12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20250212004.1
Qualification of RFAB using qualified Process Technology, Die Revision, Datasheet and additional Assembly Site/BOM options for select devices
Change Notification / Sample Request

Date: February 12, 2025
To: PREMIER FARNELL PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments (TI). The details of this change are on the following pages, and are in alignment with our standard product change notification (PCN) process.

TI requires acknowledgement of receipt of this notification within 60 days of the date of this notice. Lack of acknowledgement of this notice within 60 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within 60 days of this notification, given that samples are not built ahead of the change.

The Proposed First Ship date in this PCN letter is the earliest possible date that customers could receive the changed material. It is our commitment that the changed device will not ship before that date. If samples are requested within the 60 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

Changes outlined in this notification underscore our commitment to product longevity and supply continuity, as well as our continued efforts to transition to newer, more efficient manufacturing processes and technologies. Specifically, this particular notification is related to TI's multiyear transition plan for our two remaining 150-millimeter production lines (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). SFAB closure activities are expected to begin by the end of 2025. DFAB will remain open with a smaller set of 200mm technologies and GaN.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the Change Management team. For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

TI values customer engagement and feedback related to TI changes. Customers should contact TI if there are questions or concerns regarding a change notification.

Change Management Team
SC Business Services

20250212004.1
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
SE555P	NULL
NE555P	NULL
NA555P	NULL

Technical details of this Product Change follow on the next page(s).

PCN Number:	20250212004.1	PCN Date:	February 12, 2025
Title:	Qualification of RFAB using qualified Process Technology, Die Revision, Datasheet and additional Assembly Site/BOM options for select devices		
Customer Contact:	Change Management Team	Dept:	Quality Services
Proposed 1st Ship Date:	May 13, 2025	Sample requests accepted until:	April 13, 2025*

***Sample requests received after April 13, 2025 will not be supported.**

Change Type:

☒	Assembly Site	☒	Design	☐	Wafer Bump Material
☒	Assembly Process	☒	Data Sheet	☐	Wafer Bump Process
☒	Assembly Materials	☐	Part number change	☒	Wafer Fab Site
☐	Mechanical Specification	☐	Test Site	☒	Wafer Fab Material
☒	Packing/Shipping/Labeling	☐	Test Process	☒	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the addition of RFAB using the TIB qualified process technology and additional Assembly Site/BOM options for the devices listed below.

Current Fab Site			Additional Fab Site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab Site**	**Process**	**Wafer Diameter**
SFAB	JI1	150 mm	RFAB	TIB	300 mm

The die was also changed as a result of the process change.

Construction differences are as follows:

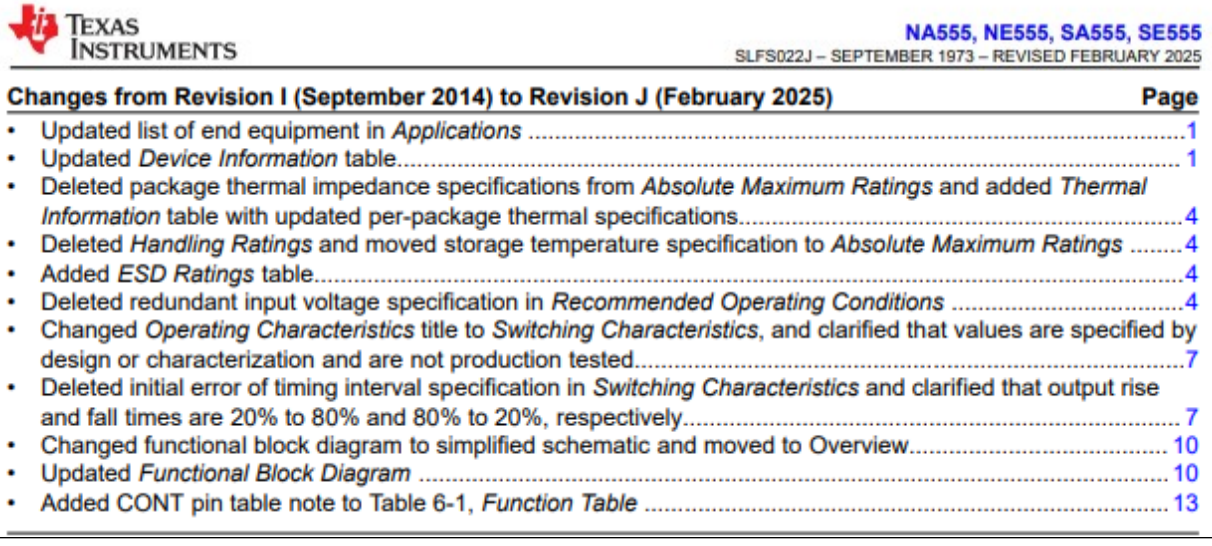
Group 1 BOM Table (RFAB/Process migration, die change plus BOM updates):

