Switching Power Converters

<u>Impellimax</u>



Shown at left is a pre-production power converter designed and constructed by Impellimax. Hybrid circuits, power magnetics, surface mount, and microcontroller technologies were used, to meet customer specifications in a compact design.

The unit shown above uses a microcontroller which is programmed to run a Buck / Boost power converter and provide three sequenced, filtered outputs under demanding automotive conditions. The unit provides up to 80 Watts of output power with high efficiency. This assembly is indicative of the wide range of technologies that we can bring to bear, even on short-run "special" power conversion requirements.

Although we have produced other power converters using more standard methodologies, we also have the freedom to use our proprietary technology which is currently patent-pending. This new technology allows us to create elegant switching power converters that are well suited for high-radiation environments. This technology is also available for use by license.

We can design and build to commercial, industrial, or military specifications, and we have the capability to migrate most designs from one screening level to another, as specifications and requirements change. Hermetic packaging of critical semiconductors can be incorporated.

In addition to our patent-pending high-radiation technology, our proprietary buck / boost pulse modulation technology is well suited to digital control and applications with widely-varying input supply voltages. This technology also provides us with the capability for generating dual-polarity outputs with a minimum of magnetic devices.

Miscellaneous