

RTE7701202CBG304T000J

R20UT2989EJ0100

Rev. 1.00

Sep. 05, 2014

Exchange Adapter for Connecting RH850/E1x Series in 304-pin 0.8-mm-pitch BGA

1. Outline

The RTE7701202CBG304T000J is an exchange adapter (EA) for connecting the RTE7701202EPA00000J emulator pod for the RH850/E1x (subsequently referred to as the pod) to pad patterns for a 304-pin 0.8-mm-pitch BGA (PRBG0304GB-A).

2. Package Components

Check to see if the RTE7701202CBG304T000J package has all the following contents with reference to Contents of the Package included in the package after purchasing this product.

- (1) RTE7701202CBG304T000J exchange adapter 1 pc.
- (2) Table of Toxic and Hazardous Substance and Elements 1 sh.

3. Specifications

Table 1 Specifications

Applicable package	PRBG0304GB-A (304-pin 0.8-mm-pitch BGA)
Insertion/removal iterations of connector	100 times guaranteed

4. Usage (See Figure 2)

The RTE7701202CBG304T000J can be used for debugging and on-board evaluation in common by mounting the TC on the target system.

(1) For debugging

Mount the TC on the pad pattern for the MCU on the target system board. In addition, connect the RTE7701202CBG304T000J to the pod, and then attach the RTE7701202CBG304T000J above the TC. The height of the socket is adjustable by inserting the SA1 or SA2 between the TC and RTE7701202CBG304T000J if this is desired.

(2) For on-board evaluation

The TC on the user system is used to attach the MA after it has been fitted with an MCU that has flash ROM or a one-time PROM. Before using the RTE7701202CBG304T000J, be sure to read the precautions on page 3.

- SA1: Space adapter (sold separately, product of Tokyo Eletech Corporation)
Model Name: CSSOCKET304A2219RE03
- SA2: Space adapter (sold separately, product of Tokyo Eletech Corporation)
Model Name: CSSOCKET304A2219RE04
- TC: Target connector (sold separately, product of Tokyo Eletech Corporation)
Model name: BSSOCKET304A2219RE21N
- MA: Mounting adapter (sold separately, product of Tokyo Eletech Corporation)
Model name: LSPACK304A2219RE01

