



Features

- SLC-NAND flash technology
- Form-factor supports vertical and horizontal types
- Support Trim command set
- Support Native Command Queuing (NCQ)
- Power request optional: Built-in power pin-7 (w/fuse)
- Power request optional: 5V power cable (w/o fuse)
- Support S.M.A.R.T. command set and utility
- Capacities from 4GB up to 32GB

Specification

■ Compatibility	SATA Revision 3.1	➤ Idle mode	20mA (Max.)
■ Declarations	RoHS & REACH compliant	■ Reliability	
■ Flash technology	SLC-NAND flash technology	➤ Wear-leveling	Static wear-leveling algorithms
■ Form-factor	Vertical: STD. (VS) / Low profile (VL) Horizontal: STD. (HS)/ Low profile (HL & HO)	➤ TBW	Up to 187.5 TBW at 32GB Capacity (Client workload by JESD-219A)
■ Host Interface	Standard SATA-III 7-pin (data)	➤ MTBF	> 3,000,000 hours
■ Performance		➤ Erase counts	Up to 60,000 times
➤ Data transfer rate	SATA 1.5Gb/s, 3.0Gb/s, 6.0Gb/s	➤ ECC	40 bits per 1024 bytes block
➤ Sequential read	220 MB/sec (Max.)	■ Physical specification	
➤ Sequential write	110 MB/sec (Max.)	➤ Weight (Max.)	20g
■ Environmental		➤ Dimension (WxL)	
➤ Operating temp.	STD. 0°C~+70°C/IND. -40°C~+85°C	➤ Vert. STD. (VS)	18.00 x 38.50 (mm)
➤ Non-operating temp.	STD. -20°C~+80°C/IND. -50°C~+95°C	➤ Vert. Low pro. (VL)	30.10 x 28.75 (mm)
➤ Humidity	10% ~ 95% non-condensing	➤ Hori. STD. (HS)	18.00 x 30.30 (mm)
➤ Vibration	70 Hz to 2K Hz, 20G, 3 axes	➤ Hori. Low pro. (HL)	30.00 x 20.08 (mm)
➤ Shock	0.5ms, 1500G, 3 axes	➤ Hori. L/P with a hole (HO)	30.00 x 28.80 (mm)
➤ Altitude	70,000 feet	■ Conformal coating	Optional
■ Power consumption		■ Warranty	
➤ Power requirement	+5V ± 5%	➤ SLC STD. grade	3 years or within 60,000 erasing counts
➤ Reading mode	55mA (Max.)	➤ SLC IND. grade	5 years or within 60,000 erasing counts
➤ Writing mode	70mA (Max.)		

Part Number List

MSF (SATA DOM) in vertical type standard (VS) form factor			
Capacity	0°C~+70°C	Capacity	-40°C~+85°C
4GB	SBMSF004G-JJCTC-VS(T/F)	4GB	WBMSF004G-JJITI-VS(T/F)
8GB	SBMSF008G-JJCTC-VS(T/F)	8GB	WBMSF008G-JJITI-VS(T/F)
16GB	SBMSF016G-JJCTC-VS(T/F)	16GB	WBMSF016G-JJITI-VS(T/F)
32GB	SBMSF032G-JJCTC-VS(T/F)	32GB	WBMSF032G-JJITI-VS(T/F)
MSF (SATA DOM) in vertical type low profile (VL) form factor			
Capacity	0°C~+70°C	Capacity	-40°C~+85°C
4GB	SBMSF004G-JJCTC-VL(T/F)	4GB	WBMSF004G-JJITI-VL(T/F)
8GB	SBMSF008G-JJCTC-VL(T/F)	8GB	WBMSF008G-JJITI-VL(T/F)
16GB	SBMSF016G-JJCTC-VL(T/F)	16GB	WBMSF016G-JJITI-VL(T/F)
32GB	SBMSF032G-JJCTC-VL(T/F)	32GB	WBMSF032G-JJITI-VL(T/F)
MSF (SATA DOM) in horizontal type standard (HS) form factor			
Capacity	0°C~+70°C	Capacity	-40°C~+85°C
4GB	SBMSF004G-JJCTC-HS(T/F)	4GB	WBMSF004G-JJITI-HS(T/F)
8GB	SBMSF008G-JJCTC-HS(T/F)	8GB	WBMSF008G-JJITI-HS(T/F)
16GB	SBMSF016G-JJCTC-HS(T/F)	16GB	WBMSF016G-JJITI-HS(T/F)
32GB	SBMSF032G-JJCTC-HS(T/F)	32GB	WBMSF032G-JJITI-HS(T/F)
MSF (SATA DOM) in horizontal type low profile (HL) form factor			
Capacity	0°C~+70°C	Capacity	-40°C~+85°C
4GB	SBMSF004G-JJCTC-HL(T/F)	4GB	WBMSF004G-JJITI-HL(T/F)
8GB	SBMSF008G-JJCTC-HL(T/F)	8GB	WBMSF008G-JJITI-HL(T/F)
16GB	SBMSF016G-JJCTC-HL(T/F)	16GB	WBMSF016G-JJITI-HL(T/F)
32GB	SBMSF032G-JJCTC-HL(T/F)	32GB	WBMSF032G-JJITI-HL(T/F)
MSF (SATA DOM) in horizontal type low profile form factor with mounting hole (HO)			
Capacity	0°C~+70°C	Capacity	-40°C~+85°C
4GB	SBMSF004G-JJCTC-HO(T/F)	4GB	WBMSF004G-JJITI-HO(T/F)
8GB	SBMSF008G-JJCTC-HO(T/F)	8GB	WBMSF008G-JJITI-HO(T/F)
16GB	SBMSF016G-JJCTC-HO(T/F)	16GB	WBMSF016G-JJITI-HO(T/F)
32GB	SBMSF032G-JJCTC-HO(T/F)	32GB	WBMSF032G-JJITI-HO(T/F)

Note : F: optional item power pin-7 with fuse

❖ 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 1

W	B	M	S	F	0	3	2	G	—	J	J	I	T	I	—	V	S		
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Example 2

W	B	M	S	F	0	3	2	G	—	J	J	I	T	I	—	H	S	F	
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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

MSF : Micro SATA Flash Module (SATA DOM)

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** MSF form-factor only

VS : Vertical type standard form factor
 VL : Vertical type low profile form factor
 HS : Horizontal type standard form factor
 HL : Horizontal type low profile form factor
 HO : Horizontal type low profile form factor with mounting hole

X19 **X20** Reserved for specific requirements

Blank : Standard product w/o thermal sensor and conformal-coating
 T : Thermal Sensor (optional)
 F : Power pin-7 with fuse (optional)
 C : Conformal coating (optional)

