PRODUCT / PROCESS CHANGE NOTIFICATION
PCN-000719
Date: 24MAY2021

Semtech Corporation, 200 Flynn Road, Camarillo CA 93012

Change Details

Part Number(s) Affected:	**Customer Part Number(s) Affected:** ☒ N/A
UCLAMP6514P.TNT	

Description, Purpose and Effect of Change:

For the benefit of our customers, Semtech has qualified additional manufacturing capacity for the UClamp6514P.TNT. An additional assembly and test site, Semtech SCI USA, has been qualified to manufacture UClamp6514P.TNT.

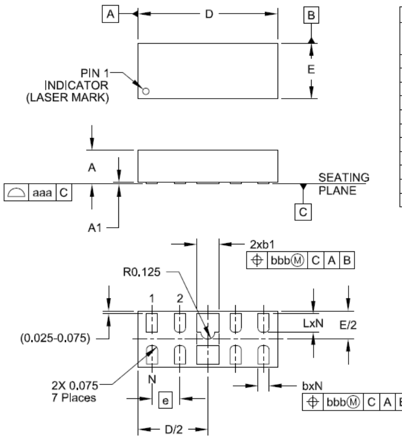
UClamp6514P parts assembled and tested at Diodes will continue to ship.

a. Additional Assembly and Test Capacity – Semtech SCI, Colorado Springs, CO USA
b. Current POR – Diodes Shanghai, China.

The land pattern remains unchanged.

In order to accommodate the second assembly site, minor POD changes were required. (See below)

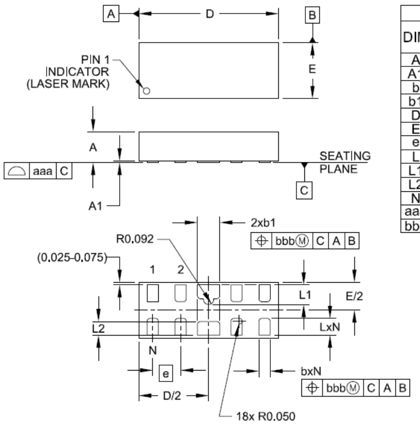
Current Datasheet



DIM	DIMENSIONS MILLIMETERS MIN	NOM	MAX
A	0.55	0.60	0.65
A1	0.00	0.03	0.05
b	0.15	0.20	0.25
b1	0.35	0.40	0.45
D	2.45	2.50	2.575
E	0.95	1.00	1.075
e	0.50 BSC		
L	0.28	0.33	0.38
N	8		
aaa	0.08		
bbb	0.10		

NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

POD for Additional Site [Included in Datasheet]



DIM	DIMENSIONS MILLIMETERS MIN	NOM	MAX
A	0.50	0.55	0.60
A1	0.00	0.03	0.05
b	0.15	0.20	0.25
b1	0.35	0.40	0.45
D	2.45	2.50	2.575
E	0.95	1.00	1.075
e	0.50 BSC		
L	0.25	0.30	0.35
L1	0.30	0.35	0.40
L2	0.194	0.244	0.294
N	8		
aaa	0.08		
bbb	0.10		

NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

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:

- NO impact to performance, characteristics; or reliability
- NO change to the land pattern.
- Minor POD changes, shown above.

Implementation Date	**31AUG2021**	**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 with Notification**

Supporting Documents for Change Validation/Attachments:

- **Product Qualification Report**
- **Datasheet**
- **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 Les Fang Yuen

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

UCLAMP6514P & RCLAMP0594P

Semtech Job#	7241
Accepted Date	10-26-2020
Job Type	Package Qual.
Business Unit	Protection
Package Type	SMF2510P8
Package Lead	8
Assembly Designator	SCI
Master Process	12S
Fab Designator	ASMC 12S
Rel Job Status	Rel. Testing Complete Passes All Requirements

Completed Tasks

Sub Lot #	Part	Lot	Assembly Lot	Date Code
1	uClamp6514P	AER-007451	AER-007451	2044

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	11-13-2020
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	11-18-2020
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	11-19-2020
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	11-13-2020
5	BI_BD_Valid	105	Meet HTOL Schematics	0	11-13-2020
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	11-13-2020
7	HTRB_150°C _0408	105	Pass on Zero Fails	0	11-16-2020
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	11-13-2020
9	HTS_0168	77	Pass on Zero Fails	0	11-13-2020
10	HTS_0500	77	Pass on Zero Fails	0	11-20-2020
11	HTS_1000	77	Pass on Zero Fails	0	12-04-2020
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	11-13-2020
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	11-13-2020
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	11-13-2020
15	Pre_Conditioning_Level_1	NA	MSL 1	0	11-16-2020
16	ROSE Clean/ Test	154	Pass on Zero Fails	0	11-13-2020
17	Pre_Elect_Precond	154	Pass on Zero Fails	0	11-16-2020
18	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	11-16-2020
19	Precond_HTS_24hr	154	Pass on Zero Fails	0	11-16-2020
20	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	11-17-2020
21	Precond_260°C_IR_Ref_Char	154	Pass on Zero Fails	0	11-30-2020
22	T/C_Pre_Elect	77	Pass on Zero Fails	0	11-30-2020

