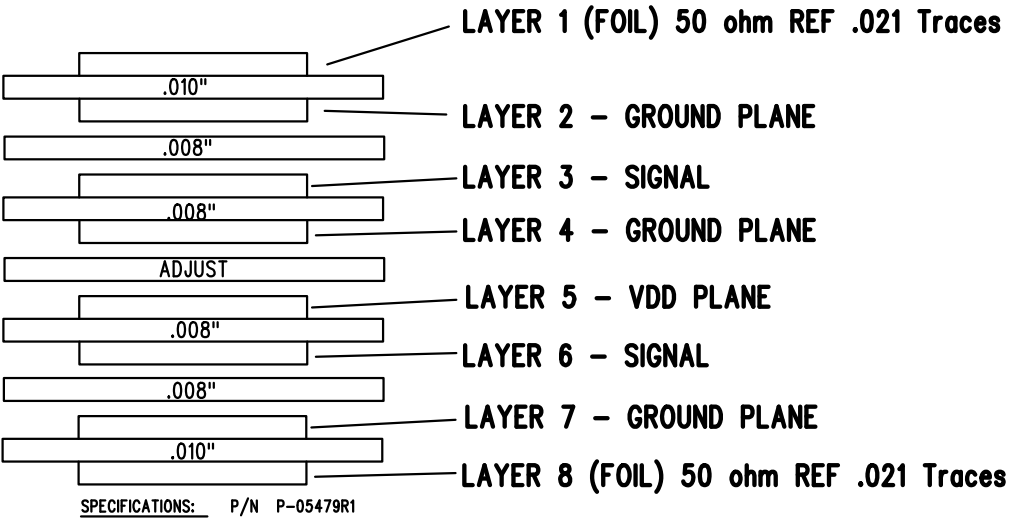
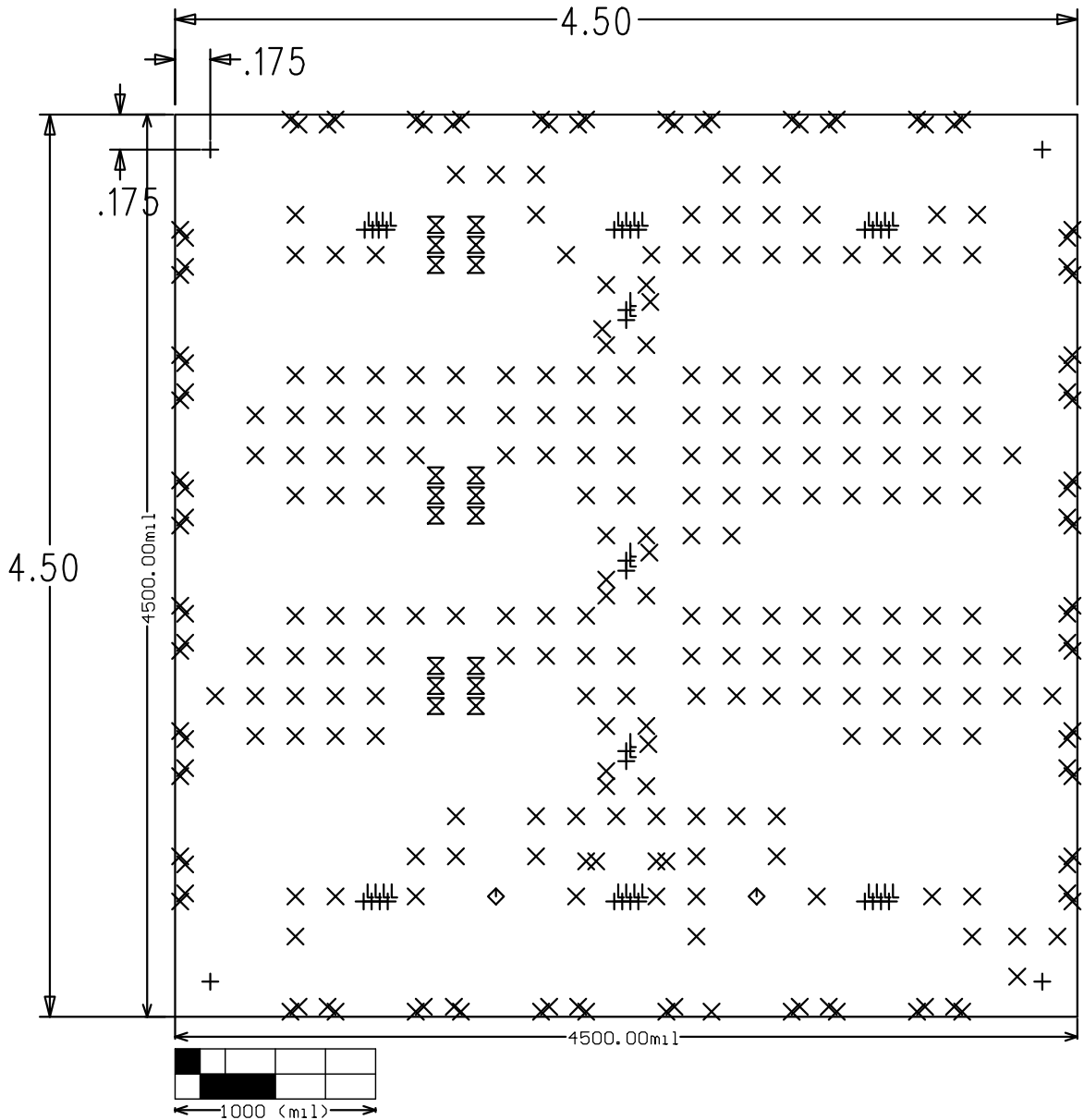


HOLE CHART LAYERS 1-8

SIZE	QTY	SYM	PLTD	TOL
12	18	⊥	YES	+/-0.003
18	297	×	YES	+/-0.003
38	18	⊗	YES	+/-0.003
125	4	+	NO	+/-0.003
261	2	◇	YES	+/-0.003



SPECIFICATIONS: P/N P-05479R1

- PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
- DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- ☒ MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- ☒ FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
- NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- ☒ HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- ☒ SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- ☒ FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- ☒ SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- ☒ FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75% (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- ☒ BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
- MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
- MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
- VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
- SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EUK.PcbDoc					
Layer Name	Order	Copper Thickness	Dielectric Material	Dielectric Constant	Dielectric Type
Top Solder Mask	(.GTS)		Solder Resist	3.50	
Top Layer	(.GTL)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL2	(.G1)	2.8mil	FR-4 High Tg	4.80	Core
SIGL3	(.G2)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL4	(.G3)	2.8mil	FR-4 High Tg	4.80	Core
VDDL5	(.G4)	2.8mil	FR-4 High Tg	4.80	PrePreg
SIGL6	(.G5)	2.8mil	FR-4 High Tg	4.80	Core
GNDL7	(.G6)	2.8mil	FR-4 High Tg	4.80	PrePreg
Bottom Layer	(.GBL)	2.8mil			
Bottom Solder Mask	(.GBS)		Solder Resist	3.50	

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL
Number of Layers : 8
MIN. TRACK WIDTH: 8 MIL
MIN. CLEARANCE: 4 MIL
MIN. VIA PAD SIZE: 30 MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER
THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER
TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-
BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

COPPER THICKNESS (FINISHED):

OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:

REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:

SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)

☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:

MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK

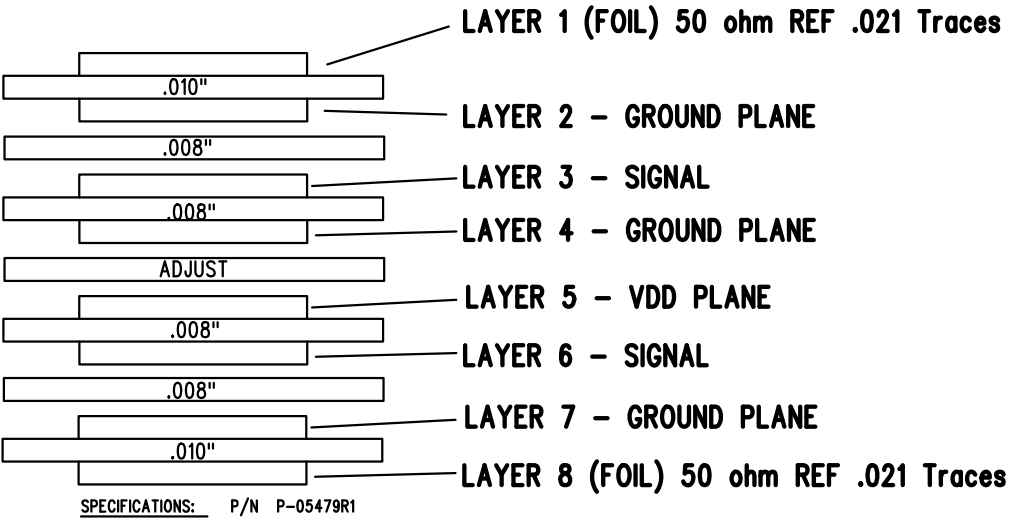


PROJECT TITLE:
DS25BR100EUK Evaluation Board
DESIGNED FOR:
Public Release
FILE NAME:
DS25BR100EUK.PcbDoc

MODIFIED BY:
Krypton Solutions
SCALE: 1.00
LAYOUT BY:
ALTUM DESIGNER VERSION:
10.0.0.27009

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME =			
PLOT NAME = DS25BR100EUK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



- PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
- DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- ☒ MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- ☒ FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
- NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- ☒ HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- ☒ SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- ☒ FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- ☒ SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- ☒ FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75% (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- ☒ BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
- MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
- MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
- VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
- SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EUK.PcbDoc					
Layer Name	Order Document	Copper Thickness	Dielectric Weight	Dielectric Material	Dielectric Type
Top Solder Mask	(.GTS)		0.4mil	Solder Resist	3.50
Top Layer	(.GTL)	2.8mil		FR-4 High Tg	4.80 PrePreg
GNDL2	(.G1)	2.8mil		FR-4 High Tg	4.80 Core
STGL3	(.G2)	2.8mil		FR-4 High Tg	4.80 PrePreg
GNDL4	(.G3)	2.8mil		FR-4 High Tg	4.80 Core
VDDL5	(.G4)	2.8mil		FR-4 High Tg	4.80 PrePreg
STGL6	(.G5)	2.8mil		FR-4 High Tg	4.80 Core
GNDL7	(.G6)	2.8mil		FR-4 High Tg	4.80 PrePreg
Bottom Layer	(.GBL)	2.8mil		FR-4 High Tg	4.80
Bottom Solder Mask	(.GBS)		0.4mil	Solder Resist	3.50

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8
MIN. TRACK WIDTH: 8 MIL
MIN. CLEARANCE: 4 MIL
MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER _____

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER _____

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- _____

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- _____

COPPER THICKNESS (FINISHED):
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER _____

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER _____
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER _____

