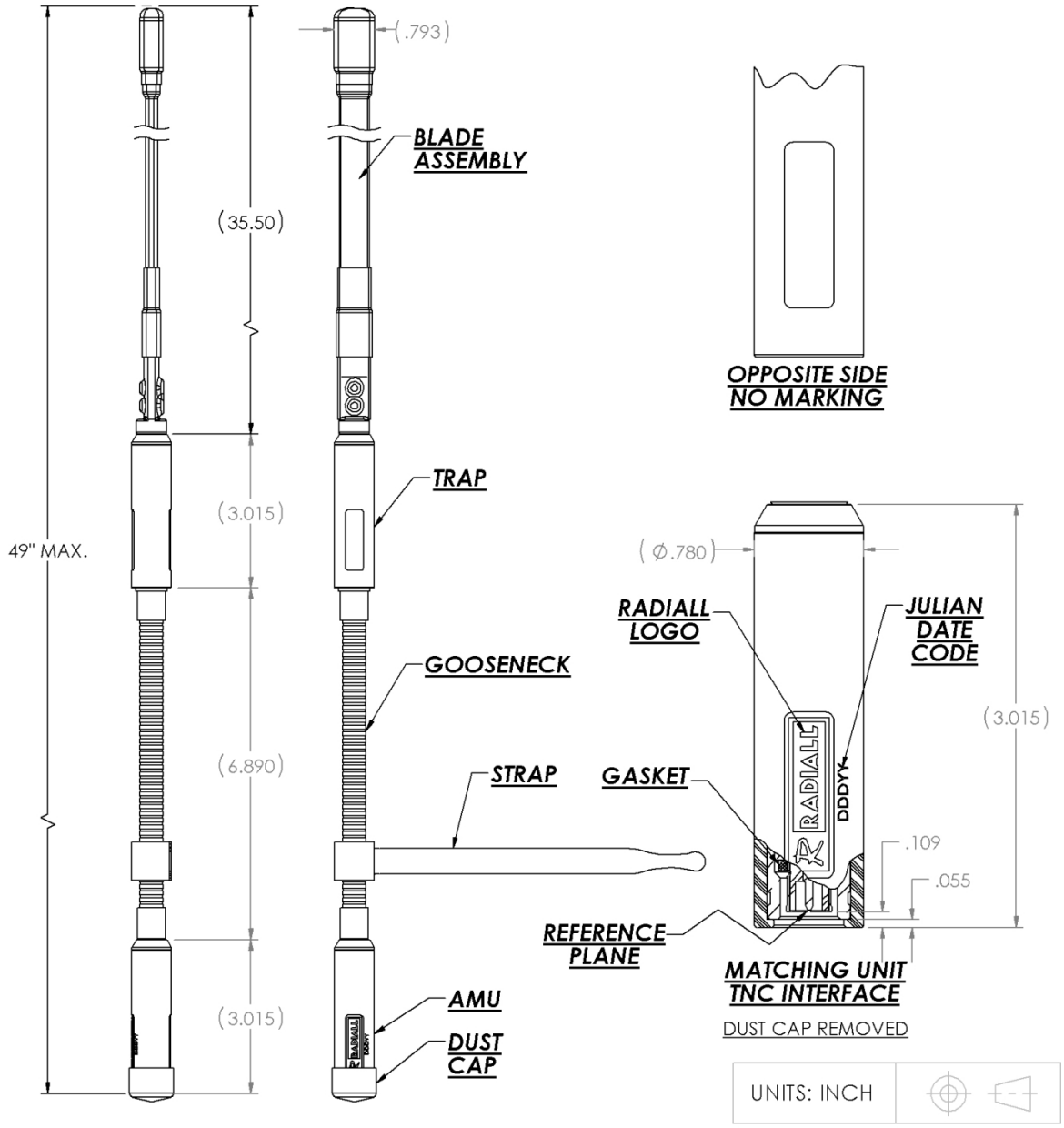
PAGE **1/8**	ISSUE **20-02-25**	SERIES **ANTENNA**	PART NUMBER **MD11-039**



All dimensions are in Inches. Tolerances according ISO 2768 m-H

ELECTRICAL CHARACTERISTICS

Frequency :	**30-512**	MHz
Nominal Impedance :	**50**	Ω
VSWR :	**3.5:1**	Max
Gain :	**See figures p4-8**	
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 Black**	
Trap Material :	**PET Black**	
Molded part Texture :	**Mold-Tech MT 11040**	
Matching Unit Length :	**3.015**	Inches
Blade Material :	**Stainless Steel**	
Blade Flex Test :	**500** **0-180° around ø0.5"**	Cycles
Weight (antenna):	**<12**	Oz
Overall length :	**49**	Inches Max.