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
23	T/C_wPre_0250	77	Pass on Zero Fails	0	11-30-2020
24	T/C_wPre_0500	77	Pass on Zero Fails	0	12-07-2020
25	Cross_Section TC 500 Cyc	5	Pass on Zero Fails	0	12-16-2020
26	CSAM Analysis	5	Pass on Zero Fails	0	01-05-2021
27	T/C_wPre_1000	77	Pass on Zero Fails	0	12-16-2020
28	HAST Pre_Elect	77	Pass on Zero Fails	0	11-30-2020
29	HAST_BD_Validation	N/A	Pass on Zero Fails	0	12-01-2020
30	HAST_wPRE_264 Hrs 110°C	73	Pass on Zero Fails	0	12-02-2020
31	CSAM Analysis	22	Pass on Zero Fails	0	11-18-2020
32	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	11-30-2020
33	Precond_HTS_24hr	22	Pass on Zero Fails	0	11-30-2020
34	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	12-01-2020
35	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	12-17-2020
36	CSAM Analysis	22	Pass on Zero Fails	0	12-18-2020
37	Construct_Package	5 unique packaged devices minimum.	Pass on Zero Fails	0	01-15-2021
38	Pack_Clos	0	0	0	01-06-2021

Sub Lot #	Part	Lot	Assembly Lot	Date Code
2	RClamp0594P	AER-007455	AER-007455	2050

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	12-17-2020
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	01-12-2021
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	01-13-2021
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	01-04-2021
5	BI_BD_Valid	105	Meet HTOL Schematics	0	01-04-2021
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	01-08-2021
7	HTRB_150°C _0408	105	Pass on Zero Fails	0	01-11-2021

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	01-06-2021
9	HTS_0168	77	Pass on Zero Fails	0	01-06-2021
10	HTS_0500	77	Pass on Zero Fails	0	01-13-2021
11	HTS_1000	77	Pass on Zero Fails	0	01-27-2021
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	01-07-2021
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	01-06-2021
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	01-07-2021
15	Pre_Conditioning_Level_1	NA	MSL 1	0	01-04-2021
16	ROSE Clean/ Test	172	Pass on Zero Fails	0	01-04-2021
17	Pre_Elect_Precond	154	Pass on Zero Fails	0	01-06-2021
18	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	01-06-2021
19	Precond_HTS_24hr	154	Pass on Zero Fails	0	01-06-2021
20	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	01-07-2021
21	Precond_260°C_IR_Ref_Char	154	Pass on Zero Fails	0	01-14-2021
22	T/C_Pre_Elect	77	Pass on Zero Fails	0	01-14-2021
23	T/C_wPre_0250	77	Pass on Zero Fails	0	01-14-2021
24	T/C_wPre_0500	77	Pass on Zero Fails	0	01-20-2021
25	Cross_Section TC 500 Cyc	5	Pass on Zero Fails	0	01-26-2021
26	T/C_wPre_1000	77	Pass on Zero Fails	0	01-26-2021
27	HAST Pre_Elect	77	Pass on Zero Fails	0	01-14-2021
28	HAST_BD_Validation	N/A	Pass on Zero Fails	0	01-15-2021
29	HAST_wPRE_0200_120C	77	Pass on Zero Fails	0	01-18-2021
30	CSAM Analysis	22	Pass on Zero Fails	0	01-13-2021
31	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	01-14-2021
32	Precond_HTS_24hr	22	Pass on Zero Fails	0	01-14-2021
33	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	01-15-2021
34	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	01-22-2021
35	CSAM Analysis	22	Pass on Zero Fails	0	01-25-2021
36	Construct_Package	5 unique packaged devices minimum.	Pass on Zero Fails	0	01-15-2021

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
37	Pack_Clos	0	0	0	02-18-2021

Sub Lot #	Part	Lot	Assembly Lot	Date Code
3	RClamp0594P	AER-007456	AER-007456	2050

