

Final Product Change Notification

PCN number 2026080001

Issue Date:2026-08-06

Effective Date:2026-011-07

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Dear *Customer*,
Here's your quality information concerning products our customers and partners purchased from WeEn.

Management Summary
This notification is to qualify Xinshun(wafer fab) and Takcheong(assembly) as the second source of SBD products.

Information Notification
This notification is to qualify Xinshun(wafer fab) and Takcheong(assembly) as the second source of SBD products. For the details, please refer to the qual report and product list enclosed.

Why do we issue this Information Notification
To keep the security of supply.

Identification of Affected Products
Please refer to the markings on the product surface or on label.

Impact

Data Sheet Revision
Update the POD accordingly.

Disposition of Old Products
No impact.

Production
Existing inventory will be shipped until depleted.

Additional information
Affected products and sales history information: see attached file of Product List.
See attached file of Self-qualification Report.

Remarks
Should you not be able to obtain these documents, please contact your WeEn sales representative or the e-mail address mentioned below under Contact and Support.This change will be effective without further notification, unless we received specific customer concerns before effective date or as specified by agreement.

Contact and Support
For all Quality Notification content inquiries, please contact your local WeEn Sales Support team.
For specific questions on this notice or the products affected please contact our specialist directly.

Name:Rongbiao Yang
Position:Quality Manager
e-mail address:Rongbiao.Yang@ween-semi.com

At WeEn Semiconductors we are constantly striving to improve our product and processes to ensure they reach the highest possible Quality Standards.

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This message has been automatically distributed. Please do not reply.

WeEn Semiconductors
www.ween-semi.com

PCN 2026080001	Final Qualification Report: <i>Qualify SBD products to Xinshun and Takcheong</i>	



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Qualification Report

*Qualify Wafer fab/Xinshun
and Assembly factory/Takcheong
as Second Source for SBD products*

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1. Introduction

The qualification report is to approve Xinshun as second-source of wafer fabrication site and Tak Cheong as a second-source of assembly & test factory for SBD products in packages TO220 and TO263.

- Xinshun is an existed wafer fab, certified with IATF16949.
- Takcheong is an existed assembly & testing factory, certified with IATF16949.

2. Affected Types

The following product types are within the scope of this qualification:

Display Name	Description	Package
9340 720 10127	WNS20H100C	TO220
9340 720 06118	WNS20H100CB	TO263
9340 720 50127	WNS30H100C	TO220
9340 720 48118	WNS30H100CB	TO263
9340 720 95127	WNS40100C	TO220
9340 720 49127	WNS40H100C	TO220

3. Purposed Material

Please refer to the BOM comparison below.

4. Technology, Platform or Material Used

4.1 Wafer information

Part No.	Existing Fab Site: AVIC		After Fab site: Xin Shun	
	Wafer Part No.	Die size	Wafer Part No.	Die size
WNS20H100C	SKRW083	1.88mmx 1.88mm	S1XV2100R100L	2.1mm x 2.1mm
WNS20H100CB	SKRW083	1.88mmx 1.88mm	S1XV2100R100L	2.1mm x 2.1mm
WNS30H100C	SKRW084	2.59mmx 2.59mm	S1XV2600R100L	2.6mm x 2.6mm
WNS30H100CB	SKRW084	2.59mmx 2.59mm	S1XV2600R100L	2.6mm x 2.6mm
WNS40100C	SKRW084	2.59mmx 2.59mm	S1XV2600R100L	2.6mm x 2.6mm
WNS40H100C	SKRW085	3.04mmx 3.04mm	S1XV3000R100L	3.0mmx 3.0mm

Remark: Die size differences are within acceptable tolerance and have been validated through electrical and reliability testing.

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4.2 BOM information

Package	Material	E-tech		Tak Cheong	
		Description	Supplier	Description	Supplier
TO220	Lead-frame	TO220AB-W OpC bare copper	Jielong	TO220, Bare Cu, KFC - 1/2 hard	Gangbo
	Solder	PbSn5Ag2.5	Nanda	PbSn5Ag2.5	Heraeus
	Wire	Al wire	Heraeus	Al wire	Tanaka
	EMC	GR260-SL	Henkel	EK-1700GHR	Eterkon
	Plating	Tin	Jielong	Tin	Xinyang
TO263	Lead-frame	TO263AB-W OpB bare copper	Jielong	TO263 Bare Cu	Gangbo
	Solder	Pb92.5Sn5Ag2.5	Nanda	PbSn5Ag2.5	Heraeus
	Wire	Al wire	Heraeus	Al wire	Tanaka
	EMC	GR260-SL	Henkel	EK-3600GHL	Eterkon
	Plating	Tin	Jielong	Tin	Xinyang

