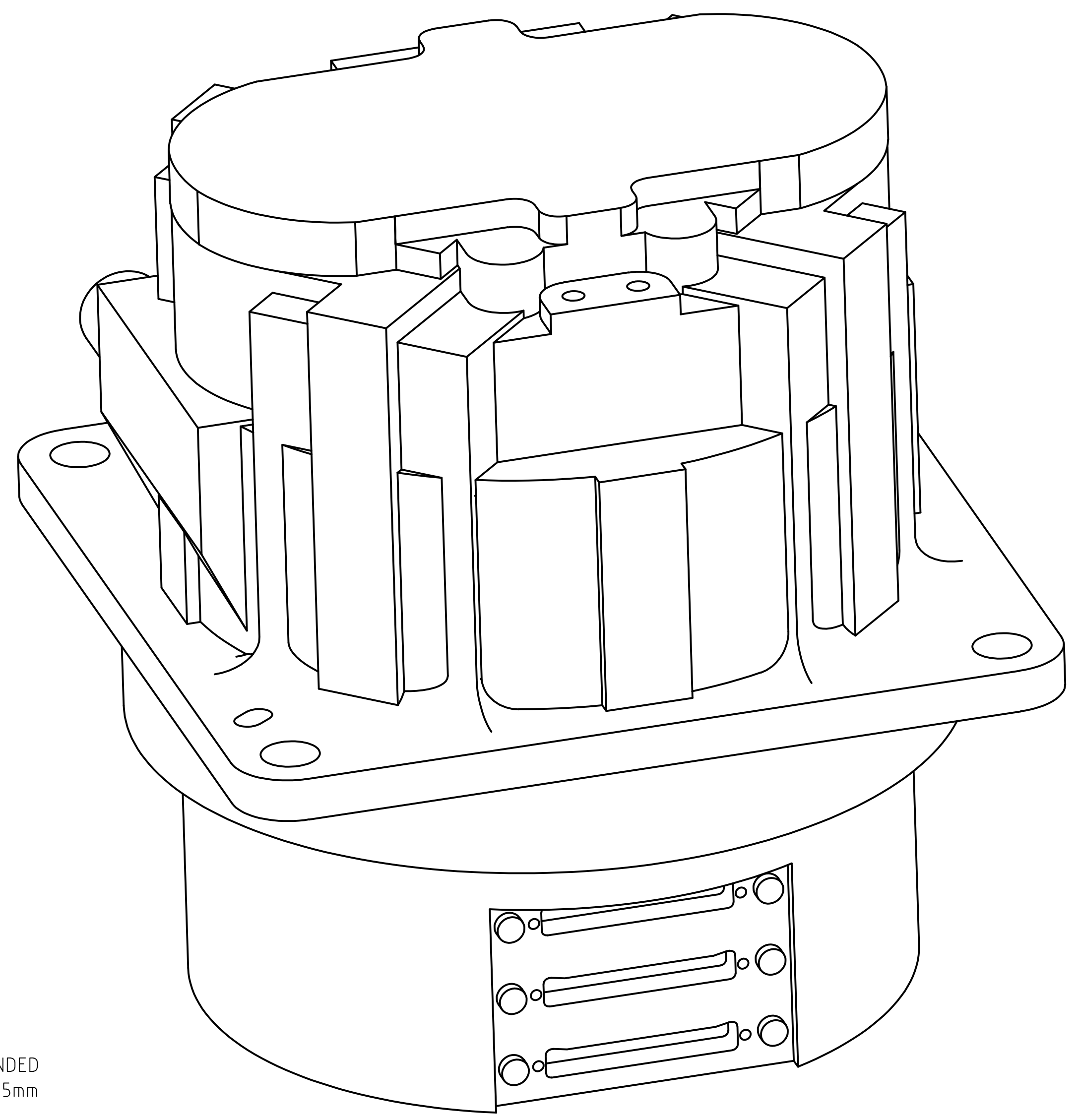


		REVISIONS										
LTR	ZONE	DESCRIPTION	CODE	DWN	CHK	STRUCT	MATL	THRM CONT	ENGR	DSGN SUPV	DATA MGT	RELEASE DATE
A		INITIAL RELEASE	B								RTN	12/7/01
B		UPDATED: MASS & CG'S, FILTER SHAPE, VOLUME NEED AROUND CAPSTANS, CONN. POSITIONS. REMOVED MODES AND MASS PARTICIPATION; ROTATED PIXEL MAP 180°.	B									



GENERAL VIEW
REFERENCE ONLY

- 9. ALL DIMENSIONS SHOWN FOR THE 300mK STAGE ARE FOR THE NOMINAL SUSPENDED POSITION. THE SUSPENDED UNIT MAY BE SHIFTED FROM NOMINAL POSITION ±0.5mm IN ANY AXIS.
- 8. ONLY PIXELS, DOWEL PIN HOLES, AND SLOTS VISIBLE. ALL OTHER FEATURES OMITTED FOR CLARITY.
- 7. FOR PHOTOMETER AND SPECTROMETER SUBSYSTEM INTERFACE DATA AND LAYOUT CONFIGURATION, SEE SHEETS 5-7.
- 6. DIMENSIONS IN {} ARE CALCULATED FOR OPERATING TEMPERATURE AND ARE PROVIDED FOR REFERENCE ONLY. ALL OTHER DIMENSIONS ARE BASED ON AN ASSEMBLY TEMPERATURE OF 20° C.
- 5. INDICATES CONNECTOR POSITION. CONNECTORS INSTALLED ARE NANONIC STM 051 M6SN.
- 4. REFER TO TABLES ON SHEETS 5, 6, AND 7 FOR DIFFERENCES BETWEEN DETECTOR ARRAYS.
- 3. ASSEMBLY REFERENCE DESIGNATOR, TITLE, PART NUMBER, REVISION LETTER, AND SERIAL NUMBER TO APPEAR AS SHOWN IN THIS AREA.

- 2. THIS IS THE INTERFACE CONTROL DRAWING FOR THE BOLOMETER DETECTOR ARRAY, JPL PART NUMBER 10209800. JPL DRAWING NUMBER 10209800 SHALL CONTAIN THE FOLLOWING NOTE: THIS ASSEMBLY MEETS THE INTERFACE REQUIREMENTS OF JPL INTERFACE CONTROL DRAWING 10209721.
- 1. THIS TECHNICAL DATA IS EXPORT CONTROLLED UNDER U.S. LAW AND IS BEING TRANSFERRED BY JPL TO PPARC PURSUANT TO THE NASA / PPARC LETTER OF AGREEMENT WHICH ENTERED INTO FORCE ON DECEMBER 2, 1999. THIS TECHNICAL DATA IS TRANSFERRED TO PPARC FOR USE EXCLUSIVELY ON THE NASA/PPARC SPIRE ON FIRST COOPERATIVE PROJECT, MAY NOT BE USED FOR ANY OTHER PURPOSE, AND SHALL NOT BE RE-TRANSFERRED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE PRIOR WRITTEN APPROVAL OF NASA.

