



R902-PAN1-9-W-V-SNF

Circularly Polarized RFID Antenna



RFID

The RFMAX **R902-PAN1-W-V-SNF** is a rugged, high-gain UHF RFID panel antenna engineered for peak performance across the 902-928 MHz band. With 8.5-9.5 dBic of right hand circularly polarized gain and a tightly controlled 1.3:1 typical VSWR, this antenna ensures optimal read range, precision, and reliability in even the most demanding RFID deployments.

- UHF RFID: 902-928 MHz (FCC)
- 68° Vertical Beamwidth x 68° Horizontal Beamwidth
- Far-Field Gain: 9 dBic
- Antenna Dimensions; 10" x 10" x 1"
- Connector; N-Female
- IP67 Rated, UL94V0 Radome
- Extended Temp Range -55 to +71c

Designed for long-lasting performance, this IP67-rated antenna is ready for extreme conditions—withstanding temperatures from -55°C to +71°C, solar radiation, salt spray, and high-speed winds up to 220 km/h. Its rugged radome and chemically treated aluminum baseplate with direct N-Female connector make it ideal for outdoor and industrial environments including logistics hubs, warehouses, and yard management systems.

Whether you're building out smart inventory systems, vehicle tracking networks, or automated asset management solutions, the **R902-PAN1-W-V-SNF** offers consistent performance, low axial ratio, and minimal side lobes for clean, efficient tag reads. Trusted by system integrators and OEMs alike, this antenna is your go-to solution for high-throughput, real-time RFID applications.

ELECTRICAL DATA

Frequency Range	902-928 MHz
Gain	8.5 dBic Min, 9.5 dBic Max
VSWR	<1.3:1 Typical
3 dB Beam Width	68° Horizontal & Vertical
Polarization	RHCP (Right Hand Circularly Polarized)
Side Lobes Level @ 90°	-14 dB Max
Axial Ratio at Bore Sight	4dB Max, 3dB Typ
F/B Ratio	-18 dB Typ
Input Impedance	50 ohm
Input Power	6 W Max
Lightning Protection	DC Grounded

MECHANICAL DATA

Dimensions (L x W x D)	(10.24" x 10.24" x .98") 260 x 260 x 25mm
IP Rating	IP67
Weight	2.6 lbs (1.2 Kg)
Connector	Standard N-Female (Jack)
Mounting	Threaded Studs, Size 1/4-20 Spacing: 2.5 inches (63.5 mm) Square
Radome Material	UL94V0 Rated Plastic (White)
Back Plate	Aluminum with Chemical Conversion Coating
ROHS Compliance	RoHS, CE 0682
Cable Type Length	Designed in the USA, Made in India

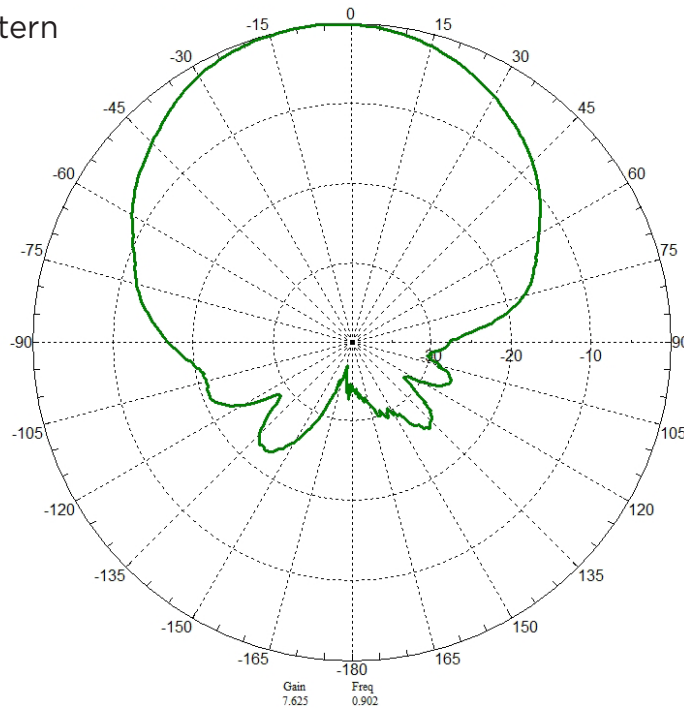
Note:

100% equivalent to PAL90209H-FNF & PAR90209H-FNF

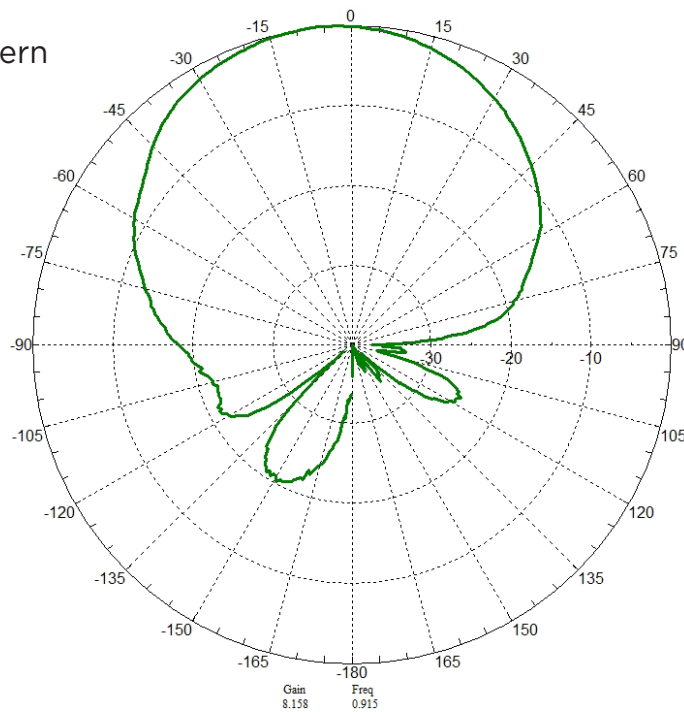
Electrically equivalent to MT-262006/TRH/A/K, S9028PCL96RTN, S9028PCR96RTN, S9028PCLJ96RTN, S9028PCRJ96RTN

Impinj IPJ-A1000 & IPJ-A1001 and Zebra AN480 (AN480-CR66100WR)

