Product Change Notification / GBNG-25SJJB110

Date:

25-Jan-2021

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4271 Final Notice: Qualification of GTK as a new assembly site for selected AT28BV64Bxx, AT28C64Bxx and AT28HC64Bxx Atmel device families available in 28L SOIC (300mils) package.

Affected CPNs:

GBNG-25SJJB110_Affected_CPN_01252021.pdf
GBNG-25SJJB110_Affected_CPN_01252021.csv

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 GTK as a new assembly site for selected AT28BV64Bxx, AT28C64Bxx and AT28HC64Bxx Atmel device families available in 28L SOIC (300mils) package.

Pre Change: Assembled at LPI using CRM-1033BF die attach material with MSL 2 classification.

Post Change: Assembled at GTK using EN-4900GC die attach material with MSL 3 classification.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site		Lingsen Precision Industries, LTD. (LPI)	Greatek Electronic Inc. (GTK)
Wire material		Au	Au
Die attach material		CRM-1033BF	EN-4900GC
Molding compound material		G600	G600
Lead frame material		C194	C194
MSL Classification		MSL 2	MSL 3
Packing Media: Tube	**Tube Color**	Clear	Clear
	Plug Color	Black/Black	Blue/White
	Tube Dimension	Minor dimensional changes. See pre and post change comparison	

Impacts to Data Sheet: None

Change Impact: None

Reason for Change:
To improve on-time delivery performance by qualifying GTK as a new assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: February 25, 2021 (date code: 2109)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	June 2020					**-->**	**January 2021**					**February 2021**				
Workweek	23	24	25	26	27		01	02	03	04	05	06	07	08	09	10
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:
June 29, 2020: Issued initial notification.

January 25, 2021: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on February 25, 2021.

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

Attachments:

PCN_GBNG-25SJJB110_Qual Report.pdf
PCN_GBNG-25SJJB110_Pre_and_Post_Change_Summary.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

Terms and Conditions:

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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)

AT28C64B-15SU
AT28HC64B-70SU
AT28HC64B-90SU
AT28HC64B-12SU
AT28HC64BF-12SU
AT28BV64B-20SU
AT28HC64B-70SU-235
AT28HC64BF-70SU-T
AT28HC64BF-90SU-T
AT28C64B-15SU-T
AT28HC64B-70SU-T
AT28HC64B-90SU-T
AT28HC64B-12SU-T
AT28HC64BF-12SU-T
AT28BV64B-20SU-T

QUALIFICATION REPORT SUMMARY

PCN #: GBNG-25SJJB110

Date

January 11, 2021

Qualification of GTK as a new assembly site for selected AT28BV64Bxx, AT28C64Bxx and AT28HC64Bxx Atmel device families available in 28L SOIC (300mils) package.

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PACKAGE QUALIFICATION REPORT

Purpose: Qualification of GTK as a new assembly site for selected AT28BV64Bxx, AT28C64Bxx and AT28HC64Bxx Atmel device families available in 28L SOIC (300mils) package.

Misc.	Assembly site	GTK
	BD Number	NA
	MP Code (MPC)	198037N3XC01
	Part Number (CPN)	AT28C64B-15SU
	MSL information	MSL 3 / 260
	Assembly Shipping Media (T/R, Tube/Tray)	Tube
	Base Quantity Multiple (BQM)	27 units/tube
	Reliability Site	MPHIL
	CCB No	4271
Lead Frame	Paddle size	160 x 205
	Material	A194
	DAP Surface Prep	DOUBLE RING
	Treatment	None
	Process	Stamped
	Lead-lock	No
	Part Number	11-0228W-010
	Lead Plating	Matte Sn
	Strip Size	4X8
	Strip Density	32
Bond Wire	Material	Au
Die Attach	Part Number	EN-4900GC
	Conductive	Yes
Mold Compound	Part Number	G600
PKG	PKG Type	SOIC
	Pin/Ball Count	28L
	PKG width/size	300mils

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	QTY In	QTY Out
GTK-212100027.000	**1000**	**1000**
GTK-212100028.000	**1000**	**1000**
GTK-212100029.000	**1000**	**1000**

Result ■ Pass ☐ Fail ☐ ____________________

300 mils SOIC28L (N3X) Mask 19803 using Au wire at GTK Taiwan is qualified the Moisture/ Reflow Sensitivity Classification Level 3 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard. No delamination was observed on all the units.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard / Method	Qty. (Acc.)	Def/SS	Result	Remarks
<u>Precondition Prior Perform Reliability Tests(</u>At MSL Level 3)	**Electrical Test:** 25°C, 85°C System: EPRO – MT9308	JESD22A113 231 units of 3 Lots	864(0)	0/864	Pass	
	Bake 150°C, 24 hrs System:		864(0			
	30°C/60%RH Moisture Soak 192 hrs. System: Climats Excal 5423-HE	IPC/JEDEC J-STD020E	864(0)			
	3x Convection-Reflow 260°C max System: Mancorp CR.5000F		864(0)	0/864	Pass	
	Electrical Test : 25°C, 85°C System: EPRO – MT9308		864(0)	0/864	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition: (Standard)** Bake 175°C, 504 hrs System : VOTSCH VT 7012 S2	JESD22-A104 45 units of 1 Lot	45(0)			
	Electrical Test :25°C, 85°C System: EPRO – MT9308		45(0)	0/45	Pass	
Thermal Cycles	**Stress Condition: (Standard)** -65°C / 150°C, 500cycles **System:**	JESD22-A104 77 units of 3 Lots	231(0)			
	Electrical Test: 85°C System: EPRO – MT9308		2310)	231(0)	Pass	
	Bond Strength: Wire/Stitch Pull(Cpk ≥ 1.67) Bond Shear (Cpk≥1.67) 30 bonds from 5 units / Lot (3 Lots)		15(0)	15(0)	Pass	
Unbiased HAST	**Stress Condition: (Standard)** 130°C / 80°C, 96hours **System:**	JESD22-A104 77 units of 3 Lots	231(0)			
	Electrical Test: 25°C, 85°C System: EPRO – MT9308		231(0)	231(0)	Pass	

Biased HAST	**Stress Condition: (Standard)** 130°C / 80°C, 96hours **System:** **Electrical Test: 25°C, 85°C** System: EPRO – MT9308	JESD22-A104 77 units of 3 Lots	231(0) 231(0)	231(0)	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Bond Strength Data Assembly	Wire /Stitch Pull (Cpk ≥1.67) :	M2011.8 MIL-STD-883	35(0)	0/35	Pass	
	Bond Shear (Cpk ≥1.67):		35(0)	0/35	Pass	
Package Dimension	30 units from 3 Lots (10 units per lot)	JESD22-B100/B108	30(0)	0/30	Pass	

CCB 4271
Pre and Post Change Summary
PCN#: GBNG-25SJJB110

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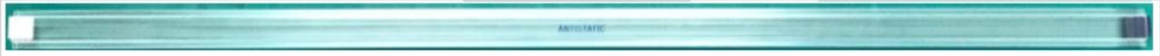
Pre and Post Change – Tube packing media

PRE-CHANGE / LPI

Package	Lead Count	Body Size	Units/ Tube	Length (inch)	End Plugs
SOIC	28	300 mils	27	20+/-0.10	Black/Black

POST-CHANGE / GTK



Package	Lead Count	Body Size	Units /Tube	Length (inch)	End Plugs
SOIC	28	300 mils	27	20 +/- 0.05	Blue/White