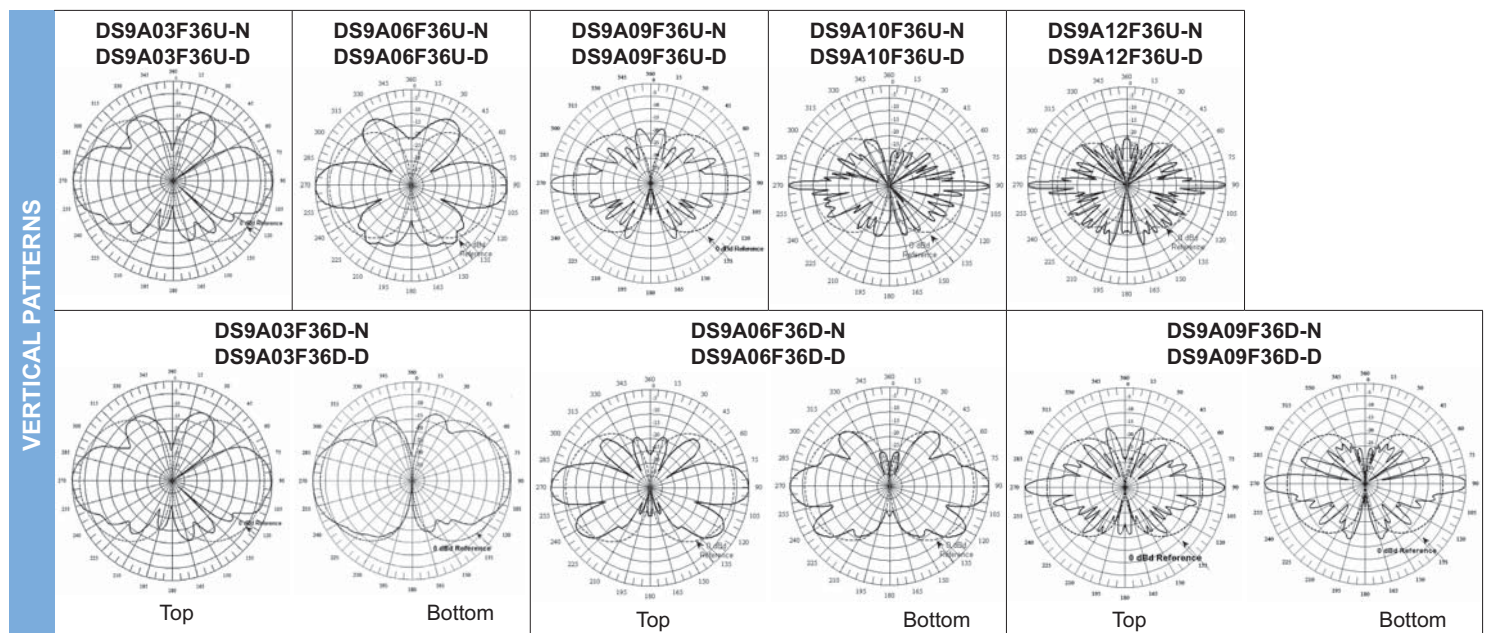
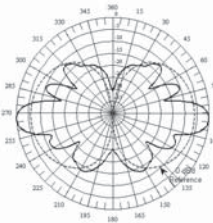
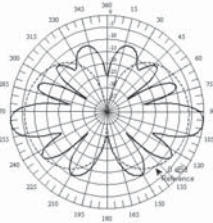
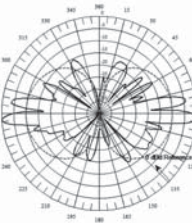


