

iMX6 TinyRex V111 - Stackup & Impedances

Date: 9-Oct-15
Created by: FEDEVEL
Contact: robert.feranec@fedevel.com

Original Stackup

| | Total Thickness (mil) | Total Thickness (um) | Er |
|-----------------|-----------------------|----------------------|------|
| L1 | 1.3925 | 35.37 | |
| Prepreg | 2.93 | 74.42 | 3.72 |
| L2 | 1.3925 | 35.37 | |
| Prepreg | 3.48 | 88.39 | 3.56 |
| L3 | 1.3925 | 35.37 | |
| Prepreg | 5.22 | 132.59 | 3.56 |
| L4 | 1.37 | 34.80 | |
| Core | 3 | 76.20 | 3.8 |
| L5 | 0.685 | 17.40 | |
| Prepreg | 4.66 | 118.36 | 3.56 |
| L6 | 1.37 | 34.80 | |
| Core | 6 | 152.40 | 3.8 |
| L7 | 1.37 | 34.80 | |
| Prepreg | 4.66 | 118.36 | 3.56 |
| L8 | 0.685 | 17.40 | |
| Core | 3 | 76.20 | 3.8 |
| L9 | 1.37 | 34.80 | |
| Prepreg | 5.22 | 132.59 | 3.56 |
| L10 | 1.3925 | 35.37 | |
| Prepreg | 3.48 | 88.39 | 3.56 |
| L11 | 1.3925 | 35.37 | |
| Prepreg | 2.93 | 74.42 | 3.72 |
| L12 | 1.3925 | 35.37 | |
| Total Thickness | 59.79 | 1518.54 | |

Suggested stackup

| | Foil (oz) | Plating (mil) | Thickness (mil) | Total Thickness (mil) | Total Thickness (um) | Er |
|-----------------|-----------|---------------|-----------------|-----------------------|----------------------|-----|
| L1 | 0.33 | 1.05 | | 1.5021 | 38.15 | |
| Prepreg | | | 2.63 | 2.63 | 66.80 | 4 |
| L2 | 0.33 | 1.05 | | 1.5021 | 38.15 | |
| Prepreg | | | 3.18 | 3.18 | 80.77 | 3.7 |
| L3 | 0.25 | 1.05 | | 1.3925 | 35.37 | |
| Prepreg | | | 8.64 | 8.64 | 219.46 | 4.4 |
| L4 | 1 | | | 1.37 | 34.80 | |
| Core | | | 4 | 4 | 101.60 | 4.2 |
| L5 | 0.5 | | | 0.685 | 17.40 | |
| Prepreg | | | 4.14 | 4.14 | 105.16 | 4.2 |
| L6 | 1 | | | 1.37 | 34.80 | |
| Core | | | 3 | 3 | 76.20 | 4.2 |
| L7 | 1 | | | 1.37 | 34.80 | |
| Prepreg | | | 4.23 | 4.23 | 107.44 | 4.2 |
| L8 | 0.5 | | | 0.685 | 17.40 | |
| Core | | | 4 | 4 | 101.60 | 4.2 |
| L9 | 1 | | | 1.37 | 34.80 | |
| Prepreg | | | 8.64 | 8.64 | 219.46 | 4.4 |
| L10 | 0.25 | 1.05 | | 1.3925 | 35.37 | |
| Prepreg | | | 3.18 | 3.18 | 80.77 | 3.7 |
| L11 | 0.33 | 1.05 | | 1.5021 | 38.15 | |
| Prepreg | | | 2.65 | 2.65 | 67.31 | 4 |
| L12 | 0.33 | 1.05 | | 1.5021 | 38.15 | |
| Total Thickness | | | | 63.93 | 1623.91 | |

Track geometry

| Original track geometry | | Width(mil) | Space(mil) | Width (um) | Space(um) |
|-------------------------|---------|------------|------------|------------|-----------|
| L1,L12 | DIFF90 | 3.94 | 4.33 | 100.08 | 109.98 |
| | DIFF100 | 3.75 | 6.09 | 95.25 | 154.69 |
| | SE55 | 3.937 | | 100.00 | |
| L3,L10 | DIFF90 | 3.1 | 3.6 | 78.74 | 91.44 |
| | DIFF100 | 3.2 | 7.43 | 81.28 | 188.72 |
| | SE55 | 3 | | 76.20 | |
| L5,L8 | DIFF90 | 3.4 | 3.29 | 86.36 | 83.57 |
| | DIFF100 | 3.38 | 7.25 | 85.85 | 184.15 |
| | SE55 | 3 | | 76.20 | |

| Suggested track geometry | | Width(mil) | Space(mil) | Width (um) | Space(um) |
|--------------------------|---------|------------|------------|------------|-----------|
| L1,L12 | DIFF90 | 3.5 | 4.77 | 88.90 | 121.16 |
| | DIFF100 | 3.1 | 6.74 | 78.74 | 171.20 |
| | SE55 | 3.1 | | 78.74 | |
| L3,L10 | DIFF90 | 2.9 | 3.8 | 73.66 | 96.52 |
| | DIFF100 | 3.1 | 7.53 | 78.74 | 191.26 |
| | SE55 | 2.8 | | 71.12 | |
| L5,L8 | DIFF90 | 3.3 | 3.39 | 83.82 | 86.11 |
| | DIFF100 | 3.3 | 7.33 | 83.82 | 186.18 |
| | SE55 | 2.8 | | 71.12 | |

Notes: