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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

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ROE521174CSJ00

Converter Board for 20-pin 0.65-mm-pitch LSSOP

User's Manual

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CAUTION

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

Renesas Tools Homepage <http://www.renesas.com/en/tools>

1. Outline

The R0E521174CSJ00 is a converter board for connecting the emulation probe R0E521000EPB00 and the compact emulator R0E521000CPE00 for R8C/Tiny Series to a foot pattern for 20-pin 0.65-mm-pitch LSSOP (PLSP0020JB-A, formerly 20P2F-A) of R8C/14, 15, 16, 17, 18, 19, 1A, 1B, 28 and 29 Groups.

2. Package Components (See Figure 1)

Table 1 Package Components

Item	Quantity
R0E521174CSJ00 (Base board R0E521000CIF00 and 150mm FFC cable included)	1 pc.
YSPACK20BG (made by Tokyo Eletech Corporation)	1 pc.
NSPACK20BG (made by Tokyo Eletech Corporation)	1 pc.
YS-GUIDE (made by Tokyo Eletech Corporation)	2 pcs.
R0E521174CSJ00 User's Manual (This manual)	1 pc.

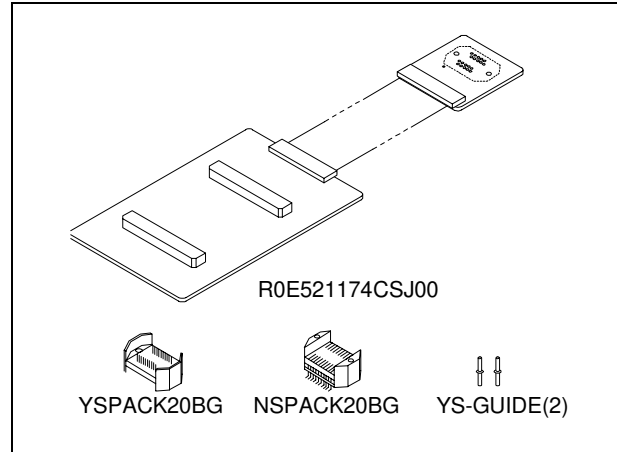


Figure 1 Package components of the R0E521174CSJ00

3. Specifications

Table 2 Specifications

Applicable package	PLSP0020JB-A, formerly 20P2F-A (20-pin 0.65-mm-pitch LSSOP)
Insertion/removal iterations of connector	Between R0E521174CSJ00 and YSPACK20BG: 100 times guaranteed
	Between R0E521000EPB00 or R0E521000CPE00 and R0E521174CSJ00: 50 times guaranteed

4. Usage (See Figure 2)

The R0E521174CSJ00 can be used for debugging and board mounted evaluation in common by mounting the NSPACK20BG on the user system.

- (1) For debugging
Mount the NSPACK20BG and YSPACK20BG on the foot pattern of the user system in that order. And fix them with the YS-GUIDE's (do not use the screws included with the YSPACK20BG).

After connecting the R0E521000EPB00 or R0E521000CPE00 and R0E521174CSJ00, connect the R0E521174CSJ00 to the YSPACK20BG.

- (2) For onboard evaluation
Mount an R8C/14, 15, 16, 17, 18, 19, 1A, 1B, 28 and 29 Groups MCU and HSPACK20BG (separately available) in that order on the NSPACK20BG on the user system. And fix them using a screw included with the HSPACK20BG.

Before using the R0E521174CSJ00, be sure to read "7. Precautions" on page 4 and the R0E521000EPB00 or R0E521000CPE00 User's Manual.

