Product Change Notification: CENO-21QUOU280

Date:

29-Apr-2025

Product Category:

8-Bit Microcontrollers, KEELOQ® Decoder Devices, KEELOQ® Encoder Devices, KEELOQ® Transcoder Devices

Notification Subject:

CCB 7364.036 Initial Notice: Qualification of Microchip Technology Gresham – Fab 4 (GRTM) as a new fabrication location for HCS301, HCS300, HCS362, HCS200, PIC16F84, HCS512, HCS410, HCS361, HCS360, PIC16C57, HCS320, PIC16C54, PIC16HV540, CF775, PIC16F83 device families of 77K technology available in various packages.

Affected CPNs:

CENO-21QUOU280_Affected_CPN_04292025.pdf
CENO-21QUOU280_Affected_CPN_04292025.csv

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 Microchip Technology Gresham – Fab 4 (GRTM) as a new fabrication location for HCS301, HCS300, HCS362, HCS200, PIC16F84, HCS512, HCS410, HCS361, HCS360, PIC16C57, HCS320, PIC16C54, PIC16HV540, CF775, PIC16F83 device families of 77K technology available in various packages.

Pre and Post Summary Changes:

	Pre Change	Post Change
Fabrication Site*	Microchip Technology Tempe – Fab 2 (TMGR)	Microchip Technology Gresham – Fab 4 (GRTM)

Wafer Size	8"	8"

Impacts to Datasheet: None

Change Impact: None

Reason for Change: To improve manufacturability and on time delivery performance by qualifying a new fabrication location (GRTM - FAB 4), which is a Microchip-owned facility that offers significant expansion potential to better meet future client demand. *Note: The attached file called Tempe_Fab2_IATF_Decertification is for the manufacturing site deactivation of Microchip Technology Tempe – Fab 2 (TMGR), contact your local Microchip sales office for inquiries.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: November 2025

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.

Timetable Summary:

	April 2025					**>**	**November 2025**				
Work Week	14	15	16	17	18		45	46	47	48	49
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: April 29, 2025: Issued initial notification.

Note: The change described in this PCN does not alter Microchip's current regulatory compliance

regarding the material content of the applicable product.

Attachments:

PCN_CENO-21QUOU280-Qual Plan.pdf
Tempe_Fab2_IATF_Decertification.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)

