

To our customers,

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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Note : Mitsubishi Electric will continue the business operations of high frequency & optical devices and power devices.

Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

M37515T-PTC

Instruction Manual

Converter for Connecting 64-core Flexible Board FLX64
to 48-pin 0.5mm-pitch LQFP

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 - (2) Modification of nonconformity when the product contains nonconformity
- 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 equipment control laws and protection against electromagnetic interference when used in Japan.
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Mitsubishi Tool Homepage http://www.tool-spt.mesc.co.jp/index_e.htm



CAUTION

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

Second Edition: October 1999

Mitsubishi Electric Corporation

Mitsubishi Electric Semiconductor Systems Corporation

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1. Description

This converter is used exclusively for the 7515 group to connect the 64-core flexible board (FLX64) or 64-pin emulator MCU connecting board (64DIP-DMS) to the foot pattern for the 48-pin 0.5mm-pitch LQFP (48P6D-A).

2. Package Components (see Figure 1)

- (1) M37515T-PTC converter
- (2) TQSOCKET048SDP
- (3) TQPACK048SD
- (4) M37515T-PTC Instruction Manual (this manual)

3. Specifications

Table 1 Specifications

Item	Description
Package	48P6D-A (48-pin 0.5mm-pitch LQFP)
Insertion/removal iterations of connector	20 times guaranteed

4. Application (see Figure 2)

This converter can be used during debugging and board-mounted evaluation in common.

(1) For debugging

Mount TQPACK048SD on the target. On top of it, mount TQSOCKET048SDP and M37515T-PTC in that order. Then connect the probe of the emulation pod to the connector provided at the top of M37515T-PTC.

(2) For board-mounted evaluation

Mount the 64-pin LCC MCU to 64LCC-DMS.

Before using M37530T-PTCB, be sure to read the precautions on page 4.

5. Connection Procedure (see Figure 3)

The connection procedure of M37515T-PTC is shown below.

- (1) Mount the TQPACK048SD.
- (2) Attach the TQSOCKET048SDP to the TQPACK048SD.
- (3) Attach the M37515T-PTC to the TQSOCKET048SDP.

