

JEDEC PUBLICATION

Part Model SupplyChain Guidelines for Electronic-Device Packages – XML Requirements

JEP30-S100

March 2023

JEDEC SOLID STATE TECHNOLOGY ASSOCIATION



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Published by
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Suite 240 South
Arlington, VA 22201-2108

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PART MODEL SUPPLYCHAIN GUIDELINE FOR ELECTRONIC-DEVICE PACKAGES - XML REQUIREMENTS

Contents

	Page
1 Scope	1
1.1 Purpose	1
2 Applicable Documents	1
2.1 JEDEC (www.jedec.org)	1
2.1.1 JEDEC Part Model Schema and Sub-Schemas	1
2.2 JEDEC/EIA/IPC (cont'd)	2
2.3 IEC	2
2.4 JEDEC/EIA/IPC	2
3 Requirements.....	3
3.1 Terms and Definitions	3
3.2 XML Schema Key Terms and Definitions.....	3
4 Part Model Schema Definition	4
4.1 Part Model - SupplyChain Section	4
4.2 Manufacturer Part Number-Array	5
4.3 Linking the Manufacturing Part Number to a specific SupplyChain Data set	6
4.3.1 Linking the Manufacturing Part Number to Manufacturer Supply Chain	7
4.3.2 Linking the Manufacturing Part Number to Distributor Supply Chain	8
4.3.3 Linking the Manufacturing Part Number to Product Change Notice.....	9
4.3.4 Linking the Manufacturing Part Number to Product Discontinuance.....	10
4.3.5 Linking the Manufacturing Part Number to Alternative Part.....	11
4.4 SupplyChain Family-Array	12
4.4.1 Manufacturer Supply Chain.....	13
4.4.1.1 Manufacturer Part Status	14
4.4.1.2 Manufacturer Part Classification	15
4.4.1.3 Packing.....	15
4.4.2 Distributor Supply Chain	16
4.4.2.1 Distributor	16
4.4.2.2 Distributor Part Number - Array.....	17
4.4.2.2.1 Distributor Part Status.....	18
4.4.2.2.2 Distributor Part Classification	19
4.4.3 Product Change Notice.....	20
4.4.3.1 Change Description	23
4.4.3.1.1 Anticipated Impact	24
4.4.3.1.2 Change Type	25
4.4.3.1.2.1 Design	26
4.4.3.1.2.2 Manufacturing Test	27
4.4.3.1.2.3 Packing Shipping	27
4.4.3.1.2.4 Product Specification	28
4.4.3.1.3 Material Deceleration Change.....	29
4.4.4 Product Discontinuance	30
4.4.5 Alternative Part - Array.....	31
4.4.5.1 Alternative Part - Array.....	32
Annex A (informative) Differences between JEP30-S100 and its predecessors.....	33

PART MODEL SUPPLYCHAIN GUIDELINE FOR ELECTRONIC-DEVICE PACKAGES - XML REQUIREMENTS

(From JEDEC Board Ballots JCB-23-10 formulated under the cognizance of the JC-11 Committee on Mechanical Standardization.)

1 Scope

This standard establishes the requirements for exchanging part data between part manufacturers and their customers for electrical and electronic products. This standard applies to all forms of electronic parts. It forms part of the Part Model XML Schema, which covers the parental structure for the electrical, physical, supply chain, assembly process classification data along with materials and substances that may be present in the supplied product or sub-products. This Guideline specifically focuses on the SupplyChain sub-section of the Part Model.

All releases of the [SupplyChain](#) sub-schema must be under the umbrella of the Part model Schema to ensure that the Part model schema is referencing the correct version of the SupplyChain sub-schema. In addition, this will enable the [SupplyChain](#) sub-schema to connect to the Manufacturer Part Number and the Manufacturer of the Part.

1.1 Purpose

This standard is intended to benefit part manufacturers, distributors of their parts and their customers by providing consistency and efficiency to the transfer of part data from part manufacturer to customers. This standard specifically covers data applicable to the [SupplyChain](#) modelling of the device.

2 Applicable Documents

The following documents form a part of this standard to the extent specified herein. The revision of the document in effect at the time of solicitation shall take precedence.

2.1 JEDEC (www.jedec.org)

JEP30, *Part Model Guidelines for Electronic-Device Packages – XML Requirements*

JEP30-A100, Part Model Assembly Process Classification Guidelines for Electronic-Device Packages – XML Requirements

JEP30-E100, *Part Model Electrical Guidelines for Electronic-Device Packages – XML Requirements*

JEP30-P100, Part Model Package Guidelines for Electronic-Device Packages – XML Requirements

JEP30-T100, Part Model Thermal Guidelines for Electronic-Device Packages – XML Requirements

2.1.1 JEDEC Part Model Schema and Sub-Schemas

JEP30-10, Part Model Schema

JEP30-A101, Part Model Assembly Process Classification Schema

2.2 JEDEC/EIA/IPC

JEP30-E101, Part Model Electrical Schema

JEP30-P101, Part Model Package Schema

JEP30-S101, Part Model Supply Chain Schema

JEP30-T101, Part Model Thermal Schema

JEP30-D10, *Part Model Schema Types Dictionary* (Required to support the Part Model Schema and each of its sectional sub-schemas.)

