Dictionary Description Rules ［Summary］

［Rule Number : ECALSDS06］

Version 2.7

Abstract: ECALS Dictionary is a set of Computer-sensible Dictionaries to describe the attributes of electronic component classes and properties. The Dictionary is comprised of “Parts Class Dictionary”, which describes component classes and the classification; “Property Dictionary”, which provides information about the attributes of electronic components; “Class and Property Relation List”, which describes the relationship between classes and properties; “Property Value List”, which lists the values selectively taken by the properties; and three other files. This is a summary of the Dictionary Description Rules. Details are described in each Description Rule.

Issued by
Technical Committee for Standardization
EC Center
Japan Electronics and Information Technology Industries Association

－ Contents －

1. Purpose and Scope

(1) Purpose

ECALS Dictionary is a set of Computer-sensible Dictionaries to describe the attributes of electronic component classes and properties. The Dictionary is comprised of Parts Class Dictionary, Property Dictionary, Class and Property Relation List, Property Value List, Segment Definitions, Template Management Data and Templates.

Description rules are necessary for the maintenance of the Dictionary. This report is a summary of rules that govern them.

Status of ECALS Dictionary:

ECALS Dictionary has been developed by the Standardization Project of the former CALS/EC Steering Committee in the Electronic Industries Association of Japan (EIAJ). It is based on the standards developed in ECALS-2 Project conducted from December 1, 1998 to January 7, 2000. ECALS-2 Project was part of a project named the Development of Global Supply Chain Foundation for Electronic Components, one of the Advanced Information Development Experimental Tasks of the former Ministry of International Trade and Industry (MITI) of Japan. For harmonization with international standards, ECALS Dictionary has been developed pursuant and with reference to IEC61360 and ISO13584 to the greatest possible extent.

MITI has been reorganized into the Ministry of Economy, Trade and Industry (METI) since January 2001. EIAJ has also been reorganized into the Japan Electronics and Information Technology Industries Association (JEITA) since November 2000.

(2) Scope

The description rules apply to the electronic description and expression of the component classification system stipulated by ECALS standardization organizations i.e. Technical Committee for Standardization (TCS).

(3) Normative references

- IEC 61360-1: 1995, Standard data element types with associated classification scheme for electric components- Part 1: Definitions, principles and methods
- IEC 61360-2: Standard data element types with associated classification scheme for electric components - Part 2: EXPRESS Dictionary Schema
- IEC 61360-4: Standard data element types with associated classification

scheme for electric components - Part 4: IEC reference collection of standard data element types, component classes and terms

・ISO 13584-42: 1998 Industrial automation systems and integration - Parts Library - Part 42: Methodology for structuring part families

2. Basic Information Model of the Dictionary

The description rules that stipulate for ECALS Dictionary are based on two standards, IEC61360-2 and ISO13584-24, which support the ability of Computer-sensible Dictionaries' interoperability. In addition, the Dictionary is expanded to accommodate the conditions for actual catalog data exchange.

Details of this expansion are as follows:

・Correspondence for two-byte characters (used in Japanese and other languages);
・Correspondence for tabular format specifications for use in displaying the distributed dictionary data;
・Expansion of data type for database use.

A physical file format for ECALS Dictionary is interchangeable with the STEP Physical File Format adopted by IEC61360-2 and ISO13584-24.

(1) Definitions of seven Computer-sensible Dictionaries

Seven Computer-sensible Dictionaries included in ECALS Dictionary are defined as follows:

・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;
・Class and Property Relation List; capdic.csv: A list that describes the relationship between classes and properties;
・Property Value List; pvldic.csv: A list of the elemental values selected by the properties;
・Segment Definitions; segdic.csv: Definition of a group of classes possessed by a property;
・Template Management Data; edltmp.csv: Data used to manage templates;
・Templates; prptmp.csv: Definitions for the search, description and display of each

property in a class;

Data produced on the basis of the rules governing these dictionaries are called dictionary data.

An example of the equivalent relationship among the tabular displays and tree structure displays in each dictionary are shown in Figure 2.1 – 'Parts Class Dictionary, Property Dictionary, Class and Property Relation List and Property Value List'.

