

Extended Reliability Assessment for Electronic Components

Sustainable Electronics

Motivation:

- Extended reliability assessment can be used to select products to be refurbished or re-assembled for longer use, reducing consumption of raw materials and processes.
- Enable the use of components beyond shelf life for reduction in waste.
- Limited data for extended reliability assessments: increased lifetime of used parts, qualification process for extended use.
- Lack of standard processes to assess extended reliability of electronic components.

Objective:

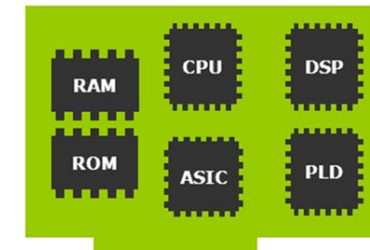
- From a proof-of-concept data collection plan, develop a standardized procedure for extended reliability assessment and component classification

Strategy/Approach:

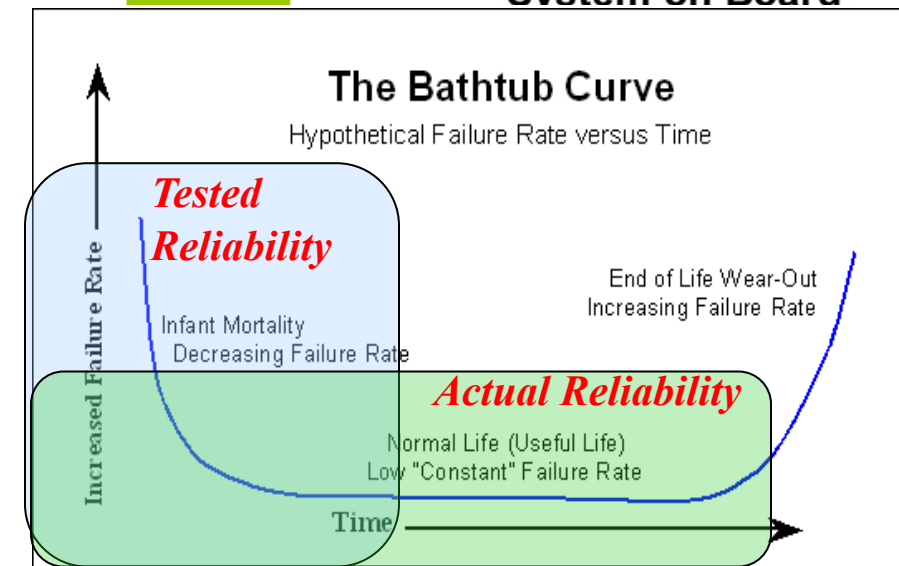
- Identify and classify components by type (application), re-workability and criticality on system.
- Select components (IC, passive or others) and subject to extended reliability. If possible, re-use reliability models to assess reliability extension.
- Select parts in use post 3+ years and subject to reliability to assess further fail rates.

Longer Term:

- Share best practices and experiences across the industry.
- Develop standard for understanding or assessing a part's long term reliability.



System on Board



Status:

- Presented at EGG 2020 for feedback
- SOW in development
- Potential Q1 launch
- Contact: marks@inemi.org