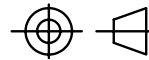


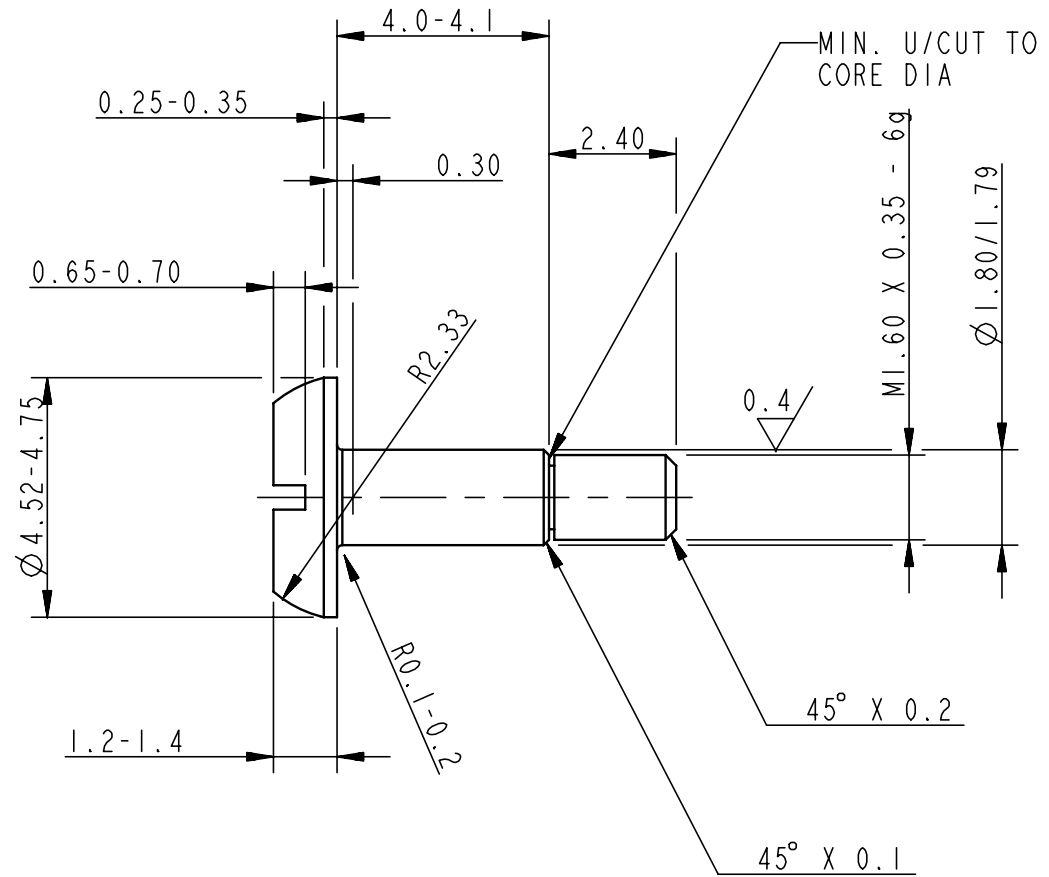
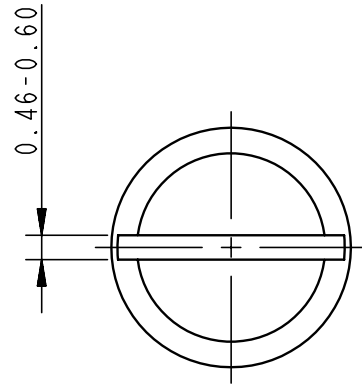
A3

TB-0059-130

PROJECTION



THIS DRAWING CONFORMS TO B.S. 308



  
ACTUAL SIZE

PROVISIONAL

F	13/SEP/00	-----	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS

USED ON

© CLRC 2000

CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX

TITLE

**SHOULDER SCREW (SLOTTED HEAD)**  
**MODULE FIXING - PRODUCTION VERSION**

ATLAS\_ID

ADR025

A3 TB-0059-130

SHEET

1 OF 1

F

TB-0059-130

A3

TOLERANCES UNLESS STATED

 $\pm 0.100$  mm  
 $\pm 0.250$  °

FINISH

 CLEAN  
 REMOVE ALL BURRS

ORIGINAL SCALE

 10:1  
 DO NOT SCALE

MATERIAL &amp; SPEC.

 STAINLESS STEEL  
 A2/A4
SURFACE TEXTURE  $\mu$ m

1.6

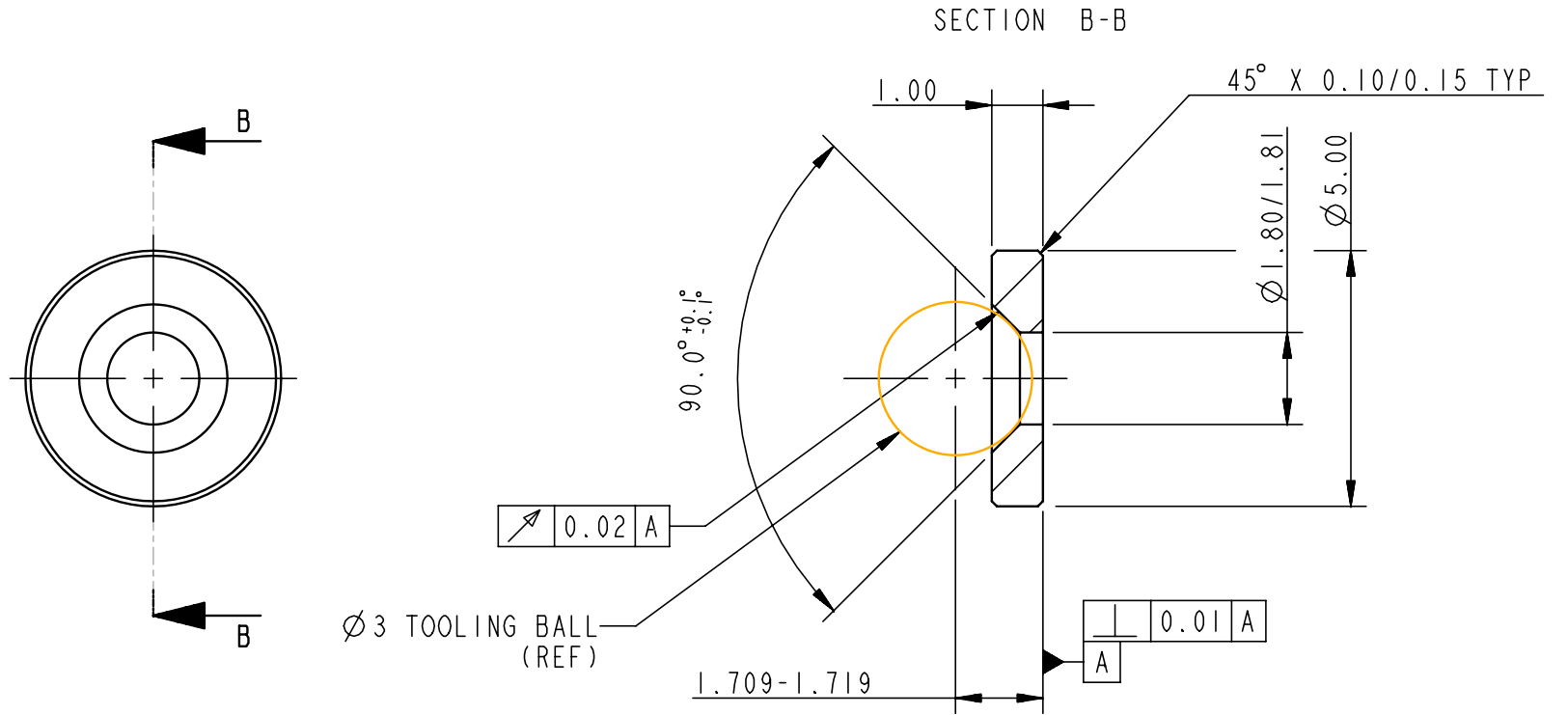
 UNLESS STATED

A3

TB-0059-206

PROJECTION

THIS DRAWING CONFORMS TO B.S. 308



PROVISIONAL

TB-0059-206

A3

F	13/SEP/00	-----	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
USED ON					AI-TB-0059-508	
					© CLRC 2000	
CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX						
TITLE						
<b>DATUM WASHER</b>						
<b>ATLAS SCT BARREL MODULE</b>						
ATLAS_ID					ADR025	
<b>A3 TB-0059-206</b>					SHEET <b>1 OF 1</b>	
					<b>F</b>	

