

## NamespaceModel.java

SECTION NAME	ID	RULE TEXT	POS	NEG	COMMENTARY
AADL Specifications	p41n1	(N1) An AADL specification has one global namespace. The package and property set identifiers i	0	0	Checked when processing package and property set nodes <b>BUT: predeclared packages and properties are not checked</b>
AADL Specifications	p41n2	(N2) These package and property set identifiers qualify the names of individual elements containe	0	0	0
AADL Specifications	p41n3	(N3) Package declarations represent labeled namespaces for component type, component implem	0	0	0
AADL Specifications	p41n4	(N4) Property set declarations represent labeled namespaces for property type and property defin	0	0	0
AADL Specifications	p41n5	(N5) Packages and property sets may be separately stored. Those packages and property sets ar	0	0	Provided by parser
AADL Specifications	p41n6	(N6) Defining identifiers in AADL must not be one of the reserved words of the language (see Sec	0	0	Provided by parser
AADL Specifications	p41n7	(N7) The AADL identifiers and reserved words can be in upper or lower case (or a mixture of the t	0	0	Provided by realization of AADLIdentifier class
AADL Specifications	p41n8	(N8) The AADL does not require that an identifier be declared before it is referenced.	0	0	0
Packages	p42n1	(N1) A defining package name consists of a sequence of one or more package identifiers separati	0	0	Checked by counting private and public package declarations
Packages	p42n2	(N2) The public and private section of a package may be declared in separate package declarati	0	0	Provided by parser
Packages	p42n3	(N3) Associated with every package is a package namespace that contains the names for all the e	0	0	0
Packages	p42n4	(N4) The package namespace is divided into a public section and a private section. Items declare	0	0	0
Packages	p42n5	(N5) The reference to an item declared in another package must be an item name qualified with a	0	0	Can be checked after all possible references are known
Packages	p42n6	(N6) The reference to a property other than predeclared properties must be an property name qua	0	0	Can be checked after all possible references are known
Packages	p42n7	(N7) The package name in a import_declaration must exist in the global name space.	0	0	Checked when processing package imports
Packages	p42n8	(N8) The property set identifier in a import_declaration must exist in the global name space.	0	0	Checked when processing package imports
Packages	p42n9	(N9) Items declared in the private section of the package can only be referenced from within the p	0	0	Can be checked after all possible references are known
Packages	p42n10	(N10) If the qualifying package identifier of a qualified reference is missing, the referenced compon	0	0	0
Packages	p42n11	(N11) The package name referenced in an alias_declaration must exist in the global namespace a	0	0	Checked when processing package aliases
Packages	p42n12	(N12) The classifier referenced by the alias_declaration must exist in the name space of the public	0	0	Checked when processing classifier aliases
Packages	p42n13	(N13) The classifier referenced by the alias declaration must refer to a component type or a featur	0	0	Provided by parser
Packages	p42n14	(N14) The defining identifier of an alias_declaration must be unique in the namespace of the packa	0	0	Checked when processing package and classifier aliases
Packages	p42n15	(N15) The alias_declaration makes the publicly visible identifier of classifiers declared in another p	0	0	Checked when processing classifier aliases
Packages	p42n16	(N16) If the alias_declaration renames all publicly visible identifiers of component types and featur	0	0	Checked when processing all aliases by intersection of two namespaces
Packages	p42n17	(N17) The identifiers introduced by the alias_declaration are only accessible within the package. W	0	0	Can be checked after all poible references are known
Packages	p42n18	(N18) The alias declared for a component type can be used instead of a qualified component type	0	0	0
Packages	p42i1	(L1) The defining package name following the reserved word end must be identical to the defining	0	0	Provided by parser
Packages	p42i2	(L2) For each package there may be at most one public section declaration and one private sectio	0	0	Checked with p42n1
Packages	p42i3	(L3) A component implementation may be declared in both the public and private part of a packag	0	0	Checked when processing component implementations
Packages	p42i4	(L4) The component category in an alias declaration must match the category of the referenced c	0	0	Checked when processing classifier aliases
Component Types	p43n1	(N1) The defining identifier for a component type must be unique in the namespace of the packag	0	0	Checked when creating local namespaces of the packages <b>BUT: currently no checking of possible intersection between public and private</b>
Component Types	p43n2	(N2) Each component type has a local namespace for defining identifiers of prototypes, features, r	0	0	Checked when creating local namespaces of component types
Component Types	p43n3	(N3) The component type identifier of the ancestor in a component type extension, i.e., that appea	0	0	Checked when processing component type declarations
Component Types	p43n4	(N4) When a component type extends another component type, a component type namespace inc	0	0	0
Component Types	p43n5	(N5) A component type that extends another component type does not include the identifiers of th	0	0	0
Component Types	p43n6	(N6) The defining identifier of a feature, flow specification, mode, mode transition, or prototype mu	0	0	Same as p43n2?
Component Types	p43n7	(N7) The refinement identifier of a feature, flow specification, or prototype refinement refers to the	0	0	0
Component Types	p43n8	(N8) The prototypes referenced by prototype binding declarations must exist in the local namespa	0	0	0
Component Types	p43n9	(N9) Mode transitions declared in the component type may not refer to event or event data ports o	0	0	0
Component Types	p43i1	(L1) The defining identifier following the reserved word end must be identical to the defining identifi	0	0	Provided by parser
Component Types	p43i2	(L2) The prototypes, features, flows, modes, and properties subclauses are optional. If a subclaus	0	0	Provided by parser(kinda, error is - "No viable alternative")
Component Types	p43i3	(L3) The category of the component type being extended must match the category of the extendin	0	0	Checked when processing component type declarations
Component Types	p43i4	(L4) The classifier being extended in a component type extension may include prototype bindings.	0	0	0
Component Types	p43i5	(L5) A component type must not contain both a requires_modes_subclause and a modes_subclau	0	0	Provided by parser(kinda, error is - extraneous input 'requires' expecting {'ANNEX', 'END', 'PROPERTIES', IDENTIFIER})
Component Types	p43i6	(L6) If the extended component type and an ancestor component type in the extends hierachy cor	0	0	Checked when processing component type declarations
Component Types	???	The defining identifier for a component type cannot contain '.'	0	0	Provided by parser(kinda, error is - no viable alternative at input '.')
Component Implementations	p44n1	(N1) A component implementation name consists of a component type identifier and a component	0	0	1 - Provided by parser(kinda, error is - mismatched input 'end' expecting '.') 2 - checked when component implementation is created
Component Implementations	p44n2	(N2) The defining identifier of the component implementation must be unique within the local nam	0	0	Checked when creating local namespaces of the packages <b>BUT: currently no checking of possible intersection between public and private</b>

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Component Implementations	p44n3	(N3) Every component implementation defines a local namespace for all defining identifiers of pro	0	0	Checked when creating local namespaces of component implementations (without types or ancestors)	
Component Implementations	p44n4	(N4) This local namespace inherits the namespace of the associated component type, i.e., definin	0	0	Checked by intersection of local namespaces of type and impl	Problem: error marker marks the whole impl and not the intersecting identifier
Component Implementations	p44n5	(N5) Refinement identifiers of features must exist in the namespace of the associated component	0	0		0
Component Implementations	p44n6	(N6) In a component implementation extension, the component type identifier of the component in	0	0		0
Component Implementations	p44n7	(N7) When a component implementation extends another component implementation, the local na	0	0		0
Component Implementations	p44n8	(N8) Within the scope of the component implementation, subcomponent declarations, connections	0	0		0
Component Implementations	p44n9	(N9) The prototype referenced by the prototype binding declaration must exist in the local namesp	0	0		0
Component Implementations	p44i1	(L1) The pair of identifiers separated by a dot (вЪѠ.вЪѠ) following the reserved word end must be	0	0		0
Component Implementations	p44i2	(L2) The prototypes, subcomponents, connections, calls, flows, modes, and properties subclauses	0	0		0
Component Implementations	p44i3	(L3) The category of the component implementation must be identical to the category of the comp	0	0	Checked when processing classifier implementations	
Component Implementations	p44i4	(L4) If the component implementation extends another component implementation, the category o	0	0	Checked when processing classifier implementations	
Component Implementations	p44i5	(L5) The classifier being extended in a component implementation extension may include prototyp	0	0		0
Component Implementations	p44i6	(L6) If the component type of the component implementation contains a requires_modes_subclau	0	0	Checked when processing classifier implementations	BUT: not watching at ancestors or aliases, so not complete
Component Implementations	p44i7	(L7) If modes are declared in the component type, then modes cannot be declared in component i	0	0	Checked when processing classifier implementations	BUT: not watching at ancestors or aliases, so not complete
Component Implementations	p44i8	(L8) If modes or mode transitions are declared in the component type, then mode transitions can t	0	0		0
Component Implementations	p44i9	(L9) The category of a subcomponent being refined must match the category of the refining subco	0	0		0
Component Implementations	p44i10	(L10) For all other refinement declarations the categories must match (see the respective sections).	0	0		0
Component Implementations	p44i11	(L11) Component implementations and component implementation extensions must not refine prot	0	0		0
Subcomponents	p45n1	(N1) The defining identifier of a subcomponent declaration placed in a component implementation	0	0		0
Subcomponents	p45n2	(N2) The defining identifier of a subcomponent refinement must exist as a defining subcomponent	0	0		0
Subcomponents	p45n3	(N3) The component type identifier or the component implementation name of a component classi	0	0		0
Subcomponents	p45n4	(N4) The prototype identifier of a prototype reference must exist in the local name space of the coi	0	0		0
Subcomponents	p45n5	(N5) The prototype referenced by the prototype binding declarations must exist in the local names	0	0		0
Subcomponents	p45n6	(N6) The modes named in the in modes statement of a subcomponent must refer to modes in the	0	0		0
Subcomponents	p45i1	(L1) The category of the subcomponent declaration must match the category of its corresponding	0	0		0
Subcomponents	p45i2	(L2) The component classifier reference of a subcomponent declaration may include prototype bin	0	0		0
Subcomponents	p45i3	(L3) In a subcomponent refinement declaration the component category may be refined from abst	0	0		0
Subcomponents	p45i4	(L4) The Classifier_Substitution_Rule property specifies the rule to be applied when a refinement	0	0		0
Subcomponents	p45i5	(L5) In the case of a signature match, the component type of the subcomponent being refined mus	0	0		0
Subcomponents	p45i6	(L6) The component category and optional component classifier or prototype reference can be fol	0	0		0
Subcomponents	p45i7	(L7) The array size specification for the dimensions is optional. In this case the array declaration is	0	0		0
Subcomponents	p45i8	(L8) When refining a subcomponent array the number of dimensions of the array cannot be chang	0	0		0
Subcomponents	p45i9	(L9) When the subcomponent is declared as an array with array dimension sizes then a list of cor	0	0		0
Subcomponents	p45i10	(L10) Selecting index ranges in one or more dimensions of an array is only possible if the size of th	0	0		0
Subcomponents	p45i11	(L11) An array element implementation list is valid only if (a) the subcomponent classifier is a comp	0	0		0
Subcomponents	p45c1	(C1) The classifier of a subcomponent cannot recursively contain subcomponents with the same ci	0	0		0
Abstract Components	p46i1	(L1) An abstract component type declaration can contain feature declarations (including abstract f	0	0		0
Abstract Components	p46i2	(L2) An abstract component implementation can contain subcomponent declarations of any catego	0	0		0
Abstract Components	p46i3	(L3) An abstract component implementation can contain a modes subclause, a connections subcl	0	0		0
Abstract Components	p46i4	(L4) An abstract subcomponent can be contained in the implementation of any component catego	0	0		0
Abstract Components	p46i5	(L5) If an abstract subcomponent is refined to a concrete category, the concrete category must be	0	0		0
Abstract Components	p46i6	(L6) An abstract subcomponent can be declared as an array of subcomponents.	0	0		0
Abstract Components	p46i7	(L7) If an abstract component type is refined to a concrete category, the features, modes, and flow	0	0		0
Abstract Components	p46i8	(L8) If an abstract component implementation is refined to a concrete category, the subcomponent	0	0		0
Prototypes	p47n1	(N1) The prototype identifier on the left-hand side of a prototype binding must exist in the local nar	0	0		0
Prototypes	p47n2	(N2) The prototype identifier on the right-hand side of a prototype binding, if present, must exist in	0	0		0
Prototypes	p47n3	(N3) Unique component classifier references must exist in the public section of the package being	0	0		0
Prototypes	p47n4	(N4) Unique feature group type references must exist in the public section of the package being id	0	0		0
Prototypes	p47i1	(L1) The component category declared in the component prototype binding must match the comp	0	0		0