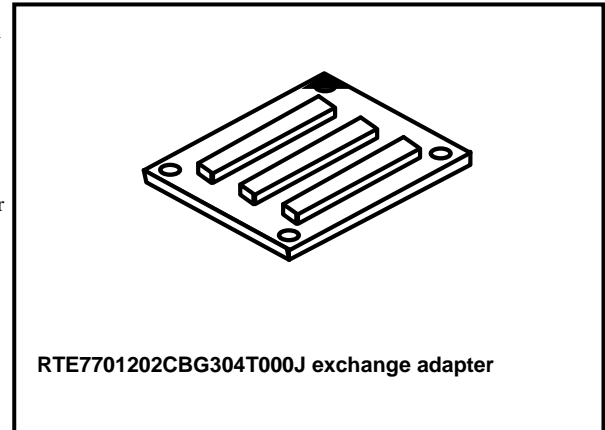


Figure 1 External View of the RTE7701202CBG304T000J

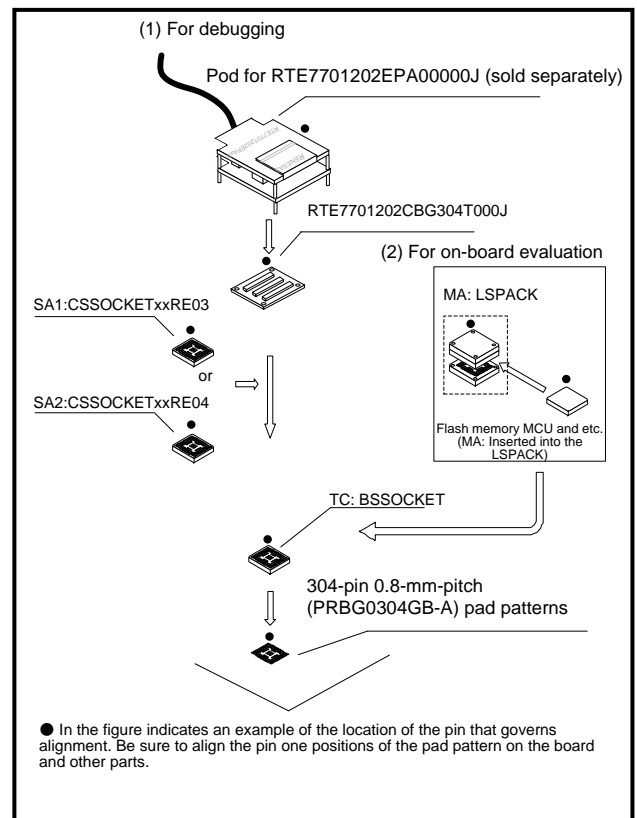


Figure 2 Usage of the RTE7701202CBG304T000J

* BSSOCKET, CSSOCKET, and LSPACK are the trademarks of Tokyo Eletech Corporation.

5. Connection Procedure (See Figure 3)

The procedure for connecting the RTE7701202CBG304T000J is shown below.

- (1) Mount the TC on the user system.
- (2) Attach the RTE7701202CBG304T000J to the pod.
- (3) Attach the RTE7701202CBG304T000J to the TC.

Confirm that there are neither cracks nor bends on the contact pins of the RTE7701202CBG304T000J at the time it is attached.

- Adjusting the height of the socket
 The height of the socket is adjustable by inserting an SA1 or SA2 between the TC and the RTE7701202CBG304T000J.
 For more information on the SA1 and SA2, contact Tokyo Eletech Corporation.

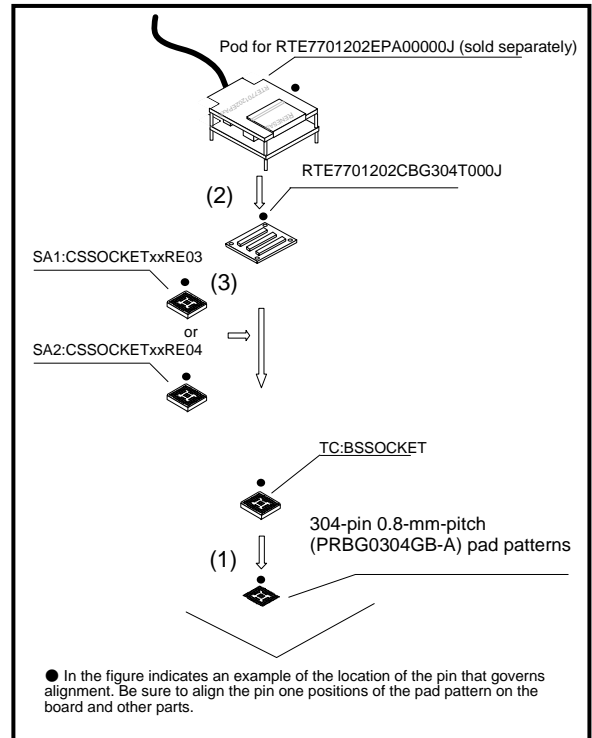


Figure 3 Procedure for Connecting the RTE7701202CBG304T000J

SA1: Space adapter (sold separately, product of Tokyo Eletech Corporation) Model Name: CSSOCKET304A2219RE03
SA2: Space adapter (sold separately, product of Tokyo Eletech Corporation) Model Name: CSSOCKET304A2219RE04
TC: Target connector (sold separately, product of Tokyo Eletech Corporation) Model name: BSSOCKET304A2219RE21N
MA: Mounting adapter (sold separately, product of Tokyo Eletech Corporation) Model name: LSPACK304A2219RE01