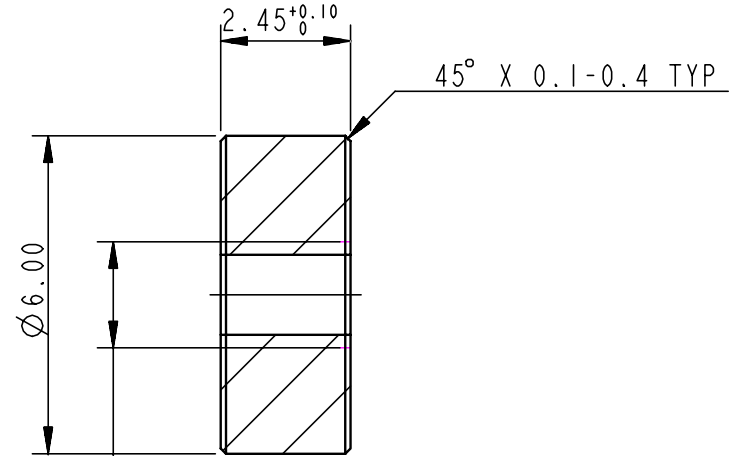
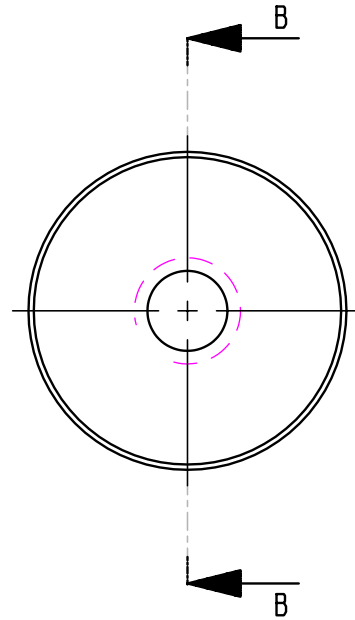
TOLERANCES UNLESS STATED	FINISH	ORIGINAL SCALE
±0.200 mm ±0.250 °	CLEAN REMOVE ALL BURRS	10:1 DO NOT SCALE
MATERIAL & SPEC.	SURFACE TEXTURE µM	
ALUM., ALLOY 6082	1.6 ✓ UNLESS STATED	

A3

TB-059-208

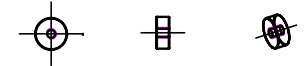
PROJECTION

THIS DRAWING CONFORMS TO B.S. 308



M2 X 0.4-6H

SECTION B-B



ACTUAL SIZE

PROVISIONAL

TB-059-208

A3

F	13/SEP/00	-----	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
USED ON					AI-TB-0059-508	
© CLRC 2000						
CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX						
TITLE						
<b>HANDLING POINT</b>						
<b>ATLAS SCT BARREL MODULE</b>						
ATLAS_ID					ADR025	
<b>A3 TB-059-208</b>				SHEET	<b>1 OF 1</b>	<b>F</b>

TOLERANCES UNLESS STATED

$\pm 0.200$  mm  
 $\pm 0.250$  °

FINISH

CLEAN  
REMOVE ALL BURRS

ORIGINAL SCALE

10:1  
DO NOT SCALE

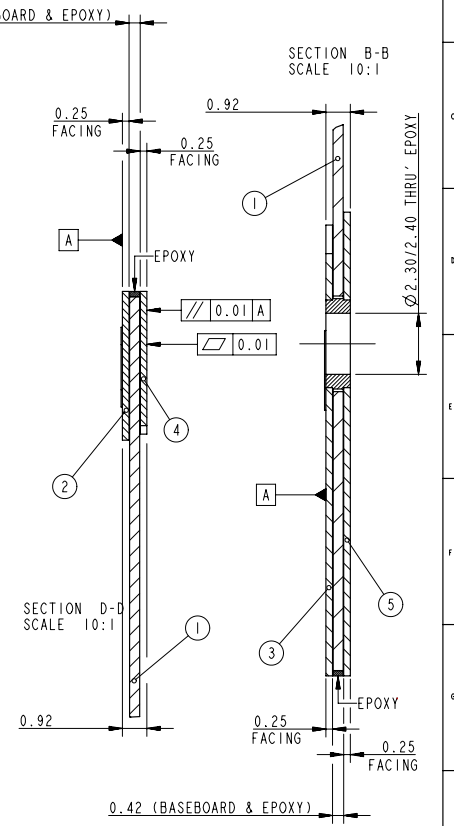
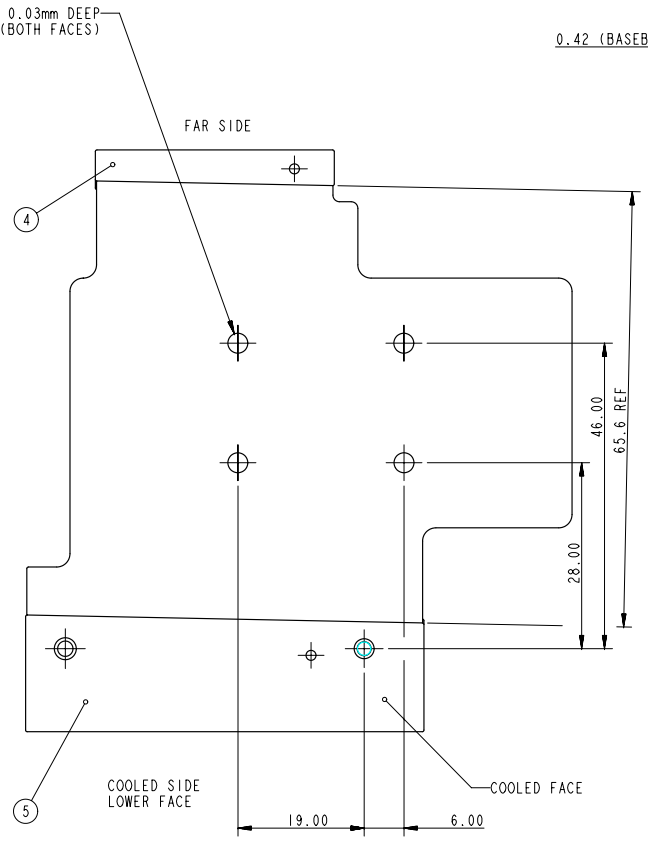
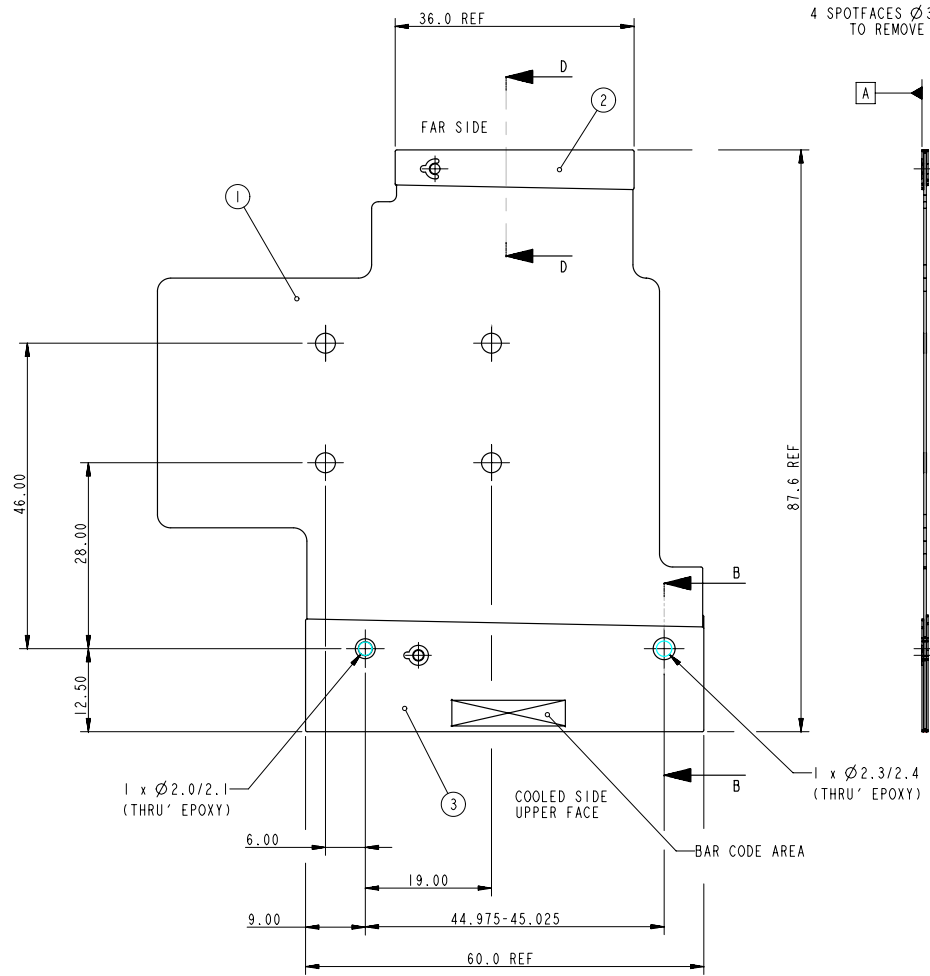
MATERIAL & SPEC.

