



TIL-TEK Antennae



Solutions that Work



Affordable Quality



ISO 9001:2000



Reliability



Service



TIL-TEK Antennae Inc.
P.O. Box 550
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Canada
K0G 1J0

May 31, 2007



Quality Management System (QMS):

As a leading supplier of communications solutions to a global marketplace, TIL-TEK is committed to achieving the highest possible quality in all of its products and services. Both our Manufacturing and Research & Development facilities in Canada are ISO 9001:2000 compliant and have been certified since 1996.

Quality is one of the cornerstones of customer value along with innovation, cost and service/support. All product leaves the plant having gone through a rigorous process with a final verification stamp indicating conformance to that process. TIL-TEK is an ISO 9001:2000 registered company. This worldwide standard covers our entire operation of the company from order entry to shipping, from product design to production. Quality will never be compromised either over the long term or for short term convenience.

TIL-TEK's Quality Management System (QMS) provides the guidance and controls for an effective process management system. By implementing and maintaining the QMS, we will consistently provide product that meets customer and applicable regulatory requirements.

Quality Policy:

TIL-TEK will strive to provide our customer with products and services that ensure a high level of customer loyalty and satisfaction. We are committed to a Quality Management System that supports and encourages a culture of customer focus, teamwork, continuous improvement and standards of excellence.

Quality Objectives:

Management has ensured its quality objectives are established and communicated within the company. The Quality Objectives are measurable and consistent with TIL-TEK's Quality Policy and include the requirements needed for planning product realization.

TIL-TEK is committed to:

- * Customer loyalty and satisfaction.
- * Product quality, delivery and service.
- * Continuous improvement of the Quality Management System.
- * Teamwork and standards of excellence.

2005-12-22

Warranty

The specifications on our product data sheets are for reference purposes only and may change at any time without prior notice. For exact specifications, the factory or an authorized representative should be contacted.

TIL-TEK products are warranted against defects in material and workmanship under normal use for a period of three years from the date of shipment from the factory. Authorization must be obtained from TIL-TEK prior to returning a product for warranty service and the product must be returned to TIL-TEK with all transportation charges prepaid. See RMA policy for details.

Warranty repair or replacement without charge will be made only after inspection at the factory shows a defect in material or workmanship. TIL-TEK will pay the return transportation charges, but all other expenses including duty, taxes, storage and all other transaction fees shall be paid by the customer. The warranty period shall not be extended beyond its original term with respect to any part or parts repaired or replaced by TIL-TEK.

TIL-TEK is in no event liable for consequential damages or other costs of any nature resulting from the use of the products it manufactures. TIL-TEK is not liable for replacement from the use of any products damaged by lightning. TIL-TEK is not liable for delays in or inability to fulfill contractual obligations when the causes thereof are beyond the reasonable control of TIL-TEK. TIL-TEK neither assumes nor authorizes any person to assume for it, any obligation or liability other than as herein expressly stated.

This limited warranty is in lieu of all other warranties, either expressed or implied.

2005-12-22

Return Material Authorization (RMA) Policy

TIL-TEK products are warranted against defects in material and workmanship under normal use for a period of three years from the date of shipment from the factory. A RMA number must be obtained from TIL-TEK prior to returning a product for warranty service. The product must be returned to TIL-TEK with all transportation charges prepaid.

Defective Antenna: Provided an antenna is found to be defective under the terms of the warranty, TIL-TEK will repair, replace and return the antenna at no charge to the customer.

No Fault Found: If, after evaluation, the antenna is found to still meet TIL-TEK's electrical and mechanical specifications:

- 1) The customer shall incur an evaluation charge of 25% of the list price or a minimum fee of \$80.00 CDN.
- 2) The customer is responsible to incur the return freight. The antenna will be returned via freight collect.

Note: If an advance replacement is sent and the returned antenna is found to have no fault, the customer will be invoiced for the new replacement and will incur the freight to have the antenna returned to them.

Products



TA-700 Series	698-806 MHz
TA-800 Series	806-960 MHz
TA-900 Series	901-940 MHz
TA-1400 Series	1425-1535 MHz
TA-1800 Series	1850-1990 MHz
TA-1880 Series	1880-1930 MHz
TA-2100 Series	2150-2700 MHz
TA-2300 Series	2300-2500 MHz
TA-2400 Series	2400-2483 MHz
TA-2500 Series	2485-2690 MHz
TA-3400 Series	3400-3700 MHz
TA-4900 Series	4940-4990 MHz
TA-5200 Series	5250-5875 MHz
TA-5400 Series	5470-5875 MHz
TA-5700 Series	5725-5875 MHz