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
1	Data-Prep	None	None	0	12-16-2020
2	HTRB_Pre_Elect_150°C_RT24	105	Pass on Zero Fails	0	01-13-2021
3	HTRB_150°C_Real Time_0024	105	Pass on Zero Fails	0	01-14-2021
4	HTRB_Pre_Elect	105	Pass on Zero Fails	0	01-07-2021
5	BI_BD_Valid	105	Meet HTOL Schematics	0	01-07-2021
6	HTRB_150°C_0072	105	Pass on Zero Fails	0	01-08-2021
7	HTRB_150°C _0408	105	Pass on Zero Fails	0	01-11-2021
8	HTS_Pre_Elect	77	Pass on Zero Fails	0	01-06-2021
9	HTS_0168	77	Pass on Zero Fails	0	01-06-2021
10	HTS_0500	77	Pass on Zero Fails	0	01-13-2021
11	HTS_1000	77	Pass on Zero Fails	0	01-26-2021
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	0	01-07-2021
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	0	01-06-2021
14	85/85_120hr_On/Off	20	Pass on Zero Fails	0	01-07-2021
15	Pre_Conditioning_Level_1	NA	MSL 1	0	01-05-2021
16	ROSE Clean/ Test	172	Pass on Zero Fails	0	01-04-2021
17	Pre_Elect_Precond	154	Pass on Zero Fails	0	01-06-2021
18	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	0	01-06-2021
19	Precond_HTS_24hr	154	Pass on Zero Fails	0	01-06-2021
20	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	0	01-07-2021
21	Precond_260°C_IR_Ref_Char	154	Pass on Zero Fails	0	01-14-2021
22	T/C_Pre_Elect	77	Pass on Zero Fails	0	01-14-2021
23	T/C_wPre_0250	77	Pass on Zero Fails	0	01-14-2021
24	T/C_wPre_0500	77	Pass on Zero Fails	0	01-20-2021

Task#	Task Code	Sample Size	Criteria	Failures	Task On Actual
25	Cross_Section TC 500 Cyc	5	Pass on Zero Fails - FA-010604	0	01-26-2021
26	T/C_wPre_1000	77	Pass on Zero Fails	0	01-26-2021
27	HAST Pre_Elect	77	Pass on Zero Fails	0	01-14-2021
28	HAST_BD_Validation	N/A	Pass on Zero Fails	0	01-15-2021
29	HAST_wPRE_0200_120C	77	Pass on Zero Fails	0	01-18-2021
30	CSAM Analysis	22	Pass on Zero Fails	0	01-13-2021
31	Precond_Temp_Cyc_5cyc	22	Pass on Zero Fails	0	01-14-2021
32	Precond_HTS_24hr	22	Pass on Zero Fails	0	01-14-2021
33	Precond_85/85_NoElec168hr	22	Pass on Zero Fails	0	01-15-2021
34	Precond_260°C_IR_Ref_Char	22	Pass on Zero Fails	0	01-22-2021
35	CSAM Analysis	22	Pass on Zero Fails	0	01-25-2021
36	Construct_Package	5 unique packaged devices minimum.	Pass on Zero Fails	0	01-15-2021
37	Pack_Clos	0	0	0	02-17-2021

uClamp6514P

65V µClamp®
4-Line, Surge & ESD Protection

PROTECTION PRODUCTS

Description

µClamp® TVS diodes are designed to protect sensitive electronics from damage or latch-up due to ESD. They feature large cross-sectional area junctions for conducting high transient currents. They offer desirable characteristics for board level protection including fast response time, low operating and clamping voltage, and no device degradation.

µClamp®6514P is in a DFN 2.5 x 1.0mm 10-Lead Package. Leads are Pb-free. Each line features a minimum breakdown voltage of 65V. This device gives the designer flexibility to replace multiple single line devices in space constrained applications. Flow through package design simplifies PCB layout. µClamp6514P may be used to meet the ESD immunity requirements of IEC 61000-4-2. The combination of high ESD surge capability and innovative package design makes them ideal for use in applications such as LCD Televisions, monitors, and industrial equipment.

Features

- High ESD Withstand Voltage
  - IEC 61000-4-2 (ESD) +/-8kV (contact)
- Protects up to Four VBus Lines
- Flow-Through Package
- Minimum Breakdown Voltage: 65V
- Low reverse current: <10nA typical (V_R=60V)
- Solid-State Silicon-Avalanche Technology

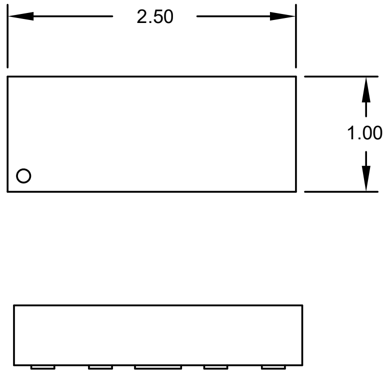
Mechanical Characteristics

- DFN 2.5 x 1.0mm 10-Lead Package
- Pb-Free, Halogen Free, RoHS/WEEE Compliant
- Lead Finish: Pb-Free
- Marking : Marking Code + Date Code
- Packaging : Tape and Reel

Applications

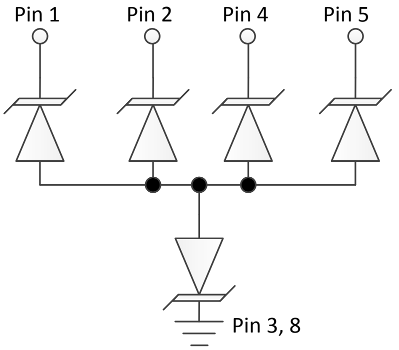
- Chip-On-Glass (COG) Panels
- VBus Protection
- LCD Televisions
- OLED Panels
- Set Top Box
- Industrial Equipment