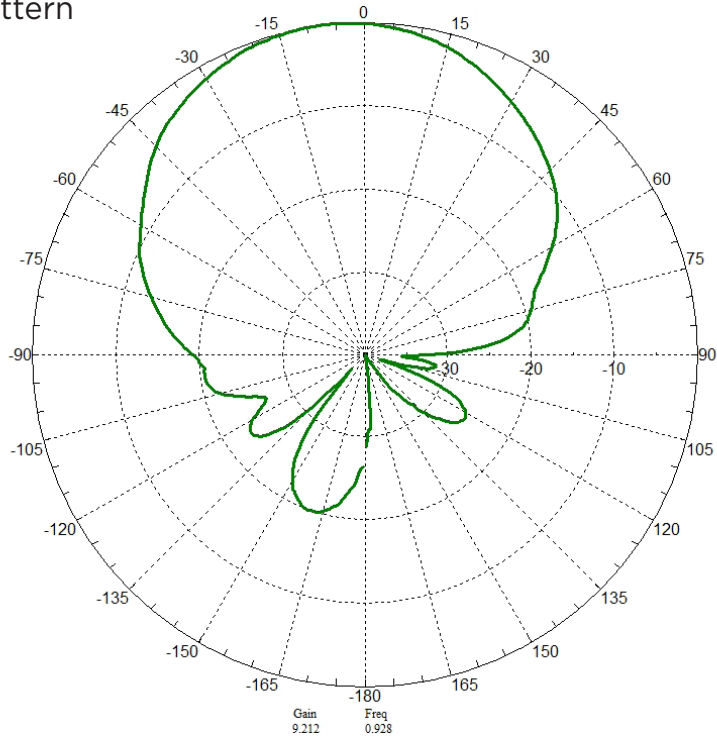
902 MHz Azimuth Pattern



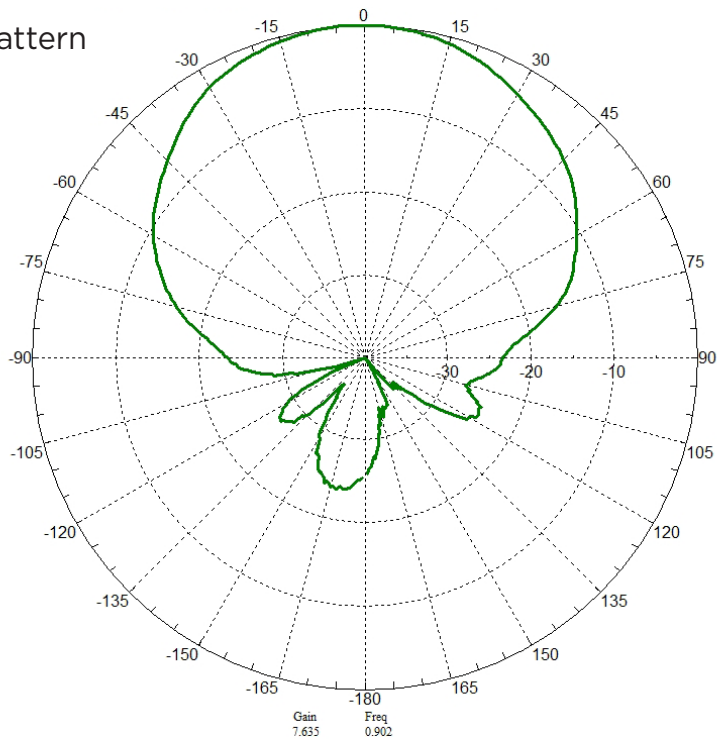
915 MHz Azimuth Pattern



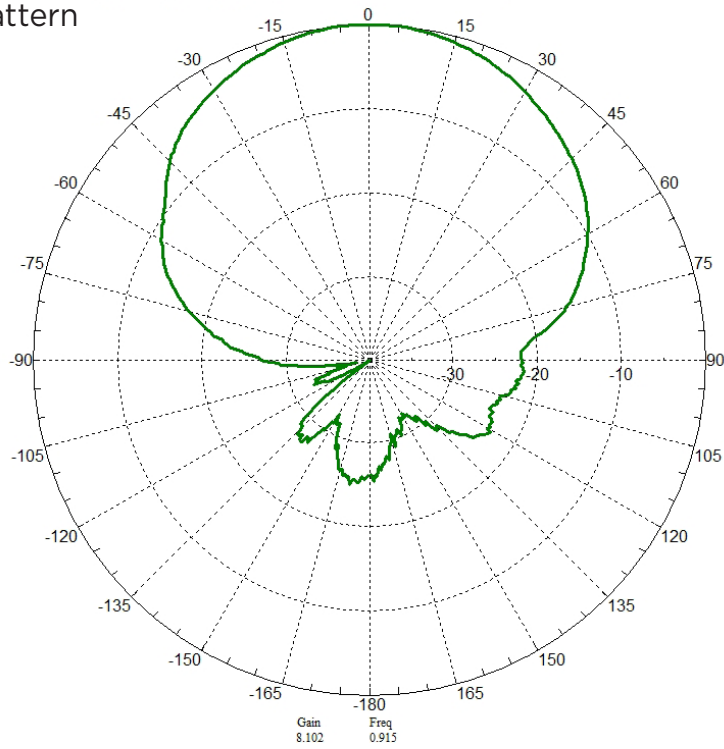
928 MHz Azimuth Pattern



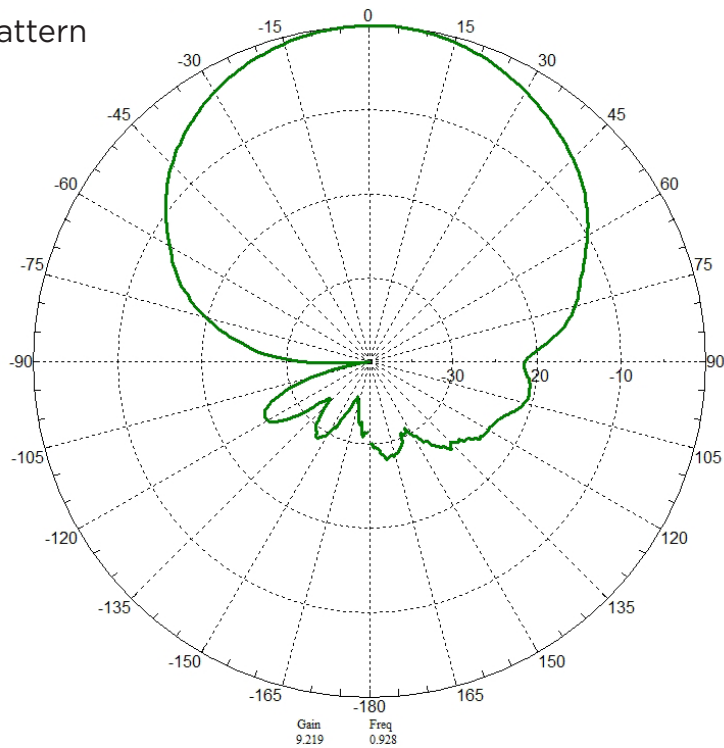
902 MHz Elevation Pattern



915 MHz Elevation Pattern



928 MHz Elevation Pattern



Test	Standard	Duration	Temperature	Notes
Low Temperature	IEC 68-2-1	72 h	-55 °C	
High Temperature	IEC 68-2-2	72 h	+71 °C	
Temp. Cycling	IEC 68-2-14	1 h	-45°C to +70°C	3 Cycles
Thermal Shock Non-Operating			-30°C to +70°C	Ramp 30°C/min
Humidity	ETSI EN300-2-4 T4.1E	144 h		95%
Water Tightness	IEC 529			IP67*
Dust Resistance				IP67*
Solar Radiation	ASTM G53	1000 h		
Ozone Resistance	ETSI 300			
Flammability	UL94			Class HB
Salt Spray	IEC 68-2-11 Ka	500 h		
Ice and Snow				25 mm Radial
Wind Speed: Survival				220 Km/h
Operation				160 Km/h
Wind Load Survival: Front Thrust				26.8 Kg
Side Thrust				2.2 Kg
Quasi Random Vibration				20 g rms for 4 hours
Vehicle Vibration Operating	1g rms, 10-500 Hz, in 3 axis	6 hours total, 2 h in each axis. Accelerated wear – an additional 50 h in worst case axis.		
Mechanical Shock Operating	10g, 11 msec, half sine pulse			

