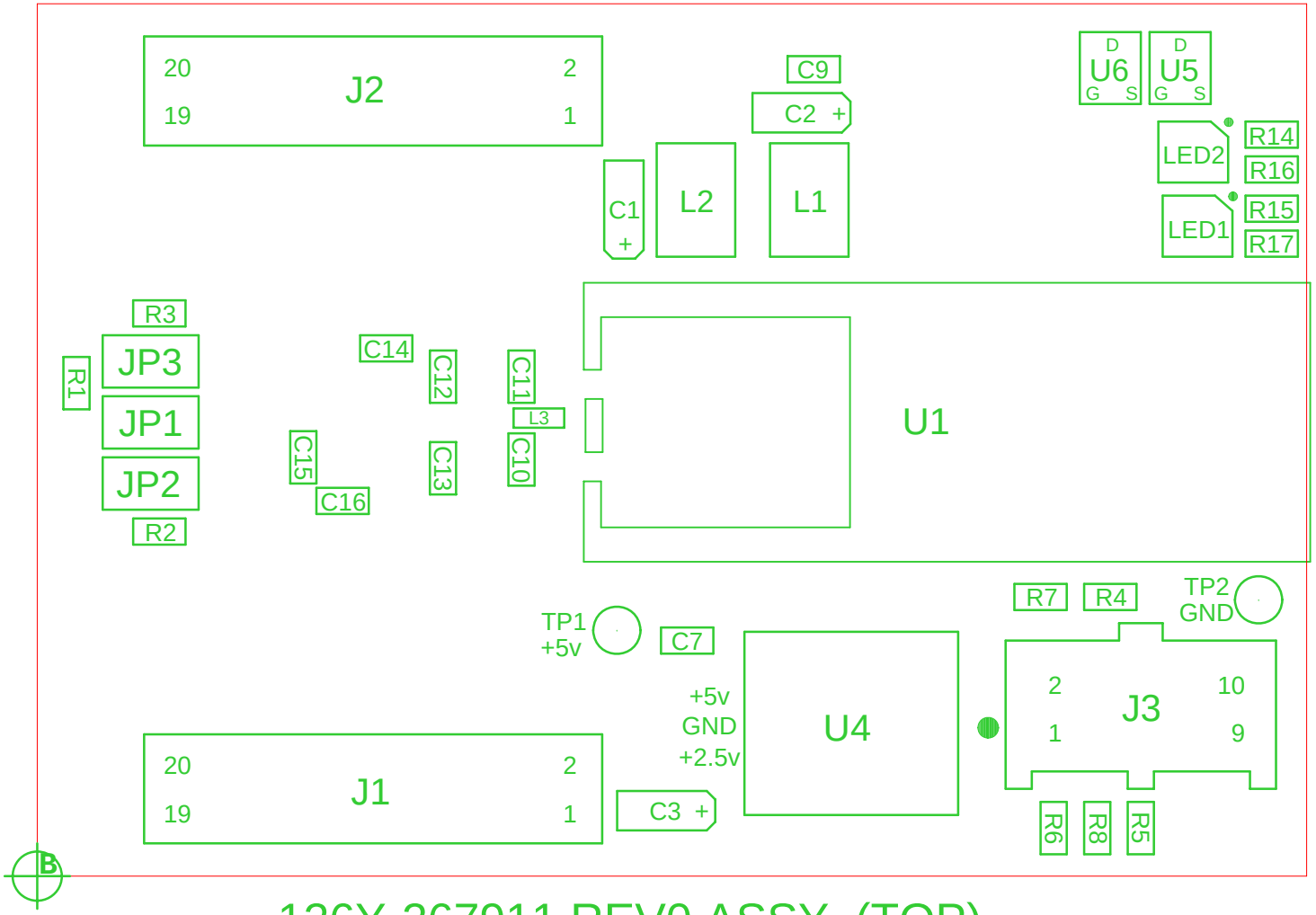