PEEK  
-----

SURFACE TEXTURE  $\mu$ m

1.6  
✓ UNLESS STATED

ITEM	DRG. NO.	DESCRIPTION	QTY	REMARKS
1	A1-TB-0059-501	BASEBOARD - TPG	1	TPG
2	A3-TB-0059-502	FACING-FAR SIDE-UPPER	1	BeO
3	A3-TB-0059-503	FACING-COOLED SIDE-UPPER	1	BeO
4	A3-TB-0059-504	FACING-FAR SIDE-LOWER	1	BeO
5	A3-TB-0059-505	FACING-COOLED SIDE-LOWER	1	BeO



A I TB-0059-500

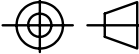
PROVISIONAL

F	13/NOV/00	-----	V FRANCIS	PF	PF	WIP
ISSUE DATE	APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
TOLERANCES UNLESS STATED			FINISH		ORIGINAL SCALE	
± mm			CLEAN		5:2	
± mm			REMOVE ALL BURRS		DO NOT SCALE	
MATERIAL & SPEC.			SURFACE TEXTURE μm			
SEE ITEMS LIST			UNLESS STATED			
USED ON						© CLRC 2000
CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX						
TITLE						
BASEBOARD SUB-ASSY (BeO)						
ATLAS SCT BARREL MODULE						
ATLAS_ID			ADR025			
A I TB-0059-500						SHEET 1 OF 1

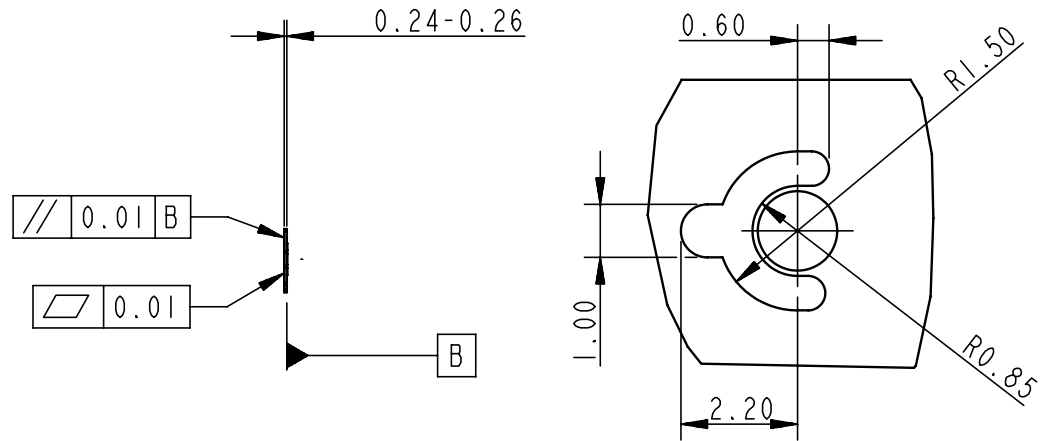
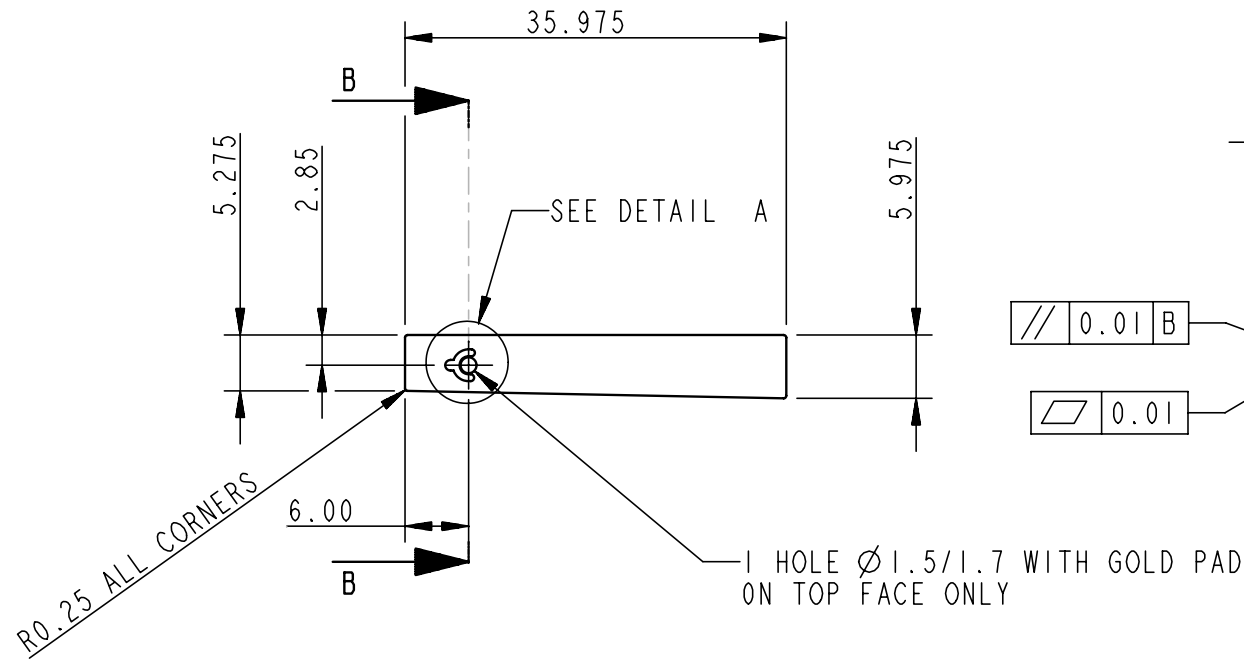


A3

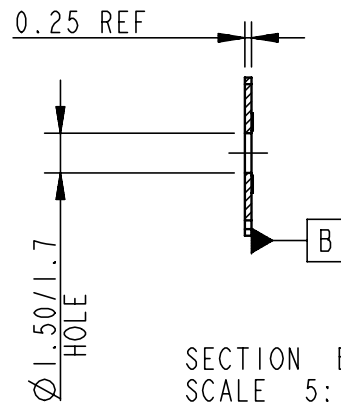
TB-0059-502

PROJECTION 

THIS DRAWING CONFORMS TO B.S. 308



DETAIL A  
SCALE 10:1



SECTION B-B  
SCALE 5:1

PROVISIONAL

MATL :-  
BERYLLIA CERAMIC, COMPRISING NOMINALLY  
99.5% BERYLLIUM OXIDE  
MIN. DENSITY - 2.86gm/cc  
SUPPLIED DUST FREE IN SEALED PLASTIC

TB-0059-502

A3

F	23/NOV/00	-----	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
USED ON					AI-TB-0059-500/508	
CENTRAL LABORATORY OF THE RESEARCH COUNCILS					RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110GX	
TOLERANCES UNLESS STATED			FINISH		ORIGINAL SCALE	
$\pm 0.025$ mm $\pm 0.025$ °			CLEAN REMOVE ALL BURRS		2:1 DO NOT SCALE	
MATERIAL & SPEC.			SURFACE TEXTURE $\mu$ m			
SEE DRG			STOCK UNLESS STATED			
TITLE				FACING-FAR SIDE-UPPER (BeO) ATLAS SCT BARREL MODULE		
ATLAS_ID				ADR025		
A3 TB-0059-502				SHEET		1 OF 1
						F

