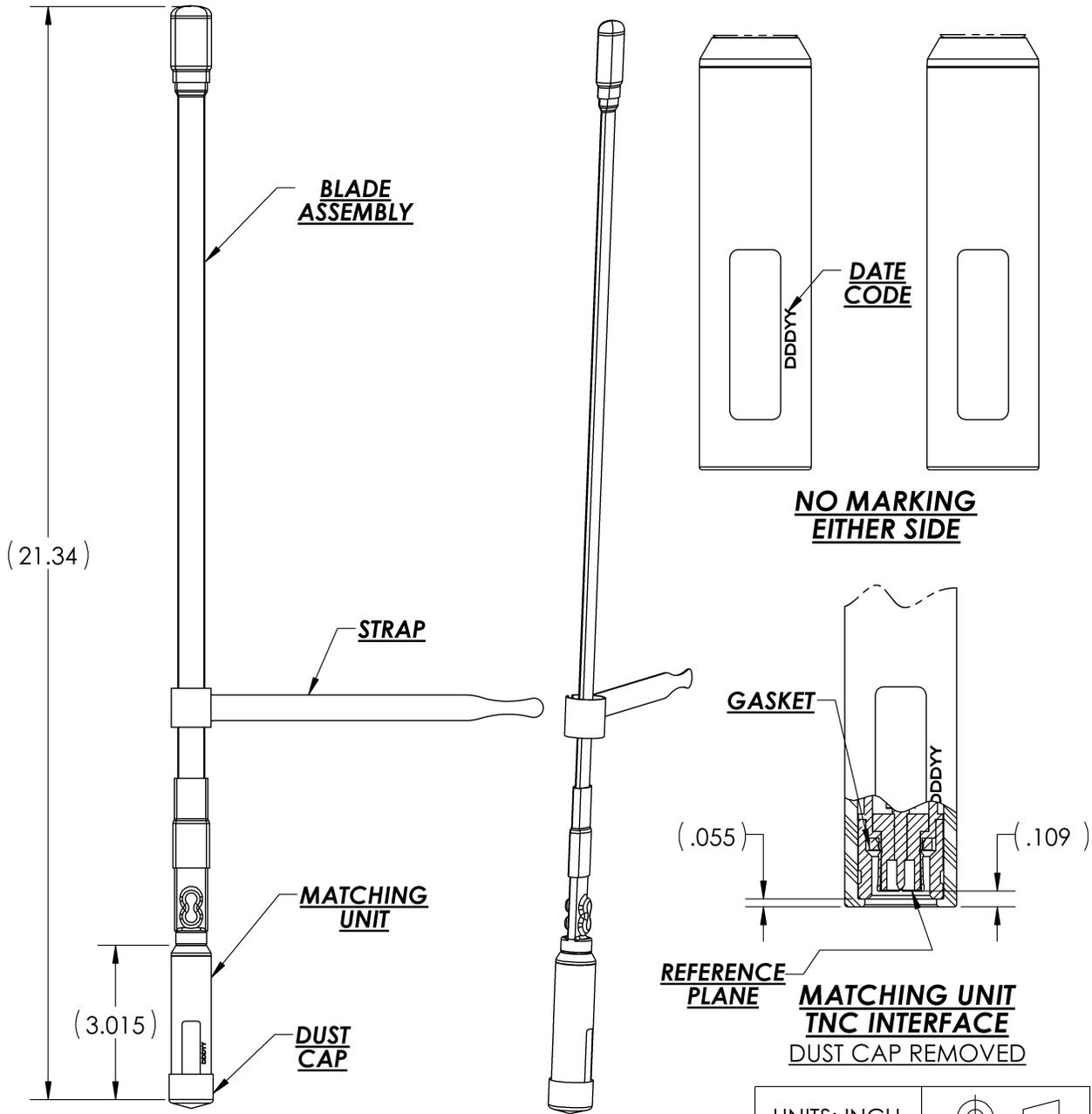


HIGH POWER BROADBAND, 21", BLADE ANTENNA

MD 11-052

30 MHz -512 MHz

Series : Antenna



All dimensions are inches

PRELIMINARY

Issue : 1423

In the effort to improve our products, we reserve the right to make changes judged to be necessary.



