

PCN Number:	20211210000.1	PCN Date:	December 14, 2021									
Title:	Qualify New Assembly Material set for Selected Device(s)											
Customer Contact:	PCN Manager	Dept:	Quality Services									
Proposed 1st Ship Date:	Mar 14, 2022	Estimated Sample Availability:	Date provided at sample request									
Change Type:												
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design									
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet									
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change									
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site									
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process									
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site									
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material									
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process									
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site									
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials									
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process									
PCN Details												
Description of Change:												
Texas Instruments is pleased to announce the qualification of new assembly material for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:												
<table border="1"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Wafer thickness</td> <td>20mils</td> <td>14mils</td> </tr> <tr> <td>Mount compound</td> <td>SID#400791</td> <td>SID#401136</td> </tr> </tbody> </table>				Material	Current	Proposed	Wafer thickness	20mils	14mils	Mount compound	SID#400791	SID#401136
Material	Current	Proposed										
Wafer thickness	20mils	14mils										
Mount compound	SID#400791	SID#401136										
Reason for Change:												
Continuity of supply												
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									
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change									
Changes to product identification resulting from this PCN:												
None												
Product Affected:												
REF7025QFKHT												

Qualification Report

Approve Date 6-Dec-2021

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: REF7012QFKHT	Qual Device: REF7016QFKHT	Qual Device: REF7020QFKHT	QBS Product Reference: REF7025QFKH	QBS Product Reference: REF7025QD GK	QBS Process Reference: OPA1671IDCK
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	-	-	3/90/0	-	3/90/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	-	3/2397/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-	3/231/0
HBM	ESD - HBM	2000 V	-	-	1/3/0	-	1/3/0	3/9/0
HBM	ESD - HBM	4000 V	-	-	-	-	1/3/0	-
CDM	ESD - CDM	500 V	-	-	1/3/0	1/3/0	-	3/9/0
CDM	ESD - CDM	1500 V	-	-	1/3/0	1/3/0	-	-
HTOL	Life Test, 150C	300 Hours	-	-	1/77/0	3/231/0	-	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	-	-	-	3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	1/77/0	-	2/154/0	-	-	-
HTSL	High Temp. Storage Bake, 150C	2000 Hours	-	-	-	-	3/231/0	-
LU	Latch-up	(per JESD78) 25C	-	-	1/6/0	-	1/6/0	3/18/0
LU	Latch-up	(per JESD78) 125C	-	-	1/6/0	-	1/6/0	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	1/Pass	-	-	3/Pass	-	-
NVM IP	NVM Power Cycling, 25C	10k Cycles	1/77/0	-	2/154/0	-	3/231/0	-
PD	Physical Dimensions	-	-	-	-	-	-	3/15/0
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	3/231/0	-	3/231/0
S1	Sequential Test	Mechanical Shock (1500 g, 0.5 ms Y1 6 pulses) --> Vibration Variable Frequency (20 g 20-2000 Hz All 3 planes (x, y, z)) --> Constant Acceleration (30 kg, Y1 only) --> Seal (Fine and Gross) --> Electrical Test (D/C) (25 degrees C, per data sheet)	1/32/0	1/32/0	1/32/0	3/96/0	-	-
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	-	-	-	-	3/231/0

- QBS Qual by Similarity

- Qual Device REF7012QFKHT, REF70165QFKHT, REF7020QFKHT are Ceramic/Hermetic Package

- 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

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