

DipTrace XML. Component Editor.

File format specification

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With the default value, some parameters are not written to the file.

1. File title

```
<?xml version="1.0" encoding="UTF-8"?>
```

Description of the XML file version and encoding.

2. Information about library file, <Library>

```
<Library Type="DipTrace-ComponentLibrary" Name="Audio Buzzers" Hint="Audio - Buzzers"
Version="4.3.0.1" Units="inch">
```

Type="DipTrace-ComponentLibrary" - file created in the DipTrace Component Editor;

Name="Audio Buzzers" – library name displayed on the Library panel;

Hint="Audio - Buzzers" – hint text that appears on the Library panel;

Version="4.3.0.1" – version of the library file format;

Units="inch" – Measurement units of dimensions in the file:

mm – millimetres;

inch – inches;

mil – mils.

3. Library of the patterns, attached to the components, <Library>

```
<Library Type="DipTrace-PatternLibrary" Version="4.3.0.1" Units="inch">
{...}
</Library>
```

It fully corresponds to the description of the XML format of the Pattern Editor. Each pattern is assigned a unique "PatternStyle", which is used to connect to the component (**5.1.1.14. Pattern attached to component, <Pattern>**).

4. Description of Component Categories used, <Categories>.

```
<Categories>          – start of the list of categories;
{...}                – list of categories (Category);
</Categories>         – end of the list of categories.
```

4.1. Category description, <Category>

4.1.1. Category number

```
<Category Index="1">
```

Index	Int	Number of the category in the list.
-------	-----	-------------------------------------

4.1.2. Category name, <Name>

<Name>Connectors</Name>

Name	Text	Category name.
------	------	----------------

4.1.3. List of category types, <Types>

<Types> – start of the list of types;
{...} – list of types (Type);
</Types> – end of the list of types.

4.1.3.1. Type description, <Type>

4.1.3.1.1. Type number

<Type Index="2">

Index	Int	Type number in the list of the current category.
-------	-----	--

4.1.3.1.2. Type name

<Name>Circular</Name>

Name	Text	Type name.
------	------	------------

4.1.3.1.3. List of SubTypes, <SubTypes>

<SubTypes> – start of the list of subtypes;
{...} – list of subtypes (SubType);
</SubTypes> – end of the list of subtypes.

4.1.3.1.3.1. Subtype description, <SubType>

4.1.3.1.3.1.1. Subtype number

<SubType Index="2">

Index	Int	Subtype number in the list of the current type.
-------	-----	---

4.1.3.1.3.1.2 Subtype name

<Name>Power DIN</Name>

Name	Text	Subtype name.
------	------	---------------

5. Component description section, <Components>

<Components> – start of the component description section;
{...} – component description (Component);
</Components> – end of the component description section.

5.1. Component description, <Component>

<Component> – start of the component description;
{...} – component part description (Part);
</Component> – end of the component description.

5.1.1.1. Component part description, <Part>

<Part RefDes="LS" PartType="Normal" ShowNumbers="Common" Type="Free" Int1="0"
Int2="0" Width="0.2" Height="0.3" LockTypeChange="Y" SubFolderIndex="0">

RefDes	Text	Component RefDes. Set for the first part only.
PartType	Text	Part type: "Normal"; "Power"; "Net Port".
ShowNumbers	Text	Show pin number above the pin: "Common"; "Show"; "Hide".
Type	Text	Symbol template style: "Free"; "2 Sides"; "IC-2 Sides"; "IC-4 Sides".
Int1	Int	Parameter for the Symbol template style: = 0 for Type = Free; = Left Pins for Type = 2 sides; = Left Pins for Type = IC – 2 sides; = Horizontal Pins for Type = IC – 4 sides.
Int2	Int	Parameter for the Symbol template style: = 0 for Type = Free; = Right Pins for Type = 2 sides; = Right Pins for Type = IC – 2 sides; = Vertical Pins for Type = IC – 4 sides.
Width	Real	Width of the symbol.
Height	Real	Height of the symbol.
LockTypeChange	Bool	Lock symbol template: "Y" – ON; "N" – OFF.

SubFolderIndex		Subfolder index, not used, set to 0.
----------------	--	--------------------------------------

5.1.1.2. Component name, <Name>

<Name>AI-1223-TWT-12V-R</Name>

Name	Text	Component name.
------	------	-----------------

Set for the first part only.

