THIS SPEC IS OBSOLETE

Spec No: 002-05034

Spec Title: DATASHEET ERRATA FOR S6E2D5 SERIES 32-BIT ARM (R) CORTEX (R)-M4F BASED MICROCONTROLLER

Replaced by: NONE

November 29, 2016

Datasheet Errata for S6E2D5 Series 32-bit ARM® Cortex®-M4F based Microcontroller

This document describes the errata for the S6E2D5 Series 32-bit ARM® Cortex®-M4F based Microcontroller datasheet. Compare this document to the device's data sheet for a complete functional description.

Contact your local Cypress Sales Representative, if you have questions.

Part Numbers Affected

Part Number
S6E2D5 Series

Page	Item	Description
Original document code: DS709-00021-1v0-E		
Rev. 1.0 June 25, 2015		
64	9. Handling Devices	"Sub Crystal Oscillator" should be added as indicated by the shading below. ■Surface mount type Size: More than 3.2 mm × 1.5 mm Load capacitance: Approximately 6 pF to 7 pF When the Standard setting (CCS/CCB=11001110) Load capacitance: Approximately 4 pF to 7 pF When the low power setting (CCS/CCB=00000100) ■Lead type Load capacitance: Approximately 6 pF to 7 pF When the Standard setting (CCS/CCB=11001110) Load capacitance: Approximately 4 pF to 7 pF When the low power setting (CCS/CCB=00000100)

<table>
<tr><th>Page</th><th>Item</th><th>Description</th></tr>
<tr><td>92</td><td>14.3.1 Current Rating</td><td>
Table 14-10 should be added as indicated by the shading below.

Table 14-10 Typical and Maximum Current Consumption in Deep Standby Stop Mode, Deep Standby RTC Mode and VBAT
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Symbol</th><th rowspan="2">Pin Name</th><th rowspan="2">Conditions</th><th rowspan="2">Frequency (MHz)</th><th colspan="2">Value</th><th rowspan="2">Unit</th><th rowspan="2">Remarks</th></tr>
<tr><th>Typ</th><th>Max</th></tr>
<tr><td rowspan="9">Power supply current</td><td rowspan="9">ICCVBAT</td><td rowspan="9">VBAT</td><td rowspan="3">RTC stop</td><td rowspan="9">-</td><td>0.009</td><td>0.032</td><td>µA</td><td>*3, *4, *5
T_A=+25°C</td></tr>
<tr><td>-</td><td>0.994</td><td>µA</td><td>*3, *4, *5
T_A=+85°C</td></tr>
<tr><td>-</td><td>1.491</td><td>µA</td><td>*3, *4, *5
T_A=+105°C</td></tr>
<tr><td rowspan="3">RTC *6 operation</td><td>1.0</td><td>1.636</td><td>µA</td><td>*3, *4
T_A=+25°C</td></tr>
<tr><td>-</td><td>2.828</td><td>µA</td><td>*3, *4
T_A=+85°C</td></tr>
<tr><td>-</td><td>4.242</td><td>µA</td><td>*3, *4
T_A=+105°C</td></tr>
<tr><td rowspan="3">RTC *7 operation</td><td>0.7</td><td>1.153</td><td>µA</td><td>*3, *4
T_A=+25°C</td></tr>
<tr><td>-</td><td>2.277</td><td>µA</td><td>*3, *4
T_A=+85°C</td></tr>
<tr><td>-</td><td>3.416</td><td>µA</td><td>*3, *4
T_A=+105°C</td></tr>
</table>
*1: V_{CC}=3.3 V
*2: V_{CC}=3.6 V
*3: When all ports are fixed.
*4: When LVD is OFF
*5: When sub oscillation is OFF
*6: When using the crystal oscillator of 32 kHz (including the current consumption of the oscillation circuit)
When the Standard setting (CCS/CCB=11001110)
*7: When using the crystal oscillator of 32 kHz (including the current consumption of the oscillation circuit)
When the low power setting (CCS/CCB=00000100)
</td></tr>
<tr><td>176</td><td>15. Ordering Information</td><td>
Ordering Information should be corrected as indicated by the shading below.

