



## Product Change Notification / ASER-12XNS0828

---

**Date:**

02-May-2022

**PCN Type:**

Manufacturing Change

**Notification Subject:**

eSign E000087577 Final Notice: Product test flow change impacting primary oscillator specifications of ATSAMC20xxx and ATSAMC21xxx device families.

**Notification Text:**

**PCN Status:**Final Notification

**PCN Type:**Manufacturing Change

**Microchip Parts Affected:**Please open one of the files found in the Affected CPNs section. Note that select new devices have been added to the product family maintaining the original specifications. Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

**Description of Change:**Alteration of final test program for ATSAMC20xxx and ATSAMC21xxxx devices effecting the accuracy of the primary oscillator. Alternative High Accuracy replacement part numbers have been created for a limited subset of devices.

Please reference Errata Document SAM-C20C21-Family-Silicon-Errata tables 2.2, 2.3, and 2.4 for clarification on the impacted specifications.

Please review the attached parts affected list for details about replacement parts if applicable.

**Pre and Post Change Summary:**

	Pre Change	Post Change
Test Program	+/- 2.5 % Primary	+/- 5 % Primary

Oscillator Error

Oscillator Error

**Note:**

Please reference Errata Document SAM-C20C21-Family-Silicon-Errata tables 2.2, 2.3, and 2.4 for clarification on the impacted specifications.

**Impacts to Data Sheet:** Modified chapters in Datasheet:

2. ordering information (distinction between standard and enhanced accuracy factory calibration)

45. Electrical characteristics 85°C (SAMC20/C21 E/G/J), RC Oscillator (OSC48M) Characteristics table (introduction of standard accuracy timings)

46. Electrical characteristics 105°C (SAMC20/C21 E/G/J), 48 MHz RC Oscillator (OSC48M) Characteristics table (introduction of standard accuracy timings)

48. Electrical Characteristics AEC - Q100 Grade 1, 125°C (SAM C20/C21 E/G/J), 48 MHz RC Oscillator (OSC48M) Characteristics table (introduction of standard accuracy timings)

## Modified chapters in Errata:

2. Data Sheet Clarifications (Description of the parameters changed in the Datasheet due to the new manufacturing process)

**Change Impact:** None

**Reason for Change:** To improve productivity by reducing multi-temperature test insertions.

**Change Implementation Status:** In Progress

**Estimated First Ship Date:** March 1, 2022 (date code: 2210)

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

**Time Table Summary:**

	February 2022				March 2022				
Workweek	6	7	8	9	10	11	12	13	14
Final PCN Issue Date	x								
Estimated Implementation Date					x				

**Method to Identify Change:**Traceability code

**Qualification Report:**Not applicable

**Revision History:**February 1, 2022: Issued final notification.

February 9, 2022: Reissued final notification to exclude several unaffected catalog part numbers (CPN).

May 2, 2022: Reissued final notification to remove unaffected catalog part numbers (CPN) and clarify the affected parts list per eSign E000106016.

## **Attachments:**

[ASER-12XNS0828\\_Affected\\_CPN.xlsx](#)

[ASER-12XNS0828\\_Affected\\_CPN.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.

