

## **DECLARATION OF DAVID DAVIS OF THE UNITED STATES AIR FORCE SPACE AND MISSILE CENTER**

I, David Davis, hereby declare the following to be true and correct to the best of my personal knowledge and belief:

1. My name is David Davis and I am the Chief of the Systems Engineering Division of the United States Air Force Space and Missile Center ("SMC") located in El Segundo, California. I have a Bachelor's of Science in Electrical Engineering and Natural Science and have worked at SMC for almost 31 years. SMC is the Air Force's primary acquiring agency for space and missile systems. SMC is currently in the process of acquiring several different satellite systems, including global positioning system, communication, and surveillance satellites. As Chief of the Systems Engineering Division, my primary responsibility is to establish technical processes and standards that will be imposed on contractors working for SMC.
2. I submit this sworn statement in connection with the investigation of the United States Department of Justice into Microsemi Corporation's ("Microsemi") July 2008 acquisition of Semicoa, Inc. ("Semicoa"), a transaction that seriously concerns me because it makes Microsemi the sole supplier of certain critical, high reliability components that are essential to the success of SMC satellite and other space programs.
3. In order to establish technical processes and standards for SMC, I regularly work with other acquiring agencies as well as agencies such as the Defense Supply Center in Columbus, Ohio ("DSCC"), an office within the Department of Defense. DSCC grants certifications and qualifications for the manufacture of different grades of electronic parts. The highest reliability grade, Joint Army-Navy Space ("JANS"), is intended for products qualified for use in space.
4. Highly reliable parts, including small signal transistors and ultrafast recovery rectifier diodes, are essential for SMC's satellite systems. Satellites are not only subjected to intense vibrations during launch, but are also expected to operate for up to 15 years in the harsh conditions of space, which include potential exposure to high levels of radiation, repeated temperature fluctuations as the spacecraft travels in and out of sunlight, exposure to a vacuum, and a micro-gravity environment that may allow loose particles to interfere with the operation of electronic equipment. Additionally, SMC's satellites are irretrievable after launch. Even with built-in system redundancies, failure of a single electronic component can jeopardize the success of a satellite's mission.
5. One type of critical electronic part used in SMC programs is known as a small signal transistor. Examples include the 2N2222, the 2N2907 and the 2N3700. Small signal transistors are a class of transistors that can act as switches of electrical current or amplifiers of electrical signals. While there are many types of transistors, it would be difficult, time-consuming, expensive, and sometimes impossible to design around the use of small signal transistors.
6. Another type of critical electronic part used in SMC programs is known as an ultrafast recovery rectifier diode. Examples include the 1N5811. Ultrafast recovery rectifier diodes are a

class of diodes that operate at low power levels, converting alternating current to direct current. They are distinguished by their extremely high switching speeds, which minimize power loss and waste heat generation. While there are many types of diodes, it would be difficult, time-consuming, expensive, and sometimes impossible to design around the use of ultrafast recovery rectifier diodes.

7. SMC's current contracting practices and standards require that operational discrete semiconductors used by SMC for operational (nonexperimental) systems, including small signal transistors and ultrafast recovery rectifier diodes, must be JANS or JANS equivalent. SMC only considers a part to be a JANS equivalent if the part has been designed, manufactured and tested to the JANS specification requirement, and the SMC contractor procuring the part applies its own supplier control practices consistent with the quality assurance standards in the contract. However, JANS equivalent parts are generally not cost-effective alternatives to JANS parts. In my view, an "upscreened" lower quality part is not a JANS-equivalent. SMC believes that the procurement and use of JANS qualified parts facilitates a continued, consistent and readily available source of supply for high reliability parts that meet space system requirements and applications.

8. It is very important for SMC programs to have a ready supply source of small signal transistors and ultrafast recovery rectifier diodes as these parts are essential to all SMC's programs. If an essential part becomes unavailable or is subject to long delays near the end of a program's production period there can be significant effects. If the program cannot work on other assemblies during a delay, the entire production staff could be idled until the part becomes available, costing SMC millions of dollars, many times the value of the part causing the delay.

9. As a result of Microsemi's acquisition of Semicoa, Microsemi is currently the only supplier of JANS small signal transistors and a comprehensive product line of JANS ultrafast recovery rectifier diodes. If Microsemi increased the prices of these products as a result of the acquisition, SMC would have to accept that price increase because a design-around is not a practical, cost-effective alternative. Further, SMC could not increase these use of "upscreened" parts as this reduces the system-level reliability of SMC programs and is therefore only used in rare circumstances. I am also concerned about the risk of a supply interruption due to a mishap, now that there is only one supplier. Finally, as a single source supplier, there is increased risk that Microsemi will be less responsive to the program's schedule requirements, which could impose delay and additional costs on the SMC programs.

I declare under penalties of perjury, that the foregoing is true and correct. Executed at El Segundo, California on December 16, 2008.

  
David Davis