Product Change Notification - RMES-10TYKT692

Date:

18 Jul 2019

Product Category:

Motor Drivers

Affected CPNs:

Notification subject:

CCB 3674 Final Notice: Qualification of NSEB as a new assembly site for selected products available in 8L DFN (4x4x0.9mm) 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 NSEB as a new assembly site for selected products available in 8L DFN (4x4x0.9mm) package.

Pre Change:

Assembled at LPI using gold (Au) bond wire, 8340 die attach, G770HT molding compound and C194 lead frame material.

Post Change:

Assembled at NSEB using gold (Au) bond wire, 8600 die attach, G700LTD molding compound and C194 lead frame material.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Lingsen Precision Industries, LTD. (LPI)	UTAC Thai Limited (UTL-1) LTD. (NSEB)
Wire material	Au	Au
Die attach material	8340	8600
Molding compound material	G770HT	G700LTD
Lead frame material	C194	C194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity and on-time delivery performance by qualifying NSEB as a new assembly site.

Change Implementation Status:
In Progress
Estimated First Ship Date:
August 15, 2019 (date code: 1933)

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

Time Table Summary:

	January 2019					-->	July 2019					August 2019			
Workweek	01	02	03	04	05		27	28	29	30	31	32	33	34	35
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:
January 16, 2019: Issued initial notification.
July 17, 2019: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on August 15, 2019. Updated time table summary.

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_RMES-10TYKT692_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.

Affected Catalog Part Numbers (CPN)

MCP8063-E/MD
MCP8063-E/MDVAO
MCP8063T-E/MD

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: RMES-10TYKT692

Date:
July 02, 2019

Qualification of NSEB as a new assembly site for selected products available in 8L DFN (4x4x0.9mm) package.

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of NSEB as a new assembly site for selected products available in 8L DFN (4x4x0.9mm) package.
CCB No.	3674
CN	ES291544
QUAL ID	Q19062 Rev. A
MP CODE	VGGA14M8XV21
Part No.	MCP8063-E/MDVAO
Bonding No.	BDM-002022 Rev. A
Package	
Type	8L DFN
Package size	4x4x0.9 mm
Die thickness	8 mils
Die size	61.7 x 84.3 mils
Lead Frame	
Paddle size	114 x 146 mils
Material	C194
Surface	Ag no lead and Ag on PAD
Process	Etched
Lead Lock	Yes
Part Number	FR0225
Material	
Epoxy	8600
Wire	Au wire
Mold Compound	G700LTD
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
NSEB195100067.000	TC03915327695.100	1912HTU
NSEB195100068.000	TC03915327695.100	1912HU0
NSEB195100069.000	TC03915327695.100	1912HU8

Result [X] Pass [ ] Fail [ ] _____

8L DFN 4x4x0.9 mm assembled by NSEB 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
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 265°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 125°C System: ETS300	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 265°C max			693		
	System: Vitronics Soltec MR1243					
	Electrical Test :+25°C and 125°C System: ETS300			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: +125°C System: ETS300		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 8.00 grams)		15 (0)	0/15	Pass	
	Bond Shear (>20.00 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: ETS300		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 260°C
	Electrical Test:+25°C and 125°C System: ETS300		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, 500 hrs System: SHEL LAB **Electrical Test :**+25°C and 125°C System: ETS300	JESD22-A103	 45(0)	45 0/45	 Pass	45 units
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 22 0/22	 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 (> 8.00 grams) Bond Shear (>20.00 grams)	M2011 JESD22-B116	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	