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# RENESAS TECHNICAL UPDATE

1753, Shimonumabe, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8668 Japan
Renesas Electronics Corporation

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| Product Category | MPU/MCU | Document No. | TN-SH7-A855A/E | Rev. | 1.00 |
| Title | SH7751R Group New BGA Package Product | Information Category | Technical Notification | | |
| Applicable Product | SH7751R Group | Lot No.<br>All lots | Reference Document | SH7751R Group Hardware Manual<br>Rev.4.00 Oct.10, 2008<br>(REJ09B0370-0400) | |

The SH7751R group (HD6417751R) new BGA package (256-pin BGA: PRBG0256DM-A) product is line-upped. The new BGA package product part name is as follows.

SH7751R group: HD6417751RBA240HV

[Summary of New BGA Package Product]

(1) There is no change for pin arrangement and pin function.

The pin arrangement and the pin function of the new product are the same as those of the current products (HD6417751RBP200V/240V, 27 by 27 by 2.5 mm 256-pin BGA: PRBG0256DE-B). For details, refer to figure 1.3 Pin Arrangement (256-Pin BGA) of section 1.3 Pin Arrangement and table 1.3 Pin Functions of section 1.4.2 Pin Functions (256-Pin BGA) of the reference document.

(2) The overall package dimensions are 27 by 27 by 2.6 mm (256-pin BGA: PRBG0256DM-A). For details, refer to appendix 1; and for mark example, refer to appendix 2 of this document.

(3) The AC characteristics and the DC characteristics of the new product (HD6417751RBA240HV*) are equal to those of the current BGA package products (HD6417751RBP200V/240V).

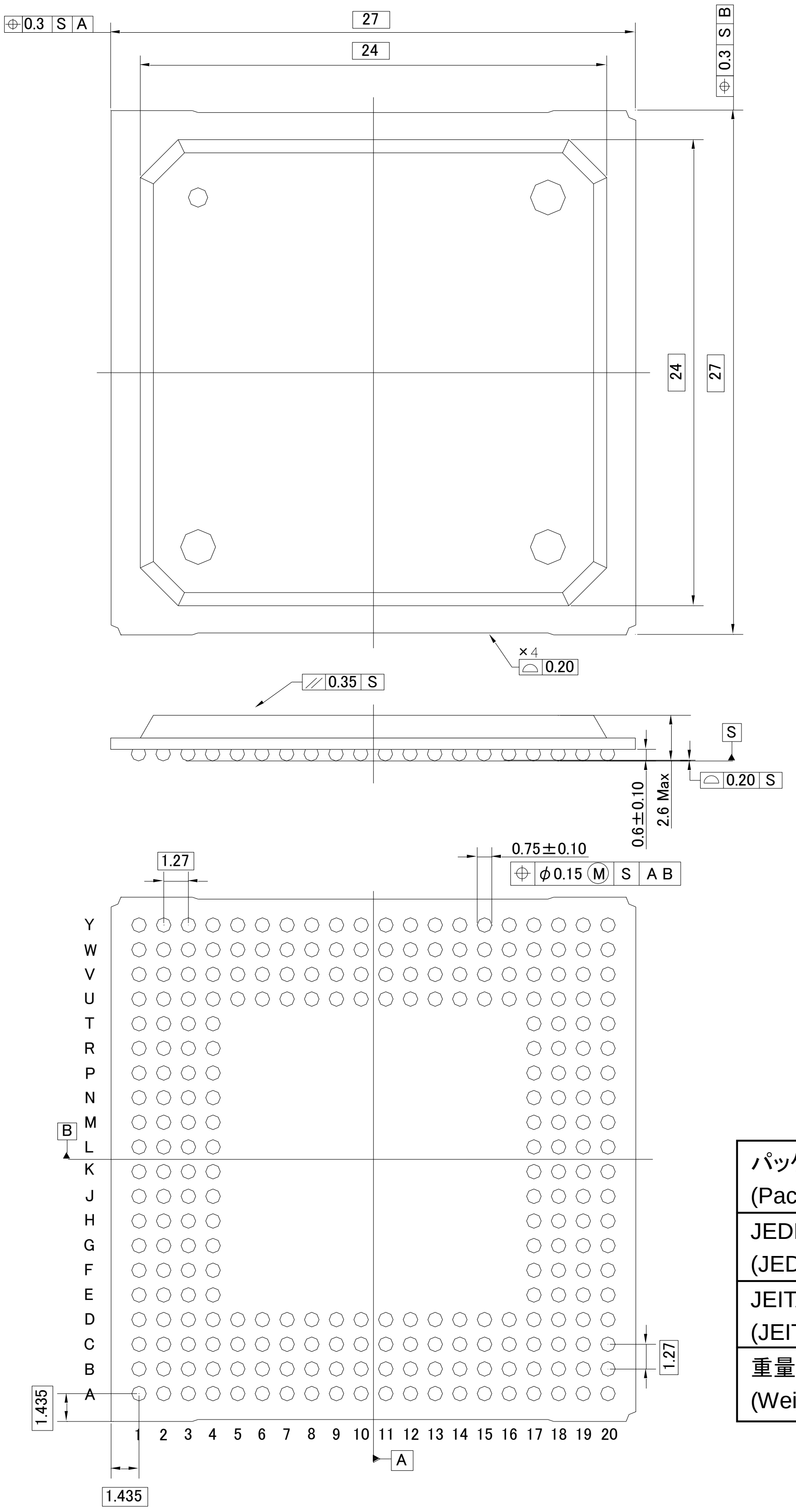
Note. *: When using the HD6417751RBA240HV at 240MHz, however, the condition of operating temperature (Topr or Ta) is -40 to +85 °C, the Min, Typ and Max values of each item of the electrical characteristics are equal to those of the HD6417751RBP240V with Ta = -20 to +75 °C in the reference document section 23.