	Current	**New**
Bond Wire composition/diameter	Cu, 0.96 mil	**Cu, 0.8 mil**
Pin one designator	dot or stripe	**dot**

Group 2 BOM Table (RFAB/Process migration, die change plus FMX as new Assembly site & BOM update):

	TAI	**FMX**
Bond Wire composition/diameter	Au, 0.96 mil	**Cu, 0.8 mil**

The datasheets will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history. The links to the revised datasheets are available in the table below.



TEXAS INSTRUMENTS

NA555, NE555, SA555, SE555

SLFS022J – SEPTEMBER 1973 – REVISED FEBRUARY 2025

Changes from Revision I (September 2014) to Revision J (February 2025) **Page**

- Updated list of end equipment in *Applications* 1
- Updated *Device Information* table 1
- Deleted package thermal impedance specifications from *Absolute Maximum Ratings* and added *Thermal Information* table with updated per-package thermal specifications 4
- Deleted *Handling Ratings* and moved storage temperature specification to *Absolute Maximum Ratings* 4
- Added *ESD Ratings* table 4
- Deleted redundant input voltage specification in *Recommended Operating Conditions* 4
- Changed *Operating Characteristics* title to *Switching Characteristics*, and clarified that values are specified by design or characterization and are not production tested 7
- Deleted initial error of timing interval specification in *Switching Characteristics* and clarified that output rise and fall times are 20% to 80% and 80% to 20%, respectively 7
- Changed functional block diagram to simplified schematic and moved to Overview 10
- Updated *Functional Block Diagram* 10
- Added CONT pin table note to Table 6-1, *Function Table* 13

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
xx555	SLFS022I	**SLFS022J**	http://www.ti.com/product/NA555

Qual details are provided in the Qual Data Section.

Reason for Change:

These changes are part of our multiyear plan to transition products from our 150-millimeter factories to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Impact on Environmental Ratings:

Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.

RoHS	REACH	Green Status	IEC 62474
☒ No Change	☒ No Change	☒ No Change	☒ No Change

Changes to product identification resulting from this PCN:

Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
SH-BIP-1	SHE	USA	Sherman
RFAB	**RFB**	**USA**	**Richardson**

Die Rev:

Current	**New**
Die Rev [2P]	**Die Rev [2P]**
B, D	**A**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TAI	TAI	TWN	Chung Ho, New Taipei City
FMX	**MEX**	**MEX**	**Aguascalientes**

Sample product shipping label (not actual product label):

Product Affected:

Group 1 Device List: (FAB/Process migration, die change plus BOM update):

NA555DR	SA555DR	NE555P	SE555P
NE555DR	NA555P	SA555P	NE555PWR

Group 2 Device list: (RFAB/Process migration, die change plus FMX as new Assembly site & BOM update):

SE555DR

For alternate parts with similar or improved performance, please visit the product page on TI.com

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	#	Test Name	Condition	Duration	Qual Device: NE555DR	QBS Process Reference: MC33063ADR	QBS Process Reference: MC33063ADR	QBS Package Reference: MC33063AQDRQ1	QBS Process Reference: OP07CDR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	3/135/0	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	3/231/0	3/231/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	2/154/0	1/77/0	3/231/0	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	-	1/77/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	1/800/0	2/1600/0	3/2400/0	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0	-