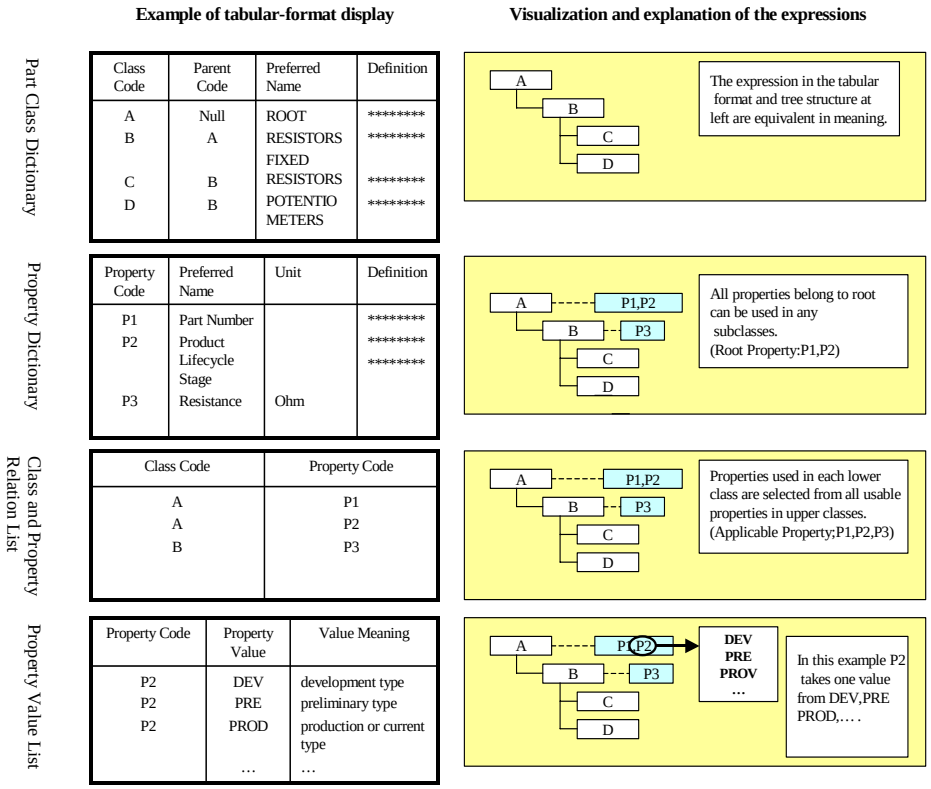

Figure 2.1 - Parts Class Dictionary, Property Dictionary, Class and Property Relation List and Property Value List

(2) Relationships among Computer-sensible Dictionaries

Each Computer-sensible Dictionary possesses one meaning with respect to the others. For example, properties used with a specific part type are defined using the Class and Property Relation List, and each class name and property name is defined in each Computer-sensible Dictionary. In addition, the values taken by the properties are defined by the property values. The definitions of those properties are found in the property dictionary. The relationship between this tabular structure and each Computer-sensible Dictionary, and the ER diagram for this tabular structure, are illustrated in Figure 2.2 – 'Relationship among Computer-sensible Dictionaries'.

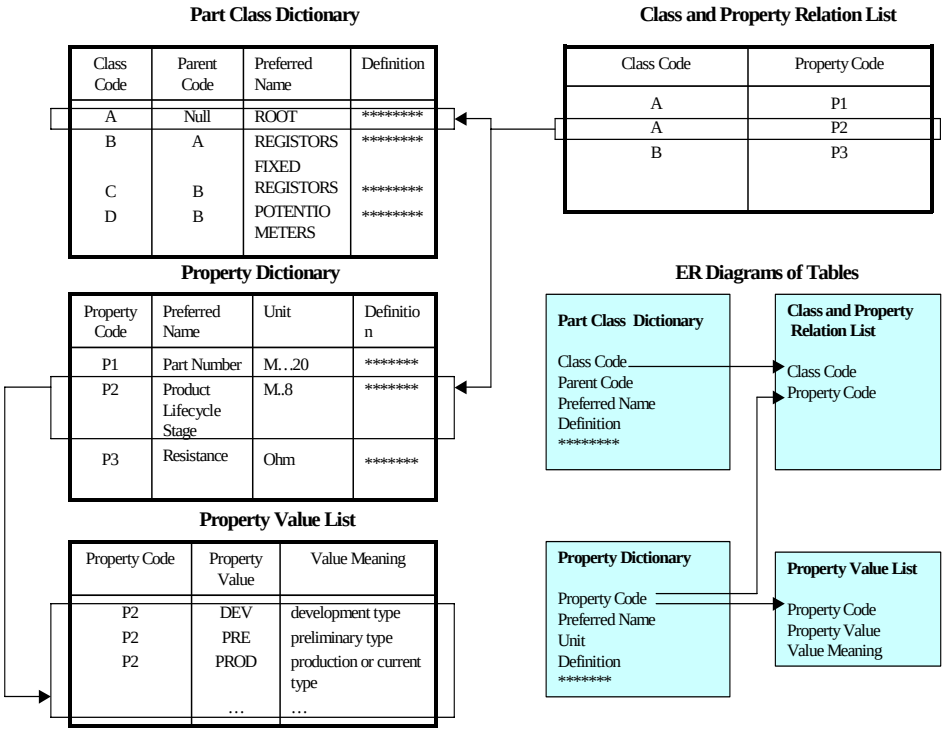

Figure 2.2 - Relationship among Computer-sensible Dictionaries

3. Parts Class Dictionary

An overview of the governing the Parts Class Dictionary Rule is shown in Table 3.1 - 'Parts Class Dictionary Rule'. The data per this description rule is stored in "clsdic.csv".

