Process Change Notice #1103231

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PCN Date: 23Mar11		**Effective Date:** 23Mar11
Title: Si403x/433x/443x/4313 EZRadioPRO Improved MSL1 Performance		
Originator: Hardy Schmidbauer	**Phone:** 408.702.1277	**Dept:** Marketing
Customer Contact: Kathy Haggar	**Phone:** 512.532.5261	**Dept:** Sales

PCN Type:

☐ **Assembly**	☐ **Discontinuance**	☒ **Package**	☐ **Test**
☐ **Datasheet**	☐ **Fabrication**	☐ **Product Revision**	
☐ **Packing**	☐ **Labeling**	☐ **Location**	☐ **Other**

Last Order Date: N/A

PCN Details

Description of Change:

Silicon Laboratories, Inc. (Silicon Labs) is pleased to announce improved Moisture Sensitivity Level (MSL) from MSL2 to MSL1 for all EZRadioPRO products.

Reason for Change:

Improve part manufacturing exposure time.

Impact on Form, Fit, Function, Quality, Reliability:

There is no impact on form, fit, function, quality or reliability. No Change was made to the existing BOM. No Changes were required for PCB layout or manufacture.

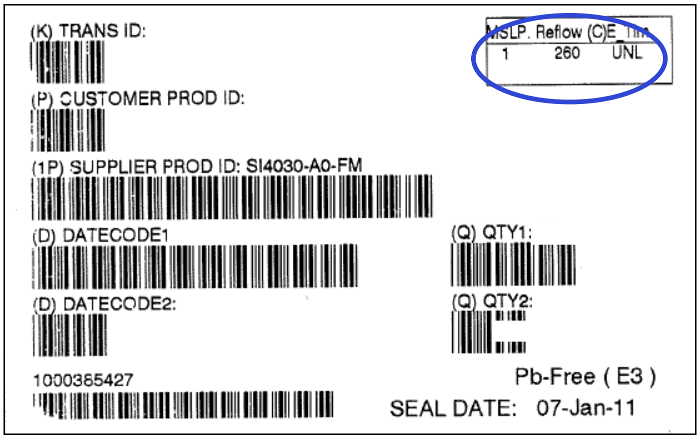
Product Identification:

This PCN applies to devices ordered using the following ordering part numbers:

Affected Ordering Part Numbers	
Si4030-A0-FM	Si4330-B1-ZM1
Si4030-B1-FM	Si4330-B1-ZM2
Si4031-A0-FM	Si4430-A0-FM
Si4031-B1-FM	Si4430-B1-FM
Si4031-B1-ZM1	Si4431-A0-FM
Si4031-B1-ZM2	Si4431-B1-FM
Si4032-B1-FM	Si4431-B1-ZM1
Si4032-B1-ZM1	Si4431-B1-ZM2
Si4032-B1-ZM2	Si4432-B1-FM
Si4032-V2-FM	Si4432-B1-ZM1
Si4313-B1-FM	Si4432-B1-ZM2
Si4330-A0-FM	Si4432-V2-FM
Si4330-B1-FM	

Note: Affected Part Numbers also include tape and reel equivalents ("R" suffix).

Current Inner Box Label



(K) TRANS ID:

MSLP. Reflow (C)E Tim
1 260 UNL

(P) CUSTOMER PROD ID:

(1P) SUPPLIER PROD ID: SI4030-A0-FM

(D) DATECODE1

(Q) QTY1:

(D) DATECODE2:

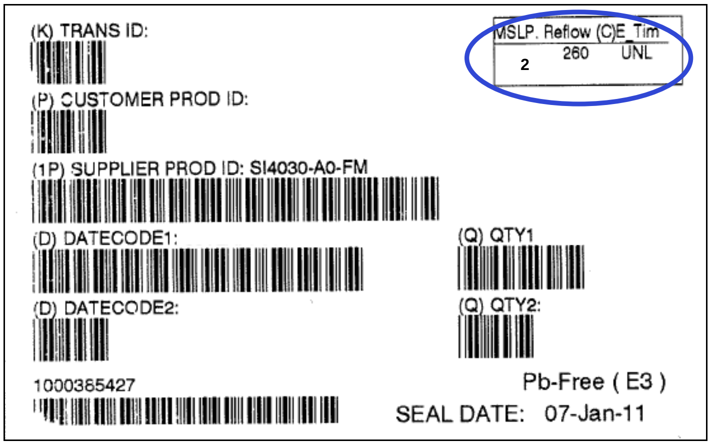
(Q) QTY2:

1000365427

Pb-Free (E3)

SEAL DATE: 07-Jan-11

Old Inner Box Label



(K) TRANS ID:

MSLP. Reflow (C)E Tim
2 260 UNL

(P) CUSTOMER PROD ID:

(1P) SUPPLIER PROD ID: SI4030-A0-FM

(D) DATECODE1:

(Q) QTY1

(D) DATECODE2:

(Q) QTY2:

1000365427

Pb-Free (E3)

SEAL DATE: 07-Jan-11

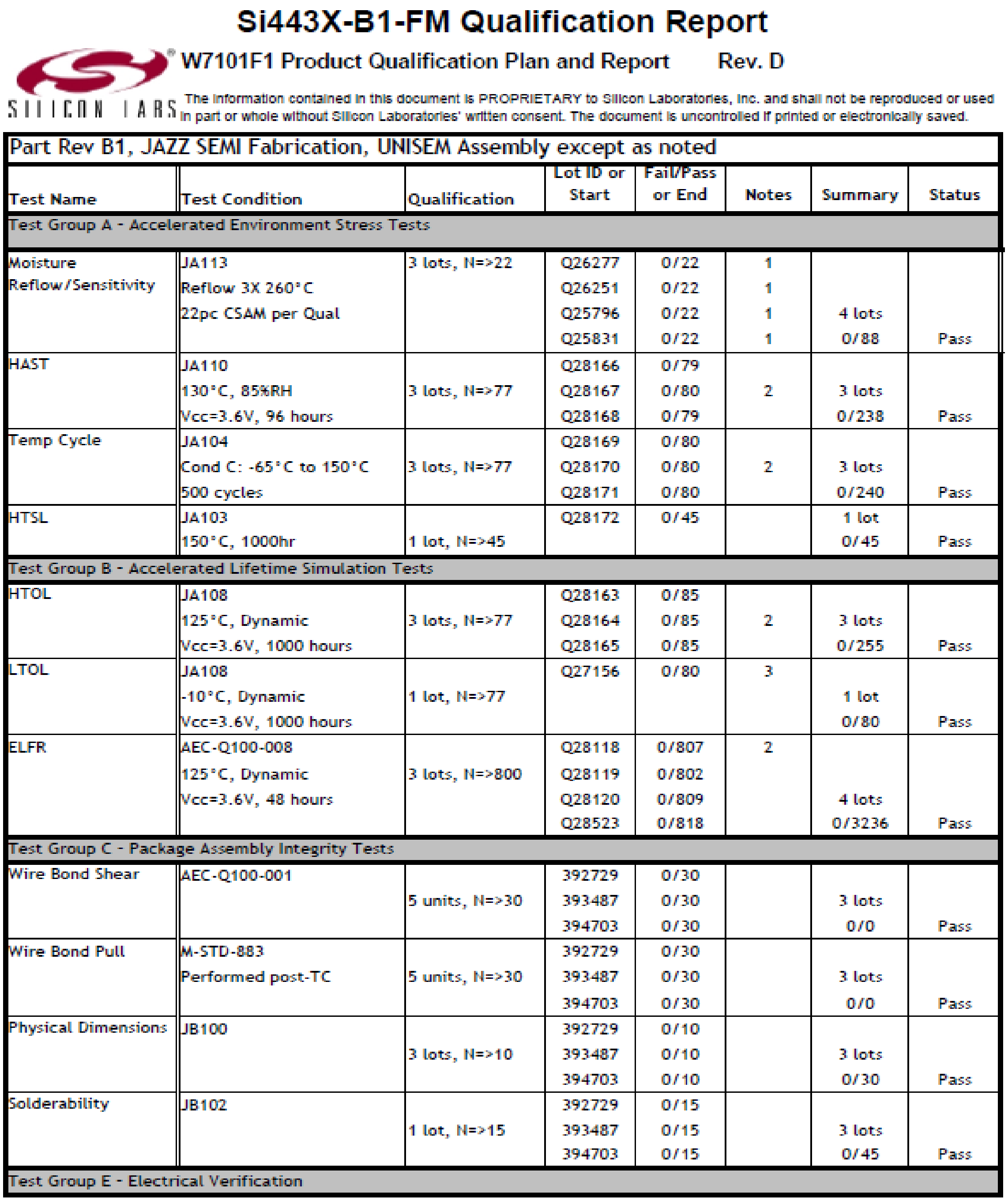
Last Date of Unchanged Product: 23Mar11

Following the Effective Date of this PCN, the Silicon Labs product shipping label will reflect the improved MSL1 level.

Qualification Samples: N/A

Qualification Data: See Appendix A for the Qualification Report

Appendix A: Qualification Report



Si443X-B1-FM Qualification Report

SILICON LABS

W7101F1 Product Qualification Plan and Report Rev. D

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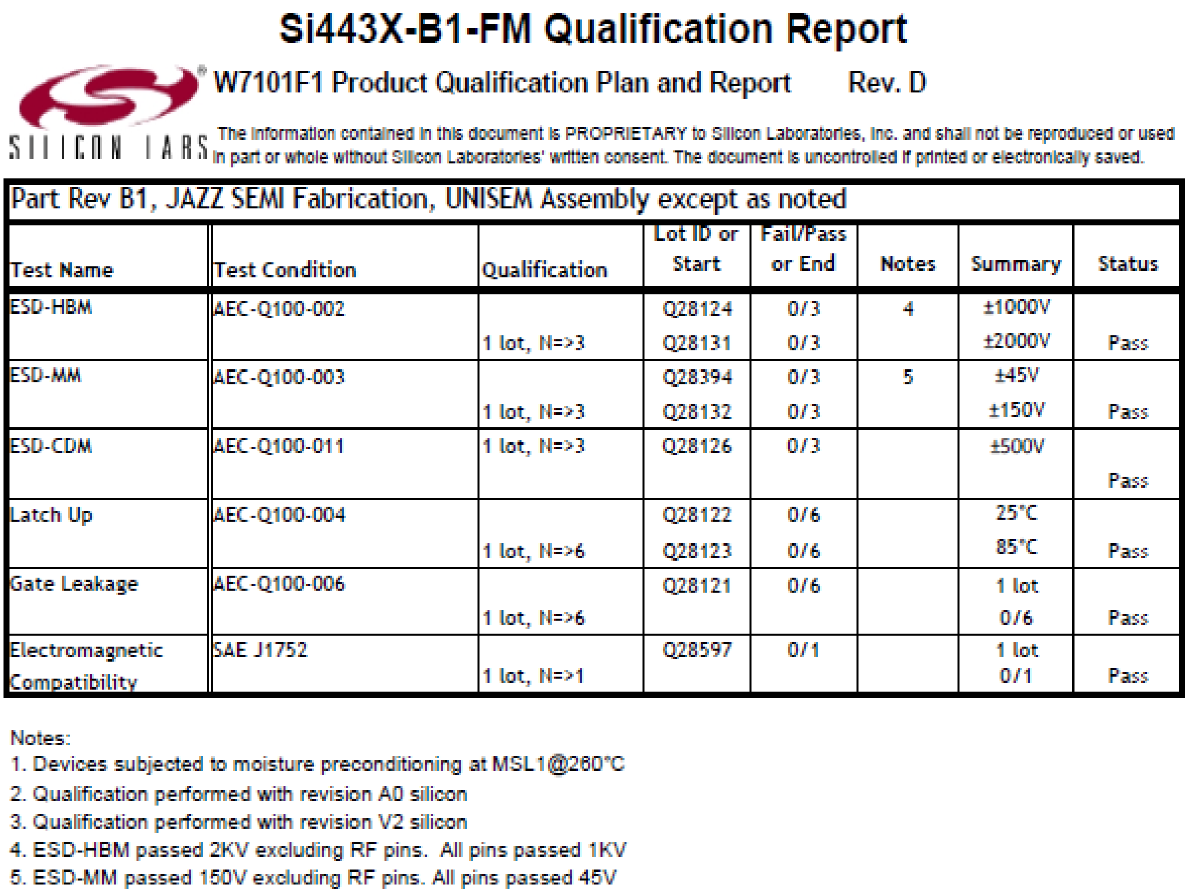
Part Rev B1, JAZZ SEMI Fabrication, UNISEM Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A - Accelerated Environment Stress Tests							
Moisture Reflow/Sensitivity	JA113 Reflow 3X 260°C 22pc CSAM per Qual	3 lots, N=>22	Q26277 Q26251 Q25796 Q25831	0/22 0/22 0/22 0/22	1 1 1 1	4 lots 0/88	Pass