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature :	**-40/+70** **MIL-STD-810F, Methods 501.4 & 502.4, Procedure II**	° C
Storage Temperature :	**-55/+85** **MIL-STD-810F, Methods 501.4 & 502.4, Procedure I**	° C
Thermal Shock :	**-40/+70** **MIL-STD-810F, Method 503.4, Procedure I Steady State**	° C
Humidity (Non-condensing):	**95%** **Through Operating Temp range** **MIL-STD-810F, Method 507.4, Procedure 4.5.2 for five 48hr cycles**	Relative Humidity
Salt Fog :	**5%** **96** **MIL-STD-810F, Method 509.4**	Salt Concentration Hours
Icing / Freezing :	**Ice Thickness 13** **MIL-STD-810F, Method 521.2, Procedure I**	mm
Sand & Dust :	**MIL-STD-810F, Method 510.4, Procedure I & Procedure II**	
Fungus :	**US Standard Set Of Test Fungi** **Duration 28** **MIL-STD-810F, Method 508.5**	Days

Solar Radiation :	**Test Category A1, Curve W MIL-STD-810F, Method 505.4, Procedure I**	
Immersion :	**20** **2** **MIL-STD-810F, Method 512.4, Procedure I**	Meters (sea water) Hrs
Altitude (Operational) :	**Equivalent to 43.1** **30,000** **MIL-STD-810F, Method 500.4, Procedure II**	Psia Ft
Shock :	**20g** **11ms** **MIL-STD-810F, Method 516.4, Procedure I**	Peak Acceleration Duration
Vibration (Loose Cargo Transport):	**MIL-STD-810F, Method 514.5, Procedure II, Category 5.2**	
Shock (Transit Drop Test) :	**48** **MIL-STD-810F, Method 516.5, Procedure IV, 26 Drops**	Inches

OTHERS CHARACTERISTICS

CURVES

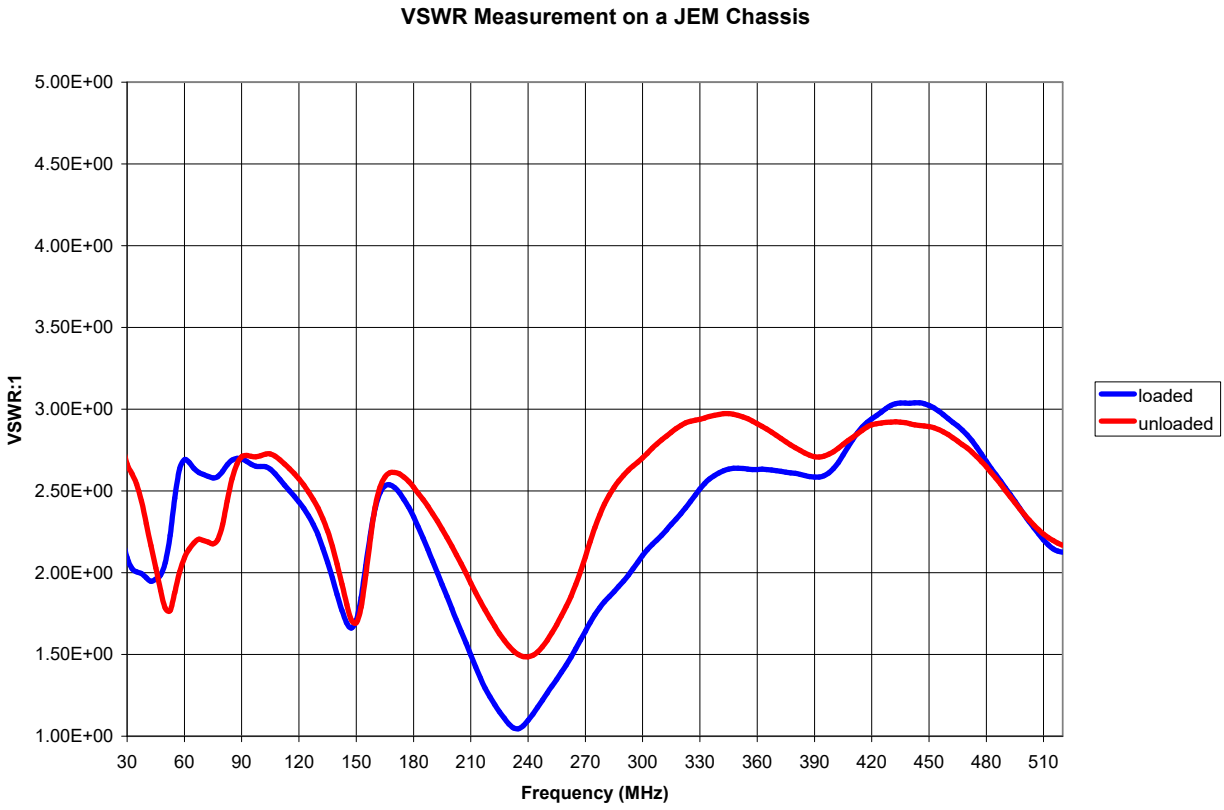


Figure 1: Typical VSWR unloaded measured 1m above the ground on the radio chassis

