

8 7 6 5 4 3 2 1

DESIGN CROSS SECTION CHART
TOTAL THICKNESS: 68.92 MIL

L1: SOLDERMASK-0.4MIL 0.4 MIL
L1: COPPER_1/20Z_PLATED 1.4 MIL
FILL_0.080 0.15 MIL
L2: COPPER_1.00Z 1.4 MIL
CORE_0.125 4.92 MIL
L3: COPPER_1.00Z 1.4 MIL
FILL_0.300 11.81 MIL
L4: COPPER_1.00Z 1.4 MIL
CORE_0.125 4.92 MIL
L5: COPPER 1.2 MIL
FILL_0.125 4.92 MIL
L6: COPPER 1.2 MIL
CORE_0.125 4.92 MIL
L7: COPPER_1.00Z 1.4 MIL
FILL_0.300 11.81 MIL
L8: COPPER_1.00Z 1.4 MIL
CORE_0.125 4.92 MIL
L9: COPPER_1.00Z 1.4 MIL
FILL_0.080 0.15 MIL
L10: COPPER_1/20Z_PLATED 1.4 MIL
SOLDERMASK-0.4MIL 0.4 MIL

TABLE 1:

LAYER NO.	LAYER NAME	DIFFERENTIAL PAIR IMPEDANCE (OHMS)	DIFF TRACE WIDTH	DIFF TRACE SPACING	SINGLE ENDED IMPEDANCE (OHMS)	SINGLE ENDED TRACE WIDTH	REFERENCE LAYER
LAYER 1	TOP	100 +/- 10%	85 +/- 10%	0.006"	0.0050"	50 +/- 10%	LAYER 3 LAYER 2
LAYER 2	L2_GND					0.0045"	
LAYER 3	L3_SIG	85 +/- 10%	0.0045"	0.005"	50 +/- 10%	0.005"	LAYER 2
LAYER 4	L4_3P3V						
LAYER 5	L5_VBUS_GND						
LAYER 6	L6_1P2V_GND						
LAYER 7	L7_5V						
LAYER 8	L8_SIG	85 +/- 10%	0.0045"	0.005"	50 +/- 10%	0.005"	LAYER 9
LAYER 9	L9_GND						
LAYER 10	BOTTOM	100 +/- 10%	85 +/- 10%	0.006"	0.0050"	50 +/- 10%	LAYER 8 LAYER 9

SPECIAL FAB NOTES:
 2: ALL 6.01 MIL VIAS NEED TO BE FILLED USING NON-CONDUCTIVE EPOXY AND PLATED SMOOTH (TOP SIDE ONLY).
 3: ALL 8 MIL VIAS TO BE TENTED ON BOTH SIDES.

DRILL CHART: TOP to L2
ALL UNITS ARE IN MILS

FIGURE	SIZE	TOLERANCE	PLATED	QTY
*	6.01	+3.0/-6.0	PLATED	46

DRILL CHART: TOP to BOTTOM
ALL UNITS ARE IN MILS

FIGURE	SIZE	TOLERANCE	PLATED	QTY
.	8.0	+3.0/-8.0	PLATED	1507
.	10.0	+3.0/-10.0	PLATED	74
.	19.69	+3.0/-3.0	PLATED	10
.	25.59	+1.97/-1.97	PLATED	6
*	28.0	+3.0/-3.0	PLATED	9
*	38.0	+3.0/-3.0	PLATED	37
*	51.0	+3.0/-3.0	PLATED	2
*	63.0	+3.0/-3.0	PLATED	4
*	67.0	+3.0/-3.0	PLATED	2
*	91.0	+3.0/-3.0	PLATED	2
⊙	125.0	+2.0/-2.0	PLATED	4
.	12.0	+2.0/-2.0	NON-PLATED	12
.	35.0	+2.0/-2.0	NON-PLATED	2
.	51.0	+2.0/-2.0	NON-PLATED	2
.	55.0	+2.0/-2.0	NON-PLATED	2
T	67.0	+2.0/-2.0	NON-PLATED	2
G	125.0	+2.0/-2.0	NON-PLATED	4
*	33.46x25.59	+3.15/-3.15	PLATED	2
*	43.11x19.69	+1.97/-1.97	PLATED	6
*	43.31x19.69	+1.97/-1.97	PLATED	6
*	59.06x32.48	+3.15/-3.15	PLATED	2
*	66.93x35.43	+3.15/-3.15	PLATED	2
*	70.87x27.56	+3.15/-3.14.96	PLATED	2
*	86.61x27.56	+3.94/-3.94	PLATED	2
⊘	106.3x35.43	+1.97/-1.97	PLATED	2