# 900 MHz Omni Antennas (890-960 MHz)

		890-960 MHz															
Model Number		DS9A03F36U-N	DS9A03F36U-D	DS9A06F36U-N	DS9A06F36U-D	DS9A09F36U-N	DS9A09F36U-D	DS9A10F36U-N	DS9A10F36U-D	DS9A12F36U-N	DS9A12F36U-D	DS9A03F36D-N	DS9A03F36D-D	DS9A06F36D-N	DS9A06F36D-D	DS9A09F36D-N	DS9A09F36D-D
Input Connector		N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN
Type		Single		Single		Single		Single		Single		Dual		Dual		Dual	
ELECTRICAL	Bandwidth, MHz	70		70		70		70		70		70		70		70	
	Power, Watts	500		500		500		500		500		350		350		350	
	Gain, dBd	3		6		9		10		12		3		6		9	
	Horizontal Beamwidth, degrees	360		360		360		360		360		360		360		360	
	Vertical Beamwidth, degrees	30		16		8		6		3		30		16		8	
	Beam Tilt, degrees	0		0		0		0		0		0		0		0	
	Isolation (minimum), dB	N/A		N/A		N/A		N/A		N/A		40		40		45	
MECHANICAL	Number of Connectors	1		1		1		1		1		2		2		2	
	Flat Plate Area, ft <sup>2</sup> (m <sup>2</sup> )	0.24 (0.02)		1.28 (0.12)		2.26 (0.21)		3.25 (0.3)		4.33 (0.4)		1.38 (0.13)		2.27 (0.21)		3.83 (0.36)	
	Lateral Windload Thrust, lbf(N)	11 (48)		48 (214)		85 (377)		122 (543)		163 (723)		31 (139)		85 (374)		144 (641)	
	Survival Wind Speed without ice, mph(kph) with 0.5" radial ice, mph(kph)	437 (703) 319 (513)		250 (402) 225 (362)		150 (241) 127 (204)		105 (169) 88 (142)		75 (121) 60 (97)		379 (610) 294 (473)		150 (241) 125 (201)		90 (145) 75 (121)	
	Mounting Hardware included	DSH2V3R		DSH2V3R		DSH3V3R		DSH3V3N		DSH3V3N		DSH2V3R		DSH3V3R		DSH3V3N	
DIMENSIONS	Length, ft(m)	2.9 (0.9)		6.7 (2)		11.4 (3.5)		16.3 (5)		21.8 (6.6)		8 (2.4)		11.4 (3.5)		19.2 (5.9)	
	Radome O.D., in(cm)	2 (5.1)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)	
	Mast O.D., in(cm)	2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)	
	Net Weight w/o bracket, lb(kg)	5.5 (2.5)		18 (8.2)		30 (13.6)		45 (20.4)		52 (23.6)		21 (9.5)		31 (14.1)		50 (22.7)	
	Shipping Weight, lb(kg)	9.6 (4.4)		28 (12.7)		60 (27.2)		75 (34)		82 (37.2)		51 (23.1)		61 (27.7)		80 (36.3)	



## 900 MHz Omni Antennas (890-960 MHz)

		890-960 MHz					
Model Number		DS9A06F36U3N	DS9A06F36U3D	DS9A06F36U6N	DS9A06F36U6D	DS9A10F36U3N	DS9A10F36U3D
Input Connector		N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN
Type		Beamtilt		Beamtilt		Beamtilt	
ELECTRICAL	Bandwidth, MHz	70		70		70	
	Power, Watts	500		500		500	
	Gain, dBd	6		6		10	
	Horizontal Beamwidth, degrees	360		360		360	
	Vertical Beamwidth, degrees	16		16		6	
	Beam Tilt, degrees	3 Down		6 Down		3 Down	
	Isolation (minimum), dB	N/A		N/A		N/A	
MECHANICAL	Number of Connectors	1		1		1	
	Flat Plate Area, ft²(m²)	1.28 (0.12)		1.28 (0.12)		2.5 (0.23)	
	Lateral Windload Thrust, lbf(N)	48 (214)		48 (214)		122 (543)	
	Survival Wind Speed without ice, mph(kph) with 0.5” radial ice, mph(kph)	250 (402) 225 (362)		250 (402) 225 (362)		105 (169) 88 (142)	
	Mounting Hardware included	DSH2V3R		DSH2V3R		DSH3V3N	
DIMENSIONS	Length, ft(m)	6.7 (2)		6.7 (2)		16.3 (5)	
	Radome O.D., in(cm)	3 (7.6)		3 (7.6)		3 (7.6)	
	Mast O.D., in(cm)	2.5 (6.4)		2.5 (6.4)		2.5 (6.4)	
	Net Weight w/o bracket, lb(kg)	18 (8.2)		18 (8.2)		45 (20.4)	
	Shipping Weight, lb(kg)	28 (12.7)		28 (12.7)		75 (34)	
VERTICAL PATTERNS	DS9A06F36U3N DS9A06F36U3D		DS9A06F36U6N DS9A06F36U6D		DS9A10F36U3N DS9A10F36U3D		
							

