



PRODUCT / PROCESS CHANGE NOTIFICATION

PCN-000432

Date: 6JUL2017

P1/1

- Semtech Corporation, 200 Flynn Road, Camarillo CA 93012
- Semtech Canada Corporation, 4281 Harvester Road, Burlington, Ontario L7L 5M4 Canada
- Semtech Irvine, 5141 California Ave., Suite 100, Irvine CA 92617
- Semtech Neuchatel Sarl, Route des Gouttes d'Or 40, CH-2000 Neuchatel Switzerland
- Nanotech Semiconductor, Semtech Corporation, 2 West Point Court, Bristol, United Kingdom, BS32 4PY
- Semtech Corpus Christi SA de CV, Carretera Matamorros Edificio 7, Reynosa, Tamaulipas, Mexico 88780
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Change Details

Part Number(s) Affected:

RClamp0561Z.TNT
RClamp0561Z.TFT

Customer Part Number(s) Affected: N/A

Description, Purpose and Effect of Change:

As part of Semtech's ongoing efforts of process improvement, Semtech is standardizing all versions of the Rclamp0561Z (TFT, TNT) to paper reel (TFT). In addition, Semtech is changing the die attach process for the Rclamp0561Z.TFT package from WBC to DAF. This change is for improved manufacturability and will provide consistent die attach thickness.

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:


There is no impact to performance, characteristics or reliability

Implementation Date	10OCT2017	Work Week	TBD
Last Time Ship (LTS) Of unchanged product	10OCT2017	Affecting Lot No. / Serial No. (SN)	N/A
Sample Availability	26JUN2017	Qualification Report Availability	26JUN2017

Supporting Documents for Change Validation/Attachments:

RCLAMP0561Z.TFT_DAF_Rel summary

Issuing Authority

Semtech Business Unit:	Protection	
Semtech Contact Info:	Les Fang Yuen Semtech Corporation Sr. Eng Manager, QA 200 Flynn Road Camarillo, CA 93012 Email: lfangyuen@semtech.com Phone: (949) 269-4443 [office]	

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



SHANGHAI KAIHONG ELECTRONIC CO.,LTD

Reliability Test Summary

FACTORY:		PART NUMBER : RCLAMP0561Z.TFT AER-3826A		CUSTOMER:		
		Package Description : SGP0603P2X3		DIODES INC.:		
LABORATORY (If Different):		PART DESCRIPTION : Rel test for new package(DAF transition).				
DW-008 (AEC Q101) Test#	Test Description	Test Conditions	#Lots	#To Test	Results	REMARKS
7.3.2 (1)	Pre- and Post- Stress Electrical Test (TEST)	Per Spec				
7.3.3 (2)	Pre-conditioning (PC)	PER JESD22 A-113 N/A for Axial	1	154	0/154	
7.3.5.4 (5)	HIGH TEMP. REVERSE BIAS (HTRB)	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A				
	Pretest		1	105	0/105	
	@ 72 Hours	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A	1	105	0/105	
	Final 408 Hours	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A	1	105	0/105	
	Steady State Operational(SSOP)	Iz max, PER MIL-STD-750-1 M1038 Condition B(Zeners)	1	77	N/A	For Zeners only
(6)	High Temperature Gate Bias (HTGB)	N/A for Diode	1	77	N/A	For Mosfet only
7.3.5.5 (7)	Temperature Cycling (TC)	T=-65°C-150°C, PER JESD22 A-104				
	Pretest		1	77	0/77	
	@ 250 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
	@ 500 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
	Final 1000 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
7.3.5.6 (8-1)	Autoclave (AC)	T=121°C 15PSIG 100%RH, PER JESD22 A-102	1	77	N/A	96hrs
	Unbiased Highly Accelerated Stress Test(UHAST)	t=96hrs, Ta=130°C, RH=85%, PER JESD22 A-118	1	77	N/A	(Optional)
7.3.5.7 (9a)	Highly Accelerated Stress Test(HAST)	T=130°C RH=85% Vr=5V, PER JESD22 A-110	1	77	N/A	96hrs
7.3.5.7 (9)	High Humidity High Temp. Reverse Bias(H ³ TRB)	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101				
	Pretest		1	77	0/77	
	@ 168 Hours	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101	1	77	0/77	
	@ 500 Hours	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101	1	77	0/77	
	Final 1000 Hours	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101	1	77	0/77	
7.3.5.8 (10)	Intermittent Operational Life(IOL)	Vd=10V Id=100mA; PER MIL-STD-750 METHOD 1037	1	77	N/A	2mins on/off 15000cycles
7.3.5.14 (16)	Resistance to Solder Heat (RSH)	PER JESD22 A-111 (SMD), B-106 (PTH)	1	30	N/A	260°C @30sec
7.3.5.15 (17)	Solderability (SD)	PER J-STD-002	1	10	N/A	245°C @5sec
Summary: The lot passed the precondition test and 1000hrs hi-rel tests.						
Submitted by: Bin Shen 2/8/17			Approved by: Adam Gu 2/8/17			

