

# **Saki Self Programming**

*For V3.5*

## Saki Self Programming

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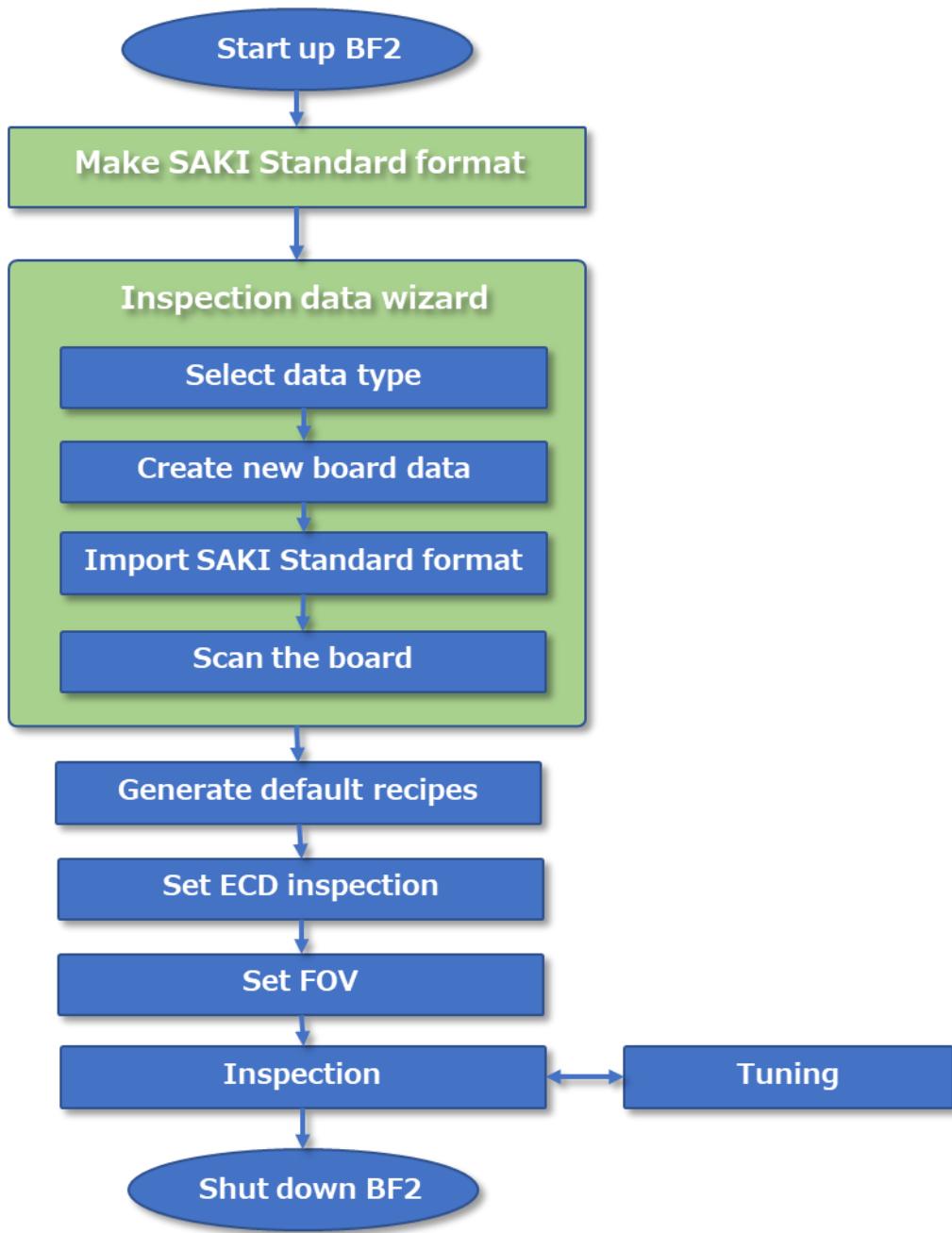
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## 1. Overview

Saki Self Programming for BF2 v3.4.

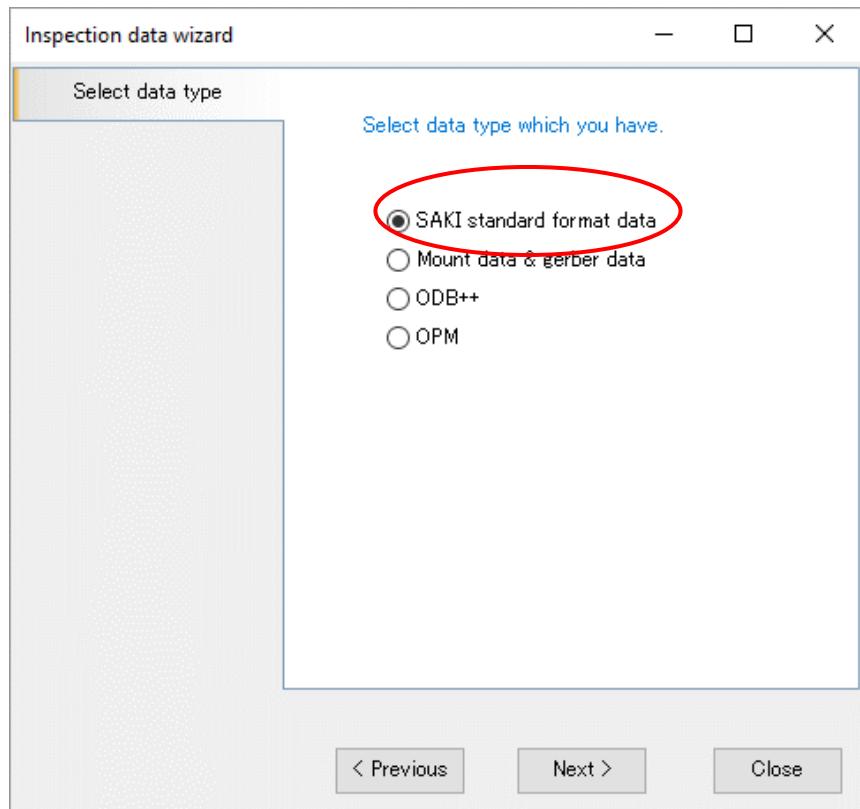
## 2. Inspection Data Wizard

The flow of making inspection data.

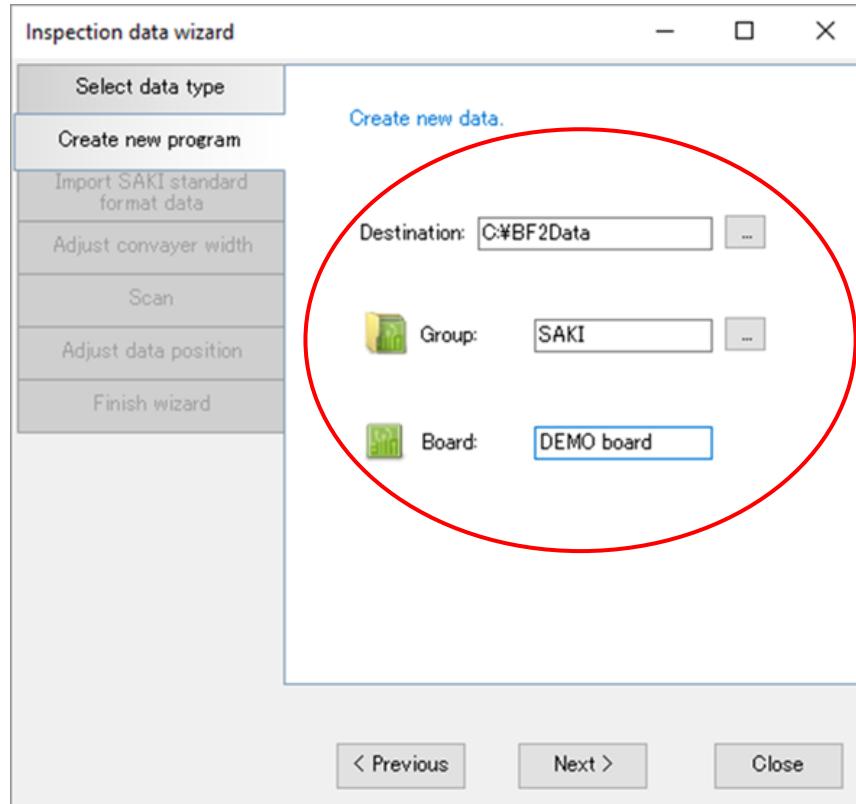


## 2.1. SAKI standard format data

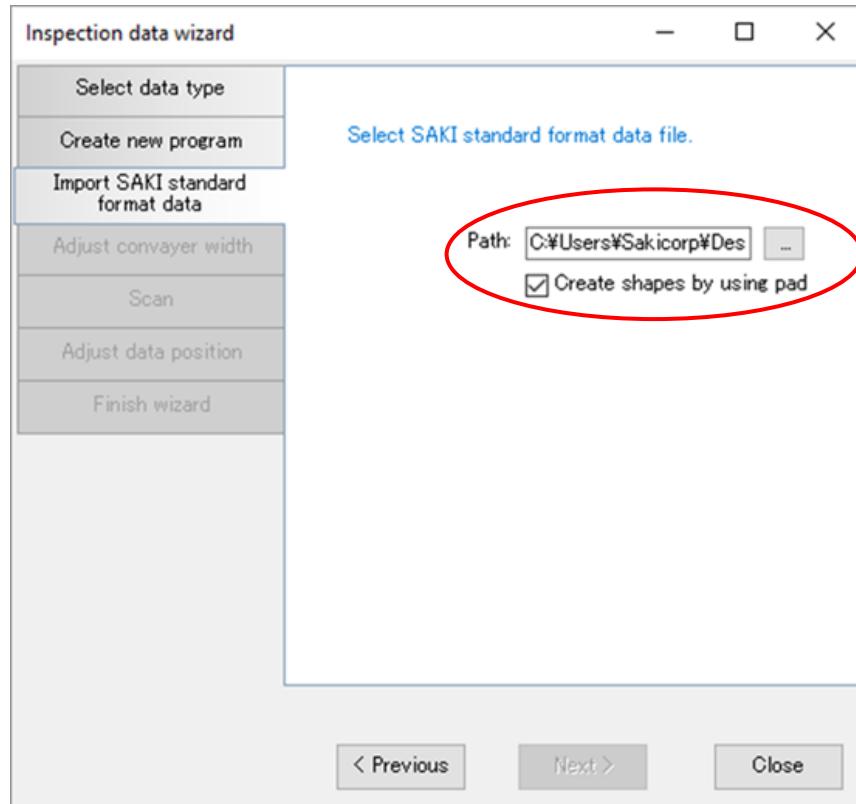
Step 1 : Start the Inspection data wizard and select “SAKI standard format” on data type selection step. And click “Next” button.



Step 2 : Specify “Destination”, “Group” and “Board”, and click “Next” button.

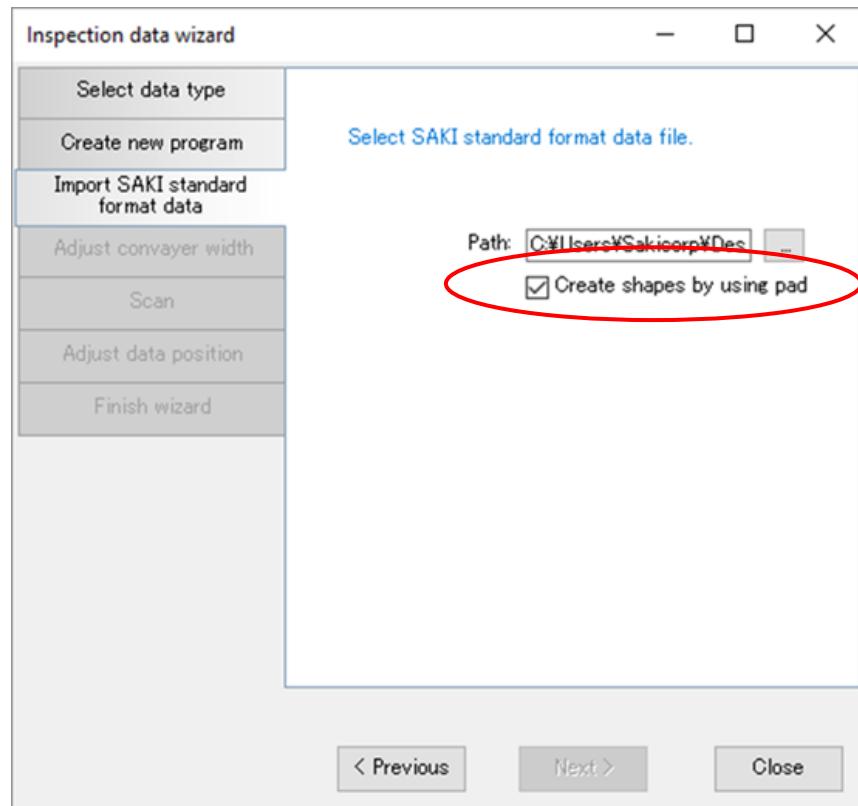


Step 3: Specify "SAKI standard format data".



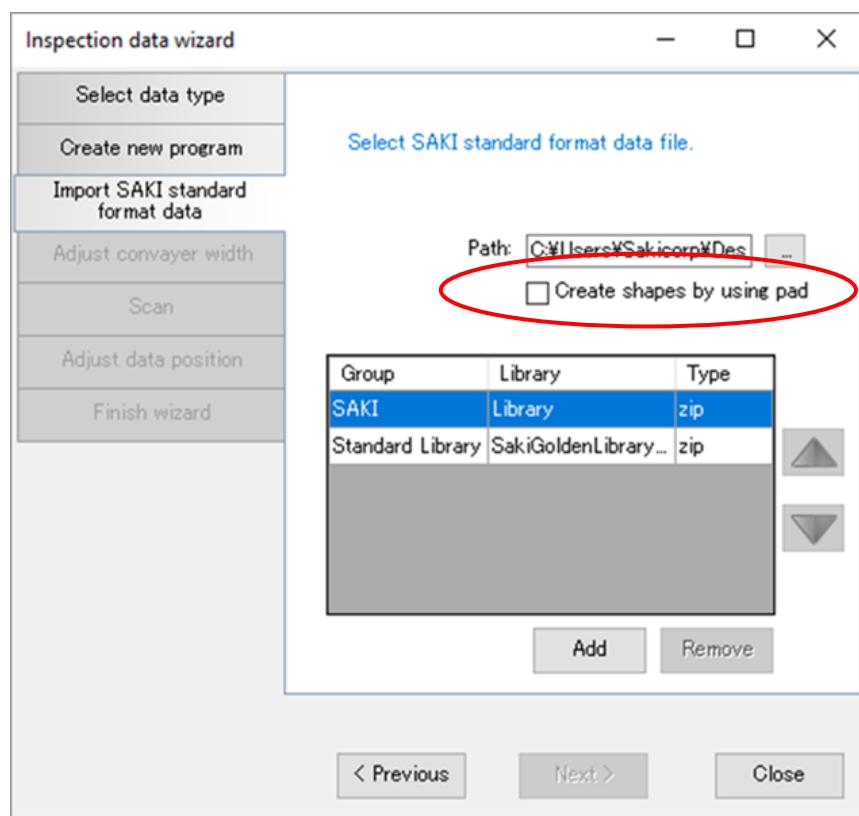
Case A. Generate shapes by using pad information.

Step 3.A-1. Check "Create shapes by using pad" and click "Next" button.



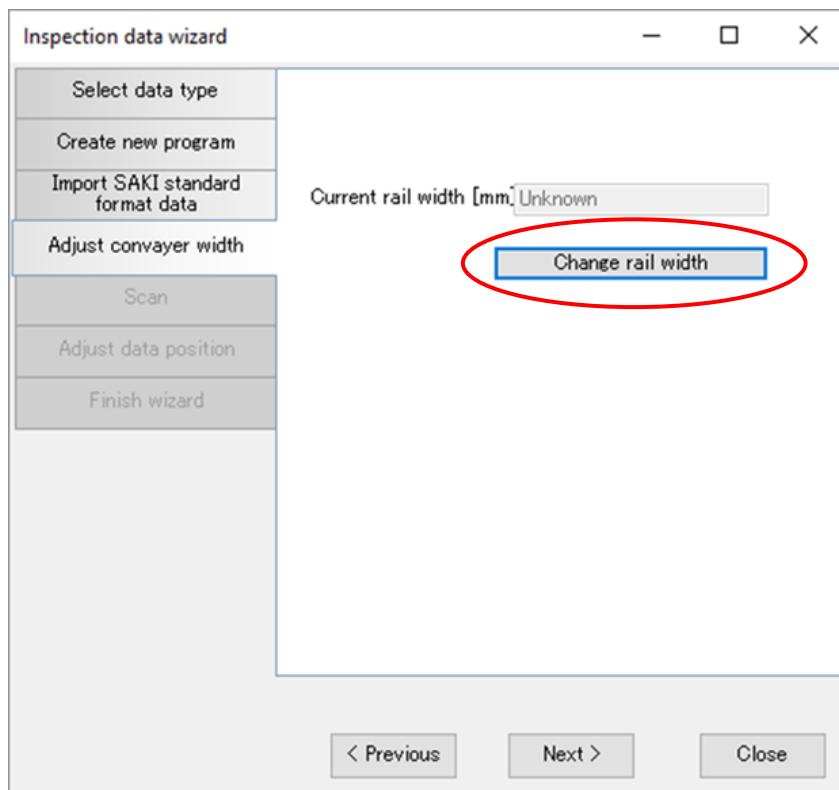
Case B. Search shapes from specified libraries.

Step 3.B-1. Uncheck "Create shapes by using pad" and click "Next" button after specify libraries.

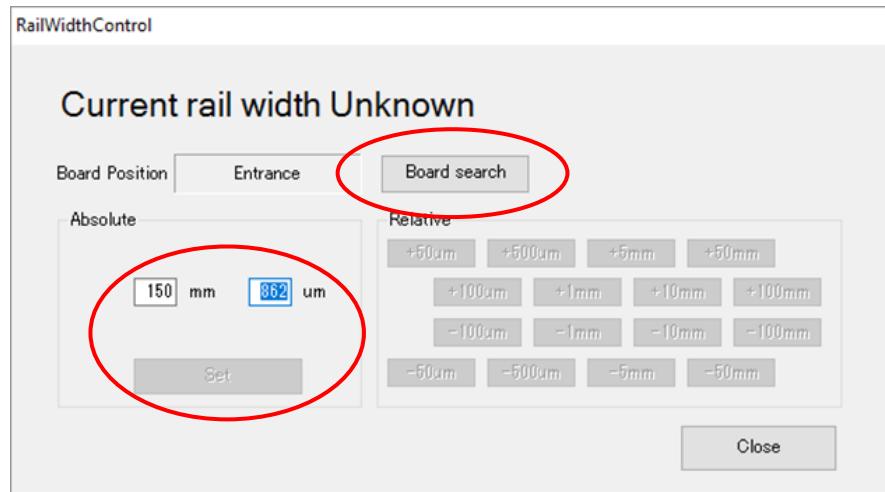


Buttons	Descriptions
Add	Add libraries which are used in the other group data to list.
Remove	Remove libraries from list. * It can not remove current group library and Saki Golden library from list.
↑	Switch priority of libraries to search shapes.
↓	* It can not switch priority of current group library.

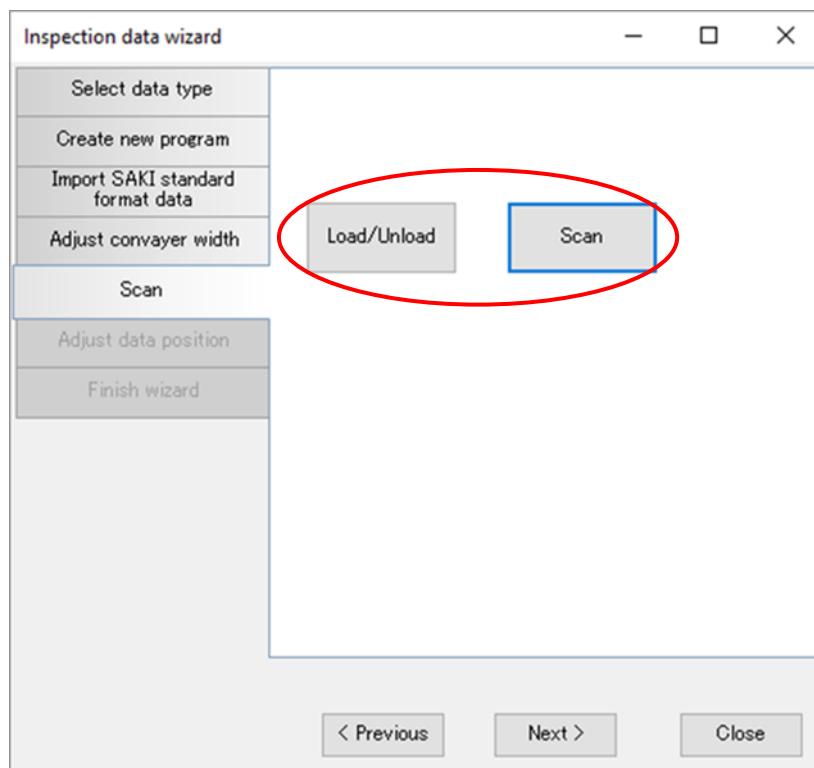
Step 4. Click "Change rail width" button and "RailWidthControl" will be displayed.



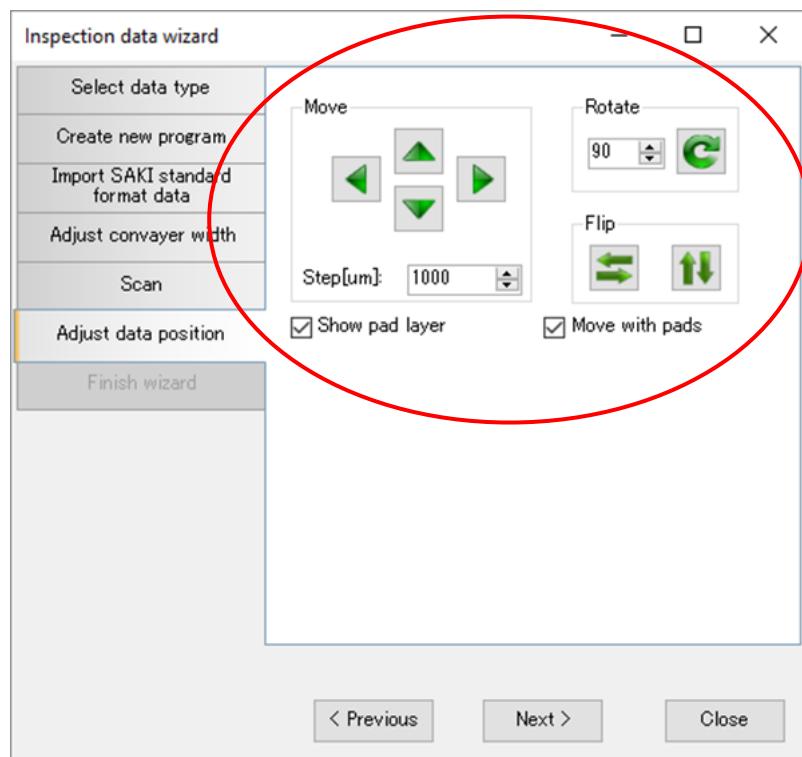
Step 5 : Click "Board search" button to check no boards exists in the machine.  
 Specify the rail width value on "Absolute" box and click "Set" button.  
 Click "Close" button after complete adjust rail width.



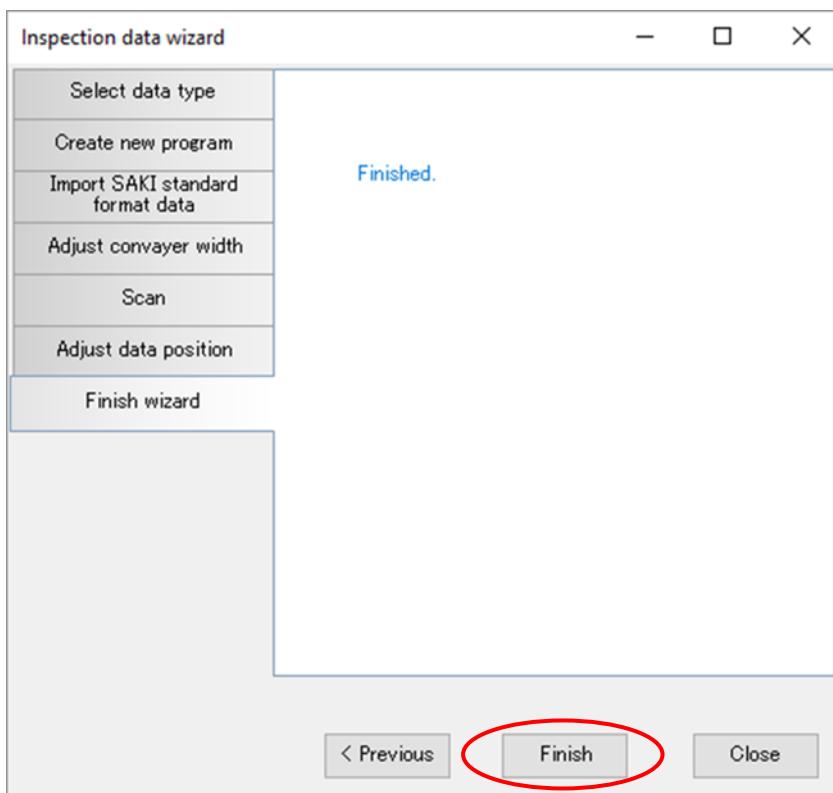
Step 6 : Set the board on the entrance of machine and click "Load/Unload" button.  
 Click "Scan" button after the machine clamped the board.  
 Click "Next" button after scanning.



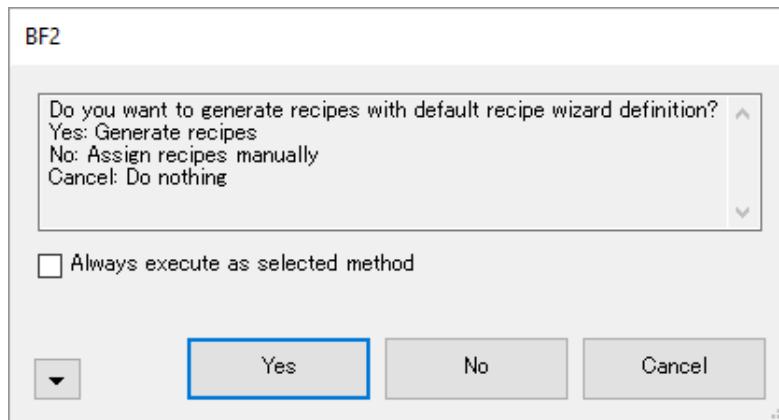
Step 7 : Adjust components and pads position with board image.



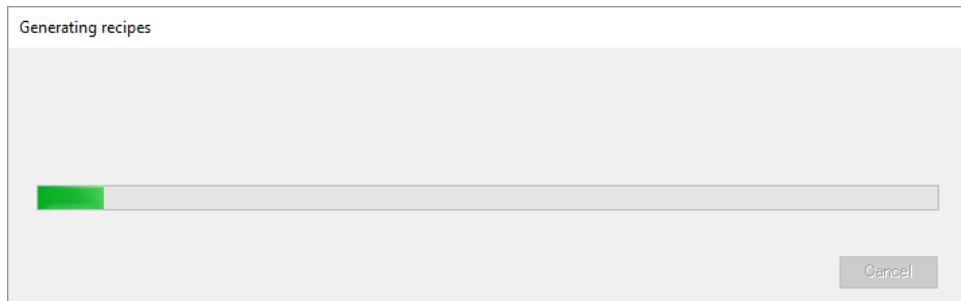
Step 8 : Click "Finish" button.



Step 9 : Default recipes will be generated when "Yes" button clicked, and "Assign Library Management" dialog will be displayed when click "No" button.

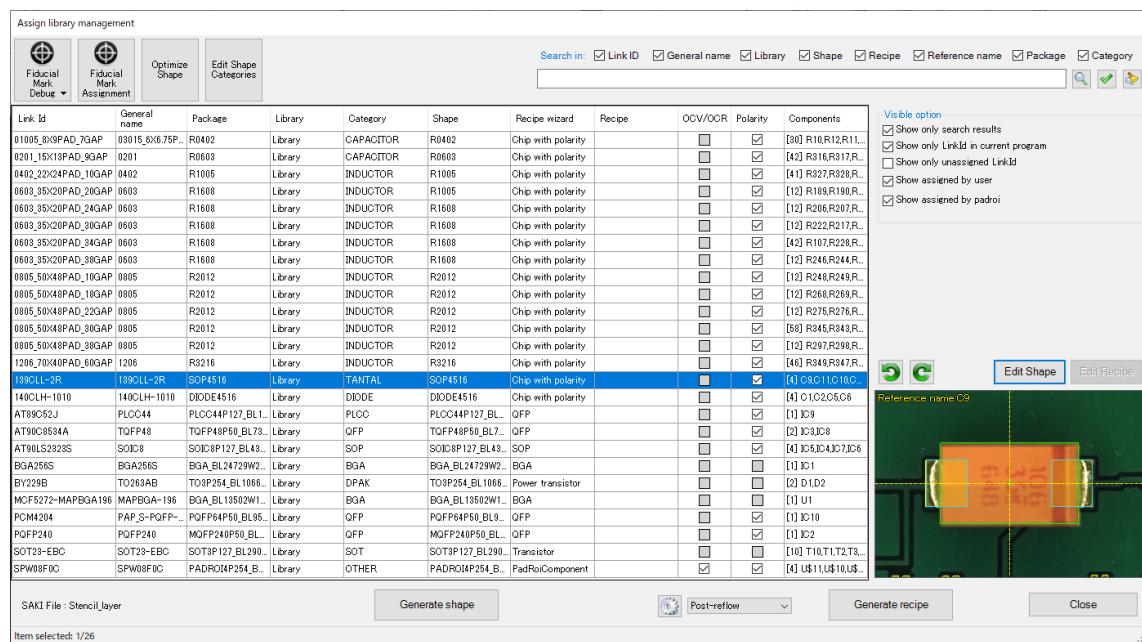


Step 9-1 : "Generating recipes" progress bar will be displayed with generating default recipes when "Yes" button clicked.



