



PCB DESIGN CHECKLIST

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|----------------|------------------|----------------|------------------------|
| Engineer: | Keith Benson | Part Number: | 600-00541-00 |
| PCB Designer: | Gerry Harrington | Revision: | 1 |
| MECH Designer: | N/A | Board Name: | PCB, EVAL, HMC1049LP5E |
| Checker: | Martin Lyons | Review Date: | 8/22/12 |
| ECR Number: | QC121026 | Charge Number: | 2012600 |

| Designer | Checker | N/A | Layout Verification | |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Spacing and Connectivity | |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Impedance Control Rules | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Power/GND Planes | PWR current capacities/net verification |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | VIA types | Blind/Back drilled/FILLED/HOT VIAS/ Mask for MTG vias |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | GND VIAS | RF Shielding/Cover wall centers/antennas |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | IC center GND slugs | Vias placed/Soldermask/Pastemask copper |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Printed Components | Layer 20/Soldermask/Keep outs |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Unused pads | If removing-preserve via pads on start/end layers |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Soldermask | 10mil solder dam/no silkscreen in solderable area |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Silkscreen | Polarities/Board #/HMC logo/Connector labels |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Fiducials | Omit Ref Des from silkscreen/add to stencil |
| Mechanical | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Cover Wall | Width/keep out/soldermask size |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Cover & Mounting holes | Sizes and locations |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Critical comp. locations | Connectors/Dimensions/Bottom layer clearances |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Keep-out areas | Verify keep outs for components, VIAS, GND pour, etc |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Solder-mask openings | Screws-washers/Bottom around connectors |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | DXF Verification | |
| Fabrication | | | | |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Specify IPC standard | |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | PCB Dimensions | Overall/cutouts/radius/angles/edge plating/coupons |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Layer stack-up detail | Via cross-section/Layers/Thickness as Critical Dimension |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Material, copper weight | Stack-up to match notes |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Finish plating req. | Multi-finish/Wire-bonding/OSP |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Special requirements | Impedance-line widths/Blind/Back drilled vias/Edge pltg |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | VIA fill requirements | Shown in cross-section detail and/or in notes |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Minimum annular ring | VIAS and thru holes |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Hole Chart | Match drill files/Partials/Merge drill sizes/Tolerances |
| Gerber, Drill Data | | | | |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Artwork, output files | Appropriate labels & RS-274X output format) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Printed Components | Proper size shapes and gaps/Metal-01 layer 20 |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Soldermask | Oversize 8 mils/POSITIVE Image-must be clearly labeled |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Stencil/Paste-mask | Undersize 2 mils/omit printed components |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NCDrill | 3 files for each type: .rep, .drl, .lst |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | GC-Prevue file | Engineer check/Design Review |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ZIP file | Readme.txt/output files/fab pdf/IPC Netlist/aperture.rep/ASCII file/Component XY/GC- Prevue/copy of this checklist |
| Assembly Dwg | | | | |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Ref Des readable | See CP121096 |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Notes | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Detail Views | |

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