

# RENESAS TECHNICAL UPDATE

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

Product Category	MPU/MCU		Document No.	TN-SH7-A854A/E	Rev.	1.00
Title	SH7750R/7750S Groups New BGA Package Product		Information Category	Technical Notification		
Applicable Product	SH7750R/SH7750S Groups	Lot No.	Reference Document	SH7750, SH7750S, SH7750R Group Hardware Manual Rev.7.00 Oct.10, 2008 (REJ09B0366-0700)		
		All lots				

The SH7750R group (HD6417750R) and the SH7750S group (HD6417750S) new BGA package (256-pin BGA: PRBG0256DM-A) products are line-upped. The new BGA package product part name is as follows respectively.

SH7750R group: HD6417750RBA240HV, SH7750S group: HD6417750SBA200V

## [Summary of New BGA Package Products]

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

The pin arrangement and the pin function of the new products are the same as those of the current products (HD6417750RBP200V/240V, HD6417750SBP200V, 27 by 27 by 2.5 mm 256-pin BGA: PRBG0256DE-B). For details, refer to figure 1.2 Pin Arrangement (256-Pin BGA) of section 1.3 Pin Arrangement and table 1.2 Pin Functions of section 1.4.1 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 (HD6417750RBA240HV\*) are equal to those of the current BGA package products (HD6417750RBP200V/240V).

The AC characteristics and the DC characteristics of the new product (HD6417750SBA200V) are equal to those of the current BGA package product (HD6417750SBP200V).

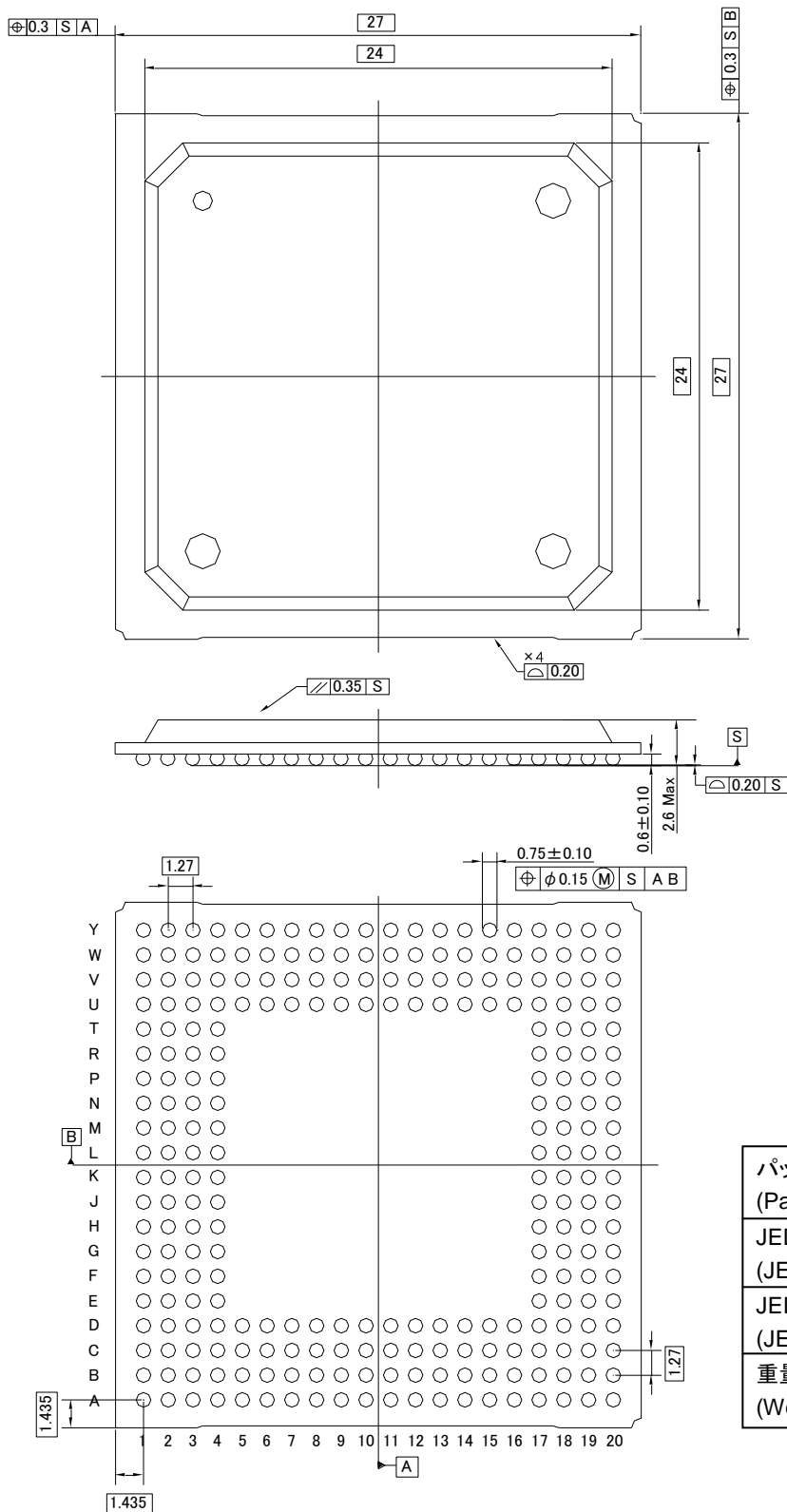
Note. \*: When using the HD6417750RBA240HV at 240MHz, however, the condition of operating temperature (Topr or Ta) is -40 to +85 °C, the Min, Typ and Max values of each item of the electrical characteristics are equal to those of the HD6417750RBP240V with Ta = -20 to +75 °C in the reference document section 22.