SC331-SF2LDF Collinear omni, 10 dBd, straight radome, low PIM, 450-460 MHz

- Rugged fiberglass radome
- 10 dBd gain, 10 MHz minimum bandwidth with 1.5:1 VSWR, low PIM design
- Designed to withstand severe environmental conditions
- Side mount kit recommended for offset mount

**Side mount kit recommended for offset mount.**

Sinclair Technologies' NEW SC331-L antenna line provides a powerful and economic alternative to our popular SC320-L Antenna. The SC331-L series provides identical electrical performance, and comparable mechanical performance to the SC320-L Series.

The new SC331-L Antenna is constructed in the same fashion as the SC320-L, replacing the tapered white radome with an attractive light blue straight radome.

The SC331-L is also high-performance low PIM collinear omni's which use industry-leading designs that offer high gain, excellent bandwidth and high reliability.

Sinclair's new SC331-L series of antennas have been specifically designed for UHF applications requiring rugged performance and superior electrical and mechanical specifications. This rugged fiberglass radome allows the withstanding of severe environmental conditions.



www.sinctech.com

Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1487 84 28 19	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com
Product Specification Sheet		SC331-SF2LDF	Issue: 1	Dated: 19-02-16
EPR 018739				Dated: 29-08-13
Customer Tech Manual 006373				

#### Electrical Specifications

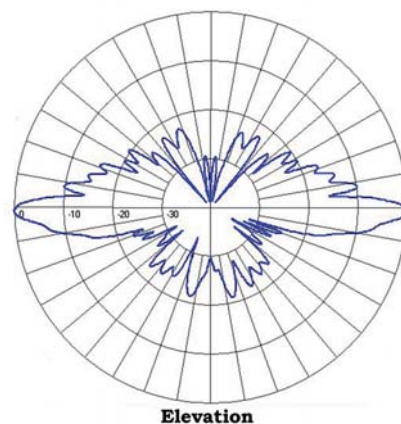
Frequency Range	MHz	450 to 460
Bandwidth	MHz	10
Connector		7/16 DIN-Female
Gain (nominal)	dBi (dBd)	12.1 (10)
VSWR (max)		1.5:1
Polarization		vertical
Impedance	$\Omega$	50
Pattern		Omni-directional
Vertical beamwidth (typ)	degrees	6
Average Power Input (max)	W	250
Passive intermod. (2x20W, 3rd ord.)	dBc	-150
Lightning protection		DC ground

#### Mechanical Specifications

Width	mm (in)	318 (12.5)
Depth	mm (in)	318 (12.5)
Length/ Height	mm (in)	6140 (241.75)
Base pipe diameter	mm (in)	73 (2.88)
Base pipe mounting length	mm (in)	508 (20)
Radome material		fiberglass (UV protected)
Weight	kg (lbs)	17.93 (39.5)
Weight iced (1/2" ice)	kg (lbs)	42.68 (94)
Actual shipping weight	kg (lbs)	33.6 (74)
Shipping dimensions	mm (in)	6756x152x152 (266x6x6)

