PCN Number:		20240220001.1				PCN Date:		:	February 20, 2024		
Title: TUSB216RWB Design Change											
Customer Contact:			Change Management team			Dept: Qualit			/ Services		
Proposed 1 st Ship Date:			May 20, 2024			Sample Requests accepted until:		March 21, 2024*			
*Sample requests received afterMarch 21, 2024 will not be supported.											
Change Type:											
Assem	Assembly Site			Design			_	Wafer	er Bump Material		
Assembly Process			Data Sheet				-	Wafer	afer Bump Process		
Assem	<u></u>	Part number change			9	-	Wafer	Water Fad Site			
Mechanical Specification Packing/Shipping/Laboling			Test Sile				-	Wafer	afer Fab Process		
							6633				
PCN Details											
Description of Change:											
This notification is to inform of a design change to the TUSB216RWB devices. Affected devices are											
listed in the Product Affected section of this document.											
The decign changes include ECD/latchup cell improvements and increased i2C frequency and											
The design changes include ESD/latchup cell improvements and increased i2C frequency spec.											
The product datasheet(s) has also been updated which was communicated in Notification #											
20231219025. This change may be reviewed at the datasheet links provided:											
https://www.ti.com/product/TUSB216											
Reason for Change:											
Improve device performance robustness and expand application use case											
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):											
None											
Product Affected: Design Change and datasheet updates											
TUSB216RWBR TUSB216RWBT											

Qualification Report Approve Date 03-17-21

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed										
Test Name / Condition	Duration	Qual Device: TUSB216IRW B	Qual Device: <u>TUSB216RWB</u> <u>R-A0</u>	Qual Device: <u>TUSB216RWB</u> <u>R-A1</u>	QBS Product Reference: <u>BQ298000RU</u> <u>G</u>	QBS Product Reference: <u>BQ298000RUG</u> <u>R</u>	QBS Product Reference: <u>TLV62568DB</u> <u>V</u>			
Autoclave 121C	96 Hours				3/231/0	-	3/231/0			
ESD - CDM	1500 V	1/3/0	1/3/0	1/3/0	2/6/0	1/3/0	2/6/0			
Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass	Pass	Pass			
Early Life Failure Rate, 125C	48 Hours				3/2400/0	-	3/3000/0			
Flammability (IEC 695-2-2)					3/15/0	-	-			
Flammability (UL					3/15/0	-	-			

			1	1	1		
94V-0)							
Flammability (UL- 1694)					3/15/0	-	-
Biased HAST, 130C/85%RH	96 Hours		1/77/0		3/231/0	-	3/231/0
UNBiased HAST, 130C/85%RH	96 Hours		1/77/0				
ESD - HBM	2500 V	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-
Life Test, 125C	1000 Hours	1/77/0		1/77/0	3/231/0	-	-
Life Test, 150C	300 Hours				-	-	3/231/0
High Temperature Storage, 170C	420 Hours		1/77/0		3/231/0	-	3/231/0
Latch-up 25C	(per JESD78)	1/6/0		1/6/0	3/18/0	1/6/0	2/12/0
Latch-up, 85C	(per JESD78)	1/6/0		1/6/0			
Physical Dimensions			1/5/0		3/15/0	-	-
Solderability	Pb Free				3/66/0	-	-
Temperature Cycle, -65/150C	500 Cycles		1/77/0		3/231/0	-	3/231/0
Bond Strength	76 Wires, 3 units min		1/76/0		3/228/0	-	-
Ball Bond Shear	76 balls, 3 units min		1/76/0				
Moisture Sensitivity	(level 2A @ 260C peak +5/-0C)		1/12/0				
Manufacturabilit y (Assembly)	(per mfg. Site specificatio n)		1/1/0				
Manufacturabilit y (Wafer Fab)	(per mfg. Site specificatio n)		1/1/0				
Visual Quality Reliability Inspection	Post 500 Temp Cycle		1/6/0				

- QBS: Qual By Similarity

- Qual Device TUSB216RWBR-A0 is gualified at LEVEL2-260C

- Qual Device TUSB216RWBR-A1 is qualified at LEVEL2-260C

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

 $- \ The \ following \ are \ equivalent \ HTOL \ options \ based \ on \ an \ activation \ energy \ of \ 0.7 eV: 125 C/1k \ Hours, \ 140 C/480 \ Hours, \ 150 C/300 \ Hours, \ and \ Normalized \ end \ end$ 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

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

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