NOTES: UNLESS OTHERWISE SPECIFIED

INTERFACE DRAWING

QTY REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE
PARTS LIST								
				CONTRACT NO. 960939		JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109 RELEASED THROUGH EDMG		
				APPD _____ DATE _____		BOLOMETER DETECTOR ARRAY, MECHANICAL ID, SPIRE		
				DWN D CRUMB 11/9/01		SIZE A1		CAGE NO 10209721
				CHK B BURDICK 11/14/01		SCALE NONE		UNCLASSIFIED
				STRUCT K BROWNING 11/19/01		SHEET 1 OF 7		REV B
				MATL M KNOPP 11/19/01		REVISIONS		
				THRM CONT				
				MSSL A. J. CDKER 11/7/01				
				ENGR G. LILENTHAL 12/13/01				
				ENGR L. HUSTED 11/19/01				
				DSGN SUPV				

MATERIAL

METRIC

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS

LINEAR TOLERANCES:

0-6	± 0.1
OVER 6-30	± 0.2
OVER 30-120	± 0.3
OVER 120-315	± 0.5
OVER 315-1000	± 0.8
OVER 1000	± 1.2

ANGULAR TOLERANCES:
± 0.5°

MACHINE FINISH (MICROMETERS) 32 ✓

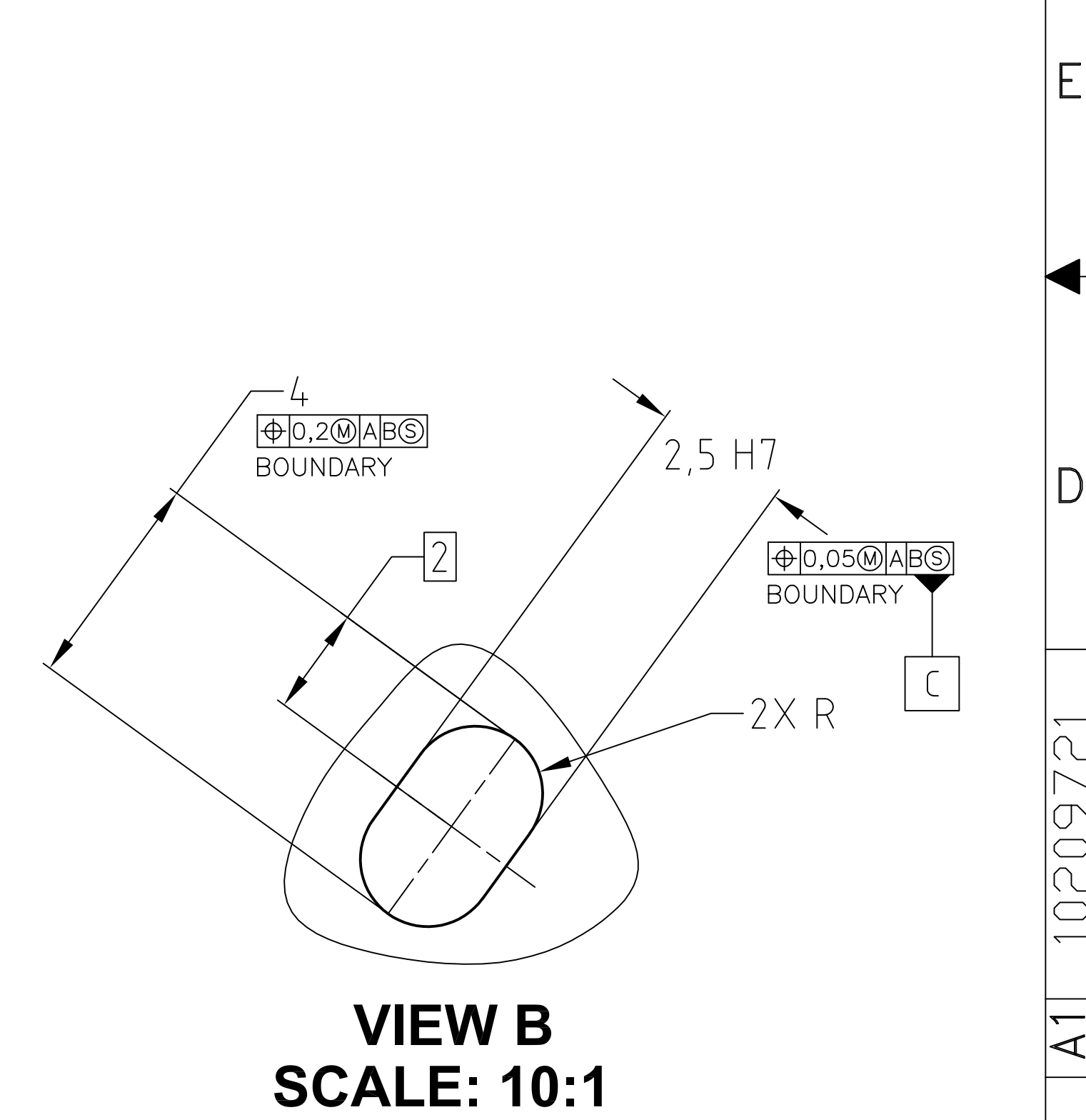
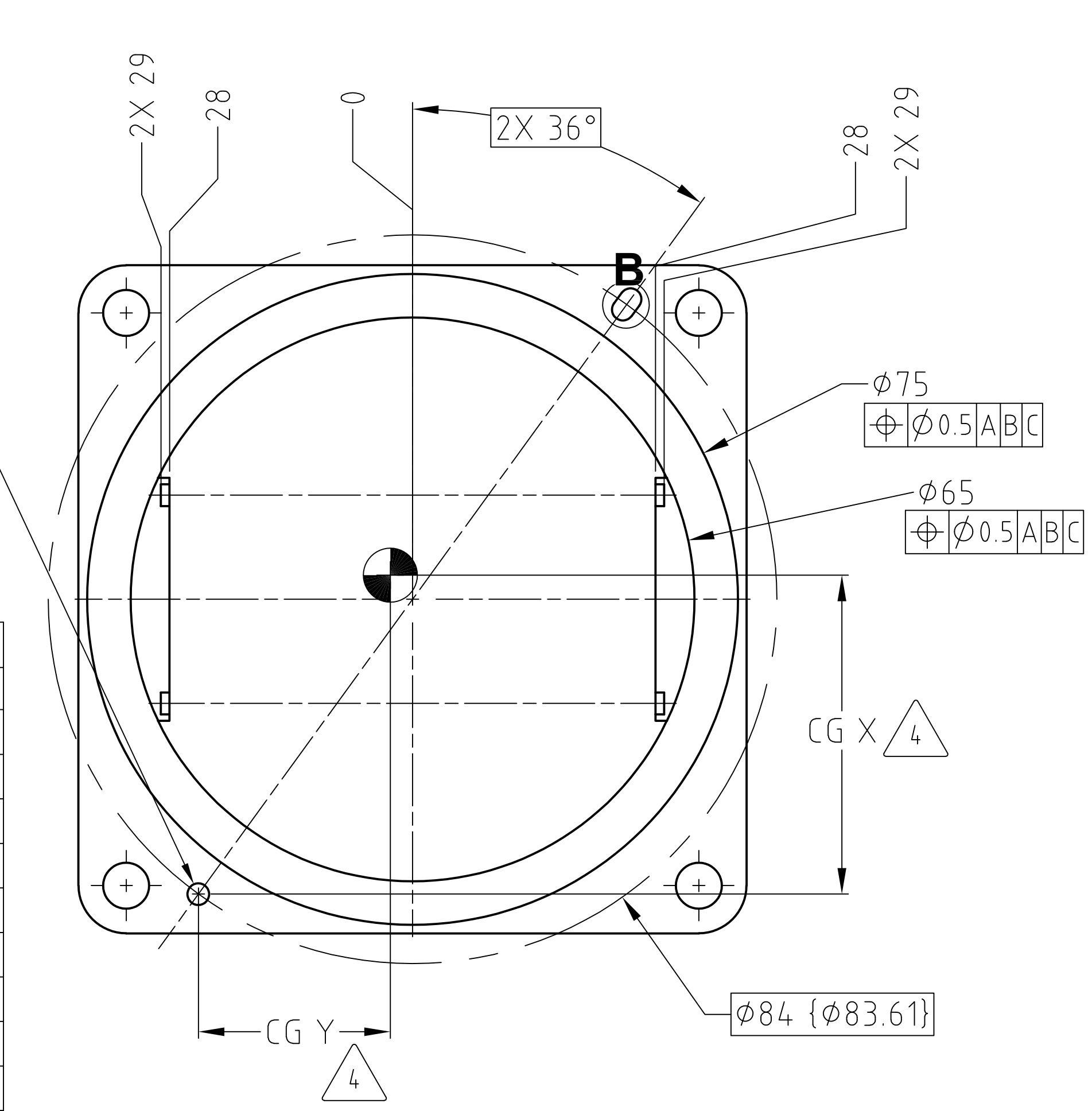
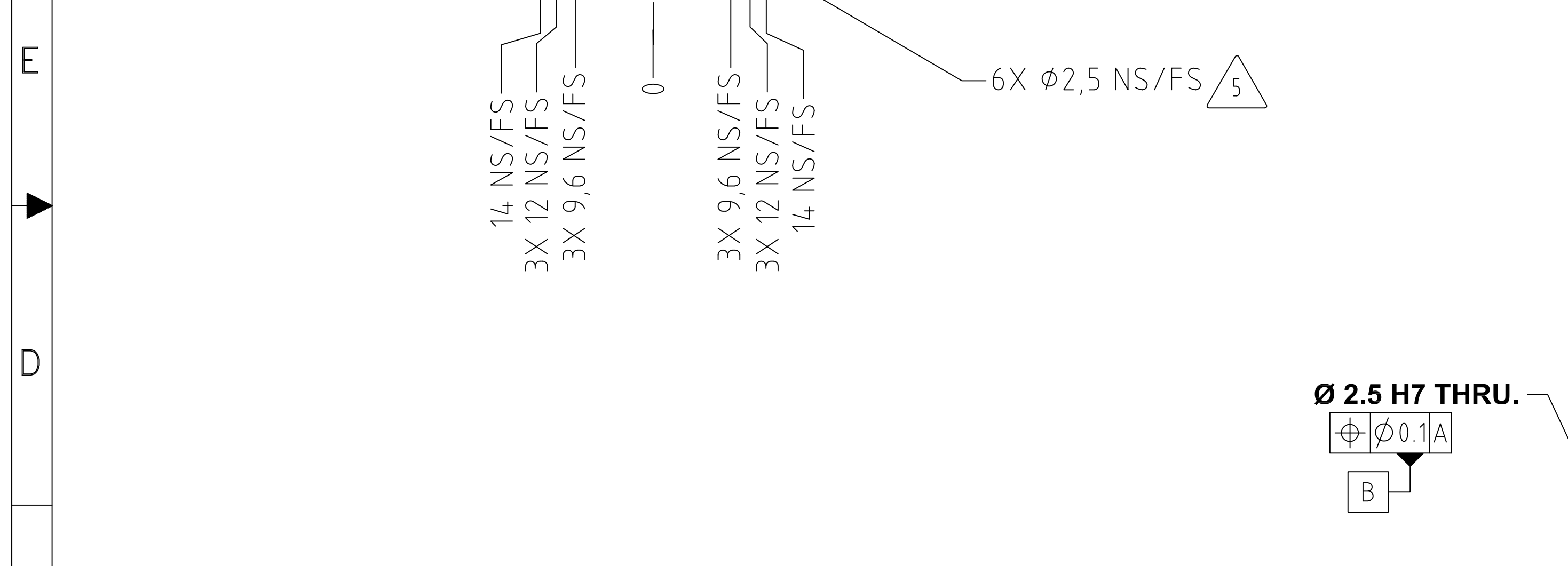
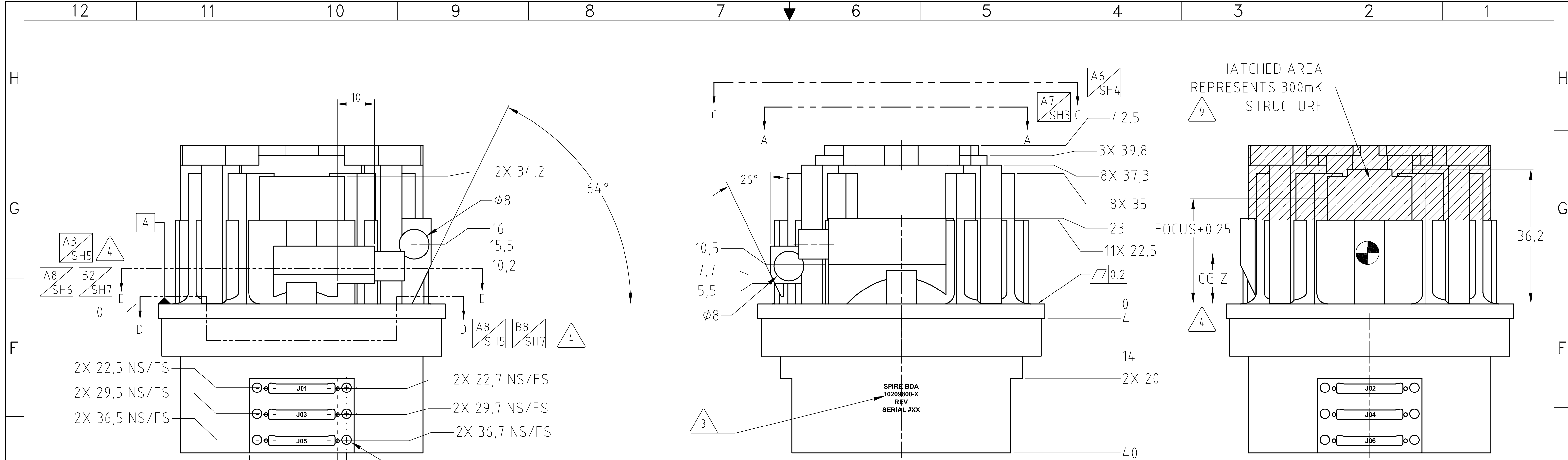
DO NOT SCALE DRAWING
INTERPRET DWG PER ASME Y14.100M

