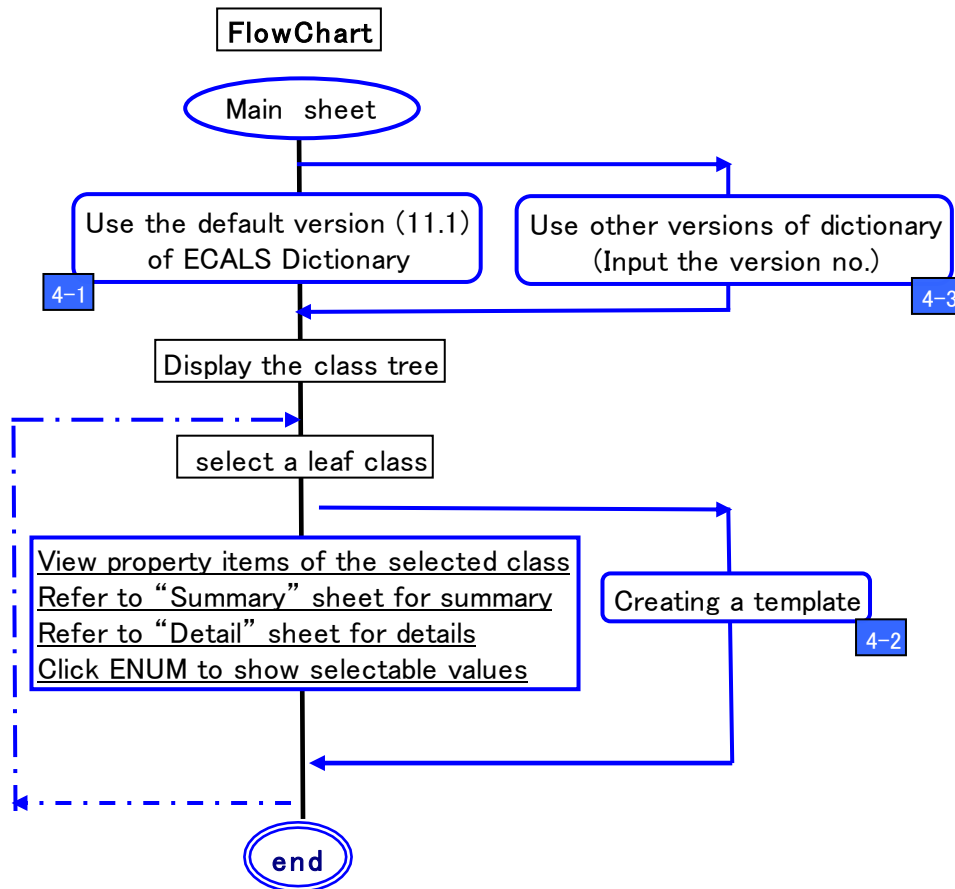


Basic operation instructions are given on the main sheet. This document is to provide further details including related information regarding the tool that was developed to encourage promotion and expansion of ECALS Standard (Dictionary and System).



1. Overview of functions .....	3
2. Recommended system environment .....	3
3. Default settings .....	4
4. Operation procedures .....	4
4-1 Using the ECALS Dictionary (v11.1) set by default. ....	5
4-2. Creating a template .....	9
4-3. Using different versions .....	14
5. Disclaimer .....	16
6. ECALS dictionary structure .....	17

## 1. Overview of functions

This tool provides following two functions:

a) ECALS dictionary viewer function

[Easy-to-understand user-friendly viewer]

The ECALS dictionary is not designed in a human-readable form as explained below.

This tool's viewer function displays in a human-friendly form and helps users understand the ECALS dictionary.

b) Template creating function that assists ECALS data input

[This function allows users to create Excel spreadsheets for data input by each electric component class.]

★ E C A L S Dictionary is a set of dictionaries regarding electronic component information defining **in a computer-readable form** attribute information including specifications and properties of electronic components by electronic component classification.

===== **Composition of ECALS dictionary** 7csv\_ file =====

▪ Parts Class Dictionary; clsdic.csv:

A dictionary that defines the hierarchical relationship among component classes.

Includes attributes such as names and definitions.

▪ Property Dictionary; prpdic.csv:

A dictionary that defines the properties of electronic components.

Includes attributes such as names, units and definitions.

▪ Property Value List; pvldic.csv:

A list of the elemental values selected by the properties.

▪ Templates; prptmp.csv:

Definitions for the search, description and display of each property in a class

▪ Class and Property Relation List; capdic.csv:

▪ Segment Definitions; segdic.csv:

• Template Management Data; edltmp.csv:

## 2. Recommended system environment

• Microsoft Excel 2003 for Windows

This tool can be operated under any conditions (OS version, CPU, memory, etc.) on which Microsoft Excel 2003 (for Windows) can be run comfortably.

Please enable macros in Excel when using.

[Note] about other versions of Microsoft Excel (for Windows).

This tool can be also used with Excel2000 and Excel2007..

### 3. Default settings

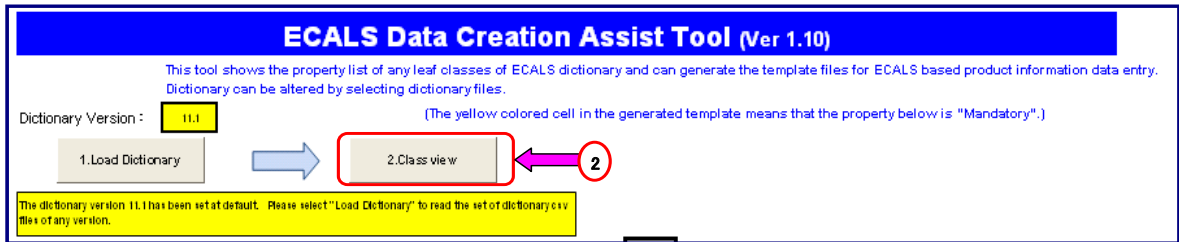
The ECALS Dictionary Version 11.1 is selected by default. To use other versions please start from loading the dictionary.

