



PRODUCT CHANGE NOTIFICATION
PCN-000855.r0
Date: 15SEP2022

P1/2

Semtech Corporation, 200 Flynn Road, Camarillo CA 93012

Change Details

Part Number(s) Affected: RClamp0524PATCT RClamp0524PBTCT RClamp0524AMTCT RClamp0521PATCT RClamp3521P.TNT	Customer Part Number(s) Affected: <input checked="" type="checkbox"/> N/A
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Description, Purpose and Effect of Change:

Due to worldwide lead frame shortage and to improve flexibility in Semtech's supply chain, Semtech has qualified an additional lead frame supplier for the above listed Semtech part numbers.

There is no change in the assembly or test site.

Comparison of key attributes between POR = MHT, and HDS lead Frame

LDF Attribute	POR = MHT Leadframe	HDS Lead Frame	Remark
LDF material	A194 or C7025	A194 or C7025	No Change
LDF thickness	0.152mm or 0.203mm	0.152mm or 0.203mm	No Change
PPF plating thickness	Ni: 0.5-2.0um Pd: 0.02-0.15um Au: 0.003-0.015um	Ni: 0.25-1.25um Pd: 0.005-0.02um AuAg: 0.005-0.062um	MHT lead frame final plating is Au HDS lead frame final plating is AuAg alloy
Roughness (S-Ratio)	1.15-1.55	1.2-1.5	Comparable
Anti-EBO	Yes	Yes	Common (coating material may be different due to proprietary material used by each supplier)

Change Classification	<input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor	Impact to Form, Fit, Function	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Impact to Data Sheet	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	New Revision or Date	<input checked="" type="checkbox"/> N/A

Impact to Performance, Characteristics or Reliability:

- No impact to performance, characteristics; or reliability
- No Impact to data sheet content or package dimensions

Implementation Date	DEC2022 or Upon customer approval	Work Week	TBD
Last Time Ship (LTS) Of unchanged product	Not Applicable	Affecting Lot No. / Serial No. (SN)	Not Applicable
Sample Availability	Immediate	Qualification Report Availability	Included

Supporting Documents for Change Validation/Attachments:

- Final reliability Report: Result = Pass
- Solderability Report: Result = Pass



PRODUCT CHANGE NOTIFICATION
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- MSL1 Report: Result = Pass

Issuing Authority

**Semtech
Business Unit:**

Protection Business Unit

Semtech Contact Info:

QA representative:

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Digital signature

FOR FURTHER INFORMATION & WORLDWIDE SALES COVERAGE: <http://www.semtech.com/contact/index.html#support>

RCLAMP0524PA

Semtech Job#	7472
Accepted Date	10-26-2021
Job Type	Package Qualification
Business Unit	Protection
Package Type	SLP2510P8
Package Lead	4
Assembly Designator	Huatian Xian
Master Process	21C
Fab Designator	ASMC21 TVS
Rel Job Status	Rel Testing Complete Passes All Requirements

Comment:

- Add a second lead frame supplier for RClamp0524PA/RClamp0524PB in HTXA
- RClamp0524AM is qualified by similarity to RClamp0524PA.

Completed Tasks

Sub Lot #	Part	Lot	Assembly Lot	Date Code	
1	RClamp0524PA	AER-008558	AER-008558	2142	
Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	02-17-2022
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	03-01-2022
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	03-02-2022
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	02-22-2022
5	BI_BD_Valid	NA	Meet HTOL Schematics	0	02-22-2022
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	02-22-2022
7	HTRB_150°C_0408	105	Pass on Zero Fails	0	02-25-2022
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	02-22-2022
9	HTS_0168	77	Pass on Zero Fails	0	02-22-2022
10	HTS_0500	77	Pass on Zero Fails	0	03-01-2022
11	HTS_1000	77	Pass on Zero Fails	0	03-15-2022
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	02-25-2022
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	02-25-2022
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	02-25-2022
15	ROSE Clean/ Test	174	Pass on Zero Fails	0	02-16-2022
16	Pre_Elect_Precond	154	Pass on Zero Fails	0	02-22-2022
17	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	02-22-2022
18	Precond_HTS_24hr	154	Pass on Zero Fails	0	02-22-2022
19	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	02-23-2022
20	Precond_IR_Refl_Char	154	Pass on Zero Fails	0	03-02-2022
21	T/C_Pre_Elect	77	Pass on Zero Fails	0	03-02-2022