CPN	Lead Count	Package Type	Replacement
ATSAMC20E15A-ANT	32L	TQFP	NA
ATSAMC20E15A-AUT	32L	TQFP	NA
ATSAMC20E15A-AZ	32L	TQFP	NA
ATSAMC20E15A-AZT	32L	TQFP	NA
ATSAMC20E15A-MNT	32L	VQFN	NA
ATSAMC20E15A-MUT	32L	VQFN	NA
ATSAMC20E15A-MZ	32L	VQFN	NA
ATSAMC20E15A-MZT	32L	VQFN	NA
ATSAMC20E16A-ANT	32L	TQFP	NA
ATSAMC20E16A-AUT	32L	TQFP	ATSAMC20E16A-AUTS2
ATSAMC20E16A-AZ	32L	TQFP	NA
ATSAMC20E16A-AZT	32L	TQFP	NA
ATSAMC20E16A-MNT	32L	VQFN	NA
ATSAMC20E16A-MUT	32L	VQFN	NA
ATSAMC20E16A-MZ	32L	VQFN	NA
ATSAMC20E16A-MZT	32L	VQFN	NA
ATSAMC20E17A-ANT	32L	TQFP	NA
ATSAMC20E17A-AUT	32L	TQFP	NA
ATSAMC20E17A-AZ	32L	TQFP	NA
ATSAMC20E17A-AZT	32L	TQFP	NA
ATSAMC20E17A-MNT	32L	VQFN	NA
ATSAMC20E17A-MUT	32L	VQFN	ATSAMC20E17A-MUTS2
ATSAMC20E17A-MZ	32L	VQFN	NA
ATSAMC20E17A-MZT	32L	VQFN	NA
ATSAMC20E18A-ANT	32L	TQFP	NA
ATSAMC20E18A-AUT	32L	TQFP	NA
ATSAMC20E18A-AZ	32L	TQFP	NA
ATSAMC20E18A-AZT	32L	TQFP	NA
ATSAMC20E18A-MNT	32L	VQFN	NA
ATSAMC20E18A-MUT	32L	VQFN	NA
ATSAMC20E18A-MZ	32L	VQFN	NA
ATSAMC20E18A-MZT	32L	VQFN	NA
ATSAMC20G15A-ANT	48L	TQFP	NA
ATSAMC20G15A-AUT	48L	TQFP	NA
ATSAMC20G15A-AZ	48L	TQFP	NA
ATSAMC20G15A-AZT	48L	TQFP	NA
ATSAMC20G15A-MNT	48L	VQFN	NA
ATSAMC20G15A-MUT	48L	VQFN	NA
ATSAMC20G15A-MZ	48L	VQFN	NA
ATSAMC20G15A-MZT	48L	VQFN	NA
ATSAMC20G16A-ANT	48L	TQFP	NA
ATSAMC20G16A-AUT	48L	TQFP	NA
ATSAMC20G16A-AZ	48L	TQFP	NA
ATSAMC20G16A-AZT	48L	TQFP	NA
ATSAMC20G16A-MNT	48L	VQFN	NA
ATSAMC20G16A-MUT	48L	VQFN	NA

ATSAMC20G16A-MZ	48L	VQFN	NA
ATSAMC20G16A-MZT	48L	VQFN	NA
ATSAMC20G17A-ANT	48L	TQFP	NA
ATSAMC20G17A-AUT	48L	TQFP	NA
ATSAMC20G17A-AZ	48L	TQFP	NA
ATSAMC20G17A-AZT	48L	TQFP	NA
ATSAMC20G17A-MNT	48L	VQFN	NA
ATSAMC20G17A-MUT	48L	VQFN	ATSAMC20G17A-MUTS2
ATSAMC20G17A-MZ	48L	VQFN	NA
ATSAMC20G17A-MZT	48L	VQFN	NA
ATSAMC20G18A-ANT	48L	TQFP	NA
ATSAMC20G18A-AUT	48L	TQFP	NA
ATSAMC20G18A-AZ	48L	TQFP	NA
ATSAMC20G18A-AZT	48L	TQFP	NA
ATSAMC20G18A-MNT	48L	VQFN	NA
ATSAMC20G18A-MUT	48L	VQFN	NA
ATSAMC20G18A-MZ	48L	VQFN	NA
ATSAMC20G18A-MZT	48L	VQFN	NA
ATSAMC20J15A-ANT	64L	TQFP	NA
ATSAMC20J15A-AUT	64L	TQFP	NA
ATSAMC20J15A-AZ	64L	TQFP	NA
ATSAMC20J15A-AZT	64L	TQFP	NA
ATSAMC20J15A-MMZ	64L	VQFN	NA
ATSAMC20J15A-MMZT	64L	VQFN	NA
ATSAMC20J15A-MNT	64L	VQFN	NA
ATSAMC20J15A-MUT	64L	VQFN	NA
ATSAMC20J15A-MZ	64L	VQFN	NA
ATSAMC20J15A-MZT	64L	VQFN	NA
ATSAMC20J16A-ANT	64L	TQFP	NA
ATSAMC20J16A-AUT	64L	TQFP	NA
ATSAMC20J16A-AZ	64L	TQFP	NA
ATSAMC20J16A-AZT	64L	TQFP	NA
ATSAMC20J16A-MMZ	64L	VQFN	NA
ATSAMC20J16A-MMZT	64L	VQFN	NA
ATSAMC20J16A-MNT	64L	VQFN	NA
ATSAMC20J16A-MUT	64L	VQFN	NA
ATSAMC20J16A-MZ	64L	VQFN	NA
ATSAMC20J16A-MZT	64L	VQFN	NA
ATSAMC20J17A-ANT	64L	TQFP	ATSAMC20J17A-ANTS2
ATSAMC20J17A-AUT	64L	TQFP	ATSAMC20J17A-AUTS2
ATSAMC20J17A-AZ	64L	TQFP	NA
ATSAMC20J17A-AZT	64L	TQFP	NA
ATSAMC20J17A-MMZ	64L	VQFN	NA
ATSAMC20J17A-MMZT	64L	VQFN	NA
ATSAMC20J17A-MNT	64L	VQFN	NA
ATSAMC20J17A-MUT	64L	VQFN	NA
ATSAMC20J17A-MZ	64L	VQFN	NA

