

PCN Number:	20201120000		PCN Date:	Dec 14, 2020				
Title:	Addition of Polyimide to TAS5424CTDKERQ1							
Customer Contact:	PCN Manager		Dept:	Quality Services				
Proposed 1st Ship Date:	June 14, 2021	Estimated Sample Availability:	Date provided at sample request					
Change Type:								
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site			
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material			
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process			
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site			
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input checked="" type="checkbox"/>	Wafer Fab Materials			
				<input type="checkbox"/>	Wafer Fab Process			
PCN Details								
Description of Change:								
Texas Instruments Incorporated is announcing the qualification of Polyimide (PI) to TAS5424CTDKERQ1.								
<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">Current Die Coat</th> <th style="text-align: center;">New Die Coat</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">None</td> <td style="text-align: center;">Polyimide</td> </tr> </tbody> </table>					Current Die Coat	New Die Coat	None	Polyimide
Current Die Coat	New Die Coat							
None	Polyimide							
Reason for Change:								
Quality Improvement (Reduction of particle shorts).								
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):								
None.								
Changes to product identification resulting from this PCN:								
None.								
Product Affected:								
TAS5424CTDKERQ1								

Qualification Report

Approve Date 06-Nov-2019

Product Attributes

Attributes	Qual Device: <u>TAS5424CTDKERQ1</u> (CFAB)	Qual Device: <u>TAS5424CTDKERQ1</u> (DMOS5)	QBS Package Reference: <u>TAS5424BTDKDRQ1</u> (CFAB)	QBS Package Reference: <u>TAS5424BTDKDRQ1</u> (DMOS5)	QBS Product / Package Reference: <u>TAS5424BTDKDRQ1</u>
Die Attributes	-	-	-	-	-
Die Revision	E1	E1	D2	D2	D2
Wafer Fab Supplier	CFAB	DMOS5	CFAB	DMOS5	DMOS5
Wafer Process	LBC5	LBC5	LBC5	LBC5	LBC5
Die Size (L,W) (mm)	262.2 X 233.5	262.2 X 233.5	262.2 X 233.5	262.2 X 233.5	6.66 X 5.93
Passivation	Nitride	Nitride	Nitride	Nitride	Nitride

- QBS: Qual By Similarity

- Qual Devices qualified at LEVEL3-260C: TAS5424CTDKERQ1 (CFAB), TAS5424CTDKERQ1 (DMOS5)

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>TAS5424CTDKERQ1</u> (CFAB)	Qual Device: <u>TAS5424CTDKERQ1</u> (DMOS5)	QBS Package Reference: <u>TAS5424BTDKDRQ1</u> (CFAB)	QBS Package Reference: <u>TAS5424BTDKDRQ1</u> (DMOS5)	QBS Product / Package Reference: <u>TAS5424BTDKDRQ1</u>
AC	Autoclave 121C	96 Hours	-	-	-	-	3/231/0
ED	Electrical Distributions	Cpk>1.67	-	-	-	-	-
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	-
HAST	Biased HAST, 130C/85%R H	96 Hours	-	-	-	-	3/231/0
CDM	ESD - CDM	750 V	-	-	-	-	-
HBM	ESD - HBM	3000 V	-	-	-	-	-
HTOL	Life Test, 125C	1000 Hours	-	-	-	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	-	3/150/0
LU	Latch-up	(per JESD78)	-	-	-	-	-
SD	Surface Mount Solderability	Pb Free	-	-	-	-	1/22/0
TC	Temperature Cycle, - 65/150C	500 Cycles	-	-	1/77/0	1/77/0	3/231/0
WBP	Bond Pull	Wires	-	-	1/30/0	1/30/0	-
WBS	Bond Shear	Wires	-	-	1/30/0	1/30/0	-

- 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/231 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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