

PRODUCT / PROCESS CHANGE NOTIFICATION

PCN-000809

Date: MAY-04-2022

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Semtech Corporation, 200 Flynn Road, Camarillo CA 93012

Change Details

Part Number(s) Affected:

Please see the next page for a list of affected part numbers.

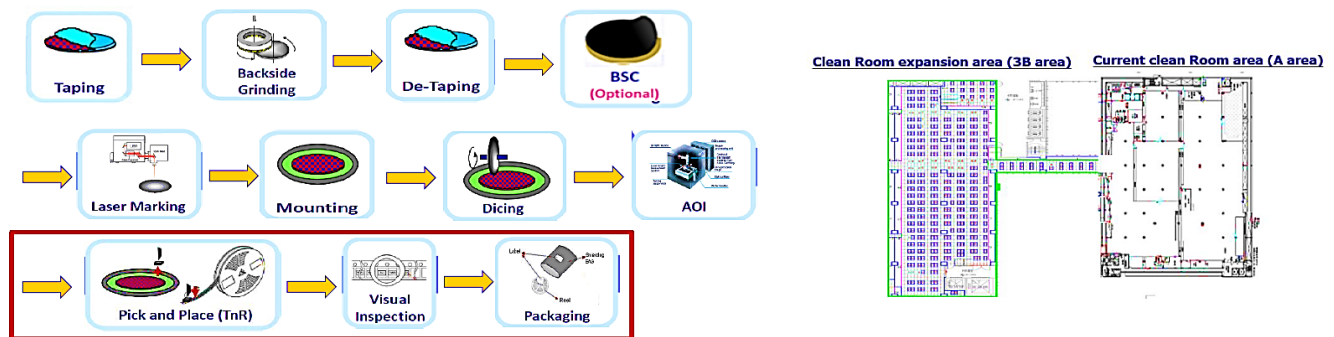
Customer Part Number(s) Affected: N/A

Description, Purpose and Effect of Change:

Chipbond, Semtech's supplier, is moving its current machines to a clean room expansion area adjacent to the current clean room area via a connector bridge. The clean room areas have their own central air conditioning, electricity, vacuum pump, and ESD ground, but the control specifications are the same and third-party certified.

The change will result in more efficient use of clean room facilities and will pave the way for future capacity expansion.

As shown in the figure below, the impacted processes have been highlighted with a red box.



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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	New Revision or Date	<input checked="" type="checkbox"/> N/A

Impact to Performance, Characteristics or Reliability:

The changes mentioned above have no impact on performance, characteristics, or reliability.


Implementation Date	AUG-04-2022	Work Week	32
Last Time Ship (LTS) Of unchanged product	N/A	Affecting Lot No. / Serial No. (SN)	N/A
Sample Availability	MAY-04-2022	Qualification Report Availability	N/A

Supporting Documents for Change Validation/Attachments:

N/A

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Issuing Authority	
Semtech Business Unit:	Signal Integrity Product Group (SIP)
Semtech Contact Info:	Pedro Jr. Bernas pbernas@semtech.com (289) 856-9326 x1162 
FOR FURTHER INFORMATION & WORLDWIDE SALES COVERAGE: http://www.semtech.com/contact/index.html#support	



- Part Number(s) Affected**

1	GN2104SC-IBTE3D	7	SC21150ACSTRT	10	SX9210ICSTRT
2	GN2104S-IBTE3D	8	SC33020HCSTRT	11	SX9320ICSTRT
3	GN2139C-IBTE3D	9	SC725CSTRT	12	SX9322ICSTRT
4	GN24L60-CSP-TR			13	SX9323ICSTRT
5	GN24L61-CSP-TR			14	SX9324ICSTRT
6	GN2904S-IBTE3D			15	SX9325ICSTRT
				16	SX9328ICSTRT
				17	SX9330ICSTRT
				18	SX9370ICSTRT

- Qualification Report**

- Pick and Place (TnR)**

- Machine Information**

Machine	Mühlbauer DS-15000	Mühlbauer DS-20000
		
Die size range	0.5*0.5~7*7mm	0.5*0.5~7*7mm
Wafer size	6/8/12 inch	6/8/12 inch
Sprint UPH	About 12k	About 18k
Placement precision	X/Y Coordinate : ±30um, Theta: 2°	X/Y Coordinate : ±30um, Theta : 2°
Sealing Tape Force	Max =100N	Max =100N
Sealing Shoe Temperature	Room temperature to 220°C	Room temperature to 220°C
Sealing Shoe Temperature Precision	Target ±5 °C	Target ±5 °C
IR capability	No	No

