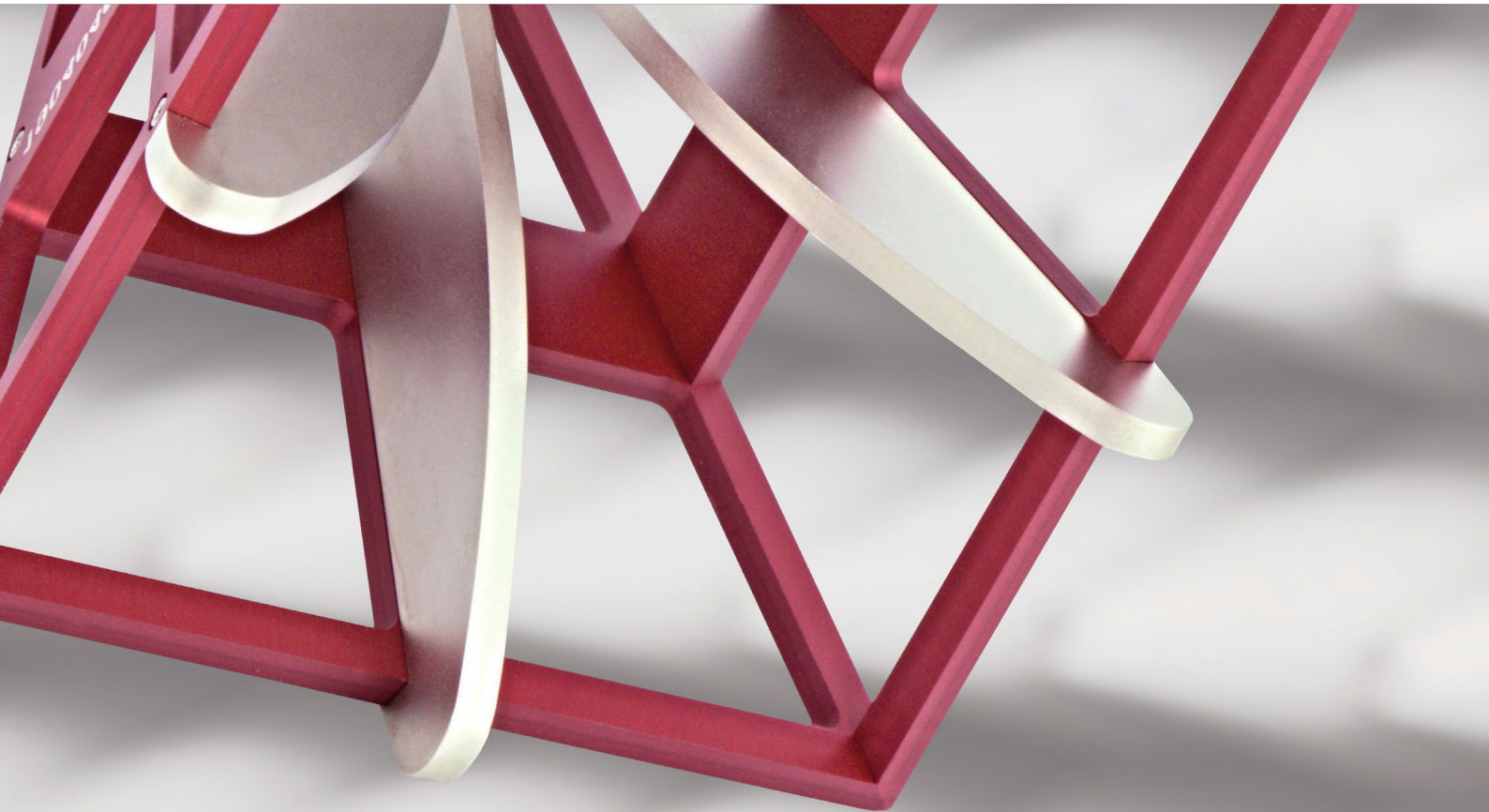




Portfolio Guide 2023



## **Rely on World-Class Broadband Antennas**

RF SPIN's portfolio of industry-leading and innovative antennas is trusted by customers around the world.



