



EN29LV640 VS S29GL064M
64Mb FLASH SPEC COMPARISON

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1. Part No.

Eon : EN29LV640

Spanion : S29GL064M

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-Lead TSOP.

3. Differences

3.1 Sector Structure

Eon : uniform-sectored 128 32K-Word /64K-byte sectors.

Spanion : uniform sector models:

128 32-Kword (64-Kbyte) sectors or 128 32 Kword sectors

R1 =Uniform sector device, highest address

sector protected when WP#/ACC=VIL

R2 = Uniform sector device, lowest address sector

protected when WP#/ACC=VIL

R5 = Uniform sector device

R6 = Uniform sector device, highest address sector

protected when WP#=VIL

R7 =Uniform sector device, lowest address sector

protected when WP#=VIL

boot sector models:

127 32-Kword (64-Kbyte) sectors + 8 4Kword (8Kbyte) boot sectors

R3 =Top boot sector device, top two address

sectors protected when WP#/ACC=VIL

R4 =Bottom boot sector device, bottom two

address sectors protected when WP#/ACC=VIL



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

3.3 Pin-out

Models R6,R7 of Spansion S29064M do not compatible with EN29LV640, but EN29LV641 is ok.

- R0 :no pin-compatible package
- R1/R2/ :no pin-compatible package(TSO56/LAA064)
- R3/R4 :EN29LV640 TSOP
- R5 :EN29LV640U
- R6/R7 :EN29LV641 TSOP

3.4 Byte/Word Access

Eon : only x16

Spansion : x8 and x16 capable

R1 = x8/x16

R2 = x8/x16

R3 = x8/x16

R4 = x8/x16

R5 = x16

R6 = x16

R7 = x16

3.5 Manufacturer ID

Eon's device uses an extended manufacturer 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.

3.6 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 EN29LV640, 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 EN29LV640, however S29GL064M/A supports it.



3.7 Page Read & Write buffer

S29064M 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 EN29LV640.

3.8 Continuous Sector Erasure

Sector erase is a six bus cycle operation as defined in the datasheet of EN29LV640. 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

If boot-sectored feature is not a major issue for your application, the other differences could be neglected. Moreover Eon has faster word program time 8 μ s (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.	2006/01/02
B	Add 3.7 Page-read-buffer, Program-buffer	2006/02/14
C	Renew 3.3 Pin-out Content	2006/03/06