2006-01-31

TA-807 Dual Band Directional Panel

824-896 / 1850-1990 MHz



The TA-807 is a dual band vertically or horizontally polarized directional panel antenna. The antenna consists of two dipole arrays and a cross band coupler enclosed in a UV stabilized ASA radome. The antenna is designed for severe weather conditions and is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 824-896 / 1850-1990 MHz
Gain: 7.5 +/- 0.5 dBd @ 824-896 MHz
 16.5 +/- 0.5 dBi @ 1850-1990 MHz
VSWR: 1.5:1 max.
Front to Back Ratio: 20 dB min. / 28 dB min.
Polarization: Vertical or Horizontal
Power Rating: 100 Watts
H-Plane Beamwidth: 60° @ 824-896 MHz
 21° @ 1850-1990 MHz
E-Plane Beamwidth: 64° @ 824-896 MHz
 22° @ 1850-1990 MHz
Cross Pol. Discrimination: 15 dB min.
Impedance: 50 ohms nominal
Termination: 7/16 DIN female

Mechanical Specifications

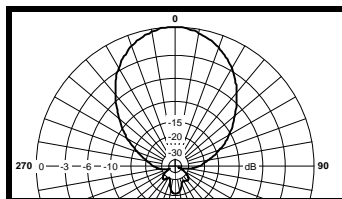
Length: 18 in. (457 mm)
Width: 18 in. (457 mm)
Depth: 4.5 in. (114 mm)
Weight (incl. Clamps): 12 lb. (5.4 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 140 lb. (63.6 kg)
Mechanical Tilt: 0 - 15 degrees
Mounting (O.D.): 1 - 3.5 in. (25.4 - 88.9 mm)

Materials

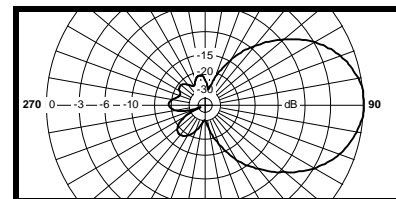
Radiating Elements: Plated Copper on PCB
Reflector: Irridited aluminum
Radome: Gray UV stabilized ASA
Clamps: Aluminum and HDG steel

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

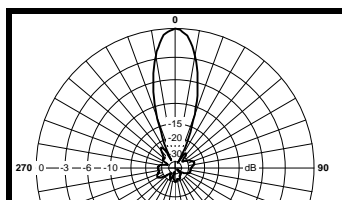
H-Plane @ 824-896 MHz



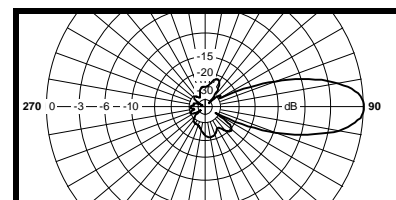
E-Plane @ 824-896 MHz



H-Plane @ 1850-1990 MHz

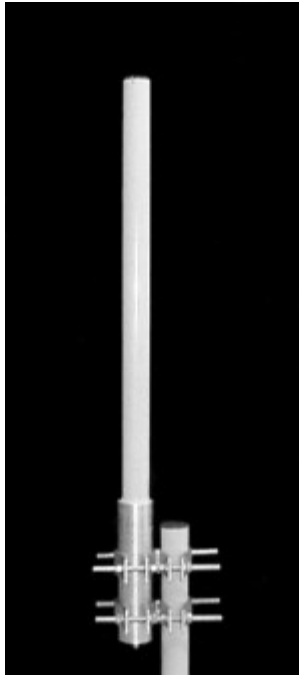


E-Plane @ 1850-1990 MHz



TA-853 Dual Band Omnidirectional

824 - 896 / 1850 - 1990 MHz



The TA-853 is a vertically polarized 2.5 dBd / 7.5 dBi dual band omnidirectional antenna. The antenna consists of two dipole arrays and a cross band coupler enclosed in a UV stabilized fiberglass radome. The antenna is designed for severe weather conditions and is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 824 - 896 / 1850 - 1990 MHz
Gain: 2.5 dBd (824-896 MHz)
 7.5 dBi (1850-1990 MHz)
VSWR: 1.5:1 max.
Polarization: Vertical
Power Rating: 65 Watts
H-Plane Beamwidth: 360 degrees
E-Plane Beamwidth: 35 degrees (824-896 MHz)
 16 degrees (1850-1990 MHz)
Cross Pol. Discrimination: 15 dB min.
Impedance: 50 ohms nominal
Termination: N female

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

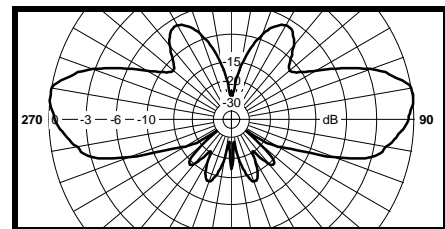
Mechanical Specifications

Length:
Radiating Section: 42 in. (1067 mm)
Base Section: 12 in. (305 mm)
Total: 54 in. (1372 mm)
Diameter: 2.25 in. (57 mm)
Weight (Incl. Clamps): 17 lb. (7.7 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 35 lb. (16 kg)
Mounting (O.D.): 1.75 - 4.0 in. (44.5 - 102 mm)

