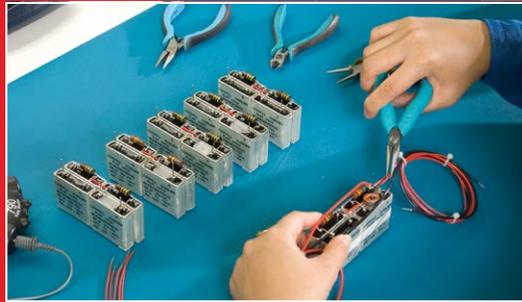


NOISE: 26.1  
ELEV: 0.75

# Specialized Contract Manufacturing for High-Voltage, High-Power Products.



**dB Control delivers.**

SCALE: 1KM/PXL  
50KM |



- Mechanical & Electromechanical Assembly
- Full Vacuum Encapsulation
- Conformal Coating
- High- & Low-Voltage Transformer Winding & Testing
- Custom Cabling & Harnesses
- Environmental Stress Screening (ESS)



### Assembly and Test of Complex, High-Voltage Products is our Specialty

No matter how stringent your specifications, we know how to solve your assembly and test challenges and improve manufacturability for your high-voltage, high-power products. That's because for 30 years we've designed and manufactured mission-critical (often sole source) products for the US Army, Navy and Air Force, as well as for major defense contractors, commercial manufacturers and military organizations worldwide. And we do it with one of the best on-time delivery rates in the industry.

### Potting, Encapsulation, Conformal Coating Reduces Size, Increases Reliability

Potting, encapsulation and conformal coating are critical processes which enable high-voltage components to be located in close proximity to each other. These processes increase efficiency by significantly reducing the size of a power supply. For example, every ten kilovolts requires approximately an inch of air space between components to prevent arcing. Without this space, unprotected components can cause system failures. Potting reduces this isolation space down to approximately one-tenth of an inch, enabling a 20 kV power supply with approximately 30 isolated components to fit in a shoe box instead of a 10x10x10-foot packing crate.

Additionally, potting and conformal coating helps protect components from exposure to elements such as dust, moisture and extreme temperatures.

High Complexity Products	Specialized Service
High-voltage transformers for military and commercial TWT Amplifiers	Winding, encapsulation, hi-potting and test
High-voltage power supplies for military and commercial TWT Amplifiers	Assembly, value-added assembly, encapsulation, conformal coating and test
High- and low-voltage power supplies for industrial X-ray equipment and various medical equipment	Assembly, encapsulation and test
High-voltage connectors and cables	Assembly, encapsulation, hi-potting and test

Another benefit is defense against shock, vibration and corrosive substances. Our proprietary conformal coating process uses silicone instead of polyurethane because higher glass transition temperature (Tg) potting compounds can fracture solder bonds as they harden and shrink at decreased temperatures.

Our ability to consistently encapsulate hundreds of high-voltage components to the exact same specifications is unmatched in the industry. In addition, our services have helped other companies improve low-yield issues and increase the reliability of their products.

### Assembling Tightly Packaged High-Voltage Circuitry

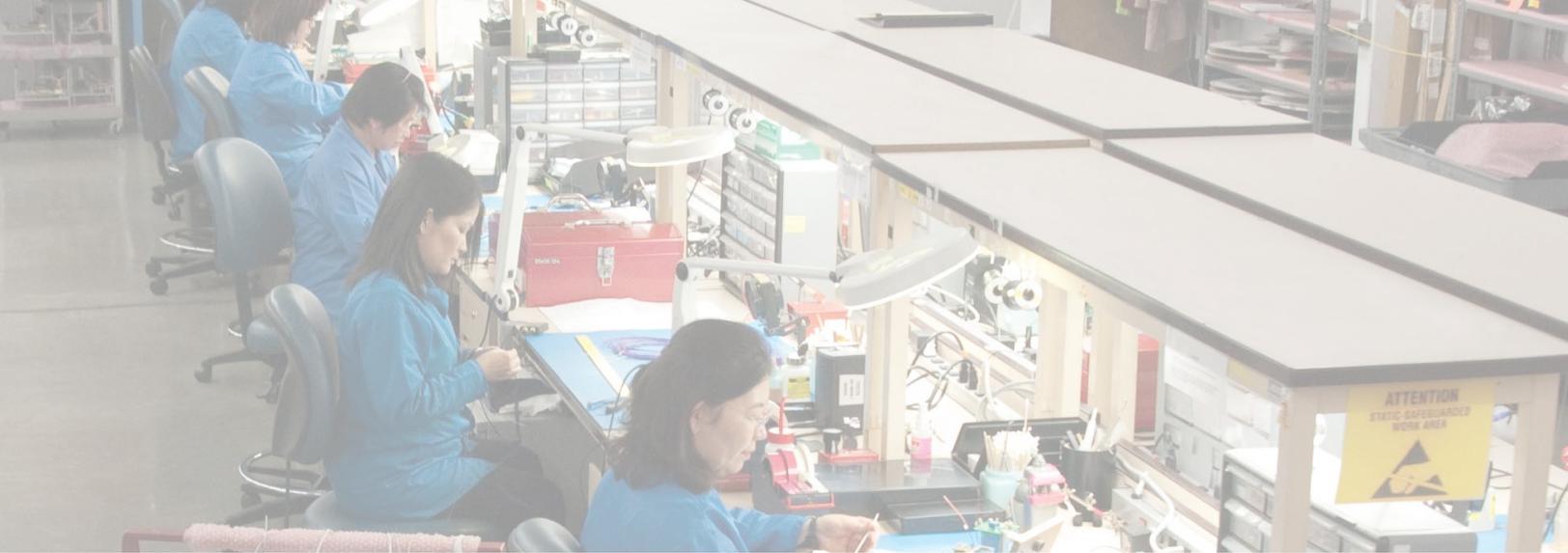
A typical high-power product can have more than 30 components tightly packed into a very small space. Add high-voltage circuitry, and assembly requires surgical precision. Our assemblers are high-voltage specialists and part of a highly trained team. Most have been with us for at least five years and many for more than a decade.