© CLRC 2000

**FACING-FAR SIDE-UPPER (BeO)  
ATLAS SCT BARREL MODULE**

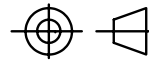
SHEET 1 OF 1

F

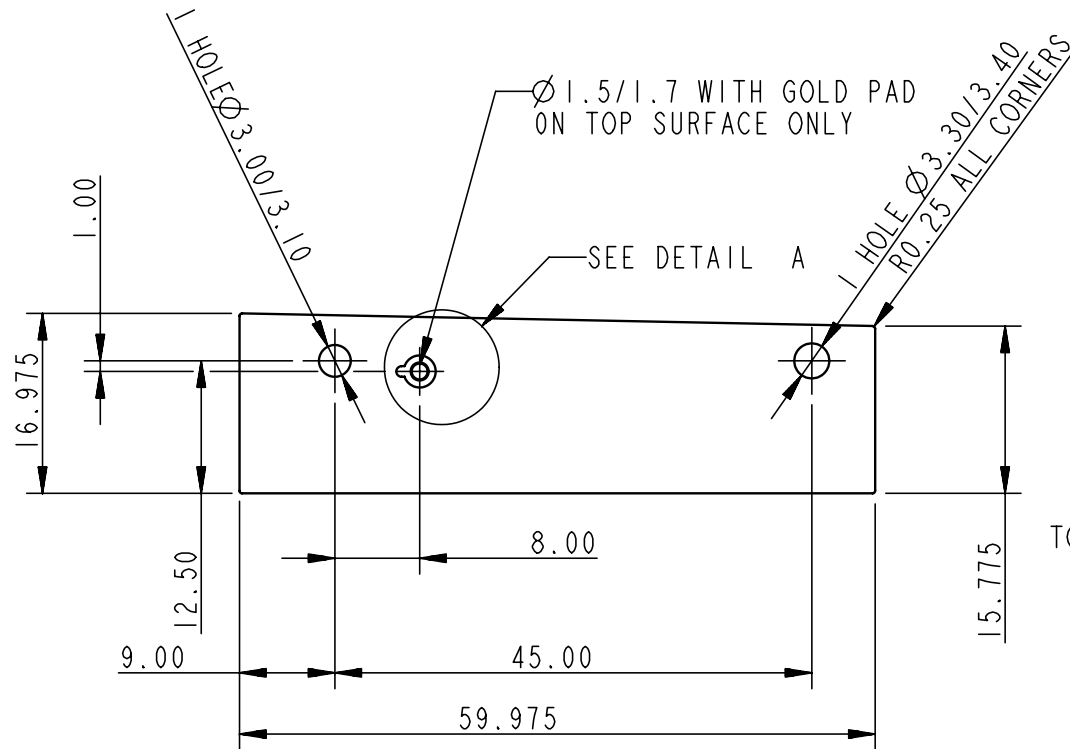
A3

TB-0059-503

PROJECTION



THIS DRAWING CONFORMS TO B.S. 308



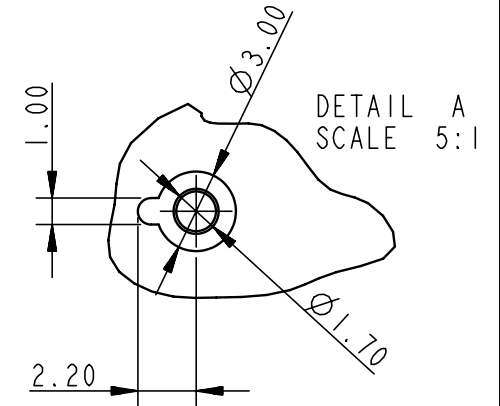
0.24-0.26

A

0.01

0.01 A

TOLERANCES FOR CERAMIC ONLY



MATL :-  
 BERYLLIA CERAMIC, COMPRISING NOMINALLY  
 99.5% BERYLLIUM OXIDE  
 MIN. DENSITY - 2.86 gm/cc  
 SUPPLIED DUST FREE IN SEALED PLASTIC

TB-0059-503

A3

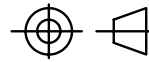
PROVISIONAL

F	23/NOV/00	-----	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
USED ON					AI-TB-0059-500/508	
CENTRAL LABORATORY OF THE RESEARCH COUNCILS					RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110GX	
TOLERANCES UNLESS STATED			FINISH		ORIGINAL SCALE	
±0.025 mm ±0.025 °			CLEAN REMOVE ALL BURRS		2:1 DO NOT SCALE	
MATERIAL & SPEC.			SURFACE TEXTURE µm		TITLE	
SEE DRG			STOCK ✓ UNLESS STATED		<b>FACING-COOLED SIDE-UPPER (BeO)</b> <b>ATLAS SCT BARREL MODULE</b>	
A3 TB-0059-503			SHEET		ADR025	
A3 TB-0059-503			1 OF 1		F	

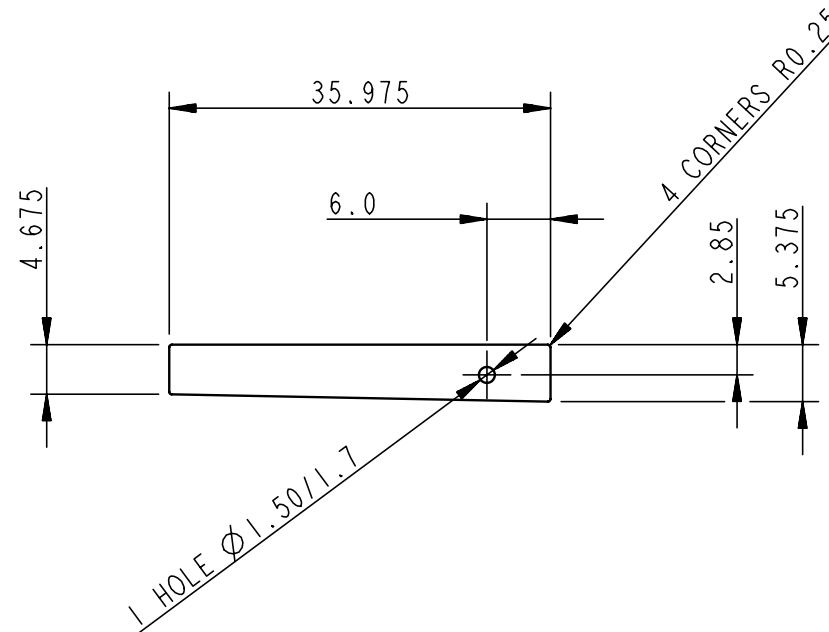
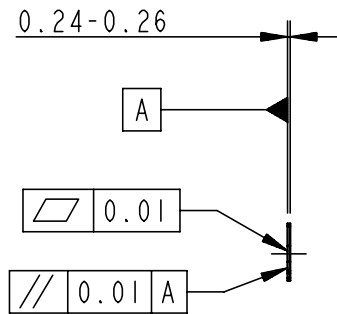
A3

TB-0059-504

PROJECTION



THIS DRAWING CONFORMS TO B.S. 308



MATL :-  
 BERYLLIA CERAMIC, COMPRISING NOMINALLY  
 99.5% BERYLLIUM OXIDE  
 MIN. DENSITY - 2.86 gm/cc.  
 SUPPLIED DUST FREE IN SEALED PLASTIC

PROVISIONAL

TB-0059-504

A3

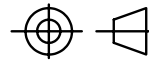
F	23/NOV/00	-----.	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
USED ON					AI-TB-0059-500/508	
						© CLRC 2000
CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110GX						
TOLERANCES UNLESS STATED			FINISH		ORIGINAL SCALE	
±0.025 mm ±0.025 °			CLEAN REMOVE ALL BURRS		2:1 DO NOT SCALE	
MATERIAL & SPEC.			SURFACE TEXTURE $\mu$ m		TITLE	
SEE DRG			STOCK ✓ UNLESS STATED		<b>FACING-FAR SIDE-LOWER (BeO)</b> <b>ATLAS SCT BARREL MODULE</b>	
A3 TB-0059-504			A3 TB-0059-504		ATLAS_ID ADR025 SHEET 1 OF 1	



