



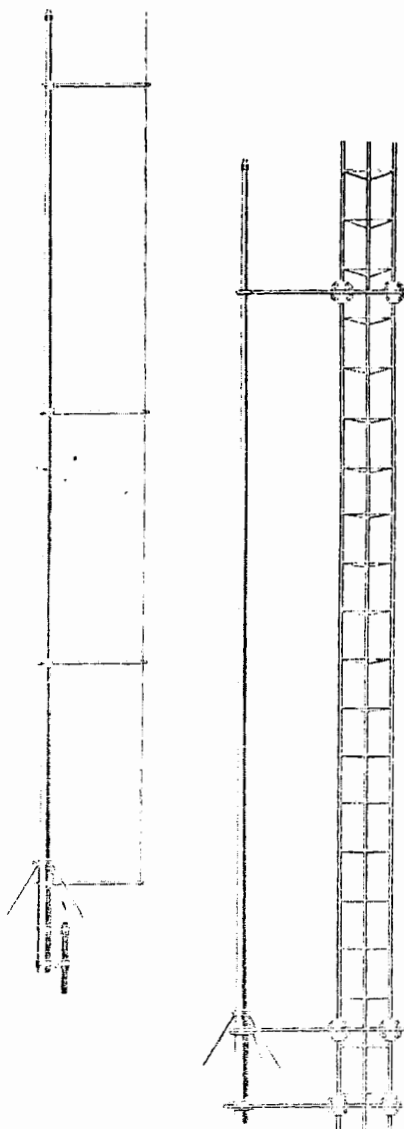
BROAD BAND BASE STATION ANTENNAS

HIGH GAIN, DIRECTIONAL OR OMNIDIRECTIONAL

TOP OR SIDE MOUNTED

136-174 mc

The wide bandpass characteristics of these versatile antennas make them ideal for multiplex systems; gain is achieved with transmit and receive frequencies up to 9 mc apart.



FEATURES

VERSATILE — The antennas may be used with or without the reflector for directional or omnidirectional coverage. Install the reflecting rod at a later date, if desired, for up to 6.75 dB gain over a half-wave dipole. They may also be side-mounted, with or without the directional reflector, for selected area coverage for up to 8.7 dB gain.

RUGGED CONSTRUCTION — The antennas are ruggedly constructed for severe weather conditions. No appreciable distortion of the radiation pattern (because of bending) in high winds; survival is guaranteed in winds up to 125 mph. The use of corrosion resistant materials throughout eliminates gradual signal degradation and bothersome maintenance problems.

EFFICIENT DESIGN — The combination of copper radiating elements with low-loss dielectric provides maximum radiation efficiency. The radome is vented for effective moisture drainage. The radome also provides complete static protection against ionized rain or dust particles which adversely affect exposed antennas. DC grounding protects radio equipment from lightning damage.

LOW VSWR — Voltage Standing Wave Ratio is maintained within 1.5:1 within the specified bandwidth in all models. This insures a high percentage of available power actually transmitted.

LOW WIND LOADING — Because of the tapered construction of these antennas, a minimum cross-sectional area is presented to high velocity wind pressure. This results in less tower loading and lower bending moments.

ICE RESISTANT — The fiberglass radome is much more resistant to ice build-up than a metallic mast. The tapered design permits enough flexing for the radome to crack off built-up ice.

THE TDD6090A AND TDD6100A antennas are designed for Common Carrier users. Transmission lines are available which provide minimum attenuation between the transmitter and the antenna.

ACCESSORIES — A full selection of recommended prematched adaptors, connectors and transmission lines is available to complete the antenna installation.

RATED PER EIA STANDARD RS-329

GUARANTEED PERFORMANCE SPECIFICATIONS

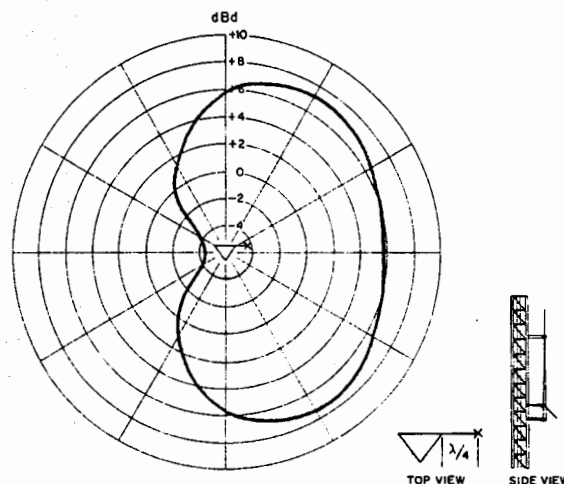
(HORIZONTAL ANTENNA PATTERNS)

