


# PRODUCT / PROCESS CHANGE NOTIFICATION

## 1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.	MDG/20/11442	
1.3 Title of PCN	SG8E (Singapore) additional source for STM8L052 32k/64k - STM8L15x 32k/64k products	
1.4 Product Category	STM8L052 32k/64k - STM8L15x 32k/64k listed products	
1.5 Issue date	2020-11-17	

## 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	Ricardo Antonio DE SA EARP
2.1.2 Marketing Manager	Veronique BARLATIER
2.1.3 Quality Manager	Pascal NARCHE

## 3. Change

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Transfer	Line transfer for a full process or process brick (process step, control plan, recipes) from one site to another site: Wafer fabrication	ST SG8E 8" (Singapore)

## 4. Description of change

	Old	New
4.1 Description	Front-end source: - ST Rousset 8" France	Front-end sources: - ST Rousset 8" France - ST SG8E 8" Singapore - added source There is no change in the product functionality. Please refer to PCN 11442 – Additional information attached document.
4.2 Anticipated Impact on form, fit, function, quality, reliability or processability?	Packaged products : no change.	

## 5. Reason / motivation for change

5.1 Motivation	Due to the success on the market of STM8 devices, ST Microcontrollers Division decided to qualify an additional front-end site to maintain state of the art service level to our customers thanks to extra capacity.
5.2 Customer Benefit	CAPACITY INCREASE

## 6. Marking of parts / traceability of change

6.1 Description	Change is visible through diffusion traceability plant, in the marking: - "VG" for ST Rousset 8" (France) - "VC" for ST SG8E 8" (Singapore)
-----------------	---

## 7. Timing / schedule

7.1 Date of qualification results	2020-12-31
7.2 Intended start of delivery	2021-02-01
7.3 Qualification sample available?	Upon Request

## 8. Qualification / Validation

8.1 Description	11442 MDG-MCD-RER1906 - PCN11442 - ST SG8E (Singapore) additional source for STM8L052x STM8L151x and STM8L152x products - reliability.pdf
-----------------	---

8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2020-11-17
--	----------------------------	------------	------------

9. Attachments (additional documentations)
11442 Public product.pdf 11442 MDG-MCD-RER1906 - PCN11442 - ST SG8E (Singapore) additional source for STM8L052x STM8L151x and STM8L152x products - reliability.pdf 11442 PCN11442_Additional information.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
	STM8L052C6T6	
	STM8L052C6T6TR	
	STM8L052R8T6	
	STM8L052R8T6TR	
	STM8L151C4T6	
	STM8L151C4U6	
	STM8L151C4U6TR	
	STM8L151C6T3	
	STM8L151C6T6	
	STM8L151C6U3	
	STM8L151C6U6	
	STM8L151C6U6TR	
	STM8L151C8T3	
	STM8L151C8T6	
	STM8L151C8T6TR	
	STM8L151C8T7	
	STM8L151C8U3	
	STM8L151C8U6	
	STM8L151C8U6TR	
	STM8L151G4U3	
	STM8L151G4U6	
	STM8L151G4U6TR	
	STM8L151G4Y3TR	
	STM8L151G4Y6TR	
	STM8L151G6U3	
	STM8L151G6U3TR	
	STM8L151G6U6	
	STM8L151G6U6TR	
	STM8L151G6U7	
	STM8L151G6Y3TR	
	STM8L151G6Y6TR	
	STM8L151K4T3	
	STM8L151K4T6	
	STM8L151K4T6TR	
	STM8L151K4U6	
	STM8L151K4U6TR	
	STM8L151K6T3	
	STM8L151K6T6	
	STM8L151K6T6TR	
	STM8L151K6U3	
	STM8L151K6U6	

	STM8L151K6U6TR	
	STM8L151M8T6	
	STM8L151M8T6TR	
	STM8L151R6T6	
	STM8L151R6T6TR	
	STM8L151R8T6	
	STM8L151R8T6TR	
	STM8L152C4T3	
	STM8L152C4T6	
	STM8L152C4T6TR	
	STM8L152C4U6	
	STM8L152C6T6	
	STM8L152C6U3	
	STM8L152C6U6	
	STM8L152C8T6	
	STM8L152C8U6	
	STM8L152K4T6	
	STM8L152K4T6TR	
	STM8L152K4U6	
	STM8L152K6T3	
	STM8L152K6T6	
	STM8L152K6U6	
	STM8L152K6U6TR	
	STM8L152K8Y6TR	
	STM8L152M8T6	
	STM8L152M8T6TR	
	STM8L152M8T7	
	STM8L152R6T6	
	STM8L152R6T6TR	
	STM8L152R8T6	
	STM8L162M8T6	
	STM8L162M8T6TR	
	STM8L162R8T6	

