



Product Line In Vehicle Networking (PL IVN):
Wafer fab Dual Source for product TJA1042
Attachment to PCN 201301011F01

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1. Introduction

As part of the NXP Business Continuity Management (BCM) program it has been decided to establish a Dual Source for product TJA1042. To this end, diffusion of this product will start in a 2nd location wafer fab SSMC, Singapore, in parallel to the running production in wafer fab ICN8, Nijmegen, the Netherlands.

This change does not affect the currently released NXP orderable part numbers and 12NC ordering codes, which are produced only in wafer fab ICN8. New 12NCs will be created to make use of the Dual Source (sourcing from both wafer fabs ICN8 and SSMC), where the actual sourcing is at NXPs discretion.

The above implies that there's no impact if you do not respond to or act on this PCN. You can continue to order the current parts without interruption.

NXP is introducing the Dual Source version to ensure the ability to continue business operations in the event of an interruption affecting all or part(s) of the NXP organization and to establish an industrial base able to support the ever-increasing demand for A-BCD3 products, driven by longer term growth in the In-Vehicle Networking market. To this end, we recommend customers to adopt this Dual Source version.

2. Why do you get this change notification?

You get this change notification because you have bought or are still buying one or more of the NXP product versions of TJA1042, produced in wafer fab ICN8, Nijmegen, the Netherlands. These current NXP 12NC product ordering codes are not affected by the proposed change, the Dual Source with SSMC.

NXP would like to communicate in a structured way on its intended implementation of the Dual Source for TJA1042 and the product qualification results for it.

3. What does Dual Source mean?

The versions of TJA1042 available for Dual Source, with the new NXP orderable part numbers and 12NC ordering codes, will be sourced from both ICN8 and SSMC, with the actual sourcing at NXPs discretion. This means that a customer order on a single Dual Source product can and will be delivered from either ICN8 or SSMC, or both. The assembly and test location will not change.

The wafer fab diffusion process in SSMC is an exact copy of the latest process in ICN8. The Bill-Of-Materials (BoM) of the Dual Source product is an exact copy of the latest BoM as used for the Single Source ICN8 TJA1042 product. Form, fit, function of the Dual Source product is unchanged. No datasheet changes arise from this announcement.

4. What product versions will be available from the Dual Source?

All functional and package versions of TJA1042 will get an additional Dual Source product version.

Dual Source will be available for the latest ICN8 diffusion process and product BoM only. The TJA1042 in an SO8 package was updated to this standardized BoM by NXP PCN 201206027, October 2012, resulting in the following transition in product versions:

- | | | |
|--------------|----|---------------|
| • TJA1042T | => | TJA1042T/CM |
| • TJA1042T/3 | => | TJA1042T/3/CM |

Customers still using the left column product versions can of course still benefit by qualifying the Dual Source product including the diffusion process and BoM update. In Appendix 1 on Page 5 the relevant information on the diffusion and BoM update from the original NXP PCN 201206027 is repeated. In the longer term, we foresee a phase out of products running on this A-BCD3 original BoM. No announcements on this are planned for at least the next 12 months. Ahead of any announcement, the products remain available without interruption.

For customers already using the updated right column product versions, the Dual Source product versions are an exact copy.

The HVSON8 package version of TJA1042 already used the standardized BoM, and will be Dual Sourced as is.

In Table 1 on page 3 the information in this paragraph is summarized, showing explicit references to the NXP orderable part numbers and 12NC ordering codes. Note that new product type names are required to be able to differentiate them from the ICN8 Single Source products. Where applicable explicit references to ICN8 (/CM) have been removed from the product type name.

Product	Current ICN8 Single Source product			New ICN8-SSMC Dual Source product			Comment	SSMC Dual Source?
	Product Type Name	Orderable part number	Ordering code (12NC)	Product Type Name	Orderable part number	Ordering code (12NC)		
TJA1042	TJA1042T	TJA1042T,112	9352 852 77112	N/A	N/A	N/A	Non-upgraded product, SO8 package	no
	TJA1042T	TJA1042T,118	9352 852 77118					
	TJA1042T/3	TJA1042T/3,112	9352 852 79112					
	TJA1042T/3	TJA1042T/3,118	9352 852 79118					
	TJA1042T/CM	TJA1042T/CM,112	9352 957 26112	TJA1042T/1	TJA1042T/1U	9353 027 19112	Upgraded product, SO8 package	yes
	TJA1042T/CM	TJA1042T/CM,118	9352 957 26118	TJA1042T/1	TJA1042T/1J	9353 027 19118		
	TJA1042T/3/CM	TJA1042T/3/CM,112	9352 957 27112	TJA1042T/3/1	TJA1042T/3/1U	9353 027 21112		
	TJA1042T/3/CM	TJA1042T/3/CM,118	9352 957 27118	TJA1042T/3/1	TJA1042T/3/1J	9353 027 21118		
	TJA1042TK/3	TJA1042TK/3,118	9352 852 93118	TJA1042TK/3/1	TJA1042TK/3/1J	9353 027 16118	leadless HVSON8 package	

