EN29LV320 VS S29GL032M

32Mb FLASH SPEC COMPARISON

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1. Part No.

Eon : **EN29LV320**

Spansion : **S29GL032M**

2. Basic Features:

The following features are identical with each other.

- **2.1** **2.7 – 3.6 Read/Program/Erase Voltage.**
- **2.2** **Access Time : as fast as 90 ns**
- **2.3** **JEDEC standard compatible pin-out and command sets.**
- **2.4** **Available package : 48-TSOP and FBGA.**
- **2.5** **x8 and x16 capable**

3. Differences

3.1 Sector Structure

Eon : 63 32-Kword (64-Kbyte) sectors + 8 4Kword (8Kbyte) boot sectors

Spansion : **uniform sector models:**

64 32-Kword (64-Kbyte) sectors

R1 = x8/x16, VCC=3.0-3.6V, Uniform sector device, highest address sector protected when WP#/ACC=VIL

R2 = x8/x16, VCC=3.0-3.6V, Uniform sector device, lowest address sector protected when WP#/ACC=VIL

boot sector models:

63 32-Kword (64-Kbyte) sectors + 8 4Kword (8Kbyte) boot sectors

R3 = x8/x16, VCC=3.0-3.6V, Top boot sector device, top two address sectors protected when WP#/ACC=VIL

R4 = x8/x16, VCC=3.0-3.6V, Bottom boot sector device, bottom two address sectors protected when WP#/ACC=VIL

R5 = x8/x16, VCC=3.0-3.6V, Top boot sector device, top two address sectors protected when WP#/ACC=VIL, FBG048 package only

R6 = x8/x16, VCC=3.0-3.6V, Bottom boot sector device, bottom two address sectors protected when WP#/ACC=VIL FBG048 package only

3.2 Secured Silicon Sector 128-word is not supported by Eon.

3.3 Pin-out

- R1/R2 : No pin-compatible package(TSO56/LAA064)
- R3/R4 : EN29LV320 TSOP or FBGA
- R5/R6 : EN29LV320 FBGA

3.4 Manufacturer ID

Eon's device uses an extended manufacurer identification code at address 100h , instead of address 000h. Thus, on address *100h*, the output is *1Ch* ;while on address 000h, the output is 7Fh.

3.5 Autoselect command during erase suspend mode.

The auto-select command sequence allows the host system to access the manufacturer and device codes, and determine whether or not a sector is protected. Normally, it is initiated from read mode. For EN29LV320, in erase suspend mode while an erase operation has been suspended, the system can read data from any sector not selected for erasure. However, manufacturer and device codes *can not* be read out by writing auto-select command sequence during this period. In other words, Auto-select command is not supported during erase suspend mode in EN29LV320, however S29GL032M supports it.

3.7 Page Read & Write buffer

S29032M has 4-word/8-byte page read buffer and 16-word/32-byte write buffer in accordance with the commands, write-to-buffer, program-buffer-to-flash, and write-to-buffer-abort-reset. These are not available for EN29LV320.

3.8 Continuous Sector Erasure

Sector erase is a six bus cycle operation as defined in the datasheet of EN29LV320. Once the sector erase operation has begun, only the erase suspend command is valid. All other commands are ignored. Unlike the devices from other vendors, only *a single sector can be specified for each sector erase command*.

Users must issue another sector erase command for the next sector to be erased after the previous one is completed.

3.9 V_{ID} and V_{HH} is 11.5V Max.

V_{ID} applied to enable Signature (Auto-select) and sector(group) protection and V_{HH} applied to Accelerated Program are between *10.5V and 11.5V*. The same parameters for S29064M are 11.5V to 12.5V.

Any voltage level higher than 11.5V would damage the device.

4. Conclusion

Eon's 32M device is a good choice to fully replace several versions of Spansion's. Moreover Eon has faster word program time 8µs (Spansion 15us) and lower active read current 9mA, (Spansion 18mA) which is more useful in practice.

Revisions History

Revision No	Description	Date
A	Initial Release.	2006/03/06