

GREENLIANT Parallel Flash Memory



27 AND 37 SERIES MTP (MANY-TIME PROGRAMMABLE) PARALLEL FLASH

RoHS Compliant. This product is RoHS compliant.

The 27 & 37 Series of Many-Time Programmable (MTP) low cost flash, based on SuperFlash® technology. The split-gate cell design and thick oxide tunneling injector attain better reliability and manufacturability compared with alternate approaches. These MTP devices can be electrically erased and programmed at least 1000 times using an external programmer with a 12V power supply. They have to be erased prior to programming. These devices conform to JEDEC standard pinouts for byte-wide memories. Designed, manufactured, and tested for a wide spectrum of applications, these devices are offered with an endurance of at least 1000 cycles. Data retention is rated at greater than 100 years. They are suited for applications that require infrequent writes and low power nonvolatile storage. These devices will improve flexibility, efficiency, and performance while matching the low cost in nonvolatile applications that currently use UV-EPROMs, OTPs, and mask ROMs.

Features (GLS27 Series):

- 5.0V Read, 12.0V Program and Erase
- Same package and pin assignments as EPROM/OTP
- For use in cordless phones, VCD players, printers and fax machines where code is frozen and in-system programming is not required

Features (GLS37 Series):

- 2.7-3.6V Read, 12.0V Program and Erase
- Same package and pin assignments as standard flash
- For use in cordless phones, VCD players, printers and fax machines where code is frozen and in-system programming is not required



◆ Surface Mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Greenliant Part No.	Package	Density	Organization	Access Time (ns)	Chip Rewrite Time (Sec)(Typ.)	Supply Volt. (V)	Operating Temp. (°C)	Price Each		
									1	50	100
◆ 804-GLS27SF5123C-NHE	GLS27SF512-70-3C-NHE	PLCC-32	512K	64Kx8	70	2.4	4.5 to 5.5	0 to +70	1.31	1.16	1.06
◆ 804-GLS27SF010-70NHE	GLS27SF010-70-3C-NHE	PLCC-32	1M	128Kx8	70	1.8	4.5 to 5.5	0 to +70	1.43	1.30	1.18
◆ 804-GLS27SF010-70PHE	GLS27SF010-70-3C-PHE	PDIP-32	1M	128Kx8	70	2.8	4.5 to 5.5	0 to +70	2.05	1.86	1.70
◆ 804-GLS37VF010-70NHE	GLS37VF010-70-3C-NHE	PLCC-32	1M	128Kx8	70	1.2	2.7 to 3.6	0 to +70	.98	.89	.82
◆ 804-GLS27SF020-70NHE	GLS27SF020-70-3C-NHE	PLCC-32	2M	256Kx8	70	5.6	4.5 to 5.5	0 to +70	1.44	1.31	1.20
◆ 804-GLS27SF020-70PHE	GLS27SF020-70-3C-PHE	PDIP-32	2M	256Kx8	70	5.6	4.5 to 5.5	0 to +70	2.05	1.86	1.70
◆ 804-GLS37VF020-70NHE	GLS37VF020-70-3C-NHE	PLCC-32	2M	256Kx8	70	2.4	2.7 to 3.6	0 to +70	.91	.88	.84



PLCC-32

29 SERIES SSF (SMALL-SECTOR FLASH) PARALLEL FLASH

The 29 Series SSF (Small-Sector Flash) devices are suited for applications that require convenient and economical updating of program, configuration, or data memory. For all system applications, they significantly improve performance and reliability, while lowering power consumption. They inherently use less energy during Erase and Program than alternative flash technologies. The total energy consumed is a function of the applied voltage, current, and time of application. Since for any given voltage range, the SuperFlash technology uses less current to program and has a shorter erase time, the total energy consumed during any Erase or Program operation is less than alternative flash technologies. They also improve flexibility while lowering the cost for program, data, and configuration storage applications.