Highly qualified  
R&D team



Innovative  
technologies



Performance  
certification



Custom  
RF solutions

# Dual Polarized Broadband Antennas

## QRH67E

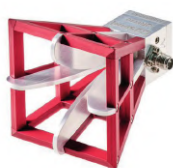


**Advanced quad ridged horn antenna with high-frequency broadband characteristics and outstanding radio-mechanical design features**

The one-of-a-kind antenna from RF SPIN combines maximum frequency and low VSWR for RF labs and R&D of new wireless technologies and 5G networks. Advanced solution with exceptional technical parameters and superior aluminum alloy design.

**6 GHz – 67 GHz**

VSWR < 2.4  
Gain 3 – 14 dBi  
Power (CW/Peak)  
5 W/10 W  
2 × 1.85 mm<sub>female</sub>



## QRH50E

**5 GHz – 50 GHz**

VSWR < 2.5  
Gain 4 – 14 dBi  
Power (CW/Peak)  
5 W/10 W  
2 × 2.40 mm<sub>female</sub>

## QRH40

**4 GHz – 40 GHz**

VSWR < 2.4  
Gain 6 – 16 dBi  
Power (CW/Peak)  
10 W/20 W  
2 × K<sub>female</sub>

## QRH0140

**1 GHz – 40 GHz**

VSWR < 2.4  
Gain 5 – 15.5 dBi  
Power (CW/Peak)  
20 W/40 W  
2 × K<sub>female</sub>

## QRH20E

**1.7 GHz – 20 GHz**

VSWR < 2.4  
Gain 5 – 15.5 dBi  
Power (CW/Peak)  
20 W/40 W  
2 × SMA<sub>female</sub>



## QRH18

**1 GHz – 18 GHz**

VSWR < 2.5  
Gain 5 – 16 dBi  
Power (CW/Peak)  
100 W/170 W  
2 × SMA<sub>female</sub>

## QRH11

**730 MHz – 11 GHz**

VSWR < 2.4  
Gain 3 – 15.5 dBi  
Power (CW/Peak)  
100 W/170 W  
2 × SMA<sub>female</sub>

## QRH400

**400 MHz – 6 GHz**

VSWR < 2.3  
Gain 4 – 15 dBi  
Power (CW/Peak)  
200 W/350 W  
2 × N<sub>female</sub>

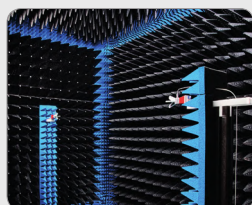
## QRH300

**300 MHz – 4.5 GHz**

VSWR < 2.2  
Gain 2 – 15 dBi  
Power (CW/Peak)  
400 W/750 W  
2 × N<sub>female</sub>

## Always measured and calibrated

We create antennas that stand for precision. Ultimate accuracy characterizes not only their advanced manufacturing, but above all their performance. That's why we measure, certify and tune each and every one of our products. And so we help improve your labs!



## Data on the RF SPIN Antenna Portal

See the dotted code attached to each of our antennas? That's how you get to the RF SPIN Antenna Portal, a unique platform with the certification of each product. Download certifies, documentation or complete lab data for the best product setup!



# Single Polarized Broadband Antennas

## DRH110

Gold coated antenna with excellent performance



14 GHz – 110 GHz

VSWR < 2.1  
Gain 6.5 – 18.5 dBi  
Power (CW/Peak)  
4 W/8 W  
1.00 mm female

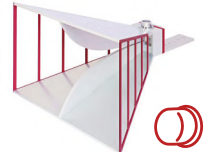
## DRH67

Double ridged horn antenna with great accuracy

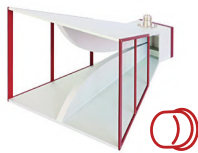


6 GHz – 67 GHz

VSWR < 2.4  
Gain 6 – 21.5 dBi  
Power (CW/Peak)  
5 W/10 W  
1.85 mm female



DRH50	DRH0844	DRH40	DRH30	DRH20E	DRH18-E
4.5 GHz – 50 GHz	8 GHz – 44 GHz	4 GHz – 40 GHz	2.5 GHz – 30 GHz	1.6 GHz – 20 GHz	1 GHz – 18 GHz
VSWR < 1.55 Gain 6 – 20.5 dBi Power (CW/Peak) 10 W/20 W 2.40 mm female	VSWR < 2 Gain 15 – 24 dBi Power (CW/Peak) 15 W/30 W K female	VSWR < 1.6 Gain 7 – 20 dBi Power (CW/Peak) 15 W/30 W K female	VSWR < 1.55 Gain 6 – 20 dBi Power (CW/Peak) 25 W/50 W K female	VSWR < 1.5 Gain 5 – 17 dBi Power (CW/Peak) 50 W/100 W SMA female	VSWR < 2.2 Gain 6 – 15 dBi Power (CW/Peak) 100 W/170 W N or SMA female