5.1.1.3. Part value, <Value>

<Value>47k</Value>

Value	Text	Part value.
-------	------	-------------

5.1.1.4. Part Origin, <Origin>

<Origin X="0" Y="0"/>

X	Real	X coordinate of the Origin. X distance from symbol center coordinate (0;0) to the Origin coordinate.
Y	Real	Y coordinate of the Origin. Y distance from symbol center coordinate (0;0) to the Origin coordinate.

5.1.1.5. Component Datasheet link, <Datasheet>

<Datasheet><http://datasheets.diptrace.com/rohm/bd6874gsw.pdf></Datasheet>

Datasheet	Text	Component datasheet.
-----------	------	----------------------

Set for the first part only.

5.1.1.6. Description of SPICE model of component part, <SpiceModel>

<SpiceModel Type="Diode">

<Model>[[[-1]]*0**0*Area(Area)=1 *1**0*IC(Initial!voltage,!V)=0 *1**0*Temp(Temperature,!C)=25]</Model>

<Details>

<Item>.MODEL D1N4148 D(IS=0.1P RS=16 CJO=2P TT=12N BV=100 IBV=3.867E-10)</Item>

<Item></Item>

<Item></Item>

</Details>

</SpiceModel>

5.1.1.6.1. SPICE model type, <Type>

Type	Text	Spice Model type: "SubCkt"; "Resistor"; "Capacitor"; "Inductor"; "Diode"; "BJT"; "JFET"; "MOSFET"; "Ga As Transistor"; "Current Source"; "Voltage Source"; "Voltage Dependent Current Source"; "Voltage Dependent Voltage Source"; "Current Dependent Current Source"; "Current Dependent Voltage Source"; "Arbitrary Behavioral Source"; "Mutual Inductance"; "Transmission Line"; "Lossy Transmission Line"; "Single Lossy Transmission Line (TXL)"; "Coupled Multiconductor Line (CPL)"; "Voltage-Controlled Switch"; "Current-Controlled Switch"; "Uniformly Distributed RC Line".
------	------	--

5.1.1.6.2. SPICE string, <Model>

Model	Text	String related to the part in Spice export.
-------	------	---

5.1.1.6.3. Text description of the SPICE model, <Details>

<Details> – start of the SPICE model description;
{...} – SPICE model description strings (Item);
</Details> – end of the SPICE model description.

5.1.1.6.3.1. SPICE model description strings, <Item>

Item	Text	SPICE model description string.
------	------	---------------------------------

5.1.1.7. Component manufacturer, <Manufacturer>

<Manufacturer>ROHM Semiconductor</Manufacturer>

Manufacturer	Text	Component manufacturer.
--------------	------	-------------------------

Set for the first part only.

5.1.1.8. Category assigned to component, <Category>

Set for the first part only.

5.1.1.8.1. Category number in the list, <Index>

<Category Index="1">

Index	Int	The number of the category assigned to the component in the list (4.1. Category description, <Category>).
-------	-----	--

5.1.1.8.2. Name of the category assigned to component, <Name>

<Name>Connectors</Name>

Name	Text	Name of the category assigned to the component.
------	------	---

5.1.1.8.3. List of category types and subtypes assigned to component, <CategoryTypes>

<CategoryTypes> – start of the list of types and subtypes;
 {...} – list of types and subtypes (CategoryType);
 </CategoryTypes> – end of the list of types and subtypes.

5.1.1.8.3.1. Type and Subtype description, <CategoryType>

5.1.1.8.3.1.1. Type name and number, <Type>

<Type Index="2">Circular</Type>

Index	Int	Type number in the current category list.
	Text	Type name.

5.1.1.8.3.1.2. SubType name and number, <SubType>

<SubType Index="2">Power DIN</SubType>

Index	Int	Subtype number in the current type list.
	Text	SubType name.

5.1.1.9. Supplier details, <Suppliers>

<Suppliers>

Set for the first part only.