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
22	T/C_wPre_0250	77	Pass on Zero Fails	0	03-02-2022
23	T/C_wPre_0500	77	Pass on Zero Fails	0	03-08-2022
24	Cross_Section TC 500 Cyc	5	Pass on Zero Fails	0	03-14-2022
25	T/C_wPre_1000	77	Pass on Zero Fails	0	03-14-2022
26	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	03-02-2022
27	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	03-02-2022
28	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	03-03-2022
29	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	03-10-2022
30	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	03-25-2022
31	CSAM Analysis	22	Pass on Zero Fails	0	02-22-2022
32	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	02-22-2022
33	Precond_HTS_24hr	22	Pass on Zero Fails	0	02-22-2022
34	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	02-23-2022
35	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	03-02-2022
36	CSAM Analysis	22	Pass on Zero Fails	0	03-03-2022
37	Pack_Clos	0	0	0	04-15-2022

Sub Lot #	Part	Lot	Assembly Lot	Date Code
2	RClamp0524PA	AER-008559	AER-008559	2142

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	02-17-2022
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	03-08-2022
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	03-09-2022
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	02-22-2022
5	BI_BD_Valid	NA	Meet HTOL Schematics	0	02-22-2022
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	02-22-2022
7	HTRB_150°C_0408	105	Pass on Zero Fails	0	02-25-2022

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	02-22-2022
9	HTS_0168	77	Pass on Zero Fails	0	02-22-2022
10	HTS_0500	77	Pass on Zero Fails	0	03-04-2022
11	HTS_1000	77	Pass on Zero Fails	0	03-15-2022
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	03-03-2022
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	03-02-2022
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	03-03-2022
15	ROSE Clean/ Test	174	Pass on Zero Fails	0	02-16-2022
16	Pre_Elect_Precond	154	Pass on Zero Fails	0	02-22-2022
17	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	02-22-2022
18	Precond_HTS_24hr	154	Pass on Zero Fails	0	02-22-2022
19	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	02-23-2022
20	Precond_IR_Refl_Char	154	Pass on Zero Fails	0	03-02-2022
21	T/C_Pre_Elect	77	Pass on Zero Fails	0	03-03-2022
22	T/C_wPre_0250	77	Pass on Zero Fails	0	03-03-2022
23	T/C_wPre_0500	77	Pass on Zero Fails	0	03-09-2022
24	Cross_Section TC 500 Cyc	15	Pass on Zero Fails	0	03-14-2022
25	T/C_wPre_1000	77	Pass on Zero Fails	0	03-14-2022
26	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	03-03-2022
27	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	03-02-2022
28	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	03-03-2022
29	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	03-10-2022
30	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	03-24-2022
31	CSAM Analysis	22	Pass on Zero Fails	0	02-22-2022
32	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	02-22-2022
33	Precond_HTS_24hr	22	Pass on Zero Fails	0	02-22-2022
34	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	03-03-2022
35	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	03-02-2022
36	CSAM Analysis	22	Pass on Zero Fails	0	03-03-2022
37	Pack_Clos	0	0	0	04-15-2022