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Prototypes	p47i2	(L2) The component category of the optional component classifier reference in the prototype declaration must be unique within the local namespace.	0	0	0
Prototypes	p47i3	(L3) If the component prototype only specifies a component category, then any component type annotation must be unique within the local namespace.	0	0	0
Prototypes	p47i4	(L4) If the component prototype declaration includes a component classifier reference, then the classifier reference must be unique within the local namespace.	0	0	0
Prototypes	p47i5	(L5) The category of the component implementation that contains the prototype declaration places the prototype declaration in the component category.	0	0	0
Prototypes	p47i6	(L6) If the direction is declared for feature prototypes, then the prototype actual satisfies the direction.	0	0	0
Prototypes	p47i7	(L7) In the case of feature group prototypes, the supplied feature group types must match the direction.	0	0	0
Prototypes	p47i8	(L8) A classifier supplied in a feature prototype binding must match the classifier of the prototype declaration.	0	0	0
Prototypes	p47i9	(L9) Component prototypes declared with square brackets specify that they expect a list of components.	0	0	0
Prototypes	p47i10	(L10) The component category of the classifier reference or prototype reference in a prototype binding must be unique within the local namespace.	0	0	0
Prototypes	p47i11	(L11) If a direction is specified for an abstract feature in a prototype declaration, then the direction must be unique within the local namespace.	0	0	0
Prototypes	p47i12	(L12) Component prototype bindings must only bind component prototypes, feature group prototypes, or feature group implementations.	0	0	0
Prototypes	p47i13	(L13) Component prototype refinements must only refine component prototypes, feature group prototypes, or feature group implementations.	0	0	0
Annex Subclauses and Annex Libraries	p48n1	(N1) The annex identifier must be the name of an approved annex or a project-specific identifier declared in the package declaration.	0	0	0
Annex Subclauses and Annex Libraries	p48n2	(N2) The mode identifiers in the in_modes statement must refer to modes in the component type declaration.	0	0	0
Annex Subclauses and Annex Libraries	p48i1	(L1) Annex subclauses can only be declared in component types, component implementations, and component group types.	0	0	0
Annex Subclauses and Annex Libraries	p48i2	(L2) A component type, component implementation, or feature group type declaration may contain an annex subclause.	0	0	0
Annex Subclauses and Annex Libraries	p48i3	(L3) Annex libraries must be declared in packages.	0	0	0
Annex Subclauses and Annex Libraries	p48i4	(L4) A package declaration may contain at most one annex library declaration for each annex.	0	0	0
Data	p51i1	(L1) A data type declaration can contain provides subprogram access declarations as well as provides subprogram access declarations.	0	0	0
Data	p51i2	(L2) A data type declaration must not contain a flow specification or modes subclause.	0	0	0
Data	p51i3	(L3) A data implementation can contain abstract, data and subprogram subcomponents, access declarations, and provides subprogram access declarations.	0	0	0
Data	p51i4	(L4) A data implementation must not contain a flow implementation, an end-to-end flow specification, or a flow implementation.	0	0	0
Subprograms and Subprogram Calls	p52n1	(N1) The defining identifier of a subprogram call sequence declaration must be unique within the local namespace.	0	0	0
Subprograms and Subprogram Calls	p52n2	(N2) The defining identifier of a subprogram call declaration must be unique within the local namespace.	0	0	0
Subprograms and Subprogram Calls	p52n3	(N3) If the called subprogram name is a subprogram classifier reference, its component type identifier must be unique within the local namespace.	0	0	0
Subprograms and Subprogram Calls	p52n4	(N4) The subprogram classifier reference of a subprogram call may be a subprogram type reference.	0	0	0
Subprograms and Subprogram Calls	p52n5	(N5) If the called subprogram name is a subprogram subcomponent reference, the subprogram subcomponent reference must be unique within the local namespace.	0	0	0
Subprograms and Subprogram Calls	p52n6	(N6) If the called subprogram name is a requires subprogram access reference, the requires subprogram access reference must be unique within the local namespace.	0	0	0
Subprograms and Subprogram Calls	p52i1	(L1) A subprogram type declaration can contain parameter, out event port, out event data port, and provides subprogram access declarations.	0	0	0
Subprograms and Subprogram Calls	p52i2	(L2) A subprogram implementation can contain abstract, subprogram, and data subcomponents, and provides subprogram access declarations.	0	0	0
Subprograms and Subprogram Calls	p52i3	(L3) Only one subprogram call sequence can apply to a given mode.	0	0	0
Subprograms and Subprogram Calls	p52c1	(C1) The reference to a provides subprogram access of a processor in a subprogram call (process declaration) must be unique within the local namespace.	0	0	0
Subprograms and Subprogram Calls	p52c2	(C2) A subprogram call may reference a subprogram classifier. A project may enforce a consistent naming convention for subprogram classifiers.	0	0	0
Subprogram Groups and Subprogram Groups	p53n1	(N1) The defining identifier of a subprogram group type must be unique within the package namespace.	0	0	0
Subprogram Groups and Subprogram Groups	p53n2	(N2) Each subprogram group provides a local namespace. The defining subprogram identifiers of the subprogram group must be unique within the local namespace.	0	0	0
Subprogram Groups and Subprogram Groups	p53n3	(N3) The local namespace of a subprogram group type extension includes the defining identifiers of the subprogram group.	0	0	0
Subprogram Groups and Subprogram Groups	p53n4	(N4) The defining subprogram identifiers of subprogram access feature declarations in feature group type declarations must be unique within the local namespace.	0	0	0
Subprogram Groups and Subprogram Groups	p53n5	(N5) The package name of the unique subprogram group type reference must refer to a package identifier.	0	0	0
Subprogram Groups and Subprogram Groups	p53i1	(L1) A subprogram group type can contain provides and requires subprogram access, and provides subprogram access declarations.	0	0	0
Subprogram Groups and Subprogram Groups	p53i2	(L2) A subprogram group implementation can contain abstract, data, subprogram group, and subprogram subcomponents.	0	0	0
Subprogram Groups and Subprogram Groups	p53i3	(L3) A subprogram group type or implementation may contain zero or more subcomponent declarations.	0	0	0
Threads	p54i1	(L1) A thread type declaration can contain port, feature group, requires data access declarations, and provides subprogram access declarations.	0	0	0
Threads	p54i2	(L2) A thread component implementation can contain abstract, data, subprogram, and subprogram subcomponents.	0	0	0
Threads	p54i3	(L3) The Complete out event port, and Error out event data port are predeclared, i.e., are implicitly declared in the package declaration.	0	0	0
Threads	p54c3	(C3) Either the Compute_Entrypoint, Compute_Entrypoint_Source_Text Compute_Entrypoint_Calculator, or Compute_Entrypoint_Calculator properties must be declared in the package declaration.	0	0	0
Threads	p54c4	(C4) The Period property must have a value if the Dispatch_Protocol property value is periodic, spi	0	0	0

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Thread Groups	p551	(L1) A thread group component type can contain provides and requires data access, as well as p	0	0	0
Thread Groups	p552	(L2) A thread group component implementation can contain abstract, data, subprogram, subprogr	0	0	0
Thread Groups	p553	(L3) A thread group implementation can contain a connections subclause, a flows subclause, a m	0	0	0
Thread Groups	p554	(L4) A thread group must not contain a subprogram calls subclause.	0	0	0
Processes	p561	(L1) A process component type can contain port, feature group, provides and requires data acces	0	0	0
Processes	p562	(L2) A process component implementation can contain abstract, data, subprogram, subprogram g	0	0	0
Processes	p563	(L3) A process implementation can contain a connections subclause, a flows subclause, a modes	0	0	0
Processes	p564	(L4) A thread group must not contain a subprogram calls subclause.	0	0	0
Processes	p56c1	(C1) The complete source text associated with a process component must form a complete and le	0	0	0
Processors	p611	(L1) A processor component type can contain port, feature group, provides subprogram access, p	0	0	0
Processors	p612	(L2) A processor component implementation can contain declarations of memory, bus, virtual bus,	0	0	0
Processors	p613	(L3) A processor implementation can contain a modes subclause, flows subclause, and a properti	0	0	0
Processors	p614	(L4) A processor implementation can contain bus access, subprogram access, subprogram group	0	0	0
Processors	p615	(L5) A processor implementation must not contain a subprogram calls subclause.	0	0	0
Virtual Processors	p621	(L1) A virtual processor component type can contain port, feature group, provides subprogram acc	0	0	0
Virtual Processors	p622	(L2) A virtual processor component implementation can contain declarations of virtual bus, virtual	0	0	0
Virtual Processors	p623	(L3) A virtual processor implementation can contain a modes subclause, flows subclause, and a p	0	0	0
Virtual Processors	p624	(L4) A virtual processor implementation must not contain a subprogram calls subclause.	0	0	0
Virtual Processors	p625	(L5) A virtual processor implementation can contain subprogram access, subprogram group acces	0	0	0
Virtual Processors	p62c1	(C1) In a fully bound system every virtual processor must be directly or indirectly bound to, or direc	0	0	0
Virtual Processors	p62c2	(C2) In a fully deployed system a requires virtual bus binding of a virtual processor specified by the	0	0	0
Memory	p631	(L1) A memory type can contain bus access declarations, feature groups, a modes subclause, and	0	0	0
Memory	p632	(L2) A memory implementation can contain abstract, memory, and bus subcomponent declaration	0	0	0
Memory	p633	(L3) A memory implementation can contain a modes subclause and property associations.	0	0	0
Memory	p634	(L4) A memory implementation can contain bus access connection declarations. Bus access conn	0	0	0
Memory	p635	(L5) A memory implementation must not contain flows subclause, or subprogram calls subclause.	0	0	0
Buses	p641	(L1) A bus type can have requires bus access declarations, a modes subclause, and property ass	0	0	0
Buses	p642	(L2) A bus type must not contain any flow specifications.	0	0	0
Buses	p643	(L3) A bus implementation can contain virtual bus and abstract subcomponent declarations.	0	0	0
Buses	p644	(L4) A bus implementation can contain a modes subclause and property associations.	0	0	0
Buses	p645	(L5) A bus implementation must not contain flows subclause, or subprogram calls subclause.	0	0	0
Virtual Buses	p651	(L1) A virtual bus type can have property associations.	0	0	0
Virtual Buses	p652	(L2) A virtual bus type must not contain flow specifications.	0	0	0
Virtual Buses	p653	(L3) A virtual bus implementation can contain virtual bus subcomponent declarations.	0	0	0
Virtual Buses	p654	(L4) A virtual bus implementation can contain a modes subclause and property associations.	0	0	0
Virtual Buses	p655	(L5) A virtual bus implementation must not contain a connections subclause, flows subclause, or s	0	0	0
Virtual Buses	p65c1	(C1) In a fully deployed system virtual buses must be directly or indirectly bound to processors or b	0	0	0
Devices	p661	(L1) A device type can contain port, feature group, provides subprogram access, provides subpro	0	0	0
Devices	p662	(L2) A device component implementation must not contain a subprogram calls subclause.	0	0	0
Devices	p663	(L3) A device implementation can contain abstract, data, virtual bus, and bus subcomponents, bus	0	0	0
Systems	p711	(L1) A system component type can contain subprogram, subprogram group, data and bus access	0	0	0
Systems	p712	(L2) A system component implementation can contain abstract, data, subprogram, subprogram gr	0	0	0
Systems	p713	(L3) A system implementation can contain a modes subclause, a connections subclause, a flows s	0	0	0
Systems	p714	(L4) A thread group must not contain a subprogram calls subclause.	0	0	0