5.1.1.9.1. Supplier search string, <PartNumber>

<PartNumber>ASI301Q</PartNumber>

PartNumber	Text	Exact supplier search string.
------------	------	-------------------------------

5.1.1.9.2. Manufacturer, <Manufacturer>

<Manufacturer>Mallory Sonalert</Manufacturer>

Manufacturer	Text	Manufacturer.
--------------	------	---------------

5.1.1.9.3. Pattern name for search, <Pattern>

<Pattern>MALLORY_ASI301Q</Pattern>

Pattern	Text	Pattern name for search.
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5.1.1.9.4. Supplier, <Supplier>

<Supplier>Mouser</Supplier>

Supplier	Text	Supplier name.
----------	------	----------------

5.1.1.9.5. Currency, <Currency>

<Currency>usd</Currency>

Currency	Text	Preferred currency.
----------	------	---------------------

5.1.1.10. Start of list of component part pins, <Pins>

<Pins> – start of the list of pins;
{...} – list of pins (Pin);
</Pins> – end of the list of pins.

5.1.1.10.1. Pin description, <Pin>

5.1.1.10.1.1. Main pin parameters

<Pin Id="0" X="0.088005" Y="0.1" Locked="N" Type="Default" ElectricType="Undefined"
Orientation="90" PadId="1" Length="0.15" ShowName="N" NumXShift="-0.034646">

NumYShift="0.014856" NameXShift="0" NameYShift="0" SignalDelay="0" NumOrientation="0"
NameOrientation="0">

Id	Int	Id (unique number) of the pin in the component part.
X	Real	X coordinate. The X distance from the symbol center coordinate (0;0) to the pin coordinate.
Y	Real	Y coordinate. The Y distance from the symbol center coordinate (0;0) to the pin coordinate.
Locked	Bool	Pin change lock: "N" – OFF: pin change allowed; "Y" – ON: pin change locked.
Type	Text	Pin visual type: "Default"; "Polarity In"; "Polarity Out"; "Non Logic"; "Open"; "Open High"; "Open Low"; "3 State"; "Hysteresis"; "Amplifier"; "Postponed"; "Shift"; "Clock"; "Generator".
ElectricType	Text	Pin electric type (for ERC): "Undefined"; "Passive"; "Input"; "Output"; "Bidirectional"; "Open High"; "Open Low"; "Passive High"; "Passive Low"; "3 State"; "Power".
Orientation	Text	Pin rotation: "0"; "90"; "180"; "270".
PadId	Int	Index of the related pad number in the pattern pad array.
Length	Real	Pin length.
ShowName	Bool	Show pin name:

		"N" – do not show; "Y" – show.
NumXShift	Real	X shift of the pin number.
NumYShift	Real	Y shift of the pin number.
NameXShift	Real	X shift of the pin name.
NameYShift	Real	Y shift of the pin name.
SignalDelay	Real	Pin signal delay for length matching.
NumOrientation	Int	Rotation of the pin number: "0" – not rotated; "1" – rotated 90 degrees.
NameOrientation	Int	Rotation of the pin name: "0" – not rotated; "1" – rotated 90 degrees.
Group	Int	Group number (Id) inside component part, see <Groups> section.

5.1.1.10.1.2. SPICE signal assigned to pin, <SpiceSignal>

<SpiceSignal>NE</SpiceSignal>

SpiceSignal	Text	Name of the SPICE signal assigned to the pin.
-------------	------	---

5.1.1.10.1.3. Pin Name <Name>

<Name>PLUS</Name>

Name	Text	Pin Name.
------	------	-----------

5.1.1.10.1.4. Pin Number, <PadNumber>

<PadNumber>1</PadNumber>

PadNumber	Text	Pin number. This is the main parameter necessary to make symbol pin to pattern pad link. Pin and Pad numbers must be identical.
-----------	------	---

5.1.1.10.1.5. Pin name font parameters, <NameFont>

<NameFont Size="5" Width="-2" Scale="1"/>

Size	Int	Pin name font size.
Width	Real	Line width vector font of name: -3 – thin; -2 – normal; -1 – bold; >0 – custom, actual value is set here.

Scale	Real	Horizontal scale for the vector font of the pin name.
-------	------	---

5.1.1.11. Start of the list of part shapes and texts, <Shapes>

<Shapes> – start of the list of part shapes and texts;
 {...} – list of part shapes and texts (Shape);
 </Shapes> – end of the list of part shapes and texts.