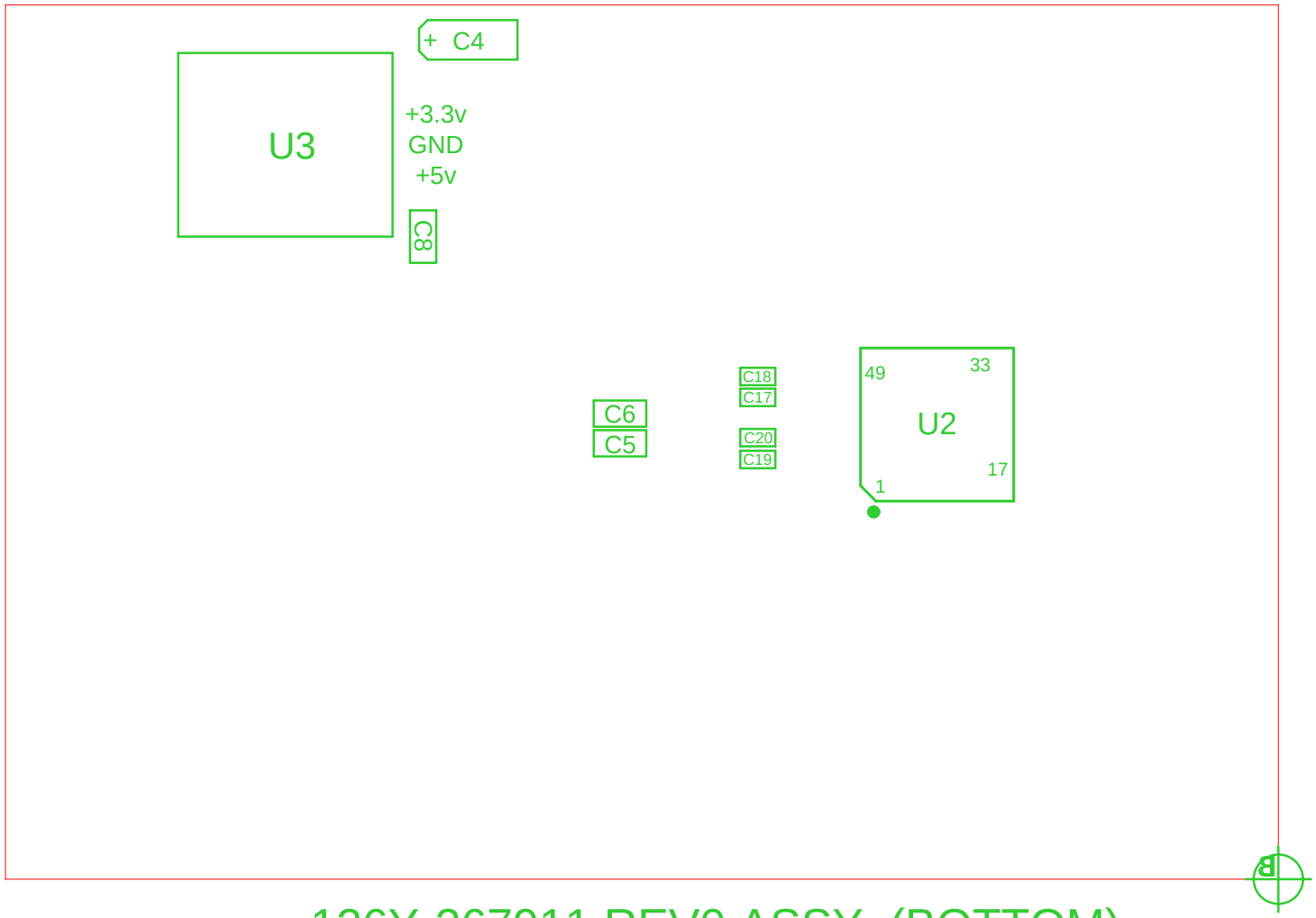