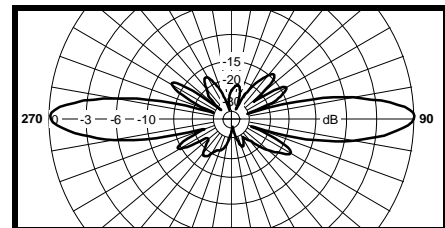
Materials

Radiating Elements: Copper
Radome: Gray UV stabilized fiberglass
Clamps: EDZ steel

E-Plane 824-896 MHz

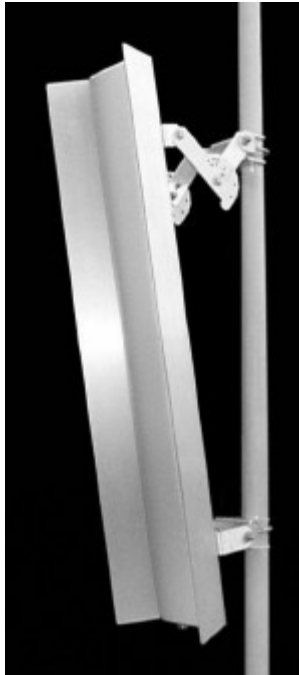


1850-1990 MHz



TA-1806-16-33 Sector

1850-1990 MHz



The TA-1806-16-33 is a vertically polarized 33 degree sectoral antenna. The antenna consists of a printed broadband dipole array enclosed in an aluminum cavity with a UV stabilized ASA radome for superior weatherability. The use of 16 radiating elements allows for precise pattern control including upper sidelobe reduction and null fill. The antenna is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 18.25 dBi
VSWR: 1.43:1 max.
Front to Back Ratio: 25 dB min.
Polarization: Vertical
Power Rating: 250 Watts
H-Plane Beamwidth: 33 +/- 2.5 degrees
E-Plane Beamwidth: 7.8 +/- 1 degrees
Electrical Downtilt: 2, 5 degrees
Cross Pol. Discrimination: 20 dB min.
Impedance: 50 ohms nominal
3rd Order I.M. (2x20W): -147 dBc
Termination: 7/16 DIN female (N optional)

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

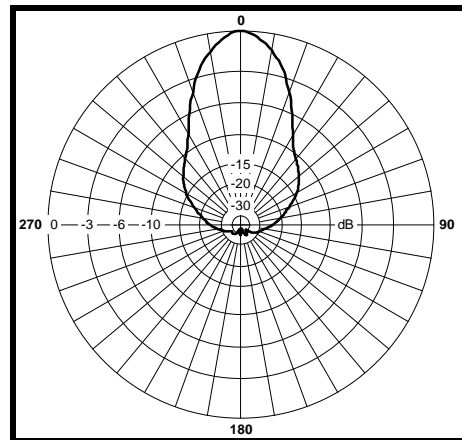
Mechanical Specifications

Length: 50 in. (1270 mm)
Width: 12.3 in. (312 mm)
Depth: 5.2 in. (133 mm)
Weight (incl. Clamps): 21 lb. (9.5 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 356 lb. (162 kg)
Mechanical Tilt: 0 - 15° (in 1° increments)
Mounting (O.D.): 1.0 - 3.5 in. (25.4 - 89 mm)

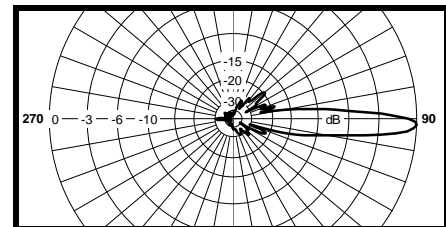
Materials

Radiating Elements: Plated copper on PCB
Reflector: Irridated aluminum
Radome: Gray UV stabilized ASA
Clamps: Aluminum and HDG steel

