

TAIYO YUDEN Component Library for Microwave Office

- Installation manual -

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System requirement

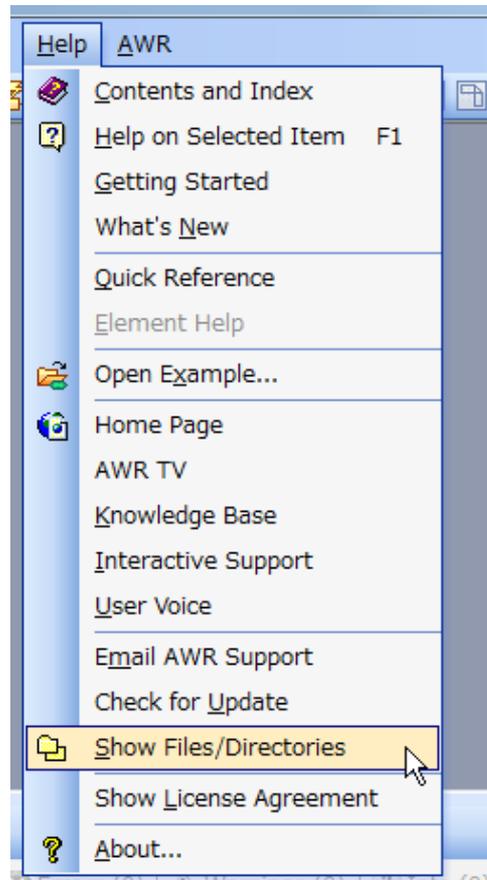
This library is available under the following environment.

