



Product Change Notification / MFOL-15DGRL818

Date:

22-Sep-2022

Product Category:

Power Discrete Components, Power Discrete Products

PCN Type:

Document Change

Notification Subject:

CCB 5277 Initial Notice: Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as an additional fabrication site for 700V and 1200V Silicon Carbide (SiC) Schottky Barrier Diodes (SBDs) products of MSC0xxSDA070xx, MSC0xxSDA120xx, MSC2X10xSDA070x, MSC2X10xSDA120x, MSC2X21DC120J, MSC2XxxSDA070x, MSC2XxxSDA120x, and MSC2X61DC120J device families available in die sales products, 2L TO-268, 2L TO-220, 2L TO-247, and 4L SOT-227 packages.

Affected CPNs:

[MFOL-15DGRL818_Affected_CPN_09222022.pdf](#)

[MFOL-15DGRL818_Affected_CPN_09222022.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 700V and 1200V Silicon Carbide (SiC) Schottky Barrier Diodes (SBDs) products of

MSC0xxSDA070xx, MSC0xxSDA120xx, MSC2X10xSDA070x, MSC2X10xSDA120x, MSC2X21DC120J, MSC2XxxSDA070x, MSC2XxxSDA120x, and MSC2X61DC120J device families available in die sales products, 2L TO-268, 2L TO-220, 2L TO-247, and 4L SOT-227 packages.

Pre and Post Change Summary:

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

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve on-time delivery performances by qualifying MSCO as an additional fab site.

Change Implementation Status:In Progress

Estimated Qualification Completion Date:October 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				>	November 2022				
	36	37	38	39		45	46	47	48	49
Workweek										
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 22, 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_MFOL-15DGRL818_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.

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MSC010SDA070B
MSC010SDA070D/S
MSC010SDA070K
MSC010SDA120B
MSC010SDA120D/S
MSC010SDA120K
MSC015SDA120B
MSC015SDA120D/S
MSC015SDA120K
MSC020SDA120B
MSC020SDA120D/S
MSC020SDA120K
MSC020SDA120S
MSC030SDA070B
MSC030SDA070BCT
MSC030SDA070D/S
MSC030SDA070K
MSC030SDA070S
MSC030SDA120B
MSC030SDA120BCT
MSC030SDA120D/S
MSC030SDA120K
MSC030SDA120S
MSC050SDA070B
MSC050SDA070BCT
MSC050SDA070D/S
MSC050SDA070S
MSC050SDA120B
MSC050SDA120BCT
MSC050SDA120D/S
MSC050SDA120S
MSC2X100SDA070J
MSC2X100SDA120J
MSC2X101SDA070J
MSC2X101SDA120J
MSC2X21DC120J
MSC2X30SDA070J
MSC2X30SDA120J
MSC2X31SDA070J
MSC2X31SDA120J
MSC2X50SDA070J
MSC2X50SDA120J
MSC2X51SDA070J
MSC2X51SDA120J
MSC2X61DC120J



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QUALIFICATION PLAN SUMMARY

PCN #: MFOL-15DGRL818

Date:

September 12, 2022

Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as an additional fabrication site for 700V and 1200V Silicon Carbide (SiC) Schottky Barrier Diodes (SBDs) products of MSC0xxSDA070xx, MSC0xxSDA120xx, MSC2X10xxSDA070x, MSC2X10xxSDA120x, MSC2X21DC120J, MSC2XxxSDA070x, MSC2XxxSDA120x, and MSC2X61DC120J device families available in die sales products, 2L TO-268, 2L TO-220, 2L TO-247, and 4L SOT-227 packages.

Purpose: Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as an additional fabrication site for 700V and 1200V Silicon Carbide (SiC) Schottky Barrier Diodes (SBDs) products of MSC0xxSDA070xx, MSC0xxSDA120xx, MSC2X10xSDA070x, MSC2X10xSDA120x, MSC2X21DC120J, MSC2XxxSDA070x, MSC2XxxSDA120x, and MSC2X61DC120J device families available in die sales products, 2L TO-268, 2L TO-220, 2L TO-247, and 4L SOT-227 packages.

CCB No.: 5277

AEC-Q101 Item	Test	Reference	Test Spec/Voltage Class	No. of Lots	Test Class	Min Sample Size/Lot	Comments
2	Pre-Conditioning	JESD22 A-113	1200V, SMT Package: 1. TC, 5 Cycles: 40C to 60C 2. Bake, 125C, 24 Hours 3. Soak, 85C/85%RH, 168 Hours 4. IR Conv. 3 Cycles, 235C	1	Auto	24+2	Electrical tests: Pre and Post pre-conditioning test.
3	External Visual	JESD22 B-101	User Specification	7	All	410	All units submitted for qualification
4	Parametric Verification		User Specification	7	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: B Pkg Largest die-Highest voltage: B(2x), S Pkg. + Smallest die-Highest voltage: K Pkg.
			1200V: Vbais=1200V @ Ta=175°C, 1k Hrs.	4	Auto	24+2	
7	Temperature Cycle	JESD22 A-104	Ta=-55°C to 175°C, 400 Cycles	5	Auto	24+2	Largest die-Highest voltage, Largest die-Lowest voltage: B(2x), K and S pkg.
8	Unbiased Highly Accelerated Stress Test	JESD22 A-110	Ta=130°C, RH=85%, 96 Hrs.	5	Auto	24+2	Largest die-Highest voltage, Largest die-Lowest voltage: B(2x), K and S pkg.
9	Highly Accelerated Stress Test	JESD22 A-110	Vbias=42V, Ta=130°C, RH=85%, 96 Hrs.	5	Auto	24+2	Largest die-Highest voltage, Largest die-Lowest voltage: B(2x), K and S pkg.
10(alt).	Intermittent Operating Life	Mil-Std 750 M1037	Delta Tj=100°C, 10k Cycles. RthJC testing at pre and 10k Cycle	5	Auto	24+2	Largest die-Highest voltage, Largest die-Lowest voltage: B(2x), K and S pkg.
22	Thermal Resistance	JESD24-3	Per Part Specification	5	Auto	10	Performed in items 7 and 10(alt).
23	Wire Bond Strength	Mil-Std 750 M2037		2	Auto	5	Min. 10 bonds from each lot.
24	Bond Shear	AEC-Q101-003		2	Auto	5	Min. 10 bonds from each lot.
25	Die Shear	Mil-Std 750 M2017		2	Auto	5	5 die from each lot