Product Change Notification / RMES-07BGQT464

Date:

08-Sep-2022

Product Category:

16-Bit - Microcontrollers and Digital Signal Controllers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5257 Initial Notice: Qualification of MMT as an additional assembly site for selected DSPIC33CK32Mx102 and DSPIC33CK64Mx102 device families available in 28L UQFN (4x4x0.6mm) package.

Affected CPNs:

RMES-07BGQT464_Affected_CPN_09082022.pdf
RMES-07BGQT464_Affected_CPN_09082022.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 MMT as an additional assembly site for selected DSPIC33CK32Mx102 and DSPIC33CK64Mx102 device families available in 28L UQFN (4x4x0.6mm) package.

Pre and Post Change Summary:

		Pre Change	Post Change	
Assembly Site		ASE Inc. (ASE)	ASE Inc. (ASE)	Microchip Technology Thailand (Branch) – (MMT)
Wire Material		Au	Au	Au
Die Attach Material		FH-900T	FH-900T	HR-5104
Molding Compound Material		CEL-9240	CEL-9240	G700LTD
Lead-Frame Material	Material	C7025	C7025	EFTEC64T
	Lead Lock (Locking Holes)	No	No	Yes
		See Pre and Post Change Summary for comparison.		

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve productivity by qualifying MMT as an additional assembly site.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: September 2022

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:

	September 2022				
Workweek	36	37	38	39	40
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:
September 08, 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_RMES-07BGQT464_Pre and Post Change Summary.pdf
PCN_RMES-07BGQT464_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.

CCB 5257
Pre and Post change comparison
PCN #: RMES-07BGQT464

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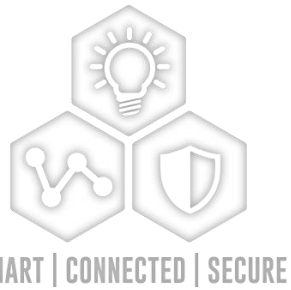
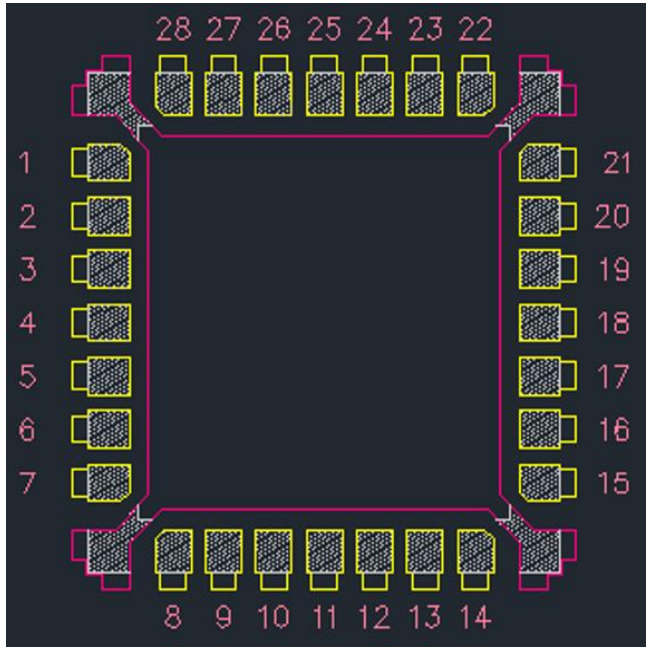