Sub Lot #	Part	Lot	Assembly Lot	Date Code	
3	RClamp0524PA	AER-008560	AER-008560	2142	
Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	02-17-2022
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	02-25-2022
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	03-01-2022
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	02-23-2022
5	BI_BD_Valid	NA	Meet HTOL Schematics	0	02-22-2022
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	02-23-2022
7	HTRB_150°C_0408	105	Pass on Zero Fails	0	03-01-2022
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	02-22-2022
9	HTS_0168	77	Pass on Zero Fails	0	02-22-2022
10	HTS_0500	77	Pass on Zero Fails	0	03-01-2022
11	HTS_1000	77	Pass on Zero Fails	0	03-15-2022
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	02-25-2022
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	02-25-2022
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	02-25-2022
15	ROSE Clean/ Test	174	Pass on Zero Fails	0	02-16-2022
16	Pre_Elect_Precond	154	Pass on Zero Fails	0	02-23-2022
17	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	02-23-2022
18	Precond_HTS_24hr	154	Pass on Zero Fails	0	02-22-2022
19	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	02-23-2022
20	Precond_IR_Refl_Char	154	Pass on Zero Fails	0	03-02-2022
21	T/C_Pre_Elect	77	Pass on Zero Fails	0	03-02-2022
22	T/C_wPre_0250	77	Pass on Zero Fails	0	03-02-2022
23	T/C_wPre_0500	77	Pass on Zero Fails	0	03-08-2022
24	Cross_Section TC 500 Cyc	15	Pass on Zero Fails	0	03-14-2022
25	T/C_wPre_1000	77	Pass on Zero Fails	0	03-14-2022
26	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	03-02-2022
27	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	03-02-2022

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
28	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	03-03-2022
29	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	03-11-2022
30	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	03-24-2022
31	CSAM Analysis	22	Pass on Zero Fails	0	02-22-2022
32	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	02-22-2022
33	Precond_HTS_24hr	22	Pass on Zero Fails	0	02-22-2022
34	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	02-23-2022
35	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	03-02-2022
36	CSAM Analysis	22	Pass on Zero Fails	0	03-03-2022
37	Pack_Clos	0	0	0	04-15-2022

TDS2212P

Semtech Job#	7471
Accepted Date	10-26-2021
Job Type	Package Qualification
Business Unit	Protection
Package Type	SLP2020P6
Package Lead	6
Assembly Designator	Huatian Xian
Master Process	HP18E80 (0.18um BCD 45V FET)
Fab Designator	MX
Rel Job Status	Rel Testing Complete Passes All Requirements

Comments:

- RClamp0521PA and RClamp3521P are qualified by similarity” to TDS2212P

Completed Tasks

Sub Lot #	Part	Lot	Assembly Lot	Date Code	
1	TDS2212P	AER-008584	AER-008584	2148	
Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	01-21-2022
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	02-01-2022
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	02-02-2022
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	01-21-2022
5	BI_BD_Valid	NA	Meet HTOL Schematics	0	01-21-2022
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	01-21-2022
7	HTRB_150°C_0408	105	Pass on Zero Fails	0	01-24-2022
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	01-24-2022
9	HTS_0168	77	Pass on Zero Fails	0	01-24-2022
10	HTS_0500	77	Pass on Zero Fails	0	01-31-2022
11	HTS_1000	77	Pass on Zero Fails	0	02-15-2022
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	01-27-2022
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	01-26-2022
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	01-27-2022
15	ROSE Clean/ Test	189	Pass on Zero Fails	0	01-21-2022
16	Pre_Elect_Precond	169	Pass on Zero Fails	0	01-21-2022
17	Precond_Temp_Cyc_5cyc	159	Pass on Zero Fails	0	01-24-2022
18	Precond_HTS_24hr	159	Pass on Zero Fails	0	01-24-2022
19	Precond_85/85_NoElec168hr	159	Pass on Zero Fails	0	01-25-2022
20	Precond_IR_Refl_Char	159	Pass on Zero Fails	0	02-01-2022
21	Cross_Section	5		0	02-01-2022

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
22	T/C_Pre_Elect	77	Pass on Zero Fails	0	02-01-2022
23	T/C_wPre_0250	77	Pass on Zero Fails	0	02-01-2022
24	T/C_wPre_0500	77	Pass on Zero Fails	0	02-07-2022
25	Cross_Section TC 500 Cyc	5	Pass on Zero Fails	0	02-14-2022
26	T/C_wPre_1000	77	Pass on Zero Fails	0	02-14-2022
27	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	02-01-2022
28	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	02-02-2022
29	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	02-02-2022
30	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	02-09-2022
31	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	03-03-2022
32	CSAM Analysis	22	Pass on Zero Fails	0	01-26-2022
33	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	01-26-2022
34	Precond_HTS_24hr	22	Pass on Zero Fails	0	01-26-2022
35	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	01-27-2022
36	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	02-03-2022
37	CSAM Analysis	22	Pass on Zero Fails	0	02-07-2022
38	Pack_Clos	0	0	0	03-17-2022

