

PRODUCT / PROCESS CHANGE INFORMATION

1. PCI basic data

1.1 Company	 STMicroelectronics International N.V
1.2 PCI No.	ADG/23/13891
1.3 Title of PCI	Full Chisel Carrier Tape for TQFP 20x20x1.4 Packages (Malta Plant)
1.4 Product Category	see list
1.5 Issue date	2023-04-06

2. PCI Team

2.1 Contact supplier	
2.1.1 Name	ROBERTSON HEATHER
2.1.2 Phone	+1 8475853058
2.1.3 Email	heather.robertson@st.com
2.2 Change responsibility	
2.2.1 Product Manager	Luca RODESCHINI
2.2.2 Marketing Manager	Matteo MOIOLI
2.2.3 Quality Manager	Alberto MERVIC

3. Change

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
General (Logistic)	3rd level packaging materials (shipment carton, sealing tape)	ST Malta

4. Description of change

	Old	New
4.1 Description	Standard Carrier Tape 20x20x1.4	Full Chisel Carrier Tape 20x20x1.4
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	No Impact	

5. Reason / motivation for change

5.1 Motivation	To introduce new Full Chisel carrier tape for TQFP20x20x1.4 packages
5.2 Customer Benefit	SERVICE CONTINUITY

6. Marking of parts / traceability of change

6.1 Description	Date-Code
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7. Timing / schedule

7.1 Date of qualification results	2023-03-13
7.2 Intended start of delivery	2023-04-30
7.3 Qualification sample available?	Not Applicable

8. Qualification / Validation

8.1 Description	13891 Details.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2023-04-06

9. Attachments (additional documentations)

13891 Public product.pdf 13891 Details.pdf

10. Affected parts		
10.1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	SPC560B40L3C6E0X	
	SPC560B40L5C6E0X	
	SPC560B50L3B4E0X	
	SPC560B50L3C6E0X	
	SPC560B50L3C6E0Y	
	SPC560B50L5C6E0X	
	SPC560B50L5C6E0Y	
	SPC560B54L3C6E0X	
	SPC560B54L5B6E0Y	
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	SPC560D40L1B3E0X	
	SPC560D40L1B4E0X	
	SPC560D40L1C4E0X	
	SPC560P40L3BEAAY	
	SPC560P40L3CEFAR	
	SPC560P40L3CEFBR	
	SPC560P40L3CEFBY	
	SPC560P44L3BEAAY	
	SPC560P44L3CEFAR	
	SPC560P50L3BEABR	
	SPC560P50L3CEFAR	
	SPC560P50L3CEFBR	
	SPC560P50L5CEFAR	
	SPC560P54L3BEABR	
	SPC560P54L3BEABY	
	SPC563M64L5COAR	
	SPC563M64L5COAY	
	SPC563M64L7COAR	
	SPC563M64L7COAY	
	SPC564A80L7CFAR	
	SPC564B64L7C9E0X	
	SPC56EC64L7B9E0Y	
	SPC56EL70L5CBOSR	
	SPC570S40E1CEFAY	
	SPC570S50E1CEFAR	
	SPC572L64E3BC6AR	
	SPC572L64F2BC6AR	
	SPC574S64E3CEFAR	
	SPC582B50E1AD00X	

	SPC582B50E1CG00X	
	SPC582B50E3CD00X	
	SPC582B60E1CD00X	
	SPC582B60E1MH00Y	
	SPC584B70E1NHC0X	
	SPC584B70E3EHC0X	
	SPC584B70E5EHC0X	
	SPC584B70E7NG00X	
	SPC58NH92C5RMI0X	
	SPC58NH92E7RMI0X	
	SPC58NN84C3RMHBR	
	ST10F276-6QR3	
	STA1052Z2	
	SPC58EC80E5QMC0Y	

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TQFP 20x20x1.4 Full Chisel Carrier Tape Change

