

## 12700 Series, Airborne Antennas

PCTEL's 12700 series antennas are robust, rigorously tested and environmentally sealed units suitable for a wide variety of GPS applications, including vehicle tracking, marine and airborne navigation.

These antennas have been tested to five DO-160 environmental test requirements, including:

- Altitude. RTCA/DO-160E, Section 4.6.1, Category F2
- Temperature and Temperature Variation Test. RTCA/DO-160E, Sections 4 and 5, Categories F2 and A
- Humidity. RTCA/DO-160D, Section 6. Category C-External Humidity Environment.
- Mechanical Shock RTCA/DO-160E, Section 7.0, Category B, Operational
- Vibration Test. RTCA/DO-160E, Section 8.0, Curves C, L, M, and Y

They feature a sealed o-ring that protects them against severe environmental conditions for reliable, long-lasting performance. Their radome is constructed of high grade polymer resin for UV and abrasion resistance. They will resist all de-icing fluids, jet fuels, and standard cleaning solvents.



1270FW

### STANDARD CONFIGURATION

| Model                      | Mount                           | Connector  | Housing Color |
|----------------------------|---------------------------------|------------|---------------|
| 1270FW<br>1271FW<br>1273FW | Surface mount four hole pattern | TNC Female | White         |

### ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

| Model                      | LNA Gain                              | Frequency Range              | Element Gain                    | Polarization        | Noise Figure   | Current Draw            |
|----------------------------|---------------------------------------|------------------------------|---------------------------------|---------------------|----------------|-------------------------|
| 1270FW<br>1271FW<br>1273FW | 26 dB @ 5 V<br>Passive<br>35 dB @ 5 V | 1575.42 ± 10 MHz<br>(GPS L1) | + 4.5 dBic nominal<br>at zenith | Right hand circular | 2.5 dB nominal | ≤ 30 mA<br>-<br>≤ 40 mA |

### ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

| Model                      | DC Voltage                | VSWR    | Nominal Impedance | Polarization        |
|----------------------------|---------------------------|---------|-------------------|---------------------|
| 1270FW<br>1271FW<br>1273FW | 3-9 VDC (working voltage) | < 2.0:1 | 50 ohms           | Right hand circular |

### MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

| Model                      | Dimensions      | Weight         | Temperature Range | Humidity |
|----------------------------|-----------------|----------------|-------------------|----------|
| 1270FW<br>1271FW<br>1273FW | 3.4" H x 2.2" W | 3.6 oz nominal | -40°C to +85°C    | 95%      |