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Systems	p71n1	(N1) The defining identifier of a feature must be unique within the namespace of the associated component.	0	0	0
Systems	p71n2	(N2) Thread features may not be declared using the predeclared ports names Complete or Error.	0	0	0
Systems	p71n3	(N3) Each refining feature identifier that appears in a feature refinement declaration must also appear in the defining feature identifier.	0	0	0
Systems	p71n4	(N4) A feature is referenced in one of two ways. Within the component implementations for a component, a feature must be referenced using the feature identifier.	0	0	0
Systems	p71n5	(N5) The path of a contained property association for a feature must refer to an element of a feature group.	0	0	0
Systems	p71i1	(L1) Each feature can be refined at most once in the same type extension.	0	0	0
Systems	p71i2	(L2) A feature refinement declaration of a feature and the original feature must both be declared as abstract features.	0	0	0
Systems	p71i3	(L3) Feature arrays must only be declared for threads, devices, and processors.	0	0	0
Systems	p71i4	(L4) If the feature refinement specifies an array dimension, then the feature being refined must have an array dimension.	0	0	0
Systems	p71i5	(L5) If the refinement specifies an array dimension size, then the feature being refined must not have an array dimension.	0	0	0
Systems	p71i6	(L6) A contained property association must only be used when the feature is a feature group.	0	0	0
Systems	p71i7	(L7) In the case of a feature with a classifier reference, the classifier of the refined feature declaration must be the same as the classifier of the feature being refined.	0	0	0
Abstract Features	p81i1	(L1) The feature direction in a refined feature declaration must be identical to the feature direction in the feature being refined.	0	0	0
Abstract Features	p81i2	(L2) If the direction of an abstract feature is specified, then the direction must be satisfied by the refined feature.	0	0	0
Abstract Features	p81i3	(L3) An abstract feature with a feature prototype identifier and the prototype being referenced must be declared as abstract.	0	0	0
Abstract Features	p81i4	(L4) An abstract feature refinement declaration of a feature with a feature prototype reference must be declared as abstract.	0	0	0
Feature Groups and Feature Group Type	p82n1	(N1) The defining identifier of a feature group type must be unique within the package namespace.	0	0	0
Feature Groups and Feature Group Type	p82n2	(N2) Each feature group type provides a local namespace. The defining identifiers of prototype, feature, and feature group types must be unique within the local namespace.	0	0	0
Feature Groups and Feature Group Type	p82n3	(N3) The local namespace of a feature group type extension includes the defining identifiers in the base namespace.	0	0	0
Feature Groups and Feature Group Type	p82n4	(N4) The defining feature identifiers of feature group declarations must be unique in the local namespace.	0	0	0
Feature Groups and Feature Group Type	p82n5	(N5) The defining feature group identifier of feature_refinement declarations in component types must be unique.	0	0	0
Feature Groups and Feature Group Type	p82n6	(N6) The package name of the unique feature group type reference must refer to a package name.	0	0	0
Feature Groups and Feature Group Type	p82n7	(N7) The prototype reference in a feature group declaration must refer to a prototype of the component.	0	0	0
Feature Groups and Feature Group Type	p82i1	(L1) A feature group type may contain zero or more elements, i.e., feature or feature groups. If it contains elements, it must be declared as abstract.	0	0	0
Feature Groups and Feature Group Type	p82i2	(L2) A feature group type can be declared to be the inverse of another feature group type, as indicated by the inverse_of property.	0	0	0
Feature Groups and Feature Group Type	p82i3	(L3) Only feature group types without inverse of or feature group types with features and inverse of features are allowed.	0	0	0
Feature Groups and Feature Group Type	p82i4	(L4) A feature group type that is an extension of another feature group type without an inverse of features must have an inverse of features.	0	0	0
Feature Groups and Feature Group Type	p82i5	(L5) The feature group type that is an extension of another feature group type with features and inverse of features must have an inverse of features.	0	0	0
Feature Groups and Feature Group Type	p82i6	(L6) A feature group declaration with an inverse of statement must only reference feature group types.	0	0	0
Feature Groups and Feature Group Type	p82i7	(L7) A feature group refinement may be refined to only add property associations. In this case include the inverse of statement.	0	0	0
Feature Groups and Feature Group Type	p82i8	(L8) The number of feature or feature groups contained in the feature group and its complement must be the same.	0	0	0
Feature Groups and Feature Group Type	p82i9	(L9) Each of the declared features or feature groups in a feature group must be a pair-wise complementary set.	0	0	0
Feature Groups and Feature Group Type	p82i10	(L10) If both feature group types have zero features, then they are considered to complement each other.	0	0	0
Feature Groups and Feature Group Type	p82i11	(L11) Ports are pair-wise complementary if they satisfy the port connection rules specified in Section 4.2.2.	0	0	0
Feature Groups and Feature Group Type	p82i12	(L12) Access features are pair-wise complementary if they satisfy the access connection rules in Section 4.2.3.	0	0	0
Feature Groups and Feature Group Type	p82i13	(L13) If an in or out direction is specified as part of a feature group declaration, then all features in the group must have the same direction.	0	0	0
Ports	p83n1	(N1) A defining port identifier must adhere to the naming rules specified for all features (see Section 3.1.1).	0	0	0
Ports	p83n2	(N2) The defining identifier of a port refinement declaration must also appear in a feature declaration.	0	0	0
Ports	p83n3	(N3) The unique component type identifier of the data classifier reference must be the name of a component type.	0	0	0
Ports	p83n4	(N4) The prototype identifier of a prototype reference, if specified, must exist in the namespace of the component.	0	0	0
Ports	p83i1	(L1) Ports can be declared in subprogram, thread, thread group, process, system, processor, virtual machine, or device.	0	0	0
Ports	p83i2	(L2) Data and event data ports may be incompletely defined by not specifying the data component.	0	0	0
Ports	p83i3	(L3) Data, event, and event data ports may be refined by adding a property association. The data component must be the same.	0	0	0
Ports	p83i4	(L4) The port category of a port refinement must be the same as the category of the port being refined.	0	0	0
Ports	p83i5	(L5) The port direction of a port refinement must be the same as the direction of the feature being refined.	0	0	0
Subprogram and Subprogram Group Access	p84n1	(N1) The defining identifier of a provides or requires subprogram or subprogram group access declaration must be unique within the package namespace.	0	0	0
Subprogram and Subprogram Group Access	p84n2	(N2) The defining identifier of a provides or requires subprogram or subprogram group refinement declaration must also appear in a subprogram declaration.	0	0	0
Subprogram and Subprogram Group Access	p84n3	(N3) The component type identifier or component implementation name of a subprogram or subprogram group access declaration must be the name of a component type.	0	0	0

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Subprogram and Subprogram Group	p84n4	(N4) The prototype identifier of a subprogram or subprogram group access classifier reference, if present, must exist in the namespace of the classifier that contains it.	0	0	0
Subprogram and Subprogram Group	p84l1	(L1) If a subprogram access refers to a component classifier or a component prototype, then the category identifier must be present.	0	0	0
Subprogram and Subprogram Group	p84l2	(L2) If a subprogram group access refers to a component classifier or a component prototype, then the category identifier must be present.	0	0	0
Subprogram and Subprogram Group	p84l3	(L3) An abstract feature can be refined into a subprogram access or a subprogram group access.	0	0	0
Subprogram and Subprogram Group	p84l4	(L4) A subprogram or subprogram group access declaration that does not specify a component classifier reference is incomplete. Such a declaration may be refined by adding a component classifier reference.	0	0	0
Subprogram and Subprogram Group	p84l5	(L5) A subprogram or subprogram group access declaration may be refined by adding a property association. Inclusion of the data classifier reference is optional.	0	0	0
Subprogram and Subprogram Group	p84l6	(L6) A provides subprogram access cannot be refined to a requires subprogram access and a requires subprogram access cannot be refined to a provides subprogram access.	0	0	0
Subprogram and Subprogram Group	p84c1	(C1) A provides subprogram access feature indicates that a subprogram is made available to be refined into a provides subprogram access.	0	0	0
Subprogram Parameters	p85n1	(N1) The defining identifier of a parameter must be unique within the namespace of the subprogram.	0	0	0
Subprogram Parameters	p85n2	(N2) The defining parameter identifier of a parameter refinement declaration must also appear in the namespace of the subprogram.	0	0	0
Subprogram Parameters	p85n3	(N3) The data classifier reference must refer to a data component type or a data component implementation.	0	0	0
Subprogram Parameters	p85n4	(N4) The prototype identifier, if present, must exist in the namespace of the subprogram classifier.	0	0	0
Subprogram Parameters	p85l1	(L1) Parameters can be declared for subprogram component types.	0	0	0
Subprogram Parameters	p85l2	(L2) A parameter declaration that does not specify a data classifier reference is incomplete. Such a declaration may be refined by adding a data classifier reference.	0	0	0
Subprogram Parameters	p85l3	(L3) A parameter declaration may be refined by adding a property association. Inclusion of the data classifier reference is optional.	0	0	0
Subprogram Parameters	p85l4	(L4) The parameter direction of a parameter refinement must be the same as the direction of the feature being refined.	0	0	0
Data Component Access	p86n1	(N1) The defining identifier of a provides or requires data access declaration must be unique within the namespace of the classifier.	0	0	0
Data Component Access	p86n2	(N2) The defining identifier of a provides or requires data access refinement must exist as a defining identifier in the namespace of the classifier.	0	0	0
Data Component Access	p86n3	(N3) The component type identifier or component implementation name of a data access classifier must exist in the namespace of the classifier.	0	0	0
Data Component Access	p86n4	(N4) The prototype identifier, if present, must exist in the namespace of the classifier that contains it.	0	0	0
Data Component Access	p86l1	(L1) If a data access refers to a component classifier or a component prototype, then the category identifier must be present.	0	0	0
Data Component Access	p86l2	(L2) A data access declaration may be refined by refining the data classifier, by adding a property association.	0	0	0
Data Component Access	p86l3	(L3) A provides data access cannot be refined to a requires data access and a requires data access cannot be refined to a provides data access.	0	0	0
Data Component Access	p86l4	(L4) An abstract feature can be refined into a data access. In this case, the abstract feature must not be refined into a data access.	0	0	0
Data Component Access	p86c1	(C1) A data access declaration that does not specify a data classifier reference is incomplete. Such a declaration may be refined by adding a data classifier reference.	0	0	0
Data Component Access	p86c2	(C2) If the source code of a component does access shared data, then the component type declaration must be a provides data access.	0	0	0
Data Component Access	p86c3	(C3) A data access refinement may refine an abstract feature declaration. If the abstract feature declaration is a provides data access, then the refinement must be a provides data access.	0	0	0
Bus Component Access	p87n1	(N1) The defining identifier of a provides or requires bus access declaration must be unique within the namespace of the classifier.	0	0	0
Bus Component Access	p87n2	(N2) The defining identifier of a provides or requires bus refinement must exist as a defining identifier in the namespace of the classifier.	0	0	0
Bus Component Access	p87n3	(N3) The component type identifier or component implementation name of a bus access classifier must exist in the namespace of the classifier.	0	0	0
Bus Component Access	p87n4	(N4) The prototype identifier, if present, must exist in the namespace of the classifier that contains it.	0	0	0
Bus Component Access	p87l1	(L1) If a bus access refers to a component classifier or a component prototype, then the category identifier must be present.	0	0	0
Bus Component Access	p87l2	(L2) A bus access declaration may be refined by refining the bus classifier, by adding a property association.	0	0	0
Bus Component Access	p87l3	(L3) A provides bus access cannot be refined to a requires bus access and a requires bus access cannot be refined to a provides bus access.	0	0	0
Bus Component Access	p87l4	(L4) An abstract feature can be refined into a bus access. In this case, the abstract feature must not be refined into a bus access.	0	0	0
Bus Component Access	p87c1	(C1) A bus access declaration that does not specify a bus classifier reference is incomplete. Such a declaration may be refined by adding a bus classifier reference.	0	0	0
Bus Component Access	p87c2	(C2) If a bus access feature is a refinement of an abstract feature, then the direction of the abstract feature must be the same as the direction of the refinement.	0	0	0
Bus Component Access	p87n1	(N1) The defining identifier of a defined connection declaration must be unique in the local namespace.	0	0	0
Bus Component Access	p87n2	(N2) The connection identifier in a connection refinement declaration must refer to a named connection.	0	0	0
Bus Component Access	p87l1	(L1) A connection refinement must contain at least one of the following: a connection source and a connection destination, or a connection source and a connection direction, or a connection destination and a connection direction.	0	0	0
Bus Component Access	p87l2	(L2) If a semantic connection may be active in a particular mode, then the ultimate source and ultimate destination must be the same.	0	0	0
Bus Component Access	p87l3	(L3) If a semantic connection may be active in a particular mode transition, then the ultimate source and ultimate destination must be the same.	0	0	0
Feature Connections	p91n1	(N1) A source or destination reference in a feature connection or feature connection refinement declaration must be unique in the local namespace.	0	0	0
Feature Connections	p91n2	(N2) The subcomponent reference may refer to a subcomponent or a subcomponent array.	0	0	0
Feature Connections	p91l1	(L1) If the feature connection declaration represents a connection between features of sibling components, then the direction of the connection must be the same as the direction of the connection.	0	0	0
Feature Connections	p91l2	(L2) If the feature connection declaration represents a connection between features up the container hierarchy, then the direction of the connection must be the same as the direction of the connection.	0	0	0
Feature Connections	p91l3	(L3) If the feature connection declaration represents a connection between features down the container hierarchy, then the direction of the connection must be the same as the direction of the connection.	0	0	0
Feature Connections	p91l4	(L4) If the feature connection declaration specifies a directional connection, then the direction of the connection must be the same as the direction of the connection.	0	0	0