Table 1: Overview of the TJA1042 product versions involved in this announcement, with explicit reference to the NXP orderable part numbers and 12NC ordering codes. Note that 12NC ending 112 is tube packing and 118 is reel packing.

5. Timing

The ICN8-SSMC Dual Source TJA1042 product versions are available for customer orders per today. Samples are available upon request.

Please note that no discontinuation, Last-Time-Buy (LTB) or Last-Time-Delivery (LTD) is associated with this PCN. The current Single Source ICN8 TJA1042 product versions are not affected by this PCN and remain available without interruption.

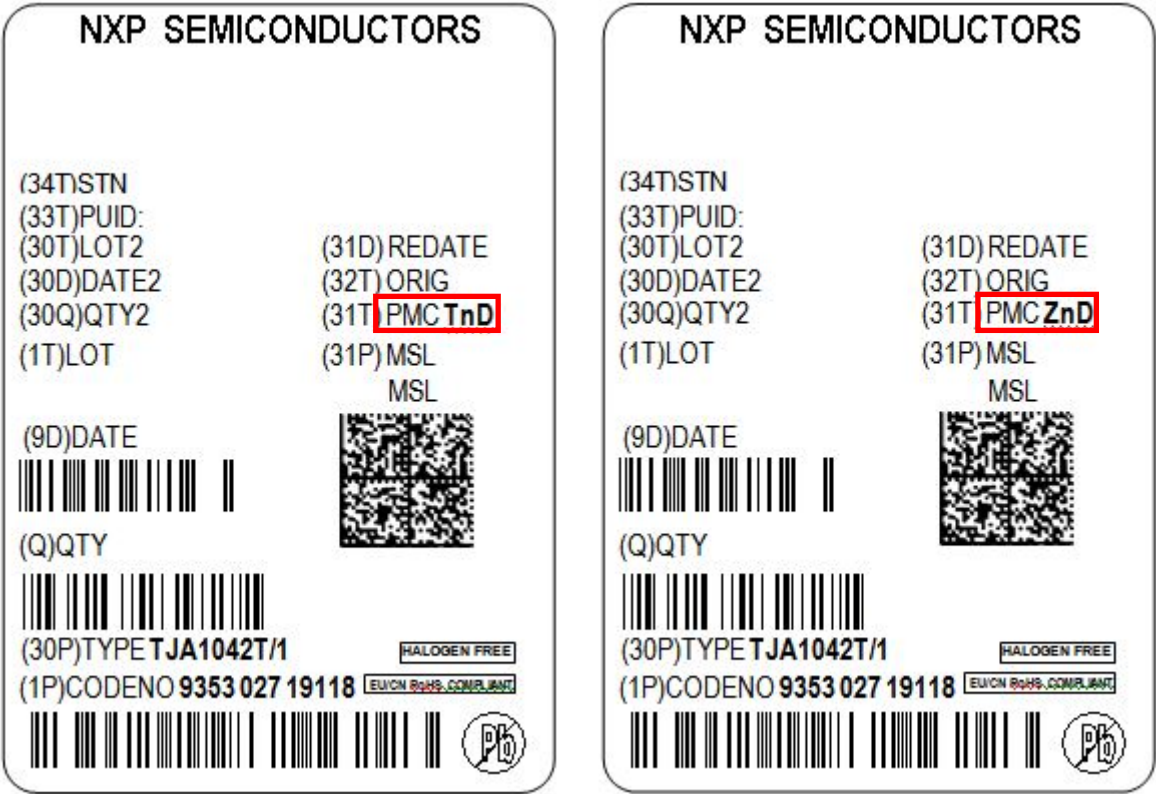
6. Qualification Results

Please download the qualification results from the NXP e-PCN system you're subscribed to, on the same tab 'Files' you obtained this document from.

7. Traceability

All Dual Source products are fully traceable. Customers can see the wafer fab source in line C of the products top-side marking (see next paragraph).

