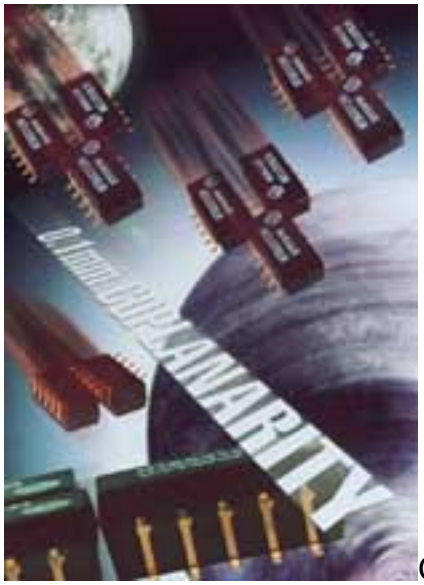
IC-Style DC-DC Converters



C&D Technologies (NCL) has expanded its family of IC-style DC-DC converters by launching two miniature, 3.3 V input, dual-output parts that provide extended temperature operation and improved reliability while saving board space and simplifying final assembly.

Ideal for low-voltage applications where analogue circuits need to be combined with the latest low-voltage processor technologies, the new 3.3 V-input NTA DC-DC converters are surface mount devices with footprints of just 1.64 cm^2 and dual isolated outputs of either 12 or 15 V. The converters are fully compliant with the CECC00802 standard for reflow soldering at 280&#176C, which allows them to be mounted at the same time as conventional ICs. This significantly simplifies final assembly by eliminating the need for additional mounting and solder processes. Component count is reduced and assembly is further simplified by the fact that the converters can deliver full specification performance at between -40&#176C and 85&#176C without the need for a heatsink or other external components.

C&D Technologies' NTA DC-DC converters are based on advanced transfer molding techniques and the latest lead frame technology. Each device combines multi-layer ceramic capacitors with an internal SMD construction, resulting in optimum reliability levels and a rated mean time to failure (MTTF) up to 1.69 million hours. In addition, a toroidal magnetics construction helps designers to address EMC requirements by minimizing radiated noise during operation.

The new converters feature 1k VDC isolation between input and output and allow any distribution of load across the dual outputs providing the total does not exceed 1 W. Load regulation is typically 11%, while typical ripple current for the devices is 41 mA peak-to-peak. Packaged in UL 94V-0 material, the new NTA DC-DC converters are available in tape-and-reel format and have pin co-planarity.

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