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Feature Connections	p91l5	(L5) The individual connections of a semantic connection must be bidirectional or have the same c	0	0	0
Port Connections	p92n1	(N1) The connection identifier in a port connection refinement declaration must refer to a named p	0	0	0
Port Connections	p92n2	(N2) A source or destination reference in a port connection or port connection refinement declarati	0	0	0
Port Connections	p92n3	(N3) The subcomponent reference may also consist of a reference to a subcomponent array.	0	0	0
Port Connections	p92n4	(N4) The event_or_event_data identifier of event source specifications (self.event_or_event_data_	0	0	0
Port Connections	p92l1	(L1) In the case of a directional port connection the connection end representing the source of the	0	0	0
Port Connections	p92l2	(L2) In the case of a bidirectional port connection either connection end can be the source. If the b	0	0	0
Port Connections	p92l3	(L3) If the source connection end is a data access feature it must have read access rights; if the d	0	0	0
Port Connections	p92l4	(L4) The feature identifier of a subcomponent reference may refer to a feature array, if the subcorr	0	0	0
Port Connections	p92l5	(L5) The following are acceptable sources and destinations of port connections. The left column sl	0	0	0
Port Connections	p92l6	(L6) If the port connection declaration represents a connection between ports of sibling componen	0	0	0
Port Connections	p92l7	(L7) If the port connection declaration represents a connection between ports up the containment	0	0	0
Port Connections	p92l8	(L8) If the port connection declaration represents a connection between ports down the containme	0	0	0
Port Connections	p92l9	(L9) The individual connections of a semantic port connection must be bidirectional or have the sa	0	0	0
Port Connections	p92l10	(L10) Self.<identifier> must only be referenced as the source of a connection.	0	0	0
Port Connections	p92l11	(L11) A data port cannot be the destination of more than one semantic port connection unless each	0	0	0
Port Connections	p92l12	(L12) A semantic connection cannot contain connection declarations with both immediate and dela	0	0	0
Port Connections	p92l13	(L13) For connections between data ports, event data ports and data access, the data classifier of	0	0	0
Port Connections	p92l14	(L14) The following rules are supported: вЂў вЂў вЂў вЂў Classifier_Match: The source data typ	0	0	0
Port Connections	p92l15	(L15) If more than one port connection declaration in a semantic port connection has a property as	0	0	0
Port Connections	p92l16	(L16) A processor port specification must only be used in event connections within threads and sul	0	0	0
Port Connections	p92c1	(C1) There cannot be cycles of immediate connections between threads, devices, and processors.	0	0	0
Port Connections	p92c2	(C2) The processor port identifier of a processor port specification (processor.processor_port_iden	0	0	0
Port Connections	p92c3	(C3) The Supports_Classifier_Subset_Matches property may be associated with a bus or virtual bu	0	0	0
Port Connections	p92c4	(C4) The Supports_Type_Conversions property may be associated with a bus or virtual bus. This s	0	0	0
Parameter Connections	p93n1	(N1) The connection identifier in a parameter connection refinement declaration must refer to a na	0	0	0
Parameter Connections	p93n2	(N2) A source (destination) reference in a parameter connection declaration must reference a para	0	0	0
Parameter Connections	p93l1	(L1) The source of a parameter connection must be an incoming data or event data port of the cor	0	0	0
Parameter Connections	p93l2	(L2) The following source/destination pairs are acceptable for parameter connection declarations:	0	0	0
Parameter Connections	p93l3	(L3) A parameter cannot be the destination feature reference of more than one parameter connec	0	0	0
Parameter Connections	p93l4	(L4) The data classifier of the source and destination must match. The matching rules as specifi	0	0	0
Access Connections	p94n1	(N1) The connection identifier in an access connection refinement declaration must refer to a nam	0	0	0
Access Connections	p94n2	(N2) An access reference in an access connection declaration must reference an access feature c	0	0	0
Access Connections	p94l1	(L1) The category of the source and the destination of a access connection declaration must be th	0	0	0
Access Connections	p94l2	(L2) In the case of a bidirectional semantic access connection either connection end can be the sc	0	0	0
Access Connections	p94l3	(L3) In the case of a directional data or bus access connection the connection end representing th	0	0	0
Access Connections	p94l4	(L4) In a partial AADL model the ultimate source or destination may be a provides access feature	0	0	0
Access Connections	p94l5	(L5) If the access connection declaration represents an access connection between access featur	0	0	0
Access Connections	p94l6	(L6) If the access connection declaration represents a feature mapping up the containment hierar	0	0	0
Access Connections	p94l7	(L7) If the access connection declaration represents a feature mapping down the containment hier	0	0	0
Access Connections	p94l8	(L8) A requires access cannot be the source or destination feature reference of more than one acc	0	0	0
Access Connections	p94l9	(L9) For access connections the classifier of the provider access must match to the classifier of th	0	0	0
Access Connections	p94l10	(L10) If more than one access feature in a semantic access connection has an Access_Right prop	0	0	0
Access Connections	p94l11	(L11) The category of the access connection source and destination must be identical. If the comp	0	0	0
Feature Group Connections	p95n1	(N1) The connection identifier in a feature group connection refinement declaration must refer to a	0	0	0
Feature Group Connections	p95n2	(N2) A source or destination reference in a feature group connection declaration must reference a	0	0	0
Feature Group Connections	p95l1	(L1) If the feature group connection declaration represents a component connection between sibli	0	0	0
Feature Group Connections	p95l2	(L2) The Classifier_Matching_Rule property specifies the rule to be applied to match the feature g	0	0	0

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Feature Group Connections	p9513	(L3) The following rules are supported for feature group connection declarations that represent a c	0	0	0
Feature Group Connections	p9514	(L4) The following rules are supported for feature group connection declarations that represent a c	0	0	0
Feature Group Connections	p9515	(L5) If the feature group connection declaration represents a connection between feature group of	0	0	0
Feature Group Connections	p9516	(L6) If the feature group connection declaration represents a connection between feature groups u	0	0	0
Feature Group Connections	p9517	(L7) If the feature group connection declaration represents a connection between feature groups c	0	0	0
Feature Group Connections	p9518	(L8) A feature group connection must be bidirectional or be consistent with the direction of the sou	0	0	0