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER _____

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EUK Evaluation Board

DESIGNED FOR:
Public Release

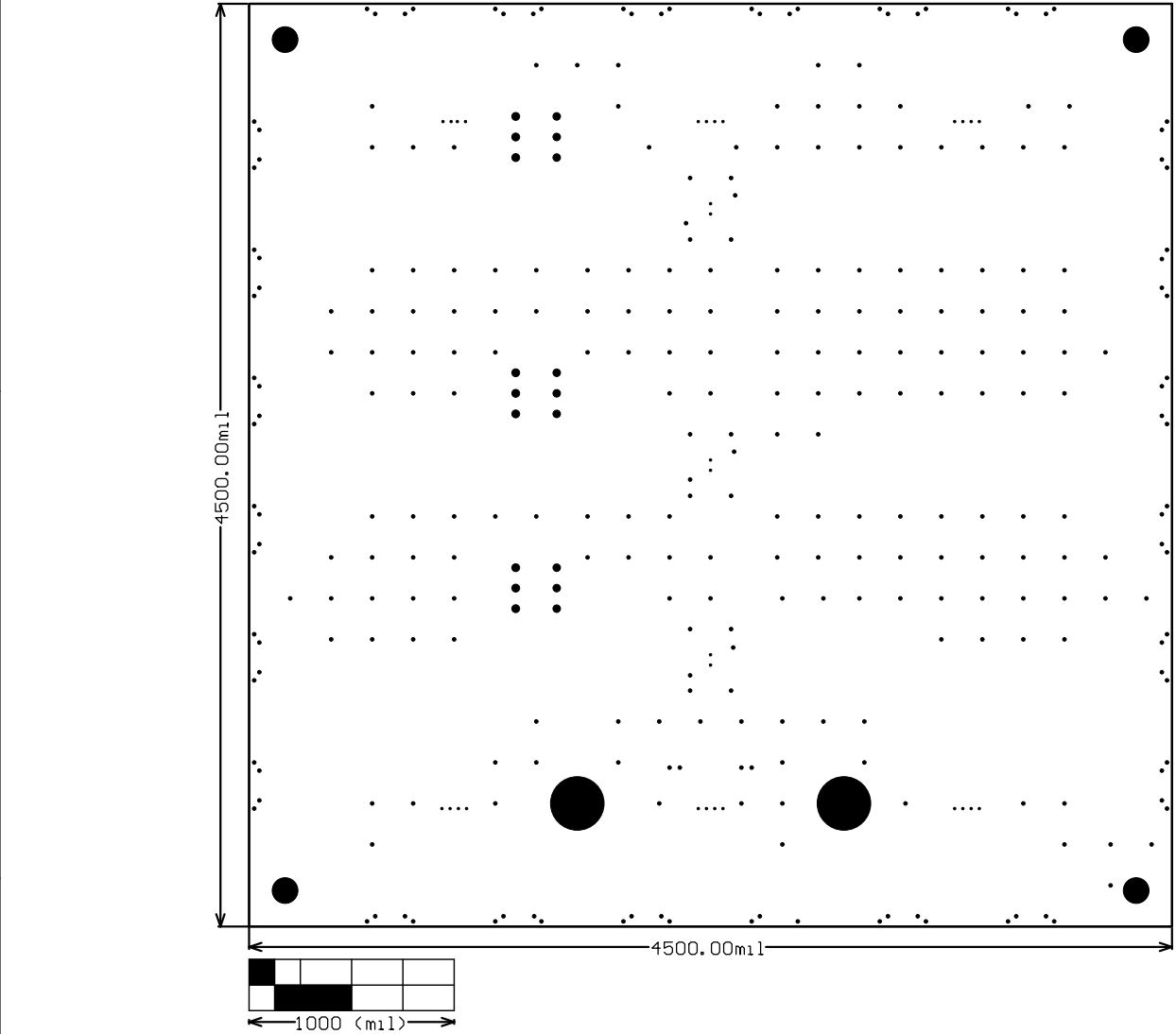
FILE NAME:
DS25BR100EUK.PcbDoc

MODIFIED BY:
Krypton Solutions

LAYOUT BY:

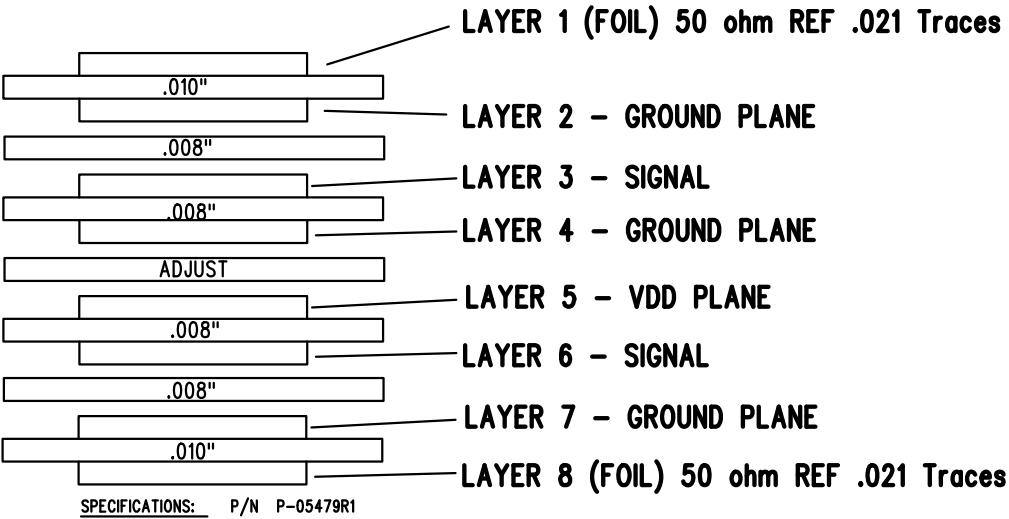
SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009

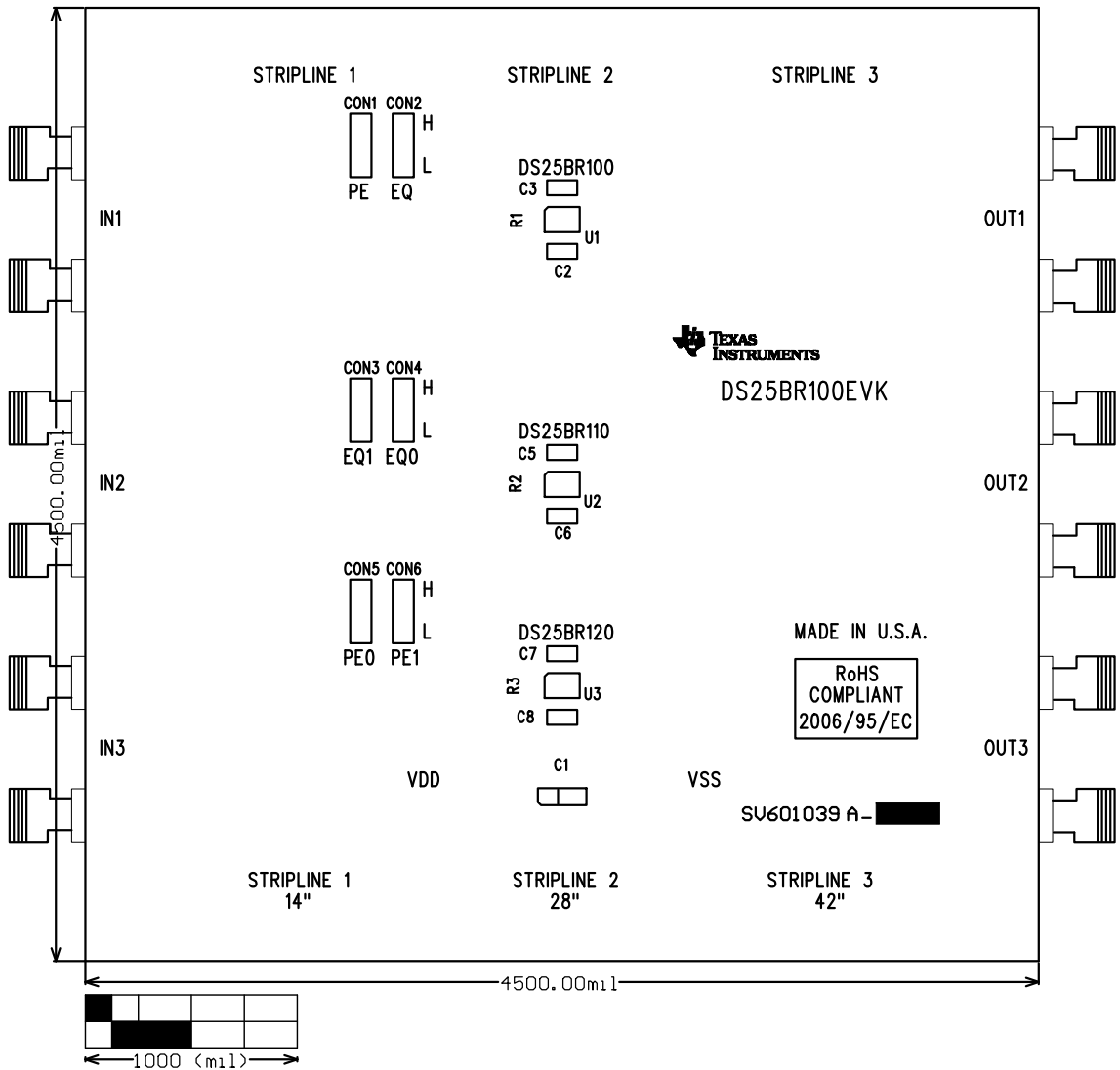


ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME =			
PLOT NAME = DS25BR100EUK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



- PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
- DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- ☒ MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- ☒ FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
- NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- ☒ HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- ☒ SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- ☒ FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- ☒ SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- ☒ FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75% (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- ☒ BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
- MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
- MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
- VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
- SEE DRAWING C-05491 FOR PANEL LAYOUT.



