

SEMICONDUCTOR GENERAL CATALOG

Memories and Storage Devices

NAND Flash Memory

NAND Flash Memory

SLC Small Block

Capacity	Part Number	Page Size (bit)	Block Size (bit)	Access Time		Program/Erase Time (typ.)		Power Supply (V)	Operating Temperature (°C)	Package
				Serial cycle (min) (ns)	1st access (max) (μs)	Program Time (ms)	Block Erase Time (ms)			
512 Mbits	TC58DVM92A3TA00	(512 + 16) x 8	(16K + 512) x 8	50	30	0.3	3	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
512 Mbits	TC58DVM92A3BAJW	(512 + 16) x 8	(16K + 512) x 8	50	30	0.3	3	2.7 to 3.6	-40 to 85	P-TFPGA63-0813-0.80AZ
1 Gbits	TC58DVG02A3TA00	(512 + 16) x 8	(16K + 512) x 8	50	30	0.3	3	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50

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SLC Large Block Middle Capacity

Capacity	Part Number	Page Size (bit)	Block Size (bit)	Access Time		Program/Erase Time (typ.)		Power Supply (V)	Operating Temperature (°C)	Package
				Serial cycle (min) (ns)	1st access (max) (μs)	Program Time (ms)	Block Erase Time (ms)			
512 Mbits	TC58NVM9S3CTA00	(2048 + 64) x 8	(128K + 4K) x 8	50	30	0.3	2.5	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
512 Mbits	TC58NVM9S3CBAJW	(2048 + 64) x 8	(128K + 4K) x 8	50	30	0.3	2.5	2.7 to 3.6	-40 to 85	P-TFPGA63-0813-0.80AZ
1 Gbits	TC58NVG0S3CTA00	(2048 + 64) x 8	(128K + 4K) x 8	50	30	0.3	2.5	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
1 Gbits	TC58NVG0S3CBAJ5	(2048 + 64) x 8	(128K + 4K) x 8	50	30	0.3	2.5	2.7 to 3.6	-40 to 85	P-TFPGA63-0911-0.80CZ
1 Gbits	TC58NVG0S3ETA00 *	(2048 + 64) x 8	(128K + 4K) x 8	25	30	0.3	2.5	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
2 Gbits	TC58NVG1S3CTA00	(2048 + 64) x 8	(128K + 4K) x 8	50	30	0.3	2.5	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
2 Gbits	TC58NVG1S3CBAJX	(2048 + 64) x 8	(128K + 4K) x 8	50	30	0.3	2.5	2.7 to 3.6	-40 to 85	P-TFPGA63-1013-0.80AZ
2 Gbits	TC58NVG1S3ETA00 *	(2048 + 64) x 8	(128K + 4K) x 8	25	30	0.3	2.5	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
4 Gbits	TC58NVG2S3ETA00 *	(2048 + 64) x 8	(128K + 4K) x 8	25	30	0.3	2.5	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50

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*: New product

SLC Large Capacity

Capacity	Part Number	Page Size (bit)	Block Size (bit)	Access Time		Program/Erase Time (typ.)		Power Supply (V)	Operating Temperature (°C)	Package
				Serial cycle (min) (ns)	1st access (max) (μs)	Program Time (ms)	Block Erase Time (ms)			
8 Gbits	TC58NVG3S0DTG00	(4096 + 218) x 8	(256K + 13.6K) x 8	30	30	0.3	2	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
16 Gbits	TH58NVG4S0DTG20	(4096 + 218) x 8	(256K + 13.6K) x 8	30	30	0.3	2	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50
32 Gbits	TH58NVG5S0DTG20	(4096 + 218) x 8	(256K + 13.6K) x 8	30	30	0.3	2	2.7 to 3.6	0 to 70	TSOP I 48-P-1220-0.50

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e-MMC*1

The e-MMC series has an interface compatible with the JEDEC/MMCA V4.3 high-speed memory card standard, which simplifies its use as an embedded MMC memory (e-MMC™-compatible) in end products.

Capacity	Part Number	Speed (MHz)	Power Supply		Operating Temperature (°C)	Package
			Vcc (V)	VccQ (V)		
2 GBytes	THGBM1G4D1EBAI7	52	2.7 to 3.6	1.7 to 1.95, 2.7 to 3.6	-25 to 85	P-FBGA169-1216-0.50A4
4 GBytes	THGBM1G5D2EBAI7	52	2.7 to 3.6	1.7 to 1.95, 2.7 to 3.6	-25 to 85	P-FBGA169-1216-0.50A4
8 GBytes	THGBM1G6D4EBAI4	52	2.7 to 3.6	1.7 to 1.95, 2.7 to 3.6	-25 to 85	P-FBGA169-1218-0.50A4
16 GBytes	THGBM1G7D4EBAI2	52	2.7 to 3.6	1.7 to 1.95, 2.7 to 3.6	-25 to 85	P-FBGA169-1418-0.50A4
32 GBytes	THGBM1G8D8EBAI2	52	2.7 to 3.6	1.7 to 1.95, 2.7 to 3.6	-25 to 85	P-FBGA169-1418-0.50A4

- Contact the Toshiba sales representative for information about RoHS compliance before you purchase any components.

eSD (Embedded SD)*1

The eSD series has an interface compatible with the SDA V2.0 (SDHC) SD card standard, which simplifies its use as an embedded SD-interface memory.

Capacity	Part Number	Speed (MHz)	Power Supply (V)	Operating Temperature (°C)	Package
1 GByte	THGVS4G3D1EBAI8	50	2.7 to 3.6	-25 to 85	P-FBGA153-1113-0.50A4
2 GByte	THGVS4G4D1EBAI4	50	2.7 to 3.6	-25 to 85	P-FBGA169-1218-0.50A4
4 GByte	THGVS4G5D2EBAI4	50	2.7 to 3.6	-25 to 85	P-FBGA169-1218-0.50A4
8 GByte	THGVS4G6D4EBAI4	50	2.7 to 3.6	-25 to 85	P-FBGA169-1218-0.50A4
16 GByte	THGVS4G7D8EBAI0	50	2.7 to 3.6	-25 to 85	P-FBGA169-1218-0.50A4
32 GByte	THGVS4G8D8EBAI2	50	2.7 to 3.6	-25 to 85	P-FBGA169-1418-0.50A4

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*1: NAND flash memories with an integrated controller, which supports error correction, wear leveling, bad block management and so on. This eliminates the need for external control specifically required for NAND flash and simplifies use of eSD.

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