Nominal Dimensions



Nominal Dimensions in mm

Schematic



4-Line, Bidirectional

Absolute Maximum Ratings

Rating	Symbol	Value	Units
Peak Pulse Power	P_{PK}	240	W
Peak Pulse Current (tp = 8/20μs)	I_{PP}	2	A
ESD per IEC 61000-4-2 (Contact)(1)	V_{ESD}	±8	kV
Operating Temperature	T_{OP}	-40 to +125	^{O}C
Storage Temperature	T_{STG}	-55 to +150	^{O}C

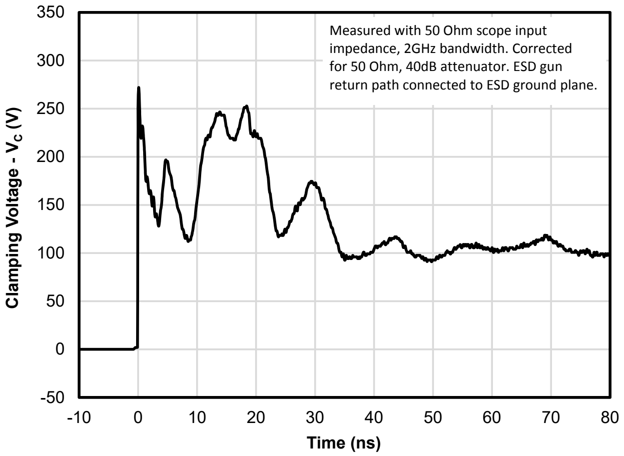
Electrical Characteristics (T=25^{O}C unless otherwise specified)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	Pins 1, 2, 4, and 5 to Pins 3 & 8	-40^{O}C to 125^{O}C			60	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1mA, Pins 1, 2, 4, and 5 to Pins 3 & 8		65	75	85	V
Reverse Leakage Current	I_R	V_{RWM} = 60V Pins 1, 2, 4, and 5 to Pins 3 & 8			<10	100	nA
Clamping Voltage(2)	V_C	I_{PP} = 2A, tp = 8/20μs, Pins 1, 2, 4, and 5 to Pins 3 & 8			105	120	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz Pins 1, 2, 4, and 5 to Pins 3 & 8			8.5	10.5	pF

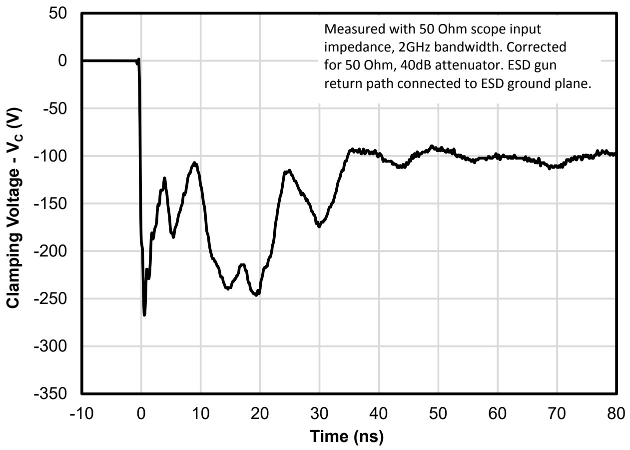
Notes:
(1) Measured with a 40dB attenuator, 50 Ohm scope input impedance, 2GHz bandwidth. ESD gun return path connected to Ground Reference Plane (GRP)
(2) Measured using a 1.2/50us voltage, 8/20us current combination waveform. Clamping is defined as the peak voltage across the device after the device snaps back to a conducting state.
(3) Transmission Line Pulse Test (TLP) Settings: tp = 100ns, tr = 0.2ns, I_{TLP} and V_{TLP} averaging window: t_1 = 70ns to t_2 = 90ns.
(4) Dynamic resistance calculated from I_{TLP} = 4A to I_{TLP} = 16A
(5) Thermal Resistance, Junction to Case: Θ_{JC} = 150 °C/W

Typical Characteristics

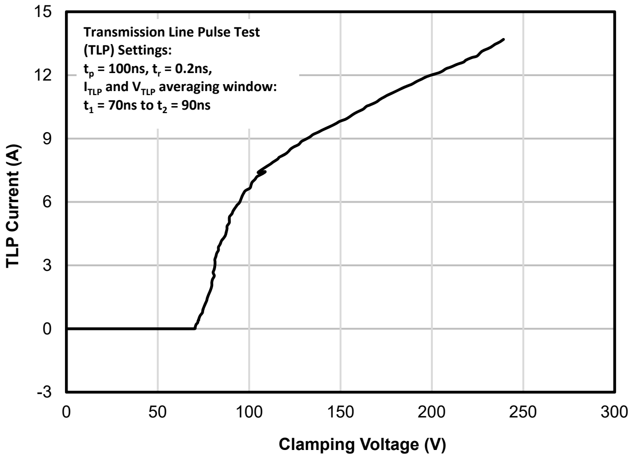
ESD Clamping (+8kV Contact per IEC 61000-4-2)


Measured with 50 Ohm scope input impedance, 2GHz bandwidth. Corrected for 50 Ohm, 40dB attenuator. ESD gun return path connected to ESD ground plane.