TDD6070A antennas may either be top mounted or side mounted. A different radiation pattern is obtained in each case. The side mounting of a base station antenna is often used to provide more effective coverage of a particular service area. The patterns depend upon the antenna, type and size of tower, and the position of the antenna in relation to the tower. These side-mounted antenna patterns are made in relation to an 18"-24" face tower. The triangles, crosses, and circles in the center of each pattern show the position and direction of the tower, antenna, and reflector that provides each pattern.

ALL PATTERNS TYPICAL FOR 150-159 MC

△ TOWER × ANTENNA ○ REFLECTOR

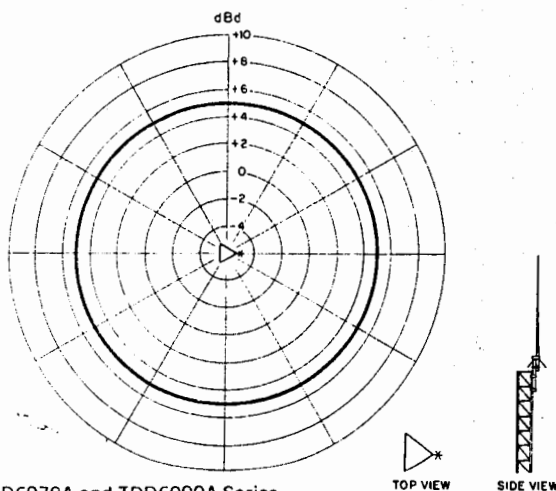
Side Mounted



TDD6070A and TDD6090A Series

PATTERN 3.

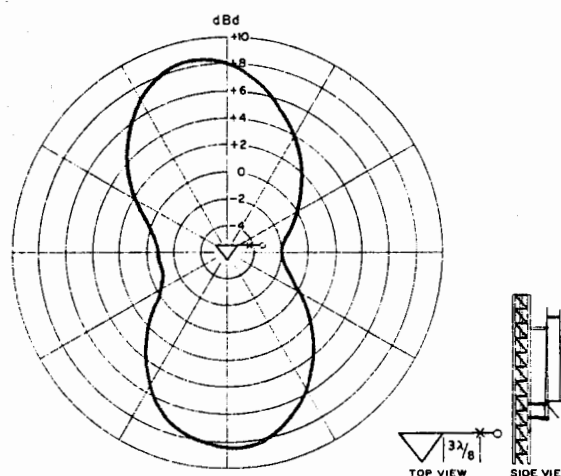
Top Mounted



TDD6070A and TDD6090A Series

PATTERN 1.

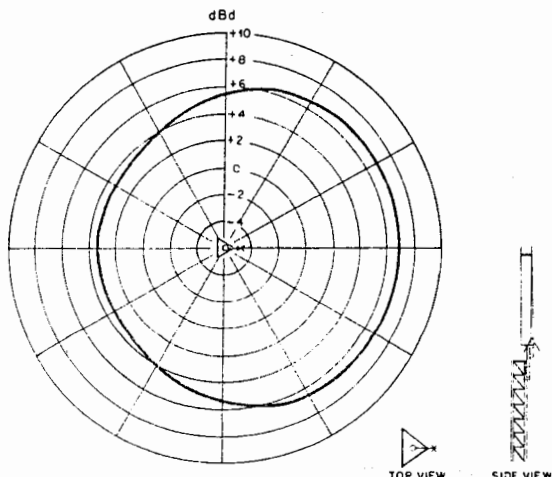
Side Mounted with Reflector



TDD6080A and TDD6100A Series

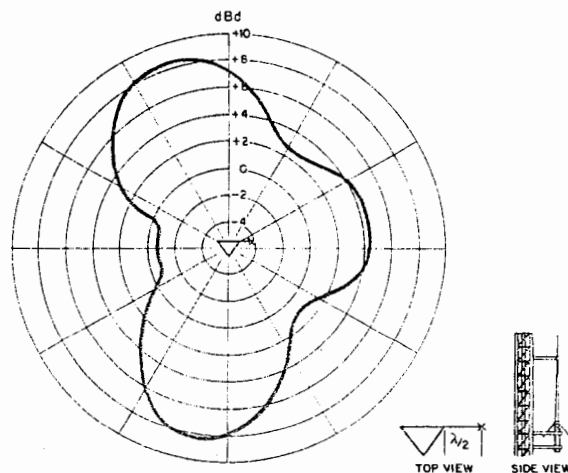
PATTERN 4.