## **IMPORTANT NOTICE – PLEASE READ CAREFULLY**

Subject to any contractual arrangement in force with you or to any industry standard implemented by us, STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

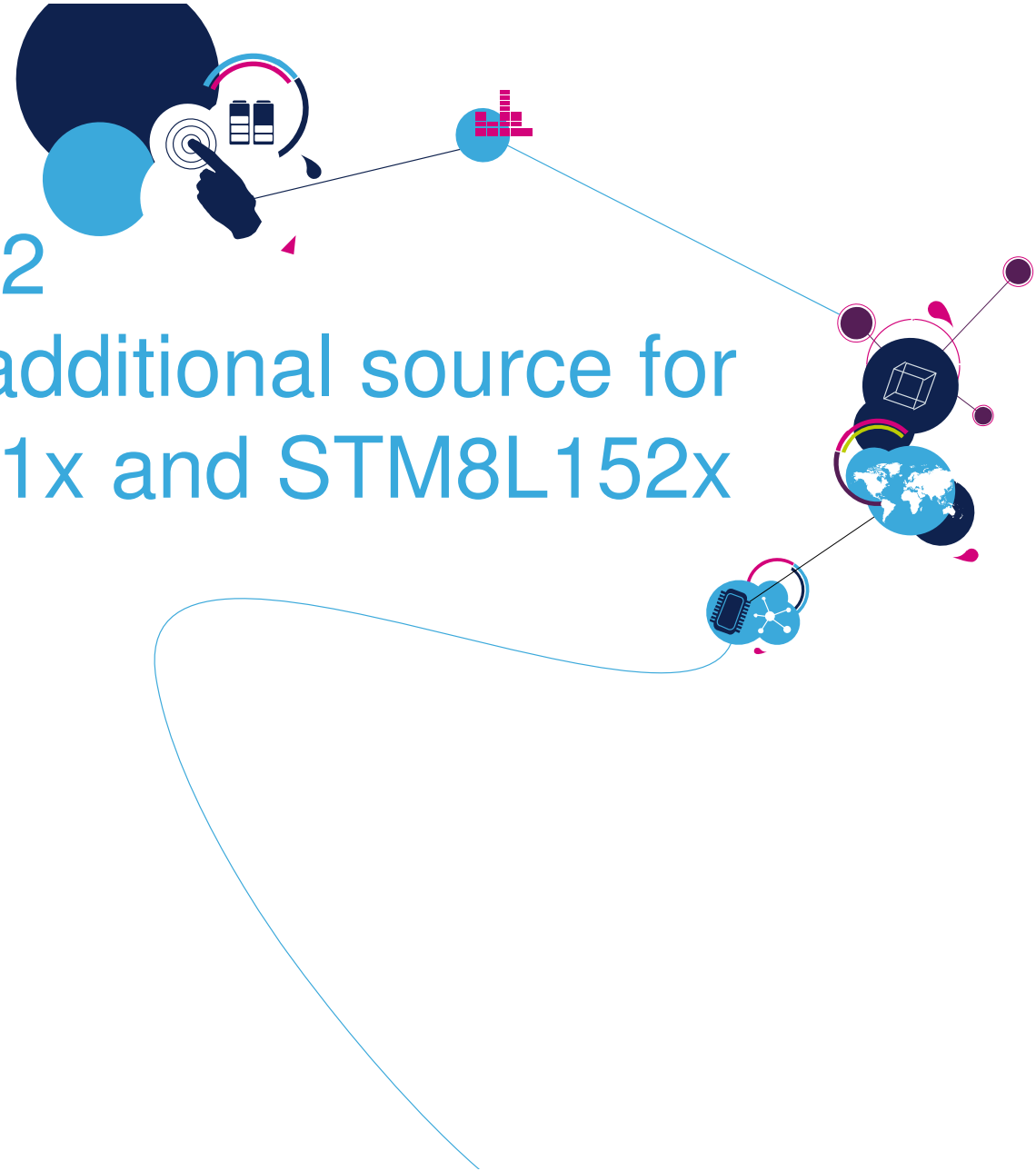
No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2018 STMicroelectronics – All rights reserved