OS : All operating systems that Microwave Office supports

Microwave Office : Above 11.0

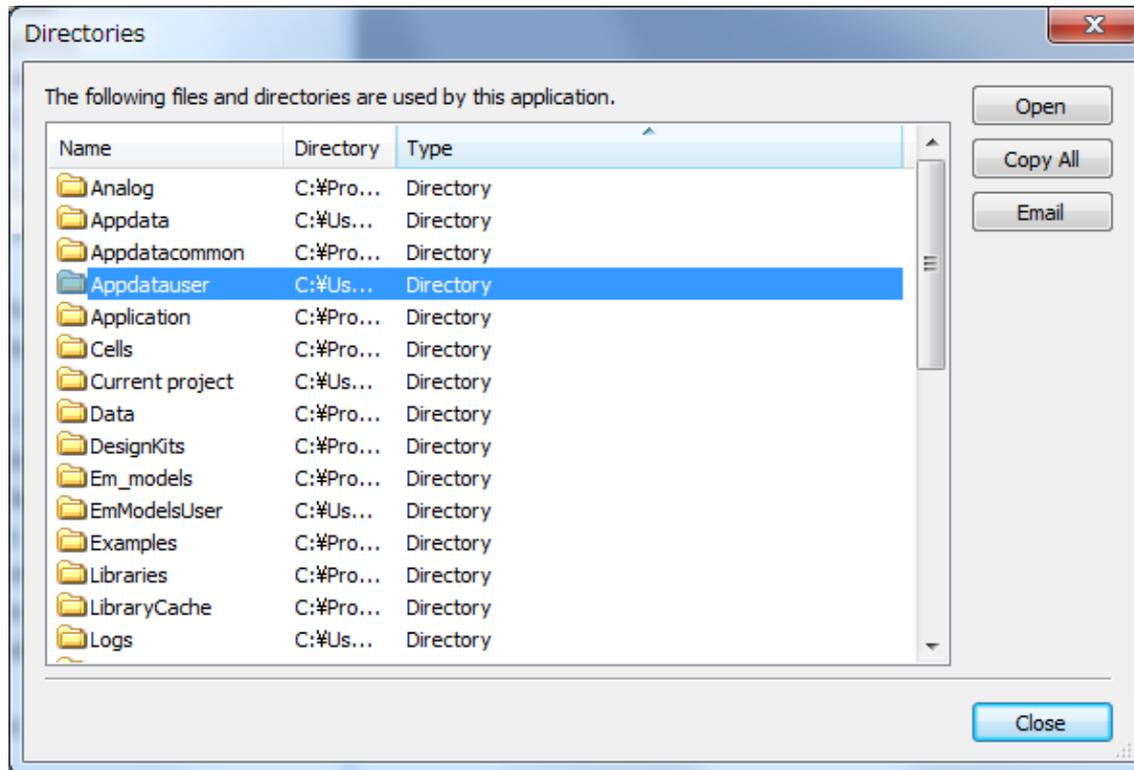
How to install Component Library

- Step 1. Unzip “AW_TY**.zip”.**
- Step 2. Launch AWR Design Environment.**
- Step 3. Select Help > Show Files/Directories.**
-> Directory dialogbox will soon appear.



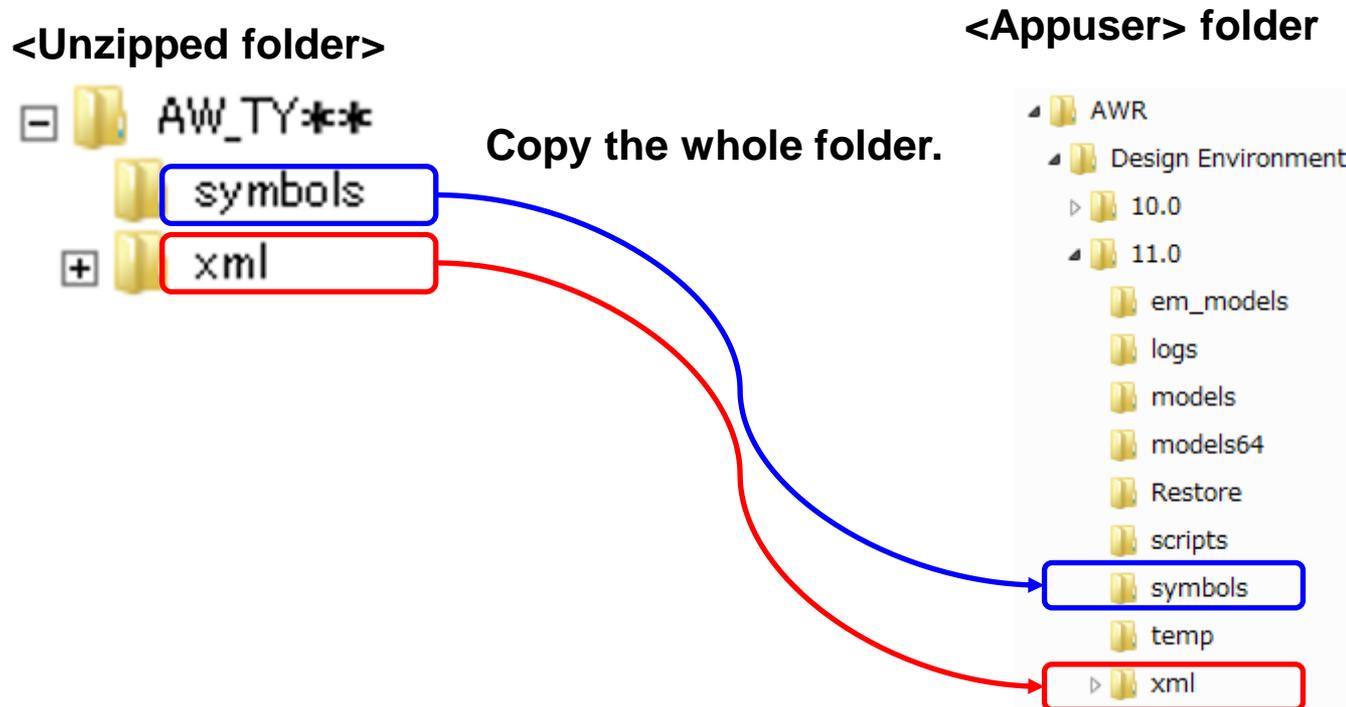
How to install Component Library

- Step 4.** Select Appdatauser on Directory dialogbox and click Open button.
-> <Appuser> folder will open.