HAST	JA110 130°C, 85%RH Vcc=3.6V, 96 hours	3 lots, N=>77	Q28166 Q28167 Q28168	0/79 0/80 0/79	2	3 lots 0/238	Pass
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q28169 Q28170 Q28171	0/80 0/80 0/80	2	3 lots 0/240	Pass
HTSL	JA103 150°C, 1000hr	1 lot, N=>45	Q28172	0/45		1 lot 0/45	Pass
Test Group B - Accelerated Lifetime Simulation Tests							
HTOL	JA108 125°C, Dynamic Vcc=3.6V, 1000 hours	3 lots, N=>77	Q28163 Q28164 Q28165	0/85 0/85 0/85	2	3 lots 0/255	Pass
LTOL	JA108 -10°C, Dynamic Vcc=3.6V, 1000 hours	1 lot, N=>77	Q27156	0/80	3	1 lot 0/80	Pass
ELFR	AEC-Q100-008 125°C, Dynamic Vcc=3.6V, 48 hours	3 lots, N=>800	Q28118 Q28119 Q28120 Q28523	0/807 0/802 0/809 0/818	2	4 lots 0/3236	Pass
Test Group C - Package Assembly Integrity Tests							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	392729 393487 394703	0/30 0/30 0/30		3 lots 0/0	Pass
Wire Bond Pull	M-STD-883 Performed post-TC	5 units, N=>30	392729 393487 394703	0/30 0/30 0/30		3 lots 0/0	Pass
Physical Dimensions	JB100	3 lots, N=>10	392729 393487 394703	0/10 0/10 0/10		3 lots 0/30	Pass
Solderability	JB102	1 lot, N=>15	392729 393487 394703	0/15 0/15 0/15		3 lots 0/45	Pass
Test Group E - Electrical Verification							