DRH18-EX	DRH10	DRH370	DRH203	DRH200	TEMH20
800 MHz – 18 GHz	740 MHz – 10.5 GHz	370 MHz – 6 GHz	200 MHz – 3 GHz	180 MHz – 2.2 GHz	1 GHz – 22 GHz
VSWR < 2.4 Gain 2.5 – 15 dBi Power (CW/Peak) 100 W/170 W N or SMA female	VSWR < 1.8 Gain 4 – 17 dBi Power (CW/Peak) 150 W/250 W N female	VSWR < 1.6 Gain 3.5 – 16 dBi Power (CW/Peak) 350 W/500 W N female	VSWR < 1.6 Gain 3 – 16 dBi Power (CW/Peak) 400 W/750 W N female	VSWR < 1.6 Gain 6 – 14 dBi Power (CW/Peak) 500 W/1000 W N female	VSWR < 2.6 Gain 6 – 22 dBi Power (CW/Peak) 25 W/50 W 3.5 mm female

## All-weather antennas in radomes

Our antennas work reliably even in the harshest conditions. Several antenna models are installed directly into a low electromagnetic impact protective radome, which guarantees their permanent functionality in all weather conditions.



## A truly all-in-one antenna package

Why wait? With a complete antenna package, you can immediately implement our product into your development or measurement solutions. RFSPIN products are always perfectly protected and the included L-shaped mounting flange makes installation easy and immediate.





# Standard Gain Horn Antennas

Frequency range	Waveguide type	Nominal Gain			
		10 dBi	15 dBi	20 dBi	25 dBi
8.2 GHz –12.4 GHz	WR90	H-A12-W10	H-A12-W15		
10 GHz –15 GHz	WR75	H-A15-W10	H-A15-W15		
12.4 GHz –18 GHz	WR62	H-A18-W10	H-A18-W15		
15 GHz –22 GHz	WR51	H-A22-W10	H-A22-W15	H-A22-W20	
18 GHz –26.5 GHz	WR42	H-A26-W10	H-A26-W15	H-A26-W20	
22 GHz –33 GHz	WR34	H-A33-W10	H-A33-W15	H-A33-W20	
26.5 GHz –40 GHz	WR28	H-A40-W10	H-A40-W15	H-A40-W20	
33 GHz –50 GHz	WR22		H-A50-W15	H-A50-W20	
40 GHz –60 GHz	WR19		H-A60-W15	H-A60-W20	H-A60-W25
50 GHz –75 GHz	WR15		H-A75-W15	H-A75-W20	H-A75-W25
60 GHz –90 GHz	WR12			H-A90-W20	H-A90-W25
75 GHz –110 GHz	WR10			H-A110-W20	H-A110-W25
90 GHz –140 GHz	WR8			H-A140-W20	H-A140-W25

# Waveguide Adapters

Frequency range	Waveguide type	Part. No	VSWR	Flange	Connector
3.95 GHz –5.85 GHz	WR187	AWC187EFS AWC187EFN	<1.3	UG-383	SMA N
5.85 GHz –8.2 GHz	WR137	AWC137EFS AWC137EFN	<1.3	UG-383	SMA N
10 GHz –15 GHz	WR90	AWC90EFS AWC90EFN	<1.25	UG-39/U	SMA N
8.2 GHz –12.4 GHz	WR75	AWC75EFS AWC75EFN	<1.25	UBR 120	SMA N
12.4 GHz –18 GHz	WR62	AWC62EFS AWC62EFN	<1.25	UG-1665/U	SMA N
15 GHz –22 GHz	WR51	AWC51EFS AWC51EFK	<1.25	UBR 180	SMA 2.92
18 GHz –26.5 GHz	WR42	AWC42EFK	<1.3	UBR 220	2.92
22 GHz –33 GHz	WR34	AWC34EFK	<1.3	UG-1530/U	2.92
26.5 GHz –40 GHz	WR28	AWC28EFK	<1.3	UG-599/U	2.92
33 GHz –50 GHz	WR22	AWC22EFQ AWC22EFV	<1.3	UG-383/U	2.4 1.85
40 GHz –60 GHz	WR19	AWC19EFV AWC19F	<1.35	UG-383/U	1.85 1.85 (90° angle)
50 GHz –67 GHz	WR15	AWC15EFV AWC15F	<1.35	UG-385/U	1.85 1.85 (90° angle)
50 GHz –75 GHz	WR15	AWC15EFW	<1.3	UG-385/U	1.00
60 GHz –90 GHz	WR12	AWC12EFW	<1.3	UG-387/U	1.00
75 GHz –110 GHz	WR10	AWC10EFW	<1.35	UG-387/U	1.00

