Low Inductance Bulk Capacitors

Ron Demcko, ron.demcko@kyocera-avx.com
Allen Mayar, allen.mayar@kyocera-avx.com
Daniel West, Daniel.west@kyocera-avx.com
Joe Hock, Joe-Hock@Kyocera-avx.com

Kyocera-AVX
1 AVX Boulevard
Fountain Inn, S.C., USA 29644

The importance of Low Inductance Capacitors in advanced circuitry is growing rapidly due to the parts ability to help deliver high quality power to loads with high di/dt needs.
In addition to their power quality promise, Low Inductance Capacitors can potentially reduce systems weight & size as well as simplify layout and design.
This paper reviews the present state of low inductance ceramic capacitors and introduces the concept of a Low Inductance Bulk Capacitor (LIBC) based upon non-ceramic material systems. A complete discussion of LIBC technology ranging from electrical and environmental performance is given. Several comparisons of LIBC technology are given relative to existing solutions. End circuit performance impacts are shown.