

ESS Vibration Failure of a COTS Power Supply

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COTS components and assemblies offer several benefits including market availability, volume production cost savings and performance advantages when developed and manufactured by companies with core competencies in various technology sectors. The challenge in integrating COTS is not just ensuring it can operate in the intended environment but that the system design can be tolerant of material and process variances often found in high volume COTS devices. This presentation will focus on an environmental test failure of a COTS Power supply. In this instance the power supply subjected to transportation qualification testing was found to be a used asset, complicating the failure analysis. We will review the general construction and ruggedized mechanical characteristics of the assembly, then review the physical analyses utilized to determine the root cause of the failure.