



Product Change Notification / ASER-16NMUI633

Date:

30-Aug-2023

Product Category:

Linear Regulators, Switching Regulators

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6191 Final 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_08302023.pdf](#)
[ASER-16NMUI633_Affected_CPN_08302023.csv](#)

Notification Text:

PCN Status:Final 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
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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 First Ship Date:September 30, 2023 (date code: 2339)

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

Time Table Summary:

	March 2023					>	August 2023					September 2023			
Workweek	9	10	11	12	13		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:March 31, 2023: Issued initial notification.

August 30, 2023: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on September 30, 2023.

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 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)

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 REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: ASER-16NMUI633

Date:
August 17, 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.**



MICROCHIP

PACKAGE QUALIFICATION REPORT

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.
CN	E000169682
QUAL ID	R2300649 Rev. A
MP CODE	218104EMAA01
Part No.	MIC4681YM
Bonding No.	BD-001372 Rev. 01
CCB No.	6191
<u>Package</u>	
Type	8L SOIC
Package size	3.9 mm (.150 in)
<u>Lead Frame</u>	
Paddle size	169 x 112 mils
Material	A194
Surface	NiPdAu
Process	STAMP
Part Number	07J1269NS01
Treatment	PPF
<u>Material</u>	
Epoxy	2200D
Wire	Au wire
Mold Compound	G600
Plating Composition	NiPdAu



MICROCHIP **PACKAGE QUALIFICATION REPORT**

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
STAR235200088.000	TMPE218425708.120	23135U3
STAR240100041.000	TMPE218425708.120	23145U4
STAR240100042.000	TMPE218425708.120	23145UJ

Result

☒ Pass ☐ Fail ☐ _____

8L SOIC (.150 in) assembled by STAR pass reliability test per QCI-39000.
This package was qualified the Moisture/Reflow Sensitivity Classification Level 2 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
<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 2)	Electrical Test: +25°C and 85°C System: ETS200	JESD22-A113	693(0)	0/693		Good Devices
	Bake 150°C, 24 hrs. System: CHINEE	JIP/ IPC/JEDEC		693		
	85°C/60%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH	J-STD-020E		693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C and 85°C System: ETS200		693(0)	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 Electrical Test: + 85°C System: ETS200 Bond Strength: Wire Pull (>4.00 grams)	JESD22-A104	231(0) 15(0)	0/231 0/15	Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: ETS200	JESD22-A118	231(0)	0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 15 Volts System: HAST 6000X Electrical Test: +25°C and 85°C System: ETS200	JESD22-A110	231(0)	0/231	Pass	Parts had been pre-conditioned at 260°C 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 Electrical Test: +25°C and 85°C System: ETS200	JESD22- A103		0/45		45 units
			45(0)	0/45	Pass	
Solderability Temp 215°C	Steam Aging: Temp 93°C, 1Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63, Pb37 System: ERS A RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22		
				0/22		
				0/22	Pass	
Solderability Temp 245°C	Steam Aging: Temp 93°C, 1Hrs System: SAS-3000 Solder Dipping: Solder Temp.245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERS A RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22		
				0/22		
				0/22	Pass	
Physical Dimensions	Physical Dimension, 10 units / 1 lot	JESD22- B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (>4.00 grams)	Mil. Std. 883-2011	30(0) Wires	0/30	Pass	
	Bond Shear (>23.10 grams)	CDF-AEC- Q100-001	30(0) bonds	0/30	Pass	