How to install Component Library

Step 5. Copy the unzipped files at step1 to <Appuser> folder.



The installation is finished here.

Restart AWR Design Environment to use TAIYO YUDEN Library.

How to use Component Library

Step 1. Select “Elements” tab.

Step 2. Open “Taiyo Yuden” from Libraries tree and select the component category.

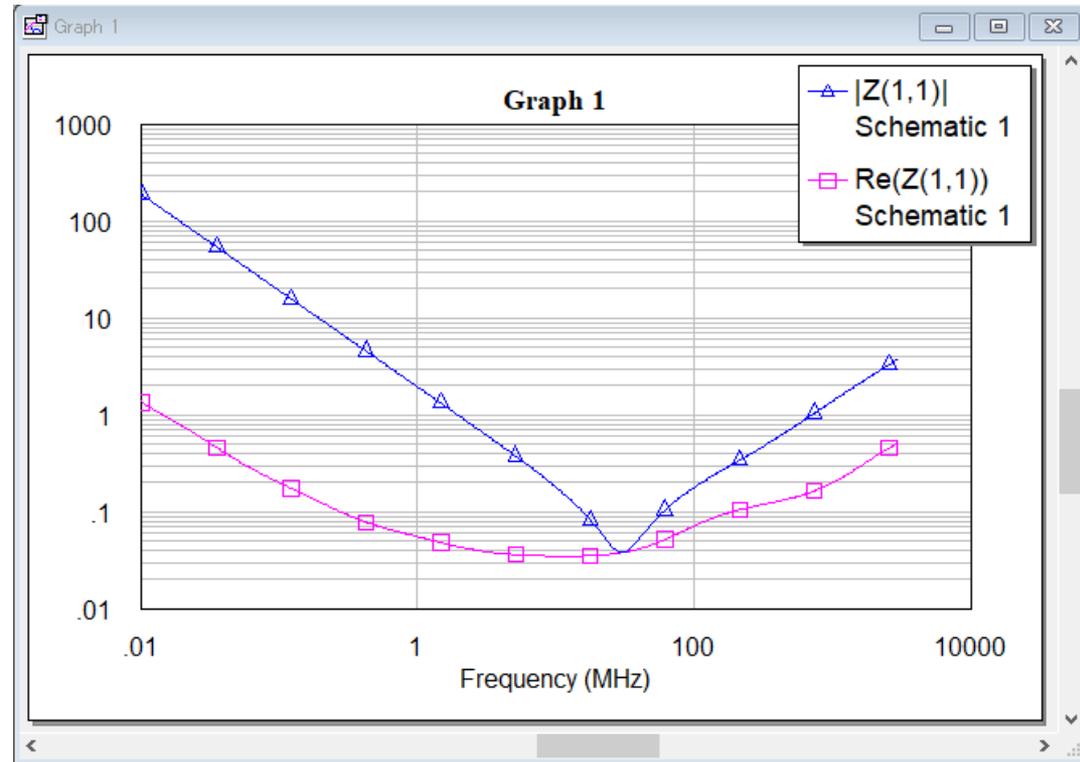
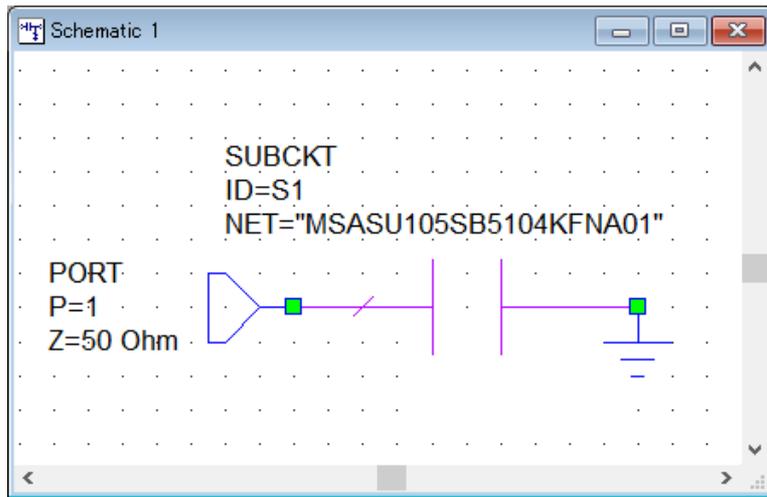
Step 3. Select the model from Models pane and drag it onto the schematic.

