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DWG NO.
PRT-75266

SH
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REV
01

REVISIONS			
ZONE	REV	APPROVALS	DATE
	01	F. ARYANFAR	11/13/19
INITIAL RELEASE			

NOTES: UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN METRIC

1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.

2. ~~GERBER FILES CONTAIN BOARD OUTLINE FOR ALIGNMENT PURPOSES. REMOVE PRIOR TO FABRICATION.~~

3. FABRICATE PCB PER IPC-6012, LATEST REVISION, TYPE 3, CLASS 2, DETAILED NOTES AND INSTRUCTIONS ON THIS DRAWING SUPERCEDE IPC REQUIREMENTS. BARE BOARD ACCEPTANCE PER IPC-A-600, LATEST REVISION.

4. TRACE WIDTH/SPACE/VIA:
TRACE WIDTHS/SPACING TO BE WITHIN ±20% OF GERBER DATA.
MINIMUM TRACE WIDTH: OUTER LAYERS= 0.15mm (0.006");
INNER LAYERS= 0.15mm (0.006");
MINIMUM AIR GAP: OUTER LAYERS= 0.125mm (0.005");
INNER LAYERS= 0.125mm (0.005");
MINIMUM VIA PAD DIAMETER: .40mm (.020").

5. MATERIAL:
NUMBER OF ELECTRICAL LAYERS IS 4.
MATERIALS AND OVERALL THICKNESS SEE STACKUP DETAIL.
LAMINATE AND PREPREG PER IPC-4101. COPPER FOIL PER IPC-MF-150.
MATERIAL'S GLASS TRANSITION TEMPERATURE (Tg) SHALL BE A MINIMUM OF 170° CENTIGRADE.
MATERIAL MUST MEET UL796 WITH A FLAMMABILITY RATING OF 94V-0
VENDOR UL LOGO AND DATE CODE TO BE SCREENED ON THE BOTTOM SIDE. IF NO BOTTOM SILKSCREEN PROVIDED VENDOR MAY ADD BOTTOM SILKSCREEN.

6. TOLERANCES:
6A. LAYER TO LAYER REGISTRATION WITHIN .076mm (.003").
6B. ALL HOLES TO BE LOCATED WITHIN .076mm (.003") OF ORIGINAL CAD DATA.
6C. ALL HOLES SURROUNDED BY COPPER SHALL HAVE A MINIMUM ANNULAR RING OF .025mm (.001").
6D. ALL PLATED THROUGH HOLES TO HAVE A MINIMUM .025mm (.001") OF PLATING.
6E. HOLE DIMENSIONS AND TOLERANCES APPLY AFTER PLATING, SEE DRILL HOLE CHART.
6F. WARP AND TWIST NOT TO EXCEED .010 IN/IN.
6G. CONDUCTOR WIDTHS/SPACINGS TO BE WITHIN ±20% OF GERBER DATA.
6H. EDGE WRAP PLATING REQUIRED AT CONNECTOR GND PINS AS OUTLINED.

7. PLATING OPTIONS: USE 7A.
7A. ENIG (ELECTROLESS NICKEL/IMMERSION GOLD) 2-10 MICROINCHES OF GOLD OVER A MINIMUM OF 120 MICROINCHES OF NICKEL PER IPC-4552. THIS FINISH COMPLIES WITH RoHS DIRECTIVES.
7B. ~~SELECTIVE HARD GOLD FINISH IN THE DUT AND POGPAD AREAS). CLASS 1 50-100 MICROINCHES MICROINCHES THICK (MINOR HARDNESS 150-200) OVER NICKEL PLATE IN ACCORDANCE WITH IPC-4552. LATEST REVISION. SECTION 4.0. CLASS 2 200-500 MICROINCHES THICK. FABRICATE IN ACCORDANCE WITH IPC 6018. START WITH 1/4oz. COPPER.~~
7C. ~~1oz. IMMERSION SILVER 30-50 MICROINCHES PER IPC-4553.~~

8. APPLY LPI (LIQUID PHOTO-IMAGEABLE) SOLDERMASK OVER BARE COPPER (SMOBC) PER IPC-SM-840 CLASS "T" TO BOTH SIDES OF PCB. SOLDERMASK COLOR TO BE: GREEN
GERBER FILES REFLECT A ZERO OVERSIZE. VENDOR MAY OVERSIZE AS NEEDED. MAX THICKNESS .025mm (.001"). ACCEPTABLE FOR SOLDERMASK WEBBING TO DISAPPEAR BETWEEN FINE PITCH BALL PADS.