Table 3.1 - Parts Class Dictionary Rule

Attribute Name (EN)	Attribute Name (JA)	Objective	Description	Obligation	Formulation	Example
Class Code	クラスコード	To identify a Part Class uniquely and distinguish it from other Part Classes.	To describe based on the BSU code	Obligation (TCS assigns the code)	XXXnnn : (3uppercase alphabets followed by 3-digit numerals.)	XJA001
Parent Class Code	親クラスコード	To identify the parent class among classes.	Description based on BSU code is used for this item.	Obligation. (TCS assigns the code) * There is no defined parent of the Root Class. "$ROOT$" is used temporality.	XXXnnn: (3 upper case capital alphabets followed by 3 digits.)	XJA001
Version Number	バージョン番号	This is used to identify a specific version from other versions in the class. A new version number should be assigned when one or more attribute is modified in the Part Class.	A string of alphanumeric characters to identify each version number. A sequence of version numbers shall be assigned in the ascending order.	Obligation	String : three-digit numerals	001 (it is followed by 002)
Revision Number	リビジョン番号	To identify each 'revision' of the same Class version. The revision number shall be incremented when values of some attributes are modified.	A string of alphanumeric characters to identify each different revision number of the same Property version. A sequence of revision numbers shall be assigned in the ascending order. The revision number is reset to '01' when a version number is changed.	Obligation	String: two- digit numerals.	01 (it is followed by 02)
Preferred Name.EN	好適名称(英語)	To distinguish a Class from other Classes definitely. This is used to make it human-readable and help users understand it easily.	Names defined in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names. It is recommended to use a	Obligation	Alphanumeric characters of 70 letters or less. Only the first letter shall be an uppercase.	Capacitor

			full-spelling-out name to express a value.			
Preferred Name.JA	好適名称(日本語)	This attribute is used to distinguish a class from other classes definitely. This is used to make it visible and make a user understand easily.	Names defined in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names. It is recommended to use a full-length names if possible.	Obligation	A string of less than 70 letters with a combination of a single-byte alphanumeric code and a double-byte Kana-Kanji character. A character string, which allowed to use, should be based on ECALSD14, 'Regulation of a character set of the dictionary'	コンデンサ
Short Name.EN	短縮名称(英語)	To define a short notification of a class to save space (for instance, to display on screen, to print on paper that has narrow space)	Names used in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names.	Obligation	Alphanumeric characters of 17 letters or less. It is allowed to use a Preferred Name.EN as a Short Name.EN as far as it has 17 letters or less.	Capacitor
Short Name.JA	短縮名称(日本語)	To define a short notification of a class to save a space (for instance, to display on screen, to print on paper that has narrow space.)	Names used in International Standard, National Standard or Industrial Standard shall take priority over using ECALS individual names.	Obligation	A string of 17 letters or less with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.It is allowed to use a Preferred Name.JA as a Short Name.JA as far as it has 17 letters or less. Character strings to be used shall be based on 'Detailed Rule concerned with characters in ECALS Dictionary'; ECALSDS14.	コンデンサ
Synonymous Name.EN	同義語名称(英語)	Alternative names showing the same concept of Preferred Name.EN.	Names used in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names.	Option	This attribute can have several synonymous terms. Each synonymous name contains alphanumeric characters of 70 letters or less.	Inductor, coil
Synonymous Name.JA	同義語名称(日本語)	Alternative name showing the same concept of Preferred	Names used in International Standard, National Standard or	Option	This attribute can have several synonymous terms.	インダクタ, コイル

		Name.JA.	Industrial Standard shall take priority over ECALS individual names.		Each synonymous name contains alphanumeric characters of 70 letters or less with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters. Character strings to be used shall be based on ‘ Detailed Rule concerned with characters in ECALS Dictionary’; ECALSDS14.	
Definition.EN	定義(英語)	This attribute is used to make a meaning of the preferred name clearer and to identify it among other classes. This notation must have an ability to show what kind of class it is.	The statement must show the meaning of the Classes and distinguish it from other Classes.	Obligation	Unlimited alphanumeric characters	A coil mainly used in high frequency circuit of such electronic apparatus as radio and television receivers.
Definition.JA	定義(日本語)	This attribute is used to make a meaning of the preferred name clearer and to identify it among other classes. This notation must have an ability to show what kind of class it is.	The statement must show the meaning of the Property and distinguish it from other classes.	Obligation	Unlimited string length with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters. Character strings to be used shall be based on ‘Detailed Rule concerned with characters in ECALS Dictionary’; ECALSDS14.	高周波領域で使用される固定型インダクタ
Source Document of Definition	定義の元文書	To list the original rules and standard documents which were referred to in defining a preferred name, a definition and a unit It will help understanding and a review in the committee after defining the class.	To list the document title, the document number and the issued date of the source document	Option	Alphanumeric characters of 80 letters or less	IEC 61360 Part 1:1998