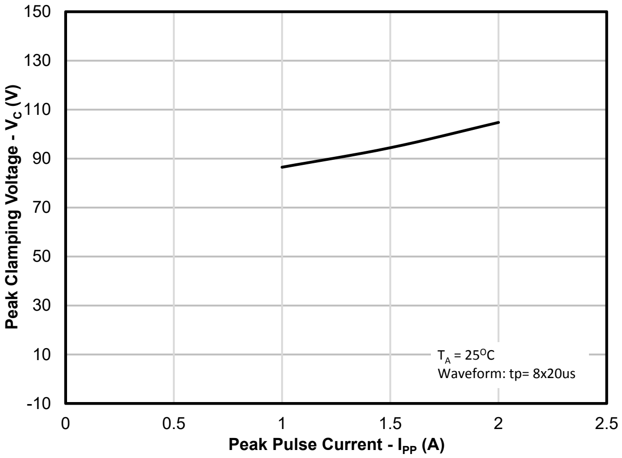
ESD Clamping (-8kV Contact per IEC 61000-4-2)


Measured with 50 Ohm scope input impedance, 2GHz bandwidth. Corrected for 50 Ohm, 40dB attenuator. ESD gun return path connected to ESD ground plane.

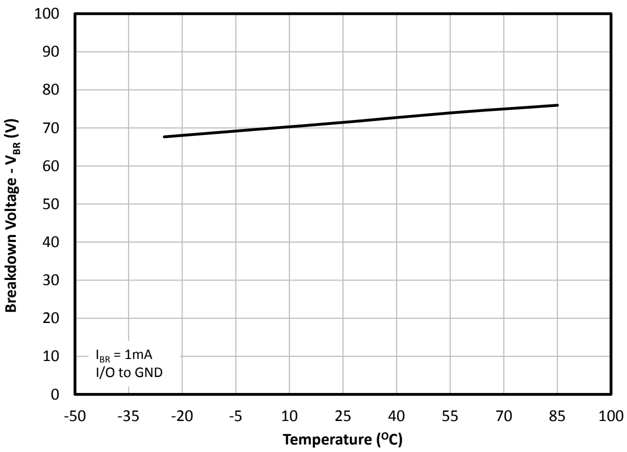
TLP IV Curve


Transmission Line Pulse Test (TLP) Settings:
t_p = 100ns, t_r = 0.2ns,
I_{TLP} and V_{TLP} averaging window:
t_1 = 70ns to t_2 = 90ns

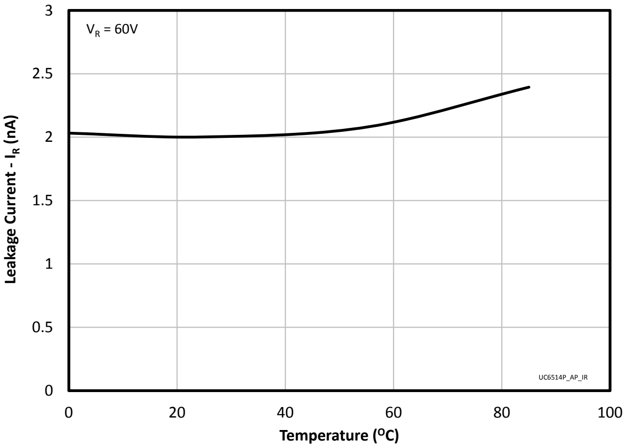
Clamping Voltage vs. Peak Pulse Current


T_A = 25°C
Waveform: tp= 8x20us

Breakdown Voltage vs. Temperature


I_{BR} = 1mA
I/O to GND

Reverse Leakage Current (IR) vs. Temperature


V_R = 60V

Application Information

VBus Protection of Chip-On-Glass (COG) Displays

LCD displays are often supplied as a module with a built-in driver circuitry mounted on a PCB at the rear of the module. This mechanically strengthens the display module, but it also increases the thickness (of the display module) and raises the manufacturing cost. Chip-On-Glass (COG) modules integrate the circuit driving the display mounts directly on the display glass, thus reducing the overall thickness of the module. The advantages of COG technology make it an attractive option for commercial, automotive, and industrial applications. Power is supplied to the modules from a PMIC on the control. These voltage bus lines are susceptible to ESD/EOS events and require external protection devices.