Layer Stack Up Detail for: DS25BR100EVK.PcbDoc					
Layer Name	Order	Copper Thickness	Dielectric Weight	Dielectric Material	Dielectric Type
Top Solder Mask	(.GTS)		0.4mil	Solder Resist	3.50
Top Layer	(.GTL)	2.8mil		FR-4 High Tg	4.80
GNDL2	(.G1)	2.8mil		FR-4 High Tg	4.80
STGL3	(.G2)	2.8mil		FR-4 High Tg	4.80
GNDL4	(.G3)	2.8mil		FR-4 High Tg	4.80
UDDL5	(.G4)	2.8mil		FR-4 High Tg	4.80
STGL6	(.G5)	2.8mil		FR-4 High Tg	4.80
GNDL7	(.G6)	2.8mil		FR-4 High Tg	4.80
Bottom Layer	(.GBL)	2.8mil		FR-4 High Tg	4.80
Bottom Solder Mask	(.GBS)		0.4mil	Solder Resist	3.50

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8
MIN. TRACK WIDTH: 8 MIL
MIN. CLEARANCE: 4 MIL
MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER _____

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER _____

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- _____

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- _____

COPPER THICKNESS (FINISHED):
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER _____

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER _____
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER _____

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER _____

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EVK Evaluation Board

DESIGNED FOR:
Public Release

FILE NAME:
DS25BR100EVK.PcbDoc

MODIFIED BY:
Krypton Solutions

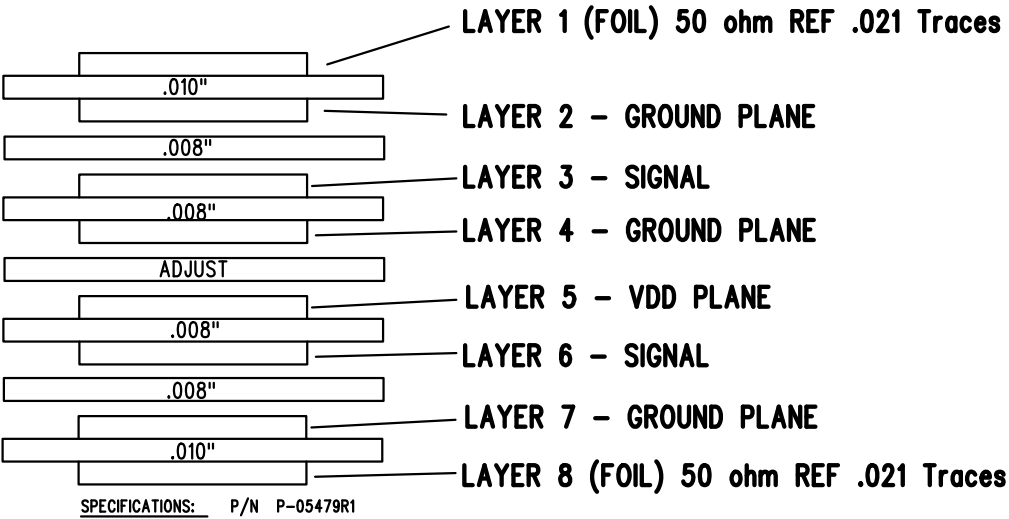
LAYOUT BY:

SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME =			
PLOT NAME = DS25BR100EVK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



1. PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
2. DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- (C1) 3. MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- (C1) 4. FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
5. NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- (C1) 6. HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- (C1) 7. SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- (C1) 8. FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- (C1) 9. SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- (C1) 10. FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75* (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- (C1) 11. BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
- PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
12. MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
13. MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
14. VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
15. SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EVK.PcbDoc					
Layer Name	Order Document	Copper Thickness	Dielectric Material	Dielectric Constant	Dielectric Type
Top Solder Mask	(.GTS)		Solder Resist	3.50	
Top Layer	(.GTL)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL2	(.G1)	2.8mil	FR-4 High Tg	4.80	Core
SIGL3	(.G2)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL4	(.G3)	2.8mil	FR-4 High Tg	4.80	Core
VDDL5	(.G4)	2.8mil	FR-4 High Tg	4.80	PrePreg
SIGL6	(.G5)	2.8mil	FR-4 High Tg	4.80	Core
GNDL7	(.G6)	2.8mil	FR-4 High Tg	4.80	PrePreg
Bottom Layer	(.GBL)	2.8mil			
Bottom Solder Mask	(.GBS)		Solder Resist	3.50	

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8

MIN. TRACK WIDTH: 8 MIL

MIN. CLEARANCE: 4 MIL

MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C

REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

COPPER THICKNESS (FINISHED):
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EVK Evaluation Board

DESIGNED FOR:
Public Release

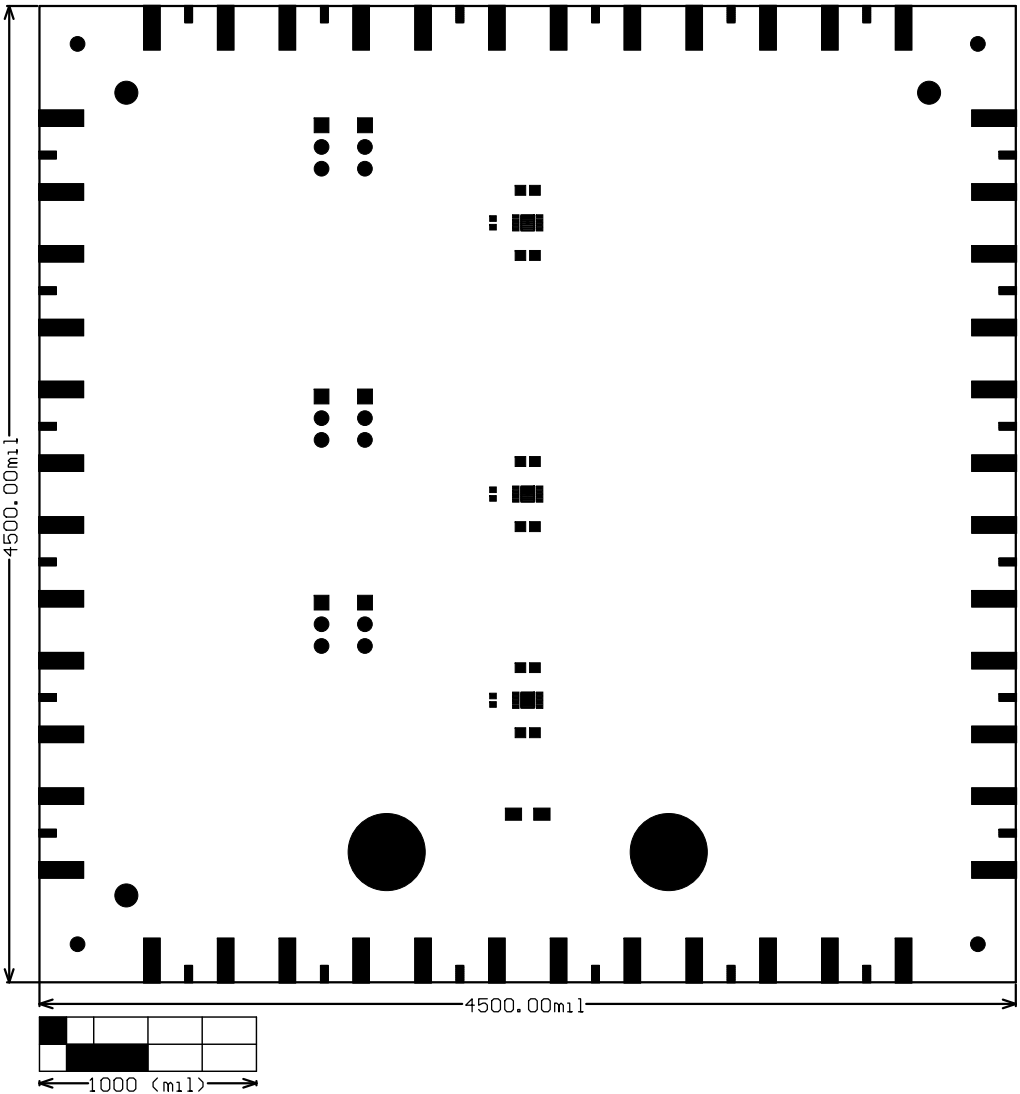
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MODIFIED BY:
Krypton Solutions

LAYOUT BY:

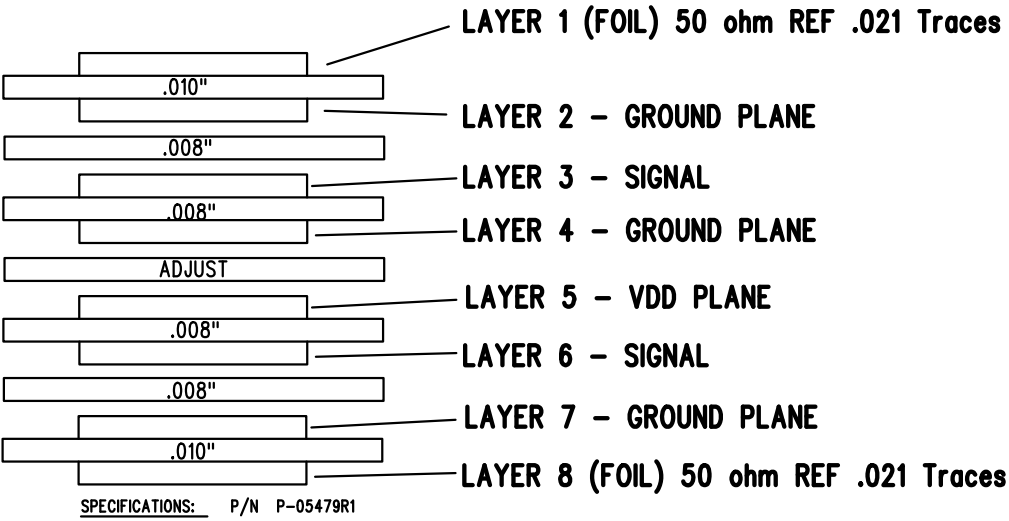
SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME = MASK TOP			
PLOT NAME = DS25BR100EVK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



1. PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
2. DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- (C1) 3. MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- (C1) 4. FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
5. NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- (C1) 6. HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- (C1) 7. SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- (C1) 8. FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- (C1) 9. SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- (C1) 10. FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75% (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- (C1) 11. BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
- PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
12. MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
13. MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
14. VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
15. SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EUK.PcbDoc					
Layer Name	Order Document	Copper Thickness	Dielectric Material	Dielectric Constant	Dielectric Type
Top Solder Mask	(.GTS)		Solder Resist	3.50	
Top Layer	(.GTL)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL2	(.G1)	2.8mil	FR-4 High Tg	4.80	Core
STGL3	(.G2)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL4	(.G3)	2.8mil	FR-4 High Tg	4.80	Core
VDDL5	(.G4)	2.8mil	FR-4 High Tg	4.80	PrePreg
STGL6	(.G5)	2.8mil	FR-4 High Tg	4.80	Core
GNDL7	(.G6)	2.8mil	FR-4 High Tg	4.80	PrePreg
Bottom Layer	(.GBL)	2.8mil			
Bottom Solder Mask	(.GBS)		Solder Resist	3.50	

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8

MIN. TRACK WIDTH: 8 MIL

MIN. CLEARANCE: 4 MIL

MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C

REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

COPPER THICKNESS (FINISHED):
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EUK Evaluation Board