2.3 IEC

IEC-62474, *Material Declaration for Products of and for the Electrotechnical Industry*

2.4 JEDEC/EIA/IPC

J-Std-046, *Customer Notification Standard for Product/Process Changes by Electronic Product Suppliers*

J-Std-048, *Notification Standard for Product Discontinuance*

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3 Requirements

The following terms and definitions are applicable to this XML Schema.

3.1 Terms and Definitions

All definitions and terms associated with the SupplyChain Data are defined in the JESD51 series of documents, as listed in the applicable documents section. The SupplyChain details of the part are defined in the [SupplyChainSection](#) of the XML Schema.

All common Terms and Definitions that are used by more than one sectional sub-schema, such as any of the Electrical, Package, Environmental, Assembly Process Classification, are defined in the "Part Model Schema Types Library".

All other definitions and terms necessary to define the schema, are defined by this document.

Part Model: A Part Model is a data representation described in an XML file that conforms to the rules and structure of the Part Model XML Schema.

NOTE 1 Companies who use the Part Model XML Files and claim compliance to JEDEC, must ensure that their Part Model XML file conforms to the specific released version of the Part Model XML Schema released by JEDEC.

NOTE 2 Section 4 will define the outline of the structure of the SupplyChain XML Schema. Specific components of the XML Schema and their hierarchy are specifically controlled by the JC-15 Standards Committee who retain the expertise for these structures.

NOTE 3 The [SupplyChainSection](#) of the schema forms part of the Part Model XML Schema and is not intended to act as a standalone schema. In addition, there is a "Part Model Schema Types Library" XML Schema, which is a common set of xml structures shared across the Part Model XML Schema and all of its sub-section schemas.

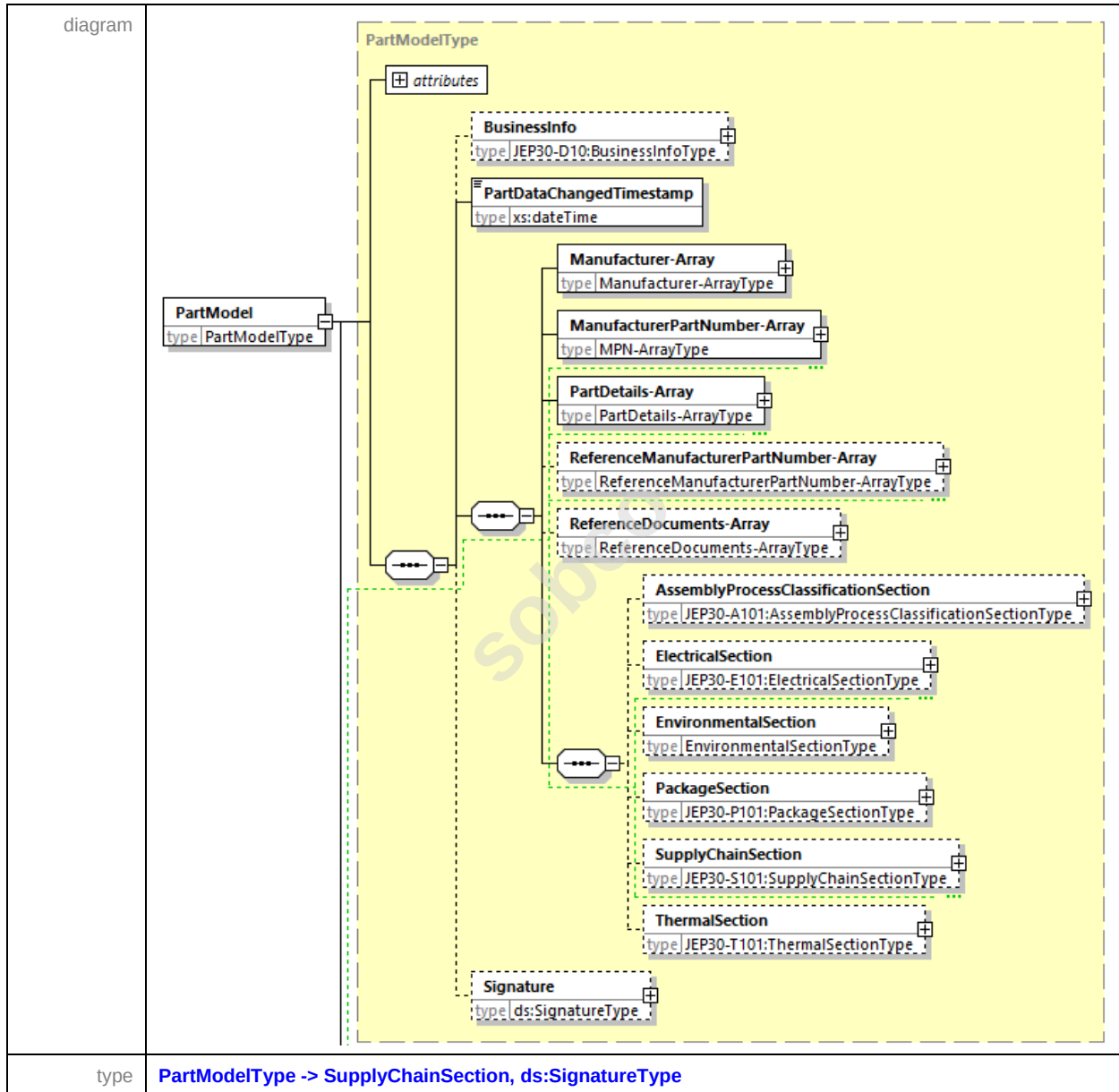
3.2 XML Schema Key Terms and Definitions