Protection Solutions

Figure 1 below is a simplified block diagram of an LCD panel circuit. The driver ICs are located on the TFT array substrate. This array is connected to a source board which supplies power and data via a flex circuit. The timing controller or T-Con board supplies the VBus power to the source board from an on-board PMIC. µClamp6514P (2 each) are located on the source board near the flex circuit. An example of how to route the traces is shown in Figure 2. VBus lines from the PMIC are routed through each device entering at pins 1, 2, 4, and 5 and exiting at pins 10, 9, 7, and 6 respectively. Each trace should run under the device and connect the pins together. For example, the trace for VBus 1 would enter at pin 1 and exit at pin 10 and so on. Ground connection is made at the center tabs (pins 3, and 8).

Design Verification

Verification of the ESD design is always recommended. In this case, ESD contact discharges are applied at the source board on the VBus traces. An IEC 61000-4-2 compliant waveform is recommended.

Figure 1 - COG Protection Solution

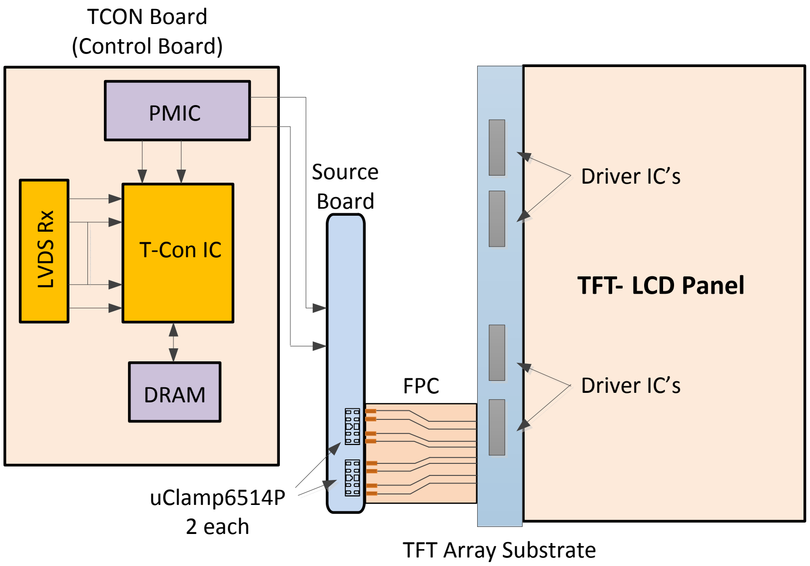
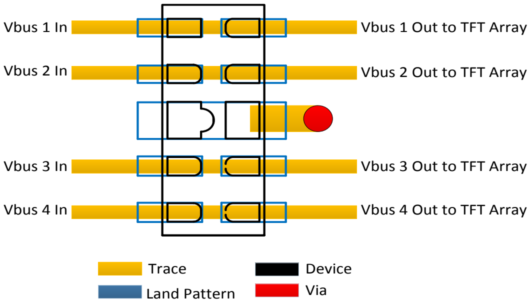
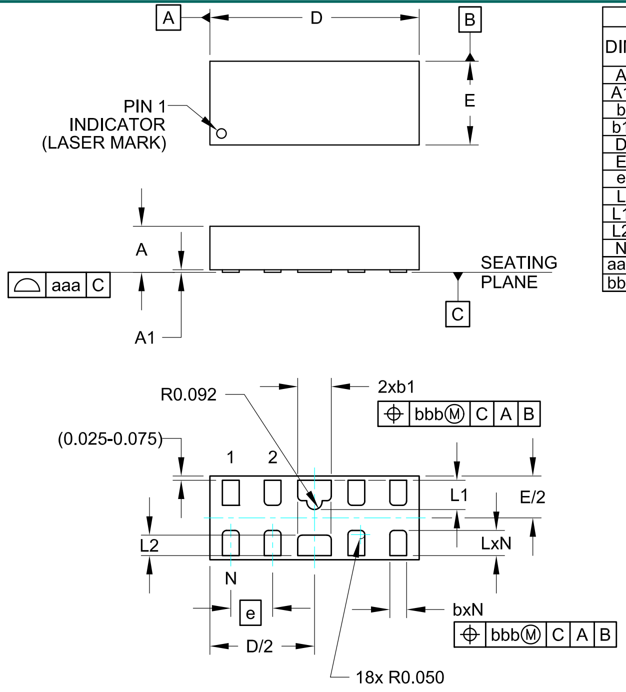


