Product Change Notification - KSRA-02EJTF568

Date:

11 Jul 2018

Product Category:

Others; 32-bit PIC Microcontrollers

Affected CPNs:

Notification subject:

CRS # 17-0682 and 17-0720 Final Notice: Qualification of UMC 8S (U08S) as an additional fabrication site for additional selected ATMEL products manufactured with the 58.85K process technology.

Notification text:

PCN Status:

Final notification.

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Qualification of UMC 8S (U08S) as an additional fabrication site for additional selected ATMEL products manufactured with the 58.85K process technology.

Note: The 58.85K process technology has been qualified at UMC FAB 8S since 2011.

Pre Change:

Fabricated at U08C fabrication site

Post Change:

Fabricated at U08C and U08S fabrication site

Pre and Post Change Summary:

	Pre Change	Post Change	
Fabrication Site	United Microelectronics Corporation (Fab 8C) / U08C	United Microelectronics Corporation (Fab 8C) / U08C	United Microelectronics Corporation (Fab 8S) / U08S
Wafer Size	8 inch	8 inch	8 inch
Quality Certification	ISO/TS16949	ISO/TS16949	ISO/TS16949
Design/Layout	No Change	No Change	No Change
Die Size	No Change	No Change	No Change

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve on time delivery performance by qualifying UMC 8S (U08S) as an additional fabrication site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

August 11, 2018 (date code: 1832)

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

Time Table Summary:

	July 2018				August 2018				
Workweek	27	28	29	30	31	32	33	34	35
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:

July 11, 2018: Issued final notification.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products

Attachment(s):

PCN_KSRA-02EJTF568_Qual_Report.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

AT8358Z53-JZNT-2
ATSAM3U2CA-AU
ATSAM3U2CA-CU
ATSAM3U2EA-AU
ATSAM3U2EA-CU
ATSAM3U4CA-AU
ATSAM3U4CA-CU
ATSAM3U4EA-AU
ATSAM3U4EA-CU
AT91SAM7X128C-AU
AT91SAM7X128C-AUR
AT91SAM7X128C-CU
AT91SAM7X128C-CUR
AT91SAM7X256C-AU
AT91SAM7X256C-AUR
AT91SAM7X256C-CU
AT91SAM7X256C-CUR
AT91SAM7X512B-AU
AT91SAM7X512B-AUR
AT91SAM7X512B-CU
AT91SAM7X512B-CUR
AT91SAM7XC512B-AU
AT91SAM7XC512B-AUR
AT91SAM7XC512B-CU
AT91SAM7XC512B-CUR

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN#: KSRA-02EJTF568

Date
February 28, 2018

Qualification of UMC 8S (U08S) as an additional fabrication site for additional selected ATMEL products manufactured with the 58.85K process technology.

Purpose Qualification of UMC 8S (U08S) as an additional fabrication site for additional selected ATMEL products manufactured with the 58.85K process technology.

CRS No 17-0682 and 17-0720

Qualification Result

WLR Qual Item	Lot ID	Site	Remarks
Electromigration	D5AGK.4	UMC	Pass
LVN-HCI	P8SP7.1 P9075.1	TPE	Pass, life time >10 yrs Pass
GOI (LVox/HVox/TDox)	P8SP7.1 P9075.1 P9235.1	TPE	Pass Pass Pass
NBTI	P8SP7.1 P9075.1 P9235.1	RFO	Pass Pass Pass
Cell Characterization	P8SP7.1 P9235.1	RFO	Pass (wo DR) Pass with DR

WLR Qual Item	Lot ID	Site	Remarks
1.8V/3.3VNMOS-HCI	P9901 P9902	RFO	Pass, life time >5 yrs Pass, life time >8 yrs
GOI (LVox/HVox/TDox)	P9AL2 P9902	TPE	All pass All pass
NBTI	P9901 P9902	RFO	All pass All pass
MIM	P9AL2 P9902	TPE	All pass All pass

Qualification Purpose	**UMC_8S Stage-I (wo HDP STI & Passivation)**			**Package Qual**	**UMC_8S Stage-II**
Qualification Product (58Z22)	P8SP7.1 TQFP 64	P9075.1 TQFP 64	P9235.1 TQFP 64	P9235.1 QFN64	P9AL5.1 TQFP 64
Early Life Fail Rate 48h 140°C	0/308	0/308	0/308	1/240	0/539
Cycling 25°C - 100k Flash	0/77	0/77	0/77	NA	1/77
Cycling 85°C - 100K - Flash	0/77 AVG 112K	0/77 AVG 93K	0/77 AVG 105k	NA	0/73 AVG 170K
Precycling 10k 25°C	0/154	0/154	0/154	NA	0/154
HTOL 168H 150°C	0/76	0/77	0/77	0/77	0/77
HTOL 500H 150°C	0/76	0/76	0/77	0/77	0/77
Post Cycling Data Retention – 150°C 500h	0/77	0/77	0/77	NA	0/77
Post Cycling Data Retention 1000h	0/77	0/77	0/77	NA	0/77
MSL Preconditioning	1/ 231	0/231	0/231	0/231	0/231
15 Thermal Shocks - 65°C/+150°C, liquid/liquid - 96h Autoclave 130°C, 85%RH, no bias	0/76	0/77	0/77	0/77	0/77
1000h Humidity bias 85°C/85%RH 3.7V Bias	0/77	0/77	0/77	NA	-
500tc Temperature Cycling -65°C/150°C air/air	0/77	0/77	0/77	0/77	0/77

Qualification Purpose	**UMC_8S** **Stage-I (wo HDP STI & Passivation)**
Qualification Product (58Z29)	P9901.1 VFBGA 96
Early Life Fail Rate 48h 140°C	0/308
Cycling 25°C - 10K - Flash	0/77
Cycling 85°C - 10K - Flash	0/77
Precycling 1k 25°C	0/154
HTOL 168H 150°C	0/77
HTOL 500H 150°C	0/77
Post Cycling Data Retention – 150°C 500h	0/77
Post Cycling Data Retention 1000h	0/77