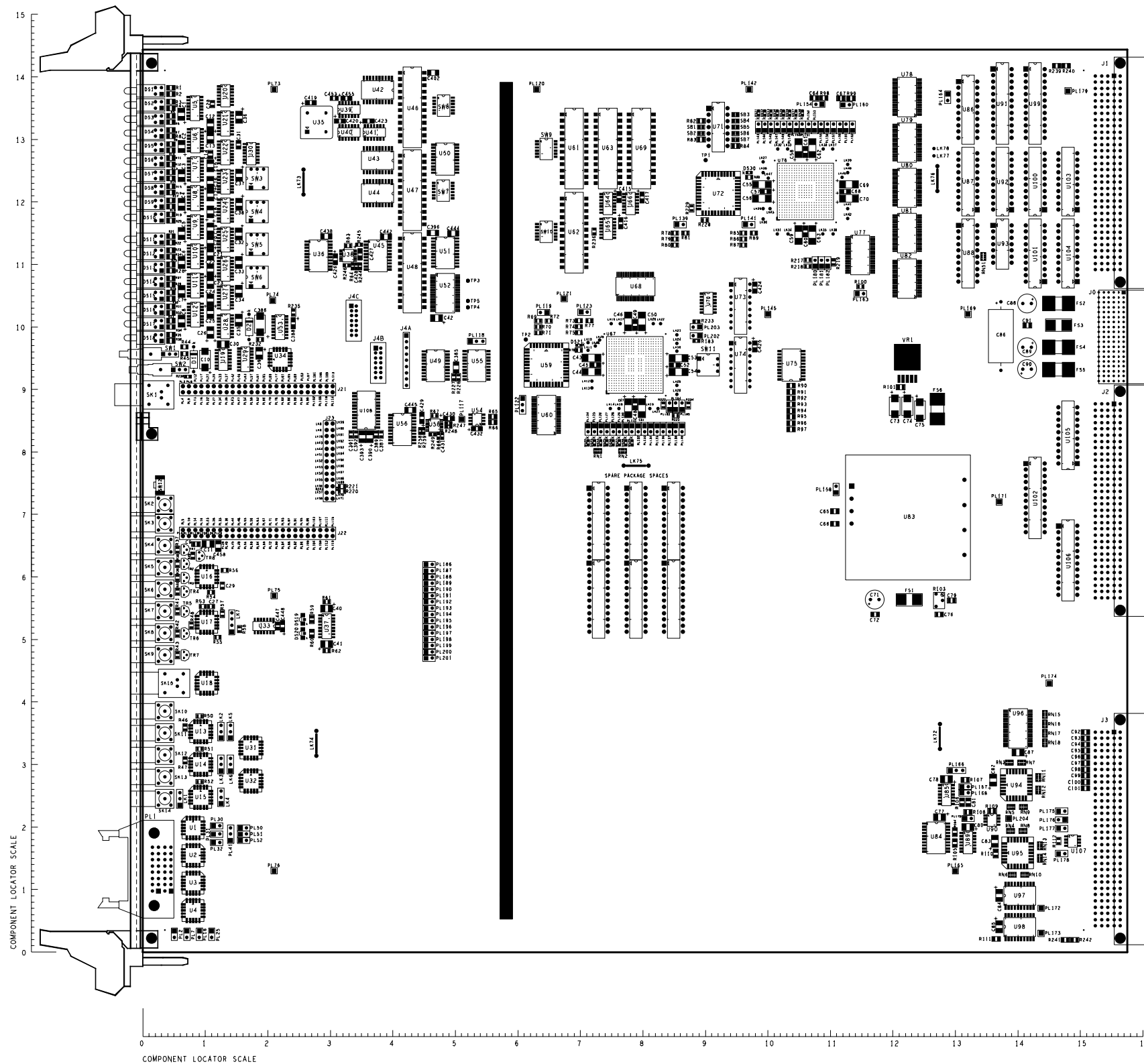


BOARD VIEWED ON 'A' FACE



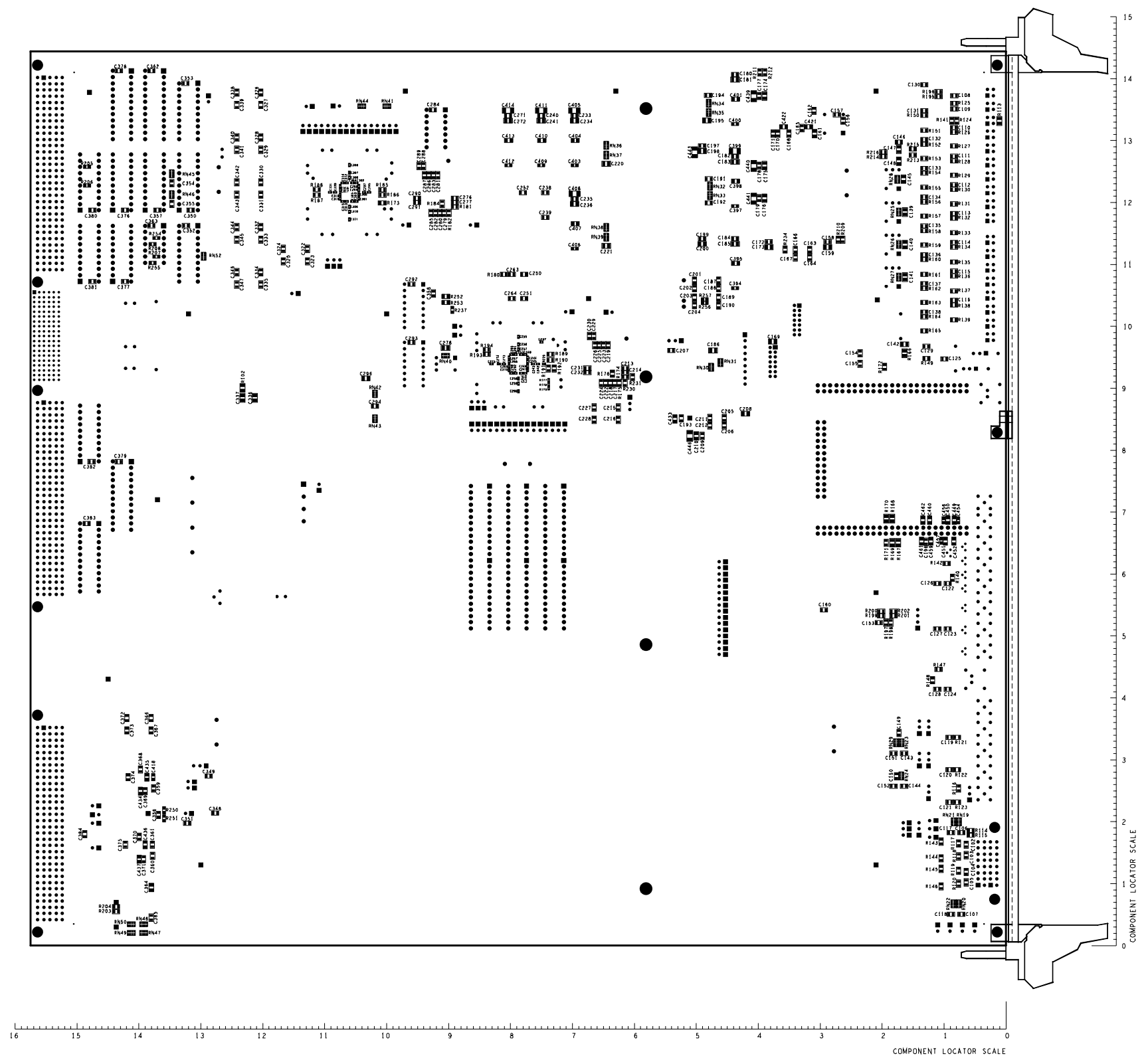
ASSEMBLY NOTES

- SOLDER PASTE MASTERS AVAILABLE FOR ASSEMBLY OF SURFACE MOUNT COMPONENTS.
 TOP SOLDER PASTE - PC3216M/2 O FACE
 BOTTOM SOLDER PASTE - PC3216M/2 P FACE
 BOTTOM ASSEMBLY DRG. AVAILABLE - A1-TE-0102-046-02-*
- ENSURE CORRECT ORIENTATION OF COMPONENTS.
 - MOUNT LOW PROFILE SOCKETS WHERE ALL DIL I.C.'s ARE TO BE MOUNTED. SEE KITTING LIST FOR DETAILS
 MOUNT U71 IN A DIL SOCKET. NOT IN LOW PROFILE SOCKET. SEE KITTING LIST.
 U73 AND U74 ARE TO BE SOLDERED DIRECTLY TO THE BOARD. NOT IN SOCKETS.
 - FIT PRECI-DIP PCB CONNECTORS 714-91-125-31-001 TO CREATE J21, J22 AND J23 CONNECTORS THESE ARE TO BE SOLDERED IN BUT NOT CUT SHORT BECAUSE DAUGHTER BOARD LEGS HAVE TO PUSH THROUGH THE BOARD.
 - MOUNT GROUND BARS LK72-LK76 AS HIGH OFF THE BOARD AS POSSIBLE.
 - DO NOT FIT CONNECTOR J0.
 - USE SCHROFF MOUNTING BLOCK TO FIT FRONT PANEL IN THE CENTRE. SEE KITTING LIST FOR DETAILS.
 - DO NOT FIT R220, R221 AND R225.

