



# PRODUCT CHANGE NOTIFICATION

PCN-000487

Date: 19APR2018

P1/1

<input checked="" type="checkbox"/> Semtech Corporation, 200 Flynn Road, Camarillo CA 93012
<input type="checkbox"/> Semtech Canada Corporation, 4281 Harvester Road, Burlington, Ontario L7L 5M4 Canada
<input type="checkbox"/> Semtech Irvine, 5141 California Ave., Suite 100, Irvine CA 92617
<input type="checkbox"/> Semtech Neuchatel Sarl, Route des Gouttes d'Or 40, CH-2000 Neuchatel Switzerland
<input type="checkbox"/> Semtech Bristol - EMEA Limited, Block B, St James Court, Great Park Road, Bristol BS32 4QJ, UK
<input type="checkbox"/> Semtech Corpus Christi SA de CV, Carretera Matamorros Edificio 7, Reynosa, Tamaulipas, Mexico 88780
<input type="checkbox"/> Semtech Plano, 1101 Resource Drive, Suite 121, Plano TX 75074

### Change Details

<b>Part Number(s) Affected:</b> μClamp5011ZATFT	<b>Customer Part Number(s) Affected:</b> <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 Protection Products. An additional wafer fabrication plant and assembly plant has been brought on line that duplicates our manufacturing processes for this product.

- a. Additional wafer fabrication: MagnaChip 8" Fab, Cheongu, South Korea
- b. Additional Assembly & Test capacity: Huatian, Kunshan, China

For reference the current POR: Wafer Fab = ASMC China /Assembly = ICI, USA/Test=DSH, China

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

**Impact to Performance, Characteristics or Reliability:**


- NO impact to data sheet content or package dimensions
- NO impact to performance, characteristics; or reliability
- NO change to material content.

<b>Implementation Date</b>	<b>1AUG2018</b>	<b>Work Week</b>	<b>To be advised</b>
<b>Last Time Ship (LTS)</b> Of unchanged product	<b>N/A</b>	<b>Affecting Lot No. / Serial No. (SN)</b>	<b>N/A</b>
<b>Sample Availability</b>	<b>18APR2018</b>	<b>Qualification Report Availability</b>	<b>Attached as supporting doc.</b>

**Supporting Documents for Change Validation/Attachments:**

- Product Qualification Report
- Product Test Summary Report

### Issuing Authority

<b>Semtech Business Unit:</b>	<b>Protection</b>	
<b>Semtech Contact Info:</b>	Les Fang Yuen Semtech Corporation Sr. Engineering Manager, QA 200 Flynn Road Camarillo, CA 93012 Ifangyuen@semtech.com Office: (949) 269-4443	

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

# Rel Job Detail Report

by Sublot, by Sequence  
 Contact: Gurmail Sajjan  
 (805) 480 2142  
 gsajjan@semtech.com

<i>Businessunit</i>	<i>Protection</i>			
<i>Reljob#</i>	<i>Part_Number, Job Name/Type</i>	<i>Fab, Package</i>	<i>Rel Job Status</i>	<i>Key Dates:</i>
6493	uClamp5011ZA  New Wafer Foundry MagnaChip Reliability Q  New Product on qualified process and qualified package	MagnaChip/ Aspen-C  SLP0603P2X3F	Rel Testing Complete Passes All Requirements	<i>Job Accepted:</i> 27-Nov-2017  <i>Requested CD:</i>  <i>Actual Start Date:</i> 01-Nov-2017  <i>ECD for Conditional:</i>  <i>Job ECD:</i> 06-Apr-2018