Note.EN	注意(英語)	To add more information to a class to make it clear.	To describe detail information to support understanding of class definition.	Option	Unlimited string length of alphanumeric characters	The classification of magnetic materials is based upon the following characteristics: the main alloying element and metallurgical state and physical properties of the material.
Note.JA	注意(日本語)	To add more information to a class to make it clear.	To describe detail information to support understanding of class definition.	Option	Unlimited string length with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters. Character strings to be used shall be based on 'Detailed Rule concerned with characters in ECALS Dictionary'; ECALSDS14.	磁性材料の分類は構成元素，冶金学的状態，物理的性質などに基づいている。
Remark.EN	注釈(英語)	This attribute is used to add more information on the class to make it clearer how to use it.	Not to mention about a meaning of the class, but to describe how to use it. With the description, part information providers can identify the class.	Option	Unlimited string length of alphanumeric characters	
Remark.JA	注釈(日本語)	To add more information to a class to make it easier to understand how to apply it.	To describe how to apply a class.	Option	Unlimited string length with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters. Character strings to be used shall be based on 'Detailed Rule concerned with characters	製品品番は，技術的仕様（プロパティ）を共通とした単位で記述すべきである。通

					in ECALS Dictionary'; ECALSDS14.	常，カタログに記載される品名構成により決定される。また，その品番を元に，別途記載される連絡先（営業担当）への技術問合せ，第１次の価格見積りが可能であるべきである。

Note) 'Alphanumeric and Kana-Kanji character' in the formulation field shows single-byte for alphanumeric characters, double-byte for Kana-Kanji characters. 'Rule of a character set of the dictionary'; ECALSDS14 defines a set of characters to be used.

4. Property Dictionary

（1）Description Rule

An overview of the Property Dictionary Rule is shown in Table 4.1 - ‘Property Dictionary Rule’. The data per this description rule is stored in “prpdic.csv”.

Table 4-1. Property Dictionary Rule

Attribute name (EN)	Attribute name (JA)	Objective	Description	Obligation	Formulation	Example
Property Code	プロパティコード	To identify a Property uniquely and distinguish it from other Properties.	To describe based on BSU code.	Obligation	XXXnnn: (3 uppercase alphabets followed by 3-digit numerals)	XJE010
Version Number	バージョン番号	To identify each version of Property. The version number shall be incremented when values of some attributes in the Property are modified.	A string of alphanumeric characters to identify each version number. A sequence of version numbers shall be assigned in the ascending order.	Obligation	String : three- digit numerals	001
Revision Number	リビジョン番号	To identify each ‘revision’ of the same Property version. The revision number shall be incremented when values of some attributes are modified.	A string of alphanumeric characters to identify each different revision number of the same Property version. A sequence of revision numbers shall be assigned in the ascending order	Obligation	String : two- digit numerals	01
Preferred Name.EN	好適名称(英語)	To distinguish a Property from other Properties definitely. This is used to make it human-readable and help users understand it easily.	Names defined in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names. It is recommended to use full-length names if possible.	Obligation	Alphanumeric characters of 70 letters or less. Only the first letter shall be an uppercase.	Insulation resistance
Preferred Name.JA	好適名称(日本語)	To distinguish a Property from other Properties definitely. This is used to make it human-readable and help users understand it easily.	Names defined in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names. It is recommended to use full-length names if possible.	Obligation	A string of 70 letters or less with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.	絶縁抵抗
Short Name.EN	短縮名称(英語)	To define a short notification of a Property to save space (for instance, to display on screen, to print on paper that has narrow space.)	Names used in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names.	Obligation	Alphanumeric characters of 17 letters or less. It is allowed to use a Preferred Name.EN as a Short Name.EN as far as it has 17 letters or less.	R_Ins

Short Name.JA	短縮名称(日本語)	To define a short notification of a Property to save a space (for instance, to display on screen, to print on paper that has narrow space.)	Names used in International Standard, National Standard or Industrial Standard shall take priority over using ECALS individual names.	Obligation	A string of 17 letters or less with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.It is allowed to use a Preferred Name.JA as a Short Name.JA as far as it has 17 letters or less.	絶縁抵抗
Synonym Name.EN	同義語名称(英語)	Alternative names showing the same concept of Preferred Name.EN.	Names used in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names.	Option	This attribute can have several synonymous terms. Each synonymous name contains alphanumeric characters of 70 letters or less.	Switching temperature, Curie temperature
Synonym Name.JA	同義語名称(日本語)	Alternative name showing the same concept of Preferred Name.JA.	Names used in International Standard, National Standard or Industrial Standard shall take priority over ECALS individual names.	Option	This attribute can have several synonymous terms. Each synonymous name contains alphanumeric characters of 70 letters or less with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.	スイッチング温度, キュリー温度
Preferred Letter Symbol	好適シンボル	To define an abbreviated name of a Property in tables, formula and drawings.	For this attribute, refer to International standards such as ISO31, IEC60027,IEC60148 and Manufacturing Standard. It is recommended that Preferred Letter Symbols are computer sensible letter strings so that they can be displayed on and printed via an ordinary computer.	Option	Alphanumeric	V_OH
Unit	単位	To describe a unit for a value of Quantitative Property.	Symbols of the SI unit are used. Units other than SI units can be adopted when the standardization organization admits they are appropriate.	Obligation (in quantitative Property)	A string of alphanumeric characters specified	m/S**2, bit, Cel
Level	レベル	To describe levels of Quantitative Property.	To express “Level”, a single or combination of the following four kinds of identifiers are used: Min(Minimum),Nom(Nominal),Typ(Typical) and Max(Maximum).	Obligation in quantity data	A string of alphanumeric characters specified	Min, Nom, Typ, Max, MinTyp, TypMax, MinNomMax, MinTypMax

