

DATE: May 28, 2026

PCN #: 2829

PCN Title: Additional wafer sources JKFAB, DBH, SK keyfoundry FAB4 and additional AT site CAT, standardized assembly BOM

Dear Customer:

This is an announcement of change(s) to products that are currently being offered by Diodes Incorporated.

We request that you acknowledge receipt of this notification within 30 days of the date of notification by contacting your local Diodes sales representative. If you require samples for evaluation purposes, please submit a corresponding request within 30 days as well. Otherwise, samples may not be built prior to the implementation of the announced change(s).

The change(s) announced in this PCN will not be implemented prior to the target implementation date, i.e. 90 days from the stated notification date, unless Diodes receives written customer approval before that date.

Previously agreed upon customer specific product and/or process change requirements will be addressed separately.

For questions or clarification regarding this PCN, please contact your local Diodes sales representative.

Sincerely,

Diodes Incorporated PCN Team



PRODUCT CHANGE NOTICE

PCN-2829-REV1

Notification Date:	Implementation Date:	Product Family:	Change Type:	PCN #:
May 28, 2026	August 27, 2026	Analog	Additional Wafer Sources, Additional AT Site, Standardize BOM	2829
TITLE				
Additional wafer sources JKFAB, DBH, SK keyfoundry FAB4 and additional AT site CAT, standardized assembly BOM				
DESCRIPTION OF CHANGE				
This PCN is being issued to notify customers that in order to assure continuity of supply, Diodes has qualified additional manufacturing sites and Bill of Material (BOM) changes: • Diodes internal wafer source (JKFAB) located in HsinChu, Taiwan. • Diodes external wafer source DB HiTek (DBH) located in Eumseong-gun South Korea. Standardized assembly BOM to include PdCu bond wire. • Diodes external wafer source SK keyfoundry (FAB4) located in Cheongju, South Korea • Diodes internal A/T site (CAT) in Chengdu, China. Full electrical characterization and high reliability testing has been completed on representative part numbers to ensure there is no change to device functionality or electrical specifications in the datasheet. There will be no change to Form, Fit or Function of products affected.				
IMPACT				
Continuity of Supply. No change in datasheet electrical parameters and product performance.				
PRODUCTS AFFECTED				
• Table 1 - Additional wafer source (JKFAB) • Table 2 - Additional wafer source (DBH) • Table 3 - Additional wafer source (DBH), standardized BOM to include PdCu bond wire • Table 4 - Additional wafer source (Fab4) • Table 5 - Additional AT site (CAT)				
WEB LINKS				
Manufacturer’s Notice:		https://www.diodes.com/quality/product-change-notices/diodes-product-change-notices/		
For More Information Contact:		https://www.diodes.com/about/contact-us/contact-sales/		
Data Sheet:		https://www.diodes.com/catalog/		
DISCLAIMER				



Unless a Diodes Incorporated Sales representative is contacted in writing within 30 days from the notification date of this PCN, all changes described in this announcement are considered approved.

Table 1 - Additional wafer source (JKFAB)

AH49ENTR-G1	AH49EZ3-G1	AH49FNTR-G1			
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Table 2 - Additional wafer source (DBH)

AH9246-P-B	AH9247Z3-G1	AH9251-P-B			
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Table 3 - Additional wafer source (DBH), standardized BOM to include PdCu bond wire

AH9246-W-7	AH9247-W-7	AH9251-W-7			
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Table 4 - Additional wafer source (FAB4)

FK2500025	FK2500025W	FK2500063	FM2500016	S1613B-25.0000	S1613B-25.0000(T)
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Table 5 - Additional AT site (CAT)

AL3353S-13					
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The Diodes Incorporated logo, featuring the word "DIODES" in a large, bold, blue sans-serif font, with "INCORPORATED" in a smaller, blue sans-serif font below it. A small trademark symbol (TM) is located to the right of "INCORPORATED".