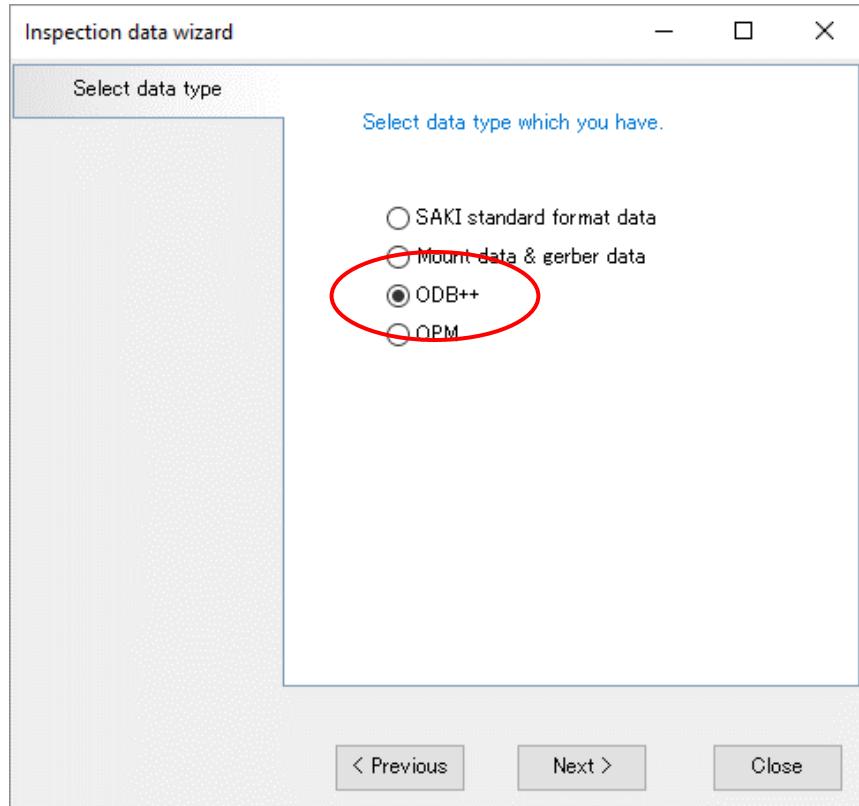
Step 9-2 : "Assign Library Management" dialog will be displayed when "No" button clicked.

\* See the "Programming manual - Part II Inspection Data - 1.12.2 Assigning a Shape Automatically" for operation of the "Assign Library Management" dialog.

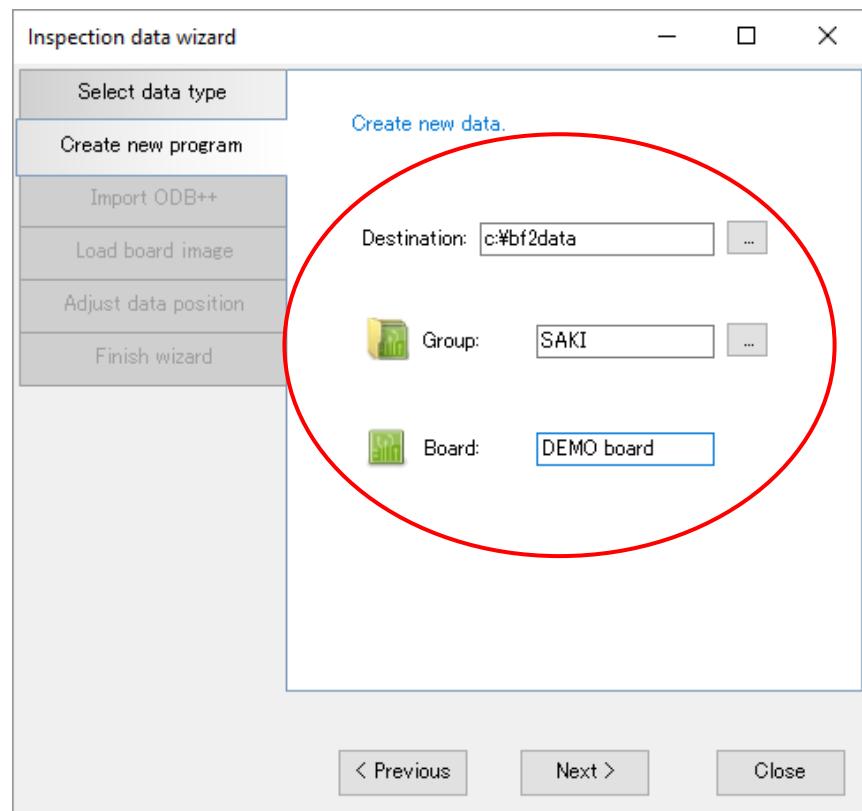


## 2.2. ODB++

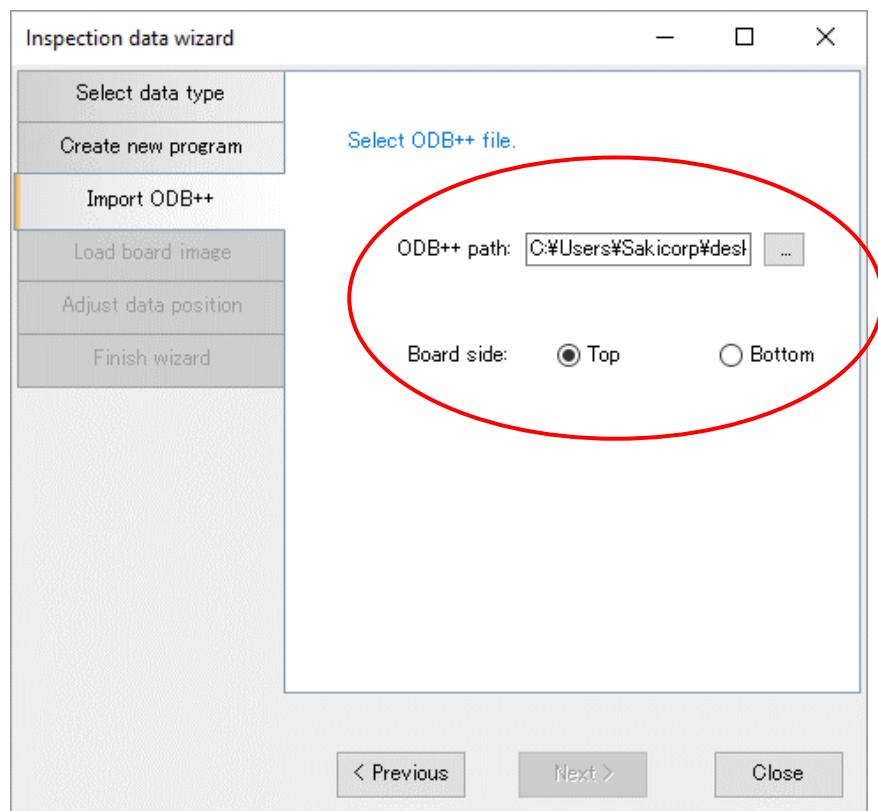
Step 1 : Start the Inspection data wizard and select “ODB++” on data type selection step. And click “Next” button.



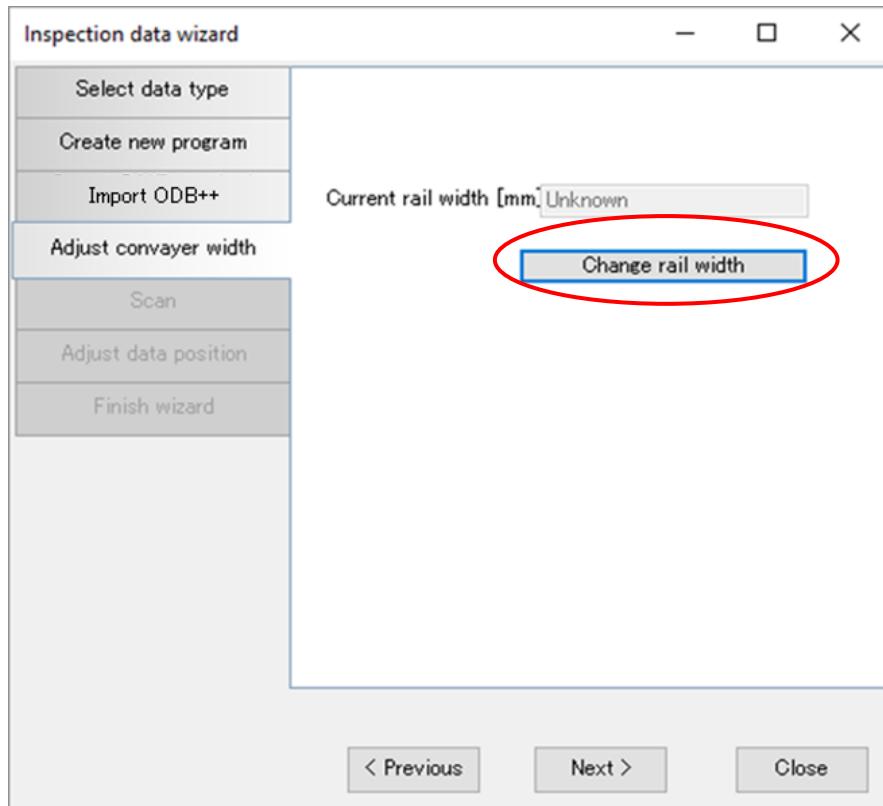
Step 2 : Specify “Destination”, “Group” and “Board”, and click “Next” button.



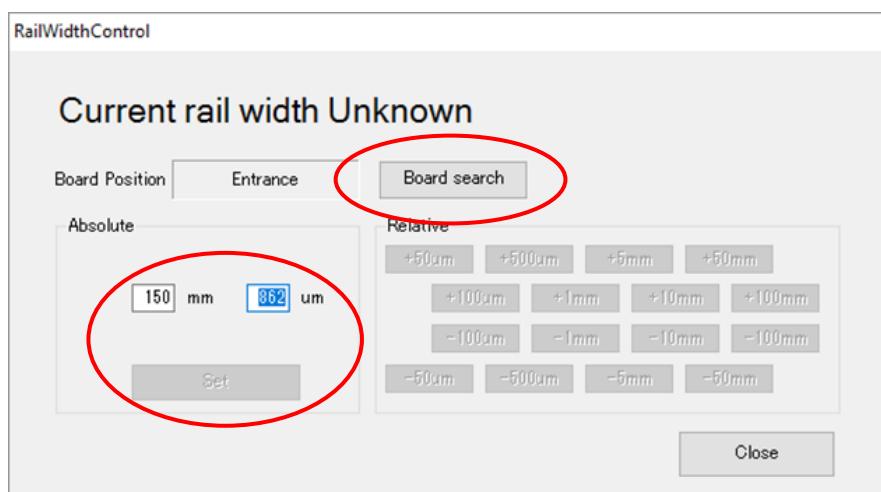
Step 3: Specify "ODB++" data path and select board side and click "Next" button.



Step 4. Click “Change rail width” button and “RailWidthControl” will be displayed.



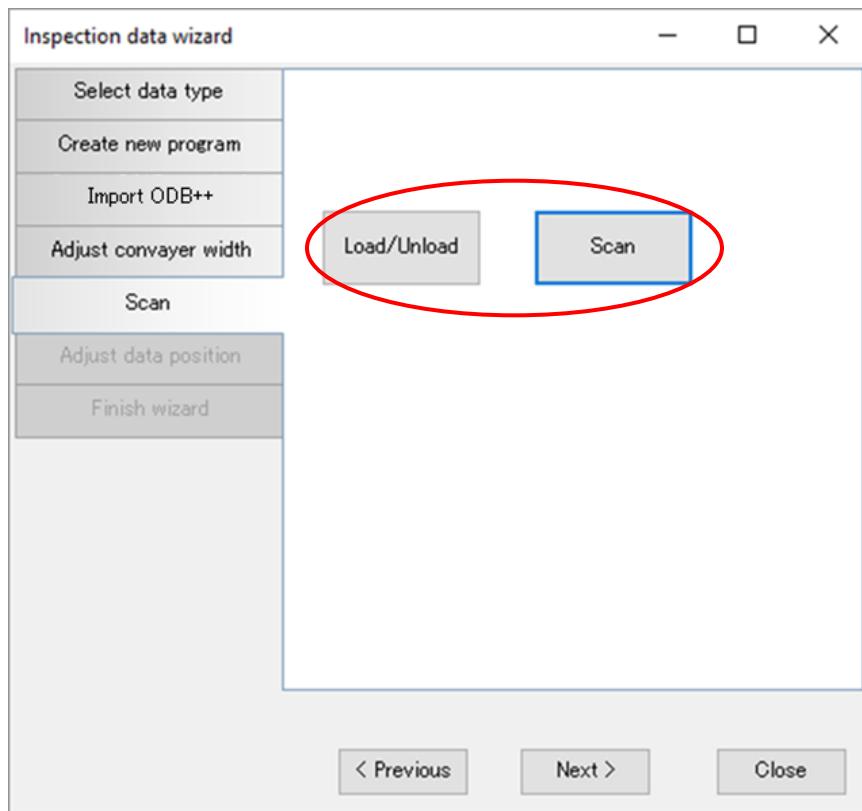
Step 5 : Click “Board search” button to check no boards exists in the machine.  
Specify the rail width value on “Absolute” box and click “Set” button.  
Click “Close” button after complete adjust rail width.



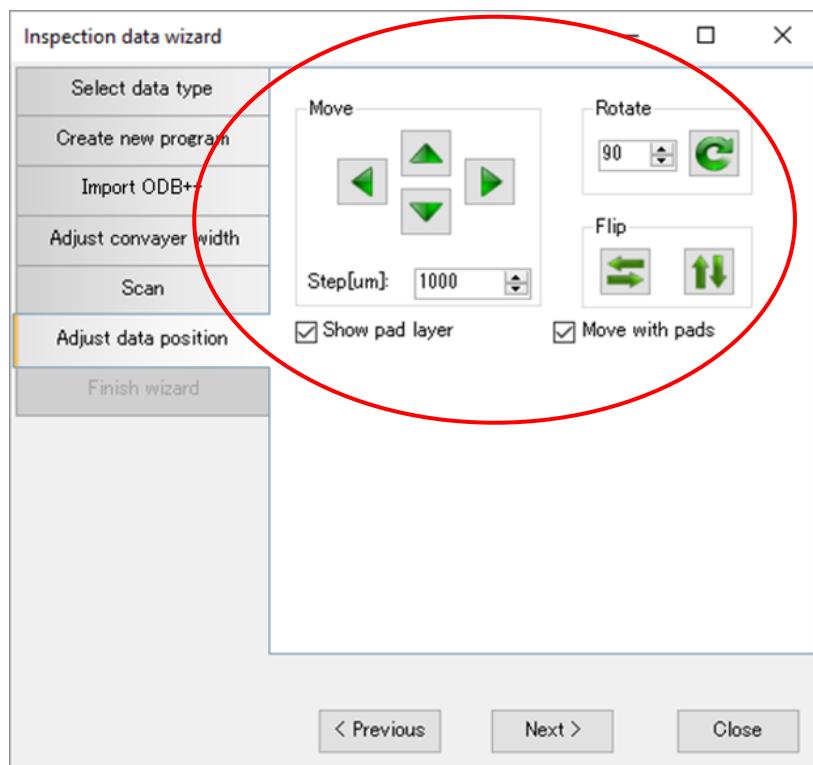
Step 6 : Set the board on the entrance of machine and click "Load/Unload" button.

Click "Scan" button after the machine clamped the board.

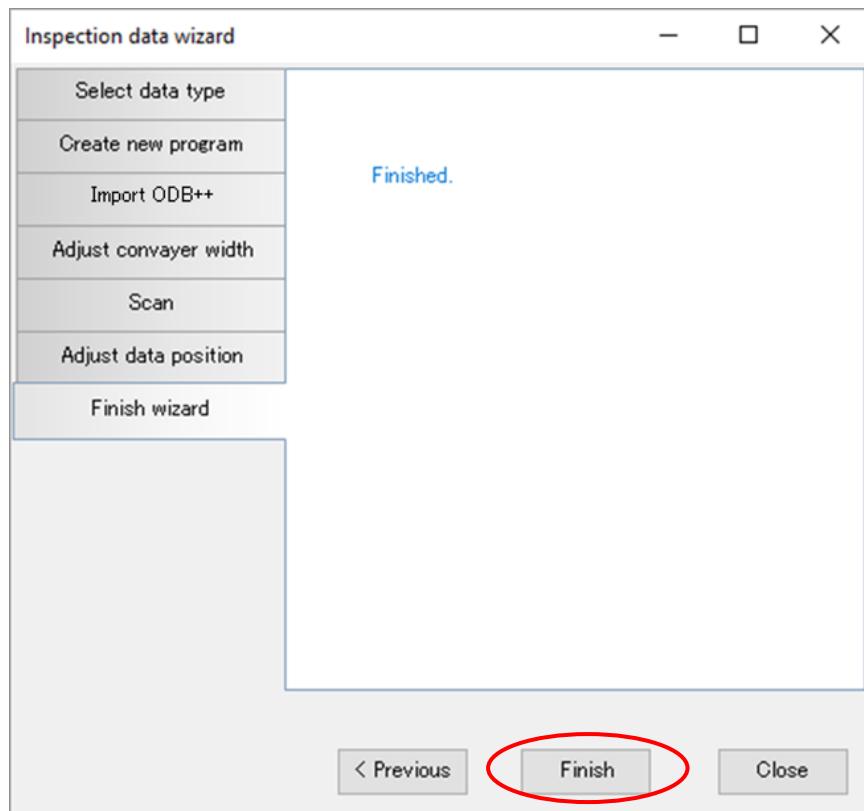
Click "Next" button after scanning.



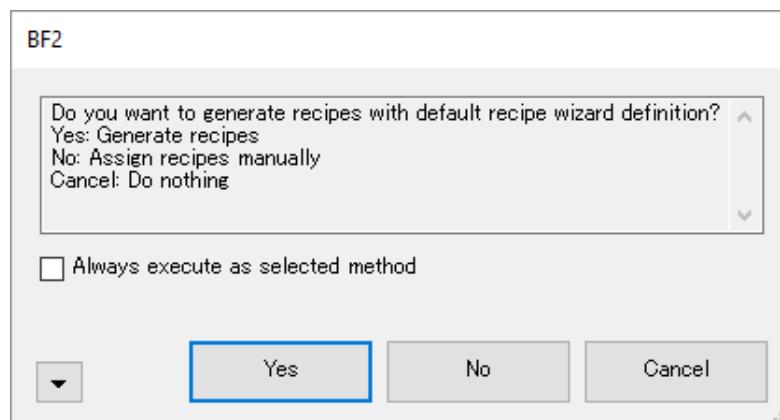
Step 7 : Adjust components and pads position with board image.



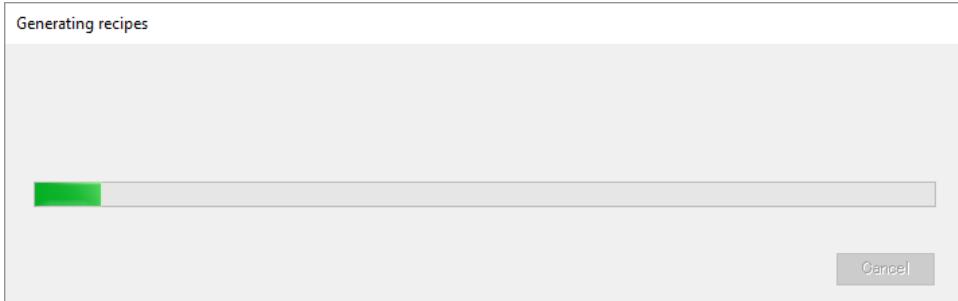
Step 8 : Click "Finish" button.



Step 9 : Default recipes will be generated when "Yes" button clicked, and "Assign Library Management" dialog will be displayed when click "No" button.

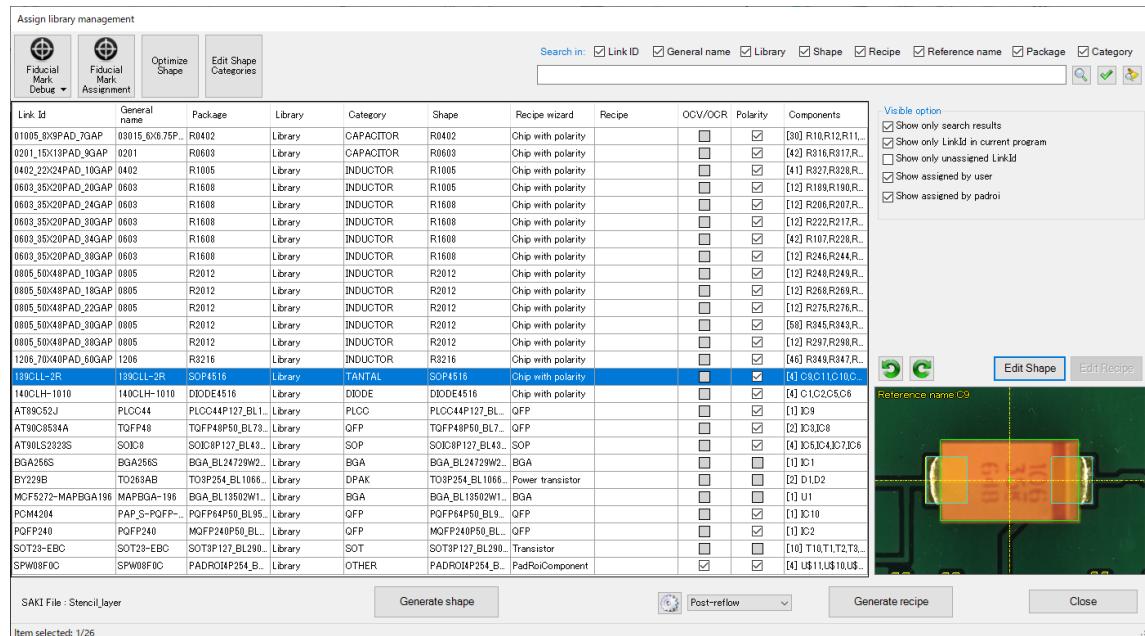


Step 9-1 : “Generating recipes” progress bar will be displayed with generating default recipes when “Yes” button clicked.



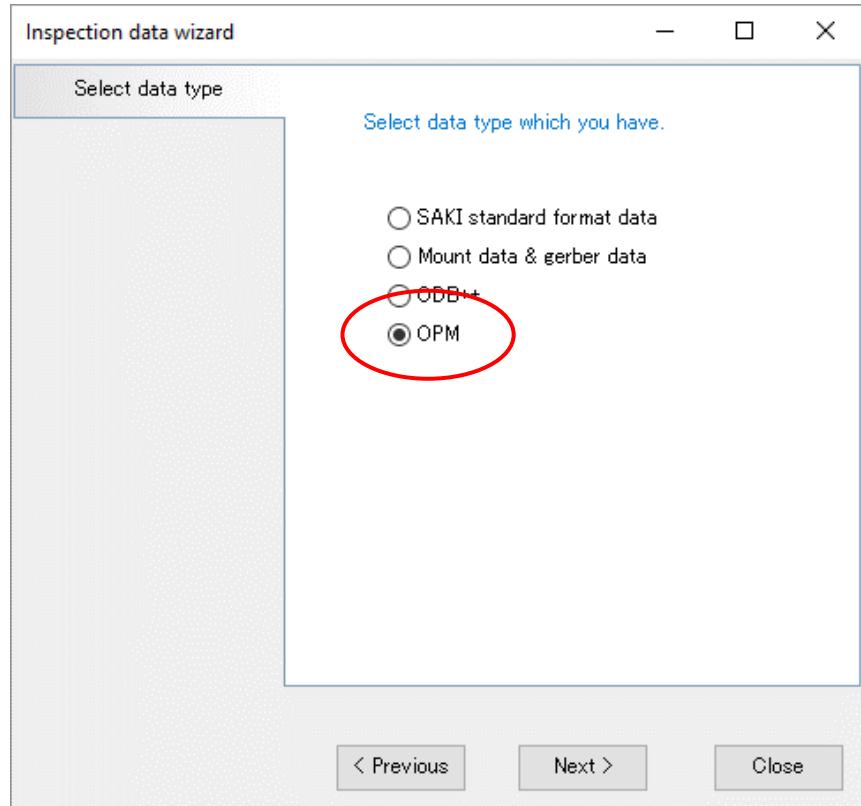
Step 9-2 : “Assign Library Management” dialog will be displayed when “No” button clicked.

\* See the “Programming manual - Part II Inspection Data - 1.12.2 Assigning a Shape Automatically” for operation of the “Assign Library Management” dialog.

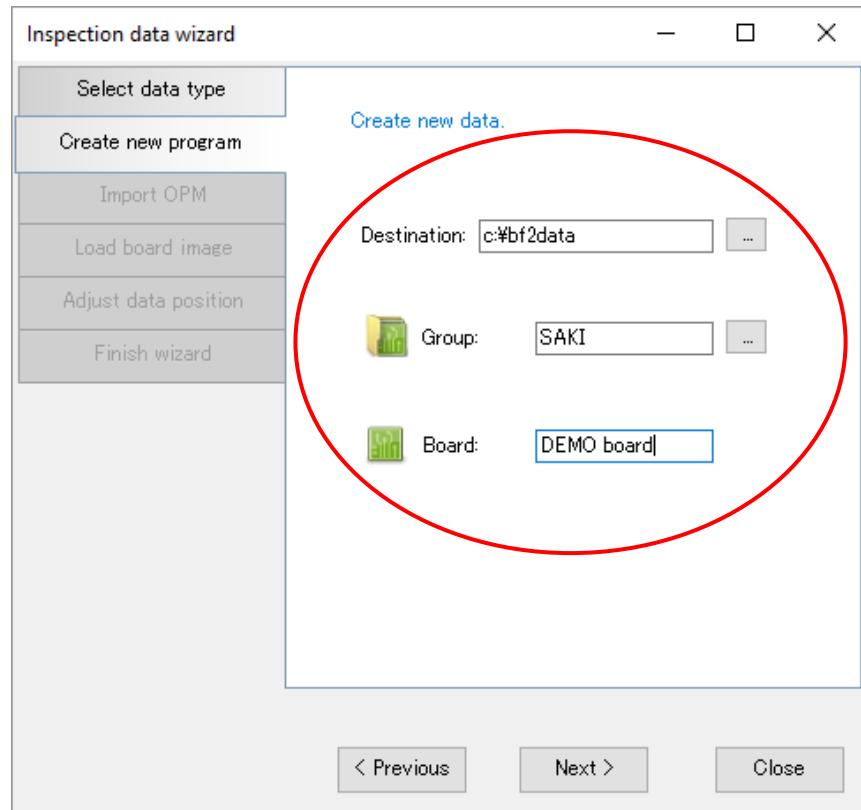


## 2.3. OPM

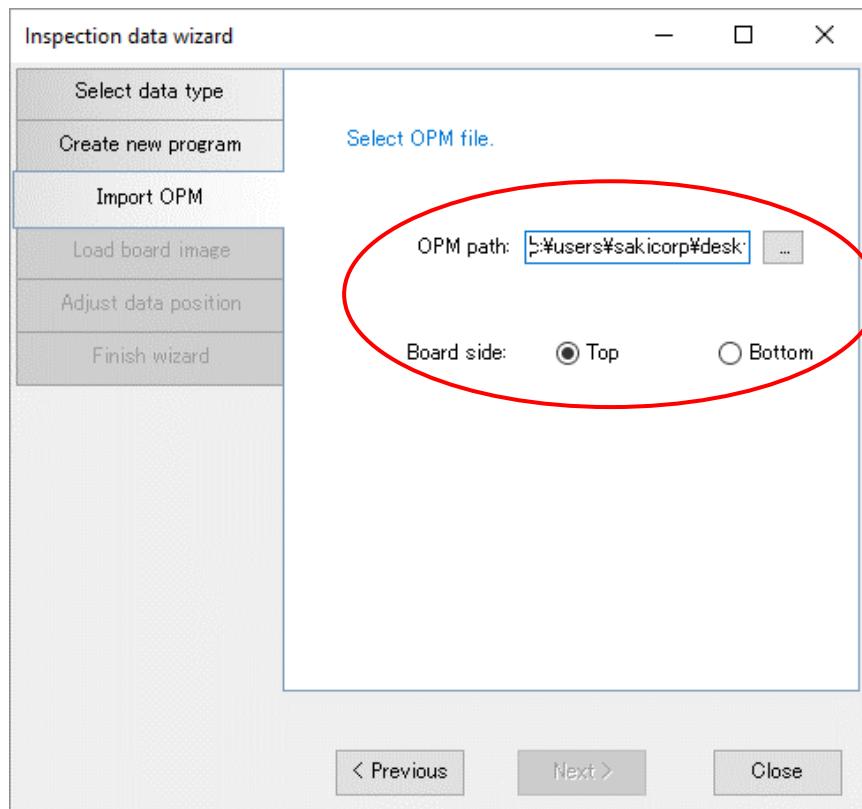
Step 1 : Start the Inspection data wizard and select “OPM” on data type selection step.  
And click “Next” button.



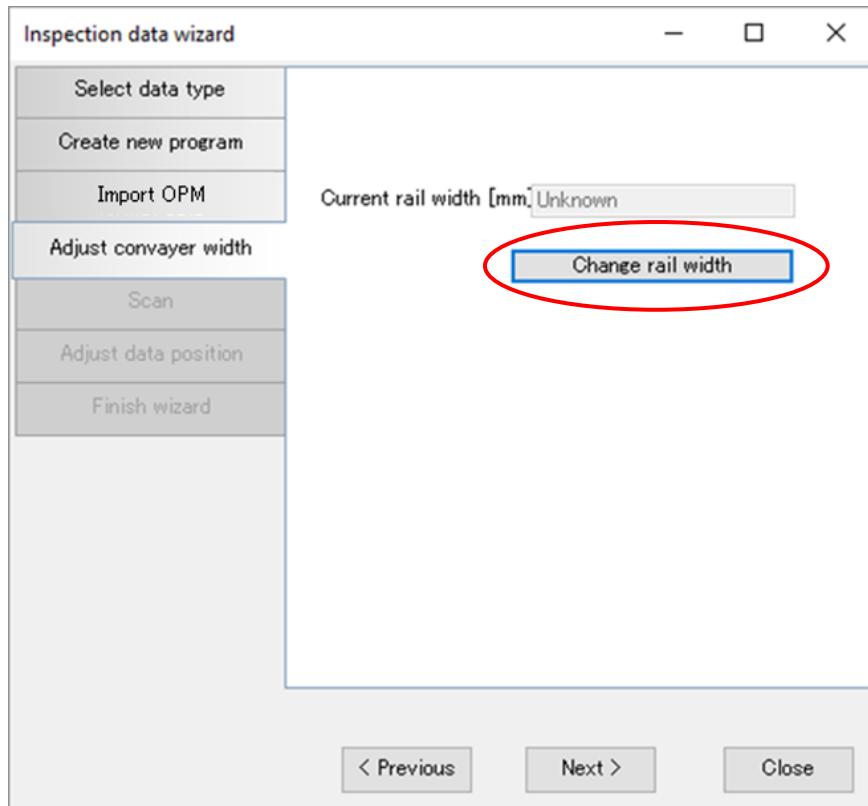
Step 2 : Specify “Destination”, “Group” and “Board”, and click “Next” button.



