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REV

DESCRIPTION

DATE

APPROVAL

1

INITIAL RELEASE

MAY 2017

2

REV-2

AUG 2017

NOTES: UNLESS OTHERWISE SPECIFIED

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1. MATERIAL: NELCO4000-3313 & NELCO4000-1080

2. GENERAL PLATING - ENIG

FOR SELECTIVE PLATING SEE BELOW

2.1. SELECTIVE HARD GOLD PLATING TO BE FLAT &

PLATED 30uIN(MINIMUM) OF Au OVER 150-200uIN OF Ni.

GOLD PLATING ON PAD SHOULD BE THE SAME LEVEL OR

ABOVE THE SOLDER RESIST SURFACE ON TOP AND BOTTOM

3. ALL HOLES ARE PLATED THRU UNLESS OTHERWISE SPECIFIED

MINIMUM PLATING FOR ALL THRU HOLE SHOULD BE 0.001" Cu

4. HOLES LESS THAN 12 MIL ARE DRILL SIZES AND NOT FINISHED HOLE SIZES

ALL HOLES TO BE +/- .003 FROM TRUE POSITION UNLESS OTHERWISE SPECIFIED

5. SILKSCREEN BOTH SIDES WITH NON-CONDUCTIVE WHITE INK

6. FABRICATE PER DIMENSIONS SHOWN.

7. SOLDER MASK TOP AND BOTTOM SIDES WITH

LIQUID PHOTO IMAGABLE OR DRY FILM

SOLDER MASK. COLOR GREEN.

8. TOTAL BOARD THICKNESS: 62 mil+/- 6 mil

12 LAYER CONSTRUCTION. REFER STACKUP

9. THEIVING IS OPTIONAL. IF ADDED IT NEED TO BE KEPT AWAY FROM ANY CONDUCTORS BY 300 MIL

AFTER APPROVAL FROM PACTRON.