(Error)
<table>
<tr><th>Part Number</th><th>Package</th></tr>
<tr><td>S6E2D55G0AGV20000</td><td rowspan="2">Plastic・LQFP (0.5 mm pitch), 120 pin
(FPT-120P-M21)</td></tr>
<tr><td>S6E2D55GJAMV20000</td></tr>
<tr><td>S6E2D55J0AGV20000</td><td>Plastic・LQFP (0.5 mm pitch), 176 pin
(FPT-176P-M07)</td></tr>
<tr><td>S6E2D55G0AGB30000</td><td>Plastic・PFBGA (0.5 mm pitch), 161 pin
(FDJ161)</td></tr>
<tr><td>S6E2D55G0AGZ20000</td><td>Plastic・Ex-LQFP (0.5 mm pitch), 120 pin
(LEM120)</td></tr>
</table>
(Correct)
<table>
<tr><th>Part Number</th><th>Package</th></tr>
<tr><td>S6E2D55G0AGV20000</td><td rowspan="2">Plastic・LQFP (0.5 mm pitch), 120 pin
(FPT-120P-M21)</td></tr>
<tr><td>S6E2D55GJAMV20000</td></tr>
<tr><td>S6E2D55J0AGV20000</td><td>Plastic・LQFP (0.5 mm pitch), 176 pin
(FPT-176P-M07)</td></tr>
<tr><td>S6E2D55G0AGB30000</td><td>Plastic・PFBGA (0.5 mm pitch), 161 pin
(FDJ161)</td></tr>
<tr><td>S6E2D55G0AGE20000</td><td>Plastic・Ex-LQFP (0.5 mm pitch), 120 pin
(LEM120)</td></tr>
</table>
</td></tr>
<tr><td colspan="3">Rev. 2.0 September 16, 2015</td></tr>
</table>

<table>
<tr><th>Page</th><th>Item</th><th>Description</th></tr>
<tr><td>11</td><td>2. Features</td><td>Note should be added as indicated by the shading below.

(Error)
GDC Unit
Controller for external graphics display
Accelerator for 2D block image transfer (blit) operations
Embedded SRAM video memory
High-Speed Quad SPI (Serial Peripheral Interface for external memory extensions)
SDRAM interface for external memory extensions
HBI (Hyper Bus Interface) interface for external memory extensions
Maximum core system clock frequency : 160 MHz

(Correct)
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Controller for external graphics display
Accelerator for 2D block image transfer (blit) operations
Embedded SRAM video memory
High-Speed Quad SPI (Serial Peripheral Interface for external memory extensions)
SDRAM interface for external memory extensions
HBI (Hyper Bus Interface) interface for external memory extensions
Maximum core system clock frequency : 160 MHz

Note:
User can leverage the internal VRAM and external HyperRAM as a graphics memory allowed to be written by GDC.</td></tr>
<tr><td>15</td><td>4. Packages</td><td>“Packages” should be corrected as indicated by the shading below.

(Error)
<table><tr><th>Product Name
Package</th><th>S6E2D55G0A</th><th>S6E2D55J0A</th><th>S6E2D55GJA</th></tr><tr><td>LQFP: FPT-120P-M21 (0.5 mm pitch)</td><td>❍</td><td>-</td><td>❍</td></tr><tr><td>LQFP: FPT-176P-M07 (0.5 mm pitch)</td><td>-</td><td>❍</td><td>-</td></tr><tr><td>PFBGA: FDJ161 (0.5 mm pitch)</td><td>❍</td><td>-</td><td>-</td></tr><tr><td>Ex_LQFP(TEQFP): LEM120 (0.5 mm pitch)</td><td>❍</td><td></td><td></td></tr></table>❍: Supported

(Correct)
<table><tr><th>Product Name
Package</th><th>S6E2D55G0A</th><th>S6E2D55J0A</th><th>S6E2D55GJA</th></tr><tr><td>LQFP: FPT-120P-M21 (0.5 mm pitch)</td><td>❍</td><td>-</td><td>❍</td></tr><tr><td>LQFP: FPT-176P-M07 (0.5 mm pitch)</td><td>-</td><td>❍</td><td>-</td></tr><tr><td>FBGA: FDJ161 (0.5 mm pitch)</td><td>❍</td><td>-</td><td>-</td></tr><tr><td>Ex_LQFP(TEQFP): LEM120 (0.5 mm pitch)</td><td>□</td><td>-</td><td>-</td></tr></table>❍: Supported □: In development</td></tr>
<tr><td>16, 18</td><td>5. Pin Assignment</td><td>Signal name should be corrected as below.

