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Vehicular 5-Port MIMO Antenna

VHP69273x22G



Patent Pending VHP96273x22G

698-960 / 1710-2700 / 2300-2700 / 4900-5900 MHz + GPS MIMO ANTENNA

The Laird vehicular 5-port MIMO antenna covers the 698-960 / 1710-2700 MHz, 2300-2700 / 4900-5900 MHz as well as GPS (1575.42 MHz) frequency ranges. Configured with 4-port, dual-band elements in addition to 1-port with integrated GPS.

Connector options include SMA male connectors for 3G/4G LTE and GPS ports with an RPSMA male connector for the WiFi 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.

SPECIFICATIONS

PARAMETER		PERFORMANCE			
Model Number	VHP69273B22G-518A (Black)		VHP69273W22G-518A (White)		
No. of Ports	5 (2-ports 3G/4G LTE, 2-ports WiFi, 1-port GPS)				
	3G/4G Port		WiFi Port		
Frequency Bands (MHz)	698-960 MHz	1710-2700 MHz	2300-2700 MHz	4900-5900 MHz	
Peak Gain * dBi	4.1	5.9	6.2	6.5	
Max Gain +/- 30 above horizon	N/A	N/A	N/A	6.2	
VSWR* Typical	< 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	
Typical Port-to-Port Isolation *	698-960	1710-2700	2300-2700	4900-5900	
	LTE 1-to-LTE 2	> 14 dB	> 26 dB	> 28 dB	N/A
	LTE 1-to-WiFi 1	> 27 dB	> 18 dB	> 20 dB	> 31 dB
	LTE 1-to-WiFi 2	> 26 dB	> 23 dB	> 23 dB	> 29 dB
	LTE 2-to-WiFi 1	> 27 dB	> 23 dB	> 23 dB	> 28 dB
	LTE 2-to-WiFi 2	> 26 dB	> 18 dB	> 20 dB	> 33 dB
	WiFi 1-to-WiFi 2	N/A	N/A	> 21 dB	> 29 dB
Nominal Impedance	50 Ω				
Polarization	Vertical Linear				
Azimuth Beam Width	Omnidirectional				
Input Power, Max	50 watts (ambient temp of 25°C/ 77°F)				
Operating Temperature	-30° C - +70° C (-22°F to +158°F)				
Dimensions (dia. x hgt)	132 mm x 87 mm (5.2" x 3.4")				
Weight	Approximately 1.16kg (2.56lbs)				
RF Connector	SMA-Male (3G/4G LTE port)		RPSMA-Male (WiFi port)		
Cable (exposed length)	LMR195M- 518.2 cm (17 ft)				
Radome / Baseplate Material	PC, UL94 - V0 Rating, UV Stable (Black & White)				
Material Compliance	ROHS compliant				
IP Dust & Water Ingress Rating	IP67				

*Measured on 1 ft. (30.48 cm) diameter ground plane

Americas: +1.847 839.6907
IAS-AmericasEastSales@lairdtech.com

Europe: +44.1628.858941
IAS-EUSales@lairdtech.com

Asia: +86.21.5855.0827.127
IAS-AsiaSales@lairdtech.com

www.lairdtech.com

Laird warrants to the original end user customer of its products that its products are free from defects in material and workmanship. Subject to conditions and limitations Laird will, at its option, either repair or replace any part of its products that prove defective by reason of improper workmanship or materials. This limited warranty is in force for the useful lifetime of the original end product into which the Laird product is installed. Useful lifetime of the original end product may vary but is not to exceed five (5) years from the original date of the end product purchase.



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GPS ANTENNA SPECIFICATIONS

PARAMETER		PERFORMANCE		
Frequency Band		1575.42 MHz (GPS L1)		
Band Width		6 MHz (Typical)		
Amplifier Gain		27 dB ± 3 dBc		
Nominal Impedance		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 - +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)		
RF Connector		SMA-Male		
Cable (exposed length)		RG174-518.2 cm (17ft)		

PART NUMBERS

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VHP69273B22G-518A 2-Ports 4G/LTE, 1-Port GPS: SMA Male; 2 Ports WiFi:RPSMA Male(Black)
VHP69273W22G-518A 2-Ports 4G/LTE, 1-Port GPS: SMA Male; 2 Ports WiFi:RPSMA Male(White)