B	29-07-2004	TE238	D. J. BECKETT	D. J. BALLARD	M. POSTRANECKY	
A	23-05-2003	- - -	D. J. BECKETT	C. P. DAY	M. POSTRANECKY	
ISSUE	DATE	MOD NO.	DRAWN	CHECKED	APPROVED	STATUS
TOLERANCE UNLESS STATED				FINISH		ORIGINAL SCALE 1:1
				REMOVE ANY BURRS		DO NOT SCALE
MATERIAL & SPEC				SURFACE TEXTURE micro m		0 50mm
				✓ UNLESS STATED		
USED ON				CCLRC 2003		
COUNCIL FOR THE CENTRAL LABORATORY RUTHERFORD APPLETON LABORATORY, CHILTON, OXON. OX11 0OX OF THE RESEARCH COUNCILS						
TITLE PC3216M				TOP ASSEMBLY		
				TTC INTERFACE MODULE (TIM-3B)		
A1-TE-0102-046-01-B						
TOTAL NO. OF SHEETS 2						

A1-TE-0102-046-01-B

BOARD VIEWED ON 'J' FACE

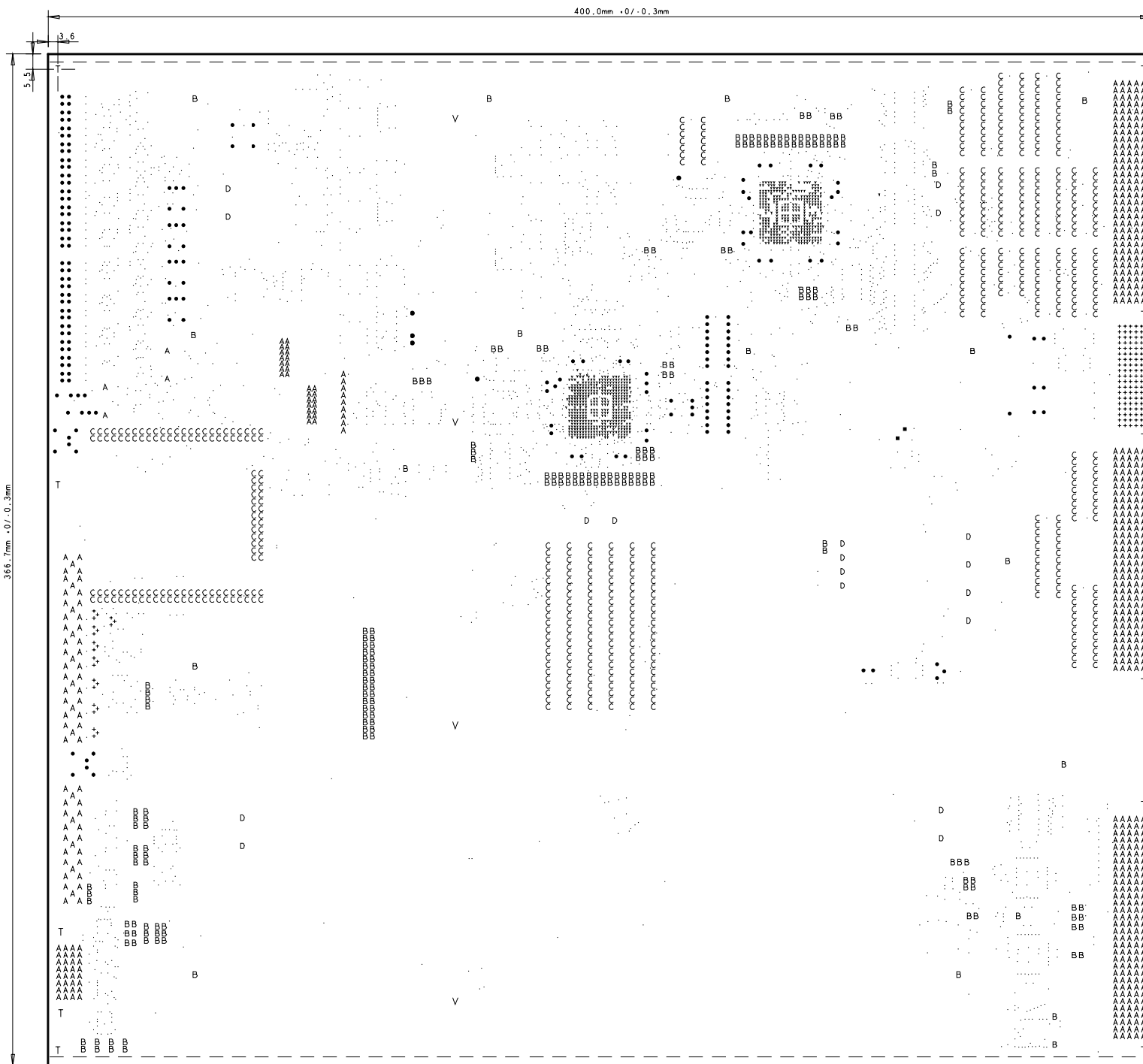
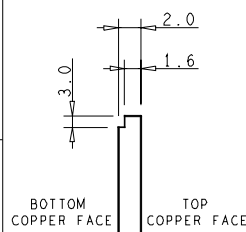


