



Migration Note

Eon Flash EN29LV320A to EN29LV320B



1. INTRODUCTION

The application note introduces how to implement a system design from Eon EN29LV320A Flash to EN29LV320B Flash.

2. General Function Comparison Table:

The following table is major features between these two devices.

Features	EN29LV320A	EN29LV320B
Process Technology	0.13 μ m	0.13 μ m
voltage range	2.7 ~ 3.6	2.7 ~ 3.6
Pin to Pin	Yes	Yes
Access time	70ns and 90ns	70ns
Sector Architecture	32Kword x 63 sectors + 4Kword x 8 boot sectors at Top or Bottom	32Kword x 63 sectors + 4Kword x 8 boot sectors at Top or Bottom
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	EN29LV320A		EN29LV320B		Unit
	Typ	Max	Typ	Max	
Read I _{CC1}	9	16	9	16	mA
Write I _{CC2}	20	30	20	30	mA
Standby I _{CC3}	1	5.0	1	5.0	μA

4. SOFTWARE CONSIDERATIONS

Manufacturer, Device Identification and Autoselect Information

Description	CE#	OE#	WE#	A20 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	
							L							7Fh	
Device ID (top boot sector)	Word	L	L	H	X	X	V _{ID}	X	X	L	X	L	H	22h	F6h
	Byte	L	L	H										X	F6h
Device ID (bottom boot sector)	Word	L	L	H	X	X	V _{ID}	X	X	L	X	L	H	22h	F9h
	Byte	L	L	H										X	F9h
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	EN29LV320A	EN29LV320B
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 EN29LV320B great improve the erase time performance. This is the major difference between EN29LV320A and EN29LV320B.

Parameter	EN29LV320A		EN29LV320B		Unit	
	Typ	Max	Typ	Max		
Sector Erase Time	0.5	10	0.1	2	Sec	
Chip Erase Time	70	None*	8	70	Sec	
Byte Programming Time	8	300	8	200	μS	
Accelerated Byte/Word Program Time	7	200	7	200	μS	
Word Programming Time	8	300	8	200	μS	
Chip Programming Time	Byte	35	100	33.6	100.8	Sec
	Word	17	50	16.8	50.4	Sec

Note* : There is no description in datasheet.



Eon Silicon Solution Inc.

Revisions List

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