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30 MHz –512 MHz

Series : **Antenna**

ELECTRICAL CHARACTERISTICS

Frequency :.....	30 - 512 MHz
Nominal Impedance:.....	50 Ω
VSWR:.....	3.5:1 Max
Typical Gain @ 90 deg at the horizon	>-30 dBi 30-90 MHz >-10 dBi 90-150 MHz >-6 dBi 150-200 MHz >-6 dBi 200-420 MHz >-10dBi 420-512 MHz
Typical Peak gain	>-30 dBi 30-90 MHz >-10 dBi 90-150 MHz >-6 dBi 150-200 MHz >-3 dBi 200-420 MHz >-2.5dBi 420-512 MHz
Radiation Pattern	
Horizontal Plane (Θ=90°):	Omni-directional
Vertical Plane (Φ=0°/90):	Dipolar
Polarization :	Linear Vertical
Power withstanding :	20 W duty cycle (1 min on/ 1 min off)
Connector type :	TNC Male

MECHANICAL CHARACTERISTICS

Antenna Color :.....	Black matte
Matching Unit Material :	PET 35% GF (Dupont Rynite 935)
Matching Unit Texture :	Mold-Tech MT 11040
Matching Unit Length:	3.015 Inches
Blade Material	Stainless Steel
Blade Flex Test	500 Cycles 0-90° around Ø5"
Weight (antenna):	3.9 Oz
Overall length :	21.37±0.25 Inches

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ENVIRONMENTAL CHARACTERISTICS

Operating Temperature :	-40 / +70 °C	
	MIL-STD-810F, Methods 501.4 & 502.4, Procedure II	
Storage Temperature :	-40 / +85 °C	
	MIL-STD-810F, Methods 501.4 & 502.4, Procedure I	
Thermal Shock:	Range 1: +25 +65 -40 °C	
	Range 2: +25 +65 +85 °C	
	MIL-STD-810F, Methods 503.4, Procedure I Steady State	
Humidity (Non-condensing) :	95%	Relative Humidity
	Through Operating Temp range	
	MIL-STD-810E, Methods 507.3 & 502.3, Procedure III	
Salt Fog:	5%	Salt Concentration
	96	Hours
	MIL-STD-810F, Methods 509.4	
Icing / Freezing:	Encapsulate Antenna in Ice	
	Ice Thickness 13	mm min
Sand & Dust:	MIL-STD-810F, Methods 510.4, Procedure I & Procedure II	
Fungus:	US Standard Set Of Test Fungi	
	Duration 28	Days
	MIL-STD-810F, Methods 508.5	
Solar Radiation:	Test Category A1, Curve W	
	MIL-STD-810F, Methods 505.4, Procedure I	
Immersion :	2	Meters (sea water)
	30	Minutes
	MIL-STD-810F, Methods 512.4, Procedure I, with a 27°C above ambient preconditioning temperature	
Altitude (Operational) :	30,000	Ft
	MIL-STD-810E, Method 500.3, Procedures I & II	
Vibration (loose cargo transport):	MIL-STD-810F, Method 514.5, Procedure II, Category 5, Attached to transceiver & Stand alone,	
Shock (Transit Drop):	Drop Height 48	Inches
	MIL-STD-810F, Methods 516.5, Procedure IV, 26 Drops (Stand Alone)	

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HIGH POWER BROADBAND, 21", BLADE ANTENNA

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Series : Antenna

ELECTRICAL CURVES



Figure 1: Typical S₂₂ plot for antenna mounted on a HandHeld.