APPLICATION

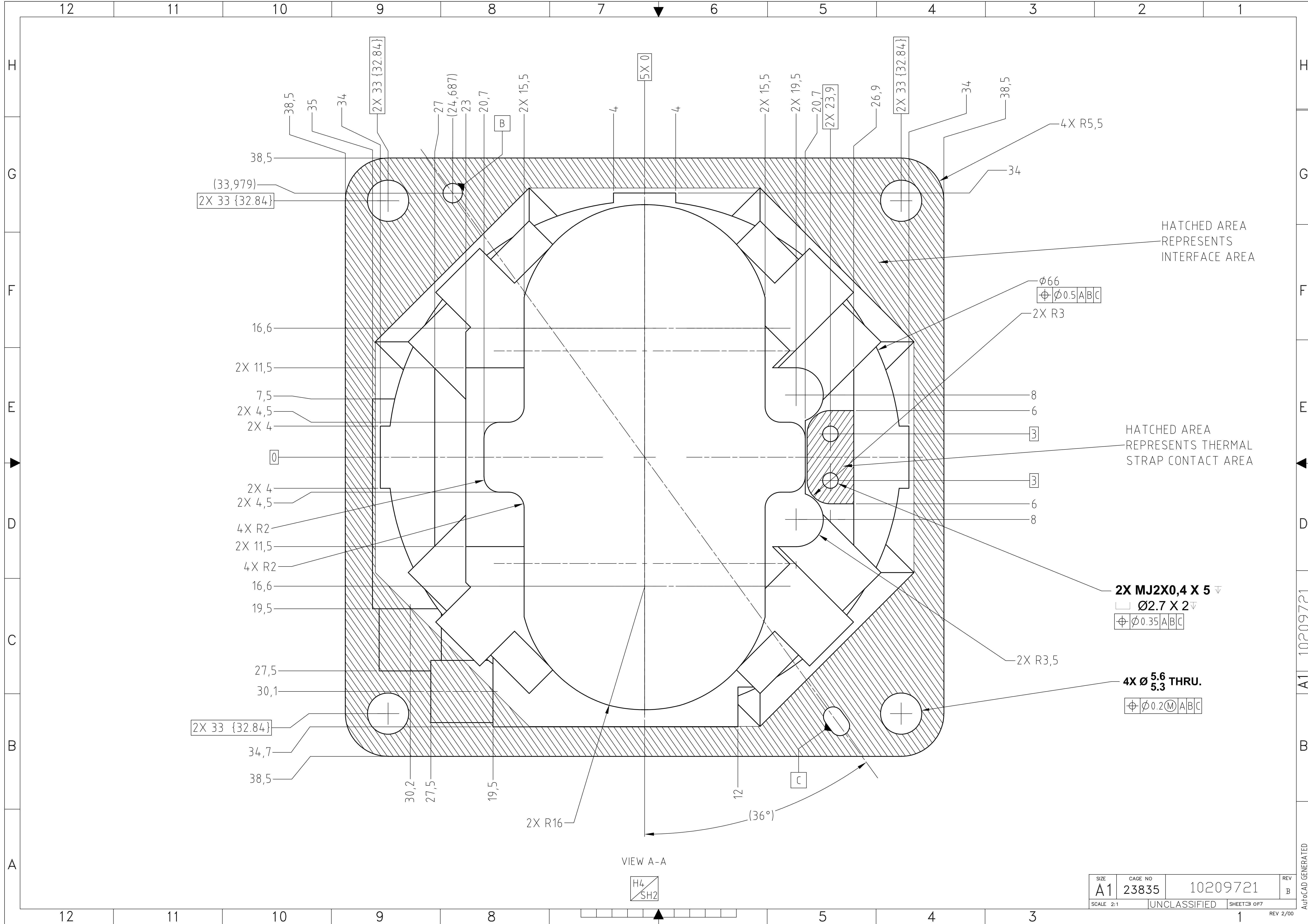
SPIRE

NEXT ASSEMBLY USED ON

A1 10209721
B
AutoCAD GENERATED
REV 2/00



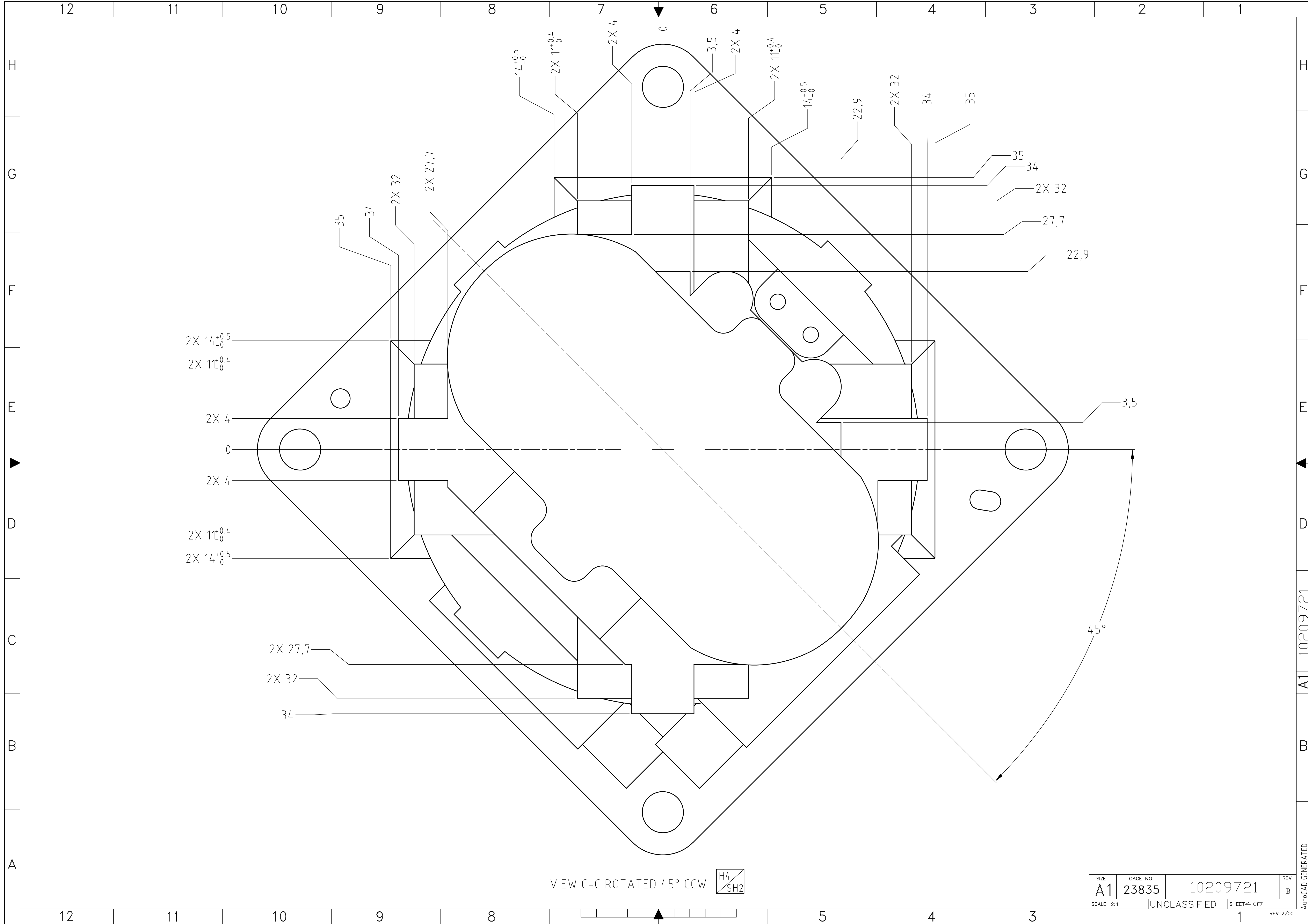
ALL CONNECTORS					
PIN #	PIN PURPOSE	PIN #	PIN PURPOSE	PIN #	PIN PURPOSE
1	SIGNAL A+	18	SIGNAL T+	35	SIGNAL J-
2	SIGNAL B+	19	SIGNAL U+	36	SIGNAL K-
3	SIGNAL C+	20	SIGNAL V+	37	SIGNAL L-
4	SIGNAL D+	21	SIGNAL W+	38	SIGNAL M-
5	SIGNAL E+	22	SIGNAL X+	39	SIGNAL N-
6	SIGNAL F+	23	SIGNAL Y+	40	SIGNAL P-
7	SIGNAL G+	24	SIGNAL Z+	41	SIGNAL R-
8	SIGNAL H+	25	SIGNAL BIAS V+	42	SIGNAL S-
9	SIGNAL I+	26	SIGNAL A-	43	SIGNAL T-
10	SIGNAL J+	27	SIGNAL B-	44	SIGNAL U-
11	SIGNAL K+	28	SIGNAL C-	45	SIGNAL V-
12	SIGNAL L+	29	SIGNAL D-	46	SIGNAL W-
13	SIGNAL M+	30	SIGNAL E-	47	SIGNAL X-
14	SIGNAL N+	31	SIGNAL F-	48	SIGNAL Y-
15	SIGNAL P+	32	SIGNAL G-	49	SIGNAL Z-
16	SIGNAL R+	33	SIGNAL H-	50	SIGNAL BIAS V-
17	SIGNAL S+	34	SIGNAL I-	51	SIGNAL BIAS GND



