Product Change Notification / JAON-12ULDX371

Date:

20-Sep-2022

Product Category:

Power Discrete Components

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5286 Initial Notice: Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as an additional fabrication site for selected 1700V SiC Schottky Barrier Diode (SBD) products of MSC010SDA170xx, MSC030SDA170xx, MSC050SDA170xx, MSC2X3xSDA170J, and MSC2X5xSDA170J device families available in die sales products, 2L TO-247, and 4L SOT-227 packages.

Affected CPNs:

JAON-12ULDX371_Affected_CPN_09202022.pdf
JAON-12ULDX371_Affected_CPN_09202022.csv

Notification Text:

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 Colorado – Fab 5 (MCSO) as an additional fabrication site for selected 1700V SiC Schottky Barrier Diode (SBD) products of MSC010SDA170xx, MSC030SDA170xx, MSC050SDA170xx, MSC2X3xSDA170J, and MSC2X5xSDA170J device families available in die sales products, 2L TO-247, and 4L SOT-227 packages.

Pre and Post Change Summary:

	Pre Change	Post Change	
Fabrication Site	X-Fab Silicon Foundries (XFTX)	X-Fab Silicon Foundries (XFTX)	Microchip Technology Colorado – Fab 5 (MCSO)
Certification	ISO 9001	ISO 9001	ISO9001/ ISO41001/ IATF16949

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve productivity and on-time delivery performance by qualifying MCSO as an additional fabrication site.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: December 2022

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.

Time Table Summary:

	September 2022					>	December 2022				
Workweek	36	37	38	39	40		49	50	51	52	53
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: September 20, 2022: Issued initial notification.

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

Attachments:

PCN_JAON-12ULDX371_Qual_Plan.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.

QUALIFICATION PLAN SUMMARY

PCN #: JAON-12ULDX371

Date:
September 12, 2022

Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as an additional fabrication site for selected 1700V SiC Schottky Barrier Diode (SBD) products of MSC010SDA170xx, MSC030SDA170xx, MSC050SDA170xx, MSC2X3xSDA170J, and MSC2X5xSDA170J device families available in die sales products, 2L TO-247, and 4L SOT-227 packages.

Purpose: Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as an additional fabrication site for selected 1700V SiC Schottky Barrier Diode (SBD) products of MSC010SDA170xx, MSC030SDA170xx, MSC050SDA170xx, MSC2X3xSDA170J, and MSC2X5xSDA170J device families available in die sales products, 2L TO-247, and 4L SOT-227 packages.

CCB No.: 5286

AEC-Q101 Item	Test	Reference	Test Spec/Voltage Class	No. of Lots	Test Class	Min Sample Size/Lot	Comments
3	External Visual	JESD22 B-101	User Specification	6	All	410	All units submitted for qualification
4	Parametric Verification		User Specification	6	All	25	Per Part Number
5	High Temperature Reverse Bias	Mil-Std 750 M1038 Cond A	700V: Vbais=700V @ Ta=175°C, 1k Hrs.	1	Auto	24+2	Largest Die-Lowest Voltage, TO-247 Package
			1200V: Vbais=1200V @ Ta=175°C, 1k Hrs.	3	Auto	24+2	Largest Die-Highest Voltage, TO-247 Package, Largest Die-Highest Voltage, TO-247 Package, SDK Substrate, Smallest Die-Highest Voltage, TO-220
			1700V: Vbais=1360V @ Ta=175°C, 1k Hrs.	2	Comm.	24+2	Largest Die-Highest Voltage, TO-247, Largest Die- Highest Voltage, SOT-227
7	Temperature Cycle	JESD22 A-104	Ta=-55°C to 175°C, 400 Cycles, RthJc testing at pre and 400 Cycles	1 (700V)	Auto	24+2	Largest Die-Lowest Voltage, TO-247 Package
				3 (1200V)	Auto	24+2	Largest Die-Highest Voltage, TO-247 Package, Largest Die-Highest Voltage, TO-247 Package, SDK Substrate, Smallest Die-Highest Voltage, TO-220
			Ta=-55°C to 175°C, 100 Cycles, RthJc testing at pre and 100 Cycles	2 (1700V)	Comm.	24+2	Largest Die-Highest Voltage, TO-247, Largest Die- Highest Voltage, SOT-227
8	Unbiased Highly Accelerated Stress Test	JESD22 A-110	Ta=130°C, RH=85%, 96 Hrs.	1 (700V)	Auto	24+2	Largest Die-Lowest Voltage, TO-247 Package
				3 (1200V)	Auto	24+2	Largest Die-Highest Voltage, TO-247 Package, Largest Die-Highest Voltage, TO-247 Package, SDK Substrate, Smallest Die-Highest Voltage, TO-220
				2 (1700V)	Comm.	24+2	Largest Die-Highest Voltage, TO-247, Largest Die- Highest Voltage, SOT-227
9	Highly Accelerated Stress Test	JESD22 A-110	Vbias=42V, Ta=130°C, RH=85%, 96 Hrs.	1 (700V)	Auto	24+2	Largest Die-Lowest Voltage, TO-247 Package
				3 (1200V)	Auto	24+2	Largest Die-Highest Voltage, TO-247 Package, Largest Die-Highest Voltage, TO-247 Package, SDK Substrate, Smallest Die-Highest Voltage, TO-220
				2 (1700V)	Comm.	24+2	Largest Die-Highest Voltage, TO-247, Largest Die- Highest Voltage, SOT-227

10(alt).	Intermittent Operating Life	Mil-Std 750 M1037	Delta Tj=100°C, 10k Cycles. RthJC testing at pre and 10k Cycle	1 (700V)	Auto	24+2	Largest Die-Lowest Voltage, TO-247 Package
				3 (1200V)	Auto	24+2	Largest Die-Highest Voltage, TO-247 Package, Largest Die-Highest Voltage, TO-247 Package, SDK Substrate, Smallest Die-Highest Voltage, TO-220
			Delta Tj=100°C, 6k Cycles. RthJc testing at pre and 6k Cycles	2 (1700V)	Comm.	24+2	Largest Die-Highest Voltage, TO-247, Largest Die- Highest Voltage, SOT-227
22	Thermal Resistance	JESD24-3	Per Part Specification	4	Auto	10	Performed in items 7 and 10(alt).
				2	Comm.		
23	Wire Bond Strength	Mil-Std 750 M2037	1200V	2	Auto	5	Min. 10 bonds from each lot.
24	Bond Shear	AEC-Q101-003	1200V	2	Auto	5	Min. 10 bonds from each lot.
25	Die Shear	Mil-Std 750 M2017	1200V	2	Auto	5	5 die from each lot

JAON-12ULDX371 - CCB 5286 Initial Notice: Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as an additional fabrication site for selected 1700V SiC Schottky Barrier Diode (SBD) products of MSC010SDA170xx, MSC030SDA170xx, MSC050SDA170xx, MSC2X3xSDA170J, and MSC2X5xSDA170J device families available in die sales products, 2L TO-247, and 4L SOT-227 packages.

Affected Catalog Part Numbers (CPN)

MSC010SDA170B
MSC010SDA170D/S
MSC030SDA170B
MSC030SDA170D/S
MSC050SDA170B
MSC050SDA170D/S
MSC2X30SDA170J
MSC2X31SDA170J
MSC2X50SDA170J
MSC2X51SDA170J

Date: Monday, September 19, 2022