



PRODUCT CHANGE NOTIFICATION

PCN-000950

Date 12JAN2024

Change Details			
Part Number(s) Affected: RClamp2594N.TCT		Customer Part Number(s) Affected: ☒ N/A	
Description, Purpose and Effect of Change: Semtech is transferring the RClamp2594N.TCT assembly & test from the Huatian, Xi'an (HTXA) assembly house to Greatek (GTK) assembly house.			
Change Classification	☒ Major ☐ Minor	Impact to Form, Fit, Function	☐ Yes ☒ No
Impact to Data Sheet	☐ Yes ☒ No	New Revision or Date	☒ N/A
Impact to Performance, Characteristics or Reliability: There is no impact to form, fit, function, performance, characteristics, or reliability of package.			
Implementation Date	30APR2024	Work Week	TBA
Last Time Ship (LTS) Of unchanged product	31JUL2024	Affecting Lot No. / Serial No. (SN)	N/A
Sample Availability	Immediate	Qualification Report Availability	Attached to Notification
Supporting Documents for Change Validation/Attachments: - RJ#7826 - RClamp2594N Char Summary			

Quality Assurance		
Semtech Business Unit	Protection	
Semtech Contact Info:	Name: Les Fang Yuen Email: lfangyuen@semtech.com Phn: +1 949-269-4443	
FOR FURTHER INFORMATION & WORLDWIDE SALES COVERAGE: http://www.semtech.com/contact/index.html#support		

RCLAMP2594N.TCT.P3 2ND SOURCE PACKAGE REQUAL

Semtech Job#	7826
Accepted Date	04-19-2023
Job Type	2nd source package requal with PI
Qualification Standard	JESD47
Business Unit	Protection
Package Type	SLP3020P10P
Package Lead	10
Assembly Designator	Greatek
Master Process	TJT_Palm E
Fab Designator	TowerPalm
Rel Job Status	Rel Testing Complete Passes All Requirements

Completed Tasks

Sub Lot #	Part	Lot	Assembly Lot	Date Code
1	RClamp2594N.TCT.P3	*	AER-009854	2319

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	07-06-2023
2	DPA @ T0	5	No Major Findings, Q&R to review the report.	0	07-14-2023
3	ROSE Clean/ Test	154	Pass on Zero Fails	0	07-10-2023
4	Pre_Elect_Precond	154	Pass on Zero Fails	0	07-13-2023
5	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	07-13-2023
6	Precond_HTS_24hr	154	Pass on Zero Fails	0	07-13-2023
7	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	07-14-2023
8	Precond_IR_Refl_Char	154	Pass on Zero Fails	0	07-21-2023
9	T/C_Pre_Elect	77	Pass on Zero Fails	0	07-24-2023
10	T/C_wPre_0250	77	Pass on Zero Fails	0	07-24-2023
11	T/C_wPre_0500	77	Pass on Zero Fails	0	07-31-2023
12	DPA @ TC500X	5	No Major Findings, Q&R to review the report.	0	08-04-2023
13	T/C_wPre_1000	77	Pass on Zero Fails	0	08-04-2023
14	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	07-24-2023
15	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	07-20-2023
16	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	07-24-2023
17	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	07-31-2023
18	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	08-14-2023
19	CSAM Analysis	22	Pass on Zero Fails	0	07-24-2023
20	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	07-24-2023
21	Precond_HTS_24hr	22	Pass on Zero Fails	0	07-24-2023

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
22	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	07-25-2023
23	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	08-01-2023
24	CSAM Analysis	22	Pass on Zero Fails	0	08-01-2023
25	Pack_Clos	0	0	0	09-07-2023

Sub Lot #	Part	Lot	Assembly Lot	Date Code
2	RClamp2594N.TCT.P3	*	AER-009855	2319

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	07-06-2023
2	ROSE Clean/ Test	154	Pass on Zero Fails	0	07-10-2023
3	Pre_Elect_Precond	154	Pass on Zero Fails	0	07-13-2023
4	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	07-13-2023
5	Precond HTS_24hr	154	Pass on Zero Fails	0	07-13-2023
6	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	07-14-2023
7	Precond_IR_Ref_Char	154	Pass on Zero Fails	0	07-21-2023
8	T/C_Pre_Elect	77	Pass on Zero Fails	0	07-24-2023
9	T/C_wPre_0250	77	Pass on Zero Fails	0	07-24-2023
10	T/C_wPre_0500	77	Pass on Zero Fails	0	07-31-2023
11	DPA @ TC500X	5	No Major Findings, Q&R to review the report.	0	08-04-2023
12	T/C_wPre_1000	77	Pass on Zero Fails	0	08-04-2023
13	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	07-24-2023
14	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	07-20-2023
15	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	07-24-2023
16	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	07-31-2023
17	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	08-14-2023
18	CSAM Analysis	22	Pass on Zero Fails	0	07-24-2023
19	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	07-24-2023

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
20	Precond_HTS_24hr	22	Pass on Zero Fails	0	07-24-2023
21	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	07-25-2023
22	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	08-01-2023
23	CSAM Analysis	22	Pass on Zero Fails	0	08-01-2023
24	Pack_Clos	0	0	0	09-07-2023

Sub Lot #	Part	Lot	Assembly Lot	Date Code
3	RClamp2594N.TCT.P3	*	AER-009856	2319

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	07-06-2023
2	ROSE Clean/ Test	154	Pass on Zero Fails	0	07-10-2023
3	Pre_Elect_Precond	154	Pass on Zero Fails	0	07-13-2023
4	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	07-13-2023
5	Precond_HTS_24hr	154	Pass on Zero Fails	0	07-13-2023
6	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	07-14-2023
7	Precond_IR_Refl_Char	154	Pass on Zero Fails	0	07-21-2023
8	T/C_Pre_Elect	77	Pass on Zero Fails	0	07-21-2023
9	T/C_wPre_0250	77	Pass on Zero Fails	0	07-21-2023
10	T/C_wPre_0500	77	Pass on Zero Fails	0	07-26-2023
11	DPA @ TC500X	5	No Major Findings, Q&R to review the report.	0	07-31-2023
12	T/C_wPre_1000	77	Pass on Zero Fails	0	07-31-2023
13	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	0	07-21-2023
14	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	0	07-20-2023
15	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	0	07-21-2023
16	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	0	07-28-2023
17	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	0	08-11-2023
18	CSAM Analysis	22	Pass on Zero Fails	0	07-24-2023

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
19	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	07-24-2023
20	Precond_HTS_24hr	22	Pass on Zero Fails	0	07-24-2023
21	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	07-25-2023
22	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	08-01-2023
23	CSAM Analysis	22	Pass on Zero Fails	0	08-01-2023
24	Pack_Clos	0	0	0	09-05-2023



RClamp2594N Transfer to GTK

Characterization Summary

Les12JAN2024.r0.

Characterization Summary

RClamp2594N

							AER-009854 GTK	AER-005965 HTXA
Parameter	Symbol	Conditions	Units	Min.	Typ.	Max.	Ave.	Ave.
Reverse Stand-Off Voltage	V_{RWM}	$T = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$, any I/O Pin to Ground	V			5		
Reverse Breakdown Voltage	V_{BR}	$I_T = 10\text{mA}$, Any I/O Pin to GND, -40°C to $+125^{\circ}\text{C}$	V	6.5	9.5	11.5	9.24	9.26
Holding Current	I_H	$T = 25^{\circ}\text{C}$	mA	75	150	250	120	110
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$	$T = 25^{\circ}\text{C}$		0.01	0.1	<0.1	<0.01
			$T = 125^{\circ}\text{C}$		0.03	0.325	<0.1	<0.01
Clamping Voltage	V_C	$I_{PP} = 35\text{A}$, $t_P = 8/20\mu\text{s}$, Line 1 to Line 2 or Line 3 to Line 4	V		7.5	8.5	6.95	7.0
ESD Clamping Voltage	V_C	$t_P = 0.2/100\text{ns}$, Any I/O Pin to GND	$I_{PP} = 4\text{A}$		4.2		3.21	3.0
			$I_{PP} = 16\text{A}$		4.7		3.69	3.40
Dynamic Resistance	R_{DYN}	$t_P = 0.2/100\text{nS}$ (TLP)	Ohms		0.05		0.04	0.03
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$, any I/O Pin to GND	pF		2.1	3	2.05	2.1
Peak Pulse Current	I_{PP}	$t_P = 8/20\mu\text{s}$	A			35	39.8	39.4
ESD per IEC 61000-4-2	V_{ESD}	Contact	kV			± 30	± 30	± 30
		Air				± 30	± 30	± 30

Source Data: "01 Elec Char AER-9631"

