

# **Stacked MLCC Components PME and BME Options for Space Military Grade Applications**

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Space grade PME components have been used across many high reliability platforms for Military, Space and Aerospace applications for over 30 years. Traditional PME Stacked Capacitors has been the dominant technology utilized within the various QPL's across the major projects/ customers in the USA and Europe i.e., the DLA and ESA plus many Aerospace applications. This paper will review the PME product technology and design concepts and do a comparison with the developing BME options.

The BME stacked capacitors have also been in use for many applications both in the USA and Europe over a timescale of around 10 years plus. They generally have a different format of stack construction and different chip insert sizes compared to the PME MLCC versions. This BME range of capacitors is being further developed for full Space QPL approval and this paper will share some of the evolving design and manufacturing concepts to be used in their construction to deliver a higher capacitance in a smaller stacked component package size.