



50 W VHF Low-Profile Antenna R&S® HV 3012

- ◆ Frequency range 30 MHz to 108 MHz
- ◆ Designed for operation on all kinds of vehicles including jeeps, trucks and other armored vehicles
- ◆ Suitable for operation on shelters and on masts or in other permanent installations
- ◆ Low-profile, stainless steel whip
- ◆ GPS base available

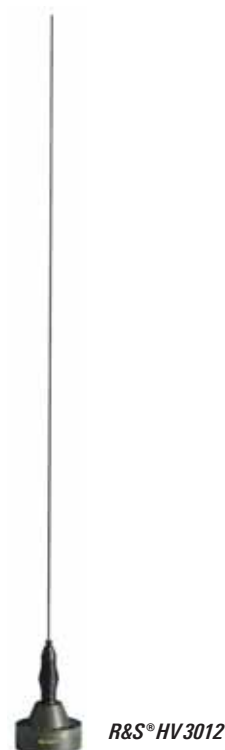


ROHDE & SCHWARZ

The R&S® HV 3012 is a low-profile monopole antenna. Its radiating element is made of stainless steel. The antenna is also available with a GPS antenna integrated in the antenna base.

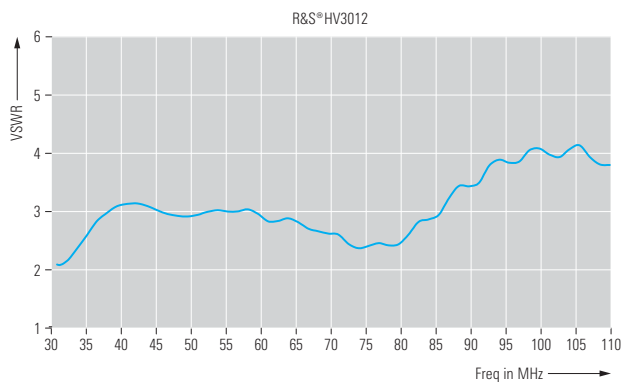
Specifications

Frequency range	30 MHz to 108 MHz
VSWR	<3.5, see diagram on next page
Nominal impedance	50 Ω
Power rating	50 W CW
Gain	see diagram on next page
Radiation pattern	
Azimuth	omnidirectional
Elevation	see diagrams on next page
Polarization	vertical
Finish	polyurethane lacquer, olive drab
Wind rating	55 m/s = 125 mph
Connector	BNC
GPS connector	SMA, model .03 only
Length	1.88 m, with spring base
Weight	2 kg, with spring base