# RER1906 for PCN11442

## ST SG8E (Singapore) additional source for STM8L052x, STM8L151x and STM8L152x products

### Reliability Evaluation Plan

Oct 09<sup>th</sup>, 2020

MDG Quality & Reliability Department



## RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM STM8L Die Test Vehicles

2

Die Vehicle	Process Perimeter	Assembly Line	Package	Number of Reliability Lots
768	F9GO2	MUAR	LQFP14*14 80L	3 lots to qualify Process Perimeter
764		JSCC	LQFP7*7 48L	Then 1 lot by Die

# RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM STM8L Die Reliability Trials

3

Reliability Trial & Standard		Test Conditions	Pass Criteria	Lot Strategy	Units per Lot
ESD HBM	0060102 JESD22-A114ANSI/ESDA JEDEC JS-001	25°C	2kV (class 2)	1 to 3 lots	3
ESD CDM	ESD Charged Device Model ANSI/ESD STM5.3.1	Aligned with device datasheet	250V to 500V	1 lot	3
LU	0018695 JESD78	125°C REG-ON Configuration 125°C REG-OFF Configuration	No concern	1 to 3 lots	3 3
EDR + Bake	JESD22-A117 JESD22-A103	125°C & 3.6V Cycling 150°C Bake	10k cycles 1500h 1000h	1 to 3 lots 1 <sup>st</sup> lot 2 <sup>nd</sup> & 3 <sup>rd</sup> if any	77
EDR + Bake	JESD22-A117 JESD22-A103	25°C & 3.6V Cycling 150°C Bake	10k cycles 168h	1 to 3 lots	77
EDR + Bake	JESD22-A117 JESD22-A103	-40°C & 3.6V Cycling 150°C Bake	10k cycles 168h	1 to 3 lots	77
ELFR	MIL-STD-883 Method 1005 JESD22-A108 JESD74	125°C & 3.6V	48h	3 lots by process perimeter	500 units min per lot Total of 2000 units
HTOL	MIL-STD-883 Method 1005 JESD22-A108	125°C & 3.6V 100MHz	1200h 600h	1 <sup>st</sup> lot 2 <sup>nd</sup> & 3 <sup>rd</sup> if any	77

# RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM8L Package Test Vehicles

4

Package Line	Assembly Line	Package	Wire	Die Vehicle / Rawline (*)	Number of Reliability Lots
LQFP	MUAR	LQFP14*14 80L	Au	768 / 1S*768	3 lots to qualify F9GO2 Technology Then 1 lot by Package Assembly Line
	JSCC	LQFP7*7 48L	Ag	764 / 5B*764	
	ASE	LQFP7*7 48L	Au	768 / 5B*768	
QFN	JSCC	UFQFPN4*4 28L	Ag	764 / MB*764	
WLCSP	SCS	WLCSP32	-	768 / CF*768	



# RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM STM8L Package Reliability Trials

5

Reliability Trial & Standard		Test Conditions	Pass Criteria	Lot Strategy	Units per Lot
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 1 J-STD-020/ JESD22-A113	Bake (125°C / 24h) Soak (85°C / 85% RH / 168h) for level 1 Convection reflow: 3 passes with Jedec level 1	3 Passes MSL1/3	1 to 3 lots	231 to 308 (**)
	Pre Conditioning: Moisture Sensitivity Jedec Level 3 J-STD-020/ JESD22-A113	Bake (125°C / 24h) Soak (30°C / 60% RH / 192h) for level 3 Convection reflow: 3 passes with Jedec level 3			
UHASt (*) (**)	Unbiased Highly Accelerated Temperature & Humidity Stress JESD22-A118	130°C, 85%RH, 2 Atm	96h	1 to 3 lots	77
TC (*)	Thermal Cycling JESD22-A104	-65°C +150°C	500Cy	1 to 3 lots	77
THB (*)	Temperature Humidity Bias JESD22-A101	85°C, 85% RH, bias	1000h	1 to 3 lots	77
HTSL (*)	High Temperature Storage Life JESD22-A103	150°C - no bias	1000h	1 to 3 lots	77
Construction Analysis	JESD22-B102	Including Solderability & Physical Dimensions	No concern	1 by package assembly line	15
	JESD22-B100/B108				10
ESD CDM	ESD Charged Device Model ANSI/ESD STM5.3.1	Aligned with device datasheet	250V to 500V	1 by package assembly line	3

## IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics International NV and its affiliates (“ST”) reserve the right to make changes corrections, enhancements, modifications, and improvements to ST products and/or to this document any time without notice.