10. THIS IS A ROHS COMPLIANT BOARD

11. BOARD MUST BE UL 94V-1 APPROVED.

12. FABRICATE BOARD PER IPC-A-600D STANDARD.

13. CLIP SILKSCREEN ON NO MASK AREA.

14. IMPEDANCE TOLERANCE SHOULD BE +/- 7.5% ON ALL LAYERS.

15. NO VENDOR LOGO, ART WORKS SHOULD NOT BE

CHANGED WITHOUT PRIOR APPROVAL FROM PACTRON

16. DEBURR ALL SHARP EDGES

17. REMOVE UNUSED PADS IN ALL INNER LAYERS.

18. BOARD DIMENSIONS ARE IN INCHES[MM].

19. WARP & TWIST: SHALL NOT EXCEED 0.005 INCHES PER INCH

20. EDGE FINGER- CHAMFER EDGES MUST BE FREE OF CUTTING BURRS

21. PROVIDE SOFT COPY OF TDR REPORT FOR OUTER LAYERS.

22. ALL THE TRACE WIDTH MENTIONED IN IMPEDANCE TABLE ARE FINISHED TRACE WIDTH

THERE SHOULD NOT BE ANY DEVIATIONS IN TRACE WIDTH AFTER MANUFACTURING

23. NICKEL CONTENT ON OUTER LAYERS SHOULD BE VERY MINIMAL POSSIBLE

TRY TO ACHIEVE THICKNESS IN OUTER LAYER METAL WITH MORE COPPER INSTEAD OF MORE NICKEL

24. TEARDROPS SHOULD NOT BE ADDED ON ANY AREA WITHOUT PRIOR APPROVAL FROM PACTRON.

25. IF REQUIRED CAN IGNORE THE TRACES THAT ARE <0.5 INCH FOR TDR MEASUREMENT. BUT SETUP

NEED TO BE DONE TO MEET IMPEDANCE REQUIREMENT

26. THROUGH HOLES PLATING THICKNESS SHOULD BE CONTROLLED BETWEEN 1.0 TO 1.5 MILS PER SIDE.

27. NEED RECTANGLE SLOT AS MENTIONED DIMENSION IN THE DRILL TABLE.

DRILL CHART: TOP to BOTTOM

ALL UNITS ARE IN MILS

FIGURE	SIZE	TOLERANCE	PLATED	QTY
•	8.0	+3.0/-3.0	PLATED	583
•	8.0	+3.0/-3.0	PLATED	433
•	8.01	DRILL WITH 10 MIL DRILL BIT ONLY	PLATED	20
•	10.0	+3.0/-3.0	PLATED	1530
•	10.0	+3.0/-3.0	PLATED	157
•	10.0	+3.0/-3.0	PLATED	4
•	10.0	+3.0/-3.0	PLATED	161
•	10.0	+3.0/-3.0	PLATED	36
•	10.01	DRILL WITH 12 MIL DRILL BIT ONLY	PLATED	28
•	12.0	+3.0/-3.0	PLATED	4
•	28.0	+2.0/-2.0	PLATED	25
•	35.0	+2.0/-2.0	PLATED	12
•	40.0	+3.0/-3.0	PLATED	35
•	40.0	+3.0/-3.0	PLATED	12
•	40.0	+3.0/-3.0	PLATED	6
•	40.0	+3.0/-3.0	PLATED	2
•	45.0	+3.0/-0.0	PLATED	4
•	62.0	+2.0/-2.0	PLATED	2
•	63.0	+3.0/-3.0	PLATED	6
•	65.0	+4.0/-0.0	PLATED	6
L	106.0	+3.0/-3.0	PLATED	2
◆	128.0	+2.0/-2.0	PLATED	2
•	35.5	+2.0/-0.0	NON-PLATED	2
•	50.0	+2.0/-0.0	NON-PLATED	2
o	66.0	+2.0/-0.0	NON-PLATED	2
P	125.0	+2.0/-2.0	NON-PLATED	4
■	63.0x39.37	+3.0/-3.0	PLATED	1
■	63.0x39.37	+3.0/-3.0	PLATED	2

3.791 [96.3]

0 [0]

.261 [6.6]

.586 [14.9]

.195 [5]

0 [0]

.396 [10.1]

R.072 [1.8]

1.118 [28.4]

1.433 [36.4]

1.577 [40]

2.018 [51.2]

2.092 [53.1]

2.925 [74.3]

R.037 [0.9]

28 [0.71] X45° (4 Places)

6.405 [162.7]

.262 [6.7]

0.063

(PAD TO PAD DIMENSION)

20°

TYP.

0.055

DETAIL B (EDGE BEVEL)

SCALE = NONE

PACTRON

DATE:AUG 2017

NAME:POLARFIRE_SPLASH KIT

FILM LAYER:FAB

REV: 2

STACKUP - 12 LAYERS

		40 OHM SINGLE	50 OHM SINGLE	80 OHM DIFFERENTIAL	90 OHM DIFFERENTIAL	95 OHM DIFFERENTIAL	100 OHM DIFFERENTIAL	TOLERANCE IN %
GLASS	TOP (0.5 oz + PLATING)	10 MIL	6.5 MIL		5.8/6.2 MIL	3.3/4.7 MIL	3.4/4.6 MIL	+/-7.5
3313	NELCO4000-13 DIELECTRIC (3.72 mils)							
	02_GND1 (1 oz)							
1080	NELCO4000-13 DIELECTRIC (3.15 mils)							
	03_SIG1 (1 oz)							
1080	NELCO4000-13 DIELECTRIC (4.72 mils)	5.7 MIL	3.7 MIL	5/5 MIL				+/-7.5
	04_GND2 (1 oz)							
1080	NELCO4000-13 DIELECTRIC (3.15 mils)							
	05_SIG2 (1 oz)	5.7 MIL	3.7 MIL	5/5 MIL			3.6/9.4 MIL	+/-7.5
1080	NELCO4000-13 DIELECTRIC (4.72 mils)							
	06_GND3 (1 oz)							
1080	NELCO4000-13 DIELECTRIC (5.12 mils)							
	07_PWR1 (1 oz)							
1080	NELCO4000-13 DIELECTRIC (5.39 mils)							
	08_PWR2 (1 oz)							
1080	NELCO4000-13 DIELECTRIC (3.15 mils)							
	09_GND4 (1 oz)							
1080	NELCO4000-13 DIELECTRIC (4.72 mils)							
	10_SIG3 (1 oz)	5.7 MIL	3.7 MIL	5/5 MIL			3.6/9.4 MIL	+/-7.5
1080	NELCO4000-13 DIELECTRIC (3.15 mils)							
	11_GND5 (1 oz)							
3313	NELCO4000-13 DIELECTRIC (3.72 mils)							
	BOTTOM (0.5 oz + PLATING)	10 MIL	6.5 MIL			3.3/4.7 MIL	3.4/4.6 MIL	+/-7.5
						5.9/14.7 MIL	6/14.6 MIL	

TOTAL BOARD THICKNESS: 62 mil+/- 6 mil

NOTE: DIELECTRIC GLASS STYLE SHOULD NOT BE CHANGED WITHOUT PRIOR APPROVAL FROM PACTRON.

FINISHED TRACE WIDTH,AIR GAP OF 100 OHM DIFFERENTIAL AND 50 OHM SIGNLE ENDED

SHOULD NOT BE CHANGED FROM ABOVE STATED VALUES.

PACTRON

3000 PATRICK HENRY DRIVE, SANTA CLARA, CA 95054.

408-329-5500 (PHONE), 408-747-1239 (FAX).

PROJECT NAMEPOLARFIRE_SPLASH KITREV :2

PART NUMBIRDVP-101-000496-001

DATEAUG 2017

ORIGINATORGANESHPRABHU K

PACTRON
PART NUMBER305-PD-17-0627