NANIUM presents WLCSP with three metal layers

Vila do Conde, Porto, Portugal – 27th October 2015 – NANIUM S.A., a leading provider of advanced semiconductor packaging, today announced that it has successfully qualified a Wafer-Level Chip Scale Package (WLCSP) solution with two redistribution layers (RDL) and an Under Bump Metallization (UBM) for high volume manufacturing. The innovative package, designed and manufactured for products in the mobile market, is the outcome of a co-development partnership between NANIUM and one of its customers.

“From the moment we started to collaborate in the product conception, we knew that building up additional metal layers would be challenging because of the new WLP technology features to be developed and qualified”, explained Paula Gomes, NANIUM’s responsible product project manager. “Enabling multi-layer RDL plus UBM based on NANIUM’s Low Temperature Cure Polyimide dielectric material, which allows for higher reliability, implied extensive development work in terms of design and materials. We could not be more proud when the product successfully passed all required JEDEC reliability tests, and thus became qualified within a development time of less than 12 months including all reliability tests.”

With a final package dimension of 4.9 x 4.6 mm², the qualified product relies on a line/space width down to 10μm/10μm. The demanding lithographic process implied the application of 6 masks, which NANIUM successfully enabled.

“We are glad to have extended the WLCSP process, allowing the processing of products of greater complexity” stated José Campos, NANIUM’s senior packaging development manager. “Enabling multi-layer RDL is a remarkable development that will widen the spectrum for WLCSP applications to encompass also solutions requiring shielding, ground and power-planes”.

WLCSP is a Fan-In WLP technology that offers the highest electrical/thermal performance, as well as the smallest package form-factor possible in the semiconductor packaging industry. It enables low-cost manufacturing for product applications such as Mobile and Consumer products, Wireless connectivity, MEMS and Sensors.

About NANIUM

NANIUM (www.nanium.com) is an outsourced semiconductor packaging, assembly and test provider, and a world-leader in 300mm Wafer-Level Packaging. The company provides Wafer-Level Chip Scale Packaging (WLCSP) and was among the first in the world to offer Wafer-Level Fan-Out (WLFO) packaging in high volume manufacturing. Nowadays, NANIUM stands as a leader in WLFO,
a technology that combines minimal form-factor with superior performance, high integration density, and maximum reliability. To date, NANIUM has shipped over 550 million WLFO packages.

NANIUM delivers world-class services and always customizes them according to the customers’ needs. In this way, its WLFO embedded integration solutions range from single to multi-die, system-in-package and package-on-package with passives integration, and serve markets such as mobile communication, medical, security, wearables and automotive radars, to name a few. The company is acknowledged for its proficiency in advanced packaging and known for its portfolio of innovative solutions, which includes the largest WLCSP in the world or the most compact WLFO Multi-Chip Module in the medical market.

Based in Portugal, NANIUM’s facilities include over 20,000 m² of cleanroom area. The company offers in-house capabilities for the entire development chain, from design to the flexibility to tailor and test solutions. NANIUM has sales offices in Dresden, Germany, and Boston, USA.

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