

# **TAIYO YUDEN Component Library for Microwave Office**

- Installation manual -

---

# Contents

---

- \* System Requirements (P3)**
- \* How to install Component Library (P4-P6)**
- \* How to use Component Library (P7-P8)**
- \* About component layout (P9)**
- \* About component detailed information (P10)**
- \* How to uninstall Component Library (P11)**

# System requirement

---

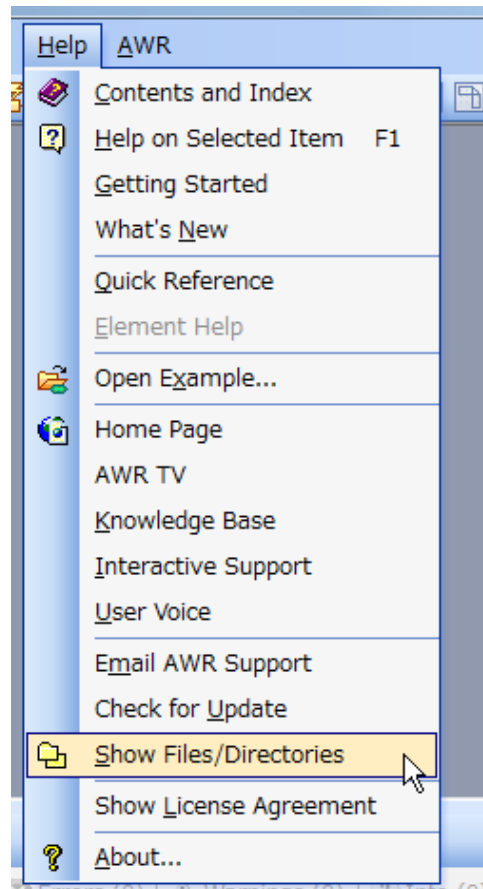
**This library is available under the following environment.**

