

Implantable Medical Electronics: A compelling case for 3D system integration.

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Technical Abstract:

Applications enabled by 'More than Moore' system integration continue to develop in the larger electronics marketplace. However, widespread adoption requires that either new or existing applications be enabled in a compelling way in order to displace established high volume production approaches. Implantable medical electronics applications offer both elements of a complete electronic system (sensing, processing, communication, energy) and one where miniaturization offered by 3D system integration can offer real benefits towards enhanced therapies. As such, they are well positioned to be a leading adopter of this type of system integration. However, substantial challenges remain in that these markets remain low volume with long development and regulatory cycle times with increasingly high expectations for reliability and cost reduction that must be addressed as part of a comprehensive approach to making these systems a reality in the marketplace.