

SAE International Releases Standard AS5553 - Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition

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Counterfeit electronic parts have been found in almost every sector of the electronics industry and continue to be an increasing threat to electronic hardware, posing significant performance, reliability and safety risks. In a recent Counterfeit Electronic Study conducted by the U.S. Department of Commerce Bureau of Industry & Security, Counterfeits were encountered by both Discrete Component and Microcircuit Original Component Manufacturers (OCMs), Authorized Distributors, Independent Distributors, Brokers, Board Assemblers and Government Prime/Sub Contractors. The number of counterfeit incidents reported from the same 498 participants increased from 3,791 in 2005 to 9,128 in 2008, more than 140% increase in three years. Approximately 7% of the companies have documented cases related to government applications. Aerospace industry organizations, in particular, must produce and continually improve safe, reliable products that meet or exceed performance specifications and requirements. The globalization of the aerospace industry and the resulting diversity of regional/national requirements and expectations have complicated this objective. End-product organizations face the challenge of assuring the quality and integration of product purchased from suppliers throughout the world and at all levels within the supply chain.

In response to this significant and increasing volume of counterfeit electronic parts entering the aerospace supply chain, the SAE International G-19 Committee formed in September 2007 to develop a document that standardizes requirements, practices, and methods related to counterfeit parts risk mitigation which was suitable for multiple levels of the electronics supply chain. The committee that produced this document included representatives across the supply chain to better ensure its suitability in the industry. Many of the members had first-hand knowledge and experience in mitigating the risks associated with counterfeit electronic parts. The committee included representatives from the U.S. Department of Homeland Security, U.S. Department of Defense Services, NASA, Government Prime Contractors, Original Component Manufacturers, Contract Assembly Manufacturers, Franchised Distributors, Independent Distributors, Industry Suppliers and Industry Associations.

The resulting document was released in April 2009 as the SAE International AS5553 – “Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition” standard. It presents solutions in addressing counterfeit electronic parts issues across a large cross-section of the electronics industry by requiring those who adopt it to develop and implement a counterfeit electronic parts control plan. The control plan includes processes to specifically address counterfeit part risk mitigation methods in electronic design and parts management, supplier management, procurement, part verification, material control and response strategies when suspect or confirmed counterfeit parts are discovered.

NASA was heavily involved in the G-19 committee formation and development of AS5553 and was the first government agency to formally adopt SAE AS5553. To order SAE AS5553:

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