## Completed Tasks

<i>I.O</i>	<i>Lot</i>	<i>AssemblyLot</i>	<i>DateCode</i>				
	AER4587	AER4587	1745				
<i>Seq</i>	<i>TaskCode</i>	<i>SampleSize</i>	<i>Criteria</i>	<i>Complete</i>	<i>Failures</i>	<i>DataSource</i>	<i>Results/Comments</i>
1	Data-Prep	None	None	29-Nov-2017		Camarillo	
2	HTRB_Pre_Elect_150°C_RT24	210	Pass on Zero Fails	08-Dec-2017	0	Camarillo	
3	HTRB_150°C_Real Time_0024	210	Pass on Zero Fails	12-Dec-2017	0	Camarillo	
4	HTRB_Pre_Elect	105	Pass on Zero Fails	30-Nov-2017	0	Camarillo	
5	BI_BD_Valid	NA	Meet HTOL Schematics	30-Nov-2017	0	Camarillo	
6	HTRB_150°C_0072	105	Pass on Zero Fails	04-Dec-2017	0	Camarillo	
7	HTRB_150°C_0408	105	Pass on Zero Fails	18-Dec-2017	0	Camarillo	
8	HTS_Pre_Elect	77	Pass on Zero Fails	01-Dec-2017	0	Camarillo	
9	HTS_0168	77	Pass on Zero Fails	08-Dec-2017	0	Camarillo	
10	HTS_0500	77	Pass on Zero Fails	22-Dec-2017	0	Camarillo	
11	HTS_1000	77	Pass on Zero Fails	12-Jan-2018	0	Camarillo	
12	85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	05-Dec-2017	0	Camarillo	
13	85°C/85%RH_BD_Valid	20	Pass on Zero Fails	05-Dec-2017	0	Camarillo	
14	85/85_120hr_On/Off	20	Pass on Zero Fails	11-Dec-2017	0	Camarillo	
15	Pre_Elect_Precond	154	Pass on Zero Fails	04-Dec-2017	0	Camarillo	

# Rel Job Detail Report

by Sublot, by Sequence  
 Contact: Gurmail Sajjan  
 (805) 480 2142  
 gsajjan@semtech.com

16	Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	04-Dec-2017	0	Camarillo
17	Precond_HTS_24hr	154	Pass on Zero Fails	05-Dec-2017	0	Camarillo
18	Precond_85/85_NoElec168hr	154	Pass on Zero Fails	12-Dec-2017	0	Camarillo
19	Precond_IR_Refl_Char	154	Pass on Zero Fails	12-Dec-2017	0	Camarillo
20	T/C_Pre_Elect	77	Pass on Zero Fails	12-Dec-2017	0	Camarillo
21	T/C_wPre_0250	77	Pass on Zero Fails	18-Dec-2017	0	Camarillo
22	T/C_wPre_0500	77	Pass on Zero Fails	02-Jan-2018	0	Camarillo
23	T/C_wPre_1000	77	Pass on Zero Fails	04-Jan-2018	0	Camarillo
25	85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	12-Dec-2017	0	Camarillo
26	85°C/85%RH_BD_Valid	77	Pass on Zero Fails	13-Dec-2017	0	Camarillo
27	85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	20-Dec-2017	0	Camarillo
28	85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	03-Jan-2018	0	Camarillo
29	85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	12-Jan-2018	0	Camarillo
31	Rider_Card_Wash/Bake	154		01-Dec-2017	0	Camarillo
32	Pack_Clos	0	0	24-Jan-2018		Camarillo

2.0	Lot	AssemblyLot	DateCode
-----	-----	-------------	----------

Seq	TaskCode	SampleSize	Criteria	Complete	Failures	DataSource	Results/Comments
1	Data-Prep	None	None	15-Dec-2017		Camarillo	
2	HTRB_Pre_Elect_150°C_RT24	210	Pass on Zero Fails	12-Jan-2018	0	Camarillo	
3	HTRB_150°C_Real Time_0024	210	Pass on Zero Fails	19-Jan-2018	0	Camarillo	
4	HTRB_Pre_Elect	105	Pass on Zero Fails	15-Dec-2017	0	Camarillo	
5	BI_BD_Valid	NA	Meet HTOL Schematics	15-Dec-2017	0	Camarillo	
6	HTRB_150°C_0072	105	Pass on Zero Fails	18-Dec-2017	0	Camarillo	
7	HTRB_150°C_0408	105	Pass on Zero Fails	03-Jan-2018	0	Camarillo	
8	HTS_Pre_Elect	77	Pass on Zero Fails	18-Dec-2017	0	Camarillo	
9	HTS_0168	77	Pass on Zero Fails	02-Jan-2018	0	Camarillo	
10	HTS_0500	77	Pass on Zero Fails	11-Jan-2018	0	Camarillo	