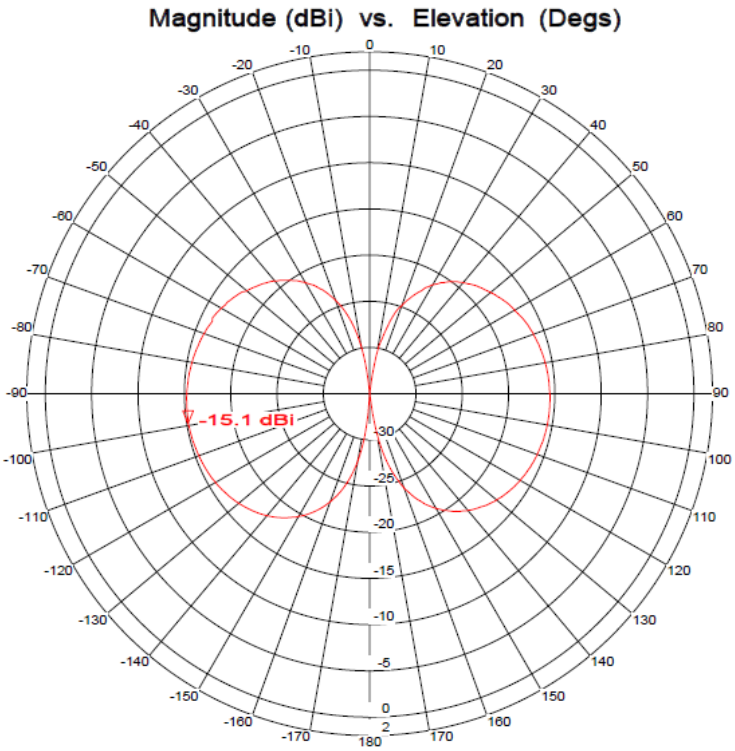


Fig 3: Elevation Pattern F = 45 MHz

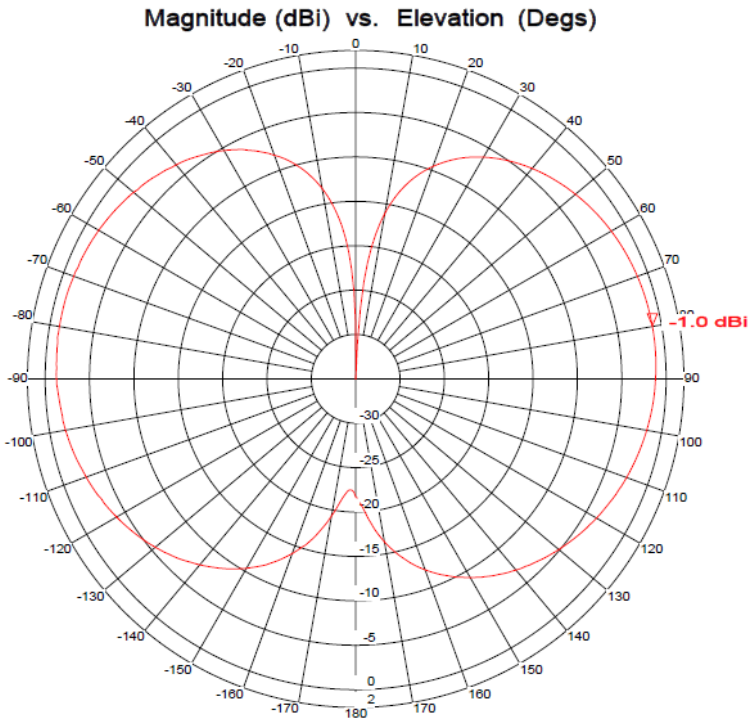


Fig 4: Elevation Pattern F = 75 MHz

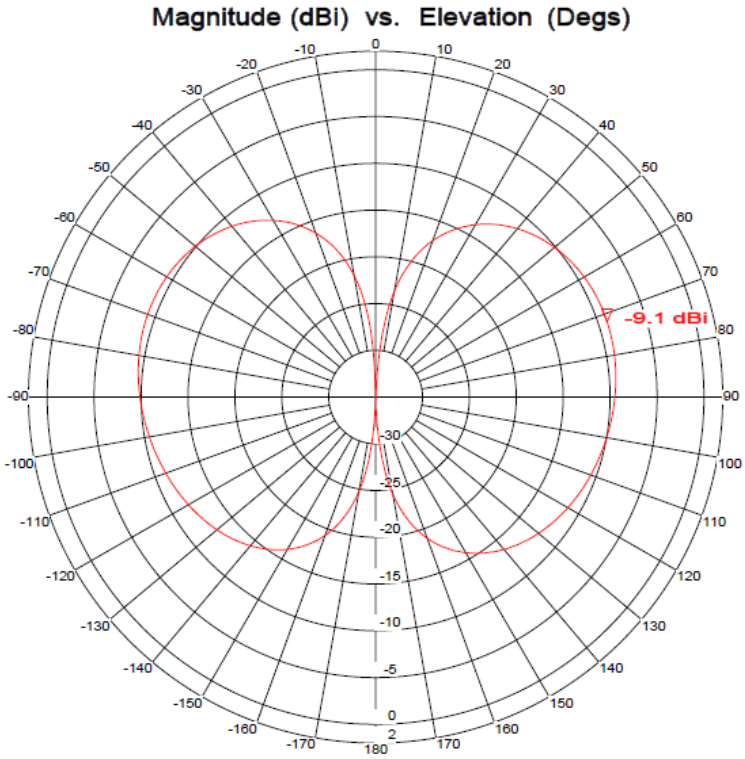


