



Process Change Notification

PCN Number: PCN-2019-118a

PCN Notification Date: 02/07/2020

Final PCN: Add-On Amendment

20L SSOP assembly site transfer from OSE Taiwan to ANST China
MSL migration from 2 to 3 for WM8152, WM8782A, and WM8782 material

Dear Customer,

This is an add-on amendment to the submitted Final PCN-2019-118. As communicated on the final PCN, the 20L SSOP devices in ANST CHINA have successfully completed qualification.

The successful qualification was based on a Moisture Sensitivity Level (MSL) 3, which is the standard MSL level from the assembly supplier (ANST) and harmonizes to the industry standard for this type of package.

Note: MSL3 material requires adherence to JEDEC J-STD-033D.

Additionally, as a result of this add-on amendment, the label details and packaging for WM8152, WM8782A, and WM8782 material will conform to MSL3 accordingly. (i.e. MBB with MSL labeling, HIC and Desiccant)

And the existing Wolfson data sheet has been converted to the Cirrus Logic data sheet format along with an update to the ordering information as well as the absolute maximum ratings accordingly.

Note: Cirrus Logic acquired Wolfson in August 2014.

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).

Title:	20L SSOP assembly site transfer from OSE Taiwan to ANST China MSL migration from 2 to 3 for WM8152, WM8782A, and WM8782 material				
Customer Contact:	Local Field Sales Representative	Phone	(512) 851-4000	Dept:	Corporate Quality
Proposed 1st Ship Date:	VARIOUS (Note1)		Estimated Sample Availability Date:	VARIOUS (Note1)	
Change Type:					
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		
Comments:	"Other" – Marking format and COO, Datasheet revision Note 1: Please, contact your sales representative for the shipment date and sample availability date.				

PCN Details

Description of Change(s):

- 20L SSOP Assembly Site Transfer**

From	To
OSE (Taiwan)	ANST (China)

Note1: The wafer fabrication, final test and packing sites do not transfer.
Note2: COO (Country of Origin) is changed from Taiwan (TW) to China (CN)

- Standard process flow and materials of ANST have been adapted for 20L SSOP**

Process change	OSE	ANST
Molding Process	MGP (Multi Gang Pot)	Automold

Material Change	OSE	ANST
Leadframe	Cu stamped	C9-DSM
Mold compound	CEL 9220HF	EME G700

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

MSL Level	OSE	ANST
WM8152SCDS/(R)V	2	3
WM8782ASEDS/(R)V	2	3
WM8782SEDS/(R)V	2	3

- POD (Package Outline Drawing):**


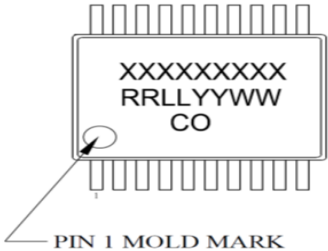
Minor differences in POD tolerances

ANST POD meets JEDEC.95 MO-150 for 20L SSOP 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	
Wolfson Marking Format 	Cirrus Logic Format 	Line 1: Part Number (9 characters maximum) Line 2: Package Mark (8 characters maximum) Line 3: Country of Origin (2 characters as shown on PO) RR = Device Rev Code LL = Lot Sequence Code YY = Year of Manufacture WW = Work Week of Manufacture

- Datasheet update:**

Ordering Information and Absolute Maximum Ratings are updated to the Cirrus standard format for WM8152, WM8782A, and WM8782 devices. Note: MSL is not designated in Cirrus Logic data sheets.

Absolute Maximum Ratings

Before change



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.

After change



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.

Ordering Information – WM8152SCDS/(R)V

Before change (Rev 4.3)

ORDERING INFORMATION

DEVICE	TEMPERATURE RANGE	PACKAGE	MOISTURE SENSITIVITY LEVEL	PEAK SOLDERING TEMPERATURE
WM8152SCDS/V	0 to 70°C	20-lead SSOP (Pb free)	MSL2	260°C
WM8152SCDS/RV	0 to 70°C	20-lead SSOP (Pb free, tape and reel)	MSL2	260°C

After change (Rev 4.4)

ORDERING INFORMATION

DEVICE	TEMPERATURE RANGE	PACKAGE	PEAK SOLDERING TEMPERATURE
WM8152SCDS/V	0 to 70°C	20-lead SSOP (Pb free)	260°C
WM8152SCDS/RV	0 to 70°C	20-lead SSOP (Pb free, tape and reel)	260°C

Datasheet reference:

<https://www.cirrus.com/products/wm8152/>

Ordering Information – WM8782ASEDS/(R)V

Before change (Rev 4.8)

