Product Change Notification - JAON-13CUTO660

Date:

13 Aug 2019

Product Category:

ARCNET-CircLink Controllers

Affected CPNs:

Notification subject:

CCB 3755 Final Notice: Qualification of MMT as a new assembly site for selected SMSC COM20019I and COM20020I device families available in 28L PLCC (11.5x11.5x4.4mm) 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 a new assembly site for selected SMSC COM20019I and COM20020I device families available in 28L PLCC (11.5x11.5x4.4mm) package.
Pre Change:
Assembled at OSE using 1076WA die attach, G631 mold compound and A151 lead frame material with MSL 3 classification.
Post Change:
Assembled at MMT using 3280 die attach, G600V mold compound and A194 lead frame material with MSL 1 classification.
Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Orient Semiconductor Electronics, Ltd (OSE)	Microchip Technology Thailand (Branch) (MMT)
Wire material	Au	Au
Die attach material	1076WA	3280
Molding compound material	G631	G600V
Lead frame material	A151	A194
MSL Classification	MSL3/260C	MSL1/245C

Impacts to Data Sheet:
None
Change Impact:
None
Reason for Change:
To improve on-time delivery performance by qualifying MMT as a new assembly site.
Change Implementation Status:
In Progress
Estimated First Ship Date:
September 13, 2019 (date code: 1937)
NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	April 2019				->	August 2019					September 2019			
Workweek	14	15	16	17		31	32	33	34	35	36	37	38	39
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:
April 1, 2019: Issued initial notification.
August 13, 2019: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on September 13, 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_JAON-13CUTO660_Qual_Report.pdf

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

Terms and Conditions:

If you wish to receive Microchip PCNs via email please register for our PCN email service at our PCN home page select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the PCN FAQ section.
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.

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: JAON-13CUTO660

Date:
July 30, 2019

Qualification of MMT as a new assembly site for selected SMSC COM20019I and COM20020I device families available in 28L PLCC (11.5x11.5x4.4mm) package.

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as a new assembly site for selected SMSC COM20019I and COM20020I device families available in 28L PLCC (11.5x11.5x4.4mm) package.
CN	ES289264
QUAL ID	Q19044 rev. A
MP CODE	ZG1017L4XA00
Part No.	COM20019I-DZD
Bonding No.	BDM-002089 Rev. A
CCB No.	3755

Package

Type	28L PLCC
Die thickness	15 mils
Die size	129.5 x 144.5 mils

Lead Frame

Paddle size	200 x 200 mils
Material	A194
Surface	Ag ring plated
Process	Stamped
Lead Lock	No
Part Number	10102832
Treatment	None

Material

Epoxy	3280
Wire	Au wire
Mold Compound	G600V
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-195001628.000	GF02919426386.100	1911J66
MMT-195001629.000	GF02919426386.100	1911J67
MMT-195001968.000	GF02919426386.100	1911SR1

Result [X] Pass [ ] Fail [ ] ___________________

28L PLCC assembled by MMT pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 245°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 250°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020E)	IPC/JEDEC J-STD-020E	135	0/135	Pass	
<u>Precondition Prior Perform Reliability Tests</u> (At MSL Level 1)	**Electrical Test :**+25°C and 110°C System: LTX_D10	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 250°C max System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C and 110°C System: LTX_D10			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 245°C
	Electrical Test: +110°C System: LTX_D10		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 2.5 grams)		15 (0)	0/15	Pass	
	Bond Shear (>15.00 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 245°C
	Electrical Test: +25°C System: LTX_D10		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 3.3 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 245°C
	Electrical Test:+25°C and 110°C System: DTX_D10		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: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test :+25°C and 110°C System: LTX_D10		45(0)	0/45	Pass	
Physical Dimensions	Physical Dimension, 10 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	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	

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Affected Catalog Part Numbers(CPN)

COM20019I-DZD
COM20019I-DZD-TR
COM20020I-DZD
COM20020I-DZD-TR