



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20180319003

**Qualification of an additional material set for select devices in the QFN package
Change Notification / Sample Request**

Date: March 29, 2018

To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require samples or additional data to support your evaluation, please request within 30 days.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

20180319003
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TPS65910A31A1RSLR	null
BQ24074RGTT	null
BQ24171RGYT	null
BQ24172RGYR	null
BQ24172RGYT	null
BQ24610RGER	null
BQ24610RGET	null
BQ294701DSGT	null
BQ294702DSGR	null
BUF12840AIRGET	null
CC1310F128RGZT	null
CC2500RGPR	null
CC2510F32RHHR	null
CC2533F64RHAR	null
CC2540F256RHAT	null
CDCLVD1204RGTT	null
CDCLVD1208RHDT	null
CDCLVD2102RGTT	null
CDCUN1208LPRHBT	null
DRV8834RGER	null
MSP430F5342IRGZT	null
OPA2333AIDRBR	null
OPA2333AIDRBRG4	null
OPA2333AIDRBT	null
SN75DP130SSRGZT	null
SN75DP159RGZT	null
TLC5957RTQT	null
TLV320AIC3105IRHBR	null
TLV62130RGTT	null
TPA2006D1DRBR	null
TPA6132A2RTET	null
TPS2500DRCT	null
TPS2552DRVT	null
TPS2561DRCT	null
TPS51200DRCT	null
TPS54620RGYT	null
TPS54622RHLR	null
TPS54622RHLT	null
TPS60151DRVR	null
TPS60151DRVT	null
TPS61026DRCT	null
TPS61160DRVR	null
TPS61160DRVT	null
TPS61161ADRVR	null
TPS61161DRVT	null
TPS61170DRVT	null
TPS61200DRCT	null
TPS62067DSGT	null
TPS62095RGTT	null
TPS62130RGTR	null
TPS62130RGTT	null
TPS62140RGTT	null
TPS62177DQCT	null
TPS62400DRCR	null
TPS63000DRCT	null
TPS63001DRCR	null
TPS63001DRCT	null

TPS63031DSKT	null
TPS65051RSMT	null
TPS65130RGET	null
TPS65170RHDR	null
TPS65192RHDR	null
TPS7A4700RGWT	null
TPS7A7100RGTT	null
TPS7A7200RGWT	null
TUSB1210BRHBT	null
UCC27512DRSR	null
UCD9090RGZT	null
TLV62130RGTR	null
TPA6132A2RTER	null
TPS40192DRCR	null
TPS54418ARTET	null
TPS55330RTET	null
TPS62150ARGTT	null
TPS63030DSKT	null
TPS54620RGYR	null
CDCL1810RGZT	null
DRV8834RGET	null
DRV8880RHRT	null
INA230AIRGTT	null
OPA2313IDRGT	null
SN75DP130DSRGZT	null
TAS2505IRGET	null
TPS22965DSGT	null
TPS2553DRVVT	null
TPS51116RGET	null
TPS51120RHBT	null
TPS51200DRCR	null
TPS51604DSGT	null
TPS54526RSAT	null
TPS59641RSLT	null
TPS61183RTJT	null
TPS62130ARGTR	null
TPS65910A31A1RSLT	null
TPS74801DRCT	null
TPS7A3301RGWT	null
TPS7A4701RGWT	null
TPS7A7100RGTR	null
TPS7A8400RGRT	null
TPS62152RGTT	null
TPS7A7100RGWT	null
ADS8568SRGCT	null
BQ24171RGYR	null
BQ40Z50RSMR-R1	null
CDCLVD1216RGZT	null
TPA2012D2RTJT	null
TPS61020DRCR	null
TPS61081DRCT	null
TPS61161ADRVVT	null
TPS61161DRVR	null
TPS62110RSAR	null
TPS62112RSAT	null
TPS62150RGTT	null
TPS7A7300RGWT	null
SN75DP139RGZT	null
TPS2062CDRBT-2	null
TPS62110RSAT	null
TPS65251RHAT	null
TPS54561DPRT	null
TPS7A8300RGRT	null
TMDS171IRGZT	null
TPS61170DRVR	null
TPS62140RGTR	null
CC2595RGTT	null
MSP430FR5849IRHAT	null
TPA6130A2RTJR	null
TPS51125ARGER	null