PIC16C57-HS/SO

PIC16C54-LP/P

PIC16C54-RC/SO

PIC16C54-LP/SO

PIC16C54-XT/SO

PIC16C57-LP/SO

PIC16C54-RC/P

PIC16C57-10/SO

PIC16C54-10/P

PIC16C54-HS/P

PIC16C54-XT/P

PIC16C54-RC/SO241

HCS410/P

PIC16C57-XT/SO

PIC16C57-RC/SO

HCS301/SN024

HCS360/SN

HCS512/SO

HCS410/SN

HCS300/SN042

PIC16F83-04/P

PIC16F84-04/P

PIC16F84-10/P

PIC16LF84-04/P

HCS301T-I/SNVAO

HCS300T-I/SNVAO

HCS362-I/STVAO

HCS300-I/SNVAO

HCS300T/SN

HCS301T/SN

HCS200T/SN

PIC16LF84T-04/SO

PIC16F84T-04/SO

HCS301T/SN024

HCS512T/SO

HCS410T/SN

HCS301T/SN022

HCS300T-I/SN

HCS301T-I/SN

HCS200T-I/SN

HCS301T-I/SN028

HCS361T-I/SN

HCS362T-I/ST

HCS362T-I/SN

HCS512T-I/SO

HCS300T-I/SN047

HCS300T-I/SN053

HCS360T-I/SN026

HCS360T-I/SN036

HCS301T-I/SN029

PIC16C57-LPE/SO

PIC16C57-XTE/P

HCS300-I/P

HCS301-I/P

HCS200-I/P

HCS320-I/SN

HCS301-I/SN

HCS300-I/SN

PIC16C57-XTI/SP

HCS200-I/SN

PIC16C57-XTI/P

PIC16LF84-04I/SO

PIC16F84-04I/SO

PIC16F84-10I/SO

PIC16C57-RCI/P

PIC16C54-RCI/SS

PIC16HV540-20I/SS

HCS362-I/P

HCS361-I/SN

HCS361-I/P

PIC16HV540-04I/SO

PIC16HV540-20I/SO

PIC16HV540-04I/P

PIC16HV540-20I/P

PIC16C54-XTI/P

PIC16C54-RCI/P

PIC16C54-RCI/SO

PIC16C54-LPI/SO

PIC16C54-XTI/SO

HCS362-I/ST

PIC16C57-10I/SO

PIC16C57-HSI/SO

PIC16C54-RCI/P028

PIC16C54-RCI/P029

PIC16C57-XTI/SO

PIC16C57-RCI/SO

PIC16C57-LPI/SO

HCS360-I/SN

HCS360-I/P

PIC16C57-HSI/P

PIC16HV540-04I/P027

HCS512-I/SO

PIC16HV540-04I/P029

HCS362-I/SN

HCS410-I/SN

HCS512-I/P

PIC16F84-04I/P

PIC16F84-10I/P

PIC16LF84-04I/P

HCS301/P

HCS200/P

HCS301/SN

HCS300/SN

PIC16C57-XT/SP

CF775-04/SP

PIC16C57-RC/P

HCS200/SN

PIC16C57-XT/P

PIC16C57-HS/P

PIC16LF84-04/SO

PIC16F84-04/SO

PIC16F84-10/SO

PIC16HV540-04/SO

PIC16HV540-20/SO

PIC16HV540-20/P

PIC16HV540-04/P

QUALIFICATION PLAN SUMMARY

PCN #: CENO-21QUOU280

Date:
February 26, 2025

Qualification of Microchip Technology Gresham – Fab 4 (GRTM) as a new fabrication location for the selected 24AA00xx, 24AA65, 24C00, 24C65, 24LC00, 24LC21xx, 24LC22A, 24LC65, 24LCS21A, 24LCS22A, 25AA040, 25AA080, 25AA160, 25C040, 25C080, 25C160, 25LC040, 25LC080, 25LC160, 93AA46, 93AA56, 93AA66, 93AA76, 93AA86, 93C46B, 93C56, 93C66xx, 93C76, 93C86, 93LC46xx, 93LC56, 93LC66xx, 93LC76 and 93LC86 device families of 77k technology available in various packages. The HCS301, HCS300, HCS362, HCS200, PIC16F84, HCS512, HCS410, HCS361, HCS360, PIC16C57, HCS320, PIC16C54, PIC16HV540, CF775, PIC16F83 device families of 77K technology available in various packages will qualify by similarity (QBS).

PROCESS QUALIFICATION

Purpose: Qualification of Microchip Technology Gresham – Fab 4 (GRTM) as a new fabrication location for the selected 24AA00xx, 24AA65, 24C00, 24C65, 24LC00, 24LC21xx, 24LC22A, 24LC65, 24LCS21A, 24LCS22A, 25AA040, 25AA080, 25AA160, 25C040, 25C080, 25C160, 25LC040, 25LC080, 25LC160, 93AA46, 93AA56, 93AA66, 93AA76, 93AA86, 93C46B, 93C56, 93C66xx, 93C76, 93C86, 93LC46xx, 93LC56, 93LC66xx, 93LC76 and 93LC86 device families of 77k technology available in various packages. The HCS301, HCS300, HCS362, HCS200, PIC16F84, HCS512, HCS410, HCS361, HCS360, PIC16C57, HCS320, PIC16C54, PIC16HV540, CF775, PIC16F83 device families of 77K technology available in various packages will qualify by similarity (QBS).

CCB No.: 7364.022 and 7364.036

Test	Conditions	Number of Lots	Sample Size (per lot)	Acceptance Criteria
ELFR	48 hours @ 125°C à 25C, 125C post-stress testing	3	800+10	0 fails
EDR[2]	100K @ 85°C (*precondition for DLT/RET) à 25C, 125C, -40C post-stress testing	3	154+10*	0 fails
DLT (for EDR/DLT)	Post-EDR: 1000 hours DLT @ 125°C à 25C, 125C, -40C post-stress testing	3	*77+5	0 fails
RET (for EDR/RET)	Post-EDR: 504 hours RET @ 175°C à 25C, 125C post-stress testing	3	*77+5	0 fails
ESD (HBM)	3 each @ ±250V, ±500V, ±1KV, ±2KV, ±3KV, ±4KV à 25C, 125C post-stress testing	1	18	0 fails
ESD (CDM)	3 each @ ±250V, ±500V, ±750V à 25C, 125C post-stress testing	1	9	0 fails
Latch Up	3 room, 3 125°C AECQ100-004	1	6	0 fails
Electrical Distribution	Data log parameters at room, hot, and cold temperatures at Vcc min/max and Frequency min/max.	1	30	0 fails

