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Process Change Notification

This is to inform you that a design and/or process change will be implemented to the affected product(s) listed below. This notification requires your concurrence within 45 days upon receipt of this notification.

Please work with your local Taiwan Semiconductor Sales Representative to manage your inventory of unchanged/ existing product if your evaluation of this change will require more than 90 calendar days.

Please contact your local Taiwan Semiconductor Field Quality Service or Customer Quality Engineer within 45 days of receipt of this notification if you require any additional data or samples.

Change No: PCN25010 rev0
Title: Commercial level STD GPP products add second wafer source
Issue Date: 2025/5/29

If you have any questions concerning this change, please contact:

Change Coordinator
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Change Type: Additional wafer source

Effectivity:
Expected 1st device shipment date: 2025/8/27 or earlier if approved by customer

Product Category (Description):

Commercial level STD GPP products that are assembled in SMA, SMB, SMC package. See detailed part numbers in the List of Affected Devices.

Description of Change:

This change notification is being issued to notify customer that in order to assure continuity of supply, TSC is qualifing the outsource wafer fab as second source for commercial level STD GPP products.

Comparison detail:

Item	Current	Additional	Remark
Wafer source	In-house	Outsource	Additional wafer source
Wafer diameter	4”	5”	Larger wafer diameter

Qualification and Reliability Result:
Qualification result (per AEC_Q101)

Stress Test	Abbrev	Test Methods	Test Conditions	Final Readpoint	Requirements		Results	
					SS	*# Lots	Rej/SS	Remarks
Environmental and Lifetime Stress Tests								
Pre- and Post-Stress Electrical Test	TEST	Product Datasheet	Test at room temp	-	540	4	0	PASS
External Visual	EV	JESD22-B101	per reference standard	-	540	4	0	PASS
Preconditioning	PC	J-STD-020	MSL-1 (3x reflow at 260ºC)	-	370	4	0	PASS
Temperature Cycle	TC	JESD22-A104	-55°C to +150°C; 15 mins dwell	1016cycs	100	4	0	PASS
Unbiased HAST	UHAST	JESD22-A118	130°C/85% RH; unbiased	96 hrs	80	4	0	PASS
Highly Accelerated Stress Test	HAST	JESD22-A110	130°C/85% RH; V=80% VR; 42V max	96 hrs	80	4	0	PASS
Resistance to Solder Heat	RSH	JESD22-B106	SMD (Pb free): 260°C; 10 sec	10 secs	30	4	0	PASS
High Temp Reverse Bias	HTRB	MIL-STD-750-1	175°C; V=80% rated V for S1J, S1M 150°C; V=80% rated V for S3M, S15MC	1008 hrs	80	4	0	PASS
Intermittent Operating Life	IOL	MIL-STD-750	Ta=25°C; ΔTj=100°C; 2.0 min on/off	15120 cycs	80	4	0	PASS
Package Assembly Integrity Tests								
Destructive Physical Analysis	DPA	AEC-Q101-004	Post-TC	results	2	4	0	PASS
Destructive Physical Analysis	DPA	AEC-Q101-004	Post-HAST	results	2	4	0	PASS
Thermal Resistance	TR	JESD24	per product datasheet	results	10	4	0	PASS

Die Shear	DS	MIL-STD-750-2	per assembly spec	results	5	4	0	PASS
Electrical Verification Tests								
Parametric Verification	PV	TSC Datasheet	per product datasheet	results	30	4	0	PASS
ESD - Human Body Model	ESD - HBM	AEC-Q101-001	per product spec	results	30	4	0	＞8kV/H3B
ESD - Charged Device Model	ESD - CDM	AEC-Q101-005	per product spec	results	30	4	0	⩾1kV/C3

Conclusion:
Passed qualification per AEC_Q101.

Effect of Change:
There is no impact on product Form, Fit and Function.

Identification and Traceability:

Item	Identification
Traceability	Product date code

List of Affected Devices:

Package	P/N	Package	P/N	Package	P/N
DO-214AC (SMA)	S1A	DO-214AA (SMB)	S2K	DO-214AB (SMC)	S4M
DO-214AC (SMA)	S1B	DO-214AA (SMB)	S2M	DO-214AB (SMC)	S5A
DO-214AC (SMA)	S1D	DO-214AA (SMB)	S3AB	DO-214AB (SMC)	S5B
DO-214AC (SMA)	S1G	DO-214AA (SMB)	S3BB	DO-214AB (SMC)	S5D
DO-214AC (SMA)	S1J	DO-214AA (SMB)	S3DB	DO-214AB (SMC)	S5G
DO-214AC (SMA)	S1K	DO-214AA (SMB)	S3GB	DO-214AB (SMC)	S5J
DO-214AC (SMA)	S1M	DO-214AA (SMB)	S3JB	DO-214AB (SMC)	S5K
DO-214AC (SMA)	S2AA	DO-214AA (SMB)	S3KB	DO-214AB (SMC)	S5M
DO-214AC (SMA)	S2BA	DO-214AA (SMB)	S3MB	DO-214AB (SMC)	S8GC
DO-214AC (SMA)	S2DA	DO-214AA (SMB)	S5GB	DO-214AB (SMC)	S8JC
DO-214AC (SMA)	S2GA	DO-214AA (SMB)	S5JB	DO-214AB (SMC)	S8KC
DO-214AC (SMA)	S2JA	DO-214AA (SMB)	S5KB	DO-214AB (SMC)	S8MC
DO-214AC (SMA)	S2KA	DO-214AA (SMB)	S5MB	DO-214AB (SMC)	S10GC
DO-214AC (SMA)	S2MA	DO-214AB (SMC)	S3A	DO-214AB (SMC)	S10JC
DO-214AA (SMB)	S1AB	DO-214AB (SMC)	S3B	DO-214AB (SMC)	S10KC
DO-214AA (SMB)	S1BB	DO-214AB (SMC)	S3D	DO-214AB (SMC)	S10MC
DO-214AA (SMB)	S1DB	DO-214AB (SMC)	S3G	DO-214AB (SMC)	S12GC
DO-214AA (SMB)	S1GB	DO-214AB (SMC)	S3J	DO-214AB (SMC)	S12JC
DO-214AA (SMB)	S1JB	DO-214AB (SMC)	S3K	DO-214AB (SMC)	S12KC
DO-214AA (SMB)	S1KB	DO-214AB (SMC)	S3M	DO-214AB (SMC)	S12MC

Package	P/N	Package	P/N	Package	P/N
DO-214AA (SMB)	S1MB	DO-214AB (SMC)	S4A	DO-214AB (SMC)	S15GC
DO-214AA (SMB)	S2A	DO-214AB (SMC)	S4B	DO-214AB (SMC)	S15JC
DO-214AA (SMB)	S2B	DO-214AB (SMC)	S4D	DO-214AB (SMC)	S15KC
DO-214AA (SMB)	S2D	DO-214AB (SMC)	S4G	DO-214AB (SMC)	S15MC
DO-214AA (SMB)	S2G	DO-214AB (SMC)	S4J		
DO-214AA (SMB)	S2J	DO-214AB (SMC)	S4K		