A3

TB-0059-505

PROJECTION



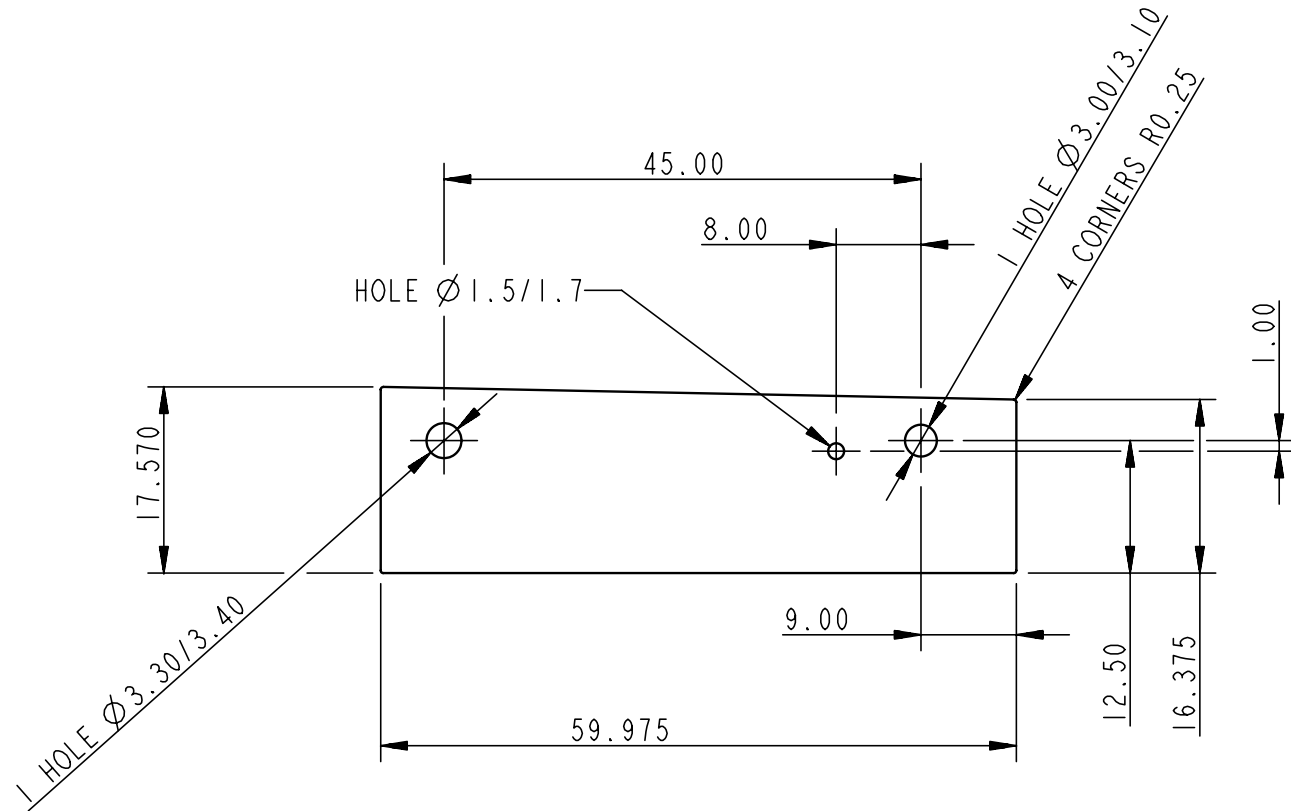
THIS DRAWING CONFORMS TO B.S. 308

0.24-0.26

A

0.01

0.01 A



PROVISIONAL

TB-0059-505

MATL:-  
 BERYLLIA CERAMIC, COMPRISING NOMINALLY  
 99.5% BERYLLIUM OXIDE  
 MIN. DENSITY - 2.86 gm/cc  
 SUPPLIED DUST FREE IN SEALED PLASTIC

F	23/NOV/00	-----	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
USED ON					AI-TB-0059-500/508	
CENTRAL LABORATORY OF THE RESEARCH COUNCILS					RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX	
TITLE					FACING-COOLED SIDE-LOWER ATLAS SCT BARREL MODULE	
ATLAS_ID					ADR025	
A3 TB-0059-505					SHEET 1 OF 1	
					F	

A3

TOLERANCES UNLESS STATED

 $\pm 0.025$  mm  
 $\pm 0.025$  °

FINISH

 CLEAN  
 REMOVE ALL BURRS

ORIGINAL SCALE

 2:1  
 DO NOT SCALE

MATERIAL &amp; SPEC.

SEE DRG

SURFACE TEXTURE  $\mu$ m

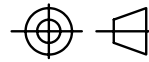
STOCK

✓ UNLESS STATED

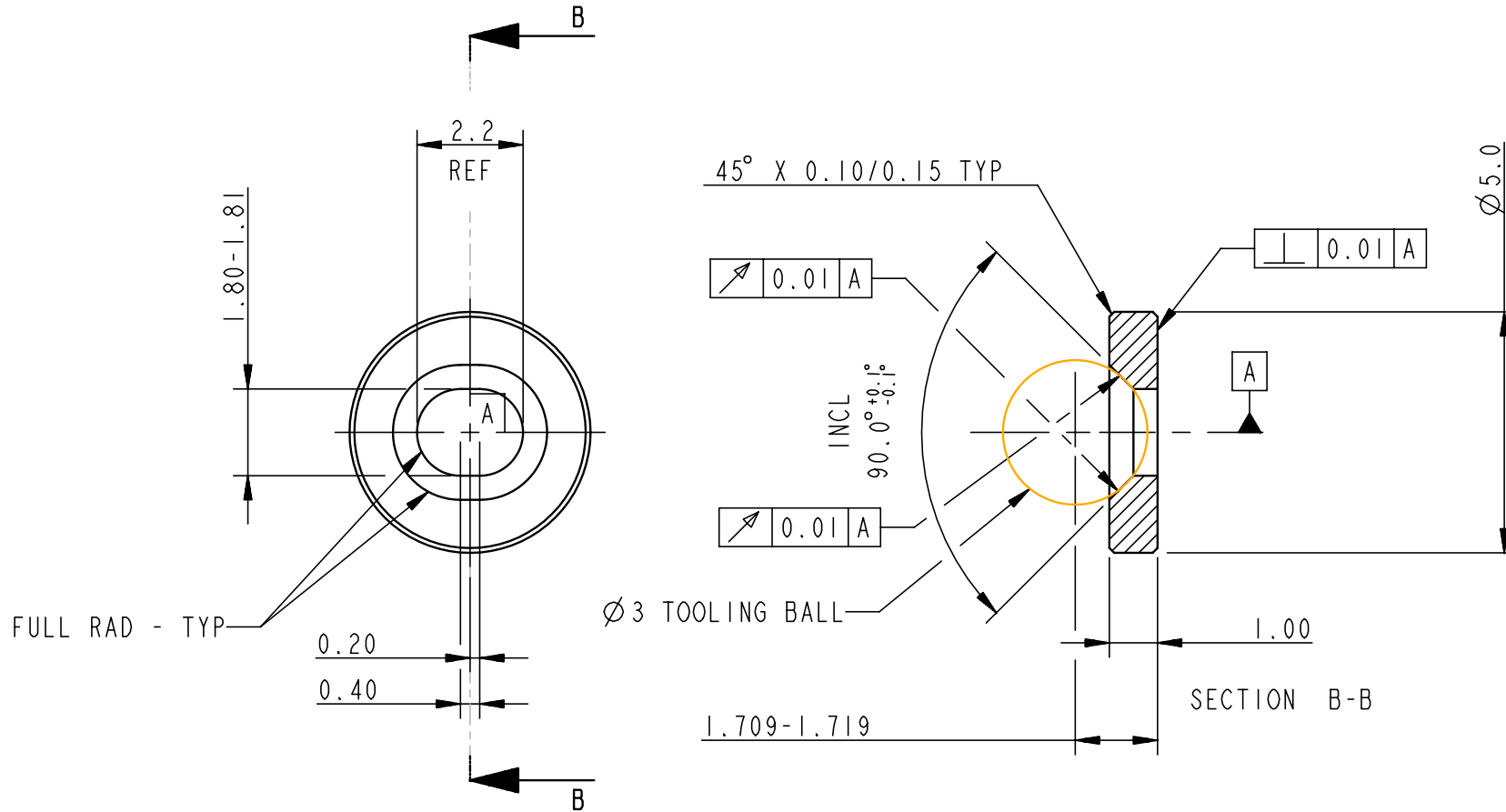
A3

TB-0059-506

PROJECTION



THIS DRAWING CONFORMS TO B.S. 308



PROVISIONAL

TB-0059-506

F	13/SEP/00	-----	V FRANCIS	PF	PF	WIP
ISSUE	DATE APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS

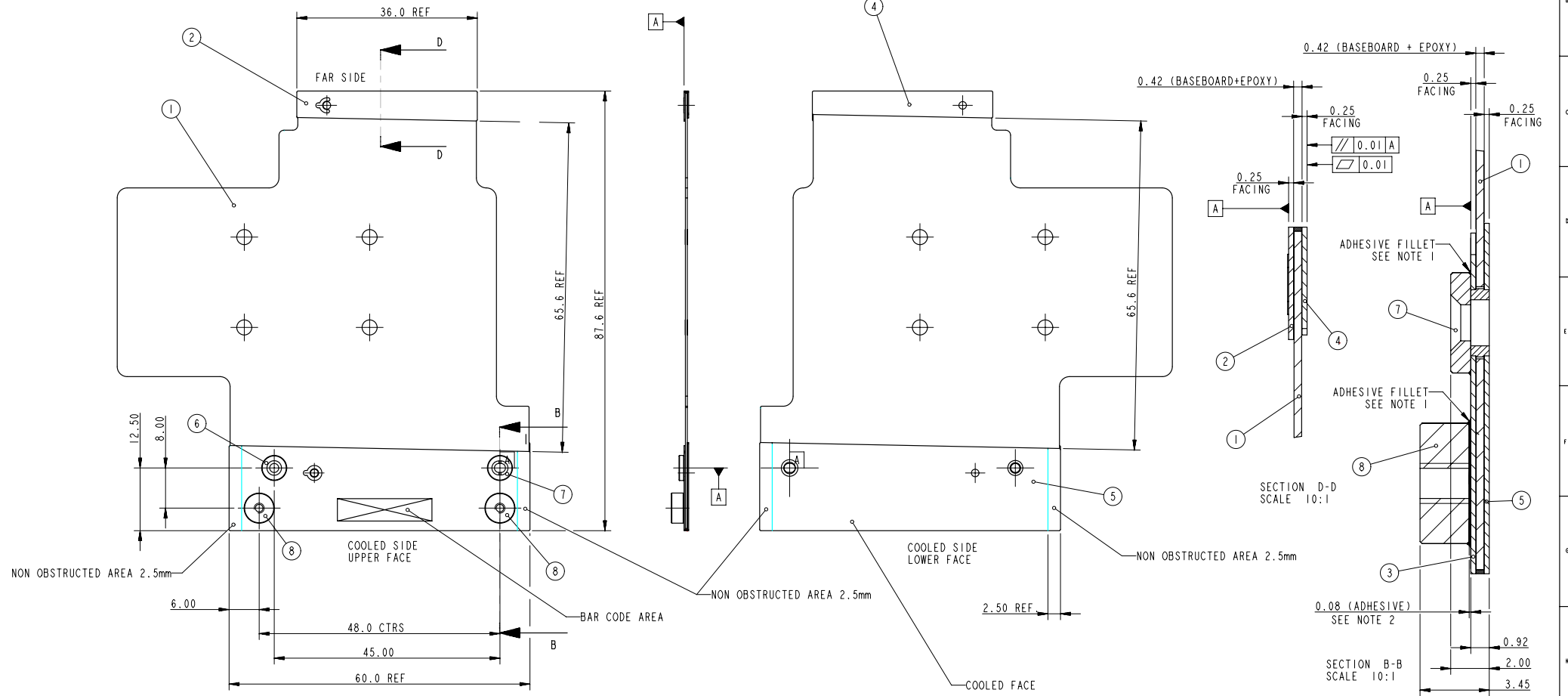
USED ON AI-TB-0059-508 © CLRC 2000

CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX

TOLERANCES UNLESS STATED ±0.200 mm ±0.250 °	FINISH CLEAN REMOVE ALL BURRS	ORIGINAL SCALE 10:1 DO NOT SCALE
MATERIAL & SPEC. ALUM. ALLOY 6082	SURFACE TEXTURE µm 1.6 ✓ UNLESS STATED	

TITLE <b>SLOTTED WASHER</b> <b>ATLAS SCT BARREL MODULE</b>	ADR025
A3 TB-0059-506	SHEET 1 OF 1 F

ITEM	DRG. NO.	DESCRIPTION	QTY	REMARKS
1	A1-TB-0059-501	BASEBOARD - TPG	1	TPG
2	A3-TB-0059-502	FACING-FAR SIDE-UPPER	1	BeO
3	A3-TB-0059-503	FACING-COOLED SIDE UPPER	1	BeO
4	A3-TB-0059-504	FACING-FAR SIDE-LOWER	1	BeO
5	A3-TB-0059-505	FACING-COOLED SIDE-LOWER	1	BeO
6	A3-TB-0059-206	DATUM WASHER	1	AL. ALLOY
7	A3-TB-0059-506	SLOTTED WASHER	1	AL. ALLOY
8	A3-TB-0059-208	HANDLING POINT	2	PEEK



- NOTES -
- ADHESIVE FILLETS - CIBA GIGY AW106/HV953U (2011)
  - ADHESIVE - PERMABOND SUPERGLUE

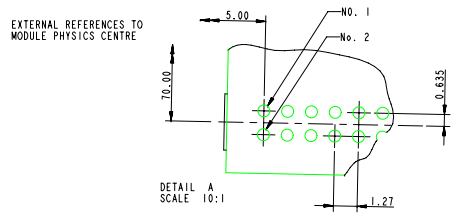
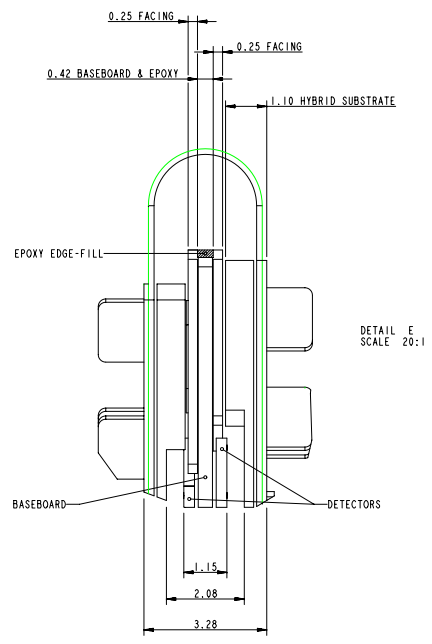
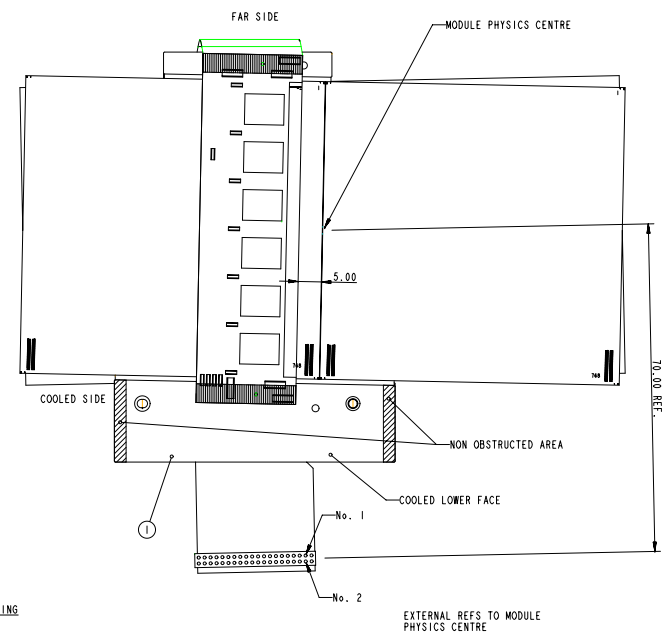
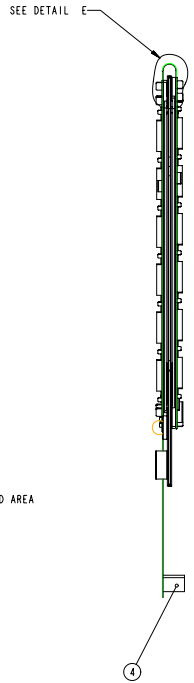
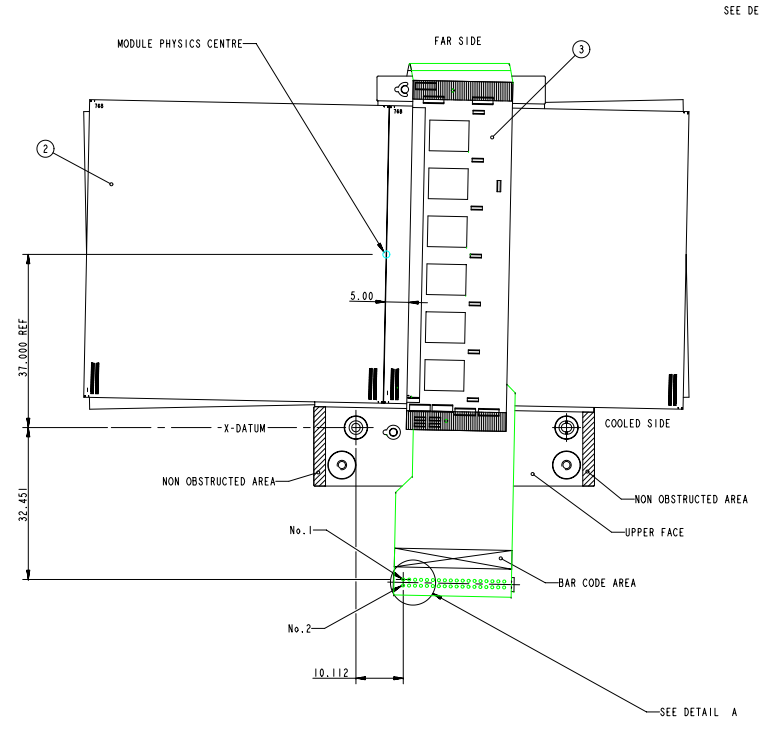
PROVISIONAL