SIZE	CAGE NO	REV
A1	23835	B
SCALE 2:1	UNCLASSIFIED	SHEET 3 OF 7
10209721		REV 2/00

A1 10209721

AutoCAD GENERATED



VIEW C-C ROTATED 45° CCW H4
SH2

SIZE	CAGE NO	REV
A1	23835	B
SCALE 2:1		UNCLASSIFIED
SHEET 4 OF 7		REV 2/00

A1 10209721
AutoCAD GENERATED

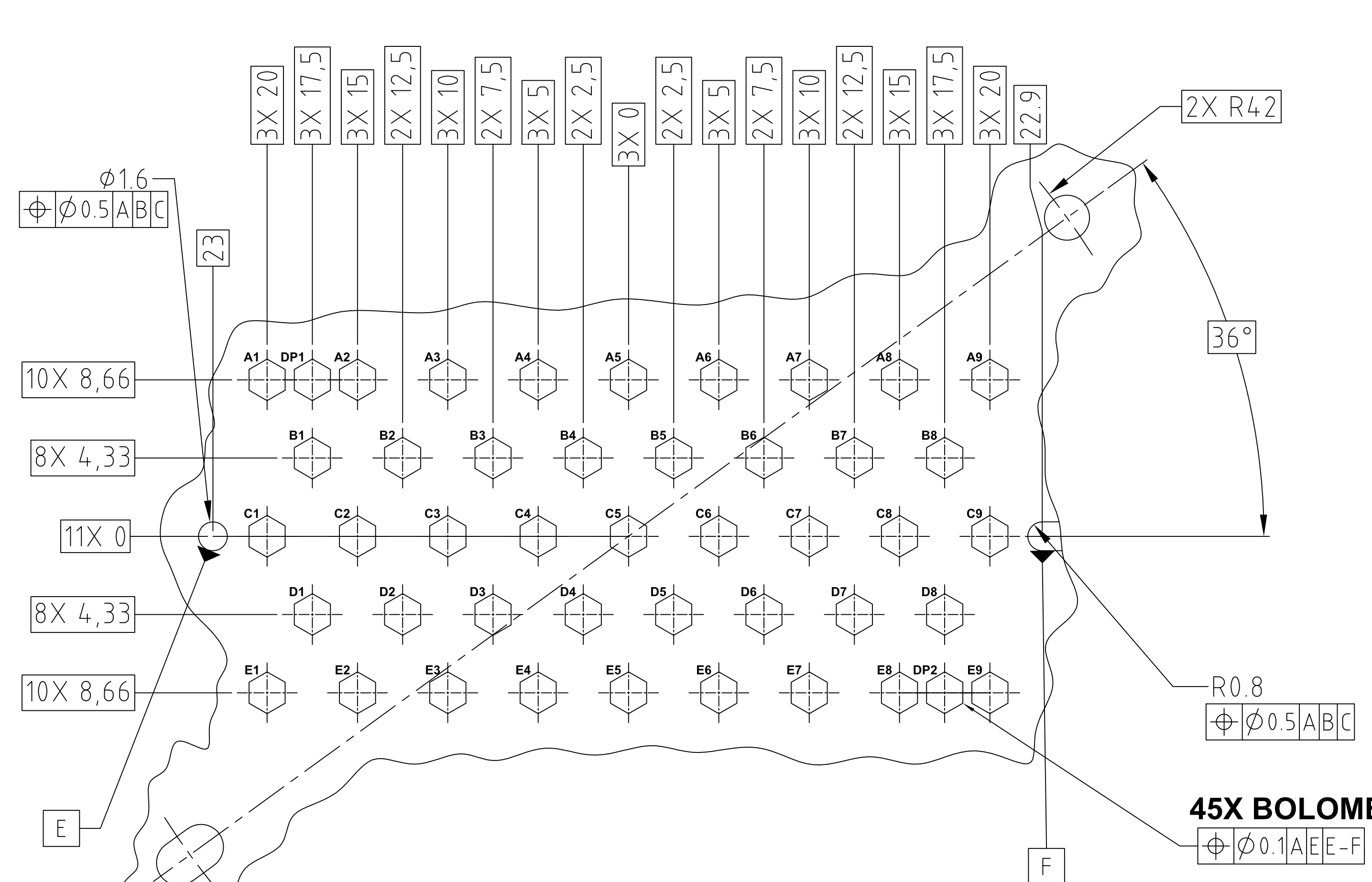
12 11 10 9 8 7 6 5 4 3 2 1

SUBSYSTEM INTERFACE DATA							
UNIT: P/LW							
NUMBER: 10209800-1							
FOCUS: 32.8							
CONNECTOR POSITIONS USED: J05, J06							
MECHANICAL CHARACTERISTICS							
MASS: 632 g							
C.O.G. LOCATION W.R.T. LOCATION HOLE:		X	34.4	Y	24.3	Z	6
MOMENT OF INERTIA:		I _x	772 Kg*mm ²	I _y	1,145 Kg*mm ²	I _z	1,423 Kg*mm ²
MECHANICAL INTERFACE MATERIAL: 7075 AL							
SURFACE FINISH DESCRIPTION: CHEM FILM GOLD							
TOTAL CONTACT AREA: 1783 mm ²							
R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 uM							
THERMAL STRAP INTERFACE MATERIAL: CU 99.999% PURE							
THERMAL STRAP SURFACE FINISH DESCRIPTION: GOLD PLATED							
THERMAL STRAP CONTACT AREA: 57.5 mm ²							
THERMAL STRAP R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 uM							

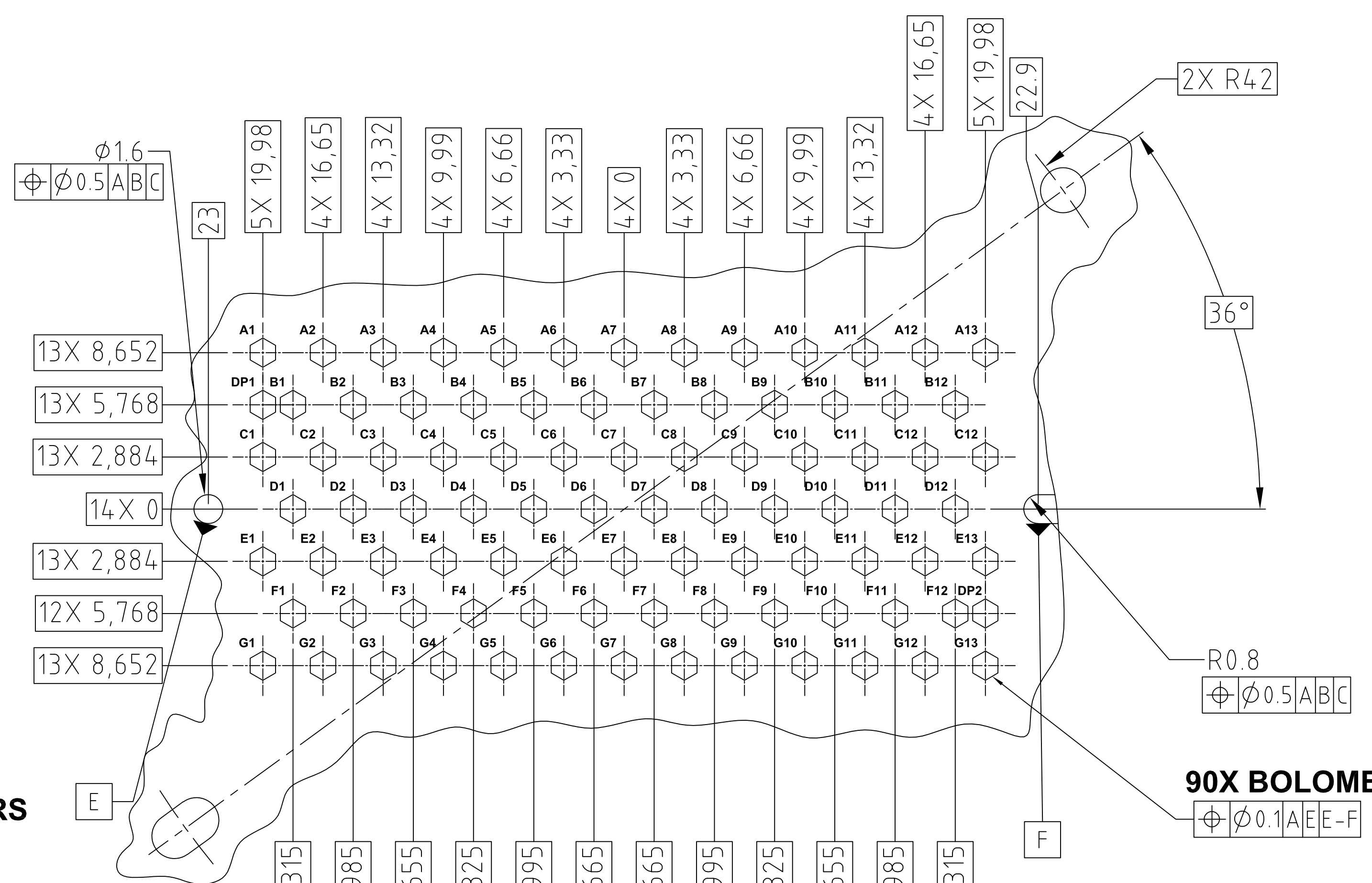
SUBSYSTEM INTERFACE DATA							
UNIT: P/MW							
NUMBER: 10209800-2							
FOCUS: 33.2							
CONNECTOR POSITIONS USED: J01, J02, J03, J04							
MECHANICAL CHARACTERISTICS							
MASS: 632 g							
C.O.G. LOCATION W.R.T. LOCATION HOLE:		X	34.4	Y	24.3	Z	8.5
MOMENT OF INERTIA:		I _x	764 Kg*mm ²	I _y	1,152 Kg*mm ²	I _z	1,428 Kg*mm ²
MECHANICAL INTERFACE MATERIAL: 7075 AL							
SURFACE FINISH DESCRIPTION: CHEM FILM GOLD							
TOTAL CONTACT AREA: 1783 mm ²							
R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 uM							
THERMAL STRAP INTERFACE MATERIAL: CU 99.999% PURE							
THERMAL STRAP SURFACE FINISH DESCRIPTION: GOLD PLATED							
THERMAL STRAP CONTACT AREA: 57.5 mm ²							
THERMAL STRAP R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 uM							

