To our customers,

Old Company Name in Catalogs and Other Documents

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

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)
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- This product has been developed by assuming its use for program development and evaluation in laboratories. Therefore, it does not fall under the application of Electrical Appliance and Material Safety Law and protection against electromagnetic interference when used in Japan.

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>R0E521174CSJ00 (Base board R0E521000CIF00 and 150mm FFC cable included)</td>
<td>1 pc.</td>
</tr>
<tr>
<td>YSPACK20BG (made by Tokyo Eletech Corporation)</td>
<td>1 pc.</td>
</tr>
<tr>
<td>NSPACK20BG (made by Tokyo Eletech Corporation)</td>
<td>1 pc.</td>
</tr>
<tr>
<td>YS-GUIDE (made by Tokyo Eletech Corporation)</td>
<td>2 pcs.</td>
</tr>
<tr>
<td>R0E521174CSJ00 User’s Manual (This manual)</td>
<td>1 pc.</td>
</tr>
</tbody>
</table>

3. Specifications

Table 2 Specifications

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

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 on-board 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.
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.

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

![Figure 3 Connection procedure of the R0E521174CSJ00](image)

![Figure 4 External dimensions and a sample foot pattern of the R0E521174CSJ00](image)
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.

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.