Aug/07/2017

errata_c31w74_02

S1C31 Manual errata

ITEM: Flash Memory Pin

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(Error)

1.3.3 Pin Descriptions

Table 1.3.3.1 Pin Description

P26	P26	I/O	Hi-Z	–	I/O port
	EXOSC	I			Clock generator external clock input

4.3.1 Flash Memory Pin

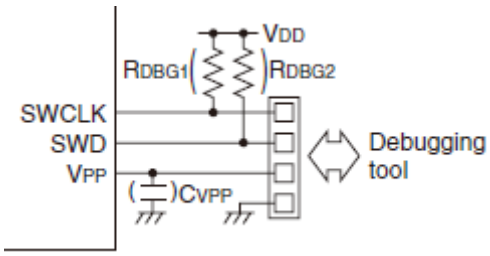
Table 4.3.1.1 Flash Memory Pin

Pin name	I/O	Initial status	Function
VPP	P	–	Flash programming power supply

For the VPP voltage, refer to "Recommended Operating Conditions, Flash programming voltage VPP" in the "Electrical Characteristics" chapter.

Note: Always leave the VPP pin open except when programming the Flash memory.

24 Basic External Connection Diagram



(Correct)

1.3.3 Pin Descriptions

Table 1.3.3.1 Pin Description

P26	P26 (ENVPP)	I/O	Hi-Z	–	I/O port (Flash programming control signal output)
	EXOSC	I			Clock generator external clock input

4.3.1 Flash Memory Pin

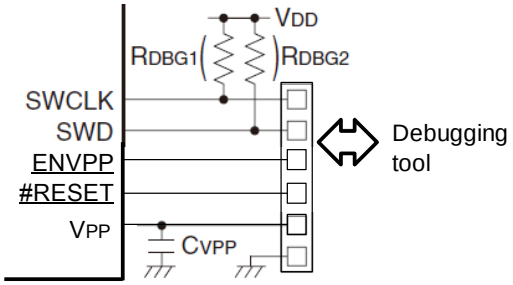
Table 4.3.1.1 Flash Memory Pin

Pin name	I/O	Initial status	Function
VPP	P	–	Flash programming power supply
(ENVPP)	O or Hi-Z	Hi-Z	Flash programming control signal output

For the VPP voltage, refer to "Recommended Operating Conditions, Flash programming voltage VPP" in the "Electrical Characteristics" chapter.

Note: Always leave the VPP pin open except when programming the Flash memory.

24 Basic External Connection Diagram



Aug/07/2017

errata_c31w74_01

S1C31 Manual Errata

ITEM Flash Programming			
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(Error)

1.1 Features

Power supply voltage	
VDD operating voltage	1.8 to 3.6 V
VDD operating voltage for Flash programming	2.7 to 3.6 V (when the internal voltage booster is used)
VDD operating voltage when LCD driver is used	2.5 to 3.6 V

4.3.3 Flash Programming

The Flash memory supports on-board programming, so it can be programmed using a flash loader.

The VPP voltage can be supplied from either an external power supply or the internal voltage booster.

Choose the flash loader according to the VPP power supply to be used.

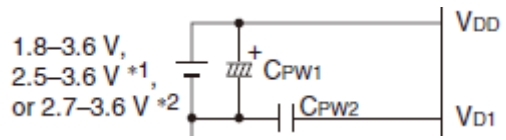
Notes: When the internal voltage booster is used, 2.7 V or more V_{DD} voltage is required.

23.2 Recommended Operating Conditions

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power supply voltage	VDD	For normal operation	1.8	-	3.6	V
		For Flash programming	2.7	-	3.6	V
		For LCD driver operation	2.5	-	3.6	V
Capacitor between V_{SS} and V_{PP}	C_{VPP}	*5	-	0.1	-	µF

*5 C_{VPP} should be connected only when the V_{PP} voltage is not stable.

24 Basic External Connection Diagram



*1: When the LCD driver is used

*2: For Flash programming (when VPP is generated internally)

Appendix C Mounting Precautions

V_{PP} pin

If fluctuations in the Flash programming voltage V_{PP} is large, connect a capacitor C_{VPP} between the V_{SS} and V_{PP} pins to suppress fluctuations within V_{PP} ± 1 V. The C_{VPP} should be placed as close to the V_{PP} pin as possible and use a sufficiently thick wiring pattern that allows current of several tens of mA to flow.

(Correct)

1.1 Features

Power supply voltage	
VDD operating voltage	1.8 to 3.6 V
VDD operating voltage for Flash programming	2.4 to 3.6 V (when VPP is supplied externally) 2.7 to 3.6 V (when VPP is generated internally)
VDD operating voltage when LCD driver is used	2.5 to 3.6 V

4.3.3 Flash Programming

The Flash memory supports on-board programming, so it can be programmed using a flash loader.

The V_{PP} voltage can be supplied from either an external power supply or the internal voltage booster.

The V_{PP} voltage can also be generated by the internal power supply for generating the Flash programming voltage. Be sure to connect a capacitor C_{VPP} between the V_{SS} and V_{PP} pins for stabilizing the voltage when the V_{PP} voltage is supplied externally or for generating the voltage when the internal power supply is used.

The V_{PP} pin must be left open except when programming the Flash memory. However, it is not necessary to disconnect the wire when using “Bridge Board (S5U1C31001L)” to supply the V_{PP} voltage, as Bridge Board controls the power supply so that it will be supplied during Flash programming only.

Notes: ・ When the V_{PP} voltage is supplied externally, 2.4 V or more V_{DD} voltage is required.

・ When the V_{PP} voltage is generated internally, 2.7 V or more V_{DD} voltage is required

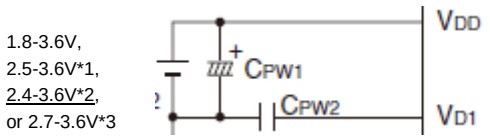
・ Be sure to avoid using the V_{PP} pin output for driving external circuits when the V_{PP} voltage is generated internally.

23.2 Recommended Operating Conditions

Item	Symbol	Condition		Min.	Typ.	Max	Unit
Power supply voltage	VDD	For normal operation		1.8	-	3.6	V
		For Flash programming	When VPP is supplied externally	2.4	-	3.6	V
			When VPP is generated internally	2.7	-	3.6	V
		For LCD driver operation		2.5	-	3.6	V
Capacitor between VSS and VPP	CVPP	~~*5~~		-	0.1	-	µF

~~*5 C_{VPP} should be connected only when the V_{PP} voltage is not stable.~~

24 Basic External Connection Diagram



*1: When the LCD driver is used

*2: For Flash programming (when VPP is supplied externally)

*3: For Flash programming (when VPP is generated internally)

Appendix C Mounting Precautions

VPP pin

~~If fluctuations in the Flash programming voltage VPP is large,~~ Connect a capacitor CVPP between the VSS and VPP pins to suppress fluctuations within VPP ± 1 V. The CVPP should be placed as close to the VPP pin as possible and use a sufficiently thick wiring pattern that allows current of several tens of mA to flow.