## Check.java

SECTION NAME	ID	RULE TEXT	POS	NEG	COMMENTARY
AADL Specifications	p41n1	(N1) An AADL specification has one global namespace. The package and property set identifiers reside in this space and	0	0	Checked by DFS during processing package nodes
AADL Specifications	p41n2	(N2) These package and property set identifiers qualify the names of individual elements contained in them when they are	0	0	0
AADL Specifications	p41n3	(N3) Package declarations represent labeled namespaces for component type, component implementation, feature group	0	0	0
AADL Specifications	p41n4	(N4) Property set declarations represent labeled namespaces for property type and property definition declarations.	0	0	0
AADL Specifications	p41n5	(N5) Packages and property sets may be separately stored. Those packages and property sets are considered to be part of	0	0	Provided by parser
AADL Specifications	p41n6	(N6) Defining identifiers in AADL must not be one of the reserved words of the language (see Section 15.7).	0	0	Provided by parser
AADL Specifications	p41n7	(N7) The AADL identifiers and reserved words can be in upper or lower case (or a mixture of the two) (see Section 15).	0	0	Provided by realization of AADLIdentifier class
AADL Specifications	p41n8	(N8) The AADL does not require that an identifier be declared before it is referenced.	0	0	0
Packages	p42n1	(N1) A defining package name consists of a sequence of one or more package identifiers separated by a double colon (a	0	0	Checked by counting private and public package declarations in DFS during processing package nodes
Packages	p42n2	(N2) The public and private section of a package may be declared in separate package declarations; these two declarations	0	0	Provided by parser
Packages	p42n3	(N3) Associated with every package is a package namespace that contains the names for all the elements defined within	0	0	0
Packages	p42n4	(N4) The package namespace is divided into a public section and a private section. Items declared in the public section c	0	0	0
Packages	p42n5	(N5) The reference to an item declared in another package must be an item name qualified with a package name separa	0	0	Can be checked after all possible references are known, impossible in current realization
Packages	p42n6	(N6) The reference to a property other than predeclared properties must be an property name qualified with a property se	0	0	Can be checked after all possible references are known, impossible in current realization
Packages	p42n7	(N7) The package name in a import_declaration must exist in the global name space.	0	0	Checked by DFS during processing package nodes - imports
Packages	p42n8	(N8) The property set identifier in a import_declaration must exist in the global name space.	0	0	Checked by DFS during processing package nodes - imports
Packages	p42n9	(N9) Items declared in the private section of the package can only be referenced from within the private section of the pa	0	0	Can be checked after all possible references are known, impossible in current realization
Packages	p42n10	(N10) If the qualifying package identifier of a qualified reference is missing, the referenced component classifier, feature g	0	0	0
Packages	p42n11	(N11) The package name referenced in an alias_declaration must exist in the global namespace and must be listed in the	0	0	Checked by DFS during processing package nodes - package aliases
Packages	p42n12	(N12) The classifier referenced by the alias_declaration must exist in the name space of the public section of the packag	0	0	Checked by DFS during processing package nodes - classifier aliases
Packages	p42n13	(N13) The classifier referenced by the alias declaration must refer to a component type or a feature group type.	0	0	Provided by parser
Packages	p42n14	(N14) The defining identifier of an alias_declaration must be unique in the namespace of the package containing the alias	0	0	Checked by DFS during processing package nodes - package and classifier aliases
Packages	p42n15	(N15) The alias_declaration makes the publicly visible identifier of classifiers declared in another package accessible in th	0	0	0
Packages	p42n16	(N16) If the alias_declaration renames all publicly visible identifiers of component types and feature group types by nam	0	0	0
Packages	p42n17	(N17) The identifiers introduced by the alias_declaration are only accessible within the package. When declared in the p	0	0	Not compatible with current realization of N14 check (alias ids == component ids), not all possible references are known
Packages	p42n18	(N18) The alias declared for a component type can be used instead of a qualified component type in a reference to a con	0	0	0
Packages	p42i1	(L1) The defining package name following the reserved word end must be identical to the defining package name followi	0	0	Provided by parser
Packages	p42i2	(L2) For each package there may be at most one public section declaration and one private section declaration. These tw	0	0	Checked with p42n1
Packages	p42i3	(L3) A component implementation may be declared in both the public and private part of a package. In that case the decl	0	0	Should be checked in component implementations
Packages	p42i4	(L4) The component category in an alias declaration must match the category of the referenced component type.	0	0	0
Component Types	p43n1	(N1) The defining identifier for a component type must be unique in the namespace of the package within which it is decl	0	0	Checked when creating local namespaces of the packages
Component Types	p43n2	(N2) Each component type has a local namespace for defining identifiers of prototypes, features, modes, mode transition	0	0	0
Component Types	p43n3	(N3) The component type identifier of the ancestor in a component type extension, i.e., that appears after the reserved w	0	0	Checked by DFS for each component type node
Component Types	p43n4	(N4) When a component type extends another component type, a component type namespace includes all the identifiers	0	0	0
Component Types	p43n5	(N5) A component type that extends another component type does not include the identifiers of the implementations of its	0	0	0
Component Types	p43n6	(N6) The defining identifier of a feature, flow specification, mode, mode transition, or prototype must be unique in the na	0	0	0
Component Types	p43n7	(N7) The refinement identifier of a feature, flow specification, or prototype refinement refers to the closest refinement or ti	0	0	0
Component Types	p43n8	(N8) The prototypes referenced by prototype binding declarations must exist in the local namespace of the component ty	0	0	0
Component Types	p43n9	(N9) Mode transitions declared in the component type may not refer to event or event data ports of subcomponents.	0	0	0
Component Types	p43i1	(L1) The defining identifier following the reserved word end must be identical to the defining identifier that appears after th	0	0	Provided by parser
Component Types	p43i2	(L2) The prototypes, features, flows, modes, and properties subclauses are optional. If a subclause is present but empty,	0	0	Provided by parser(kinda, error is - "No viable alternative")
Component Types	p43i3	(L3) The category of the component type being extended must match the category of the extending component type, i.e.,	0	0	Checked by DFS for each component type node
Component Types	p43i4	(L4) The classifier being extended in a component type extension may include prototype bindings. There must be at mos	0	0	0
Component Types	p43i5	(L5) A component type must not contain both a requires_modes_subclause and a modes_subclause.	0	0	Provided by parser(kinda, error is - extraneous input 'requires' expecting {'ANNEX', 'END', 'PROPERTIES', IDENTIFIER})
Component Types	p43i6	(L6) If the extended component type and an ancestor component type in the extends hierarchy contain modes subclauses	0	0	Checked by DFS for each component type node
Component Implementation	p44n1	(N1) A component implementation name consists of a component type identifier and a component implementation identifi	0	0	0
Component Implementation	p44n2	(N2) The defining identifier of the component implementation must be unique within the local namespace of the compone	0	0	0
Component Implementation	p44n3	(N3) Every component implementation defines a local namespace for all defining identifiers of prototypes, subcomponent	0	0	0

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Component Implementation	p44n4	(N4) This local namespace inherits the namespace of the associated component type, i.e., defining identifiers must be unique within the namespace.	0	0	0
Component Implementation	p44n5	(N5) Refinement identifiers of features must exist in the namespace of the associated component type or one of the component types it refines.	0	0	0
Component Implementation	p44n6	(N6) In a component implementation extension, the component type identifier of the component implementation being extended must exist in the namespace of the component type being extended.	0	0	0
Component Implementation	p44n7	(N7) When a component implementation extends another component implementation, the local namespace of the extending component implementation must be a refinement of the local namespace of the component implementation being extended.	0	0	0
Component Implementation	p44n8	(N8) Within the scope of the component implementation, subcomponent declarations, connections, subprogram call sequences, and properties must be unique.	0	0	0
Component Implementation	p44n9	(N9) The prototype referenced by the prototype binding declaration must exist in the local namespace of the component implementation.	0	0	0
Component Implementation	p44i1	(L1) The pair of identifiers separated by a dot (a.b) following the reserved word end must be identical to the pair of identifiers of the component type being implemented.	0	0	0
Component Implementation	p44i2	(L2) The prototypes, subcomponents, connections, calls, flows, modes, and properties subclauses are optional. If they are present, they must be separated by semicolons.	0	0	0
Component Implementation	p44i3	(L3) The category of the component implementation must be identical to the category of the component type for which the implementation is provided.	0	0	0
Component Implementation	p44i4	(L4) If the component implementation extends another component implementation, the category of both must match, i.e., they must be identical or one must be a refinement of the other.	0	0	0
Component Implementation	p44i5	(L5) The classifier being extended in a component implementation extension may include prototype bindings. There must be no prototype bindings in the component implementation being extended.	0	0	0
Component Implementation	p44i6	(L6) If the component type of the component implementation contains a requires_modes_subclause then the component implementation must contain a modes statement.	0	0	0
Component Implementation	p44i7	(L7) If modes are declared in the component type, then modes cannot be declared in component implementations.	0	0	0
Component Implementation	p44i8	(L8) If modes or mode transitions are declared in the component type, then mode transitions can be added in the component implementation.	0	0	0
Component Implementation	p44i9	(L9) The category of a subcomponent being refined must match the category of the refining subcomponent declaration, i.e., they must be identical or one must be a refinement of the other.	0	0	0
Component Implementation	p44i10	(L10) For all other refinement declarations the categories must match (see the respective sections).	0	0	0
Component Implementation	p44i11	(L11) Component implementations and component implementation extensions must not refine prototypes declared in a component type.	0	0	0
Subcomponents	p45n1	(N1) The defining identifier of a subcomponent declaration placed in a component implementation must be unique within the local namespace.	0	0	0
Subcomponents	p45n2	(N2) The defining identifier of a subcomponent refinement must exist as a defining subcomponent identifier in the local namespace of the component implementation.	0	0	0
Subcomponents	p45n3	(N3) The component type identifier or the component implementation name of a component classifier reference must exist in the local namespace of the component implementation.	0	0	0
Subcomponents	p45n4	(N4) The prototype identifier of a prototype reference must exist in the local namespace of the component implementation.	0	0	0
Subcomponents	p45n5	(N5) The prototype referenced by the prototype binding declarations must exist in the local namespace of the component implementation.	0	0	0
Subcomponents	p45n6	(N6) The modes named in the in modes statement of a subcomponent must refer to modes in the component implementation.	0	0	0
Subcomponents	p45i1	(L1) The category of the subcomponent declaration must match the category of its corresponding component classifier reference.	0	0	0
Subcomponents	p45i2	(L2) The component classifier reference of a subcomponent declaration may include prototype bindings for a subset or all of the features of the component classifier.	0	0	0
Subcomponents	p45i3	(L3) In a subcomponent refinement declaration the component category may be refined from abstract to one of the concrete categories.	0	0	0
Subcomponents	p45i4	(L4) The Classifier_Substitution_Rule property specifies the rule to be applied when a refinement supplies a classifier and the component classifier reference of the subcomponent declaration.	0	0	0
Subcomponents	p45i5	(L5) In the case of a signature match, the component type of the subcomponent being refined must have a subset of the features of the component type of the subcomponent classifier.	0	0	0
Subcomponents	p45i6	(L6) The component category and optional component classifier or prototype reference can be followed by a set of array dimensions.	0	0	0
Subcomponents	p45i7	(L7) The array size specification for the dimensions is optional. In this case the array declaration is considered incomplete.	0	0	0
Subcomponents	p45i8	(L8) When refining a subcomponent array the number of dimensions of the array cannot be changed, but the array size can be changed.	0	0	0
Subcomponents	p45i9	(L9) When the subcomponent is declared as an array with array dimension sizes then a list of component implementation names must be provided.	0	0	0
Subcomponents	p45i10	(L10) Selecting index ranges in one or more dimensions of an array is only possible if the size of the array for these dimensions is known.	0	0	0
Subcomponents	p45i11	(L11) An array element implementation list is valid only if (a) the subcomponent classifier is a component type and (b) all the element identifiers exist in the local namespace of the component implementation.	0	0	0
Subcomponents	p45c1	(C1) The classifier of a subcomponent cannot recursively contain subcomponents with the same component classifier. In other words, a subcomponent classifier cannot contain a subcomponent classifier that contains the original subcomponent classifier.	0	0	0
Abstract Components	p46i1	(L1) An abstract component type declaration can contain feature declarations (including abstract feature declarations), flow declarations, and mode declarations.	0	0	0
Abstract Components	p46i2	(L2) An abstract component implementation can contain subcomponent declarations of any category. Certain combinations of subcomponent categories are not allowed.	0	0	0
Abstract Components	p46i3	(L3) An abstract component implementation can contain a modes subclause, a connections subclause, a flows subclause, and a properties subclause.	0	0	0
Abstract Components	p46i4	(L4) An abstract subcomponent can be contained in the implementation of any component category.	0	0	0
Abstract Components	p46i5	(L5) If an abstract subcomponent is refined to a concrete category, the concrete category must be acceptable to the component category.	0	0	0
Abstract Components	p46i6	(L6) An abstract subcomponent can be declared as an array of subcomponents.	0	0	0
Abstract Components	p46i7	(L7) If an abstract component type is refined to a concrete category, the features, modes, and flow specifications of the abstract component type must be a subset of the specifications of the concrete category.	0	0	0
Abstract Components	p46i8	(L8) If an abstract component implementation is refined to a concrete category, the subcomponents, call sequences, mode transitions, and properties must be a subset of the specifications of the concrete category.	0	0	0
Prototypes	p47n1	(N1) The prototype identifier on the left-hand side of a prototype binding must exist in the local namespace of the classifier.	0	0	0
Prototypes	p47n2	(N2) The prototype identifier on the right-hand side of a prototype binding, if present, must exist in the local namespace of the classifier.	0	0	0
Prototypes	p47n3	(N3) Unique component classifier references must exist in the public section of the package being identified in the reference.	0	0	0
Prototypes	p47n4	(N4) Unique feature group type references must exist in the public section of the package being identified in the reference.	0	0	0
Prototypes	p47i1	(L1) The component category declared in the component prototype binding must match the component category of the prototype.	0	0	0
Prototypes	p47i2	(L2) The component category of the optional component classifier reference in the prototype declaration must match the component category of the prototype.	0	0	0

