



Issue date:

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General Manager

LSIs Package Engineerings Div.
LSIs Production Headquarters
ROHM Co., Ltd.

Notification of Product/Process Change
Doc. No.: 102500D

This letter intends as a formal notification of change to products which are currently supplied by ROHM Co., Ltd.

ROHM Co., Ltd. requires customers to provide acknowledgment of the receipt of this notification within 30 days from the date of this notice. Lack of acknowledgment of this notice within 30 days is considered as acceptance of the change.

After acknowledgement of the customer, lack of additional response within 90 day period constitutes acceptance of the change according to JEDEC Standard J-STD-046.

Your understanding and cooperation would be highly appreciated.

Issue Date: November 28, 2025

Title of change	LSI bonding wire material change from gold to copper November 2025		
Affected product(s)	Manufacturer part number	Customer part number	
	Refer to the attachment.		
Detailed description of change	Before	After	
	Wire Material : Gold (Au)	Wire Material : Copper (PdCu)	
Reason for change	In order to ensure stable supply of our products, we intend to submit a PCN to change the bonding wire material from gold to copper.		
Anticipated impact on quality	There are no impact on the quality.		
Identification of change	Identification is possible using the internal part number on the product label.		
Planned first ship date	April 1, 2026	Sample available schedule :	Nov,28,2025
Comments			
Supplier contact	Please contact the local ROHM sales office or the authorized distributor.		
Notes			



Electronics for the Future

Control Number : 102500D

PCN Description

LSI bonding wire material change from gold to copper

(November 2025)

Mar. 27th, 2026 Rev.B

LSIs Package Engineerings Div.

LSIs Production Headquarters

ROHM Co., Ltd.

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1. Background

< Background and Purpose of change >

The price of gold has been rising in recent years, and this trend continues. In order to ensure stable supply of our products, we will submit a PCN to change the bonding wire material from gold (Au) to copper (PdCu).

< Schedule >

Reply due : Nov. 30, 2026

Planned first ship date : Apr. 1, 2026

(We will implement the change after receiving your approval.)

2-1. Comparison of 4M

Au wire products and PdCu wire products will be produced with the equivalent Machine and Method.

		Before change / Au wire products	After change / PdCu wire products	Changing point	
Package Name		Refer to Parts List	Refer to Parts List	No change	
Factory	Assembly	Production Site	Rohm Integrated Systems Thailand Co., Ltd	No change	
		Country	Thailand		
		personnel	Approximately 1,300 people		
		Cleanroom Design	Below		
		DB – WB process	Class 10,000		
		Molding process	Class 100,000		
	Test	Production Site	Rohm Integrated Systems Thailand Co., Ltd	No change	
		Country	Thailand		
Man	Assembly	Qualified operators	Same as the left	No change	
	Test	Qualified operators	Same as the left		
Machine	Assembly	Die bonding process	Fully automatic die bonding machine	No change	
		Wire bonding process	Fully automatic wire bonding machine		
		Molding process	Fully automatic molding machine		
		Tie bar cutting process	Fully automatic tie bar cutting machine		
		Plating process	Fully automatic plating machine		
		Marking process	Fully automatic laser marking machine		
		Lead forming process	Fully automatic forming machine		
	Test	Test handler	Fully automatic handler	No change	
		Tester	Fully automatic tester		
	Taping	Taping process	Fully automatic taping machine	Same as the left	No change
Method	Assembly	Die bonding process	Ag paste dispensing	In each process step, the method remains the same, and there are no changes. ※ Since PdCu wire is used, production conditions have been modified and forming gas has been introduced at the processing point.	
		Wire bonding process	Thermo-sonic bonding		Same as the left ※
		Molding process	Transfer molding		Same as the left
		Plating process	Electroplating		Same as the left
	Test	Test process	Socket contact		Same as the left
Material	Assembly	Please see next page	Please see next page	-	

2-2. Comparison of 4M (Material)

The only difference between the Au wire products and the PdCu wire products is the wire material.
We have verified this change and confirmed there are no impact on quality.