When using the HD6417750RBA240HV 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 HD6417750RBP200V with Ta = -20 to +75 °C in the reference document section 22.

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

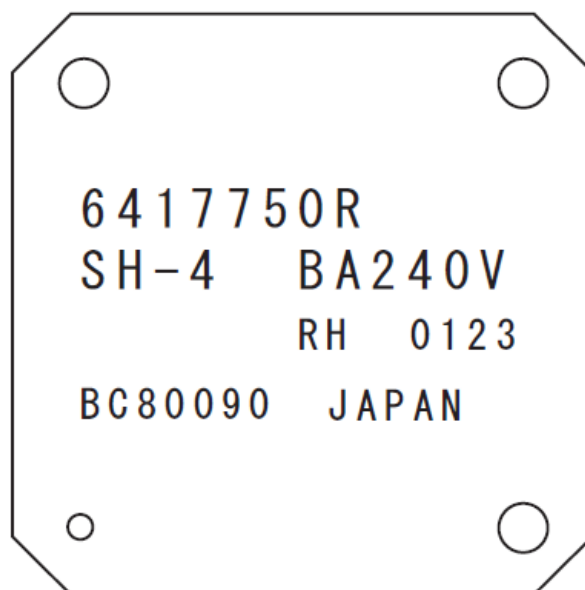
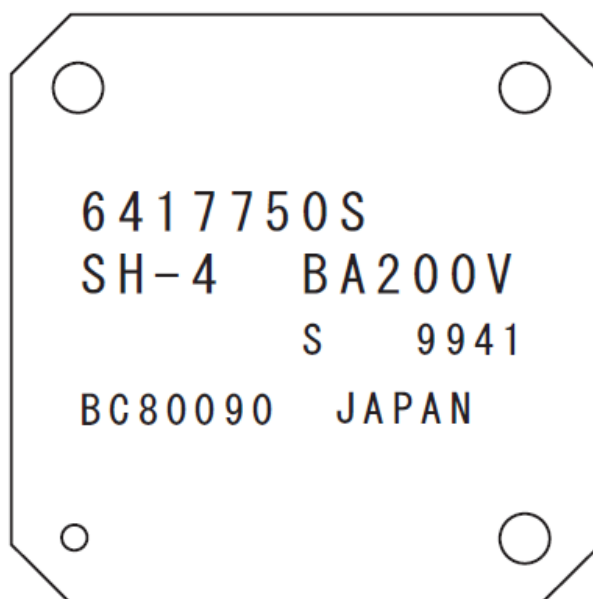
Part Number	Operating Temperature	Solder Ball (eutectic solder/lead free)	Remarks: AC/DC Characteristics
HD6417750RBA240HV	-40 to +85 °C	Lead free	(a) Refer to the specification of the current HD6417750RBP200V when using at 200MHz. (b) Refer to the specification of the current HD6417750RBP240 when using at 240MHz.
HD6417750SBA200V	-20 to +75 °C	Lead free	Refer to the specification of the current HD6417750SBP200V.

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 (Package Code)	PRBG0256DM-A
JEDEC コード (JEDEC CODE)	—
JEITA コード (JEITA CODE)	P-BGA256-27x27-1.27
重量 (Weight)	3.1g

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

Mark Example of HD6417750RBA240HVMark Example of HD6417750SBA200V