F	18/NOV/00	-----	V FRANCIS	PF	PF	WIP
ISSUE DATE	APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
TOLERANCES UNLESS STATED			FINISH		ORIGINAL SCALE	
± mm			CLEAN		5:2	
MATERIAL & SPEC.			REMOVE ALL BURRS		DO NOT SCALE	
SEE ITEMS LIST			SURFACE TEXTURE µm			
			UNLESS STATED			
USED ON			A0-TB-0059-601 SHEET 1 OF 2		© CLRC 2000	
CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX						
TITLE						
BASEBOARD SUB-ASSY (BeO)						
ATLAS SCT BARREL MODULE						
ATLAS_ID					ADR025	
A1   TB-0059-508			SHEET		1 OF 1   F	

A1 | TB-0059-508

ITEM	DRG No. / CAT No.	TITLE	QTY	REMARKS
1	TB-0059-508	BASEBOARD SUB-ASSY.	1	
2	TB-0059-600	SILICON MICROSTRIP DETECTORS	4	
3	TB-0059-650	HYBRID SUB-ASSY.	1	
4	SFMC-118-L3-5-D	CONNECTOR (SAMTEC UK)	1	

PROVISIONAL

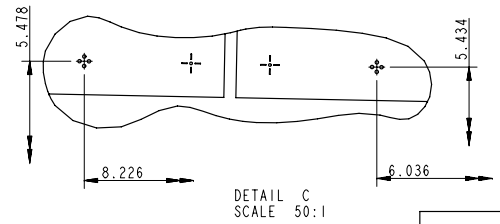
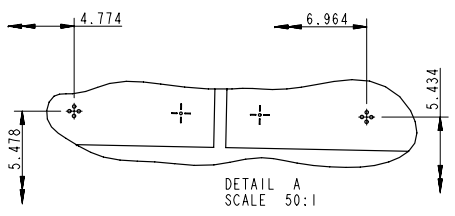
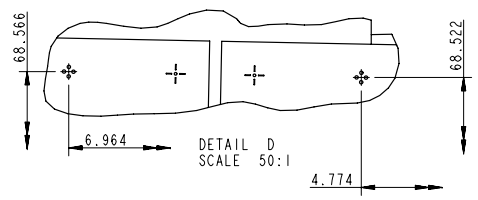
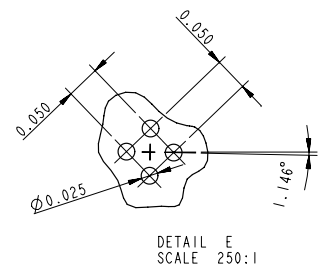
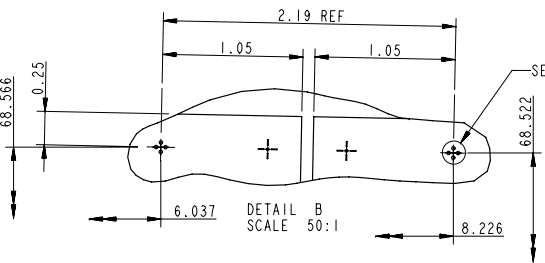
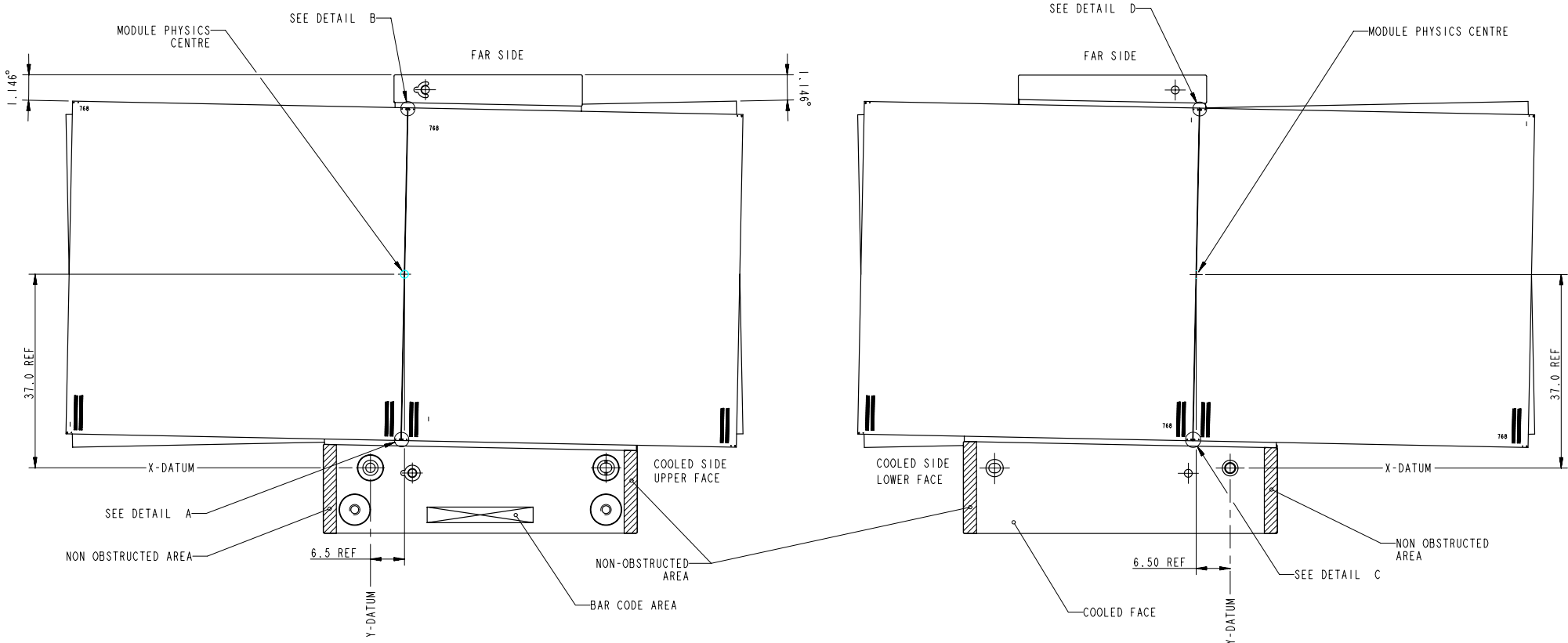