5.1.1.11.1. Shape description, <Shape>

```

<Shape Type="Line" LineWidth="0.01" Locked="N" FontVector="N" FontSize="0"
FontColor="0" TextShow="Any Text" FontName="" FontWidth="0" FontScale="0"
Angle="1.570796" HorzAlign="Left" VertAlign="Top" TextAlign="Left" LineSpacing="1.2"
Group="-1">

```

```

  <Lines>
  <Item></Item>
</Lines>
  <Points>
  <Item X="0.1" Y="0.15"/>
  <Item X="0.1" Y="-0.15"/>
</Points>
</Shape>

```

5.1.1.11.1.1. Main parameters of Shape

Type	Int	Shape type: "Line"; "Arc"; "Arrow"; "Rectangle"; "FillRect"; "Obround"; "FillObround"; "Polyline"; "Polygon"; "Text".
LineWidth	Real	Shape line width (for not filled and non-text objects only).
Locked	Bool	Change lock: "Y" – ON, changes locked; "N" – OFF, changes allowed.
FontVector	Bool	"Y" – vector font; "N" – True Type font.
FontSize	Int	Font size for text object.
FontColor	Int	Font color of text object.
TextShow	Text	Displayed text:

		"Any Text"; "Name"; "RefDes"; "Value"; "Part Name"; "Manufacturer"; "Datasheet".
FontName	Text	Name of the TrueType font.
FontWidth	Real	Line width for vector text: -3 – thin; -2 – normal; -1 – bold; >0 – custom, actual value is set here.
FontScale	Real	Horizontal scale for the vector text.
Angle	Real	Angle of the text in radians, counterclockwise.
HorzAlign	Text	Horizontal text anchor point: "Center"; "Right"; "Left".
VertAlign	Text	Vertical text anchor point: "Center"; "Bottom"; "Top".
TextAlign	Text	Text alignment: "Center"; "Right"; "Left".
LineSpacing	Real	Line spacing for multiline text.
Group	Int	Group number (Id) inside component part, see <Groups> section. "-1" – does not belong to any group.

5.1.1.11.1.2. List of lines of "Text" shape, <Lines>

<Lines> – start of the list of lines;
 {...} – list of lines (Item);
 </Lines> – end of the list of lines.

5.1.1.11.1.2.1. Lines of "Text" shape, <Item>

<Item>Segm</Item>

Item	Text	Text line.
------	------	------------

5.1.1.11.1.3. List of shape points, <Points>

<Points> – start of the list of shape points;
{...} – list of shape points (Item);
</Points> – end of the list of shape points.

5.1.1.11.1.3.1. Shape point coordinates, <Item>

<Item X="-31.4367" Y="23.9103"/>

X	Real	X coordinate.
Y	Real	Y coordinate.

5.1.1.12. Part groups list, <Groups>

<Groups> – start of the list of groups;
{...} – group descriptions (Group);
</Groups> – end of the list of groups.

5.1.1.12.1. Part group description, <Group>

<Group Id="0" X="0.26" Y="1.905"/>

Id	Int	Id (unique number) of the group in the component part.
X	Real	X coordinate of the center of the rectangle enclosing all elements of the group.
Y	Real	Y coordinate of the center of the rectangle enclosing all elements of the group.

5.1.1.13. List of Additional Fields, <AddFields>

<AddFields> – start of the list of Additional Fields;
{...} – list of Additional Fields (AddField);
</AddFields> – end of the list of Additional Fields.

Set for the first part only.

5.1.1.13.1. Additional Field description, <AddField>

5.1.1.13.1.1. Additional Field type

<AddField Type="Text">

Type	Text	Additional field value type: "Text"; "Link".
------	------	--

5.1.1.13.1.2. Additional Field Name (Name), <Name>

<Name>Part Number (Digi-Key)</Name>

Name	Text	Additional Field Name.
------	------	------------------------

5.1.1.13.1.3. Additional Field Value (Value), <Text>

<Text>668-1018-ND</Text>

Text	Text	Additional Field Value.
------	------	-------------------------

5.1.1.14. Pattern attached to component, <Pattern>

<Pattern Style="PatType0"/>

Style	Text	"PatternStyle" in the Pattern Library – pattern attached to the component (3. Library of the patterns, attached to the components, <Library>).
-------	------	---

Set for the first part only.

5.1.1.15. List of internal connections, <InternalConnections>

<InternalConnections> – start of the list of Internal Connections;
 {...} – list of Internal Connections (IntCon);
 </InternalConnections> – end of the list of Internal Connections.

Set for the first part only.

5.1.1.15.1. Internal Connection, <IntCon>

<IntCon X="1" Y="8"/>

X	Int	Number of the first pad of the internal connection.
Y	Int	Number of the second pad of the internal connection.