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April 1st, 2010
Renesas Electronics Corporation

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

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M34559T-PTCB

Converter Board for Connecting to 52-pin 0.65mm pitch LQFP of 4559 Group

User's Manual

Notes regarding these materials

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CAUTION

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

Renesas Tools Homepage <http://www.renesas.com/tools>

Rev.1.01
Sep. 01, 2007
REJ10J1487-0101

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1. Outline

The M34559T-PTCB, combined with the M34559T2-CPE compact emulator, is a converter board for connecting a foot pattern for 52-pin 0.65mm pitch LQFP package (PLQP0052JA-A) of the 4559 group.

2. Package Components (See Figure 1)

- (1) M34559T-PTCB converter board..... 1 pc.
- (2) NQPACK052SB (made by Tokyo Eletech Corporation) 1 pc.
- (3) YQPACK052SB (made by Tokyo Eletech Corporation) 1 pc.
- (4) YQSOCKET052SBF (made by Tokyo Eletech Corporation) 1 pc.

Pre-mounted on the converter board M34559T-PTCB

- (5) YQ-GUIDE-S1 (made by Tokyo Eletech Corporation) 4 pcs.
- (6) M34559T-PTCB User's Manual (This manual)

3. Specifications

Table 1 Specifications

Applicable package	PLQP0052JA-A (Previous code: 52P6A-A) (52-pin 0.65mm pitch LQFP)
Insertion/removal iterations of connector	20 times guaranteed

4. Usage (See Figure 2)

The M34559T-PTCB can be used for debugging and board-mounted evaluation in common by mounting the NQPACK052SB on the user system.

- (1) For debugging
Mount the NQPACK052SB on the foot pattern of the user system and attach the YQPACK052SB on it. Then connect the M34559T-PTCB to the YQPACK052SB.
- (2) For onboard evaluation
Mount the OzROM MCU first, and HQPACK052SB (separately available) on the NQPACK052SB on the user system.

Before using the M34559T-PTCB, be sure to read "6. Precautions" on page 3.

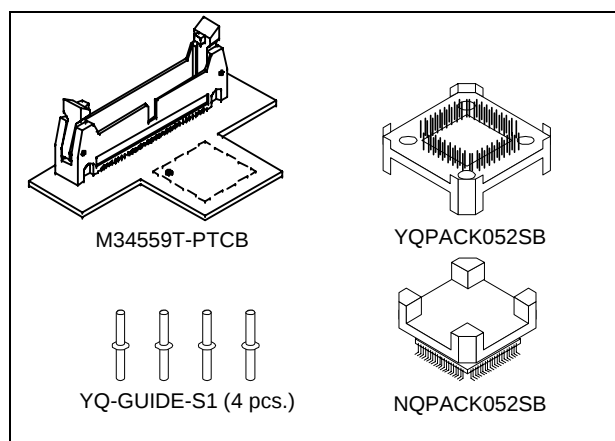


Figure 1 Package components of the M34559T-PTCB

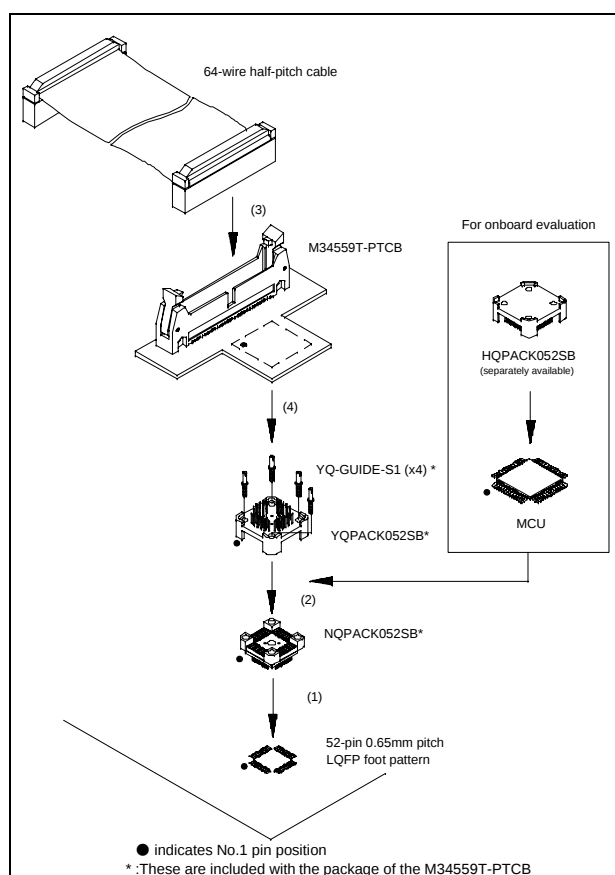


Figure 2 Usage of the M34559T-PTCB

5. External Dimensions

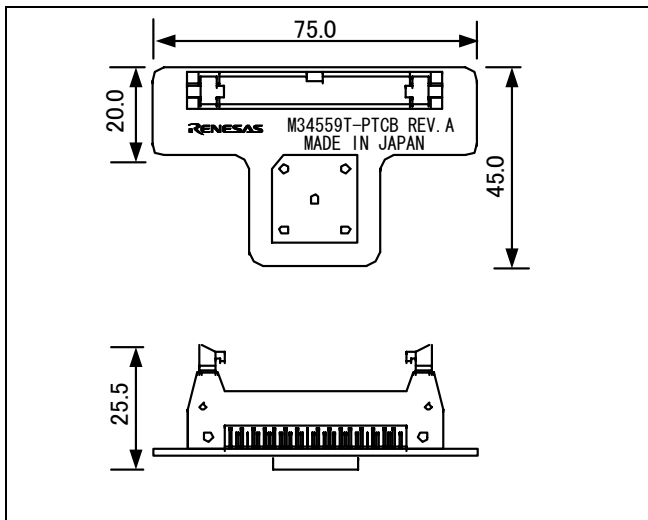


Figure 3 External dimensions of the M34559T-PTCB

6. Precautions

⚠ CAUTION

Caution to Be Taken for This Product:



- When connecting the YQPACK052SB, be sure to use the included YQ-GUIDE's.
- Do NOT use the screws included with the YQPACK052SB for connecting the YQPACK052SB.

IMPORTANT

Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NQPACK052SB, YQPACK052SB, HQPACK052SB, contact the following:
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.
Renesas Tools Homepage <http://www.renesas.com/tools>

7. Correspondence of Connectors

Table 2 Correspondence of the connectors

MCU Pin No.	Signal	MCU Pin No.	Signal
1	D2	52	D1
2	D3	51	D0
3	D4	50	P33/SEG31
4	D5/INT	49	P32/SEG30
5	CNVSS	48	P31/SEG29
6	XCIN/D6	47	P30/SEG28
7	XCOUT/D7	46	P23/SEG27
8	RESET	45	P22/SEG26
9	XOUT	44	P21/SEG25
10	VSS	43	P20/SEG24
11	XIN	42	P13/SEG23
12	VDD	41	P12/SEG22
13	C/CNTR	40	P11/SEG21
14	VDCE	39	P10/SEG20
15	COM0	38	P03/SEG19
16	COM1	37	P02/SEG18
17	COM2	36	P01/SEG17
18	COM3	35	P00/SEG16
19	SEG0/VLC3	34	SEG15
20	SEG1/VLC2	33	SEG14
21	SEG2/VLC1	32	SEG13
22	SEG3	31	SEG12
23	SEG4	30	SEG11
24	SEG5	29	SEG10
25	SEG6	28	SEG9
26	SEG7	27	SEG8

("-": No connection)