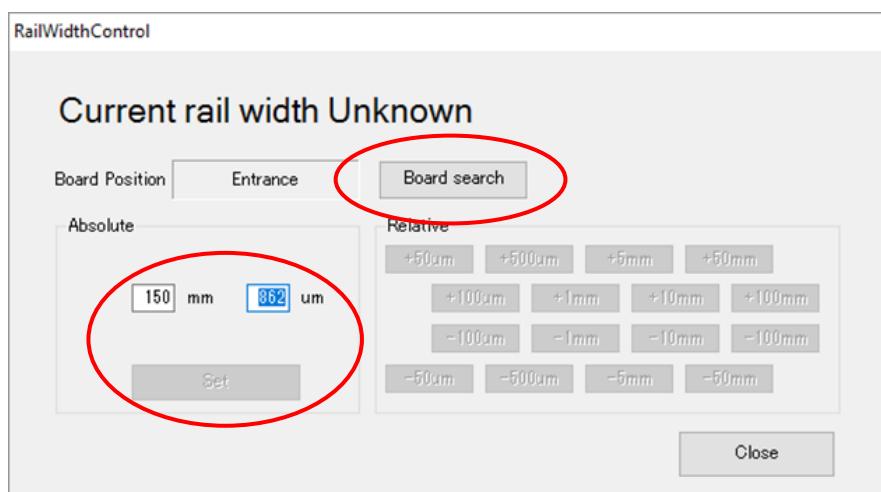
Step 3: Specify "OPM" data path and select "Board side" and click "Next" button.



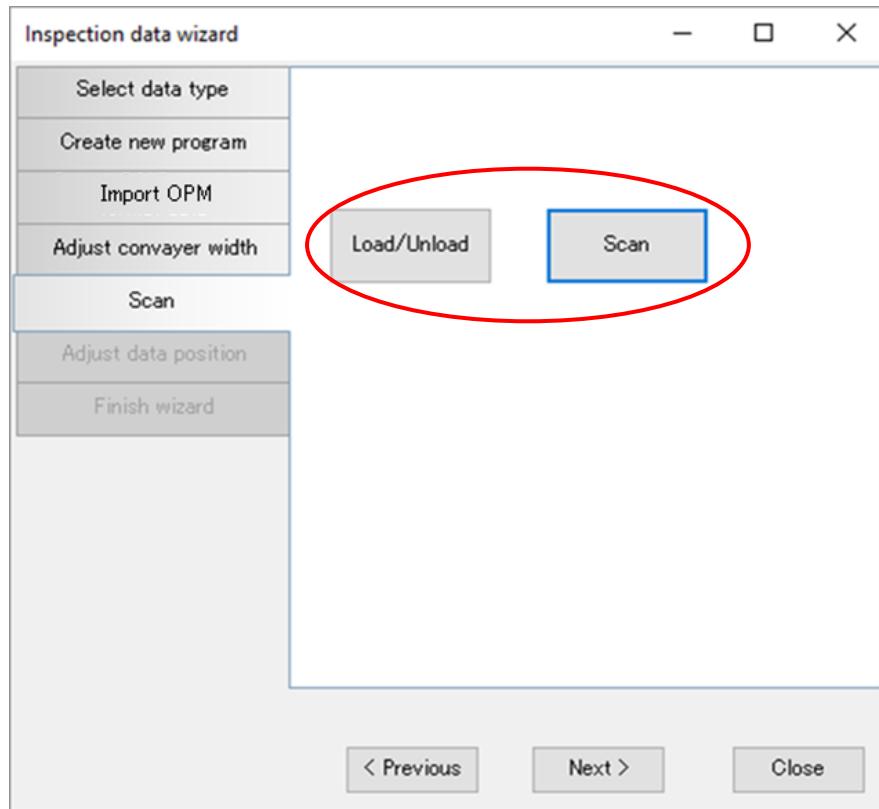
Step 4. Click “Change rail width” button and “RailWidthControl” will be displayed.



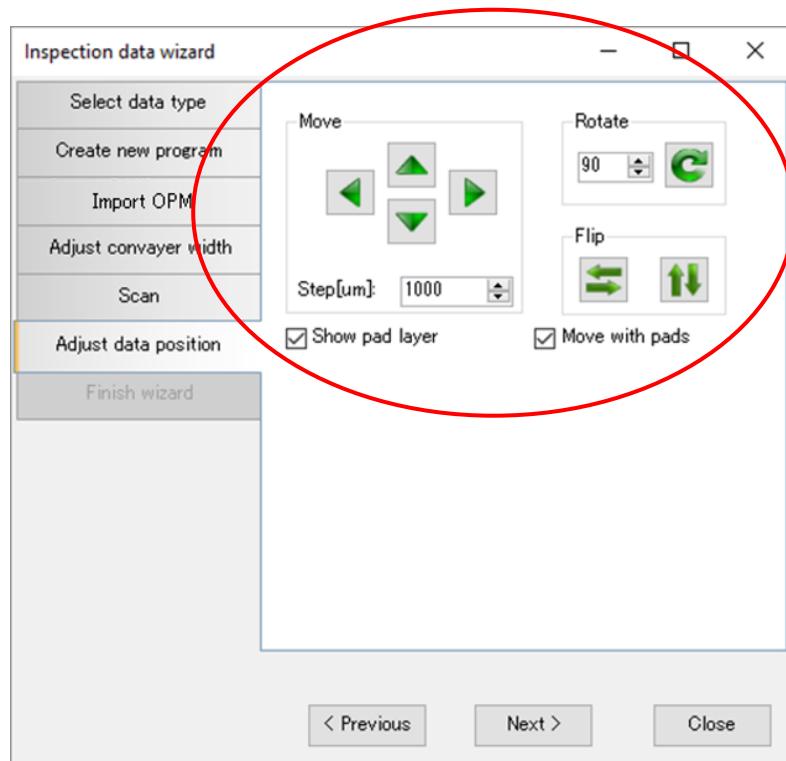
Step 5 : Click “Board search” button to check no boards exists in the machine.  
Specify the rail width value on “Absolute” box and click “Set” button.  
Click “Close” button after complete adjust rail width.



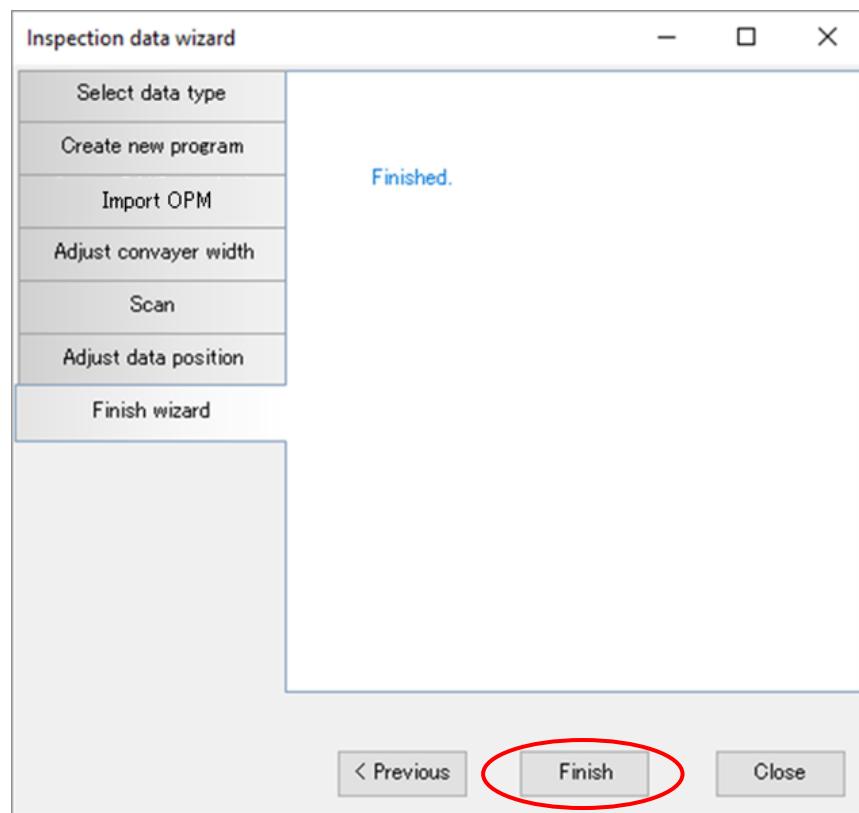
Step 6 : Set the board on the entrance of machine and click "Load/Unload" button.  
Click "Scan" button after the machine clamped the board.  
Click "Next" button after scanning.



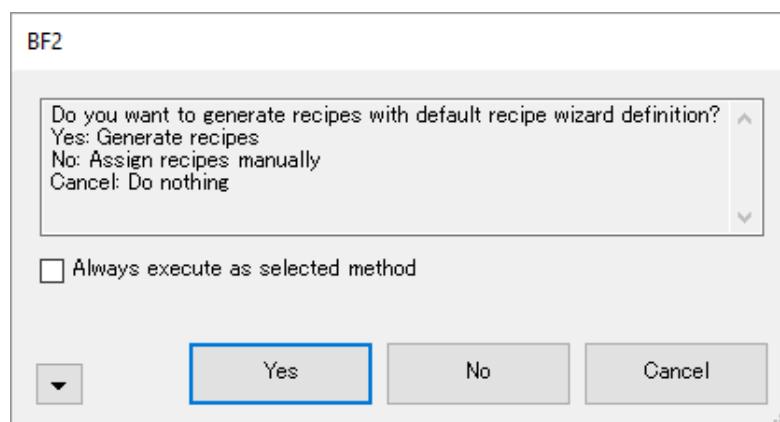
Step 7 : Adjust components and pads position with board image.



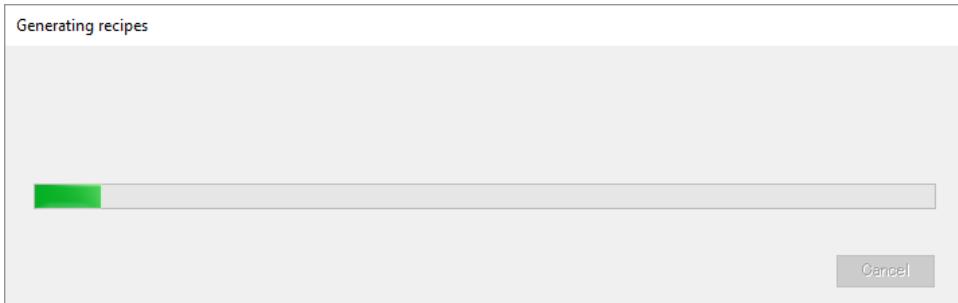
Step 8 : Click “Finish” button.



Step 9 : Default recipes will be generated when “Yes” button clicked, and “Assign Library Management” dialog will be displayed when click “No” button.

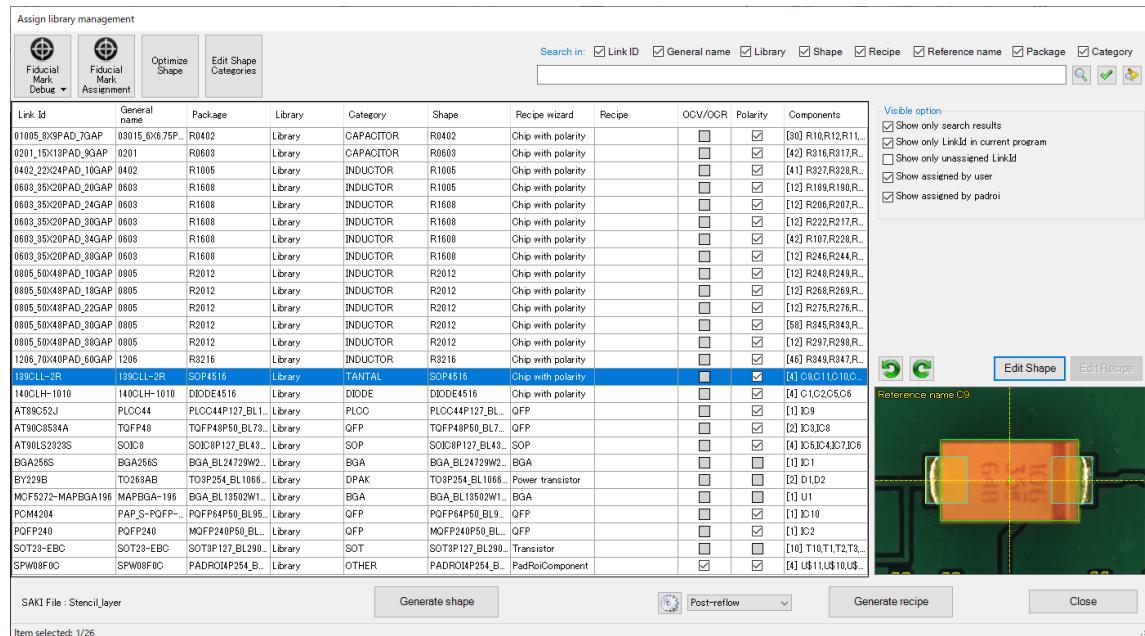


Step 9-1 : "Generating recipes" progress bar will be displayed with generating default recipes when "Yes" button clicked.



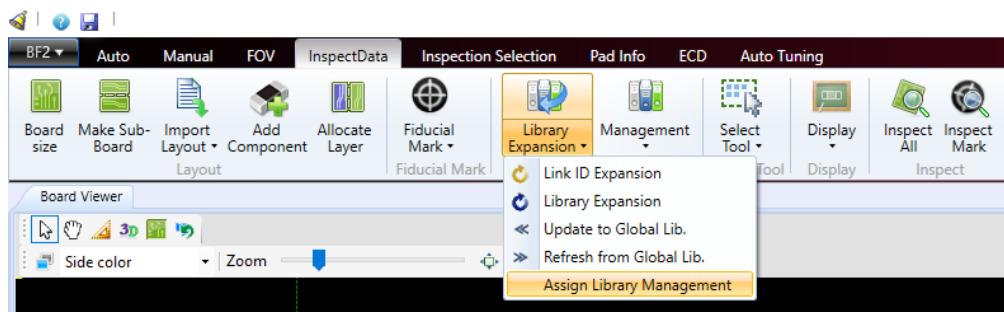
Step 9-2 : "Assign Library Management" dialog will be displayed when "No" button clicked.

\* See the "Programming manual - Part II Inspection Data - 1.12.2 Assigning a Shape Automatically" for operation of the "Assign Library Management" dialog.



### 3. Assign Library Management

Click "Assign Library Management" of "InspectData" tab and the LibraryManagerForm will be displayed.



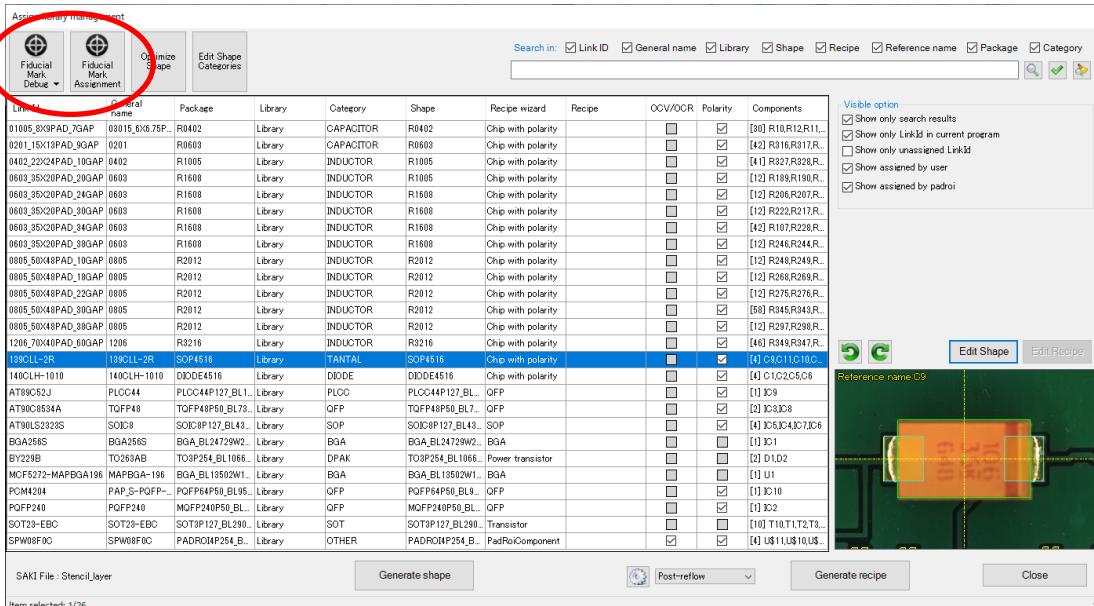
The screenshot shows the LibraryManagerForm window with various features highlighted:

- Fiducial mark debugging**: Points to the 'Fiducial Mark' button in the toolbar.
- Edit shape categories**: Points to the 'Edit Shape Categories' button in the toolbar.
- Link ID table**: Points to the main table area displaying component data.
- Display options**: Points to the search and filter bar at the top right.
- Searching options**: Points to the checkboxes in the search bar for filtering by Link ID, General name, Library, Shape, Recipe, Reference name, Package, and Category.
- Generating shapes**: Points to the 'Generate shape' button at the bottom left.
- Inspection preset**: Points to the 'Post-reflow' dropdown at the bottom center.
- Generating recipes**: Points to the 'Generate recipe' button at the bottom center.
- Selected link ID image**: Points to the preview image of a component with a red border.

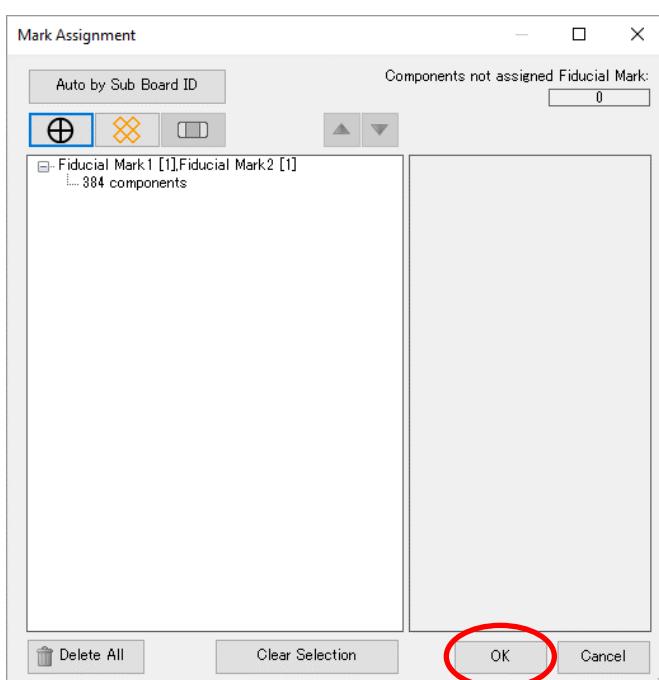
Link Id	General name	Package	Library	Category	Shape	Recipe wizard	Recipe	OCV/OCR	Polarity	Components
1005_8x9PAD_7GAP	08015_6x8.75P..	R0402	Library	CAPACITOR	R0402	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[30] R10,R12,R11,R1
201_15x13PAD_9GAP	0201	R0603	Library	CAPACITOR	R0603	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R316,R317,R
A02_22x24PAD_10GAP	0402	R1005	Library	INDUCTOR	R1005	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[41] R327,R328,R
603_35x20PAD_20GAP	0608	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R189,R190,R
603_35x20PAD_24GAP	0608	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R206,R207,R
603_35x20PAD_30GAP	0608	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R222,R217,R
603_35x20PAD_34GAP	0608	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R107,R228,R
603_35x20PAD_38GAP	0608	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R246,R244,R
8005_50x48PAD_10GAP	08005	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R248,R249,R
8005_50x48PAD_18GAP	08005	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R268,R269,R
8005_50x48PAD_22GAP	08005	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R275,R276,R
8005_50x48PAD_30GAP	08005	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[58] R345,R344,R
8005_50x48PAD_38GAP	08005	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R297,R298,R
206_70x40PAD_60GAP	1206	R3216	Library	INDUCTOR	R3216	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[46] R349,R347,R
30CLL-2R	139CLL-2R	SOP4516	Library	TANTAL	SOP4516	Chip with polarity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C9C11C100	
40CLH-I-1010	140CLH-I-1010	DD0E4516	Library	DIODE	DD0E4516	Chip with polarity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C1C2C5,C6	
AT99C52J	PLCC44	PLCC44P127_BL1..	Library	PLCC	PLCC44P127_BL1..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC9	
AT90C8534A	TOFP48	TOFP48P50_BL7..	Library	QFP	TOFP48P50_BL7..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[2] IC3,IC8	
AT90LS232S	SOT8	SOTC8P127_BL43..	Library	SOP	SOTC8P127_BL43..	SOP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[4] IC6,IC4,IC7,IC8	
BGA256S	BGA	BGA_BL24729W2..	Library	BGA	BGA_BL24729W2..	BGA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC1	
3Y229B	T0283AB	T03P254_BL1066..	Library	DPAK	T03P254_BL1066..	Power transistor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[2] D1,D2	
MCF5272-MAPBGA196	MABPBGA-196	BGA_BL18502WL..	Library	BGA	BGA_BL18502WL..	BGA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[1] U1	
PCM1204	PAP_S-POFP--	POFP64P50_BL95..	Library	QFP	POFP64P50_BL95..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC10	
QFP240	POFP240	MOFP240P50_BL..	Library	QFP	MOFP240P50_BL..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC2	
SOT23-EBC	SOT3P127_BL290..	Library	SOT	SOT3P127_BL290..	Transistor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[10] T1,T1,T2,T3..		
SPW08FDC	SPW08FDC	PADRO4P254_B	Library	OTHER	PADRO4P254_B	PadRoComponent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[4] US111US101US	

### 3.1. Fiducial mark assignment

Step 1: Click “Fiducial mark assignment” button then “Mark assignment” dialog will be displayed.

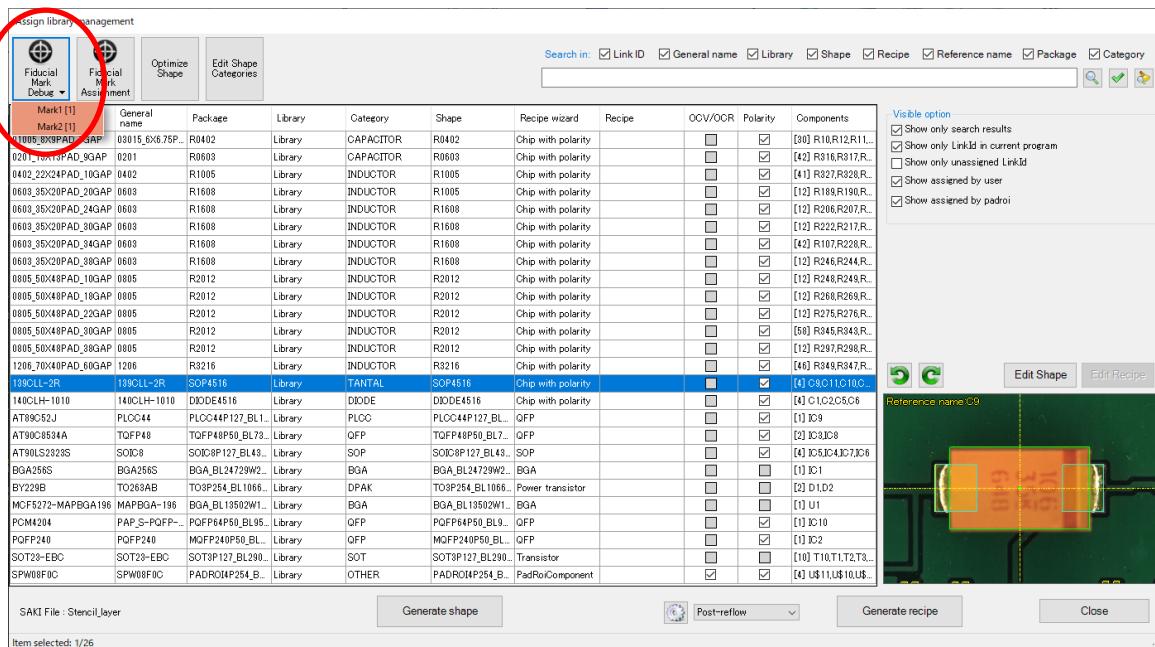


Step 2: Assign Fiducial mark and click “OK” button.

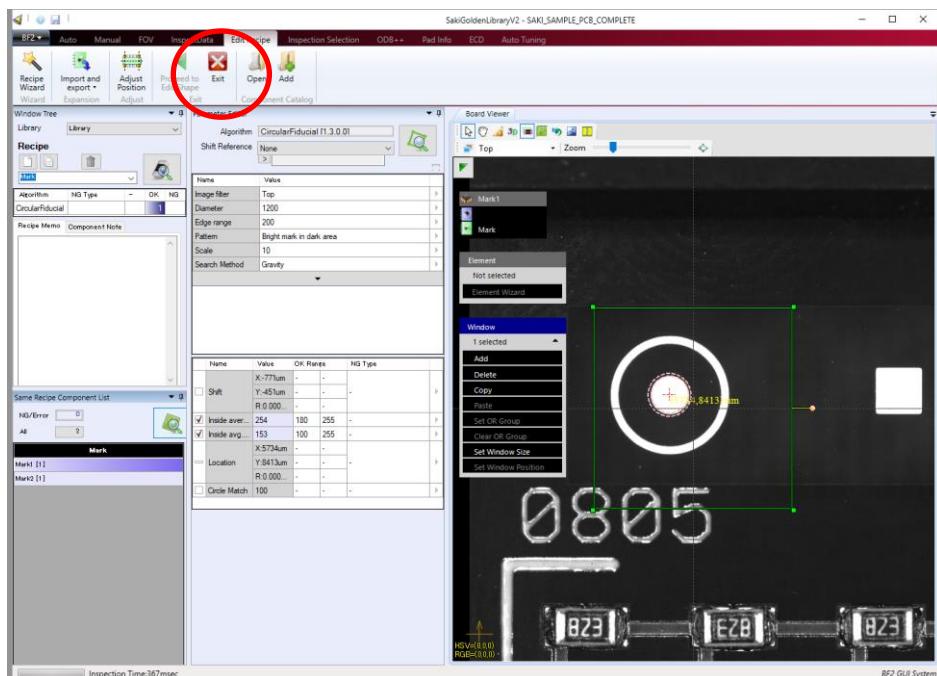


### 3.2. Fiducial mark debug

Step 1: Open “Fiducial mark debug” menu and click Mark component then Recipe editor will be displayed.



Step 2: Debug mark recipe and click “Exit” button.



Step 3: Component position will be adjust by Fiducial mark shift.

Assign library management

Link Id	General name	Package	Library	Category	Shape	Recipe wizard	Recipe	OCV/OCR	Polarity	Components
01005_6X9PAD_7GAP	03015_6X9.75P..	R0402	LIBRARY	CAPACITOR	R0402	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[0] R10.R12.R11..
0201_15X13PAD_9GAP	0201	R0603	LIBRARY	CAPACITOR	R0603	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R316,R317,R..
0402_22X24PAD_10GAP	0402	R1005	LIBRARY	INDUCTOR	R1005	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[41] R327,R328,R..
0603_35X20PAD_20GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R189,R190,R..
0603_35X20PAD_24GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R266,R267,R..
0603_35X20PAD_30GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R222,R217,R..
0603_35X20PAD_34GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R107,R228,R..
0603_35Y20PAD_30GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R246,R244,R..
0805_50X48PAD_10GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R248,R249,R..
0805_50X48PAD_18GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R268,R269,R..
0805_50X48PAD_22GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[58] R345,R346,R..
0805_50X48PAD_30GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R297,R298,R..
1206_70X40PAD_60GAP	1206	R3216	LIBRARY	INDUCTOR	R3216	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[46] R349,R347,R..
139CLL-2R	139CLL-2R	SOP4516	LIBRARY	TANTAL	SOP4516	Chip with polarity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C8.C11.C10C..
140CLH-1010	140CLH-1010	D0DE4516	LIBRARY	DIODE	D0DE4516	Chip with polarity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C10.C20.C5C6
AT89C62J	PLCC44	PLCC44P127_BL1..	LIBRARY	PLCC	PLCC44P127_BL..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC9
AT90C8534A	TOFF48	TOFF48P50_BL73..	LIBRARY	QFP	TOFF48P50_BL7..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] IC3IC8
AT90LS2923S	SOIC8	SOIC8P127_BL4..	LIBRARY	SOP	SOIC8P127_BL4..	SOP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] IC5IC4IC7JC6
BGA256S	BGA256S	BGA_BL24729W2..	LIBRARY	BGA	BGA_BL24729W2..	BGA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC1
BY229B	TO269AB	TO269A_BL106..	LIBRARY	DPAK	TO269A_BL106..	Power transistor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] D1,D2
PCM4204	PAP_S-PQFP-	PQFP64P50_BL95..	LIBRARY	BGA	BGA_BL18502W1..	BGA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] U1
PQFP240	PQFP240	MQFP240P50_BL..	LIBRARY	QFP	MQFP240P50_BL..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC10
SOT23-EBC	SOT23-EBC	SOT3P127_BL290..	LIBRARY	SOT	SOT3P127_BL290..	Transistor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[10] T1,T1,T2,T3..
SPW08F0C	SPW08F0C	PADRO14P254_B..	LIBRARY	OTHER	PADRO14P254_B..	PadRoComponent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] US11,U\$10,U\$..

Visible option

- Show only search results
- Show only LinkId in current program
- Show only unassigned LinkId
- Show assigned by user
- Show assigned by padro1

SAKI File : Stencil\_layer

Generate shape Post-reflow Generate recipe Close

Item selected: 1/26

### 3.3. Optimize shape

Step 1: Select LinkId rows which does not have correct shape by using mouse.

