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Device embedding assembly technology – Part 2-8: Guidelines – Warpage control of active device embedded substrate

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DEVICE EMBEDDING ASSEMBLY TECHNOLOGY –

Part 2-8: Guidelines – Warpage control of active device embedded substrate

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Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 62878 series, published under the general title *Device embedding assembly technology*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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DEVICE EMBEDDING ASSEMBLY TECHNOLOGY –

Part 2-8: Guidelines – Warpage control of active device embedded substrate

1 Scope

This part of IEC 62878 describes a warpage control of active device embedded substrate along with parameters for determining warpage, which are useful during package assembly. Warpage results are explained using warpage driving force, resistance and neutral axis, for typical die embedded substrate, where the discrete active dies are placed in the core of substrate and interconnected to the substrate by direct Cu bonding. The same principles are applicable in other device embedded substrates. Even though the detailed structure of other device embedded substrates might be different, the origin and determination of the parameters of warpage are the same and thus the purpose of this report is to help engineers improve the warpage behaviours of their products by applying this principle.

2 Normative references

IEC 60194 (all parts), *Printed boards design, manufacture and assembly – Vocabulary*