DIODES
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				Qual Device 1			Qual Device 2			Qual Device 3	
General	Part Number			AH477AZ4-BG1 for Others AH477AZ4-XG1 for Assy report/ESD/LU/CDM			AH477AZ4-BG1 for Others AH477AZ4-XG1 for Assy rport/ESD/LU/CDM			AH49HNTR-G1	
	Package			TO-94			TO-94			SOT23-3	
	Wire Bond, Cu Pillar, CSP			Wire Bond			Wire Bond			Wire Bond	
	MSL Level			N/A			N/A			3	
	Package Size			18.7mm*5.13mm*1.62mm			18.7mm*5.13mm*1.62mm			2.96mm*2.825mm*1.2mm	
	Die Quantity (eg. Die per package)			1			1			1	
Die Name(1)	Die Size (W/L/Thickness			PD204A-H 2.06mm*1.13mm			PD204A-H 2.06mm*1.13mm			PD217B0-H 0.96mm*0.97mm	
	Die Process / Technology			4um25V Bipolar			4um25V Bipolar			4um25V Bipolar	
	Wire Bond Material (Au, Cu, Al)			AuPdCu			AuPdCu			PdCu	
	Wire Diameter			1mil			1mil			1mil	
	Wafer FAB			LSC JK Fab			LSC JK Fab			LSC JK Fab	
	Wafer Diameter			6"			6"			6"	
	Wafer Thickness			675			675			675	
	Top Metal Type/Bond Pad Composition			Al/Si/Cu			Al/Si/Cu			Al/Si/Cu	
	Top Metal Thickness			1.8um Al			1.8um Al			1.2um Al	
	Die passivation thickness range			Nitride (1um)			Nitride (1um)			Nitride (1um)	
	No. of bond over active area			0			0			0	
	Glass Transistion Temp			130 degree C			130 degree C			130 degree C	
	Lead Material Manufacture			KFC			KFC			KFC	
	Max Junction Temp			150 degree C			150 degree C			150 degree C	
	Max Thermal resistance Junc (aribent)			227° C/W			227° C/W			°C/W	
	Fab	No of masks Steps			8			8			8
Metal Layers				1			1			1	
Min Metal Width				4um			4um			4um	
Power Consumption				550mW			550mW			230mW	
Bond Type (at Die)				Ball			Ball			Ball	
Bond Type (at LF)				Wedge			Wedge			Wedge	
DB Epoxy/Solder Type				Epoxy			Epoxy			Epoxy	
Die Attach Material				84-1LMISR4			84-1LMISR4			8290	
# of pad/ball/pin Pitch				4			4			3	
Leadframe Type				stamping			stamping			stamping	
Leadframe Material				TO-94			TO-94			C194	
Molding Compound Type				EK5600G			EK5600G			EME-G600F	
Green Compound (Yes/No)				Yes			Yes			Yes	
Lead-Free (Yes/No)				Yes			Yes			Yes	
Assembly Site				JCET			JCET			JCET	
AT/Rel		FT Test Site			DWF			DWF			JCET
	Realibility Test Site			BCD			BCD			BCD	
	DataSheet Complete (Y/N)			AH477A			AH477A			AH49H	
	Qual Plan #			# 20062306			# 20062306			# 20062306	
Realibility Testing											
Test	Test Conditions	Duration / Limits	Fail/SS	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail		
Test Group A - Accelerated Environment Stress Tests											
MSL3 Pre-cond	(JESD22-A113) Bake 125C	24 Hrs	0/154					X	Pass		
	Soak 30C, 60% RH	192Hrs	0/154					X	Pass		
	IR reflow 260C	3 cycles	0/154					X	Pass		
Temp Cycle (TC)	(JESD22-A104) -65C-150C	500 cycles	0/77	X	Pass	X	Pass	X	Pass		
	Mounted on PCB Board (Daughter Card)	1000 cycles	0/77	X	Pass	X	Pass	X	Pass		
	Post TC (Min 30 Bonds from 5 Devices)	post 1000 cyc	0/30 Bonds	X	Pass	X	Pass	X	Pass		
Post TC Wire Bond Pull	Post TC (Min 30 Bonds from 5 Devices)	post 1000 cyc	0/30 Bonds	X	Pass	X	Pass	X	Pass		
Post TC CSAM	CSAM post 1000 cyc TC (If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 1000 cyc	0/30					X	Pass		
HAIST	JESD22-A101/A110	96 Hrs	0/77	X	Pass	X	Pass	X	Pass		
	130C, 85%RH 33.3 psia Vcc = Op Max	post 96 Hrs	0/30 Bonds	X	Pass	X	Pass	X	Pass		
	Post HAST (Min 30 Bonds from 5 Devices)	post 96 Hrs	0/30 Bonds	X	Pass	X	Pass	X	Pass		
Post HAST Wire Bond Pull	CSAM post 96 hr HAST										
Post HAST CSAM	(If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 96 Hrs	0/30					X	Pass		
UHAIST	JESD22-A118	96 Hrs	0/77	X	Pass	X	Pass	X	Pass		
	130C, 85%RH 33.3 psia										
	CSAM post 96 hr HAST										
Post UHAIST CSAM	(If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 96 Hrs	0/30					X	Pass		
HTSL High Temperature Storage	(JESD22-A103) Ta> 150C	168 Hrs	0/77	X	Pass	X	Pass	X	Pass		
		500 Hrs	0/77	X	Pass	X	Pass	X	Pass		
		1000 Hrs	0/77	X	Pass	X	Pass	X	Pass		
	Post HTSL (Min 30 Bonds from 5 Devices) (Make side by side WBP measurement comparison Pre Mold TC measurements vs post HTSL units to demonstrate IMC growth through increase wire pull strength)	post 1000 Hrs	0/30 Bonds	X	Pass	X	Pass	X	Pass		
	Post HTSL (Min 30 Bonds from 5 Devices) (Make side by side WBP measurement comparison Pre Mold TC measurements vs post HTSL units to demonstrate IMC growth through increase wire pull strength)	post 1000 Hrs	0/30 Bonds	X	Pass	X	Pass	X	Pass		
	Post HTSL CSAM	CSAM post 1000 hr HTSL (If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 1000 Hrs	0/30				X	Pass		
Test Group B - Accelerated Lifetime Simulation Tests											
HTOL	Ta=125C, 100% Vcc or Ta=150 for 408 hrs	168 Hrs	0/77	X	Pass	X	Pass	X	Pass		
		500 Hrs	0/77	X	Pass	X	Pass	X	Pass		
		1000 Hrs	0/77	X	Pass	X	Pass	X	Pass		
ELFR Earlier Life Failure Rate	Ta=125C, 100% Vcc	48 hrs	0/800	X	Pass	QBS Device1		QBS Device1			
Test Group C - Package Assembly Integrity Tests											
WBS	JESD22-B116B	Cpk>1.66	0/5	X	pass	X	pass	X	Pass		
WBP	MIL-STD883-2011	Cpk>1.66	0/5	X	pass	X	pass	X	Pass		
SD Solderability	>95% Coverage	5 Seconds	0/15	X	Pass	QBS Device1		X	Pass		
PD Physical Dimensions		Package Outline	Ppk>1.67 Cpk>1.33	X	Pass	QBS Device1		X	Pass		
Test Group E - Electrical Verification											
ESD											
Human Body Model	HBM (AEC-Q100-002)	+ -2KV	0/3	X	Pass	X	Pass	X	Pass		
Charged Device Model	CDM (AEC-Q100-011)	+750V	0/3	X	Pass	X	Pass	X	Pass		
LU Latch-up (Class II)	Max Operating Ta or Tc or Tj	100mA	0/6		Pass	X	Pass	X	Pass		
Char Characterization	Typ -40C, 25C, 85C	Operating Range	0/30	X	Pass	QBS Device1		X	pass		
Remark:											
Summary:											
Submitted By: Li YuanJian											
Approved By: Michael Kulbeth 09/29/2020											

Remark:	
Summary:	
Submitted By:	Li YuanJian
Approved By:	Michael Kulbeth 09/29/2020