**OS : All operating systems that Microwave Office supports**

**Microwave Office : Above 11.0**

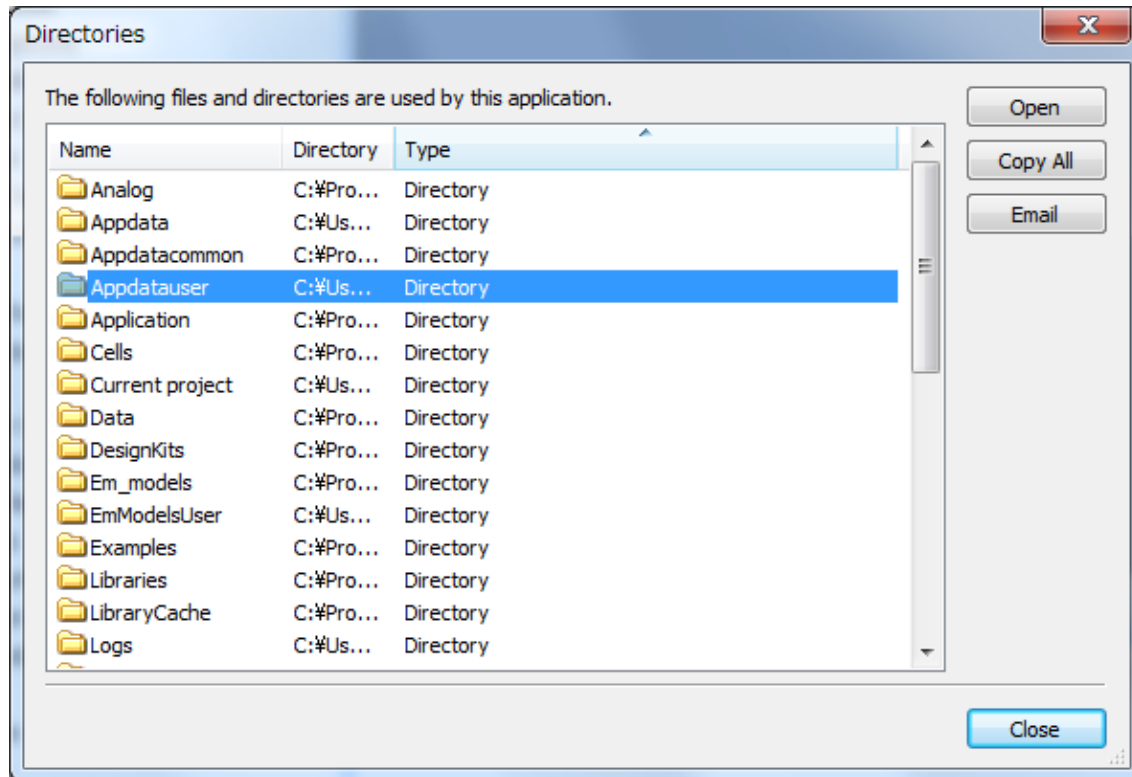
# How to install Component Library

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



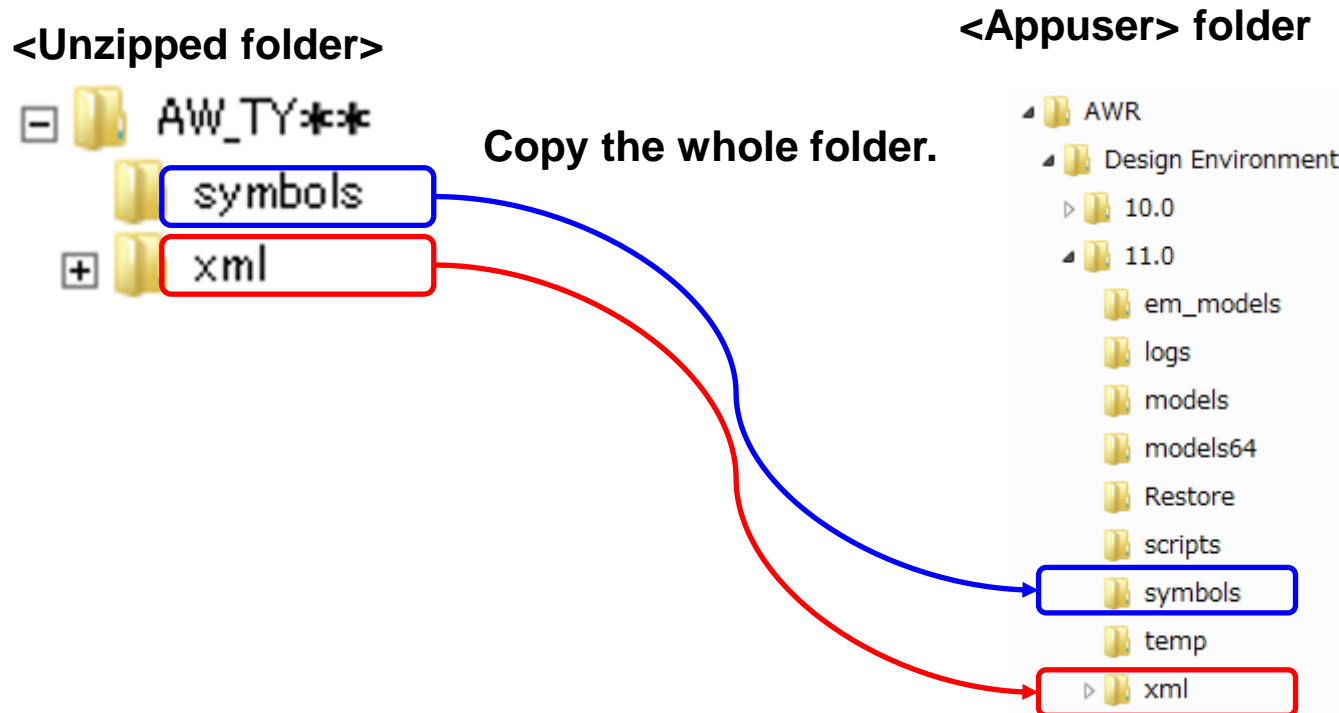
# How to install Component Library

- 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 'TaiyoYuden' expanded, and the 'High\_Dielectric' category selected. The 'Models' pane below it lists various capacitor models, with 'MSASU105SB5104KFNA01' highlighted. A red box labeled 'Step 2.' is placed over the 