H
G
F
E
D
C
B
A

H
G
F
E
D
C
B
A



SECTION D-D
PHOTOMETER LONG WAVE
SCALE: 5:1



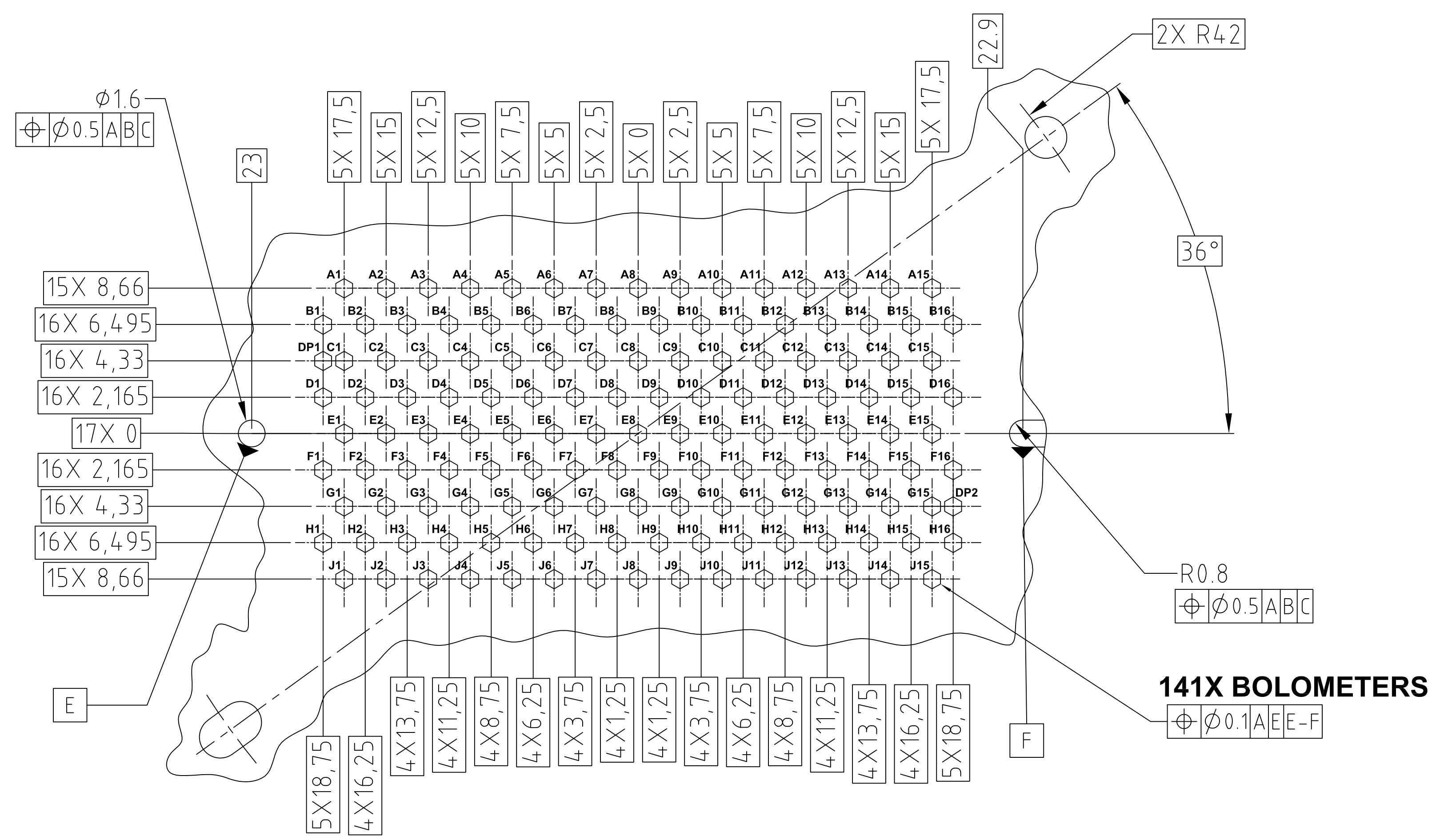
SECTION E-E
PHOTOMETER MEDIUM WAVE
SCALE: 5:1

12 11 10 9 8 7 6 5 4 3 2 1

SIZE	CAGE NO	REV
A1	23835	B
SCALE NOTED	UNCLASSIFIED	SHEET 5 OF 7

10209721
AutoCAD GENERATED
REV 2/00

SUBSYSTEM INTERFACE DATA			
UNIT: P/SW			
NUMBER: 10209800-3			
FOCUS: 25			
CONNECTOR POSITIONS USED: J01, J02, J03, J04, J05, J06			
MECHANICAL CHARACTERISTICS			
MASS: 600 g			
C.O.G. LOCATION W.R.T. LOCATION HOLE:	X	34.5	Y 24.3 Z 6.5
MOMENT OF INERTIA:	I _x	712 Kg*mm ²	I _y 1,074 Kg*mm ² I _z 1,364 Kg*mm ²
MECHANICAL INTERFACE MATERIAL: 7075 AL			
SURFACE FINISH DESCRIPTION: CHEM FILM GOLD			
TOTAL CONTACT AREA: 1783 mm ²			
R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			
THERMAL STRAP INTERFACE MATERIAL: CU 99.999% PURE			
THERMAL STRAP SURFACE FINISH DESCRIPTION: GOLD PLATED			
THERMAL STRAP CONTACT AREA: 57.5 mm ²			
THERMAL STRAP R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			