DIODES
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						Qual Device 1		Qual Device 2		Qual Device 3	
General	Part Number					HX1A12001Q		HX3AA0001Q		HX7AG1101Q	
Product	Package					CER 2016		CER 3225		CER 7050	
	Package Size	By series				2.00 x 1.60 x 0.75		3.20 x 2.50 x 1.00		7.00 x 5.00 x 1.40	
	Package Material	Al2O3 Ceramic				Al2O3 Ceramic		Al2O3 Ceramic		Al2O3 Ceramic	
	Plating Material	Ni/Au				Ni/Au		Ni/Au		Ni/Au	
	Supplier	Kyocera				Sumitomo		Sumitomo		Sumitomo	
	Frequency	MHz				12.000000		100.000000		161.132800	
	Frequency Tolerance (After 2 times reflow, Refer to nominal frequency)	± ppm				± 100		± 100		± 100	
	Operating Temp Range	By series				-40°C to +125°C		-40°C to +125°C		-40°C to +125°C	
	Idd Max, enabled	By series				20 mA		40 mA		40 mA	
	Idd Max, disabled	By series				100uA		100uA		100uA	
	Logic Type	By series				LVC MOS		LVC MOS		LVC MOS	
	Pk-Pk Jitter, max	By series				40ps		40ps		40ps	
	Phase Jitter, max	By series				1ps		1ps		1ps	
	Output Load	By series				15pF		15pF		15pF	
	Rise / Fall Times, max	By series				8 ns		4 ns		4 ns	
	Start Time, max	By series				10 ms		10 ms		10 ms	
Material	Primary Die Information										
	Die Size (W/L)	By series				0.630 x 0.660mm		0.630 x 0.660mm		0.630 x 0.660mm	
	Die Pad Size	By series				70*70um		70*70um		70*70um	
	Die Pad Material	Al				Al		Al		Al	
	Supplier	NPC				PTI		PTI		PTI	
	Crystal Blank information										
	Material	AT Quartz				AT Quartz		AT Quartz		AT Quartz	
	Dimension	By series				1.30*0.90		2.00*1.35		4.995*2.480	
	Angle	By series				3D04M00S+/-30S		2D45M00S+/-30S		2D50M00S+/-01M	
	Blank Frequency	TBD				24.000000		100.000000		161.132000	
	Supplier	TBD				CTZ		SRX		PCL	
	Lid information										
	Material	Fe-Ni-Co				Fe-Ni-Co		Fe-Ni-Co		Fe-Ni-Co	
	Dimension	By series				1.85X1.35		2.75X2.05		6.20X4.40	
	Supplier	Yoshikawa				Yoshikawa		Yoshikawa		Yoshikawa	
	Die bond epoxy										
	Material (Conductive epoxy/ Non-conductive epoxy)	Non-cond. epoxy				Non-cond. epoxy		Non-cond. epoxy		Non-cond. epoxy	
	Supplier (Three Bond/Ablestik)										
	Wire information										
	Material	Au				Au		Au		Au	
	Wire Diameter	1.0 mil				1.0 mil		1.0 mil		1.0 mil	
	Supplier	Yuh-cheng				Yuh-cheng		Yuh-cheng		Yuh-cheng	
	Crystal Blank mount epoxy										
	Material	Conductive epoxy				Conductive epoxy		Conductive epoxy		Conductive epoxy	
	Supplier	Three bond				Three bond		Three bond		Three bond	
Process	Aging										
	Temperature (°C)	125C				125C		125C		125C	
	Time (Hrs)	72				72		72		72	
	Programming (Y/N)	N				N		N		N	
	Electrode material (Au / Ag)	Ag				Au		Au		Au	
	Wire number	6				6		6		6	
	Temperature (°C)	260				260		260		260	
	Time (Hrs)	2				2		2		2	
	Seam Seal										
	Dew point (°C)	-40	-40	-40	-40						
	Reflow										
	Max Temp.	260	260	260	260						
	Cycle	3	3	3	3						
	Helium Gross/Fine Leak										
	Pressure (Kg/cm2)	5.3	5.3	5.3	5.3						
	Time (Hrs)	1	1	1	1						
	Lead-Free (Yes/No)	Yes	Yes	Yes	Yes						
A/T/Rel	Assembly Site	PCL	PCL	PCL	PCL						
	FT Test Site	PCL	PCL	PCL	PCL						
	MSL Level	1	1	1	1						
	Realitylity Test Site	PCL	PCL	PCL	PCL						
	Qual Plan #		23061404	23061404	23061404						
Reliability Testing											
Test	Test Conditions	Duration / Limits	Fail/SS	Lots Required	Test Temp	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail
Test Group A - Accelerated Environment Stress Tests											
Reflow	MIL-STD-202 M210 260±5°C / 10s	3 cycle	0/338	3 Assy lots	Room	X	pass	X	pass	X	pass
Freq Vs. Temperature	Per spec	1 cycle from Cold to Hot	0/30	3 Assy lots	Temp Range	X	pass	X	pass	X	pass
IDD Vs. Temperature	Per spec	1 cycle from Cold to Hot	0/30	3 Assy lots	Temp Range	X	pass	X	pass	X	pass
High Temperature Exposure (Storage)	MIL-STD-202 Method 108 125°C / 1008Hrs	1008Hrs	0/77	3 Assy lots	Room	X	Pass	X	Pass	X	Pass
Temperature Cycling	JESD22-A104 -55°C ~ 125°C Dwell 15Min Xfer ~15min	1000Cycles	0/77	3 Assy lots	Room	X	Pass	X	Pass	X	Pass
Constant Temp./Humidity	MIL-STD-202 Method 103 85 ± 2°C ,RH85% / 1000Hrs(Without Biased)	1000Hrs	0/77	3 Assy lots	Room	X	Pass	X	Pass	X	Pass
High Temp. Operational Life	MIL-STD-202 0, 168, 504 & 1008 Hrs 125°C @ Vmax	1008Hrs	0/77	3 Assy lots	Room	X	Pass	X	Pass	X	Pass
Physical Dimension	JESD22 Method JB-100 per spec	Per Spec	0/30	3 Assy lots							