Top Mounted with Reflector



TDD6080A and TDD6100A Series

Side Mounted



TDD6070A and TDD6090A Series

GUARANTEED PERFORMANCE SPECIFICATIONS (ELECTRICAL)

RATED PER EIA STANDARD RS-329

MODEL COMPLEMENT AND GAIN TABLE

ANTENNA MODEL NO.*	FREQ. IN MC	GAIN (in dBd.)**				
		PATTERN 1	PATTERN 2	PATTERN 3	PATTERN 4	PATTERN 5
TDD6071A	136-143	4.8		7.0		7.8
TDD6072A	142-151	4.8		7.0		7.8
TDD6073A	150-159	5.25		7.5		8.3
TDD6074A	157-166	5.25		7.5		8.3
TDD6075A	165-174	5.25		7.5		8.3
TDD6081A	136-143		6.3		8.2	
TDD6082A	142-151		6.3		8.2	
TDD6083A	150-159		6.75		8.7	
TDD6084A	157-166		6.75		8.7	
TDD6085A	165-174		6.75		8.7	
TDD6090A†	150-159	5.25		7.5		8.3
TDD6100A‡	150-159		6.75		8.7	

*All models include mounting clamp kit.

†These antennas are specifically designed for IMTS (Improved Mobile Telephone Systems) applications.

**Gain in decibels above a half-wave dipole. Gain figure given is at the pattern maximum in the horizontal plane.

IMPEDANCE
..... 50 ohms nominal

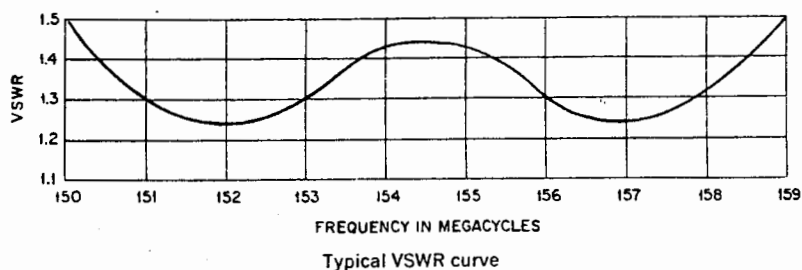
POWER RATING
..... 500 watts continuous duty

VSWR MAX. IN BAND 1.5:1

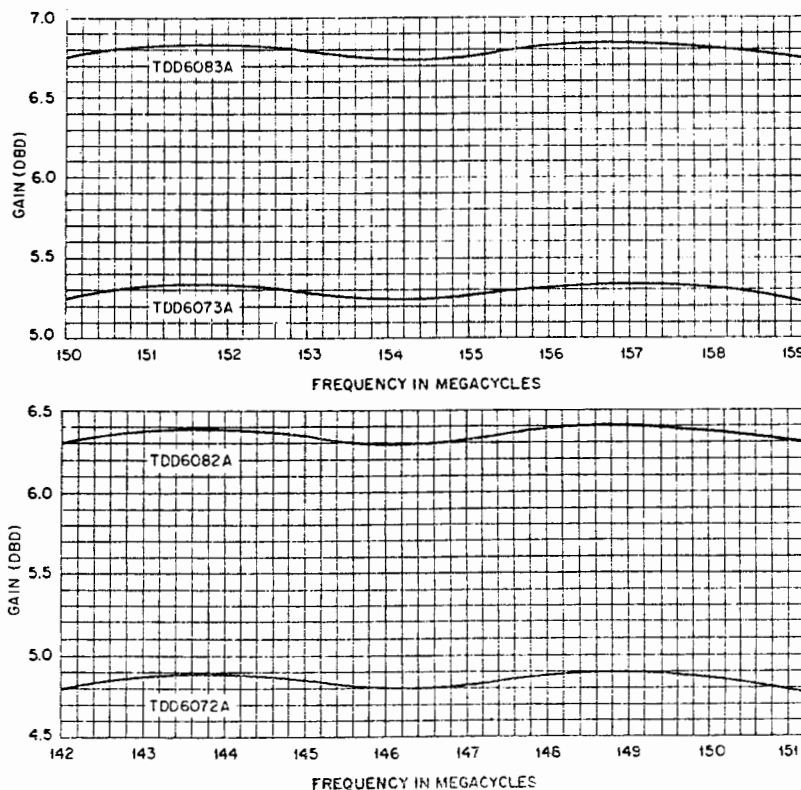
LIGHTNING PROTECTION
..... D.C. ground

TERMINATION
..... UHF female; however
TDD6090A and TDD-
6100A antennas have a
type N female termina-
tion.

