

The TCI Model 532 antenna is specifically designed to serve medium range circuits from 350 to 2600 kilometers (230 to 1600 miles) and will provide secondary coverage for short (0 kilometer) and long range (over 2600 kilometers) communications. The Model 532 antenna utilizes the Clamped Mode* concept which extends the radiating aperture, thus increasing the broadside gain and decreasing the azimuthal beamwidth. (Upon request, your TCI applications engineer can provide additional information on the Clamped Mode concept.) Because of the narrower azimuthal beamwidth, a broader elevation pattern can be tolerated and still maintain acceptable gain. Consequently the broad elevation patterns permit the long range communications as well as medium range circuits. At the lower frequencies, where high angle radiation is necessary for short range communications, the Model 532 provides over 4 dBi gain directly overhead. At the higher frequencies where low angle radiation is necessary for long range communications, the gain at 10° is over 13 dBi.

The Model 532 antenna requires only a single tower for support, thereby decreasing installation costs, maintenance costs, and the required land area. No fiberglass assemblies are used in the catenary and support structure. Alumoweld wire, broken where necessary with ceramic fail-safe insulators, is used instead to provide long service life. Because of these cost saving features, the Model 532 will prove to be the most economical antenna to install, use and maintain.

- Optimum performance for medium range circuits
- Useful performance for short and long range circuits
- Full 2–30 MHz coverage
- Single tower support for reduced installation and maintenance costs
- High power gain

Five optional low cut-off frequencies are available in the 532 family. TCI's applications engineering staff can help you establish exactly the lowest frequency required. This analysis frequency results in choosing a significantly smaller and less expensive antenna, and concurrent savings on land and installation costs.

Specifications

PolarizationHorizontal

| SWR2:1 maximum | | | | | |
|------------------------------|--|--|--|--|--|
| Environmental Performance | Designed in accordance with EIA Specification RS-222C for loading of 225 km/h (140 mi/h) wind, no ice, 12 mm (1/2") radial ice Optional: 160 km/h (100 mi/h), no ice 96 km/h (60 mi/h) wind, 12 mm (1/2") radial ice | | | | |

Front Support PoleCustomer supplied, 7.62 m (25 ft.), Class 2

Gain & Pattern Data

| Freq. | Lower Half Power Point | Nominal Take-off Angle | Upper Half Power Point | Front- to-Back Ratio | Gain Relative to Isotropic | Azimuthal Beamwidth between Half-Power Points |
|-------|---------------------------------|------------------------------|---------------------------------|----------------------------|-------------------------------------|---|
| 2.0 | 19° | 40° | 73° | 9.3 dB | 9.3 dBi | 80° |
| 2.88 | 19° | 38° | 70° | 15.7 dB | 10.7 dBi | 70° |
| 5.56 | 18° | 39° | 67° | 14.2 dB | 11.2 dBi | 61° |
| 23.05 | 12° | 24° | 37° | 10.5 dB | 13.5 dBi | 55° |
| 28.46 | 10° | 20° | 32° | 18.7 dB | 13.7 dBi | 55° |
| 30.0 | 10° | 20° | 31° | 13.4 dB | 13.4 dBi | 55° |

Size

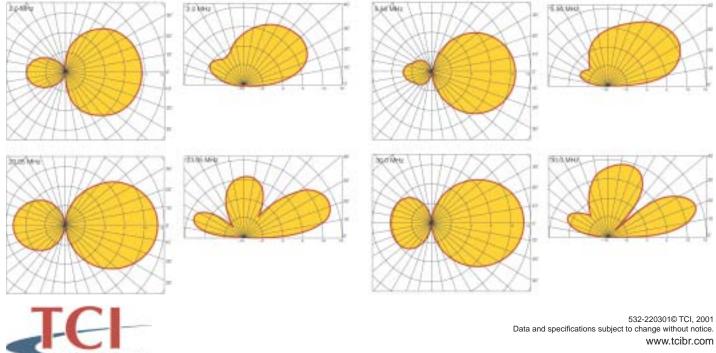
| | JIZE | | | | | | | |
|---|--------|-------------|--------|------|--------|------|-------|------|
| | Model | Frequency | Height | | Length | | Width | |
| | Number | Range | ft. | mtr. | ft. | mtr. | ft. | mtr. |
| Г | 532-1 | 2–30 MHz | 225 | 69 | 500 | 152 | 660 | 201 |
| | 532-2 | 3.8–30 MHz | 121 | 38 | 300 | 91 | 360 | 110 |
| | 532-3 | 5.75–30 MHz | 81 | 25 | 192 | 59 | 240 | 73 |
| | 532-4 | 3–30 MHz | 149 | 45 | 357 | 109 | 450 | 137 |
| L | 532-5 | 4.7–30 MHz | 101 | 30 | 250 | 76 | 295 | 90 |

Power & Impedance Data

| i ower & impedance Data | | | | | | | |
|-------------------------|---------|----------------|-------------------|--|--|--|--|
| Model | Input | Power Handling | | | | | |
| Number Impedance | | Capability | Connector | | | | |
| 532-N-02 | 50 ohms | Receive | Type N Female | | | | |
| 532-N-03 | 50 ohms | 10 kW Avg / | 1-5/8" EIA Female | | | | |
| | | 50 kW PEP | | | | | |
| 532-N-04 | 50 ohms | 25 kW Avg / | 3-1/8" EIA Female | | | | |
| | | 50 kW PEP | | | | | |
| 532-N-06 | 50 ohms | 1 kW Avg / | Type N Female | | | | |
| | | 2 kW PEP | | | | | |



Elevation and Azimuth Patterns (Azimuth pattern at elevation angle of beam maximum) gain in dBi



- A Dielectric Computy 47300 Kato Road, Fremont, California 94538, USA • 1 800 824-8074 (USA) • Tel 1 510 687-6100 • Fax 1 510 687-6101