When using the HD6417751RBA240HV at 200MHz, however, the condition of the operating temperature (Topr or Ta) is -40 to +85 °C, the Min, Typ and Max values of each item of the electrical characteristics are equal to those of the HD6417751RBP200V with Ta = -20 to +75 °C in the reference document section 23.

(4) The new BGA package product part number and operating temperature are as follows.

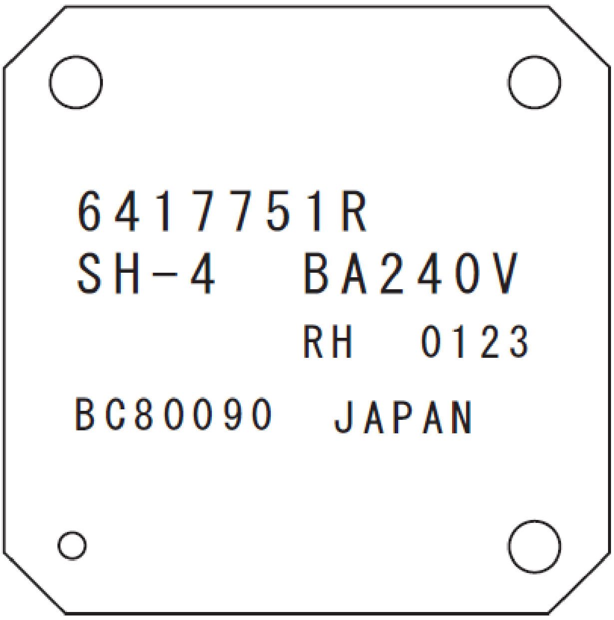
| Part Number | Operating Temperature | Solder Ball (eutectic solder/lead free) | Remarks: AC/DC Characteristics |
|---|---|---|---|
| HD6417751RBA240HV | -40 to +85 °C | Lead free | (a) Refer to the specification of the current HD6417751RBP200V when using at 200MHz.<br>(b) Refer to the specification of the current HD6417751RBP240 when using at 240MHz. |

Appendix 1 Dimensions of New BGA Package (27 mm x 27 mm x 2.6 mm, PRBG0256DM-A)



| | |
|---|---|
| パッケージコード<br>(Package Code) | PRBG0256DM-A |
| JEDEC コード<br>(JEDEC CODE) | — |
| JEITA コード<br>(JEITA CODE) | P-BGA256-27x27-1.27 |
| 重量<br>(Weight) | 3.1g |

## Appendix 2 Mark Example of New Product (laser mark)



Mark Example of HD6417751RBA240HV