Figure 2 - µClamp6514P Trace Routing



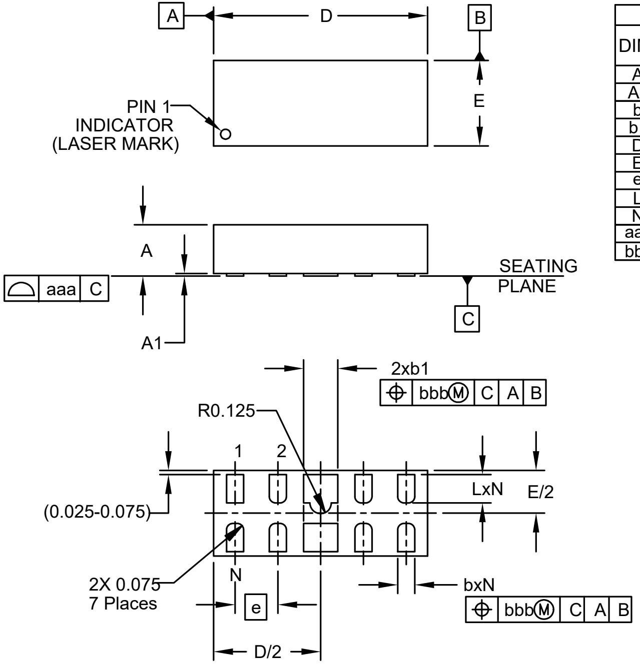
Outline Drawing - DFN 2.5 x 1.0 x 0.55mm 10-Lead



DIM	DIMENSIONS MILLIMETERS MIN	NOM	MAX
A	0.50	0.55	0.60
A1	0.00	0.03	0.05
b	0.15	0.20	0.25
b1	0.35	0.40	0.45
D	2.45	2.50	2.575
E	0.95	1.00	1.075
e	0.50 BSC		
L	0.25	0.30	0.35
L1	0.30	0.35	0.40
L2	0.194	0.244	0.294
N	8		
aaa	0.08		
bbb	0.10		

NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

Outline Drawing - DFN 2.5 x 1.0 x 0.60mm 10-Lead

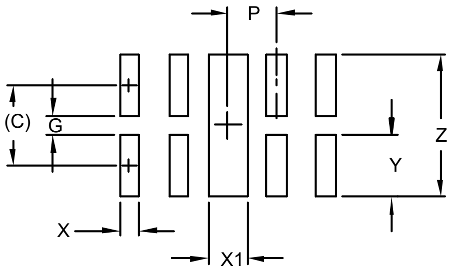


DIM	DIMENSIONS MILLIMETERS MIN	NOM	MAX
A	0.57	0.60	0.63
A1	0.00	0.03	0.05
b	0.15	0.20	0.25
b1	0.35	0.40	0.45
D	2.45	2.50	2.575
E	0.95	1.00	1.075
e	0.50 BSC		
L	0.28	0.33	0.38
N	8		
aaa	0.08		
bbb	0.10		

NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

Note:
This device is available with two package outline drawings. Both are compatible with the recommended land pattern. Semtech reserves the right to ship either POD. Please Reveiw dimensions of each to guarantee either will work in your design.

Land Pattern - DFN 2.5 x 1.0mm 10-Lead

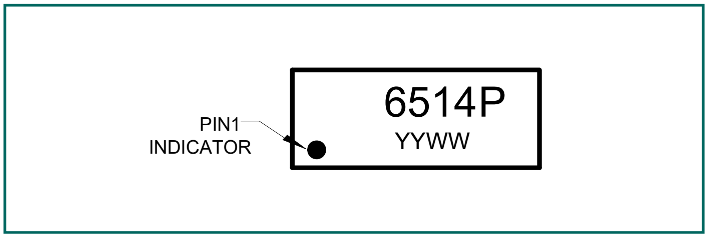


DIMENSIONS	
DIM	MILLIMETERS
C	(0.825)
G	0.20
P	0.50
X	0.20
X1	0.40
Y	0.625
Z	1.45

NOTES:

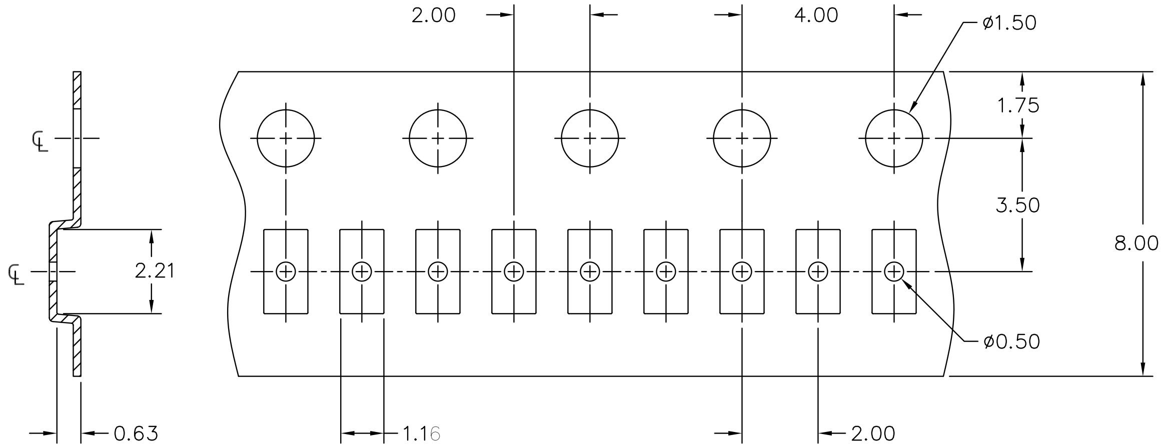
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

