# HITACHI SEMICONDUCTOR TECHNICAL UPDATE

| DATE | December 14, 1999 | No. | TN-SH7-200A/E |
|---|---|---|---|
| THEME | DMAC DDT mode usage notice | | |
| CLASSIFICATION | ☐ Spec. change ☐ Limitation on Use<br>■ Supplement of Documents | | |
| PRODUCT NAME | HD6417750BP200, HD6417750F167, HD6417750VF128, HD6417750BP200M, HD6417750F167I | | |
| REFERENCE DOCUMENTS | SH7750 Hardware Manual | Effective Date: Eternity<br>Lot#: All | |

1. Following hardware manual notification of SH7750(DDT Module) is changed.

1-1 14.5.1 Operation

3.Handshake protocol using the data bus(valid for channel 0 only)

This mode is only valid for channel 0.

After the initial settings have been made in the DMAC channel 0 control register,the DDT module asserts a data transfer request for the DMAC by setting the DTR format ID=00 ,MD=00 and SZ≠101,110,and driving the DTR format.

1-2 14.5.2 Pins in DDT Mode

Data Transfer Request Format

Bits 63 to 61:Transmit Size(SZ2-SZ0)

- 101:Setting prohibited

Additional note:

6. When transferring the DTR format, it must be set to DTR.ID=00, DTR.MD=00, DTR and DTR.SZ≠101,110. Operation is not guranteed, if the DTR format data setting are DTR.ID=00,DTR.MD=00,DTR≠101,110.

1-3 14.5.4 Notes on Use of DDT Module

3.Handshake protocol using the data bus(valid for channel 0 only)

a. The handshake protocol using the data bus applies only to channel 0
(The DTR format must be set to DTR.ID=00,DTR.MD=00,DTR.SZ≠101,110.
Operation is not guaranteed,if the DTR format data setting are DTR.ID=00,DTR.MD=00,DTR.SZ≠101,110.)

b. If a request is asserted for a channel other than channel 0 during execution with the handshake protocol using the data bus,and setting of DTR.ID=00,DTR.MD=00 and DTR.SZ≠101,110 are sent by an external device with the handshake protocol using the data bus after DMA transfer has been executed on that channel,a request to channel 0 is asserted.

7.The DDT module uses the following procedure to process ID,MD,and SZ:

When ID=00

a. MD=00,SZ≠101,110:Handshake with data bus