ADHESIVE COVERAGE BETWEEN HYBRID SUBSTRATE AND FACINGS

DETAIL E SCALE 20:1

F	22/NOV/00	-----	V FRANCIS	PF	---	WIP
ISSUE DATE	APPD	MOD. No.	DRN. BY	CHRD BY	APPD BY	STATUS
TOLERANCES UNLESS STATED	±	FRACTION	CLEAN	REMOVE ALL BURRS	ORIGINAL SCALE	5:2
MATERIAL & SPEC.	SEE ITEMS LIST	SURFACE TEXTURE µm	UNLESS STATED	DO NOT SCALE		

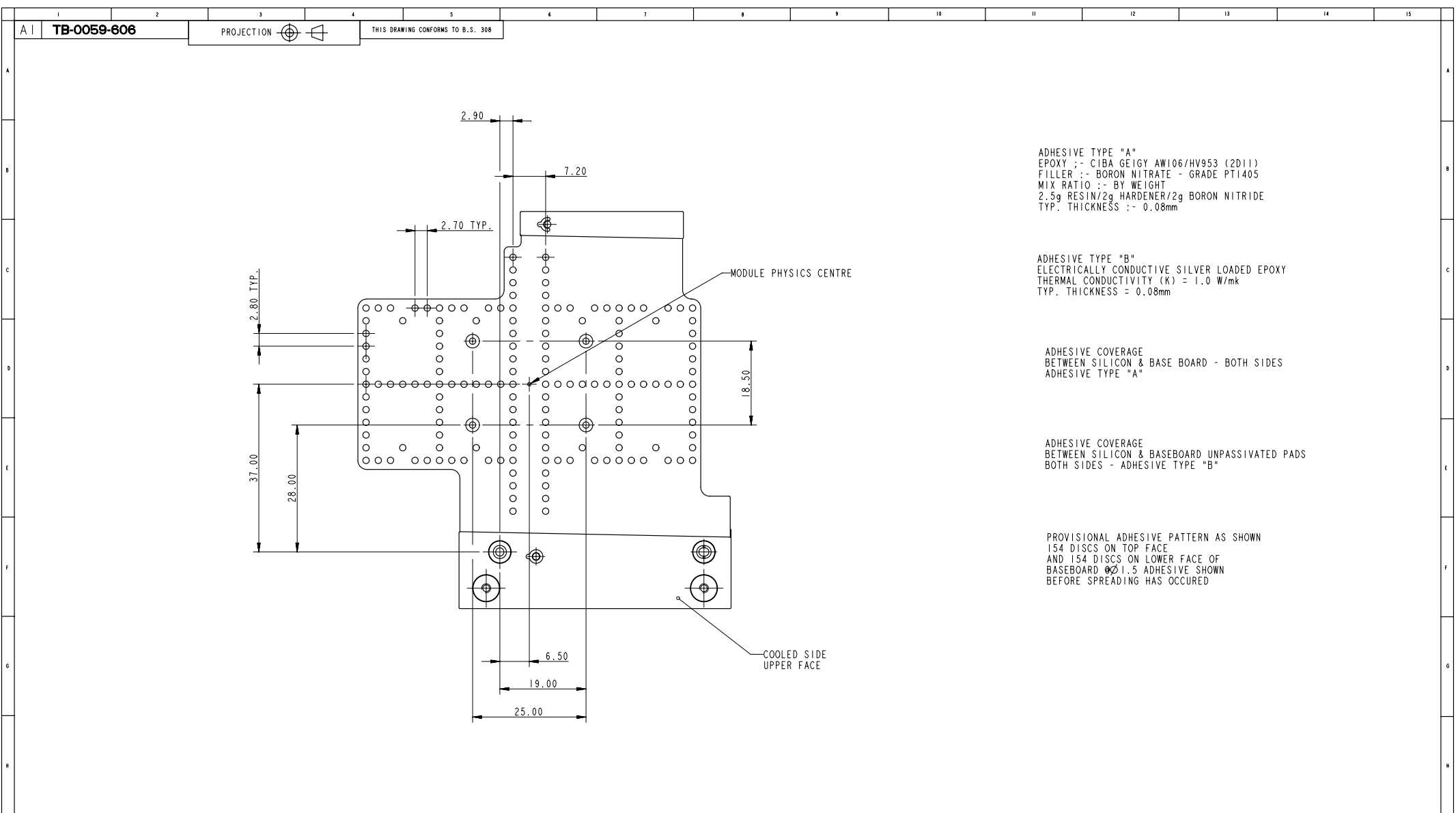
USED ON © CLRC 2000  
 CENTRAL LABORATORY OF THE RESEARCH COUNCILS Rutherford Appleton Laboratory, Chilton, Oxon OX11 0QX  
 TITLE ATLAS SCT BARREL MODULE ASSEMBLY  
 ATLAS\_ID  
 A0 TB-0059-601-01 SHEET 1 OF 2 F



DETAILS A TO E ARE ENLARGED VIEWS OF FIDUCIALS  
REFERENCE DIMENSIONS SHOWN TO X AND Y DATUMS

F	--/--/--	-----	V FRANCIS	---	---	WIP	
ISSUE	DATE	APPD	MOD. No.	DRN. BY	CHKD BY	APPD BY	STATUS
TOLERANCES UNLESS STATED			FINISH		ORIGINAL SCALE		
±0.200 mm			REMOVE ALL BURRS		1:1		
±0.250 mm			SURFACE TEXTURE µm		DO NOT SCALE		
MATERIAL & SPEC.			UNLESS STATED				
USED ON						© CLRC 2000	
CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110RX							
TITLE <b>ATLAS SCT BARREL MODULE ASSEMBLY</b>							
A1 TB-0059-601-02						SHEET 2 OF 2	

A1 TB-0059-601-02



ADHESIVE TYPE "A"  
 EPOXY :- CIBA GEIGY AW106/HV953 (2D11)  
 FILLER :- BORON NITRATE - GRADE PT1405  
 MIX RATIO :- BY WEIGHT  
 2.5g RESIN/2g HARDENER/2g BORON NITRIDE  
 TYP. THICKNESS :- 0.08mm

ADHESIVE TYPE "B"  
 ELECTRICALLY CONDUCTIVE SILVER LOADED EPOXY  
 THERMAL CONDUCTIVITY (K) = 1.0 W/mk  
 TYP. THICKNESS = 0.08mm

ADHESIVE COVERAGE  
 BETWEEN SILICON & BASE BOARD - BOTH SIDES  
 ADHESIVE TYPE "A"

ADHESIVE COVERAGE  
 BETWEEN SILICON & BASEBOARD UNPASSIVATED PADS  
 BOTH SIDES - ADHESIVE TYPE "B"

PROVISIONAL ADHESIVE PATTERN AS SHOWN  
 154 DISCS ON TOP FACE  
 AND 154 DISCS ON LOWER FACE OF  
 BASEBOARD  $\varnothing$ 1.5 ADHESIVE SHOWN  
 BEFORE SPREADING HAS OCCURED

PROVISIONAL ADHESIVE DETAILS

F	13/SEP/00	-----	V FRANCIS	PF	PF	WIP
ISSUE DATE	APPD	MOD. No.	DRN. BY	CHKD BY.	APPD BY.	STATUS
TOLERANCES UNLESS STATED		FINISH		ORIGINAL SCALE		
$\pm$ mm		CLEAN REMOVE ALL BURRS		5:2 DO NOT SCALE		
MATERIAL & SPEC. SEE ITEMS LIST		SURFACE TEXTURE $\mu$ m ----- <input checked="" type="checkbox"/> UNLESS STATED				
USED ON				© CLRC 2000		
CENTRAL LABORATORY OF THE RESEARCH COUNCILS RUTHERFORD APPLETON LABORATORY, CHILTON, OXON OX110QX						
TITLE <b>BASEBOARD SUB-ASSY (BeO) ATLAS SCT BARREL MODULE</b>						
ATLAS.ID					ADR025	
<b>A1 TB-0059-606</b>				SHEET		<b>1 OF 1</b>
						<b>F</b>

A1 TB-0059-606