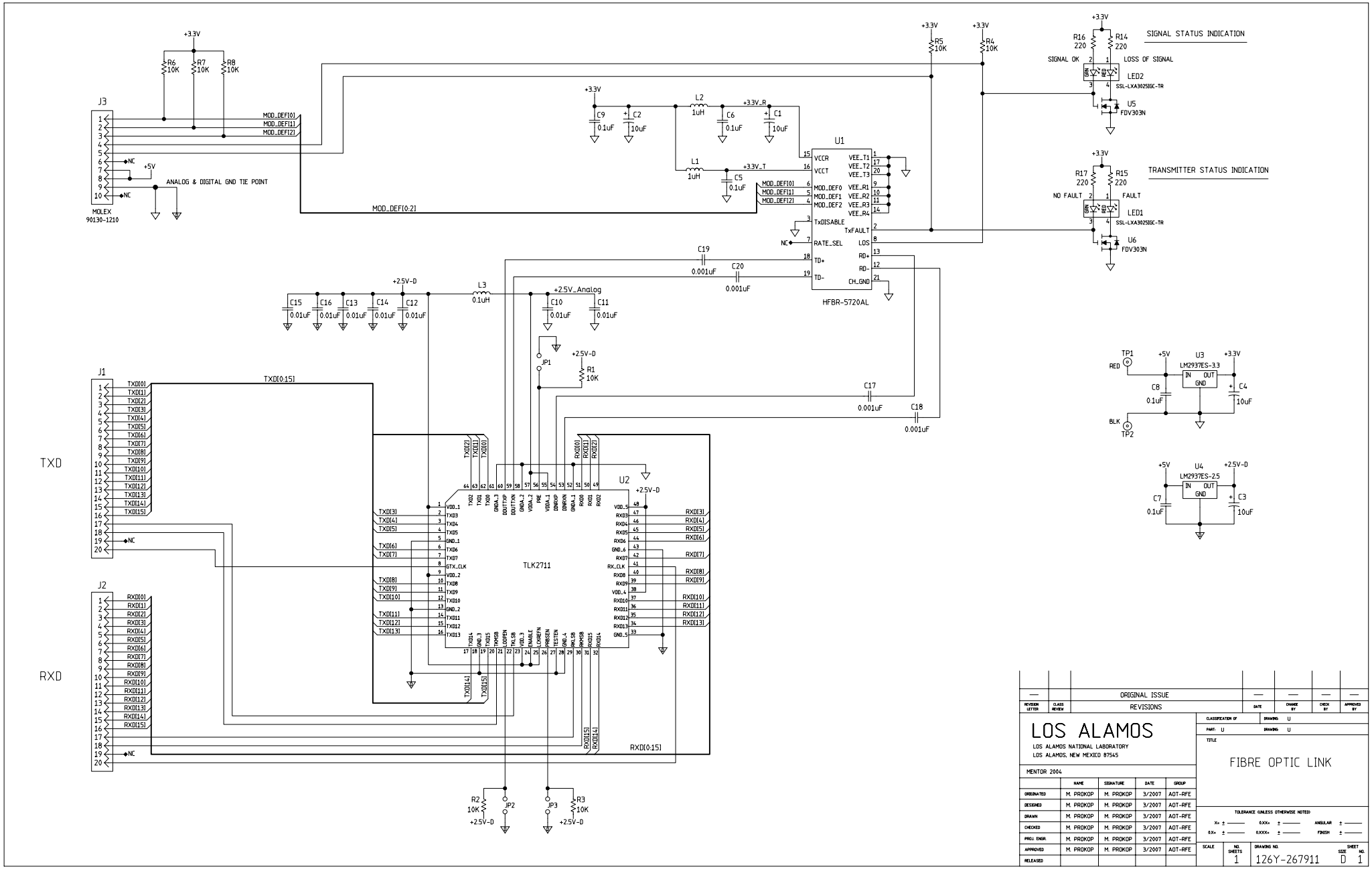