		Before change Au wire products	After change PdCu wire products	Changing point
Lead Frame	Frame size	ROHM Standard design	Same as the left	No change
	Inner design	ROHM Standard design	Same as the left	
	Base Material	Cu alloy	Same as the left	
	Surface plating	Ag plating	Same as the left	
Die attach		Ag paste	Same as the left	No change
Wire material		Au	Au, PdCu	The wire material has been changed, and both Au and PdCu will be used (Chip-to-chip: Au / Chip-to-lead: PdCu).
Mold compound		Halogen free resin	Same as the left	No change
Outer plating		100%Sn	Same as the left	No change
Marking		Laser marking	Same as the left	No change
Carrier tape		ROHM standard material	Same as the left	No change
Reel		ROHM standard material	Same as the left	No change
Box		ROHM standard material	Same as the left	No change

3-1. Comparison of products (External dimensions and Internal structures)

Changing point is Wire material only.
There are no influences on the product external dimensions.

Package type : SSOP-B28W

Item	Before change / Au wire products	After change / PdCu wire products
External dimensions		
Internal structures		<p style="text-align: center;">Only the wire for chip-to-lead bonding is being changed to PdCu.</p>

3-2. Comparison of products

There are no changes to the reference land pattern or product characteristics between the Au wire products and the PdCu wire products.

Item	Comparison of Au wire products (Before change) and PdCu products (After change)
Part number	No change
Reference land pattern	No change
Marking	No change
Product characteristics	There are no changes to the characteristic specified listed in the datasheet.

4. Comparison of product label

There are no changes to product part numbers before and after the change, although identification is possible using the internal part number on the product label.

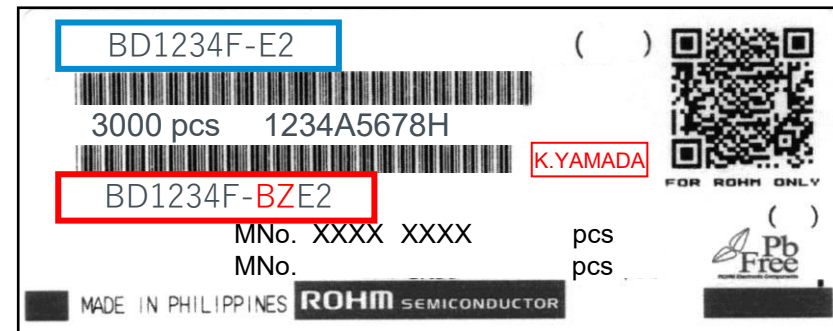
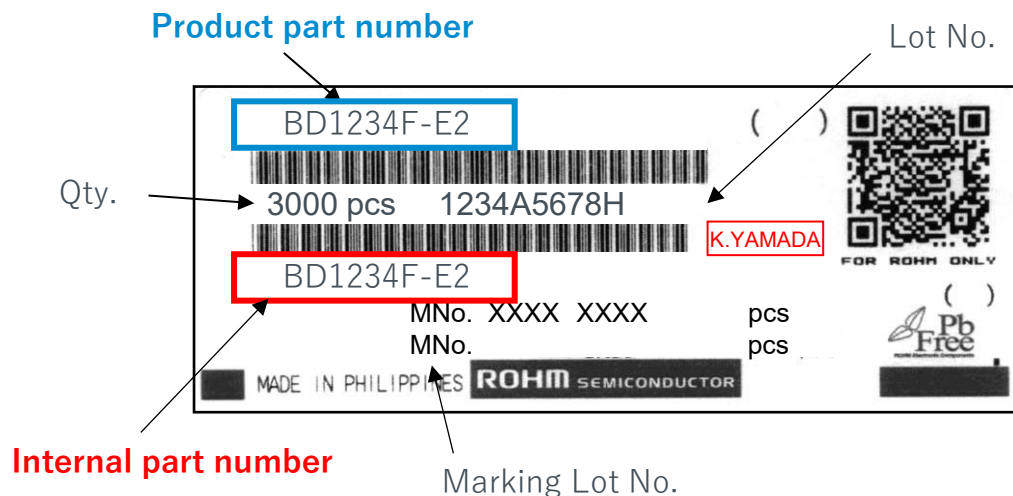
<How to identify>

For Rohm's internal product control purposes, the internal part number differs between Au wire products (before change) and PdCu wire products (after change). The internal part number can be found on the product label on shipping packages and reeling wheels.

