

SLC

aSLC

MLC

3D-NAND

DRAM Module

Adapter

Card-drive



◆ 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 128GB

◆ Specification

- **Compatibility**
SATA Revision 3.1
ATA-8 command set
- **Declarations**
RoHS & REACH compliant
- **Flash technology**
SLC-NAND flash technology
- **Form-factor**
Standard mSATA form factor
- **Host Interface**
Compliant with JEDEC MO-300A
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**
385 MB/sec (Max.)
 - **Sequential write**
225 MB/sec (Max.)
 - **4KB random read**
12K IOPS (Max.)
 - **4KB random write**
20K IOPS (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**
174mA (Max.)
 - **Writing mode**
180mA (Max.)
 - **Idle mode**
134mA (Max.)
- **Reliability**
 - **Wear-leveling**
Static wear-leveling algorithms
Up to 768 TBW at 128GB Capacity
(Client workload by JESD-219A)
 - **TBWF**
> 3,000,000 hours
 - **Erase counts**
Up to 60,000 times
 - **ECC**
40 bits per 1024 bytes block
- **Physical specification**
 - **Weight (Max.)**
8g
 - **Dimension (WxL)**
29.85 x 50.80 (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	SBMSM004G-JICTC-(T)	4GB	WBMSM004G-JIITI-(T)
8GB	SBMSM008G-JICTC-(T)	8GB	WBMSM008G-JIITI-(T)
16GB	SBMSM016G-JICTC-(T)	16GB	WBMSM016G-JIITI-(T)
32GB	SBMSM032G-JICTC-(T)	32GB	WBMSM032G-JIITI-(T)
64GB	SBMSM064G-JICTC-(T)	64GB	WBMSM064G-JIITI-(T)
128GB	SBMSM128G-JICTC-(T)	128GB	WBMSM128G-JIITI-(T)

◆ Part Number Decoder

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
W	B	M	S	M	1	2	8	G	—	J	I	I	T	I	—	T	C		

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

MSM : Mini SATA Module (mSATA)

X6 **X7** **X8** **X9** Capacity

004G : 4GB 032G : 32GB
008G : 8GB 064G : 64GB
016G : 16GB 128G : 128GB

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)