There will be no mixing of ICN8 and SSMC source products within a single reel/tube packing quantity. The label will show the diffusion wafer fab source in the first character of the 'PMC' code (see examples in the picture below).



Picture 1: Example labels for the Dual Source product TJA1042T/1. PMC code 'TnD' is ICN8, 'ZnD' is SSMC.

8. Product Type Name and Marking

Table 2 below shows the changes in TJA1042 product type name and top-side marking, applicable only to the Dual Source products. For the HVSON8 package product the top-side marking format will be changed to enable future improvements on product traceability. For the SO8 package products this marking format change was already introduced by NXP PCN 201206027.

Where applicable explicit references to ICN8 (/C) have been removed from the line A marking, and the wafer fab identifier has been added to the line C marking. This enables the traceability for customer, as mentioned above. The result is that the ICN8 products are differently marked depending on whether they are a Single Source or Dual Source product. As explained however the two are physically completely identical.

9. Customer qualification and samples

NXP has performed AEC-Q100 compliant qualifications for the Dual Source TJA1042 product versions, which should enable you to release these parts.

Should you or your end-customer require further qualification, samples are available. Please note that orders for the Dual Source TJA1042 product versions from Table 1 do not contain a prescribed mix of ICN8 and SSMC source material. Therefore, please contact your NXP sales representative to obtain samples from a guaranteed source.

NXP expertise is available to help you minimize the qualification effort for the Dual Source. Please contact your NXP sales representative or 'abl.customer.service@nxp.com' for this.

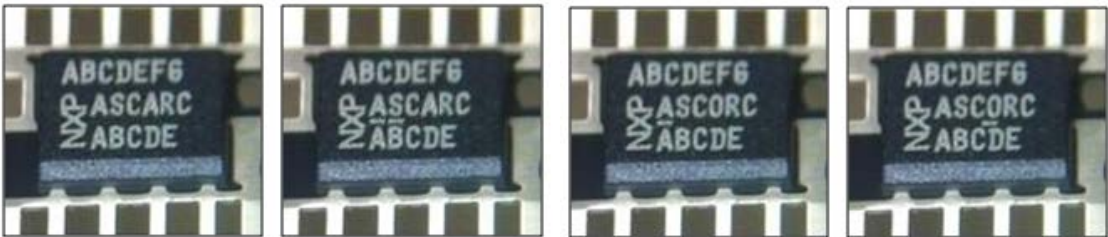
Table 2: Product Type Name and Marking

Type name and marking of product TJA1042 will be changed as follows:

current ICN8 Single Source		new Dual Source	
		ICN8	SSMC
SO8	TJA1042T/CM A42/C xxxxxx nDxxx	TJA1042T/1 TJA1042 xxxxxx Tnxxx1	TJA1042T/1 TJA1042 xxxxxx Znxxx1
SO8	TJA1042T/3/CM A42/3C xxxxxx nDxxx	TJA1042T/3/1 A1042/3 xxxxxx Tnxxx1	TJA1042T/3/1 A1042/3 xxxxxx Znxxx1
HVSON8	TJA1042TK/3 A42/3 xxxxxx Dxxx	TJA1042TK/3/1 A42/3 xxxxxx Tnxxx1	TJA1042TK/3/1 A42/3 xxxxxx Znxxx1

T = wafer fab ICN8, Z = wafer fab SSMC, D = Dark Green, n = assembly site APB, Thailand.

In addition to the change in line B marking for TJA1042TK/3, there will be additional dashes between line B and C. The amount and position of these dashes can vary, see the 4 pictures below for examples. These are generic examples, all lines will follow the above-mentioned marking format.



Appendix 1: Relevant changes from NXP PCN 201206027

The relevant changes for A-BCD3 product TJA1042 were:

- Upgrade of the A-BCD3 diffusion process with High-Density-Plasma (HDP) oxide based passivation, improving robustness against passivation cracks. This is already in use for years for other automotive products in the A-BCD3 diffusion process. This change is only applicable to TJA1042T. Both the TJA1042T/3 and the HVSON package TJA1042TK/3 already benefit from this upgrade.
- 20µm AuPd bondwire i.s.o. 25µm Au bondwire, already in use for the HVSON package TJA1042TK/3.
- 280µm die thickness i.s.o. 380µm, already in use for the HVSON package TJA1042TK/3.

These changes brought the product in line with what is already in use for the majority of our products, and help to standardize our industrial processes.