



Technical Report of Japan Electronics and Information Technology Industries Association

*JEITA RCR-2335C*

**Safety application guide for fixed ceramic capacitors for use  
in electronic equipment**

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## INTRODUCTION

This guide is published by Ceramic Capacitors Working Group of Technical Standardization Committee on Passive Components, Electronic Components Division, JEITA, based on **JEITA RCR-1001A** (Safety application guide on components for use in electronic and electrical equipment), in order to aim at improving the safety of electronic products and the whole electronic device industry.

**EIAJ RCR-2335**, the first edition, unified **EIAJ RCR-2331** (Guidelines of notabilia for single layer ceramic capacitors for 200V or less), **EIAJ RCR-2332** (Guidelines of notabilia for fixed disk type capacitors), and **EIAJ RCR-2333** (Guidelines of notabilia for fixed multilayer capacitors) published in 1995 as guidelines of notabilia for fixed ceramic capacitors.

This document is edited under the consolidation of the newest **JEITA RCR-2335B**, **JEITA RCR-2335B-1**, and the recent supplemental guideline issued April, 2011.

It is expected that this guide is used by electronic equipment manufacturers, who should ensure the safety of the products while designing, in the mounting process and in use. It is also expected that component manufacturers use this guide to prepare specification notes regarding the safe use of components.

This guide is based on the particular experience and knowledge of component manufacturers with contributions from some electronic equipment manufacturers.

**JEITA RCR-1001A** is also recommended for reference since the fundamentals regarding electronic component safety are stated in it.

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## Safety application guide for fixed ceramic capacitors for use in electronic equipment

### 1 Scope

This guide is applied to capacitors in which the metalized electrodes are formed on ceramic dielectric layers, and capacitors in which the ceramic dielectric layers and the metalized electrode layers are accumulated alternately.

The guide aims at improving the safety of electronic equipment by informing electronic components' approach to the safety, appropriate ways of use and promotions of action for the safety. Therefore, this guide shall not assure the safety of the applied electronic components and equipment.

### 2 Normative references

**JEITA RCR-1001A** *Safety application guide on components for use in electronic and electrical equipment*

**JIS C 5070** *Surface mounting technology- Transportation and storage conditions of surface mounting devices (SMD) - Guidelines*

NOTE Corresponding IEC standard: IEC 61760-2, *Surface mounting technology- Part 2: Transportation and storage conditions of surface mounting devices (SMD)- Application guide*

**JIS C 5101-9** *Fixed capacitors for use in electronic equipment - Part 9: Sectional specification: Fixed capacitors of ceramic dielectric, Class 2*

NOTE Corresponding IEC standard: IEC 60384-9, *Fixed capacitors for use in electronic equipment – Part 9: Sectional specification: Fixed capacitors of ceramic dielectric, Class 2*

**JIS C 5101-14** *Fixed capacitors for use in electronic equipment - Part 14: Sectional specification - Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*

NOTE Corresponding IEC standard: IEC 60384-14, *Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*

**JIS C 5101-21** *Fixed capacitors for use in electronic equipment - Part 21: Sectional specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 1*

NOTE Corresponding IEC standard: IEC 60384-21, *Fixed capacitors for use in electronic equipment - Part 21: Sectional specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 1*

**JIS C 5101-22** *Fixed capacitors for use in electronic equipment - Part 22: Sectional specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 2*

NOTE Corresponding IEC standard: IEC 60384-22, *Fixed capacitors for use in electronic equipment - Part 22: Sectional specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 2*

**JIS C 6950-1** *Information technology equipment - Safety - Part 1: General requirements*

NOTE Corresponding IEC standard: IEC 60950-1, *Information technology equipment - Safety - Part 1: General requirements*