

## S1C17 Manual errata

| ITEM: Package                                |                |  |         |
|--|----------------|--|---------|
| Object manuals                               | Document codes | Items  | Pages   |
| S1C17624/604/622/602/621<br>Technical Manual | 411914903      | 1.1 Features<br>Table 1.1.1 Features Shipping form | 1-2     |
|  |                | 1.3.2 S1C17604 Pin Configuration<br>Diagram        | 1-7     |
|  |                | 1.3.4 S1C17602/621 Pin Configuration<br>Diagram    | 1-13    |
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| S1C17803 Technical Manual                    | 411820401      | 1 Overview Table 1.1 Product Lineup                | 1-1     |
|  |                | 1.1 Features Shipping Form                         | 1-6     |
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S1C17604/602/621

Page 1-2 1.1 Features Table 1.1.1 Features Shipping form

(Error) **TQFP**14-100pin (Correct) **QFP**14-100pin

Page 1-7 1.3.2 S1C17604 Pin Configuration Diagram

(Error) **TQFP**14-100pin (Correct) **QFP**14-100pin

Page 1-13 1.3.4 S1C17602/621 Pin Configuration Diagram

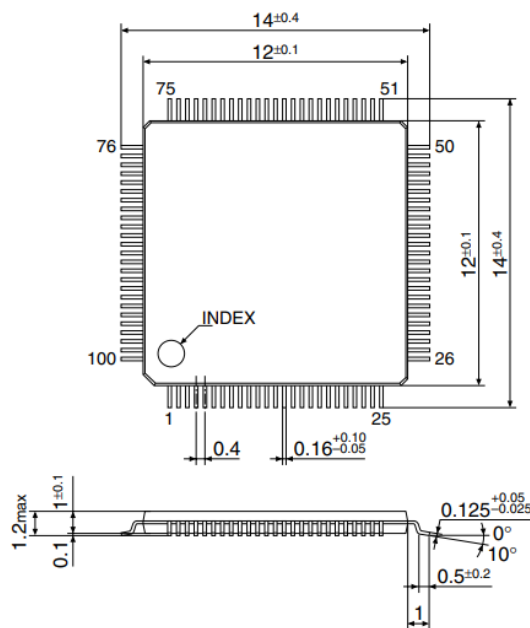
(Error) **TQFP**14-100pin (Correct) **QFP**14-100pin

Page 31-1 31 Package

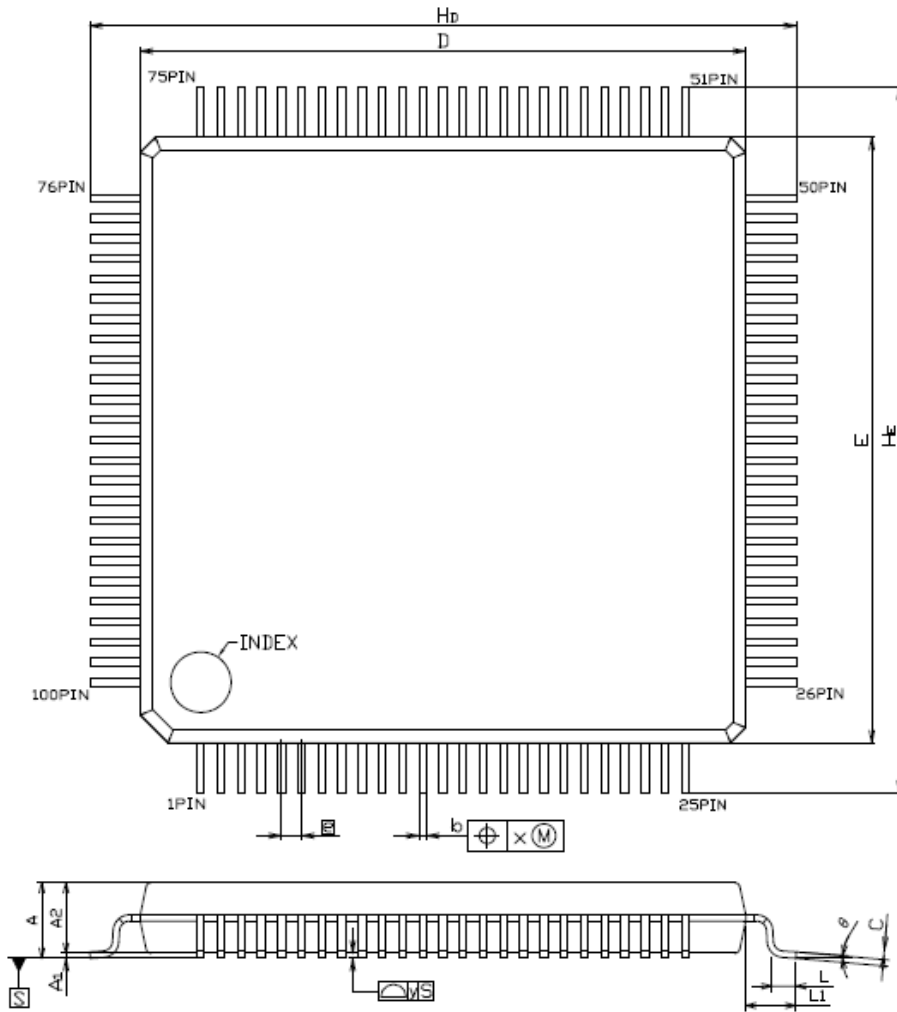
(Error)

