

PCN # 1753B

DATE: January 28, 2019

EXPECTED PCN SHIP DATE: January 28, 2019



Quality Assurance  
160 Rio Robles  
San Jose, CA 95134

www.maximintegrated.com

PROCESS CHANGE NOTICE

PRODUCT CHANGE NOTICE

MAXIM INTEGRATED HEREBY ISSUES NOTIFICATION OF CHANGE  
THAT MAY AFFECT THE FOLLOWING CATEGORIES:

<input type="checkbox"/> DESIGN	<input type="checkbox"/> WAFER FAB	<input checked="" type="checkbox"/> ASSEMBLY	<input type="checkbox"/> TEST	<input type="checkbox"/> ELEC/MECH SPECS
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AFFECTED PRODUCT:

Ordering P/N: (See PN listing XLS in PCN ZIP file)
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CHANGE FROM: - Adding Assembler Greatek for Maxim Commercial devices in uMAX package - Phase B	CHANGE TO: - Additional Assembler Greatek in Taiwan/R.O.C.
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JUSTIFICATION: - Maxim has selected Greatek to expand assembly capacity. Greatek is an established assembly subcontractor and is certified under QS 9000, ISO/TS 16949, ISO 14001. This new partnership will enhance Maxim's Supply-Chain to meet capacity demands, flexibility and on-time delivery. Qualification results are reflected in Maxim's Reliability report attached (R29185CQ). There are no changes to the form, fit, function or quality of the devices.
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TRACEABILITY: Maxim Integrated maintains full traceability by device marking, packaging labels and shipment documents.
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Maxim Integrated's Change Notification System is designed to keep our customer base apprised of major product, manufacturing, or facility improvements.

*Nasser Ali Chaouche*

Nasser AliChaouche / PCN Coordinator

For further information, please contact either of the people listed below.

Contact your local Maxim Integrated Company Representative or Nasser AliChaouche, PCN Coordinator  
408-601-5660 / pcn.coordinator@maximintegrated.com

## 1) PURPOSE

To qualify assembler Greatek to build uMAX packages with 1.0/1.3 mil Au-wire

## 2) SUMMARY

Qualification lots assembled in Greatek have passed reliability qualification (Conditional Qualification Requirements / Acceptance Criteria). Therefore, assembler Greatek is conditionally qualified to build uMAX packages with Au-wire. These packages, as tested MSL1, are not moisture sensitive, therefore, requires no bake-and-bag precautions for shipment and/or storage.

## 3) Package Coverage

The following packages can be covered by this qualification result.

U10+2	U10CN+1	U8+1	U8+4	U8E+2
U10+5	U10E+3	U8+3	U8CN+1	

## 4) QUALIFICATION REQUIREMENTS AND RESULTS

Rel#	R29185A	R29185B		
Lot#	JFFZCA004JC	JFFZCA004JD		
Device:	MAX9921AUB/V+	MAX9921AUB/V+		
Die Type:	OY24Y	OY24Y		
Die Size (mils)	62X87 mil	62X87 mil		
Package Type (code):	10L uMAX (U10+2)	10L uMAX (U10+2)		
Date Code:	1805	1805		
Topmark:	9921 AB/V +	9921 AB/V +		
Stress Test	Duration	Sampling Plan	Result	Result
Convection Reflow <sup>*1,2,3</sup> , 260°C Peak	MSL 1, 3X	0/400	0/400	0/400
Unbiased HAST 130°C / 85% R.H. <sup>*1,3</sup>	96 hrs.	0/77	0/77	0/77
Temperature Cycle <sup>*1,2,3</sup> -65°C to 150°C (Condition C)	500 cyc	0/77	0/77	0/77
High Temperature Storage 150°C <sup>*1,2,3</sup>	500 hrs.	0/77	0/77	0/77
HTOL <sup>*2,3,4</sup>	500 hrs	0/77	0/77	0/77
C-SAM*1	T (0)	0/22	0/22	0/22
Wire Bond Pull Minimum 5 grams-force	T (0)	0/20	0/20	0/20
Solderability (Lead-Free,245C)	T (0)	0/15	0/15	0/15
Physical Dimension (PD)	T (0)	0/20	0/20	0/20
Bond Crater Check	Post-Precon	0/20	0/20	0/20
Solder Shock <sup>*3</sup>	T0	0/15	0/15	0/15

Note:

- \*1. Convection reflow is used as preconditioning for SMD packages.
- \*2. Electrical tests pre- and post-stress were performed at +125°C.
- \*3. Electrical tests pre- and post-stress were performed at +25°C.
- \*4. Electrical tests pre- and post-stress were performed at -40°C.