Sub Lot #	Part	Lot	Assembly Lot	Date Code
2	TDS2212P	AER-008585	AER-008585	2148

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	01-21-2022
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	01-27-2022
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	01-27-2022
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	01-21-2022
5	BI_BD_Valid	NA	Meet HTOL Schematics	0	01-21-2022
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	01-21-2022

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
7	HTRB_150°C_0408	105	Pass on Zero Fails	0	01-24-2022
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	01-24-2022
9	HTS_0168	77	Pass on Zero Fails	0	01-24-2022
10	HTS_0500	77	Pass on Zero Fails	0	01-31-2022
11	HTS_1000	77	Pass on Zero Fails	0	02-15-2022
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	01-26-2022
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	01-26-2022
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	01-27-2022
15	ROSE Clean/ Test	184	Pass on Zero Fails	0	01-21-2022
16	Pre_Elect_Precond	159	Pass on Zero Fails	0	01-24-2022
17	Precond_Temp_Cyc_5cyc	159	Pass on Zero Fails	0	01-24-2022
18	Precond_HTS_24hr	159	Pass on Zero Fails	0	01-24-2022
19	Precond_85/85_NoElec168hr	159	Pass on Zero Fails	0	01-25-2022
20	Precond_IR_Refl_Char	159	Pass on Zero Fails	0	02-01-2022
21	T/C_Pre_Elect	77	Pass on Zero Fails	0	02-01-2022
22	T/C_wPre_0250	77	Pass on Zero Fails	0	02-01-2022
23	T/C_wPre_0500	77	Pass on Zero Fails	0	02-07-2022
24	Cross_Section TC 500 Cyc	5	Pass on Zero Fails	0	02-15-2022
25	T/C_wPre_1000	77	Pass on Zero Fails	0	02-15-2022
26	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	02-01-2022
27	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	02-01-2022
28	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	02-02-2022
29	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	02-09-2022
30	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	02-23-2022
31	CSAM Analysis	22	Pass on Zero Fails	0	01-26-2022
32	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	01-26-2022
33	Precond_HTS_24hr	22	Pass on Zero Fails	0	01-26-2022
34	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	01-27-2022
35	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	02-03-2022
36	CSAM Analysis	22	Pass on Zero Fails	0	02-07-2022

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
37	Pack_Clos	0	0	0	03-17-2022

Sub Lot #	Part	Lot	Assembly Lot	Date Code
3	TDS2212P	AER-008586	AER-008586	2148

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	01-21-2022
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	02-02-2022
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	02-02-2022
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	01-21-2022
5	BI_BD_Valid	NA	Meet HTOL Schematics	0	01-21-2022
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	01-21-2022
7	HTRB_150°C_0408	105	Pass on Zero Fails	0	01-24-2022
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	01-24-2022
9	HTS_0168	77	Pass on Zero Fails	0	01-24-2022
10	HTS_0500	77	Pass on Zero Fails	0	01-31-2022
11	HTS_1000	77	Pass on Zero Fails	0	02-15-2022
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	01-27-2022
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	01-26-2022
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	01-27-2022
15	ROSE Clean/ Test	179	Pass on Zero Fails	0	01-21-2022
16	Pre_Elect_Precond	159	Pass on Zero Fails	0	01-24-2022
17	Precond_Temp_Cyc_5cyc	159	Pass on Zero Fails	0	01-24-2022
18	Precond_HTS_24hr	159	Pass on Zero Fails	0	01-24-2022
19	Precond_85/85_NoElec168hr	159	Pass on Zero Fails	0	01-25-2022
20	Precond_IR_Refl_Char	159	Pass on Zero Fails	0	02-01-2022
21	T/C_Pre_Elect	77	Pass on Zero Fails	0	02-01-2022
22	T/C_wPre_0250	77	Pass on Zero Fails	0	02-01-2022