9. APPLY SILKSCREEN LEGEND USING WHITE NON-CONDUCTIVE EPOXY INK. TRIM SILKSCREEN FROM ALL EXPOSED COPPER. BOTH SIDE(S).

10. VENDOR MAY REMOVE NON-FUNCTIONAL PADS FROM INTERNAL LAYERS.

11. VENDOR MAY ONLY ADD THEIVING OUTSIDE THE BOARD OUTLINE TO COMPENSATE FOR LOW COPPER DENSITY.

12. REMOVE ALL BURRS AND BREAK SHARP EDGES. INSIDE CORNER MAXIMUM RADIUS 381mm (.015").

13. BARE BOARD ELECTRICAL TEST IS REQUIRED. USE THE SUPPLIED IPC-D-356 NETLIST.

14. MATRIX DRAWING: USE 14A.
14A. NO MATRIX DRAWING IS REQUIRED. BOARDS TO BE DELIVERED FULLY ROUTED.
~~14B. MATRIX DRAWING PROVIDED. SEE FABRICATION DRAWING SHEET 2 OF 2.~~
~~14C. VENDOR TO GENERATE MATRIX DRAWING. VENDOR GENERATED MATRIX DRAWINGS REQUIRE APPROVAL BY PSEMI CORPORATION. PANELIZED BOARDS TO HAVE SAME ORIENTATION AND SHALL BE ROUTED AND RETAINED WITH BREAK AWAY TABS. SEE DETAIL 8. SUPPORT RAIL WIDTH TO BE 6.35mm (.25") 12.7mm (.50") WITH 1.52mm (.060") FIDUCIALS AND 3.175mm (.125") TOOLING HOLES IN 3 CORNERS. PANELIZED SOLDERPASTE GERBER TO BE SUBMITTED TO PSEMI CORPORATION.~~

15. PLANARITY: 15A AND 15B.
15A. VARIATION OF BUMP PADS IN THE Z AXIS TO BE <=5um.
15B. ALL VIAS TO BE COPPER FILLED OR NON-CONDUCTIVE EPOXY FILLED AND COPPER OVERPLATED AFTER PLATING AND BEFORE FINAL SURFACE FINISH. NON-CONDUCTIVE EPOXY (SAR EI 900 OR EQUIVALENT) IS RECOMMENDED. EPOXY SHALL NOT PROTRUDE FROM HOLES. THIS APPLIES TO ALL VIAS THAT ARE EXPOSED ON BOTH SIDES. A SMOOTH COPLANAR FINISH IS REQUIRED WHEN EXPOSED BY SOLDERMASK.
~~15C. ALL VIAS ARE TO BE PLUGGED AND FILLED WITH SOLDERMASK MATERIAL.~~

16. CONTROLLED IMPEDANCE REQUIREMENTS: USE 16B.
VENDOR MAY MODIFY DIELECTRIC THICKNESS BY 25% WITHOUT WRITTEN CONSENT. ANY MODIFICATION GREATER THAN 25% REQUIRES WRITTEN CONSENT FROM PSEMI CORPORATION.
~~16A. NO CONTROLLED IMPEDANCE MEASUREMENTS REQUIRED.~~
16B. VENDOR TO PROVIDE TEST COUPON AND IMPEDANCE REPORT.
0.38mm (0.015") TRACES ON LAYER 1 ARE 50 OHMS. CO-PLANAR TRANSMISSION LINES +/-5%
.Xmm (.XXX") TRACES ON LAYER 1 ARE 50 OHMS. CO-PLANAR TRANSMISSION LINES +/-5%
.Xmm (.XXX") TRACES ON LAYER Y ARE 100 OHMS. DIFFERENTIAL, +/- 10%.

17. SHORTS DESTINED IN BOARD: ~~NO~~
~~NET XXXXXX TO GND, LAYER 1~~
~~NET XXXXXX TO GND, LAYER 6~~

18. DEVIATIONS BY FABRICATION FACILITY TO BE REPORTED TO PSEMI CORPORATION.
19 THIS PCB HAS < .076mm (.003") TRACE/SPACE IN DUT AREA.
20 .15mm (.006") AND .20mm (.008") VIAS MAY HAVE AN ANNULAR RING OF ZERO
21 FABRICATION VENDOR MAY ADD TEARDROPS IN DUT AREA.
22 FABRICATION VENDOR MAY ADD SOLDER TAILS TO PADS IN DUT AREA.
23 NO SILKSCREEN IN THE DUT AREA. VENDOR MAY MODIFY DATA TO REMOVE SILKSCREEN AND NOTIFY PSEMI CORPORATION OF THAT MODIFICATION.

THIS DOCUMENT CONTAINS INFORMATION PROPRIETARY TO PSEMI CORPORATION. THE INFORMATION IN THIS DOCUMENT IS NOT TO BE USED OR DUPLICATED IN ANY MANNER WITHOUT THE PRIOR APPROVAL OF PSEMI CORPORATION.

4 LAYER - STACK UP

PRIMARY SIDE..SILKSCREEN

PRIMARY SIDE..SOLDERMASK

PRIMARY SIDE..L1

GND PLANE..L2

GND PLANE..L3

SECONDARY SIDE..L4

SECONDARY SIDE..SOLDERMASK

SECONDARY SIDE..SILKSCREEN

CU

0.05334mm (0.0021") FINISHED

0.254mm (0.010")

1.0 oz.

0.8636mm (0.034")

1.0 oz.

0.254mm (0.010")

0.05334mm (0.0021") FINISHED

TOTAL BOARD THICKNESS: 1.575mm ±10% (0.062" ±10%)

UNITS: Metric (Inches)

DIMENSIONS IN mm(Inches)

TOLERANCES UNLESS OTHERWISE NOTED

X.X +/- .3(.012)

X.XX +/- .25(.010)

X.XXX +/- .127(.005)

X.XXXX +/- .0254(.001)

ANGLES +/- .572 DEG

CONTRACT NO.

APPROVALS

DATE

DRAWN
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CHECKED
Y. KARISAN

ISSUED
X. XXXXXXX

REVISED BY
X. XXXXXXX

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TITLE

PCB,
PE43614 SCO0BY EVK

SIZE

B

RoHS COMPLIANCE
RELEASE DATE

RoHS COMPLIANCE

RELEASE DATE

DWG NO.
PRT-75266

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01

SCALE: NONE

SHEET: 1 of 2