Data Type	データタイプ	To identify a Data Type such as Integer, Real, String, Boolean and External File Reference.	Describe a defined Data Type Code	Obligation	Data Type Code specified (Alphanumeric)	Int
Definition.EN	定義(英語)	To identify a Property among other Properties. This notation must show clearly what kind of characteristics the Property has.	The statement must show the meaning of the Property and distinguish it from other Properties.	Obligation	Unlimited string length of alphanumeric characters	The maximum equivalent series resistance of a capacitor at specified temperature and frequency.
Definition.JA	定義(日本語)	To identify a Property among other Properties. This notation must show clearly what kind of characteristics the Property has.	The statement must show the meaning of the Property and distinguish it from other Properties.	Obligation	Unlimited string length with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.	規定の温度, 及び周波数でのコンデンサの等価直列抵抗の最大値。
Source Document of Definition	定義の元文書	To list the original rules and standard documents which were referred to in defining a preferred name, a definition and a unit It will help understanding and a review in the committee after defining the Property.	To list the document title, the document number and the issued date of the source document	Option	Alphanumeric characters of 80 letters or less	IEC 61360-1:1998
Note.EN	注意(英語)	To add more information to a Property to make it clear.	To describe detail information to support understanding of Property definition.	Option	Unlimited string length of alphanumeric characters	The temperature at which the change of the slope of the derating curve occurs.
Note.JA	注意(日本語)	To add more information to a Property to make it clear.	To describe detail information to support understanding of Property definition.	Option	Unlimited string length with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.	周囲温度が70℃以外のときは定格周囲温度を規定する
Remark.EN	注釈(英語)	To add more information to a Property to make it easier to understand how to apply it.	To describe how to apply a Property.	Option	Unlimited string length of alphanumeric characters	Apply to rectangular chip with terminals or

						electrode in opposite direction.
Remark.JA	注釈(日本語)	To add more information to a property to make it easier to understand how to apply it.	To describe how to apply a Property.	Option	Unlimited string length with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.	反対方向にある端子、又は電極を持つ角形チップに適用する。
Segment	セグメント	To classify Properties into groups. Properties in a same group have same characteristics. Segment is used 1) when part information providers get information on extracting Properties and 2) when part information users get a group of Properties.	A Property shall be classified into a Segment.	Obligation	SEGxxx(3 uppercase alphabets followed by 3-digit numerals)	SEG006

Note) ‘Alphanumeric and Kana-Kanji character’ in the formulation field shows single-byte for alphanumeric characters, double-byte for Kana-Kanji characters. ‘Rule of a character set of the dictionary’; ECALSDS14 defines a set of characters to be used.

(2) Usable combinations of Levels

Combinations of the level, which can be used, are made into 11 kinds shown in Table 4.2 - 'Usable combination of Levels'.

Table 4.2 - Usable combination of Levels

Identifier	Meaning	Note
Min	Minimum value	
Nom	Nominal value (defined as a rating)	To describe the nominal value of an characteristics in a design.
Typ	Typical value (obtained by an actual measurement. Some conditions are added in this case.)	To express performance of an attribute. (If there are any measurement conditions attached, not 'Nom', but 'Typ' shall be used.)
Max	Maximum value	
MinMax	Range from minimum to maximum	
MinNom	Minimum and nominal value	
MinTyp	Minimum and typical value	
NomMax	Nominal and Maximum value	
TypMax	Typical and Maximum value	
MinNomMax	Minimum and Maximum centered by Nominal	
MinTypMax	Minimum and Maximum centered by Typical.	

(When there are especially no requirements, MinNom and NomMax are not used)

(3) Data type and meaning

Data Type gives a unique code name (a string of characters). The list of code grant is shown in Table 4.3 - 'List of Data Type'.

Table 4.3 – List of Data Type

Data Type	Code for Data Type	Meaning
Integer	Int	Integer with no unit
Integer Measurement	IntM	Integer with a unit
Integer Currency	IntC	Integer with a currency unit
Integer Enumeration	IntE	Integer with value defined in Property Value List
Real	Real	Real with no unit
Real Measurement	RealM	Real with a unit
Real Currency	RealC	Real with a currency unit
String	String	String of characters
String Enumeration	ENUM	String with value defined in Property Value List
Boolean	Boolean	Truth or False
External File Reference	File	External file reference
Date	Date	Date type

5. Class and Property Relation List

An overview of Class and Property Relation List is shown in Table 5.1 - ‘Rules of Class and Property Relation’. The data per this description rule is stored in “capdic.csv”.

Table 5.1 - Rules of Class and Property Relation

Attribute Name (English)	Attribute Name (Japanese)	Objective	Description	Obligation	Formulation	Example
Class Code	クラスコード	To identify a Part Class uniquely and distinguish it from other Part Classes.	To describe based on the BSU code	Obligation (TCS assigns the code)	XXXnnn :(3 uppercase alphabets followed by 3-digit numerals.)	XJA001
Property Code	プロパティコード	To identify a Property uniquely and distinguish it from other Properties.	To describe based on BSU code.	Obligation	XXXnnn: (3 uppercase alphabets followed by 3-digit numerals)	XJE010

6. Property Value List

An overview of the rules governing the Property Value List is shown in Table 6.1 - 'Rules Governing Property Value List'. The data per this description rule is stored in "pvldic.csv".

