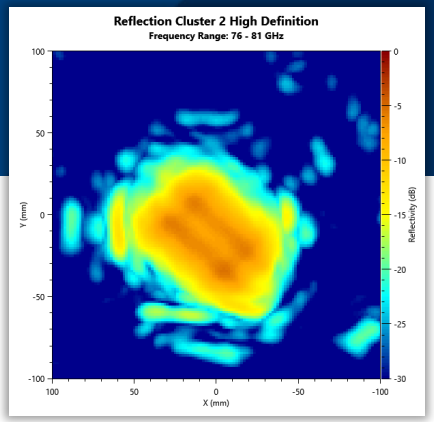
ROHDE&SCHWARZ
Make ideas real

R&S®QAR50-K30: HIGH RESOLUTION REFLECTION IMAGE

For R&S®QAR50 quality automotive radome tester



Common uses

Analysis and evaluation of radomes and bumpers in R&D

Testing radomes and bumpers in production (end-of-line)

Key specifications		
Frequency range	Cluster 1 & Cluster 2	
	Start frequency	76 GHz
	Stop frequency	81 GHz
	Center frequency	78.5 GHz
	Frequency span	5 GHz
Number of frequency steps	128	
Image lateral resolution [1]	≤ 8 mm (0.31 in)	

[1] minimum distance of two phase steps to be resolved

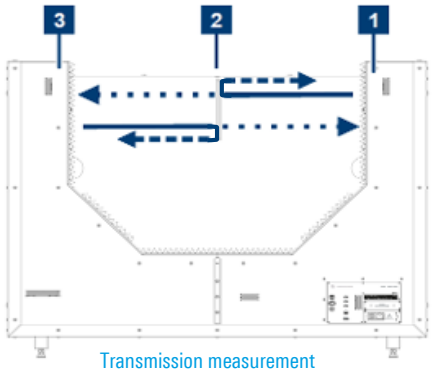
Customize your R&S®QAR50 quality automotive radome tester with the high resolution reflection image option

- High resolution reflection image
- Quick detection of disturbances
- Clearly reveals the bumper mounting structure
- Allows fast and accurate DUT position tracking

Your benefit	Features
Quickly detect problems with radome design	DUT geometry has a large influence on the visible image. The R&S®QAR50-K30 quickly detects these problems.
Speed up initial positioning	The bumper mounting is clearly visible in the high resolution measurement. Being able to easily view the radome and bumper edges can help to find the correct DUT position.
Maintain correct positioning	High-resolution reflection measurements support extensive analysis and error tracking in R&D and production.

For more information, visit
www.rohde-schwarz.com/product/QAR50

High resolution image with one transmission and reflection measurements



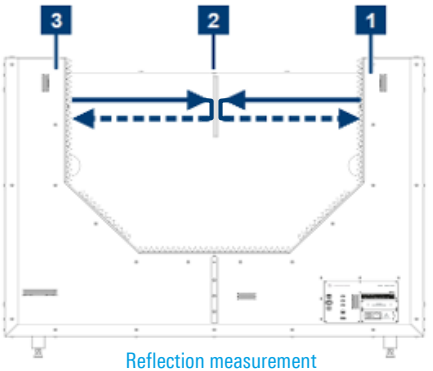
Transmission measurement

1: Cluster 1
2: DUT
3: Cluster 2

Straight line:
Stimulus signal

Dotted line:
Attenuated signal

Dashed line:
Reflected energy



Reflection measurement

1: Cluster 1
2: DUT
3: Cluster 2

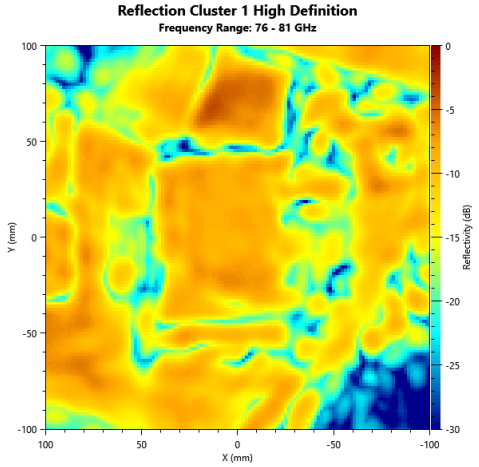
Straight line:
Stimulus signal

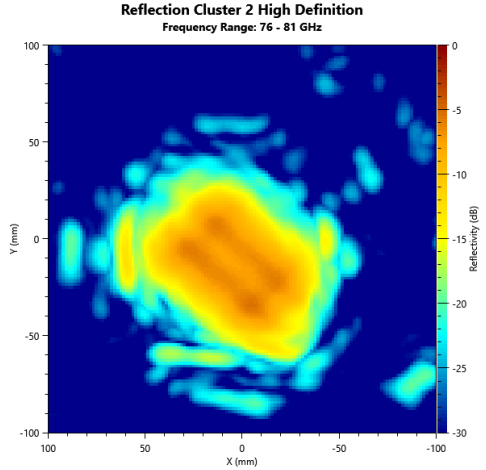
Dashed line:
Reflected energy

Both clusters send a signal that passes through the DUT for transmission measurements. The passage through the DUT attenuates the signal. The attenuated signal is measured by the opposite cluster. The reflection measurement determines the percentage of energy being reflected by the DUT.

The R&S®QAR50 produces spatially resolved reflection DUT measurements by combining information over the 76 GHz to 81 GHz frequency range collected by the distributed transmit and receive antennas in a coherent operation. The resulting millimeter wave images, diagrams and numerical results allow for an intuitive evaluation of the DUT reflection behavior.

Result displays





The resulting reflection image displays the measured levels in different color according to the dB level. The reflected image is evaluated and displayed separately for each cluster. The color range depends on the selected color scheme. A color map next to the image explains which levels correspond to which color.

Step 1: choose your R&S®QAR50 model

Model		
R&S®QAR50 vertical polarization	R&S®QAR50	1343.0099K02 1343.0099.02
R&S®QAR50 horizontal polarization	R&S®QAR50	1343.0099K03 1343.0099.03

Included: All models come with a power cord, a getting started manual and a 1-year warranty

Step 2: choose your software option and accessories

Options		
Frequency response	R&S®QAR50-K10	1343.2091.02
Phase mask	R&S®QAR50-K20	1343.2110.02
HD reflection	R&S®QAR50-K30	1343.2133.02
Accessories		
Verification set	R&S®QAR50-Z44	1343.0082.02

All options can be retrofitted

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