The screenshot displays the AWR Design Environment (22.1) interface. The 'Elements' pane on the left shows the 'Libraries' tree with 'Taiyo Yuden' expanded to 'Ceramic_Capacitor' > 'High_Dielectric' > '1005'. The 'Models' pane below it shows a list of models, with 'MSASU105SB5104KFNA01' selected. A red box highlights the '1005' category in the 'High_Dielectric' list, and another red box highlights the selected model in the 'Models' list. A red arrow points from the selected model to the schematic window. The schematic window shows a subcircuit 'SUBCKT ID=S1 NET=MSASU105SB5104KFNA01' with a port 'P=1 Z=50 Ohm' and a capacitor symbol. The 'Status Window' at the bottom shows 'Errors (0)', 'Warnings (0)', and 'Info (0)'. The 'Elements' tab is selected at the bottom of the interface.

Models	Description
MSASU105SB5223KFNA01	0.022[uF](+/-10[%]), 100kHz - 3GHz, 50[V], X5R
MSASU105SB5223MFNA01	0.022[uF](+/-20[%]), 100kHz - 3GHz, 50[V], X5R
MSASU105SB5473KFNA01	0.047[uF](+/-10[%]), 100kHz - 3GHz, 50[V], X5R
MSASU105SB5473MFNA01	0.047[uF](+/-20[%]), 100kHz - 3GHz, 50[V], X5R
MSASU105SB5104KFNA01	0.1[uF](+/-10[%]), 10kHz - 3GHz, 50[V], X5F
MSASU105SB5104MFNA01	0.1[uF](+/-20[%]), 10kHz - 3GHz, 50[V], X5F
MSASU105SB5224KFNA01	0.22[uF](+/-10[%]), 10kHz - 3GHz, 50[V], X5R
MSASU105SB5224MFNA01	0.22[uF](+/-20[%]), 10kHz - 3GHz, 50[V], X5R

