1. Assign the terms from the left column to the corresponding definitions on the right.

|  |  |  |
| --- | --- | --- |
| HDI |  | It is an enhancement to RS-274-D data format as an extended version. |
|  |  |  |
| Conductive  Surface Coating |  | It provides the basis for creating the circuit pattern |
|  |  |  |
| VIA |  | It is an electrical connection between layers in a physical electronic circuit that goes through the plane of one or more adjacent layers. |
|  |  |  |
| RS-274X |  | Abbreviation used to refer to High Density Interconnect PCBs |

1. List three basic characteristics of High Density Interconnect printed circuit boards.

1. Higher wiring density per unit area than conventional PCBs.

2. They have finer lines and spaces.

3. They have smaller vias, capture pads and a very high connection pad density.

1. Correct the text so that the following statements are true.

The power supply pins should be decoupled directly to the ground plane by using located as close as possible to the integrated circuit power pins.

In general, frequencies higher than 1GHz are considered as high frequencies.

Single-layer PCBs are made out of a single layer of .

Aluminum backed PCBs are composed of an backing, a highly thermally conductive dielectric layer and a standard circuit layer.

The rigid-flex PCBs, combine the of both rigid boards and flexible circuits integrated together.

1. Assign the terms from the left column to the corresponding definitions on the right.

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| --- | --- | --- |
| Floor plan |  | It refers to the white ink legend in the PCB that identifies the components, tests points,... |
|  |  |  |
| Schematic design |  | Drawing that indicates the general location of components on the PCB. |
|  |  |  |
| DRC |  | Diagram of an electronic circuit into the CAD software. |
|  |  |  |
| Silkscreen |  | It is a CAD software feature that checks if the routed PCB satisfies the design rules. |

1. List a minimum of 5 basic steps of the PCB fabrication process.

1. Film generation

2. Drilling

3. Etching

4. Solder mask

5. Silkscreen

1. Correct the text so that the following statements are true.

Keep digital and analog grounds because voltage and current spikes from circuits can generate interference noise in the circuits.

When placing components, trace lengths and avoid degrees angles.

Manufacturers use a to obtain a image of the PCB.

Sensitive signals should be from noise sources with planes and be kept impedance controlled.