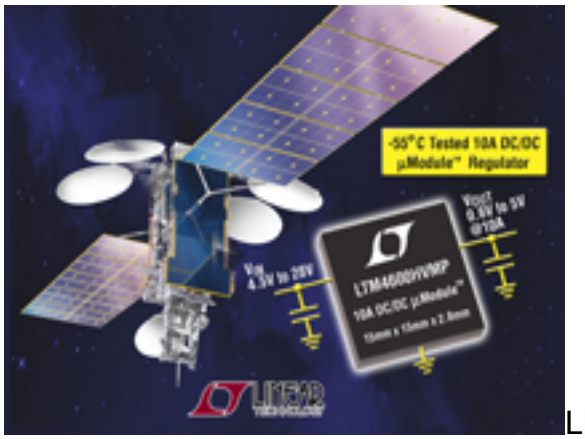
Encapsulated 10A DC/DC Switching DC/DC Regulator System for Military Applications



Linear Technology's LTM4600HVMPV is a complete and encapsulated 10A switching DC/DC regulator system and the first device in a new family of uModule (micromodule) DC/DC regulators for rugged military and avionics applications. The device is fully tested over the temperature range of -55°C to 125°C, and it is offered in a 15 mm x 15 mm x 2.8 mm Military Plastic LGA (Land Grid Array) package. Comprised entirely of Linear Technology silicon and supported by the company's in-house testing, the LTM4600HVMPV is suited for demanding applications such as military and aerospace systems. This synchronous switchmode DC/DC step-down regulator includes a built-in inductor, supporting power components and compensation circuitry. The device operates from an input supply range of 4.5V to 28V and regulates an output voltage from 0.6V to 5V. This DC/DC uModule regulator can provide 10A continuous load current (14A peak) and achieve efficiencies as high as 92 percent. A DC/DC uModule regulator such as the LTM4600HVMPV is said to simplify power supply design and construction, requiring only input and output bulk capacitors and a resistor to set the output voltage. The LTM4600HVMPV DC/DC regulator weighs 1.7g and is housed in a surface-mount package that can be handled and assembled like a standard integrated circuit. Its low profile design permits the device to be soldered onto the back side of a PCB. The LTM4600HVMPV is self-protected against output overvoltage and short circuit conditions. 1,000-piece pricing starts at $36.95 each.

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