

**Product Change Notification: MAAN-27CZQP803****Date:**

03-Jun-2025

Product Category:

8-Bit Microcontrollers, Capacitive Touch Sensors

Notification Subject:

CCB 7627 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected AT42QT1481, AT42QT2640, AT89LP3240, AT89LP51, AT89LP51xxx, AT89LP52, AT89LP6440, AT89S8253, ATmega1284, ATmega1284P, ATmega16, ATmega16xx, ATmega32, ATmega32xx, ATmega644, ATMEGA644PA, ATmega85xx, ATxmega128xxx, ATxmega16xxxx, ATxmega32xxxx, ATxmega64xx, QT60326, QT6C1x, QT6C21 and QT6E22 device families available in 44L TQFP (10x10x1mm) package.

Affected CPNs:[MAAN-27CZQP803_Affected_CPN_06032025.pdf](#)[MAAN-27CZQP803_Affected_CPN_06032025.csv](#)**PCN Status:** Final 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 palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected AT42QT1481, AT42QT2640, AT89LP3240, AT89LP51, AT89LP51xxx, AT89LP52, AT89LP6440, AT89S8253, ATmega1284, ATmega1284P, ATmega16, ATmega16xx, ATmega32, ATmega32xx, ATmega644, ATMEGA644PA, ATmega85xx, ATxmega128xxx, ATxmega16xxxx, ATxmega32xxxx, ATxmega64xx, QT60326, QT6C1x, QT6C21 and QT6E22 device families available in 44L TQFP (10x10x1mm) package.

Pre and Post Summary Changes:

	Pre Change	Post Change
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Assembly Site	Microchip Technology Thailand (HQ) (MTAI)	Microchip Technology Thailand (HQ) (MTAI)
Wire Material	Au	CuPdAu
Die Attach Material	3280	3280
Molding Compound Material	G700	G700
Lead-Frame Material	C7025	C7025

Impacts to Datasheet: None

Change Impact: None

Reason for Change: To improve productivity by qualifying palladium coated copper with gold flash (CuPdAu) as a new bond wire material.

Change Implementation Status: In Progress

Estimated First Ship Date: 22 July 2025 (date code: 2530)

Note Below EFSD: Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Timetable Summary:

	May 2025					>	July 2025				
Work Week	18	19	20	21	22		27	28	29	30	31
Qual Report Availability					x						
Final PCN Issue Date					x						
Estimated Implementation Date										x	

Method to Identify Change: Traceability Code

Qualification Report: Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History: May 30, 2025: Issued final notification.
June 03, 2025: Re-issued final notification to update lead-frame material.

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_MAAN-27CZQP803 Qual_Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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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.

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Affected Catalog Part Numbers (CPN)

ATMEGA8515L-8AU

ATMEGA8515-16AUR

ATMEGA8515L-8AUR

ATXMEGA128D4-AU

ATXMEGA128A4U-AU

ATXMEGA64D4-AU

ATXMEGA128A4U-AUR

ATXMEGA128D4-AUR

ATXMEGA64D4-AUR

ATMEGA164A-AUA2

ATMEGA164A-AURA2

ATMEGA1284P-AU

ATMEGA1284-AU

ATMEGA1284P-AUR

ATMEGA1284-AUR

ATMEGA644PA-AN

ATMEGA644PA-ANR

AT89LP52-20AU

AT89LP51-20AU

ATMEGA32L-8AUA3

ATMEGA32L-8AURA0

ATMEGA32L-8AURA2

ATMEGA32L-8AURA4

ATMEGA16U4-AU

ATMEGA32U4-AU

ATMEGA32U4RC-AU

Date: Monday, June 2, 2025

MAAN-27CZQP803 - CCB 7627 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected AT42QT1481, AT42QT2640, AT89LP3240, AT89LP51, AT89LP51xxx, AT89LP52, AT89LP6440, AT89S8253, ATmega1284, ATmega1284P, ATmega16, ATmega16xx, ATmega32, ATmega32xx, ATmega644, ATMEGA644PA, ATmega85xx, ATxmega128xxx, ATxmega16xxxx, ATxmega32xxxx, ATxmega64xx, QT60326, QT6C1x, QT6C21 and QT6E22 device families available in 44L TQFP (10x10x1mm) package.