Assign library management

Link Id	General name	Package	Library	Category	Shape	Recipe wizard	Recipe	OCV/OCR	Polarity	Components
01005_6X9PAD_7GAP	03015_6X9.75P..	R0402	LIBRARY	CAPACITOR	R0402	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[0] R10.R12.R11..
0201_15X13PAD_9GAP	0201	R0603	LIBRARY	CAPACITOR	R0603	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R316,R317,R..
0402_22X24PAD_10GAP	0402	R1005	LIBRARY	INDUCTOR	R1005	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[41] R327,R328,R..
0603_35X20PAD_20GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R189,R190,R..
0603_35X20PAD_24GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R266,R267,R..
0603_35X20PAD_30GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R222,R217,R..
0603_35X20PAD_34GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R107,R228,R..
0603_35Y20PAD_30GAP	0603	R1608	LIBRARY	INDUCTOR	R1608	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R246,R244,R..
0805_50X48PAD_10GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R248,R249,R..
0805_50X48PAD_18GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R268,R269,R..
0805_50X48PAD_22GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[58] R345,R346,R..
0805_50X48PAD_30GAP	0805	R2012	LIBRARY	INDUCTOR	R2012	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R297,R298,R..
1206_70X40PAD_60GAP	1206	R3216	LIBRARY	INDUCTOR	R3216	Chip with polarity		<input type="checkbox"/>	<input checked="" type="checkbox"/>	[46] R349,R347,R..
139CLL-2R	139CLL-2R	SOP4516	LIBRARY	TANTAL	SOP4516	Chip with polarity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C8.C11.C10C..
140CLH-1010	140CLH-1010	D0DE4516	LIBRARY	ALUMINUM CAP	C4516	Electrolytic capa..	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C10.C20.C5C6
AT89C62J	PLCC44	PLCC44P127_BL1..	LIBRARY	PLCC	PLCC44P127_BL..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC9
AT90C8534A	TOFF48	TOFF48P50_BL73..	LIBRARY	QFP	TOFF48P50_BL7..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] IC3IC8
AT90LS2923S	SOIC8	SOIC8P127_BL4..	LIBRARY	SOP	SOIC8P127_BL4..	SOP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] IC5IC4IC7JC6
BGA256S	BGA256S	BGA_BL24729W2..	LIBRARY	BGA	BGA_BL24729W2..	BGA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC1
BY229B	TO269AB	TO269A_BL106..	LIBRARY	DPAK	TO269A_BL106..	Power transistor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] D1,D2
PCM4204	PAP_S-PQFP-	PQFP64P50_BL95..	LIBRARY	BGA	BGA_BL18502W1..	BGA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] U1
PQFP240	PQFP240	MQFP240P50_BL..	LIBRARY	QFP	MQFP240P50_BL..	QFP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC10
SOT23-EBC	SOT23-EBC	SOT3P127_BL290..	LIBRARY	SOT	SOT3P127_BL290..	Transistor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[10] T1,T1,T2,T3..
SPW08F0C	SPW08F0C	PADRO14P254_B..	LIBRARY	OTHER	PADRO14P254_B..	PadRoComponent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] US11,U\$10,U\$..

Visible option

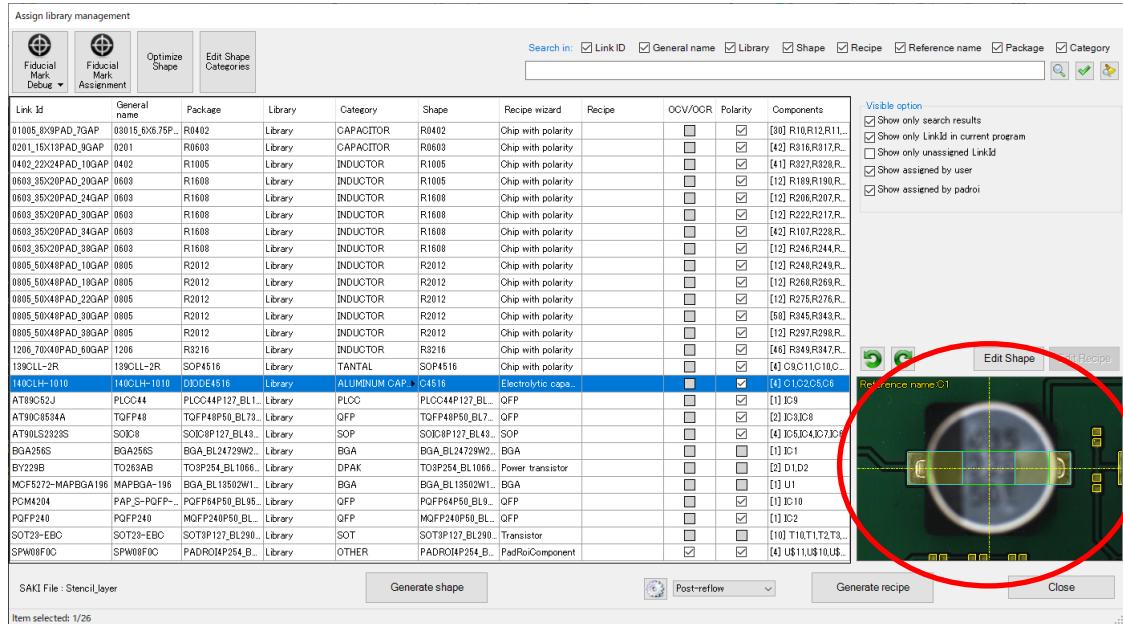
- Show only search results
- Show only LinkId in current program
- Show only unassigned LinkId
- Show assigned by user
- Show assigned by padro1

SAKI File : Stencil\_layer

Generate shape Post-reflow Generate recipe Close

Item selected: 1/26

Step 2: Click “Optimize shape” button and shape will be optimized by component image.

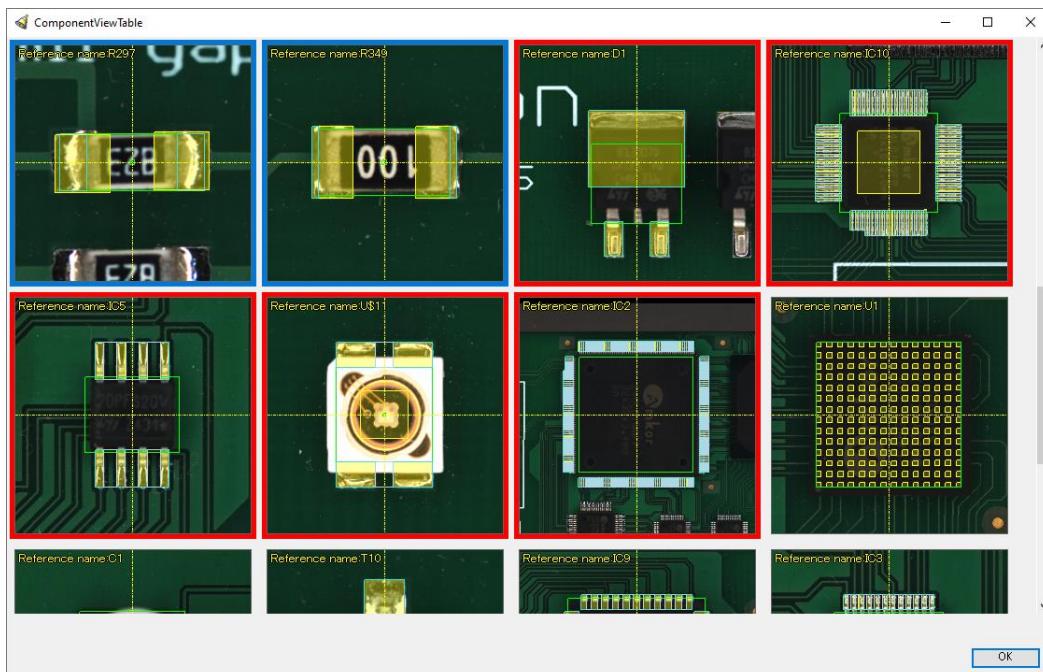


\* Shape thumbnail view will be displayed when shape optimization was executed with selecting Link Id 2 or over than.

Shapes which were optimized normally will be displayed in the blue box.

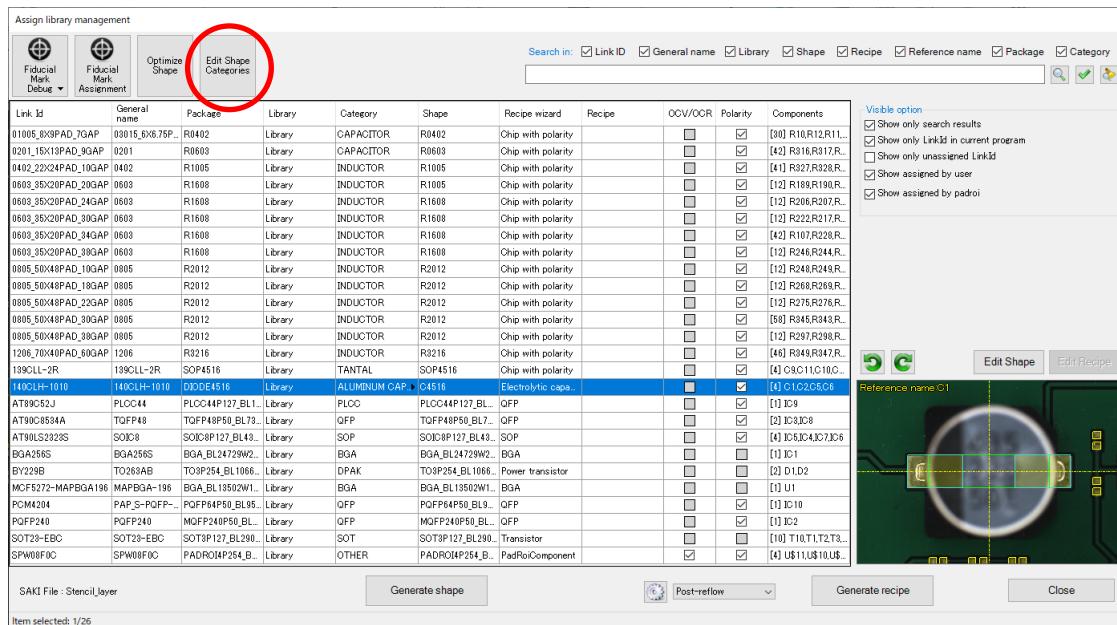
Shapes which were not able to be optimized or were assigned by "Others" and "Connector" as Category will be displayed in the red box.

It can enter to the Shape editor with double click each thumbnails.

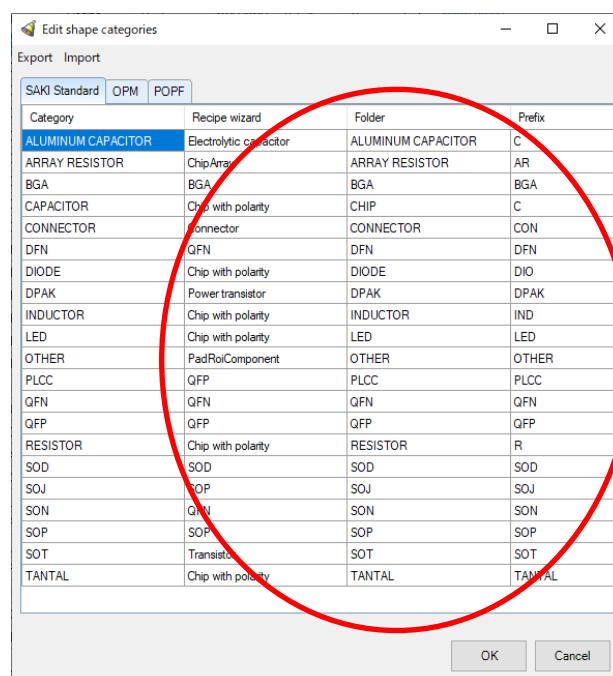


### 3.4. Edit shape categories

Step 1: Click “Edit Shape Categories” button and “Edit Shape categories” dialog will be opened.



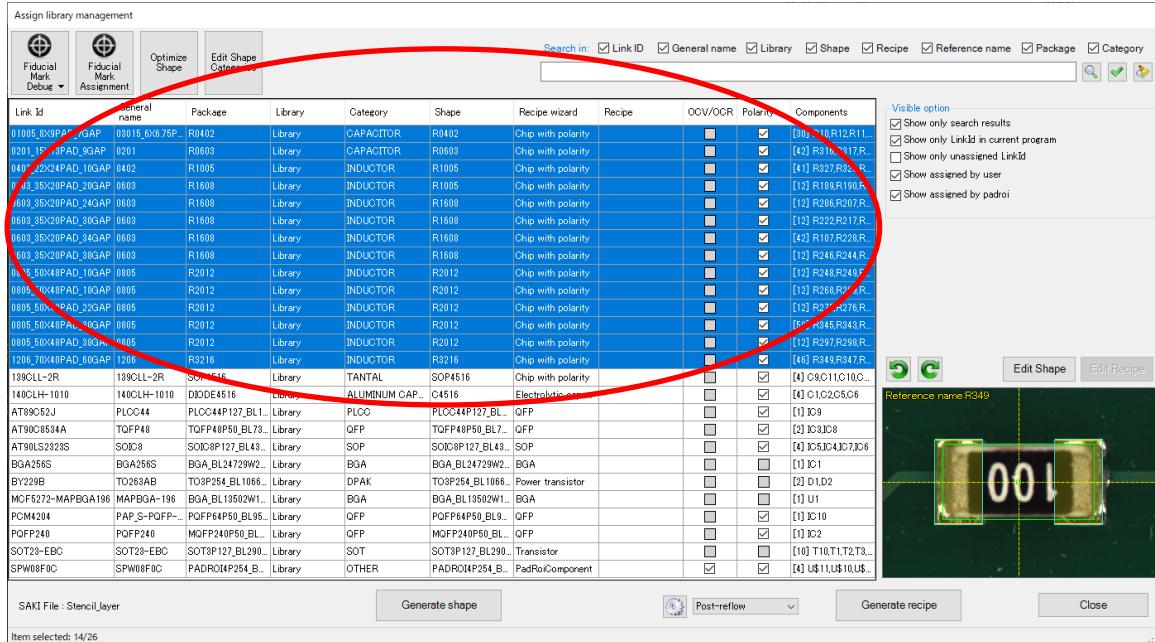
Step 2: It can be to change “Recipe wizard”, “Folder” and “Prefix” items.



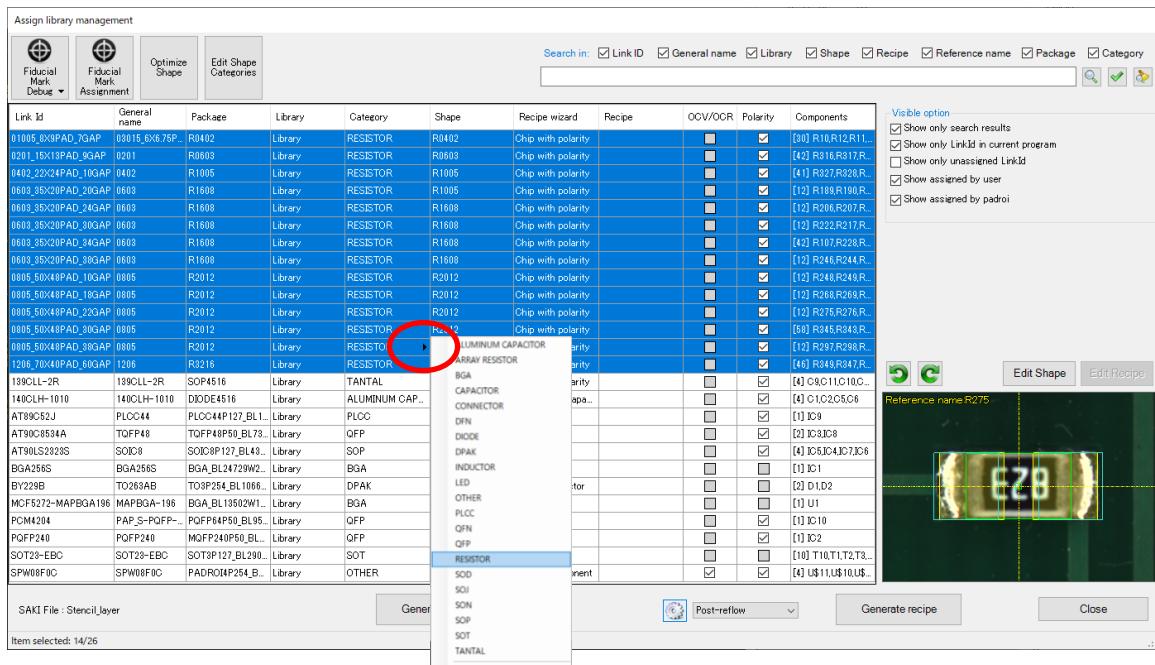
Items	Descriptions
Recipe Wizard	Recipe will be generated based on specified “recipe wizard” when “Generate recipe” clicked.
Folder	Shape will be moved to specified folder when Shape category was selected.
Prefix	Prefix of shape name will be replaced with specified Prefix when Shape category was selected.

### 3.5. Specifying package categories and polarity options

Step 1: Select LinkId rows by using mouse.



Step 2: Open “Category” menu by clicking triangle icon on Category column and select package category.



Step 3: Category and Recipe wizard will be replaced. And each shapes will be moved to selected category folder internally.

Link Id	General name	Package	Library	Category	Shape	Recipe wizard	Recipe	OCV/OCR	Polarity	Components
01005_8X9PAD_7GAP	03015_6X6.75P..	R0402	Library	RESISTOR	R0402	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[30] R10.R12.R11..
0201_15X13PAD_9GAP	0201	R0603	Library	CAPACITOR	R0603	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R16.R317.R..
0402_22X24PAD_10GAP	0402	R1005	Library	INDUCTOR	R1005	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[41] R22.R328.R..
0603_35X20PAD_20GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R189.R190.R..
0603_35X20PAD_24GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R206.R207.R..
0603_35X20PAD_30GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R222.R217.R..
0603_35X20PAD_34GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R107.R228.R..
0603_35X20PAD_38GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R246.R244.R..
0805_50X48PAD_10GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R248.R249.R..
0805_50X48PAD_18GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R268.R269.R..
0805_50X48PAD_22GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R275.R276.R..
0805_50X48PAD_30GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[6] R245.R243.R..
0805_50X48PAD_38GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R297.R298.R..
1206_70X10PAD_60GAP	1206	R3216	Library	RESISTOR	R3216	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[46] R349.R347.R..
139CLL-2R	139CLL-2R	SOP4516	Library	TANTAL	SOP4516	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C8.C11C18C..
140CLH-1010	140CLH-1010	D0DE4516	Library	ALUMINUM CAP..	C4516	Electrolytic capa..		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C1.C2C5C6
AT90C62J	PLCC44	PLCC44P127_BL1..	Library	PLCC	PLCC44P127_BL..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC9
AT90C8534A	TOFP48	TOFP48P50_BL73..	Library	QFP	TOFP48P50_BL7..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] IC3IC8
AT90LS2283S	SOIC8	SOIC8P127_BL43..	Library	SOP	SOIC8P127_BL43..	SOP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] IC5IC4.JC7.JC6
BGA256S	BGA256S	BGA_BL24729W2..	Library	BGA	BGA_BL24729W2..	BGA		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC1
BY229B	TO268AB	TO3P254_BL106..	Library	DPAK	TO3P254_BL106..	Power transistor		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] D1.D2
MCF5272-MAPDQA196	MAPDQA196	BGA_BL13502W1..	Library	BGA	BGA_BL13502W1..	BGA		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] U1
PCM4204	PAP_S-PQFP-..	PQFP64P50_BL95..	Library	QFP	PQFP64P50_BL9..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC10
PQFP240	PQFP240	MQFP240P50_BL..	Library	QFP	MQFP240P50_BL..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC2
SOT23-EBC	SOT23-EBC	SOT3P127_BL290..	Library	SOT	SOT3P127_BL290..	Transistor		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[10] T10.T1LT2.T3..
SPW08F0C	SPW08F0C	PADRO14P254_B..	Library	OTHER	PADRO14P254_B..	PadRoComponent		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] US11.US10.US..

SAKI File : Stencil\_layer      Generate shape      Post-reflow      Generate recipe      Close

Item selected: 14/26

Step 4: Set “OCV/OCR” and “Polarity” inspection windows need to generate or not. OCV windows will be generated when “OCV” column is checked.

Polarity windows will be generated when “Polarity” column is checked.

\* Parameters and sample tolerance of algorithm to generate should be defined in each Recipe wizard.

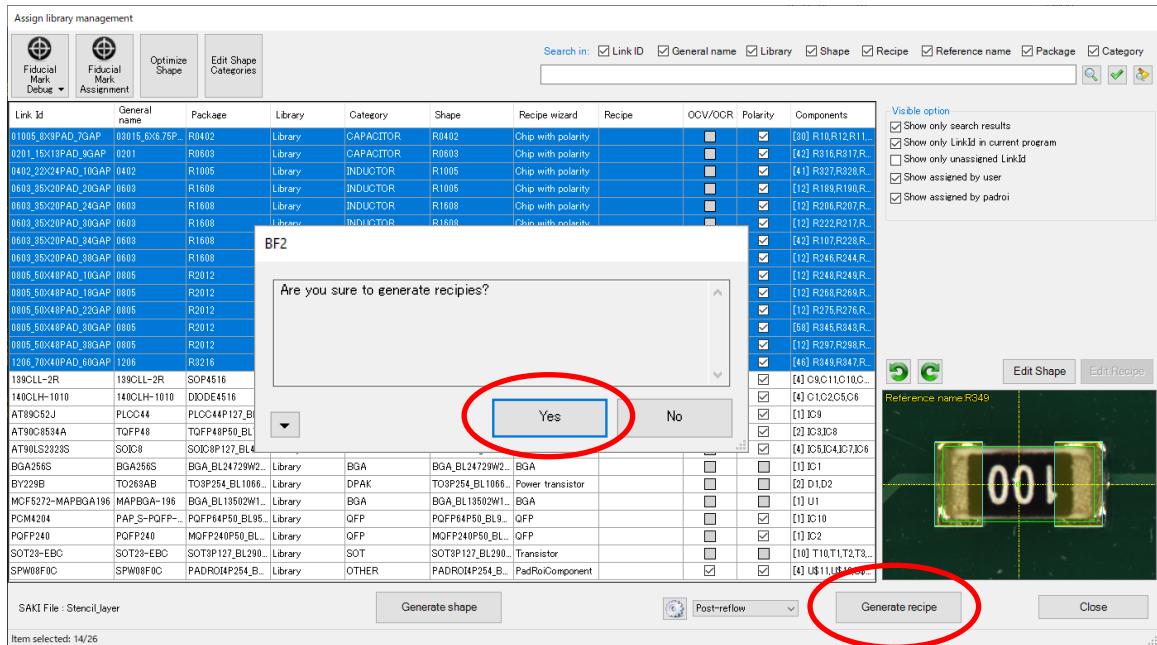
Link Id	General name	Package	Library	Category	Shape	Recipe wizard	Recipe	OCV/OCR	Polarity	Components
01005_8X9PAD_7GAP	03015_6X6.75P..	R0402	Library	CAPACITOR	R0402	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[30] R10.R12.R11..
0201_15X13PAD_9GAP	0201	R0603	Library	CAPACITOR	R0603	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R16.R317.R..
0402_22X24PAD_10GAP	0402	R1005	Library	INDUCTOR	R1005	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[41] R22.R328.R..
0603_35X20PAD_20GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R189.R190.R..
0603_35X20PAD_24GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R206.R207.R..
0603_35X20PAD_30GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R222.R217.R..
0603_35X20PAD_34GAP	0603	R1608	Library	INDUCTOR	R1608	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[42] R107.R228.R..
0805_50X48PAD_10GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R246.R244.R..
0805_50X48PAD_18GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R268.R269.R..
0805_50X48PAD_22GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R275.R276.R..
0805_50X48PAD_30GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[6] R245.R243.R..
0805_50X48PAD_38GAP	0805	R2012	Library	INDUCTOR	R2012	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[12] R297.R298.R..
1206_70X10PAD_60GAP	1206	R3216	Library	RESISTOR	R3216	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[46] R349.R347.R..
139CLL-2R	139CLL-2R	SOP4516	Library	TANTAL	SOP4516	Chip with polarity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C8.C11C18C..
140CLH-1010	140CLH-1010	D0DE4516	Library	ALUMINUM CAP..	C4516	Electrolytic capa..		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] C1.C2C5C6
AT90C62J	PLCC44	PLCC44P127_BL1..	Library	PLCC	PLCC44P127_BL..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC9
AT90C8534A	TOFP48	TOFP48P50_BL73..	Library	QFP	TOFP48P50_BL7..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] IC3IC8
AT90LS2283S	SOIC8	SOIC8P127_BL43..	Library	SOP	SOIC8P127_BL43..	SOP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] IC5IC4.JC7.JC6
BGA256S	BGA256S	BGA_BL24729W2..	Library	BGA	BGA_BL24729W2..	BGA		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC1
BY229B	TO268AB	TO3P254_BL106..	Library	DPAK	TO3P254_BL106..	Power transistor		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[2] D1.D2
MCF5272-MAPDQA196	MAPDQA196	BGA_BL13502W1..	Library	BGA	BGA_BL13502W1..	BGA		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] U1
PCM4204	PAP_S-PQFP-..	PQFP64P50_BL95..	Library	QFP	PQFP64P50_BL9..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC10
PQFP240	PQFP240	MQFP240P50_BL..	Library	QFP	MQFP240P50_BL..	QFP		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[1] IC2
SOT23-EBC	SOT23-EBC	SOT3P127_BL290..	Library	SOT	SOT3P127_BL290..	Transistor		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[10] T10.T1LT2.T3..
SPW08F0C	SPW08F0C	PADRO14P254_B..	Library	OTHER	PADRO14P254_B..	PadRoComponent		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	[4] US11.US10.US..

SAKI File : Stencil\_layer      Generate shape      Post-reflow      Generate recipe      Close

Item selected: 14/26

Step 5: Click “Generate” button and recipes will be generated by selected Recipe wizard.

\* Recipes of Link ID which has “Recipe” column is empty will be generated.



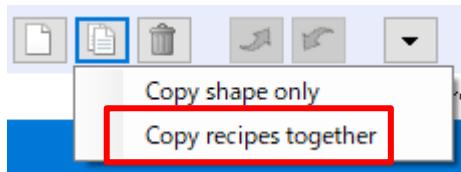
## 4. Shape editor improvement

### 4.1. Copy shape with recipes

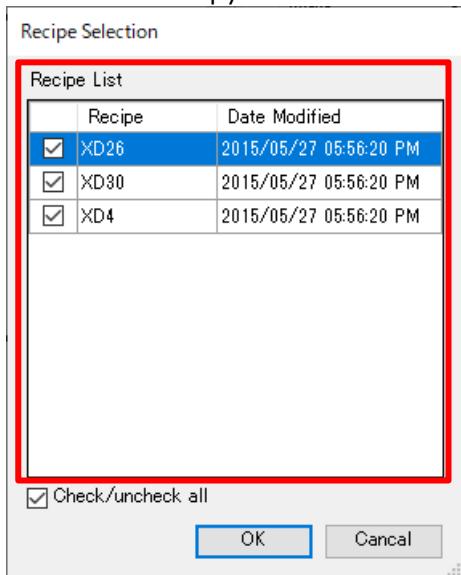
Step1: Open the shape edit screen.

Step2: Select a shape to copy the recipe with.

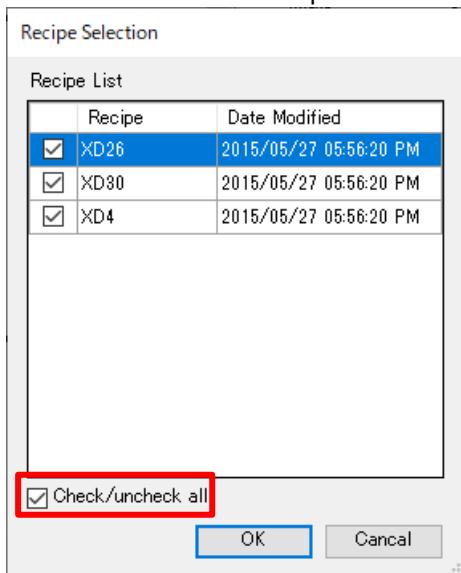
Select "Copy recipes together" from the context menu of the copy button.



Step3: From the recipe linked to the shape displayed in the recipe list, check the recipes which are needed to copy.

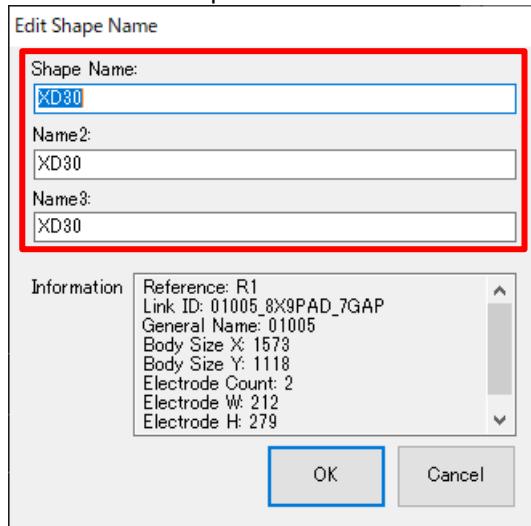


Step4: It can be checked or unchecked all recipes with "Check/uncheck all".



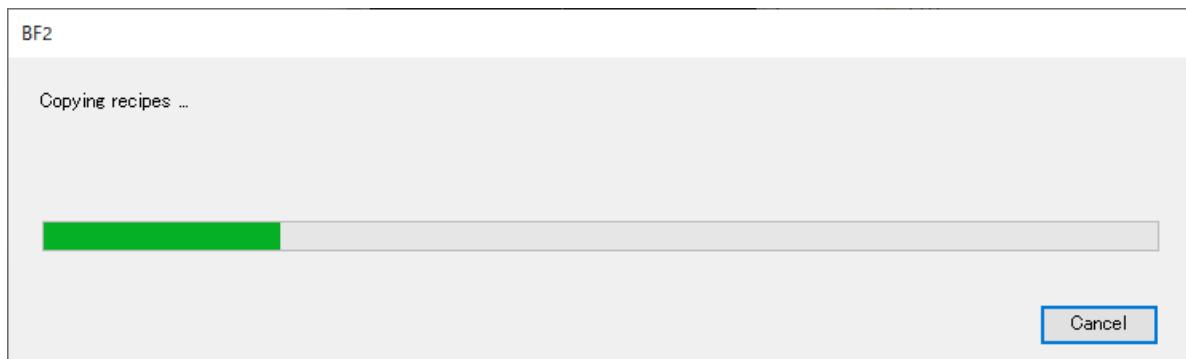
Step5: Click the OK button to copy the checked recipe along with the shape.  
Clicking the Cancel button copies only the shape without copying the recipe.

Step6: Change the name of the shapes which are needed to copy.



Step7: Click the OK button to copy the shape and recipe.  
The name of the copied recipe does not change.  
Clicking the Cancel button will not copy the shape and recipe.

