# Dossier: APEX MICRODEVICES LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,872.00

**Award Date:** 2023-12-18

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

APEX Microdevices LLC, based in Tucson, Arizona, specializes in the design, development, and manufacturing of high-reliability power amplifier solutions for demanding applications in the aerospace, defense, industrial, and medical sectors. Their core mission revolves around providing robust, high-performance, and custom power amplifiers tailored to meet the specific needs of customers operating in extreme environments, characterized by wide temperature ranges, high vibration, and other harsh conditions. They aim to solve the challenges of efficiently delivering high power amplification in physically constrained and environmentally challenging applications where standard commercial amplifiers fall short. Their unique value proposition lies in their ability to provide customized power amplifier solutions with high power density, exceptional reliability, and rapid prototyping capabilities, often utilizing innovative packaging and thermal management techniques.

**Technology Focus:**

* Develops and manufactures high-reliability, high-power density operational amplifiers, power amplifiers, and PWM amplifiers. These devices often feature hermetically sealed packages for extreme environmental resilience.
* Offers custom and standard product lines, with a focus on wide temperature operation (-55°C to +125°C) and high voltage capabilities (up to 1000V).

**Recent Developments & Traction:**

* Apex Microtechnology (parent company of Apex Microdevices LLC) was acquired by HEICO Corporation in July 2021. This acquisition provides Apex Microdevices with increased resources and market reach.
* Apex Microtechnology released new high-reliability power amplifiers for various applications including electrostatic deflection and programmable power supplies.

**Leadership & Team:**

While specific names are difficult to confirm without deeper proprietary tools, Apex Microtechnology (parent company) is led by a team of experienced engineering and management professionals with a background in power electronics, semiconductor design, and high-reliability manufacturing. Since the acquisition by HEICO, management likely reports through the HEICO organizational structure.

**Competitive Landscape:**

* Texas Instruments: TI offers a broad range of amplifiers, including some high-reliability options, but typically does not offer the same level of customization as Apex Microdevices for extreme applications.
* Microchip Technology (via acquisition of Microsemi): Offers radiation-hardened and high-reliability solutions, but may not always provide the same level of power density or custom packaging. Apex Microdevices differentiates itself through its specialized expertise in high-power, high-reliability amplifier solutions tailored to demanding niche applications, with rapid prototyping and extensive customization.

**Sources:**

1. [https://www.heico.com/newsroom/heico-corporation-completes-acquisition-apex-microtechnology](https://www.heico.com/newsroom/heico-corporation-completes-acquisition-apex-microtechnology)

2. [https://www.apexanalog.com/](https://www.apexanalog.com/)