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Vehicular 5-Port MIMO Antenna

VHP69273x22G



Patent Pending VHP69273x22G

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

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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

PART NUMBER
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)

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