### 4. Operation procedures

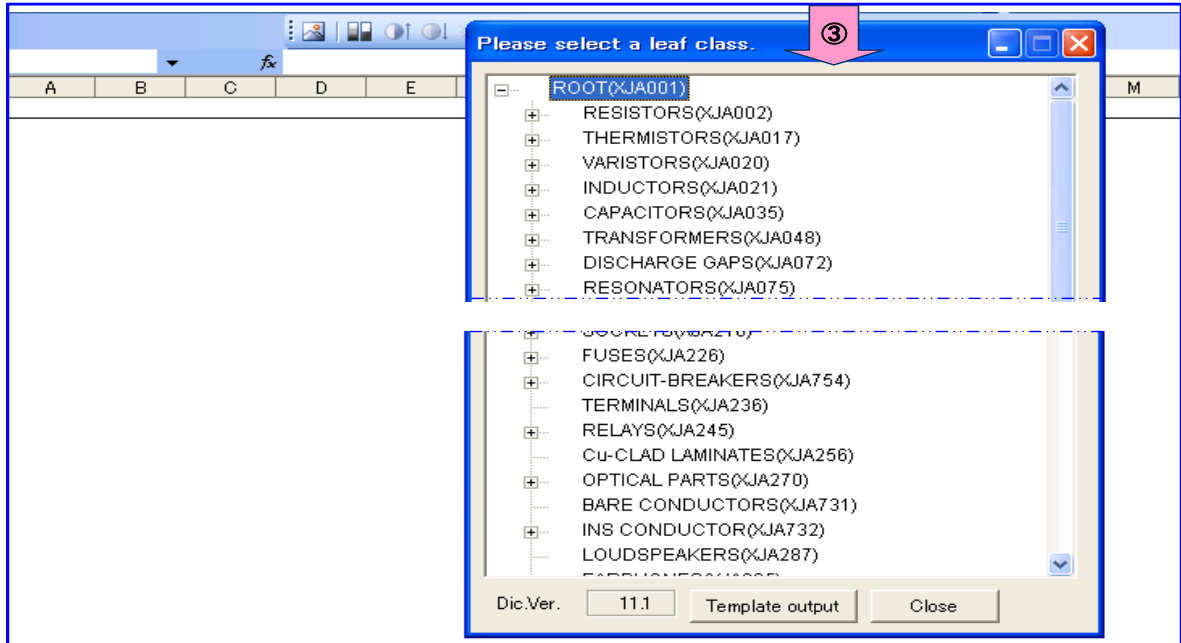
(1) When the tool is opened, 'Main' sheet is displayed.

#### 4-1 Using the ECALS Dictionary (v11.1) set by default.

(2). Press [2. Class view] button



(3) Display the class tree (popup)



4-1-2. Select a leaf class you want to display the property of from the class tree.

Property Code	PREFNAME.EN	DEFINITION.EN	Class Code
XJE005	Class code	BSU code and unique code based on part classification system that ECALS provides	XJA001
XJE007	Product's class name	The products class name based on the class code determined by ECALS.	XJA001
XJE008	Product name	Name that shows products that part dissemination company provides	XJA001
XJE009	Family or series name	Name that shows family or series of products that product dissemination company provides	XJA001
XJE010	Product number	Peculiar name to product that products dissemination company provides.	XJA001
XJE012	Company code	Peculiar code of company that manufactures products or sells it that ECALS decides	XJA001
XJE011	Company name	Name of company that manufactures products or sells it	XJA001
XJE014	General description	Content that shows product background, feature, and function	XJA001
XJE015	Application scope	The primary application of product.	XJA001
XJE016	Package type	Information on package name or sign (SOP, DIP, etc.) decided by original IEC/EIA/JEITA/JEDEC/maker etc. and number of pins and materials, etc.	XJA001
XJE013	Product lifecycle stage	The availability status of the component (L: development, preparation for production, I: mass production, scheduled production discontinuance, production discontinuance maintained product, discontinued product)	XJA001
XJL582	Mounting method	Mounting method of an electric/electronic/electromechanical components	XJA001
XJE018	Caution document file	Describes issues to be considered when using a product, such as cautions on component use and notes on PL and trade management, as well as information on copyrights and patents and document title.	XJA001

★ Click “-” to shrink and minimize the class tree popup.

Property Code	PREFNAME.EN	DEFINITION.EN	Class Code
XJE005	Class code	BSU code and unique code based on part classification system that ECALS provides	XJA001
XJE007	Product's class name	The products class name based on the class code determined by ECALS.	XJA001
XJE008	Product name	Name that shows products that part dissemination company provides	XJA001
XJE009	Family or series name	Name that shows family or series of products that product dissemination company provides	XJA001
XJE010	Product number	Peculiar name to product that products dissemination company provides.	XJA001
XJE012	Company code	Peculiar code of company that manufactures products or sells it that ECALS decides	XJA001
XJE011	Company name	Name of company that manufactures products or sells it	XJA001
XJE138	Information of environmental burden	URL name of obtaining environmental burden chemical substance data sheet designation and file name of data sheet	XJA001
XJE028	Release date	Release date of product or sale expected date	XJA001
XJE133	Based on the standard or law	International, the region, the nation, and the group standard to which parts conform are specified.	XJA001
XJE134	Certifications of safety standards	The safety standard to which parts are certified is specified.	XJA001
XJE135	Minimum packaging form when delimiting it	Minimum packaging form when delimiting it	XJA001

4-1-3. The “Summary” sheet lists the outline of property of the selected leaf class.

