



# Process Change Notification

PCN Number: PCN-2019-120

PCN Notification Date: 01/29/2020

## Final PCN

The assembly site of the WM8523 device transfer  
from Amkor Philippines to ASECL Taiwan

Dear Customer,

We are pleased to announce the successful completion of the assembly site transfer of the WM8523 device from Amkor Philippines to ASECL Taiwan.

The qualification of WM8523 in ASECL Taiwan is complete. The successful qualification was based on a Moisture Sensitivity Level (MSL) of 3, which is the standard MSL level from the Assembly Supplier for this type of package. Please be aware that this is a change of MSL level for this device, which was previously qualified to MSL 1.

As a result of this change, Cirrus Logic supply the WM8523 using the following conditions - the packaging includes MBB (Moisture Barrier Bag), HIC (Humidity Indicate Card) and desiccant, and the label details the parts are MSL 3.

Ordering Information and Absolute Maximum Ratings are updated without the MSL level in the datasheet as the standard Cirrus Datasheet format.

The described change is effective as of the date of customer's agreement for this notification and delivery will commence immediately to ensure continuity of supply without disruption.

Cirrus Logic would like to take this opportunity to thank our customers for their cooperation and assistance in this respective matter. Any specific or immediate inquiries should be directed to your local Field Sales Representative.

If you have any questions, please contact your Sales Representative.

Sincerely,

Quality Systems Administrator  
Cirrus Logic Corporate Quality  
Phone: +1(512) 851-4000



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**Products Affected:**

The devices listed on subsequent pages are the complete list of affected devices. According to our records, one or more of these devices have been purchased by your organization within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

Technical details of this Process / Product Change follow on the next page(s).

<b>Title:</b>		The assembly site of the WM8523 device transfer from Amkor Philippines to ASECL Taiwan			
<b>Customer Contact:</b>		Local Field Sales Representative	<b>Phone:</b>	(512) 851-4000	<b>Dept:</b> Corporate Quality
<b>Proposed 1<sup>st</sup> Ship Date:</b>		Q1 2020	<b>Estimated Sample Availability Date:</b>		Dec. 2019
<b>Change Type:</b>					
X	Assembly Site	X	Assembly Process	X	Assembly Materials
	Wafer Fab Site		Wafer Fab Process		Wafer Fab Materials
	Wafer Bump Site		Wafer Bump Process		Wafer Bump Material
	Test Site		Test Process		Design
	Electrical Specification		Mechanical Specification		Part Number
X	Packing/Shipping/Labeling	X	Other		
<b>Comments:</b>		"Other" – Marking format and COO			

## PCN Details

**Description of Change(s):**

- Assembly Site Transfer**

<b>From</b>	<b>To</b>
Amkor Philippines	ASECL Taiwan

Note1: The wafer fabrication, final test and packing site will not transfer.  
 Note2: COO (Country of Origin) will be changed from Philippines (PH) to Taiwan (TW)

- Standard process flow and materials of ASECL will be adapted for the WM8523 device**

Material Change	ATP	ASECL
Leadframe	Matrix- 168 units/LF (Stamped) Alloy: C7025	Matrix - 170 units/LF (Stamped) Alloy: C194
Die attach	Epoxy 8290	Epoxy 4900G
Mold compound	EME-G700K	EME-G631HA

Note1: Material Declarations or Product Content reports available upon request.

MSL Level	ATP	ASECL
	1	3

- Packing condition:**

The packing includes MBB (Moisture Barrier Bag), HIC (Humidity Indicate Card) and desiccant for MSL per the Jedec standard.  
 The label details the information of MSL 3.

- POD (Package Outline Drawing):**

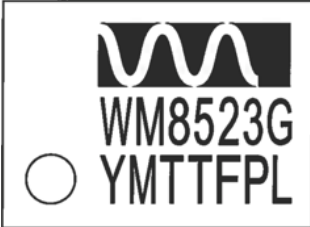
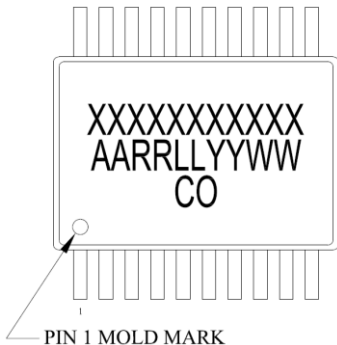
Minor differences in POD tolerances

ASECL POD meets the JEDEC for 20L TSSOP and adheres to the tolerances outline in the data sheet specification.

Reference Appendix A: POD Comparison Chart

- Marking Format:** Consistent with Cirrus Logic Mark Format Standard

**Note:** Cirrus Logic acquired Wolfson in August 2014

From	To	
<p>Wolfson Marking Format</p> 	<p>Cirrus Logic Format</p> 	<p>Line 1: Part Number (11 characters maximum) Line 2: Package Mark (10 characters maximum) Line 3: Country of Origin (2 characters as shown on PO)</p> <p>AA = Assembly Site Code RR = Device Rev Code LL = Lot Sequence Code YY = Year of Manufacture WW = Work Week of Manufacture</p>

- Datasheet update:**

Ordering Information and Absolute Maximum Ratings are updated to the Cirrus standard format – MSL information removed.