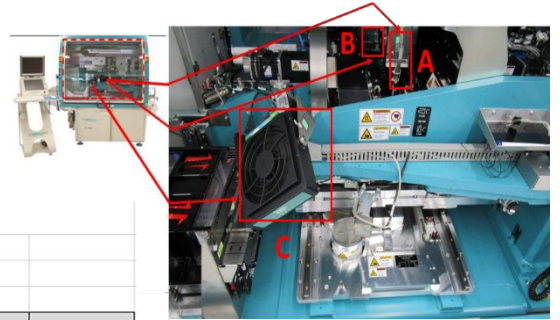
PRODUCT / PROCESS CHANGE NOTIFICATION

PCN-000809

Date: MAY-04-2022

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- ESD Check Item
 - ✓ Surface Voltage, Spec. $\leq \pm 100V$
 - ✓ Ionization discharge time, Spec. $(\pm 1000V - \pm 100V) < 5sec$
 - ✓ Balanced Voltage, Spec. $\leq \pm 35V$ for 30-60sec.
 - ✓ Machine Grounding, Spec. $< 1\ ohm$



光復廠TNR DS機台靜電壓、離子消散設備月量測記錄表

設備編號(Equipment):	TRDS2054F					
計劃日期(Plan Date):	2022.01.24					
執行日期(Action Date):	2022.01.24					
No.	保養項目 Check Item	說明 (Content)	下限 lower Spec	上限 Upper Spec	Result	Judgement
1	NO.1表面靜電壓 Number 1 Surface Voltage	$< \pm 100V, 2.5$ 公分內 $< \pm 100V, within 2.5cm$	≥ -100	≤ 100	3 V	Pass
2	NO.2表面靜電壓 Number 2 Surface Voltage	$< \pm 100V, 2.5$ 公分內 $< \pm 100V, within 2.5cm$	≥ -100	≤ 100	4 V	Pass
3	針尖清潔 Cleaning tip	使用棉花棒清潔 Use a cotton swab clean			OK	Pass
4	A點+消散時間 A point Ionization +Discharge time	實際使用與產品距離檢測,離子消散時間 It must be measured by actual product distance, Discharge time	> 0	< 5	0.1 Sec	Pass
5	A點-消散時間 A point Ionization -Discharge time	實際使用與產品距離檢測,離子消散時間 It must be measured by actual product distance, Discharge time	> 0	< 5	0.2 Sec	Pass
6	A點平衡電壓值 A point Ionization Balanced voltage value	離子平衡電壓: $\leq \pm 35V$,維持30-60秒 Balance voltage: $\leq \pm 35V$, For 30-60sec	≥ 35	≤ 35	12 V	Pass
7	B點+消散時間 B point Ionization +Discharge time	實際使用與產品距離檢測,離子消散時間 It must be measured by actual product distance, Discharge time	> 0	< 5	0.3 sec	Pass
8	B點-消散時間 B point Ionization -Discharge time	實際使用與產品距離檢測,離子消散時間 It must be measured by actual product distance, Discharge time	> 0	< 5	0.6 Sec	Pass
9	B點平衡電壓值 B point Ionization Balanced voltage value	離子平衡電壓: $\leq \pm 35V$,維持30-60秒 Balance voltage: $\leq \pm 35V$, For 30-60sec	≥ 35	≤ 35	8 V	Pass
10	C點+消散時間 C point Ionization +Discharge time	實際使用與產品距離檢測,離子消散時間 It must be measured by actual product distance, Discharge time	> 0	< 5	1.2 sec	Pass
11	C點-消散時間 C point Ionization -Discharge time	實際使用與產品距離檢測,離子消散時間 It must be measured by actual product distance, Discharge time	> 0	< 5	1.4 sec	Pass
12	C點平衡電壓值 C point Ionization Balanced voltage value	離子平衡電壓: $\leq \pm 35V$,維持30-60秒 Balance voltage: $\leq \pm 35V$, For 30-60sec	≥ 35	≤ 35	18 V	Pass
PM Remark:						
執行者: 蕭洪		審核者: 許清瀟				
設備編號: 電子13號機						W09HW133-002 V2

項目	保養項目	說明	下限	上限	單位	執行OK?/結果
1	設備接地 (A-G) Equipment Grounding	接地電阻小於1歐姆 Grounding $< 1\ ohm$	> 0	< 1	ohm(Ω)	0.3

Qualification Run

Device types (Die size)	1.115*1.571 mm	0.765*0.9mm
Wafer size	8"	8"
Bump Height	65	65
Die size (x)	1.115mm	0.765mm
Die size (y)	1.571mm	0.9mm
Die size (z)	0.29mm	0.29mm
Pocket size (x)	1.19mm	0.85mm
Pocket size (y)	1.64mm	1.03mm
Pocket size (z)	0.39mm	0.36mm
Carrier tape part No.	3M124391	3M114391
Carrier tape width	8.00mm	8.00mm
Cover tape part No.	CP25-054A	CP25-054A
Cover tape width	5.40mm	5.40mm

TnR Dummy Qualification : PASS

1.115*1.571 mm Dummy Qualification, TnR Yield=99.93%

Machine No.	IN	OUT	Yield
TRDS2054	20010	20000	99.95%

0.765*0.9mm Dummy Qualification, TnR Yield=99.88%

Machine No.	IN	OUT	Yield
TRDS2054	30018	30000	99.94%

PRODUCT / PROCESS CHANGE NOTIFICATION

PCN-000809

Date: MAY-04-2022

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○ **Visual Inspection / Visual Check (VC)**

