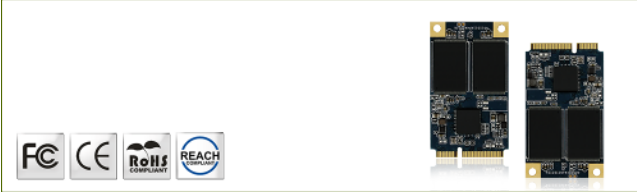


SIC
aSLC
MLC
3D-NAND
DRAM Module
Adapter
Card-drive



◆ Features

- TOSHIBA BiCS Flash™ (3D-NAND) technology
- Support Trim command set
- Support Native Command Queuing (NCQ)
- Support LDPC (Low Density Parity Check) ECC algorithm
- Support S.M.A.R.T. command set and utility
- Support Power Loss Protection
- Capacities from 64GB up to 1TB

◆ Specification

- **Compatibility**
SATA Revision 3.2
ATA-8 ACS4 command set
- **Declarations**
RoHS & REACH compliant
- **Flash technology**
3D-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**
550 MB/sec (Max.)
 - **Sequential write**
500 MB/sec (Max.)
- **Environmental**
 - **Operating temp.**
STD. 0°C~+70°C/W.T. -40°C~+85°C
 - **Non-operating temp**
STD. -20°C~+80°C/W.T. -50°C~+95°C
 - **Humidity**
10% ~ 95% non-condensing
 - **Vibration**
80 Hz to 2K Hz, 20G, 3axes
 - **Shock**
0.5ms, 1500G, 3 axes
 - **Altitude**
70,000 feet

- **Power consumption**
 - **Power requirement**
+3.3 V ± 5%
 - **Reading mode**
1,600 mW (Max.)
 - **Writing mode**
1,650 mW (Max.)
 - **Idle mode**
330 mW (Max.)
- **Reliability**
 - **Wear-leveling**
Static and Dynamic wear-leveling algorithms
Up to 835 TBW at 1TB Capacity.
(Client workload by JESD-219A)
 - **TBW**
Up to 3,000 times
 - **Erase counts**
LDPC (Low Density Parity Check)
- **Physical specification**
 - **Weight (Max.)**
8g
 - **Dimension (WxL)**
29.85 x 50.80 (mm)
- **Conformal coating**
Optional
- **Warranty**
2 years or within 3,000 erasing counts

◆ Part Number List

Capacity	0°C~+70°C	Capacity	-40°C~+85°C
64GB	SBMSM064G-PKCT3-(W/T/WT)	64GB	WBMSM064G-PKCT3-(W/T/WT)C
128GB	SBMSM128G-PKCT3-(W/T/WT)	128GB	WBMSM128G-PKCT3-(W/T/WT)C
256GB	SBMSM256G-PKCT3-(W/T/WT)	256GB	WBMSM256G-PKCT3-(W/T/WT)C
512GB	SBMSM512G-PKCT3-(W/T/WT)	512GB	WBMSM512G-PKCT3-(W/T/WT)C
1TB	SBMSM001T-PKCT3-(W/T/WT)	1TB	WBMSM001T-PKCT3-(W/T/WT)C

◆ 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	M	0	0	1	T	-	P	K	C	T	3	-	W	T	C	
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- X1 Grade**
S : Standard grade operating temp. 0°C~+70°C
W : Wide temp. 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**
064G : 64GB
128G : 128GB
256G : 256GB
512G : 512GB
001T : 1TB
- X11 Controller**
P : PHANES Series

- X12 Controller version**
A, B, C, D....
- X13 Controller grade**
C : Commercial grade
- X14 Flash IC brand**
T : Toshiba NAND flash IC
- X15 Flash IC type**
3 : BiCS 3D-NAND Flash IC
- X17 X18 X19 X20 Reserved for specific requirements**
Blank : Standard product w/o thermal sensor and conformal-coating
W : Write Protection Switch (optional)
T : Thermal Sensor (optional)
WT : Write Protection Switch + Thermal Sensor (optional)
C : Conformal coating (optional)