9 dBd HD omni antenna 420 - 470 MHz, low PIM

DESCRIPTION

- The 422x Series omni antenna is designed for demanding applications where a durable and high performance colinear is required.
- The centre fed dipole design and feed network gives a stable radiation pattern across a wide bandwidth, and allows tilted beam designs to be effectively employed without large pattern distortions.
- High quality materials and manufacturing techniques are employed to ensure that the antenna has excellent intermodulation performance & wide bandwidth characteristics for multi-channel trunked radio communication systems.
- The antenna has been designed to withstand lightning strike.
- Former Skymasts brand product.

SPECIFICATIONS

Electrical	
Model	422x.09-445-Txx
Frequency	420 - 470 MHz
Max. Input Power	300 W
Omni Deviation	< ± 1 dB
Polarisation	Vertical
Peak Instantaneous Power (PIP)	25 kW
3 dB Beamwidth, E-Plane	8° ±1°
3 dB Beamwidth, H-Plane	Omnidirectional
Impedance	50 Ω
Gain	8.7 dBd (10.9 dBi)
VSWR	< 1.5:1
Passive Intermodulation	-153 dBc (3rd Order, 2 x Tx @ 43 dBm) (PIM value not guaranteed for N connector version)
Lightning Protection	Lightning current handling capability : 200 kA According to EN 62305-1 (Test pulse 10/350 µs)
Antistatic Protection	All metal parts DC-grounded (Connector shows a DC-short)

Mechanical	
Connection(s)	7/16 DIN(f), N(f) or 4.3-10(f)
Materials	Antenna Base : Aluminium Shroud : GRP tube 53 mm dia.
Mounting Section	Al. tube 63.5 mm dia. x 350 mm long
Dimensions	5370 (l) x 53 (dia.) mm / 211.42 x 2.09 (dia.) in.
Wind Load	417 N (160 km/h)
Weight	Approx. 13 kg / 28.66 lb.
Mounting Bracket	2141.01.00.00 (up to 120 mm dia.) (Ordered Separately) ETC-250 (50 to 76 mm dia.) (Ordered Separately)

Environmental	
Operating temperature range	-40 °C to +70 °C
Survival Wind Speed	300 km/h
Ingress Protection	IP56

ORDERING

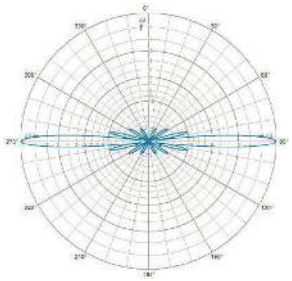
Model	Product No.	Description	Frequency
9 dBd HD omni antenna, low PIM	4220.09-445-T0	7/16 DIN(f) ; 0° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4220.09-445-T2	7/16 DIN(f) ; 2° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4220.09-445-T4	7/16 DIN(f) ; 4° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4220.09-445-T6	7/16 DIN(f) ; 6° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4221.09-445-T0	N(f) ; 0° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4221.09-445-T2	N(f) ; 2° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4221.09-445-T4	N(f) ; 4° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4221.09-445-T6	N(f) ; 6° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4223.09-445-T0	4.3-10(f) ; 0° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4223.09-445-T2	4.3-10(f) ; 2° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4223.09-445-T4	4.3-10(f) ; 4° Electrical Tilt	420 - 470 MHz
9 dBd HD omni antenna, low PIM	4223.09-445-T6	4.3-10(f) ; 6° Electrical Tilt	420 - 470 MHz
Accessories			
Galvanised steel parallel bracket	2141.01.00.00	38 - 120 mm (PAIR)	
Extruded Parallel Tube Clamp	ETC-250	50 - 76 mm	

INSTALLATION NOTE

Please note that the survival wind speed stated in this specification is based on a static load test simulating a single gust of wind, according to EN 1991-1-4. Continuous flexure of the antenna, over long periods of time in extreme conditions, can cause a gradual deterioration in the structural integrity of the materials; this may result in a reduction of specifications or other failure of the antenna structure.To mitigate this, the antenna must be stabilised with a second fixation at the top of the shroud; non-conductive bracket **FB-HB** can be used in conjunction with one of our **SMC** brackets to achieve this.

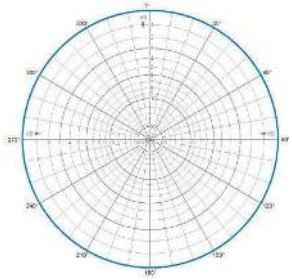
Provision of product warranty is subject to installation of the product with both top and bottom fixation. At the discretion of Amphenol Procom, we may approve warranty claims for antennas having been installed without top fixation. For any warrant claim, thorough documentation must be presented before such warranty claim can be accepted.

RADIATION PATTERN



E-Plane | 445 MHz

RADIATION PATTERN



H-Plane | 445 MHz

MOUNTING DETAILS