#### Environmental Specifications

Temperature range	°C (°F)	-40 to +60 (-40 to +140)
Wind Loading Area (Flat Plate Equivalent)	m <sup>2</sup> (ft <sup>2</sup> )	0.29 (3.11)
Wind Loading Area (1/2" ice)	m <sup>2</sup> (ft <sup>2</sup> )	0.43 (4.66)
Rated wind velocity (no ice)	km/h (mph)	217 (135)
Rated wind velocity (1/2" radial ice)	km/h (mph)	185 (115)
Lateral thrust (100 mph No Ice)	N (lbs)	529.3 (119)
Torsional moment (100 mph No Ice)	Nm (ft-lbs)	178.2 (132)
Bending moment (100 mph No Ice)	Nm (ft-lbs)	1335.2 (989)
Tip deflection (100 mph No Ice)	degrees	5.9



Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
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<b>Telephone</b>	USA: 1 800 263 3275	International: +44 (0) 1487 84 28 19	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
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<b>E-mail</b>	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com
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Product Specification Sheet

EPR 018739

Customer Tech Manual 006373

SC331-SF2LDF

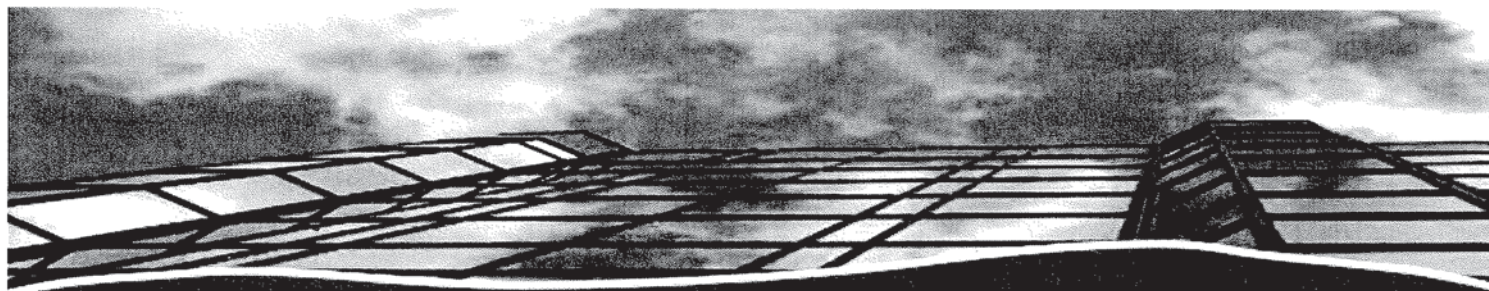
Issue: 1

Dated: 19-02-16

Dated: 29-08-13



# Kreco Antennas

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## Heavy Duty Shunt Fed Co-Axial Antennas

### Model CO-41H

By these antennas internally the entire external surfaces are at ground potential. The vertical radiator is aluminum pipe which extends down inside the skirt and inside the support pipe. Thus there is double pipe inside the skirt and down to the bottom end of the mounting pipe.

Vertical Radiator: 1" Pipe  
Mounting Pipe: 1 1/4" Pipe  
Support Pipe is Stainless Steel  
Skirt: 2 5/8" Tube  
Power Rating: 1 KW  
Unity Gain - Omni Directional  
Choice of UHF or type N F/M Connector  
The Lower End Of The Mounting Pipe,  
Pipe Is Part Of The Antenna

Frequency Range	Weight
30 - 50 MHz	40 lbs
50 - 100 MHz	30 lbs





## TrunkLine Antenna, Standard (FCC 101, Cat A) , Dual Polarized, 6 ft

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 24 GHz. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. Standard Performance antennas are economical solutions for systems where side lobe suppression is of less importance. These antennas are required for use in networks where there is a low interference potential. Antennas are available in 2 ft (0.6m) to 12 ft (3.7m) diameters. Antennas from 4ft up to 12 ft (3.7m) can be equipped with a moulded radome to reduce wind load and to protect the feed against the accumulation of ice and snow.