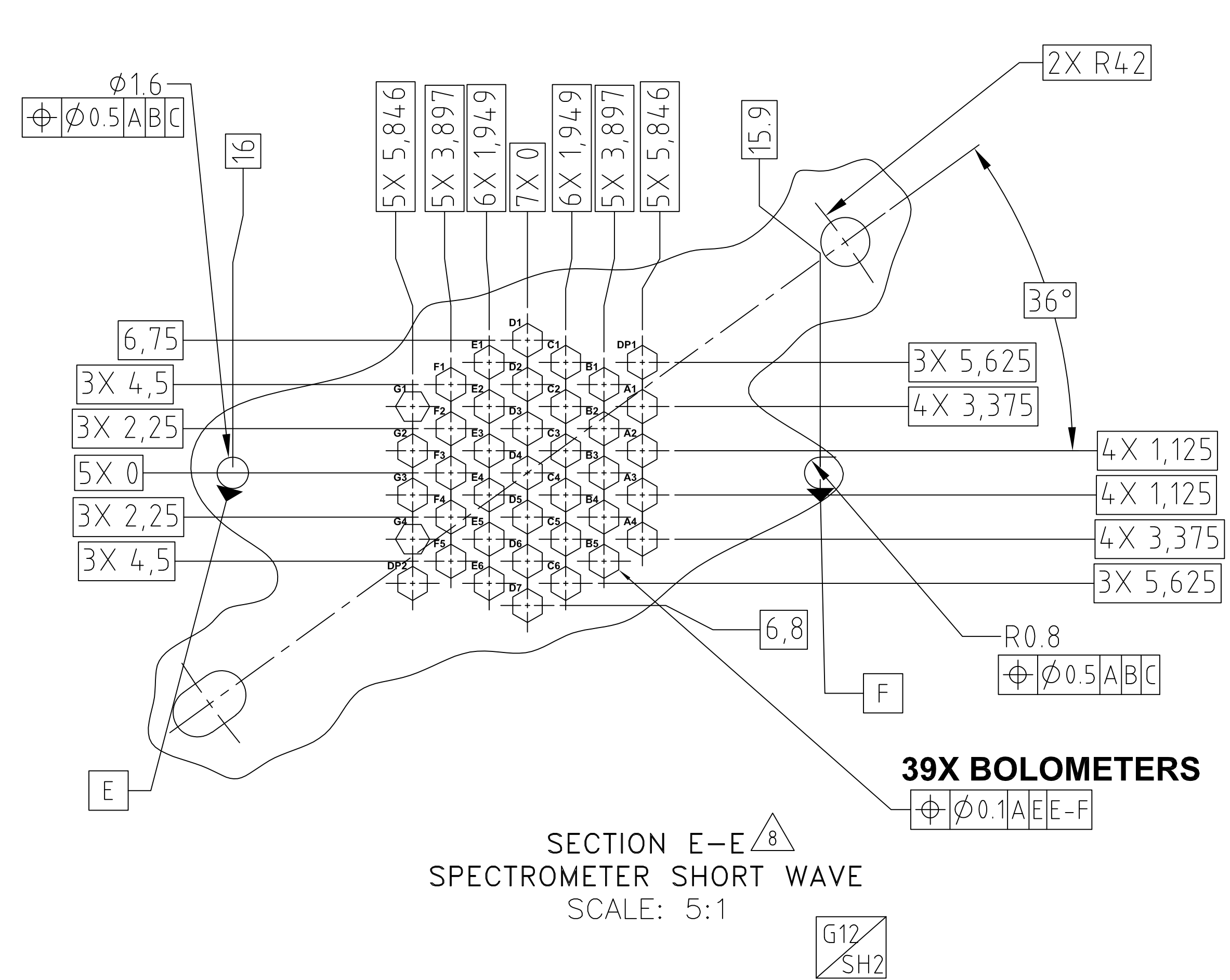
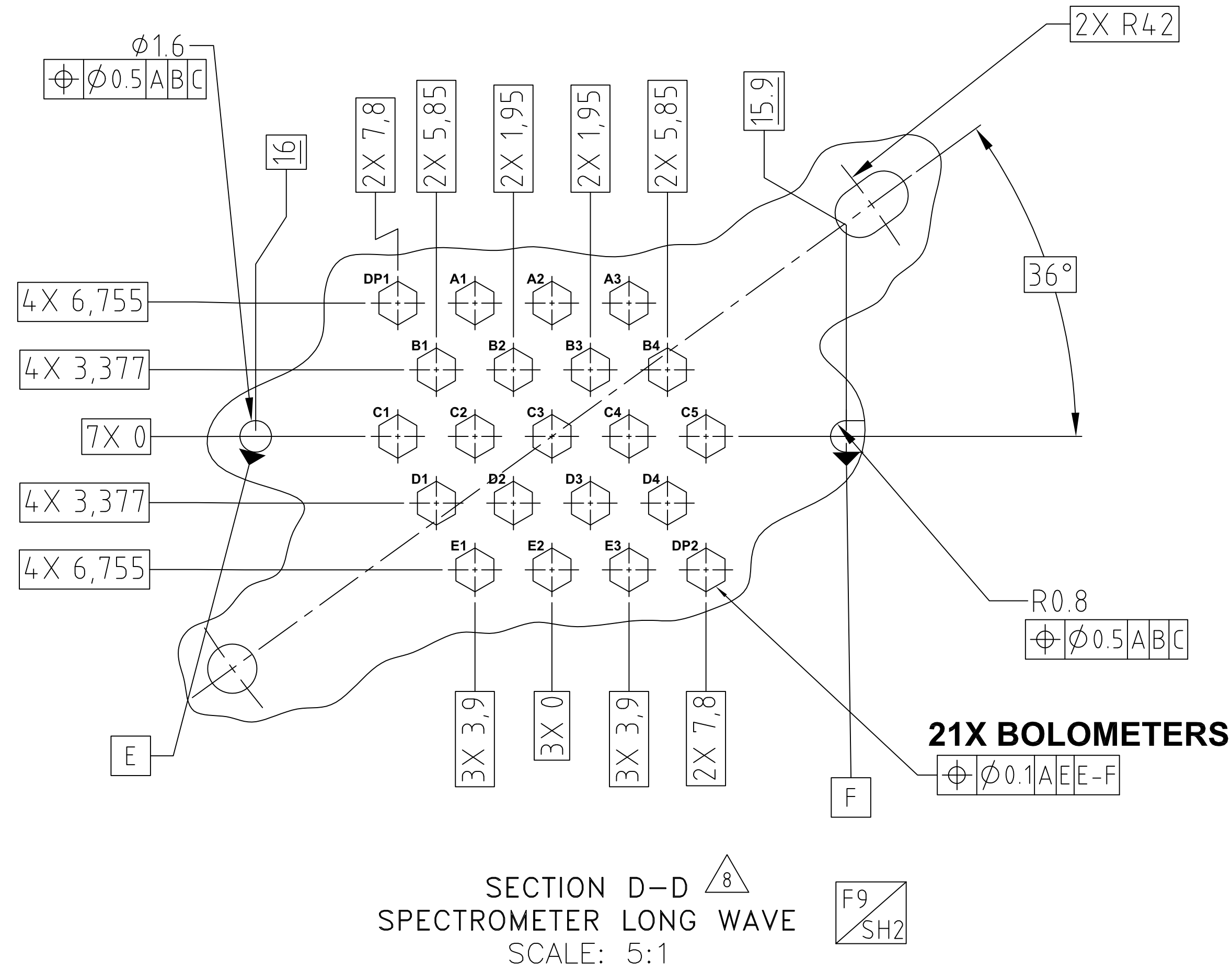