A	B	C
Property Code	PREFNAME.EN	DEFINITION.EN
XJE005	Class code	BSU code and unique code based on part classification system that ECALS provides
XJE007	Product's class name	The products class name based on the class code determined by ECALS.
XJE008	Product name	Name that shows products that part dissemination company provides
XJE009	Family or series name	Name that shows family or series of products that product dissemination company provides
XJE010	Product number	Peculiar name to product that products dissemination company provides.
XJE012	Company code	Peculiar code of company that manufactures products or sells it that ECALS decides
XJE011	Company name	Name of company that manufactures products or sells it
XJE014	General description	Content that shows product background, feature, and function
XJE015	Application scope	The primary application of product.
XJE016	Package type	Information on package name or sign (SOP and DIP, etc.) decided ..original IEC/EIA/JEITA/JEDEC/maker it... and number of pins and materials, etc.
XJE013	Product lifecycle stage	The availability status of the component [Under development, preparation for production, in mass production, scheduled production discontinuance, production discontinuance, maintained product, discontinued product].
XJL582	Mounting method	Mounting method of an electric/electronic or electromechanical components
XJE018	Caution document file	Describes issues to be considered when using a product, such as cautions on component use and notes on PL and trade management, as well as information on copyrights and patents and document title.

Please select a Leaf Class(Undermost layer)

- ROOT(XJA001)
  - RESISTORS(XJA002)
    - FIXED RESISTORS(XJA003)
      - PRECISION(XJA004)**
        - POWER RESISTORS(XJA005)
        - LOW-POWER(XJA006)
        - RESISTOR NETWORKS(XJA007)
        - CHIP RESISTORS(XJA771)
        - SM NETWORKS(XJA768)
        - FUSING RESISTORS(XJA009)
        - POSITIVE TEMP COE(XJA010)
        - 0 OHM RESISTORS(XJA967)
        - ATTENUATORS(XJA968)
        - POTENTIOMETERS(XJA011)
      - THERMISTORS(XJA017)
      - VARISTORS(XJA020)
      - INDUCTORS(XJA021)
      - CAPACITORS(XJA035)
      - TRANSFORMERS(XJA048)
      - DISCHARGE GAPS(XJA072)
      - RESONATORS(XJA075)
      - OSCILLATORS(XJA085)
      - FILTERS(XJA088)
      - DELAY LINES(XJA108)
      - MICROWAVE(XJA115)
      - FUNCTION MODULES(XJA818)
      - SWITCHES(XJA136)

\Main\Su~~mary~~Detail\Selection/

4-1-4. The “Detail” sheet lists the details of property of the selected leaf class.

Class Code	Property Code	PREFNAME.EN	Q	M	Preferred Letter Symbol	UNITS	LEVEL	DATATYPE	DEFINITION.EN
XJA001	XJE005	Class code	N	M				String	BSU code and unique code based on part classification system that ECALS provide
XJA001	XJE007	Product's class name	N	M				String	The products class name based on the c code determined by ECALS.
XJA001	XJE008	Product name	N	M				String	Name that shows products that part dissemination company provides
XJA001	XJE009	Family or series name	N	O				String	Name that shows family or series of prod that product dissemination company prov Peculiar name to product that products
XJA003	XJF715	Limiting element voltage	N	O	U_max	V	Max	RealM	The maximum d.c. or a.c. r.m.s. voltage ( that may be continuously applied to the termination of resistors.
XJA003	XJF716	Category temperature range	N	M	T_c	Cel	MinMax	RealM	The range of ambient temperature for wh resistor has been designed to operate continuously; this is defined by the temper limits of its appropriate category.
XJA004	XJF717	Resistive material	Y	M	resistive mat			ENUM	Code of the resistive material of fixed resistors.
XJA004	XJK642	Temperature coefficient of resistan	Y	M		10 <sup>-6</sup> -6K	MinMax	RealM	Relative variation of resistance between given temperatures divided by the differe the temperature producing it.
XJA004	XJF719	Rated ambient temperature	N	O	T_amb	Cel	Max	RealM	The temperature at which the change of slope of the derating curve occurs.

\Main\Su~~mary~~Detail\Selection/

4-1-5. Click cells indicated as “ENUM” (item with choices) in the DATATYPE column to open a window that lists the value options within the property.

Property Code	PREFNAME.EN	Property Value.EN	Value Meaning.EN
XJF717	Resistive material	metal film	Resistive film consists of metal as NiCr system
XJF717	Resistive material	metal foil	metal foil
XJF717	Resistive material	wirewound	Resistive element using metal wire(NiCr, CuNi)
XJF717	Resistive material	others	Other type resistive element

4-1-6. All the value options of all the property items with DATATYPE “ENUM” within the selected leaf class are listed in the “Selection” sheet.

Property Code	PREFNAME.EN	Property Value.EN	Value Meaning.EN
XJE013	Product lifecycle stage	DEV	development type
XJE013	Product lifecycle stage	PRE	preliminary type
XJE013	Product lifecycle stage	PROD	production or current type
XJE013	Product lifecycle stage	NRND	not recommended for new design
XJE013	Product lifecycle stage	OBSL	obsolete
XJE013	Product lifecycle stage	MAINT	being discontinued type
XJE013	Product lifecycle stage	DISCON	discontinued type
XJL582	Mounting method	surface mounted	Surface mounting device
XJL582	Mounting method	inserted	Parts that insert terminal in substrate
XJL582	Mounting method	flange mounted	Parts where flanges of parts are fixed with screw
XJL582	Mounting method	stud mounted	The one installed in substrate or panel, etc. with male screw of parts
XJL582	Mounting method	others	The one that doesn't come under four above-mentioned items
XJF717	Resistive material	metal film	Resistive film consists of metal as NiCr system, Ta-system or Pt.
XJF717	Resistive material	metal foil	metal foil
XJF717	Resistive material	wirewound	Resistive element using metal wire(NiCr, CuNi)
XJF717	Resistive material	others	Other type resistive element

