



## 50 W UHF Vehicular Broadband Antenna R&S® HV 3013

- ◆ Frequency range 225 MHz to 512 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
- ◆ Different kinds of bases available, with or without spring for flexible or rigid installation (on request)
- ◆ No groundplane needed (centerfed)
- ◆ GPS base available



**ROHDE & SCHWARZ**

The R&S® HV3013 is a centerfed dipole antenna. Its radiating element is completely enclosed in epoxy/fiberglass laminate. Metal parts are made of brass and stainless steel. Rods can be exchanged without tools.

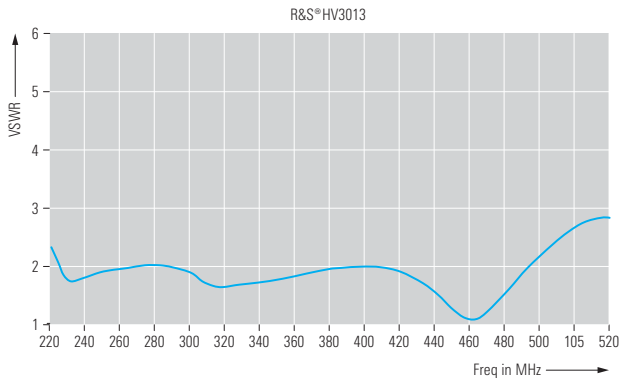
## Specifications

Frequency range	225 MHz to 450 MHz, fully specified 225 MHz to 512 MHz, operational
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 Elevation	omnidirectional see diagrams on next page
Polarization	vertical
Finish	polyurethane lacquer, olive drab
Wind rating	55 m/s = 125 mph
Connector GPS connector	BNC SMA, model .03 only
Length	1 m, with spring base
Weight	3.4 kg, with spring base

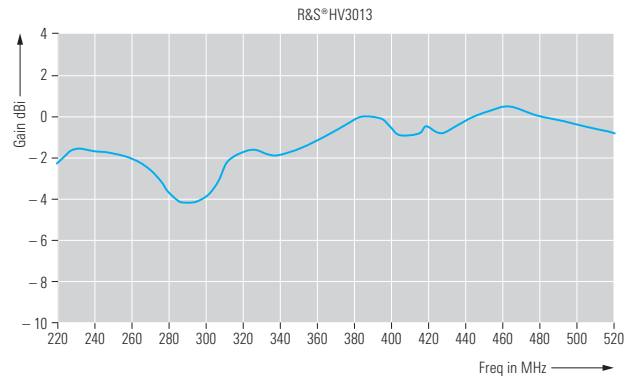


## Environmental specifications

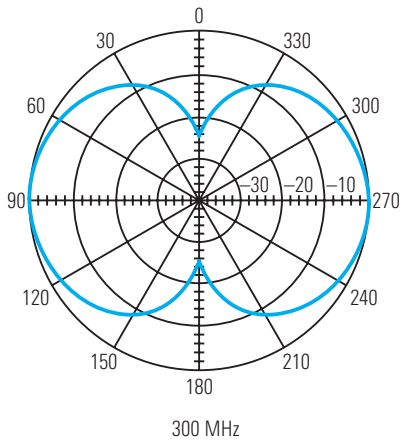
Cold	fulfils requirements down to -55 °C, test method: IEC 60068-2-1 test Ab, duration: 16 h
Heat	fulfils requirements up to +71 °C, withstands storage at temperatures up to +85 °C, test method: IEC 60068-2-2 test Bb
Change of temperature	withstands rapid changes of temperature between -40 °C and +55 °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 °C and +55 °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 <sup>2</sup> 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 ±30 ° deflection, i.e. 10000 cycles in each orthogonal direction 5000 cycles with ±90 ° deflection. tests performed at +18 °C ±2 °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 UHF Vehicular Broadband Antenna	R&S®HV 3013	6099.7800.02
50 W UHF Vehicular Broadband Antenna GPS	R&S®HV 3013	6099.7800.03
NATO codification of complete antenna		5985-25-142-7956

More information at  
[www.rohde-schwarz.com](http://www.rohde-schwarz.com)  
(search term: M3TR)



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