Before the change (Rev 4.2)



ESD Sensitive Device. This device is manufactured on a CMOS process. It is therefore generically susceptible to damage from excessive static voltages. Proper ESD precautions must be taken during handling and storage of this device.

Wolfson tests its package types according to IPC/JEDEC J-STD-020 for Moisture Sensitivity to determine acceptable storage conditions prior to surface mount assembly. These levels are:

MSL1 = unlimited floor life at <30°C / 85% Relative Humidity. Not normally stored in moisture barrier bag.

MSL2 = out of bag storage for 1 year at <30°C / 60% Relative Humidity. Supplied in moisture barrier bag.

MSL3 = out of bag storage for 168 hours at <30°C / 60% Relative Humidity. Supplied in moisture barrier bag.

The Moisture Sensitivity Level for each package type is specified in Ordering Information.

ORDER CODE	TEMPERATURE RANGE	PACKAGE	MOISTURE SENSITIVITY LEVEL	PEAK SOLDERING TEMPERATURE
WM8523GEDT	-40°C to +85°C	20-lead TSSOP (pb-free)	MSL1	260°C
WM8523GEDT/R	-40°C to +85°C	20-lead TSSOP (pb-free, tape and reel)	MSL1	260°C

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After the change (Rev 4.3)



ESD Sensitive Device. This device is manufactured on a CMOS process. It is therefore generically susceptible to damage from excessive static voltages. Proper ESD precautions must be taken during handling and storage of this device.

ORDER CODE	TEMPERATURE RANGE	PACKAGE	PEAK SOLDERING TEMPERATURE
WM8523GEDT	-40°C to +85°C	20-lead TSSOP (pb-free)	260°C
WM8523GEDT/R	-40°C to +85°C	20-lead TSSOP (pb-free, tape and reel)	260°C

Datasheet reference:

<https://www.cirrus.com/products/wm8523/>

**Reason for Change:**

The WM8523 device transferred operations from Amkor Philippines to ASECL Taiwan to maintain long term continuity of supply. Because the ASECL standard for the TSSOP 20L package type is MSL3, Cirrus Logic harmonize to the industry standard for this package type.

**Anticipated Impact on Form, Fit, Function, Quality or Reliability:**

No anticipated adverse impact to the Quality and/or Reliability of said product but the storage condition must meet the MSL 3 standard. However, the customer may have to adjust Pick-N-Place recognition system to adapt to the Cirrus Logic part marking standardization.

**Anticipated Impact on Material Declaration:**

- No Impact to the Material Declaration
  Material Declarations or Product Content reports are driven from production data and will be available following the production release.

**Product Affected:**

Cirrus Logic Part Number
WM8523GEDT/R
WM8523GEDT

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## Qualification Result

Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results			
Reliability Test	Standard	Conditions	Sample Size (PASS/FAIL)
<b>HTS</b> (High Temperature Storage)	JESD22-A103	150 Deg.C, 1000 Hrs. No PC needed	3 Lots @ 77 pcs ea. <b>Passed</b>
<b>PC</b> (Precondition)	J-STD-020	Bake: 24Hr 125°C; MSL 3 192Hr 30°C / 60% RH Soak, (Reflow 260°C x3)	3 Lots @ 154 pcs ea. <b>Passed</b>
<b>TC</b> (Temperature Cycling)	JESD22-A104	-40°C to +125°C for 1000 cycles	3 Lots @ 77 pcs ea. <b>Passed</b>
<b>BHAST</b> (Biased Highly Accelerated Temperature and Humidity Stress Test)	JESD22-A110	110°C/85% RH, 264 hrs	3 Lots @ 77 pcs ea. <b>Passed</b>
<b>Pkg Physical DIM</b>			3 Lots @ 10 pcs ea. <b>Passed</b>
<b>Notes:</b> <ul style="list-style-type: none"> <li>Qualification tests "pass" on zero fails for each test.</li> </ul>			

## Appendix A: POD Comparison Chart

20L TSSOP POD comparison		ATP POD			ASECL POD		
		Min	Nom	Max	Min	Nom	Max
A	Thickness + stand off			1.10			1.10
A1	Stand off	0.05		0.15	0.05		0.15
A2	Thickness (- stand off)	0.85	0.90	0.95	0.85		0.95
b	Lead width	0.19		0.30	0.19		0.27
c	LF thickness	0.09		0.20	0.13		0.18
D	Package length	6.40	6.50	6.60	6.4	6.5	6.6
E	Tip to tip length		6.40 BSC		6.3	6.4	6.5
E1	Package width	4.30	4.40	4.50	4.3	4.4	4.5
e	Pitch		0.65 BSC			0.65 BSC	
L	Foot length	0.50	0.60	0.70	0.5	0.6	0.7
$\theta$ 3	Foot angle	0 deg		8.0 deg	0 deg		8.0 deg