ATMEGA16U4RC-AU

ATMEGA16U4-AUR

ATMEGA32U4-AUR

ATMEGA32U4RC-AUR

ATMEGA32-16AU

ATMEGA32L-8AU

ATMEGA32A-AN

ATMEGA32A-ANR

ATMEGA32A-AURA5

ATMEGA32L-8AUR

ATMEGA32-16AUR

QT6C21-ASG-V3

QT60326-ASG

QT6C13-ASG

QT6C16-ASG

QT6E22-ASG

ATMEGA16-16AUA6

ATMEGA16L-8AQ

ATMEGA16L-8AQRA5

ATMEGA16-16AQR

ATMEGA16L-8AQR

ATMEGA16L-8AURA0

ATMEGA16L-8AURA5

ATMEGA16-16AURA5

ATMEGA164P-20AQRA1

AT89LP51ED2-20AU

AT89LP51ID2-20AU

AT89LP51RD2-20AU

ATXMEGA32D4-AUA4

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ATXMEGA16D4-AUA2

ATXMEGA16C4-AU

ATXMEGA32C4-AU

ATXMEGA32D4-AU

ATXMEGA16D4-AU

ATXMEGA32D4-AN

ATXMEGA32D4-ANR

ATXMEGA16D4-AURA2

ATXMEGA32D4-AURA4

ATXMEGA16C4-AUR

ATXMEGA32C4-AUR

ATXMEGA16D4-AUR

ATXMEGA32D4-AUR

ATMEGA644PV-10AU

ATMEGA644P-20AU

ATMEGA644PV-10AQ

ATMEGA644P-20AQ

ATMEGA644P-20AQR

ATMEGA644PV-10AQR

ATMEGA644PV-10AUR

ATMEGA644P-20AUR

AT89LP51RB2-20AU

ATMEGA324PA-AU

ATMEGA324A-AU

ATMEGA324PA-AN

ATMEGA324PA-ANR

ATMEGA324A-AURA3

ATMEGA324PA-AUR

ATMEGA324A-AUR

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ATMEGA644-20AU

ATMEGA644V-10AU

ATMEGA644-20AUR

ATMEGA644V-10AUR

ATMEGA162-16AU

ATMEGA162V-8AU

ATMEGA162-16AUR

ATMEGA162V-8AUR

AT89S8253-24AU

ATMEGA164PV-10AU

ATMEGA164P-20AU

ATMEGA164P-20AQ

ATMEGA164PV-10AQ

ATMEGA164PV-10AUR

ATMEGA164P-20AUR

ATXMEGA32D4-AUA5

ATXMEGA16A4-AU

ATXMEGA32D4-AUA0

ATXMEGA32A4-AU

ATXMEGA16A4-AUR

ATXMEGA32A4-AUR

ATXMEGA64A4U-AU

ATXMEGA64A4U-AUR

ATMEGA8535-16AU

ATMEGA8535L-8AU

ATMEGA8535-16AUR

ATMEGA8535L-8AUR

ATMEGA324PV-10AU

ATMEGA324P-20AU

Date: Monday, June 2, 2025

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ATMEGA324P-20AQ

ATMEGA324P-20AQR

ATMEGA324PV-10AUR

ATMEGA324P-20AUR

ATMEGA324P-20AURA0

ATMEGA16-16AU

AT42QT2640-AU

AT42QT1481-AU

ATMEGA16L-8AU

AT42QT1481-AN

AT42QT1481-ANR

ATMEGA16-16AUR

ATMEGA16L-8AUR

AT42QT2640-AUR

AT42QT1481-AUR

AT89LP6440-20AU

AT89LP3240-20AU

ATXMEGA16A4U-AU

ATXMEGA32A4U-AU

ATXMEGA16A4U-AN

ATXMEGA32A4U-AN

ATXMEGA16A4U-ANR

ATXMEGA32A4U-ANR

ATXMEGA16A4U-AUR

ATXMEGA32A4U-AUR

ATMEGA8515-16AU

Date: Monday, June 2, 2025



QUALIFICATION REPORT SUMMARY

PCN #: MAAN-27CZQP803

**Date:
December 20, 2016**

Qualification of top marking, Assembly, and Final Test site at MTAI for selected ATmega32A and ATmega16A device family available in 44L TQFP (10x10x1.0mm) package. The selected AT42QT1481, AT42QT2640, AT89LP3240, AT89LP51, AT89LP51xxx, AT89LP52, AT89LP6440, AT89S8253, ATmega1284, ATmega1284P, ATmega16, ATmega16xx, ATmega32, ATmega32xx, ATmega644, ATMEGA644PA, ATmega85xx, ATxmega128xxx, ATxmega16xxxx, ATxmega32xxxx, ATxmega64xx, QT60326, QT6C1x, QT6C21 and QT6E22 device families available in 44L TQFP (10x10x1mm) package will qualify by similarity (QBS).