Type	#	Test Name	Condition	Duration	Qual Device: NE555DR	QBS Process Reference: MC33063ADR	QBS Process Reference: MC33063ADR	QBS Package Reference: MC33063AQDRQ1	QBS Process Reference: OP07CDR
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	3/30/0	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	1/3/0	-	-	1/3/0
ESD	E2	ESD CDM	-	500 Volts	-	-	-	1/3/0	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	1/3/0	-	-	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	1/3/0	-	1/6/0	1/3/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	1/30/0	3/90/0	1/30/0

- QBS: Qual By Similarity
- Qual Device NE555DR is qualified at MSL1 260C

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

TI Qualification ID: R-CHG-2308-019

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	#	Test Name	Condition	Duration	Qual Device: NE555P	Qual Device: NE555PWR	Qual Device: NE555DR	QBS Product Reference: NE555DR	QBS Reference: UCC37322P	QBS Reference: LM2902BQPWRQ1	QBS Reference: LM2903BQDRQ1	QBS Reference: TMP1075DR	QBS Reference: MC33063ADR	QBS Reference: MC33063ADR	QBS Reference: OPA2991QDRQ1	QBS Reference: OPA2277P	QBS Reference: TL071CP	QBS Reference: LM2901VQPWRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	-	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	-	-	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	3/231/0	-	-	-	-	-	-	-	-	-
UHAST	A3	Unbiased HAST	110C/85%RH	264 Hours	-	-	-	-	-	3/231/0	-	-	-	-	-	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	1/77/0	1/77/0	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0	1/77/0	1/77/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-	3/231/0	3/135/0	-	-	-	3/135/0	-	-	1/45/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	3/231/0	-	-	3/231/0	3/231/0	3/231/0	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	-	-	-	-	-	2/154/0	1/77/0	-	-	-	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	-	-	-	3/231/0	-	-	-	-	-	-	1/77/0
HTOL	B1	Life Test	150C	408 Hours	-	-	-	-	-	3/231/0	-	-	-	-	1/76/0	-	-	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	-	-	-	3/2400/0	3/2400/0	-	1/800/0	2/1600/0	-	-	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	-	-	-	1/15/0	-	-	-	-	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	-	3/66/0	-	1/15/0	-	-	-	-	-	-	1/15/0
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	-	-	3/30/0	3/30/0	-	-	-	3/30/0	-	-	1/10/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	1/3/0	-	1/3/0	-	3/9/0	1/3/0	1/3/0	1/3/0	-	1/3/0	1/3/0	-	1/3/0
ESD	E2	ESD HBM	-	1000 Volts	-	-	-	1/3/0	-	-	-	-	1/3/0	-	-	1/3/0	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	-	-	3/9/0	1/3/0	-	-	-	1/3/0	-	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	-	-	1/3/0	-	3/18/0	1/6/0	-	1/3/0	-	1/6/0	1/3/0	-	1/6/0

Type	#	Test Name	Condition	Duration	Qual Device: NE555P	Qual Device: NE555PWR	Qual Device: NE555DR	QBS Product Reference: NE555DR	QBS Reference: UCC37322P	QBS Reference: LM2902BQPWRQ1	QBS Reference: LM2903BQDRQ1	QBS Reference: TMP1075DR	QBS Reference: MC33063ADR	QBS Reference: MC33063ADR	QBS Reference: OPA2991QDRQ1	QBS Reference: OPA2277P	QBS Reference: TL071CP	QBS Reference: LM2901VQPWRQ1
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	-	1/30/0	-	3/90/0	3/90/0	-	1/30/0	1/30/0	3/90/0	1/30/0	-	3/90/0

- QBS: Qual By Similarity
- Qual Device NE555P is qualified at NOT CLASSIFIED NOT CLASSIFIED
- Qual Device NE555PWR is qualified at MSL1 260C
- Qual Device NE555DR is qualified at MSL1 260C

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/600 Cycles

Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

TI Qualification ID: R-CHG-2306-033

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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