



Product Change Notification / ALAN-14DVPU428

Date:

23-Mar-2023

Product Category:

General Purpose FPGAs

PCN Type:

Manufacturing Change

Notification Subject:

eSign E000165526 Initial Notice: Qualification of E705GR as an additional substrate material for selected MPF300T-1FCG484xx, MPF200T-FCG484Exx, MPF200T-1FCVG48xx, and MPF200T-FCVG484xx device families available in 484L BGA (19x19x3.32mm and 23x23x2.87mm) packages.

Affected CPNs:

[ALAN-14DVPU428_Affected_CPN_03232023.pdf](#)

[ALAN-14DVPU428_Affected_CPN_03232023.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 E705GR as an additional substrate material for selected MPF300T-1FCG484xx, MPF200T-FCG484Exx, MPF200T-1FCVG48xx, and MPF200T-FCVG484xx device families available in 484L BGA (19x19x3.32mm and 23x23x2.87mm) packages.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	Amkor Technology Korea (K4), INC (ATK)	Amkor Technology Korea (K4), INC (ATK)	Amkor Technology Korea (K4), INC (ATK)
Substrate Core material	E700GR	E700GR	E705GR
Dielectric	ABF-GX13	ABF-GX13	ABF-GX92
Solder mask	AUS703	AUS703	SR-FK

Impacts to Data Sheet:None

Change ImpactNone

Reason for Change:To improve manufacturability by qualifying an additional E705GR substrate core material.

Change Implementation Status:In Progress

Estimated Qualification Completion Date:May 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					>	May 2023				
Workweek	9	10	11	12	13		18	19	20	21	22
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 23, 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_ALAN-14DVPU428 Qualification_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)

MPF300T-1FCG484E
MPF300T-1FCG484I
MPF300T-FCG484E
MPF300T-FCG484I
MPF200T-1FCG484E
MPF200T-1FCG484I
MPF200T-FCG484E
MPF200T-FCG484I
MPF200T-1FCVG484E
MPF200T-1FCVG484I
MPF200T-FCVG484E
MPF200T-FCVG484I



MICROCHIP

QUALIFICATION PLAN SUMMARY

PCN# ALAN-14DVPU428

**Date:
January 18, 2023**

Qualification of E705GR as an additional substrate material for selected MPF300T-1FCG484xx, MPF200T-FCG484Exx, MPF200T-1FCVG48xx, and MPF200T-FCVG484xx device families available in 484L BGA (19x19x3.32mm and 23x23x2.87mm) packages.

Purpose: Qualification of E705GR as an additional substrate material for selected MPF300T-1FCG484xx, MPF200T-FCG484Exx, MPF200T-1FCVG48xx, and MPF200T-FCVG484xx device families available in 484L BGA (19x19x3.32mm and 23x23x2.87mm) packages.

eSign#: E000165526

Test Name	Test Criteria	Test Condition	# of Lots	Sample Size per lot	Test Duration Pull Point	Acceptance Criteria
MSL-4 (Pre-con)	JESD22-A113	30°C/60%RH, 96 hrs., 245°C Reflow	3	225	96 hrs	Pass QA e-test
UnBiased HAST	JESD22-A118	110°C, 85%RH, 264 hrs, Vccmax	3	25	264 hrs	Pass QA e-test
Temperature Cycle	JESD22-A104	-55°C to 125°C Cond. B, 700 cycles	3	25	700 cycles	Pass QA e-test
High Temp Storage	JESD22-A103	150°C, 1000 hrs	3	25	1000 hrs	Pass QA e-test

Assembly Process	Monitoring	Sample Size	Failure/ Tested Qty	Criteria (per assembly spec)	Comments
Laser groove/wafer saw	Kerf Width	1 wfr, 4 pts	0/4	Assembly spec	
Chip Attach 1. Flux thickness 2. Flux imprint 3. Die Peel	Amkor standard	3 readings/lot 1pc/set up 1pc/set up	0/3 lots 0/set up 0/set up	Assembly spec	
Flip Chip Underfill		5 units/lot	0/15	No voids/white bumps	
BGA Ball Shear (Pb-free)	JESD22-B117	5 balls/ package X 10 packages X 3 lots	0/30	Min 630gf	
Coplanarity				Per POD	All units from all lots inspect