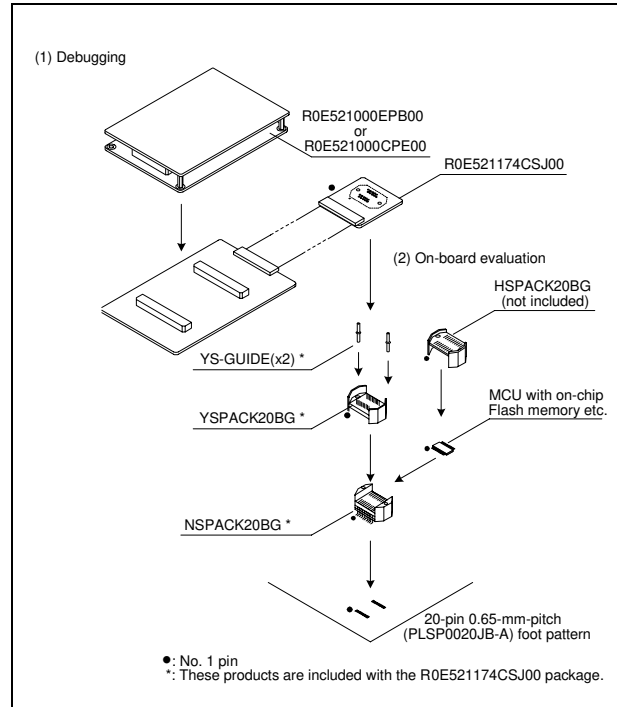


Figure 2 Usage of the R0E521174CSJ00

5. Connection Procedure (See Figure 3)

The procedure for connecting the R0E521174CSJ00 is shown below.

- (1) Mount the NSPACK20BG on the user system.
- (2) Attach the YSPACK20BG on the NSPACK20BG.
- (3) Secure the two corners of the YSPACK20BG with the YS-GUIDE's.

- Do not use the screws included with the YSPACK20BG for fixing the YSPACK20BG.
- The screwdriver included with the NSPACK020BG is used for fixing the HSPACK020BG. Do not use it for fixing the YS-GUIDE's.

- (4) Attach the R0E521000EPB00 or R0E521000CPE00 to the R0E521174CSJ00.
- (5) Attach the R0E521174CSJ00 to the YSPACK20BG.

