Product Change Notification / RMES-18OAWC144

Date:

24-Nov-2020

Product Category:

Analog to Digital Converters

PCN Type:

Manufacturing Change

Notification Subject:

CCB 2929.003 Final Notice: Qualification of NSEB as a new assembly site for MCP33141 and MCP33151 device families available in 10L MSOP (3x3mm) package

Affected CPNs:

RMES-18OAWC144_Affected_CPN_11242020.pdf
RMES-18OAWC144_Affected_CPN_11242020.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 NSEB as a new assembly site for MCP33141 and MCP33151 device families available in 10L MSOP (3x3mm) package.

Pre Change:
Assembled at ANAP site using 8290 die attach and G700K mold compound material with 78 x 97 mils lead frame paddle size

Post Change:
Assembled at NSEB site using 8200T die attach and G600 mold compound material with 82 x 94 mils lead frame paddle size

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Amkor Technology Philippines (ANAP)	UTAC Thai Limited (NSEB)
Wire material	Au	Au
Die attach material	8290	8200T
Molding compound material	G700K	G600
Lead frame material	C7025	C7025
Lead frame paddle size	78 x 97 mils	82 x 94 mils
Lead frame comparison	See attachment	

Impacts to Data Sheet:
None

Change Impact:
None

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

Change Implementation Status:
In Progress

Estimated First Ship Date:
December 20, 2020 (date code: 1952)

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

Time Table Summary:

	November 2020				December 2020			
Workweek	45	46	47	48	49	50	51	52
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:
November 24, 2020: Issued final notification. Attached the qualification report. Provided estimated first date to be on December 20, 2020.

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

Attachments:

PCN_RMES-18OAWC144_Qual_Report.pdf
PCN_RMES-18OAWC144_Pre and Post Change Summary.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)

MCP33151D-10-E/MS
MCP33151D-05-E/MS
MCP33151-10-E/MS
MCP33151-05-E/MS
MCP33141D-10-E/MS
MCP33141D-05-E/MS
MCP33141-10-E/MS
MCP33141-05-E/MS
MCP33151D-10T-E/MS
MCP33151D-05T-E/MS
MCP33151-10T-E/MS
MCP33151-05T-E/MS
MCP33141D-10T-E/MS
MCP33141D-05T-E/MS
MCP33141-10T-E/MS
MCP33141-05T-E/MS

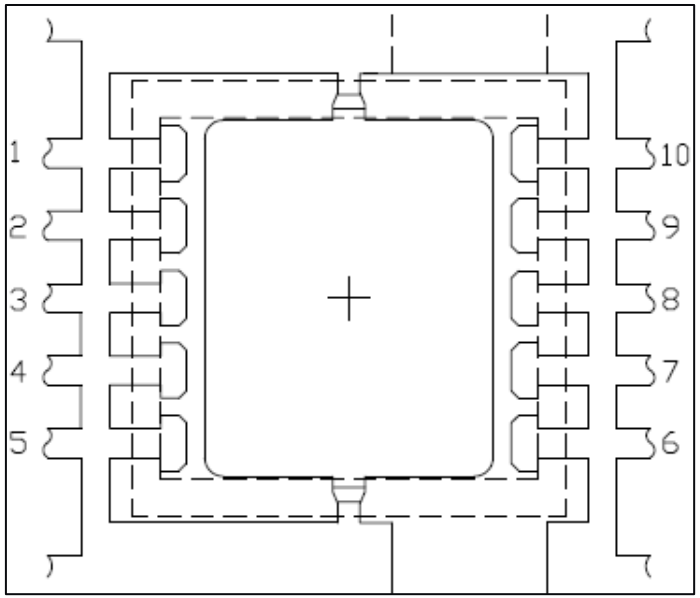
CCB 2929.003
Pre and Post Change Summary
PCN #: RMES-18OAWC144

A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

Qualification of NSEB as a new assembly site for MCP33141 and MCP33151 device families available in 10L MSOP (3x3mm) package

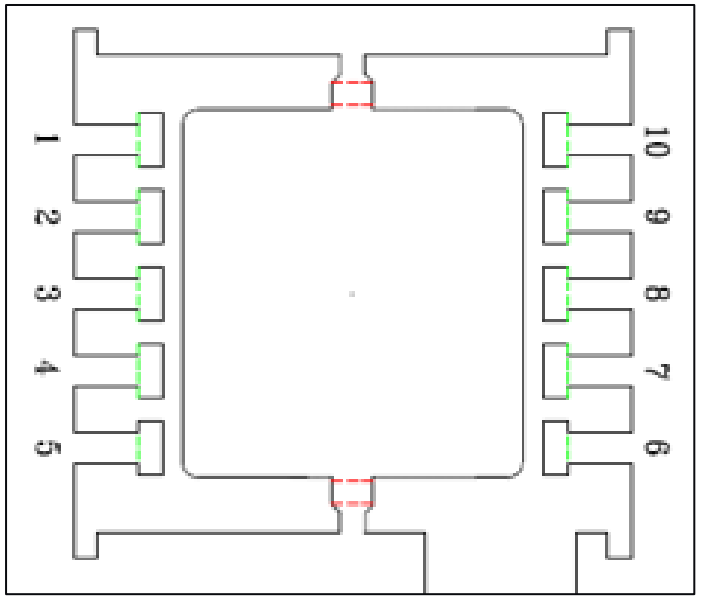
Lead frame Comparison

ANAP



Paddle size	78 x 97 mils

NSEB



Paddle size	82 x 94 mils

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QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: RMES-18OAWC144

Date:
November 11, 2020

Qualification of NSEB as a new assembly site for MCP33141 and MCP33151 device families available in 10L MSOP (3x3mm) package.

PACKAGE QUALIFICATION REPORT

Purpose **Qualification of NSEB as a new assembly site for MCP33141 and MCP33151 device families available in 10L MSOP (3x3mm) package.**

CN	ES295627
QUAL ID	Q19076 Rev. A
MP CODE	TAPA44E3XA11
Part No.	MCP33111-10-E/MS
Bonding No.	BDE-005353 Rev. 01
CCB No.	2929, 2929.001 and 2929.003
Package	
Type	10L MSOP
Package size	3 x 3 mm
Paddle size	82 x 94 mils
Material	C7025
Surface	Ag Spot plated
Process	Stamped
Lead Lock	No
Part Number	FM0009
Treatment	None
Material	
Epoxy	8200T
Wire	Au wire
Mold Compound	G600
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
NSEB200400001.000	TC08919468004.400	1917T0M
NSEB200400002.000	TC08919468004.400	1917T0R
NSEB200400003.000	TC08919468004.400	1917T0T

Result [x] Pass [ ] Fail [ ] _____

10L MSOP 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	

Precondition Prior Perform Reliability Tests **(At MSL Level 1)**	**Electrical Test :**+25°C and 125°C System: J750_HD	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				Pass	
	Electrical Test :+25°C and 125°C System: J750_HD			0/693		

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 **Electrical Test:** + 125°C System: J750_HD **Bond Strength:** Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22-A104	231(0) 15 (0) 15 (0)	231 0/231 0/15 0/15	Pass Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot
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 (> 2.5 grams) Bond Shear (>15.00 grams)	M2011 JESD22-B116	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	