Biased Mixed Flowing Gas Testing for World Class Reliability
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Abstract:
The reliability of complex installed systems is a function of many variables, including those inherent in the operating environment. Recent changes in world market conditions and pressure for environmentally-friendly products require the rapid development of reliability information for new products installed in stressful environments. The thorough evaluation of design reliability requires that accelerated testing incorporate as many real causes of failure as possible. Biased Mixed Flowing Gas tests cover the most significant categories of stress variables inherent in real world operating conditions and are capable of simulating mass transport-dominated failure modes with near-linear acceleration. This paper discusses the general and specific aspects of Biased MFG testing of electronic systems and provides a case study of a field failure which illustrates the need for this type of testing as a regular part of system qualification.