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FOR IMMEDIATE RELEASE

Practical Components Adds Casio Micronics W-CSP Wafer Scale Technology to Dummy Component Lineup

LOS ALAMITOS, CA — October 2010 — Practical Components has added the Casio Micronics WLP <u>Wafer Chip</u> Size <u>Package</u> (W-CSP) to its comprehensive line of dummy components. The W-CSP is a miniature package, suitable for installation in surface mount technology (SMT).

W-CSP is a new technology for semiconductor devices that enables rerouting of the copper traces and encapsulation of the chips in epoxy resin while the wafer is intact. W-CSP can be differentiated from other IC packages by its unique production method that all the W-CSP packaging processes are carried out on a single silicon wafer. Aluminum pads are interconnected by Cu redistribution wirings to Cu posts. Epoxy resin is filled to protect the structure. Solder bumps (both eutectic and lead-free) are applied on the Cu posts. There is an increasing demand for electronics products that are more compact and offer a high level of performance, and WLP technology is ideal for applications such as mobile phones and digital cameras. Additionally, W-CSP has been adopted for new classes of devices such as power MOSFETs to enable their use in miniaturized equipment.

Benefits of W-CSP are many and include the following:

• Reduced form factor (Small footprint: 1/4 compared to QFP, reduced package height: less than 0.65 mm/LGA, less than 0.80 mm/BGA)

• Conventional SMT chip bonders can be used for mounting W-CSPs on the PCB

• Cost benefit can be obtained if high yield and small size ICs are processed because the process cost is wafer-dependent.

"The new Practical Components W-CSP dummy component will help users to learn and assemble with this exciting new product," said Kevin Laphen, President of Practical Components. "We are excited to welcome Casio to the world-class producers that make Practical Components the leader in dummy components."

Practical Components' products are designed to help engineers qualify their technology, and train and grow their business while significantly reducing costs. Laphen added, "Our dummy products are selected with care to be the finest 'factory quality' components and test boards and kits that simulate real-world production. Special attention is given to lead-free availability and formulations including all the various SAC formulations."

Dummy components are exact mechanical equivalents of live components used only when the physical properties of the components are required. These components can cost as much as 80 percent less than live components, making them ideal for testing of solder processes, machine setup and other process evaluations.

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About Practical Components

Practical Components is the world's leading supplier of dummy components and test boards, which are exact mechanical equivalents of live components, used when only the physical properties of the components or boards are required. These components and boards are ideal for testing of solder processes, machine setup, thermal, CPK, drop test and other process evaluations. Practical Components is headquartered in Los Alamitos, CA with distributors worldwide. For more information, visit www.practicalcomponents.com.

About Casio Micronics

CASIO MICRONICS technology helps bring the convenience of cell phones and flat panel displays to people worldwide. Under the slogan "Smart & Fine Technologies," the company remains committed to unrelenting innovation and development of new products and processes, including original fine processing techniques that work at thicknesses finer than a strand of hair. Everything CASIO MICRONICS does is undertaken with a goal of improving its products and services.