TPS59621RHAT	null
BQ24074RGTR	null
BQ24230RGTR	null
BQ24250RGER	null
BQ24266RGER	null
CDCM6208V1RGZT	null
CDCM6208V2RGZT	null
LDC0851HDSGR	null
LDC0851HDSGT	null
LM27761DSGR	null
MSP430FR5847IRHAT	null
MSP430FR5969IRGZT	null
ONET8501PBRGTR	null
SN65LVDS822RGZR	null
TLK105LRHBT	null
TLV320AIC3101IRHBR	null
TLV320AIC3104IRHBT	null
TLV320AIC3204IRHBR	null
TLV62090RGTR	null
TLV62130ARGTT	null
TLV62150ARGTT	null
TLV62150RGTR	null
TPS2420RSAR	null
TPS25200DRV	null
TPS2540RTET	null
TPS2557DRBT	null
TPS2560DRCT	null
TPS2590RSAT	null
TPS25910RSAT	null
TPS51217DSCT	null
TPS51631ARSMT	null
TPS53623RSMT	null
TPS54361DPRT	null
TPS54426RSAR	null
TPS54821RHLR	null
TPS55340RTER	null
TPS59116RGER	null
TPS61240DRV	null
TPS62090RGTT	null
TPS62134CRGTT	null
TPS62737RGYT	null
TPS65218B1RSLT	null
TPS65251RHAR	null
TPS65400RGZR	null
TPS65400RGZT	null
TPS659106A1RSLR	null
TPS65910AA1RSLR	null
TPS73701DRBR	null
TPS7A4700RGWR	null
TPS7A4701RGWR	null
TPS7A7300RGWR	null
TPS7A8001DRBT	null
TPS7A8300RGWR	null
TPS7A8300RGWT	null
TPS7A8500RGRT	null
TS3USB3031RMGR	null
ADS8028IRTJT	null
LDC1101DRCT	null
SN65HVD75DRBR	null
TPS62091RGTR	null
TPS659106A1RSL	null
ADS8638SRGET	null
BQ24167RGER	null
CC1310F128RHBT	null
CC1310F64RHBT	null
CDCLVD1212RHAT	null
CDCLVP215RHBT	null
DAC6578SRGET	null
LDC1101DRCR	null
LM27761DSGT	null

SN75DP139RGZR	null
TLV62065DSGR	null
TPA6204A1DRBR	null
TPS22953DSQR	null
TPS22954DQCR	null
TPS25940LRVCT	null
TPS25942ARVCT	null
TPS51631RSMR	null
TPS53631RSBT	null
TPS53661RSBT	null
TPS54061DRBR	null
TPS54218ARTER	null
TPS54320RHLT	null
TPS54326RGTR	null
TPS54519RTER	null
TPS54821RHLT	null
TPS61088RHLR	null
TPS61088RHLT	null
TPS61093DSKT	null
TPS62092RGTR	null
TPS62092RGTT	null
TPS62093RGTR	null
TPS62410DRCT	null
TPS65051RSMR	null
TPS65235RUKR	null
TPS65235RUKT	null
TPS74901RGWR	null
TPS74901RGWT	null
TRF37C75IDSGT	null
UCC27523DSDT	null
UCD90120ARGCT	null
UCD9246RGCT	null
TPS74701DRCT	null
TPS7A3001DRBT	null
SN8C050B0RGZR	null
TLV62130ARGTR	null
TPS70930DRVVT	null
TPS25200DRVR	null
TPS2590RSAR	null
TPS51220ARTVR	null
TPA2012D2RTJR	null
TPA6130A2RTJT	null
TPS62090RGTR	null
TPS62111RSAR	null
TPS62420DRCR	null
DRV401AIRGWR	null
DRV411AIRGPR	null
DRV411AIRGPT	null
MSP430FR5869IRGZR	null
CC1310F128RGZR	null
TPS62740DSSR	null
TPS62740DSST	null
TPS65070RSLT	null
BQ24617RGET	null
DAC8750IRHAT	null
DRV8846RGET	null
TPS627451DSST	null
TPS65217CRSLT	null
TUSB501DRFR	null
TPS62410DRCR	null
TLV62084DSGR	null
TPS2541ARTER	null
TPS53647RTAT	null
TPS54218ARTET	null
TPS63000DRCR	null
TRF3765IRHBR	null
UCC27201ADRCT	null
UCD9090ARGZT	null
CC1101-LP-RGPR	null
CC110LRGPR	null