DESIGNED FOR:
Public Release

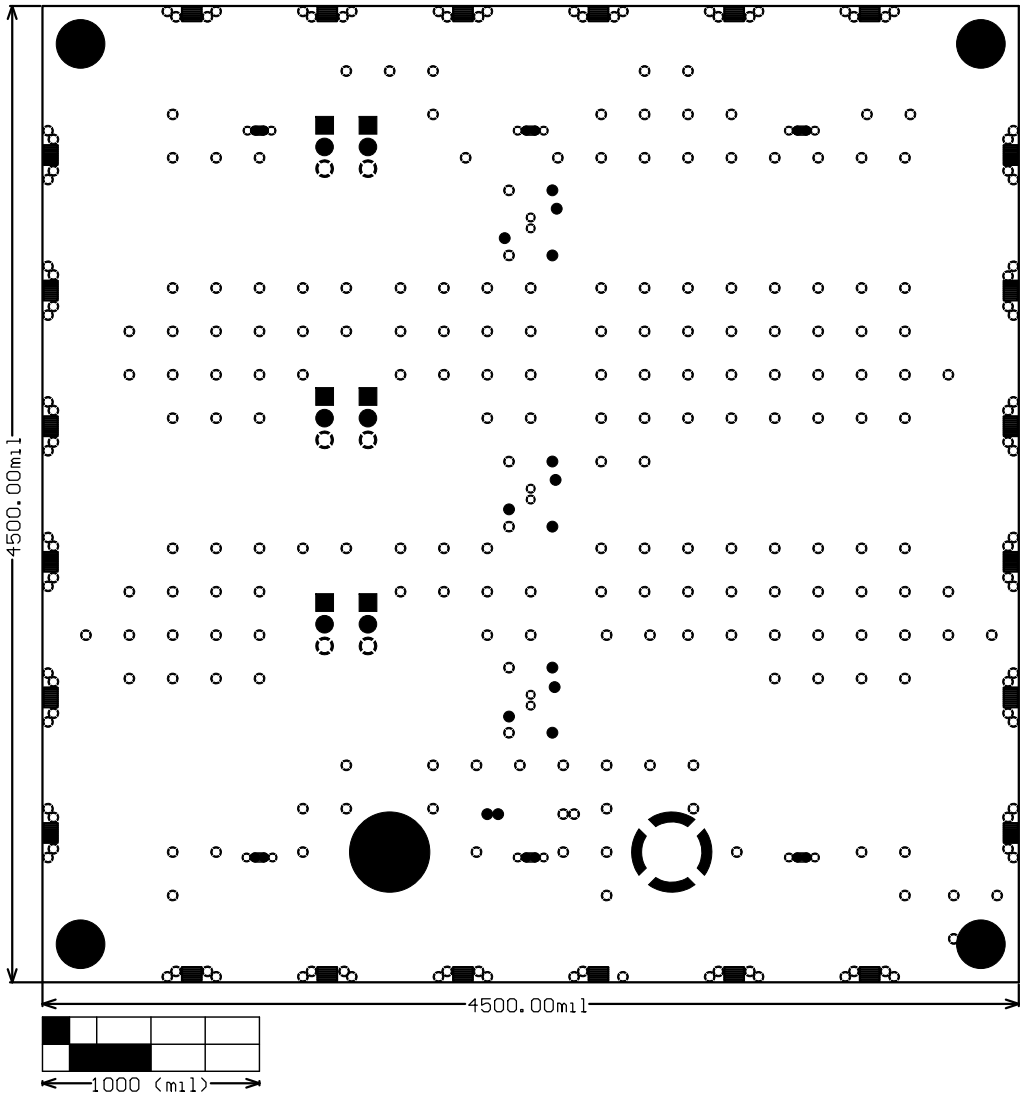
FILE NAME:
DS25BR100EUK.PcbDoc

MODIFIED BY:
Krypton Solutions

LAYOUT BY:

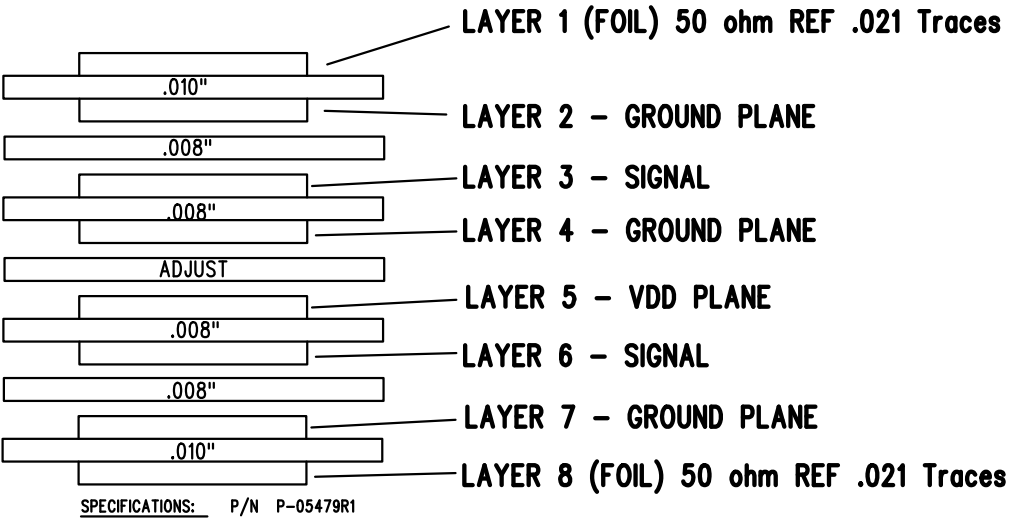
SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME = LAYER 2 GND PLANE			
PLOT NAME = DS25BR100EUK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

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1. PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
2. DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- (CI) 3. MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- (CI) 4. FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
5. NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- (CI) 6. HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- (CI) 7. SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- (CI) 8. FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- (CI) 9. SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- (CI) 10. FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75% (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- (CI) 11. BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
- PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
12. MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
13. MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
14. VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
15. SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EUK.PcbDoc					
Layer Name	Order Document	Copper Thickness	Dielectric Weight	Dielectric Material	Dielectric Constant
Top Solder Mask	(.GTS)		0.4mil	Solder Resist	3.50
Top Layer	(.GTL)	2.8mil		FR-4 High Tg	4.80
GNDL2	(.G1)	2.8mil		FR-4 High Tg	4.80
STGL3	(.G2)	2.8mil		FR-4 High Tg	4.80
GNDL4	(.G3)	2.8mil		FR-4 High Tg	4.80
VDDL5	(.G4)	2.8mil		FR-4 High Tg	4.80
STGL6	(.G5)	2.8mil		FR-4 High Tg	4.80
GNDL7	(.G6)	2.8mil		FR-4 High Tg	4.80
Bottom Layer	(.GBL)	2.8mil		FR-4 High Tg	4.80
Bottom Solder Mask	(.GBS)		0.4mil	Solder Resist	3.50

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8

MIN. TRACK WIDTH: 8 MIL

MIN. CLEARANCE: 4 MIL

MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C

REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

COPPER THICKNESS (FINISHED):
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EUK Evaluation Board

DESIGNED FOR:
Public Release

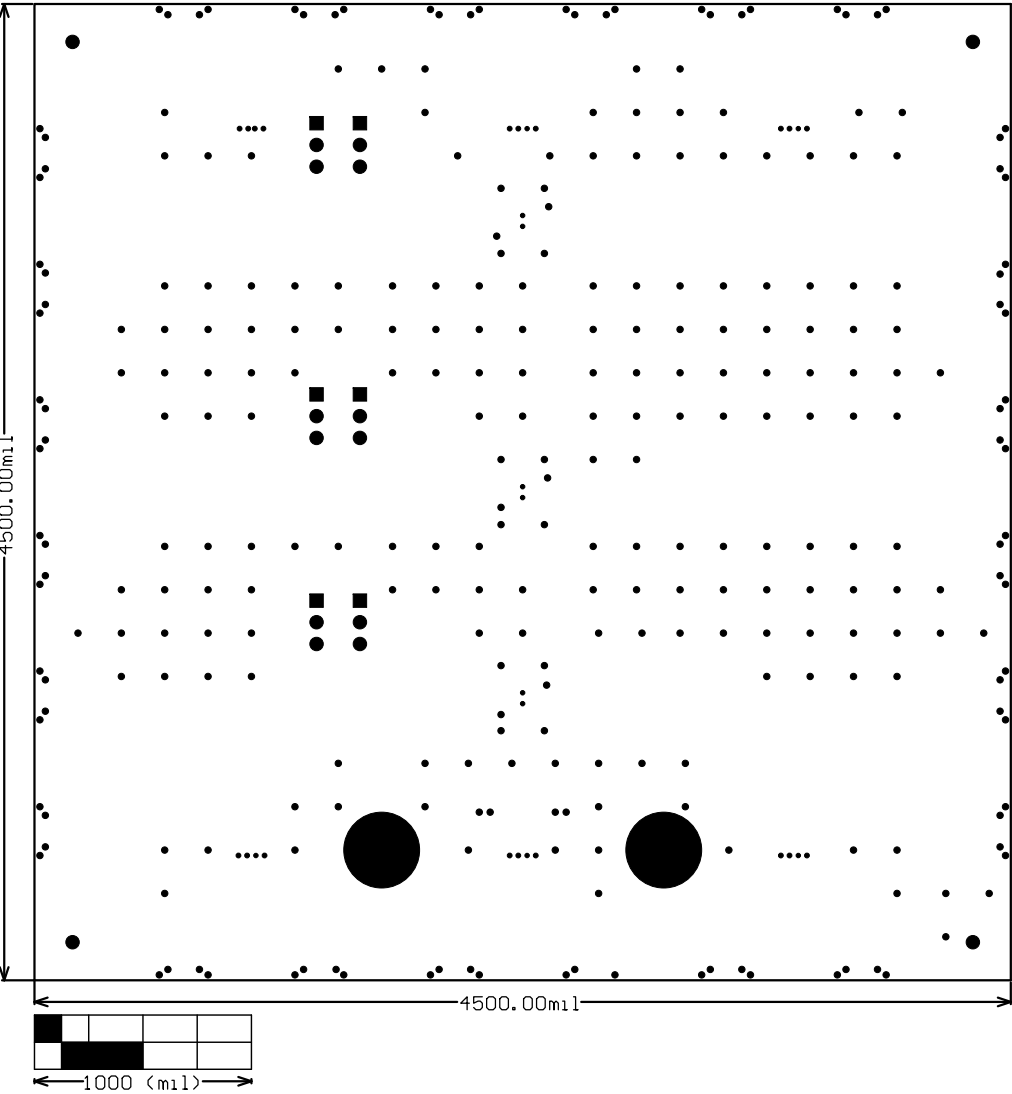
FILE NAME:
DS25BR100EUK.PcbDoc

MODIFIED BY:
Krypton Solutions

LAYOUT BY:

SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME = LAYER 3 SIGNAL			
PLOT NAME = DS25BR100EUK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