Reference the JEP30 publication for details of the "XML Schema Key Terms and Definitions".

4 Part Model Schema Definition

The following section describes the XML Schema structure.

4.1 Part Model - SupplyChain Section



The [PartModelType](#) belongs to the “Part Model XML Schema”. The [SupplyChainSection](#) belongs to the “Part Model SupplyChain XML Schema”. The primary purpose of the Part Model Schema is to provide the structure for identifying unique parts (Manufacturer and MPN), and the structure to include the sub schemas which define the part details, as outline in the JEP30 - Part Model Guidelines for Electronic-Device Packages – XML Requirements.

4.1 Part Model - SupplyChain Section (cont'd)

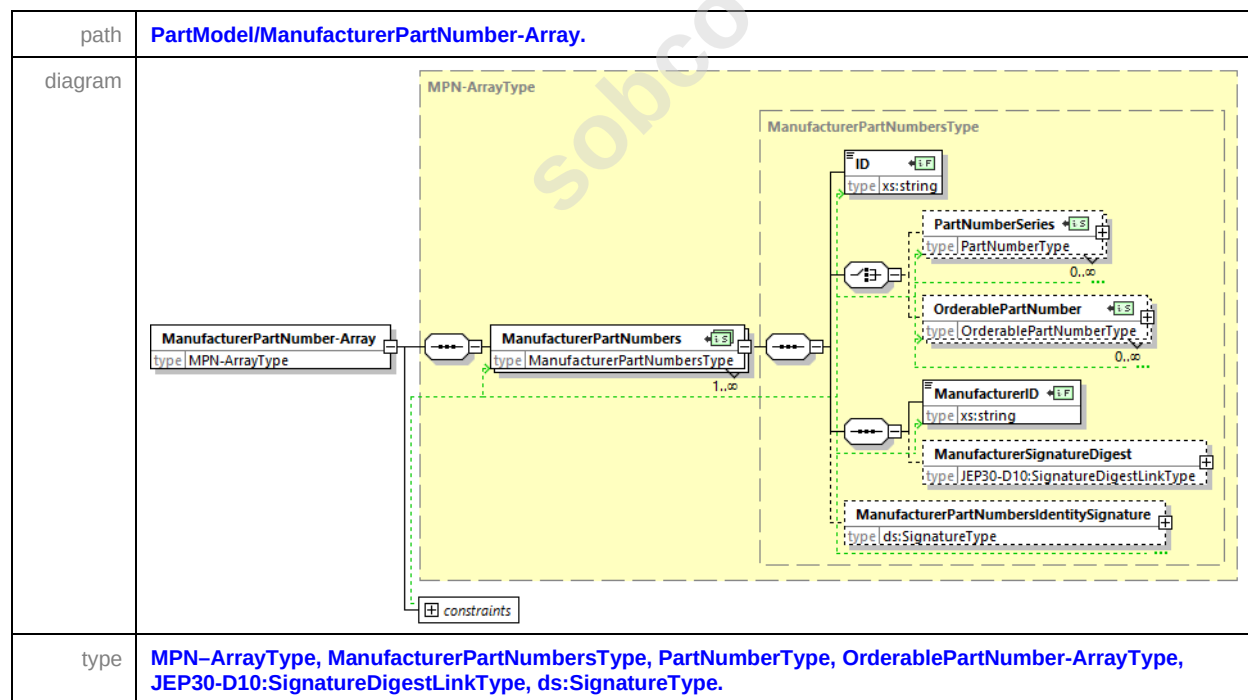
This document covers the [SupplyChainSection](#), which is referenced from its parent's structure, the [PartModel](#). The contents under the [SupplyChainSection](#) are tied to the Manufacturer's name and Manufacturer's part number.