**TQFP14-100pin package**

(Unit: mm)



(Correct)  
QFP14-100 pin package



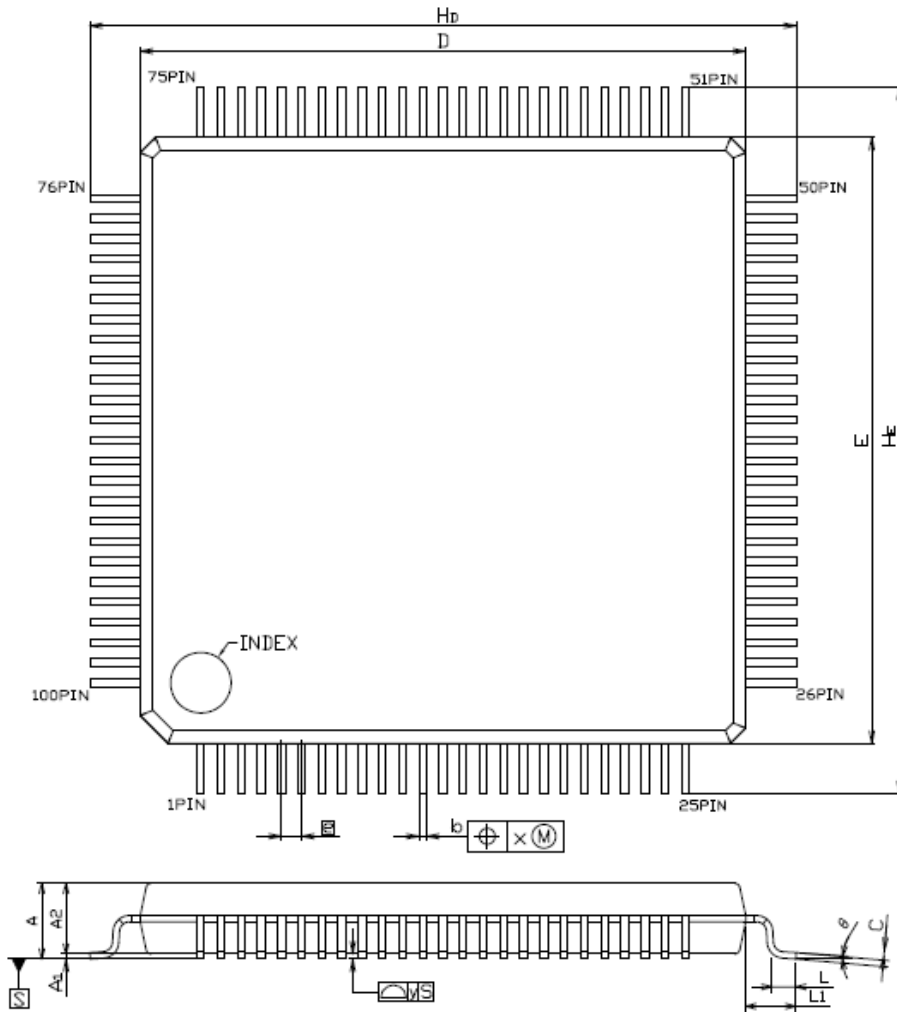
| Symbol     | Dimension In Millimeters |       |       |
|------------|--------------------------|-------|-------|
|            | Min                      | Nom   | Max   |
| $D$        | 11.90                    | 12.00 | 12.10 |
| $E$        | 11.90                    | 12.00 | 12.10 |
| $A$        | -                        | -     | 1.70  |
| $A_2$      | 0.00                     | 0.10  | 0.20  |
| $A_e$      | 1.30                     | 1.40  | 1.50  |
| $\boxplus$ | -                        | 0.40  | -     |
| $b$        | 0.13                     | 0.18  | 0.23  |
| $c$        | 0.09                     | 0.15  | 0.20  |
| $\theta$   | 0°                       | 5°    | 10°   |
| $L$        | 0.30                     | 0.50  | 0.75  |
| $L_1$      | 0.80                     | 1.00  | 1.20  |
| $H_D$      | 13.60                    | 14.00 | 14.40 |
| $H_E$      | 13.60                    | 14.00 | 14.40 |
| $x$        | -                        | -     | 0.08  |
| $y$        | -                        | -     | 0.08  |