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Prototypes	p47i3	(L3) If the component prototype only specifies a component category, then any component type and component impleme	0	0	0
Prototypes	p47i4	(L4) If the component prototype declaration includes a component classifier reference, then the classifier supplied in the p	0	0	0
Prototypes	p47i5	(L5) The category of the component implementation that contains the prototype declaration places restrictions on the set	0	0	0
Prototypes	p47i6	(L6) If the direction is declared for feature prototypes, then the prototype actual satisfies the direction according to the sai	0	0	0
Prototypes	p47i7	(L7) In the case of feature group prototypes, the supplied feature group types must match the declared feature group typ	0	0	0
Prototypes	p47i8	(L8) A classifier supplied in a feature prototype binding must match the classifier of the prototype declaration, if present, a	0	0	0
Prototypes	p47i9	(L9) Component prototypes declared with square brackets specify that they expect a list of component classifiers. These	0	0	0
Prototypes	p47i10	(L10) The component category of the classifier reference or prototype reference in a prototype binding declaration must r	0	0	0
Prototypes	p47i11	(L11) If a direction is specified for an abstract feature in a prototype declaration, then the direction of the prototype actual	0	0	0
Prototypes	p47i12	(L12) Component prototype bindings must only bind component prototypes, feature group prototype bindings must only b	0	0	0
Prototypes	p47i13	(L13) Component prototype refinements must only refine component prototypes, feature group prototype refinements mu	0	0	0
Annex Subclauses and Anr	p48n1	(N1) The annex identifier must be the name of an approved annex or a project-specific identifier different from the approv	0	0	0
Annex Subclauses and Anr	p48n2	(N2) The mode identifiers in the in_modes statement must refer to modes in the component type or component impleme	0	0	0
Annex Subclauses and Anr	p48i1	(L1) Annex subclauses can only be declared in component types, component implementations, and feature group types.	0	0	0
Annex Subclauses and Anr	p48i2	(L2) A component type, component implementation, or feature group type declaration may contain at most one annex su	0	0	0
Annex Subclauses and Anr	p48i3	(L3) Annex libraries must be declared in packages.	0	0	0
Annex Subclauses and Anr	p48i4	(L4) A package declaration may contain at most one annex library declaration for each annex.	0	0	0
Data	p51i1	(L1) A data type declaration can contain provides subprogram access declarations as well as property associations.	0	0	0
Data	p51i2	(L2) A data type declaration must not contain a flow specification or modes subclause.	0	0	0
Data	p51i3	(L3) A data implementation can contain abstract, data and subprogram subcomponents, access connections, and data p	0	0	0
Data	p51i4	(L4) A data implementation must not contain a flow implementation, an end-to-end flow specification, or a modes subclai	0	0	0
Subprograms and Subprog	p52n1	(N1) The defining identifier of a subprogram call sequence declaration must be unique within the local namespace of the	0	0	0
Subprograms and Subprog	p52n2	(N2) The defining identifier of a subprogram call declaration must be unique within the local namespace of the componen	0	0	0
Subprograms and Subprog	p52n3	(N3) If the called subprogram name is a subprogram classifier reference, its component type identifier or component impl	0	0	0
Subprograms and Subprog	p52n4	(N4) The subprogram classifier reference of a subprogram call may be a subprogram type reference.	0	0	0
Subprograms and Subprog	p52n5	(N5) If the called subprogram name is a subprogram subcomponent reference, the subprogram subcomponent must exist	0	0	0
Subprograms and Subprog	p52n6	(N6) If the called subprogram name is a requires subprogram access reference, the requires subprogram access must ex	0	0	0
Subprograms and Subprog	p52i1	(L1) A subprogram type declaration can contain parameter, out event port, out event data port, and feature group declar	0	0	0
Subprograms and Subprog	p52i2	(L2) A subprogram implementation can contain abstract, subprogram, and data subcomponents, a subprogram calls sub	0	0	0
Subprograms and Subprog	p52i3	(L3) Only one subprogram call sequence can apply to a given mode.	0	0	0
Subprograms and Subprog	p52c1	(C1) The reference to a provides subprogram access of a processor in a subprogram call (processor . provides_subprog	0	0	0
Subprograms and Subprog	p52c2	(C2) A subprogram call may reference a subprogram classifier. A project may enforce a consistency rule that this referen	0	0	0
Subprogram Groups and Si	p53n1	(N1) The defining identifier of a subprogram group type must be unique within the package namespace of the package w	0	0	0
Subprogram Groups and Si	p53n2	(N2) Each subprogram group provides a local namespace. The defining subprogram identifiers of subprogram declaratio	0	0	0
Subprogram Groups and Si	p53n3	(N3) The local namespace of a subprogram group type extension includes the defining identifiers in the local namespace	0	0	0
Subprogram Groups and Si	p53n4	(N4) The defining subprogram identifiers of subprogram access feature declarations in feature group refinements must n	0	0	0
Subprogram Groups and Si	p53n5	(N5) The package name of the unique subprogram group type reference must refer to a package name in the global nam	0	0	0
Subprogram Groups and Si	p53i1	(L1) A subprogram group type can contain provides and requires subprogram access, and provides and requires subprog	0	0	0
Subprogram Groups and Si	p53i2	(L2) A subprogram group implementation can contain abstract, data, subprogram group, and subprogram subcomponent	0	0	0
Subprogram Groups and Si	p53i3	(L3) A subprogram group type or implementation may contain zero or more subcomponent declarations. If it contains zer	0	0	0
Threads	p54i1	(L1) A thread type declaration can contain port, feature group, requires data access declarations, as well as requires and	0	0	0
Threads	p54i2	(L2) A thread component implementation can contain abstract, data, subprogram, and subprogram group subcomponent	0	0	0
Threads	p54i3	(L3) The Complete out event port, and Error out event data port are predeclared, i.e., are implicitly identifiers in the name	0	0	0
Threads	p54c3	(C3) Either the Compute_Entrypoint, Compute_Entrypoint_Source_Text Compute_Entrypoint_Call_Sequence property n	0	0	0
Threads	p54c4	(C4) The Period property must have a value if the Dispatch_Protocol property value is periodic, sporadic, timed, or hybrid.	0	0	0
Thread Groups	p55i1	(L1) A thread group component type can contain provides and requires data access, as well as port, feature group, provi	0	0	0

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Thread Groups	p55i2	(L2) A thread group component implementation can contain abstract, data, subprogram, subprogram group, thread, and	0	0	0
Thread Groups	p55i3	(L3) A thread group implementation can contain a connections subclause, a flows subclause, a modes subclause, and pr	0	0	0
Thread Groups	p55i4	(L4) A thread group must not contain a subprogram calls subclause.	0	0	0
Processes	p56i1	(L1) A process component type can contain port, feature group, provides and requires data access, provides and require	0	0	0
Processes	p56i2	(L2) A process component implementation can contain abstract, data, subprogram, subprogram group, thread, and threa	0	0	0
Processes	p56i3	(L3) A process implementation can contain a connections subclause, a flows subclause, a modes subclause, and a propi	0	0	0
Processes	p56i4	(L4) A thread group must not contain a subprogram calls subclause.	0	0	0
Processes	p56c1	(C1) The complete source text associated with a process component must form a complete and legal program as defined	0	0	0
Processors	p61i1	(L1) A processor component type can contain port, feature group, provides subprogram access, provides subprogram gr	0	0	0
Processors	p61i2	(L2) A processor component implementation can contain declarations of memory, bus, virtual bus, virtual processor, and	0	0	0
Processors	p61i3	(L3) A processor implementation can contain a modes subclause, flows subclause, and a properties subclause.	0	0	0
Processors	p61i4	(L4) A processor implementation can contain bus access, subprogram access, subprogram group access, port, feature, a	0	0	0
Processors	p61i5	(L5) A processor implementation must not contain a subprogram calls subclause.	0	0	0
Virtual Processors	p62i1	(L1) A virtual processor component type can contain port, feature group, provides subprogram access, and subprogram g	0	0	0
Virtual Processors	p62i2	(L2) A virtual processor component implementation can contain declarations of virtual bus, virtual processor, and abstrac	0	0	0
Virtual Processors	p62i3	(L3) A virtual processor implementation can contain a modes subclause, flows subclause, and a properties subclause.	0	0	0
Virtual Processors	p62i4	(L4) A virtual processor implementation must not contain a subprogram calls subclause.	0	0	0
Virtual Processors	p62i5	(L5) A virtual processor implementation can contain subprogram access, subprogram group access, port, feature, and fe	0	0	0
Virtual Processors	p62c1	(C1) In a fully bound system every virtual processor must be directly or indirectly bound to, or directly or indirectly contain	0	0	0
Virtual Processors	p62c2	(C2) In a fully deployed system a requires virtual bus binding of a virtual processor specified by the Required_Virtual_Bus	0	0	0
Memory	p63i1	(L1) A memory type can contain bus access declarations, feature groups, a modes subclause, and property associations	0	0	0
Memory	p63i2	(L2) A memory implementation can contain abstract, memory, and bus subcomponent declarations.	0	0	0
Memory	p63i3	(L3) A memory implementation can contain a modes subclause and property associations.	0	0	0
Memory	p63i4	(L4) A memory implementation can contain bus access connection declarations. Bus access connections can connect a	0	0	0
Memory	p63i5	(L5) A memory implementation must not contain flows subclause, or subprogram calls subclause.	0	0	0
Buses	p64i1	(L1) A bus type can have requires bus access declarations, a modes subclause, and property associations.	0	0	0
Buses	p64i2	(L2) A bus type must not contain any flow specifications.	0	0	0
Buses	p64i3	(L3) A bus implementation can contain virtual bus and abstract subcomponent declarations.	0	0	0
Buses	p64i4	(L4) A bus implementation can contain a modes subclause and property associations.	0	0	0
Buses	p64i5	(L5) A bus implementation must not contain flows subclause, or subprogram calls subclause.	0	0	0
Virtual Buses	p65i1	(L1) A virtual bus type can have property associations.	0	0	0
Virtual Buses	p65i2	(L2) A virtual bus type must not contain flow specifications.	0	0	0
Virtual Buses	p65i3	(L3) A virtual bus implementation can contain virtual bus subcomponent declarations.	0	0	0
Virtual Buses	p65i4	(L4) A virtual bus implementation can contain a modes subclause and property associations.	0	0	0
Virtual Buses	p65i5	(L5) A virtual bus implementation must not contain a connections subclause, flows subclause, or subprogram calls subcl	0	0	0
Virtual Buses	p65c1	(C1) In a fully deployed system virtual buses must be directly or indirectly bound to processors or buses that support the	0	0	0
Devices	p66i1	(L1) A device type can contain port, feature group, provides subprogram access, provides subprogram group access, bus	0	0	0
Devices	p66i2	(L2) A device component implementation must not contain a subprogram calls subclause.	0	0	0
Devices	p66i3	(L3) A device implementation can contain abstract, data, virtual bus, and bus subcomponents, bus access connections, a	0	0	0
Systems	p71i1	(L1) A system component type can contain subprogram, subprogram group, data and bus access declarations, port, feat	0	0	0
Systems	p71i2	(L2) A system component implementation can contain abstract, data, subprogram, subprogram group, process, and syste	0	0	0
Systems	p71i3	(L3) A system implementation can contain a modes subclause, a connections subclause, a flows subclause, and propert	0	0	0
Systems	p71i4	(L4) A thread group must not contain a subprogram calls subclause.	0	0	0
Systems	p71n1	(N1) The defining identifier of a feature must be unique within the namespace of the associated component type.	0	0	0
Systems	p71n2	(N2) Thread features may not be declared using the predeclared ports names Complete or Error.	0	0	0

