



Doppler simulator

- Electronic velocity simulation
- Flight time simulation (10m standard simulated)
- CW or ON/OFF Modulated output
- All radar modulations : CW, pulse, FSK, FMCW
- Onboard Doppler Reference for autotest

Communication

| Type | Désignation |
|-------------|---|
| Serial | RS232 (standard) Or USB instead of RS232 |
| Programming | programming software provided Windows XP SP2/Vista/Win7/Win8 |

Compliant with

EN 300 440, EN 60950-1, EN62479-10

Specifications

Simulator characteristics

Input frequency range 24.000 to 24.25 GHz

Doppler frequency Prog. through RS232
 Doppler frequency range ± 35700 Hz
 Doppler frequency step 1 Hz
 Doppler frequency accuracy < 0.2 Hz

Delay line

Type internal coaxial
 Simulated distance 10 m \pm 0.3m
 Higher distances available from 10m to 200m

RF power

Pin max -30dBm
 Transpondeur gain (with antenna gain) 33.5dB ± 0.5 dB
 Typical ripple in bandwidth ± 1.4 dB
 Spurious -50dBc

Antennas

Bi-static antennas
 Antenna aperture H plane 36 deg.
 Antenna aperture E plane 21 deg.

Output modulation

ON/OFF Modulation Ton=3s; Toff=3s
 Extinction ratio > 60 dB

Supply

Supply voltage 9 -30Vdc
 Power 12W

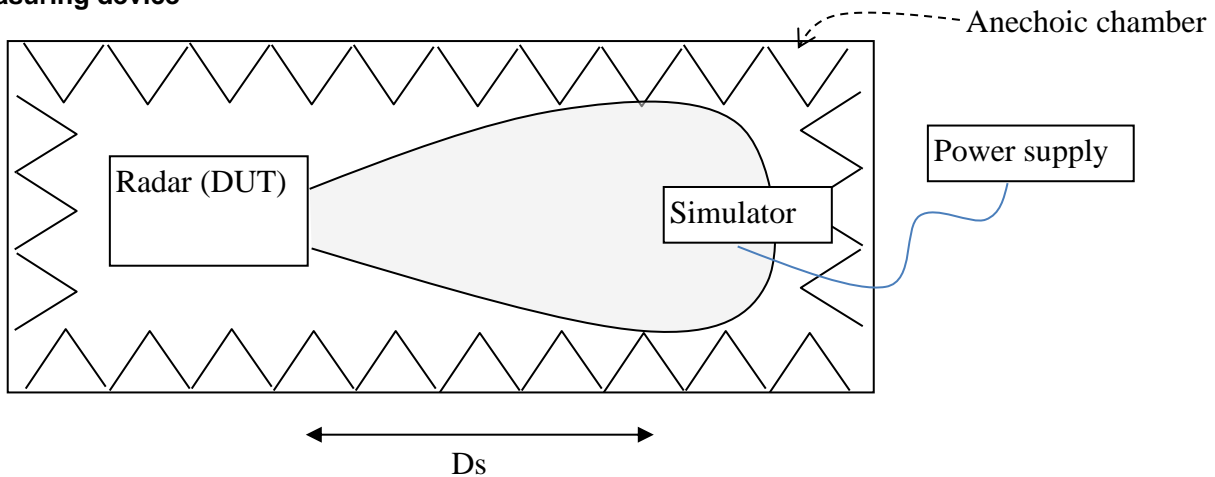
Mechanical specifications

Black anodised aluminium case 250x170x53mm

Environmental conditions

Operating temperature 10°C..+40°C
 Storing temperature -10°C..+60°C
 Warm up 15 mn

Measuring device



The simulator generates a delayed Doppler signal.

The signal amplitude is fixed, the Doppler frequency is programmable in steps of 1 Hz up to 30kHz. Programming is done using a computer and the software provided with the simulator.

The distance is simulated by a coaxial delay line of 10m.

The RCS can be calculated by using the technical characteristics of the simulator and the measuring distance using the following formula:

Ds : Distance between the simulator and the radar (m)

Dr : Distance between the radar and the target (m)

Lambda : Wavelength (m)

Sigma : RCS - radar cross section (m²)

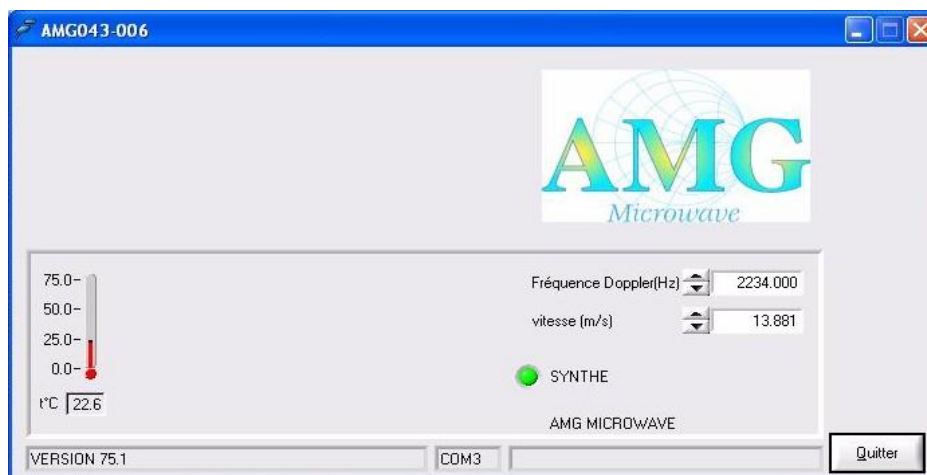
Gse : Radar emission antenna gain

Gsr : Radar reception antenna gain

Gs : Simulator gain including cable losses

$$\sigma = \frac{\lambda^2}{4\pi} \left(\frac{Dr}{Ds} \right)^4 G_{se} G_{sr} G_s$$

Remote PC software



DISCLAIMER

Different technical specifications are possible upon request, AMG reserves the right to make modifications to the design and characteristic of the product at any time and without prior notice