ASSEMBLY NOTES

SOLDER PASTE MASTERS AVAILABLE FOR ASSEMBLY OF SURFACE MOUNT COMPONENTS.
 TOP SOLDER PASTE - PC3216M/1 O FACE
 BOTTOM SOLDER PASTE - PC3216M/1 P FACE
 TOP ASSEMBLY DRG. AVAILABLE - A1-TE-0102-046-01-*

B	29-07-2004	TE238	D. J. BECKETT	D. J. BALLARD	M. POSTRANECKY	
A	23-05-2003	- - -	D. J. BECKETT	C. P. DAY	M. POSTRANECKY	
ISSUE	DATE	MOD NO.	DRAWN	CHECKED	APPROVED	STATUS
TOLERANCE UNLESS STATED			FINISH		ORIGINAL SCALE 1:1	
MATERIAL & SPEC			REMOVE ANY BURRS		DO NOT SCALE	
			SURFACE TEXTURE micro m		0 50mm	
			UNLESS STATED		CCLRC 2003	
CCLRC COUNCIL FOR THE CENTRAL LABORATORY RUTHERFORD APPLETON LABORATORY, CHILTON, OXON, OX11 0OX OF THE RESEARCH COUNCILS						
TITLE			PC3216M BOTTOM ASSEMBLY			
			TTC INTERFACE MODULE (TIM-3B)			
A1-TE-0102-046-02-B						

END VIEW OF CARD
NOT TO SCALE



MANUFACTURING NOTES

- 1 STYLE - MULTILAYER (10 LAYERS)
- 2. MATERIAL - FR4
- 3. FINISHED BOARD THICKNESS - 2.0mm WITH TWO EDGES REDUCED TO 1.6mm (SEE END VIEW)
- 4. BASE COPPER - OUTER - 17 MICRONS
INNER - 17 MICRONS
- 5 FINISH - IMMERSION GOLD OVER NICKEL
- 6. SOLDER RESIST - GREEN, PHOTOIMAGABLE (2 OFF)
- 7. COMPONENT IDENT. - WHITE (2 OFF)
- 8 RELEASE - CERTIFICATE OF CONFORMITY

PC3216M ISSUE 2		
LAYER STRUCTURE		
LAYER	DESCRIPTION	COMMENT
K	COMPONENT IDENT - TOP	
M	SOLDER RESIST - TOP	MOSTLY RESIST
A	TOP TRACKS	SEE CONTROLLED & DIFFERENTIAL TABLES
B	GROUND PLANE 1	MOSTLY COPPER
C	INNER TRACKS 1	
D	INNER TRACKS 2	SEE DIFFERENTIAL IMPEDANCE TABLE
E	VCC PLANE	MOSTLY COPPER
F	VEE/SVS PLANE	MOSTLY COPPER
G	INNER TRACKS 3	
H	INNER TRACKS 4	SEE DIFFERENTIAL IMPEDANCE TABLE
I	GROUND PLANE 2	MOSTLY COPPER
J	BOTTOM TRACKS	SEE CONTROLLED & DIFFERENTIAL TABLES
N	SOLDER RESIST - BOTTOM	MOSTLY RESIST
L	COMPONENT IDENT - BOTTOM	

