

## ● PREFACE

This book is published in the name of “The Defects and Causes of Electronic Circuit Boards” in Japanese, together with in Chinese and English for convenience of the user of this book, editing the revised version of “The Defects and Causes of Printed Boards”. In editing the book, some modifications were made in explanation of some defects and the table of contents and the indices in Chinese and English were also added.

This book may be used for as;

- 1) A guidebook for novice engineers to understand the defects generated in printed boards
- 2) A guidebook for obtaining clues for eliminating defects in printed boards
- 3) A reference book to help acquire middle class workers and engineers habit to observe more closely to reduce the defects in printed boards
- 4) A guidebook for the management to refer to as necessary

### Explanations for use of this book:

- 1. Code number:** The code numbers are given according to the classifications of defects shown in the table of contents
- 2. Names of defects:** Based in principle on “Terms and definitions for printed circuits”, JPCA, 2000. Those not listed in the glossary are named by the author at his own discretion for easy understanding by the readers
- 3. Characteristics:** Typical appearances of defects
- 4. Causes/processes involved/keys to judgment:** General causes for the defects, processes where the defects are generated and the key points for identifying the causes of the defects
- 5. Photos of defects:** Enlarged colour photos or illustrations showing the defects in their typical forms
- 6. Abbreviations:** meanings of the abbreviations are given in Table

Table of abbreviation

Abbreviations	Meanings	Abbreviations	Meanings
FPC	Flexible printed wiring board	Ni	Nickel plating
PTH	Plated through hole	UTC	Ultra thin copper foil
RCC	Resin coated copper foil	CCL	Copper clad laminate
HAL	Hot air leveling		