



## Product Change Notification - ASER-28LQKG396

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**Date:**

20 Nov 2019

**Product Category:**

Others; Computing Embedded Controllers; Ethernet Switches; USB Bridge

**Affected CPNs:****Notification subject:**

CCB 3870 Final Notice: Qualification of MMT as an additional assembly site for selected SMSC KBC1126, SCH555X, MEC1310, LAN931X and USB22XX device families available in 128L TQFP (14x14x1mm) package.

**Notification text:****PCN Status:**

Final notification

**PCN Type:**

Manufacturing Change

**Microchip Parts Affected:**

Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

**Description of Change:**

Qualification of MMT as an additional assembly site for selected SMSC KBC1126, SCH555X, MEC1310, LAN931X and USB22XX device families available in 128L TQFP (14x14x1mm) package.

**Pre Change:**

Assembled at ASE assembly site using Au/PdCu wire material, 1076WA die attach, and G631H molding compound material.

**Post Change:**

Assembled at ASE assembly site using Au/PdCu wire, 1076WA die attach, and G631H molding compound material or assembled at MMT assembly site using CuPdAu wire, 3280 die attach, and G700HA molding compound.

**Pre and Post Change Summary:**

	Pre Change	Post Change	
<b>Assembly Site</b>	Advanced Semiconductor Engineering, Inc. (ASE)	Advanced Semiconductor Engineering, Inc. (ASE)	Microchip Technology Thailand (Branch) (MMT)
<b>Wire material</b>	Au/PdCu	Au/PdCu	CuPdAu
<b>Die attach material</b>	1076WA	1076WA	3280
<b>Molding compound material</b>	G631H	G631H	G700HA



Lead frame material	C7025	C7025	C7025
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**Impacts to Data Sheet:**

None.

**Change Impact:**

None.

**Reason for Change:**

To improve manufacturability by qualifying MMT as an additional assembly site.

**Change Implementation Status:**

Complete

**Estimated First Ship Date:**

December 20, 2019 (date code: 1952)

**Time Table Summary:**

Workweek	July 2019					-->	November 2019					December 2019				
	27	28	29	30	31		44	45	46	47	48	49	50	51	52	1
Initial PCN Issue Date		X														
Qual Report Availability									X							
Final PCN Issue Date									X							
Estimated Implementation Date													X			

**Method to Identify Change:**

Traceability code

**Qualification Report:**

Please open the attachments included with this PCN labeled as PCN\_#\_Qual\_Report.

**Revision History:**

**July 09, 2019:** Issued initial notification.

**November 20, 2019:** Issued final notification. Attached the qualification report. Revised the affected parts list. Provided estimated first ship date to be on December 20, 2019.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

**Attachment(s):**

[PCN\\_ASER-28LQKG396\\_Qual\\_Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.



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If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

KBC1126-NU  
SCH5555-NU  
SCH5553-NU  
SCH5555V-NU  
SCH5555-NU-TR  
SCH5553-NU-TR  
MEC1310-NU  
MEC1310-NU-TR  
LAN9311-NU  
LAN9313-NU  
LAN9313-NU-TR  
USB2227-NU-11  
USB2228-NU-11  
USB2250-NU-06  
USB2251-NU-06  
USB2250I-NU-06  
USB2251I-NU-06  
USB2251I-NU-06-CAG



**MICROCHIP**

# **QUALIFICATION REPORT SUMMARY**

**PCN #: ASER-28LQKG396**

**Date:  
November 7, 2019**

**Qualification of MMT as an additional assembly site for  
selected SMSC KBC1126, SCH555X, MEC1310, LAN931X and  
USB22XX device families available in 128L TQFP  
(14x14x1mm) package.**

<b>Purpose</b>	Qualification of MMT as an additional assembly site for selected SMSC KBC1126, SCH555X, MEC1310, LAN931X and USB22XX device families available in 128L TQFP (14x14x1mm) package.
<b>CCB #</b>	3870
<b>CN</b>	ES315064
<b>QUAL ID</b>	Q19126
<b>MP CODE</b>	TG2151Z2XBCC
<b>Part No.</b>	SCH5553-NU
<b>Bonding No.</b>	BDM-002151 Rev. B
<b><u>Package</u></b>	
<b>Type</b>	128L TQFP
<b>Package size</b>	14x14x1 mm
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	190 x 190 mils
<b>Material</b>	C7025
<b>Surface</b>	Double Ag Ring Plated
<b>Process</b>	Etched
<b>Lead Lock</b>	No
<b>Part Number</b>	10112801
<b>Treatment</b>	BOT
<b><u>Material</u></b>	
<b>Epoxy</b>	3280
<b>Wire</b>	CuPdAu wire
<b>Mold Compound</b>	G700HA

## Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-201800001.000	GF3E920106974.100	1931G8M
MMT-201800002.000	GF3E920106974.100	1931GK4
MMT-202300043.000	GF3E920106974.100	19362GR

### Result

Pass     Fail     \_\_\_\_\_

128L TQFP 14x14x1 mm assembled by MMT pass reliability test per QCI-39000. This package was qualified the 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
<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 3)	<p><b>Electrical Test</b> :+25°C and 85°C System: LTX_D1X</p> <p>Bake 150°C, 24 hrs System: CHINEE</p> <p>30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH</p> <p>3x Convection-Reflow 265°C max</p> <p>System: Vitronics Soltec MR1243</p> <p><b>Electrical Test</b> :+25°C and 85°C System: LTX_D1X</p>	JESD22- A113	693(0)	693		Good Devices
		JIP/ IPC/JEDE C J-STD- 020E		693		
				693		
				693		
				0/693	Pass	



# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C  77 units / lot
	<b>Electrical Test:</b> + 85°C System: LTX_D1X		231(0)	0/231	Pass	
	<b>Stress Condition:</b> -65°C to +150°C, 1000 Cycles System : TABAI ESPEC TSA-70H			231		
	<b>Electrical Test:</b> +25°C and 85°C System: LTX_D1X		231(0)	0/231	Pass	
	<b>Bond Strength:</b> Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)		15 (0)	0/15	Pass	
			15 (0)	0/15	Pass	
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C  77 units / lot
	<b>Electrical Test:</b> +25°C System: LTX_D1X		231(0)	0/231	Pass	
	<b>Stress Condition:</b> +130°C/85%RH, 192 hrs. System: HAST 6000X			231		
	<b>Electrical Test:</b> + 25°C System: LTX_D1X		231(0)	0/231	Pass	
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 3.3 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C  77 units / lot
	<b>Electrical Test:</b> + 25°C and 85°C System: LTX_D1X		231(0)	0/231	Pass	
	<b>Stress Condition:</b> +130°C/85%RH, 192 hrs. <b>Bias Volt:</b> 3.3 Volts System: HAST 6000X			231		
	<b>Electrical Test:</b> + 25°C and 85°C System: LTX_D1X		231(0)	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, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	<b>Electrical Test</b> :+25°C and 85°C System: LTX_D1X		45(0)	0/45	Pass	
<b>Solderability Temp 215°C</b>	<b>Steam Aging:</b> 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 22 0/22	Pass	
<b>Solderability Temp 245°C</b>	<b>Steam Aging:</b> 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	
<b>Physical Dimensions</b>	Physical Dimension, 10 units / lot from 3 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
<b>Bond Strength Data Assembly</b>	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	