Features (GLS29EE Series):

- 128 byte Sector-Erase
- Sector-by-sector Erase operations
- Byte-by-byte Program operations

Features (GLS29SF/VF Series):

- 128 byte page size
- Page-by-page Write operations
- Page-Write operation includes an internal Erase transparent to the external system



◆ Surface Mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Greenliant Part No.	Package	Density	Organization	Access Time (ns)	Chip Rewrite Time (Sec)(Typ.)	Supply Volt. (V)	Operating Temp. (°C)	Price Each		
									1	50	100
◆ 804-GLS29EE512-70NHE	GLS29EE512-70-4C-NHE	PLCC-32	512K	64Kx8	70	2.5	4.5 to 5.5	0 to +70	2.07	1.87	1.72
◆ 804-GLS29EE512-70EHE	GLS29EE512-70-4C-EHE	TSOP-32	512K	64Kx8	70	2.5	4.5 to 5.5	0 to +70	2.28	2.06	1.90
◆ 804-GLS29EE5124I-EHE	GLS29EE512-70-4I-EHE	TSOP-32	512K	64Kx8	70	2.5	4.5 to 5.5	-40 to +85	2.62	2.38	2.18
◆ 804-GLS29EE5124I-NHE	GLS29EE512-70-4I-NHE	PLCC-32	512K	64Kx8	70	2.5	4.5 to 5.5	-40 to +85	3.41	3.08	2.82
◆ 804-GLS29EE010-70NHE	GLS29EE010-70-4C-NHE	PLCC-32	1M	128Kx8	70	5.0	4.5 to 5.5	0 to +70	2.42	2.20	2.02
◆ 804-GLS29EE010-70WHE	GLS29EE010-70-4C-WHE	TSOP-32	1M	128Kx8	70	5.0	4.5 to 5.5	0 to +70	2.54	2.29	2.11
◆ 804-GLS29EE010-70EHE	GLS29EE010-70-4C-EHE	TSOP-32	1M	128Kx8	70	5.0	4.5 to 5.5	0 to +70	2.63	2.39	2.19
◆ 804-GLS29EE0104I-EHE	GLS29EE010-70-4I-EHE	TSOP-32	1M	128Kx8	70	5.0	4.5 to 5.5	-40 to +85	3.06	2.77	2.55
◆ 804-GLS29EE010-70PHE	GLS29EE010-70-4C-PHE	PDIP-32	1M	128Kx8	70	5.0	4.5 to 5.5	0 to +70	2.79	2.52	2.31
◆ 804-GLS29VF040-NHE-T	GLS29VF040-70-4I-NHE-T	PLCC-32	4M	512Kx8	70	8.0	2.7 to 3.6	-40 to +85	2.50	2.27	2.10



PDIP-32

36 SERIES CSF (CONCURRENT SUPER FLASH) PARALLEL FLASH

The 36 Series CSF (Concurrent Super Flash) is a dual-bank flash memory device designed for wireless communication and consumer applications. The dual-bank architecture supports the Concurrent Read-Write operation where the user may read from one bank while programming or erasing in the other bank.

Features:

- Dual-bank architecture for Concurrent Read-While-Write operations
- Operating voltage: 2.7-3.6V for Read and Write operations
- Hardware top or bottom sector protection
- Flexible Erase capability
- Factory and User programmable security ID
- Erase-Suspend/Eraser Resume
- User selectable x8/x16 Data Bus through a BYTE# pin
- Hardware Write protection through WP# pin

◆ Surface Mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Greenliant Part No.	Package	Density	Organization	Access Time (ns)	Chip Rewrite Time (Sec)(Typ.)	Supply Volt. (V)	Operating Temp. (°C)	Price Each		
									1	50	100
◆ 804-GLS36VF1601G-EKE	GLS36VF1601G-70-4I-EKE	TSOP-48	16M	1Mx16 or 2Mx8	70	7.0	2.7 to 3.6	-40 to +85	3.23	2.93	2.70
◆ 804-GLS36VF3204E-EKE	GLS36VF3203-70-4E-EKE	TSOP-48	32M	2Mx16 or 4Mx8	70	7.0	2.7 to 3.6	-20 to +85	4.51	4.08	3.76
◆ 804-GLS36VF3204AEEKE	GLS36VF3204-70-4E-EKE	TSOP-48	32M	2Mx16 or 4Mx8	70	7.0	2.7 to 3.6	-20 to +85	4.51	4.08	3.76



TSOP-48

85 SERIES SATA FLASH NANDRIVE

The SATA NANDrive™ family extends Greenliant's portfolio of high-performance, fully integrated embedded solid state drives (SSDs). These managed NAND products integrate a Serial ATA controller and one or more NAND flash die in a multi-chip package. A built-in microcontroller and flash file management firmware replace the need for host-side Flash File System (FFS) and Memory Technology Driver (MTD) software. Compatible with the latest generation chipsets, SATA NANDrive products have the same footprint across all capacities for backward compatibility, simplifying system-level board design.