Certificate of Design, Construction & Qualification

Description: Standard Qual Plan Template AH9246-P-B, AH9247Z3-G1, AH9251-P-B

				Qual Device 1		Qual Device 2		Qual Device 3		QBS Device 1		QBS Device 2		QBS Device 3		QBS Device 4		QBS Device 5		QBS Device 6	
General	Part Number			AH924723-G1		AH9246-P-B		AH9251-P-B		AH9246-W-7		AH9246-W-7		AH9247-W-7		AH9246-W-7		AH9246-W-7		AH9251-W-7	
	PC #			PG1.1		PG1.2		PG1.3		PG1.1		PG1.2		PG1.3		PG1.1		PG1.4		PG1.3	
	Package			TO92		TO92		TO92		SC59		SC59		SC59		SC59		SC59		SC59	
	Wire Bond, Cu Pillar, CSP			Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond	
	MSL Level			N/A		N/A		N/A		MSL1		MSL1		MSL1		MSL1		MSL1		MSL1	
	Package Size			4.1*3.25mm		4.1*3.25mm		4.1*3.25mm		3*2.8mm		3*2.8mm		3*2.8mm		3*2.8mm		3*2.8mm		3*2.8mm	
	Die Name(1)			AD08040686B0		AD08040686E0		AD08040686D0		AD08040686C0		AD08040686D0		AD08040686D0		AD08040686B0		AD08040686E0		AD08040686D0	
	Die Size (W/L/Thickness)			655*733		655*733		655*733		655*733		655*733		655*733		655*733		655*733		655*733	
	Die Process / Technology			1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA	
	No of masks Steps			19		19		19		19		19		19		19		19		19	
Fab	Wire Bond Material (Au, Cu, Al)			AuPdCu		AuPdCu		AuPdCu		PdCu		PdCu		PdCu		PdCu		PdCu		PdCu	
	Wire Diameter			0.8mil		0.8mil		0.8mil		0.8mil		0.8mil		0.8mil		0.8mil		0.8mil		0.8mil	
	Wafer FAB			Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek	
	Wafer FAB Location			Korea		Korea		Korea		Korea		Korea		Korea		Korea		Korea		Korea	
	Wafer Diameter			8"		8"		8"		8"		8"		8"		8"		8"		8"	
	Wafer Thickness			725		725		725		725		725		725		725		725		725	
	Top Metal Type/Bond Pad Composition			Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu	
	Top Metal Thickness			0.8um		0.8um		0.8um		0.8um		0.8um		0.8um		0.8um		0.8um		0.8um	
	No. of bond over active area			0		0		0		0		0		0		0		0		0	
	Max Junction Temp			150 degree C		150 degree C		150 degree C		150 degree C		150 degree C		150 degree C		150 degree C		150 degree C		150 degree C	
Package	No of masks Steps			19		19		19		19		19		19		19		19		19	
	Metal Layers			3		3		3		3		3		3		3		3		3	
	Min Metal Width			0.23um		0.23um		0.23um		0.23um		0.23um		0.23um		0.23um		0.23um		0.23um	
	Min Metal Spacing			0.23um		0.23um		0.23um		0.23um		0.23um		0.23um		0.23um		0.23um		0.23um	
	Power Consumption			0.11W		0.11W		0.11W		0.11W		0.11W		0.11W		0.11W		0.11W		0.11W	
	Backgrind Thickness			305um		305um		305um		305um		305um		305um		140um		140um		140um	
	Bond Type (at Die)			Ball		Ball		Ball		Ball		Ball		Ball		Ball		Ball		Ball	
	Bond Type (at LF)			Wedge		Wedge		Wedge		Wedge		Wedge		Wedge		Wedge		Wedge		Wedge	
	DB Epoxy/Solder Type			Epoxy		Epoxy		Epoxy		Epoxy		Epoxy		CWBC		CWBC		CWBC		CWBC	
	Die Attach Material			84-1LMISR4		84-1LMISR4		84-1LMISR4		84-1LMISR4		84-1LMISR4		84-1LMISR4		8008MD		8008MD		8008MD	
AT/Rel	Leadframe Type (Stamped or Etched)									SC-59 D(DLF00645)		SC-59 D(DLF00645)		SC-59 D(DLF00645)		SC-59 D(DLF00645)		SC-59 D(DLF00645)		SC-59 D(DLF00645)	
	Leadframe Material			TFe0.1		TFe0.1		TFe0.1		EFTEC-64T		EFTEC-64T		EFTEC-64T		EFTEC-64T		EFTEC-64T		EFTEC-64T	
	Ag plated or Bare Cu			Bare Cu		Bare Cu		Bare Cu								Ag		Ag		Ag	
	Molding Compound Type			EME-G600F		EME-G600F		EME-G600F		CEL-1700HF40SK-D3		CEL-1700HF40SK-D3		CEL-1700HF40SK-D3		EME-G630AY		EME-G630AY		EME-G630AY	
	Green Compound (Yes/No)			Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
	Lead-Free (Yes/No)			Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
	Assembly Site/ Location			JCET		JCET		JCET		SAT		SAT		SAT		SAT		SAT		SAT	
	Test Site/ Location			JCET		JCET		JCET		SAT		SAT		SAT		SAT		SAT		SAT	
	Reliability Test Site			DHC		DHC		DHC		DHC		DHC		DHC				DHC		DHC	
	DataSet Complete (Y/N)			AH9247		AH9246		AH9251		AH9247		AH9246		AH9251		AH9247		AH9246		AH9251	
Qual Plan #			25062601		25062601		25062601		25060601		25060601		25060601		25111002		25111002		25111002		
Reliability Testing																					
Test	Test Conditions	Duration / Limits	Fail/SS	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail
Test Group A - Accelerated Environment Stress Tests																					
MSL1 Pre-cond	(JESD22-A113) Bake 125C	24 Hrs	0/154							X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	Soak 85C, 85% RH	168Hrs	0/154							X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	IR reflow 260C	3 cycles	0/154							X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
Temp Cycle (TC)	(JESD22-A104) -65C-150C	500 cycles	0/77	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	Mounted on PCB Board (Daughter Card)	1000 cycles	0/77	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
HAST	JESD22-A101/A110 130C, 85%RH 33.3 psia Vcc = Op Max	96 Hrs	0/77	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
HTSL High Temperature Storage	(JESD22-A103) Ta>150C	168 Hrs	0/77	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
		500 Hrs	0/77	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
		1000 Hrs	0/77	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
Test Group B - Accelerated Lifetime Simulation Tests																					
HTOL	Ta=125C, 100% Vcc or Ta=150 for 408 hrs	168 Hrs	0/77	X	Pass	QBS to QBS device 1		QBS to QBS device 2		X	Pass	X	Pass			X	Pass	QBS to QBS device1		QBS to QBS device2	
		500 Hrs	0/77	X	Pass	QBS to QBS device 1		QBS to QBS device 2		X	Pass	X	Pass			X	Pass	QBS to QBS device1		QBS to QBS device2	
		1000 Hrs	0/77	X	Pass	QBS to QBS device 1		QBS to QBS device 2		X	Pass	X	Pass			X	Pass	QBS to QBS device1		QBS to QBS device2	
Test Group C - Package Assembly Integrity Tests																					
WBS	JESD22-B116B	Cpk>1.66	0/5	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
WBP	MIL-STD883-2011	Cpk>1.66	0/5	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
SD	>95% Coverage	5 Seconds	0/15							X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
Solderability																					
PD																					
Physical Dimensions		Package Outline	Ppk>1.67 Cpk>1.33	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
Test Group E - Electrical Verification																					
ESD																					
Human Body Model	HBM (AEC-Q100-002)	+2KV	0/3	X	Pass	QBS to QUAL device1		QBS to QUAL device1		X	Pass	QBS to QBS device 1		QBS to QBS device 1		X	Pass	QBS to QUAL device1		QBS to QUAL device1	
Charged Device Model	CDM (AEC-Q100-011)	+750V	0/3	X	Pass	QBS to QUAL device1		QBS to QUAL device1		X	Pass	QBS to QBS device 1		QBS to QBS device 1		X	Pass	QBS to QUAL device1		QBS to QUAL device1	
LU																					
Latch-up (Class II)	Max Operating Ta or To or Tj	100mA	0/6	X	Pass	QBS to QUAL device1		QBS to QUAL device1		X	Pass	QBS to QBS device 1		QBS to QBS device 1		X	Pass	QBS to QUAL device1		QBS to QUAL device1	
Char Characterization	Typ -40C, 0C, 25C, 85C	Operating Range	0/30	X	Pass	QBS to QUAL device1		QBS to QUAL device1		X	Pass	QBS to QBS device 1		QBS to QBS device 1		X	Pass	X	Pass	X	Pass
Remark: AH924723-G1 runs ESD MM: 400V																					
Summary: Nicky Cheng 3/17/2026																					
Submitted By: Nicky Cheng 7/11/2025																					
Approved By: Daniel Li 4/17/2026																					