1 = 1mm



(Correct)

QFP14-100 pin package



| Symbol         | Dimension in Millimeters |       |       |
|----------------|--------------------------|-------|-------|
|                | Min                      | Nom   | Max   |
| D              | 11.90                    | 12.00 | 12.10 |
| E              | 11.90                    | 12.00 | 12.10 |
| A              | -                        | -     | 1.70  |
| A <sub>L</sub> | 0.00                     | 0.10  | 0.20  |
| A <sub>P</sub> | 1.30                     | 1.40  | 1.50  |
| ⊠              | -                        | 0.40  | -     |
| b              | 0.13                     | 0.18  | 0.23  |
| c              | 0.09                     | 0.15  | 0.20  |
| θ              | 0°                       | 5°    | 10°   |
| L              | 0.30                     | 0.50  | 0.75  |
| L <sub>1</sub> | 0.80                     | 1.00  | 1.20  |
| H <sub>D</sub> | 13.60                    | 14.00 | 14.40 |
| H <sub>E</sub> | 13.60                    | 14.00 | 14.40 |
| x              | -                        | -     | 0.08  |
| y              | -                        | -     | 0.08  |

1 = 1mm

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|  |               |                               |       |      |      |
|--|---------------|-------------------------------|-------|------|------|
| ITEM: USI/USIL AC Characteristics  |               |                               |       |      |      |
| Object manual  | Document code | Object ITEM                   | Page  |      |      |
| S1C17803 Technical Manual  | 411820401     | 30.7.3 USI AC Characteristics | 30-10 |      |      |
| 30-10  |               |                               |       |      |      |
| <b>(Error)</b>   |               |                               |       |      |      |
| <b>SPI master mode (8 or 9 bits, normal mode)</b>                                      |               |                               |       |      |      |
| Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1_VDD/IO2_VDD= 4.5 to 5.5V, VSS = 0V |               |                               |       |      |      |
| Item   | Symbol        | Min.                          | Typ.  | Max. | Unit |
| spi_sck cycle time   | tSPCK         | 85 + tPCLK                    | -     | -    | ns   |
| spi_sdi setup time   | tSDS          | 85 + tPCLK                    | -     | -    | ns   |
| Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1_VDD/IO2_VDD= 2.7 to 3.6V, VSS = 0V |               |                               |       |      |      |
| Item   | Symbol        | Min.                          | Typ.  | Max. | Unit |
| spi_sck cycle time   | tSPCK         | 85 + tPCLK                    | -     | -    | ns   |
| spi_sdi setup time   | tSDS          | 85 + tPCLK                    | -     | -    | ns   |
| <b>SPI master mode (8 or 9 bits, fast mode)</b>  |               |                               |       |      |      |
| Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1_VDD/IO2_VDD= 4.5 to 5.5V, VSS = 0V |               |                               |       |      |      |
| Item   | 記号            | Min.                          | Typ.  | Max. | Unit |
| spi_sck cycle time   | tSPCK         | 85                            | -     | -    | ns   |
| spi_sdi setup time   | tSDS          | 85                            | -     | -    | ns   |
| Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1_VDD/IO2_VDD= 2.7 to 3.6V, VSS = 0V |               |                               |       |      |      |
| Item   | 記号            | Min.                          | Typ.  | Max. | Unit |
| spi_sck cycle time   | tSPCK         | 85                            | -     | -    | ns   |
| spi_sdi setup time   | tSDS          | 85                            | -     | -    | ns   |
| <b>(Correct)</b>   |               |                               |       |      |      |
| <b>SPI master mode (8 or 9 bits, normal mode)</b>                                      |               |                               |       |      |      |
| Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1_VDD/IO2_VDD= 4.5 to 5.5V, VSS = 0V |               |                               |       |      |      |
| Item   | Symbol        | Min.                          | Typ.  | Max. | Unit |
| spi_sck cycle time   | tSPCK         | <b>(85 + tPCLK) x 2</b>       | -     | -    | ns   |
| spi_sdi setup time   | tSDS          | 85 + tPCLK                    | -     | -    | ns   |
| Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1_VDD/IO2_VDD= 2.7 to 3.6V, VSS = 0V |               |                               |       |      |      |
| Item   | Symbol        | Min.                          | Typ.  | Max. | Unit |
| spi_sck cycle time   | tSPCK         | <b>(85 + tPCLK) x 2</b>       | -     | -    | ns   |
| spi_sdi setup time   | tSDS          | 85 + tPCLK                    | -     | -    | ns   |

**SPI master mode (8 or 9 bits, fast mode)**

Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1\_VDD/IO2\_VDD= 4.5 to 5.5V, VSS = 0V

| Item               | 記号    | Min.          | Typ. | Max. | Unit |
|--------------------|-------|---------------|------|------|------|
| spi_sck cycle time | tSPCK | <b>85 x 2</b> | -    | -    | ns   |
| spi_sdi setup time | tSDS  | 85            | -    | -    | ns   |

Unless otherwise specified: LVDD = 2.7 to 3.6V, IO1\_VDD/IO2\_VDD= 2.7 to 3.6V, VSS = 0V

| Item               | 記号    | Min.          | Typ. | Max. | Unit |
|--------------------|-------|---------------|------|------|------|
| spi_sck cycle time | tSPCK | <b>85 x 2</b> | -    | -    | ns   |
| spi_sdi setup time | tSDS  | 85            | -    | -    | ns   |

## S1C17 Family Technical Manual Errata

| ITEM I2C Slave Input/Output Pins |               |                                  |       |
|----------------------------------|---------------|----------------------------------|-------|
| Object manual                    | Document code | Object item                      | Page  |
| S1C17601 Technical Manual        | 411805701     | 21.2 I2C Slave Input/Output Pins | 21-2  |
| S1C17611 Technical Manual        | 411882301     | 21.2 I2C Slave Input/Output Pins | 21-2  |
| S1C17706 Technical Manual        | 412026401     | 18.2 I2CS Input/Output Pins      | 18-1  |
| S1C17002 Technical Manual        | 411554402     | V.3.2 I2C Slave I/O Pins         | V-3-2 |
| S1C17003 Technical Manual        | 411635102     | 21.2 I2C Slave Input/Output Pins | 21-2  |
| S1C17803 Technical Manual        | 411820401     | 21.2 I2CS Input/Output Pins      | 21-2  |

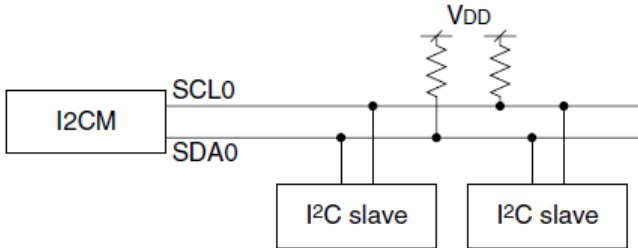
(Addition)

Note: The pins go to high impedance status when the port function is switched. The SCL and SDA pins do not output a high level, so these lines should be pulled up to VDD with an external pull-up resistor. Be sure to avoid pulling these pins up to a voltage that exceeds the VDD level.

The diagram illustrates the I2C bus configuration. An I2C master is connected to the SDA1 and SCL1 lines. These lines are also connected to an I2CS (I2C Slave) and an I2C slave. Two resistors are shown pulling the SDA1 and SCL1 lines up to the VDD supply voltage. The resistors are connected to the VDD supply and the SDA1 and SCL1 lines respectively.



## S1C17 Family Technical Manual Errata

| ITEM I2C Master Input/Output Pins   |               |                                   |        |
|---|---------------|-----------------------------------|--------|
| Object manual   | Document code | Object item                       | Page   |
| S1C17601 Technical Manual   | 411805701     | 20.2 I2C Master Input/Output Pins | 20-2   |
| S1C17611 Technical Manual   | 411882301     | 20.2 I2C Master Input/Output Pins | 20-2   |
| S1C17701 Technical Manual   | 411089904     | 20.2 I2C I/O Pins                 | 20-2   |
| S1C17704 Technical Manual   | 411511903     | 20.2 I2C I/O Pins                 | 20-2   |
| S1C17706 Technical Manual   | 412026401     | 17.2 I2CM Input/Output Pins       | 17-1   |
| S1C17001 Technical Manual   | 411412301     | 20.2 I2C Input/Output Pins        | 252    |
| S1C17002 Technical Manual   | 411554402     | V.2.2 I2C Master I/O Pins         | V-2-2  |
| S1C17003 Technical Manual   | 411635102     | 20.2 I2C Master Input/Output Pins | 20-2   |
| S1C17501 Technical Manual   | 411525602     | VI.2.2 I2C I/O Pins               | VI-2-2 |
| S1C17801 Technical Manual   | 411390802     | VI.2.2 I2C I/O Pins               | VI-2-2 |
| S1C17803 Technical Manual   | 411820401     | 20.2 I2CM Input/Output Pins       | 20-2   |
| <p>(Addition)</p> <p>Note: The pins go to high impedance status when the port function is switched.</p> <p>The SCL and SDA pins do not output a high level, so these lines should be pulled up to VDD with an external pull-up resistor. Be sure to avoid pulling these pins up to a voltage that exceeds the VDD level.</p>  |               |                                   |        |