Marking Code

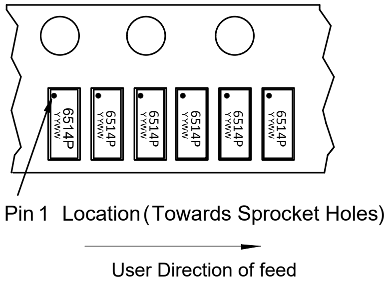


Notes: YYWW = Alphanumeric Date Code

Tape and Reel Specification



Note: All dimensions are nominal dimensions in mm.



Ordering Information

Part Number	Qty per Reel	Reel Size
µClamp6514P.TNT	10000	7 Inch
MicroClamp and uClamp are registered trademarks of Semtech Corporation.		

Important Notice

Information relating to this product and the application or design described herein is believed to be reliable, however such information is provided as a guide only and Semtech assumes no liability for any errors in this document, or for the application or design described herein. Semtech reserves the right to make changes to the product or this document at any time without notice. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. Semtech warrants performance of its products to the specifications applicable at the time of sale, and all sales are made in accordance with Semtech's standard terms and conditions of sale.

SEMTECH PRODUCTS ARE NOT DESIGNED, INTENDED, AUTHORIZED OR WARRANTED TO BE SUITABLE FOR USE IN LIFE-SUPPORT APPLICATIONS, DEVICES OR SYSTEMS, OR IN NUCLEAR APPLICATIONS IN WHICH THE FAILURE COULD BE REASONABLY EXPECTED TO RESULT IN PERSONAL INJURY, LOSS OF LIFE OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. INCLUSION OF SEMTECH PRODUCTS IN SUCH APPLICATIONS IS UNDERSTOOD TO BE UNDERTAKEN SOLELY AT THE CUSTOMER'S OWN RISK. Should a customer purchase or use Semtech products for any such unauthorized application, the customer shall indemnify and hold Semtech and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs damages and attorney fees which could arise.

The Semtech name and logo are registered trademarks of the Semtech Corporation. All other trademarks and trade names mentioned may be marks and names of Semtech or their respective companies. Semtech reserves the right to make changes to, or discontinue any products described in this document without further notice. Semtech makes no warranty, representation or guarantee, express or implied, regarding the suitability of its products for any particular purpose. All rights reserved.

© Semtech 2021

Contact Information

Semtech Corporation
200 Flynn Road, Camarillo, CA 93012
Phone: (805) 498-2111, Fax: (805) 498-3804
www.semtech.com

www.semtech.com

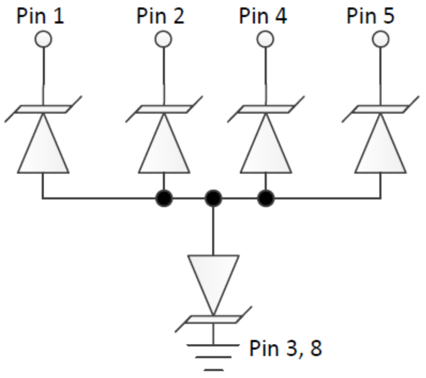
uClamp6514P SCI Federal Test Summary

Franc 04/29/2021

Test Summary

uClamp6514P

							AER-7451 SCI Federal	AER-2284 POR
Parameter	**Symbol**	**Conditions**	**Units**	**Min.**	**Typ.**	**Max.**	**Ave.**	**Ave.**
Reverse Stand-Off Voltage	V_{RWM}		V			60		
Reverse Breakdown Voltage	V_{BR}	1,2,4,5 to 3,8 I_{BR} = 1mA	V	65	75	85	**72.3**	**71.3**
Reverse Leakage Current	I_R	1,2,4,5 to 3,8 V_{RWM} = 60V	nA		<10	100	**~2**	**<6**
Clamping Voltage	V_C	tp = 8/20μs I_{PP} = 2A	V		105	120	**106.4**	**104.8**
Junction Capacitance	C_J	Vr =0V, f = 1MHz	pF		8.5	10.5	**8.40**	**8.50**
Peak Pulse Current (tp = 8/20μs)	I_{PP}		A			2	**2.4**	**2.5**
ESD per IEC 61000-4-2 (Contact)	V_{ESD}		kV			±8	**±14**	**±10**



4-Line, Bidirectional

Source Data: uClamp6514P AER-007451 SCI-Federal – Duke Pham 1/15/21

www.semtech.com