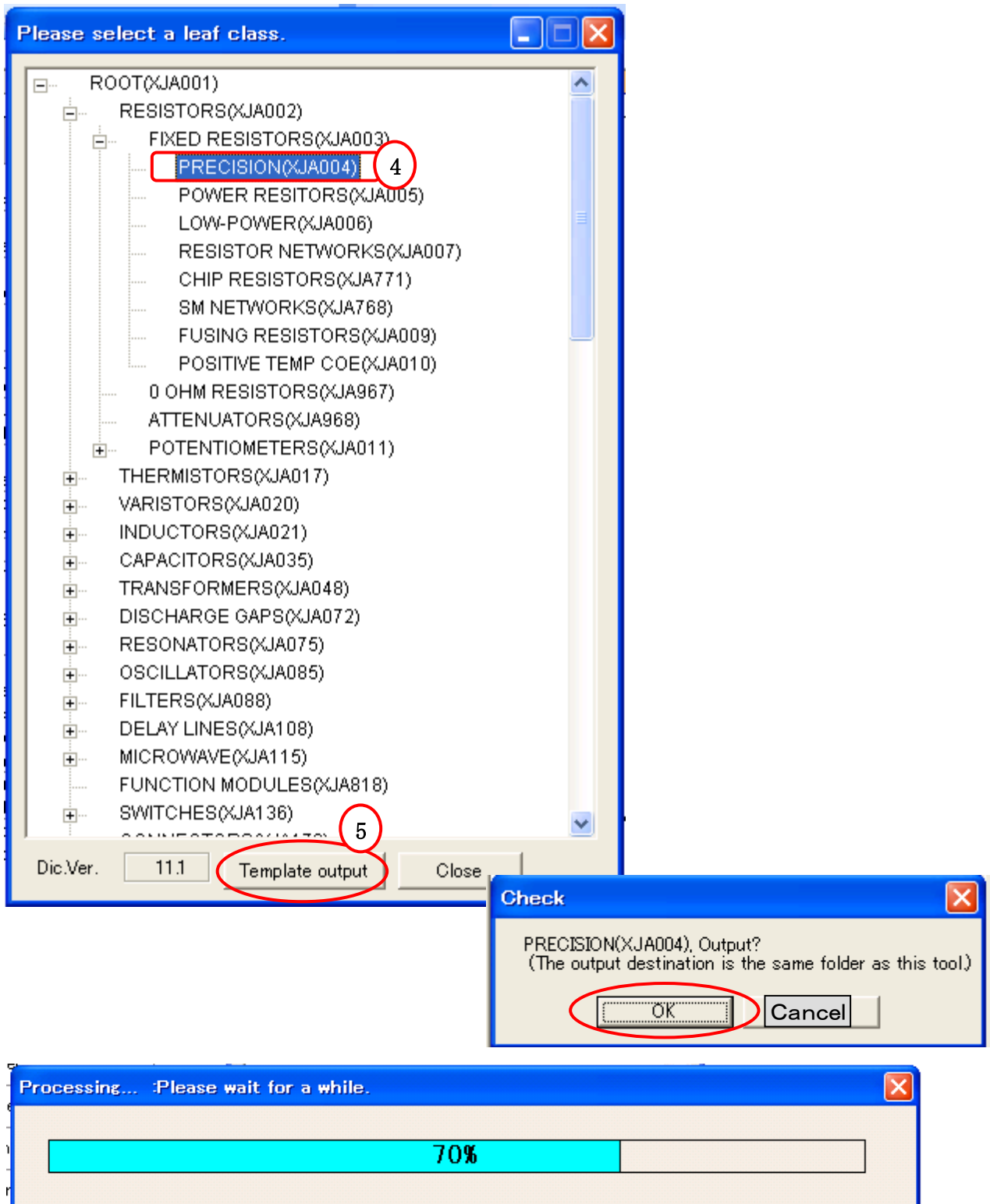
## 4-2. Creating a template

(Make it based on the details sheet displayed with the above 4-2-4.).

### 4-2-1. On the class tree popup window

(4) Select the leaf class you want to create a template of.

(5) Click the “Template output” button at the bottom of the class tree popup.



★ The following warning appears when there is a file of the same name already in the destination folder and the new file will not be output.



