

S1C17 Manual errata

ITEM: Package			
Object manuals	Document codes	Items	Pages
S1C17653 Technical Manual	412355800	1.1 Features Table 1.1.1 Features, Shipping form 3	1-1
		24.2.2 Gold Bump Specifications	24-4
		Appendix C Mounting Precautions Handling gold bump chip products	AP-C-3

Page 1-2, Table 1.1.1 Features, shipping form 3

(Error) Gold Bump (Correct) (This item was deleted.)

Page 24-4, 24.2.2 Gold Bump Specification

(Error) 24.2.2 Gold Bump Specifications (Correct) (This item was deleted.)

24.2.2 Gold Bump Specifications

Table 24.2.2.1 Gold Bump Specifications

Characteristic		Specification
Bump shape		Strait bump
Bump height (Distance between Al trace and top of bump)	Central height	17 μm Typ.
	Bump-to-bump variation tolerances in all lots	Central height $\pm 4 \mu\text{m}$
	Bump-to-bump variation tolerances in a chip	$R(\text{Max.} - \text{Min.}) \leq 3 \mu\text{m}$
Bump hardness	All bumps in all lots	30 to 70 HV
Bump strength	All bumps in all lots	0.0067g/ μm^2 , shearing within a gold bump
Bump surface asperities	Height Max. - Min. in a bump	3.0 μm or less
Bump dimensions	X and Y plane dimension tolerances (at top of bump)	$X \pm 4 \mu\text{m}$, $Y \pm 4 \mu\text{m}$
Clearance between bumps	Minimum value	$S = 20 \mu\text{m}$

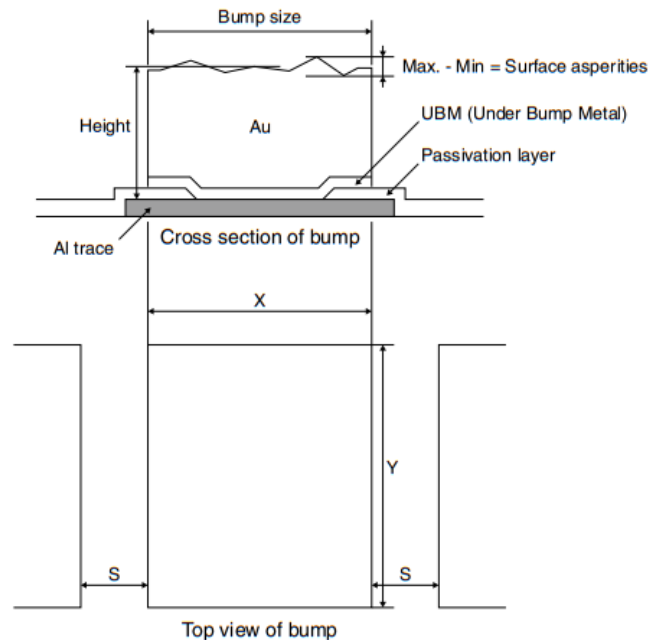


Figure 24.2.2.1 Gold Bump Specifications

Page AP-C-3, Appendix C Handling gold bump chip products

(Error) Handling gold bump chip products (Correct) (This item was deleted.)

Handling gold bump chip products (subjecting to high temperature stress)

If an IC is subjected to high temperature stress such as when a gold bump chip is mounted on COF, the internal Flash memory characteristics may vary. Confirm the heat conditions (temperature and time) for mounting using the table below. If any of the “Data reprogramming required” conditions apply, be sure to reprogram the Flash memory using the corresponding fls program or the standalone Flash programmer. For details of the fls program or the standalone Flash programmer, refer to the respective manual.

Temperature \ Time	Not affected to Flash memory	Affected to Flash memory	
		Data reprogramming required	Allowable time
Lower than 250°C	≤ 5 hours	5 hours to 450 hours	Max. 450 hours
250°C to 300°C	≤ 400 seconds	400 seconds to 10 hours	Max. 10 hours
300°C to 350°C	≤ 20 seconds	20 seconds to 0.5 hour	Max. 0.5 hour
350°C to 400°C	≤ 1 second	1 second to 100 seconds	Max. 100 seconds
400°C to 450°C	≤ 0.1 second	0.1 second to 10 seconds	Max. 10 seconds
Higher than 450°C			Max. 0 seconds

S1C17 Manual errata

ITEM: Package			
Object manuals	Document codes	Items	Pages
S1C17653 Technical Manual	412355800	Table 1.1.1 Features Shipping form 1	1-2
		1.3.1 Pin Configuration Diagram	1-3
		1.3.2 Pin Descriptions	1-5
		24 Package/Chip	24-1
S1C17656 Technical Manual	412745100	Table 1.1.1 Features Shipping form 2	1-2
		1.3.1 Pin Configuration Diagram	1-5
		1.3.2 Pin Descriptions	1-6
		24 Package	24-1

S1C17653

Page 1-2

(Error) **TQFP**14-80pin (14 mm × 14 mm × 1 mm, lead pitch: 0.5 mm)

(Correct) **QFP**14-80pin (14 mm × 14 mm × 1.4 mm, lead pitch: 0.5 mm)

Page 1-3, 1-5

(Error) **TQFP**14-80pin (Correct) **QFP**14-80pin, (Error) TQFP (Correct) QFP

Page 24-1

(Error)

24.1 TQFP Package

TQFP14-80pin package

(Unit: mm)

Figure 24.1.1 TQFP14-80pin Package Dimensions

(Correct)

24.1 QFP Package

QFP14-80pin package

(Unit: mm)

Figure 24.1.1 QFP14-80pin Package Dimensions

S1C17656

Page 1-2

(Error) **TQFP**14-80pin (14 mm × 14 mm × **1 mm**, lead pitch: 0.5 mm)

(Correct) **QFP**14-80pin (14 mm × 14 mm × **1.4 mm**, lead pitch: 0.5 mm)

Page 1-5, 1-6

(Error) **TQFP**14-80pin (Correct) **QFP**14-80pin (Error) **TQFP**14-80 (Correct) **QFP**14-80

Page 24-1

(Error) **24 Package**

TQFP14-80pin

(Unit: mm)

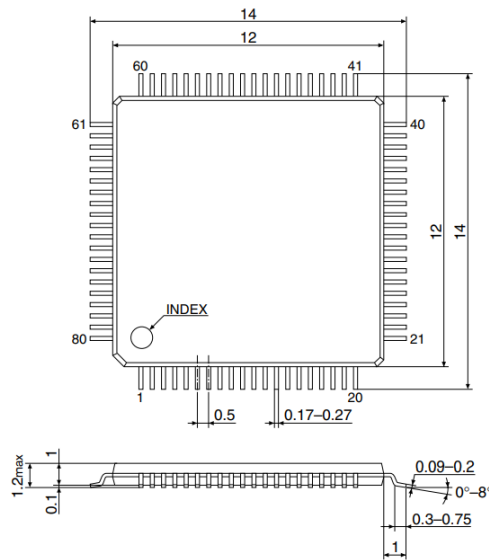


Figure 24.1 TQFP14-80pin Package Dimensions

(Correct) **24 Package**

QFP14-80pin

(Unit: mm)

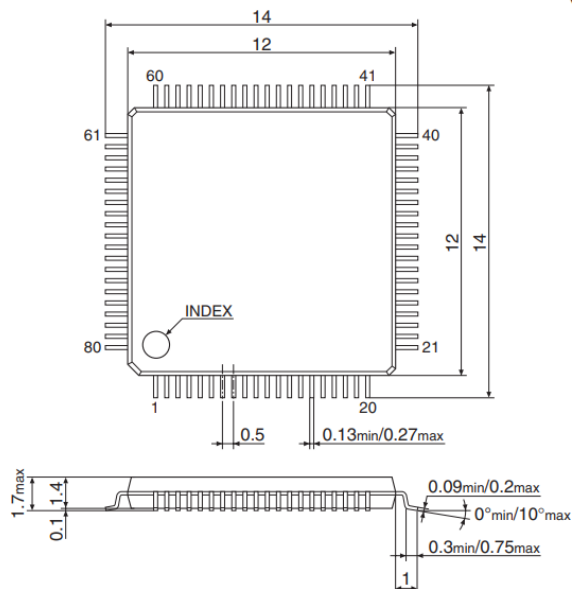


Figure 24.1 QFP14-80pin Package Dimensions

S1C17 Family Technical Manual Errata

ITEM Pad/Bump Configuration			
Object manual	Document code	Object item	Page
S1C17653 Technical Manual	412355800	24.2.1 Pad/Bump Configuration	24-2
<p>(Error)</p> <p>Chip size X = 2.637 mm, Y = 2.543 mm</p> <p>Pad opening No. 1 to 17, 37 to 47: X = 76 μm, Y = 85 μm</p> <p>No. 18 to 36, 48 to 67: X = 85 μm, Y = 76 μm</p> <p>Bump size No. 1 to 17, 37 to 47: X = 70 μm, Y = 79 μm</p> <p>No. 18 to 36, 48 to 67: X = 79 μm, Y = 70 μm</p> <p>Chip thickness 400 μm</p>			
<p>(Correct)</p> <p>Chip size X = 2.637 mm, Y = 2.543 mm</p> <p>Pad opening No. 1 to 17, 37 to 47: X = 76 μm, Y = 85 μm</p> <p>No. 18 to 36, 48 to 67: X = 85 μm, Y = 76 μm</p> <p>Bump size No. 1 to 17, 37 to 47: X = 70 μm, Y = 79 μm</p> <p>No. 18 to 36, 48 to 67: X = 79 μm, Y = 70 μm</p> <p>Chip thickness 400 μm</p> <p>Alignment mark: Upper left (X:-1206.1um, Y:1159.1um) Lower right(X:1206.1um, Y:-1095.1um)</p>			