



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
--	------------	-------------

Assembly Site	JCET Group Co.,Ltd (JCEG)	JCET Semiconductor (Chuzhou) Co.,Ltd . (JCET)	JCET Group Co.,Ltd (JCEG)	JCET Semiconductor (Chuzhou) Co.,Ltd . (JCET)	ASE Inc. (ASE)
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 Impact:None

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				
Workweek	1 8	1 9	2 0	2 1	2 2		4 0	4 1	4 2	4 3	4 4
Initial PCN Issue Date			x								
Qual Report Availability									x		
Final PCN Issue									x		

Affected Catalog Part Numbers (CPN)

MCP1665T-E/MRA



MICROCHIP

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.**

Purpose: _____ 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:

Type _____ 10LD FC VQFN

Width or Size _____ 2mm x 2mm

BOM:

Structure _____ 1P1M

Polymer 1&2 _____ PI

Polymer thickness _____ 10um

Fab Process _____ 0.18um

MC _____ EME-G700LA

LF:

Material _____ A194

Finger size _____ 300 um

Finger pitch _____ 450 um

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 Coplanarity	JESD22B117A	5	0	3	15	0	5			10 balls/5 units. Parts should gone Preconditioning
	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	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.
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-A104. -55°C to +125°C for 1000 cycles. Electrical test pre and post stress at 125°C.	77	5	3	246	0	30	MTAI	MTAI	Spare should be properly identified. Use the parts which have gone through Pre-conditioning.