DIODES
INCORPORATED

				Qual Device 1		Qual Device 2		Qual Device 3		QBS Device 1		QBS Device 2	
General	Part Number			AH9247-W-7		AH9246-W-7		AH9251-W-7		AH9247-W-7		AH9246-W-7	
	PG #			PG1.1		PG1.4		PG1.3		PG1.1		PG1.2	
	Package			SC59		SC59		SC59		SC59		SC59	
	Wire Bond, Cu Piller, CSP			Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond	
	MSL Level			MSL1		MSL1		MSL1		MSL1		MSL1	
	Package Size			3*2.8mm		3*2.8mm		3*2.8mm		3*2.8mm		3*2.8mm	
	Die Name(1)			AD08040686B0		AD08040686E0		AD08040686D0		AD08040686B0		AD08040686C0	
	Die Size (W/L/Thickness			655*733		655*733		655*733		655*733		655*733	
	Die Process / Technology			1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA		1830AN18BA	
	No of masks Steps			19		19		19		19		19	
	Wire Bond Material (Au, Cu, Al)			PdCu		PdCu		PdCu		PdCu		PdCu	
	Wire Diameter			0.8mil		0.8mil		0.8mil		0.8mil		0.8mil	
Fab	Wafer FAB			Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek		Dongbu Hitek	
	Wafer FAB Location			Korea		Korea		Korea		Korea		Korea	
	Wafer Diameter			8"		8"		8"		8"		8"	
	Wafer Thickness			725		725		725		725		725	
	Top Metal Type/Bond Pad Composition			Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu	
	Top Metal Thickness			0.8um		0.8um		0.8um		0.8um		0.8um	
	No. of bond over active area			0		0		0		0		0	
	Max Junction Temp			150 degree C		150 degree C		150 degree C		150 degree C		150 degree C	
	No of masks Steps			19		19		19		19		19	
	Metal Layers			3		3		3		3		3	
	Min Metal Width			0.23um		0.23um		0.23um		0.23um		0.23um	
	Min Metal Spacing			0.23um		0.23um		0.23um		0.23um		0.23um	
	Power Consumption			0.11W		0.11W		0.11W		0.11W		0.11W	
Package	BackgrindThickness			140um		140um		140um		305um		305um	
	Bond Type (at Die)			Ball		Ball		Ball		Ball		Ball	
	Bond Type (at LF)			Wedge		Wedge		Wedge		Wedge		Wedge	
	DB Epoxy/Solder Type			CWBC		CWBC		CWBC		Epoxy		Epoxy	
	Die Attach Material			8008MD		8008MD		8008MD		84-1LMISR4		84-1LMISR4	
	Leadframe Type (Stamped or Etched)			SC-59 D(DLF00645)		SC-59 D(DLF00645)		SC-59 D(DLF00645)		SC-59 D(DLF00645)		SC-59 D(DLF00645)	
	Leadframe Material			EFTEC-64T		EFTEC-64T		EFTEC-64T		EFTEC-64T		EFTEC-64T	
	Ag plated or Bare Cu			Ag		Ag		Ag		Ag		Ag	
	Molding Compound Type			EME-G630AY		EME-G630AY		EME-G630AY		CEL-1700HF40SK-D3		CEL-1700HF40SK-D3	
	Green Compound (Yes/No)			Yes		Yes		Yes		Yes		Yes	
	Lead-Free (Yes/No)			Yes		Yes		Yes		Yes		Yes	
AT/Rel	Assembly Site/ Location			SAT		SAT		SAT		SAT		SAT	
	Test Site/ Location			SAT		SAT		SAT		SAT		SAT	
	Realibility Test Site			DHC		DHC		DHC		DHC		DHC	
	DataSheet Complete (Y/N)			AH9247		AH9246		AH9251		AH9247		AH9246	
	Qual Plan #			25111002		25111002		25111002		25060601		25060601	
Realibility Testing													
Test	Test Conditions	Duration / Limits	Fail/SS	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail
Test Group A - Accelerated Environment Stress Tests													
MSL1 Pre-cond	(JESD22-A113) Bake 125C	24 Hrs	0/154	X	Pass	X	Pass	X	Pass	X	Pass		