Purpose: Qualification of top marking, Assembly, and Final Test site at MTAI for selected ATmega32A and ATmega16A device family available in 44L TQFP (10x10x1.0mm) package. The selected AT42QT1481, AT42QT2640, AT89LP3240, AT89LP51, AT89LP51xxx, AT89LP52, AT89LP6440, AT89S8253, ATmega1284, ATmega1284P, ATmega16, ATmega16xx, ATmega32, ATmega32xx, ATmega644, ATMEGA644PA, ATmega85xx, ATxmega128xxx, ATxmega16xxxx, ATxmega32xxxx, ATxmega64xx, QT60326, QT6C1x, QT6C21 and QT6E22 device families available in 44L TQFP (10x10x1mm) package will qualify by similarity (QBS).

CCB No.: CRB 16-1206 and 7627

PACKAGE QUALIFICATION FOR 44 TQFP

ASSEMBLY MATERIALS INFORMATION

- | | |
|--|-------------------------|
| 1. ASSEMBLY HOUSES | : MTAI, Thailand |
| 2. LEAD FRAME | : C7025 |
| 3. LEAD PLATING COMPOSITION | : Matte Sn |
| 4. DIE ATTACH VENDOR AND NUMBER | 3280 |
| 5. BOND WIRE MATERIAL | : Copper wire |
| 6. MOLDING COMPOUND | : G700 |

Qualification Vehicle Information

Device Type	MEGA32A	MEGA644	XMEGA32A4
Product	MICROCONTROLLER	MICROCONTROLLER	MICROCONTROLLER
Package Dimension	10 mm x 10 mm	10 mm x 10 mm	10 mm x 10 mm
Package Thickness	1.0 mm	1.0 mm	1.0 mm



PACKAGE RELIABILITY

Baseline Electrical Parameters Per Device Specification

- **Data Retention Bake**

- Ta: 175C°
- Test Intervals: 500, 1000 hrs.

DEVICE TYPE	LOT NUMBER	DATE CODE	RETENTION 500 HRS	RETENTION 1000 HRS	Result
MEGA32A	A8F6NC2BCF	1634	0/84	0/84	Passed
MEGA644	A8MB3C2BCD	1634	0/84	0/84	Passed
XMEGA32A4	A8CF5C253V	1634	0/84	0/84	Passed

- **UHA**

- Condition: 110C°, 85% RH
- Test Intervals: 264 hrs.

DEVICE TYPE	LOT NUMBER	DATE CODE	UHA 264HRS	Result
MEGA32A	A8F6NC2BCF	1634	0/84	Passed
MEGA644	A8MB3C2BCD	1634	0/81	Passed
XMEGA32A4	A8CF5C253V	1634	0/83	Passed

- **Temperature Cycle**

- Conditions: -65C°/+150C°
- Preconditioning: Yes
- Test Intervals: 500 cycles

DEVICE TYPE	LOT NUMBER	DATE CODE	500 TEMP CYCLE (-65°C TO +150°C)	Result
MEGA32A	A8F6NC2BCF	1634	0/80	Passed
MEGA644	A8MB3C2BCD	1634	0/80	Passed
XMEGA32A4	A8CF5C253V	1634	0/80	Passed

- **HAST**

- Conditions: Ta: 110C°, 85% RH
- Vcc: 5.5V (3.7V for low voltage products)



- Mode: Static Standby
- Preconditioning: Yes
- Test Intervals: 264 hrs.

DEVICE TYPE	LOT NUMBER	DATE CODE	HAST 96HRS	Result
MEGA32A	A8FNC2BCF	1634	0/80	Passed
MEGA644	A8MB3C2BCD	1634	0/80	Passed
XMEGA32A4	A8CF5C253V	1634	0/80	Passed