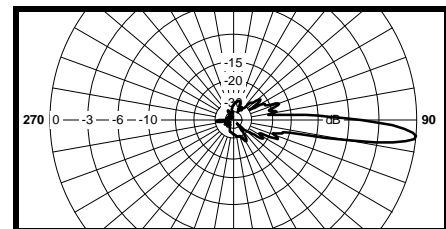
H-Plane



E-Plane



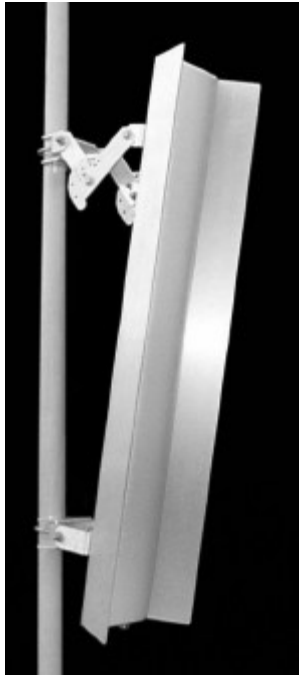
T2



T5

TA-1806-16-45 Sector

1850-1990 MHz



The TA-1806-16-45 is a vertically polarized 45 degree sectoral antenna. The antenna consists of a printed broadband dipole array enclosed in an aluminum cavity with a UV stabilized ASA radome for superior weatherability. The use of 16 radiating elements allows for precise pattern control including upper sidelobe reduction and null fill. The antenna is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 17 dBi
VSWR: 1.43:1 max.
Front to Back Ratio: 25 dB min.
Polarization: Vertical
Power Rating: 250 Watts
H-Plane Beamwidth: 45 +/- 3 degrees
E-Plane Beamwidth: 7.8 +/- 1 degrees
Electrical Downtilt: 2, 5 degrees
Cross Pol. Discrimination: 20 dB min.
Impedance: 50 ohms nominal
3rd Order I.M. (2x20W): -147 dBc
Termination: 7/16 DIN female (N optional)

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

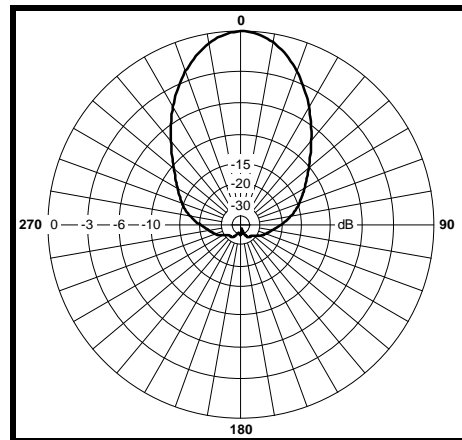
Mechanical Specifications

Length: 50 in. (1270 mm)
Width: 9.7 in. (246 mm)
Depth: 3.75 in. (95 mm)
Weight (incl. Clamps): 19 lb. (8.6 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 280 lb. (127 kg)
Mechanical Tilt: 0 - 15° (in 1° increments)
Mounting (O.D.): 1.0 - 3.5 in. (25.4 - 89 mm)

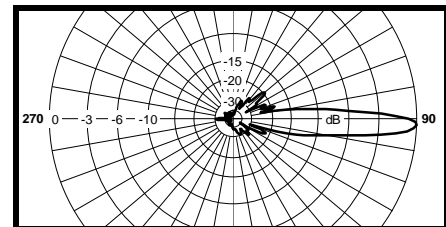
Materials

Radiating Elements: Plated copper on PCB
Reflector: Irridated aluminum
Radome: Gray UV stabilized ASA
Clamps: Aluminum and HDG steel

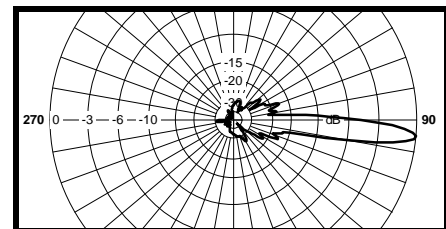
H-Plane



E-Plane



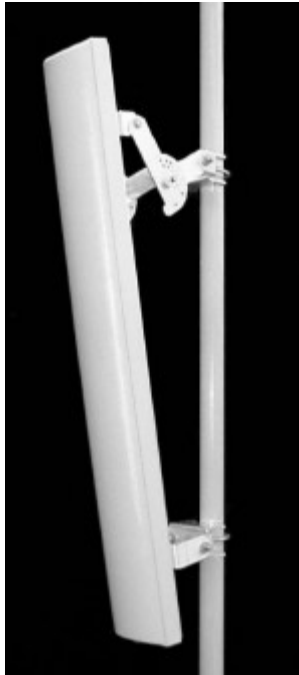
T2



T5

TA-1806-16-62 Sector

1850-1990 MHz



The TA-1806-16-62 is a vertically polarized 62 degree sectoral antenna. The antenna consists of a printed broadband dipole array enclosed in an aluminum cavity with a UV stabilized ASA radome for superior weatherability. The use of 16 radiating elements allows for precise pattern control including upper sidelobe reduction and null fill. The antenna is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 16.5 dBi
VSWR: 1.43:1 max.
Front to Back Ratio: 25 dB min.
Polarization: Vertical
Power Rating: 250 Watts
H-Plane Beamwidth: 62 +/- 3 degrees
E-Plane Beamwidth: 7.8 +/- 1 degrees
Electrical Downtilt: 2, 5 degrees
Cross Pol. Discrimination: 20 dB min.
Impedance: 50 ohms nominal
3rd Order I.M. (2x20W): -147 dBc
Termination: 7/16 DIN female (N optional)