Rel#	R29185C		R29185D	
Lot#	TIDZDA016HC		TIDZDA016HD	
Device:	MAX9924UAUB/V+		MAX9924UAUB/V+	
Die Type:	OY25Z		OY25Z	
Die Size (mils)	37x48		37x48	
Package Type (code):	10L uMAX (U10+2)		10L uMAX (U10+2)	
Date Code:	1805		1805	
Topmark:	9924 UA/V +		9924 UA/V +	
Stress Test	Duration	Sampling Plan	Result	Result
Convection Reflow *1,2,3, 260°C Peak	MSL 1, 3X	0/400	0/400	0/400
Unbiased HAST 130°C / 85% R.H. *1,3	96 hrs.	0/77	0/77	0/77
Temperature Cycle *1,2,3 -65°C to 150°C (Condition C)	500 cyc	0/77	0/77	0/77
High Temperature Storage 150°C *1,2,3	500 hrs.	0/77	0/77	0/77
C-SAM*1	T (0)	0/22	0/22	0/22
Wire Bond Pull Minimum 5 grams-force	T (0)	0/20	0/20	0/20
Solderability (Lead-Free,245C)	T (0)	0/15	0/15	0/15
Physical Dimension (PD)	T (0)	0/20	0/20	0/20
Bondcrater	Post-Precon	0/20	0/20	0/20
Solder Shock*3	T0	0/15	0/15	0/15

Rel#	R29185E		R29185F	
Lot#	N1I0BA086FC		N1I0BA086FD	
Device:	MAX4091AUA+		MAX4091AUA+	
Die Type:	OX54Y		OX54Y	
Die Size (mils)	37x55		37x55	
Package Type (code):	8L uMAX (U8+1)		8L uMAX (U8+1)	
Date Code:	1805		1805	
Topmark:	4091 AUA +		4091 AUA +	
Stress Test	Duration	Sampling Plan	Result	Result
Convection Reflow *1,2,3, 260°C Peak	MSL 1, 3X	0/400	0/400	0/400
HAST 130°C / 85% R.H. *1,2,3	96 hrs.	0/77	0/77	0/77
Unbiased HAST 130°C / 85% R.H. *1,3	96 hrs.	0/77	0/77	0/77
Temperature Cycle *1,2,3 -65°C to 150°C (Condition C)	500 cyc	0/77	0/77	0/77
High Temperature Storage 150°C *1,2,3	500 hrs.	0/77	0/77	0/77
HTOL *2,3,4	500 hrs	0/77	0/77	0/77
C-SAM*1	T (0)	0/22	0/22	0/22
Wire Bond Pull Minimum 5 grams-force	T (0)	0/20	0/20	0/20
Solderability (Lead-Free,245C)	T (0)	0/15	0/15	0/15
Physical Dimension (PD)	T (0)	0/20	0/20	0/20
Bondcrater	Post-Precon	0/20	0/20	0/20
Solder Shock*3	T0	0/15	0/15	0/15

## Note

- \*1. Convection reflow is used as preconditioning for SMD packages.
- \*2. Electrical tests pre- and post-stress were performed at +125°C.
- \*3. Electrical tests pre- and post-stress were performed at +25°C.
- \*4. Electrical tests pre- and post-stress were performed at -40°C.