5. Process capability

5.1 Solder Void: Acceptable

Device	WNS20H100C	WNS20H100CB	WNS30H100C	WNS30H100CB	WNS40100C	WNS40H100C
Package	TO220	TO263	TO220	TO263	TO220	TO220
Spec	Singel ≤ 5%, Total ≤ 10%					
RESULT	Pass	Pass	Pass	Pass	Pass	Pass

5.2 Wire Pull test: Acceptable

Device	WNS20H100C	WNS20H100CB	WNS30H100C	WNS30H100CB	WNS40100C	WNS40H100C
Package	TO220	TO263	TO220	TO263	TO220	TO220
Spec(g)	≥ 350	≥ 350	≥ 350	≥ 350	≥ 350	≥ 350
Cpk	12.899	6.527	3.588	2.477	9.098	10.311
RESULT	Accept	Accept	Accept	Accept	Accept	Accept

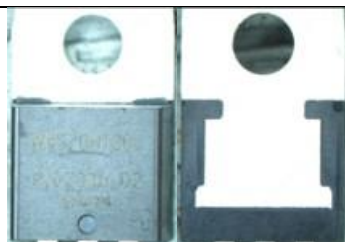
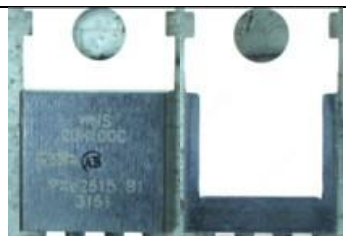
5.3 Bonding shear test: Acceptable

Device	WNS20H100C	WNS20H100CB	WNS30H100C	WNS30H100CB	WNS40100C	WNS40H100C
Package	TO220	TO263	TO220	TO263	TO220	TO220
Spec(g)	≥ 1170	≥ 1170	≥ 1170	≥ 1170	≥ 1170	≥ 1170
Cpk	5.272	4.668	5.929	3.451	7.328	7.932
RESULT	Accept	Accept	Accept	Accept	Accept	Accept

Remark: The process capability performances meet acceptance criteria.

6. Appearance Comparison

1) Package Structure:

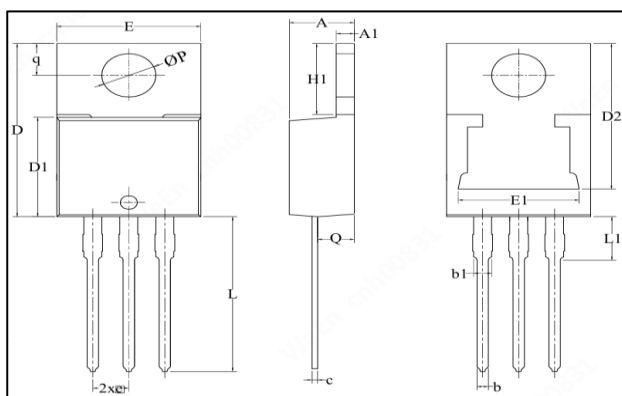
Site	E-tech	Tak Cheong	Remark
TO220			Different heatsink appearance
TO263			Different heatsink appearance

Remark: The heatsink design shows cosmetic difference between the two assembly sites.