# Circular Polarized Antennas

There are many applications where it is not appropriate to use linearly polarized antennas, because it is not possible to guarantee the correct mutual alignment of the receiving and transmitting antennas, which usually change position over time. For certain antenna orientations, there would be significant attenuation due to polarization mismatch and thus possible signal loss.

One example is for moving objects such as satellites, drones or aircraft. For these applications, it is very advantageous to use antennas with circular polarization, where the polarization orientation of the antenna does not matter much. Circularly polarized antennas are becoming popular in many mainstream

wireless applications and even have a future in 5G. We can design our solution up to a frequency of 50 GHz, offering a bandwidth of up to 10 percent and an axial ratio in the order of tenths of a decibel. The antennas can be single-polarized or have both circular

polarizations at the same time and can serve as an antenna separately with a gain of 7 – 20 dBi or as an irradiator of a parabolic dish with a significantly higher overall gain. We can supply circularly polarized parabolic antennas as a whole and with a radome.



## Pyramidal Horn Antennas

Pyramidal horn antennas are specially developed with an emphasis on perfection and straightforward results. One connector, one holder, but so many options to choose from. Now from 22 GHz up to 50 GHz.

H-A33



## Special Purpose Antennas

Whether you need a high gain, small cross-section antenna or other special modifications, our development center will design an antenna to fit your application. For example, see our range of single and dual polarized measurement probes.

OEWG1831AA



## Antenna Cables and Adapters

We offer a wide range of RF cables and adapters featuring outstanding mechanical and electrical performance, low loss and durability. The range includes flexible, semi-rigid and ruggedized cable assemblies for use in and out of labs, as well as adapters for almost any RF need.



## 90 Degree Hybrid Couplers

Circular polarization is not a problem with broadband hybrid couplers specifically designed to correspond in frequency with QRH antennas. Together with phase-paired coaxial cables, LHCP or RHCP can be achieved.



## Accessories



### Antenna Fixtures

RU01	Rotary fixture for DRH200
AHS22-XX	Rotary fixture for DRH and QRH antennas
AHS2022	Plastic ball head for EMC tripod



### Antenna Stands

PAS01	Metal tube mobile stand
PAS02	Fiberglass tube mobile stand
PAS02-3	Fiberglass mobile stand with up to 3 m height
FAS01	Fixed antenna stand
PAS2022	Wooden EMC tripod

# Custom Antenna Solutions

Do you have a challenging RF project coming up? Our highly experienced R&D department, with a track record of successful customer projects, can handle even the most complex assignments – in RF SPIN's own production facilities, using the latest technology for your advanced RF solutions.

We are always happy to contribute to the success of your project! And it doesn't matter whether it's a parametric or physical modification of our existing products or the design of a completely new RF solution.

Contact our Special Project Team at [special@rfspin.com](mailto:special@rfspin.com) to share and discuss your ideas.



## SHARKIE

Active antenna with extremely low noise and easy gain adjustment.

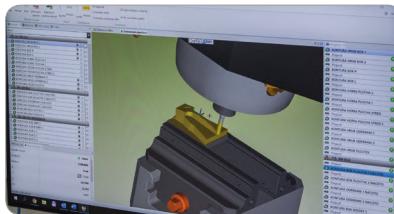


## PARABOLIC REFLECTOR

High-directive antenna with radome cover for outdoor use.

# In-house Manufacturing

We have 100% control over the entire production process – from the initial computational and mechanical design through the selection of materials to the high-precision manufacturing, surface treatment, assembly and subsequent measurement and certification of the parameters and properties of our antennas.



## RF SPIN worldwide



## Contact details



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