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FOR IMMEDIATE RELEASE

Triple Stack Package on Package and 15mm Dummy PoP Packages

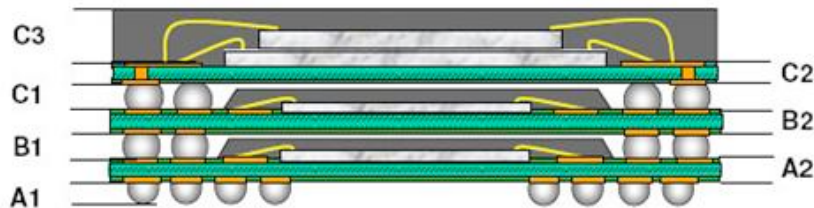
Practical Components® is the exclusive supplier of Amkor Technology Dummy Components. Amkor offers the industry's broadest array of package formats and sizes, from traditional, "off-the-shelf" leadframe configurations to leading-edge chip scale, flip chip and system-in-package solutions incorporating highly customized designs. This allows Amkor to be a single source for many of our customers' total IC packaging requirements.

Practical Components is the worlds leading supplier of Dummy Components (mechanical samples), Test Boards and Training Kits.

Practical Dummy Components now has availability of a dummy version of the Amkor® middle stacked package that makes a Triple Stack PoP package (PSvfBGA). After the success of the Amkor® double stack PoP we have added a Package (POP) 12x12mm, 0.65mm to pitch Stacked Daisy Chain to make a 3 Package Stacking.

The Practical Dummy Component version is identical to the live package without the expensive die inside. PoP provides OEMs and EMS providers with a platform to cost effectively expand options for logic & memory 3D integration with the following benefits:

- Greatly expands device options by simplifying the business logistics of stacking
- Integration controlled at the system level to best match stacked combinations with system requirements
- JEDEC standards ensure broad component availability
- Eliminates margin stacking and expands technology reuse
- Helps manage the huge cost impacts associated with increasing demand for multi-media processing and memory
- Logic device transitions to flip chip in the bottom package enables further PoP size and height reductions



Symbol	unit	Min	Nom	Max
A1 (Ball, 0.5 pitch)	mm	0.180	0.230	0.280
A2 (4L laminate)	mm	0.260	0.300	0.340
B1 (Ball, 0.65 pitch)	mm	0.270	0.300	0.330
B2 (2L laminate)	mm	0.180	0.210	0.240
C1 (Ball, 0.65 pitch)	mm	0.270	0.300	0.330
C2 (2L laminate)	mm	0.180	0.210	0.240
C3 (Mold cap)	mm	0.420	0.450	0.480
Overall Pkg height	mm	1.907	2.000	2.093

About Practical Components

Practical Components is the worlds leading supplier of dummy components, which are exact mechanical equivalents of live components, used when only the physical properties of the components are required. These components can cost as much as 80% less than live components making the ideal for testing of solder processes, machine setup and other process evaluations. The new publication provides a detailed offering of Practical Components' full line of dummy components, test boards, training kits, production tools and training materials.