'High\_Dielectric' category. A red box labeled 'Step 3.' is placed over the 'MSASU105SB5104KFNA01' model. A red arrow points from the highlighted model to the schematic editor. The schematic editor shows a 'SUBCKT' symbol with 'ID=S1' and 'NET="MSASU105SB5104KFNA01"'. The 'PORT' section shows 'P=1' and 'Z=50 Ohm'. The schematic diagram shows a capacitor symbol connected to a ground symbol. The 'Status Window' at the bottom shows 'Copy All', 'Errors (0)', 'Warnings (0)', and 'Info (0)'.

**Step 2.**

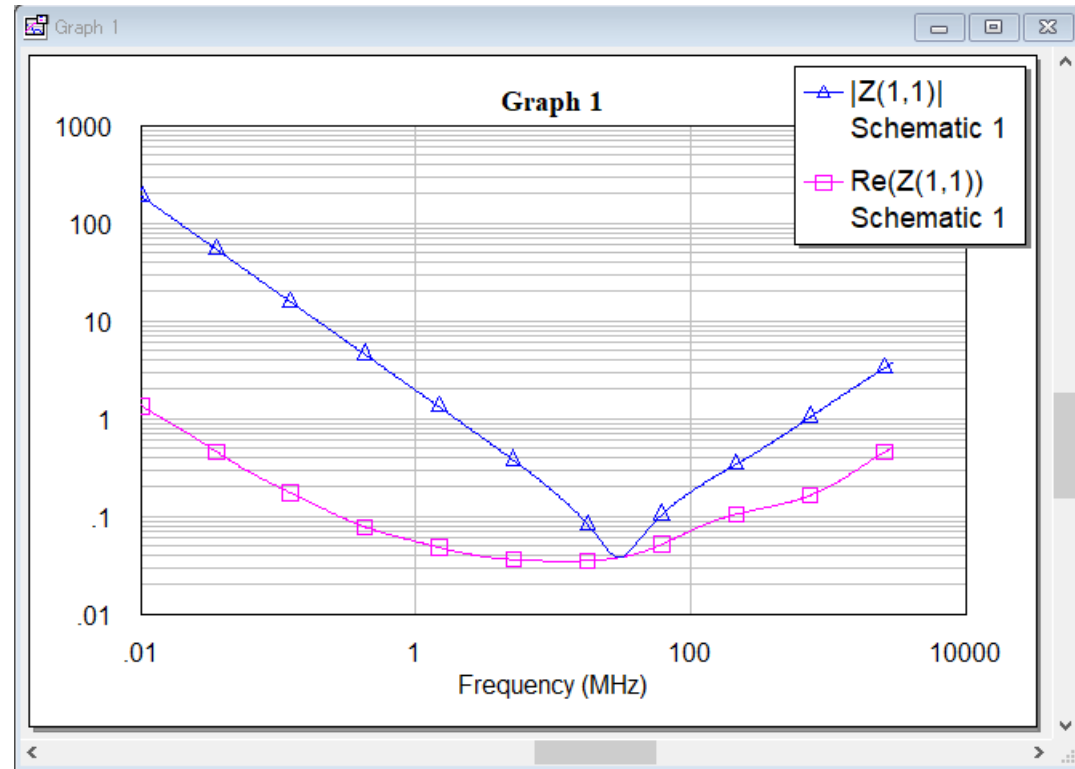
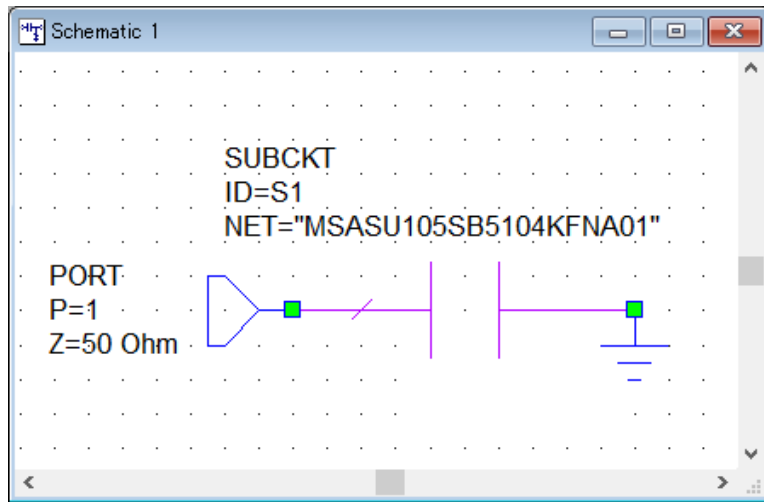
**Step 3.**