# Rel Job Detail Report

by Sublot, by Sequence  
 Contact: Gurmail Sajjan  
 (805) 480 2142  
 gsajjan@semtech.com

11 HTS_1000	77	Pass on Zero Fails	02-Feb-2018	0	Camarillo
12 85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	11-Jan-2018	0	Camarillo
13 85°C/85%RH_BD_Valid	20	Pass on Zero Fails	11-Jan-2018	0	Camarillo
14 85/85_120hr_On/Off	20	Pass on Zero Fails	29-Jan-2018	0	Camarillo
15 Pre_Elect_Precond	154	Pass on Zero Fails	19-Dec-2017	0	Camarillo
16 Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	21-Dec-2017	0	Camarillo
17 Precond_HTS_24hr	154	Pass on Zero Fails	22-Dec-2017	0	Camarillo
18 Precond_85/85_NoElec168hr	154	Pass on Zero Fails	02-Jan-2018	0	Camarillo
19 Precond_IR_Refl_Char	154	Pass on Zero Fails	02-Jan-2018	0	Camarillo
20 T/C_Pre_Elect	77	Pass on Zero Fails	02-Jan-2018	0	Camarillo
21 T/C_wPre_0250	77	Pass on Zero Fails	08-Jan-2018	0	Camarillo
22 T/C_wPre_0500	77	Pass on Zero Fails	15-Jan-2018	0	Camarillo
23 T/C_wPre_1000	77	Pass on Zero Fails	22-Jan-2018	0	Camarillo
25 85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	02-Jan-2018	0	Camarillo
26 85°C/85%RH_BD_Valid	77	Pass on Zero Fails	02-Jan-2018	0	Camarillo
27 85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	10-Jan-2018	0	Camarillo
28 85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	24-Jan-2018	0	Camarillo
29 85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	13-Feb-2018	0	Camarillo
31 Rider_Card_Wash/Bake	154		15-Dec-2017	0	Camarillo
32 Pack_Clos	0	0	14-Feb-2018		Camarillo

3.0 Lot	AER4679 Wafer 03	AssemblyLot	AER4679 Wafer 03	DateCode	1802
---------	------------------	-------------	------------------	----------	------

Seq	TaskCode	SampleSize	Criteria	Complete	Failures	DataSource	Results/Comments
1	Data-Prep	None	None	15-Jan-2018		Camarillo	
2	HTRB 150°C Real Time 24 B	210	Pass on Zero Fails	24-Jan-2018	0	Camarillo	
2	HTRB_Pre_Elect_150°C_RT24	210	Pass on Zero Fails	18-Jan-2018	0	Camarillo	
3	HTRB_150°C_Real Time_0024	210	Pass on Zero Fails	23-Jan-2018	0	Camarillo	
4	HTRB_Pre_Elect	105	Pass on Zero Fails	15-Jan-2018	0	Camarillo	

# Rel Job Detail Report

by Sublot, by Sequence  
Contact: Gurmail Sajjan  
(805) 480 2142  
gsajjan@semtech.com