Appendix A: Qualification Report (cont)



Si443X-B1-FM Qualification Report

W7101F1 Product Qualification Plan and Report Rev. D

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Part Rev B1, JAZZ SEMI Fabrication, UNISEM Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
ESD-HBM	AEC-Q100-002	1 lot, N=>3	Q28124 Q28131	0/3 0/3	4	±1000V ±2000V	Pass
ESD-MM	AEC-Q100-003	1 lot, N=>3	Q28394 Q28132	0/3 0/3	5	±45V ±150V	Pass
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q28126	0/3		±500V	Pass
Latch Up	AEC-Q100-004	1 lot, N=>6	Q28122 Q28123	0/6 0/6		25°C 85°C	Pass
Gate Leakage	AEC-Q100-006	1 lot, N=>6	Q28121	0/6		1 lot 0/6	Pass
Electromagnetic Compatibility	SAE J1752	1 lot, N=>1	Q28597	0/1		1 lot 0/1	Pass

Notes:
1. Devices subjected to moisture preconditioning at MSL1@260°C
2. Qualification performed with revision A0 silicon
3. Qualification performed with revision V2 silicon
4. ESD-HBM passed 2KV excluding RF pins. All pins passed 1KV
5. ESD-MM passed 150V excluding RF pins. All pins passed 45V