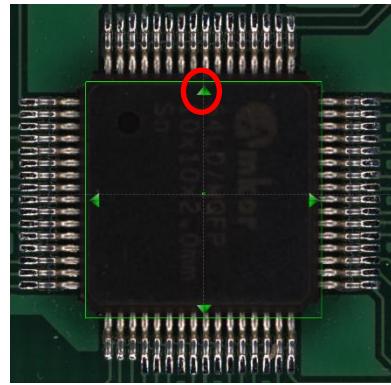
Step8: If processing is interrupted while copying a recipe, the shape and the recipe up to the point of interruption are copied.



## 4.2. Deploy pin elements by PadInfo

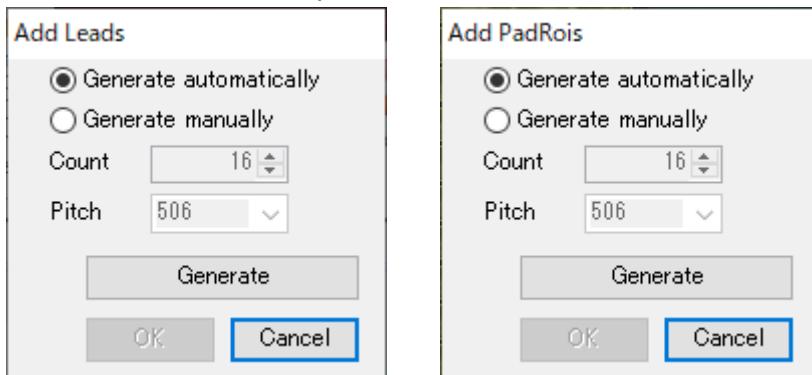
Step1: Open the shape edit screen for the part that generates the pins.

Step2: Select the pin creation direction in the screen.



Step3: After selecting the creation direction, select "Add> Add Leads" or "Add> Add PadRois", and the following dialog opens.

\*The default is "Generate automatically", but if the pad information is not found, "Generate manually" is the default.



Step4: Clicking the "Generate" button in the dialog will automatically generate a pin, and press the "OK" button to apply it.

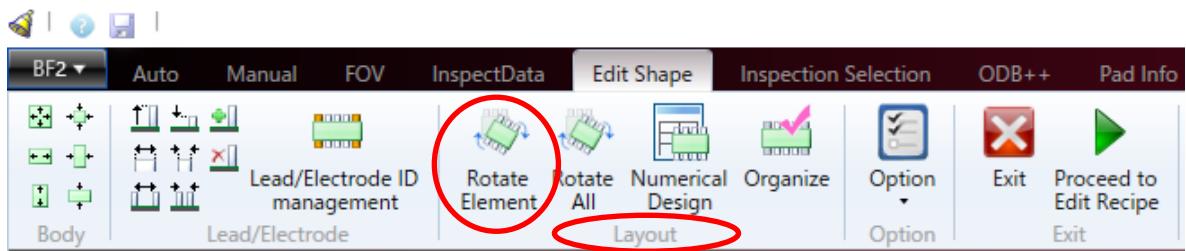
\* If "Generate automatically" does not work, make fine adjustments with "Generate manually".

### 4.3. Rotate selected elements

Step 1 : Open the shape edit screen.

Step 2 : Select the shape element you want to rotate on the board viewer.

Step 3 : Select [Layout] group-> [Rotate Element] from the [Edit Shape] tab.



## 5. Recipe editor improvement

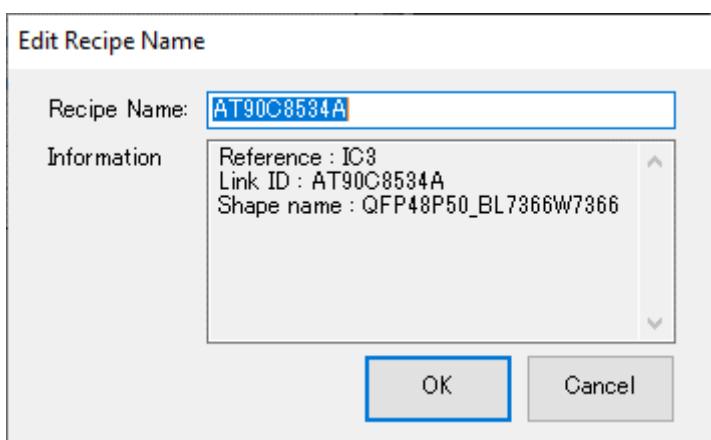
### 5.1. Rename recipe

Step 1. Open the recipe edit screen.

Step 2. Click “Rename” button and input name dialog will be displayed.



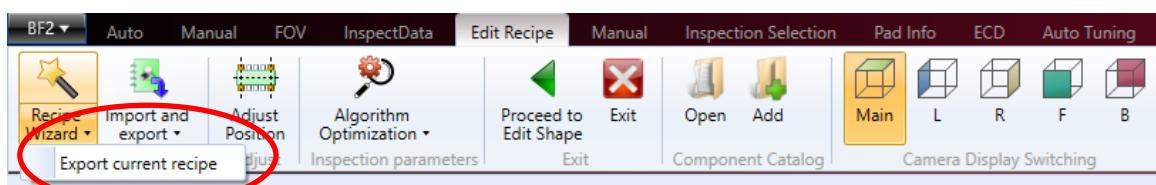
Step 3. Input new recipe name and click OK button.



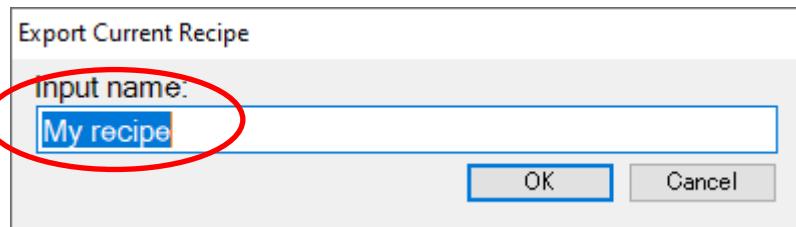
### 5.2. Export current recipe as recipe wizard

Step 1. Enter the recipe edit screen.

Step 2. Open “Recipe wizard” drop down menu and click “Export current recipe” menu.



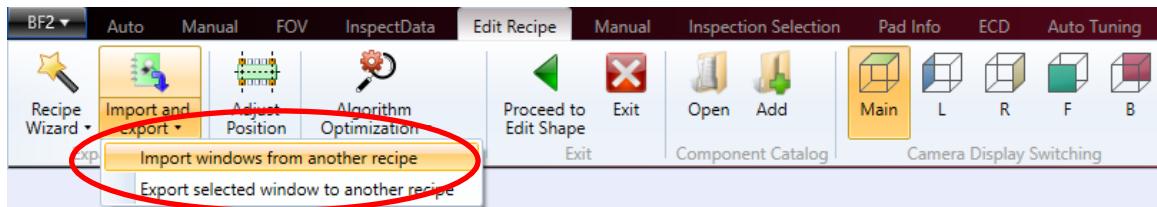
Step 3. Input name of “Recipe wizard” to export and click OK button.



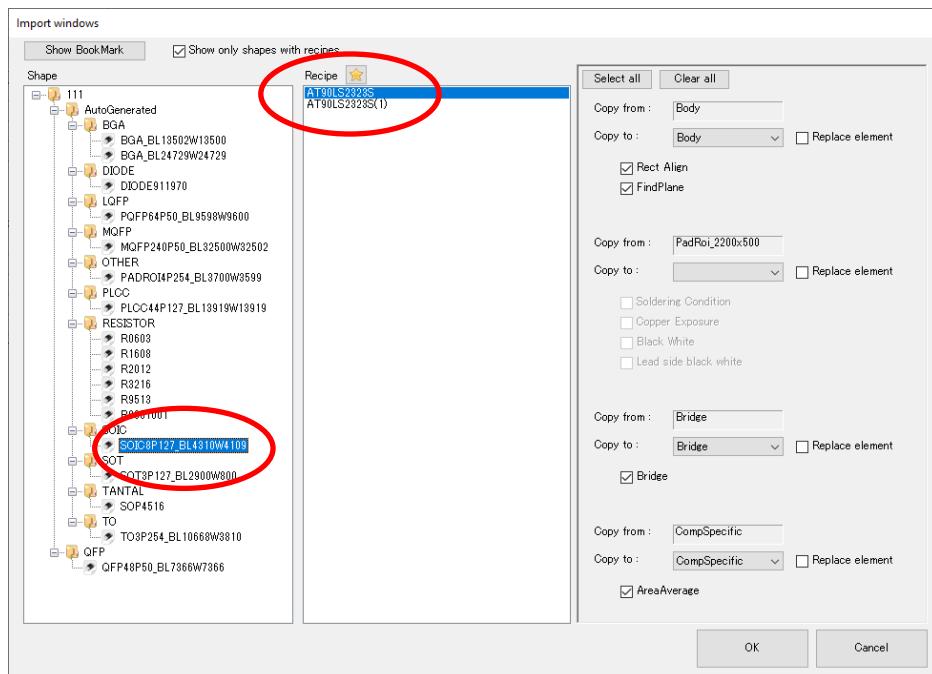
### 5.3. Import windows dialog improvement

Step 1. Open the recipe edit screen.

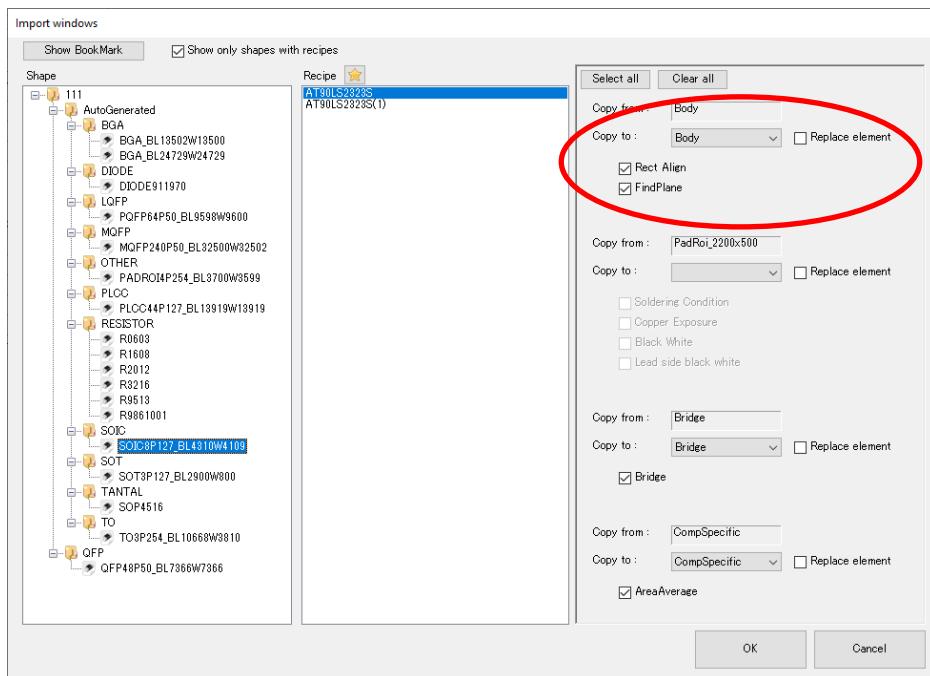
Step 2. Open “Import and Export” drop down menu and click “Import windows from another recipe” menu.



Step 3. Select shape and recipe to import.



- Step 4. Select Algorithms to import and specify target shape elements.  
 \* Inspection windows will be replaced if "Replace element" was checked.  
 Inspection windows will be added if "Replace element" was unchecked.



## 5.4. Displaying OR group improvement

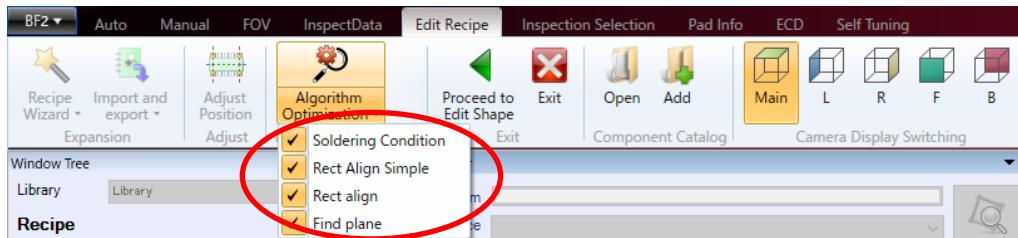
OR group windows will be displayed by icon on the window tree view.

OR Algorithm	NG Type	Count	OK	NG
CompSpecific		Body (1)		
AreaAverage		1		
Body		Body (1)		
FindPlane	MISSING, LIFTED_BODY	1		
Rect Align	COMPONENT_NG, Shift	1		
Bridge		Bridge (44)		
PadRoi_1016x305		Pad Roi (48)		
Copper Exposure	COPPER_EXPOSU	48		
Lead side black white	LIFTED LEAD, SOLDERING	48		
Black White	SOLDERING	48		
Black White	SOLDERING	48		
Soldering Condition	NOT_WET, SOLDERING, LIFTED LEAD, MISSING	48		

## 5.5. Algorithm optimization

Step 1. Enter the recipe edit screen.

Step 2. Open “Algorithm Optimization” drop down menu and select the target algorithm to optimize.



Step 3. Click “Algorithm Optimization” button.

Name	Value
Image filter	Height in 5um step
Brightness direction	Bright
Top & Bottom ratio	50
Left & Right ratio	50
Component Size [...]	59
Search Direction	Out -> In
Terminal	by Object

Name	Value
Lead Height Thre...	100
Fillet lighting	Custom image (Top)
- Upper Threshold	230
Lifted terminal det...	
- Lead start ratio [...]	50
- Lead start finetu...	30
- Lead end ratio [%]	100
Excessive solder ...	
- Area ratio 3H/3 ...	50
- Depth overhang...	33

## 6. Algorithm optimization

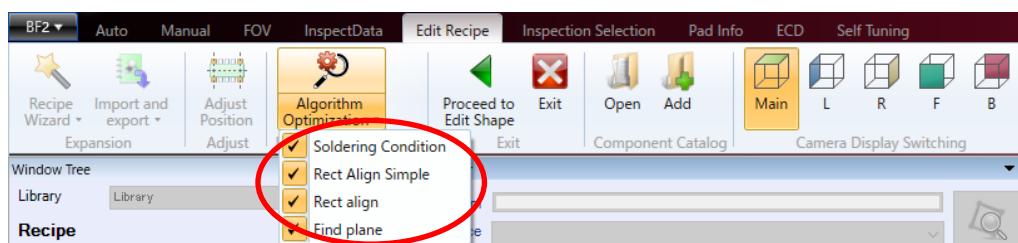
Algorithm Optimization automatize setting algorithm parameters, which can otherwise be set only manually in Recipe Editor. Algorithm Optimization in initial release automatically sets following items.

- Lead Height Threshold [ $\mu\text{m}$ ] parameter of Soldering condition algorithm
- Component Size [%] parameter of Rect Align Simple algorithm
- Image Filter of Rect Align and Rect Align Simple algorithms
- Tolarence of Height value of Find Plane algorithm

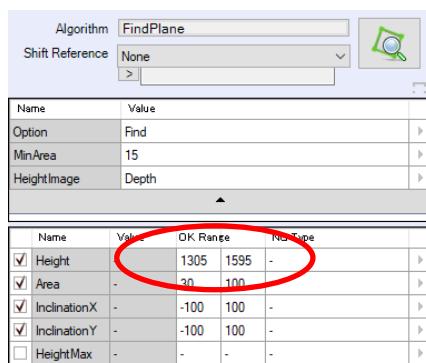
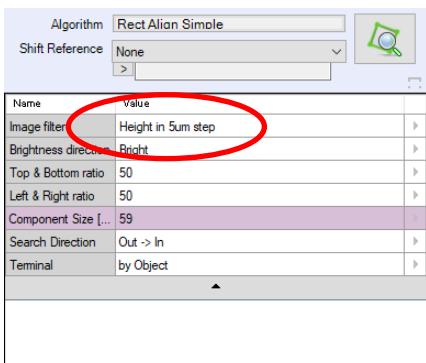
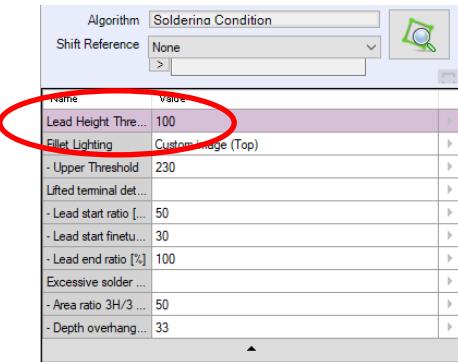
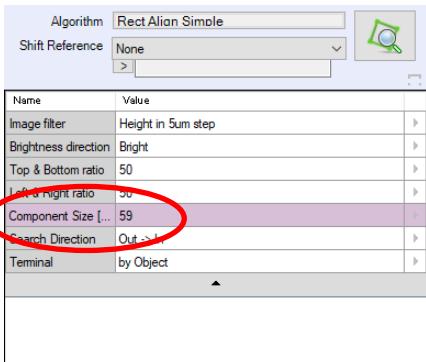
### 6.1. Algorithm optimization on the Recipe editor

Step 1. Enter the recipe edit screen.

Step 2. Open “Algorithm Optimization” drop down menu and select the target algorithm to optimize.



Step 3. Click “Algorithm Optimization” button.

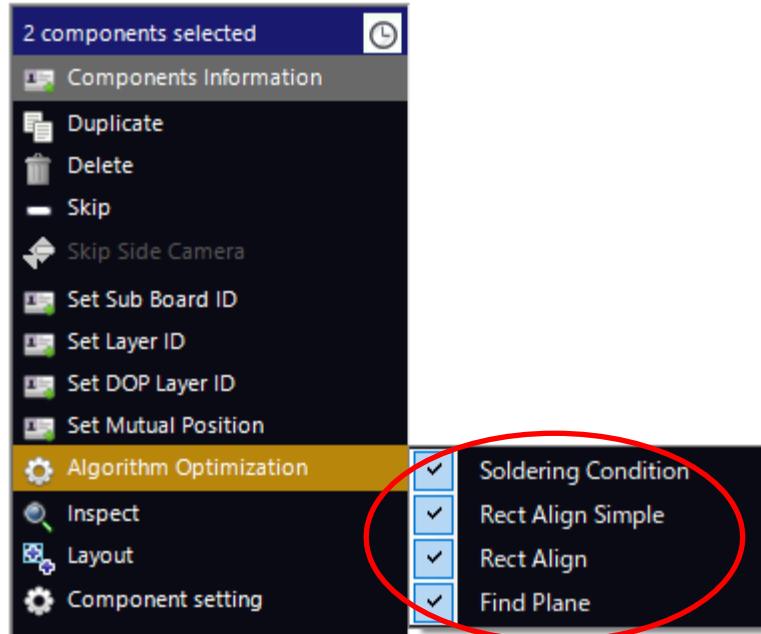


## 6.2. Algorithm optimization on the Board viewer

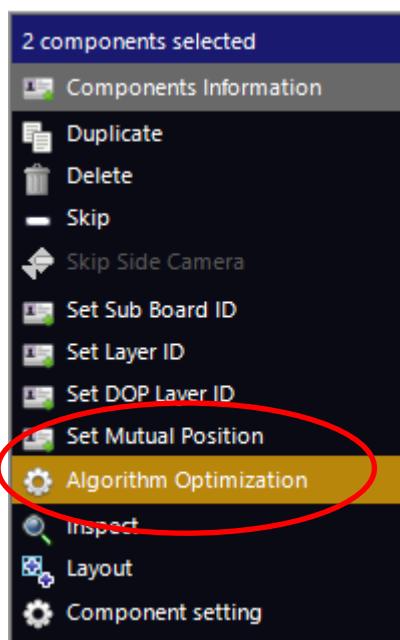
Algorithm Optimization can be used for one selected component or for more selected components in InspectData tab.

Here describes how optiminize selected component(s).

Step1: Set which algorithm will be optimized for selected component(s).



Step2: Push Algorithm Optimization menu item. After that choosen algorithms will be optimized.



## Step3: Changes can be confirmed in Recipe Editor.

Algorithm: Rect Alien Simple

Shift Reference: None

Name	Value
Image filter	Height in 5um step
Brightness direction	Bright
Top & Bottom ratio	50
Left & Right ratio	50
Component Size [...]	59
Search Direction	Out -> In
Terminal	by Object

Algorithm: Soldering Condition

Shift Reference: None

Name	Value
Lead Height Thre...	100
Fillet Lighting	Custom Image (Top)
- Upper Threshold	230
Lifted terminal det...	
- Lead start ratio [...]	50
- Lead start finetu...	30
- Lead end ratio [%]	100
Excessive solder ...	
- Area ratio 3H/3 ...	50
- Depth overhang...	33

Algorithm: Rect Alien Simple

Shift Reference: None

Name	Value
Image filter	Height in 5um step
Brightness direction	Bright
Top & Bottom ratio	50
Left & Right ratio	50
Component Size [...]	59
Search Direction	Out -> In
Terminal	by Object

Algorithm: FindPlane

Shift Reference: None

Name	Value
Option	Find
MinArea	15
HeightImage	Depth

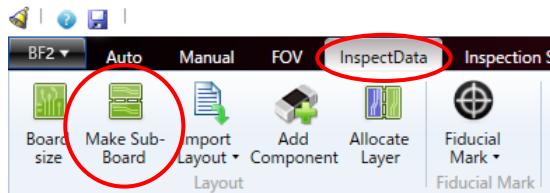
  

Name	Value	OK Range	NSType
<input checked="" type="checkbox"/> Height		1305 1595	-
<input checked="" type="checkbox"/> Area	-	30 100	-
<input checked="" type="checkbox"/> InclinationX	-	-100 100	-
<input checked="" type="checkbox"/> InclinationY	-	-100 100	-
<input type="checkbox"/> HeightMax	-	- -	-

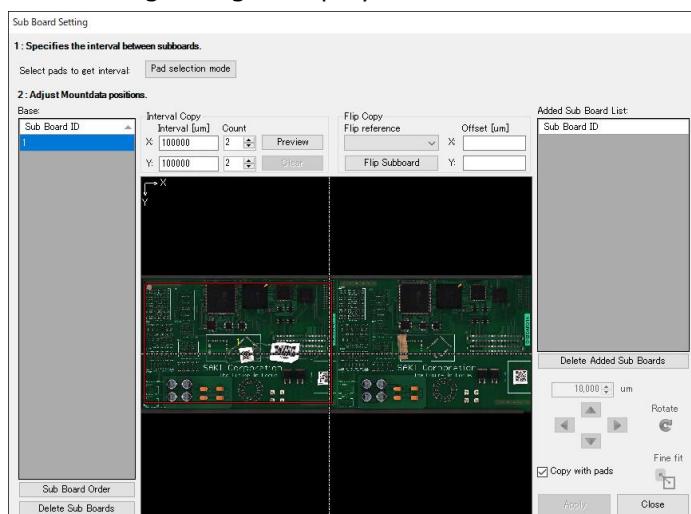
## 7. Make sub-board improvement

### 7.1. Make sub-board with mouse drag operation

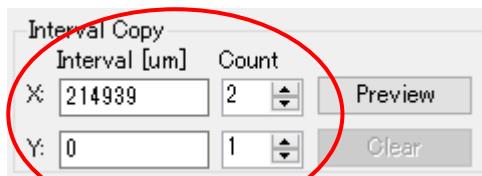
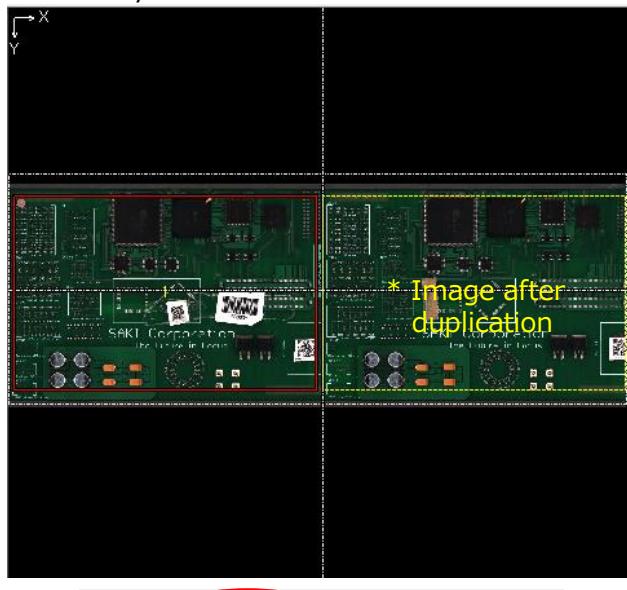
Step1: Select the “Make Sub-Board” menu from the “Layout” group on the “InspectData” tab.



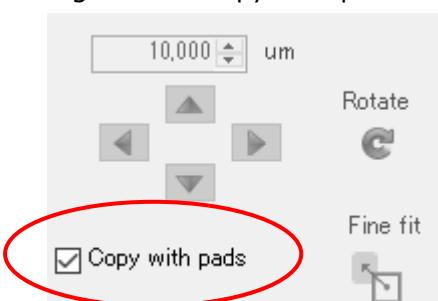
Step2: The sub board setting dialog is displayed.



Step3: Select the drag range so that it surrounds the board you want to duplicate (moving while left-clicking), and the duplicated image will be displayed within the range. In addition, the "interval" and "count" of the replication will be updated automatically.



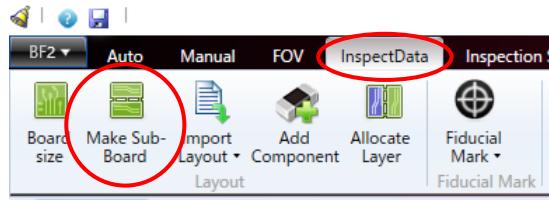
Step4: Click "Preview" button and sub-boards will be duplicated as preview.  
 \* PadInfo will be copied together if "Copy with pads" was checked.



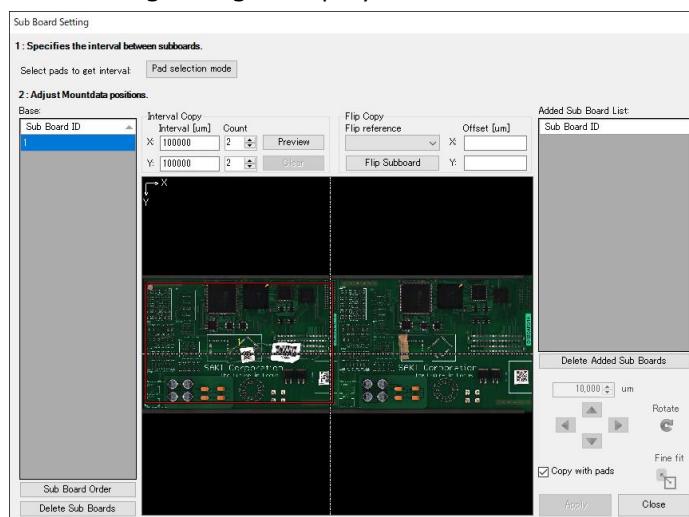
Step6: Click "Apply" button and sub-board will be duplicated.

## 7.2. Make sub-board with Pad selection mode

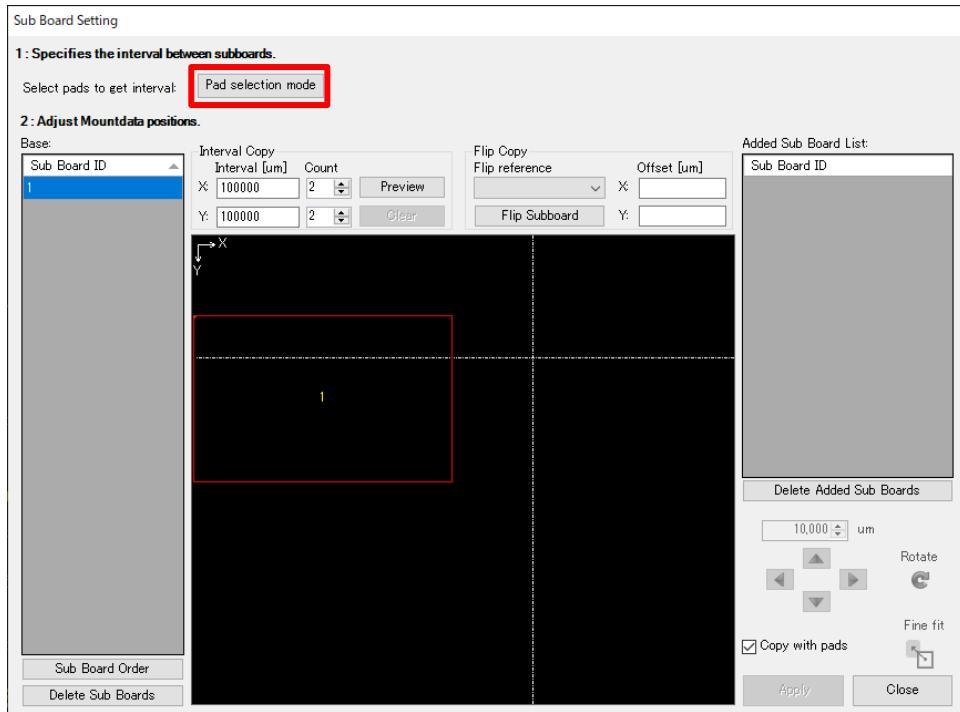
Step1: Select the “Make Sub-Board” menu from the “Layout” group on the “InspectData” tab.



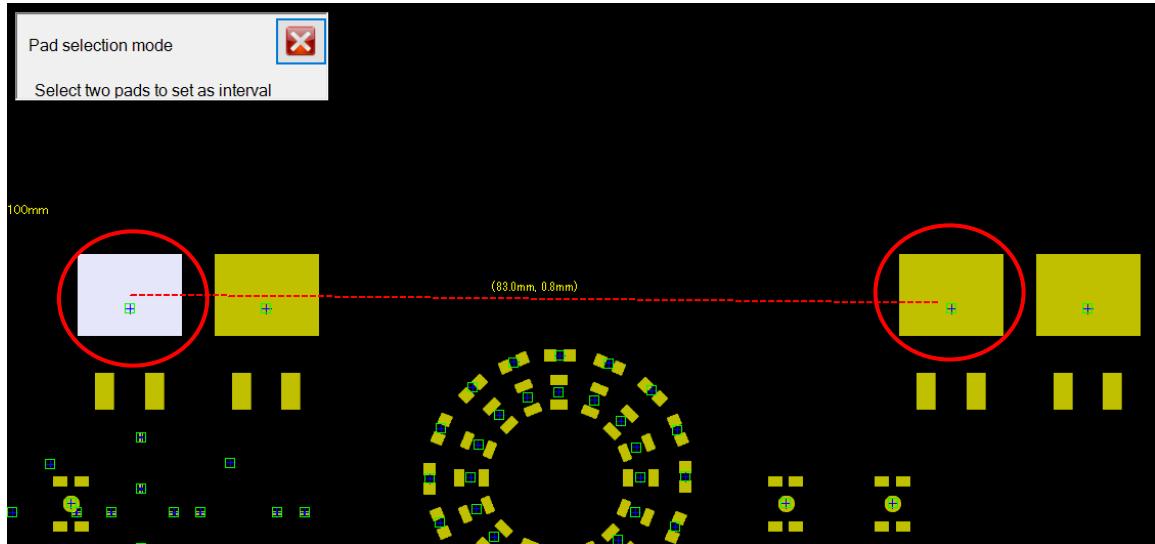
Step2: The sub board setting dialog is displayed.