This document is provided solely for the purpose of obtaining general information relating to an ST product. Accordingly, you hereby agree to make use of this document solely for the purpose of obtaining general information relating to the ST product. You further acknowledge and agree that this document may not be used in or in connection with any legal or administrative proceeding in any court, arbitration, agency, commission or other tribunal or in connection with any action, cause of action, litigation, claim, allegation, demand or dispute of any kind. You further acknowledge and agree that this document shall not be construed as an admission, acknowledgement or evidence of any kind, including, without limitation, as to the liability, fault or responsibility whatsoever of ST or any of its affiliates, or as to the accuracy or validity of the information contained herein, or concerning any alleged product issue, failure, or defect. ST does not promise that this document is accurate or error free and specifically disclaims all warranties, express or implied, as to the accuracy of the information contained herein. Accordingly, you agree that in no event will ST or its affiliates be liable to you for any direct, indirect, consequential, exemplary, incidental, punitive, or other damages, including lost profits, arising from or relating to your reliance upon or use of this document.

Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement, including, without limitation, the warranty provisions thereunder.

In that respect please note that ST products are not designed for use in some specific applications or environments described in above mentioned terms and conditions.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

Information furnished is believed to be accurate and reliable. However, ST assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and ST logo are trademarks of ST. All other product or service names are the property of their respective owners.  
Information in this document supersedes and replaces information previously in any prior version of this document.

© 2020 STMicroelectronics - All rights reserved

[www.st.com](http://www.st.com)





**PRODUCT/PROCESS  
CHANGE NOTIFICATION  
PCN 11442 – Additional information**

---

**SG8E (Singapore) additional source for  
STM8L052 32k/64k - STM8L15x 32k/64k products**

---

**MDG - Microcontrollers Division (MCD)**

The standard marking is:



.....  
.....  
PPLL **WX**  
COO TF YWW

**WX** code indicates the diffusion traceability plant code.

Please refer to the DataSheet for marking details.

The marking is changing as follows:

Existing		Additional	
WX code	Fab	WX code	Fab
VG	ST Rousset 8”(France)	VC	ST SG8 8" (Singapore)

## How to order samples?

- For all samples request linked to this PCN, please:
- place a **Non-standard** sample order (choose Sample Non Std Type from pull down menu)
  - insert the PCN number “**PCN11442**” into the NPO Electronic Sheet/**Regional Sheet**
  - request sample(s) through Notice tool, indicating a single Commercial Product for each request

The image shows two screenshots of the SAP NPO Sample order form. The top screenshot is a close-up of the 'Sample Type' dropdown menu, which is open and shows the following options: 'Sample Non Std Type', 'Sample Std Type', 'Sample Non Std Type', and 'Sample Non Std w Spl Tests'. A red arrow points from this menu to the 'Sample Type' field in the main form below. The main form is titled 'SO | NPO Sample' and contains various fields for order details. A red circle highlights the 'Regional Sheet' field, which contains the text 'PCN 10595'. The 'Sample Type' field in the main form is also set to 'Sample Non Std Type'.

Partial Ship: 01 Price Pol: 05 Status: 01 Canc: ☐

%: 0 Sample Type: Sample Non Std Type

Closing Type: Sample Std Type

Lab Sheet:

SO | NPO Sample

Header

SO Nr: 8018S02433 Customer: 99770200 01 ST-TOKYO SO Type: 30 Sample Order Cost Center: JT3129 SAMPLES /SALES J

PO Nr: Carrier Code: 0001 Price Policy: 05 Currency: 02 U.S. DOLLAR Req Name:

Notes: Status: 01 All items pending\_n Issuing Date: 25-JUN-2018 Ord Val: 0.0000 Sample Req Date: 25-Jun-2018

Sch I Nr	PO I. Nr.	Finished Good	Comm Qty	Open Qty	Plant Open Qty	Reqd Qty	Unit Price	RD	CD	EDD	St
1.1.10	000001	STM32F429NIH6	30	30	30	30	0.0000	25-Jun-18	01-Mar-59	01-Mar-59	01

Final Cust: PO Item: 000001 Comm Prod: STM32F429NIH6 Qty: 30 RD: 25-Jun-18 Unit Price: 0.0000 Final Cust: 8800367006 SANSHIN/NPC

Cust Part Nr: Finished Good: Partial Ship: 01 Price Pol: 05 Status: 01 Canc: ☐

Notes: TAM K Pieces: 0 Our Share%: 0 Sample Type: Sample Non Std Type

Project Name: Closing Date: Closing Type:

Regional Sheet: PCN 10595

Lab Sheet:

## IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics International NV and its affiliates (“ST”) reserve the right to make changes corrections, enhancements, modifications, and improvements to ST products and/or to this document any time without notice.

