



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.

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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