

Early Failure Tests

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JUNO Electronics Workshop

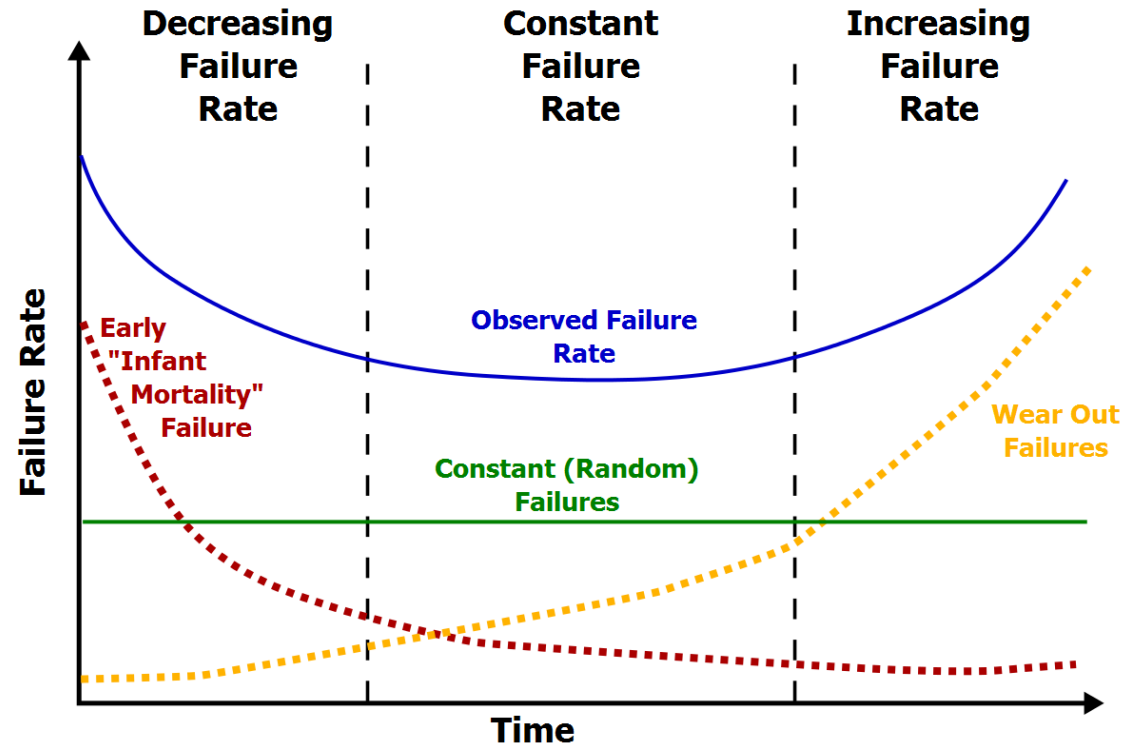
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Reliability of Electronic Components

Bathtub Curve

1. Early Failures:
 - Material defects
 - Solder joints
2. Random Failures:
 - Useable lifetime
3. Wear Out Failures:
 - Mostly physical or chemical breakdown of components
 - Should not happen in JUNO



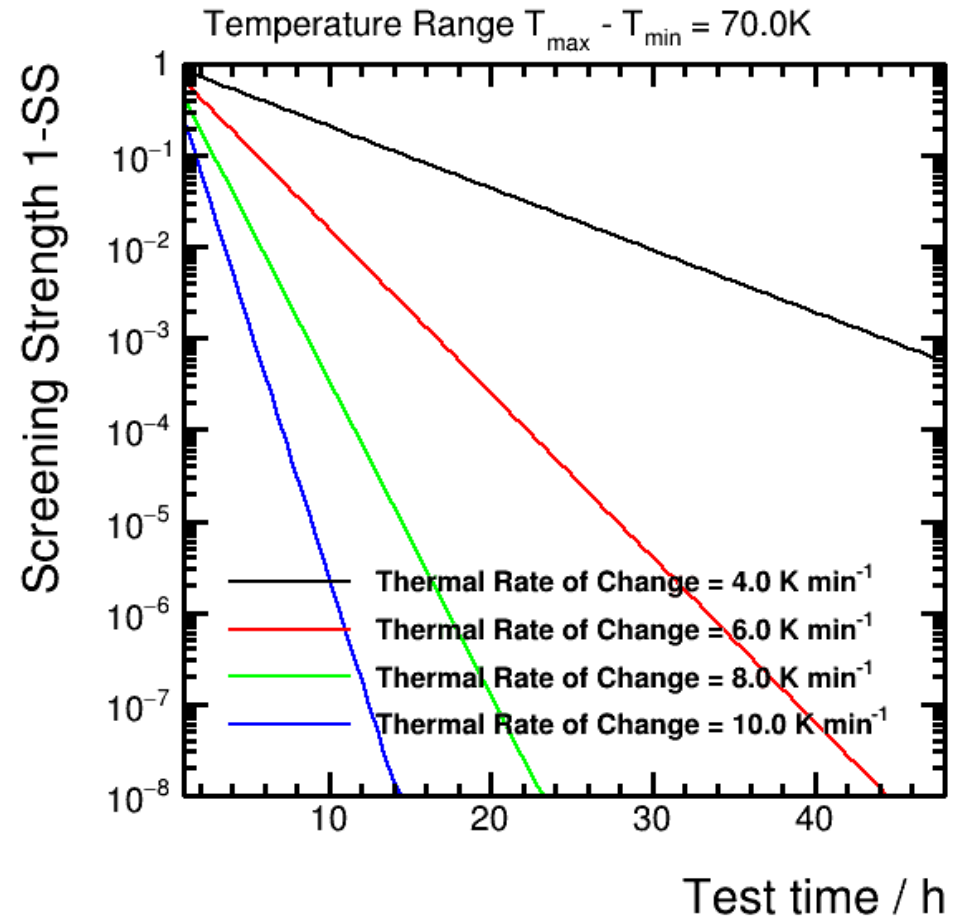
Early Failures

First Calculations for the Powerboard

Duration:

- $\Delta T = 70K$,
- $4K/min$
- *Screening Strength = 99.9%*
- 70 cycles

Duration = 50h



First Idea for the production and testing

