



# **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. The EN29LV800C only migrate process from 0.18 $\mu$ m to 0.13 $\mu$ m, so user doesn't need to do any design change for it.

## 2. GENERAL FUNCTION COMPARISON TABLE:

The following table is major features of these two devices.

Features	EN29LV800B	EN29LV800C
Process Technology	0.18 $\mu$ m	0.13 $\mu$ 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
Erase Suspend/Resume	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<sub>CC</sub> comparison

Current	EN29LV800B		EN29LV800C		Unit
	Typ	Max	Typ	Max	
Read I <sub>CC1</sub>	7	20	7	20	mA
Write I <sub>CC2</sub>	15	30	15	30	mA
Standby I <sub>CC3</sub>	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 <sup>2</sup>	A8	A7	A6	A5 to A2	A1	A0	DQ8 to DQ15	DQ7 to DQ0
Manufacturer ID: Eon		L	L	H	X	X	V <sub>ID</sub>	H <sup>1</sup>	X	L	X	L	L	X	1Ch
Device ID (top boot block)	Word	L	L	H	X	X	V <sub>ID</sub>	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 <sub>ID</sub>	X	X	L	X	L	H	22h	5Bh
	Byte	L	L	H										X	5Bh
Sector Protection Verification		L	L	H	SA	X	V <sub>ID</sub>	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 <sub>VCS</sub>	Vcc Setup Time	50μs	50μs
t <sub>RP1</sub>	RESET# Pulse Width (During Embedded Algorithms)	None*	10μs
t <sub>RP2</sub>	RESET# Pulse Width (NOT During Embedded Algorithms)	500ns	500ns
t <sub>RH</sub>	Reset# High Time Before Read	50ns	50ns
t <sub>RB1</sub>	RY/BY# Recovery Time ( to CE#, OE# go low)	None*	0ns
t <sub>RB2</sub>	RY/BY# Recovery Time ( to WE# go low)	None*	50ns
t <sub>READY1</sub>	Reset# Pin Low (During Embedded Algorithms) to Read or Write	20μs	20μs
t <sub>READY2</sub>	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.

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## Revisions List

Revision No	Description	Date
A	Initial Release	2009/4/7
B	Correct GENERAL FUNCTION COMPARISON TABLE to remove CFI and WP# in page 2	2009/4/9