(Error) GE_SPCSX_0 (Correct) GE_SPCSX0
(Error) GE_HBCSX_0 (Correct) GE_HBCSX0
(Error) GE_HBCSX_1 (Correct) GE_HBCSX1</td></tr>
<tr><td>21, 23, 48</td><td>6. Pin Descriptions</td><td>Signal name should be corrected as below.

(Error) GE_SPCSX_0 (Correct) GE_SPCSX0
(Error) GE_HBCSX_0 (Correct) GE_HBCSX0
(Error) GE_HBCSX_1 (Correct) GE_HBCSX1</td></tr>
</table>

<table>
<tr><th>Page</th><th>Item</th><th>Description</th></tr>
<tr><td>67</td><td>10. Block Diagram</td><td>Signal name should be corrected as below.

(Error) GE_SPCSX_0 (Correct) GE_SPCSX0
(Error) GE_HBCSX_0/1 (Correct) GE_HBCSX0/1</td></tr>
<tr><td>93</td><td>14.3 DC Characteristics</td><td>“VFLASH memory Standby current” should be corrected as indicated by the shading below.

(Error)
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Symbol</th><th rowspan="2">Pin name</th><th rowspan="2">Conditions</th><th colspan="3">Value</th><th rowspan="2">Unit</th><th rowspan="2">Remarks</th></tr>
<tr><th>Min</th><th>Typ</th><th>Max</th></tr>
<tr><td>VFLASH memory Standby current</td><td rowspan="3">$I_{CCVFLASH}$</td><td rowspan="3">VCC</td><td>At Standby</td><td>-</td><td>15</td><td>25</td><td>µA</td><td></td></tr>
<tr><td rowspan="2">VFLASH memory Read current</td><td rowspan="2">At Read</td><td rowspan="2">-</td><td>9</td><td>14</td><td rowspan="2">mA</td><td>40MHz</td></tr>
<tr><td>13</td><td>20</td><td>80MHz</td></tr>
<tr><td>VFLASH memory write/erase current</td><td>At Write/Erase</td><td>-</td><td>20</td><td>25</td><td>mA</td><td></td></tr>
</table>
(Correct)
<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Symbol</th><th rowspan="2">Pin name</th><th rowspan="2">Conditions</th><th colspan="3">Value</th><th rowspan="2">Unit</th><th rowspan="2">Remarks</th></tr>
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<tr><td>VFLASH memory Standby current</td><td rowspan="3">$I_{CCVFLASH}$</td><td rowspan="3">VCC</td><td>At Standby</td><td>-</td><td>15</td><td>35</td><td>µA</td><td></td></tr>
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<tr><td>13</td><td>20</td><td>80MHz</td></tr>
<tr><td>VFLASH memory write/erase current</td><td>At Write/Erase</td><td>-</td><td>20</td><td>25</td><td>mA</td><td></td></tr>
</table></td></tr>
<tr><td>162, 161, 162</td><td>14.4 AC Characteristics</td><td>Signal name should be corrected as below.

(Error) GE_SPCSX_0 (Correct) GE_SPCSX0
(Error) GE_HBCSX_0 (Correct) GE_HBCSX0
(Error) GE_HBCSX_1 (Correct) GE_HBCSX1</td></tr>
</table>

Document History Page

Document Title: Datasheet Errata for S6E2D5 Series 32-bit ARM® Cortex®-M4F based Microcontroller Document Number: 002-05034			
Rev.	**ECN No.**	**Orig. of Change**	**Description of Change**
**	_	AKIH	Initial release
*A	5037589	AKIH	Converted to Cypress format
*B	5546786	HTER	Made the corrections to datasheet spec, 002-03982; this spec is now obsolete.

Cypress Semiconductor
198 Champion Court
San Jose, CA 95134-1709
Phone: 408-943-2600
Fax: 408-943-4730
http://www.cypress.com

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S6E2D55GJAMV20000 S6E2D55G0AGV20000 S6E2D55G0AGB30000 S6E2D55J0AGV20000 S6E2D55G0AGE20000 S6E2D55G0AGB3000A S6E2D55J0AGV2000A