

1. Stability Test:

1.1 CPU Function Test:

Test Purpose	Test CPU functions work normally under Windows Operating System
Test Procedure	1. Install Windows operating system 2. Install M/B device drivers 3. Check CPU temperature in BIOS setup menu 4. Run PassMark BurnInTest and check CPU Temp. 5. Using CPU-Z check CPU info
Test Criteria	It should be correct for each test step

No.	CPU	Type	Idle CPU Temp.	Full Loading CPU Temp.	Result
1	Intel / 3.70GHz	Core i7-8700K (Coffeelake / SR3QR) / 95W / LGA1151	40.0°C	68.0°C	Pass
2	Intel / 3.20GHz	Core i7-8700 (Coffeelake / QNML) / 65W / LGA1151	40.0°C	66.0°C	Pass
3	Intel / 2.40GHz	Core i7-8700T (Coffeelake / QP4P) / 35W / LGA1151	37.0°C	65.0°C	Pass
4	Intel / 3.00GHz	Core i5-8500 (Coffeelake / QP5J) / 65W / LGA1151	39.0°C	50.0°C	Pass
5	Intel / 2.10GHz	Core i5-8500T (Coffeelake / QP5H) / 35W / LGA1151	35.0°C	47.0°C	Pass
6	Intel / 3.60GHz	Core i3-8100 (Coffeelake / QP5K) / 65W / LGA1151	40.0°C	48.0°C	Pass
7	Intel / 3.10GHz	Core i3-8100T (Coffeelake / QP5Q) / 35W / LGA1151	38.0°C	47.0°C	Pass
8	Intel / 3.70GHz	Pentium G5400 (Coffeelake /SR3X9) / 58W / LGA1151	39.0°C	47.0°C	Pass
9	Intel / 3.10GHz	Celeron G4900(Coffeelake /SR3W4) / 54W / LGA1151	38.0°C	47.0°C	Pass

1.1.1 Application Test:

No.	Software	Test Keypoint	Result
1	CPU-Z ver1.86	1. Check all information.	Pass

1.2 Memory Function Test:

Test Purpose	Test Memory functions work normally under Windows Operating System
Test Procedure	<ol style="list-style-type: none"> 1. Install Windows Operating System 2. Install M/B Device Driver 3. Run AIDA64 Cache and Memory Benchmark Ver.5.97.4600 1 time 4. Run Passmark Performance Test 9.0 Build1029 1 time 5. Run 3DMark for Windows Ver.2.4.6546 BenchMark 3 times 6. S3/Hibernate Test 3 times
Test Criteria	It should be no problem for the test

1.2.1 DDR4:

No.	Function	Result
1	DDR4 DIMM Slot Examine	Pass
2	Single Channel mode	Pass
3	Dual channel mode	Pass
4	Warning beep sound when no memory install	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Test Environment	Result
1	MemTest86 Ver.7.5.0	1. Burn-In test 24 hours.	DDR4: DDR4-2666(16GB) 78.D1GS7.4010B / Apacer/ Samsung SEC 801 K4A8G085WB BCTD (DR050-1/2/3/4) Dual Channel O.S.: UEFI Shell	Pass

1.2.3 DDR4 Approved List:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	Apacer	Samsung	16GB	DDR4-2666	K4A8G085WB BCTD	78.D1GS7.4010B	Pass
2	Apacer	Samsung	8GB	DDR4-2666	K4A8G085WB BCTD	78.C1GS7.40F0B	Pass
3	Apacer	Samsung	4GB	DDR4-2666	K4A8G085WB BCTD	78.B1GS6.40F0B	Pass
4	Innodisk	Samsung	8GB	DDR4-2666	K4A8G085WB BCTD	M4U0-8GSSKCIK	Pass
5	Innodisk	Samsung	4GB	DDR4-2666	K4A8G085WB BCTD	M4U0-4GSSJCIK	Pass
6	Transcend	Samsung	8GB	DDR4-2666	K4A8G085WB BCTD	TS1GLH64V6B	Pass
7	Transcend	Samsung	16GB	DDR4-2666	K4A8G085WB BCTD	TS2GLH64V6B	Pass
8	Transcend	Samsung	8GB	DDR4-2666	K4A8G085WB BCTD	TS1GLH72V6B (ECC)	Pass
9	Innodisk	Samsung	4GB	DDR4-2666	K4A8G085WB BCTD	M4C0-4GSSLCIK (ECC)	Pass