ORDERING INFORMATION

DEVICE	TEMPERATURE RANGE	PACKAGE	MOISTURE SENSITIVITY LEVEL	PEAK SOLDERING TEMPERATURE
WM8782ASEDS/V	-40°C to +85°C	20-lead SSOP (Pb-free)	MSL2	260°C
WM8782ASEDS/RV	-40°C to +85°C	20-lead SSOP (Pb-free, tape and reel)	MSL2	260°C

After change (Rev 4.9)

ORDERING INFORMATION

DEVICE	TEMPERATURE RANGE	PACKAGE	PEAK SOLDERING TEMPERATURE
WM8782ASEDS/V	-40°C to +85°C	20-lead SSOP (Pb-free)	260°C
WM8782ASEDS/RV	-40°C to +85°C	20-lead SSOP (Pb-free, tape and reel)	260°C

Datasheet reference:

<https://www.cirrus.com/products/wm8782/>

Ordering Information – WM8782SEDS/(R)V
Before change (Rev 4.7)
ORDERING INFORMATION

DEVICE	TEMPERATURE RANGE	PACKAGE	MOISTURE SENSITIVITY LEVEL	PEAK SOLDERING TEMPERATURE
WM8782SEDS/V	-40°C to +85°C	20-lead SSOP (Pb-free)	MSL2	260°C
WM8782SEDS/RV	-40°C to +85°C	20-lead SSOP (Pb-free, tape and reel)	MSL2	260°C

After change (Rev 4.8)
ORDERING INFORMATION

DEVICE	TEMPERATURE RANGE	PACKAGE	PEAK SOLDERING TEMPERATURE
WM8782SEDS/V	-40°C to +85°C	20-lead SSOP (Pb-free)	260°C
WM8782SEDS/RV	-40°C to +85°C	20-lead SSOP (Pb-free, tape and reel)	260°C

Datasheet reference:

<https://www.cirrus.com/products/wm8782/>
Reason for Change:

The 20L SSOP devices transferred operations from OSE Taiwan to ANST China to maintain long term continuity of supply. Because the ANST standard for the 20L SSOP package type is MSL3, Cirrus Logic has harmonized 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, JEDEC J-STD-033D standard.

However, the customers may have to adjust their 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.



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Product Affected:

Cirrus Logic Part Number
WM8152SCDS/RV (Note2)
WM8152SCDS/V (Note2)
WM8782ASEDS/RV (Note2)
WM8782ASEDS/V (Note2)
WM8782SEDS/RV (Note2)
WM8782SEDS/V (Note2)
XWM8734EDS/RV
XWM8734EDS/V
WM8804GEDS/RV
WM8804GEDS/V

(Note2) Devices with MSL migration from 2 to 3.

Qualification Result

Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results			
Reliability Test	Standard	Conditions	Sample Size (PASS/FAIL)
HTS (High Temperature Storage)	JESD22-A103	150 Deg.C, 1000 Hrs. No PC needed	3 Lots @ 77 pcs ea. Passed
PC (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. Passed
TC (Temperature Cycling)	JESD22-A104	-40°C to +125°C for 1000 cycles	3 Lots @ 77 pcs ea. Passed
BHAST (Biased Highly Accelerated Temperature and Humidity Stress Test)	JESD22-A110	110°C/85% RH, 264 hrs	3 Lots @ 77 pcs ea. Passed
Solderability	J-STD-002	Characterization 11 leads/unit	3 Lots @ 2 pcs ea. Passed
Pkg Physical DIM			3 Lots @ 10 pcs ea. Passed
Notes: <ul style="list-style-type: none"> • Qualification tests “pass” on zero fails for each test. • The WM8734 component served as the primary qualification vehicle • The WM8782 and WM8152 components passed HTSL, MSL, and TC. BHAST is QBS (Qualified By Similarity). • The remaining components are QBS (Qualified By Similarity). 			

Appendix A: POD Comparison Chart

20 SSOP POD comparison		OSE POD			ANST POD		
		Min	Nom	Max	Min	Nom	Max
A	Thickness + stand off			2.00	1.73		1.99
A1	Stand off	0.05			0.05		0.21
A2	Thickness (- stand off)	1.65	1.75	1.85	1.68		1.80
B	Lead width	0.22		0.38	0.25		0.38
C	LF thickness	0.09		0.25	0.09		0.20
D	Package length	7.00	7.20	7.40	7.10	7.20	7.30
E	Tip to tip length	7.50	7.80	8.10	7.70	7.80	7.90
E1	Package width	5.00	5.30	5.60	5.20	5.30	5.40
e	Pitch		0.65 BSC			0.65 BSC	
L	Foot length	0.55	0.75	0.95	0.65		0.85
θ 3	Foot angle	0 deg	4.0 deg	8.0 deg	0 deg		8.0 deg