Certificate of Design, Construction & Qualification

Description: ULN2003AFS16-13/ULN2003AS16-13-01 add AT site FengHua

				Qual Device 1		Qual Device 2		Qual Device 3		QBS Device 1		QBS Device 2	
General	Part Number			ULN2003AFS16-13 ULN2003AS16-13-01		ULN2003AFS16-13 ULN2003AS16-13-01		ULN2003AFS16-13 ULN2003AS16-13-01		ULN2003AS16-13-01		ULN2003AS16-13-02	
	PG #			PG1.0		PG1.0		PG1.0		PG1.0		PG1.0	
	Package			SO16		SO16		SO16		SO16		SO16	
	Wire Bond, Cu Pillar, CSP			Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond	
	MSL Level			3		3		3		3		3	
	Package Size			9.8*3.8*1.75mm		9.8*3.8*1.75mm		9.8*3.8*1.75mm		9.8*3.8*1.75mm		9.8*3.8*1.75mm	
	Die Quantity (eg. Die per package)			1		1		1		1		1	
	Die Name(1)			AA261A0-H		AA261A0-H		AA261A0-H		AA261A0-H		AA261A0-H	
	Die Size (W/L/Thickness)			1201x2221		1201x2221		1201x2221		1201x2221		1201x2221	
	Die Process / Technology			60V 4um Bipolar		60V 4um Bipolar		60V 4um Bipolar		60V 4um Bipolar		60V 4um Bipolar	
	No of masks Steps			9		9		9		9		9	
	Wire Bond Material (Au, Cu, Al)			PdCu		PdCu		PdCu		Cu		PdCu	
	Wire Diameter			1mil		1mil		1mil		0.8mil		1mil	
	Down Bonds			Yes		Yes		Yes		Yes		Yes	
	# of Down Bonds			2		2		2		2		2	
	Wire Bond Material (Au, Cu, Al)			PdCu		PdCu		PdCu		Cu		PdCu	
Fab	Wafer FAB			JKFAB		JKFAB		JKFAB		JKFAB		JKFAB	
	Wafer FAB Location			TW		TW		TW		TW		TW	
	Wafer Diameter			6"		6"		6"		6"		6"	
	Wafer Thickness			675um		675um		675um		675um		675um	
	Top Metal Type/Bond Pad Composition			Al/Si/Cu		Al/Si/Cu		Al/Si/Cu		Al/Si/Cu		Al/Si/Cu	
	Top Metal Thickness			1.8um		1.8um		1.8um		1.8um		1.8um	
	Die passivation thickness range			SiO2 5KA +/- 0.5KA SIN 5KA +/- 0.5KA		SiO2 5KA +/- 0.5KA SIN 5KA +/- 0.5KA		SiO2 5KA +/- 0.5KA SIN 5KA +/- 0.5KA		SiO2 5KA +/- 0.5KA SIN 5KA +/- 0.5KA		SiO2 5KA +/- 0.5KA SIN 5KA +/- 0.5KA	
	No. of bond over active area			21		21		21		21		21	
	Glass Transition Temp			130 degree C		130 degree C		130 degree C		130 degree C		130 degree C	
	Header plating (Die Land Area)			Ag		Ag		Ag		Ag		Ag	
	Max Junction Temp			150 degree C		150 degree C		150 degree C		150 degree C		150 degree C	
	No of masks Steps			9		9		9		9		9	
	Assembly Lot #			2550-251211019.FH		2550-251211093.FH		2550-251211094.FH		ESR2006-059		J8212501.5M	
	BackgrindThickness			140um		140um		140um		140um		250um	
	Backgrind Location			FengHua		FengHua		FengHua		CAT		SIMAT	
	Bond Type (at Die)			Ball		Ball		Ball		Ball		Ball	
	Bond Type (at LF)			Wadge		Wadge		Wadge		Wadge		Wadge	
	DB Epoxy/Solder Type			Epoxy		Epoxy		Epoxy		Epoxy		Epoxy	
	Die Attach Material			S220		S220		S220		9005SP		9005SP-2	
	Min Bond Pad Pitch			141um		141um		141um		141um		141um	
	# of pad/ball/pin Pitch			17/22/16		17/22/16		17/22/16		17/22/16		17/22/16	
	Leadframe Type (Stamped or Etched)			SOP16-12R-B		SOP16-12R-B		SOP16-12R-B		SOIC-16L A TYPE 12ROW		SO-16	
	Leadframe Material			A194		A194		A194		CDA-194		A194	
	Ag plated or Bare Cu			Ag		Ag		Ag		Bare Cu		Bare Cu	
	Molding Compound Type			EME-G630AY		EME-G630AY		EME-G630AY		EME-G631K		CEL-9240HF-NAC	
	Molding Compound Manufacturer			住友		住友		住友		SUMITOMO		N/A	
	Green Compound (Yes/No)			Yes		Yes		Yes		YES		YES	
	Lead-Free (Yes/No)			Yes		Yes		Yes		YES		YES	
	Assembly Site/ Location			FengHua/GuangDong		FengHua/GuangDong		FengHua/GuangDong		CAT/ChengDu		SIMAT/ShangHai	
	Test Site/ Location			FengHua/GuangDong		FengHua/GuangDong		FengHua/GuangDong		CAT/ChengDu		SIMAT/ShangHai	
