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|---|--|--|------------------------|
| Bulletin Date: 7/3/2014 | | Bulletin Effective Date: 7/3/2014 | |
| Title: EFM32G Datasheet Revision Notification | | | |
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| Bulletin Details | | | |
| Description: | | | |
| <p>Silicon Labs is pleased to announce that version 1.80 of the EFM32G (Gecko family) datasheets and version 1.10 of the EFM32G reference manual are now available. The affected datasheets are: EFM32G200, EFM32G210, EFM32G222, EFM32G230, EFM32G232, EFM32G280, EFM32G290, EFM32G840, EFM32G842, EFM32G880, EFM32G890. The affected reference manual is: EFM32G-RM.</p> <p>The datasheet revision includes a number of key changes to existing Min/Max/Typ values that more accurately reflect the performance of the part. These changes are summarized in Table 1 at the end of this document. In addition, Table 3.12 HFRCO has a new Footnote 5, ensuring frequency bands above 7MHz will always have some overlap across supply voltage and temperature.</p> <p>In addition, new min/max data has been added and other minor updates have been made as follows:</p> <ul style="list-style-type: none"> • Updated Current Consumption information • Updated Power Management information • Updated GPIO information • Updated LFXO information • Updated HFXO information • Updated HFRCO information and figures • Updated ULFRCO information • Updated ACMP information <p>See Table 1 at the end of this document for additional details.</p> <p>The reference manual has also been changed to reflect the updated operating voltage range and current consumption information.</p> | | | |
| Reason: | | | |
| Updated specifications based on the results of additional silicon characterization. There are no physical or software changes to the devices. | | | |

Product Identification:

| Affected Part Numbers |
|-----------------------|
| EFM32G200F16-QFN32 |
| EFM32G200F32-QFN32 |
| EFM32G200F64-QFN32 |
| EFM32G210F128-QFN32 |
| EFM32G222F32-QFP48 |
| EFM32G222F64-QFP48 |
| EFM32G222F128-QFP48 |
| EFM32G230F32-QFN64 |
| EFM32G230F64-QFN64 |
| EFM32G230F128-QFN64 |

| Affected Part Numbers |
|-----------------------|
| EFM32G232F32-QFP64 |
| EFM32G232F64-QFP64 |
| EFM32G232F128-QFP64 |
| EFM32G280F32-QFP100 |
| EFM32G280F64-QFP100 |
| EFM32G280F128-QFP100 |
| EFM32G290F32-BGA112 |
| EFM32G290F64-BGA112 |
| EFM32G290F128-BGA112 |

| Affected Part Numbers |
|-----------------------|
| EFM32G840F32-QFN64 |
| EFM32G840F64-QFN64 |
| EFM32G840F128-QFN64 |
| EFM32G842F32-QFP64 |
| EFM32G842F64-QFP64 |
| EFM32G842F128-QFP64 |
| EFM32G880F32-QFP100 |
| EFM32G880F64-QFP100 |
| EFM32G880F128-QFP100 |
| EFM32G890F32-BGA112 |
| EFM32G890F64-BGA112 |
| EFM32G890F128-BGA112 |

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Customer Actions Needed:

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Table 1: EFM32Gxxx Datasheet Rev 1.80 - Summary of Key Changes

| Table* | Symbol | Parameter | Condition | Datasheet Rev 1.71 | | | Datasheet Rev 1.80 | | | Unit |
|----------------------------------|-------------------------|--|---|---------------------|-----|---------------------|---------------------|------|---------------------|------|
| | | | | Min | Typ | Max | Min | Typ | Max | |
| 3.2 General Operating Conditions | V _{DDOP} | Operating Supply Voltage | | 1.85 | | 3.8 | 1.98 | | 3.8 | V |
| 3.6 Power Management | V _{BODextthr} | BOD threshold, falling external supply | | 1.82 | | 1.85 | 1.74 | | 1.96 | V |
| 3.7 Flash | V _{FLASH} | Flash erase/write supply voltage | | 1.8 | | 3.8 | 1.98 | | 3.8 | V |
| 3.8 GPIO | V _{IOOH} | Output high voltage | Sourcing 6 mA, V _{DD} = 1.98V | 0.75V _{DD} | | | 0.75V _{DD} | | | V |
| | | | Sourcing 6 mA, V _{DD} = 3.0V | 0.95V _{DD} | | | 0.85V _{DD} | | | V |
| | | | Sourcing 20 mA, V _{DD} = 1.98V | 0.7V _{DD} | | | 0.6V _{DD} | | | V |
| | | | Sourcing 20 mA, V _{DD} = 3.0V | 0.9V _{DD} | | | 0.8V _{DD} | | | V |
| | V _{IOOL} | Output low voltage | Sinking 6 mA, V _{DD} = 1.98V | | | 0.25V _{DD} | | | 0.3V _{DD} | V |
| | | | Sinking 6 mA, V _{DD} = 3.0V | | | 0.05V _{DD} | | | 0.2V _{DD} | V |
| | | | Sinking 20 mA, V _{DD} = 1.98V | | | 0.3V _{DD} | | | 0.35V _{DD} | V |
| | | | Sinking 20 mA, V _{DD} = 3.0V | | | 0.1V _{DD} | | | 0.2V _{DD} | V |
| | I _{IOLEAK} | Input leakage current | | | ±25 | | ±0.1 | ±100 | nA | |
| 3.13 ULFRCO | f _{ULFRCO} | Oscillation frequency | | 0.8 | | 1.5 | 0.7 | | 1.75 | kHz |
| 3.16 ACMP | V _{ACMPOFFSET} | Offset voltage | | | 10 | | 0 | | | mV |

* Note: Table numbers may vary by datasheet. Numbers listed refer to EFM32G890.