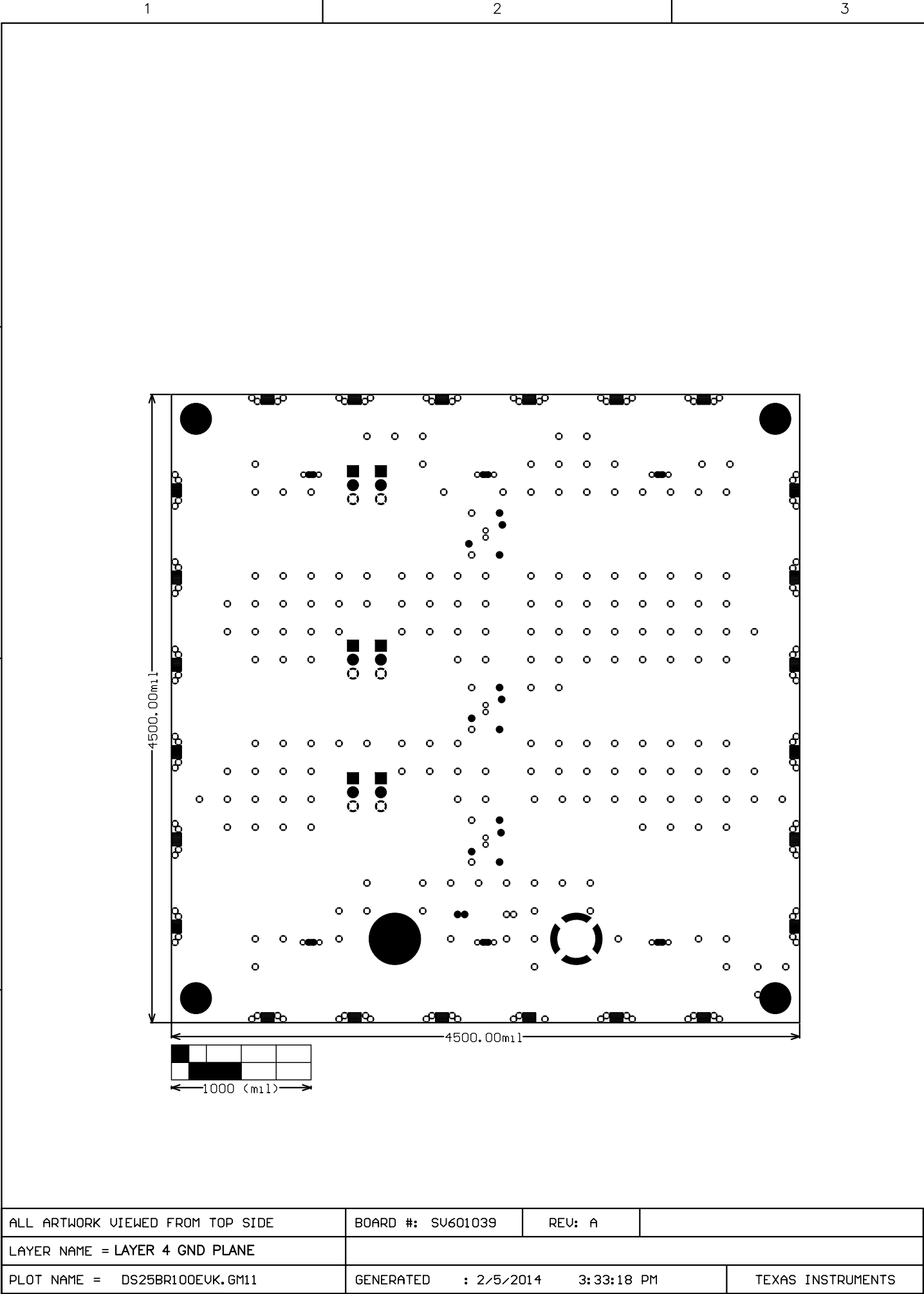
Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

A

B

C

D



1	2	3	4	5	6
DESIGN INFORMATION					
BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)					
4500MIL X 4500MIL					
Number of Layers : 8					
MIN. TRACK WIDTH: 8 MIL					
MIN. CLEARANCE: 4 MIL					
MIN. VIA PAD SIZE: 30 MIL					
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL					
PER IPC-D-275 CLASS 2 LEVEL C					
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL					
MATERIAL:					
☐ FR-4 ☒ FR-4 High Tg ☐ OTHER					
THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER					
TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2					
☐ OTHER +/-					
BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2					
☐ OTHER +/-					
COPPER THICKNESS (FINISHED):					
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)					
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A					
DRILLING:					
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES					
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER					
BOARD FINISH:					
SILKSCREEN: ☒ TOP ☒ BOTTOM					
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER					
SOLDER RESIST COLOR:					
☒ GREEN ☐ BLUE ☐ OTHER					
SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)					
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER					
ARRAY/PANEL:					
☐ CUT AND TRIM PER MECH LAYER 1					
☐ N.C. ROUTE ☒ V. SCORE					
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:					
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3					
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER					
ADDITIONAL REQUIREMENTS:					
MICROSECTION: ☐ YES					
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER					
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK					
PROJECT TITLE:					
DS25BR100EUK Evaluation Board					
DESIGNED FOR:					
Public Release					
FILE NAME:					
DS25BR100EUK.PcbDoc					
MODIFIED BY:			LAYOUT BY:		
Krypton Solutions					
SCALE: 1.00			ALTUM DESIGNER VERSION:		
			10.0.0.27009		

6

Layer Stack Up Detail for: DS25BR100EUK.PcbDoc						
Layer Name	Order Document	Copper Thickness	Dielectric Material	Dielectric Constant	Dielectric Type	
Top Solder Mask	C.61SD	2.0mil	Solder Resist	3.50		
Top Layer	C.6TL	2.0mil				
GNL2	C.61	2.0mil	FR-4 High Tg	4.80	PrePreg	
STGL3	C.62	2.0mil	FR-4 High Tg	4.80	Core	
GNL4	C.63	2.0mil	FR-4 High Tg	4.80	PrePreg	
UDL5	C.64	2.0mil	FR-4 High Tg	4.80	Core	
STGL6	C.65	2.0mil	FR-4 High Tg	4.80	PrePreg	
GNL7	C.66	2.0mil	FR-4 High Tg	4.80	Core	
Bottom Layer	C.6BL	2.0mil	FR-4 High Tg	4.80	PrePreg	
Bottom Solder Mask	C.6BS		Solder Resist	3.50		

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)

4500MIL X 4500MIL

Number of Layers : 8

MIN. TRACK WIDTH: 8 MIL

MIN. CLEARANCE: 4 MIL

MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNUAL RING 0.05mm (2MIL) EXTERNAL

PER IPC-D-275 CLASS 2 LEVEL C

REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4

☒ FR-4 High Tg

☐ OTHER

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2

☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2

☐ OTHER +/-

COPPER THICKNESS (FINISHED):

OUTER: ☐ 1.4MIL (1oz)

☐ 2MIL (1.4oz)

☒ 2.8MIL (2oz)

INNER SIGNAL: ☐ 1.4MIL (1oz)

☒ 2.8MIL (2oz)

☐ N/A

DRILLING:

REFERENCE: ☒ AS SHOWN

☒ NC_DRILL FILES

PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:

SILKSCREEN: ☒ TOP

☒ BOTTOM

SILKSCREEN COLOR: ☒ WHITE

☐ OTHER

SOLDER RESIST COLOR:

☒ GREEN

☐ BLUE

☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)

☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1

☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:

☒ ANSI IPC-A-600F CLASS ->

☐ 1

☒ 2

☐ 3

☒ UL 94V-0

☒ RoHS

☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:

MICROSECTION: ☐ YES

BARE BOARD ELEC. TEST: ☐ NONE

☒ REQUIRED

☐ PER ORDER

MANUFACTURER'S ID/LOGO: ☐ RAIL

☐ METAL

☒ SILK

TEXASINSTRUMENTS

PROJECT TITLE: DS25BR100EUK Evaluation Board

DESIGNED FOR: Public Release

FILE NAME: DS25BR100EUK.PcbDoc

MODIFIED BY: Krypton Solutions

LAYOUT BY:

SCALE: 1.00

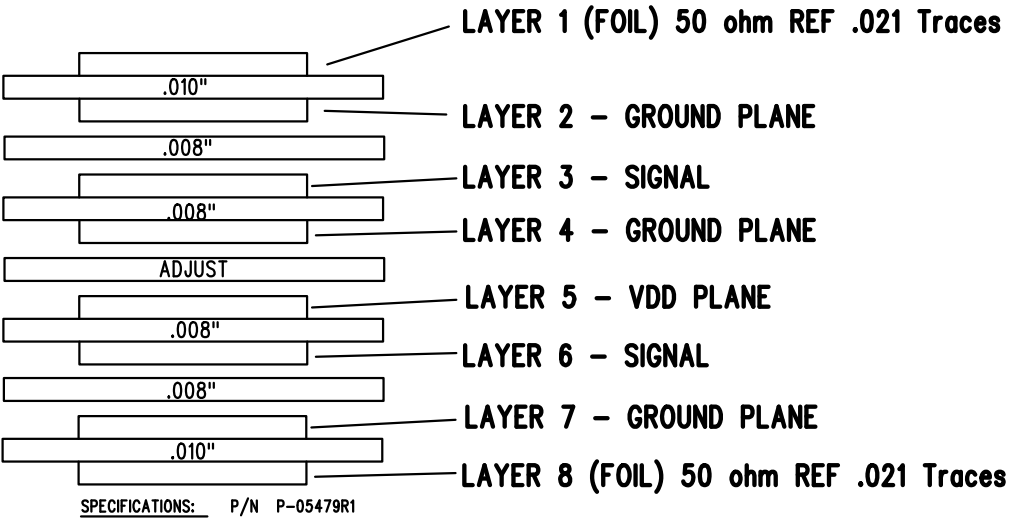
ALTUM DESIGNER VERSION: 10.0.0.27009

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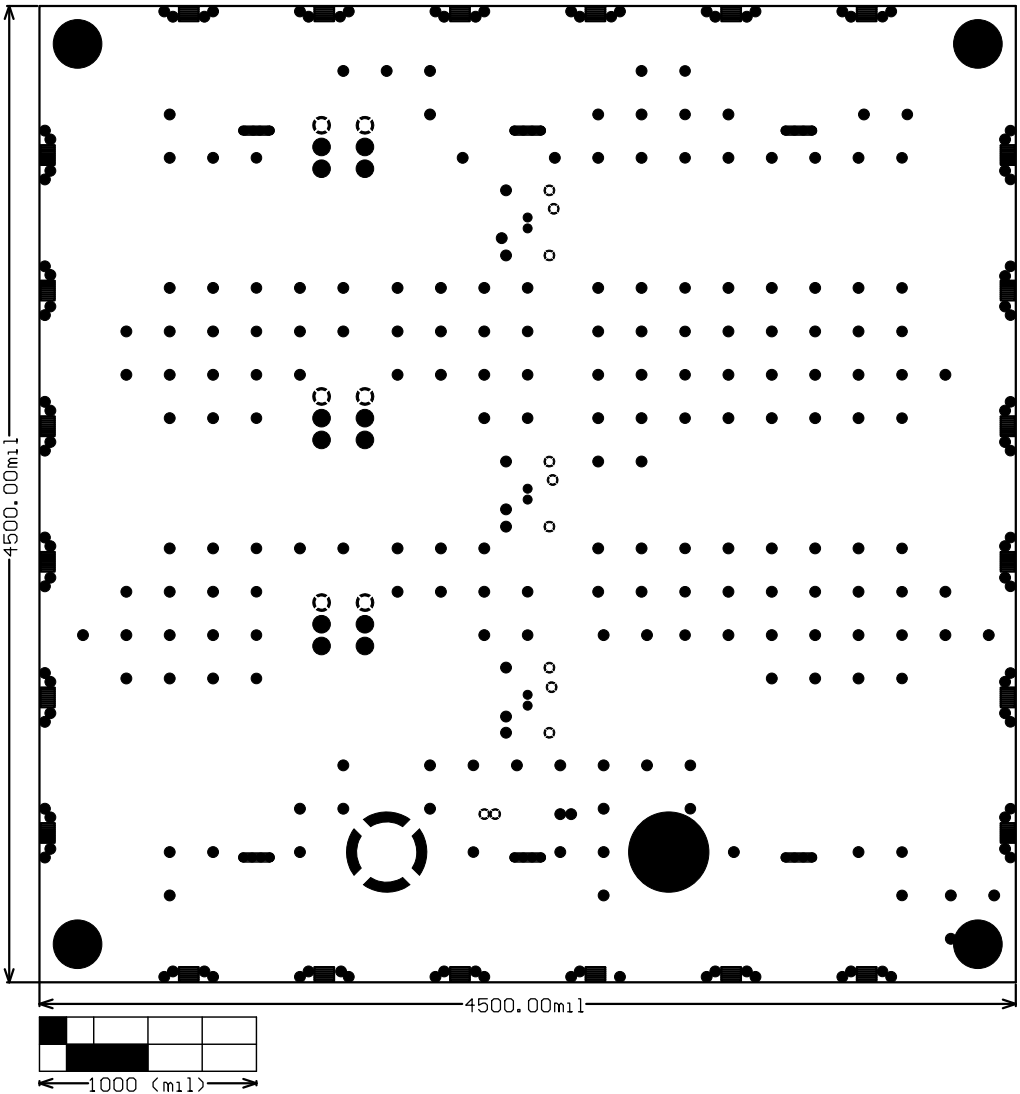
B

C

D



1. PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
2. DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
3. MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
4. FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
5. NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
6. HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
7. SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
8. FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
9. SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
10. FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75% (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
11. BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
- PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
12. MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
13. MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
14. VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
15. SEE DRAWING C-05491 FOR PANEL LAYOUT.



Layer Stack Up Detail for: DS25BR100EUK.PcbDoc					
Layer Name	Order	Copper Thickness	Dielectric Weight	Dielectric Prepreg	Dielectric Type
Top Solder Mask	(.GTS)		0.4mil	Solder Resist	3.50
Top Layer	(.GTL)	2.8mil		FR-4 High Tg	4.80 PrePreg
GNDL2	(.G1)	2.8mil		FR-4 High Tg	4.80 Core
STGL3	(.G2)	2.8mil		FR-4 High Tg	4.80 PrePreg
GNDL4	(.G3)	2.8mil		FR-4 High Tg	4.80 Core
VDDL5	(.G4)	2.8mil		FR-4 High Tg	4.80 PrePreg
STGL6	(.G5)	2.8mil		FR-4 High Tg	4.80 Core
GNDL7	(.G6)	2.8mil		FR-4 High Tg	4.80 PrePreg
Bottom Layer	(.GBL)	2.8mil		FR-4 High Tg	4.80
Bottom Solder Mask	(.GBS)		0.4mil	Solder Resist	3.50

DESIGN INFORMATION	
BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)	
4500MIL	X 4500MIL
Number of Layers : 8	
MIN. TRACK WIDTH:	8 MIL
MIN. CLEARANCE:	4 MIL
MIN. VIA PAD SIZE:	30 MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL	
PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL	

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2 ☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2 ☐ OTHER +/-

COPPER THICKNESS (FINISHED):

OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)

INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:

REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES

PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:

SILKSCREEN: ☒ TOP ☒ BOTTOM

SILKSCREEN COLOR: ☒ WHITE ☐ OTHER

SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG) ☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1 ☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:

☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3

☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:

MICROSECTION: ☐ YES

BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER

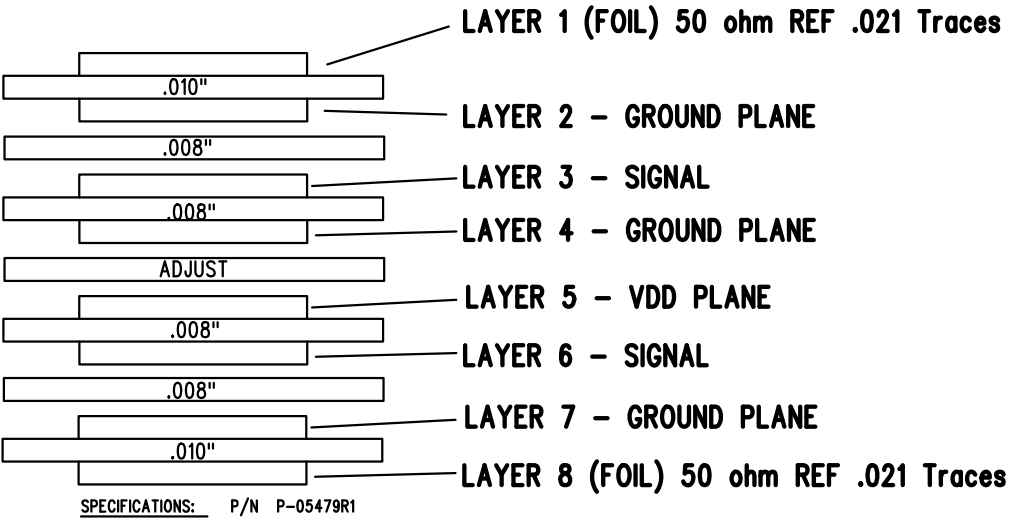
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE: DS25BR100EUK Evaluation Board	
DESIGNED FOR: Public Release	
FILE NAME: DS25BR100EUK.PcbDoc	
MODIFIED BY: Krypton Solutions	LAYOUT BY:
SCALE: 1.00	ALTUM DESIGNER VERSION: 10.0.0.27009

ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME = LAYER 5 VDD PLANE			
PLOT NAME = DS25BR100EUK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



1. PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
2. DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
3. MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
4. FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
5. NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
6. HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
7. SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
8. FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
9. SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
10. FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75* (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
11. BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
- PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
12. MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
13. MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
14. VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
15. SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EUK.PcbDoc					
Layer Name	Order Document	Copper Thickness	Dielectric Weight	Dielectric Material	Dielectric Type
Top Solder Mask	(.GTS)		0.4mil	Solder Resist	3.50
Top Layer	(.GTL)	2.8mil		FR-4 High Tg	4.80 PrePreg
GNDL2	(.G1)	2.8mil		FR-4 High Tg	4.80 Core
STGL3	(.G2)	2.8mil		FR-4 High Tg	4.80 PrePreg
GNDL4	(.G3)	2.8mil		FR-4 High Tg	4.80 Core
VDDL5	(.G4)	2.8mil		FR-4 High Tg	4.80 PrePreg
STGL6	(.G5)	2.8mil		FR-4 High Tg	4.80 Core
GNDL7	(.G6)	2.8mil		FR-4 High Tg	4.80 PrePreg
Bottom Layer	(.GBL)	2.8mil			
Bottom Solder Mask	(.GBS)		0.4mil	Solder Resist	3.50

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8

MIN. TRACK WIDTH: 8 MIL

MIN. CLEARANCE: 4 MIL

MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C

REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2 ☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2 ☐ OTHER +/-

COPPER THICKNESS (FINISHED):

OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)

INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:

REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES

PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:

SILKSCREEN: ☒ TOP ☒ BOTTOM

SILKSCREEN COLOR: ☒ WHITE ☐ OTHER

SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG) ☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1 ☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:

☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3

☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:

MICROSECTION: ☐ YES

BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER

MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EUK Evaluation Board

DESIGNED FOR:
Public Release

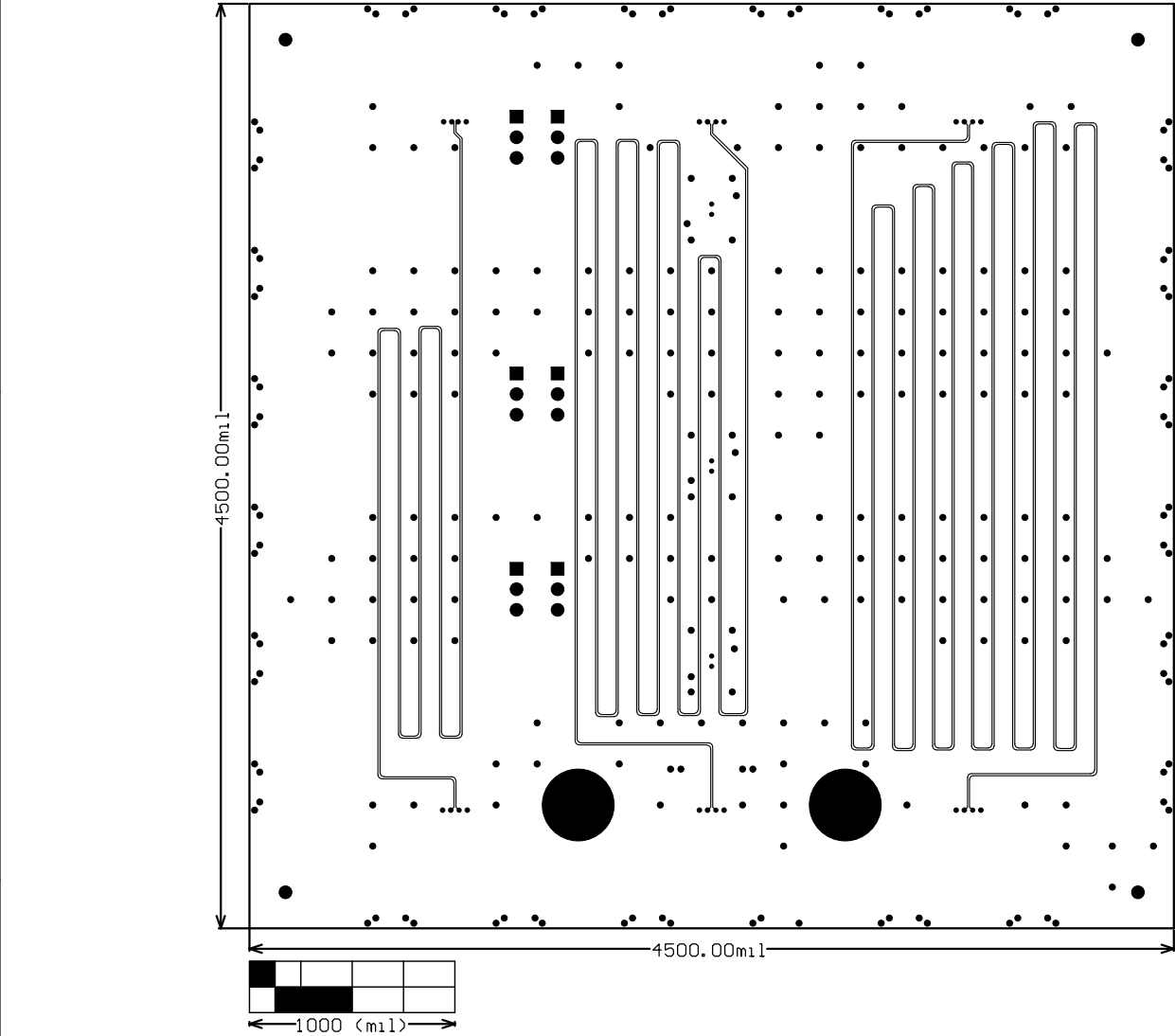
FILE NAME:
DS25BR100EUK.PcbDoc

MODIFIED BY:
Krypton Solutions

LAYOUT BY:

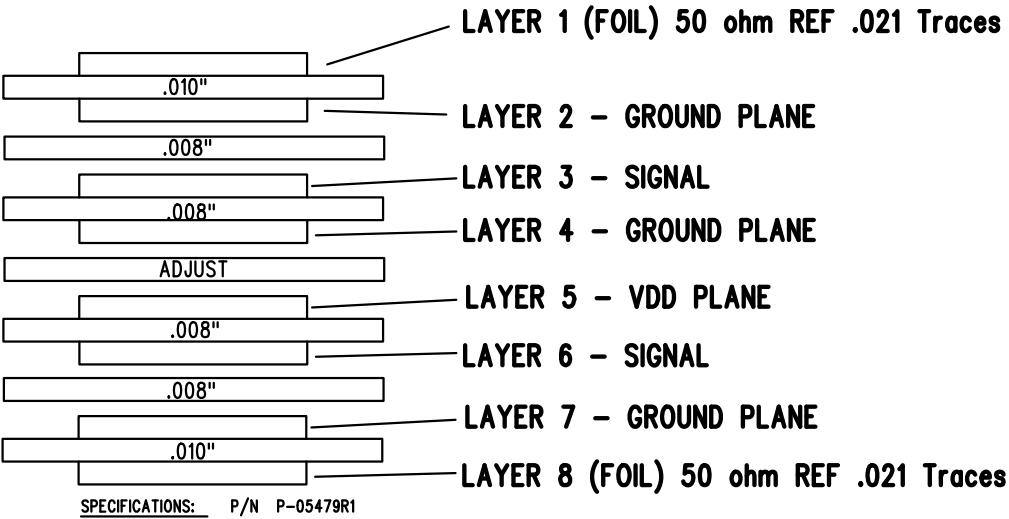
SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME = LAYER 6 SIGNAL			
PLOT NAME = DS25BR100EUK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



- PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
- DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- ☒ MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- ☒ FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
- NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in.. FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- ☒ HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- ☒ SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- ☒ FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- ☒ SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- ☒ FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75% (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- ☒ BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
- MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
- MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
- VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
- SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EVK.PcbDoc					
Layer Name	Order Document	Copper Thickness	Dielectric Material	Dielectric Constant	Dielectric Type
Top Solder Mask	(.GTS)		Solder Resist	3.50	
Top Layer	(.GTL)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL2	(.G1)	2.8mil	FR-4 High Tg	4.80	Core
STGL3	(.G2)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL4	(.G3)	2.8mil	FR-4 High Tg	4.80	Core
VDDL5	(.G4)	2.8mil	FR-4 High Tg	4.80	PrePreg
STGL6	(.G5)	2.8mil	FR-4 High Tg	4.80	Core
GNDL7	(.G6)	2.8mil	FR-4 High Tg	4.80	PrePreg
Bottom Layer	(.GBL)	2.8mil	FR-4 High Tg	4.80	PrePreg
Bottom Solder Mask	(.GBS)		Solder Resist	3.50	

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8
MIN. TRACK WIDTH: 8 MIL
MIN. CLEARANCE: 4 MIL
MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER _____

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER _____

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- _____

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/- _____

COPPER THICKNESS (FINISHED):
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER _____

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER _____
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER _____

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER _____

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EVK Evaluation Board

DESIGNED FOR:
Public Release

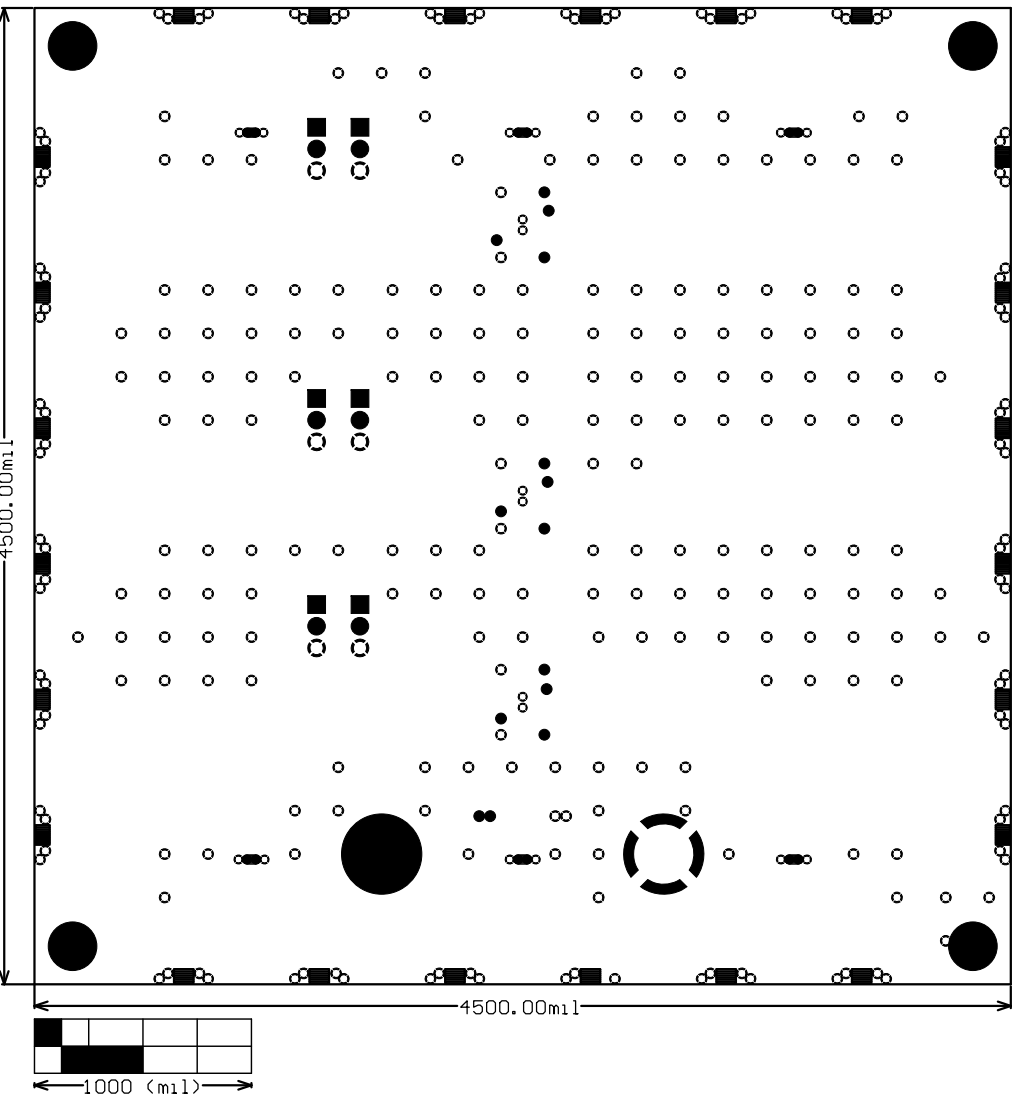
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DS25BR100EVK.PcbDoc

MODIFIED BY:
Krypton Solutions

LAYOUT BY:

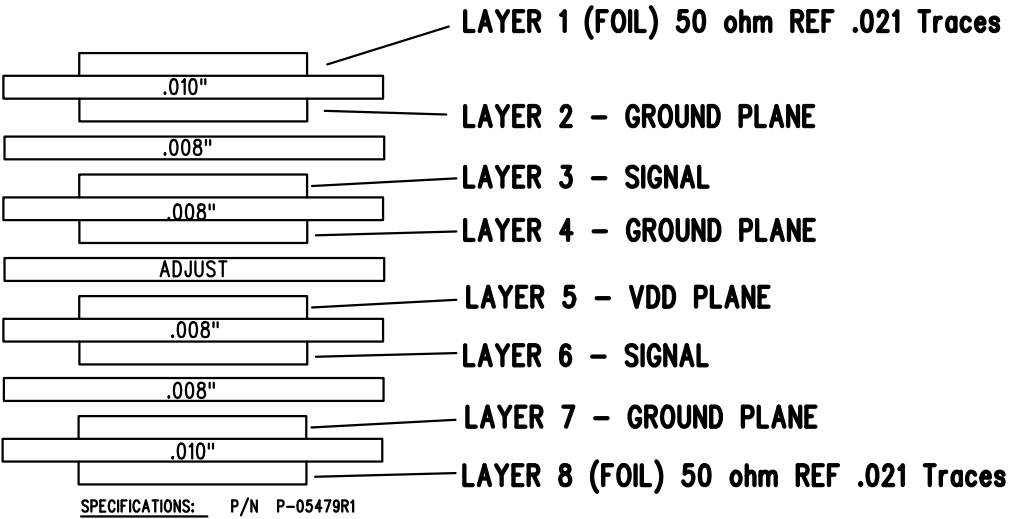
SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME = LAYER 7 GND PLANE			
PLOT NAME = DS25BR100EVK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