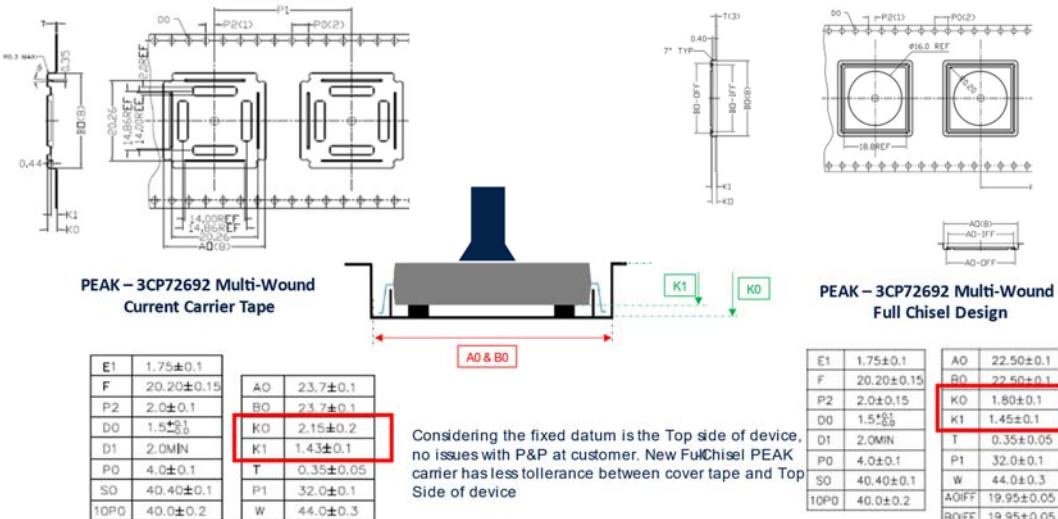
WHAT is the change?

Additional suppliers qualification for TQFP 20x20x1.4 **Full Chisel** Carrier Tape. This affected ST MALTA.

Current: ST material code reference: 3CP72692

New : PEAK (ST material code reference: 3CP72692)
 ADVANTEK (ST material code reference: 3CP72692)
 CPAK (ST material code reference: 3CP72692)

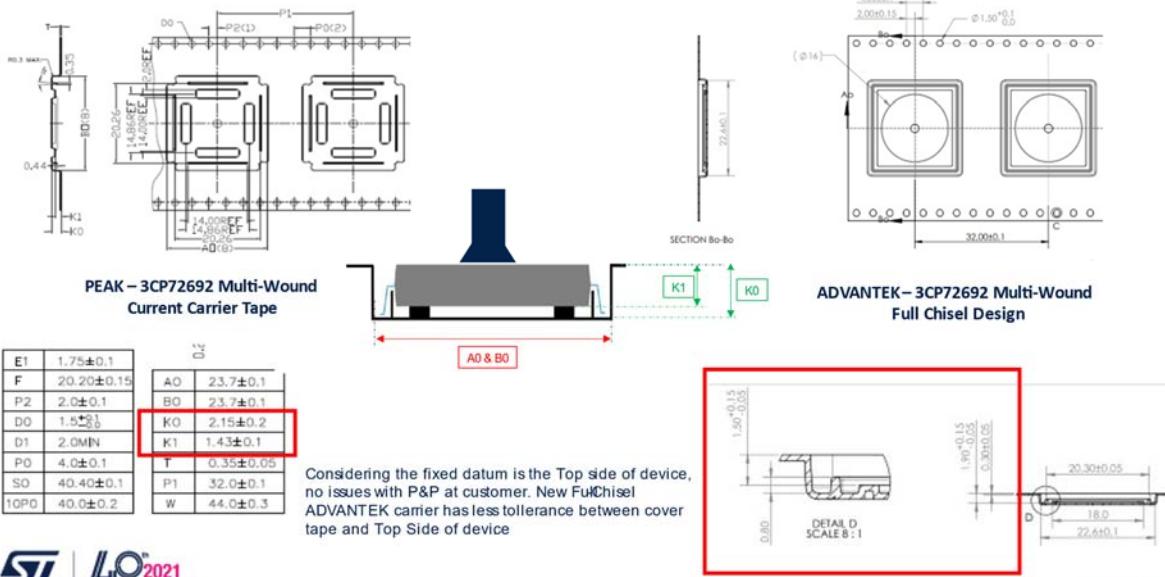
20x20x1.4 Full Chisel Design Carrier Tapes - PEAK



