



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: MFOL-09ZURS938

Date:
May 05, 2017

Qualification of MMT as an additional assembly site for AT93C86A-10SU-1.8, AT93C86A-10SU-2.7, AT93C86A-10SU-2.7-T, AT93C86A-10SU-1.8-T, AT93C56B-SSHMT, AT93C66B-SSHMT, AT93C56B-SSHMT and AT93C66B-SSHMT catalog part numbers (CPN) available in 8L SOIC (3.90mm) package will qualify by similarity (QBS).



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site for AT93C86A-10SU-1.8, AT93C86A-10SU-2.7, AT93C86A-10SU-2.7-T, AT93C86A-10SU-1.8-T, AT93C56B-SSHMT, AT93C66B-SSHMT, AT93C56B-SSHMT and AT93C66B-SSHMT catalog part numbers (CPN) available in 8L SOIC (3.90mm) package.
CN	ES090904-18972
QUAL ID	QTP2900 Rev. A
MP CODE	355B27D3XC03
Part No.	ATTINY84-20SSU
Bonding No.	BDM-001250 rev B
CCB No.	2831 and 6404.001
<u>Package</u>	
Type	14L SOIC
Package size	150 mils
<u>Lead Frame</u>	
Paddle size	104x150 mils
Material	A194
Surface	Bare Cu
Process	Etched
Lead Lock	No
Part Number	10101413
Treatment	BOT
<u>Material</u>	
Epoxy	8390A
Wire	CuPdAu
Mold Compound	G600V
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-174600763.000	MCSO517450071.000	1706KKA
MMT-174600764.000	MCSO 517 4500 71.000	1706KKB
MMT-174600765.000	MCSO517450071.000	1706KKC

Result

☒

Pass

☐

Fail

☐

14L SOIC (.150") assembled by MMT (ALPH) pass reliability test per QCI-39000 which was conducted at MPHL rel lab. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 1)	Electrical Test :+85°C System: MT9320 Handler:0202 0hr CSAM Bake 150°C, 24 hrs System: HERAEUS 85°C/85%RH Moisture Soak 168 hrs. System: Climats Excal 5423-HE 3x Convection-Reflow 265°C max System:Mancorp CR.5000F Electrical Test :+85°C System: MT9320 Handler:0202	JESD22-A113 IPC/JEDEC J-STD-020D	846(0) 0/846	846 22 846 846 846 0/846	Pass	Good Devices
	Temp Cycle Stress Condition: (Standard) 65°C to +150°C, 500 Cycles System : VOTSCH VT 7012 S2 Electrical Test: + 85°C System: MT9320 Handler:0202 Bond Strength: Wire Pull (> 2.50 grams) Bond Shear (>15.00 grams) Stress Condition: (Extended) -65°C to +150°C, 1000 Cycles System : VOTSCH VT 7012 S2 Electrical Test: + 85°C System: MT9320 Handler:0202 Bond Strength: Wire Pull (>2.50 grams) Bond Shear (>15.00 grams)	JESD22-A104	248(0) 15(0) 233(0) 18(0)	240 0/248 0/15 233 0/233 0/18	Pass Pass Pass Pass	Parts had been pre-conditioned at 260°C

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
UNBIASED- HAST	Stress Condition: (Standard) +130°C/85%RH, 96 hrs. System: HIRAYAMA HASTEST PC-422R8	JESD22- A118		252		Parts had been pre-conditioned at 260°C
	Electrical Test: +85°C System: MT9320 Handler: 0202		252(0)	0/252	Pass	
	Stress Condition: (Extended) +130°C/85%RH, 192 hrs. System: HIRAYAMA HASTEST PC-422R8			251		
	Electrical Test: +85°C System: MT9320 Handler: 0202		251(0)	0/251	Pass	
HAST	Stress Condition: (Standard) +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HIRAYAMA HASTEST PC-422R8	JESD22- A110		240		Parts had been pre-conditioned at 260°C
	Electrical Test: +85°C System: MT9320 Handler:0202		240(0)	0/240	Pass	
	Stress Condition: (Extended) +130°C/85%RH, 192 hrs. Bias Volt: 5.5 Volts System: HIRAYAMA HASTEST PC-422R8			228		
	Electrical Test: +85°C System: MT9320 Handler:0202		228(0)	0/228	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: HERAEUS Electrical Test :+85°C System: MT9320 Handler:0202	JESD22-A103	45(0)	45 0/45	Pass	45 units
Solderability Temp 215°C	Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63,Pb37 System: ERS A RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	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 95.5Ag3.9Cu0.6 System: ERS A RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Physical Dimensions	Physical Dimension, 30 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.50 grams) Bond Shear (>15.00 grams)	M2011.8 MIL-STD-883	30 (0) Wires 30 (0) bonds	0/30 0/30		



MICROCHIP
QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: MFOL-09ZURS938

Date:
November 4, 2025

**Qualification of MMT as an additional assembly site for
AT93C86A-10SU-1.8, AT93C86A-10SU-2.7, AT93C86A-10SU-
2.7-T, AT93C86A-10SU-1.8-T, AT93C56B-SSHM-T, AT93C66B-
SSHM-B, AT93C56B-SSHM-B and AT93C66B-SSHM-T catalog
part numbers (CPN) available in 8L SOIC (3.90mm) package.
This is a qualification by similarity.**



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site for AT93C86A-10SU-1.8, AT93C86A-10SU-2.7, AT93C86A-10SU-2.7-T, AT93C86A-10SU-1.8-T, AT93C56B-SSHMT, AT93C66B-SSHMT, AT93C56B-SSHMT and AT93C66B-SSHMT catalog part numbers (CPN) available in 8L SOIC (3.90mm) package. This is a qualification by similarity.
CN	E000284047
QUAL ID	R2501177
Bonding No.	BD-003702 Rev.02
MP CODE	365S64C5XC0X
Part No.	25LC640AX-E/ST
CCB No.	7797 and 6404.001
<u>Lead Frame</u>	
Paddle size	82 x 82 mils
Material	C7025
Surface	Bare Cu
Process	Stamped
Lead lock	No
Part number	10100849
Plating composition	Matte Tin
<u>Bond Wire</u>	
Wire	CuPdAu wire
<u>Die Attach Material</u>	
Epoxy	QMI519
<u>Mold Compound</u>	
Mold compound	G600V
<u>Package</u>	
Type	8L TSSOP
Package size	4.4 mm



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-262300055.000	MCSO524324531.300	25369ER
MMT-262400001.000	MCSO524324531.300	2537C10
MMT-262400002.000	MCSO524324531.300	2537C11

Result☒

Pass

☐

Fail

☐

8L TSSOP assembled by MMT 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
<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 1)	Electrical Test: +25°C,85°C and 125°C System: NEXTEST_PT	JESD22-A113	693(0)	0/693	Pass	Good Devices
	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	JIP/ IPC/JEDEC J-STD-020E	693(0)	693 693 693 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	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +85°C and 125°C System: NEXTEST_PT		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>3.00 grams)		15(0)	0/15	Pass	
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
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 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

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs. System: TPS Bake Oven Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22-A103	135(0)	135 0/135	Pass	45 units / lot
Solderability Temp 215°C	Steam Aging: Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp 215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	22 0/22	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 0/22	Pass	
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Physical Dimensions	Physical Dimension, 10 units / 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (>3.00 grams) Bond Shear (>15.00 grams)	Mil. Std. 883-2011 CDF-AEC-Q100-001	30(0) Wires 30(0) Bonds	0/30 0/30	Pass Pass	