Fig 5: Elevation Pattern F = 100 MHz

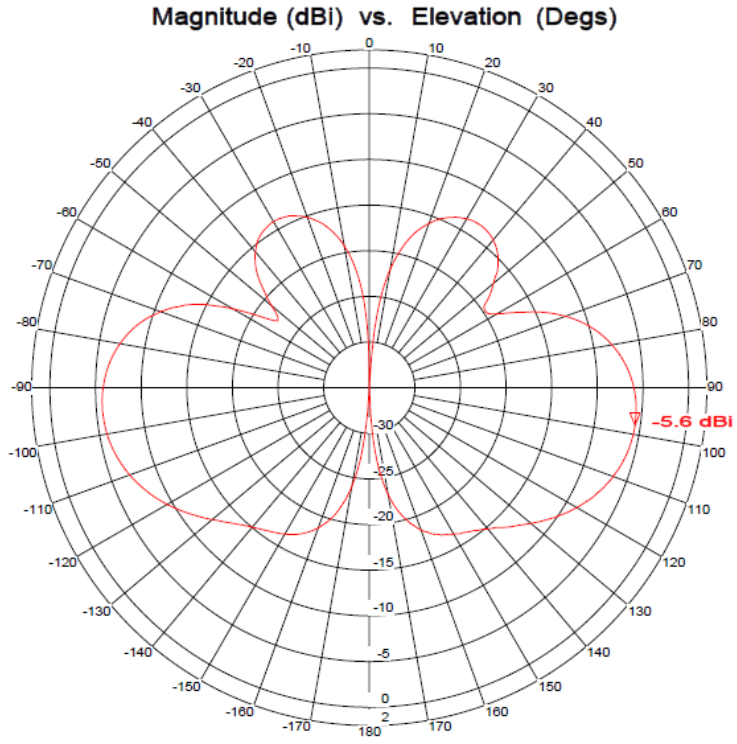


Fig 6: Elevation Pattern F = 200 MHz

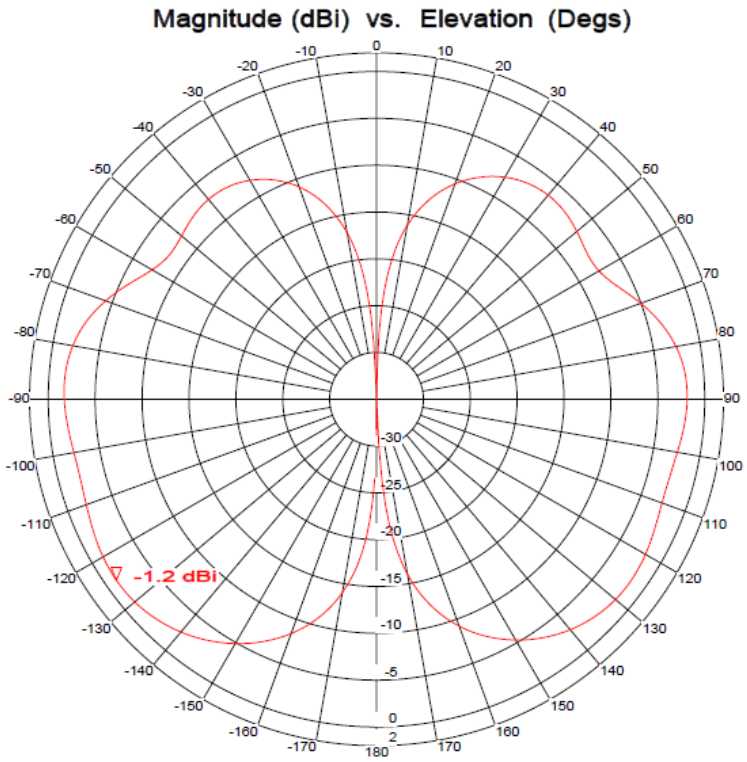