126Y-267911 REV0 ASSY. (TOP)

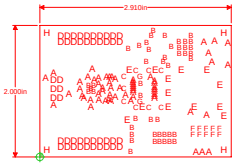


126Y-267911 REV0 ASSY. (BOTTOM)

FIBRE OPTIC LINK (BOM) #126Y-267911 REV0 4-19-2007							
ITEM	**QTY**	**REF DES**	**DESCRIPTION**	**VENDOR**	**VALUE**	**FOOTPRINT**	**PART NO**
1	4	C1-C4	CAPACITOR,35V,TANTALUM CHIP	KEMET	10uF	C3216	CWR11MH102KB
2	5	C5-C9	CAPACITOR,50V,CHIP	KEMET	0.1uF	603	C0603C104K5RAC
3	7	C10-C16	CAPACITOR,50V,CHIP	KEMET	0.01uF	603	C0603C105K5RAC
4	4	C17-C20	CAP 25V CHIP (1000pF)	PANASONIC	0.001uF	402	ECJ-0EB1E102K
5	2	J1-J2	CONNECTOR,HEADER,2 ROW,20PIN	BERG ELEC		J20HD2	89F4689
6	1	J3	10 PIN SHROUDED HEADER	MOLEX		C-GRID3_10P	90130-1210
7	3	JP1-JP3	JUMPER, 2 PIN	BERGSTICK		BERG2	68040_
8	2	L1-L2	INDUCTOR, 1.0UH	JW MILLER	1uH	PM1812	PM1812-1ROJ-RC
9	1	L3	INDUCTOR, 100nH	TAIYO YUDEN	0.1uH	1608	HK1608R10J-T
10	2	LED1-LED2	DUAL RED/GRN LED	LUMEX		3x2.5mm_LUMEX_LED	SSL-LXA3025IGC-TR
11	8	R1-R8	RESISTOR,1/16W,1%,CHIP	DALE	10K	603	CRCW06031002FRT1
12	4	R14-R17	RESISTOR,1/16W,5%,CHIP	PANASONIC	220	603	ERJ-3GEYJ221V
13	1	TP1	RED MINI TEST POINT	KEYSTONE		KEYSTONE_MINI_TP	5000
14	1	TP2	BLACK MINI TEST POINT	KEYSTONE		KEYSTONE_MINI_TP	5001
15	1	U1	Optical Transciever	Agilent		HFBR-5720	HFBR-5720AL
16	1	U2	1.6 TO 2.7 GBPS TRANSCEIVER	TI		64_.5MMSP_.472W_THERMAL_.17	TLK2711
17	1	U3	POS. LDO REG. 500ma	NATIONAL SEMI.		TO-263_LEE	LM2937ES-3.3
18	1	U4	POS. LDO REG. 500ma	NATIONAL SEMI.		TO-263_LEE	LM2937ES-2.5
19	2	U5-U6	DIGITAL FET, N-CHANNEL	FAIRCHILD		SOT23	FDV303N
Total Parts Used: 51							


J3
MOLEX
90130-1210
MOD_DEF[0]
MOD_DEF[1]
MOD_DEF[2]
MOD_DEF[0:2]
ANALOG & DIGITAL GND TIE POINT
+3.3V
+5V
NC
R6 10K
R7 10K
R8 10K
R5 10K
R4 10K
C9 0.1uF
C2 10uF
L2 1uH
C6 0.1uF
C1 10uF
L1 1uH
C5 0.1uF
+3.3V_R
+3.3V_T
U1
HFBR-5720AL
VCCR
VCCT
VEE_T1
VEE_T2
VEE_T3
MOD_DEF0
MOD_DEF1
MOD_DEF2
VEE_R1
VEE_R2
VEE_R3
VEE_R4
TxDISABLE
TxFAULT
RATE_SEL
LOS
TD+
TD-
RD+
RD-
CH_GND
C19 0.001uF
C20 0.001uF
C17 0.001uF
C18 0.001uF
SIGNAL STATUS INDICATION
R16 220
R14 220
SIGNAL OK
LOSS OF SIGNAL
LED2
SSL-LXA3025IGC-TR
U5
FDV303N
TRANSMITTER STATUS INDICATION
R17 220
R15 220
NO FAULT
FAULT
LED1
SSL-LXA3025IGC-TR
U6
FDV303N
+2.5V-D
+2.5V_Analog
L3 0.1uH
C15 0.01uF
C16 0.01uF
C13 0.01uF
C14 0.01uF
C12 0.01uF
C10 0.01uF
C11 0.01uF
JP1
R1 10K
TP1
RED
TP2
BLK
U3
LM2937ES-3.3
IN
OUT
GND
C8 0.1uF
C4 10uF
U4
LM2937ES-2.5
C7 0.1uF
C3 10uF
J1
TXD
TXD[0:15]
J2
RXD
RXD[0:15]
U2
TLK2711
R2 10K
JP2
JP3
R3 10K
ORIGINAL ISSUE
REVISIONS
LOS ALAMOS
LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO 87545
MENTOR 2004
FIBRE OPTIC LINK
M. PROKOP
3/2007
AOT-RFE
126Y-267911
D
1