6. Drawing of the Socket Assembly, Drawing with Dimensions, and Pad Pattern for Reference

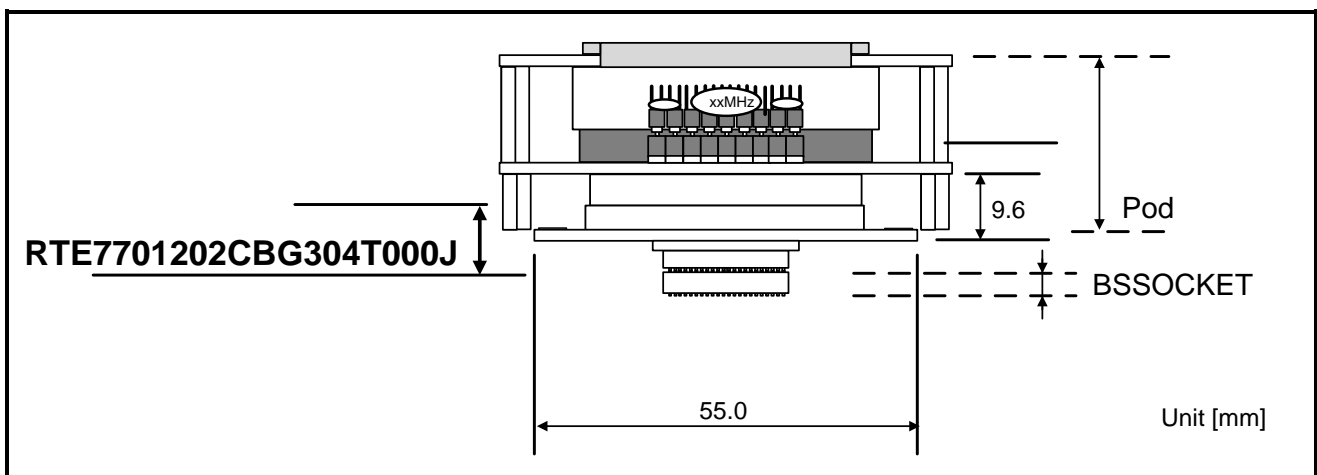


Figure 4 Drawing of the Socket Assembly

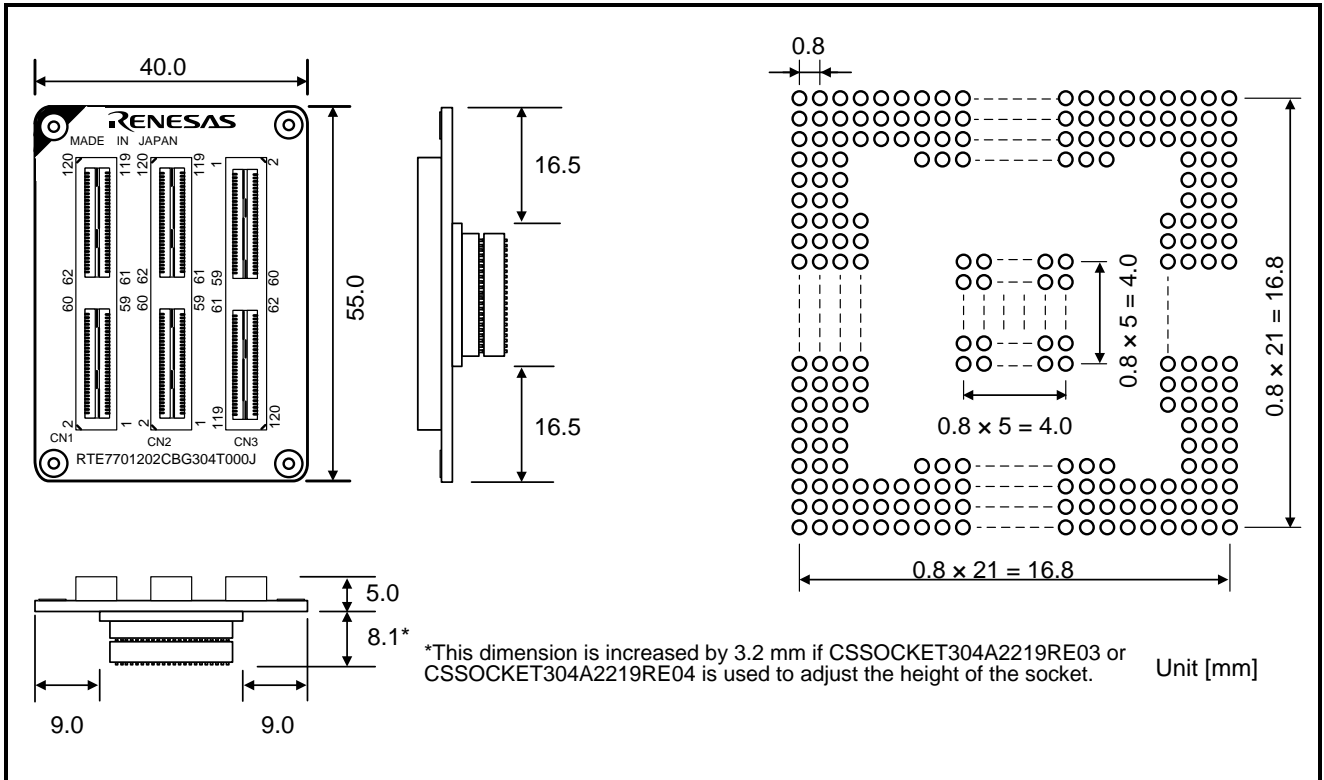


Figure 5 Drawing with Dimensions and a Pad Pattern for Reference

7. Precautions and WEEE Directive

⚠ CAUTION

Cautions to be Taken for This Product:

- Inquiries regarding the combination of CSSOCKET304A2219RE03 and CSSOCKET304A2219RE04 used for adjusting the height of the assembly, please send an email to the address below.

Tokyo Eletech Corporation http://www.tetc.co.jp/e_index.htm

IMPORTANT

Note on This Product:

- This product is not reparable.
- Inquiries regarding the purchase of BSSOCKET304A2219RE21N, CSSOCKET304A2219RE03, CSSOCKET304A2219RE04, and LSPACK304A2219RE01, please send an email to the address below.

Tokyo Eletech Corporation http://www.tetc.co.jp/e_index.htm

Disposal Instruction (This is only valid in the European Union.):

Renesas development tools and products are directly covered by the European Union's Waste Electrical and Electronic Equipment, (WEEE), Directive 2002/96/EC. As a result, this equipment, including all accessories, must not be disposed of as household waste but through your locally recognised recycling or disposal schemes. As part of our commitment to environmental responsibility Renesas also offers to take back the equipment and has implemented a Tools Product Recycling Program for customers in Europe. This allows you to return equipment to Renesas for disposal through our approved Producer Compliance Scheme. To register for the program, click here "<http://www.renesas.com/weee>".