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
23	T/C_wPre_0500	77	Pass on Zero Fails	0	02-07-2022
24	Cross_Section TC 500 Cyc	5	Pass on Zero Fails	0	02-15-2022
25	T/C_wPre_1000	77	Pass on Zero Fails	0	02-15-2022
26	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	02-01-2022
27	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	02-01-2022
28	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	02-02-2022
29	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	02-09-2022
30	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	02-23-2022
31	CSAM Analysis	22	Pass on Zero Fails	0	01-26-2022
32	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	01-26-2022
33	Precond_HTS_24hr	22	Pass on Zero Fails	0	01-26-2022
34	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	01-27-2022
35	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	02-03-2022
36	CSAM Analysis	22	Pass on Zero Fails	0	02-07-2022
37	Pack_Clos	0	0	0	03-17-2022



Qualify HDS as Second Source PPF Lead Frame Summary MSL1 Report.

Les 12JAN2022

Introduction



- This report describes the MSL1 results captured during HDS Lead Frame qualification.

- Conclusion: HDS Lead Frame passes MSL1 pre-conditioning.

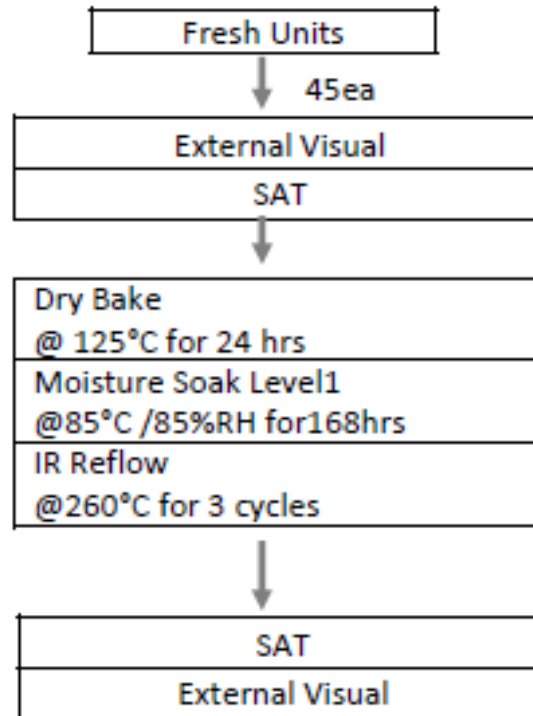
Source Information:

UCLAMP1002P.F.P1 AER-008517 MSL1 report (RA2110170N)

UCLAMP1002P.F.P1 AER-008518 MSL1 report (RA2110165N)

UCLAMP1002P.F.P1 AER-008519 MSL1 report (RA2110140N)

MSL1 Test Flow

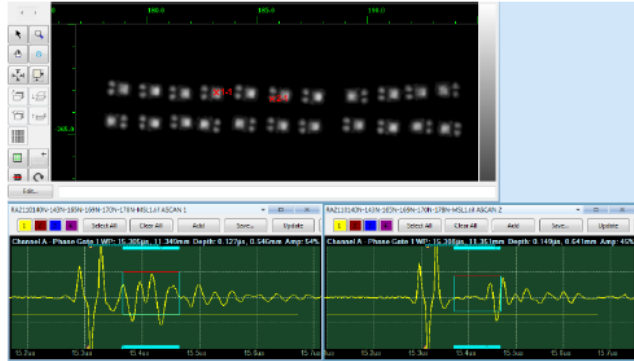


AER-008517 MSL1 Test Report

>> Before Test:


C-SCAN Picture	检测结果Description
 <p>The image shows a C-SCAN picture of a device before MSL1. The top part is a dark image with some bright spots. Below it are two waveform graphs showing signal activity. The left graph is labeled 'Channel A: Phase Gate 1 WP: 14.250ps, 11.871ns, Depth: 0.127ps, 0.541ns, Amp: 54%' and the right graph is labeled 'Channel A: Phase Gate 1 WP: 14.250ps, 11.871ns, Depth: 0.144ps, 0.611ns, Amp: 45%'.</p>	<p>MSL1前SAT检测无明显异常 There is no obvious abnormality by SAT before MSL1.</p>

>> After MSL1:

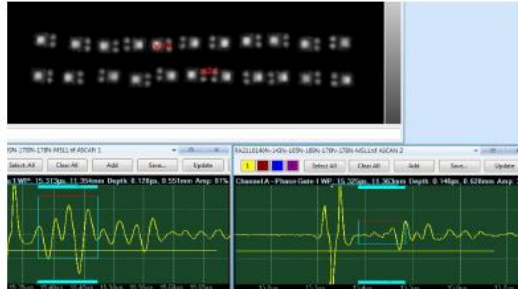
C-SCAN Picture	检测结果Description
 <p>The image shows a C-SCAN picture of a device after MSL1. The top part is a dark image with some bright spots. Below it are two waveform graphs showing signal activity. The left graph is labeled 'Channel A: Phase Gate 1 WP: 15.305ps, 11.340ns, Depth: 0.127ps, 0.541ns, Amp: 54%' and the right graph is labeled 'Channel A: Phase Gate 1 WP: 15.305ps, 11.351ns, Depth: 0.149ps, 0.611ns, Amp: 45%'.</p>	<p>MSL1后SAT检测无异常 There is no obvious abnormality by SAT after MSL1.</p>

AER-008518 MSL1 Test Report

>> Before Test:


C-SCAN Picture	检测结果Description
 <p>The image shows a C-SCAN test result before MSL1. It consists of a top section with a grid of bright spots on a black background, representing a scan of a component. Below this is a software interface with two channels of waveforms. Channel A shows a signal with a peak, and Channel B shows a similar signal. The interface includes various control buttons and numerical readouts.</p>	<p>MSL1前SAT检测无明显异常 There is no obvious abnormality by SAT before MSL1.</p>

>> After MSL1:


C-SCAN Picture	检测结果Description
 <p>The image shows a C-SCAN test result after MSL1. It features a grid of bright spots on a black background, similar to the 'Before Test' image. Below the grid is a software interface with two channels of waveforms. Channel A and Channel B both show signals with peaks, indicating consistent results after the MSL1 process.</p>	<p>MSL1后SAT检测无明显异常 There is no obvious abnormality by SAT after MSL1.</p>

AER-008519 MSL1 Test Report

>> Before Test:

C-SCAN Picture	检测结果Description
	<p>MSL1前SAT检测无明显异常 There is no obvious abnormality by SAT before MSL1.</p>

>> After MSL1:

C-SCAN Picture	检测结果Description
	<p>MSL1后SAT检测无明显异常 There is no obvious abnormality by SAT after MSL1.</p>

End of Report



Qualify HDS as Second Source PPF Lead Frame Summary Solderability Report.

Les 12JAN2022

Introduction



- This report describes the solderability results captured during HDS Lead Frame qualification.

- Conclusion: HDS Lead Frame passes solderability tests.

Source Information:

AER-008517 HDS LF Solderability test report

AER-008518 HDS LF Solderability test report

AER-008519 HDS LF Solderability test report

Solderability Test Conditions

4、参数设定 (Parameter enactment) :

- 1) Aging steam: 93°C, 8h
- 2) Flux Immersion Time: 5 s
- 3) Solder Temperature: 245°C ± 5°C
- 4) Solder Immersion Time: 5 ± 1 Seconds
- 5) Solder alloy: 95.5%Sn,0.6%Cu,3.9%Ag

5、参考标准 (Test Standard) :

The Solderability test method conforms to JESD22-B102.

6、判定依据 (Judge Procedure) :

The inspected area of each lead must have 95% solder coverage minimum.

AER-008517 HDS LF Solderability Test

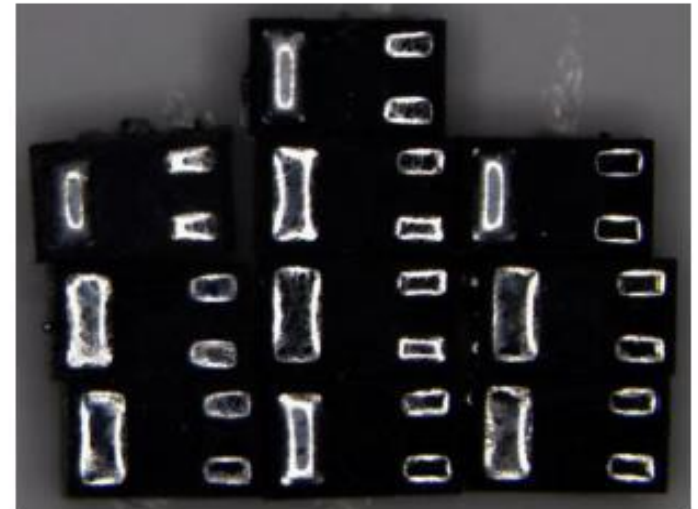
7、试验图片 (Test picture) :