7. Package Dimension Comparison

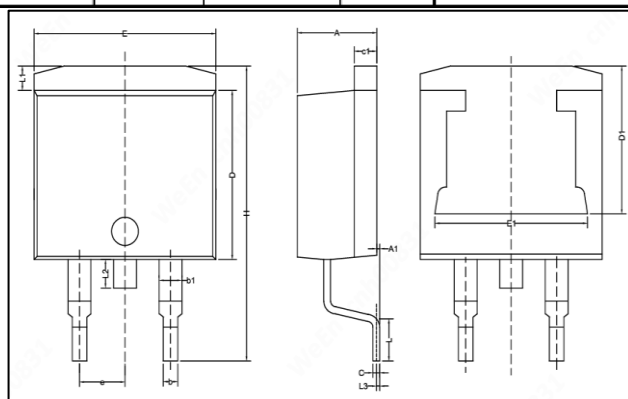
a) TO220 Package

Symbol	Datasheet		E-tech(Actual test data)			Takcheong(Actual test data)			Comment
	LSL	USL	Min	Max	Aver	Min	Max	Aver	
A	4.35	4.75	4.52	4.59	4.556	4.38	4.61	4.523	Comparable
A1	1.14	1.40	1.24	1.29	1.249	1.31	1.39	1.345	Comparable
b	0.69	1.01	0.76	0.81	0.775	0.79	0.97	0.857	Comparable
b1	1.20	1.45	1.31	1.36	1.332	1.29	1.48	1.354	Comparable
c	0.36	0.61	0.40	0.45	0.421	0.48	0.58	0.521	Comparable
D	14.95	15.55	15.15	15.22	15.188	15.60	16.26	15.939	minor change
D1	8.50	9.02	8.64	8.72	8.690	9.065	9.97	9.420	minor change
D2	12.20	12.88	12.75	12.93	12.846	no define			no define for TC
E	10.00	10.40	10.18	10.25	10.212	9.94	10.07	10.028	minor change
E1	8.25	8.89	8.37	8.58	8.507	no define			no define for TC
e	-	2.54	2.53	2.60	2.574	2.48	2.58	2.543	Comparable
H1	6.00	6.40	6.22	6.30	6.261	6.06	6.79	6.520	minor change
L	13.00	14.00	13.63	13.72	13.666	13.01	14.20	13.380	minor change
L1	3.40	3.80	3.64	3.70	3.681	2.85	3.19	2.966	minor change
P	3.70	3.95	3.80	3.86	3.828	3.55	3.65	3.608	minor change
Q	2.60	3.00	2.58	2.62	2.605	2.11	2.40	2.237	minor change
q	2.40	2.80	2.78	2.83	2.800	2.60	3.14	2.916	minor change



b) TO263 Package

Symbol	E-TECH Actual Data			Symbol	Takcheong Actual Data				Footprint
	Minimum	Maximum	Mean		Minimum	Maximum	Mean	Result	
A	4.58	4.60	4.59	A	4.49	4.54	4.51	Comparable	Comparable
A1	0.06	0.11	0.08	A2	0.10	0.16	0.13	Micor change	
No defined				Q	0.10	0.16	0.13	E-TECH no definid	
b	0.79	0.84	0.82	b	0.83	0.86	0.84	Comparable	
b1	1.27	1.32	1.30	b1	1.26	1.31	1.28	Comparable	
C	0.43	0.48	0.46	C	0.50	0.56	0.54	Comparable	
C1	1.32	1.37	1.36	A1	1.30	1.33	1.32	Comparable	
L1	1.35	1.43	1.39	L1	1.17	1.27	1.19	Comparable	
D1	7.75	7.81	7.77	D1	8.01	8.04	8.03	Micor change	
E	10.14	10.20	10.17	E	9.98	10.02	9.99	Comparable	
E1	8.39	8.46	8.43	E1	7.99	8.04	8.03	Micor change	
e	2.51	2.54	2.53	e	2.53	2.56	2.55	Comparable	
H	15.18	15.23	15.21	H	15.13	15.29	15.22	Comparaple	
L	2.58	2.67	2.62	L	2.23	2.30	2.27	Micor change	
L2	1.46	1.54	1.5	L2	0.91	1.02	0.99	Comparable	
L3	0.45	0.47	0.46	No defined				TC no definid	



Remark: There are minor dimensional differences between E-tech and Tak Cheong's package outline drawings (POD).

8. Life Test Result

8.1 TO220

Test Items	Test Condition	Device	Package	Sample Size	During	Result
Temperature Cycle (TMCL)	1000 cycles at -55°C to 150°C.	WN3S40H100C	TO220	80pcs * 3 lots	1000cycles	Pass
		WN3S30100C	TO220	80pcs * 1 lot	1000cycles	Pass
		WN3S20H150C	TO220	80pcs * 2 lots	1000cycles	Pass
Unbiased Highly Accelerated Stress Test (UHST)	96 hours at Ta = 130°C, RH = 85%	WN3S40H100C	TO220	80pcs * 3 lots	96hrs	Pass
		WN3S30100C	TO220	80pcs * 1lot	96hrs	Pass
		WN3S20H150C	TO220	80pcs * 2 lots	96hrs	Pass
High Temperature, Humidity & Reverse Bias (THBS)	1000 hours at Tj = 85°C, RH = 85%, Reverse Bias = 80V	WN3S40H100C	TO220	80pcs * 3 lots	1000hrs	Pass
		WN3S30100C	TO220	80pcs * 1lot	1000hrs	Pass
		WN3S20H150C	TO220	80pcs * 2 lots	1000hrs	Pass
Thermal Fatigue (TFAT)	10000 cycles, Tj = 25°C to 125°C, ΔTj ≥ 80°C,	WN3S40H100C	TO220	80pcs * 3 lots	10Kcycles	Pass
		WN3S30100C	TO220	80pcs * 1lot	10Kcycles	Pass
		WN3S20H150C	TO220	80pcs * 2 lots	10Kcycles	Pass
Static High Temperature Life (SHTL)	1000 hours; Tj 150 °C, Reverse Bias = 80% rated voltage.	WN3S40H100C	TO220	80pcs * 3 lots	1000hrs	Pass
		WN3S30100C	TO220	80pcs * 1lot	1000hrs	Pass
		WN3S20H150C	TO220	80pcs * 2 lots	1000hrs	Pass
High Temperature Storage (HTSL)	1000 hours at Ta = 150°C	WN3S40H100C	TO220	80pcs * 3 lots	1000hrs	Pass
		WN3S30100C	TO220	80pcs * 1lot	1000hrs	Pass
		WN3S20H150C	TO220	80pcs * 2 lots	1000hrs	Pass

