency of 220MHz.
2. Cut the reflector element (R) per cutting chart above to 26". The reflector element is located approximately 10" away from the tip of the mounting boom area.
3. Cut the driven element (DR) per cutting chart above to 24.5" long. The driven element is located in the center between the reflector and the director elements.
4. Cut the director element (D1) per cutting chart above to 23.5" long. The director element is located 1" away from the tip of the boom.

Notes:
For quick visual inspection, be sure it is uniform for all elements when it is looking from the side (vertically) from the tip of the element toward the boom and the other end of the element tip.

Mouser Electronics

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TE Connectivity:
YS2163