Amkor’s ChipArray Ball Grid Array (CABGA) laminate based packages are compatible with SMT mounting processes worldwide. The near chip size CABGA fine-pitch BGA (FBGA) offers a broad selection of ball array pitches (≥0.3 mm pitch), ball counts and body sizes (1.5 mm to 27 mm body), single and multi-die layouts, stacked die (1-16) and passive component integration.

Thin core laminate (2 to 6 metal layer) from the strongest supply chain in the industry, ultra-thin mold cap thickness and Si thinning to 50 µm enable next generation tablets, smartphones, game controllers, digital and video cameras and remote devices.

Advances in substrate surface finishes and routing techniques reduce gold costs while improving electrical and board level reliability performance. Innovative thermal package structures offer cost competitive solutions for the most challenging thermal management needs.

Applications

The ChipArray package family is applicable for a wide range of semiconductors from high end FPGAs, ASICS to memory, analog, RF devices, MCUs and simple PLDs requiring a package size smaller than conventional PBGAs or leadframe packages. ChipArray packages fill the need for the low cost, minimum space, high performance and reliability requirements of mobile and gaming devices, notebooks, personal computers, networking, automotive and industrial applications.

Thermal Performance (Standard BOM)

<table>
<thead>
<tr>
<th>Body Size (mm)</th>
<th>ΘJA at 1.0W and 0 Airflow (°C/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LFBGA</td>
</tr>
<tr>
<td>8 x 8</td>
<td>37.28</td>
</tr>
<tr>
<td>10 x 10</td>
<td>29.86</td>
</tr>
<tr>
<td>15 x 15</td>
<td>20.1</td>
</tr>
<tr>
<td>19 x 19</td>
<td>17.04</td>
</tr>
</tbody>
</table>

Reliability Qualification

Amkor assures reliable performance by continuously monitoring key indices:

- Moisture Sensitivity Characterization: JEDEC Level 3 @ 260°C L2 & L1 achievable in some structures/BOMs*
  85°C/85% RH, 168 hours
- HAST: 130°C/85% RH, 96 hours
- Temp/Humidity: 85°C/85% RH, 1000 hours
- Temperature Cycle: -55°C/+125°C, 1000 cycles
- High Temperature Storage: 150°C, 1000 hours
- Automotive AEC-Q100 Grade 0 reliability available**

*Contact Amkor for additional information
**Board level reliability available
With respect to the information in this document, Amkor makes no guarantee or warranty of its accuracy or that the use of such information will not infringe upon the intellectual rights of third parties. Amkor shall not be responsible for any loss or damage of whatever nature resulting from the use of, or reliance upon it and no patent or other license is implied hereby. This document does not in any way extend or modify Amkor’s warranty on any product beyond that set forth in its standard terms and conditions of sale. Amkor reserves the right to make changes in its product and specifications at any time and without notice. The Amkor name and logo are registered trademarks of Amkor Technology, Inc. All other trademarks mentioned are property of their respective companies. © 2019 Amkor Technology Incorporated. All Rights Reserved. DS550V  Rev Date: 6/19

Visit amkor.com or email sales@amkor.com for more information.