

Product Change Notification / ASER-11NPKA247

Date:

17-May-2023

Product Category:

Switching Regulators

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6238 Initial Notice: Qualification of ASE as an additional assembly site for MCP1665T-E/MRA catalog part number (CPN) available in 10L VQFN (2x2x0.9mm) package.

Affected CPNs:

ASER-11NPKA247_Affected_CPN_05172023.pdf ASER-11NPKA247_Affected_CPN_05172023.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 ASE as an additional assembly site for MCP1665T-E/MRA catalog part number (CPN) available in 10L VQFN (2x2x0.9mm) package.

Pre and Post Change Summary:

Pre Change	Post Change
	Page 1 of 3

Assembly Site	JCET Group Co.,Ltd	JCET Semiconductor (Chuzhou) Co.,Ltd .	JCET Group Co.,Ltd	JCET Semiconductor (Chuzhou) Co.,Ltd .	ASE Inc. (ASE)	
	(3020)	(JCET)	(3020)	(JCET)		
Molding Compound Material	EME-G770 H	EME-G770H	EME-G770 H	EME-G770H	EME-G700L A	
Lead-Frame Material	A194	A194	A194	A194	A194	
DAP Surface Prep	Bare Cu	Bare Cu	Bare Cu	Bare Cu	Bare Cu	

Impacts to Data Sheet:None

Change ImpactNone

Reason for Change:To improve on-time delivery performance by qualifying ASE as an additional assembly site.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: October 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:

	May 2023					>	October 2023				
Morkwook	1	1	2	2	2		4	4	4	4	4
VVOLKWEEK	8	9	0	1	2		0	1	2	3	4
Initial PCN Issue											
Date			х								
Qual Report											
Availability									X		
Final PCN Issue									х		

Date

Method to Identify Change: Traceability code

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

Revision History: May 17, 2022: 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-11NPKA247_Qual Plan.pdf

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

Terms and Conditions:

If you wish to <u>receive Microchip PCNs via email</u> 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 <u>change your PCN profile</u>, <u>including opt out</u>, please go to the <u>PCN home page</u> select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections. ASER-11NPKA247 - CCB 6238 Initial Notice: Qualification of ASE as an additional assembly site for MCP1665T-E/MRA catalog part number (CPN) available in 10L VQFN (2x2x0.9mm) package.

Affected Catalog Part Numbers (CPN)

MCP1665T-E/MRA



QUALIFICATION PLAN SUMMARY

PCN #: ASER-11NPKA247

Date: March 22, 2023

Qualification of ASE as an additional assembly site for MCP1665T-E/MRA catalog part number (CPN) available in 10L VQFN (2x2x0.9mm) package.

CCB: 6238 MP code: VA6A3YMRAA00 Part No.: MCP1665T-E/MRA Package: 10LD FC VQFN Type 10LD FC VQFN Width or Size 2mm x 2mm BOM: 1P1M Polymer 1&2 PI	Purpose:	Qualification of ASE as an additional assembly site for MCP1665T-E/MRA catalog part number (CPN) available in 10L VQFN (2x2x0.9mm) package.
MP code: VA6A3YMRAA00 Part No.: MCP1665T-E/MRA Package: 10LD FC VQFN Type10LD FC VQFN 2mm x 2mm BOM: 2mm x 2mm Structure1P1M Polymer 1&2 PI	ССВ:	6238
Part No.: MCP1665T-E/MRA Package: 10LD FC VQFN Type10LD FC VQFN 2mm x 2mm BOM: 2mm x 2mm Structure1P1M 1P1M Polymer 1&2 PI PI	MP code:	VA6A3YMRAA00
Package: Type	Part No.:	MCP1665T-E/MRA
Package: Type		
Type 10LD FC VQFN Width or Size 2mm x 2mm BOM: IP1M Structure 1P1M Polymer 1&2 PI	Package:	
Width or Size 2mm x 2mm BOM: IP1M Structure 1P1M Polymer 1&2 PI	Туре	10LD FC VQFN
BOM: Structure 1P1M Polymer 1&2 PI	Width or Size	2mm x 2mm
BOM: Structure 1P1M Polymer 1&2 PI		
Structure 1P1M Polymer 1&2 PI	BOM:	
Polymer 1&2 PI	Structure	1P1M
	Polymer 1&2	PI

Polymer thickness	_ 10um
Fab Process	_0.18um
MC	EME-G700LA

<u>LF:</u>	
Material	A194
Finger size	300 um
Finger pitch	450 um
Reliability Test plan:	See attached STD Package Reliability Test r

Reliability Test plan: _____ See attached, STD Package Reliability Test plan on each package.

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 hours steam aging for Matte tin finish and 1 hr 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			For JESD22B-102E use Surface Mount Process Simulation Test method- Board level solderability. If performed, Surface mount Process Simulation Test Method is recommended.
Backward Solderability	J-STD-002D ; Perform 8 hours steam aging for Matte tin finish and 1 hr 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	-	-	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.
Solder Ball Shear	JESD22B117A	5	0	3	15	0	5			10 balls/5 units. Parts should gone Preconditioning
Coplanarity	JESD22B108A/POD	5	0	3	15					All units
High Temperature Storage Life (HTSL)	JESD22-A103. 150°C for 1008 hours Readpoints at 0, 504, and 1008 hours. Electrical test pre and post stress at +25°C and 125°C.	45	5	1	50	0	45	MTAI	MTAI	Spare should be properly identified. Post-stress Electrical Test Window Time: Within 168 hours. Refer to JESD22-A103 for details.
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. JESD22A113. Perform SAM (C-SCAN and T-SCAN*) analysis using 45 samples per lot. (MSL-1, 260C)	231	15	3	738	0	15	MTAI	MTAI	Spares should be properly identified. 231 parts from each lot to be used for HAST, UHAST & Temp Cycle test. Post-stress Electrical Test Window Time: N/A
HAST	JESD22-A110. +130°C/85% RH for 96 hours or +110°C/85% RH for 264 hours. Electrical test pre and post stress at +25°C and 125°C.	77	5	3	246	0	10	ΜΤΑΙ	ΜΤΑΙ	Spare should be properly identified. Use the parts which have gone through Pre-conditioning. Post-stress Electrical Test Window Time: Within 48 hours.
Unbiased HAST	JESD22-A110. +130°C/85% RH for 96 hours or +110°C/85% RH for 264 hours. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	MTAI	MTAI	Spare should be properly identified. Use the parts which have gone through Pre-conditioning. Post-stress Electrical Test Window Time: Within 48 hours.
Temp Cycle	JESD22-A10455°C to +125°C for 1000 cycles. Electrical test pre and post stress at 125C.	77	5	3	246	0	30	MTAI	MTAI	Spare should be properly identified. Use the parts which have gone through Pre-conditioning.