ATSAMC20J17A-MZT	64L	VQFN	NA
ATSAMC20J17A-UUT	56L	WLCSP	NA
ATSAMC20J18A-ANT	64L	TQFP	ATSAMC20J18A-ANTS2
ATSAMC20J18A-AUT	64L	TQFP	NA
ATSAMC20J18A-AZ	64L	TQFP	NA
ATSAMC20J18A-AZT	64L	TQFP	NA
ATSAMC20J18A-MMZ	64L	VQFN	NA
ATSAMC20J18A-MMZT	64L	VQFN	NA
ATSAMC20J18A-MNT	64L	VQFN	NA
ATSAMC20J18A-MUT	64L	VQFN	NA
ATSAMC20J18A-MZ	64L	VQFN	NA
ATSAMC20J18A-MZT	64L	VQFN	NA
ATSAMC20J18A-UUT	56L	WLCSP	NA
ATSAMC20N17A-ANT	100L	VQFN	NA
ATSAMC20N17A-AZ	100L	VQFN	NA
ATSAMC20N17A-AZT	100L	VQFN	NA
ATSAMC20N18A-AN	100L	VQFN	NA
ATSAMC20N18A-ANT	100L	VQFN	NA
ATSAMC20N18A-AZ	100L	VQFN	NA
ATSAMC20N18A-AZT	100L	VQFN	NA
ATSAMC21E15A-ANT	32L	TQFP	NA
ATSAMC21E15A-AUT	32L	TQFP	NA
ATSAMC21E15A-AZ	32L	TQFP	NA
ATSAMC21E15A-AZT	32L	TQFP	NA
ATSAMC21E15A-MNT	32L	VQFN	NA
ATSAMC21E15A-MUT	32L	VQFN	NA
ATSAMC21E15A-MZ	32L	VQFN	NA
ATSAMC21E15A-MZT	32L	VQFN	NA
ATSAMC21E16A-ANT	32L	TQFP	NA
ATSAMC21E16A-AUT	32L	TQFP	NA
ATSAMC21E16A-AZ	32L	TQFP	NA
ATSAMC21E16A-AZT	32L	TQFP	NA
ATSAMC21E16A-MNT	32L	VQFN	NA
ATSAMC21E16A-MUT	32L	VQFN	NA
ATSAMC21E16A-MZ	32L	VQFN	NA
ATSAMC21E16A-MZT	32L	VQFN	NA
ATSAMC21E17A-ANT	32L	TQFP	NA
ATSAMC21E17A-AUT	32L	TQFP	NA
ATSAMC21E17A-AZ	32L	TQFP	NA
ATSAMC21E17A-AZT	32L	TQFP	NA
ATSAMC21E17A-MNT	32L	VQFN	NA
ATSAMC21E17A-MUT	32L	VQFN	NA
ATSAMC21E17A-MZ	32L	VQFN	NA
ATSAMC21E17A-MZT	32L	VQFN	NA
ATSAMC21E18A-ANT	32L	TQFP	NA
ATSAMC21E18A-AUT	32L	TQFP	NA
ATSAMC21E18A-AZ	32L	TQFP	NA