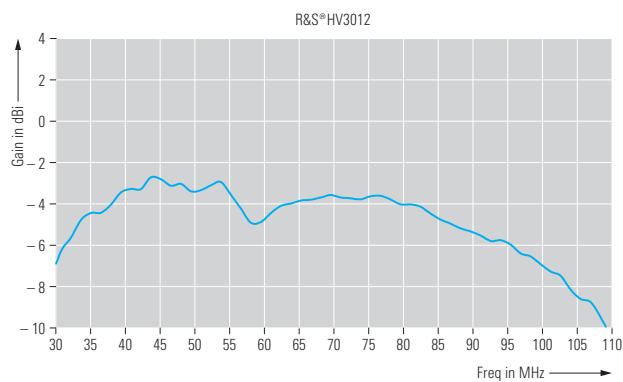


Environmental specifications

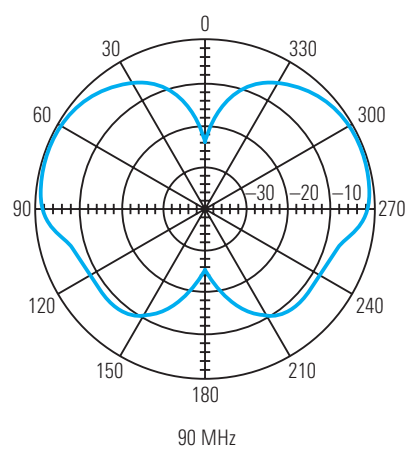
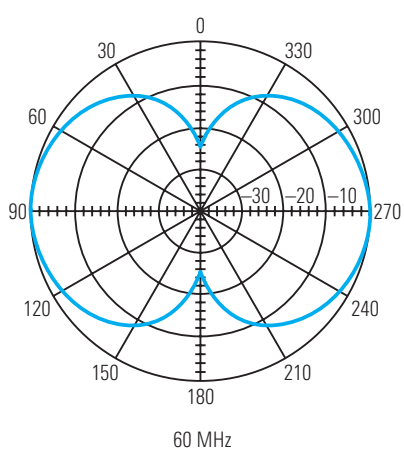
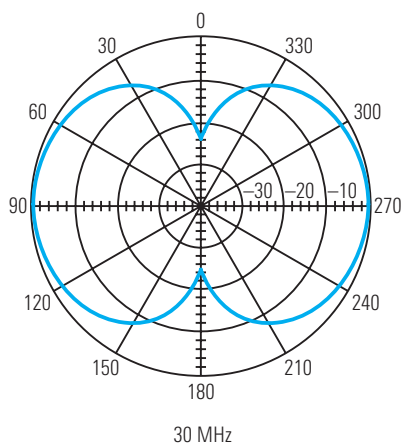
Cold	fulfils requirements down to -55°C , test method: IEC 60068-2-1 test Ab, duration: 16 h
Heat	fulfils requirements up to $+71^{\circ}\text{C}$, withstands storage at temperatures up to $+85^{\circ}\text{C}$, test method: IEC 60068-2-2 test Bb
Change of temperature	withstands rapid changes of temperature between -40°C and $+55^{\circ}\text{C}$, test method: IEC 60068-2-14 test Na, exposure time: 0.5 h, number of cycles: 6, duration: 16 h
Damp heat	withstands storage at humidity of 95 % to 100 % between $+25^{\circ}\text{C}$ and $+55^{\circ}\text{C}$, test method: IEC 60068-2-30 test Db, number of cycles: 10; the test is to be performed after the sinusoidal vibration test
Sealing	withstands immersion in water up to a depth of 1 m, test method: IEC 60068-2-17 test Qf, duration of conditioning: 24 h, antenna to be immersed in horizontal position
Salt mist	resistant to salt mist, test method: IEC 60068-2-11 test Ka, duration: 240 h
Sinusoidal vibration	withstands sinusoidal vibrations: 5 Hz to 40 Hz – ± 0.75 mm amplitude acceleration, 40 Hz to 250 Hz – 50m/s^2 acceleration, test method: IEC 60068-2-29 test Fc, axes of vibration: x, y and z, sweep cycles: > 5; all resonant frequencies to be observed during these sweeps; duration of endurance at each critical frequency: 2 h
Bump	test method: IEC 60068-2-29 test Eb, peak acceleration: 40 g, number of bumps: 4000 ± 10 ; the parts of the antenna are to be fastened to the fixture in a normal transport position
Impact	Withstands impact at the midpoint of the radiating element. Secured on the roof of a vehicle in a vertical position, the antenna is to be subjected to 25 repeated blows with the vehicle traveling at a speed of 40 km/h. After the test physical damage must be limited to minor surface abrasions the point of impact, which are non-detrimental to the performance of the antenna
Flexibility	withstands the following number of flexes: 40000 cycles with $\pm 30^{\circ}$ deflection, i.e. 10000 cycles in each orthogonal direction 5000 cycles with $\pm 90^{\circ}$ deflection. tests performed at $+18^{\circ}\text{C} \pm 2^{\circ}\text{C}$; flexing rate ≈ 10 cycles per minute
EMP protection	withstands the following electromagnetic pulses: 100 kV/m, 1.2/50 ns, vertically polarized 25 kV/m, 5 to 10/200 ns, vertically polarized
Lightning protection	Withstands the heat and force of lightning with a current integral of 50 As and a current square integral of 106 As. The antenna is to withstand electrical influence from lightning with a current peak value of 50 kA and a rise time of 10 ms. Test method: IEC 60060-2



Typical standing wave ratio



Typical gain

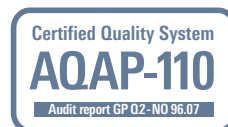


Radiation pattern: elevation

Ordering information

Designation	Type	Order No.
50 W VHF Low-Profile Antenna	R&S® HV 3012	6099.7700.02
50 W VHF Low-Profile Antenna GPS	R&S® HV 3012	6099.7700.03
NATO codification of complete antenna		5985-25-145-5923

More information at
www.rohde-schwarz.com
(search term: M3TR)



www.rohde-schwarz.com

Europe: Tel. +49 1805 12 4242, e-mail: customersupport@rohde-schwarz.com · North America: Tel. +1 410-910-7988, e-mail: customer.support@rsa.rohde-schwarz.com

Asia: Tel. +65 68463710, e-mail: customer-service@rssg.rohde-schwarz.com