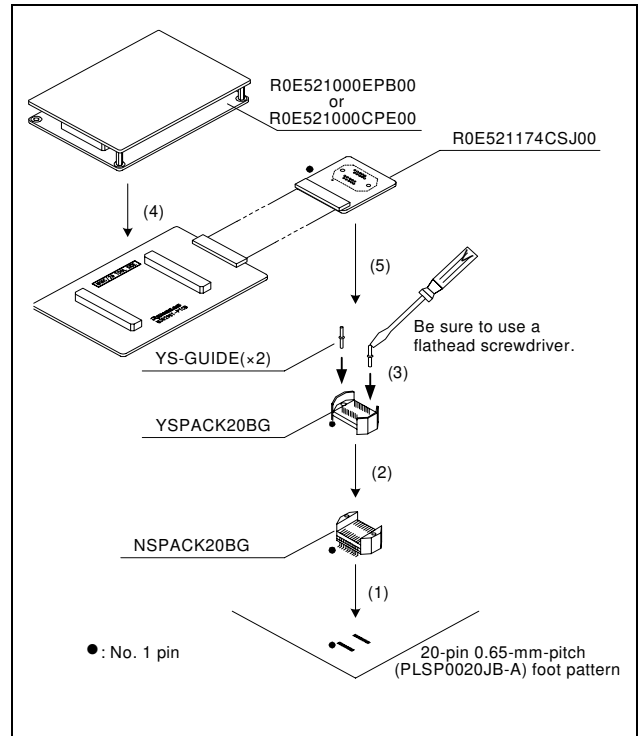


Figure 3 Connection procedure of the R0E521174CSJ00

6. External Dimensions and a Sample Foot Pattern (See Figure 4)

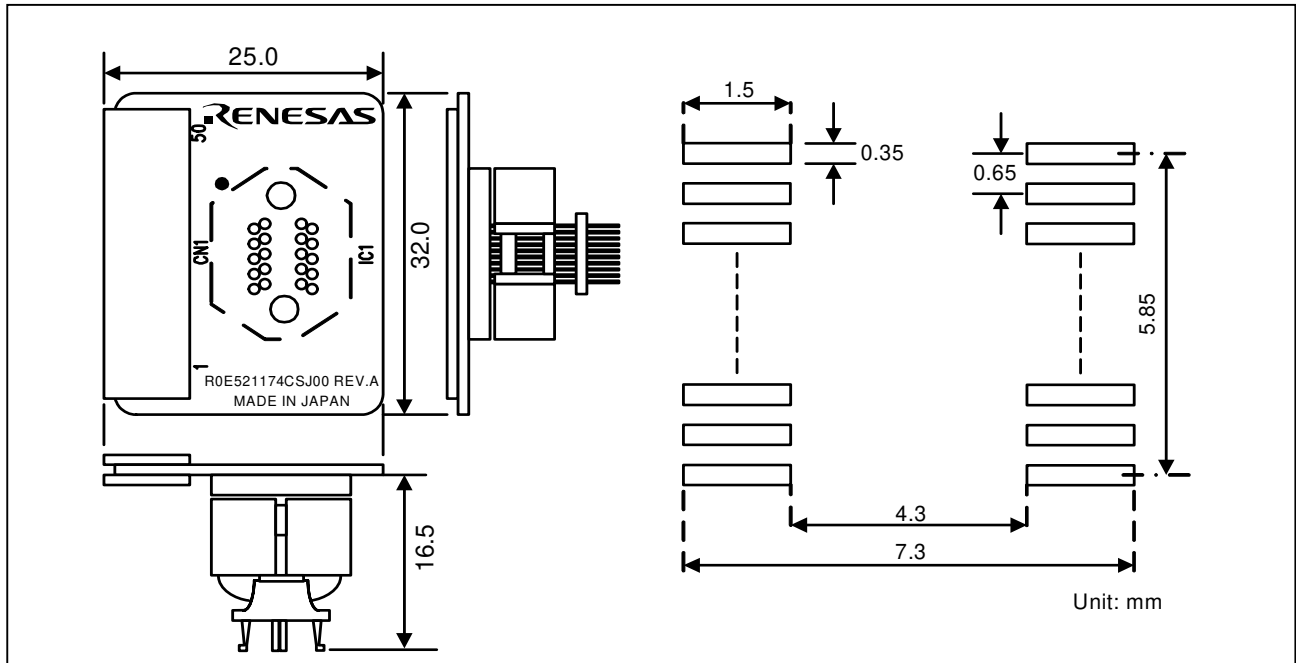


Figure 4 External dimensions and a sample foot pattern of the R0E521174CSJ00

7. Precautions

CAUTION

Cautions to Be Taken for This Product:



- Do not pull or excessively flex the cable. The cable may cause a break.
- When connecting the YSPACK20BG, be sure to use the included YS-GUIDE's.
- Do not use the screws included with the YSPACK20BG to fix it.

IMPORTANT

Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NSPACK20BG, YSPACK20BG and HSPACK20BG, contact the following:
Daimaru Kogyo Ltd. <http://www.daimarukogyo.co.jp/>
Tokyo Eletech Corporation http://www.tetc.co.jp/e_tet.htm
- For inquiries about the product or the contents of this manual, contact your local distributor.
Renesas Tools Homepage <http://www.renesas.com/en/tools>

8. How to Add an MCU File

If an MCU file for the R8C/28 and 29 Groups cannot be selected after starting up the emulator debugger, add an MCU file following the procedure below.

- (1) Please download an MCU file installer which is suitable for your emulator from the download site below.
http://tool-support.renesas.com/eng/toolnews/download/r8c26_29.htm

- When using with the compact emulator R0E521000CPE00
MCU file installer: MCU_Files_install_cpe_R8C_26-29.exe
- When using with the emulation probe R0E521000EPB00
MCU file installer: MCU_Files_install_epb_R8C_26-29.exe

- (2) Execute the installer to add the MCU file.