This document is provided solely for the purpose of obtaining general information relating to an ST product. Accordingly, you hereby agree to make use of this document solely for the purpose of obtaining general information relating to the ST product. You further acknowledge and agree that this document may not be used in or in connection

with any legal or administrative proceeding in any court, arbitration, agency, commission or other tribunal or in connection with any action, cause of action, litigation, claim, allegation, demand or dispute of any kind. You further acknowledge and agree that this document shall not be construed as an admission, acknowledgement or evidence of any kind, including, without limitation, as to the liability, fault or responsibility whatsoever of ST or any of its affiliates, or as to the accuracy or validity of the information contained herein, or concerning any alleged product issue, failure, or defect. ST does not promise that this document is accurate or error free and specifically disclaims all warranties, express or implied, as to the accuracy of the information contained herein. Accordingly, you agree that in no event will ST or its affiliates be liable to you for any direct, indirect, consequential, exemplary, incidental, punitive, or other damages, including lost profits, arising from or relating to your reliance upon or use of this document.

Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement, including, without limitation, the warranty provisions thereunder.

In that respect please note that ST products are not designed for use in some specific applications or environments described in above mentioned terms and conditions.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products. Information furnished is believed to be accurate and reliable. However, ST assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously in any prior version of this document.



## 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 :** SG8E (Singapore) additional source for STM8L052 32k/64k - STM8L15x 32k/64k products

**PCN Reference :** MDG/20/11442

**Subject :** Public Products List

Dear Customer,

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

STM8L151R8T6	STM8L052C6T6	STM8L151R6T6TR
STM8L151C6T3TR	STM8L052R8T6	STM8L151K4T3
STM8L151C4U6	STM8L162R8T6	STM8L151C6U6TR
STM8L152C4T6TR	STM8L152K6U6	STM8L152M8T6TR
STM8L151G6U7	STM8L151C4T6	STM8L151G6U7TR
STM8L151G4U6TR	STM8L151C8U6TR	STM8L152C6T6TR
STM8L151R8T3	STM8L151G4U6	STM8L151G6U3
STM8L152R8T6	STM8L152C4T3	STM8L152K6U6TR
STM8L151C4U6TR	STM8L151C6U3TR	STM8L151K6U6
STM8L152M8T3	STM8L151C8T6TR	STM8L151K4T6TR
STM8L152K4T6	STM8L152C4T3TR	STM8L151K6U6TR
STM8L152K6T6	STM8L151C8U3	STM8L151R8T6TR
STM8L152C4T6	STM8L151G6U6	STM8L151C8T3
STM8L151G6U3TR	STM8L151C8T7	STM8L152R8T3
STM8L151K6U3	STM8L152R6T6	STM8L152R6T6TR
STM8L151M8T6	STM8L151G6U6TR	STM8L052R8T6TR
STM8L152C4U6	STM8L151G4U3	STM8L151C6U3
STM8L151C4T6TR	STM8L152C8T6	STM8L052C6T6TR
STM8L152C8U6	STM8L152C6U6	STM8L152M8T6
STM8L151K6U3TR	STM8L151K6T6	STM8L151C8T6
STM8L151C8U6	STM8L151C6T6	STM8L152M8T7
STM8L152K6T3	STM8L151K6T6TR	STM8L151K6T3
STM8L152C6T6	STM8L151R6T6	STM8L151M8T6TR
STM8L152C8T6TR	STM8L151G4Y6TR	STM8L151K4U6TR
STM8L152K4T6TR	STM8L152K4U6	STM8L151C6U6
STM8L151K4U6	STM8L151G6Y6TR	STM8L151C4T3
STM8L162M8T6	STM8L151C6T6TR	STM8L151K4T6
STM8L152C6U3	STM8L151C6T3	STM8L162M8T6TR
STM8L152K8Y6TR	STM8L151G6Y3TR	STM8L151G4Y3TR



### IMPORTANT NOTICE – PLEASE READ CAREFULLY

Subject to any contractual arrangement in force with you or to any industry standard implemented by us, STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.