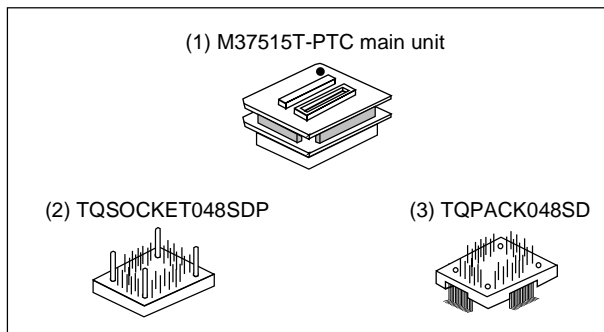


Figure 1 Package components of M37515T-PTC

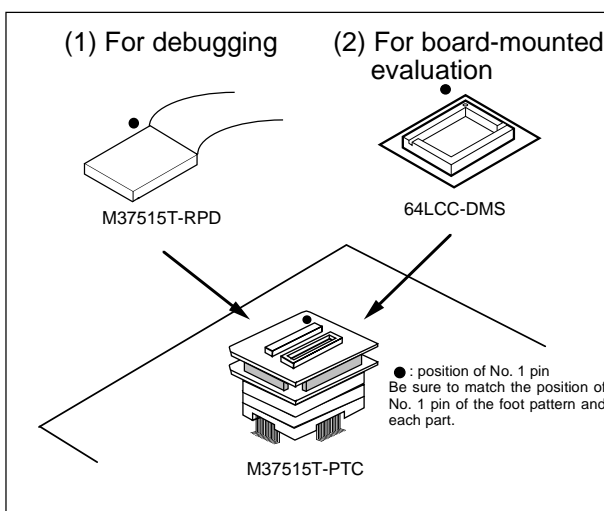


Figure 2 Usage of M37515T-PTC

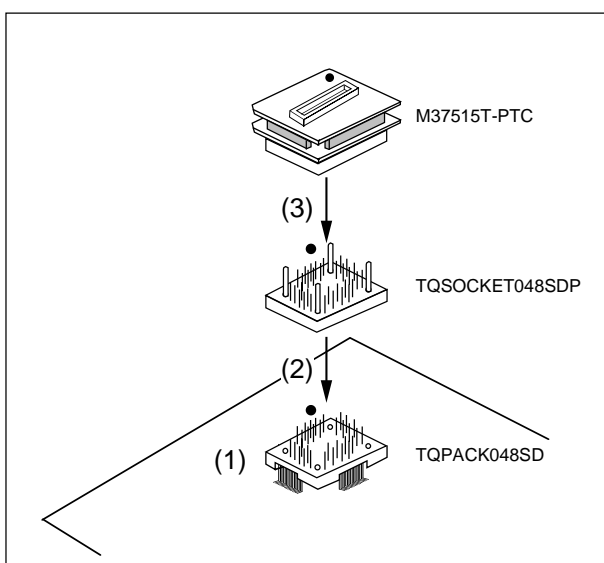


Figure 3 Connection procedure of M37515T-PTC

6. External Dimensions of M37515T-PTC

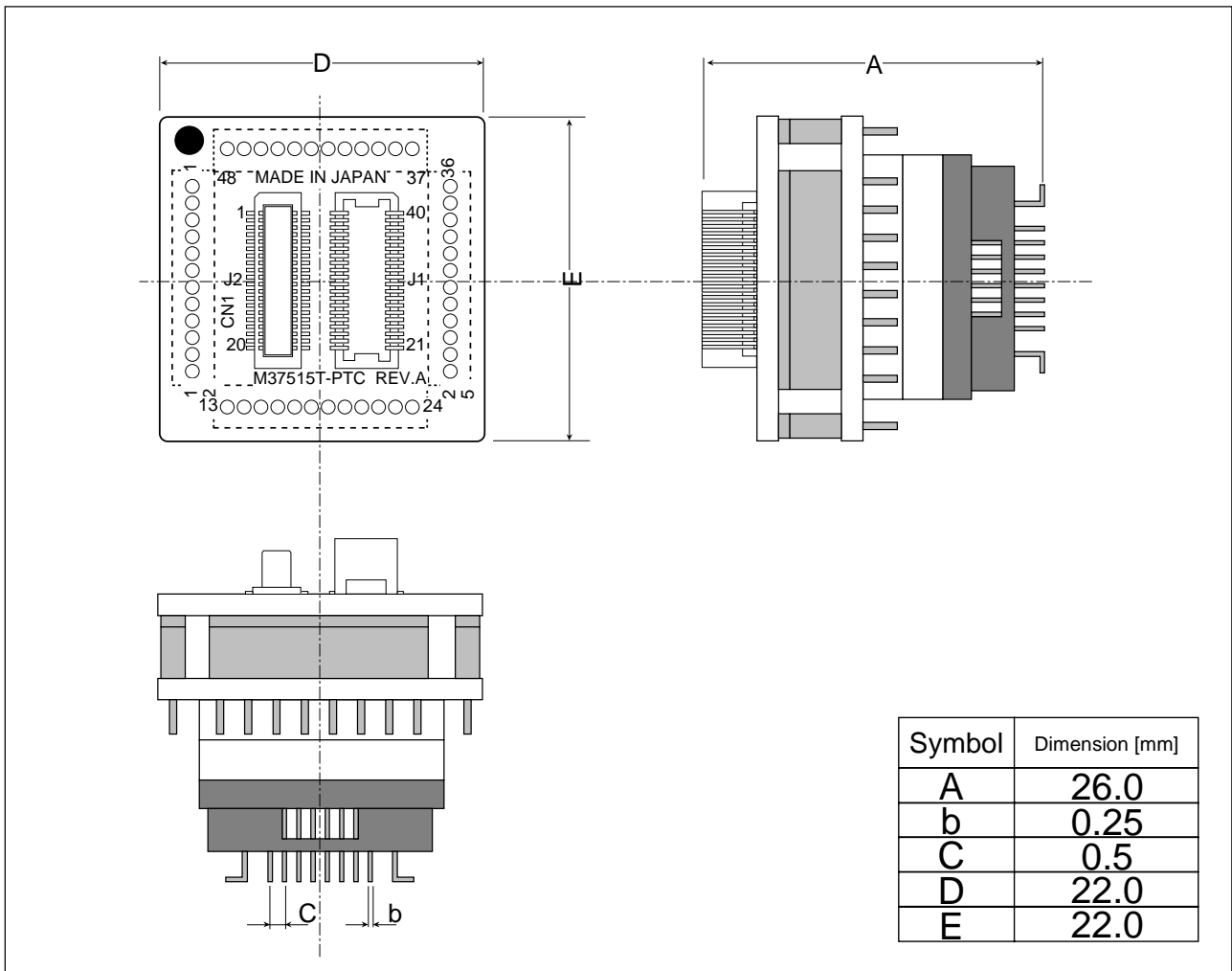


Figure 4 External dimensions of M37515T-PTC

7. Target Foot Pattern

Figure 5 shows the foot pattern for TQPACK made by Tokyo Eletech Corporation.