8.2 TO263

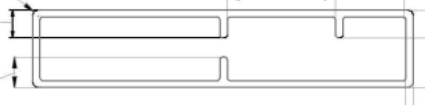
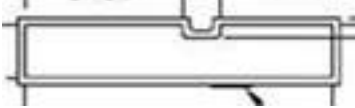
Test Items	Test Condition	Device	Package	Sample Size	During	Result
Temperature Cycle (TMCL)	1000 cycles at -55°C to 150°C.	BTA312B-800C	TO263	1 lot x 80pcs	1000cycles	Pass
		BTA316B-600B	TO263	1 lot x 80pcs	1000cycles	Pass
		BT153B-1200T	TO263	1 lot x 80pcs	1000cycles	Pass
		BYC30MB-650P	TO263	1 lot x 80pcs	1000cycles	Pass
		WN3S40H100CB	TO263	1 lot x 80pcs	1000cycles	Pass
High temperature reverse bias	1000 hours – Tj = max operating temp, Reverse Bias = 80% rated voltage.	BTA312B-800C	TO263	1 lot x 80pcs	1000Hrs	pass
		BTA316B-600B	TO263	1 lot x 80pcs	1000Hrs	pass
		BT153B-1200T	TO263	1 lot x 80pcs	1000Hrs	pass
		BYC30MB-650P	TO263	1 lot x 80pcs	1000Hrs	pass
		WN3S40H100CB	TO263	1 lot x 80pcs	1000Hrs	pass
Unbiased Highly Accelerated StressTest (UHST)	96 hours at Ta = 130°C, RH = 85%	BTA312B-800C	TO263	1 lot x 80pcs	96hrs	Pass
		BTA316B-600B	TO263	1 lot x 80pcs	96hrs	Pass
		BT153B-1200T	TO263	1 lot x 80pcs	96hrs	Pass
		BYC30MB-650P	TO263	1 lot x 80pcs	96hrs	Pass
		WN3S40H100CB	TO263	1 lot x 80pcs	96hrs	Pass
High Temperature, Humidity & Reverse Bias (THBS)	1000 hours at Tj = 85°C, RH = 85%, Reverse Bias = 80V	BTA312B-800C	TO263	1 lot x 80pcs	1000hrs	Pass
		BTA316B-600B	TO263	1 lot x 80pcs	1000hrs	Pass
		BT153B-1200T	TO263	1 lot x 80pcs	1000hrs	Pass
		BYC30MB-650P	TO263	1 lot x 80pcs	1000hrs	Pass
		WN3S40H100CB	TO263	1 lot x 80pcs	1000hrs	Pass
Thermal Fatigue (TFAT)	10000 cycles, Tj = 25°C to 125°C, ΔTj ≥ 80°C	BTA312B-800C	TO263	1 lot x 80pcs	10Kcycles	Pass
		BTA316B-600B	TO263	1 lot x 80pcs	10Kcycles	Pass
		BT153B-1200T	TO263	1 lot x 80pcs	10Kcycles	Pass
		BYC30MB-650P	TO263	1 lot x 80pcs	10Kcycles	Pass
		WN3S40H100CB	TO263	1 lot x 80pcs	10Kcycles	Pass
High Temperature Storage (HTSL)	1000 hours at Ta = 150°C	BTA312B-800C	TO263	1 lot x 80pcs	1000hrs	Pass
		BTA316B-600B	TO263	1 lot x 80pcs	1000hrs	Pass
		BT153B-1200T	TO263	1 lot x 80pcs	1000hrs	Pass
		BYC30MB-650P	TO263	1 lot x 80pcs	1000hrs	Pass
		WN3S40H100CB	TO263	1 lot x 80pcs	1000hrs	Pass

Xinshun wafers assembled in Takcheong packages of TO220 & TO263 fully meet the reliability tests.

