



**Radar Transmitters**



**Advanced RF Systems**



**Power Converters**

## **PowerMod™** High Voltage Power Supplies

### **Systems in Action**



**Free-standing 50 kV, 200 kW switching power supply.** Enclosure is 24" w x 36" d x 60" h.

PowerMod™ high voltage power supplies offer advanced high voltage power conditioning for demanding research and manufacturing applications. DTI incorporates the latest advances in solid-state switching technology into efficient and compact designs. High efficiency and a small footprint allow DTI power supplies to significantly reduce facility and cooling costs.

PowerMod™ high voltage power supplies are ideal for applications such as magnetron heating, lasers, electron beams, and RF transmitters. They offer typical voltage regulation to  $\pm 0.1\%$  and maximum voltage ripple of  $<0.1\%$ . Regulation to  $0.01\%$  and ripple  $<.001\%$  are available, if required. Supplies are available up to 300 kW average power, at voltages up to 200 kV, and can be paralleled for higher output power.

When combined with a DTI solid-state switch, the power supply system offers very fast response to arcs, limiting arc energy while the power supply remains at full voltage. Power can be restored immediately after the arc clears, or, if the arc clears quickly enough, operation will continue uninterrupted.

DTI power supplies use front panel controls and rear panel connectors that enable running under full local or remote control with internal overcurrent, overvoltage, and fault protection. All control systems are fully isolated from the EM effects of high voltage switching via noise-immune fiber-optic interfaces. Component inputs and outputs are fully protected against overvoltages, fast transients, and short circuits.

#### **PowerMod™ Power Supplies**

Model	Maximum Voltage	Avg. Power
HVPS 100	5 kV - 200 kV	100 kW
HVPS 200		200 kW
HVPS 300		300 kW



**Eight 200 kW shipboard DTI PowerMod™ Power Supplies** and 480 VAC power distribution as installed for the Cobra Judy S-Band Phased Array Modernization.



All PowerMod™ power supplies are available in custom configurations to meet your specific system requirements. Integrate your PowerMod™ power supply with a DTI PowerMod Pulse Modulator for the best choice in complete pulse power systems.



**Custom DTI 400 kV, 400 mA  
DC Power Supply.**



**PowerMod™ Compact Power Supply.**  
Providing similar average power as the free-standing supply, this supply was optimized for an order of magnitude increase in power density.

## Diversified Technologies, Inc.

Drawing on decades of experience and expertise with high power technologies in applications ranging from radar transmitters to particle accelerators, DTI produces systems recognized globally for:

- Efficiency. >93%, depending on the load.
- Durability. Rugged design for years of reliable operation.
- Safety. Redundant failsafes and fast over-voltage and over-current protection of the load.
- Compatibility. DTI's systems are fully customizable to fit a customer's need and seamlessly integrate into existing systems.



**Located in Greater Boston,** DTI employs a dynamic team of electrical, mechanical, and aeronautical engineers, physicists, and system analysts with decades of experience designing and developing multi-megawatt solid-state power supplies, modulators, and advanced military radar systems.