Notice

1. Descriptions of circuits, software and other related information in this document are provided only to illustrate the operation of semiconductor products and application examples. You are fully responsible for the incorporation of these circuits, software, and information in the design of your equipment. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from the use of these circuits, software, or information.
 2. Renesas Electronics has used reasonable care in preparing the information included in this document, but Renesas Electronics does not warrant that such information is error free. Renesas Electronics assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.
 3. Renesas Electronics does not assume any liability for infringement of patents, copyrights, or other intellectual property rights of third parties by or arising from the use of Renesas Electronics products or technical information described in this document. No license, express, implied or otherwise, is granted hereby under any patents, copyrights or other intellectual property rights of Renesas Electronics or others.
 4. You should not alter, modify, copy, or otherwise misappropriate any Renesas Electronics product, whether in whole or in part. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from such alteration, modification, copy or otherwise misappropriation of Renesas Electronics product.
 5. Renesas Electronics products are classified according to the following two quality grades: "Standard" and "High Quality". The recommended applications for each Renesas Electronics product depends on the product's quality grade, as indicated below.
"Standard": Computers; office equipment; communications equipment; test and measurement equipment; audio and visual equipment; home electronic appliances; machine tools; personal electronic equipment; and industrial robots etc.
"High Quality": Transportation equipment (automobiles, trains, ships, etc.); traffic control systems; anti-disaster systems; anti-crime systems; and safety equipment etc.
Renesas Electronics products are neither intended nor authorized for use in products or systems that may pose a direct threat to human life or bodily injury (artificial life support devices or systems, surgical implantations etc.), or may cause serious property damages (nuclear reactor control systems, military equipment etc.). You must check the quality grade of each Renesas Electronics product before using it in a particular application. You may not use any Renesas Electronics product for any application for which it is not intended. Renesas Electronics shall not be in any way liable for any damages or losses incurred by you or third parties arising from the use of any Renesas Electronics product for which the product is not intended by Renesas Electronics.
 6. You should use the Renesas Electronics products described in this document within the range specified by Renesas Electronics, especially with respect to the maximum rating, operating supply voltage range, movement power voltage range, heat radiation characteristics, installation and other product characteristics. Renesas Electronics shall have no liability for malfunctions or damages arising out of the use of Renesas Electronics products beyond such specified ranges.
 7. Although Renesas Electronics endeavors to improve the quality and reliability of its products, semiconductor products have specific characteristics such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Further, Renesas Electronics products are not subject to radiation resistance design. Please be sure to implement safety measures to guard them against the possibility of physical injury, and injury or damage caused by fire in the event of the failure of a Renesas Electronics product, such as safety design for hardware and software including but not limited to redundancy, fire control and malfunction prevention, appropriate treatment for aging degradation or any other appropriate measures. Because the evaluation of microcomputer software alone is very difficult, please evaluate the safety of the final products or systems manufactured by you.
 8. Please contact a Renesas Electronics sales office for details as to environmental matters such as the environmental compatibility of each Renesas Electronics product. Please use Renesas Electronics products in compliance with all applicable laws and regulations that regulate the inclusion or use of controlled substances, including without limitation, the EU RoHS Directive. Renesas Electronics assumes no liability for damages or losses occurring as a result of your noncompliance with applicable laws and regulations.
 9. Renesas Electronics products and technology may not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable domestic or foreign laws or regulations. You should not use Renesas Electronics products or technology described in this document for any purpose relating to military applications or use by the military, including but not limited to the development of weapons of mass destruction. When exporting the Renesas Electronics products or technology described in this document, you should comply with the applicable export control laws and regulations and follow the procedures required by such laws and regulations.
 10. It is the responsibility of the buyer or distributor of Renesas Electronics products, who distributes, disposes of, or otherwise places the product with a third party, to notify such third party in advance of the contents and conditions set forth in this document, Renesas Electronics assumes no responsibility for any losses incurred by you or third parties as a result of unauthorized use of Renesas Electronics products.
 11. This document may not be reproduced or duplicated in any form, in whole or in part, without prior written consent of Renesas Electronics.
 12. Please contact a Renesas Electronics sales office if you have any questions regarding the information contained in this document or Renesas Electronics products, or if you have any other inquiries.
- (Note 1) "Renesas Electronics" as used in this document means Renesas Electronics Corporation and also includes its majority-owned subsidiaries.
- (Note 2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.



SALES OFFICES

Renesas Electronics Corporation

<http://www.renesas.com>

Refer to "<http://www.renesas.com/>" for the latest and detailed information.

Renesas Electronics America Inc.

2801 Scott Boulevard Santa Clara, CA 95050-2549, U.S.A.
Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited

1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada
Tel: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: +44-1628-585-100, Fax: +44-1628-585-900

Renesas Electronics Europe GmbH

Arcadiastrasse 10, 40472 Düsseldorf, Germany
Tel: +49-211-6503-0, Fax: +49-211-6503-1327

Renesas Electronics (China) Co., Ltd.

Room 1709, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100191, P.R.China
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.

Unit 301, Tower A, Central Towers, 555 Langao Road, Putuo District, Shanghai, P. R. China 200333
Tel: +86-21-2226-0888, Fax: +86-21-2226-0999

Renesas Electronics Hong Kong Limited

Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong
Tel: +852-2265-6688, Fax: +852 2886-9022/9044

Renesas Electronics Taiwan Co., Ltd.

13F, No. 363, Fu Shing North Road, Taipei 10543, Taiwan
Tel: +886-2-8175-9600, Fax: +886 2-8175-9670

Renesas Electronics Singapore Pte. Ltd.

80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre, Singapore 339949
Tel: +65-6213-0200, Fax: +65-6213-0300

Renesas Electronics Malaysia Sdn.Bhd.

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jin Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd.

12F., 234 Teheran-ro, Gangnam-Ku, Seoul, 135-920, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141



CAUTION

If the requirements shown in the "CAUTION" sentences are ignored, the equipment may cause personal injury or damage to the products.

Renesas Tools Website <http://www.renesas.com/tools>
All trademarks and registered trademarks are the property of their respective owners.