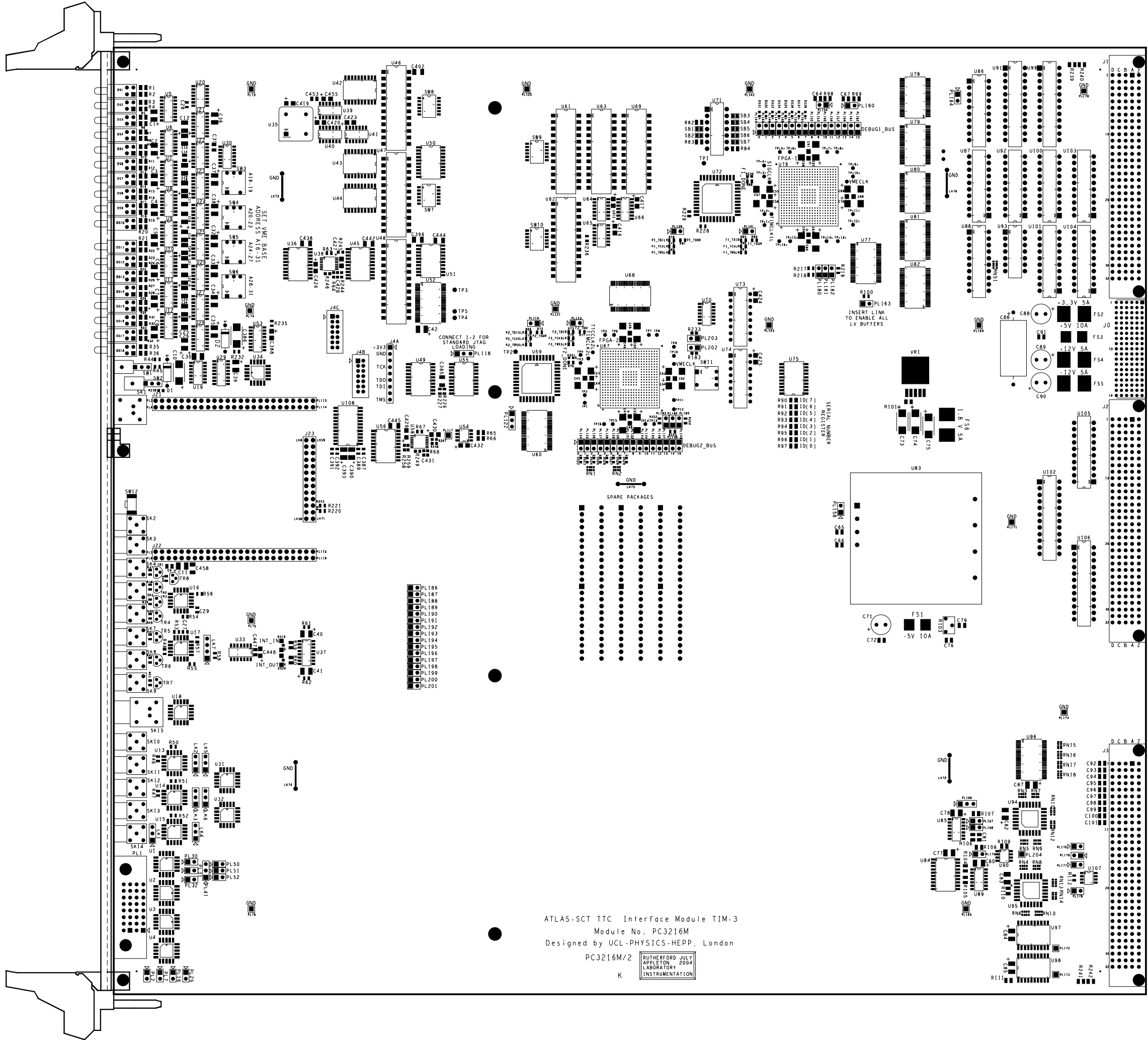
HOLE SIZES (FINISHED)				
TOOL	SYMBOL	SIZE(mm)	PLATED	QTY
T01	-	0.2	YES	757
T02	-	0.3	YES	2521
T03	-	0.4	YES	2
T04	-	0.6	YES	138
T05	-	0.8	YES	204
T06	A	0.9	YES	618
T07	B	1.0	YES	257
T08	-	1.1	YES	5
T09	C	1.1	YES	574
T10	D	1.2	YES	18
T11	T	2.8	YES	11
T12	V	3.0	YES	4