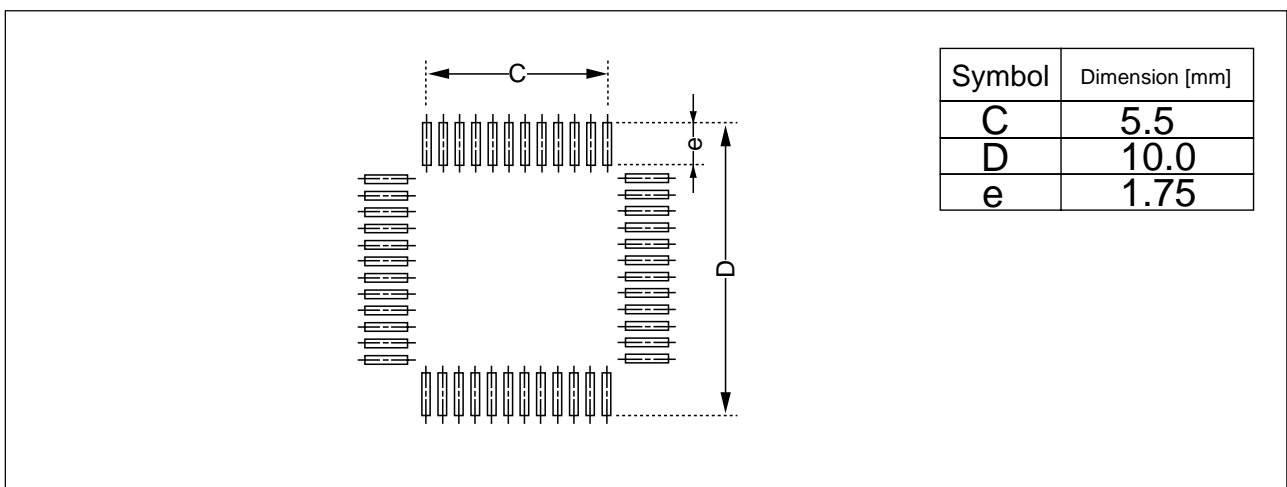


Figure 5 External dimensions of target system

7. Precautions

CAUTION

Cautions To Be Taken for This Product:

-  • We cannot accept any request for repair.
- For purchasing TQPACK048SD and TQSOCKET048SDP, contact the following.
 Daimaru Kogyo Ltd.
<http://www.daimaru-kogyo.com/>
 Tokyo Eletech Corporation
 Phone: +81-3-5295-1661 Fax: +81-3-5295-1663
 E-mail: info@tetc.co.jp URL: <http://www.tetc.co.jp/>
- For inquiries about the product or the contents of this manual, contact your nearest Mitsubishi office or distributor.
 Mitsubishi Tool Homepage http://www.tool-spt.mesc.co.jp/index_e.htm

8. Correspondence of Connectors J1, J2 and CN1

Table 2 lists the correspondence of connectors J1, J2 and CN1.

Table 2 Correspondence of connectors J1, J2 and CN1

Connector pin No.	CN1 pin No.	Connector pin No.	CN1 pin No.	Connector pin No.	CN1 pin No.	Connector pin No.	CN1 pin No.
J1-1	NC	J1-21	NC	J2-1	NC	J2-21	NC
J1-2	NC	J1-22	NC	J2-2	NC	J2-22	NC
J1-3	NC	J1-23	NC	J2-3	NC	J2-23	NC
J1-4	NC	J1-24	24	J2-4	NC	J2-24	NC
J1-5	37	J1-25	25	J2-5	2	J2-25	NC
J1-6	38	J1-26	26	J2-6	3	J2-26	14
J1-7	39	J1-27	27	J2-7	4	J2-27	15
J1-8	40	J1-28	28	J2-8	5	J2-28	16
J1-9	41	J1-29	29	J2-9	6	J2-29	17
J1-10	42	J1-30	30	J2-10	7	J2-30	18
J1-11	19	J1-31	31	J2-11	8	J2-31	43
J1-12	20	J1-32	32	J2-12	9	J2-32	44
J1-13	21	J1-33	33	J2-13	10	J2-33	45
J1-14	22	J1-34	34	J2-14	11	J2-34	46
J1-15	23	J1-35	35	J2-15	12	J2-35	47
J1-16	NC	J1-36	36	J2-16	13	J2-36	48
J1-17	NC	J1-37	NC	J2-17	NC	J2-37	1
J1-18	NC	J1-38	NC	J2-18	NC	J2-38	NC
J1-19	NC	J1-39	NC	J2-19	NC	J2-39	NC
J1-20	NC	J1-40	NC	J2-20	NC	J2-40	NC

(NC: not connected)