	Part number	Internal part number	Remark
Before change / Au wire products	BD1234F-E2	BD1234F-E2	
After change / PdCu wire products		BD1234F-BZE2	We add "BZ" on internal part number

< Before change / Au wire products >

< After change / PdCu wire products >



5. Verification results for changing point

ROHM verifies the changes in the wire material to confirm that there is no impact on quality.

Change point	Concerns	Evaluation items	Evaluation Results	Judgement
Melting point Au:1064→Cu:1084, Pd:1555°C	There is a concern about changes in bonding performance due to changes in material properties and mechanical properties.	Wire bonding (1st bond)	It has been confirmed that there is no impact on quality, based on Process margin evaluation and bonding evaluation.	Pass
Tensile strength 100→210MPa		Wire bonding (2nd bond)		
Elastic modulus 78→130GPa				
Vickers hardness 45→70Hv	There is a concern about cracks under the pad due to increased impact on the pad during the first bonding, because of a harder first ball.	Wire bonding (under-pad cracks)	It has been confirmed that there are no cracks under the pad.	Pass
Diffusion rate with aluminum $1.1 \times 10^{-4} \rightarrow 1.9 \times 10^{-16} \text{cm}^2/\text{s}$	There is a concerns about bonding failure and a decrease in bond strength due to low bonding performance.	Wire bonding (Shear strength, NSOP alarms)	It has been confirmed that there are no impact on bonding performance, by bonding strength evaluation.	Pass
	There is a concern about wire breakage caused by Kirkendall voids between the wire and pad.	HTSL	It has been confirmed that there is no impact based on the reliability test.	Pass
Coefficient of Thermal Expansion 14.2→16.5ppm	There is a concern about cracks at the second bond caused by increased thermal stress.	TC	It has been confirmed that there is no impact, based on the reliability test.	Pass
High Ionization tendency	There is a concern that the wire may become open caused by oxidation or corrosion.	AC	It has been confirmed that there is no impact, based on the reliability test.	Pass
		THB	It has been confirmed that there is no impact, based on the reliability test.	Pass
Using forming gas	There is a concern that there may be a decrease in wire bonding quality due to temperature drops caused by forming gas or abnormal gas flow rates.	Wire bonding (1st bond)	It has been confirmed that there is no impact on quality, based on process margin evaluation and bonding evaluation.	Pass
		Wire bonding (2nd bond)	It has been confirmed that there is no impact on quality, based on process margin evaluation and bonding evaluation.	Pass

6. Reliability test results

Standard reliability tests are conducted. Results from a representative product is shown below for reference.

【Pre conditions】

MSL	JEDEC LEVEL 2a
Drying	125°C 24h
Moisture soaking	60°C 60% 120h
Reflow profiles	Pb free reflow profiles (260°C) 3times

■ Reliability test results

Items	Standards	Conditions	Duration	Sample Qty.	Fail	Judgement
Resistance to soldering heat PC	J-STD-020	MSL 1/2a/3	-	77 pcs x 3 Lot	0 pcs	Pass
Temperature Humidity Bias THB	JESD22-A101	85°C 85% w/bias	2000h	77 pcs x 3 Lot	0 pcs	Pass
High Accelerated Stress Test HAST	JESD22-A101	135°C 85% w/bias	192h			
Autoclave AC	JESD22-A102	121°C 100% 2atm	192h	77 pcs x 3 Lot	0 pcs	Pass
Temperature Cycling TC	JESD22-A104	-65°C⇔150°C	1000cyc	77 pcs x 3 Lot	0 pcs	Pass
High Temperature Storage Life HTSL	JESD22-A103	150°C	2000h	45 pcs x 3 Lot	0 pcs	Pass
High Temperature Operating Life HTOL	JESD22-A108	125°C w/bias	2000h	77 pcs x 3 Lot	0 pcs	Pass



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Public (External) PN

PCN102500D

BM60052AFV-CE2

BM60053AFV-CE2

BM60056FV-CE2

BM60059FV-CE2

BM60060FV-CE2

BM60061FV-CE2

BM60062FV-CE2

BM6112FV-CE2

W004-CE2