Fig 7: Elevation Pattern F = 300 MHz

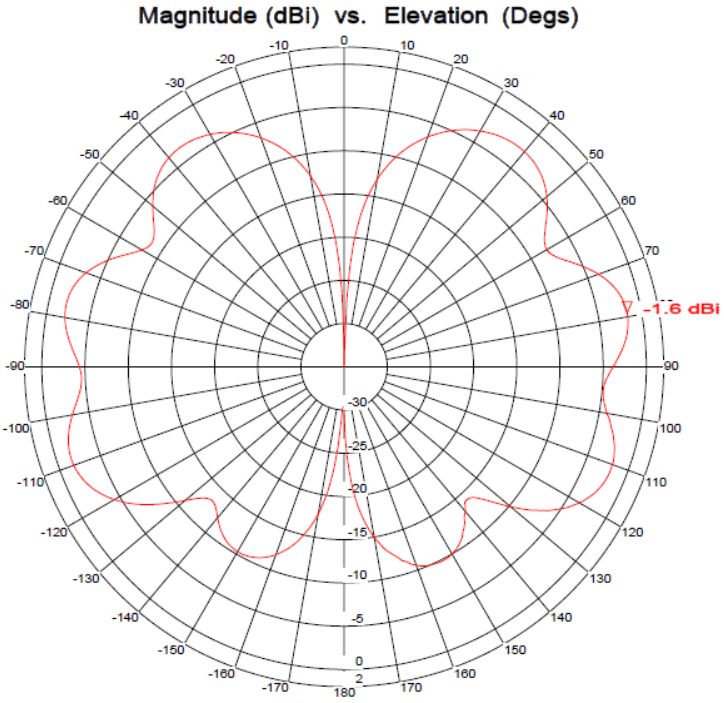


Fig 7: Elevation Pattern F = 400 MHz

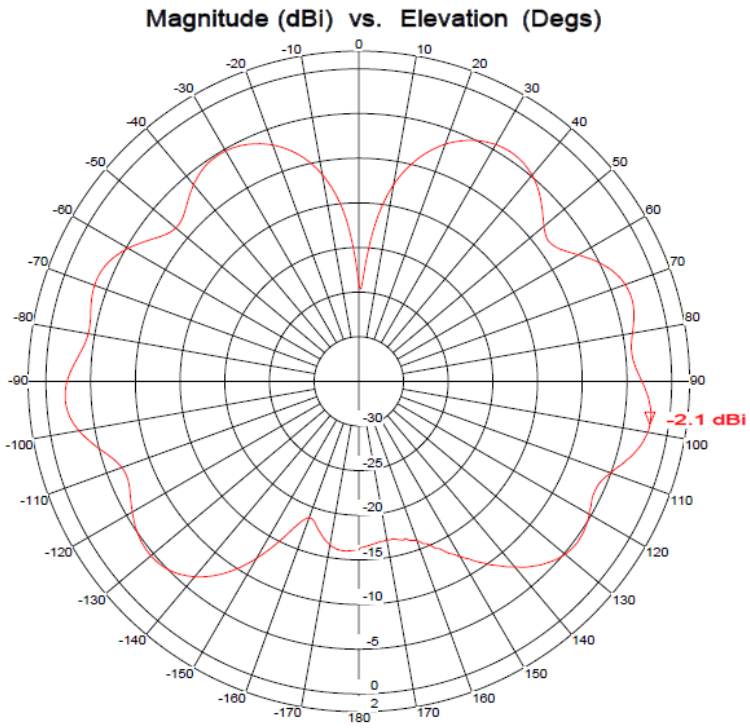


Fig 7: Elevation Pattern F = 500 MHz