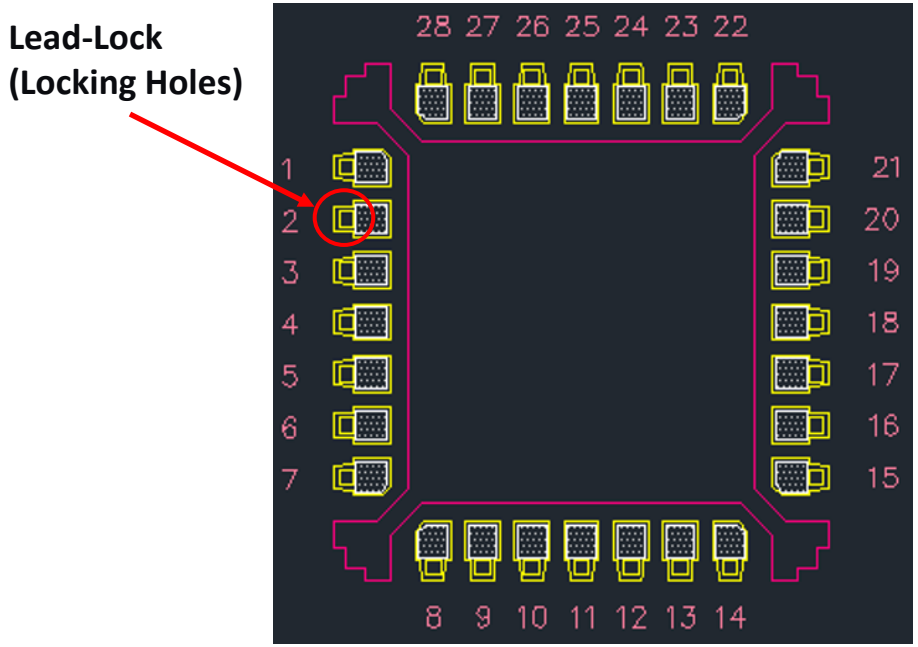
Pre and Post Change Summary – Lead frame comparison

ASE



Lead-Frame Material	C7025
Lead-lock (Locking Holes)	No

MMT



Lead-Frame Material	EFTEC64T
Lead-lock (Locking Holes)	Yes

Note: Mold compound materials fills the lead lock holes, which provides improved protection against moisture penetration along the edge of the leads (pins) of the package.

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Affected Catalog Part Numbers (CPN)

DSPIC33CK64MC102-E/M6
DSPIC33CK32MC102-E/M6
DSPIC33CK64MC102-I/M6
DSPIC33CK32MC102-I/M6
DSPIC33CK64MC102-H/M6
DSPIC33CK32MC102-H/M6
DSPIC33CK64MC102T-I/M6
DSPIC33CK32MC102T-I/M6
DSPIC33CK64MC102T-E/M6
DSPIC33CK32MC102T-E/M6
DSPIC33CK64MP102-E/M6
DSPIC33CK32MP102-E/M6
DSPIC33CK64MP102-E/M6C01
DSPIC33CK64MP102-I/M6
DSPIC33CK32MP102-I/M6
DSPIC33CK64MP102-H/M6
DSPIC33CK32MP102-H/M6
DSPIC33CK64MP102T-I/M6
DSPIC33CK32MP102T-I/M6
DSPIC33CK64MP102T-E/M6
DSPIC33CK32MP102T-E/M6
DSPIC33CK64MP102T-E/M6C01

QUALIFICATION PLAN SUMMARY

PCN #: RMES-07BGQT464

Date:
September 1, 2022

Qualification of MMT as an additional assembly site for selected DSPIC33CK32Mx102 and DSPIC33CK64Mx102 device families available in 28L UQFN (4x4x0.6mm) package.

Purpose: Qualification of MMT as an additional assembly site for selected DSPIC33CK32Mx102 and DSPIC33CK64Mx102 device families available in 28L UQFN (4x4x0.6mm) package.

MP Code: WACU1MPWXAXF

Part No.: DSPIC33CK64MP102-H/M6

BD No: BD-000836 rev. 01

Package:

Type: 28L UQFN

Width or Size: 4 x 4 x 0.6 mm

Leadframe:

Paddle Size: 110 x 110 mils

Paddle Plating: Cu-RT

Process: ETCHED

Treatment: BOT

Lead Lock: YES

Material: EFTEC64T

Part Number: 10102846

Wire:

Material: Au

Die Attach Epoxy:

Part Number HR-5104

Conductive NO

Mold Compound:

Part Number: G700LTD

Lead Finish: 100% Matte Sn

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	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	MTAI	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	MTAI	MTAI	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	MTAI	MTAI	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	MTAI	MTAI	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	MTAI	
Preconditioning - Required for surface mount devices	+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. **MSL-1@260 C**	231	15	3	738	0	15	MTAI	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.

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
HAST	+130°C/85% RH for 96 hours Electrical test pre and post stress at +25°C and hot temp.	77	5	3	246	0	10	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.