PHISON

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AUTOMOTIVE SOLUTIONS

We power intelligent cars

With over twenty years of NAND storage experience, we provide one of the most reliable and comprehensive automotive product portfolios on the market. We are committed to providing state-of-the-art NAND storage solutions that support IVI, ADAS, and connectivity applications in modern vehicles of today and the future.

Phison is a proud member of AECC (Automotive Edge Computing Consortium), Renesas R-car Consortium and MIH EV Platform.

BGA SSD - MPT167A & MPT567A

Phison's BGA SSD solutions boost performance and reliability of leading-edge automotive electronics systems. In modern cars of today, BGA SSD is the best choice to enable premium IVI system, navigation, voice recognition, digital cockpit, black box and advanced driver assistant systems.

Our automotive BGA SSD - MPT167A & MPT567A solution are powered by controller PS5013 & PS5021. A DRAM-less design can provide higher speed than UFS but keeps a relatively low price at the same time. Phison's automotive BGA SSD solution is compliant with AEC-Q100, IATF16949 and more certifications based on a customer's requirement.

BGA SSD – MPT167A

EMBEDDED

Controller	PS5013		
Capacity [1]	128GB	256B	512GB
Interface	PCIe Gen3 x 2		
Form Factor	BGA SSD 1113		
Performance [2 3 4]			
Sequential Read	1100 MB/s	1730 MB/s	1730 MB/s
Sequential Write	500 MB/s	1050 MB/s	1400 MB/s
4K Random Read	100K IOPS	195K IOPS	195K IOPS
4K Random Write	130K IOPS	245K IOPS	245K IOPS
Power			
Supply Voltage	PWR_1: 2.5V / PWR_2: 1.2V / PWR_3: 0.9V		
Active (Average) [5]	1580 mW	1670 mW	1710 mW
Low Power PS4 (L1.2)	2.5 mW	2.5 mW	2.5 mW
pending	720 mW	760 mW	760 mW
Temperature			
Operating	-40°C ~ 85°C		
Non-Operating	-40°C ~ 85°C		
Advanced Features	- Thermal Throttling - Boot Partition - Write Reliability - Power Loss Protection - Production State Awareness (PSA) - GPIO Refresh		

(1) 1GB = 1,000,000,000 bytes
(2) 1MB/s = 1,000,000 bytes / second
(3) Sequential Performance is based on Crystal Disk Mark 6.0.0, test size 1GiB, and test drive set as secondary
(4) Random Performance is based on IOMeter, 1GB range, 4K data size, QD=128
(*a) Performance is based on Intel Gen3 Z270 + PLDA Gen4 switch.
(*b) Performance is based on AMD Gen4 X570 + 8 Core CPU.
(5) Measured with Crystal Disk Mark

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BGA SSD – MPT567A

Controller	PS5021		
Capacity [1]	256GB	512B	1TB
Interface	PCIe Gen4 x 4		
Form Factor	BGA SSD 1620		
Performance [2][3][4]			
Sequential Read	3200 MB/s	3600 MB/s	3600 MB/s
Sequential Write	1000 MB/s	2000 MB/s	3000 MB/s
4K Random Read	200K IOPS	400K IOPS	600K IOPS
4K Random Write	150K IOPS	220K IOPS	310K IOPS
Power			
Supply Voltage	PWR_1: 2.5V / PWR_2: 1.2V / PWR_3: 0.83V		
Active (Average)	TBD	TBD	TBD
Low Power PS4 (L1.2)	5 mW	5 mW	5 mW
pending	TBD	TBD	TBD
Temperature			
Operating	-40°C ~ 85°C		
Non-Operating	-40°C ~ 85°C		
Advanced Features	- Thermal Throttling - Boot Partition - Write Reliability - Power Loss Protection - Production State Awareness (PSA) - GPIO Refresh		

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