HUA TIAN

Before Test



After Test



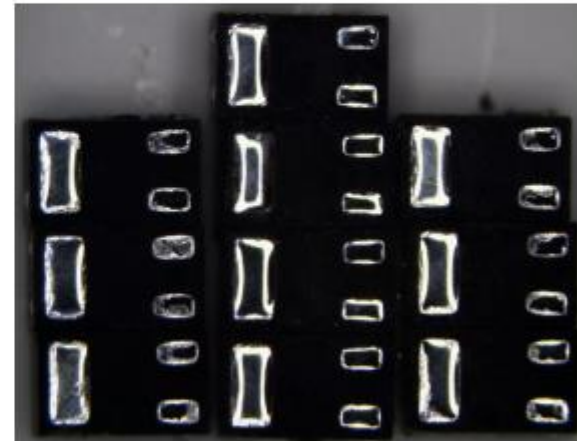
AER-008518 HDS LF Solderability Test

7、试验图片 (Test picture) :

HUA TIAN

Before Test

After Test

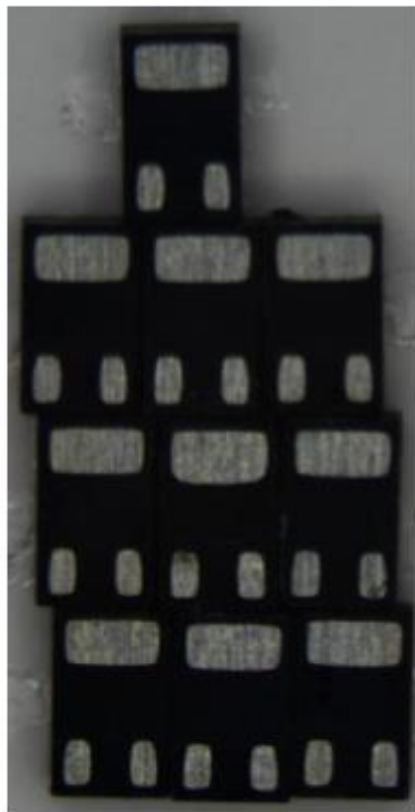


AER-008519 HDS LF Solderability Test

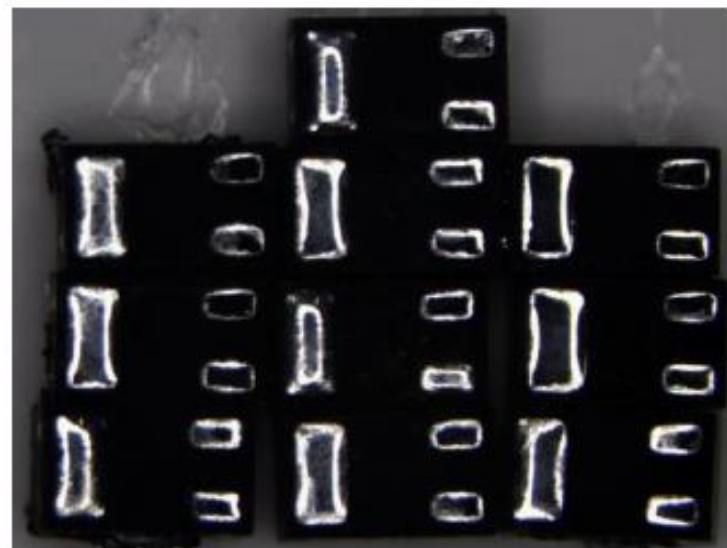
7、试验图片 (Test picture) :

HUA TIAN

Before Test



After Test



End of Report