EOTPR5000

- A Game Changer in Advanced IC Package Inspection

TeraView, the pioneer and leader in terahertz technology and solutions (http://www.teraview.com/) is pleased to introduce our fully automated integrated circuit (IC) package inspection system, the EOTPR 5000. Building on the success of the EOTPR 2000 which has an established track record in the industry for rapid fault isolation and manual inspection, the EOTPR 5000 is a fully automated advanced IC package inspection system that utilizes TeraView's proprietary EOTPR terahertz technology to detect weak or marginal interconnect quality in high volume manufacturing environments, which no other technology can detect today.

Today's advanced IC packages are susceptible to a variety of faults and quality variations, including solder ball defects such as head-in-pillow failures in Package on-Package (PoP) or 2.5/3D packages. These weak or marginal interconnect conditions may not be captured by logic or electrical testers even if there is a good electrical continuity present. However, due to the EOTPR 5000's superior accuracy and sensitivity, users can now detect minute shifts in impedance changes from weak or marginal interconnects after accelerated life tests or high temperature cycle tests. The same principle applies to the detection and reduction of manufacturing variations to improve packaging-related yield, since the complexity of the advanced IC packages is increasing while the features sizes are decreasing. The goal of the EOTPR 5000 is to improve yield and reliability of today's advanced IC packages.

The EOTPR 5000 is truly a one-of-a-kind interconnect quality inspection tool for advanced IC packaging technology in high volume manufacturing environment. No other tool can inspect and detect like the EOTPR 5000.

Dr. Don Arnone, TeraView CEO commented, "We are excited not only for TeraView, but also for the entire terahertz industry to announce the launch of the EOTPR 5000. This product will be the first terahertz system ever to be deployed in a mass production environment. It will be deployed to detect weak or marginal interconnects in the advanced IC packages which no other testers or inspection equipment can detect. This is a truly revolutionary inspection system for the world's leading IC manufacturers and OSATS."

According to Martin Igarashi, VP of TeraView's Semiconductor Business, "Until the EOTPR 5000'sarrival, IC manufacturers did not have100% confidence in a so-called "golden device" or "known good device or KGD". How would you know that your golden device is truly golden? But with the EOTPR 5000, combined with other existing inspection methods, IC manufacturers now can breathe a sigh of relief that their devices are reliable, and when their devices are put in their customers' smart phones or tablet devices, their confidence level should be significantly higher because of the EOTPR5000. We are starting beta testing of the EOTPR 5000 at a major IC manufacturer's site in Asia shortly to demonstrate that this product meets the rigor of the 24x7 IC manufacturing environments. This product will be available for customers in early 2017."

About Terahertz

Terahertz light lies between infra-red and microwaves, and as such has unique properties

whichenablesittopassthroughobjectsandtotransmitimagesandcompositional (spectroscopic) information that is ordinarily hidden. Terahertz is non destructive, safe and fast, making it the ideal inspection and imaging modality for many applications across a range of industries.

TeraView has demonstrated the potential of terahertz technology in a number of applications including the detection of hidden weapons and explosives in security screening, monitoring the quality of pharmaceutical drugs, high value coatings used in automotive and other industries, as well as medical imaging of cancer. In the semiconductor industry, Electro Optical Terahertz Pulse Reflectometry (EOTPR) is the world's first use of terahertz to isolate the location of faults and manufacturing quality variations in integrated circuit packaging. EOTPR has been widely accepted by the leading semiconductor manufacturers as their tool of choice for non-destructively isolating defects in advanced integrated circuit packages.

About TeraView (www.teraview.com)

TeraView (www.teraview.com) is the world's first and leading company solely focused upon the application of terahertz light to provide solutions to customer issues. A spin out from the Toshiba Corporation and Cambridge University, TeraView has developed its proprietary technology across a number of markets. These include fault analysis and quality assurance for semiconductor chips used in mobile computing and communications, as well as non destructive inspection of high value coatings used in the automotive, pharmaceutical, food and solar industries. With the largest number of systems in the field, as well as applications know-how made available to customers via a team of dedicated scientists using intellectual property and knowledge in peer-reviewed scientific publications, TeraView is uniquely placed to deliver the business benefits of terahertz to customers. Headquartered in Cambridge UK, sales and customer support are available throughout the Far East, North America and Europe either directly or through a network of distributors.

About ACE Solution (www.acesolution.com.tw)

TeraView

The mission of ACE Solution is customer oriented. We focus on the RF electrical market with the strong technical supporting. ACE Solution provides the professional, innovative, passionate, multi-function integrating technique and solutions. In order to enhance the product quality, improve the yield rate and to increase Time to Market (TTM) / Time to Volume (TTV) for the customers of electrical component, device, and the system manufacture, we need to provide the products and service to achieve the expectation of customers.

Steve Hsu, CEO of ACE Solution, said "EOTPR 5000 can provide good repeatability and reliability for IC Manufacture in Advanced Package Devices for Quality Control and Yield Improvement."