ATSAMC21E18A-AZT	32L	TQFP	NA
ATSAMC21E18A-MNT	32L	VQFN	NA
ATSAMC21E18A-MUT	32L	VQFN	NA
ATSAMC21E18A-MZ	32L	VQFN	NA
ATSAMC21E18A-MZT	32L	VQFN	NA
ATSAMC21G15A-ANT	48L	TQFP	NA
ATSAMC21G15A-AUT	48L	TQFP	NA
ATSAMC21G15A-AZ	48L	TQFP	NA
ATSAMC21G15A-AZT	48L	TQFP	NA
ATSAMC21G15A-MNT	48L	VQFN	NA
ATSAMC21G15A-MUT	48L	VQFN	NA
ATSAMC21G15A-MZ	48L	VQFN	NA
ATSAMC21G15A-MZT	48L	VQFN	NA
ATSAMC21G16A-ANT	48L	TQFP	NA
ATSAMC21G16A-AUT	48L	TQFP	NA
ATSAMC21G16A-AZ	48L	TQFP	NA
ATSAMC21G16A-AZT	48L	TQFP	NA
ATSAMC21G16A-MNT	48L	VQFN	ATSAMC21G16A-MNTS2
ATSAMC21G16A-MUT	48L	VQFN	NA
ATSAMC21G16A-MZ	48L	VQFN	NA
ATSAMC21G16A-MZT	48L	VQFN	NA
ATSAMC21G17A-ANT	48L	TQFP	NA
ATSAMC21G17A-AUT	48L	TQFP	NA
ATSAMC21G17A-AZ	48L	TQFP	NA
ATSAMC21G17A-AZT	48L	TQFP	NA
ATSAMC21G17A-MNT	48L	VQFN	NA
ATSAMC21G17A-MU	48L	VQFN	NA
ATSAMC21G17A-MUT	48L	VQFN	ATSAMC21G17A-MUTS2
ATSAMC21G17A-MZ	48L	VQFN	NA
ATSAMC21G17A-MZT	48L	VQFN	NA
ATSAMC21G18A-ANT	48L	TQFP	NA
ATSAMC21G18A-AUT	48L	TQFP	NA
ATSAMC21G18A-AZ	48L	TQFP	NA
ATSAMC21G18A-AZT	48L	TQFP	NA
ATSAMC21G18A-MNT	48L	VQFN	NA
ATSAMC21G18A-MUT	48L	VQFN	NA
ATSAMC21G18A-MZ	48L	VQFN	NA
ATSAMC21G18A-MZT	48L	VQFN	NA
ATSAMC21J15A-ANT	64L	TQFP	NA
ATSAMC21J15A-AUT	64L	TQFP	NA
ATSAMC21J15A-AZ	64L	TQFP	NA
ATSAMC21J15A-AZT	64L	TQFP	NA
ATSAMC21J15A-MMZ	64L	VQFN	NA
ATSAMC21J15A-MMZT	64L	VQFN	NA
ATSAMC21J15A-MNT	64L	VQFN	NA
ATSAMC21J15A-MUT	64L	VQFN	NA
ATSAMC21J15A-MZ	64L	VQFN	NA

ATSAMC21J15A-MZT	64L	VQFN	NA
ATSAMC21J16A-ANT	64L	TQFP	NA
ATSAMC21J16A-AUT	64L	TQFP	NA
ATSAMC21J16A-AZ	64L	TQFP	NA
ATSAMC21J16A-AZT	64L	TQFP	NA
ATSAMC21J16A-MMZ	64L	VQFN	NA
ATSAMC21J16A-MMZT	64L	VQFN	NA
ATSAMC21J16A-MNT	64L	VQFN	NA
ATSAMC21J16A-MUT	64L	VQFN	NA
ATSAMC21J16A-MZ	64L	VQFN	NA
ATSAMC21J16A-MZT	64L	VQFN	NA
ATSAMC21J17A-ANT	64L	TQFP	NA
ATSAMC21J17A-AUT	64L	TQFP	NA
ATSAMC21J17A-AZ	64L	TQFP	NA
ATSAMC21J17A-AZT	64L	TQFP	NA
ATSAMC21J17A-MMZ	64L	VQFN	NA
ATSAMC21J17A-MMZT	64L	VQFN	NA
ATSAMC21J17A-MNT	64L	VQFN	NA
ATSAMC21J17A-MUT	64L	VQFN	NA
ATSAMC21J17A-MZ	64L	VQFN	NA
ATSAMC21J17A-MZT	64L	VQFN	NA
ATSAMC21J17A-UUT	56L	WLCSP	NA
ATSAMC21J18A-ANT	64L	TQFP	NA
ATSAMC21J18A-AUT	64L	TQFP	NA
ATSAMC21J18A-AZ	64L	TQFP	NA
ATSAMC21J18A-AZT	64L	TQFP	NA
ATSAMC21J18A-MMZ	64L	VQFN	NA
ATSAMC21J18A-MMZT	64L	VQFN	NA
ATSAMC21J18A-MNT	64L	VQFN	NA
ATSAMC21J18A-MUT	64L	VQFN	NA
ATSAMC21J18A-MZ	64L	VQFN	NA
ATSAMC21J18A-MZT	64L	VQFN	NA
ATSAMC21J18A-UUT	56L	WLCSP	NA
ATSAMC21N17A-AN	100L	VQFN	NA
ATSAMC21N17A-ANT	100L	VQFN	NA
ATSAMC21N17A-AZ	100L	VQFN	NA
ATSAMC21N17A-AZT	100L	VQFN	NA
ATSAMC21N18A-AN	100L	VQFN	NA
ATSAMC21N18A-ANT	100L	VQFN	NA
ATSAMC21N18A-AZ	100L	VQFN	NA
ATSAMC21N18A-AZT	100L	VQFN	NA