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Systems	p71n3	(N3) Each refining feature identifier that appears in a feature refinement declaration must also appear in a feature declaration.	0	0	0
Systems	p71n4	(N4) A feature is referenced in one of two ways. Within the component implementations for a component type, a feature can be referenced by a feature group or a feature group refinement.	0	0	0
Systems	p71n5	(N5) The path of a contained property association for a feature must refer to an element of a feature group.	0	0	0
Systems	p71i1	(L1) Each feature can be refined at most once in the same type extension.	0	0	0
Systems	p71i2	(L2) A feature refinement declaration of a feature and the original feature must both be declared as port, parameter, access, or data.	0	0	0
Systems	p71i3	(L3) Feature arrays must only be declared for threads, devices, and processors.	0	0	0
Systems	p71i4	(L4) If the feature refinement specifies an array dimension, then the feature being refined must have an array dimension.	0	0	0
Systems	p71i5	(L5) If the refinement specifies an array dimension size, then the feature being refined must not have an array dimension.	0	0	0
Systems	p71i6	(L6) A contained property association must only be used when the feature is a feature group.	0	0	0
Systems	p71i7	(L7) In the case of a feature with a classifier reference, the classifier of the refined feature declaration in a component type must be the same as the classifier of the feature being refined.	0	0	0
Abstract Features	p81i1	(L1) The feature direction in a refined feature declaration must be identical to the feature direction in the feature declaration.	0	0	0
Abstract Features	p81i2	(L2) If the direction of an abstract feature is specified, then the direction must be satisfied by the refinement (see also the feature direction rule).	0	0	0
Abstract Features	p81i3	(L3) An abstract feature with a feature prototype identifier and the prototype being referenced must both specify the same direction.	0	0	0
Abstract Features	p81i4	(L4) An abstract feature refinement declaration of a feature with a feature prototype reference must only add property associations.	0	0	0
Feature Groups and Feature Groups	p82n1	(N1) The defining identifier of a feature group type must be unique within the package namespace of the package where the feature group type is defined.	0	0	0
Feature Groups and Feature Groups	p82n2	(N2) Each feature group type provides a local namespace. The defining identifiers of prototype, feature, and feature group type extensions must be unique within the local namespace.	0	0	0
Feature Groups and Feature Groups	p82n3	(N3) The local namespace of a feature group type extension includes the defining identifiers in the local namespace of the feature group type being extended.	0	0	0
Feature Groups and Feature Groups	p82n4	(N4) The defining feature identifiers of feature group declarations must be unique in the local namespace of the component type.	0	0	0
Feature Groups and Feature Groups	p82n5	(N5) The defining feature group identifier of feature_refinement declarations in component types must exist in the local namespace.	0	0	0
Feature Groups and Feature Groups	p82n6	(N6) The package name of the unique feature group type reference must refer to a package name in the global namespace.	0	0	0
Feature Groups and Feature Groups	p82n7	(N7) The prototype reference in a feature group declaration must refer to a prototype of the component type or feature group type.	0	0	0
Feature Groups and Feature Groups	p82i1	(L1) A feature group type may contain zero or more elements, i.e., feature or feature groups. If it contains zero elements, it is an empty feature group type.	0	0	0
Feature Groups and Feature Groups	p82i2	(L2) A feature group type can be declared to be the inverse of another feature group type, as indicated by the reserved word inverse.	0	0	0
Feature Groups and Feature Groups	p82i3	(L3) Only feature group types without inverse of or feature group types with features and inverse of can be extended.	0	0	0
Feature Groups and Feature Groups	p82i4	(L4) A feature group type that is an extension of another feature group type without an inverse of cannot contain an inverse of.	0	0	0
Feature Groups and Feature Groups	p82i5	(L5) The feature group type that is an extension of another feature group type with features and inverse of that adds features must not have an inverse of.	0	0	0
Feature Groups and Feature Groups	p82i6	(L6) A feature group declaration with an inverse of statement must only reference feature group types without an inverse of.	0	0	0
Feature Groups and Feature Groups	p82i7	(L7) A feature group refinement may be refined to only add property associations. In this case inclusion of the feature group type must be identical.	0	0	0
Feature Groups and Feature Groups	p82i8	(L8) The number of feature or feature groups contained in the feature group and its complement must be identical.	0	0	0
Feature Groups and Feature Groups	p82i9	(L9) Each of the declared features or feature groups in a feature group must be a pair-wise complement with that in the feature group.	0	0	0
Feature Groups and Feature Groups	p82i10	(L10) If both feature group types have zero features, then they are considered to complement each other.	0	0	0
Feature Groups and Feature Groups	p82i11	(L11) Ports are pair-wise complementary if they satisfy the port connection rules specified in Section 9.2.1. This includes the case where one or both are empty feature groups.	0	0	0
Feature Groups and Feature Groups	p82i12	(L12) Access features are pair-wise complementary if they satisfy the access connection rules in Section 9.4.	0	0	0
Feature Groups and Feature Groups	p82i13	(L13) If an in or out direction is specified as part of a feature group declaration, then all features inside the feature group must have the same direction.	0	0	0
Ports	p83n1	(N1) A defining port identifier must adhere to the naming rules specified for all features (see Section 8).	0	0	0
Ports	p83n2	(N2) The defining identifier of a port refinement declaration must also appear in a feature declaration of a component type.	0	0	0
Ports	p83n3	(N3) The unique component type identifier of the data classifier reference must be the name of a data component type. The classifier reference must be a data classifier.	0	0	0
Ports	p83n4	(N4) The prototype identifier of a prototype reference, if specified, must exist in the namespace of the component type or feature group type.	0	0	0
Ports	p83i1	(L1) Ports can be declared in subprogram, thread, thread group, process, system, processor, virtual processor, and device.	0	0	0
Ports	p83i2	(L2) Data and event data ports may be incompletely defined by not specifying the data component classifier reference or the direction.	0	0	0
Ports	p83i3	(L3) Data, event, and event data ports may be refined by adding a property association. The data component classifier direction must be the same as the direction of the feature being refined.	0	0	0
Ports	p83i4	(L4) The port category of a port refinement must be the same as the category of the port being refined, or the port being refined must be a data port.	0	0	0
Ports	p83i5	(L5) The port direction of a port refinement must be the same as the direction of the feature being refined. If the feature being refined is a data port, the direction must be the same as the direction of the data port.	0	0	0
Subprogram and Subprogram	p84n1	(N1) The defining identifier of a provides or requires subprogram or subprogram group access declaration must be unique within the package namespace.	0	0	0
Subprogram and Subprogram	p84n2	(N2) The defining identifier of a provides or requires subprogram or subprogram group refinement must exist as a defining identifier.	0	0	0
Subprogram and Subprogram	p84n3	(N3) The component type identifier or component implementation name of a subprogram or subprogram group access declaration must exist in the component type namespace.	0	0	0
Subprogram and Subprogram	p84n4	(N4) The prototype identifier of a subprogram or subprogram group access classifier reference, if present, must exist in the component type namespace.	0	0	0
Subprogram and Subprogram	p84i1	(L1) If a subprogram access refers to a component classifier or a component prototype, then the category of the classifier or prototype must be the same as the category of the subprogram.	0	0	0

