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OSSAT OBC Dev Board

PCB Layer Stack-up

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Reference: KS-BRD-01467-02

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VERSION 02

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# Document History

Please see the following record of revisions:

|  |  |  |  |
| --- | --- | --- | --- |
| Document Revision | Document  Status | Change  Description | <SharePoint  Version> - |
| 01 | DRAFT | Initial Version |  |
| 02 | RELEASED | Updated Formatting |  |

# Applicable Documents

The following references are applicable to this document.

|  |  |  |  |
| --- | --- | --- | --- |
| Document Reference | Document Title | Date | Reference in this Document |
| KS-SCH-01466-01 | OSSAT OBC Dev Board Schematic | 02/11/22 |  |
| KS-SCH-01467-02 | OSSAT OBC Dev Board PCB Artwork | 02/11/22 |  |
| (KS-SCH-01467-02) | OSSAT OBC Dev Board Manufacturing file set (Gerbers and pick & place etc) etc. | 02/11/22 |  |

# References

The following external references are applicable to this document.

|  |  |  |  |
| --- | --- | --- | --- |
| Document Reference | Document Title | Date | Reference in this Document |
|  |  |  |  |

# Introduction

This document defines the PCB specifications and layer stack-up for the OSSAT OBC Development Board. It should be used, in conjunction with the Gerber manufacturing files to ensure correct build for the board.

# Board Requirements

## Board Specification Table

|  |  |  |
| --- | --- | --- |
| **Item** | **Detail** | **Notes** |
| Material | FR4 (150degC) |  |
| Nominal thickness | 1.6mm |  |
| Copper weight | 1oz (0.035mm) |  |
| Finish | Immersion silver |  |
| Approximate Size | 160 x 100 |  |
| Layers | 6 | See layer stack-up table |
| Solder Mask colour | BLUE ………. | **Note colour blue** |
| Solder mask sides | Top and Bottom |  |
| Silk screen colour | White |  |
| Silk screen sides | Top only | No components on the bottom |

## Layer Stack-Up Preview, Including Vias

The figure below shows the sectional view of the PCB layer stack-up. Note that the layer numbers reflect the source CAD design and the Layer Stack-Up Table relates this numbering to actual copper layers.

A picture containing diagram

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Figure 1 Layer Stack-Up Sectional View

## Layer Stack-Up Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Name** | **Material** | **Thickness / Weight** | **Copper layer #** | **Function** |
| \* | Top Silk | See board specification table | X |  |  |
| \* | Top Mask | See board specification table | 0.025mm |  |  |
| \* | Top Finish | See board specification table | 0.02mm |  |  |
| 1 | Top signal | Cu foil | (1oz) 0.035mm | 1 | Top tracking and components |
| \* |  | Prepreg | 0.11mm |  |  |
| \* |  | Prepreg | 0.11mm |  |  |
| 2 | Inner Signal | Cu foil | (1oz) 0.035mm | 2 | DGND plane |
| \* |  | CORE | 0.3mm |  |  |
| 3 | Inner Signal | Cu foil | (1oz) 0.035mm | 3 | 3V3 power plane |
| \* |  | Prepreg | 0.11mm |  |  |
| \* |  | Prepreg | 0.11mm |  |  |
| \* |  | Prepreg | 0.11mm |  |  |
| 14 | Inner Signal | Cu foil | (1oz) 0.035mm | 4 | Inner tracking |
| \* |  | CORE | 0.3mm |  |  |
| 15 | Inner Signal | Cu foil | (1oz) 0.035mm | 5 | DGND plane |
| \* |  | Prepreg | 0.11mm |  |  |
| \* |  | Prepreg | 0.11mm |  |  |
| 16 | Bottom Signal | Cu foil | (1oz) 0.035mm | 6 | Bottom tracking (no components) |
| \* | Bottom Finish | See board specification table | 0.02mm |  |  |
| \* | Bottom Mask | See board specification table | 0.025mm |  |  |
| \* | Bottom Silk | See board specification table | X |  |  |

A screenshot of a cell phone

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