9. Packing

9.1 Tube Size

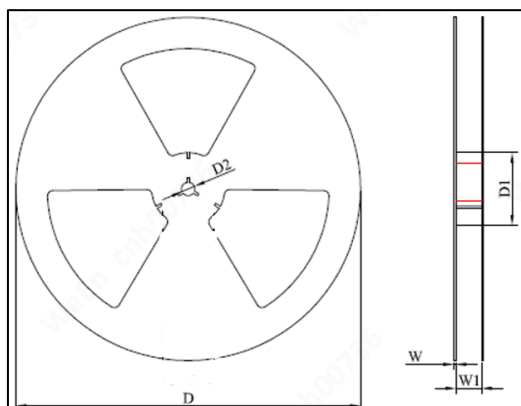
50 units in 1 Tube, 20 Tubes in 1 PQ, total 1000 units in 1 PQ Box at E-tech and TakCheong.

TO220package	E-tech	Takcheong
Length(mm)	530	525
Width(mm)	32.75	32.8
Thickness(mm)	7	7
Drawing		
Unit/Per tube	50	50
Tube/Per PQ Box	20	20
Unit total qty	1000	1000

9.2 Carrier & Reel Size

800 units in 1 Reel, 1 Reel in 1 PQ , total 800 units in 1 PQ Box.

TO263package	E-tech	Takcheong
Pitch(mm)	16	16
Width(mm)	24	24
Drawing	Technical drawing of TO263 package E-tech variant. The top view shows a series of rectangular components with dimensions: $10P_0$, D_0, P_0, P_2, P_1, D_1, P_B, E, F, W, and 7 (MAX). The side view shows a cross-section with dimensions: A_0, 7, 1.5, and 5.	Technical drawing of TO263 package Takcheong variant. The top view shows a series of rectangular components with dimensions: 2.00 ± 0.1, 24.00 ± 0.3, 1.00 ± 0.3, 4.88, and 0.5. The side view shows a cross-section with dimensions: 4.88 and 0.5. Material: Black Conductive PS radius (R) is 0.3mm MAX 2nd tolerance: $\pm 0.1mm$ missible difference of the accumulation pitch ding hole is assumed to be $\pm 0.2mm$ up
Unit/Per Reel	800	800
Tube/Per PQ Box	1	1
Unit total qty	800	800



Remark: No change on key dimensions.

Symbol	E-tech	Takcheong	Result
D	228~232	228~232	No Change
D1	98~102	99.8~100.5	Comparable
D2	12~13.4	12.8~13.5	Comparable
W	19.6~20.4	1.94~1.98	Comparable
W1	24.1~24.7	24.6~25.3	Comparable

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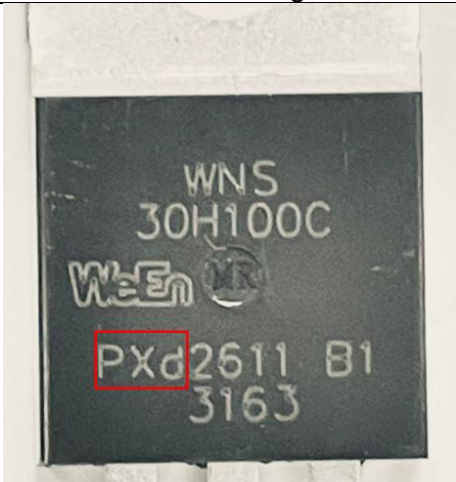
9.3 Packing label Comparison

PMC information on label will be changed from “zEH” to “JdH”

E-Tech	Takcheong
WeEn SEMICONDUCTORS MADE IN CHINA (33T)PUID 13EC26-04889 (32T)ORIG N260 (31T)PMC zEH (1T)LOT C26-04889 (9D)DATE 2616 (Q)QTY 1000 HALOGEN FREE EU RoHS COMPLIANT (30P)TYPE WNS20H100C (3P)PART WNS20H100CQ (1P)CODENO 9340 720 10127	WeEn Semiconductors MADE IN CHINA (33T)PUID 01dTJ21363314N (32T)ORIG N260 (31T)PMC JdH (1T)LOT TJ21363314N (9D)DATE 2136 (Q)QTY 1000 HALOGEN FREE EU RoHS COMPLIANT (30P)TYPE WNS30H100C (3P)PART WNS30H100CQ (1P)CODENO 9340 720 50127

9.4 Marking Comparison

Site code on marking will be changed from “zE” to “Xd”

E-Tech	Takcheong
	

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10. Conclusions

Based on the above data, there is minor difference on the heatsink. The performance of the products with Xinshun's wafer in TO220 & TO263 packages of Takcheong are comparable with existed products.