CC1121RHBR	null
BQ24079RGTT	null
BQ24079TRGTT	null
BQ24192IRGER	null
BQ24192RGET	null
BQ24616RGER	null
BQ24735RGRR	null
BQ24780SRUYR	null
BQ24780SRUYT	null
BQ27541DRZR-V200	null
BQ27542DRZR-G1	null
BQ28Z610DRZR	null
BQ294504DRVR	null
BQ294701DSGR	null
BQ294704DSGR	null
BQ294705DSGR	null
BQ9000RSMR	null
BQ9000RSMR-D1	null
BQ9000RSMR-L1	null
BUF12840AIRGER	null
CC2650F128RGZT	null
DAC8760IRHAR	null
DRV8833RTYR	null
DRV8837DSGT	null
DRV8838DSGR	null
MSP430G2533IRHB32R	null
SN1303050RTER	null
TAS2521IRGER	null
TAS2521IRGET	null
TLV320ADC3101IRGET	null
TLV62084DSGT	null
TPS2556DRBT	null
TPS43061RTER	null
TPS43061RTET	null
TPS51220ARSNR	null
TPS51285BRUKR	null
TPS51622ARSMR	null
TPS51622RSMR	null
TPS61200DRCRG4	null
TPS61291DRVR	null
TPS61291DRVT	null
TPS62095RGTR	null
TPS62132RGTR	null
TPS62140ARGTT	null
TPS650731RSLR	null
TS3L500AERHUR	null
DRV8837DSGR	null
BQ24193RGER	null
BQ24193RGET	null
BQ50002ARHBT	null
BQ50002RHBT	null
CC1110F32RHHR	null
CDCLVD1204RGTR	null
MSP430G2333IRHB32T	null
TLC59581RTQR	null
TPS62420DRCT	null
TPS70612DRVR	null
TPS70612DRVT	null
SN65HVD78DRBR	null
TPS25940ARVCR	null
TPS25942ARVCR	null
TPS7A4901DRBR	null
TPS7A4901DRBT	null
TPS7A8001DRBR	null
BQ24616RGET	null
TPS2559DRCT	null
TPS2592AADRCR	null
TPS62150ARGTR	null
TS3DV20812RHHR	null
CC2640F128RGZT	null