PACKAGE QUALIFICATION

Purpose: Qualification of Microchip Technology Gresham – Fab 4 (GRTM) as a new fabrication location for the selected 24AA00xx, 24AA65, 24C00, 24C65, 24LC00, 24LC21xx, 24LC22A, 24LC65, 24LCS21A, 24LCS22A, 25AA040, 25AA080, 25AA160, 25C040, 25C080, 25C160, 25LC040, 25LC080, 25LC160, 93AA46, 93AA56, 93AA66, 93AA76, 93AA86, 93C46B, 93C56, 93C66xx, 93C76, 93C86, 93LC46xx, 93LC56, 93LC66xx, 93LC76 and 93LC86 device families of 77k technology available in various packages. The HCS301, HCS300, HCS362, HCS200, PIC16F84, HCS512, HCS410, HCS361, HCS360, PIC16C57, HCS320, PIC16C54, PIC16HV540, CF775, PIC16F83 device families of 77K technology available in various packages. This is Q100 Grade 1 qualification and will qualify by similarity (QBS).

CCB No.: 7413.008 and 7364.036

Misc.	Assembly site	MTAI
	BD Number	A-061640
	MP Code (MPC)	77155YC2XC17
	Part Number (CPN)	25C160T-E/SN
	MSL information	1
	Assembly Shipping Media	T&R
	Base Quantity Multiple (BQM)	3300
	Reliability Site	MTAI
Lead-Frame	Paddle size	95 x 158 mils
	Material	CDA194
	DAP Surface Prep	Bare Cu
	Treatment	Roughened
	Process	Stamped
	Lead-lock	No
	Part Number	10100814
	Lead Plating	Matte tin
Bond Wire	Material	CuPdAu
Die Attach	Part Number	8390A
	Conductive	Yes
MC	Part Number	G600V
PKG	Package Type	SOIC
	Pin/Ball Count	8
	PKG width/size	150 mils

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E Temp)	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Standard Pb-free	J-STD-002D ; Perform 8 hours of steam aging for Matte tin			22	5	1	27	>95% lead	5	Standard Pb-free solderability is the requirement.
Wire Bond Pull - WBP	Mil. Std. 883-2011			5	0	1	5	0 fails after TC	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001			5	0	1	5	0	5	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108			10	0	3	30	0	5	
External Visual	Mil. Std. 883-2009/2010			All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)	JESD22-A103 +175°C *2x Stress*	1st Readpoint: Grade 1: 500 hrs (+175°C) 2nd Readpoint: Grade 1: 1000 hrs (+175°C)	Grade 1: +25°C, +85°C, +125°C	45	5	3	150	0	21 - 167	Perform per the requirements in AEC-Q100/Q101. Spares should be properly identified.
Preconditioning - Required for surface mount devices	J-STD-020 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. MSL 1 @ 260 C		Grade 1: +25°C	231	15	3	738	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A101 or A110 +130°C/85% RH for 96 hrs or +110°C/85%RH for 264 hrs	1st Readpoint: Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C, +85°C, +125°C	77	5	3	246	0	10 - 22	Perform per the requirements in AEC-Q006. Spares should be properly identified.
uHAST	JESD22-A102, A118, or A101 +130°C/85% RH for 96 hrs	Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104 and Appendix 3 -55ºC to +150ºC	1st Readpoint: Grade 1: 1000 cycles (-55ºC to +150ºC)	Grade 1: +25°C,+85°C, +125°C	77	5	3	246	0	15 - 120	Perform per the requirements in AEC-Q006. Spares should be properly identified.
Wire Bond Integrity (AEC-Q006 Requirements)	AEC-Q006									

Date: January 30, 2025

RE: Tempe (Fab 2) Wafer Fabrication Facility ISO/IATF Decertification

IATF Certificate: 08435-2002-AQ-HOU-IATF-33RSTM

On December 2, 2024, Microchip announced manufacturing restructuring plans that include the closure of the Tempe (Fab 2) Wafer Fabrication Facility.

This memo is to further announce that as part of the facility closure, its active IATF-16949 certificate will be withdrawn, in early Q3, 2025. Additionally, the facility will be removed from Microchip's Corporate ISO-9001 certificate by the end of 2025.

Microchip is committed to ensuring product quality during the entire time that Fab 2 remains operational. All established and certified process control measures remain in place and adherence to these practices will continue for the life of the fab, regardless of the status of IATF-16949 certification. Additionally, all Microchip devices are 100% electrically tested, with only known good products shipped to customers.

Please contact your local **Microchip Sales Office** with questions or concerns regarding this notification.

Regards,

Microchip Corporate Quality Systems