Product Change Notification / ASER-16NMUI633

Date:

31-Mar-2023

Product Category:

Linear Regulators, Switching Regulators

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6191 Initial Notice: Qualification of 2200D as a new die attach material for selected MIC371xx, MIC391xx, MIC468xx and MIC469xx device families available in 8L SOIC (3.9mm) package.

Affected CPNs:

ASER-16NMUI633_Affected_CPN_03312023.pdf
ASER-16NMUI633_Affected_CPN_03312023.csv

Notification Text:

PCN Status: Initial Notification

PCN Type: Manufacturing Change

Microchip Parts Affected: Please open one of the files found in the Affected CPNs section.
Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

Description of Change: Qualification of 2200D as a new die attach material for selected MIC371xx, MIC391xx, MIC468xx and MIC469xx device families available in 8L SOIC (3.9mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	Stars Microelectronics (Thailand) Public Company Limited (STAR)	Stars Microelectronics (Thailand) Public Company Limited (STAR)
Wire Material	Au	Au
Die Attach Material	84-1LMISR8	2200D
Molding Compound Material	G600	G600
Lead-Frame Material	A194	A194

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve manufacturability by qualifying 2200D as a new Die Attach material.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: June 2023

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	March 2023					>	**June 2023**				
Workweek	9	10	11	12	13		22	23	24	25	26
Initial PCN Issue Date					x						
Qual Report Availability							x				
Final PCN Issue Date							x				

Method to Identify Change: Traceability code

Qualification Plan: Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History: March 31, 2023: Issued initial notification.

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

Attachments:

PCN_ASER-16NMUI633 Qual Plan.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)

MIC39101-1.8YM
MIC39101-2.5YM
MIC39101-3.3YM
MIC39101-5.0YM
MIC39102YM
MIC39101-1.8YM-TR
MIC39101-2.5YM-TR
MIC39101-3.3YM-TR
MIC39101-5.0YM-TR
MIC39102YM-TR
MIC37101-1.5YM
MIC37101-1.65YM
MIC37101-1.8YM
MIC37101-2.1YM
MIC37101-2.5YM
MIC37101-3.3YM
MIC37102YM
MIC37101-1.5YM-TR
MIC37101-1.65YM-TR
MIC37101-1.8YM-TR
MIC37101-2.1YM-TR
MIC37152YM
MIC37152YM-TR
MIC37101-2.5YM-TR
MIC37101-3.3YM-TR
MIC37102YM-TR
MIC4680-3.3YM
MIC4680YM
MIC4680-3.3YM-TR
MIC4680-5.0YM-TR
MIC4680YM-TR
MIC4681YM
MIC4690YM
MIC4690YM-TR
MIC4680-5.0YM
MIC4681YM-TR

QUALIFICATION PLAN SUMMARY

PCN #: ASER-16NMUI633

Date:
March 16, 2023

Qualification of 2200D as a new die attach material for selected MIC371xx, MIC391xx, MIC468xx and MIC469xx device families available in 8L SOIC (3.9mm) package.

Purpose: Qualification of 2200D as a new die attach material for selected MIC371xx, MIC391xx, MIC468xx and MIC469xx device families available in 8L SOIC (3.9mm) package.

CCB: 6191

Misc.	Assembly site	STAR
	BD Number	BD-001372 rev01
	MP Code (MPC)	218104EMAA01
	Part Number (CPN)	MIC4681YM
	MSL information	MSL-2 @260C
	Assembly Shipping Media (T/R, Tube/Tray)	T/R
	Base Quantity Multiple (BQM)	2,500
	Reliability Site	MTAI
Lead-Frame	Paddle size	169x112 mil
	Material	A194
	DAP Surface Prep	NiPdAu
	Treatment	PPF
	Process (Stamped/Etched)	STAMP
	Part Number	07J1269NS01
	Lead frame Thickness	0.008+/-0.0003 inch
	Lead Plating	NiPdAu
	Strip Size	L(8.9880+/-0.004) W(2.0000+/-0.002) inch
	Strip Density	140 pads / Strip
Bond Wire	Material	Au
Die Attach	Part Number	2200D
	Conductive	Yes
MC	Part Number	G600
PKG	PKG Type	SOIC
	Pin/Ball Count	8
	PKG width/size	3.9mm (.150in)

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot(should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5		MTAI	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Backward Solderability	J-STD-002D ;Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5		MTAI	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0	5		STAR	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5		STAR	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5		STAR	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5		STAR / MTAI	
Preconditioning - Required for surface mount devices	JESD22-A113. +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at 25°C and 85C. MSL-2 @ 260C	231	15	3	738	0	15	STAR	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A110. +130°C/85% RH for 96 hours Electrical test pre and post stress at 25°C and 85C.	77	5	3	246	0	10	STAR	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot(should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Special Instructions
UHAST	JESD22-A118. +130°C/85% RH for 96 hrs Electrical test pre and post stress at 25°C	77	5	3	246	0	10	STAR	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles. Electrical test pre and post stress at 85C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	STAR	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.