PART NUMBER			PARTS LIST
PREFIX NUMBER	ITEM NUMBER	NUMBER REQD	DESCRIPTION



FIBRE OPTIC LINK

126Y-267911 REV: 0 3-2007

D6 - FAB NOTES

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATERIAL : .063 THK FR-4, +/- .008. LAMINATE GLASS FIBER EPOXY FLAME RETARDANT PER IPC-4101.
2. COPPER PLATING : TOTAL ON THE SURFACE INCLUDING ORIGINAL CLADDING PLUS PLATED COPPER SHALL BE 1 OZ. MINIMUM. COPPER PLATING ON WALL OF HOLES SHALL BE .0008" AVG. MIN. NO VALUE LESS THAN .0007".
3. SOLDER PLATING: SURFACE CONDUCTOR PATTERN AND SOLDER PLATE ON WALL OF PLATED THROUGH HOLES SHALL BE TIN-LEAD (60% TIN, 40% LEAD) IN ACCORDANCE WITH THE SOLDERABILITY REQUIREMENTS OF J-STD-003.
4. TRIM CARD TO DIMENSIONS SHOWN. DIMENSIONS ARE IN INCHES.
5. DO NOT SCALE DRAWING.
6. SEE DRILL TABLE FOR PLATING REQUIREMENTS.
7. HOLE DIAMETERS APPLY AFTER PLATING +/- .003.
8. USE THE FOLLOWING ARTWORK/STACKUP FOR LANL PN 126Y-267911 REV -0 :

DIELECTRIC LAYER - 20mils →
DIELECTRIC LAYER - 30mils →
DIELECTRIC LAYER - 6mils →

M1 - LAYER 1, PRIMARY SIDE
M2 - LAYER 2, POWER PLANES
M3 - LAYER 3, SIGNAL AND GROUND
M4 - LAYER 4, SECONDARY SIDE
M5 - SOLDERMASK, PRIMARY SIDE
M6 - SOLDERMASK, SECONDARY SIDE
M7 - SILKSCREEN, PRIMARY SIDE
M8 - SILKSCREEN, SECONDARY SIDE
D6 - FAB NOTES

ALL COPPER LAYERS ARE 1oz.

9. SOLDER MASK (SMOBC) BOTH SIDES OF BOARD.
10. SILKSCREEN BOTH SIDES OF BOARD USING WHITE INK.
11. MANUFACTURE IN ACCORDANCE WITH IPC 6011 AND 6012- CLASS 2.
12. NO MODIFICATIONS OR REPAIRS WITHOUT PRIOR APPROVAL.
13. APPROVED MODIFICATIONS OR REPAIRS SHALL BE IN ACCORDANCE WITH IPC-R-700.

Through Holes
All Drills (unless specified) +/- 0.003 (in)

Symbol	Diameter (in)	Tolerance (in)	Plated	Punched	Hole Name	Quantity
A	0.010		Yes	No	Rnd 10	61
B	0.020		Yes	No	Rnd 20	47
C	0.037		Yes	No	Rnd 37	9
D	0.039		Yes	No	Rnd 39	46
E	0.041		Yes	No	Rnd 41	13
F	0.044		Yes	No	Rnd 44	10
G	0.061		No	No	Rnd 61 Non-Plated	2
H	0.114		No	No	Rnd 114 Non-Plated	4

REVISION LETTER	CLASS REVIEW	REVISIONS	DATE	CHANGED BY	CHECKED BY	APPROVED BY
		RELEASED FOR FABRICATION				

LOS ALAMOS

LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO 87545

WG2004.1 (EXPEDITION)

	NAME	SIGNATURE	DATE	GROUP
ORIGINATED	M. PROKOP	M. PROKOP	3/07	AOT-RFE
DESIGNED	M. PROKOP	M. PROKOP	3/07	AOT-RFE
DRAWN	M. PROKOP	M. PROKOP	3/07	AOT-RFE
CHECKED	M. PROKOP	M. PROKOP	3/07	AOT-RFE
PROJ ENGR	M. PROKOP	M. PROKOP	3/07	AOT-RFE
APPROVED	M. PROKOP	M. PROKOP	3/07	AOT-RFE
RELEASED				

