

# JIS

JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

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**JIS Z 3285** : 2017

**Solder paste for micro-joining—  
Characteristic test methods for  
solder paste using fine particles**

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ICS 25.160.50

Reference number : **JIS Z 3285 : 2017 (E)**

Z 3285 : 2017

Date of Establishment: 2017-12-20

Date of Public Notice in Official Gazette: 2017-12-20

Investigated by: Japanese Industrial Standards Committee  
Standards Board for ISO area  
Technical Committee on Metal and Inorganic  
Materials

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JIS Z 3285:2017, First English edition published in 2018-07

Translated and published by: Japanese Standards Association  
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

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Printed in Japan

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## **Foreword**

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

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# Solder paste for micro-joining— Characteristic test methods for solder paste using fine particles

## 1 Scope

This Japanese Industrial Standard specifies the characteristics test methods for solder paste using fine solder particles with a particle size of symbol 7 and symbol 8 specified in **JIS Z 3284-1** (hereafter referred to as solder paste), mainly intended for connection of wiring and components to high-density printed circuit boards with fine wiring (e.g. 60  $\mu\text{m}$  or smaller in minimum conductor width and minimum conductor spacing) used in electronic and communication devices. The test methods specified in this Standard incorporate consideration for the effect of high surface activity of fine solder particles, so that such solder particles can be tested with better precision than when tested using the test methods specified in **JIS Z 3284** series.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS Z 3001-3 *Welding and allied processes—Vocabulary—Part 3: Soldering and brazing*

JIS Z 3284-1 *Solder paste—Part 1: Kinds and quality classification*

JIS Z 3284-3 *Solder paste—Part 3: Test methods for printability, viscosity, slump and tackiness*

## 3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS Z 3001-3**, **JIS Z 3284-1** and **JIS Z 3284-3**, and the following apply.

### 3.1 digital microscope

device for displaying a magnified video image on the screen of a personal computer or a monitor

## 4 Particle size distribution measurement

### 4.1 Electron microscope particle size distribution test

This method uses a scanning electron microscope (SEM) to measure the particle distribution of a solder powder used for solder paste to confirm that the measured size distribution matches that required for the nominal size of the solder powder.

- a) **Outline of test** The particle size distribution of the solder powder used for solder paste is measured by SEM observation.
- b) **Device and instrument** The following device and instrument shall be used.