1. PERFORMANCE: IN ACCORDANCE WITH (IAW) IPC-6012 CLASS 2.
2. DIMENSIONS: INTERPRET DRAWING, DIMENSIONS AND TOLERANCES PER ANSI Y14.5M. DIMENSIONS ARE IN INCHES.
- (C1) 3. MATERIAL: ROHS COMPLIANT/LEAD FREE ASSEMBLY CAPABLE WOVEN E-GLASS LAMINATE, PCL-FR-370HR OR EQUIVALENT WITH A Tg OF 170 OR GREATER AND A Td OF 340 OR GREATER. TOTAL BOARD THICKNESS OVER MASK .062 INCHES +/- 10%. FINISHED COPPER WEIGHT: 1/2 oz
- (C1) 4. FLAMMABILITY RATING: FINISHED BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAME RATING OF 94V-0 OR BETTER. VENDOR MARKINGS, DATE CODE AND FLAME RATING TO BE ON THE PCB. LOCATION AT THE VENDORS DISCRETION UNLESS OTHERWISE SPECIFIED. SILKSCREEN OR ETCH PERMISSIBLE.
5. NUMBER OF LAYERS: 8
MIN CONDUCTOR WIDTH/SPACING: WIDTH 0.005 in. SPACING 0.004 in..
FINISHED CONDUCTOR WIDTHS AND SPACINGS SHALL BE WITHIN 20% OF SUPPLIED ORIGINAL CAD DATA.
- (C1) 6. HOLES: DRILL BOARDS USING DRILL DATA, DRILL PATTERN AND HOLE SCHEDULE. HOLE LOCATIONS MAY VARY WITHIN 0.004 in. (RADIAL ERROR) MAXIMUM ABOUT TRUE POSITION. PLATE HOLES PER HOLE SCHEDULE. MINIMUM COPPER PLATING IN PLATED HOLES TO BE 0.001 in. UNLESS OTHERWISE NOTED ALL HOLE DIMENSIONS APPLY AFTER PLATING. MINIMUM ANNULAR IN ACCORDANCE WITH IPC-6012 CLASS 2.
- (C1) 7. SOLDER MASK: APPLY LPI GLOSS BLUE OVER BARE COPPER IAW IPC-SM-840 BOTH SIDES. SOLDERMASK MISREGISTRATION SHALL NOT EXCEED +0.004 in. NO OVERLAP PERMITTED ON PADS.
- (C1) 8. FINAL FINISH: ELECTROLESS NICKEL IMMERSION GOLD (ENIG) PER IPC-4552.
- (C1) 9. SILKSCREEN: THE FOLLOWING LAYERS SHALL BE SCREEN PRINTED USING WHITE PERMANENT NON-CONDUCTIVE EPOXY INK PER APPROPRIATE ARTWORK FILE: LAYER 1 TOP INK NOT PERMITTED ON PADS.
- (C1) 10. FLATNESS: BOW AND TWIST SHALL NOT EXCEED 0.75* (0.0075 in. PER in.) IN ACCORDANCE WITH IPC-A-600F WHEN MEASURED WITH IPC-TM-650, METHOD 2.4.22.
- (C1) 11. BARE BOARD ELECTRICAL TEST: BARE BOARDS SHALL BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NET LIST DATA. VENDOR SHALL SUPPLY CERTIFICATION OF BOARD CONTINUITY BASED ON CAD DATA SUPPLIED AND SHALL MARK THAT ALL BOARDS HAVE PASSED TEST. CERTIFICATION SHALL STATE HOW ACCEPTED BOARDS HAVE BEEN MARKED.
- PRIOR TO FABRICATION VENDOR TO DO NETLIST COMPARISON CHECK USING SUPPLIED IPC-D-356A NETLIST DATA. CONTACT ENERCON WITH ANY DISCREPANCIES.
12. MODIFICATIONS: ENERCON APPROVAL REQUIRED PRIOR TO ADDING THIEVING PATTERN TO PROVIDE COPPER BALANCE. VENDOR MAY REMOVE ALL NON-FUNCTIONAL PADS FROM THE INTERNAL SIGNAL LAYERS. REPAIR OF OPEN OR HIGH RESISTANCE TRACES PER IPC-7721.
13. MISC: ALL LAYERS VIEWED FROM LAYER 1. REFERENCES TO IPC STANDARDS ASSUME CURRENT REVISION.
14. VENDOR TO SUPPLY ROHS CERTIFICATE OF COMPLIANCE.
15. SEE DRAWING C-05491 FOR PANEL LAYOUT.

Layer Stack Up Detail for: DS25BR100EUK.PcbDoc					
Layer Name	Order Document	Copper Thickness	Dielectric Material	Dielectric Constant	Dielectric Type
Top Solder Mask	(.GTS)		Solder Resist	3.50	
Top Layer	(.GTL)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL2	(.G1)	2.8mil	FR-4 High Tg	4.80	Core
STGL3	(.G2)	2.8mil	FR-4 High Tg	4.80	PrePreg
GNDL4	(.G3)	2.8mil	FR-4 High Tg	4.80	Core
VDDL5	(.G4)	2.8mil	FR-4 High Tg	4.80	PrePreg
STGL6	(.G5)	2.8mil	FR-4 High Tg	4.80	Core
GNDL7	(.G6)	2.8mil	FR-4 High Tg	4.80	PrePreg
Bottom Layer	(.GBL)	2.8mil	FR-4 High Tg	4.80	
Bottom Solder Mask	(.GBS)		Solder Resist	3.50	

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
4500MIL X 4500MIL

Number of Layers : 8

MIN. TRACK WIDTH: 8 MIL

MIN. CLEARANCE: 4 MIL

MIN. VIA PAD SIZE: 30 MIL

MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C

REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL

MATERIAL:

☐ FR-4 ☒ FR-4 High Tg ☐ OTHER

THICKNESS: ☒ 62 MIL (1.6mm) +/-10% ☐ OTHER

TOLERANCE: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

BOW & TWIST: ☒ ANSI IPC-6012 TYPE 3 CLASS 2
☐ OTHER +/-

COPPER THICKNESS (FINISHED):
OUTER: ☐ 1.4MIL (1oz) ☐ 2MIL (1.4oz) ☒ 2.8MIL (2oz)
INNER SIGNAL: ☐ 1.4MIL (1oz) ☒ 2.8MIL (2oz) ☐ N/A

DRILLING:
REFERENCE: ☒ AS SHOWN ☒ NC_DRILL FILES
PTH MIN COPPER THICKNESS: ☒ 1MIL ☐ OTHER

BOARD FINISH:
SILKSCREEN: ☒ TOP ☒ BOTTOM
SILKSCREEN COLOR: ☒ WHITE ☐ OTHER
SOLDER RESIST COLOR: ☒ GREEN ☐ BLUE ☐ OTHER

SURFACE FINISH: ☒ IMMERSION GOLD (ENIG)
☐ IMM. TIN/SILVER OR EQUIV ☐ OTHER

ARRAY/PANEL: ☐ CUT AND TRIM PER MECH LAYER 1
☐ N.C. ROUTE ☒ V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:
☒ ANSI IPC-A-600F CLASS -> ☐ 1 ☒ 2 ☐ 3
☒ UL 94V-0 ☒ RoHS ☐ OTHER PER ORDER

ADDITIONAL REQUIREMENTS:
MICROSECTION: ☐ YES
BARE BOARD ELEC. TEST: ☐ NONE ☒ REQUIRED ☐ PER ORDER
MANUFACTURER'S ID/LOGO: ☐ RAIL ☐ METAL ☒ SILK



PROJECT TITLE:
DS25BR100EUK Evaluation Board

DESIGNED FOR:
Public Release

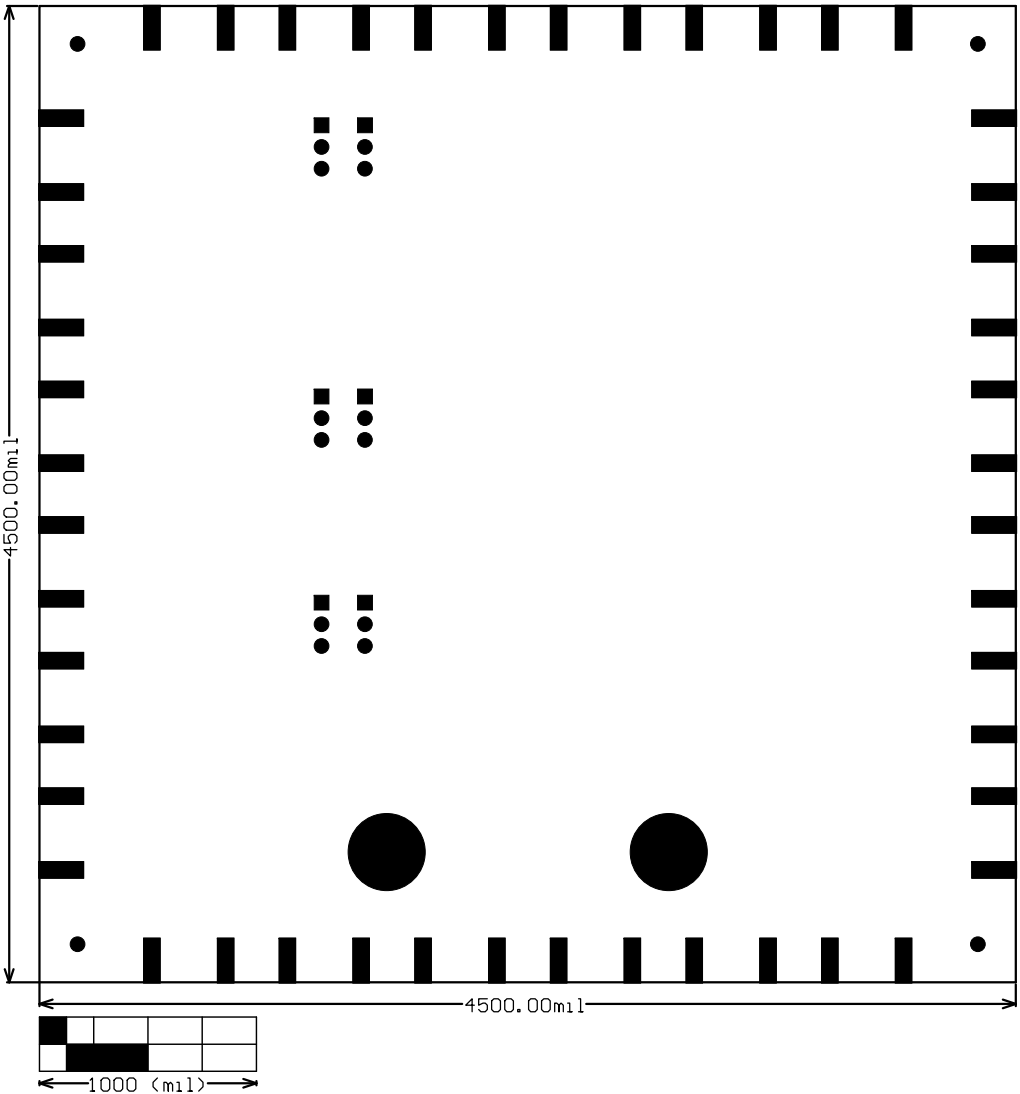
FILE NAME:
DS25BR100EUK.PcbDoc

MODIFIED BY:
Krypton Solutions

LAYOUT BY:

SCALE: 1.00

ALTUM DESIGNER VERSION:
10.0.0.27009



ALL ARTWORK VIEWED FROM TOP SIDE	BOARD #: SU601039	REV: A	
LAYER NAME = MOTTO8 X2AM			
PLOT NAME = DS25BR100EUK.GM11	GENERATED : 2/5/2014 3:33:18 PM	TEXAS INSTRUMENTS	

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