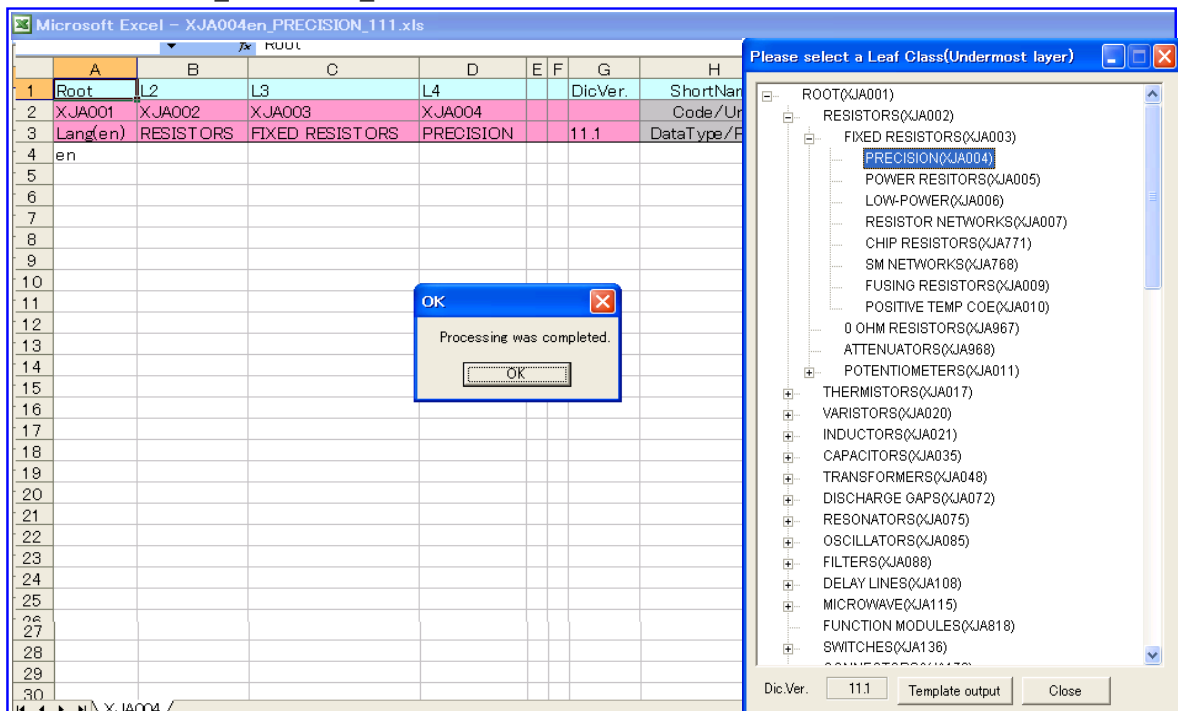
Please output the template again after deleting or renaming the file of the same name or moving it out from the folder.

#### 4-2-2. File name of the template

The file name comprises of: class code + language (ja/en) + class name + dictionary version (without the period, eg. 111 instead of 11.1).

Examples :

- XJA004en\_PRECISION\_111.xls
- XJA709en\_MOS FET\_111.xls



### 4-2-3. About the output template

The template file of a selected leaf class will be created in the folder of this tool.

Root	L2	L3	L4		DicVer.	ShortName	Class code	Class name	Product name	Mass [Nom
XJA001	XJA002	XJA003	XJA004			Code/Unit	XJE005	XJE007	XJE008	XJE136_No
Lang(en)	RESISTORS	FIXED RESISTORS	PRECISION		11.1	DataType/Prefix	String	String	String	RealM
en							XJA004	PRECISION		

- a) From Row 1 to 3 of the template is the header part and from Row 4 is the data part.

Row 1: Abbreviated Name (Abbr. Name)

The 2nd line: Property code (with level) and unit

The 3rd line: Data type and prefix

The class hierarchy of the object class is displayed as the 2<sup>ND</sup> row and the 3<sup>ND</sup> row from the 1<sup>st</sup> row of 2nd lines.

Example:

Root	L2	L3	L4	L5	DicVer.	ShortName	Class code	Class name	Pro
XJA001	XJA035	XJA036	XJA037	XJA744		Code/Unit	XJE005	XJE007	XJE
Lang(en)	CAPACITORS	FIXED CAPACITORS	CERAMIC CAPACITOR	CERA-CAP, CLASS1	11.1	DataType/Prefix	String	String	Stri
en							XJA744	CERA-CAP, CLASS1	

7th row  
1st line  
2nd line  
3rd line

The dictionary version is displayed to the 7<sup>th</sup> row of the 3rd line

- b) the system used 1-8th row of the template and 9th-n row display each property information (Refer to template header part).

- c) In the shortening name display cell, the comment (Preferred name, Preferred Letter Symbol, Definition, Notes, and Remark) is displayed.

M1		Product number								
H	L	M	P	S	U	V	AE	AF		
ShortName	Family name	Product number	Pr	[PrefName] : Product number						
Code/Unit	XJE009	XJE010	XJ	[Definition] : Peculiar name to product that products dissemination company provides.					Nom	g
DataType/Prefix	String	String	EN	[Note] : Alphanumeric code of a maximum of 35 figures						Prefix
				[Remark] : (1) Product Name would be allowed to have same name as Part Number. (2) Make no rule about inclusive relation between Product Name and Series Name (Family Name). (3) Regarding Part						

M1		Product number								
BM	BN	BO	BP	BQ	BR	BS				
Rated power [Max]				erance [Nom]		Rated voltage				
XJF711_Max	W			F713_Nom	%	XJF714_Max				
RealM	P			alM	Prefix	RealM				
				[PrefName] : Rated dissipation power						
				[PrefLetterSymbol] : P						
				[Definition] : Maximum allowable dissipation at an ambient temperature of 70 cel under the conditions of the endurance test at 70 cel and for which the permitted change in resistance for the endurance test is not exceed.						
				[Note] : (1)In the network resistor, the rated power of an individual element in the circuit that composes is indicated. (2)It is assumed the highest, permissible power in the temperature when provided for the ambient temperature of ratings with the fixed precisio						
				[Remark] : Similar to AAE257 (IEC 61360-4 2005-11-11)						

- d) It individually inputs it to the property with two or more levels including the prefix (Displayed in the header)(Express it putting the level on the property code).

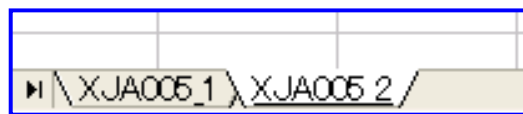
Example: 「XJF714\_Max」, 「XJF715\_Max」, 「XJF716\_Min」, 「XJF716\_Max」

BW1		Ctgy temp range [Min]							
BS	BT	BU	BV	BW	BX	BY			
Rated voltage [Max]		Limiting voltage [Max]		Ctgy temp range [Min]		Ctgy temp range			
XJF714_Max	V	XJF715_Max	V	XJF716_Min	Cel	XJF716_Max			
RealM	Prefix	RealM	Prefix	RealM	Prefix	RealM			

e) 1 sheet per 1 class basically, but in case item numbers are too large two or more sheets will be created.