How to use Component Library

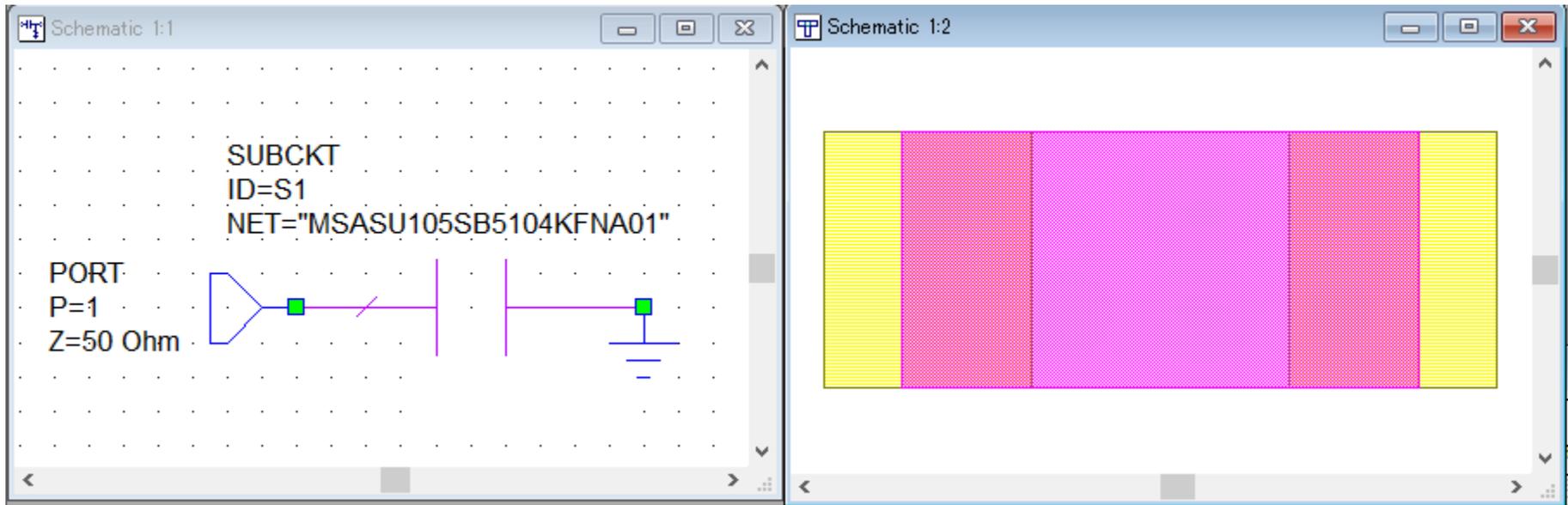
Step 4. Perform the simulation.



About component layout

You can see the component layout of this library on the layout window. The component layout is consisted of component outline or the external square border around the component, and the recommended land pattern of the component.

Please refer to the Microwave Office manual for layout descriptions.



About component detailed information

When you select the model of this library in Models pane at Elements tab, you can open our product search site “TY-COMPAS” and directly find the detailed information of the selected item from right-click menu “Element Help”.

Untitled Project - AWR Design Environment (22.1)

File Edit View Draw Schematic Project Simulate Options Tools

Elements

- Libraries
 - * AWR web site
 - CMC Models
 - Murata
 - SiMKit 4.7
 - TaiyoYuden
 - Ceramic_Capacitor
 - Automotive_(Body_Chassis_and_Infotainment)
 - Automotive_(Powertrain_and_Safety)
 - General_Equipment
 - High_Dielectric
 - 0201
 - 0402
 - 0603
 - 1005
 - 1608
 - 2012

Models

Model	Description
MSASU105SB5223KFNA01	0.022[uF](+/-10%), 100kHz - 3GHz, 50[V], >
MSASU105SB5223MFNA01	0.022[uF](+/-20%), 100kHz - 3GHz, 50[V], >
MSASU105SB5473KFNA01	0.047[uF](+/-10%), 100kHz - 3GHz, 50[V], >
MSASU105SB5473MFNA01	0.047[uF](+/-20%), 100kHz - 3GHz, 50[V], >
MSASU105SB5104KFNA01	0.1[uF](+/-10%), 100kHz - 3GHz, 50[V], X5R
MSASU105SB5104MFNA01	0.1[uF](+/-20%), 100kHz - 3GHz, 50[V], X5R
MSASU105SB5224KFNA01	0.022[uF](+/-10%), 100kHz - 3GHz, 50[V], X5I
MSASU105SR5224MFNA01	0.022[uF](+/-20%), 100kHz - 3GHz, 50[V], X5I

Project Elements

TAIYO YUDEN

TY-COMPAS (Taiyo Yuden COMPONENT Assist System)

Select Region Version info. PRECAUTIONS AND DISCLAIMERS

MSASU105SB5104KFNA01

(Previous Part Number : UMK105BJ104KV-F)

