

River Publishers Series in Electronic Materials, Circuits and Devices

High Temperature Electronics Design for Aero Engine Controls and Health Monitoring

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Description:

There is a growing desire to install electronic power and control systems in high temperature harsh environments to improve the accuracy of critical measurements, reduce the amount of cabling and to eliminate cooling systems. Typical target applications include electronics for energy exploration, power generation and control systems.

Technical topics presented in this book include:

- High temperature electronics market
- High temperature devices, materials and assembly processes
- Design, manufacture and testing of multi-sensor data acquisition system for aero-engine control
- Future applications for high temperature electronics

High Temperature Electronics Design for Aero Engine Controls and Health Monitoring contains details of state of the art design and manufacture of electronics targeted towards a high temperature aero-engine application.

High Temperature Electronics Design for Aero Engine Controls and Health Monitoring is ideal for design, manufacturing and test personnel in the aerospace and other harsh environment industries as well as academic staff and master/research students in electronics engineering, materials science and aerospace engineering.

Keywords: High temperature electronics, ASIC design, silicon on insulator devices, electronic packaging, aero-engine control, sensor signal conditioning, Aeronautical rotating systems, CMOS SOI, peak detector, operational amplifiers, ARINC, instrumentation amplifier, single-ended to differential converter, current mirror

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