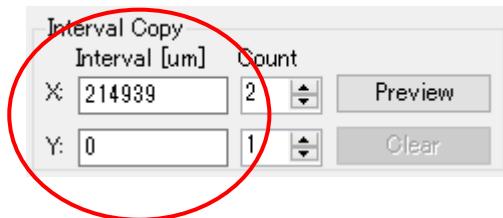
Step3: Click the “Pad selection mode” button.



Step4: Select two pads that you want to set as intervals.

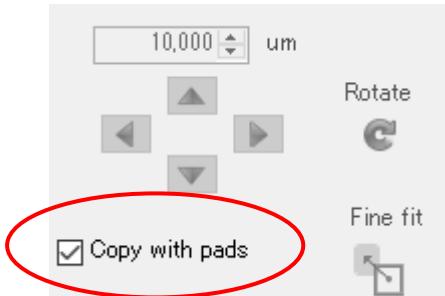


The distance between the centers of the two selected pads is set as the interval X and Y.



Step5: Click “Apply” button and sub-board will be duplicated.

\* PadInfo will be copied together if “Copy with pads” was checked.

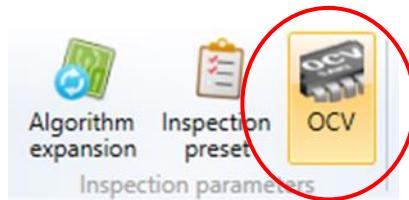


Step6: Click “Apply” button and sub-board will be duplicated.

## 8. OCV thumbnails

It can be set OCV parameters of all Link IDs by operation on the one dialog.

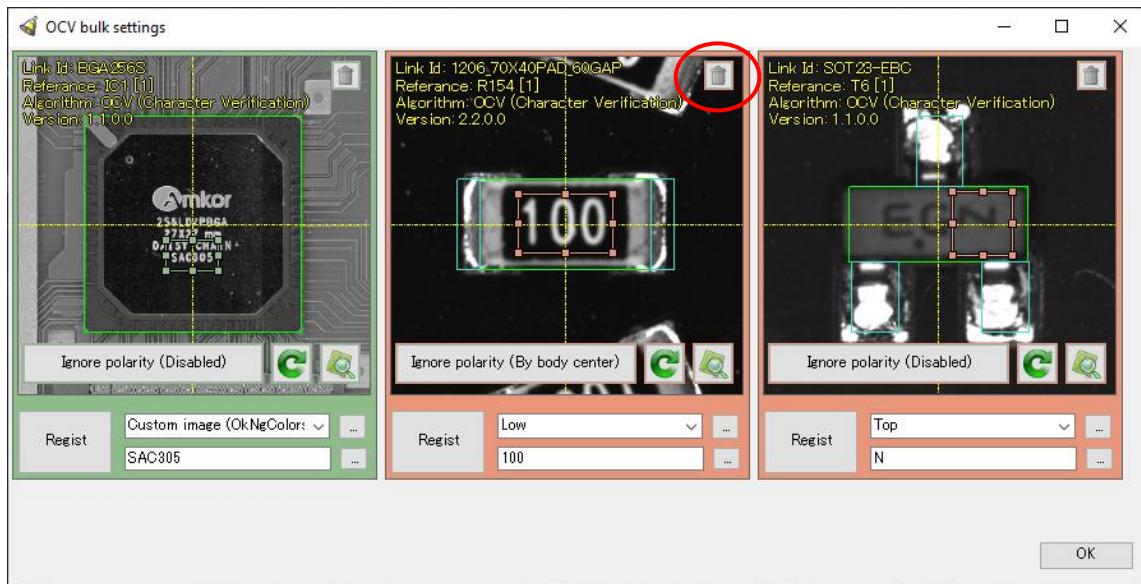
Step 1 : Click "OCV" button on the Inspect Data tab.



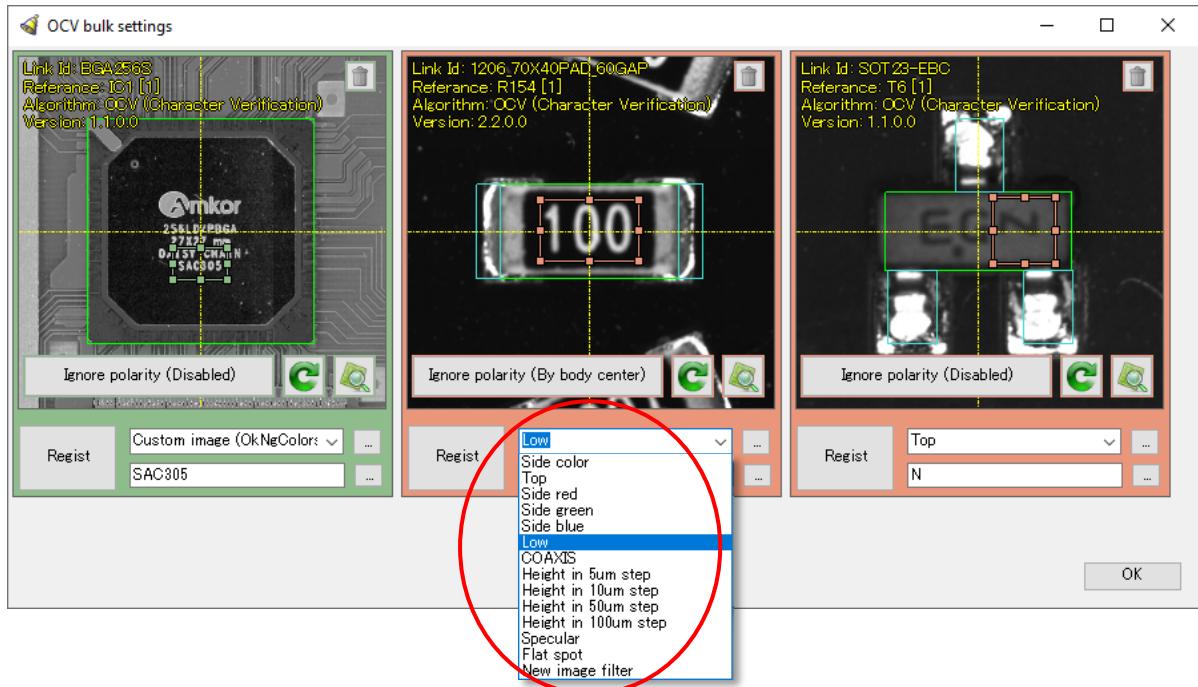
Step 2 : Adjust size, position and rotation of the inspection window.



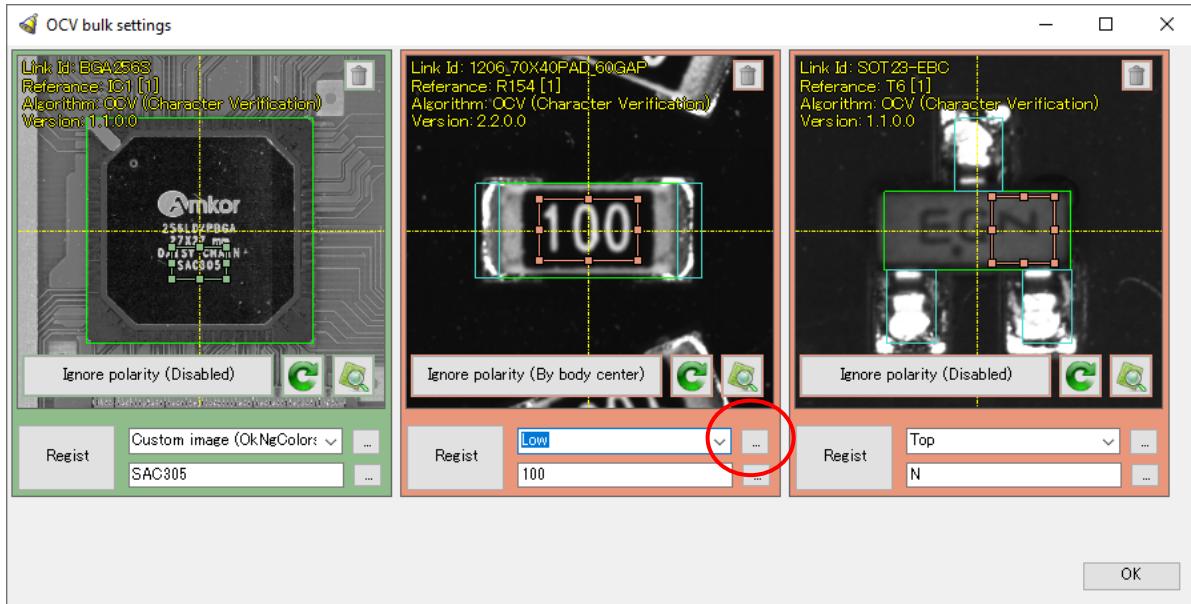
Click "delete" button if it does not need to inspect OCV.



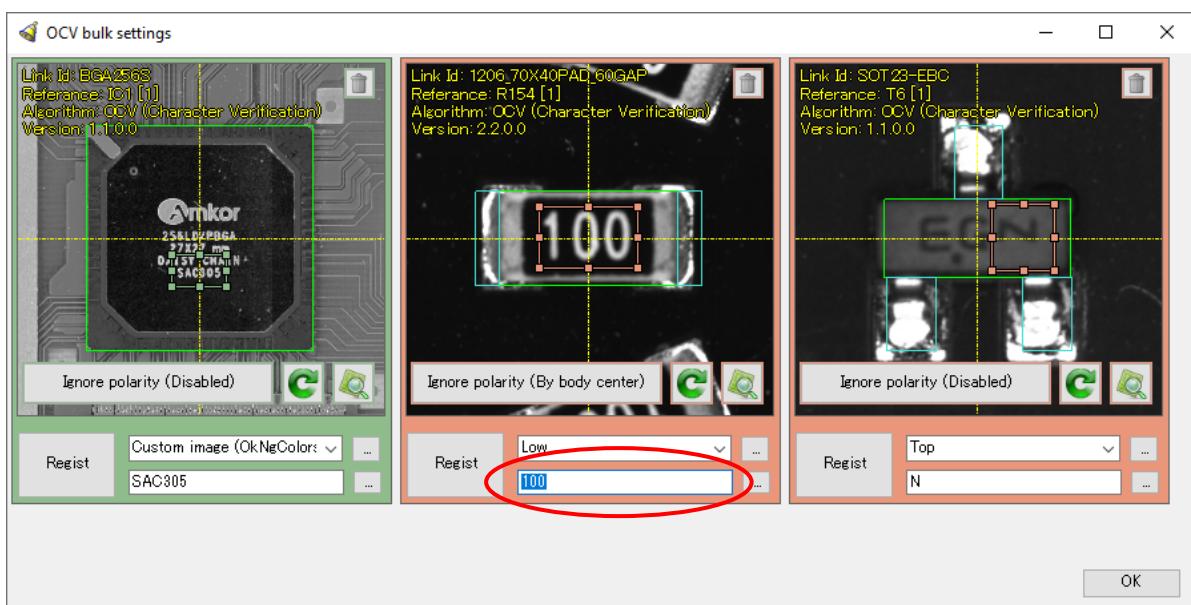
Step 3 : Select "Image filter" to use for inspection.



Click “...” button if it needs to create new image filter, or edit parameters of image filters.  
 \* See the “Programming manual” for definition of image filters.

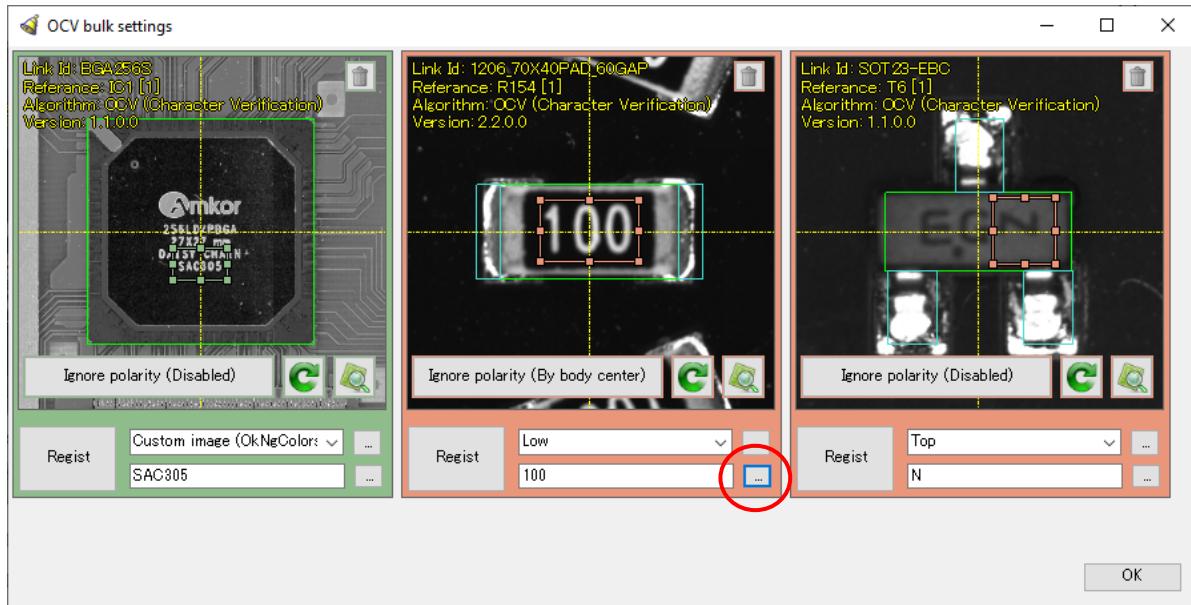


Step 4 : Input “Characters” to inspect.

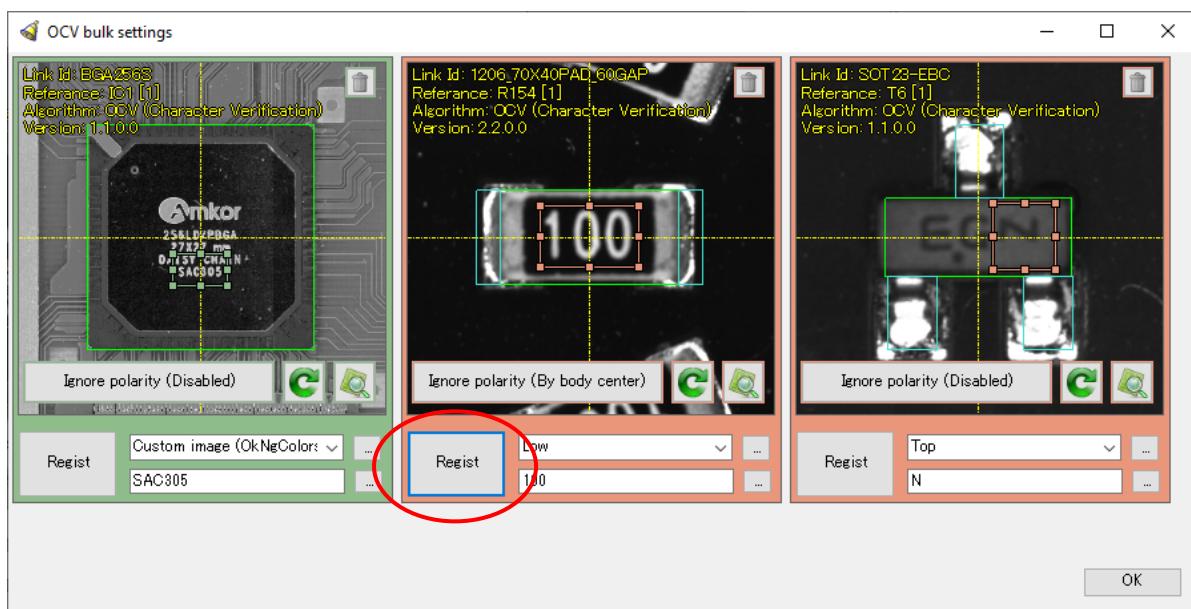


Click “...” button to register the “Font”.

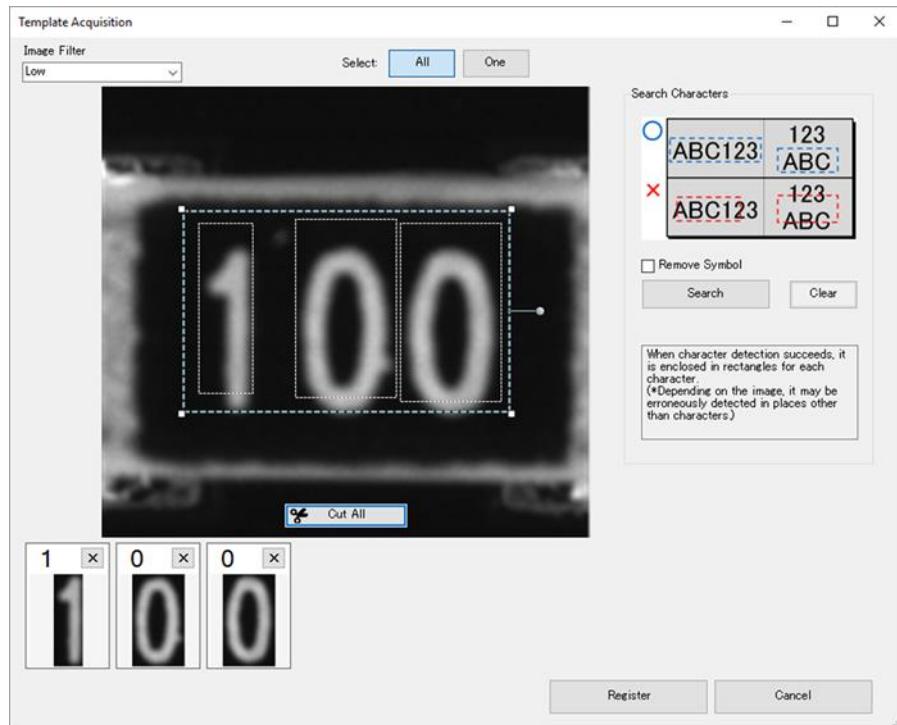
\* See the “Programming manual” for operation of “Registration of Font”.



Step 5 : Click “Regist” button to teach new characters.

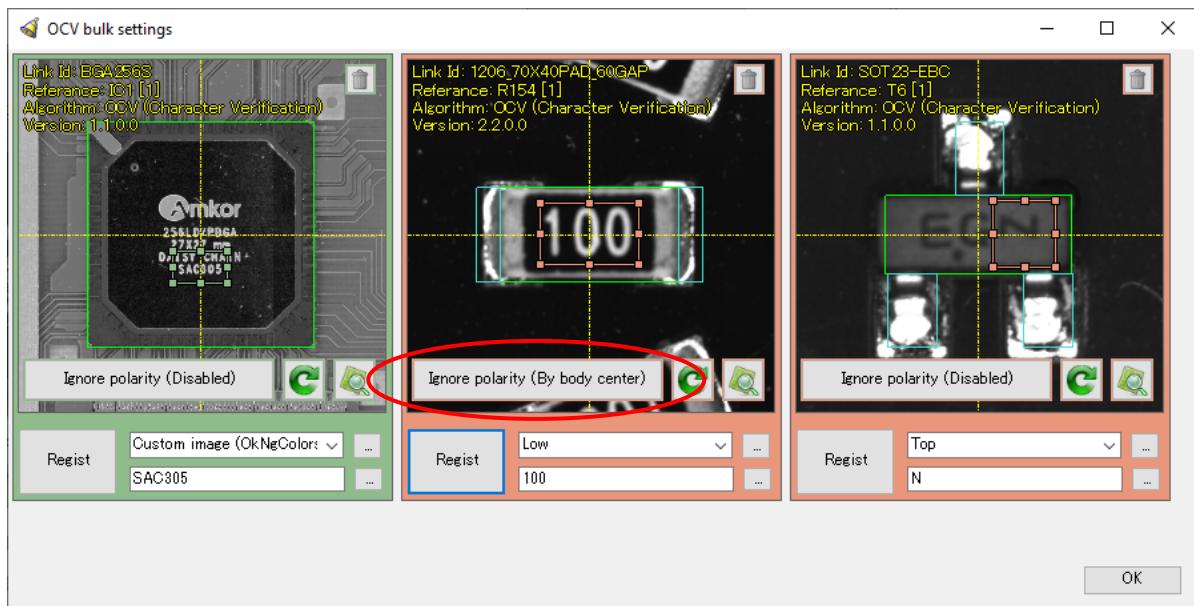


\* See the "Programming manual" for operation of "Registration OCV characters".

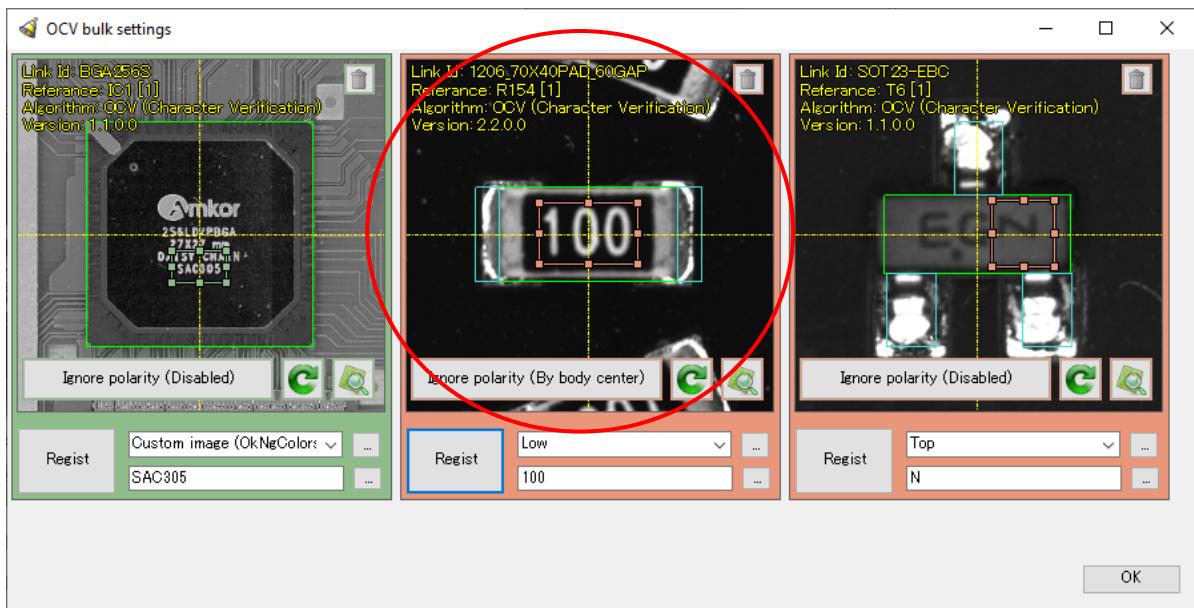


Step 6 : Select "Ignore polarity" option if it need.

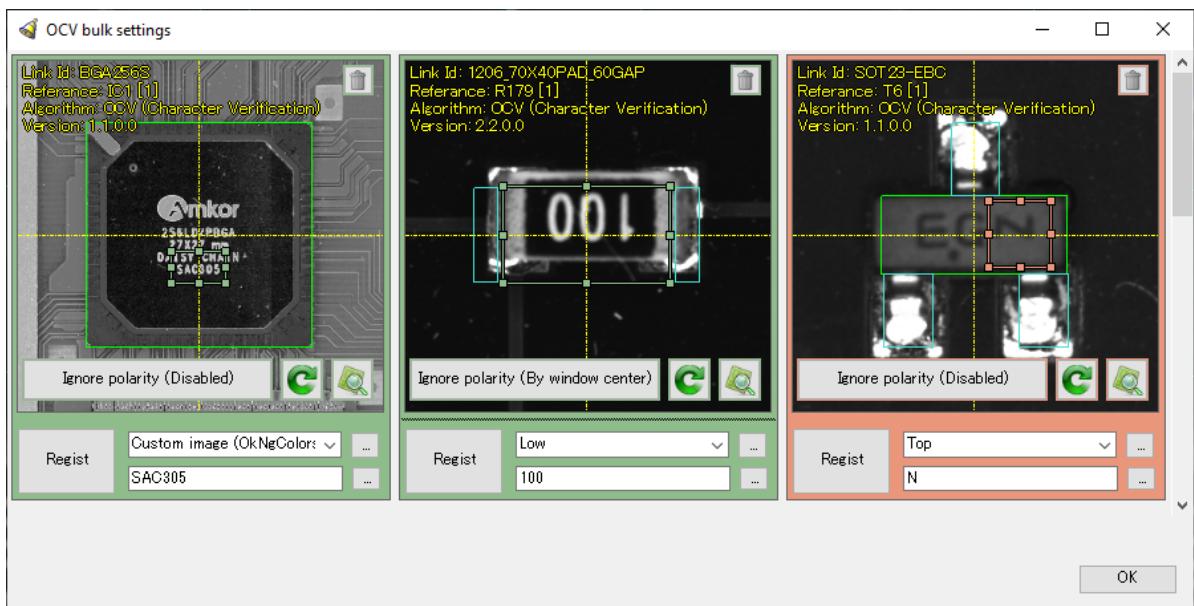
\* "Ignore polarity" option will be enabled when OCV "1.1.0.0" or over was assigned.



Step 7 : It can switch to the “Recipe Editor” by double-click a component thumbnail.



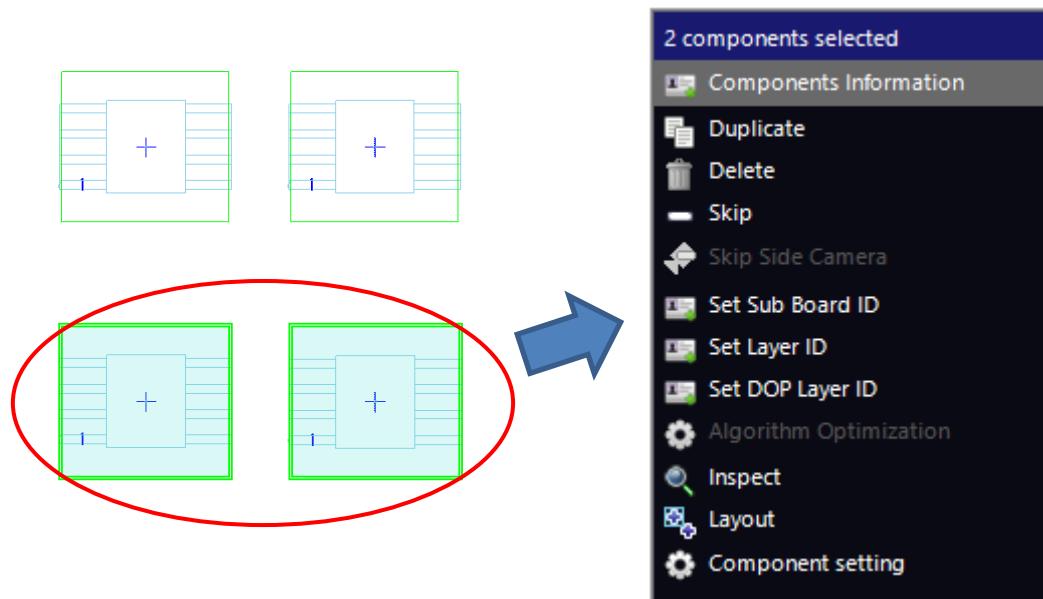
Step 8 : It will be displayed as green when inspection result is OK. And it will be displayed as red when inspection result is NG.



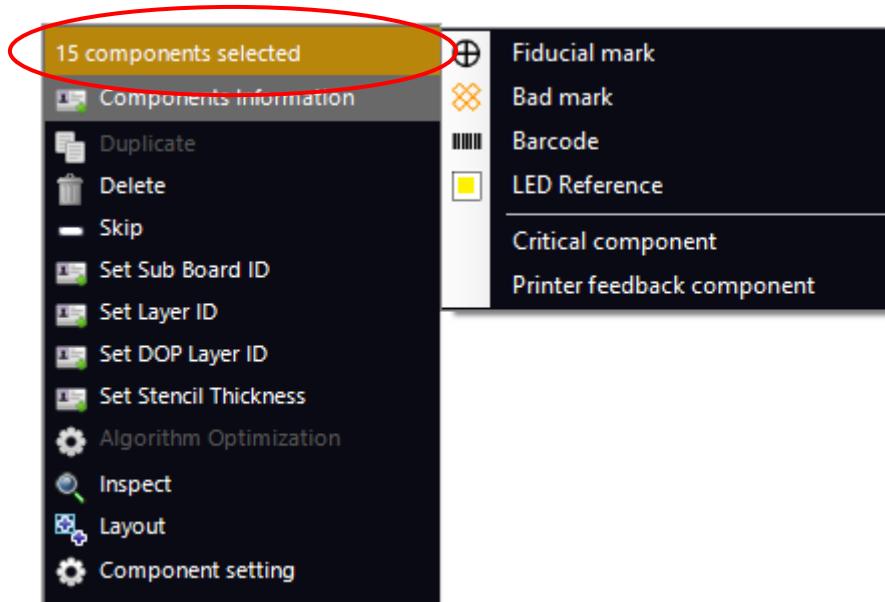
## 9. Set component properties with multi selection

### 9.1. Set component types

Step 1: Select components on the “Inspect data tab” and property menu will be displayed.



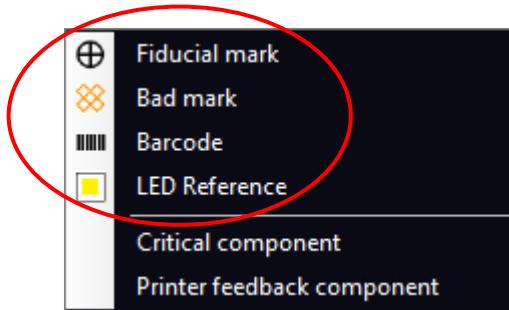
Step 2: Click caption bar and “Component type list” menu will be displayed.



Step 3: Select component type.

**Procedure of Component type conversion**

When you select a component type ([Fiducial Mark], [Bad Mark], [Barcode], [LED Reference]) from the component type pull-down menu, the component types of the selected parts will be converted at once.