TPS28225DRBT	null
TPS70933DRVT	null
TPS54226RGTT	null
TPS22966DPUT	null
TPS2561ADRCT	null
TPS65910AA1RSL	null
TPS65217DRSLT	null
TPS542951RSAT	null
TPS65217CRSLR	null
TPS65132WRVCT	null
TPS51124RGET	null
MSP430FR5869IRGZT	null
BQ24170RGYT	null
TPS54541DPRR	null
TPS54541DPRT	null
TPS62745DSSR	null
SN65LVCP40RGZ	null
BQ24296MRGET	null
TPA2006D1DRBT	null
TPS59116RGET	null
ADS1220IRVAT	null
TPS25942LRVCT	null
CC1120RHBR	null
CC2640F128RSMT	null
TPS7A3301RGWR	null
BQ24075RGTR	null
BQ24160ARGER	null
BQ24190RGET	null
BQ24192IRGET	null
BQ24192RGER	null
BQ24195LRGER	null
BQ24250RGET	null
BQ24296RGER	null
BQ294504DRVT	null
BQ294532DRVT	null
BQ294700DSGR	null
BQ9000RSMT	null
BQ9003RSMR-L1	null
MSP430F5252IRGCR	null
MSP430F5252IRGCT	null
MSP430F5259IRGCT	null
MSP430FR5969IRGZR	null
OPA4330AIRGYR	null
SN1303050RTET	null
TLV320AIC3105IRHBT	null
TPA3132D2RHBT	null
TPS43060RTET	null
TPS542951RSAR	null
TPS54418RTET	null
TPS54620RHLT	null
TPS61200DRCR	null
TPS61230DRCT	null
TPS62111RSAT	null
TPS62143RGTT	null
TPS63002DRCT	null
TPS65023RSBT	null
BQ24079RGTR	null
ONET1151MRGTR	null
BQ27441DRZR-G1A	null
TPS43060RTER	null
TPS63030DSKR	null
TPA2006D1DRBRG4	null
MSP430F5340IRGZR	null
TPS62175DQCT	null
BQ24072RGTR	null
BQ24072TRGTR	null
TPS22981RGPR	null
TPS61020DRCRG4	null
TPS65130RGER	null
MSP430FR5739IRHAR	null

SNA9007RHBR	null
TPS54319RTER	null
TS3DV520ERHUR	null
BQ24253RGER	null
BQ24257RGER	null
TAS2505IRGER	null
TLV320AIC3254IRHBR	null
TPA3131D2RHBR	null
TPS61165DRVR	null
TPS62112RSAR	null
BQ294502DRVR	null
BQ294532DRVR	null
BQ294592DRVR	null
BQ40Z50RSMT-R1	null
BQ50002ARHBR	null
BQ50002RHBR	null
BQ9000RSMR-D2	null
TS3DV520ERUAR	null
BQ24737RGRR	null
HD3SS460IRHRT	null
TPA6211A1DRBR	null
TPS2231RGPR	null
TPS22954DSQR	null
TPS22967DSGR	null
TPS2555DRCR	null
TPS2556DRBR	null
TPS51624RSMR	null
TPS61232DRCR	null
TPS62150RGTR	null
TPS62175DQCR	null
TLV320ADC3101IRGER	null
TPS60231RGTR	null
TPA6047A4RHBR	null
TS3L501ERUAR	null
TPS54678RTET	null
BQ24780RUYR	null
BQ294512DRVR	null
TPS25810RVCR	null
TRF3705IRGER	null
DAC8750IRHAR	null
OPA2314AIDRBR	null
TPS54227DRCR	null
TPS54320RHLR	null
TPS61030RSAR	null
BQ24725ARGRR	null
CC2533F96RHAR	null
CC2640F128RSMR	null
MSP430G2333IRHB32R	null
TLV320DAC3101IRHBR	null
TPS2543RTER	null
TPS61093DSKR	null
TPS65632ARTER	null
TPS65910A3A1RSLR	null
TPS7A8101DRBR	null

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

PCN Number:	20180319003		PCN Date:	March 29 2018	
Title:	Qualification of an additional material set for select devices in the QFN package				
Customer Contact:	PCN Manager		Dept:	Quality Services	
Proposed 1st Ship Date:	June 29 2018		Estimated Sample Availability:	Provided upon Request	
Change Type:					
☐	Assembly Site	☐	Assembly Process	☒	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☐	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process
	☐	Part number change			
PCN Details					
Description of Change:					
Texas Instruments is pleased to announce the qualification of an additional material set for the devices listed in pg 2 of this notification as follows:					
		Current		Additional	
Mount Compound		4207768		4207123	
Mold Compound		4208625		4222198	
Reason for Change:					
Continuity of Supply					
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):					
None					
Anticipated impact on Material Declaration					
☐	No Impact to the Material Declaration	☒	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website .		
Changes to product identification resulting from this PCN:					
Not Applicable					
Product Affected					
See Page 2					