DESIGN INFORMATION

BOARD SIZE (REFER ALSO ARRAY/PANEL PROFILING INFORMATION)
 NUMBER OF LAYERS: 10
 MIN. TRACK WIDTH: 4.0 MIL
 MIN. CLEARANCE: 3.9 MIL
 MIN. VIA PAD/DRILL: 12.0/6.0 MIL (BLIND)

MIN. ANNUAL RING 2 MIL EXTERNAL PER IPC-6012C CLASS 2
 REGISTRATION TOLERANCES: METAL +/- X MIL, HOLES +/- X MIL
 IMPEDANCE CONTROL: NONE YES - SEE TABLE 1
 MIXED DIELECTRIC: NO YES

LAMINATE MATERIAL:
 FR-4 HIGH Tg ROGERS 4350B OTHER: _____

THICKNESS:
 0.069" +/-10% 0.093" +/-10% OTHER: _____

TOLERANCE: IPC-6012C TYPE 3 CLASS 2 OTHER +/-
 BOW & TWIST: IPC-6012C TYPE 3 CLASS 2 OTHER +/-

COPPER THICKNESS (FINISHED):
 OUTER: 1/4 OZ. 1/2 OZ. 1.0 OZ. 2.0 OZ.
 INNER SIGNAL: 1/4 OZ. 1/2 OZ. 1.0 OZ. 2.0 OZ.
 INNER PLANE: 1/4 OZ. 1/2 OZ. 1.0 OZ. 2.0 OZ.
 OTHER: _____

BOARD FINISH:
 SILKSCREEN: TOP BOTTOM
 SILKSCREEN COLOR: WHITE OTHER: _____

SOLDERMASK: (PER IPC-6011,6012)
 TOP BOTTOM

SOLDERMASK COLOR: GREEN BLUE OTHER: BLACK

THROUGH-HOLE VIA TREATMENT:
 OPEN TENTED IDENTIFIER: ALL 8 MIL VIAS
 VIA FILL USING NON-CONDUCTIVE EPOXY:
 NO YES IDENTIFIER: ALL 6.01 MIL VIAS

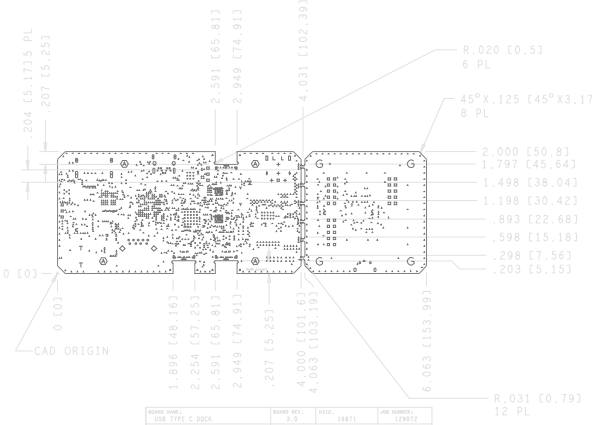
THEIVING ALLOWED: YES NO

BOARD SURFACE TREATMENT:
 NICKEL/GOLD (ENIG) ORGANIC (OSP) HASL ENEPIG
 IMMERSION TIN OTHER: _____

FOR WIRE BONDING:
 HARD GOLD SOFT GOLD PER SUPPLIED ARTWORK

ADDITIONAL REQUIREMENTS:
 MICRO-SECTION TDR REPORTS/COUPONS ELECTRICAL TEST
 CERTIFICATES OF COMPLIANCE RoHS UL 94V-0

VENDOR MARKING:
 VENDOR DATE CODE, UTL, LOGO: ETCH SILKSCREEN BREAK-AWAY
 IN AN OPEN AREA WHERE INDICATED (SEE DRAWING)



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	BOARD NAME : USB TYPE C DOCK	
FABRICATION DRAWING		
APPROVALS	DATE	SIZE KSID NO.
DRAWN: MT	03-09-16	16871
RELEASED: JO	03-09-16	129072
DO NOT SCALE DRAWING	SCALE NONE	SHEET 1 OF 1

8 7 6 5 4 3 2 1

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