Table 6.1 - Rules Governing Property Value List

Attribute name (EN)	Attribute name (JA)	Objective	Description	Obligation	Formulation	Example
Property Code	プロパティコード	To specify a property which uses a enumerated element	Write BSU code which is defined in Property Dictionary	Obligation	Property BSU code	XJE013
Property Name	プロパティ名称	Property Name which uses an enumerated element	Write a property name which is defined in Property Dictionary	Obligation	Japanese Preferred Name	製品供給状態
Property Value EN	プロパティ値（英語）	To list up Values of an enumerated property.	Should be identical among property Values	Obligation	Alphanumeric characters of 17 letters or less	DEV, PRE, PROD, NRND
Property Value JA	プロパティ値（日本語）	To list up Values of an enumerated property.	Should be identical among property Values	Obligation	Alphanumeric and Kana-kanji character of 17 letters or less	開発中,事前準備,量産体制,生産中止予定
Value Meaning EN	値の意味（英語）	To define a brief meaning of Property Value.	Describe a meaning of a Property Value in English to make it easy to understand	Obligation	Alphanumeric characters of 70 letters or less	not recommended for new design
Value Meaning JA	値の意味（日本語）	To define a brief meaning of Property Value	Describe a meaning of a Property Value in Japanese to make it easy to understand	Obligation	Alphanumeric and Kana-kanji character of 70 letters or less	生産中止予定のため新機種への採用禁止

Table 6.2 shows an example of possible values of the Property ‘XJG021’.

Table 6.2 - Example of possible values of the property ‘XJG021’

Property code	Property Name	Property Value.EN	Property Value.JA	Value Meaning.EN	Value Meaning.JP
XJG021	Function class	Fast Page	ファーストページ	FP(fast page)DRAM	ファーストページ
XJG021	Function class	EDO	EDO	EDO(Extended Data Out) DRAM	EDO
XJG021	Function class	Synchronous	シンクロナス	S(Synchronous)DRAM	シンクロナス
XJG021	Function class	Rambus	ランバス	R(Rambus)DRAM	ランバス
XJG021	Function class	DDR-DRAM	ダブルデータレート	DDR(Double Data Rate) SDRAM	ダブルデータレート
XJG021	Function class	Other Function	その他	Other Function	その他

7. Segment Definitions

Segment definitions are shown in Table 7.1 - ‘Rules Governing Segment Definitions’. The data per this description rule is stored in “segdic.csv”.

Table 7.1 - Rules Governing Segment Definitions

Segment Code	PrefName.EN	PrefName.JA	ShortName.EN	ShortName.JA	Definition.EN	Definition.JA
SEG001	Management Identification	管理情報	Management ID	管理	This segment contains all those properties which are concerned with the identification of the component information by supply	部品情報を管理するための情報。部品分類コード、部品分類名称、バージョン、リビジョンなど
SEG002	Component Information	部品情報	Component	部品	This segment contains all those properties which are concerned with the information n of the component itself, including its source of supply	部品を識別するための情報。製品名、型番、企業名及び各種管理用のIDなど
SEG003	Physical description	物理情報	Physical	物理	This segment contains the physical description of the components including materials and qualitative descriptions of structure	部品のパッケージ材質、端子材質を含む物性情報
SEG004	Limiting conditions (ratings)	定格	Ratings	定格	This segment contains information on all conditions (temperature, current, power etc.) which must not be exceeded without risking damage to the device	定格に関する情報。電源電圧、動作温度範囲など
SEG005	Normal operating characteristics	特性（電気、機械）	Characteristics	特性	This segment contains those parameters which cover the normal operation of the component and which are generally ranges for observed values under test and measured under stated conditions	電気特性（推奨動作条件を含む）及び機械特性に関する情報。抵抗値、許容差、データ容量など
SEG006	Package and Dimension	パッケージ及び外形形状	Package	寸法	This segment covers package styles, geometric information and outline dimensions	部品のパッケージ及び外形寸法に関する情報。パッケージコードや外形形状の寸法データなど