Features:

- Small Form Factor SATA Solid State Drive
- Industry Standard Serial ATA Interface
- Energy Efficient
- Multi-tasking Technology Increases Performance
- Pre-programmed Firmware in Embedded SuperFlash® Memory
- Robust Power Down Data Protection
- Bad Block Management
- Built-in ECC
- Advanced Data Security
- SSD Lifespan Monitoring
- Multiple Densities with Same Pin-out
- Commercial and Industrial Temperatures



◆ Surface Mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Greenliant Part No.	Package	Operating Voltage (V)	Supported Capacity	Sustained Write Speed	Sustained Read Speed	Operating Temp. (°C)	Price Each		
								1	50	100
◆ 804-GLS85LS1002AMCFZ	GLS85LS1002A-M-C-FZJE	FBGA	1.2 and 3.3	2GB	Up to 8MB/sec	Up to 35MB/sec	0 to +70	49.81	45.27	41.69
◆ 804-GLS85LS1002PSIFZ	GLS85LS1002P-S-I-FZJE	FBGA	1.2 and 3.3	2GB	Up to 60MB/sec	Up to 70MB/sec	-40 to +85	122.03	122.03	111.65
◆ 804-GLS85LS1004AFZJE	GLS85LS1004A-M-C-FZJE	BGA	1.2 and 3.3	4GB	Up to 10MB/sec	Up to 35MB/sec	0 to +70	64.73	59.91	56.47
◆ 804-GLS85LS1004PSIFZ	GLS85LS1004P-S-I-FZJE	FBGA	1.2 and 3.3	4GB	Up to 60MB/sec	Up to 70MB/sec	-40 to +85	202.71	188.62	176.69
◆ 804-GLS85LS1008PSIFZ	GLS85LS1008P-S-I-FZJE	FBGA	1.2 and 3.3	8GB	Up to 60MB/sec	Up to 70MB/sec	-40 to +85	375.47	345.52	325.54
◆ 804-GLS85LP0512PLBTE	GLS85LP0512P-S-I-LBTE	LBGA	3.3	512MB	Up to 6MB/sec	Up to 25MB/sec	-40 to +85	48.96	45.31	42.71
◆ 804-GLS85LP1008P-FTE	GLS85LP1008P-S-I-FTE	BGA	3.3	8GB	Up to 39MB/sec	Up to 50MB/sec	-40 to +85	371.34	343.68	323.93



FBGA, BGA

COMPACTFLASH CARD CONTROLLER

The GLS55LC200 NAND Controller is the core of a high performance, flash media-based, data storage system. The controller recognizes the control, address, and data signals on the CF bus and translates them into memory accesses for standard NAND-type flash media. Using both Single Level Cell (SLC) and Multi-Level Cell (MLC) flash media, this technology supports solid state mass storage applications by offering new, expanded functionality while enabling smaller, lighter designs with lower power consumption. The NAND Controller supports standard CF protocols with up to PIO Mode-6, Multi-word DMA Mode-4, and Ultra DMA Mode-4 interface. The CF interface is widely used in products such as portable and desktop computers, digital cameras, music players, handheld data collection scanners, PDAs, handy terminals, personal communicators, audio recorders, monitoring devices, and set-top boxes.

Features:

- CompactFlash Association Specification Revision 3.0 standard
- Interface for standard NAND Flash media
- Low current operation
- Power management unit
- Flash Media Interface: Single or Dual 8-bit access
- Supports up to 4 flash media devices per channel
- Supports Single-Level Cell (SLC) or Multi-Level Cell (MLC) media 2K Byte and 4K Byte program page size
- 20-byte unique ID for enhanced security
- Programmable, multitasking NAND interface
- Firmware storage in Embedded SuperFlash®
- Pre-programmed Embedded Firmware
- Built-in Hardware ECC
- Built-in Internal System Clock
- Automatic recognition and initialization of Flash Media devices

◆ Surface Mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Greenliant Part No.	Package	Operating Voltage (V)	Clock Speed (MHz)	Supported Capacity	Sustained Write Speed	Sustained Read Speed	Security Features	Price Each		
									1	50	100
◆ 804-GLS55LC200C-TQWE	GLS55LC200-60-C-TQWE	TQFP-100L	3.3	60	up to 4GB	Up to 30MB/sec	Up to 30MB/sec	Yes	6.65	6.02	5.54



TQFP-100L

Memory

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