## Check.java

Subprogram and Subprogram Access	p84l2	(L2) If a subprogram group access refers to a component classifier or a component prototype, then the category of the classifier or prototype must be a subprogram access or a subprogram group access.	0	0	0
Subprogram and Subprogram Access	p84l3	(L3) An abstract feature can be refined into a subprogram access or a subprogram group access. In this case, the abstract feature must not have a direction specified.	0	0	0
Subprogram and Subprogram Access	p84l4	(L4) A subprogram or subprogram group access declaration that does not specify a component classifier reference is incomplete. Such a reference can be added to the declaration.	0	0	0
Subprogram and Subprogram Access	p84l5	(L5) A subprogram or subprogram group access declaration may be refined by adding a property association. Inclusion of the data classifier reference is optional.	0	0	0
Subprogram and Subprogram Access	p84l6	(L6) A provides subprogram access cannot be refined to a requires subprogram access and a requires subprogram access cannot be refined to a provides subprogram access.	0	0	0
Subprogram and Subprogram Access	p84c1	(C1) A provides subprogram access feature indicates that a subprogram is made available to be referenced. A project must not contain a provides subprogram access feature.	0	0	0
Subprogram Parameters	p85n1	(N1) The defining identifier of a parameter must be unique within the namespace of the subprogram type containing the parameter.	0	0	0
Subprogram Parameters	p85n2	(N2) The defining parameter identifier of a parameter refinement declaration must also appear in a feature declaration of the subprogram type.	0	0	0
Subprogram Parameters	p85n3	(N3) The data classifier reference must refer to a data component type or a data component implementation.	0	0	0
Subprogram Parameters	p85n4	(N4) The prototype identifier, if present, must exist in the namespace of the subprogram classifier that contains the parameter.	0	0	0
Subprogram Parameters	p85l1	(L1) Parameters can be declared for subprogram component types.	0	0	0
Subprogram Parameters	p85l2	(L2) A parameter declaration that does not specify a data classifier reference is incomplete. Such a reference can be added to the declaration.	0	0	0
Subprogram Parameters	p85l3	(L3) A parameter declaration may be refined by adding a property association. Inclusion of the data classifier reference is optional.	0	0	0
Subprogram Parameters	p85l4	(L4) The parameter direction of a parameter refinement must be the same as the direction of the feature being refined. If the parameter direction is not specified, it must be the same as the direction of the feature being refined.	0	0	0
Data Component Access	p86n1	(N1) The defining identifier of a provides or requires data access declaration must be unique within the namespace of the component type.	0	0	0
Data Component Access	p86n2	(N2) The defining identifier of a provides or requires data access refinement must exist as a defining identifier of a provides or requires data access declaration.	0	0	0
Data Component Access	p86n3	(N3) The component type identifier or component implementation name of a data access classifier reference must exist in the namespace of the component type.	0	0	0
Data Component Access	p86n4	(N4) The prototype identifier, if present, must exist in the namespace of the classifier that contains the data access declaration.	0	0	0
Data Component Access	p86l1	(L1) If a data access refers to a component classifier or a component prototype, then the category of the classifier or prototype must be a data access or a data access group access.	0	0	0
Data Component Access	p86l2	(L2) A data access declaration may be refined by refining the data classifier, by adding a property association, or by doing a data access refinement.	0	0	0
Data Component Access	p86l3	(L3) A provides data access cannot be refined to a requires data access and a requires data access cannot be refined to a provides data access.	0	0	0
Data Component Access	p86l4	(L4) An abstract feature can be refined into a data access. In this case, the abstract feature must not have a direction specified.	0	0	0
Data Component Access	p86c1	(C1) A data access declaration that does not specify a data classifier reference is incomplete. Such a reference can be added to the declaration.	0	0	0
Data Component Access	p86c2	(C2) If the source code of a component does access shared data, then the component type declaration must specify a requires data access.	0	0	0
Data Component Access	p86c3	(C3) A data access refinement may refine an abstract feature declaration. If the abstract feature declaration specifies a direction, the data access refinement must specify the same direction.	0	0	0
Bus Component Access	p87n1	(N1) The defining identifier of a provides or requires bus access declaration must be unique within the namespace of the component type.	0	0	0
Bus Component Access	p87n2	(N2) The defining identifier of a provides or requires bus refinement must exist as a defining identifier of a provides or requires bus access declaration.	0	0	0
Bus Component Access	p87n3	(N3) The component type identifier or component implementation name of a bus access classifier reference must exist in the namespace of the component type.	0	0	0
Bus Component Access	p87n4	(N4) The prototype identifier, if present, must exist in the namespace of the classifier that contains the bus access declaration.	0	0	0
Bus Component Access	p87l1	(L1) If a bus access refers to a component classifier or a component prototype, then the category of the classifier or prototype must be a bus access or a bus access group access.	0	0	0
Bus Component Access	p87l2	(L2) A bus access declaration may be refined by refining the bus classifier, by adding a property association, or by doing a bus access refinement.	0	0	0
Bus Component Access	p87l3	(L3) A provides bus access cannot be refined to a requires bus access and a requires bus access cannot be refined to a provides bus access.	0	0	0
Bus Component Access	p87l4	(L4) An abstract feature can be refined into a bus access. In this case, the abstract feature must not have a direction specified.	0	0	0
Bus Component Access	p87c1	(C1) A bus access declaration that does not specify a bus classifier reference is incomplete. Such a reference can be added to the declaration.	0	0	0
Bus Component Access	p87c2	(C2) If a bus access feature is a refinement of an abstract feature, then the direction of the abstract feature, if specified, must be the same as the direction of the bus access feature.	0	0	0
Bus Component Access	p87n1	(N1) The defining identifier of a defined connection declaration must be unique in the local namespace of the component.	0	0	0
Bus Component Access	p87n2	(N2) The connection identifier in a connection refinement declaration must refer to a named connection declared in an ancestor component type.	0	0	0
Bus Component Access	p87l1	(L1) A connection refinement must contain at least one of the following: a connection source and destination subclause, a connection direction subclause, or a connection mode subclause.	0	0	0
Bus Component Access	p87l2	(L2) If a semantic connection may be active in a particular mode, then the ultimate source and ultimate destination components must be the same.	0	0	0
Bus Component Access	p87l3	(L3) If a semantic connection may be active in a particular mode transition, then the ultimate source component must be the same as the ultimate destination component.	0	0	0
Feature Connections	p91n1	(N1) A source or destination reference in a feature connection or feature connection refinement declaration must refer to a component type or a component implementation.	0	0	0
Feature Connections	p91n2	(N2) The subcomponent reference may refer to a subcomponent or a subcomponent array.	0	0	0
Feature Connections	p91l1	(L1) If the feature connection declaration represents a connection between features of sibling components, then the source and destination references must be the same.	0	0	0
Feature Connections	p91l2	(L2) If the feature connection declaration represents a connection between features up the containment hierarchy, then the source reference must be the same as the destination reference.	0	0	0
Feature Connections	p91l3	(L3) If the feature connection declaration represents a connection between features down the containment hierarchy, then the destination reference must be the same as the source reference.	0	0	0
Feature Connections	p91l4	(L4) If the feature connection declaration specifies a directional connection, then the direction of the connection must be the same as the direction of the feature being connected.	0	0	0
Feature Connections	p91l5	(L5) The individual connections of a semantic connection must be bidirectional or have the same direction. The direction of the connection must be the same as the direction of the feature being connected.	0	0	0

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Port Connections	p92n1	(N1) The connection identifier in a port connection refinement declaration must refer to a named port or feature connection.	0	0	0
Port Connections	p92n2	(N2) A source or destination reference in a port connection or port connection refinement declaration must reference a port or feature connection.	0	0	0
Port Connections	p92n3	(N3) The subcomponent reference may also consist of a reference to a subcomponent array.	0	0	0
Port Connections	p92n4	(N4) The event_or_event_data identifier of event source specifications (self.event_or_event_data_identifier) must not contain a subcomponent reference.	0	0	0
Port Connections	p92l1	(L1) In the case of a directional port connection the connection end representing the source of the flow must be the source of the flow.	0	0	0
Port Connections	p92l2	(L2) In the case of a bidirectional port connection either connection end can be the source. If the bidirectional connection is used in a thread, device, or processor, it must be the source.	0	0	0
Port Connections	p92l3	(L3) If the source connection end is a data access feature it must have read access rights; if the destination connection end is a data access feature it must have write access rights.	0	0	0
Port Connections	p92l4	(L4) The feature identifier of a subcomponent reference may refer to a feature array, if the subcomponent is a thread, device, or processor.	0	0	0
Port Connections	p92l5	(L5) The following are acceptable sources and destinations of port connections. The left column shows connections between ports of sibling components, then the source must be the source of the flow.	0	0	0
Port Connections	p92l6	(L6) If the port connection declaration represents a connection between ports of sibling components, then the source must be the source of the flow.	0	0	0
Port Connections	p92l7	(L7) If the port connection declaration represents a connection between ports up the containment hierarchy, then the source must be the source of the flow.	0	0	0
Port Connections	p92l8	(L8) If the port connection declaration represents a connection between ports down the containment hierarchy, then the source must be the source of the flow.	0	0	0
Port Connections	p92l9	(L9) The individual connections of a semantic port connection must be bidirectional or have the same direction. The direction of the flow must be the same.	0	0	0
Port Connections	p92l10	(L10) Self.<identifier> must only be referenced as the source of a connection.	0	0	0
Port Connections	p92l11	(L11) A data port cannot be the destination of more than one semantic port connection unless each semantic port connection has a property association for a given data classifier.	0	0	0
Port Connections	p92l12	(L12) A semantic connection cannot contain connection declarations with both immediate and delayed Timing property values.	0	0	0
Port Connections	p92l13	(L13) For connections between data ports, event data ports and data access, the data classifier of the source port must match the data classifier of the destination port.	0	0	0
Port Connections	p92l14	(L14) The following rules are supported: $\forall \text{Type } T, \text{Type } T' \text{ Classifier\_Match: The source data type and data implementation must match.}$	0	0	0
Port Connections	p92l15	(L15) If more than one port connection declaration in a semantic port connection has a property association for a given data classifier, the property values must match.	0	0	0
Port Connections	p92l16	(L16) A processor port specification must only be used in event connections within threads and subprograms.	0	0	0
Port Connections	p92c1	(C1) There cannot be cycles of immediate connections between threads, devices, and processors.	0	0	0
Port Connections	p92c2	(C2) The processor port identifier of a processor port specification (processor.processor_port_identifier) must name a port or feature connection.	0	0	0
Port Connections	p92c3	(C3) The Supports_Classifier_Subset_Matches property may be associated with a bus or virtual bus. This specifies the subset of classifiers that are supported.	0	0	0
Port Connections	p92c4	(C4) The Supports_Type_Conversions property may be associated with a bus or virtual bus. This specifies the subset of types that are supported.	0	0	0
Parameter Connections	p93n1	(N1) The connection identifier in a parameter connection refinement declaration must refer to a named parameter or feature connection.	0	0	0
Parameter Connections	p93n2	(N2) A source (destination) reference in a parameter connection declaration must reference a parameter of a preceding declaration.	0	0	0
Parameter Connections	p93l1	(L1) The source of a parameter connection must be an incoming data or event data port of the containing thread, an incoming data or event data port of a subcomponent, or a parameter connection.	0	0	0
Parameter Connections	p93l2	(L2) The following source/destination pairs are acceptable for parameter connection declarations: threadport -> call.parameter, deviceport -> call.parameter, processorport -> call.parameter.	0	0	0
Parameter Connections	p93l3	(L3) A parameter cannot be the destination feature reference of more than one parameter connection declaration unless it is a parameter connection.	0	0	0
Parameter Connections	p93l4	(L4) The data classifier of the source and destination must match. The matching rules as specified by the Classifier_Matching_Rule property.	0	0	0
Access Connections	p94n1	(N1) The connection identifier in an access connection refinement declaration must refer to a named access or feature connection.	0	0	0
Access Connections	p94n2	(N2) An access reference in an access connection declaration must reference an access feature of a subcomponent, subthread, or subprocessor.	0	0	0
Access Connections	p94l1	(L1) The category of the source and the destination of an access connection declaration must be the same, i.e., they must both be data or event data.	0	0	0
Access Connections	p94l2	(L2) In the case of a bidirectional semantic access connection either connection end can be the source.	0	0	0
Access Connections	p94l3	(L3) In the case of a directional data or bus access connection the connection end representing the component being accessed must be the destination.	0	0	0
Access Connections	p94l4	(L4) In a partial AADL model the ultimate source or destination may be a provides access feature of a component instead of a data or event data port.	0	0	0
Access Connections	p94l5	(L5) If the access connection declaration represents an access connection between access features of sibling components, then the source must be the source of the flow.	0	0	0
Access Connections	p94l6	(L6) If the access connection declaration represents a feature mapping up the containment hierarchy, then one connection end must be the source of the flow.	0	0	0
Access Connections	p94l7	(L7) If the access connection declaration represents a feature mapping down the containment hierarchy, then one connection end must be the source of the flow.	0	0	0
Access Connections	p94l8	(L8) A requires access cannot be the source or destination feature reference of more than one access connection declaration.	0	0	0
Access Connections	p94l9	(L9) For access connections the classifier of the provider access must match to the classifier of the requires access connection.	0	0	0
Access Connections	p94l10	(L10) If more than one access feature in a semantic access connection has an Access_Right property association, then the property values must match.	0	0	0
Access Connections	p94l11	(L11) The category of the access connection source and destination must be identical. If the component category is specified, then the category must match.	0	0	0
Feature Group Connections	p95n1	(N1) The connection identifier in a feature group connection refinement declaration must refer to a feature group named in the declaration.	0	0	0
Feature Group Connections	p95n2	(N2) A source or destination reference in a feature group connection declaration must reference a feature group declared in the model.	0	0	0
Feature Group Connections	p95l1	(L1) If the feature group connection declaration represents a component connection between sibling components, the feature group classifier must match.	0	0	0
Feature Group Connections	p95l2	(L2) The Classifier_Matching_Rule property specifies the rule to be applied to match the feature group classifier of a component connection.	0	0	0
Feature Group Connections	p95l3	(L3) The following rules are supported for feature group connection declarations that represent a connection up or down the containment hierarchy.	0	0	0
Feature Group Connections	p95l4	(L4) The following rules are supported for feature group connection declarations that represent a connection between two components.	0	0	0

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Feature Group Connections	p95i5	(L5) If the feature group connection declaration represents a connection between feature group of sibling components, th	0	0	0
Feature Group Connections	p95i6	(L6) If the feature group connection declaration represents a connection between feature groups up the containment hier	0	0	0
Feature Group Connections	p95i7	(L7) If the feature group connection declaration represents a connection between feature groups down the containment h	0	0	0
Feature Group Connections	p95i8	(L8) A feature group connection must be bidirectional or be consistent with the direction of the source and destination fea	0	0	0