



- ### Features
- SLC-NAND flash technology
 - Support Trim command set
 - Support Native Command Queuing (NCQ)
 - Support S.M.A.R.T. command set and utility
 - Capacities from 4GB up to 32GB

- ### Specification
- **Compatibility** SATA Revision 3.1
 - **Declarations** RoHS & REACH compliant
 - **Flash technology** SLC-NAND flash technology
 - **Form-factor** mSATA mini form factor
 - **Host Interface** Compliant with JEDEC MO-300B mini PCI-e connector with 52 pins SATA pin out
 - **Performance**
 - **Data transfer rate** SATA 1.5Gb/s, 3.0Gb/s, 6.0Gb/s
 - **Sequential read** 220 MB/sec (Max.)
 - **Sequential write** 120 MB/sec (Max.)
 - **Environmental**
 - **Operating temp.** STD. 0°C~+70°C/IND. -40°C~+85°C
 - **Non-operating temp.** STD. -20°C~+80°C/IND. -50°C~+95°C
 - **Humidity** 10% ~ 95% non-condensing
 - **Vibration** 70 Hz to 2K Hz, 20G, 3 axes
 - **Shock** 0.5ms, 1500 G, 3 axes
 - **Altitude** 70,000 feet

- **Power consumption**
 - **Power requirement** +3.3 V ± 5%
 - **Reading mode** 240mA (Max.)
 - **Writing mode** 240mA (Max.)
 - **Idle mode** 130mA (Max.)
- **Reliability**
 - **Wear-leveling** Static wear-leveling algorithms
 - **TBW** Up to 192 TBW at 32GB Capacity (Client workload by JESD-219A)
 - **MTBF** > 3,000,000 hours
 - **Erase counts** Up to 60,000 times
 - **ECC** 40 bits per 1024 bytes block
- **Physical specification**
 - **Weight (Max.)** 3.5g
 - **Dimension (WxL)** 29.80 x 26.80 (mm)
- **Conformal coating** Optional
- **Warranty**
 - **SLC STD. grade** 3 years or within 60,000 erasing counts
 - **SLC IND. grade** 5 years or within 60,000 erasing counts

Part Number List

Capacity	0°C~+70°C	Capacity	-40°C~+85°C
4GB	SBMSH004G-JJCTC-(T)	4GB	WBMSH004G-JJITI-(T)
8GB	SBMSH008G-JJCTC-(T)	8GB	WBMSH008G-JJITI-(T)
16GB	SBMSH016G-JJCTC-(T)	16GB	WBMSH016G-JJITI-(T)
32GB	SBMSH032G-JJCTC-(T)	32GB	WBMSH032G-JJITI-(T)

Part Number Decoder

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
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Example

W	B	M	S	H	0	3	2	G	-	J	J	I	T	I	-	T	C		
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- X1 Grade**
S : Standard grade operating temp. 0°C~+70°C
W: Industrial grade operating temp. -40°C~+85°C
- X2 The material of casing**
B : Bare (without casing)
- X3 X4 X5 Product category**
MSH : Mini SATA Module Half Size (mSATA mini)
- X6 X7 X8 X9 Capacity**
004G : 4GB
008G : 8GB
016G : 16GB
032G : 32GB
- X11 Controller**
J : HERMES Series

- X12 Controller version**
A, B, C, D.....
- X13 Controller grade**
C : Commercial grade
I : Industrial grade
- X14 Flash IC brand**
T : Toshiba SLC-NAND flash IC
- X15 Flash IC grade**
C : Commercial grade
I : Industrial grade
- X17 X18 X19 X20 Reserved for specific requirements**
Blank : Standard product w/o thermal sensor and conformal-coating
T : Thermal Sensor (optional)
C : Conformal coating (optional)

SLC
oSLC
MLC
3D-NAND
DRAM Module
Adapter
Card-drive