The [ComplianceToPartModelSchemaVersion](#) indicates the version of the Schema to which the XML file is to be validated against. All new releases to this document or XML Schema is governed by the rules outlined in JEP30, and must be released in sync with the Part Model.

"Each time that a Sub-schema gets updated, then the part model version also gets updated in order to release that Sub-schema under the umbrella of the Part model. This is because the Part Model must now reference the new version of Sub-schema, since all subschemas have their own version number. The parent schema includes them by referring to a precise version, so a version bump in the subschema requires a version bump in the parent only at the time of release of the Parent."

The [PartModelContentRevision](#) indicates the revision of the data for the Part that is submitted in the XML file. This enables the Component Manufacturer to provide a new XML file for a Part each time they wish to upgrade a new set of data for a part, in any of the sub-sections such as this [SupplyChainSection](#).

4.2 Manufacturer Part Number-Array



The [ManufacturerPartNumber-Array](#) consists of a [ManufacturerPartNumbers](#) section that provide the definition of the part number, either via the [PartNumberSeries](#) or the [OrderablePartNumber](#). All Parts via their Part Number families or via their Orderable Part Numbers are connected to the details in the [SupplyChainSection](#) via the [PartDetails-Array](#) section.

4.3 Linking the Manufacturing Part Number to a specific SupplyChain Data set

The linking of the Parts to its technical data is done via the [PartDetails-Array](#) section as outline in the JEP30 - Part Model Guidelines for Electronic-Device Packages – XML Requirements. This consists of two sections called [PartsSelection-Array](#) and [Association-Array](#) which defines the relationship between identifying the specific set of parts and how they are associated with the supply chain content. Reference the JEP30 parent document for more details on this association.

path	PartModel/PartDetails-Array/PartDetails/Association-Array/Association/SupplyChain-Array.
diagram at the Association level	
type	SupplyChainAssociation-ArrayType , ManufacturerSupplyChainAssociationType , DistributorSupplyChainAssociationType , ProductChangeNoticeAssociationType , ProductDiscontinuanceAssociationType , AlternativePartAssociationType .
path	PartModel/SupplyChainSection
diagram at the Supply Chain Section level	
type	SupplyChainSectionType , SupplyChain-ArrayType , ManufacturerSupplyChainType , DistributorSupplyChainType , ProductChangeNoticeType , ProductDiscontinuanceType , AlternativePart-ArrayType

4.3.1 Linking the Manufacturing Part Number to Manufacturer Supply Chain

path	PartModel/PartDetails-Array/PartDetails/Association-Array/Association/SupplyChain-Array/ManufacturerSupplyChain
diagram at the Manufacturer Supply Chain Association level	
type	ManufacturerSupplyChainAssociationType , JEP30-D10:SignatureDigestLinkType .
path	PartModel/SupplyChainSection/SupplyChain-Array/ManufacturerSupplyChain
diagram at the Manufacturer Supply Chain level.	
type	ManufacturerSupplyChainType , ManufacturerPartStatusType , ManufacturerPartClassificationType , PackingType , ds:SignatureType

The [ManufacturerSupplyChainID](#) references the [ManufacturerSupplyChain/ID](#) under the [SupplyChainSection/SupplyChain-Array](#). This is enforced by the key named as [ManufacturerSupplyChainKey](#) that is assigned to the [ManufacturerSupplyChain/ID](#) element, which is referenced by the [ManufacturerSupplyChainID](#) which has a KeyRef that refers to the [JEP30-S101:ManufacturerSupplyChainKey](#).

4.3.2 Linking the Manufacturing Part Number to Distributor Supply Chain

path	PartModel/PartDetails-Array/PartDetails/Association-Array/Association/SupplyChain-Array/DistributorSupplyChain
diagram at the Distributor Supply Chain Association level	
type	DistributorSupplyChainAssociationType , JEP30-D10:SignatureDigestLinkType .
path	PartModel/SupplyChainSection/SupplyChain-Array/DistributorSupplyChain
diagram at the Distributor Supply Chain level.	
type	DistributorSupplyChainType , Distributor-ArrayType , ds:SignatureType

The [DistributorSupplyChainID](#) references the [DistributorSupplyChain/ID](#) under the [SupplyChainSection/SupplyChain-Array](#). This is enforced by the key named as [DistributorSupplyChainKey](#) that is assigned to the [DistributorSupplyChain/ID](#) element, which is referenced by the [DistributorSupplyChainID](#) which has a KeyRef that refers to the [JEP30-S101:DistributorSupplyChainKey](#).