Qualification Report

Clark UniBOM 4222198 and 4207123 Enterprise Qualification

Approve Date 05-Mar-2018

Product Attributes

Attributes	Qual Device: <u>27541DRZR-V200</u>	Qual Device: <u>430FR5969IRGZR</u>	Qual Device: <u>ADS1220IRVAR</u>	Qual Device: <u>ADS8548SRGCR</u>
Assembly Site	CLARK AT	CLARK AT	CLARK AT	CLARK AT
Package Family	VSON	VQFN	VQFN	VQFN
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DFAB, TSMC WFT	DMOS 6	AIZU	DMOS5
Wafer Fab Process	LBC4-X, TSMC 0.25	HPE035	HPA07	50HPA07HF.03DR

- QBS: Qual By Similarity
- Qual and QBS Devices qualified at LEVEL2-260CG: 27541DRZR-V200, ADS1220IRVAR
- Qual Devices qualified at LEVEL3-260CG: ADS8548SRGCR, 430FR5969IRGZR
- Device 27541DRZR-V200 contains multiple dies.

Attributes	Qual Device: <u>CC2541F256RHAR</u>	Qual Device: <u>DRV10866DSCR</u>	Qual Device: <u>RGC-DC</u>	Qual Device: <u>S320F28030RSHT</u>
Assembly Site	CLARK AT	CLARK AT	CLARK AT	CLARK-AT
Package Family	VQFN	WSON	VQFN	VQFN
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	TSMC WFT	RFAB	-	DMOS5
Wafer Fab Process	0.18-DP5M-FLASH	LBC7	-	18F05.25L

- QBS: Qual By Similarity
- Qual and QBS Devices qualified at LEVEL2-260CG: DRV10866DSCR
- Qual Devices qualified at LEVEL3-260CG: RGC-DC, CC2541F256RHAR, S320F28030RSHT

Attributes	Qual Device: <u>TPS63000DRCR</u>	Qual Device: <u>TPS65631WDSKR</u>	QBS Package Reference: <u>TPS7A4701QRGWRQ1</u>	QBS Package Reference: <u>TRS3122ERGER</u>
Assembly Site	CLARK-AT	CLARK AT	CLARK AT	CHENGDU A/T
Package Family	VSON	WSON	QFN, 5 x 5 MM	VQFN
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	MIHO 8	RFAB	FREISING (FFAB)	RFAB
Wafer Fab Process	LBC7	LBC7X	BICOM3-HV	LBC7

- QBS: Qual By Similarity
- Qual Device qualified at LEVEL1-260CG: TPS65631WDSKR
- Qual and QBS Devices qualified at LEVEL2-260CG: TPS63000DRCR, TPS7A4701QRGWRQ1, TRS3122ERGER

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

Type	Test Name / Condition	Duration	Qual Device: 27541DRZR-V200	Qual Device: 430FR5969IRGZR	Qual Device: AD51220IRVAR	Qual Device: AD58548SRGCR
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0	3/231/0
BLR	Board Level Reliability, Temp Cycle, -40/125C	1000 Cycles	-	-	-	-
ED	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	-
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	-
FLAM	Flammability (UL 94V-0)	--	-	-	-	-
FLAM	Flammability (UL-1694)	--	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	-	-
HBM	ESD - HBM	1000 V	-	-	-	-
CDM	ESD - CDM	250 V	-	3/9/0	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	-
HTOL	Life Test, 150C	300 Hours	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	3/229/0	-	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	-
LU	Latch-up	(per JESD78)	-	-	-	-
PD	Physical Dimensions	--	3/15/0	3/15/0	3/15/0	3/15/0
PTC	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	-	-
SD	Surface Mount Solderability	8 Hours Steam Age, Pb-Free	-	-	-	-
SD	Surface Mount Solderability	Pb	-	-	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	-	-	-	-
UHAST	Unbiased HAST, 110C/85%RH	264 Hours	-	-	-	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	-
VM	Visual / Mechanical	(per mfg. Site specification)	3/984/0	3/984/0	3/984/0	3/984/0
WBP	Bond Pull	Wires	3/228/0	3/228/0	-	-
WBS	Ball Bond Shear	Wires	3/228/0	3/228/0	-	-