TABLE OF CONTROLLED IMPEDANCE - 70-100 OHMS					
LAYER	TRACK P-CODE	TRACK WIDTH	MIN. GAP	Z ₀	REF. LAYER/LAYERS
A	-	.005"	.006"	82	B (MICROSTRIP)
J	-	.005"	.006"	82	I (MICROSTRIP)

TABLE OF DIFFERENTIAL IMPEDANCE-100 OHMS					
LAYER	TRACK P-CODE	TRACK WIDTH	MIN. GAP	Z ₀	REF. LAYER/LAYERS
A	-	.006"	.005"	100	# SEE BELOW
D	-	.005"	.009"	100	# SEE BELOW
H	-	.005"	.009"	100	# SEE BELOW
J	-	.008"	.005"	100	# SEE BELOW

DIFFERENTIAL IMPEDANCE OF 100 OHMS REQUIRED BETWEEN PAIRS OF .005" TRACKS RUNNING IN PARALLEL SEPARATED BY A .008" GAP.
DIFFERENTIAL IMPEDANCE OF 100 OHMS REQUIRED BETWEEN PAIRS OF .008" TRACKS RUNNING IN PARALLEL SEPARATED BY A .005" GAP.

B	29-07-2004	TE238	D. J. BECKETT	D. J. BALLARD	M. POSTRANECKY	
A	23-05-2003	- - -	D. J. BECKETT	C. P. DAY	M. POSTRANECKY	
ISSUE	DATE	MOD NO.	DRAWN	CHECKED	APPROVED	STATUS
TOLERANCE UNLESS STATED GENERAL +/- 0.1 mm HOLES +/- 0.05 mm			FINISH SEE NOTES REMOVE ANY BURRS SURFACE TEXTURE micro m		ORIGINAL SCALE 1:1 DO NOT SCALE	
MATERIAL & SPEC SEE NOTES			SURFACE TEXTURE micro m		0 50mm	
USED ON						UNLESS STATED
CCLRC 2003						
COUNCIL FOR THE CENTRAL LABORATORY RUTHERFORD APPLETON LABORATORY, CHILTON, OXON. OX11 0OX OF THE RESEARCH COUNCILS						
TITLE PC3216M			DRILLING TTC INTERFACE MODULE (TIM-3B)			
A1-TE-0102-045-00-B						
TOTAL NO. OF SHEETS 1						