- ESD Check Item
 - ✓ Surface Voltage, Spec. $< \pm 100V$
 - ✓ Ionization discharge time, Spec. $(\pm 1000V - \pm 100V) : < 5sec$
 - ✓ Balanced Voltage, Spec. $\leq \pm 35V$ for 30-60sec.
 - ✓ Machine Grounding, Spec. $< 1 ohm$



光復廠VC FVI-330機台靜電壓、離子消散設備月量測記錄表						
設備編號(Equipment): TRFV1348F		Security C W CHIPBOND				
執行日期(Action Date): 2022/01/21						
No.	保養項目 Check Item	說明(Content)	下限 lower Spec	上限 Upper Spec	Result	Judgement
1	NO.1表面靜電壓 Number 1 Surface Voltage	$< \pm 100V$, 2.5公分內 $< \pm 100V$, within 2.5cm	≥ -100	$\leq +100$	1 V	Pass
2	NO.2表面靜電壓 Number 2 Surface Voltage	$< \pm 100V$, 2.5公分內 $< \pm 100V$, within 2.5cm	≥ -100	$\leq +100$	2 V	Pass
3	NO.3表面靜電壓 Number 3 Surface Voltage	$< \pm 100V$, 2.5公分內 $< \pm 100V$, within 2.5cm	≥ -100	$\leq +100$	2 V	Pass
4	針尖清潔 Cleaning tip	使用棉花棒清潔 Use a cotton swab clean			OK	Pass
5	A點+消散時間 A point Ionization +Discharge time	實際使用與產品距離檢測,離子 消散時間 $(\pm 1000v \sim \pm 100v)$: It must be measured by actual product distance ,Discharge time $(\pm 1000v \sim \pm 100v)$: $< 5sec$	> 0	< 5	1 Sec	Pass
6	A點-消散時間 A point Ionization -Discharge time	實際使用與產品距離檢測,離子 消散時間 $(\pm 1000v \sim \pm 100v)$: It must be measured by actual product distance ,Discharge time $(\pm 1000v \sim \pm 100v)$: $< 5sec$	> 0	< 5	1.2 Sec	Pass
7	A點平衡電壓值 A point Ionization Balanced voltage value	離子平衡電壓: $\leq \pm 35V$,維持 30~60秒 Balance voltage : $\leq \pm 35V$, For 30~60sec	≥ -35	$\leq +35$	2 V	Pass
8	B點+消散時間 B point Ionization +Discharge time	實際使用與產品距離檢測,離子 消散時間 $(\pm 1000v \sim \pm 100v)$: It must be measured by actual product distance ,Discharge time $(\pm 1000v \sim \pm 100v)$: $< 5sec$	> 0	< 5	1.6 Sec	Pass
9	B點-消散時間 B point Ionization -Discharge time	實際使用與產品距離檢測,離子 消散時間 $(\pm 1000v \sim \pm 100v)$: It must be measured by actual product distance ,Discharge time $(\pm 1000v \sim \pm 100v)$: $< 5sec$	> 0	< 5	1.5 Sec	Pass
10	B點平衡電壓值 B point Ionization Balanced voltage value	離子平衡電壓: $\leq \pm 35V$,維持 30~60秒 Balance voltage : $\leq \pm 35V$, For 30~60sec	≥ -35	$\leq +35$	-1 V	Pass

PM Remark:
執行者: 卡巴
保存期限: 電子化檔案
審核者: 林秉漢
W09HW1311-004_V2

項目	保養項目	說明	下限	上限	單位	執行OK?/結果
1	設備接地 (A-G) Equipment Grounding	接地電阻小於1歐姆 Grounding $< 1 ohm$	> 0	< 1	ohm(O)	0.3

▪ **Qualification Run**

Device types (Die size)	0.698*0.958mm	1.08*2.35mm
Wafer size	8"	12"
Bump Height	10 um	47.5 um
Die size (x)	0.698mm	1.08 mm
Die size (y)	0.958mm	2.35 mm
Die size (z)	0.185mm	0.1675 mm
Pocket size (x)	0.8mm	1.22 mm
Pocket size (y)	1.06mm	2.47 mm
Pocket size (z)	0.26mm	0.29 mm
Carrier tape part No.	3M154711-NB	3M137381
Carrier tape width	8mm	8mm
Cover tape part No.	CP25-054A	CP25-054A
Cover tape width	5.4mm	5.4mm

VC Dummy Qualification : PASS

0.698*0.958mm Dummy Qualification, VC Yield=100%

Machine No.	IN	OUT	Yield
TRFV1348F (KF II)	40000	40000	100%

1.08*2.35mm Dummy Qualification, VC Yield=100%

Machine No.	IN	OUT	Yield
TRFV1348F (KF II)	40000	40000	100%