SEREEL2-SPA Single-Photon Absorption

To enable laser Single Event Effects (SEE) testing and to simulate the ionisation tracks of charged particles, ultrashort laser pulses are focussed onto the device under test (DUT).

SPA in SEE testing can be realised based on incident photons having energies larger than the bandgap of the target device. For silicon, photons with wavelengths shorter than 1100 nm will suffice. As photon absorption occurs along the propagation of the laser illumination, frontside testing of DUT is most suitable.

Companies can benefit from our SEREEL2-SPA system to screen DUTs for SEE in your very own facility, thus saving test and travel costs. Once good DUTs are identified, Radtest Ltd can assist you with confirmation testing in our facilities or arrange for heavy ion testing time.

Radtest Ltd will provide installation, training and support after SEREEL2-SPA purchase.

- SEREEL2-SPA delivers varied laser scanning routines through our bespoke control software SEE SIMulation
- Full registration of upsets to die locations
- SEE screening of large numbers of devices for use in hostile radiation environments
- Autofocussing and levelling of DUT
- SPA system provides simple operation, ideal for wire bonded devices
- Spiral scanning for ultimate positional precision for high throughput part screening
- Raster scanning for R&D testing or less speed critical applications
- Fully enclosed for safe operation
- A full warranty is provided
- Non-ITAR

The setup is highly customisable and options include:

- Laser
  - 1030 nm or 1064 nm
  - ps to ns pulse duration
  - pulse energy up to ~1 mJ
- XY stage ranging from 75 mm to 300 mm
  - step size from 0.1 µm to 0.6 µm
- 25 mm vertical lift stage with 0.05 µm step size
- XY piezo stage with 250 µm or 800 µm travel range
- extended warranty is possible with order

For further information please contact **Radtest Ltd**
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