



MICROCHIP

QUALIFICATION REPORT SUMMARY

PCN# DSNO-13APZA934

Date:
May 15, 2025

Qualification of U08D as a new fabrication location of Die #2 of catalog part number AT24C64D-XHM-T available in 8L TSSOP (4.4mm) used in the U2 component of BM23SPKS1NB9-YBN3AA, BM23SPKS1NB9-0B02AA, BM23SPKS1NB9-YB03AA, BM23SPKS1NB9-YB02AA, BM23SPKA1NB9-0B02AA, BM23SPKS1NB9-LB01AA, BM23SPKS1NB9-YB01AA, BM23SPKS1NB9-0001AA and BM23SPKA1NB9-0001AA catalog part numbers (CPN) available in 43L MODULE (15x29mm) package.

Purpose: Qualification of U08D as a new fabrication location of Die #2 of catalog part number AT24C64D-XHM-T available in 8L TSSOP (4.4mm) used in the U2 component of BM23SPKS1NB9-YBN3AA, BM23SPKS1NB9-0B02AA, BM23SPKS1NB9-YB03AA, BM23SPKS1NB9-YB02AA, BM23SPKA1NB9-0B02AA, BM23SPKS1NB9-LB01AA, BM23SPKS1NB9-YB01AA, BM23SPKS1NB9-0001AA and BM23SPKA1NB9-0001AA catalog part numbers (CPN) available in 43L MODULE (15x29mm) package.

CCB No.: 8254

Test Name/Qual Step	Details/Conditions		Results
Sort Yield	CP1 @ 125C		PASSED
	CP2 @ -40C		
	CP3 @ 25C		
Final Test + Qual Baseline	FT1 @ 25C		PASSED
	QC1 @ 25C		
	QC2 @ -40C		
	QC3 @ 85C		
	QC4 @ 125C		
ESD	HBM (7KV)		PASSED
Latch Up	200mA, 25C 105mA, 125C		PASSED
ESD	CDM (2KV)		PASSED
Early Life Failure Rate (ELFR)	48hr @ 125C Sample size 800 + 25 spares		PASSED
Endurance (EDR)	100k @ 85C	Sample size 77 + 5 spares	PASSED
Dynamic Life Test (DLT)	96hr @ 125C		PASSED
	408hr @ 125C		
	1008hr @ 125C		
Endurance (EDR)	100k @ 85C	Sample size 231 + 5 spares	PASSED
Retention (RET)	96hr @ 175C		PASSED
	504hr @ 175C		



MICROCHIP

PACKAGE QUALIFICATION REPORT

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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 8254
<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		Good Devices
			693	693		
			693	693		
			693	693		
			693(0)	0/693	Pass	

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 Bond Strength: Wire Pull (>2.50 grams) Bond Shear (>15.00 grams)	JESD22-A104		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	
			45(0)	0/45	Pass	
				231		
			231(0)	0/231	Pass	
			45(0)	0/45	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 Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT Bond Strength: Wire Pull (>2.50 grams) Bond Shear (>15.00 grams) Stress Condition: +130°C/85%RH, 192 hrs. Bias Volt: 5.6 Volts System: HAST 6000X Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT Bond Strength: Wire Pull (>2.50 grams) Bond Shear (>15.00 grams)	JESD22-A110		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	77 units / lot
			45(0)	0/45	Pass	
				231		
			231(0)	0/231	Pass	
			45(0)	0/45	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: ERS 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	