**Step 1.**

**TAIYO YUDEN**

# How to use Component Library

## Step 4. Perform the simulation.

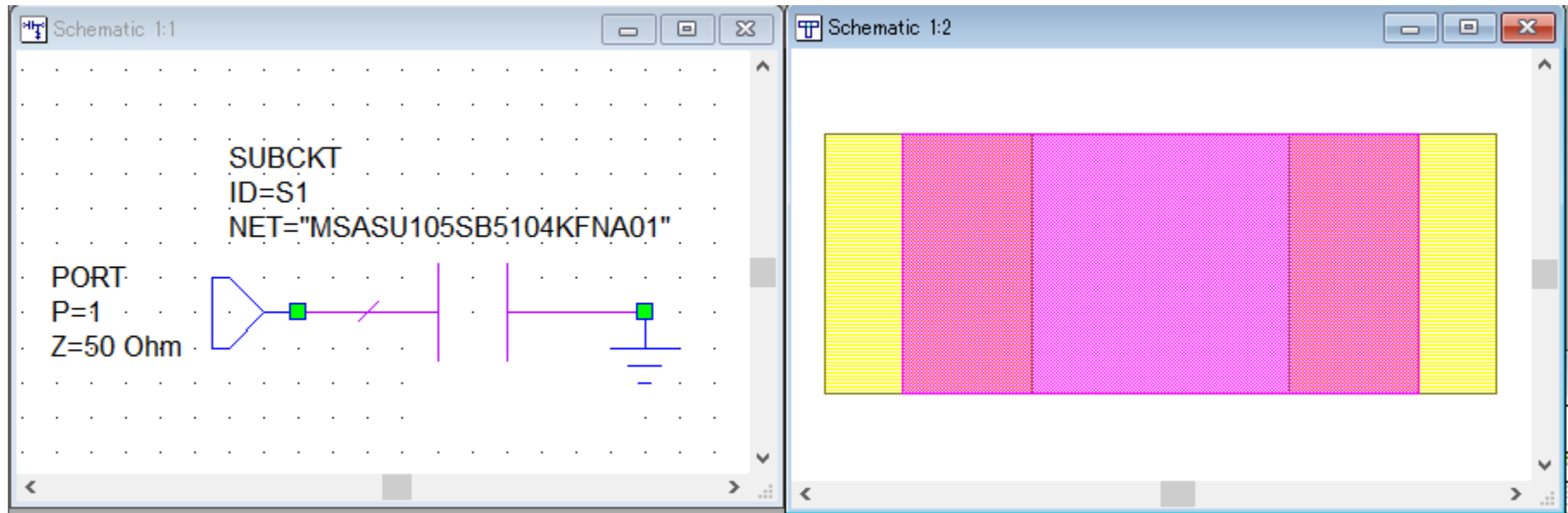




# About component layout

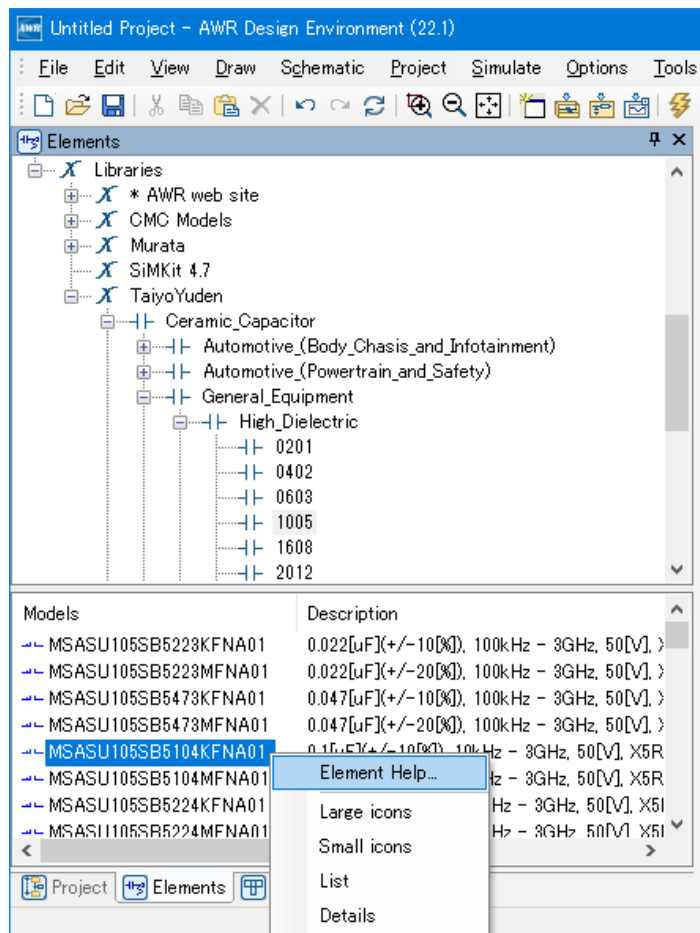
You can see the component layout of this library on the layout window. The component layout is consisted of component outline or the external square border around the component, and the recommended land pattern of the component.


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”.

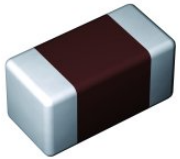