	Reliability Test Site			BCD		BCD		BCD		CAT		CAT	
	Qual Plan #			26012902		26012902		26012902		20061501		20061501	
	Reliability Testing												
Test	Test Conditions	Duration / Limits	Fail/SS	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail
Test Group A - Accelerated Environment Stress Tests													
MSL3 Pre-cond	(JESD22-A113) Bake 125C	24 Hrs	0/154	X	pass	X	pass	X	pass				
	Soak 30C, 60% RH	192Hrs	0/154	X	pass	X	pass	X	pass				
	IR reflow 260C	3 cycles	0/154	X	pass	X	pass	X	pass				
CSAM Pre Post PC	CSAM pre and post IR	30 pcs	0/30	X	pass	X	pass	X	pass				
Temp Cycle (TC)	(JESD22-A104) -65C-150C	500 cycles	0/77	X	pass	X	pass	X	pass				
	Mounted on PCB Board (Daughter Card)												
		1000 cycles	0/77	X	pass	X	pass	X	pass				
Post TC Wire Bond Pull Post TC Wire Bond Shear	Post TC (Min 30 Bonds from 5 Devices)	post 1000 cyc	0/30 Bonds	X	pass	X	pass	X	pass				
	Post TC (Min 30 Bonds from 5 Devices)	post 1000 cyc	0/30 Bonds	X	pass	X	pass	X	pass				
Post TC CSAM	CSAM post 1000 cyc TC (If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 1000 cyc	0/30	X	pass	X	pass	X	pass				
HAST Post HAST Wire Bond Pull Post HAST Wire Bond Shear	(JESD22-A101/A110												
	130C, 85%RH 33.3 psia Vcc = Op Max	96 Hrs	0/77	X	pass	X	pass	X	pass				
	Post HAST (Min 30 Bonds from 5 Devices)	post 96 Hrs	0/30 Bonds	X	pass	X	pass	X	pass				
	Post HAST (Min 30 Bonds from 5 Devices)	post 96 Hrs	0/30 Bonds	X	pass	X	pass	X	pass				
	UHAST												
	130C, 85%RH 33.3 psia	96 Hrs	0/77	X	pass	X	pass	X	pass				
Post UHAST CSAM	CSAM post 96 hr HAST (If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 96 Hrs	0/30	X	pass	X	pass	X	pass				
	(JESD22-A103)	Ta>150C	168 Hrs	0/77	X	pass	X	pass	X	pass			
			500 Hrs	0/77	X	pass	X	pass	X	pass			
		1000 Hrs	0/77	X	pass	X	pass	X	pass				
Test Group B - Accelerated Lifetime Simulation Tests													
HTOL	Ta=125C, 100% Vcc	168 Hrs	0/77	X	pass	QBS to Qual Device1 and QBS Device1,2		QBS to Qual Device1 and QBS Device1,2		X	Pass	X	Pass
	or Ta=150 for 408 hrs	500 Hrs	0/77	X	pass	QBS to Qual Device1 and QBS Device1,2		QBS to Qual Device1 and QBS Device1,2		X	Pass	X	Pass
		1000 Hrs	0/77	X	pass	QBS to Qual Device1 and QBS Device1,2		QBS to Qual Device1 and QBS Device1,2		X	Pass	X	Pass
Test Group C - Package Assembly Integrity Tests													
WBS	JESD22-B116B	Cpk>1.66	0/5	X	pass	X	pass	X	pass				
WBP	MIL-STD883-2011	Cpk>1.66	0/5	X	pass	X	pass	X	pass				
SD													
Solderability	>95% Coverage	5 Seconds	0/15	X	pass	X	pass	X	pass				
PD													
Physical Dimensions	Package Outline			X	pass	X	pass	X	pass				
Test Group E - Electrical Verification													
ESD													
Human Body Model	HBM (AEC-Q100-002)	+2KV	0/3	X	Pass	QBS to Qual Device1 and QBS Device1,2		QBS to Qual Device1 and QBS Device1,2		X	Pass	X	Pass
Charged Device Model	CDM (AEC-Q100-011)	+750V	0/3	X	Pass	QBS to Qual Device1 and QBS Device1,2		QBS to Qual Device1 and QBS Device1,2		X	Pass	X	Pass
LU													
Latch-up (Class II)	Max Operating Ta or Tc or Tj	100mA	0/6	X	Pass	QBS to Qual Device1 and QBS Device1,2		QBS to Qual Device1 and QBS Device1,2		X	Pass	X	Pass
Char Characterization	Typ -40C, 0C, 25C, 85C, 125C	Operating Range	0/30	X	pass	QBS to Qual Device1 and QBS Device1,2		QBS to Qual Device1 and QBS Device1,2		X	Pass	X	Pass
Remark:													
Summary:	Jidong Liu 4/8/2026												
Submitted By:	Jidong Liu 3/1/2026												
Approved By:	Daniel Li 4/9/2026												



