



Migration Note

Eon Flash EN29LV800B to EN29LV800C



1. INTRODUCTION

The application note introduces how to implement a system design from Eon EN29LV800B Flash to EN29LV800C Flash.

2. GENERAL FUNCTION COMPARISON TABLE:

The following table is major features of these two devices.

| Features | EN29LV800B | EN29LV800C |
|---|--|--|
| Process Technology | 0.18 μ m | 0.13 μ m |
| voltage range | 2.7 ~ 3.6 | 2.7 ~ 3.6 |
| Pin to Pin | Yes | Yes |
| Access time | 55R, 70ns and 90ns | 70ns |
| Sector Architecture | 32Kword x 15 sectors and 16Kword + 4Kword x 2 + 8Kword boot sectors at Top or Bottom | 32Kword x 15 sectors and 16Kword + 4Kword x 2 + 8Kword boot sectors at Top or Bottom |
| Byte/Word mode | Yes | Yes |
| CFI | Yes | Yes |
| Erase Suspend/Resume | Yes | Yes |
| Hardware Protection for Top/Bottom Sector | Yes | Yes |
| OTP sector | None | None |
| Minimum endurance cycle | 100K | 100K |
| Package | 48-pin 12mm x 20mm TSOP 48 ball 6mm x 8mm TFBGA | 48-pin 12mm x 20mm TSOP 48 ball 6mm x 8mm TFBGA |



3. HARDWARE CONSIDERATIONS

I_{CC} comparison

| Current | EN29LV800B | | EN29LV800C | | Unit |
|--------------------------|------------|-----|------------|-----|------|
| | Typ | Max | Typ | Max | |
| Read I _{CC1} | 7 | 20 | 7 | 20 | mA |
| Write I _{CC2} | 15 | 30 | 15 | 30 | mA |
| Standby I _{CC3} | 1 | 5.0 | 1 | 5.0 | μA |

4. SOFTWARE CONSIDERATIONS

There is no difference in Manufacturer ID, Device ID and Autoselect function for EN29LV800B and EN29LV800C.

Manufacturer, Device Identification and Autoselect Information

| Description | Mode | CE # | OE # | WE# | A18 to A12 | A11 to A10 | A9 ² | A8 | A7 | A6 | A5 to A2 | A1 | A0 | DQ8 to DQ15 | DQ7 to DQ0 |
|----------------------------------|------|------|------|-----|------------|------------|-----------------|----------------|----|----|----------|----|----|-------------|----------------------|
| Manufacturer ID: Eon | | L | L | H | X | X | V _{ID} | H ¹ | X | L | X | L | L | X | 1Ch |
| Device ID (top boot block) | Word | L | L | H | X | X | V _{ID} | X | X | L | X | L | H | 22h | DAh |
| | Byte | L | L | H | | | | | | | | | | X | DAh |
| Device ID (bottom boot block) | Word | L | L | H | X | X | V _{ID} | X | X | L | X | L | H | 22h | 5Bh |
| | Byte | L | L | H | | | | | | | | | | X | 5Bh |
| Sector Protection Verification | | L | L | H | SA | X | V _{ID} | X | X | L | X | H | L | X | 01h (Protected) |
| | | | | | | | | | | | | | | X | 00h (Unprotected) |



5. PERFORMANCE DIFFERENCES

5.1 Power-on and Reset Timings

| Parameter | Description | EN29LV800B | EN29LV800C |
|---------------------|--|------------|------------|
| t _{VCS} | Vcc Setup Time | 50μs | 50μs |
| t _{RP1} | RESET# Pulse Width (During Embedded Algorithms) | None* | 10μs |
| t _{RP2} | RESET# Pulse Width (NOT During Embedded Algorithms) | 500ns | 500ns |
| t _{RH} | Reset# High Time Before Read | 50ns | 50ns |
| t _{RB1} | RY/BY# Recovery Time (to CE#, OE# go low) | None* | 0ns |
| t _{RB2} | RY/BY# Recovery Time (to WE# go low) | None* | 50ns |
| t _{READY1} | Reset# Pin Low (During Embedded Algorithms) to Read or Write | 20μs | 20μs |
| t _{READY2} | Reset# Pin Low (NOT During Embedded Algorithms) to Read or Write | 500ns | 500ns |

5.2 ERASE AND PROGRAM PERFORMANCE

The erase time is improved greatly in EN29LV800C. This is the major different between EN29LV800B and EN29LV800C.

| Parameter | EN29LV800B | | EN29LV800C | | Unit | |
|-----------------------|------------|-------|------------|-----|------|-----|
| | Typ | Max | Typ | Max | | |
| Sector Erase Time | 0.5 | 10 | 0.1 | 2 | Sec | |
| Chip Erase Time | 8 | None* | 2 | 20 | Sec | |
| Byte Programming Time | 8 | 300 | 8 | 200 | μS | |
| Word Programming Time | 8 | 300 | 8 | 200 | μS | |
| Chip Programming Time | Byte | 8.4 | 25.2 | 4.2 | 12.6 | Sec |
| | Word | 4.2 | 12.6 | 8.4 | 25.2 | Sec |

Note* : There is no description in datasheet.



Eon Silicon Solution Inc.

Revisions List

| Revision No | Description | Date |
|-------------|-----------------|----------|
| A | Initial Release | 2009/4/7 |