



PRODUCT CHANGE NOTIFICATION
PCN-000730
Date: 25MAY2021

P1/1

Semtech Corporation, 200 Flynn Road, Camarillo CA 93012			
Change Details			
Part Number(s) Affected: UCLAMP0502P.TCT		Customer Part Number(s) Affected: <input checked="" type="checkbox"/> N/A	
Description, Purpose and Effect of Change: For the benefit of our customers, Semtech has qualified additional manufacturing capacity for the UClamp0502P.TCT. An additional assembly and test site, Hua Tian, Xi'an, China, has been qualified to manufacture UClamp0502P.TCT. UClamp0502P.TCT parts assembled and tested at Diodes will continue to ship. a. Current POR – Assembly & Test - Diodes Shanghai, China.			
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	New Revision or Date	<input checked="" type="checkbox"/> N/A
Impact to Performance, Characteristics or Reliability: <ul style="list-style-type: none"> • NO impact to performance, characteristics; or reliability 			
Implementation Date	31AUG2021	Work Week	TBA
Last Time Ship (LTS) <small>Of unchanged product</small>	Not Applicable	Affecting Lot No. / Serial No. (SN)	Not Applicable
Sample Availability	Immediate	Qualification Report Availability	Included with Notification
Supporting Documents for Change Validation/Attachments: <ul style="list-style-type: none"> • Product Qualification Report • Test Characterization Data 			

Issuing Authority		
Semtech Business Unit:	Protection Business Unit	
Semtech Contact Info:	QA representative: Les Fang Yuen lfangyuen@semtech.com +1 949-269-4443	Digital signature

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

UCLAMP0502P.TCT

Semtech Job#	7303
Accepted Date	01-29-2021
Job Type	New Device Qualification
Business Unit	Protection
Package Type	SLP1006P3
Package Lead	3
Assembly Designator	Huatian Xian
Master Process	12B
Fab Designator	ASMC12B
Rel Job Status	Rel Testing Complete Passes All Requirements

Comment:

- Qualified die, qualified package; POR back metal for uClamp0502P is Au.

Completed Tasks

Sub Lot #	Part	Lot	Assembly Lot	Date Code	
1	uClamp0502P.TCT	AER-007719	AER-007719	2053	
Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	02-22-2021
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	03-02-2021
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	03-04-2021
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	02-25-2021
5	BI_BD_Valid	105	Meet HTOL Schematics	0	02-22-2021
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	03-01-2021
7	HTRB_150°C_0408	105	Pass on Zero Fails	0	03-04-2021
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	02-25-2021
9	HTS_0168	77	Pass on Zero Fails	0	02-25-2021
10	HTS_0500	77	Pass on Zero Fails	0	03-04-2021
11	HTS_1000	77	Pass on Zero Fails	0	03-18-2021
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	03-03-2021
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	03-03-2021
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	03-03-2021
15	Pre_Conditioning_Level_1	NA	MSL 1	0	02-24-2021
16	ROSE Clean/ Test	174	Pass on Zero Fails	0	02-25-2021
17	Pre_Elect_Precond	154	Pass on Zero Fails	0	03-01-2021
18	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	03-01-2021
19	Precond_HTS_24hr	154	Pass on Zero Fails	0	03-01-2021
20	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	03-02-2021
21	Precond_260°C_IR_Ref_Char	154	Pass on Zero Fails	2	03-09-2021

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
22	T/C_Pre_Elect	77	Pass on Zero Fails	0	03-09-2021
23	T/C_wPre_0250	77	Pass on Zero Fails	0	03-09-2021
24	T/C_wPre_0500	77	Pass on Zero Fails	0	03-15-2021
25	Cross_Section TC 500 Cyc	5	Pass on Zero Fails	0	03-22-2021
26	T/C_wPre_1000	77	Pass on Zero Fails	0	03-22-2021
27	HAST Pre_Elect	77	Pass on Zero Fails	0	03-09-2021
28	BI_BD_Valid	NA	Meet HTOL Schematics	0	03-10-2021
29	HAST_nPRE_264 Hrs 110°C	77	Pass on Zero Fails	0	03-10-2021
30	CSAM Analysis	22	Pass on Zero Fails	0	03-16-2021
31	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	03-18-2021
32	Precond HTS_24hr	22	Pass on Zero Fails	0	03-18-2021
33	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	03-19-2021
34	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	03-26-2021
35	CSAM Analysis	22	Pass on Zero Fails	0	03-31-2021
36	Pack_Clos	0	0	0	04-19-2021



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uClamp0502P

F. Almaguer 5/18/2021

uClamp0502P



uClamp0502P

							HTXA	Prod. Parts
Parameter	Symbol	Conditions	Units	Min.	Typ.	Max.	Ave	Ave
Reverse Stand-Off Voltage	V_{RWM}		V			5		
Reverse Breakdown Voltage	V_{BR}	$I_t = 1mA$	V	6.0	7.1	8	7.133	7.119
Reverse Leakage Current	I_R	$V_{RWM} = 5V$	μA		0.06	0.25	<0.01	<0.01
Forward Voltage	V_C	$I_F = 10mA$	V		1	1.2	0.798	0.798
Clamping Voltage		$I_{PP} = 2A, t_p = 8/20\mu s$				12.5	10.75	10.69
ESD Clamping Voltage	V_C	$t_{lp} = 0.2/100ns,$ Pin 1 to 3 or Pin 2 to 3	$I_{tlp} = 4A$ $I_{tlp} = 16A$		13.4		9.15	9.00
					15.2		13.70	13.50
Dynamic Resistance	R_{dyn}	$t_p = 0.2/100ns, Pin 1 to 3 or Pin 2 to 3$	Ohm		0.15		0.38	0.38
Junction Capacitance	C_J	$V_r = 0V, f = 1MHz$	pF			10	9.22	9.38
Junction Capacitance	C_J	$V_r = 3.3V, f = 1MHz$	pF		4.5		4.66	4.93
Peak Pulse Current ($t_p = 8/20\mu s$)		I_{PP}	A		2		2.4	2.3
ESD per IEC 61000-4-2 (Contact)		V_{ESD}	kV		± 15		± 17	± 18
ESD per IEC 61000-4-2 (Air)					± 20		± 21	± 21



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