<b>Rel#</b>	R29185G		R29185H	
<b>Lot#</b>	TAQJ2A105FA		TAQJ2A105FB	
<b>Device:</b>	MAX16956AUBE/V+		MAX16956AUBE/V+	
<b>Die Type:</b>	AP36A-0D		AP36A-0D	
<b>Die Size (mils)</b>	57.874X53.937		57.874X53.937	
<b>Package Type (code):</b>	10L uMAX (U10E+3)		10L uMAX (U10E+3)	
<b>Date Code:</b>	1809		1809	
<b>Topmark:</b>	AABL AZEC +		AABL AZEC +	
<b>Stress Test</b>	<b>Duration</b>	<b>Sampling Plan</b>	<b>Result</b>	<b>Result</b>
<b>Convection Reflow *1,2,3, 260°C Peak</b>	MSL 1, 3X	0/400	0/400	0/400
<b>Unbiased HAST 130°C / 85% R.H. *1,3</b>	96 hrs.	0/77	0/77	0/77
<b>Temperature Cycle *1,2,3 -65°C to 150°C (Condition C)</b>	500 cyc	0/77	0/77	0/77
<b>High Temperature Storage 150°C *1,2,3</b>	500 hrs.	0/77	0/77	0/77
<b>HTOL *2,3,4</b>	500 hrs	0/77	0/77	0/77
<b>C-SAM*1</b>	T (0)	0/22	0/22	0/22
<b>Wire Bond Pull Minimum 5 grams-force</b>	T (0)	0/20	0/20	0/20
<b>Solderability (Lead-Free,245C)</b>	T (0)	0/15	0/15	0/15
<b>Physical Dimension (PD)</b>	T (0)	0/20	0/20	0/20
<b>Bondcrater</b>	Post-Precon	0/20	0/20	0/20
<b>Solder Shock*3</b>	T0	0/15	0/15	0/15

<b>Rel#</b>	R29185I		R29185J	
<b>Lot#</b>	J3KBIA478AA		J3KBIA478AB	
<b>Device:</b>	MAX1745EUB/V+		MAX1745EUB/V+	
<b>Die Type:</b>	PX98Y-1Z		PX98Y-1Z	
<b>Die Size (mils)</b>	88x75		88x75	
<b>Package Type (code):</b>	10LuMAX(U10CN+1)		10LuMAX(U10CN+1)	
<b>Date Code:</b>	1811		1811	
<b>Topmark:</b>	1745 EB/V +		1745 EB/V +	
<b>Stress Test</b>	<b>Duration</b>	<b>Sampling Plan</b>	<b>Result</b>	<b>Result</b>
<b>Convection Reflow *2,3 260°C Peak</b>	MSL 1, 3X	0/400	0/400	0/400
<b>Unbiased HAST 130°C / 85% R.H. *1,2</b>	96 hrs.	0/77	0/77	0/77
<b>Temperature Cycle *1,2,3 -65°C to 150°C (Condition C)</b>	500 cyc	0/77	0/77	0/77
<b>High Temperature Storage 150°C *1,2,3</b>	500 hrs.	0/77	0/77	0/77
<b>HTOL *2,3,4</b>	500 hrs	0/77	0/77	0/77
<b>Solderability (Lead-Free,245C)</b>	T(0)	0/15	0/15	0/15
<b>C-SAM*1</b>	T(0)	0/22	0/22	0/22
<b>Wire Bond Pull Minimum 5 grams-force</b>	T (0)	0/20	0/20	0/20
<b>Physical Dimension (PD)</b>	T (0)	0/15	0/15	0/15
<b>Bondcrater</b>	Post-Precon	0/20	0/20	0/20
<b>Solder Shock*3</b>	T(0)	0/15	0/20	0/20

- Note:**
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  - \*2. Electrical tests pre- and post-stress were performed at +125°C.
  - \*3. Electrical tests pre- and post-stress were performed at +25°C.
  - \*4. Electrical tests pre- and post-stress were performed at -40°C.

Affected product numbers

DS1338U-18+

DS1339U-33+T&R

DS1390U-33+

DS1390U-33+T&R

DS1631U+

DS1631U+T&R

DS18B20U+

DS18B20U+T&R

DS3904U-020+

DS3904U-020+T&R

MAX1693EUB+T

MAX1954EUB+

MAX4080SAUA+

MAX4080SAUA+T

MAX4373TEUA+T