Q-Form Q014-4,Rev.M



SHANGHAI KAIHONG ELECTRONIC CO.,LTD

Reliability Test Summary

FACTORY:		PART NUMBER : RCLAMP0561Z.TFT AER-3827A		CUSTOMER:		
		Package Description : SGP0603P2X3		DIODES INC.:		
LABORATORY (If Different):		PART DESCRIPTION : Rel test for new package(DAF transition).				
DW-008 (AEC Q101) Test#	Test Description	Test Conditions	#Lots	#To Test	Results	REMARKS
7.3.2 (1)	Pre- and Post- Stress Electrical Test (TEST)	Per Spec				
7.3.3 (2)	Pre-conditioning (PC)	PER JESD22 A-113 N/A for Axial	1	154	0/154	
7.3.5.4 (5)	HIGH TEMP. REVERSE BIAS (HTRB)	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A				
	Pretest		1	105	0/105	
	@ 72 Hours	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A	1	105	0/105	
	Final 408 Hours	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A	1	105	0/105	
	Steady State Operational(SSOP)	Iz max, PER MIL-STD-750-1 M1038 Condition B(Zeners)	1	77	N/A	For Zeners only
(6)	High Temperature Gate Bias (HTGB)	N/A for Diode	1	77	N/A	For Mosfet only
7.3.5.5 (7)	Temperature Cycling (TC)	T=-65°C-150°C, PER JESD22 A-104				
	Pretest		1	77	0/77	
	@ 250 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
	@ 500 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
	Final 1000 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
7.3.5.6 (8-1)	Autoclave (AC)	T=121°C 15PSIG 100%RH, PER JESD22 A-102	1	77	N/A	96hrs
	Unbiased Highly Accelerated Stress Test(UHAST)	t=96hrs, Ta=130°C, RH=85%, PER JESD22 A-118	1	77	N/A	(Optional)
7.3.5.7 (9a)	Highly Accelerated Stress Test(HAST)	T=130°C RH=85% Vr=5V, PER JESD22 A-110	1	77	N/A	96hrs
7.3.5.7 (9)	High Humidity High Temp. Reverse Bias(H ³ TRB)	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101				
	Pretest		1	77	0/77	
	@ 168 Hours	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101	1	77	0/77	
	@ 500 Hours	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101	1	77	0/77	
	Final 1000 Hours	T=85°C, RH=85%, Vr=5V, PER JESD22 A-101	1	77	0/77	
7.3.5.8 (10)	Intermittent Operational Life(IOL)	Vd=10V Id=100mA; PER MIL-STD-750 METHOD 1037	1	77	N/A	2mins on/off 15000cycles
7.3.5.14 (16)	Resistance to Solder Heat (RSH)	PER JESD22 A-111 (SMD), B-106 (PTH)	1	30	N/A	260°C @30sec
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SHANGHAI KAIHONG ELECTRONIC CO.,LTD

Reliability Test Summary

FACTORY:		PART NUMBER : RCLAMP0561Z.TFT AER-3828A		CUSTOMER:		
		Package Description : SGP0603P2X3		DIODES INC.:		
LABORATORY (If Different):		PART DESCRIPTION : Rel test for new package(DAF transition).				
DW-008 (AEC Q101) Test#	Test Description	Test Conditions	#Lots	#To Test	Results	REMARKS
7.3.2 (1)	Pre- and Post- Stress Electrical Test (TEST)	Per Spec				
7.3.3 (2)	Pre-conditioning (PC)	PER JESD22 A-113 N/A for Axial	1	154	0/154	
7.3.5.4 (5)	HIGH TEMP. REVERSE BIAS (HTRB)	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A				
	Pretest		1	105	0/105	
	@ 72 Hours	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A	1	105	0/105	
	Final 408 Hours	T=150°C Vr=5V, PER MIL-STD-750-1 M1038 Method A	1	105	0/105	
	Steady State Operational(SSOP)	Iz max, PER MIL-STD-750-1 M1038 Condition B(Zeners)	1	77	N/A	For Zeners only
(6)	High Temperature Gate Bias (HTGB)	N/A for Diode	1	77	N/A	For Mosfet only
7.3.5.5 (7)	Temperature Cycling (TC)	T=-65°C-150°C, PER JESD22 A-104				
	Pretest		1	77	0/77	
	@ 250 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
	@ 500 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
	Final 1000 Cycles	T=-65°C-150°C, PER JESD22 A-104	1	77	0/77	
7.3.5.6 (8-1)	Autoclave (AC)	T=121°C 15PSIG 100%RH, PER JESD22 A-102	1	77	N/A	96hrs
	Unbiased Highly Accelerated Stress Test(UHAST)	t=96hrs, Ta=130°C, RH=85%, PER JESD22 A-118	1	77	N/A	(Optional)
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