VSWR ACROSS ANTENNA BAND



GAIN ACROSS ANTENNA BAND



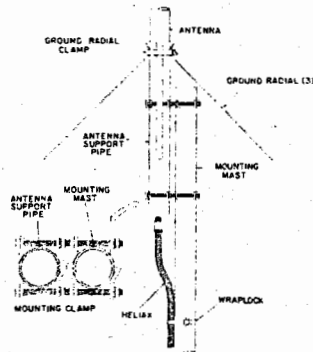
GUARANTEED PERFORMANCE SPECIFICATIONS

(MECHANICAL)

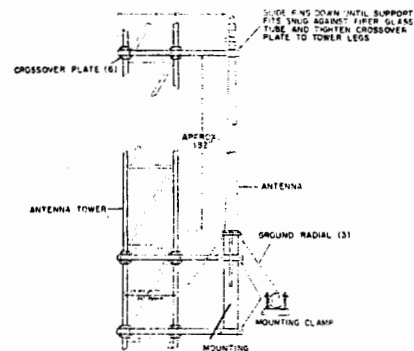
RATED PER EIA STANDARD RS-329

Length (Max.)	22 ft.	Survival Wind Rating	
Mounting	1"-2 3/4" O.D. Pipe	w/ 1/2" Radial ice	100 MPH
Side Mount Kit .. mounts antenna 18"-36" from tower		w/o/ice	125 MPH
Net Weight	23 lbs.	Operable Wind Rating	60 MPH for 1/2 dB degradation 100 MPH for 3 dB degradation
Shipping Weight	56 lbs.	Materials	Fiberglass Radome Copper Elements Aluminum Ground Radials

MOUNTING DETAILS

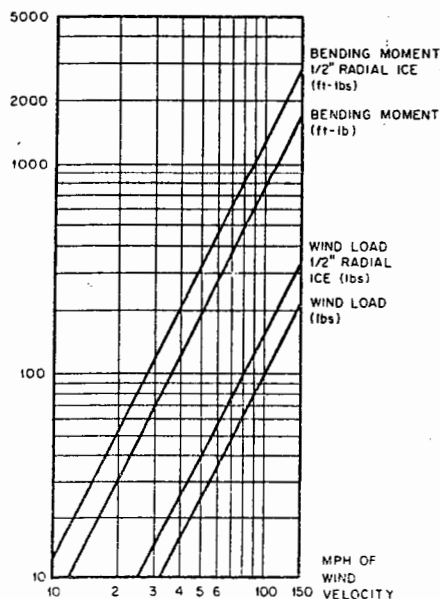


TDN6017B Top Mount Clamp
Comes with all antennas.

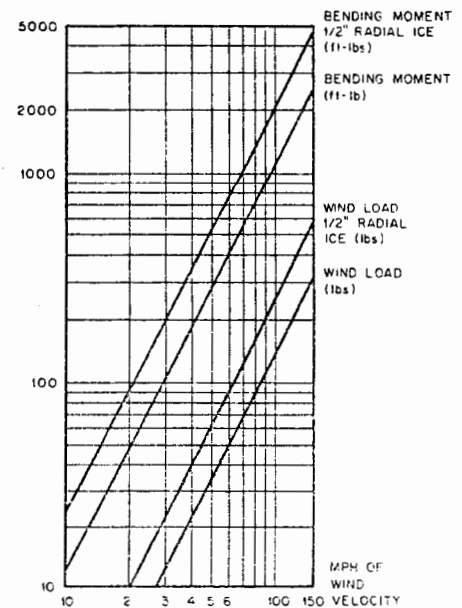


TDN6056A Side Mount Kit
Must be ordered in addition to basic antenna for side mounting.

WIND LOADING AND BENDING MOMENT



Antennas without reflector



Antennas with reflector

Specifications subject to change without notice

MOTOROLA COMMUNICATIONS AND ELECTRONICS, INC.