SEG007	Handling and mounting	実装情報	Handling	実装	This segment contains information on how the component should be handled and mounted and the form of packing in which it is supplied to the user	部品の実装に関する情報。梱包形態、テーピング、トレイなどの仕様、及び、実装時のはんだ付け特性など
SEG008	Quality and reliability	品質及び信頼性	Quality	品質	This segment contains information on any formal quality assurance approvals for the component as well as failure-rate data which may be of use in system reliability predictions. Some of the data may be available in an external file	部品の信頼性と品質に関する情報。部品故障率や信頼性データ。ISO9000などの認証取得、安全規格など
SEG009	Commercial information	販売情報	Commercial	販売	This segment contains information concerning the price of the component and its availability in the market place. The information should be under the close management of the component supplier and may be quite volatile	部品の販売に関する情報。標準的な価格、納期。最小受注単位、生産国。購入可能国など
SEG010	Functional Models	機能モデル	EDA model	機能	This segment contains information concerning mainly external file about simulation models or datasheets are handled as global objects	EDAデータに関する情報。回路図シンボル、フットプリント、解析モデルなど
SEG011	Discontinuance	生産中止情報	Discontinuance	生産中止	This segment contains information necessary for an equipment manufacturer to handle appropriately the discontinuance of component manufacturing	部品の生産中止に関する情報。生産中止区分、生産中止予定日付、保管時の注意事項など
SEG012	Deconditioning and recycling	リサイクル情報	Deconditioning	リサイクル	This segment contains information necessary for an equipment manufacturer to handle appropriately the deconditioning and/or recycling of the component	部品の環境問題対応事項として、ISO14000の取得など。部品のライフサイクルに関して、廃棄品時の環境有害物質及び量、又は、リサイクル可能な場合の再生手順など。

SEG013	Release Information	リリース情報	Release	リリース	This segment contains information necessary for an equipment manufacturer to handle appropriately the availability status , sample providing status or sales release date of the component	部品情報のリリースに関する情報。サンプルの提供可能有無、代替品、新製品の事前資料など
SEG014	Caution Document	注意文書	Caution	注意	This segment contains information necessary for an equipment manufacturer to handle appropriately the caution of PL, trading law about component.	部品の注意事項に関する情報。部品取扱い時の、貿易管理令、PL法含む安全規格、著作権、特許に関する注意文書など
SEG015	EDIL Identifier	テンプレート管理情報	EDIL ID	テンプレート	This segment contains all those properties which are concerned with the template of the component itself. Also should be maintained by JEITA ECALS Standard Group.	テンプレートを管理するための情報。テンプレートコード、バージョン、リビジョンなど。本情報の値は、JEITA標準化分科会が作成、管理する

8. Template Management Data

Template Management Data are items for managing Templates.

(1) Template Name

(2) Template Code

(3) Template Version

(4) Template Revision

(5) Template Identifier

(6) Template Last Creation Date

(7) ECALS Class Code

(8) Template Definition

(9) Template Note

(10) Template Remark

Template Management Data are defined in each class.
These names, definitions and formulations/examples are shown in Table 8.1 – ‘Template Management Data Items’.
Examples show the template management data value of FIXED RESISTORS.

Table 8.1 - Template Management Data Items

Name	Definition	Formulation/Example
Template Name	Description of Template name.	Ex: Template of Fixed Resistors
Template Code	Template code.	Alphanumeric code of 6 figures Ex: EDL003
Template Version	Template version.	Numeric of 3 digits Ex: 001
Template Revision	Template revision.	Numeric of 3 digits Ex: 006
Template Identifier	The identification code that is formed by a combination of the template name and version.	A provider will specify an ID for a template. Format is EDLnnn-nnn Ex: EDL003-001
Template Last Creation Date	The last date of template creation.	Date format. Format is YYYY-MM-DD, 10 digits. Ex: 2003-09-22
ECALS Class Code	A description of the ECALS class code to which the template belongs.	Alphanumeric code of 6 figures Ex: XJA003
Template Definition	A definition of the template contents.	Ex: Fixed Resistors
Template Note	A note added to the template definition.	
Template Remark	A remark added to the template definition.	Ex: ECALS Ver5.1

Files of the Template Management Data are stored in “edltmp.csv.”

9. Templates

A Template consists of a set of each Property description for every Parts Class, attributes of description, search and disclosure of each Property. Specifically, eight attributes are described in the Templates: Property Code, Preferred Name in Japanese, Query Attribute, Description Attribute, Disclosure Attribute, Segment Code, Parts Class Code and Template ID. These items are shown in Table 9.1 – 'Templates'. Files of Templates are stored in "prptmp.csv."

（1） Attributes of Templates

Table 9-1. Templates

Attribute Name (English)	Attribute Name (Japanese)	Objective	Description	Obligation	Formulation	Example
Property Code	プロパティコード	To specify a Property Code which is defined in Property Dictionary	To write BSU code which is defined in Property Dictionary	Obligation	XXXnnn	XJE001
Property Name	プロパティ名称	To distinguish a Property from other Properties definitely. This is used to make it human-readable and help users understand it easily.	To write Preferred Name.JA which is defined in Property Dictionary	Obligation	A string of 70 letters or less with a combination of single-byte alphanumeric characters and double-byte Kana-Kanji characters.	バージョン
Query Attribute	検索属性	To define whether or not the Property is querable in searching.	To describe in each Property Y: Querable N: Non-querable Y or N are described in upper-case one-byte characters.	Obligation	Y/N	N
Description Attribute	記述属性	To define whether the value of a Property is mandatory or not.	To describe in each Property M: Mandatory O: Optional S: Standardization team use only M, O and S are described in half-size, one-byte characters	Obligation	M/O	M
Disclosure Attribute	開示属性	To define whether the value of a Property is disclosed or not	To describe in each Property P: open to the Public R: Restricted disclosure P and R are described in	Obligation	P/R	P

			half-size, one-byte characters			
Segment	セグメント	To specify a Segment which is defined in Property Dictionary	To write BSU code which is defined in Property Dictionary	Obligation	SEGnnn	SEG001
Parts Class Code	クラスコード	To specify a Class Code which is defined in Class Dictionary	To write BSU code which is defined in Class Dictionary	Obligation	XXXnnn	XJA001
Template ID	テンプレートID	To specify a Template which contains all properties that are concerned with the parts themselves. Also should be maintained by Standardization Team.	To write Template ID which is define by Standardization Team XXXXXX-nnn. XXXXXX is a unique six-digit number. nnn indicates the template version.	Obligation	XXXXXX-nnn	EDL001-001