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ST Restricted

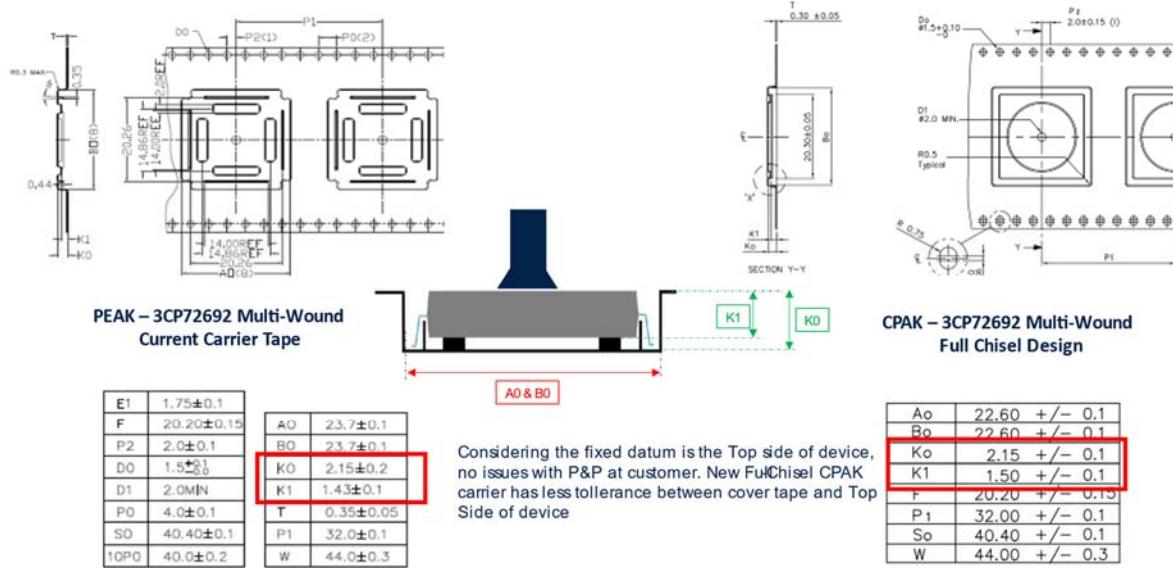
20x20x1.4 Full Chisel Design Carrier Tapes - ADVANTEK



7

ST Restricted

20x20x1.4 Full Chisel Design Carrier Tapes - CPAK



8
ST Restricted

WHY?

Service Continuity.

WHEN will this change occur?

The change will be implemented starting from: April '23

HOW will the change be qualified?

Carrier tape vs Package Picking analysis – No Issues
 Drop test – No Issues
 ESD check – Passed all Tests

IMPACTS of the Change

Form: No change on product
 Fit: No change on product
 Function: No change on product
 Reliability : No change on product
 Processability : No change on product

APPENDICES:

APPENDIX 1 Risk assessment
 APPENDIX 2 Qualification plan
 APPENDIX 3 Qualification results