CLASSIFICATION OF DRAWING UNCLASSIFIED
PART UNCLASSIFIED TITLE BLOCK UNCLASSIFIED

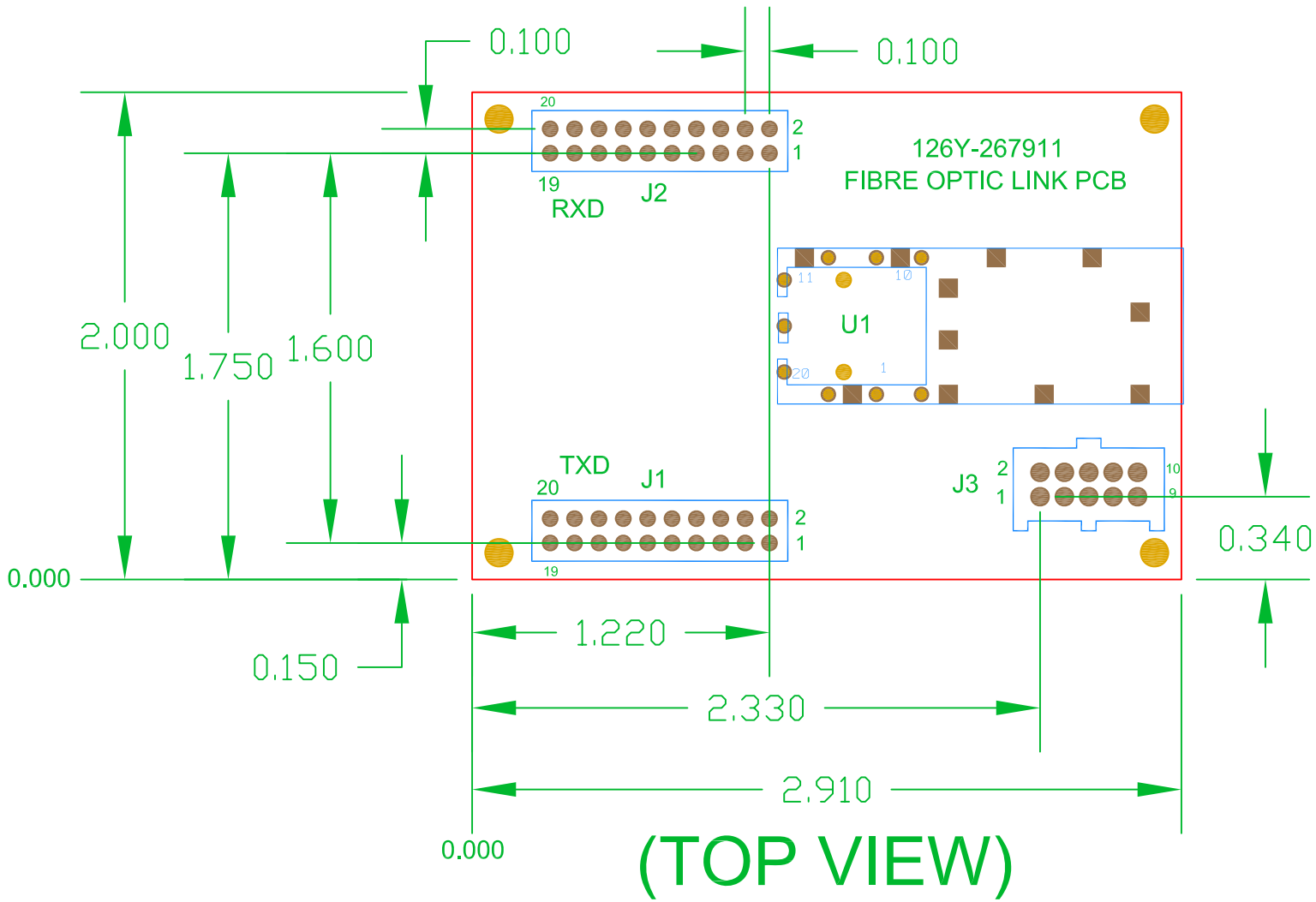
PROJECT

FIBRE OPTIC LINK

FABRICATION DRAWING

TOLERANCE (UNLESS OTHERWISE NOTED)
X = - 0.XX = .01 ANGULAR = -
0.X = - 0.XXX = -010 FINISH = 125

SCALE	TOTAL SHEETS	DRAWING NO.	SHEET SIZE	NO.
N/A	1	126Y-267911	D	1


0.100
0.100
20
2
1
19
RXD
J2
126Y-267911
FIBRE OPTIC LINK PCB
U1
2.000
1.750
1.600
TXD
20
J1
2
1
19
J3
2
1
10
9
0.340
0.000
0.150
1.220
2.330
2.910
0.000
(TOP VIEW)