

Isolated DC-DC Converters Deliver High Efficiency For Mil/Aerospace Applications

[Modular Devices](#) has introduced a series of isolated 2-W and 6-W dc-dc converters offering high efficiency for demanding military and aerospace applications. According to the company, each of the four models in this series feature efficiency that is higher than competitive units.

Requiring no external components, these converters employ magnetic feedback (eliminating optocouplers) and feature an input ripple current inductor and output common-mode spike filter. Built-in protection features include inhibit-not function, power-on soft start and short circuit protection. All four models in this series are available in single-and dual-voltage outputs.

The Model 3715, also known as the "MINI," is a 2-W dc-dc converter that operates from a 28-V nom. input, which corresponds to an input range of 12 to 50 V continuous or 15 to 50 V for full power output. The Mini has a footprint of 0.8 in. x 0.975 in. With a 28-V input, typical efficiency for a single output device is 70% at 3.3 V, 74% at 5 V, 78% at 12 V, 79% at 15 V, and 79% at 28 V.

Operating over the same input range as the Mini, is the Model 3716, which is also known as the "FLATSO." This is a 6-W dc-dc converter in a 1.080 in. x 1.080 in. footprint. With a 28-V input, typical efficiency for a single output device is 74% at 3.3 V, 77% at 5 V, 81% at 12 V, 83% at 15 V, 83% at 28 V, 81% at 48 V, 80% at 100 V, and 74% at 200 V.

Another 2-W dc-dc converter is the Model 3717, which targets vehicle and UAV applications. The 3717 has a wide, 9- to 50-V input range and a similar footprint to the other 2-W converter, the 3715.

Similarly, the Model 3718 is another 6-W dc-dc converter, which also targets vehicle and UAV applications with its 9-V to 50-V input range. Like the other 6-W converter, this 3716, the 3718 also has a 1.080-in. x 1.080-in. footprint.

These models are available in industrial, military and extended temp grades in either solder sealed or seam welded flangeless PCB mount packages. These converters can be used with the Model 3723 EMI filter for MIL-STD 461 requirements. For more information, see www.mdipower.com.

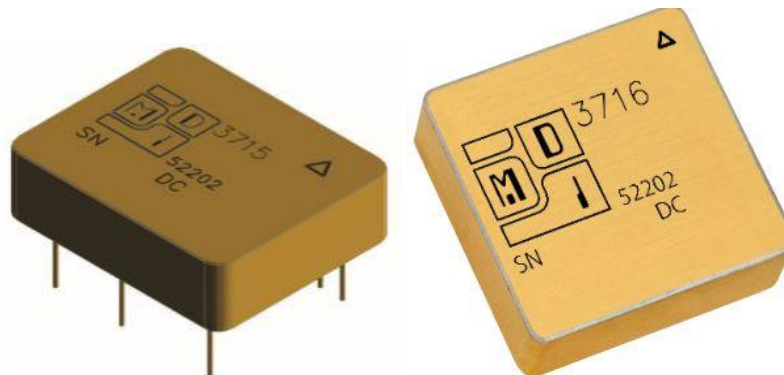


Figure. A series of isolated 2-W and 6-W dc-dc converters targeting demanding military and aerospace applications, the Models 3715, 3716, 3717 and 3718, operate from 28-V nominal inputs with input voltage ranges as wide as 9 to 50 V. Requiring no external components, these converters employ magnetic feedback (eliminating optocouplers) and feature an input ripple current inductor and output common-mode spike filter.