PRELIMINARY

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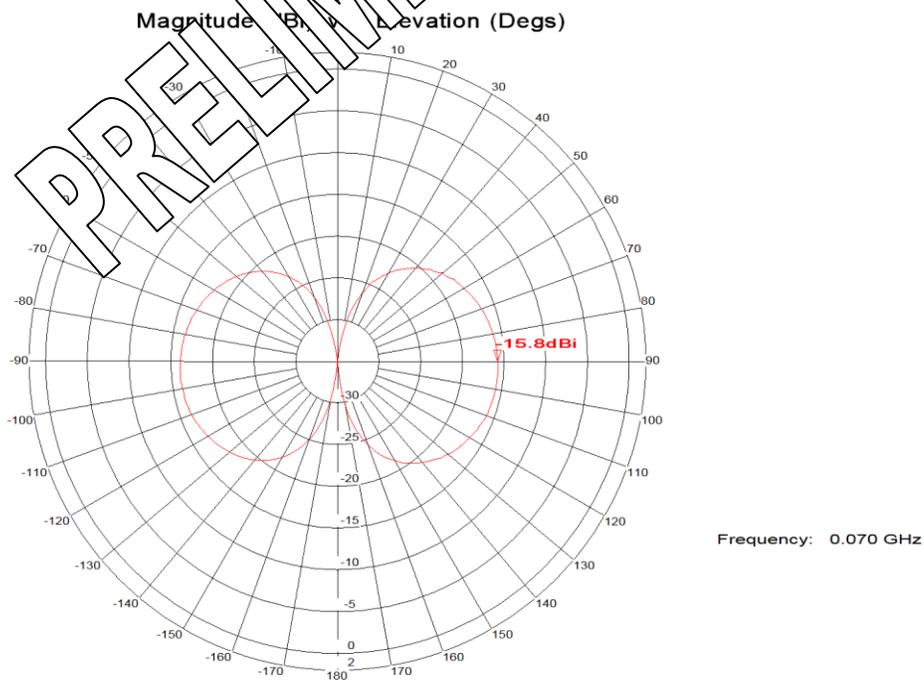
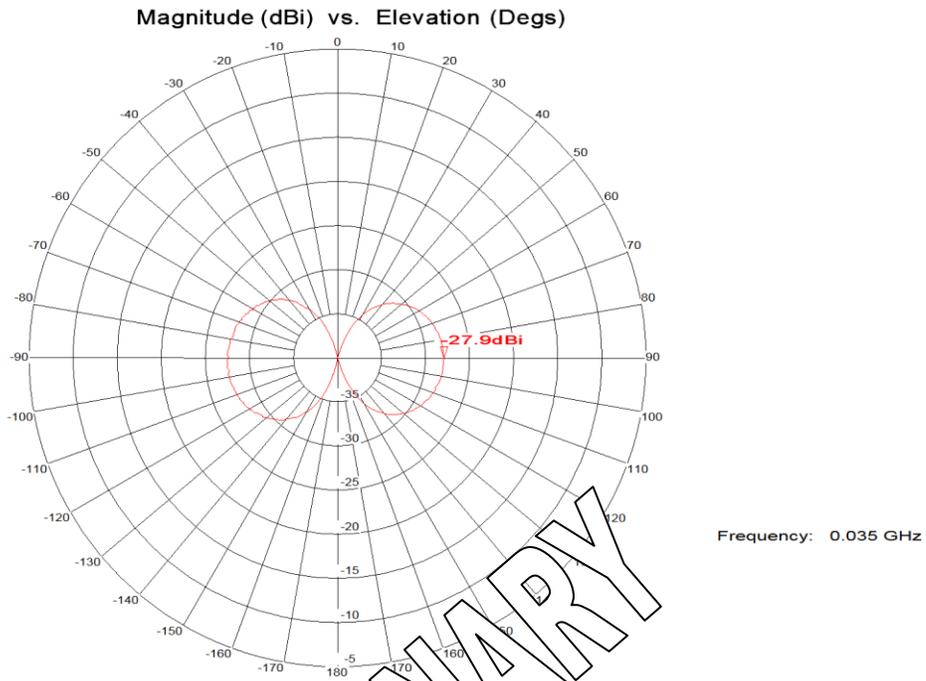
HIGH POWER BROADBAND, 21", BLADE ANTENNA