Sheet name comprises of: Class Code + under bar ( ) + sheet number (in case multiple sheets are created).

Examples: XJA004, XJA005\_1 & XJA005\_2



★ In case there are too many items the sheet will be separated to multiple sheets.

f) When the data type is “ENUM type”, the options are indicated (using cell comment) in the 3<sup>rd</sup> row (ENUM) of the template.

M	S	U	V	AE	AF	AG	AH	
Product number	Product lifecycle	Caution document	Mass [Nom]		Sample status	Contact address		
XJE010	XJE013	XJE014	XJE015	XJE016	XJE030	XJE023		
String	ENUM	File		refix	Boolean	String		
		DEV : development type PRE : preliminary type PROD : production or current type NRND : not recommended for new design OBSL : obsolete MAINT : being discontinued type DISCON : discontinued type						

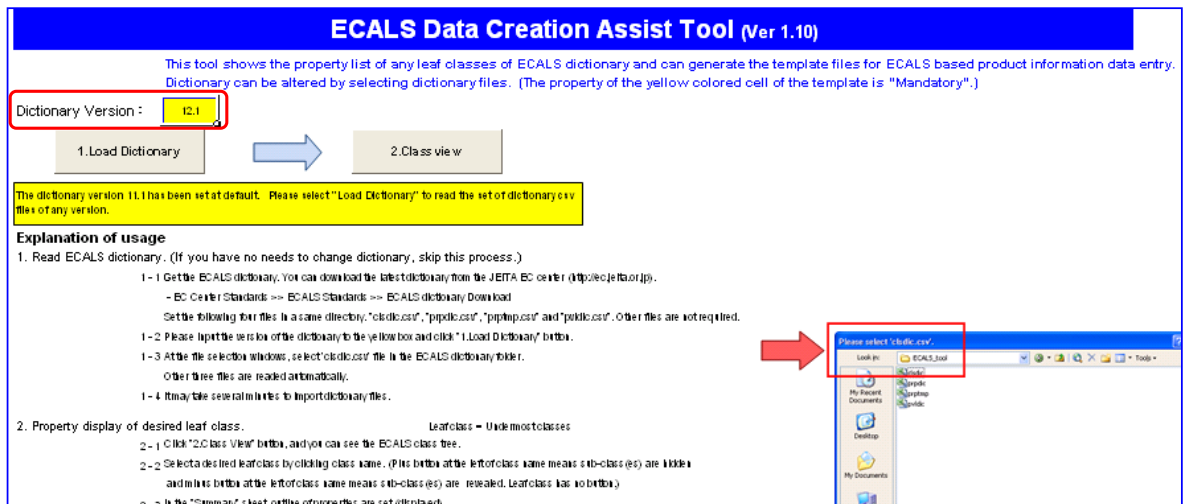
g) Mandatory items are highlighted in yellow in the Abbreviated Name row.

I	J	K	L	M	N	O
Class code	Class name	Product name	Family name	Product number	Company code	Company name
XJE005	XJE007	XJE008	XJE009	XJE010	XJE012	XJE011
String	String	String	String	String	String	String
XJA004	PRECISION					

### 4-3. Using different versions of the ECALS Dictionary

Input the version number of dictionary you are using to the dictionary version entry field colored in yellow.

Example: changing from “11.1” to “12.1”



★1 Since the ECALS Dictionary files do not contain version information, the version numbers you enter need to be kept identical to the actual versions you use at your responsibility.

★2 The tool will remember the dictionary version. It will appear on the class popup and templates you generate.

**4-3-1** Skip to 4-3-3 if you already have obtained the corresponding version of ECALS Dictionary.

★ Four files (clsdic.csv, prpdic.csv, prptmp.csv and pvldic.csv) must be kept in the same folder.

#### 4-3-2 When the ECALS dictionary of the object version has not been obtained.

Go to the JEITA\_EC center site (<http://ec.jeita.or.jp/>) and download it. Top >> ECALS Standards >> ECALS Dictionary Download

The screenshot shows the JEITA EC Center website. The navigation menu on the left includes 'EC Center Standards' and 'ECALS Standards'. The main content area is titled 'ECALS Dictionary Rules' and contains a table with the following data:

Rule Name	Rule No.	Ver / Rev
Specification of CSV File Dictionary	ECALSDS01	001-04
Description Rule of Part Class Dictionary	ECALSDS02	002-05
Description Rule of Property Dictionary	ECALSDS03	002-06
Description Rule of Property Value List	ECALSDS04	002-05
Dictionary Description Rules [Summary]	ECALSDS06	002-07
Detailed Rule concerned with units of ECALS Dictionary	ECALSDS08	002-07

Below the table is the 'ECALS Dictionary Download' section, dated Nov,27,2009, indicating 'ECALS Dictionary Ver.11.1 issued'. It includes a table with the following data:

ECALS Dictionary Version	Date of Publication	Relevant Standard & Version
[Ver 011-01]	2009/11/27	IEC61360-1 2002-02 IEC61360-2 1998-04 IEC61360-4 1997-05

Text below the table states: 'Only the most recent version of the ECALS dictionary is available for downloading. You must input [here](#) personal information in agreement with the attached agreement document to obtain an ECALS dictionary.' A red box highlights the 'ECALS dictionary Download (\*A new window opens)' button.

Following the ECALS Dictionary Download procedures, obtain the dictionary file in zip format, uncompress and save.

