



**MICROCHIP**

**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: NTDO-13PLGV705**

**Date:**  
**May 15, 2026**

**Qualification of MTAI as a new assembly site for selected AT91SAM7S512, ATSAM3N00B, ATSAM3N1B, ATSAM3N0B, ATSAM3SD8B, ATSAM3S2B, ATSAM3S8B, AT91SAM7S64, ATSAM3S4B, AT91SAM7S128, AT91SAM7S256 and ATSAM3S1B device families available in 64L VQFN (9x9x1mm) package.**



# MICROCHIP

## Package Qualification Report

**Purpose:** Qualification of MTAI as a new assembly site for selected AT91SAM7S512, ATSAM3N00B, ATSAM3N1B, ATSAM3N0B, ATSAM3SD8B, ATSAM3S2B, ATSAM3S8B, AT91SAM7S64, ATSAM3S4B, AT91SAM7S128, AT91SAM7S256 and ATSAM3S1B device families available in 64L VQFN (9x9x1mm) package.

**CCB #:** 6917

Misc.	Assembly site	MTAI
	BD Number	BD-002270 rev.01
	MP Code (MPC)	58U837THBC01
	Part Number (CPN)	ATSAM3S8BA-MU
	MSL information	MSL3/260
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	260
	Reliability Site	MPHIL
Lead-Frame	Paddle size	287 x 287
	Material	A194
	DAP Surface Prep	Ag ring plated
	Treatment	Roughening
	Process	Etched
	Lead-lock	No
	Part Number	10106419
	Lead Plating	Matte Tin
	Strip Size	70 x 250 mm
Strip Density	240 units/strip	
Bond Wire	Material	CuPdAu
Die Attach	Part Number	QM1519
	Conductive	Yes
MC	Part Number	G700LTD
PKG	Package Type	VQFN
	Pin/Ball Count	64
	PKG width/size	9x9x1.0 mm



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## Manufacturing Information

Assembly Lot No.
MTAI250900937.000
MTAI250900938.000
MTAI250900939.000
MTAI264900360.000
MTAI264900361.000
MTAI264900362.000

### Result



Pass



Fail

58U83 in VQFN 64 9x9 (THB) package, assembled in MTAI pass reliability tests which was conducted at MPHL rel lab. This package is qualified Moisture/Reflow Sensitivity Classification Level 3 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	
<b>Precondition Prior Perform Reliability Tests (At MSL Level 3)</b>	<b>Electrical Test :</b> 25°C D10I_UC 85°C D10I_UC	JESD22- A113,  JIP/ IPC/JEDE C J-STD- 020E	231 per lot	Lot 1 0/231	Pass	Good Devices	
				Lot 2 0/231	Pass		
				Lot 3 0/231	Pass		
	<b>Bake</b> 150°C, 24 hrs System: HERAEUS			231 per lot			
	<b>Moisture Soak</b> 192h(30°C/60%RH) System: VOTSCH VC4034			231 per lot			
	<b>Reflow</b> 3x Convection-Reflow 265°C max System: Mancorp CR.5000F			231 per lot	Lot 1 0/231	Pass	
	Lot 2 0/231	Pass					
	Lot 3 0/231	Pass					
	<b>Electrical Test :</b> 25°C D10I_UC 85°C D10I_UC		231 per lot	Lot 1 0/231	Pass		
		Lot 2 0/231		Pass			
		Lot 3 0/231		Pass			

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 500 hrs System: HERAEUS  <b>Electrical Test:</b> 25°C D10I_UC 85°C D10I_UC	JESD22-A103	45 units 1 lot	Lot 1 0/45  Lot 2 0/45  Lot 3 0/45	Pass  Pass  Pass	
<b>HAST</b>	<b>Stress Condition:</b> (Standard) 130°C, 85%RH, 96 hrs. VOLTS=5.5V System: HIRAYAMA HASTEST PC-422R8  <b>Electrical Test:</b> 25°C D10I_UC 85°C D10I_UC	JESD22-A110	77 units per lot	Lot 1 0/77  Lot 2 0/77  Lot 3 0/77	Pass  Pass  Pass	Parts had been pre-conditioned at 260°C
<b>UNBIASED HAST</b>	<b>Stress Condition:</b> (Standard) 130°C, 85%RH, 96 hrs.. System: HIRAYAMA HASTEST PC-422R8  <b>Electrical Test:</b> 25°C D10I_UC	JESD22-A118	77 units per lot	Lot 1 0/77  Lot 2 0/77  Lot 3 0/77	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
<b>Temp Cycle</b>	<b>Stress Condition:</b> (Standard) - 65°C/150°C, 500 Cycles System : Votsch VTS <sup>2</sup> 7012  <b>Electrical Test:</b> 85°C D10I_UC	JESD22-A104	77 units per lot	Lot 1 0/77  Lot 2 0/77  Lot 3 0/77	Pass  Pass  Pass	Parts had been pre-conditioned at 260°C
	<b>Wire Bond Pull WBP</b>	Mil. Std. 883-2011	5 units, 30 bonds 1 lot	Lot 1 0/30	Pass	
<b>Wire Bond Pull WBP , 0 Hour</b>		Mil. Std. 883-2011	5 units, 30 bonds 1 lot	Lot 1 0/30	Pass	
<b>Wire Bond Shear WBS, 0Hour</b>		CDF-AEC-Q100-001	5 units, 30 bonds 1 lot	Lot 1 0/30	Pass	
<b>Standard Pb-free Solderability</b>	>95% lead coverage	J-STD-002E	22 units 1 lot	0/22	Pass	