

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.		ADG/22/13775
1.3 Title of PCN		Migration of DPAK IGBT Leadframe from Standard to Matrix
1.4 Product Category		IGBT
1.5 Issue date		2022-11-17

2. PCN 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	Angelo RAO
2.1.2 Marketing Manager	Giuseppe BAZZANO
2.1.3 Quality Manager	Vincenzo MILITANO

3. Change

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Materials	New direct material part number (same supplier, different supplier or new supplier), Lead frame base material	STS Shenzhen

4. Description of change

	Old	New
4.1 Description	The current Leadframe used for DPAK package is Standard single row	The DPAK Leadframe will migrate to the Matrix Leadframe
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	no impact	

5. Reason / motivation for change

5.1 Motivation	Back-End rationalization
5.2 Customer Benefit	SERVICE IMPROVEMENT

6. Marking of parts / traceability of change

6.1 Description	by FG code and Q.A. number
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7. Timing / schedule

7.1 Date of qualification results	2022-11-14
7.2 Intended start of delivery	2023-05-14
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	13775 RERPTD22078_1_STGD19N40LZ_I2B4_DPAK_from STS STD to STS Matrix_Automotive.pdf	
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date 2022-11-17

9. Attachments (additional documentations)

13775 Public product.pdf

13775 PCN_DPAK IGBT Matrix IZB4 SMB4.pdf

13775 RERPTD22078_1_STGD19N40LZ_IZB4_DPAK_from STS STD to STS Matrix_Automotive.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
	STGD18N40LZT4	
	STGD19N40LZ	
	STGD20N40LZ	

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Automotive Discrete Group (ADG)
Power Transistor Sub-Group
IGBT & IPM Business Unit
Process Change Notification

Migration of DPAK IGBT Leadframe from Standard to Matrix

Dear valued Customer,

Following the optimization and the rationalization of our Back-End manufacturing processes, this is to notify you that we're going to migrate the DPAK IGBT Leadframe in our Shenzhen plant from the current Standard single row Leadframe to the Matrix Leadframe.

The Matrix Leadframe is already largely and successfully used in most of the recent Automotive IGBT, such as STGD20N45LZAG and STGD25N40LZAG, and will grant the same quality and electrical characteristics of the current production.

Involved product:

Product Family	Package	Involved Product	Test Vehicle Samples
IGBT	DPAK	STG18N40LZT4, STGD19N40LZ, STGD20N40LZ	STGD19N40LZ

Qualification program and results availability:

The qualification report is provided in attachment to this document.

Samples availability:

Samples of the test vehicle device are available.

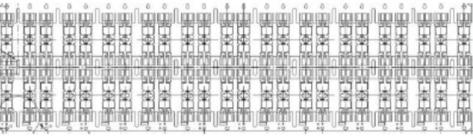
Change implementation schedule:

The production start and first shipments are expected to be implemented starting from week 19 / 2023.

Marking and traceability:

Unless otherwise stated by customer specific requirements, the traceability of the devices affected by this process change will be ensured by the internal code (Finished Good) and Q.A. number.

Leadframes comparison

Leadframe	BEFORE	AFTER
Type	Current Leadframe Standard single row	Leadframe Matrix
Lead frame PN	5FT18597	5FT34363
Lead frame drawing No.	7790961	7200780
Lead frame Description	FRAME TO251 3L Big Ve5 OpE 30u SeINi/NiP	FRAME TO252 Mtx DG Ve3 SeINi/NiP
Lead frame Size	239.40(± 0.1) x 19.80(± 0.05)	215.70(± 0.1) x 57.658(± 0.075)
Units per frame	30 pcs	96 pcs
Supplier	SDI(Taiwan) / GOTOH(Philippines)	SDI(Taiwan) / GOTOH(Philippines)
Etch/Stamp	Stamp	Stamp
Finishing	SeINi/NiP	SeINi/NiP
Material	Wieland_K80 / Mitsubishi_TAMAC4	Mitsubishi_TAMAC4 / Mitsubishi_TAMAC4
Drawing		

Yours faithfully,



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

PCN Title : Migration of DPAK IGBT Leadframe from Standard to Matrix

PCN Reference : ADG/22/13775

Subject : Public Products List

Dear Customer,

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

STGD20N40LZ	STGD18N40LZT4	STGD19N40LZ
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