



VHP69273X22G

Vehicular 5-Port MIMO Antenna
698-960 MHz/1710-2700 MHz/2300-2700
MHz/4900-5900 MHz/GPS

The Laird vehicular five-port MIMO antenna covers the 698-960 MHz, 1710-2700 MHz, 2300-2700 MHz, and 4900-5900 MHz as well as GPS (1575.42 MHz) frequency ranges. It is configured with four-port, dual-band elements in addition to one-port with integrated GPS.

Connector options include SMA male connectors for 3G/4G LTE and GPS ports with an RPSMA male connector for the Wi-Fi port. The housing incorporates a low-profile, rugged design that meets IP67 standards. The antenna also features high impact, UV-resistant polycarbonate plastic available in black or white.

APPLICATIONS

- FirstNet/Public Safety

ELECTRICAL SPECIFICATIONS

| Number of Ports | 3G/4G LTE - 2 | | WI-FI - 2 | |
|--|-----------------|-----------|-----------|-----------|
| | 698-960 | 1710-2700 | 2300-2700 | 4900-5900 |
| Operating Frequency (MHz) | 698-960 | 1710-2700 | 2300-2700 | 4900-5900 |
| VSWR - Avg* | <1.7:1 | <1.6:1 | <1.7:1 | <1.4:1 |
| VSWR - Max | <2.0:1 | <2.0:1 | <2.0:1 | <2.0:1 |
| Gain - Peak (dBi)* | 4.1 | 5.9 | 6.2 | 6.5 |
| Gain Horizon 30° - Max (dBi) | N/A | N/A | N/A | 6.2 |
| Typical Port-to-Port Isolation* | 698-960 | 1710-2700 | 2300-2700 | 4900-5900 |
| LTE 1 to LTE 2 | >14 | >26 | >28 | N/A |
| LTE 1 to Wi-Fi 1 | >27 | >18 | >20 | >31 |
| LTE 1 to Wi-Fi 2 | >26 | >23 | >23 | >29 |
| LTE 2 to Wi-Fi 1 | >27 | >23 | >23 | >28 |
| LTE 2 to Wi-Fi 2 | >26 | >18 | >20 | >33 |
| Wi-Fi 1 to Wi-Fi 2 | N/A | N/A | >21 | >29 |
| Nominal Impedance (Ohms) | 50 | | | |
| Max Power - Ambient 25°C (W) | 50 | | | |
| Polarization | Vertical Linear | | | |
| Horizontal Plane 3 dB Beamwidth Port 1 | Omnidirectional | | | |

MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Dimensions - diameter x height - mm (in.) | 132 x 87 (5.2 x 3.4) |
| Weight - kg (lbs) | Approximately 1.16 (2.55) |
| Connector | LTE ports- SMA male; Wi-Fi ports- RPSMA male |
| Cable Type | LMR*-195 or equivalent - 518.2 cm (17 ft) |
| Radome Material | PC, UL94 - VO Rating, UV Stable (Black and White) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|---|--------------------------|
| Operating Temperature - °C (°F) | -30 to +70 (-22 to +158) |
| IP Dust & Water Ingress Protection Rating | IP67 |
| Material Substance Compliance | RoHS |

GPS ANTENNA SPECIFICATIONS

| | | | |
|--|--|---------------|-------------------|
| Number of Ports | GPS- 1 | | |
| Frequency Band (MHz) | 1575.42 MHz (GPS L1) | | |
| Bandwidth | 6 MHz (Typical) | | |
| Amplifier Gain | 27 dB ± 3 dBc | | |
| Nominal Impedance (Ohms) | 50 Ω | | |
| Output VSWR | < 1.5:1 | | |
| DC Voltage | 2.7 - 12 Vdc | | |
| DC Current | 20 mA (Nominal); < 30 mA (-40°C - +85°C) | | |
| Out-of-Band Signal Rejection | > 40 dB rejection @ ± 50 MHz from center frequency | | |
| Intermodulation @ CW Mode (-40° C to +85° C) | Int1 | Int2 | IM3 |
| Power, dBm | -10(1842.8 MHz) | -10(2110 MHz) | -100(1575.6 MHz) |
| Power, dBm | -10(829.58 MHz) | -10(2405 MHz) | -100(1575.42 MHz) |
| Power, dBm | -10(755.42 MHz) | -10(820 MHz) | -100(1575.42 MHz) |
| Input 1 dB Compression @ 750 MHz, 2000 MHz, 3500 MHz | > 10 dBm (-40°C - +85°C) | | |
| Connector | SMA-Male | | |
| Cable - Exposed Length | RG174-518.2 cm (17 ft.) | | |

CONFIGURATION

| PART NUMBER | CONNECTOR |
|-------------------|------------------|
| VHP69273B22G-518A | SMA MALE (BLACK) |
| VHP69273W22G-518A | SMA MALE (WHITE) |

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