(2) Example of Template (in ECALS Dictionary version 5.1)

(a) The classification class of THERMISTORS

XJA001(ECALS/JEITA ROOT COMPONENT)
└ XJA017 (THERMISTORS)
└ XJA018(NTC THERMISTORS)
├XJA749(NTC THERMISTORS FOR TEMPERATURE DETECT,TEMPERATURE COMPENSATION)
└XJA734(INRUSH CURRENT LIMITING NTC THERMISTORS)

(b) The Template which constitutes Part Classes (temperature detection / NTC for temperature compensation)

XJA001: The Template of ECALS/JEITA ROOT COMPONENT

(common to all Parts)

XJE005	Class Code	N	M	P	SEG001	XJA001	EDL001-001
XJE007	Component Class Name	N	M	P	SEG001	XJA001	EDL001-001
XJE008	Product name	Y	M	P	SEG002	XJA001	EDL001-001
XJE009	Family or Series Name	N	O	P	SEG002	XJA001	EDL001-001
XJE010	Part Number	Y	M	P	SEG002	XJA001	EDL001-001
XJE012	Company Code	Y	M	P	SEG002	XJA001	EDL001-001
XJE011	Company Name	Y	M	P	SEG002	XJA001	EDL001-001
XJE003	Creation Date	N	M	P	SEG001	XJA001	EDL001-001
XJE004	Last Revised Date	Y	M	P	SEG001	XJA001	EDL001-001
XJE029	Catalog Document File	N	M	P	SEG013	XJA001	EDL001-001
XJE024	Outline Dimension Set Data File	N	O	R	SEG010	XJA001	EDL001-001

XJA017: The Template of THERMISTORS

XJG661	Nominal zero load resistance	Y	M	P	SEG005	XJA017	EDL017-001
XJG662	Tolerance of nominal zero load resistance	N	O	P	SEG005	XJA017	EDL017-001
XJG663	Category temperature range	N	O	P	SEG004	XJA017	EDL017-001

XJA018: NTC THERMISTORS

(since there is no property, there is no Template)

XJA749: NTC THERMISTORS FOR TEMPERATURE DETECT, TEMPERATURE COMPENSATION

XJE185	Rated B-Value(B25/85)	Y	M	P	SEG005	XJA749	EDL749-001
XJH795	Rated B-Value(B25/50)	Y	O	P	SEG005	XJA749	EDL749-001
XJH796	Rated B-Value(B25/75)	Y	O	P	SEG005	XJA749	EDL749-001
XJE186	Tolerance Of Rated B-Value	N	O	P	SEG004	XJA749	EDL749-001
XJE177	Maximum Power Dissipation	Y	M	P	SEG004	XJA749	EDL749-001
XJE180	Thermal Time Constant by Ambient Temperature	N	O	P	SEG004	XJA749	EDL749-001
XJE181	Thermal Time Constant by Self-heat dissipation	N	O	P	SEG004	XJA749	EDL749-001
XJE179	Dissipation Constant	N	O	P	SEG004	XJA749	EDL749-001

Notes)

1. Technical Committee for Standardization (TCS) is the only authority who is able to modify and withdraw ECALSDS06.
2. This specification was opened to the public.
3. Revision history

Date	Status	history	Major changes
2000/09/28	Published	001-01	
2002/04/01	Revised	002-01	・Explanations of Data Type and Level are added. ・An example of Template is added.
2002/10/19	Revised	002-02	・ The string lengths of Preferred Name, Short Name , Synonymous Name, Property Value and Value Meaning are changed to meet IEC61360-1（2002-02）. ・ ‘Alphanumeric upper case characters of 70 letters or less’ is added in the formulation of the Preferred Name.EN in Part Class Dictionary. ・ To restrict using double-byte characters in Source Document of Definition, ‘single-byte alphanumeric character strings of 80 letters or less’ is added. ・ ‘Alphanumeric characters of 70 letters or less and only the first letter shall be an upper case’ is added in the formulation of Preferred Name.EN in Property Dictionary. ・ The formulation of Template ID is modified to permit ‘XXXXXX-nnn’.
2003/2/3	Revised	002-03	・ Editorial Errors in titles of tables are modified.
2003/6/17	Revised	002-04	・ Editorial Errors are modified.
2004/5/25	Revised	002-05	・ Examples are modified as per ECALS Dictionary ver5.1.
2005/4/28	Revised	002-06	・ Change of disclosure scope.
2006/1/26	Revised	002-07	・ Editorial change of ‘8.Template Management Data’