1.2.4 DDR4 Module Test Procedures:

No.	DDR4 Module	Test Procedures	Result
1	DDR4-2666(16GB) CL17 / Apacer/ Samsung SEC 801 K4A8G085WB BCTD	DUT: DUT#1 CPU: Intel(R) Core(TM) i7-8700K CPU @ 3.70GHz (SR3QR) (CP0139) DIMM Slot: DIMM-1/2/3/4 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:38863 MB/s WRITE:41206 MB/s COPY:38518 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:16849.1 Memory Mark:3442.7 3DMark for Windows(V 2.8.6546)3times Cloud Gate:12269 Ice Storm Extreme:53577 Skydiver: 5327 Fire Strike:1383	Pass
2	DDR4-2666(8GB) CL19 / Apacer/ Samsung SEC 813 K4A8G085WB BCTD	DUT: DUT#1 CPU: Intel (R) Core (TM) i7-8700T CPU @ 2.40GHz (QP4P) (CP0131) DIMM Slot: DIMM-1/2 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:20637 MB/s WRITE:19828 MB/s COPY:22075 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:12121.7 Memory Mark:2606.5 3DMark for Windows(V 2.8.6546)3times Cloud Gate:10225 Ice Storm Extreme:49218 Skydiver: 4876 Fire Strike:1199	Pass
3	DDR4-2666(4GB) CL19 / Apacer/ Samsung SEC 737 K4A4G085WE BCTD	DUT: DUT#1 CPU: Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz (QNML) (CP0123) DIMM Slot: DIMM-2/4 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:20613 MB/s WRITE:20427 MB/s COPY:20166 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:13866.6 Memory Mark:2508.7 3DMark for Windows(V 2.8.6546)3times Cloud Gate:10908 Ice Storm Extreme:50086 Skydiver: 4940 Fire Strike:1209	Pass
4	DDR4-2666(8GB) Innodisk M4U0-8GSSKCIK/ Samsung SEC 825 K4A4G085WE BCTD	DUT: DUT#1 CPU: Intel(R) Core(TM) i5-8500 CPU @ 3.00GHz (QP5J) (CP0114) DIMM Slot: DIMM-1/2/3/4 Dual Channel Test Summary: : AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:37500 MB/s WRITE:41183 MB/s COPY:37803 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:13147.5 Memory Mark:3213.1 3DMark for Windows(V 2.8.6546)3times Cloud Gate:10315 Ice Storm Extreme:54007 Skydiver: 4921 Fire Strike:1253	Pass

5	DDR4-2666(8GB) Transcend TS1GLH64V6B/ Samsung SEC 740 K4A8G085WC BCTD	M/B: M/B BIOS: CPU: DIMM Slot: Test Summary:	DUT#1 Intel(R) Core(TM) i5-8500T CPU @ 2.10GHz (QP5H) (CP0120) DIMM-1/3 Dual Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:37240 MB/s WRITE:38310 MB/s COPY:33701 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:10880.0 Memory Mark:2795.3 3DMark for Windows(V 2.8.6546)3times Cloud Gate:9571 Ice Storm Extreme:51512 Skydiver: 4856 Fire Strike:1228	Pass
6	DDR4-2666(16GB) Transcend TS2GLH64V6B/ Samsung SEC 822 K4A8G085WC BCTD	DUT: CPU: DIMM Slot: Test Summary:	DUT#1 Intel(R) Core(TM) i3-8100 CPU @ 3.60GHz (QP5K) (CP0108) DIMM-2/4 Dual Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:34325 MB/s WRITE:36817 MB/s COPY:32984 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:8843.6 Memory Mark:2938.7 3DMark for Windows(V 2.8.6546)3times Cloud Gate:9136 Ice Storm Extreme:50885 Skydiver: 4696 Fire Strike:1208	Pass
7	DDR4-2666(4GB) Innodisk M4U0-4GSSJCIK/ Samsung SEC 807 K4A4G085WE BCTD	DUT: CPU: DIMM Slot: Test Summary:	DUT#1 Intel(R) Core(TM) i3-8100T CPU @ 3.10GHz (QP5Q) (CP0105) DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:18194 MB/s WRITE:18041 MB/s COPY:17684 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7151.7 Memory Mark:1763.4 3DMark for Windows(V 2.8.6546)3times Cloud Gate:7412 Ice Storm Extreme:41513 Skydiver: 4160 Fire Strike:1000	Pass
8	DDR4-2666(8GB) Transcend TS1GLH64V6B/ Samsung SEC 834 K4A8G085WC BCTD	DUT: CPU: DIMM Slot: Test Summary:	DUT#1 Intel(R) Pentium(R) Gold G5400 CPU @ 3.70GHz (SR3X9) (CP0141) DIMM-2 Single Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:17652 MB/s WRITE:17795 MB/s COPY:17387 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:5231.2 Memory Mark:2198.7 3DMark for Windows(V 2.8.6546)3times Cloud Gate:5618 Ice Storm Extreme:27482 Skydiver: 2674 Fire Strike:668	Pass

<p style="text-align: center;">9</p>	<p>DDR4-2666(8GB) Transcend TS1GLH64V6B/ Samsung SEC 837 K4A8G085WC BCTD</p>	<p>DUT: DUT#1 CPU: Intel(R) Celeron(R) G4900 CPU @ 3.10GHz (SR3W4) (CP0142) DIMM Slot: DIMM-3 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) READ:17383 MB/s WRITE:17890 MB/s COPY:16962 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:3375.7 Memory Mark:2041.9</p> <p>3DMark for Windows(V 2.8.6546)3times Cloud Gate:4444 Ice Storm Extreme:25142 Skydiver: 2522 Fire Strike:646</p>	<p style="text-align: center;">Pass</p>
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