**TY-COMPAS**  
(Taiyo Yuden COMPONENT Assist System)

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]

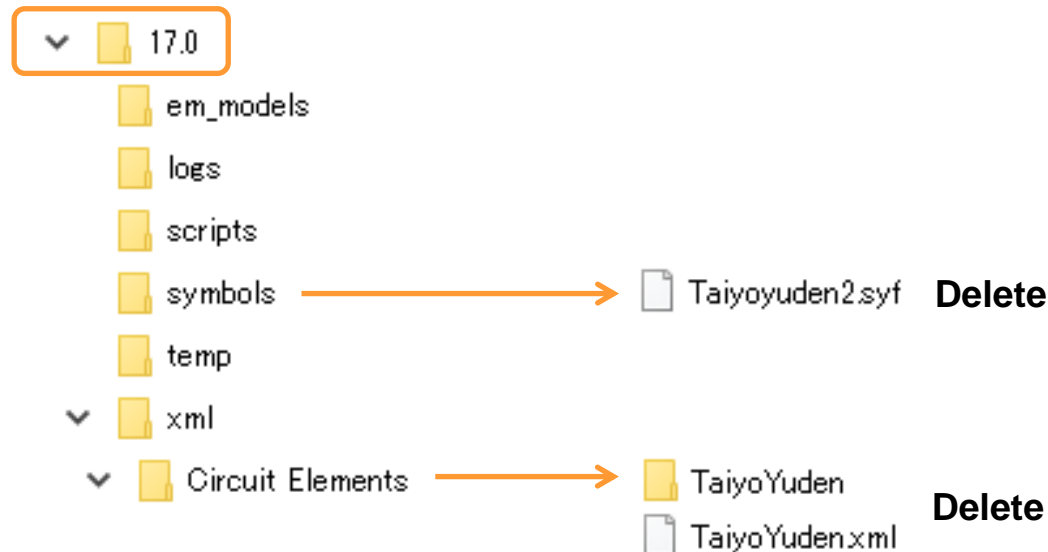
Specifications	Appearance	To Higher Specification																																						
<table><tr><td>Status</td><td>Mass Production (Preferred)</td></tr><tr><td>Capacitance</td><td>0.1 uF ± 10 %</td></tr><tr><td>Case Size (EIA/JIS)</td><td>0402/1005</td></tr><tr><td>Rated Voltage</td><td>50 V</td>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