Antenna

### FEATURES / BENEFITS

- Field-proven reliability and long life
- Withstanding winds up to 200 km/h (125 mph), an optional sway bar is available for added assurance in case mistakes are made during installation
- A single-piece configuration and compact packaging to reduce transportation costs
- Frequencies ranging from 4 GHz to 15 GHz with support for two wideband frequency ranges (5.725-6.875 and 7.125-8.5 GHz) to reduce antenna requirements and simplify logistics

### Technical Features

#### GENERAL SPECIFICATIONS

Product Type		Point to point antennas
Profile		TrunkLine
Performance		Improved Performance
Polarization		Dual
Antenna Input		CPR137G
Reflector		1-part
Radome		Optional
Antenna color		White RAL 9010
Swaybar		1: (2.0 m x Ø60 mm)

#### ELECTRICAL SPECIFICATIONS

Frequency	GHz	5.725 - 7.125
3dB beamwidth	degrees	1.7
Low Band Gain	dBi	37.9
Mid Band Gain	dBi	38.9
High Band Gain	dBi	39.8
F/B Ratio	dB	55
XPD	dB	30
IPI	dB	35
Max VSWR / R L	VSWR / dB	1.15 ( 23.1 ) @5.925 - 7.125 GHz 1.5 ( 14 ) @5.725 - 5.85 GHz
Regulatory Compliance		FCC Category A

#### MECHANICAL SPECIFICATIONS

Diameter	ft (m)	6 (1.8)
Elevation Adjustment	degrees	± 5
Azimuth Adjustment	degrees	± 5
Polarization Adjustment	degrees	± 5
Mounting Pipe Diameter minimum	mm (in)	114 (4.5)
Mounting Pipe Diameter maximum	mm (in)	114 (4.5)
Approximate Weight	kg (lb)	65 (141)
Survival Windspeed	km/h (mph)	200 (125)
Operational Windspeed	km/h (mph)	190 (118)

#### STRUCTURE

Radome Material		Fiberglass
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#### FURTHER ACCESSORIES

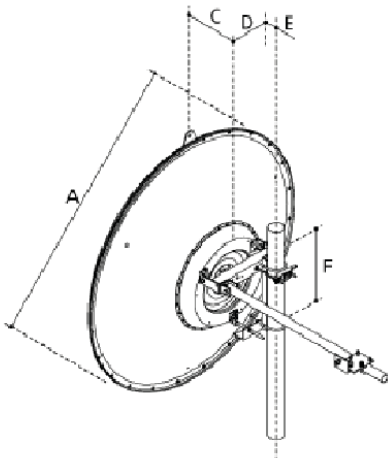
optional Swaybar		1: SMA-SK-60-2000A (2.0 m x Ø60mm)
Further Accessories		SMA-SKO-UNIVERSAL-L : Universal sway bar fixation kit



TrunkLine Antenna, Standard (FCC 101, Cat A) , Dual Polarized, 6 ft

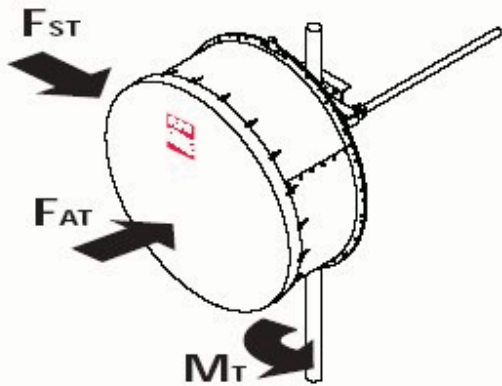
Mount Outline

Dimension A	mm (in)	2000 (79)
Dimension B	mm (in)	()
Dimension C	mm (in)	364 (14.3)
Dimension D for 219mm (8.5in) Pipe	mm (in)	not applicable
Dimension D for 114mm (4.5in) Pipe	mm (in)	175 (6.9)
Dimension D for 89mm (3.5in) Pipe	mm (in)	not applicable
Dimension D for 51mm (2.0in) Pipe	mm (in)	not applicable
Dimension E	mm (in)	283 (11.1)
Dimension F	mm (in)	590 (23.2)
Dimension G	mm (in)	not applicable
Dimension H	mm (in)	not applicable