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

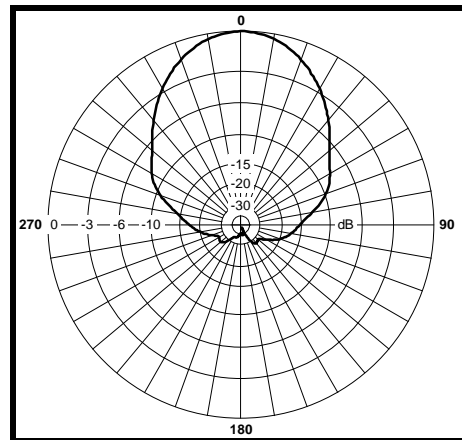
Mechanical Specifications

Length: 50 in. (1270 mm)
Width: 6.5 in. (165 mm)
Depth: 3.75 in. (95 mm)
Weight (incl. Clamps): 14 lb. (6.4 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 141 lb. (64.1 kg)
Mechanical Tilt: 0 - 15° (in 1° increments)
Mounting (O.D.): 1.0 - 3.5 in. (25.4 - 89 mm)

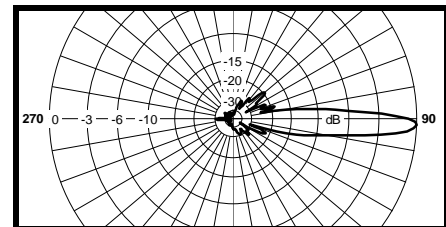
Materials

Radiating Elements: Plated copper on PCB
Reflector: Irridated aluminum
Radome: Gray UV stabilized ASA
Clamps: Aluminum and HDG steel

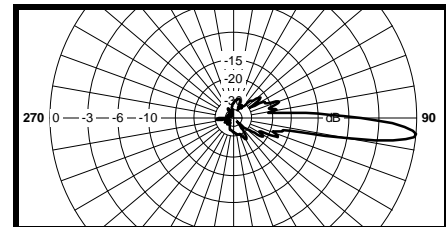
H-Plane



E-Plane



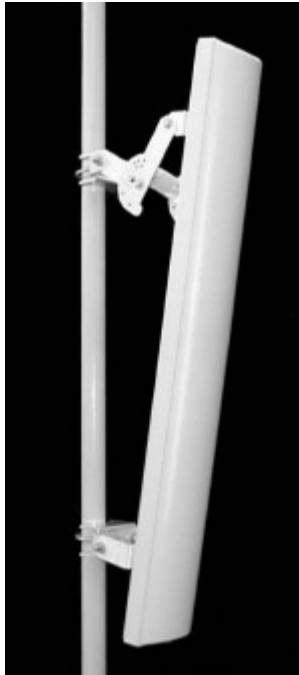
T2



T5

TA-1806-16-90 Sector

1850-1990 MHz



The TA-1806-16-90 is a vertically polarized 90 degree sectoral antenna. The antenna consists of a printed broadband dipole array enclosed in an aluminum cavity with a UV stabilized ASA radome for superior weatherability. The use of 16 radiating elements allows for precise pattern control including upper sidelobe reduction and null fill. The antenna is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 15 dBi
VSWR: 1.43:1 max.
Front to Back Ratio: 25 dB min.
Polarization: Vertical
Power Rating: 250 Watts
H-Plane Beamwidth: 90 +/- 3 degrees
E-Plane Beamwidth: 7.8 +/- 1 degrees
Electrical Downtilt: 2, 5 degrees
Cross Pol. Discrimination: 20 dB min.
Impedance: 50 ohms nominal
3rd Order I.M. (2x20W): -147 dBc
Termination: 7/16 DIN female (N optional)

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

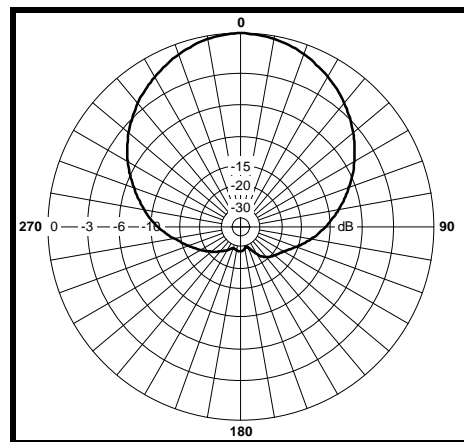
Mechanical Specifications

Length: 50 in. (1270 mm)
Width: 6.5 in. (165 mm)
Depth: 3.8 in. (96.5 mm)
Weight (incl. Clamps): 14 lb. (6.4 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 141 lb. (64.1 kg)
Mechanical Tilt: 0 - 15° (in 1° increments)
Mounting (O.D.): 1.0 - 3.5 in. (25.4 - 89 mm)

