Make our over 12 years of experience in radome evaluation work for you and get in touch with us!

We also offer customer specific solutions for development and End-of-Line testing of design radar covers (e.g. emblems) and complete bumpers.

For more information, please contact our specialists!

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Fax     +49 89 959 277 529
E-Mail  support@perisens.de

More information on www.perisens.de
RMS-D-77/79G

- Material characterization & radar cover (radomes) test
- Measurement of
  - transmission in amplitude and phase
  - relative permittivity and dissipation factor of dielectric materials (plastics, coatings,…)
  - calculation of reflection/absorption
- Future proof: Both automotive radar bands (77/79G)
- Easy to handle: Measurement at a push of a button
- Simulation of transmission, reflection and absorption vs thickness and frequency
- Measurement of samples with small size
- Fast update time allows real time measurement
- Highest accuracy (0.1 dB / 1 deg)
- Comparability with measurements using VNA (Vector Network Analyzer) and RMS-C
- Positioning system for scanning measurements (optional)
- Cost effective solution compared to VNA systems
- Proven technology: worldwide in use by leading paint manufacturers, exterior part suppliers, and OEMs since 2019

RMS-C-A2-77/79G

- End-of-Line (EoL) test of radar covers (radomes)
- Measurement of
  - transmission in amplitude and phase
  - reflection (as software option – in development)
- Future proof: Both automotive radar bands (77/79G)
- Fast measurement time allows test within a few seconds
- Flexible pointwise measurement: Allows to follow the shape of the part in a robot-based setup (measurement vertical to surface in every point of bumper)
- Configurable setup: available with different arm length and polarization
- Highest accuracy (0.1 dB / 1 deg for transmission) and transparent measurement procedure
- Comparability with measurements using VNA (Vector Network Analyzer) and RMS-D
- Flexible integration in production: prepared for robot-based process; remote control by Ethernet and powered with 24 VDC
- Proven technology: worldwide in use for leading automotive OEMs since 2020

<table>
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<tr>
<th>Application</th>
<th>Application field</th>
<th>Automotive radar cover (radome) testing</th>
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<tr>
<td>Laboratory</td>
<td>Frequency range</td>
<td>Production (End-of-Line testing)</td>
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<tr>
<td>76 to 81 GHz (full 77/79G automotive radar bands)</td>
<td>Measured values</td>
<td>76 to 81 GHz (full 77/79G automotive radar bands)</td>
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<tr>
<td>1-way transmission in amplitude and phase relative permittivity and dissipation factor</td>
<td>Measurement accuracy (transmission)</td>
<td>1-way transmission in amplitude and phase reflection in amplitude (optional – in development)</td>
</tr>
<tr>
<td>±0.1 dB / ±1 deg</td>
<td>Dynamic range</td>
<td>±0.1 dB / ±1 deg</td>
</tr>
<tr>
<td>&gt; 40 dB</td>
<td>RF transmit power</td>
<td>&gt; 40 dB</td>
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<tr>
<td>5 mW (harmless according to ICNIRP guideline)</td>
<td>Phase noise at 77 GHz</td>
<td>5 mW (harmless according to ICNIRP guideline)</td>
</tr>
<tr>
<td>-93 dBc/Hz@100 kHz offset, typ.</td>
<td>Power supply</td>
<td>-93 dBc/Hz@100 kHz offset, typ.</td>
</tr>
<tr>
<td>85 – 264 VAC, 47 – 63 Hz</td>
<td>Weight in kg</td>
<td>24 VDC</td>
</tr>
<tr>
<td>45</td>
<td>Dimensions in mm</td>
<td>23</td>
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<tr>
<td>420 x 530 x 815 (W x L x H)</td>
<td>xy scanning option, 30 and 50 mm aperture</td>
<td>380 x 440 x 500-650 (W x L x H)</td>
</tr>
<tr>
<td>Options</td>
<td>xy scanning option, 30 and 50 mm aperture</td>
<td>Options</td>
</tr>
<tr>
<td>50, 100 and 150 mm arm extension, reflection measurement, hor. polarization</td>
<td>xy scanning option, 30 and 50 mm aperture</td>
<td>xy scanning option, 30 and 50 mm aperture</td>
</tr>
</tbody>
</table>

Radome evaluation

Material characterization