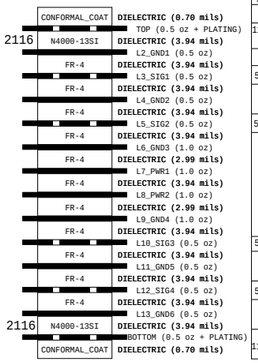
REVISIONS			
REV	DESCRIPTION	DATE	APPROVAL
1	INTIAL RELEASE	JUN 2018	

DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
·	8.0	+3.0/-3.0	PLATED	1757
·	8.0	+3.0/-3.0	PLATED	2016
·	8.01	DRILL WITH 10MIL DRILL BIT ONLY	PLATED	60
·	10.0	+3.0/-3.0	PLATED	378
·	10.0	+3.0/-3.0	PLATED	36
•	10.0	+3.0/-3.0	PLATED	4
•	10.0	+3.0/-3.0	PLATED	4
·	10.01	DRILL WITH 12MIL DRILL BIT ONLY	PLATED	32
·	23.62	+2.0/-2.0	PLATED	209
•	28.0	+2.0/-2.0	PLATED	10
^	40.0	+3.0/-3.0	PLATED	1
J	40.0	+3.0/-3.0	PLATED	8
○	40.0	+3.0/-3.0	PLATED	9
•	40.0	+3.0/-3.0	PLATED	4
•	40.0	+3.0/-3.0	PLATED	18
^	40.0	+3.0/-3.0	PLATED	3
●	45.0	+3.0/-3.0	PLATED	8
●	51.18	+4.0/-2.0	PLATED	12
⊠	65.0	+4.0/-0.0	PLATED	6
◎	110.24	+3.0/-3.0	PLATED	2
▪	35.5	+2.0/-0.0	NON-PLATED	2
•	40.16	+2.0/-0.0	NON-PLATED	2
⊗	50.0	+2.0/-0.0	NON-PLATED	2
⊗	66.0	+2.0/-0.0	NON-PLATED	2
⊠	78.74	+2.0/-0.0	NON-PLATED	2
⊗	125.0	+2.0/-2.0	NON-PLATED	8
⊗	165.35	+2.0/-2.0	NON-PLATED	1
▪	63.0x39.37	+3.0/-3.0	PLATED	2
▪	63.0x39.37	+3.0/-3.0	PLATED	1

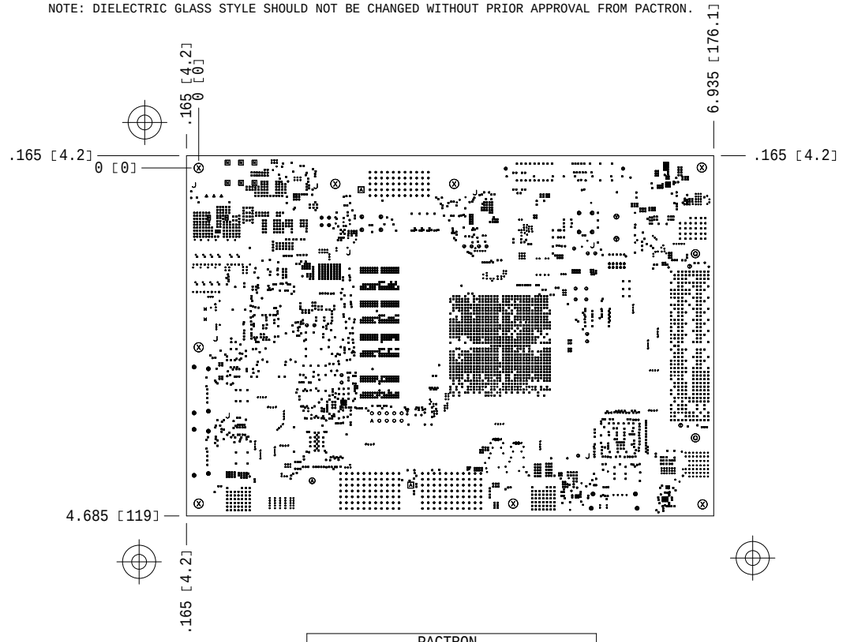
CONTROLLED IMPEDANCE REQUIRED

STACKUP - 14 LAYERS



40 OHM SINGLE	43 OHM SINGLE	45 OHM SINGLE	50 OHM SINGLE	80 OHM DIFFERENTIAL	86 OHM TIGHTLY	86 OHM LOOSELY	90 OHM TIGHTLY	90 OHM LOOSELY	100 OHM TIGHTLY	100 OHM LOOSELY	140 OHM DIFFERENTIAL
11.5 MILS	11 MILS	10 MILS	7.5 MILS		5.8/4.2 MILS	9.9/17.1 MILS	5.65/4.85 MILS	9/16 MILS	4.2/4.8 MILS	6.5/14 MILS	4/8 MILS (REFERRED TO LAYER-3)
5.5 MILS			3.5 MILS	4/7.3 MILS						3.2/8.3 MILS	
5.5 MILS			3.5 MILS	4/7.3 MILS						3.2/8.3 MILS	
5.5 MILS			3.5 MILS	4/7.3 MILS						3.2/8.3 MILS	
5.5 MILS			3.5 MILS	4/7.3 MILS						3.2/8.3 MILS	
11.5 MILS		10 MILS	7.5 MILS		5.8/4.2 MILS	9.9/17.1 MILS	5.65/4.85 MILS	9/16 MILS	4.2/4.8 MILS	6.5/14 MILS	

TOTAL BOARD THICKNESS: 63 mil+/- 6 mil
NOTE: DIELECTRIC GLASS STYLE SHOULD NOT BE CHANGED WITHOUT PRIOR APPROVAL FROM PACTRON.



PACTRON	
DATE: JUNE 2018	
NAME: POLARFIRE_VIDEO_KIT	REV: 1
FILM LAYER: FAB	

NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: N4000-13SI AND FR4.
2. GENERAL PLATING - ENIG
3. ALL HOLES ARE PLATED THRU UNLESS OTHERWISE SPECIFIED
   MINIMUM PLATING FOR ALL THRU HOLE SHOULD BE 0.001" Cu
4. THROUGH HOLES PLATING THICKNESS SHOULD BE CONTROLLED BETWEEN 1.0 TO 1.5 MILS PER SIDE.
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: 63 mil+/- 6 mil
   14 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 +/- 5% ON L1, L14.REST OF THE LAYRES CAN HAVE 10% TOLERANCE
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. NEED RECTANGLE SLOT AS MENTIONED DIMENSION IN THE DRILL TABLE.
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. ALL 8 MIL, 8.01 MIL,10 MIL AND 10.01 MIL DRILLS NEED NON CONDUCTIVE VIA PLUGGING.
    AFTER PLUGGING THESE VIAS SHOULD BE FLAT AND SMOOTH ON BOTH TOP AND BOTTOM SIDES.

PACTRON
3000 PATRICK HENRY DRIVE, SANTA CLARA, CA 95054.
408-329-5500(PHONE), 408-747-1239(FAX).

PROJECT NAME	POLARFIRE_VIDEO_KIT	REV :1
PART NUMBER	DVP-101-000512-001	
DATE	JUNE 2018	
ORIGINATOR		
PACTRON PART NUMBER	305-PD-18-0267	