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30 MHz –512 MHz

Series : Antenna

Figure 2: Typical Elevation Pattern Data for 35, 100, 200, 300, 400 and 500 MHz



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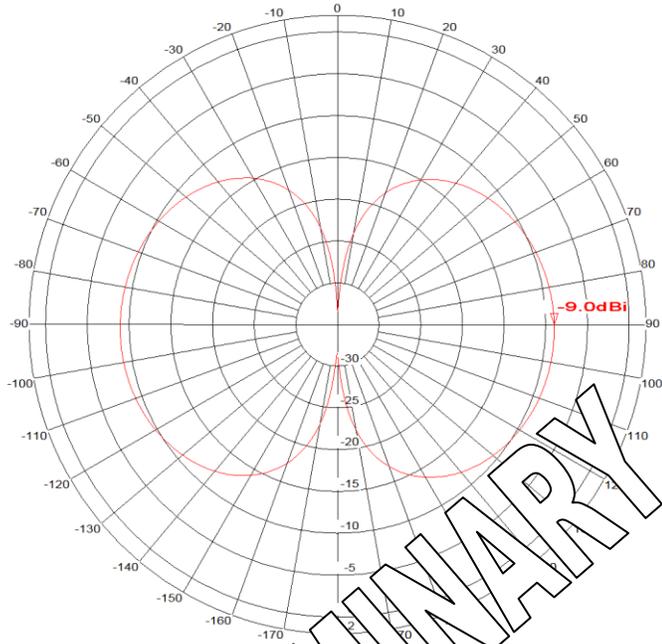
HIGH POWER BROADBAND, 21", BLADE ANTENNA

MD 11-052

30 MHz –512 MHz

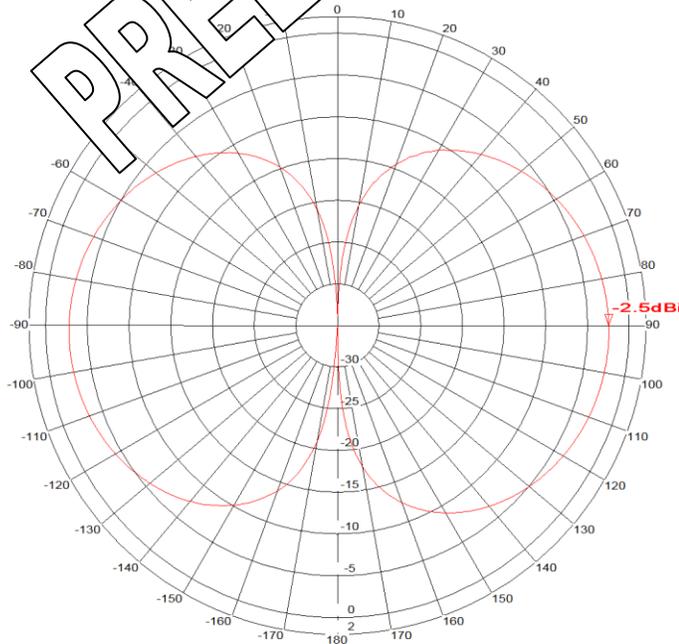
Series : Antenna

Magnitude (dBi) vs. Elevation (Degs)



Frequency: 0.100 GHz

Magnitude (dBi) vs. Elevation (Degs)