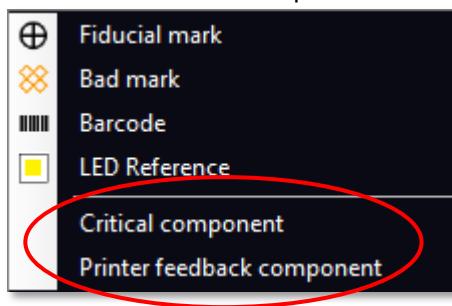


\* Only Normal component can be changed.

If at least one of the selected parts contains a [Fiducial mark], [Bad mark], [barcode], or [LED reference], the component type pull-down is not selectable (grayed out).

#### **Procedure of conversion for Critical component and Printer feedback component**

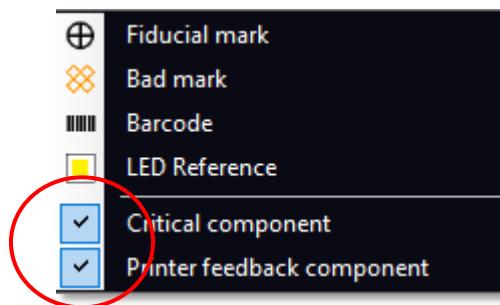
When a Critical component is selected from the component type pull-down, the selected parts are converted to Critical component at once.



If all selected parts are Critical component, a check icon is displayed on the Critical component button.

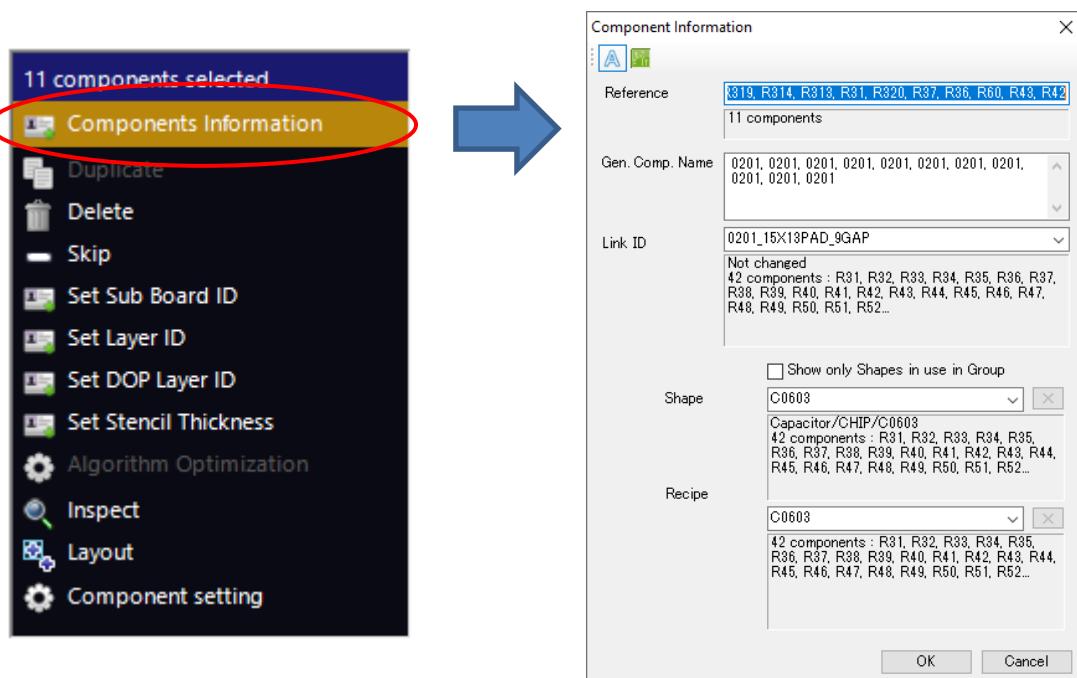
If the Critical component button is selected while the check icon is displayed, all selected parts are no longer Critical component.

The same applies to Printer feedback component.



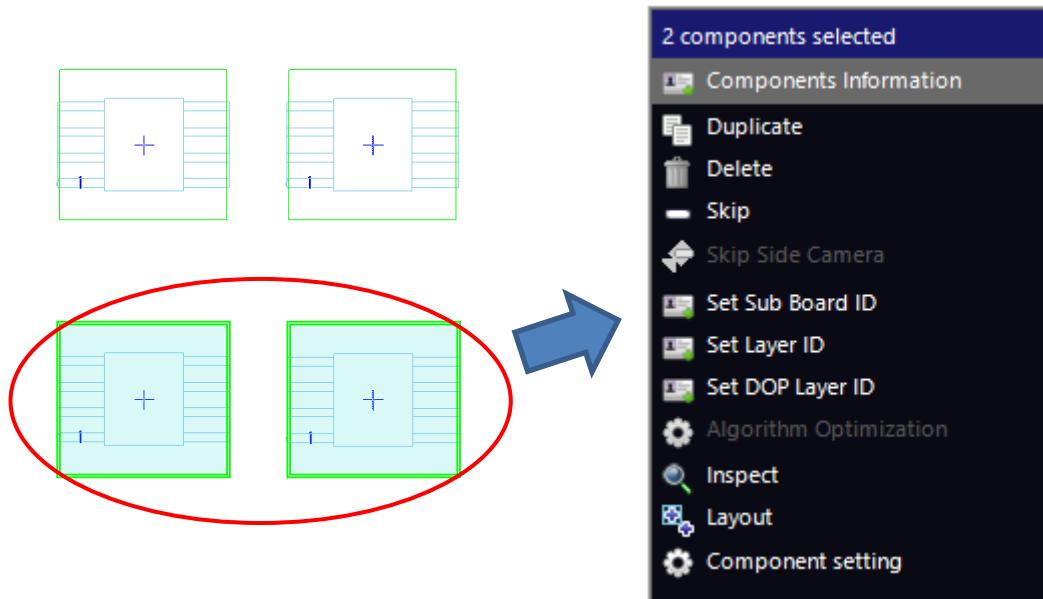
#### **Procedure of component information change**

It can be opened “Component Information” dialog.

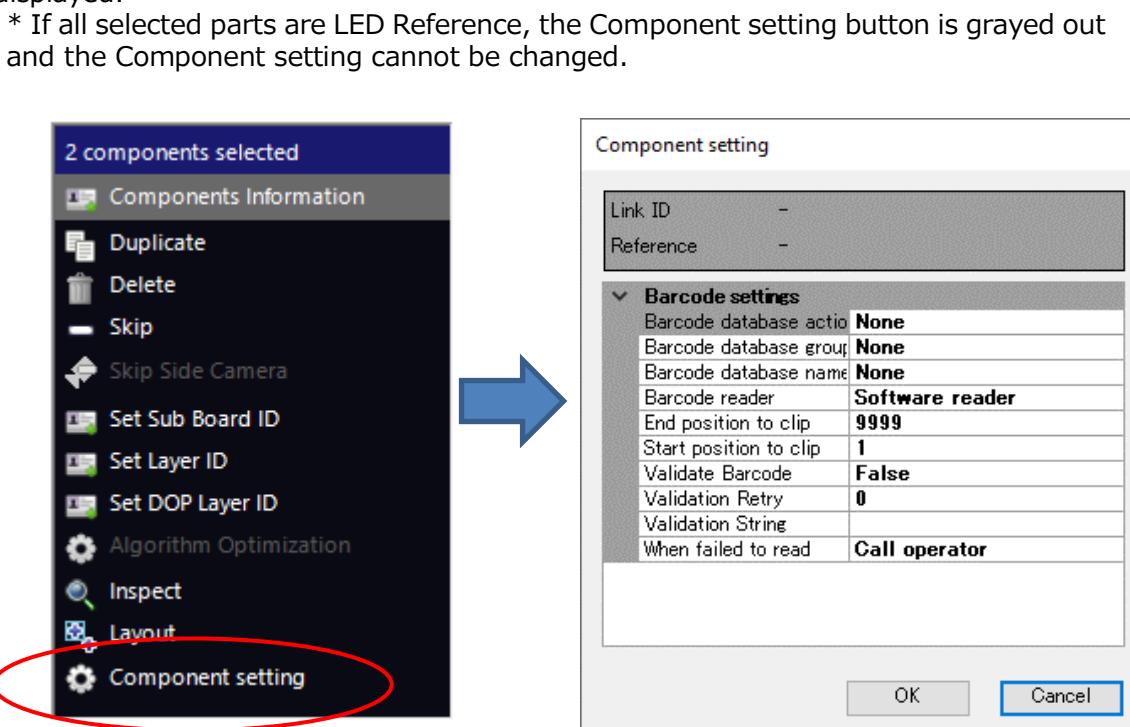


## 9.2. Set component setting

Step 1: Select components on the “Inspect data tab” and property menu will be displayed.



Step 2: Click “Component setting” menu and “Component setting” dialog will be displayed.



Step 3: Set each settings on “Component setting” dialog.

Selected components type	Component setting items
Only Normal components	<p>* Inspect Layer is displayed only in BF-3Si</p>
Only Fiducial marks	
Only LED References	Not selectable ("Component setting" menu will be grayed out)
Only Bad marks	
Only Barcodes	
Mixed types	

## 10. Making SAKI Standard format data with ePM-AOI

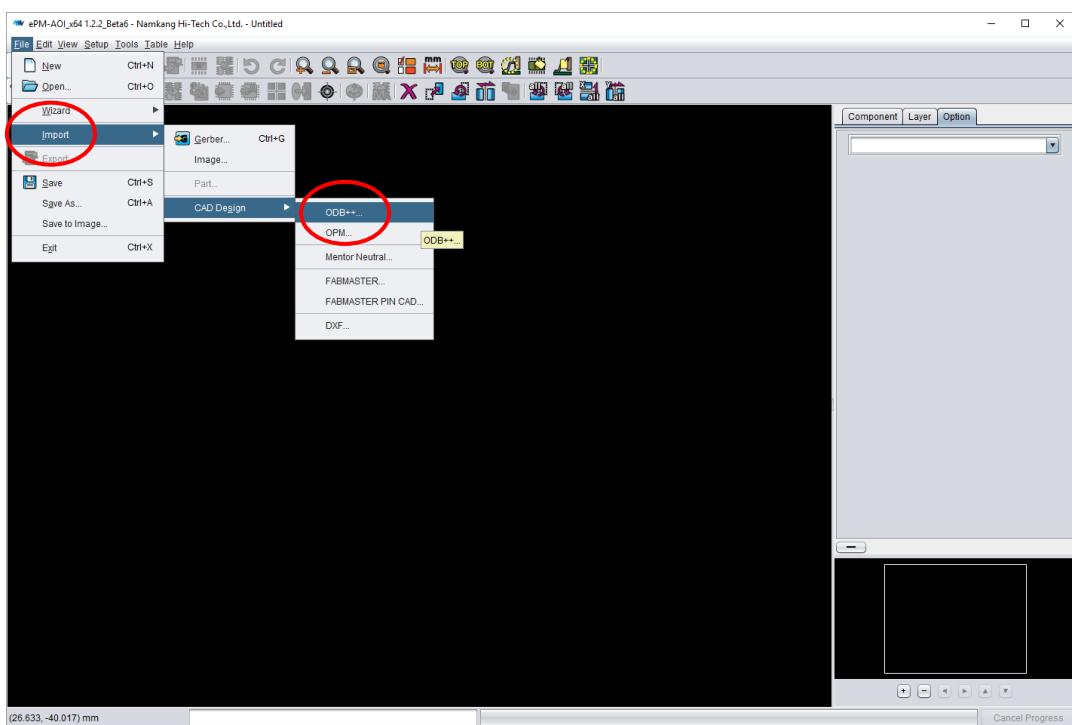
### 10.1. Importing ODB++

It needs "SSP Option license" to use importing ODB++ function of ePM-AOI.

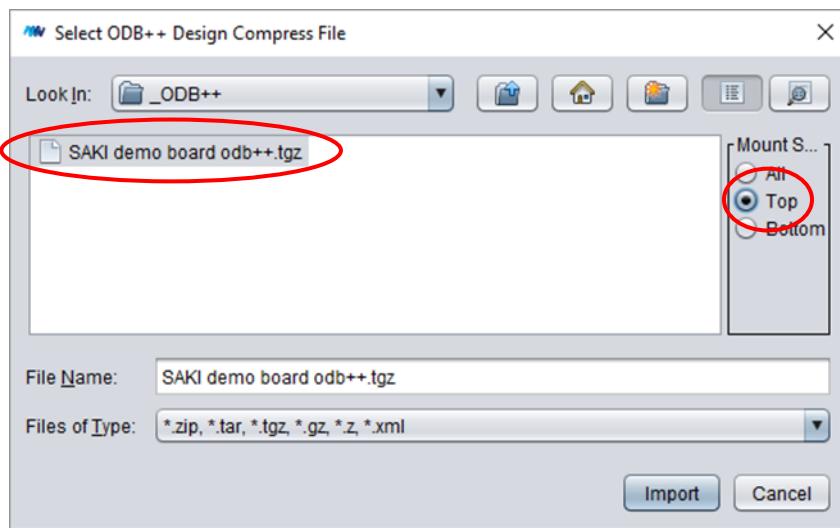
\* See "[TSM-18034-01EC]\_How\_to\_upgrade\_SSP\_Option\_License" for upgrading license.

\* See "[SFM18019-01JA]\_SoftwareFunctionManual\_SakiSelfProgramming.pdf" for operation of ePM-AOI.

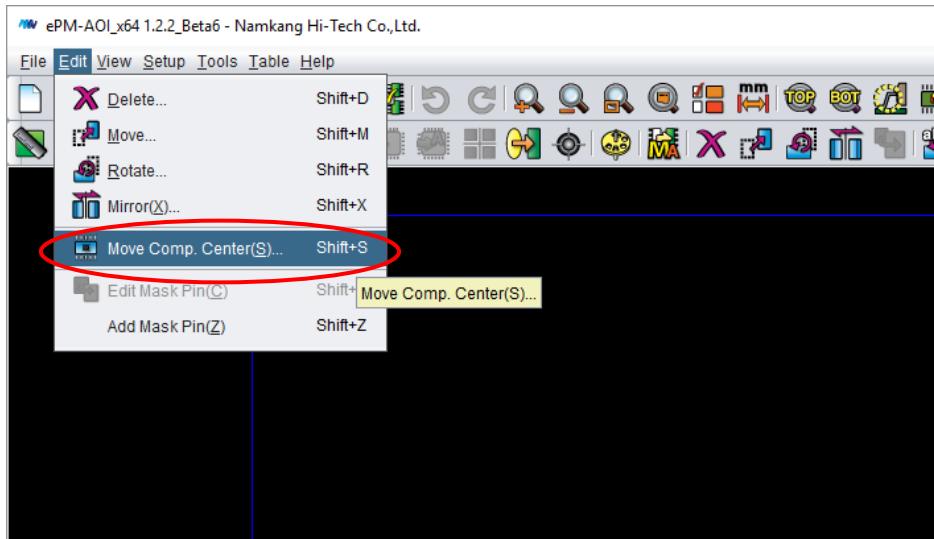
Step 1 : Click "File -> Import -> CAD Design -> ODB++" and open "Select ODB++ file" dialog.



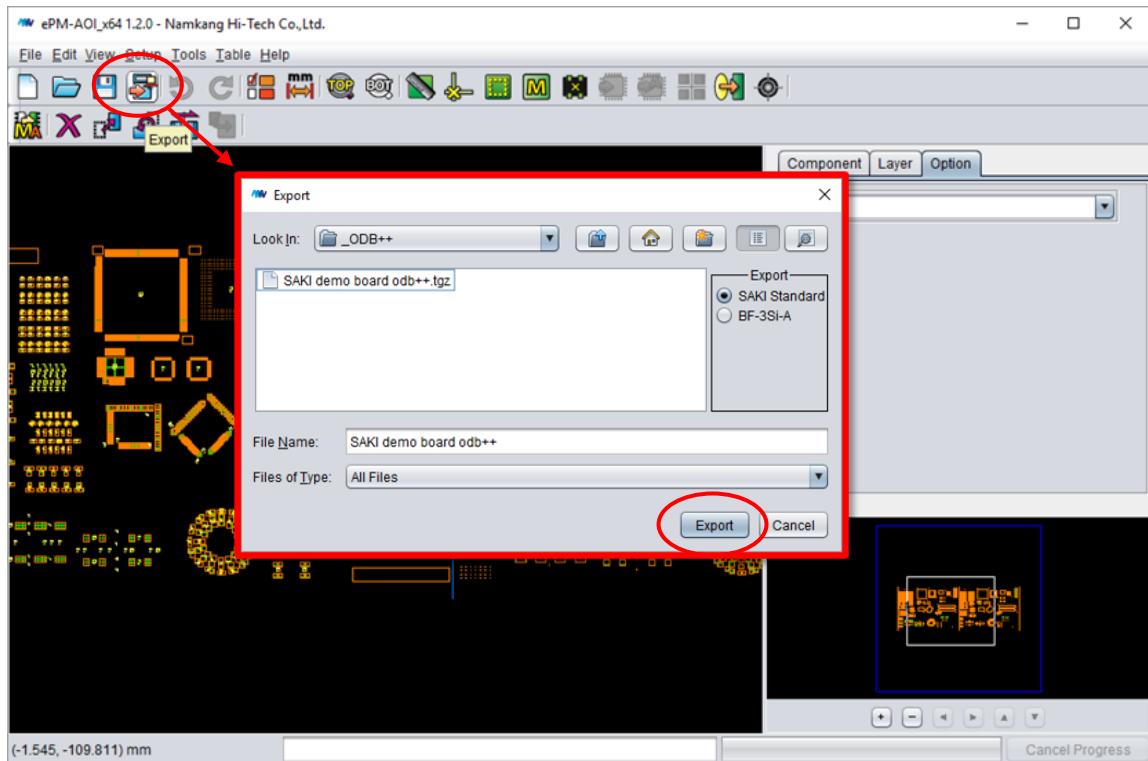
Step 2 : Select ODB++ file and specify board side.



Step 3 : Click "Move Comp. Center" menu and components center position will be adjust.



Step 4 : Export as "SAKI Standard format data".



Step 5 : Import SAKI Standard format to BF2(See "2. SAKI Standard format Data").

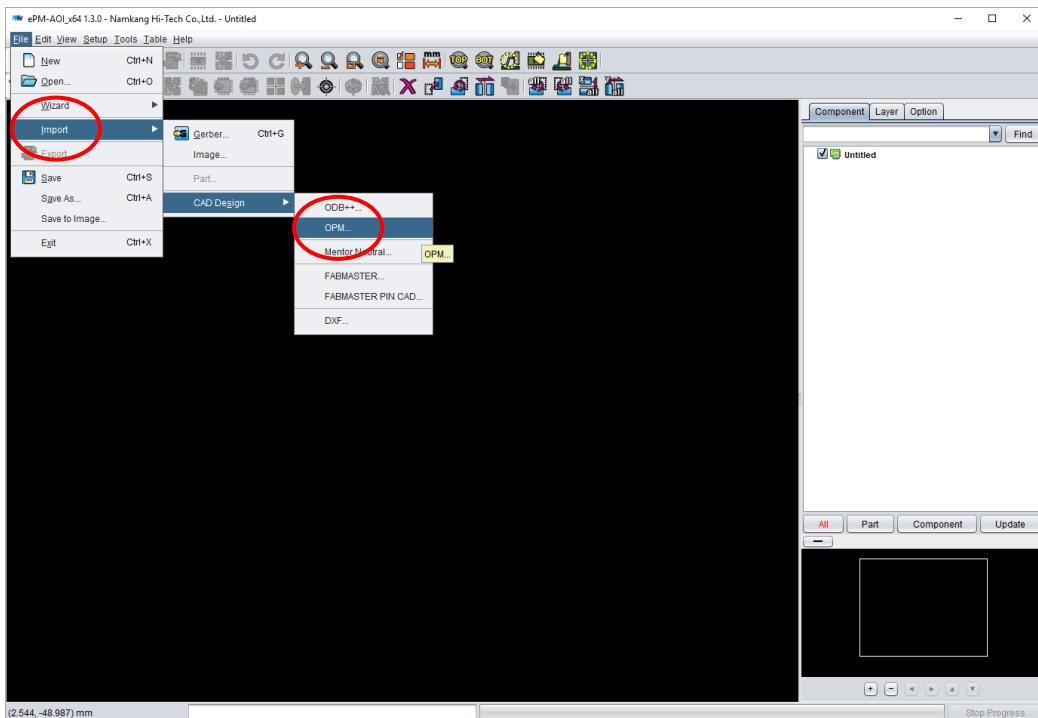
## 10.2. Importing OPM

It needs "SSP Option license" to use importing OPM function of ePM-AOI.

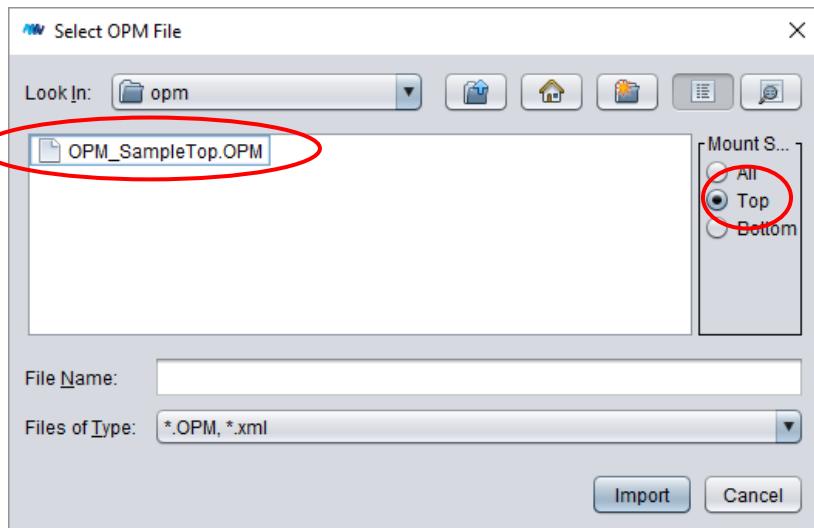
\* See "[TSM-18034-01EC]\_How\_to\_upgrade\_SSP\_Option\_License" for upgrading license.

\* See "[SFM18019-01JA]\_SoftwareFunctionManual\_SakiSelfProgramming.pdf" for operation of ePM-AOI.

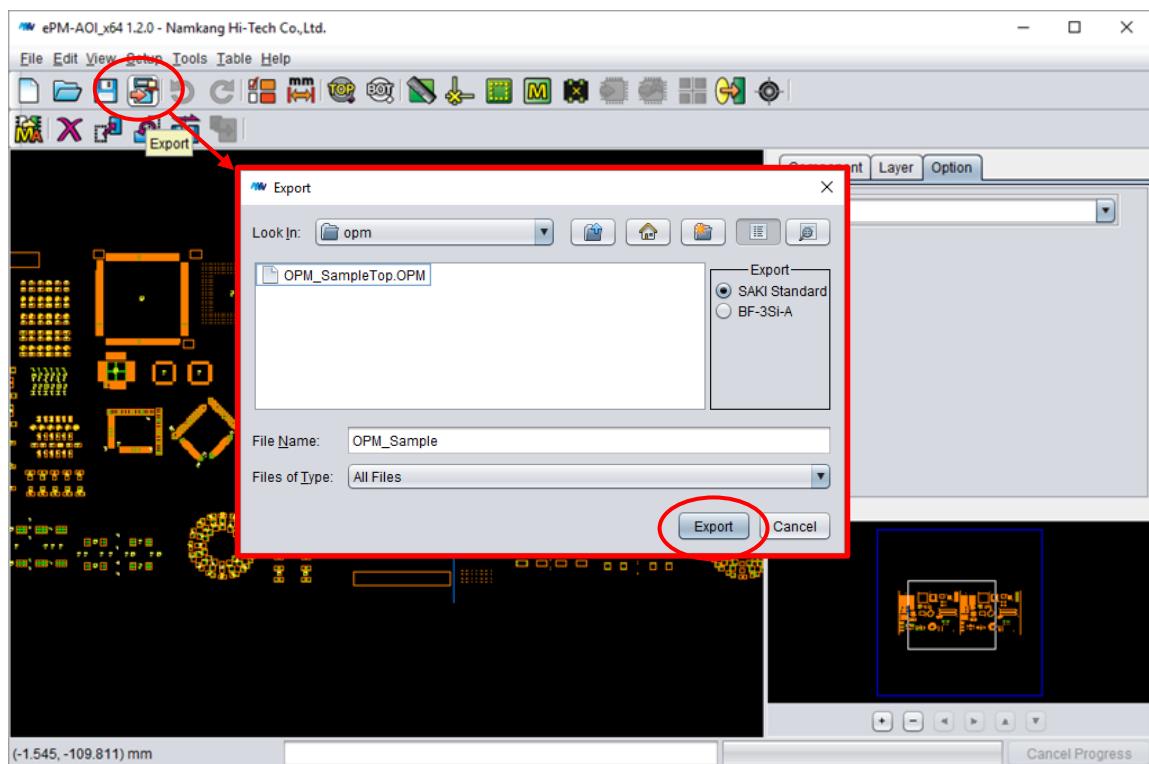
Step 1 : Click "File -> Import -> CAD Design -> OPM" and open "Select OPM file" dialog.



Step 2 : Select OPM file and specify board side.



Step 3 : Export as "SAKI Standard format data".

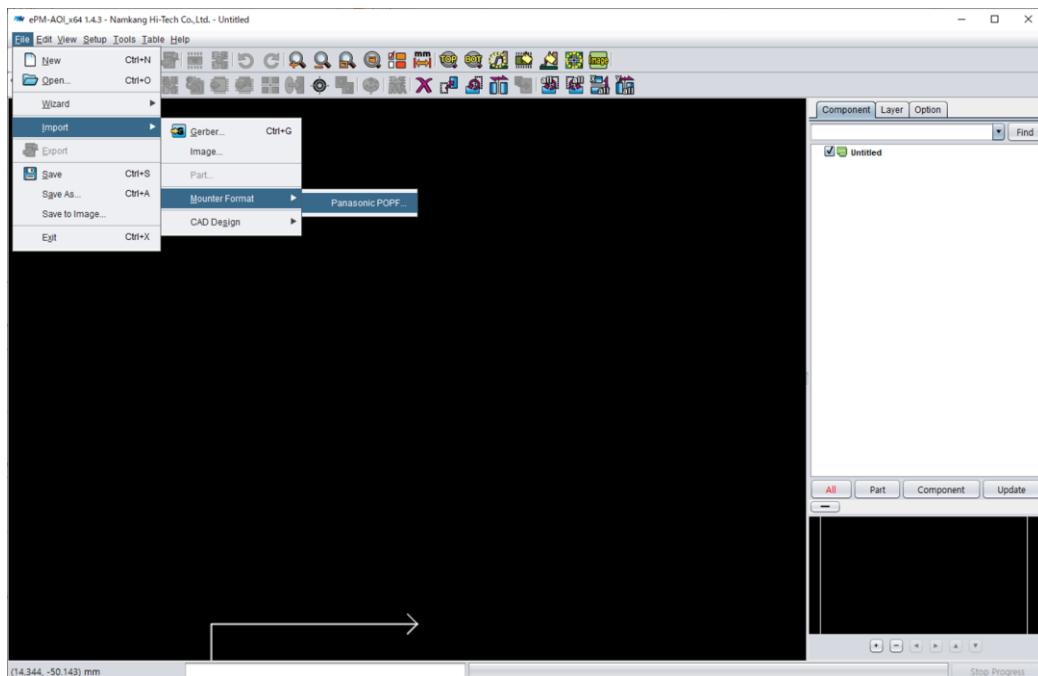


Step 4 : Import SAKI Standard format to BF2(See "2. SAKI Standard format Data").

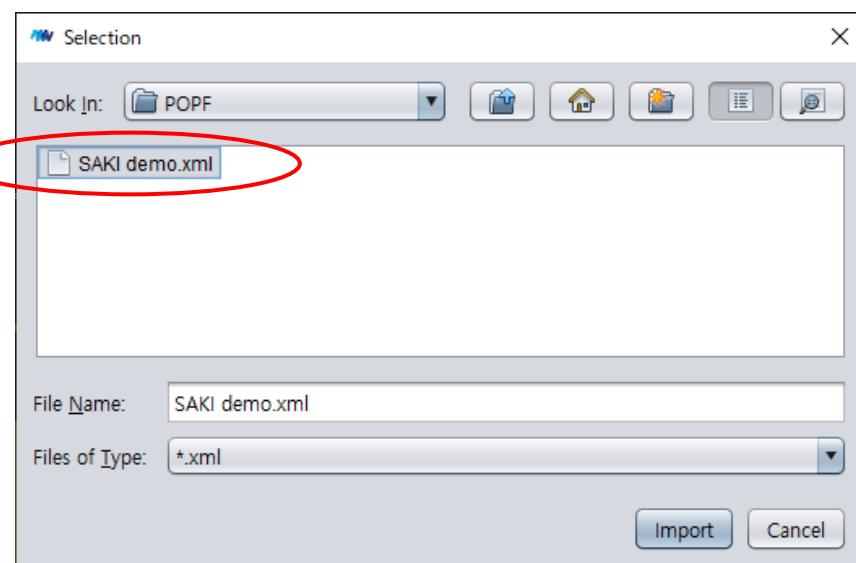
### 10.3. Importing POPF

It needs the "Converting" license to import SAKI standard data which is made by POPF on ePM-AOI into BF2.

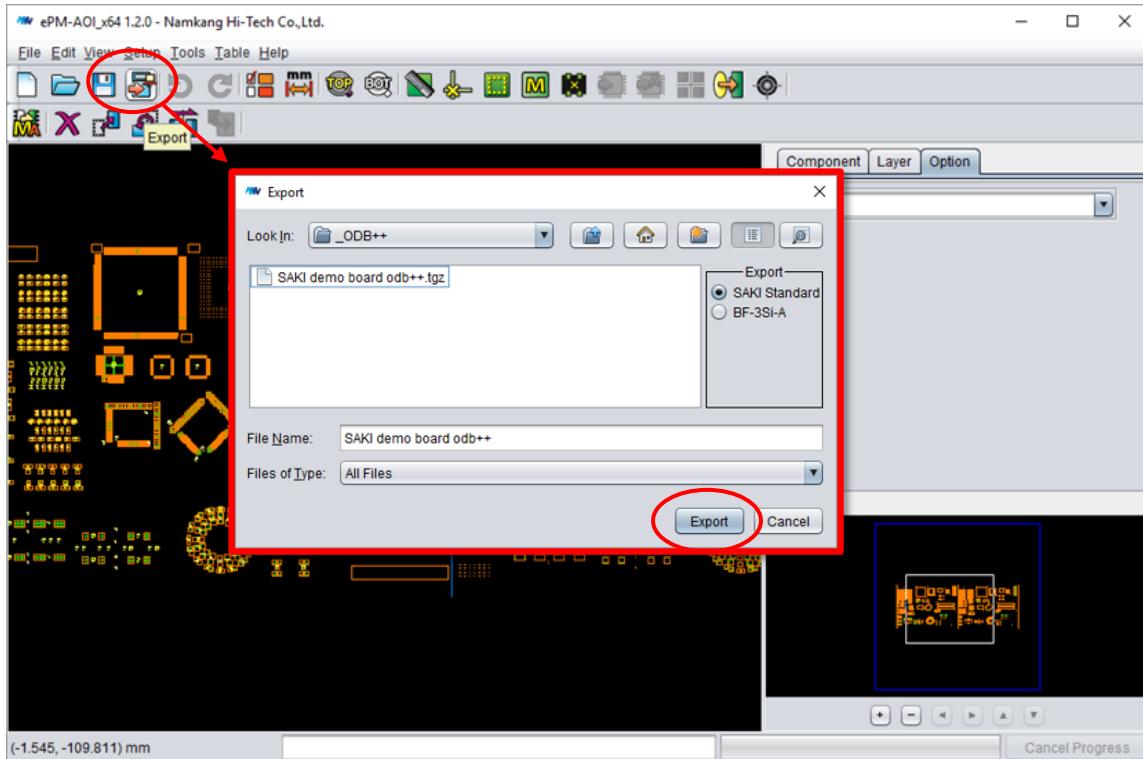
Step 1: Click "File -> Import -> Mounter format -> Panasonic POPF" and open "Select POPF file" dialog.



Step 2: Select POPF file.



Step 3 : Export as “SAKI Standard format data”.



Step 4 : Import SAKI Standard format to BF2(See “2. SAKI Standard format Data”).

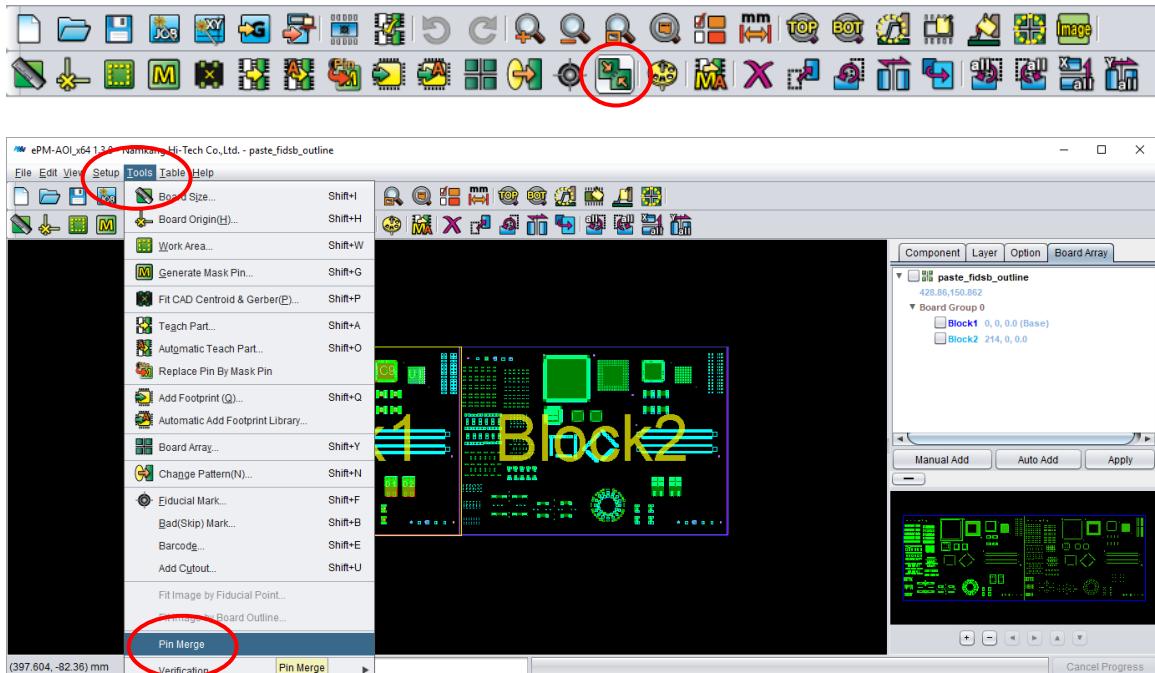
## 10.4. Importing Gerber and Mount data with Merge Pins

It needs "Merge pins" operation for use one SAKI standard format data on SPI and AOI machines.

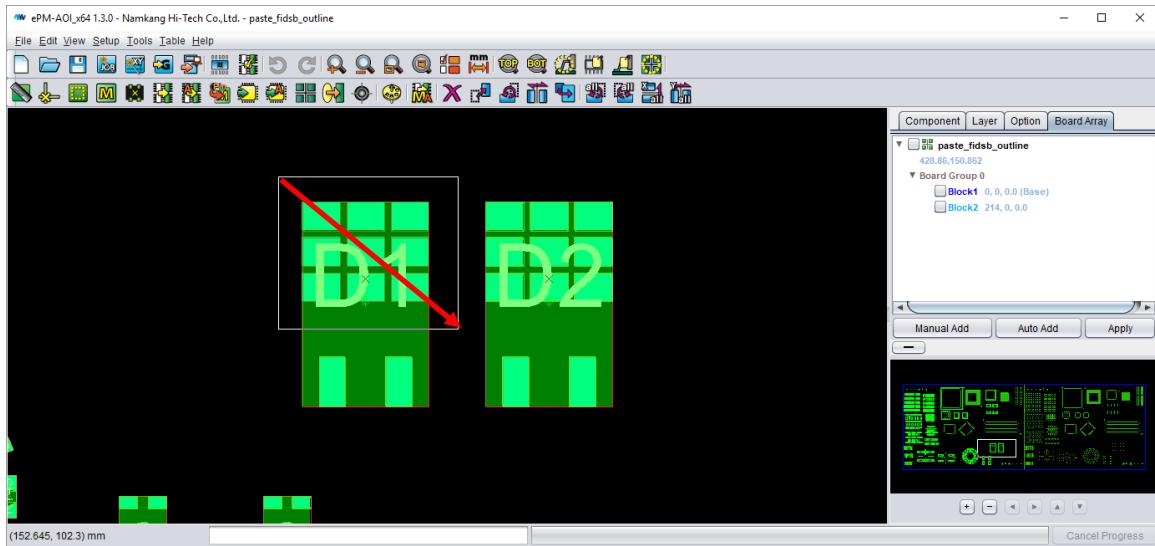
Step 1: Make job data with Gerber and Mount data.



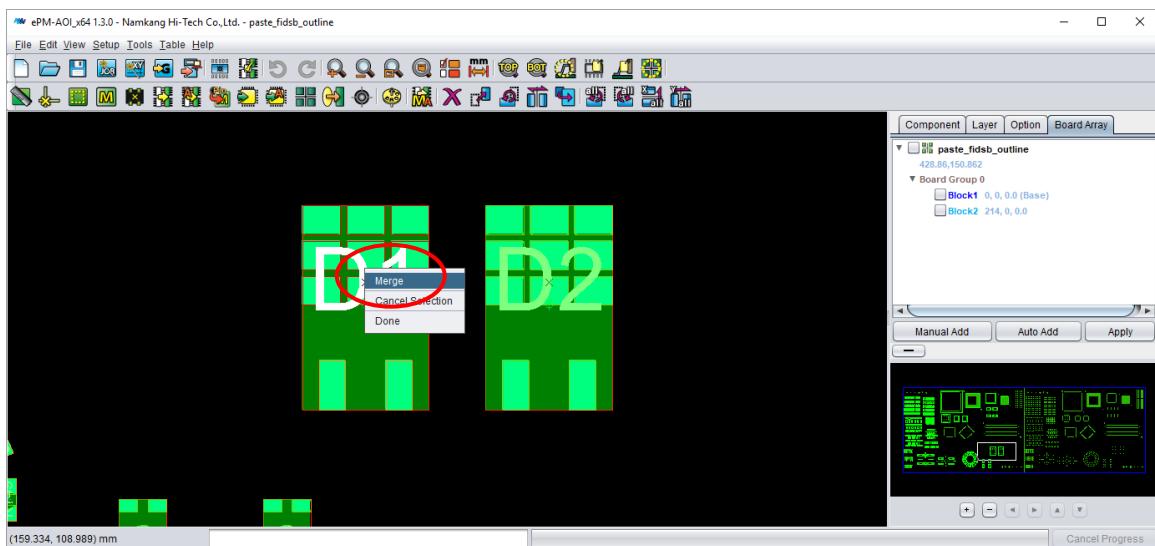
Step 2: Click "Pin merge" button or open "Tools" menu and click "Pin merge" menu.



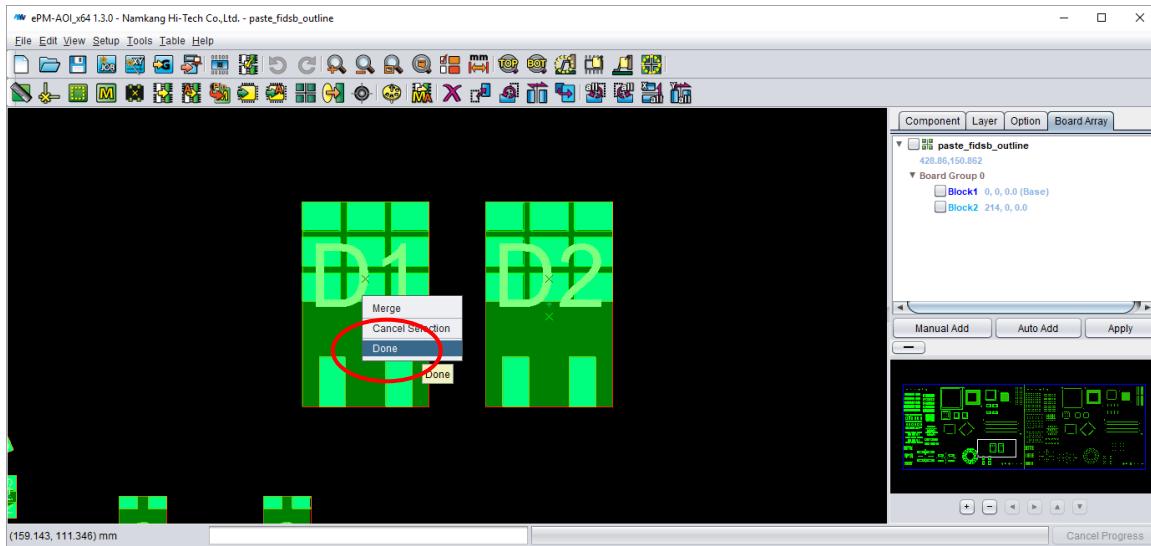
Step 3: Select pins to merge by using mouse drag operation.



Step 4: Open menu by using mouse right-click and click "Merge" menu.

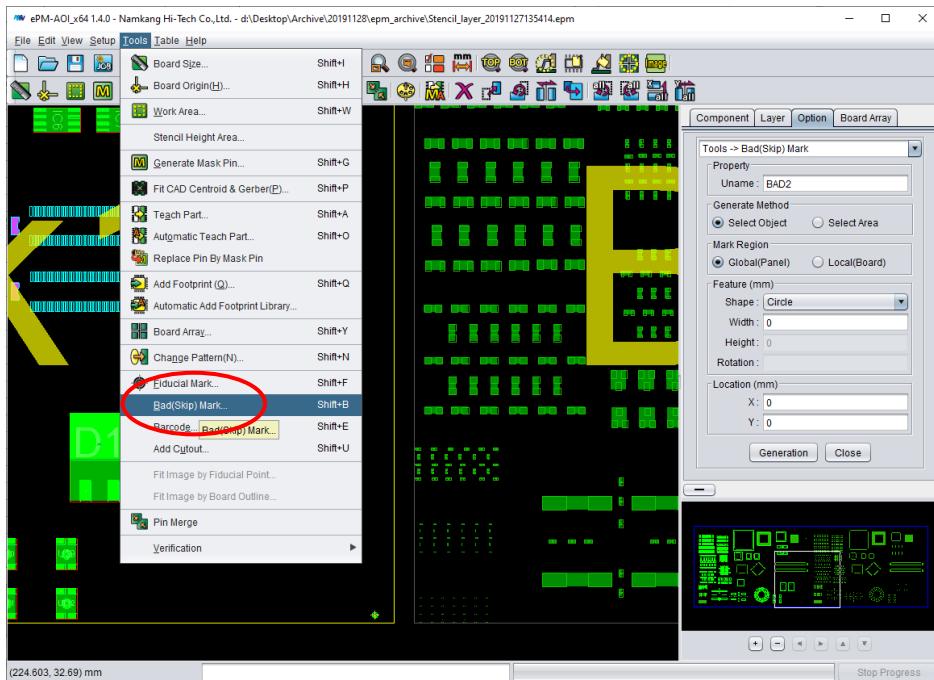


Step 5: Open menu by using mouse right-click and click "Done" menu.

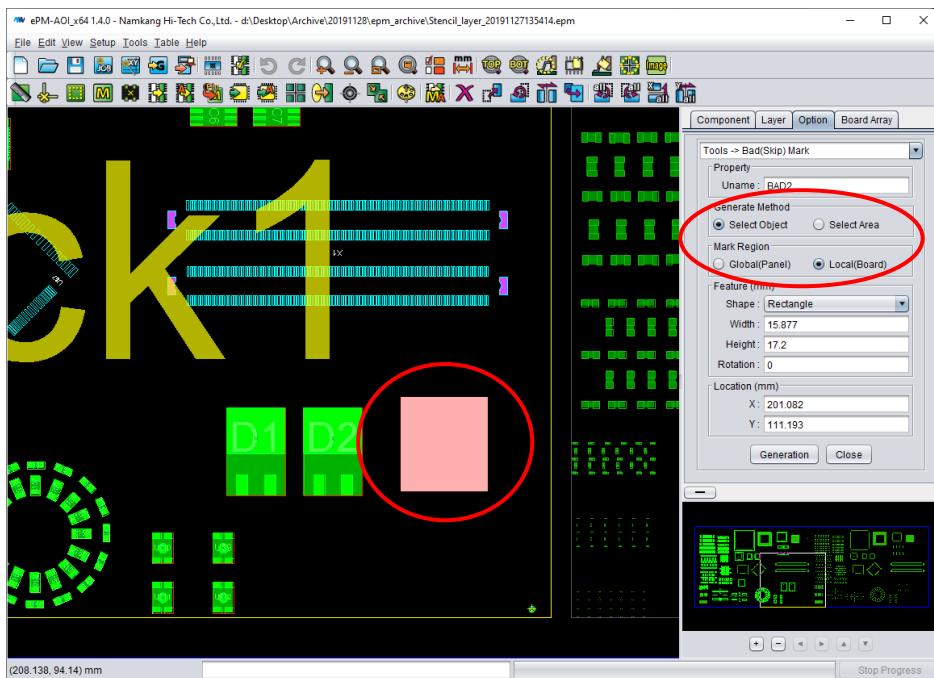


## 10.5. Make Bad marks

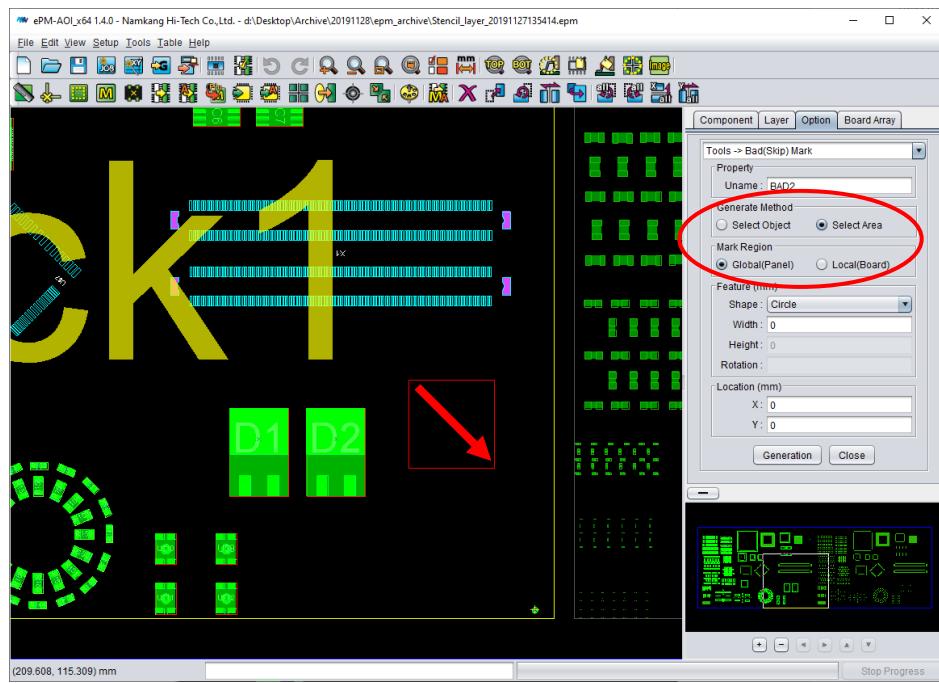
Step 1. Open “Tools” menu and click “Bad(Skip) mark” menu.



Step 2-a. Click gerber object to set as Bad mark after select “Select object” as “Generate method” and select “Global” or “Local” as “Mark Region” property.



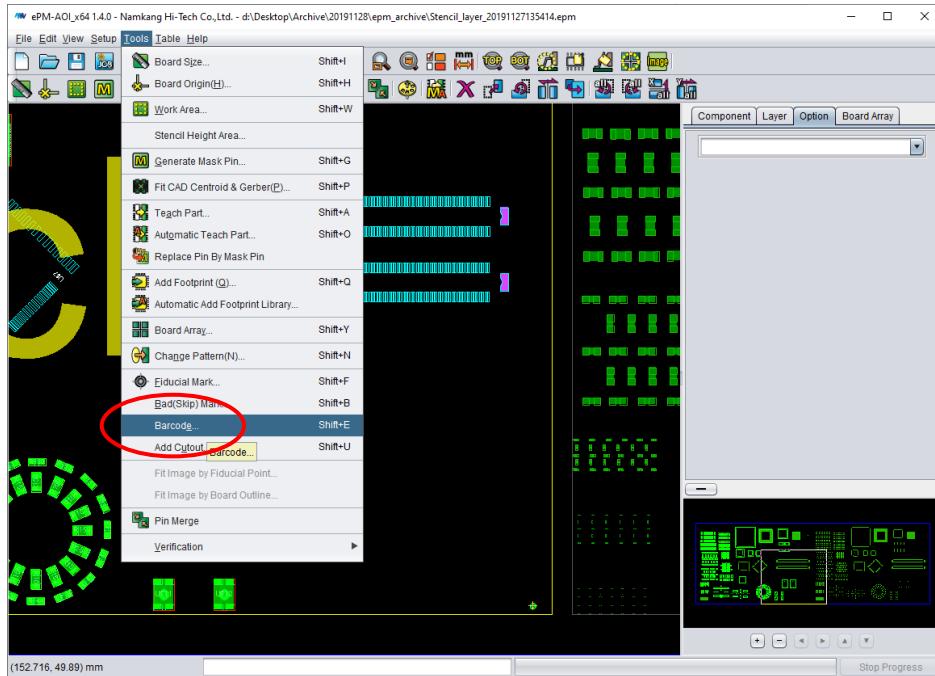
Step 2-b. Select area by mouse drag to set as Bad mark after select "Select area" as "Generate method" and select "Global" or "Local" as "Mark region" property.



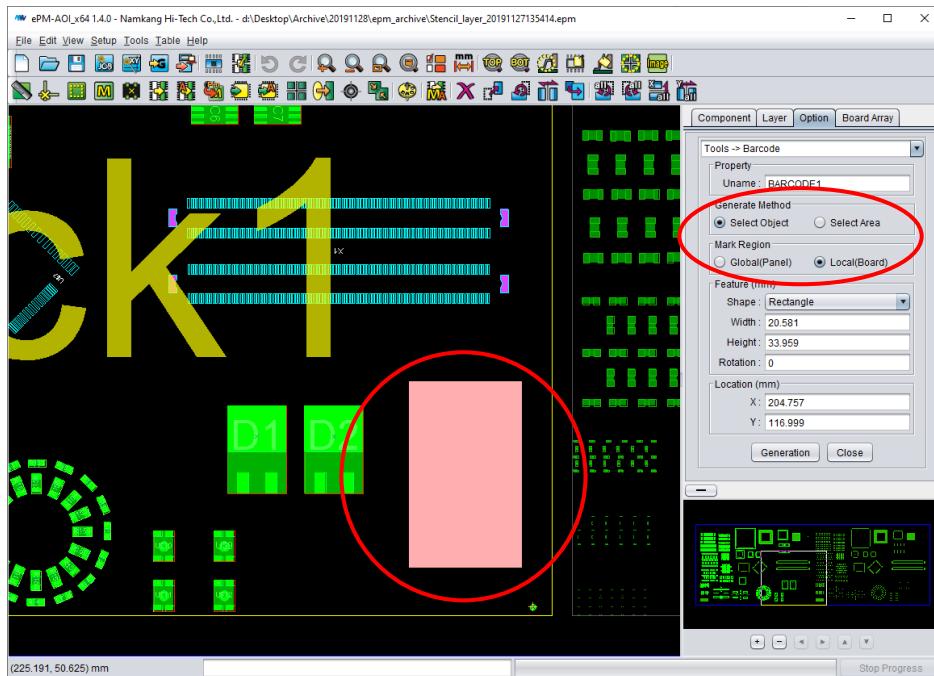
Step 3. Click "Generation" button.

## 10.6. Make Barcodes

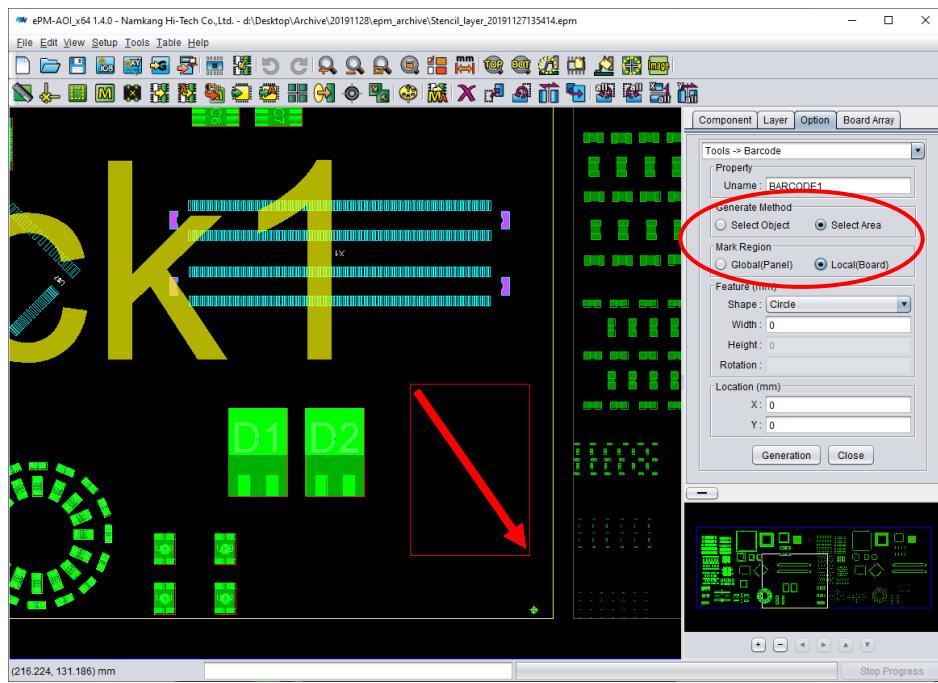
Step 1. Open “Tools” menu and click “Barcode” menu.



Step 2-a. Click gerber object to set as Bad mark after select “Select object” as “Generate method” and select “Global” or “Local” as “Mark Region” property.



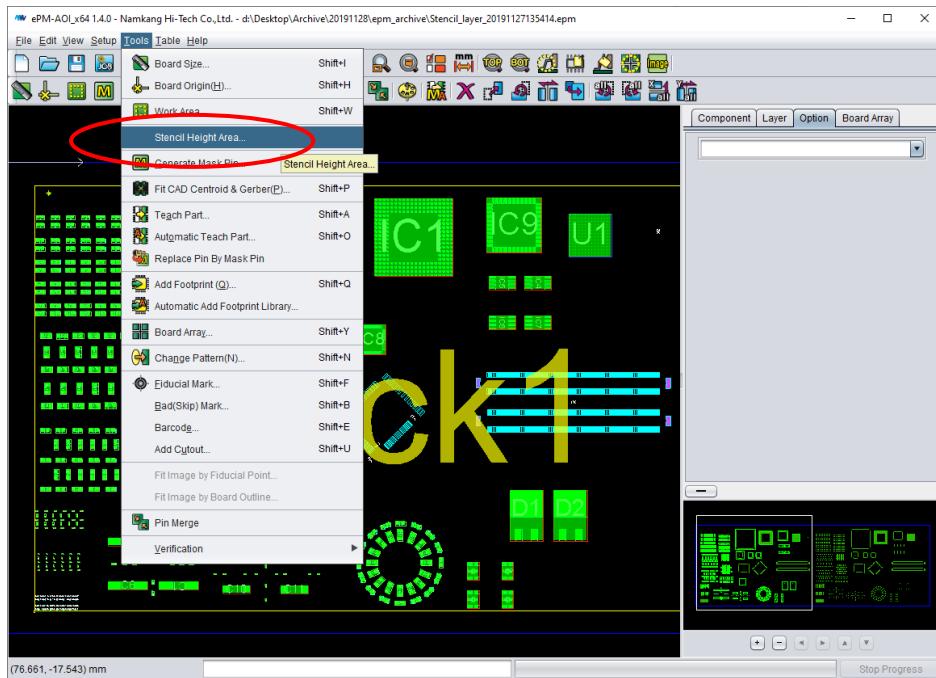
Step 2-b. Select area by mouse drag to set as Bad mark after select "Select area" as "Generate method" and select "Global" or "Local" as "Mark region" property.



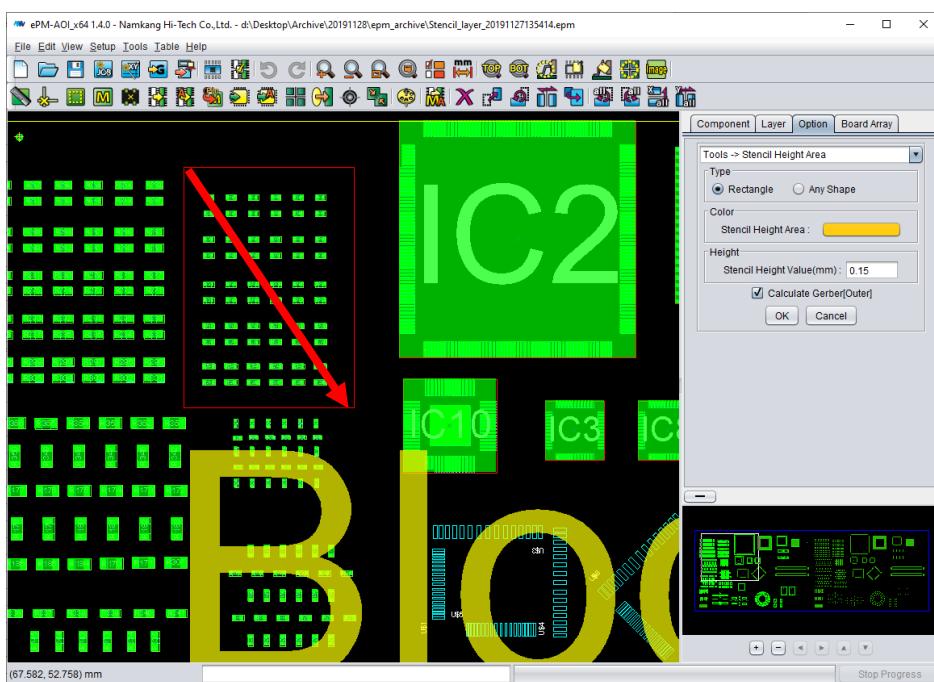
Step 3. Click "Generation" button.

## 10.7. Set stencil height with specifying area

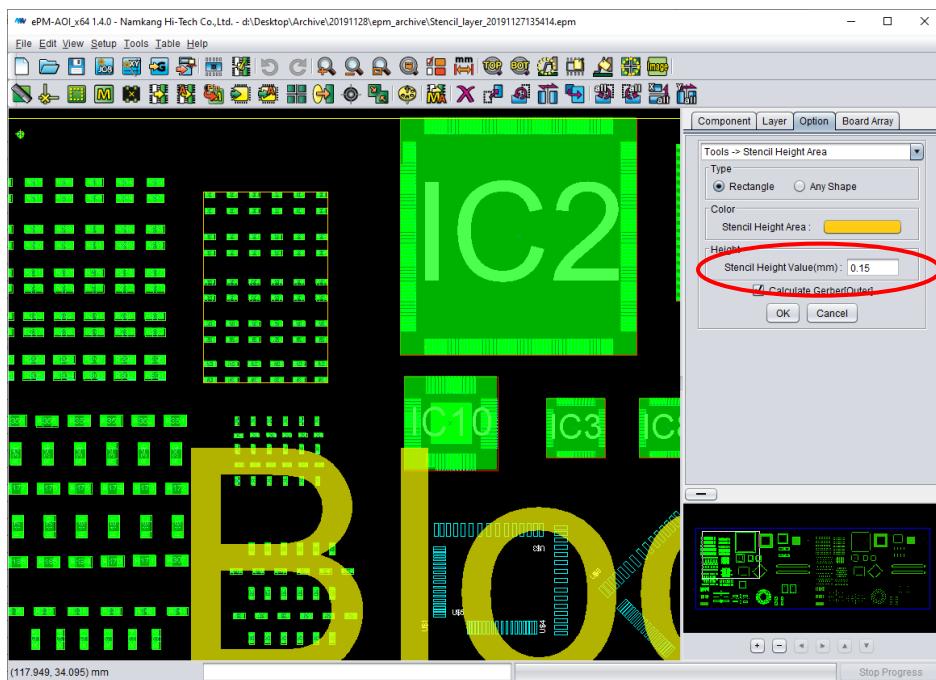
Step 1. Open “Tools” menu and click “Stencil Height area” menu.



Step 2. Select gerber objects to set stencil height by using mouse drag.



Step 3. Input "Stencil height value" and click "OK" button.



## 11. Revision History

Revision	Date	Description	Written by
01	2020/06/15	The first edition	Kim