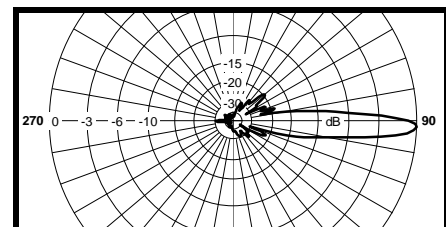
Materials

Radiating Elements: Plated copper on PCB
Reflector: Irridated aluminum
Radome: Gray UV stabilized ASA
Clamps: Aluminum and HDG steel

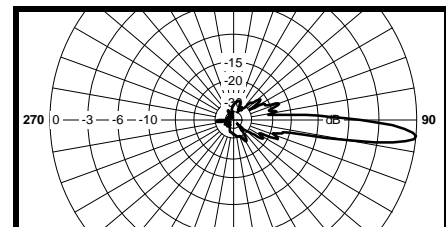
H-Plane



E-Plane

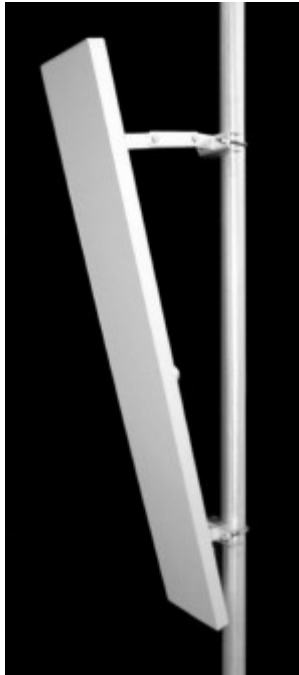


T2



T5

TA-1807-8-60 Dual Polarized Sector 1850-1990 MHz



The TA-1807-8-60 is a dual slant polarized 60 degree sectoral antenna. The antenna is intended for use where multiple antennas may not be practical. It consists of a broadband patch array on an aluminum base with a UV stabilized ASA radome for superior weatherability. The antenna is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 17 dBi
VSWR: 1.5:1 max.
Front to Back Ratio: 25 dB
Polarization: +/- 45 degrees (slant)
Power Rating: 250 Watts
Azimuth Beamwidth: 60 degrees
Elevation Beamwidth: 7.5 degrees
Cross Pol. Discrimination: 15 dB min.
Electrical Downtilt: 0, 2, 5 degrees
Port to Port Isolation: 30 dB min.
3rd Order I.M. (2x20W): -147 dBc
Impedance: 50 ohms nominal
Termination: 7/16 DIN female

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

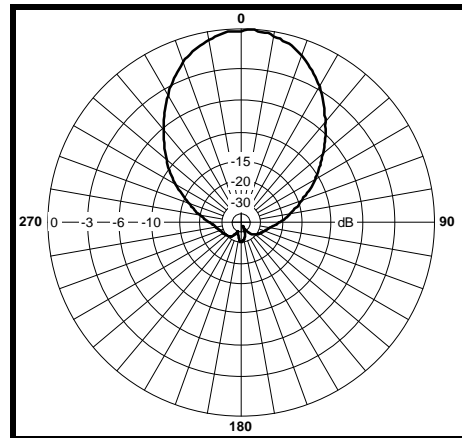
Mechanical Specifications

Length: 43 in. (1092 mm)
Width: 6 in. (152.4 mm)
Depth: 1.85 in. (46.9 mm)
Weight (incl. Clamps): 10 lb. (4.5 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 117 lb (53.1 kg)
Mechanical Tilt: 0 - 15 degrees
Mounting (O.D.): 1.90 - 4.5 in. (48 - 114 mm)

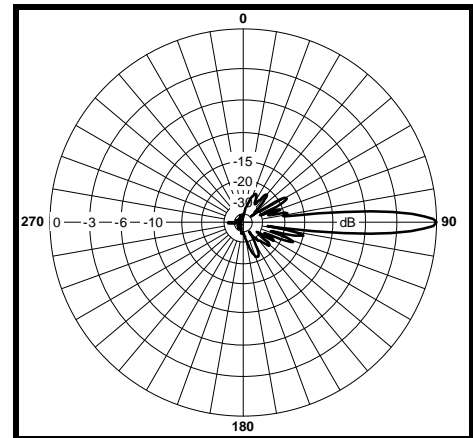
Materials

Radiating Elements: Plated copper on PCB
Reflector: Irridated aluminum
Radome: Gray UV stabilized ASA
Clamps: Aluminum and steel

