RELIABILITY COMPUTATION OF MICROPROCESSOR BASED MECHATRONICS SYSEMS – A HIGHLIGHT FOR ENGINEERS

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ABSTRACT

Microprocessor along with some other digital components is frequently embedded in mechatronic systems. Microprocessor based systems usually having constituents such as microprocessors, memories, ADCs, DACs, sensors and many more ICs along with the mechanical and electronic parts. This paper highlights some the issues of reliability prediction procedures for the microprocessor based Mechatronic systems in different environments and applications. The procedure and discussion is based on literature of MIL-HDBK-217 handbook. The paper also provides basics of the reliability and its related issues.

KEY WORDS: Mechatronics, Microprocessor, ADC, DAC, Reliability, Failure Rate, MTBF