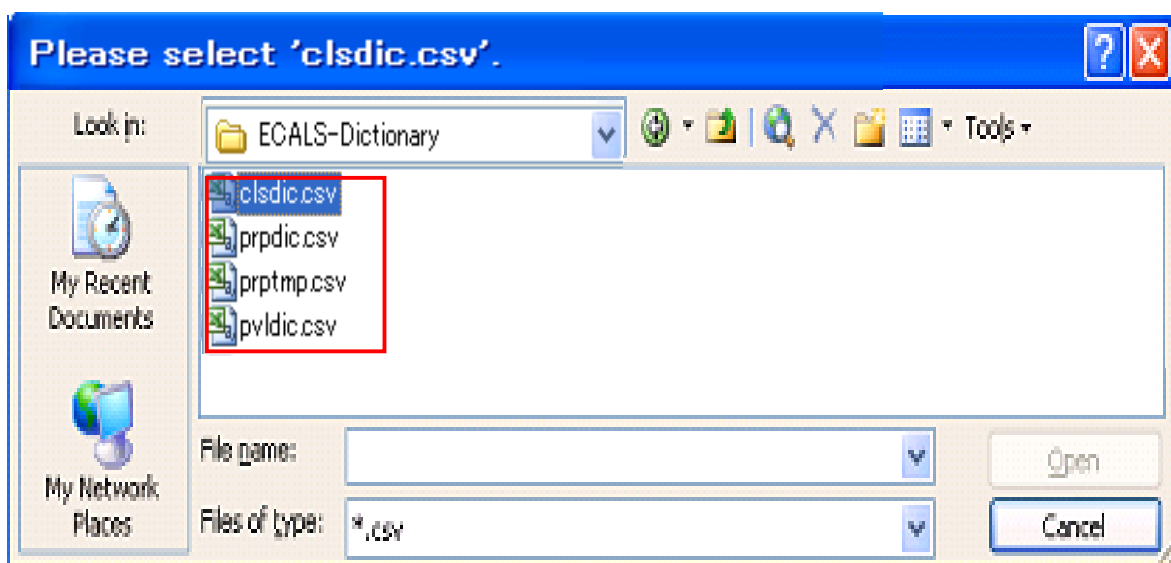
#### 4-3-3 Click the “1. Load Dictionary” button.

The screenshot shows the 'ECALS Data Creation Assist Tool (Ver 1.10)'. The interface includes a 'Dictionary Version' dropdown set to '11.1'. A red box highlights the '1. Load Dictionary' button, with an arrow pointing to the '2. Class view' button. Below this, a yellow box contains the instruction: 'The dictionary version 11.1 has been set as default. Please select "Load Dictionary" to read the set of dictionary csv files of any version.' The 'Explanation of usage' section provides detailed steps for loading the dictionary and viewing class properties. A red box highlights a file selection window titled 'Please select: class.csv', showing the 'ECALS\_tool' folder selected in the file explorer.

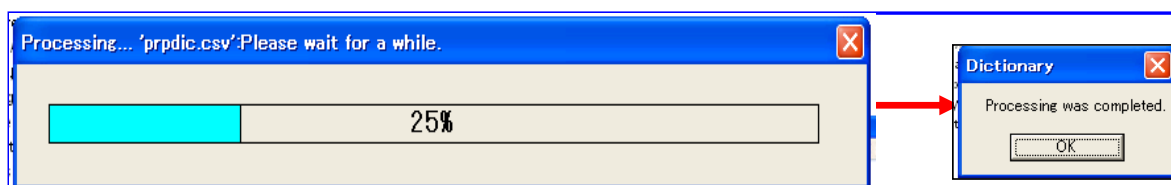
#### 4-3-4. File (clsdic.csv) selection

A file selection window will appear. Select clsdic.csv from the folder where ECALS Dictionary files of the corresponding version are kept.

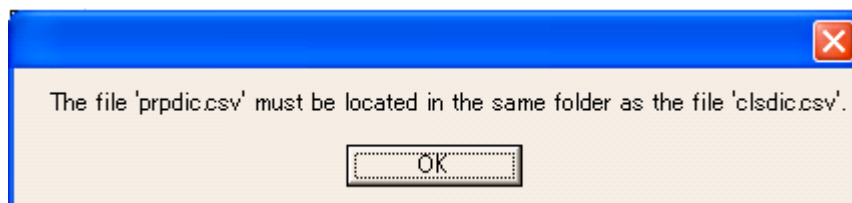
The remaining three files, “prpdic.csv”, “prptmp.csv” and “pvldic.csv”, will be automatically loaded if they are kept in the same folder.



It takes a few minutes.



The following message appears in case pvdic.csv and clsdic.csv are not in the same folder and the loading cannot be completed.



#### 5. Disclaimer

JEITA/EC Center shall not be liable for any damages and losses that this software may cause to the users.

Moreover, JEITA/EC Center shall not have any obligation to correct errors in case any defects are found on this software.