APPENDIX 1: RISK ASSESSMENT

#	Risks identified	Potential risk resulting from	Class (Low / Medium)	Considered action
1	Insufficient lead protection from accidental drops up to 4 ft height	Units cannot be soldered at PCBA due to bent leads	Medium	Perform drop test from 4 ft height to ensure no bent leads
2	Device malfunction	EOS damage due to ESD	Medium	Perform validation for ESD protection compliance
3	Insufficient clearance between leads and carrier tape pocket	Bent leads due to mechanical contact	Medium	Perform fit analysis considering all potential combinations for carrier tape vs package dimensions
4	Opened/improper cover tape sealing	Units drop out of carrier tape	Medium	Perform peel off strength to ensure it meets ST requirements
5				
6				
7				
8				
9				

APPENDIX 2: QUALIFICATION PLAN

- Visual inspection report
- Drop test
- Peel test
- ESD

APPENDIX 3: QUALIFICATION EXECUTION & RESULTS

Visual Inspection Report

Visual inspection	Results
Does not contain stain or foreign material	Passed
No Damage	Passed
No Burr	Passed
Orientation	Passed
The component does not protrude above the top surface of the carrier tape	Passed
The component can be removed from the cavity in a vertical direction without mechanical restriction, after the top cover tape has been removed.	Passed
Lateral movement of the component is restricted to 1.0mm maximum	Passed

Drop and Peel Test

Test	Result
Drop Test Result	Passed
Peel Test Result	Passed

ESD check

	TQFP 20x20x1.4 Full Chisel			
ESD Check	3V	3V	1.50E050	2.60E050
Results	PASS	PASS	PASS	PASS

ESD results: carrier tape meet ST ESD requirement.

Conclusion

- Based on all evaluations performed, the TQFP 20x20x1.4 Full Chisel carrier tape meets all ST requirements

Public Products List

Public Products are off the shelf products. They are not dedicated to specific customers, they are available through ST Sales team, or Distributors, and visible on ST.com

PCI Title : Full Chisel Carrier Tape for TQFP 20x20x1.4 Packages (Malta Plant)

PCI Reference : ADG/23/13891

Subject : Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

SPC58NH92E7RMI0X	SPC570S50E1CEFAY	SPC582B60E1CD00X
SPC560P60L5CEFAR	SPC570S40E1CEFAY	SPC584B70E7NG00X
SPC560B60L5B6E0Y	SPC584B70E5EHC0X	SPC584B64E1NH00X
SPC560B60L3B6E0X	SPC564B74L7B9ECX	SPC560D40L3C4E0X
SPC564B74L7C8E0X	SPC560P50L5BEFAR	SPC582B60E3CD00X
SPC560C50L3B4E0X	SPC560P50L3CEFBR	SPC56EL60L3CBFSY
SPC58NG84C3GEC0X	SPC56EL70L5CBOSY	SPC56EL60L5CBOSY
SPC564A70L7CFAY	SPC56AP60L5CEFAY	SPC58EG80E5P0H0Y
SPC560P50L3BEABY	SPC584B70E3NMC0X	SPC572L64E3BC6AR
SPC584B60E3BDC0X	SPC582B54E3CD00X	SPC58NE84C3QMHAR
SPC560D40L1C4E0X	SPC584B64E3CDC0X	SPC564L70L3CBFSR
SPC56EL60L5CBFQR	SPC56EL60L5CBFSY	SPC570S50E1DEFAR
SPC572L64F2BC6AR	SPC56EL70L5CBFSY	SPC560P54L5CEAAR
SPC584B70E5NMC0X	SPC564A70L7CFAR	SPC560B40L5C6E0X
SPC574S64E3CEFAR	SPC560C50L3C6E0X	SPC564A80L7COBR
SPC582B50E1CG00X	SPC56AP60L3BEFBR	SPC582B50E3CD00X
SPC584B60E5CD00X	SPC560B54L5B6E0Y	SPC560P40L3CEFBR
SPC584B70E3EHC0X	SPC560B64L7B6E0X	SPC560B40L3C6E0X
SPC56EL60L3CCFQR	SPC584B70E5EHC0Y	SPC584B60E3MHC0X
SPC58NH92C5RMI0X	SPC574K72E5C6FAR	SPC560P50L3CEFAR
SPC58EG80E5PEC0X	SPC560P44L3CEFAR	SPC584B70E5NHC0X
SPC564L70L5BBOSR	SPC564L60L3BCOQR	SPC560D40L1B3E0X
SPC582B54E1CG00X	SPC56EC64L7B9E0Y	SPC584B60E5EDC0X
SPC58NH92C5HMI0X	SPC582B54E1BD00X	SPC560B60L7B6E0X
SPC58EG84E5GEC0X	SPC564A80L7CFAR	SPC56AP60L3BEFBY
SPC564A80L7CFAY	SPC560P50L5CEFAR	SPC56AP60L3BEAAR
SPC564L54L3BCFQR	SPC563M64L7COAY	SPC584B64E7EDC0Y
SPC582B60E1MH00Y	SPC564L70L3CBFSY	SPC58NN84E7RMHBR
SPC563M64L7COAR	SPC560D30L3B3E0X	SPC564B70L7B9E0X
SPC564L60L5BCOQR	SPC564L54L3BCOQR	SPC564B64L7C9E0X
SPC564A70L7COBR	SPC58NG84E7QEH0X	SPC564L70L3BCOSR
SPC584B70E1NHC0X	SPC560B50L3C6E0X	SPC570S50E1CEFAR
SPC56EL60L3CBFSR	SPC560B50L3B6E0X	SPC560P34L1CEFAY
SPC584B70E3CD00X	SPC56EL60L5CCOSR	SPC56EL70L5CBOSR
SPC560B54L3C6E0X	SPC56EL60L3CBFQY	SPC560B60L3C6E0X
SPC58EG80E5QEC0X	SPC564B64L7C800Y	SPC560B54L5C6E0X