Certificate of Design, Construction & Qualification

Description: AL3353S-13 qualify CAT as 2nd A/T site
Full QBS to RTPed product using same package BOM

				Qual Device 1		QBS Device 1 - Lot1		QBS Device 1 - Lot2		QBS Device 1 - Lot3		QBS Device 2 - Lot1		QBS Device 2 - Lot2	
General	Part Number			AL3353S-13		AL8853AQs-13		AL8853AQs-13		AL8853AQs-13		AL3353S-13		AL3353S-13	
	PG #			P586.1.1		P586.1.5		P586.1.5		P586.1.5		P586.1.1		P586.1.1	
	Package			SO-8		SO-8		SO-8		SO-8		SO-8		SO-8	
	Wire Bond, Cu Piller, CSP			Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond		Wire Bond	
	MSL Level			MSL1		MSL1		MSL1		MSL1		MSL1		MSL1	
	Package Size			4.90mm*6.00mm*1.60mm		4.90mm*6.00mm*1.60mm		4.90mm*6.00mm*1.60mm		4.90mm*6.00mm*1.60mm		4.90mm*6.00mm*1.60mm		4.90mm*6.00mm*1.60mm	
	Die Quantity (eg. Die per package)			1		1		1		1		1		1	
	Die Name(1)			BN134B0-2		BN134QH0-2		BN134QH0-2		BN134QH0-2		BN134B0-2		BN134B0-2	
	Die Size (W/L/Thickness)			0.94mm*1.07mm*0.25mm		0.94mm*1.07mm*0.25mm		0.94mm*1.07mm*0.25mm		0.94mm*1.07mm*0.25mm		0.94mm*1.07mm*0.25mm		0.94mm*1.07mm*0.25mm	
	Die Process / Technology			0.5um 40V BCD		0.5um 40V BCD		0.5um 40V BCD		0.5um 40V BCD		0.5um 40V BCD		0.5um 40V BCD	
	No of masks Steps			25		25		25		25		25		25	
	Wire Bond Material (Au, Cu, Al)			PdCu		PdCu		PdCu		PdCu		PdCu		PdCu	
Fab	Wire Diameter			1.0mil		1.0mil		1.0mil		1.0mil		1.0mil		1.0mil	
	Wafer FAB			SFAB2		SFAB2		SFAB2		SFAB2		SFAB2		SFAB2	
	Wafer FAB Location			ShangHai		ShangHai		ShangHai		ShangHai		ShangHai		ShangHai	
	Wafer Diameter			6"		6"		6"		6"		6"		6"	
	Wafer Thickness			675um		675um		675um		675um		675um		675um	
	Top Metal Type/Bond Pad Composition			Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu		Al/Cu	
	Top Metal Thickness			3 um		3 um		3 um		3 um		3 um		3 um	
	Die passivation thickness range			0.5um SiO2+ 0.5um SiN		0.5um SiO2+ 0.5um SiN		0.5um SiO2+ 0.5um SiN		0.5um SiO2+ 0.5um SiN		0.5um SiO2+ 0.5um SiN		0.5um SiO2+ 0.5um SiN	
	No. of bond over active area			0		0		0		0		0		0	
	Glass Transition Temp			130°C		130°C		130°C		130°C		130°C		130°C	
	Lead Material Manufacture			ASM		ASM		ASM		ASM		ASM		ASM	
	Max Junction Temp			150°C		150°C		150°C		150°C		150°C		150°C	
	Max Thermal resistance Junc (case)			6.6°C/W		6.6°C/W		6.6°C/W		6.6°C/W		65°C/W		65°C/W	
	Max Thermal resistance Junc (ambient)			105°C/W		105°C/W		105°C/W		105°C/W		105°C/W		105°C/W	
	No of masks Steps			25		25		25		25		25		25	
	Metal Layers			3		3		3		3		3		3	
Package	Backgrind/Thinkness			0.25um		0.25um		0.25um		0.25um		0.25um		0.25um	
	Backgrind Location			CAT		CAT		CAT		CAT		CAT		CAT	
	Bond Type (at Die)			Ball		Ball		Ball		Ball		Ball		Ball	
	Bond Type (at LF)			Wedge		Wedge		Wedge		Wedge		Wedge		Wedge	
	DB Epoxy/Solder Type			Epoxy		Epoxy		Epoxy		Epoxy		Epoxy		Epoxy	
	Die Attach Material			9005SP (导电胶)		9005SP (导电胶)		9005SP (导电胶)		9005SP (导电胶)		8200T		8200T	
	Min Bond Pad Pitch			120um		120um		120um		120um		120um		120um	
	# of pad/ball/pin Pitch			8		8		8		8		8		8	
	Leadframe Type (Stamped or Etched)			SOP-8L C TYPE 12ROW [Stamped]		SOP-8L C TYPE 12ROW [Stamped]		SOP-8L C TYPE 12ROW [Stamped]		SOP-8L C TYPE 12ROW [Stamped]		SOIC-8		SOIC-8	
	Leadframe Material			A194		A194		A194		A194		A194		A194	
	Ag plated or Bare Cu			Bare Cu		Bare Cu		Bare Cu		Bare Cu		Bare Cu		Bare Cu	
	Molding Compound Type			EME-G700		EME-G700		EME-G700		EME-G700		EME-G600FB		EME-G600FB	
	Molding Compound Manufacturer			SUMITOMO		SUMITOMO		SUMITOMO		SUMITOMO		SUMITOMO		SUMITOMO	
	Green Compound (Yes/No)			Yes		Yes		Yes		Yes		Yes		Yes	
	Lead-Free (Yes/No)			Yes		Yes		Yes		Yes		Yes		Yes	
	Assembly Site/ Location			CAT		CAT		CAT		CAT		TSHT		TSHT	
AT/Rel	Test Site/ Location			CAT		CAT		CAT		CAT		TSHT		TSHT	
	Reability Test Site			CAT		CAT		CAT		CAT		BCD		BCD	
	DataSheet Complete (Y/N)			Y (AL3353)		Y (AL8853AQ)		Y (AL8853AQ)		Y (AL8853AQ)		Y (AL3353)		Y (AL3353)	
	Qual Plan #			#26032502		#22072001		#22072001		#22072001		#18080101		#18080101	
Reliability Testing															
Test	Test Conditions	Duration / Limits	Fail/SS	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail	X = Test Needed	Results Pass/Fail
Test Group A - Accelerated Environment Stress Tests															
MSL1 Pre-cond	(JESD22-A113) Bake 125C	24 Hrs	0/154	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	Soak 85C, 85% RH	168Hrs	0/154	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	IR reflow 260C	3 cycles	0/154	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
Temp Cycle (TC)	(JESD22-A104) -65C-150C														
	Mounted on PCB Board (Daughter Card)	500 cycles	0/77	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
		1000 cycles	0/77	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
Post TC Wire Bond Pull	Post TC (Min 30 Bonds from 5 Devices)	post 1000 cyc	0/30 Bonds	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	Post TC (Min 30 Bonds from 5 Devices)	post 1000 cyc	0/30 Bonds	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	CSAM post 1000 cyc TC														
Post TC CSAM	(If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 1000 cyc	0/30	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
HAST	(JESD22-A101/A110														
	130C, 85%RH 33.3 psia Vcc = Op Max	96 Hrs	0/77	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	Post HAST (Min 30 Bonds from 5 Devices)	post 96 Hrs	0/30 Bonds	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	Post HAST (Min 30 Bonds from 5 Devices)	post 96 Hrs	0/30 Bonds	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	CSAM post 96 hr HAST														
Post HAST CSAM	(If performing 2X then 1X CSAM may be waived if mounted on PCB board)	post 96 Hrs	0/30	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
HTSL High Temperature Storage	(JESD22-A103)	Ta>150C	168 Hrs	0/77	QBS to QBS Device 1		Pass	X	Pass	X	Pass	X	Pass	X	Pass
			500 Hrs	0/77	QBS to QBS Device 1		Pass	X	Pass	X	Pass	X	Pass	X	Pass
			1000 Hrs	0/77	QBS to QBS Device 1		Pass	X	Pass	X	Pass	X	Pass	X	Pass
Test Group B - Accelerated Lifetime Simulation Tests															
HTOL	Ta=125C, 100% Vcc	168 Hrs	0/77	QBS to QBS Device 2		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
	or Ta=150 for 408 hrs	500 Hrs	0/77	QBS to QBS Device 2		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
		1000 Hrs	0/77	QBS to QBS Device 2		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
Test Group C - Package Assembly Integrity Tests															
WBS	JESD22-B116B	Cpk>1.66	0/5	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
WBP	MIL-STD883-2011	Cpk>1.66	0/5	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass	X	Pass	X	Pass
SD															
Solderability	>95% Coverage	5 Seconds	0/15	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass				
PD															
Physical Dimensions		Package Outline	Ppk>1.67 Cpk>1.33	QBS to QBS Device 1		X	Pass	X	Pass	X	Pass				
Test Group E - Electrical Verification															
ESD															
Human Body Model	HBM (AEC-Q100-002)	++2KV	0/3	QBS to QBS Device 2		X	Pass	X	Pass	X	Pass	X	Pass		
Charged Device Model	CDM (AEC-Q100-011)	++750V	0/3	QBS to QBS Device 2		X	Pass	X	Pass	X	Pass	X	Pass		
LU															
Latch-up (Class II)	Max Operating Ta or Tc or Tj	100mA	0/6	QBS to QBS Device 2		X	Pass	X	Pass	X	Pass	X	Pass		
Char	Typ -40C, 0C, 25C, 85C, 125C	Operating Range	0/30	QBS to QBS Device 2		X	Pass	X	Pass	X	Pass	X	Pass		
Characterization															
Remark:															
Summary:	Huafeng Yin 4/2/2026														
Submitted By:	Huafeng Yin 4/2/2026														
Approved By:	Daniel Li 4/7/2026														