END

## 6. ECALS dictionary structure

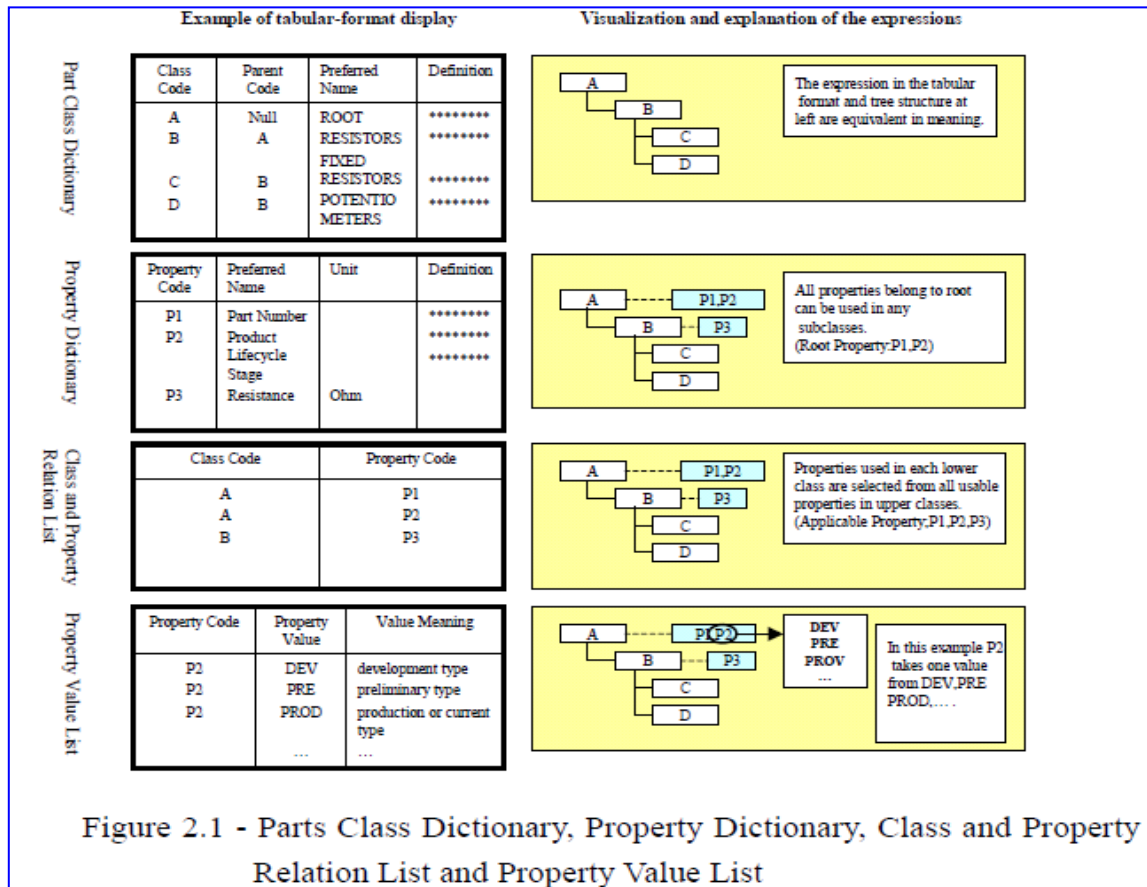


Figure 2.1 - Parts Class Dictionary, Property Dictionary, Class and Property Relation List and Property Value List

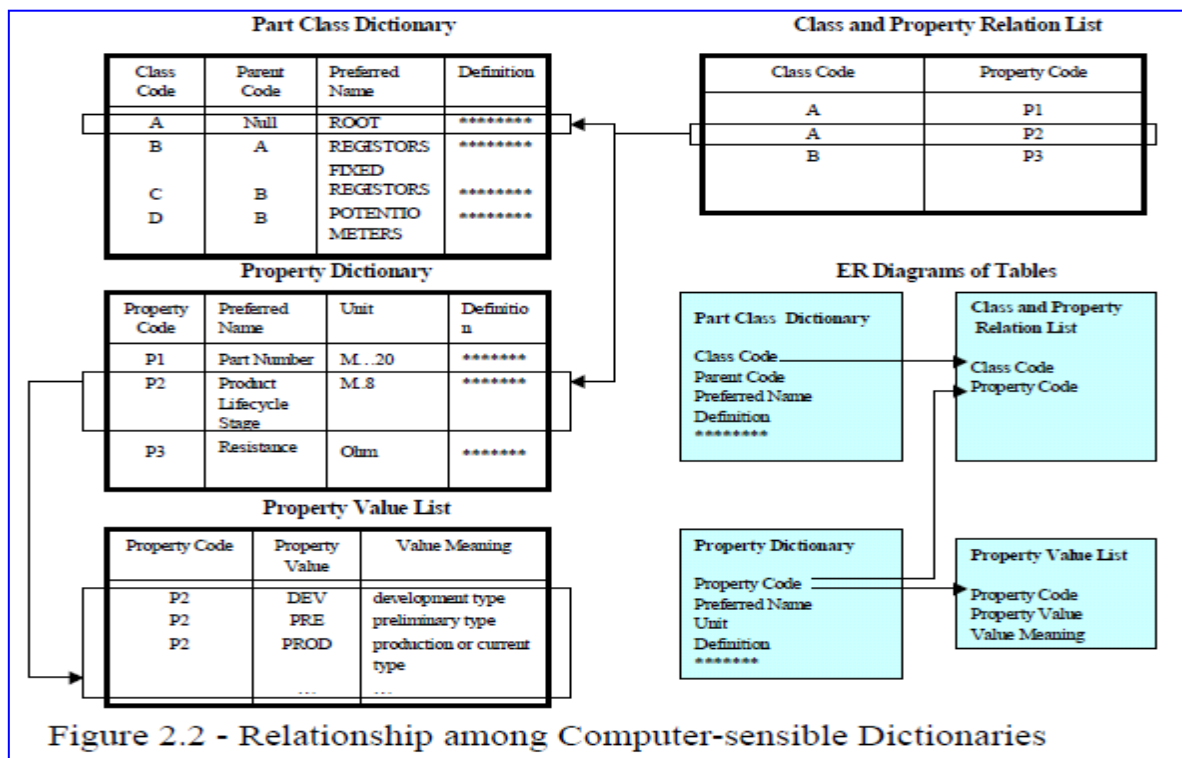


Figure 2.2 - Relationship among Computer-sensible Dictionaries