PN-A5

High-end Geodetic Antenna

The PN-A5 antenna combines the Topcon TA-5 full spectrum GNSS antenna element with an innovative convex impedance ground plane.

The TA-5 antenna element utilizes an array of vertical dipoles to provide highly sensitive and stable Full Wave signal tracking for all existing and planned GNSS signals. Topcon's convex impedance ground plane provides improved multipath mitigation while providing minimum signal loss for satellites tracked to the horizon.

- High-end Geodetic Antenna
- Topcon's TA-5 vertical convex dipole antenna element for full spectrum GNSS signal tracking
- Semi-hemispherical convex impedance groundplane
- Environmentally sealed
- Minimized phase center offset variations in vertical within GNSS frequency band
- Significant increase of low elevated satellites tracking

OPERATING FREQUENCY RANGE		
Lower band	1230 MHz ±70 MHz (L5, E5B, E3, L2, G2, E4, E6)	
Upper band	1565 MHz ±50 MHz (E2, L1, E1, G1, OmniStar, SBAS, CDGPS)	
OUT OF BAND REJECTION		
Lower band	(1232 MHz ± 100 MHz) (1232 MHz ± 150 MHz)	-30 dBc (typical) -30 dBc (typical)
Upper band	(1568.5 MHz ±100 MHz) (1568.5 MHz ±150 MHz)	-30 dBc (typical) -30 dBc (typical)
f < 1000 MHz	-80 dBc (typical)	
f > 1750 MHz	-80 dBc (typical)	
GAIN, NOISE FIGURE AND VSWR		
LNA Gain	43 dB (typical)	
Gain at Zenith (90°)	Lower band: +6 dB (typical)	Upper band: +4.7 dB (typical)
Gain Roll-Off (from Zenith to Horizon)	Lower band: -12 dB (typical)	Upper band: -10 dB (typical)
Noise Figure	1.0 dB (typical)	
VSWR	1.5 : 1	
Differential Propagation Delay (typical)	Lower band: 3 ns (maximum)	Upper band: 3 ns (maximum)
Nominal Impedance	50 Ohm	
ENVIRONMENTAL		
Enclosure	MIL-STD-810G	
Temperature (Methods 501.5, 502.5)	Operating: -50°C to 70°C	Storage: -55°C to 85°C
Water / Dust Rating	IP67 IEC 60529	
Vibration	Method 514.6, Broad band noise (random vibration), along each of 3 axes, Category 4, table 514.6C-IV	
Humidity	95% (Method 507.5)	
Shock	Method 516.6, along each of 3 axes. Procedure I - Functional Shock, Table 516.6-I, Fig. 516.6-8, accelerative forces up to 40 g	
Drop Test	Repeated drops from the height of 1 m on concrete surface. All sides – top, bottom and border. (with Topcon or SCIGN Dome)	
RoHS Compliant	Yes	
POWER		
Input Voltage	3 to 12 VDC	
Power Consumption	100 mA (typical)	
PHYSICAL		
Dimensions (d x h)	380 x 262 mm (antenna without anti-snow dome) 380 x 292 mm (with Topcon anti-snow spherical dome) 415 x 287 mm (with SCIGN anti-snow short dome)	
Weight	6.7 kg (antenna) 1.1 kg (Topcon anti-snow spherical dome) 7.8 kg (antenna with Topcon anti-snow spherical dome)	
Centering	< 1 mm, micro-centered	
Connector	N-type	

Specifications subject to change without notice.

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