## S1C17 Family Technical Manual Errata

|                              |               |                                 |      |
|------------------------------|---------------|---------------------------------|------|
| ITEM About Power-on sequence |               |                                 |      |
| Object manual                | Document code | Object item                     | Page |
| S1C17803 Technical Manual    | 411820401     | 4.7 Precautions on Power Supply | 4-4  |
|                              |               |                                 |      |
|                              |               |                                 |      |

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(Error)

### **4.7 Precautions on Power Supply**

#### **Power-on sequence**

In order to operate the device normally, supply power in accordance with the following timing.

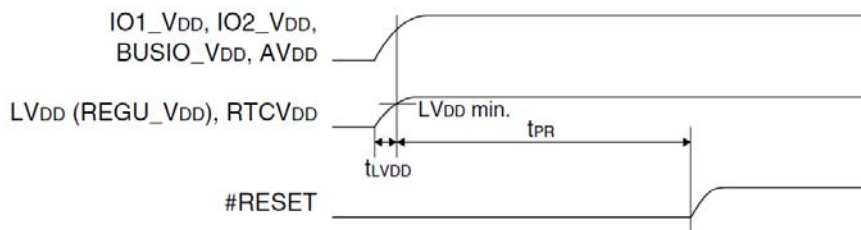


Figure 4.7.1 Power-On Sequence

(1) tLVDD: Elapsed time until the power supply stabilizes after power-on

Supply power in the following sequence.

Power-on: 1. LVDD (and RTCVDD) or REGU\_VDD

2. BUSIO\_VDD, IO1\_VDD, IO2\_VDD, AVDD (May be applied with 1 above at the same time.)

3. Apply the input signal

\* The RTCVDD can be always supplied to the chip to operate the RTC and BBRAM.

(2) tPR: Power-on-reset time

Keep the #RESET signal low for this period. See “Electrical Characteristics” for the power-on-reset time.

(Correct)

## 4.7 Precautions on Power Supply

### Power-on sequence

In order to operate the device normally, supply power in accordance with the following timing.

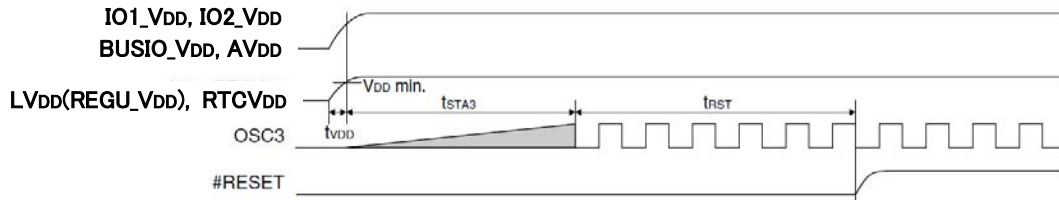


Figure 4.7.1 Power-On Sequence

(1)  $t_{VDD}$ : Elapsed time until the power supply stabilizes after power-on

Supply power in the following sequence.

Power-on: 1. LV<sub>DD</sub> (and RTCV<sub>DD</sub>) or REGU\_V<sub>DD</sub>

2. BUSIO\_V<sub>DD</sub>, IO1\_V<sub>DD</sub>, IO2\_V<sub>DD</sub>, AV<sub>DD</sub> (May be applied with 1 above at the same time.)

3. Apply the input signal

\* The RTCV<sub>DD</sub> can be always supplied to the chip to operate the RTC and BBRAM.

(2)  $t_{STA3}$ : Time at which OSC3 oscillation starts

(3)  $t_{RST}$ : Minimum reset pulse width

Time at which the clock supplied to the chip stabilizes plus at least six clocks; Keep the #RESET signal low.