Azimuth



Elevation



TA-1809 Directional Panel

1850-1990 MHz



The TA-1809 consists of a printed broadband dipole array enclosed in an aluminum base with a UV stabilized ASA radome for superior weatherability. It was designed for applications such as PCS repeater sites which require medium gain and low sidelobes. It can be mounted for either vertical or horizontal polarization. The antenna is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 18 dBi
VSWR: 1.5:1 max
Front to Back Ratio: 30 dB min.
Polarization: Vertical or Horizontal
Power Rating: 250 Watts
H-Plane Beamwidth: 21 +/- 1 degrees
E-Plane Beamwidth: 22 +/- 1 degrees
Cross Pol. Discrimination: 20 dB min.
Impedance: 50 ohms nominal
3rd Order I.M. (2x20W): -147 dBc
Termination: 7/16 DIN female (N-optional)

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

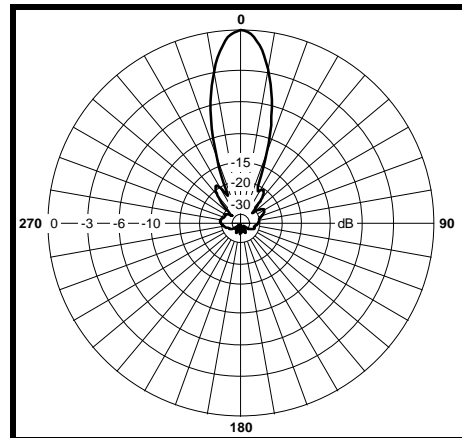
Mechanical Specifications

Length: 18 in. (457 mm)
Width: 18 in. (457 mm)
Depth: 2.25 in. (57 mm)
Weight (incl. Clamps): 11 lb. (5 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 140 lb. (63.6 kg)
Mechanical Tilt: 0 - 15 degrees (optional)
Mounting (O.D.): 1.0 - 3.5 in. (25.4 - 89 mm)

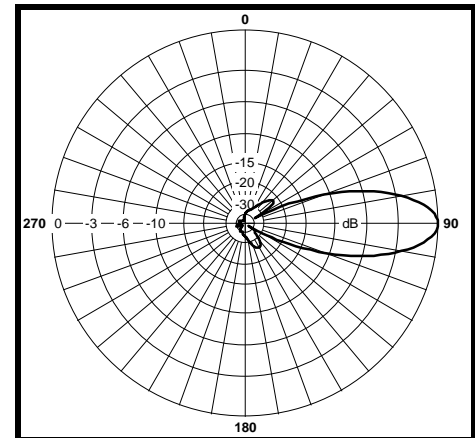
Materials

Radiating Elements: Plated Copper on PCB
Reflector: Irridited aluminum
Radome: Gray UV stabilized ASA
Clamps: Aluminum and HDG steel

H-Plane

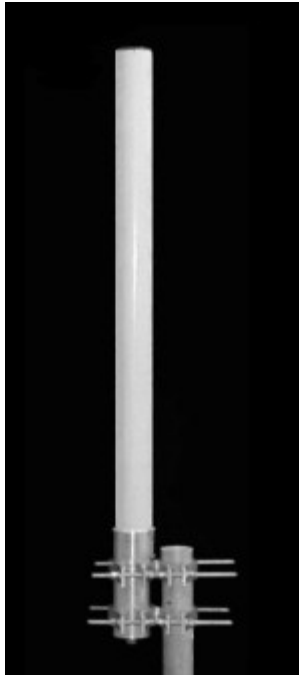


E-Plane



TA-1850 Omnidirectional

1850-1990 MHz



The TA-1850 is a 10 dBi omnidirectional antenna consisting of center fed collinear dipoles in a UV stabilized fiberglass radome. The antenna is designed for severe weather conditions and is at DC ground to aid in lightning protection.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 10 dBi
VSWR: 1.5:1 max.
Polarization: Vertical
Power Rating: 200 Watts
H-Plane Beamwidth: 360 degrees
E-Plane Beamwidth: 8 degrees
Electrical Downtilt: 0, 2, 4 degrees
Cross Pol. Discrimination: 20 dB min.
Impedance: 50 ohms nominal
Termination: N female (7/16 DIN optional)