5 BI_BD_Valid	NA	Meet HTOL Schematics	15-Jan-2018	0	Camarillo
6 HTRB_150°C_0072	105	Pass on Zero Fails	18-Jan-2018	0	Camarillo
7 HTRB_150°C_0408	105	Pass on Zero Fails	01-Feb-2018	0	Camarillo
8 HTS_Pre_Elect	77	Pass on Zero Fails	16-Jan-2018	0	Camarillo
9 HTS_0168	77	Pass on Zero Fails	23-Jan-2018	0	Camarillo
10 HTS_0500	77	Pass on Zero Fails	06-Feb-2018	0	Camarillo
11 HTS_1000	77	Pass on Zero Fails	27-Feb-2018	0	Camarillo
12 85°C/85%RH_N/Pre_Pre Elec	20	Pass with 0 fail	18-Jan-2018	0	Camarillo
13 85°C/85%RH_BD_Valid	20	Pass on Zero Fails	18-Jan-2018	0	Camarillo
14 85/85_120hr_On/Off	20	Pass on Zero Fails	23-Jan-2018	0	Camarillo
15 Pre_Elect_Precond	154	Pass on Zero Fails	17-Jan-2018	0	Camarillo
16 Precond_Temp_Cyc_5cyc	154	Pass on Zero Fails	17-Jan-2018	0	Camarillo
17 Precond_HTS_24hr	154	Pass on Zero Fails	18-Jan-2018	0	Camarillo
18 Precond_85/85_NoElec168hr	154	Pass on Zero Fails	25-Jan-2018	0	Camarillo
19 Precond_IR_Refl_Char	154	Pass on Zero Fails	25-Jan-2018	0	Camarillo
20 T/C_Pre_Elect	77	Pass on Zero Fails	25-Jan-2018	0	Camarillo
21 T/C_wPre_0250	77	Pass on Zero Fails	31-Jan-2018	0	Camarillo
22 T/C_wPre_0500	77	Pass on Zero Fails	05-Feb-2018	0	Camarillo
23 T/C_wPre_1000	77	Pass on Zero Fails	15-Feb-2018	0	Camarillo
25 85°C/85%RH_W/Pre_Pre Elec	77	Pass on Zero Fails	25-Jan-2018	0	Camarillo
26 85°C/85%RH_BD_Valid	77	Pass on Zero Fails	26-Jan-2018	0	Camarillo
27 85°C/85%RH_Biased_168hrs	77	Pass on Zero Fails	02-Feb-2018	0	Camarillo
28 85°C/85%RH_Biased_500hrs	77	Pass on Zero Fails	16-Feb-2018	0	Camarillo
29 85°C/85%RH_Biased_1000hrs	77	Pass on Zero Fails	09-Mar-2018	0	Camarillo
31 Rider_Card_Wash/Bake	154		16-Jan-2018	0	Camarillo
32 Pack_Clos	0	0	12-Mar-2018		Camarillo

# *Rel Job Detail Report*

*by Sublot, by Sequence*  
*Contact: Gurmail Sajjan*  
*(805) 480 2142*  
*gsajjan@semtech.com*

---



# SEMTECH



## Test Summary: $\mu$ Clamp5011ZA

Les 18APR2018.r0

r0 18APR2018 Initial Version

# Test Summary

UC5011ZA

Magna  
chip  
HTKS

Parameter	Symbol	Conditions	Units	Min	Typ	Max	Ave	POR
Reverse Stand-Off Voltage	$V_{RWM}$	Pin 1 to 2 or 2 to 1	V			5		
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR} = 1\text{mA}$ , Pin 1 to 2 or 2 to 1	V	6.5	8.5	10.5	8.62	8.31
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V}$ , Pin 1 to 2 or 2 to 1	nA		5	20	<1	<1
Clamping Voltage	$V_C$	$I_{PP} = 2.5\text{A}$ , $t_p = 8/20\mu\text{s}$	V			12	9.4	9.4
ESD Clamping Voltage	$V_C$	$I_{PP} = 4\text{A}$ , $t_p = 0.2/100\text{ns}$	V		8		7.7	7.8
		$I_{PP} = 16\text{A}$ , $t_p = 0.2/100\text{ns}$			9.8		9.91	9.71
Dynamic Resistance	$R_{DYN}$	$t_p = 0.2/100\text{ns}$	Ohms		0.15		0.18	0.16
Junction Capacitance	$C_J$	$V_r = 0\text{V}$ , $f = 1\text{MHz}$	pF		4.2	5	3.85	4.25





# SEMTECH



Note: copy or use of the material in this presentation can only be done with Semtech authorization

Semtech and the Semtech logo are trademarks of the Semtech Corporation. All other product or service names are the property of their respective owners

© Copyright 2015 Semtech Corporation