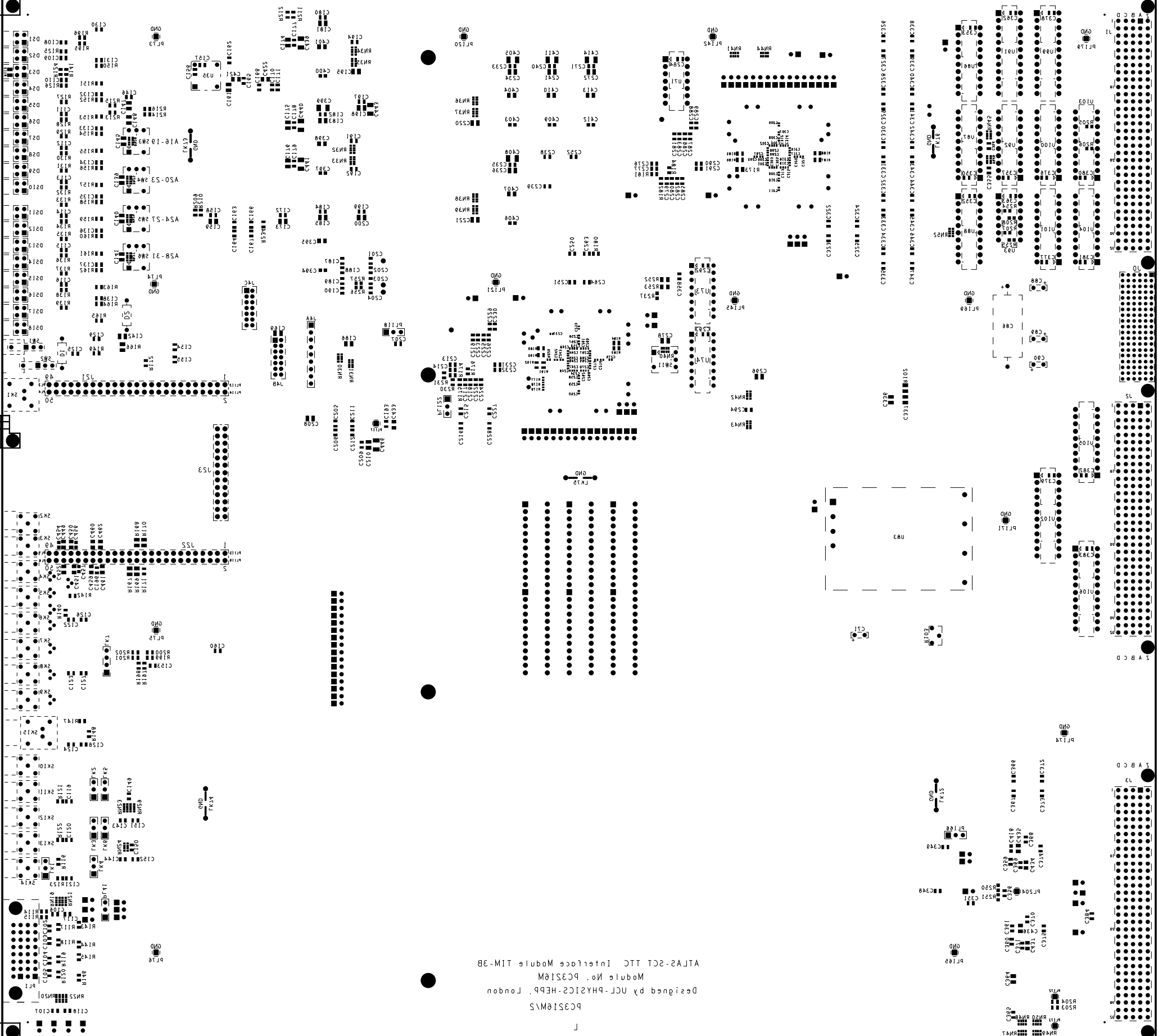
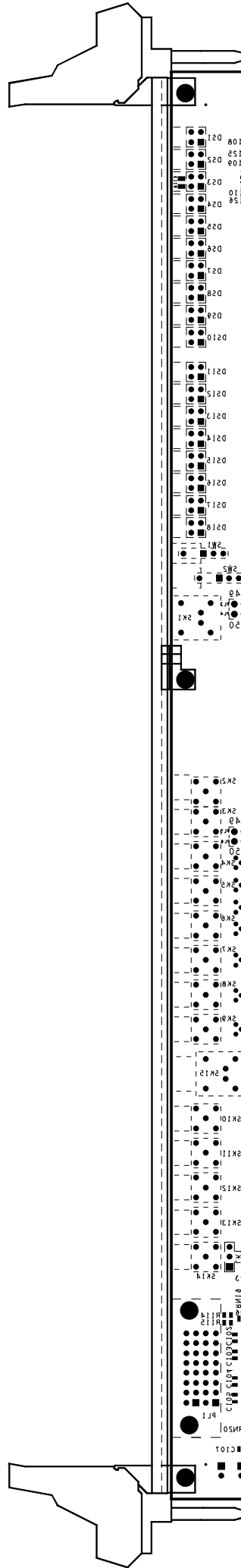


K COMPONENT IDENT

ATLAS-SCT TTC Interface Module TIM-3
Module No. PC3216M
Designed by UCL-PHYSICS-HEPP, London
PC3216M/2

RUTHERFORD JULY
APPLETON 2004
LABORATORY
INSTRUMENTATION

- PL186
- PL187
- PL188
- PL189
- PL190
- PL191
- PL192
- PL193
- PL194
- PL195
- PL196
- PL197
- PL198
- PL199
- PL200
- PL201



PC3218MVS
 Designed by UCL-PHYSICS-HEPP, London
 Module No. PC3218M
 ATLAS-2CT TTC Interface Module TIM-3B

L COMPONENT IDENT