



Final Product/Process Change Notification

Document # : FPCN21670X

Issue Date: 10 March 2017

Title of Change:	Qualification of Advantek Carrier Tape for Products produced at the ON Semiconductor Seremban, Malaysia Factory		
Proposed first ship date:	10 June 2017 or earlier if approved by the customer		
Contact information:	Contact your local ON Semiconductor Sales Office or <todd.manes@onsemi.com>		
Samples:	Contact your local ON Semiconductor Sales Office		
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office		
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.		
Change Part Identification:	Products with date code 1723 or later will utilize the new tape. (If customer approval for earlier implementation is received, the implementation date code will be modified accordingly.)		
Change category:	☐ Wafer Fab Change ☐ Assembly Change ☐ Test Change ☒ Other <u>Tape and Reel Carrier Tape</u>		
Change Sub-Category(s): ☐ Manufacturing Site Change/Addition ☐ Manufacturing Process Change ☒ Material Change ☐ Product specific change ☐ Datasheet/Product Doc change ☒ Shipping/Packaging/Marking ☐ Other: _____			
Sites Affected: ☐ All site(s) ☐ not applicable ☒ ON Semiconductor site(s) : <u>ON Seremban, Malaysia</u> ☐ External Foundry/Subcon site(s)			
Description and Purpose: ON Semiconductor announces the qualification of Advantek as a supplier of Tape and Reel carrier tape for the products listed below. Note that no other changes to the products are occurring. There are no electrical or mechanical changes to the products listed.			
	Before Change	After Change	
ON Semi Part Number	(3M Tape Part Number)	(Advantek Tape Part Number)	
NB3RL02FCT2G	3M065031	ABH155-ABA500.M5C	
NCP2811AFCT1G	3M053491	ABH116-ABA500.M5C	
NCP2811BFCCT1G	3M053491	ABH116-ABA500.M5C	
NCP335FCT2G	3M070321	ABH118-ABA500.M5C	
NCP435FCT2G	3M070321	ABH118-ABA500.M5C	
NCP392ARFCCT1G	3M077421	ABH115-ABA500.M5C	
NCP392BRFCCT1G	3M077421	ABH115-ABA500.M5C	
NCP392CRFCCT1G	3M077421	ABH115-ABA500.M5C	
NCP392CSFCCT1G	3M077421	ABH115-ABA500.M5C	
NCP392DRFCCT1G	3M077421	ABH115-ABA500.M5C	
TCC-103A-RT	3M079591	ABH117-ABA500.M5C	
TCC-103B-RT	3M079591	ABH117-ABA500.M5C	
TCC-103C-RT	3M079591	ABH117-ABA500.M5C	
TCC-103D-RT	3M079591	ABH117-ABA500.M5C	

The following table provides a comparison of carrier tape pocket sizes for the existing (3M) tape and the newly qualified (Advantek) tape:



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Device	NCP435 / NCP335		TCC-103A		NCP2811		NCP392D		NB3RL02	
Carrier Tape Details	Before	After	Before	After	Before	After	Before	After	Before	After
Supplier	3M	Avantek	3M	Avantek	3M	Avantek	3M	Avantek	3M	Avantek
Part #	3M070321	ABH118	3M079591	ABH117	3M053491	ABH116	3M077421	ABH115	3M065031	ABH155
Tape width	8	8	8	8	8	8	8	8	8	8
Pitch	4	4	4	4	4	4	4	4	4	4
Tape thickness	0.20 ±0.02	0.20 ±0.03	0.25 ±0.02	0.20 ±0.03	0.20 ±0.02	0.20 ±0.03	0.20 ±0.02	0.20 ±0.03	0.25 ±0.02	0.20 ±0.03
Pocket X - Dimension (mm)	1.09. ±0.05	1.1 ±0.03	2.05 ±0.05	2.06. ±0.05	1.67 ±0.05	1.66 ±0.05	1.42 ±0.05	1.50 ±0.03	0.90 ±0.05	0.90 ±0.03
Pocket Y - Dimension (mm)	1.09 ±0.05	1.1 ±0.03	2.33 ±0.05	2.26 ±0.05	2.17 ±0.05	2.16 ±0.05	2.10 ±0.05	2.20 ±0.03	1.75 ±0.05	1.70 ±0.03
Pocket Z - Dimension (mm)	0.76 ±0.05	0.71 ±0.03	0.85 ±0.05	0.72 ±0.05	0.73 ±0.05	0.70 ±0.05	0.76 ±0.05	0.68 ±0.03	0.60 ±0.05	0.58 ±0.03
Material Type	PC	PC Tri-Lam	PC	PC Tri-Lam	PC	PC Tri-Lam	PC	PC Tri-Lam	PC	PC Tri-Lam

Reliability Data Summary:

The following evaluations have been completed with the new carrier tape with passing results. Further details are available upon request:

- Visual Inspection (14000 units)
- Peel Back Test (14000 units)
- Visual Inspection and Peel Back Test After MSL1 Aging (3 lots)

Electrical Characteristic Summary: No changes to device electrical characteristics or performance

List of affected Standard Parts:

Part Number	Qualification Vehicle
NB3RL02FCT2G	NCP435FCT2G and TCC-103A-RT
NCP2811AFCT1G	
NCP2811BFCCT1G	
NCP335FCT2G	
NCP435FCT2G	
NCP392ARFCCT1G	
NCP392BRFCCT1G	
NCP392CRFCCT1G	
NCP392CSFCCT1G	
NCP392DRFCCT1G	
TCC-103A-RT	
TCC-103B-RT	
TCC-103C-RT	
TCC-103D-RT	