SAR (Specific Absorption Rate) Testing with UL

Fast and flexible SAR testing to conform to global RF human exposure limits

As the exponential growth of mobile technology continues, global markets and consumers are becoming increasingly focused on the health and safety impact of products using RF transmitters.
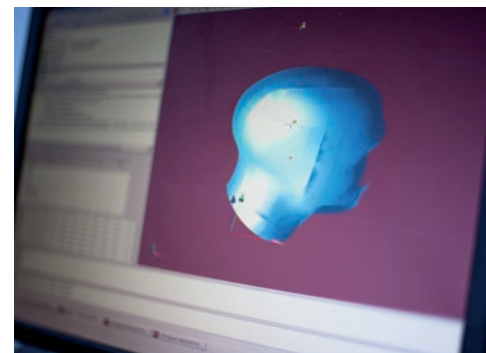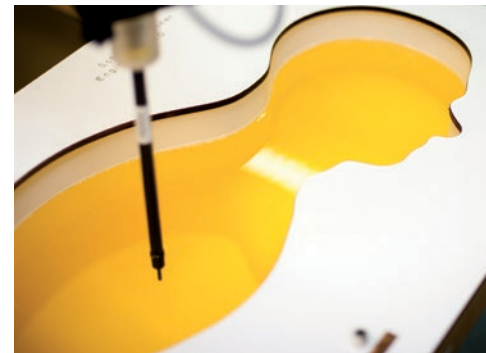
Using state-of-the-art equipment, UL tests to all major SAR standards, offering testing at any stage of development right up to product launch. This helps manufacturers to release products that conform to the legal and market requirements governing RF exposure around the world.

Flexible SAR Testing Services

SAR testing measures the electromagnetic energy absorbed by a human body using a wireless device. With over 10 years' experience in SAR evaluation, UL provides industry leadership in technical advice, project management and conformance testing, to assist manufacturers in complying with mandatory global requirements. Our presence on major technical committees helps to guarantee that we remain up to date with the latest international standards and drafts, including the regular updates applied to the FCC Knowledge Database and Permit-But-Ask (now known as Pre-Approval Guidance) procedures and requirements.

Our global presence provides 25 fully operational SAR testing systems – both DASY and cSAR3D – 13 of them in North America. Proud to boast the latest in SAR testing equipment, UL is able to offer fast SAR and cSAR3D evaluations alongside traditional full compliance testing. These testing additions allow UL to tailor testing to suit manufacturer's needs, at any stage of product development. UL's SAR services include:

Key Drivers	Benefits	Standards/Specifications
Pre-Compliance Testing • cSAR3D fast evaluation – find overall worst case position/mode • DASY evaluation on worst bandwidth	• Immediate test reports, with highest reported SAR • Reduces cost of re-testing full compliance SAR • Indicates compliance readiness	IEC 62311 EN 50360 IEC 62209-1/2 EN 50566 IEEE 1528 FCC KDB Publications RSS-102 Issue 5
Full Compliance Testing • DASY evaluation – starting with worst case mode	• Full compliance SAR test/full test reports with short lead time	

Full Service SAR Testing

UL provides customers with expert technical advice, project management and conformance testing to help ensure that products meet essential market requirements.

We perform SAR testing for all devices used within 20cm of the body, operating below 6 GHz, and requiring CE, FCC, IC and other regulatory approvals. Our comprehensive expertise, based on more than 10 years of experience in SAR testing, helps companies launch RF products quickly, efficiently and cost-effectively.

Pre-compliance SAR Testing with UL

Pre-compliance SAR testing with UL can save you significant time and money by avoiding failures later in the compliance process. SAR testing on traditional systems can take up to 50 minutes per scan. The cSAR3D system takes only 2 seconds per scan, detecting non-compliance with safety limits almost immediately. This means the manufacturer can quickly test adjustments as you go, e.g. alter the power delivered to the antenna and immediately retest for SAR compliance.

Benefits:

- **REASSURANCE**
  Discovery of non-compliance close to product launch can be costly and cause significant delay. Regular testing during development provides the assurance that problems or mistakes can be addressed early in the design stage.

- **FLEXIBILITY**
  Nearly instantaneous measurements allow for easy evaluation of the effect of small design modifications on RF performance. Plus, our qualified test facilities around the world enable UL to provide services in customers' own time zones and languages.

- **COST SAVINGS**
  Internal UL testing has shown that manufacturers could have saved time and money on SAR testing if they had used cSAR3D system testing early in the development stages. Bundling SAR testing together with other testing and certifications is another way UL can help improve your bottom line. Ask us for details.

About UL

UL is a premier global independent safety science company that has championed progress for more than 120 years.

Its nearly 11,000 professionals are guided by the UL mission to promote safe working and living environments for all people. UL uses research and standards to continually advance and meet ever-evolving safety needs. We partner with businesses, manufacturers, trade associations and international regulatory authorities to bring solutions to a more complex global supply chain.

For more information about our certification, testing, inspection, advisory and education services, visit www.UL.com

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