All assembly services are performed onsite in our 40,000-square-foot facility, conveniently located at the north end of Silicon Valley in Fremont, California – just minutes from the San Jose International Airport.

### Extensive Customized Testing Ensures Reliability

When it comes to systems used for applications where lives are at stake, reliability is non-negotiable. That's why we developed extensive test capabilities that give us complete control over the processes – and also offer automated 24-hour test cycling to reduce processing time and labor costs. Not only are we highly meticulous when testing your assemblies, we can also customize test services to meet your needs.

For instance, if your assembly has temperature and altitude specifications, we can program our environmental test chambers for your specific requirements, and accommodate enclosures from small airborne to large rack-mount assemblies.



## Assembly Services

- Mechanical and electromechanical assembly
- Full vacuum encapsulation
- Conformal coating
- High- and low-voltage transformer winding and testing
- Custom cabling and harnesses
- High-voltage ball soldering
- Quick turnaround
- Low-volume thru-hole, SMT and mixed technology PCBs
- Blanket orders with JIT (Just-In-Time) delivery
- Turnkey assembly from BOM

## Assembly Equipment

- Vapor degreasers for efficient product cleaning
- Pressure-cure ovens for thorough epoxy curing

## Test Services and Equipment

- Complete life cycle support
- Environmental Stress Screening (ESS)
- Temperature/altitude chambers
- Vibration test capability for testing at high G-force levels
- Highly Accelerated Life Test (HALT) chamber
- Highly Accelerated Stress Screening (HASS) chamber
- Augmentation of existing shock/vibration equipment
- Modern network and signal analysis instrumentation

## Certifications

- IPC-A-610 Class 3 Acceptability of Electronics Assemblies Certified
- IPC/EIA J-STD-001 Class 3 Certified for Soldered Electrical and Electronic Assemblies
- First article inspection in accordance with AS9100D
- ISO 9001:2015 Certified
- IPC-7711/7721 Class 3 Certified
- IPC-A-600 Class 3 Certified



**Reliability by Design®**



## About dB Control

Established in 1990, dB Control Corp. supplies mission-critical, often sole-source, products worldwide to military organizations, as well as to major defense contractors and commercial manufacturers. dB Control is a subsidiary of the Electronic Technologies Group of HEICO Corp., a publicly traded aerospace and electronics company with more than 60 subsidiaries. dB Control designs and manufactures reliable high-power TWT amplifiers (TWTAs), microwave power modules (MPMs), transmitters, high- and low-voltage power supplies, and modulators for radar, electronic countermeasures (ECM), and data link applications. The modularity of dB Control's designs enables rapid configuration of custom products for a variety of platforms, including ground-based and high-altitude military manned and unmanned aircraft. Acquisitions in 2019 (TTT-Cubed, Inc.), 2021 (Pacrowave, Inc.) and 2022 (Charter Engineering, Inc.) added custom RF



sources and receivers, RF/microwave components and integrated subsystems, and precision electromechanical switches and components to the company's product offerings. dB Control also offers specialized contract manufacturing and repair depot services from its modern 40,000-square-foot facilities in Fremont, California. The company is AS9100D- and ISO 9001:2015-certified.

SCALE: 1KM/PXL  
50KM



1120 Auburn St., Fremont, CA 94538  
+1 (510) 656-2325 | info@dbcontrol.com | www.dBControl.com

