PCB SPECS

THICKNESS: 1.2 MM / 0.047 IN
1/2 OZ CU THICKNESS: 0.4 MILS
1.0 OZ CU THICKNESS: 1.4 MILS

IMPEDANCE: 50 OHMS +/- 10%

DIELECTRIC: FR-4

LAYER COUNT: 12

SIGNAL TRACE WIDTH: 4 MILS
SIGNAL TRACE SPACING: 4 MILS

PREPREG THICKNESS: 2-3 MILS

SEE PCB CAD FILES FOR MORE SPECIFIC INFO.

BOARD STACK-UP AND CONSTRUCTION

<table>
<thead>
<tr>
<th>Layer</th>
<th>Description 1</th>
<th>Description 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PREPREG (3MIL)</td>
<td>SIGNAL (1/3 OZ + COPPER PLATING)</td>
</tr>
<tr>
<td>2</td>
<td>LAMINATE (4MIL)</td>
<td>GROUND (1/2 OZ)</td>
</tr>
<tr>
<td>3</td>
<td>PREPREG (3MIL)</td>
<td>SIGNAL (1/2 OZ)</td>
</tr>
<tr>
<td>4</td>
<td>LAMINATE (4MIL)</td>
<td>SIGNAL (1/2 OZ)</td>
</tr>
<tr>
<td>5</td>
<td>PREPREG (2MIL)</td>
<td>GROUND (1/2 OZ)</td>
</tr>
<tr>
<td>6</td>
<td>LAMINATE (3MIL)</td>
<td>CUT POWER PLANE (1 OZ)</td>
</tr>
<tr>
<td>7</td>
<td>PREPREG (2MIL)</td>
<td>CUT POWER PLANE (1 OZ)</td>
</tr>
<tr>
<td>8</td>
<td>LAMINATE (4MIL)</td>
<td>GROUND (1/2 OZ)</td>
</tr>
<tr>
<td>9</td>
<td>PREPREG (3MIL)</td>
<td>SIGNAL (1/2 OZ)</td>
</tr>
<tr>
<td>10</td>
<td>LAMINATE (4MIL)</td>
<td>SIGNAL (1/2 OZ)</td>
</tr>
<tr>
<td>11</td>
<td>PREPREG (3MIL)</td>
<td>GROUND (1/2 OZ)</td>
</tr>
<tr>
<td>12</td>
<td>LAMINATE (4MIL)</td>
<td>SIGNAL (1/3 OZ + COPPER PLATING)</td>
</tr>
</tbody>
</table>

PCB BOARD STANDOFFS

BOARD INFORMATION
LEFT USB PORT

PUT L4, L5 AND L6 ACROSS THE MOAT

PLACE R3-R7, R24, C4-C6,Q4, PD1 CLOSE TO U2

LEFT USB / SENSOR CONNECTOR

USB & ALS

NOTICE OF PROPRIETARY PROPERTY

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I TO MAINTAIN THE DOCUMENT IN CONFIDENCE

I AGREE TO THE FOLLOWING

RECOMMENDATION TO USE A DATA SHEET WHERE AVAILABLE

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PLACE C2, C3 AND C16 CLOSE TO J1
PLACE L1, L2 AND L3 CLOSE TO J1
POWER NET CONSTRAINTS

<table>
<thead>
<tr>
<th>SIG_NAME</th>
<th>VOLTAGE</th>
<th>MIN_LINE_WIDTH</th>
<th>MIN_NECK_WIDTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADAPTER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHANGE HISTORY
1. IMPORTED 051-6474
2. CHANGED LM3526 TO MIC2025
3. ADDED AQL DUST COVER (815-7053) FOR THE BOM
4. SCHEMATIC RELEASED FOR PROTO
4. LEAD FREE PARTS. SCHEMATIC RELEASED FOR EVT.
**Signal Cross-Reference for the entire design**

- +3V_MAIN: 6D6
- +5V_MAIN: 6D6
- +5V_USB_EMI_L: 3C3, 6C6
- +5V_USB_L: 3D5, 6C6
- +ADAPTER: 4B3, 4C3, 4C5, 4C7, 6D6
- +ADAPTER_FUSE: 4B4, 6D6
- +ADAPTER_UF: 4B6, 6D6
- ADAPTER_DET: 4C7
- ADAPTER_DET_F: 4C6
- ADAPTER_DET_G: 4C6
- ADAPTER_DET_U: 4B5
- ADAPTER_DET_UF: 4B6
- ADAPTER_GND: 4B6, 6C6
- ADAPTER_RING: 4B6
- ALS_GAIN: 3B3, 5C8
- ALS_OUT: 3B3, 5C8
- CHARGE_LED_D: 4C3, 6C6
- CHARGE_LED_DRV: 4C4
- CHARGE_LED_L: 4C7
- CHARGE_LED_L_ESD: 4C5
- CHARGE_LED_S: 4C3, 6C6
- CHGND1: 6C6
- CHGND2: 6C6
- DC_PLUG_GND: 4B3, 4B5, 4C6, 6C6
- DC_PLUG_TIP: 4B6, 6C6
- GAIN_SETTING1: 3A7, 5C8
- LEFT_USB_GND: 3C3, 6C6
- LIGHT_SENSOR: 3B7, 5C8
- MAX4236_IN+: 3B5, 5C8
- MAX4236_IN-: 3B5, 5C8
- MAX4236_OUT: 3B5, 5C8
- PWRON: 3D6
- USB_DM_EMI_L: 3C3, 5D2
- USB_DM_L: 3B3, 3C4, 5D2
- USB_DP_EMI_L: 3C3, 5D2
- USB_DP_L: 3B4, 3C4, 5D2

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