CERAMIC CAPACITORS [Multilayer Ceramic Capacitors (High dielectric type) for General Electronic Equipment]

Specifications	Appearance	To Higher Specification
Status	Mass Production (Preferred)	Smaller
Capacitance	0.1 uF ± 10 %	Hi-Temp.
Case Size (EIA/JIS)	0402/1005	Lower
Rated Voltage	50 V	Hi-Cap.
tanδ (max)	10 %	
Temperature Characteristic (EIA)	X5R	
Operating Temp. Range (EIA)	-55 to +85 °C	
High Temperature Loading (% Rated Voltage)	150 %	
Insulation Resistance (min)	500 MΩ·μF	
Dimension L	1.0 ±0.05 mm	
Dimension W	0.5 ±0.05 mm	
Dimension T	0.5 ±0.05 mm	
Dimension e	0.25 ±0.10 mm	
RoHS Compliance (10 subst.)	Yes	
REACH Compliance (235 subst.)	Yes	
IEC62474 (Ver. D26.00) Compliance	Yes	
Halogen Free	Yes	
Soldering	Reflow	
Standard Quantity	Taping Paper 10000pcs	

Features

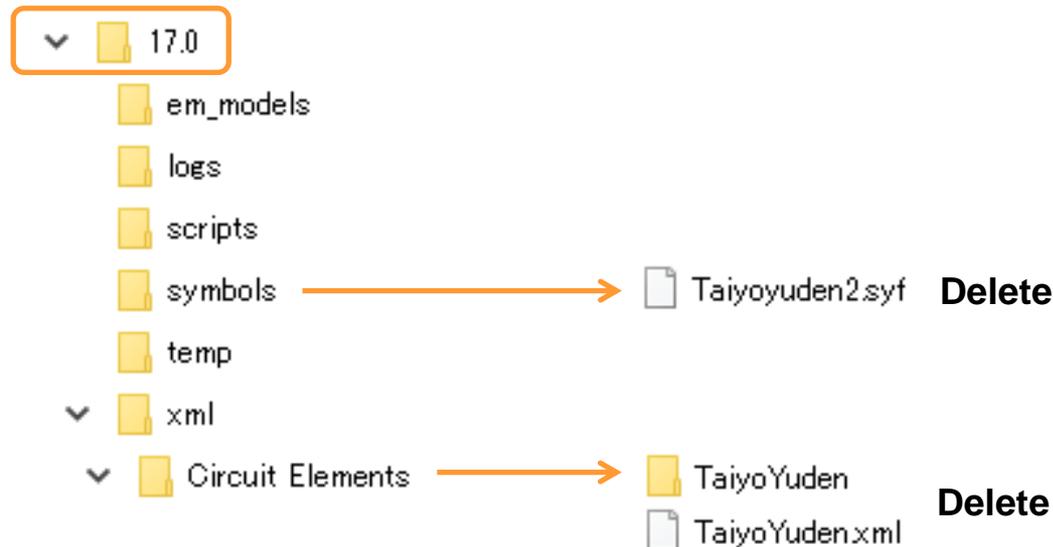
- Monolithic structure provides higher reliability
- A wide range of capacitance values available in standard case sizes
- The use of nickel as electrode material and plating processing improve the solderability and heat resistance characteristics. It also prevents migration and raises the level of reliability.
- Low equivalent series resistance(ESR) provides superior noise absorption characteristics

Main Applications

How to uninstall Component Library

- Step 1.** Open <Appuser> folder where you installed the library.
 - Step 2.** Delete <Appuser>¥symbols¥Taiyoyuden2.syf.
 - Step 3.** Delete “TaiyoYuden” folder and “TaiyoYuden.xml” located in <Appuser>¥xml¥Circuit Elements.
- That is all for the uninstallation.**

<Appuser> folder



TAIYO YUDEN