Reliability Summary Report

Product Type: 8GB eMMC

Part Number: KTM8GL1ASI01

Package: 153 ball BGA

1. Product Information

Product No.	Dimensions	Package	JEDEC Standard
KTM8GL1ASI01	11.5 x 13.0 x 1.0mm	153 ball FBGA	eMMC v5.1

2. Test Summary

Product Test Result				
☒PASS ☐FAIL				
	Test Items	Test Results		Notes
1	Performance	☒PASS	☐FAIL	
2	Electrical Performance	☒PASS	☐FAIL	
3	Reliability	☒PASS	☐FAIL	

3. Performance

3.1. Crystal-Disk Mark Benchmark V3.0.2

Drive Capacity	Sequential (Q32T1)		Random 4KB (Q32T4)		Sequential		Random 4KB	
	Read	Write	Read	Write	Read	Write	Read	Write
8GB	234.1	109.2	15.62	21.22	239.3	109.1	12.48	19.48

(Unit : MB/s)

3.2. TestMetrix Performance

Drive Capacity	DDR52 Performance			
	Seq. Read (MB/s)	Seq. Write (MB/s)	Random RMB (IOPS)	Random WMB (IOPS)
8GB	90.22	81.79	10997.27	2955.97

Drive Capacity	HS200 Performance			
	Seq. Read (MB/s)	Seq. Write (MB/s)	Random RMB (IOPS)	Random WMB (IOPS)
8GB	160.14	114.29	9296.37	9641.75

Drive Capacity	HS400 Performance			
	Seq. Read (MB/s)	Seq. Write (MB/s)	Random RMB (IOPS)	Random WMB (IOPS)
8GB	251.71	118.02	10211.94	11065.87

3.3. IO-Meter Benchmark

Transfer Size	Sequential				Random			
	Write MBps	Read MBps	Write IOps	Read IOps	Write MBps	Read MBps	Write IOps	Read IOps
512B	0.82	3.11	1685.61	6369.54	0.68	2.10	1398.46	4301.01
1KB	4.36	5.36	4460.80	5489.72	1.48	3.61	1520.61	3691.88
2KB	7.52	7.94	3852.63	4063.20	2.97	7.04	1521.26	3605.78
4KB	21.25	15.33	5439.75	3923.93	8.31	13.50	2126.37	3455.56
8KB	38.85	32.66	4972.61	4180.89	10.22	24.08	1308.44	3082.56
16KB	54.08	57.79	3461.34	3698.85	13.51	39.56	864.75	2532.06
32KB	31.10	96.22	995.34	3078.93	9.22	59.98	295.19	1919.21
64KB	31.19	224.29	498.96	3588.65	10.27	79.09	164.35	1265.52
128KB	31.24	223.14	249.89	1785.13	11.64	98.94	93.09	791.49
256KB	31.22	222.53	124.88	890.12	9.90	113.60	39.62	454.40
512KB	31.27	222.46	62.53	444.92	9.72	124.20	19.44	248.40
1M	31.18	222.41	31.18	222.41	8.04	132.16	8.04	132.16

4. Electrical Performance

4.1. Power Consumption

Test Item	Drive Capacity	ICCQ (mA)			ICC (mA)		
		DDR52	HS200	HS400	DDR52	HS200	HS400
Write Current	**8GB**	21.7	36.8	36.7	18.0	56.7	56.7
Read Current		31.0	35.9	44.8	18.6	31.1	10.0

5. Reliability

Num.	Item	Details	Sample	Result
7.1	Preconditioning (PC)	30℃/ 60% RH/ Time: 192hrs, J-STD-020/JESD22-A113	225	PASS
7.2	Temperature humidity bias (THB)	85℃, 85%RH, 168hrs, JESD22-A110	45	PASS
7.3	Unbiased HAST (UHAST)	130℃, 85%RH, 96hrs, JESD22-A118	45	PASS
7.4	High temperature storage life (HTSL)	150℃, 1000hrs, JESD22-A103	45	PASS
7.5	Electrostatic Discharge Human Body Model	HBM test: +/- 2KV according to JESD22-A114 100pf/1.5k ohms	3	PASS
7.6	Latch-Up (LU)	Refer to JESD78	6	PASS