SPC560B64L5C6E0X	SPC560B64L3B6E0X	SPC563M64L5COAR
SPC56EL70L5CBFSR	SPC560B40L3B4E0X	SPC560P50L3BEABR
SPC560P60L3CEFAY	SPC582B60E3MH00Y	SPC563M64L5COAY
SPC560B64L7C6E0X	SPC570S40E1CEFAR	SPC564L60L5CCFQR
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SPC58NG84C3QTH0Y	SPC560P54L5BEAAR	SPC574S60E3CE0AR
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SPC560P40L3CEFAR	SPC56EC64L7B9E0X	SPC560P40L3CEFBY
SPC560B50L5C6E0Y	SPC582B50E1AD00X	SPC58NN84C3RMHBR
SPC564A80L7CFBY	SPC584B70E1EH00X	SPC58NG84E7QEH0Y
SPC58NE84E7QMHAR	SPC560P60L5CEAAR	SPC58EG80E5QEH0Y
SPC560P54L3BEABY	SPC58NG84C3QTH0X	SPC560P54L3BEABR
SPC58EE84E7QMSAR	SPC564A70L7CFBR	SPC560P44L3BEAAY
SPC582B60E1MH00X	SPC560D40L3B3E0Y	SPC564B74L7B8E0X
SPC584B70E7EHC0X	SPC560B60L5C6E0X	SPC563M60L5COBR
SPC574K72E7C6FAR	SPC560P60L3BEABR	SPC582B54E3L000X
SPC560D40L1B4E0X	SPC560B60L5B6E0X	SPC560B50L5C6E0X
SPC560P40L3CEAAR	SPC584C70E7QMC1X	SPC560P40L3BEAAY
SPC58NE84E7QMSAR	SPC58NG80E5QEC0X	SPC560D40L3B4E0X
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SPC560P50L5BEAAY	SPC584B70E1ED00X	ST10F276-6QR3
SPC560P44L3CEFAY	F272-BAR-P-TX	SPC560P50L3CEFAY
SPC560P50L3CEFBY	SPC58EC80E5QMC0X	SPC564B64L7C8ECX
SPC584C80E3G0C0X	SPC58EC80E5QMC0Y	

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