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

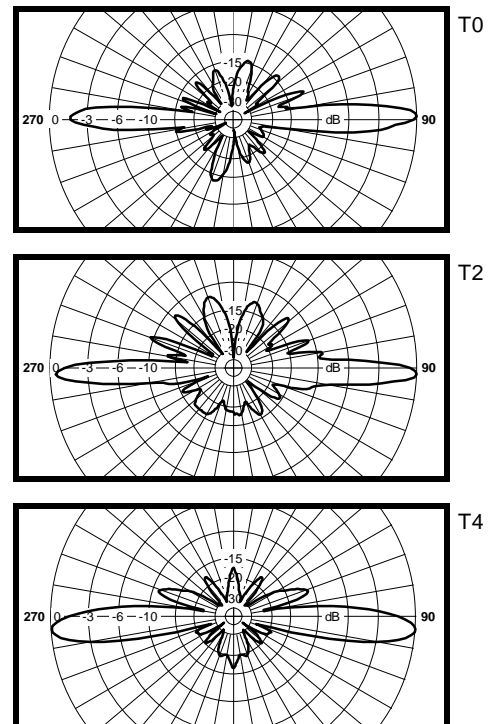
Mechanical Specifications

Length: 57 in. (1448 mm)
Diameter: 2.25 in. (57 mm)
Weight (Incl. Clamps): 17 lb. (7.7 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 37 lb. (16.8 kg)
Mounting (O.D.): 1.75 - 4.0 in. (44.5 - 102 mm)

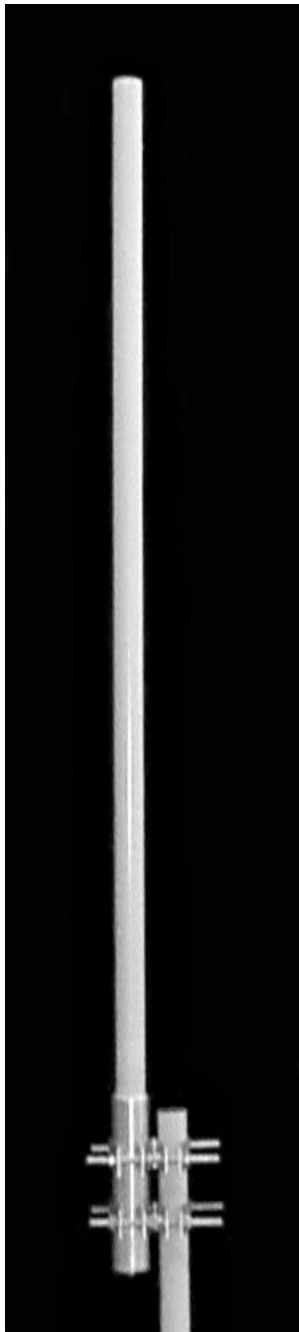
Materials

Radiating Elements: Copper
Radome: Gray UV stabilized fiberglass
Clamps: HDG steel

E-Plane



TA-1850-2 Omnidirectional 1850-1990 MHz



The TA-1850-2 is a 12 dBi omnidirectional antenna consisting of center fed collinear dipoles in a UV stabilized fiberglass radome. The antenna is designed for severe weather conditions and is at DC ground to aid in lightning protection. Due to the very narrow elevation beamwidth, TIL-TEK recommends that this antenna be used on stable platforms and where other options are not practical.

Electrical Specifications

Frequency Range: 1850-1990 MHz
Gain: 12 dBi
VSWR: 1.5:1 max.
Polarization: Vertical
Power Rating: 200 Watts
H-Plane Beamwidth: 360 degrees
E-Plane Beamwidth: 4 degrees
Electrical Downtilt: 0, 2 degrees
Cross Pol. Discrimination: 20 dB min.
Impedance: 50 ohms nominal
Termination: N female (7/16 DIN optional)

Typical mid band values. (For details , contact factory)
 Specifications subject to change without notice

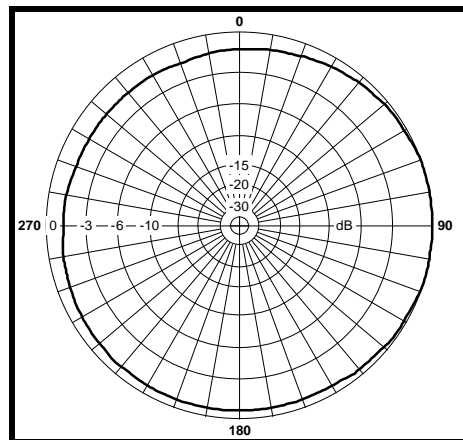
Mechanical Specifications

Length: 100.5 in. (2553 mm)
Diameter: 2.25 in. (57 mm)
Weight (Incl. Clamps): 20 lb. (9.1 kg)
Rated Wind Velocity: 125 mph (200 km/h)
Hor. Thrust at rated wind: 65 lb. (29.5 kg)
Mounting (O.D.): 1.75 - 4.0 in. (44.5 - 102 mm)

Materials

Radiating Elements: Copper
Radome: Gray UV stabilized fiberglass
Clamps: HDG steel

H-Plane



E-Plane