Wind Load

FST Side force max. @ survival wind speed	N (lb)	2910 (651)
FAT Axial force max. @ survival wind speed	N (lb)	9900 (2217)
MT Torque maximum @ survival wind speed	Nm (lb ft)	3055 (2270)



External Document Links

Complete Antenna installation  
RPE (IQ-Link format)  
RPE (PDF format)  
RPE (Pathloss format)

Only available in North America

Notes

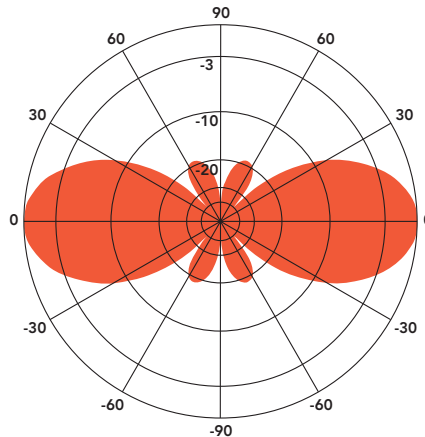
## ANT150F2

### FIBERGLASS COLLINEAR ANTENNA 2.5 dBd

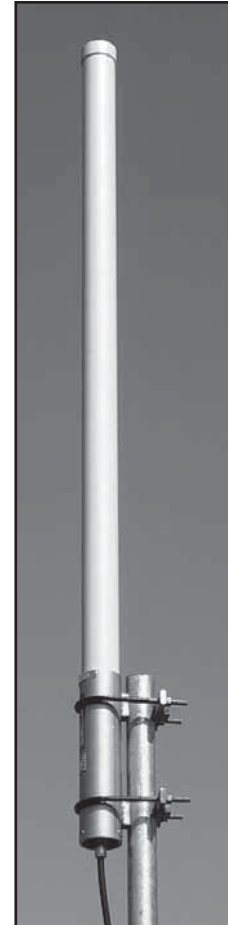
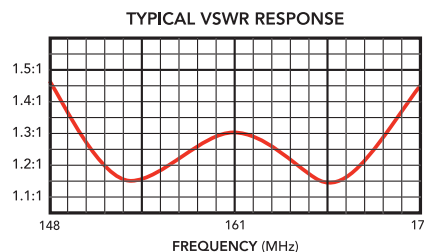
The Telewave ANT150F2 is an extremely rugged collinear antenna, with moderate gain and wide vertical beamwidth. This compact antenna produces 2.5 dBd gain, and is designed for operation in all environmental conditions. The antenna is constructed with brass and copper elements, with a path to DC ground for lightning impulse protection.

All junctions are fully soldered to prevent RF intermodulation, and each antenna is completely protected within a rugged, high-tech radome to ensure survivability in the worst environments. The "Cool Blue" radome provides maximum protection from corrosive gases, ultraviolet radiation, icing, salt spray, acid rain, and wind blown abrasives.

The ANT150F2 includes the ANTC485 dual clamp set for mounting to a 1.5" to 3" O.D. support pipe, and a 24" removable RG-213 N-Male jumper.



ANT150F2 156 MHz  
Vertical Plane  
Gain = 2.55 dBd



#### SPECIFICATIONS

Frequency (continuous)	148-174 MHz	Dimensions (L x base diam.) in.	60 x 2.75
Gain	2.5 dBd	Tower weight (antenna + clamps)	12 lb.
Power rating (typ.)	500 watts	Shipping weight	16 lb.
Impedance	50 ohms	Wind rating / with 0.5" ice	200 / 150 MPH
VSWR	1.5:1 or less	Maximum exposed area	1.3 ft. <sup>2</sup>
Pattern	Omnidirectional	Lateral thrust at 100 MPH	50 lb.
Vertical beamwidth	38°	Bending moment at top clamp	67 ft. lb.
Termination	Recessed N Female 7-16 DIN-F opt.	(100 MPH, 40 PSF flat plate equiv.)	