Frequency: 0.200 GHz

Issue : 1423

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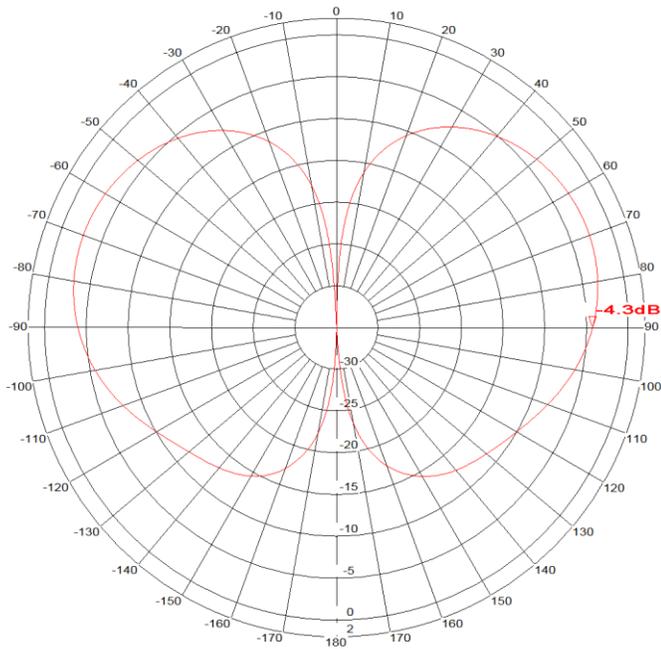
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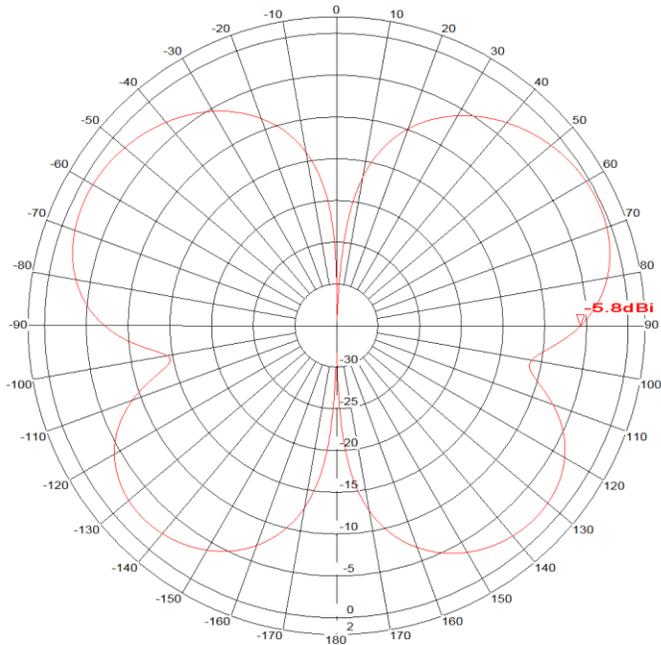
Series : Antenna

Magnitude (dBi) vs. Elevation (Degs)



Frequency: 0.300 GHz

Magnitude (dBi) vs. Elevation (Degs)



Frequency: 0.400 GHz

Issue : 1423

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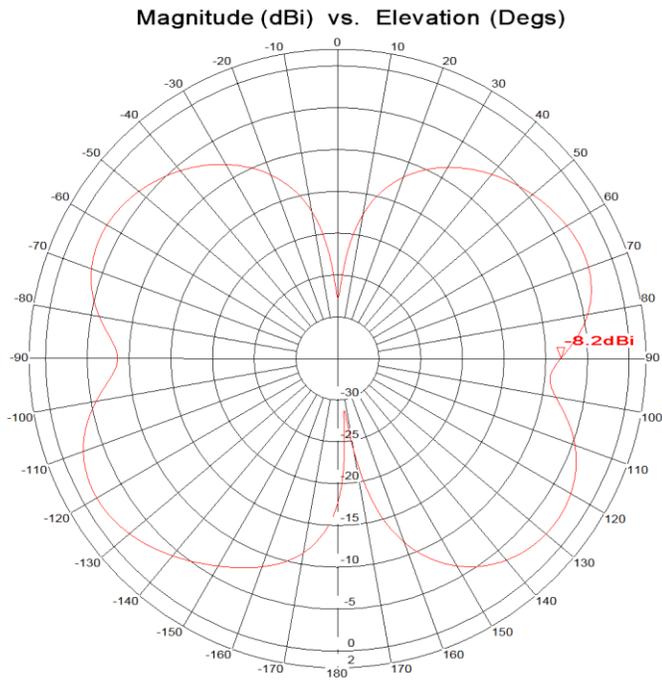


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