- 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/>
Green/Pb-free Status:
Qualified Pb-Free(SMT) and Green

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

Type	Test Name / Condition	Duration	Qual Device: CC2541F256RHAR	Qual Device: DRV10866DSCR	Qual Device: RGC-DC	Qual Device: S320F28030RSHT
AC	Autoclave 121C	96 Hours	-	3/231/0	-	3/231/0
BLR	Board Level Reliability, Temp Cycle, -40/125C	1000 Cycles	-	-	1/32/0	-
ED	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	-	-	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	-
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	-
FLAM	Flammability (UL 94V-0)	--	-	-	-	-
FLAM	Flammability (UL-1694)	--	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-
HBM	ESD - HBM	1000 V	-	-	-	-
CDM	ESD - CDM	250 V	-	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	-
HTOL	Life Test, 150C	300 Hours	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	3/231/0	-	-	3/230/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	-
LU	Latch-up	(per JESD78)	-	-	-	-
PD	Physical Dimensions	--	3/15/0	3/15/0	-	3/15/0
PTC	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	-	-
SD	Surface Mount Solderability	8 Hours Steam Age, Pb-Free	-	-	-	3/66/0
SD	Surface Mount Solderability	Pb	-	-	-	-
TC	Temperature Cycle, -55/125C	700 Cycles	3/230/0	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	-	3/231/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	-	-	-	3/219/0
UHAST	Unbiased HAST, 110C/85%RH	264 Hours	3/231/0	-	-	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	3/231/0	-	-
VM	Visual / Mechanical	(per mfg. Site specification)	3/984/0	3/984/0	-	3/984/0
WBP	Bond Pull	Wires	-	3/228/0	-	3/228/0
WBS	Ball Bond Shear	Wires	-	3/228/0	-	3/228/0

- 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/>
Green/Pb-free Status:
Qualified Pb-Free(SMT) and Green

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

Type	Test Name / Condition	Duration	Qual Device: TPS63000DRCR	Qual Device: TPS65631WDSKR	QBS Package Reference: TPS7A4701QRGWRQ1	QBS Package Reference: TRS3122ERGER
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0	3/231/0
BLR	Board Level Reliability, Temp Cycle, -40/125C	1000 Cycles	-	-	1/32/0	-
ED	Electrical Distributions	Cpk>1.67 Room, Hot, & Cold	-	-	3/90/0	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	1/30/0
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	3/15/0
FLAM	Flammability (UL 94V-0)	--	-	-	-	3/15/0
FLAM	Flammability (UL-1694)	--	-	-	-	3/15/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	3/231/0
HBM	ESD - HBM	1000 V	-	-	1/0/0	-
CDM	ESD - CDM	250 V	-	-	1/3/0	-
HTOL	Life Test, 125C	1000 Hours	-	-	3/231/0	-
HTOL	Life Test, 150C	300 Hours	-	-	-	1/77/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	1/45/0	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	3/230/0	-	-
LU	Latch-up	(per JEDEC78)	-	-	1/12/0	1/6/0
PD	Physical Dimensions	--	3/15/0	3/15/0	3/30/0	3/30/0
PTC	Power Temperature Cycle, -40/125C	1000 Cycles	-	-	1/50/0	-
SD	Surface Mount Solderability	8 Hours Steam Age, Pb-Free	3/66/0	-	1/15/0	1/22/0
SD	Surface Mount Solderability	Pb	-	-	1/15/0	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	-	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/225/0	3/231/0	3/231/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 Hours	-	-	-	-
UHAST	Unbiased HAST, 110C/85%RH	264 Hours	-	-	-	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	-
VM	Visual / Mechanical	(per mfg. Site specification)	3/984/0	3/984/0	-	3/984/0
WBP	Bond Pull	Wires	3/228/0	3/228/0	3/90/0	3/228/0
WBS	Ball Bond Shear	Wires	3/228/0	3/228/0	3/90/0	3/228/0

- 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 JEDEC47 : -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/>

Green/Pb-free Status:

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

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