

COTS Developments in Hi-Rel Applications

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Satellite and hi-rel power supplies have changed over the last few years. It is becoming more common to adopt the use of commercial, non-vetted parts in hi-rel applications such as mission critical and space applications. It is common for designers to choose magnetics in favor of product availability from online distributors, potentially sacrificing reliability, integrity of sources, and misapplication of intended use of the component. This discussion will focus on upscreening techniques, pitfalls, failure modes and resolution. We will delve into the use and application of automotive grade parts vs MIL STD 981 techniques and the reasons behind each. COTS and HI-REL parts have a place in these applications. It is critical to success to understand where to use these parts, why to use them and to follow guidelines to select manufacturers with the appropriate systems in place to support the needs of the industry. This paper will focus on magnetics with references to other components.