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| |  | | --- | | **Product Management**  **Procedure** | |  | |
| **FOR EDUCATIONAL USE ONLY** |

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| **What is a miniPCB?** |
| A miniPCB is a printed circuit board that contains a layout of an electronic circuit. |
| A miniPCB has a mechanical design that is consistent with numerous similar miniPCBs. |
| A miniPCB has an interface connector that is simple and economical. |
| A miniPCB has educational documentation that is approved by an engineer. |
| A miniPCB is sold in minimum-order-quantities determined by the PCB panel size. |
| This document is available for free as a download from the GitHub repository: <https://github.com/miniPCB>  This document is associated with the miniPCB Channel on YouTube:  <https://www.youtube.com/@minipcb> |

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# Purpose

This document provides a system for managing miniPCBs.

# Scope

This document applies to development activities related to the miniPCB project.

# Responsibilities

**Nolan Manteufel** is responsible for maintaining this procedure.

**Anyone** developing a miniPCB is responsible for adhering to this procedure.

# Terminology and Abbreviations

Terminology and abbreviations used throughout the miniPCB project are consistent with the definitions presented in this section.

Table – Definitions and Abbreviations

|  |  |
| --- | --- |
| TERM | DEFINITION |
| PCB | Printed Circuit Board, Bare Board |
| PCBA | Printed Circuit Board Assembly, Bare Board + Parts + Assembly |
| SMD | Surface mount device |
| THD | Through hole device |

# Procedure

## Life Cycle

### Idea Phase

Purpose: Generate ideas for miniPCBs and record those ideas in the Product Catalog.

Conclusion: A kickoff video for a miniPCB development project.

### Prototype Phase

Purpose: Develop miniPCBs and publish deliverables to the GitHub repository.

Activities:

* Circuit design
* Part selection
* Part capture
* Schematic capture
* Board layout
* Fabrication file generation
* Prototype order
* Test plan creation
* Prototype assembly
* Test plan performance
* Test report creation
* Datasheet creation

Conclusion: A hardware release video for a miniPCB development project.

### Active Phase

Purpose: Help as many students and teachers as possible.

Conclusion: A hardware obsolescence video changing a miniPCB status from Active to Obsolete.

### Obsolete Phase

Purpose: Provide a record for past efforts of the miniPCB project.

# References

miniPCB™ Design Standard

miniPCB™ Product Catalog

ECObase Template

TESTbase Template

# Change and Liability Notice

This document is subject to change without notice. While effort has been made to ensure the accuracy of the material contained within this document, Nolan Manteufel shall under no circumstances be liable for incidental or consequential damages or related expenses resulting from the use of this document.

# Trademark Notice

miniPCB is a trademark of Nolan Manteufel.

This specification does not constitute permission to use the miniPCB trademark.

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| --- | --- | --- |
| WORDMARK | FIGUREMARK | FIGUREMARK |
| miniPCB™ | A picture containing drawing  Description automatically generated™ | Icon  Description automatically generated™ |

# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| REV | DESCRIPTION | ECO | DATE |
| A | Initial Release | 1013 | 15JAN2023 |
| B | Moved sections included in Initial Release to the miniPCB Quality Manual.  Added sections Idea, Prototype, Released, and Obsolete phases. | 1015 | 16JAN2023 |