



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: BLAS-01LHKC373

Date:
August 24, 2023

**Qualification of 66.9k wafer technology with AMK-EP27 as a new die attach material and CuPdAu as a new wire material for AT25M01-SSHM-T and AT25M01-SSHM-B catalog part numbers (CPN) available in 8L SOIC (.150in) package will qualify by similarity (QBS).
This is a Q006 Grade 1 Qualification.**



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of 66.9k wafer technology with AMK-EP27 as a new die attach material and CuPdAu as a new wire material for AT25M01-SSHM-T and AT25M01-SSHM-B catalog part numbers (CPN) available in 8L SOIC (.150in) package will qualify by similarity (QBS). This is a Q006 Grade 1 Qualification.
CN	E000143151
QUAL ID	R2300428 Rev. A
MP CODE	669014C2XA00
Part No.	25CSM01-E/SN
Bonding No.	BD-000834 Rev. 02
CCB No.	5340 and 7235.001
<u>Package</u>	
Type	8L SOIC
Package size	150 mils
<u>Lead Frame</u>	
Paddle size	95 x 155 mils
Material	C19400FH
Surface	Ring Ag
Process	Stamped
Lead Lock	Yes
Part Number	101393362
Treatment	Roughened
<u>Material</u>	
Epoxy	AMK-EP27
Wire	CuPdAu wire
Mold Compound	AMK-MC27
Plating Composition	Matte tin



MICROCHIP **PACKAGE QUALIFICATION REPORT**

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ANAP233300001.000	U08D923227429.110	2246TSQ
ANAP233300002.000	U08D923227429.110	2246TSR
ANAP240100200.000	U08D923227429.110	23149VD

Result



Pass



Fail



8L SOIC (150 mils) assembled by ANAP pass reliability test per QCI-39000.
This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C
reflow temperature per IPC/JEDEC J-STD-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020E)	IPC/JEDEC C J-STD- 020E	135(0)	0/135	Pass	
Precondition Prior Perform Reliability Tests (At MSL Level 1)	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT Bake 150°C, 24 hrs System: CHINEE 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22- A113	693(0)	0/693 693 693 693	 Pass	Good Devices

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H Electrical Test: +85°C and 125°C System: NEXTEST_PT	JESD22-A104		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	
	Stress Condition: -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H Electrical Test: +85°C and 125°C System: NEXTEST_PT		231(0)	0/231	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.6 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT		231(0)	0/231	Pass	77 units / lot
	Stress Condition: +130°C/85%RH, 192 hrs. Bias Volt: 5.6 Volts System: HAST 6000X			231		
	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT		231(0)	0/231	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: NEXTEST_PT		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 500 hrs. System: TPS DC-166-F-ST350	JESD22-A103		135		45 units / lot
	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT		135(0)	0/135	Pass	
	Stress Condition: Bake 175°C, 1000 hrs. System: TPS DC-166-F-ST350			135		
	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT		135(0)	0/135	Pass	
Solderability Temp 245°C	Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	22 22 0/22	 Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Physical Dimensions	Physical Dimension, 10 units / lot from 3 lot	JESD22- B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (>2.50 grams)	Mil. Std. 883-2011	30(0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	CDF-AEC- Q100-001	30(0) bonds	0/30	Pass	