SECTION E-E $\triangle 8$
 PHOTOMETER SHORT WAVE
 SCALE: 5:1

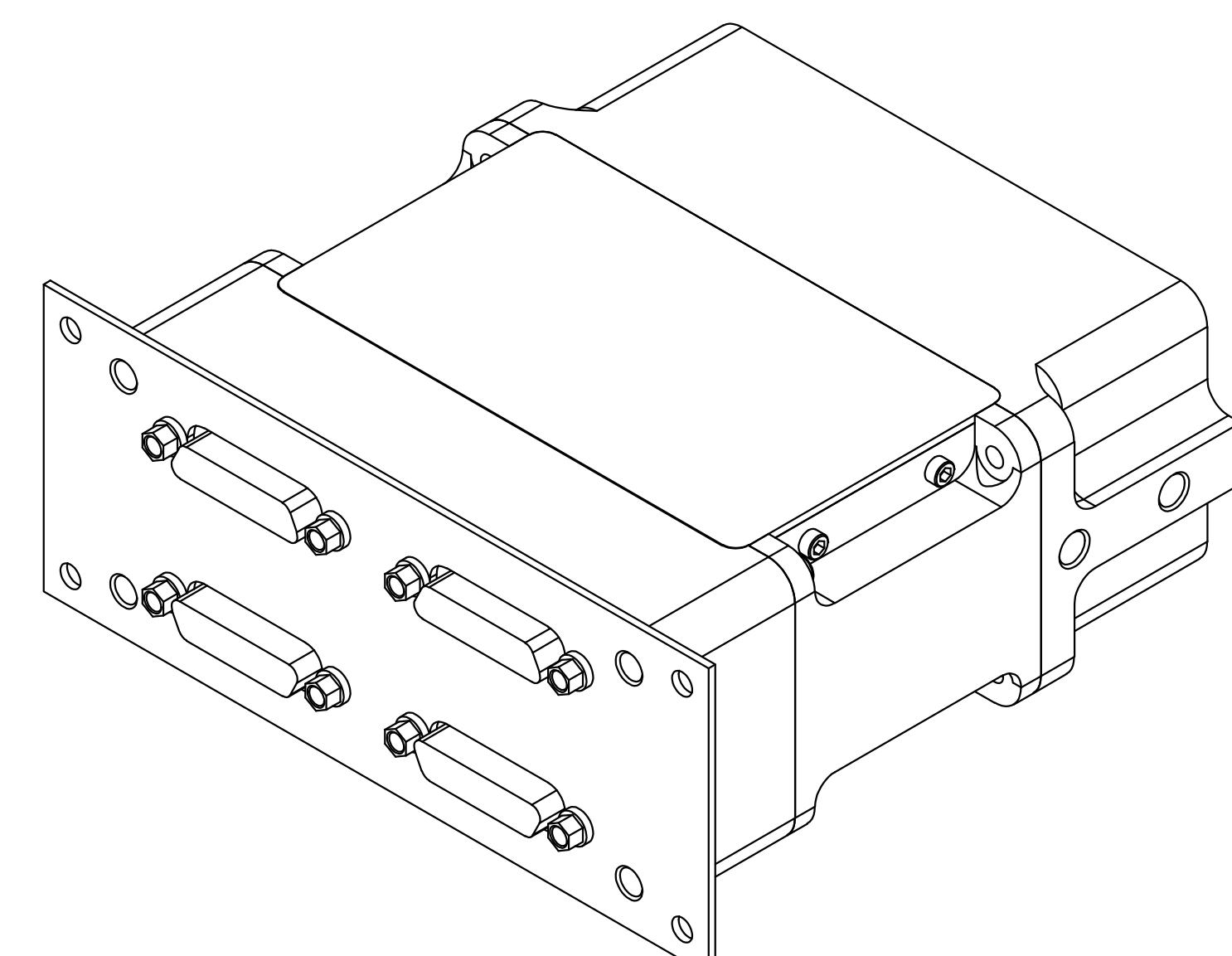
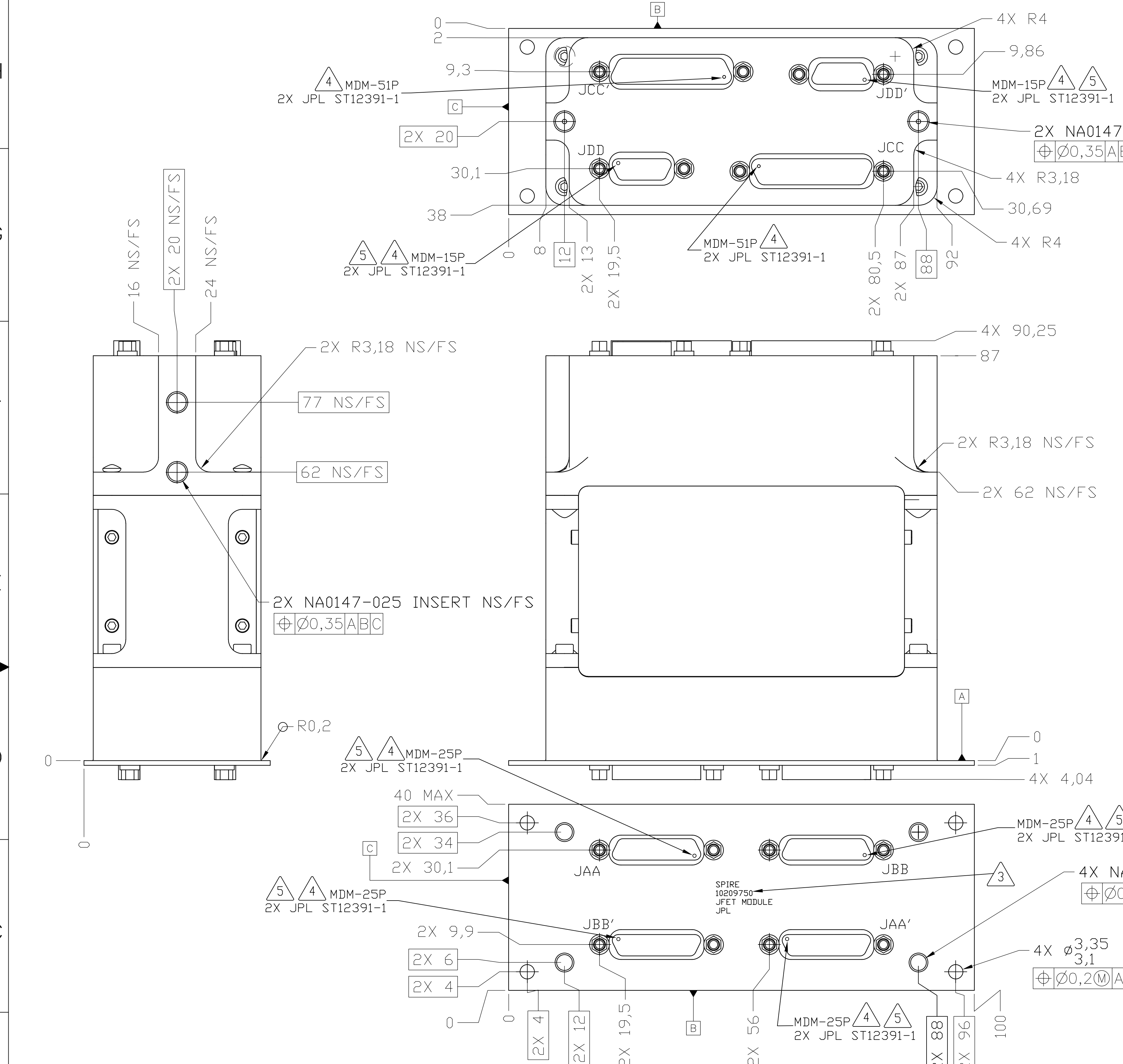


SUBSYSTEM INTERFACE DATA			
UNIT: S/LW			
NUMBER: 10209800-4			
FOCUS: 36.9			
CONNECTOR POSITIONS USED: J05			
MECHANICAL CHARACTERISTICS			
MASS: 550 g			
C.O.G. LOCATION W.R.T. LOCATION HOLE:		X 34.5	Y 24.1
Z 4.4			
MOMENT OF INERTIA:		I _x 665 Kg*mm ²	I _y 990 Kg*mm ²
		I _z 1,239 Kg*mm ²	
MECHANICAL INTERFACE MATERIAL: 7075 AL			
SURFACE FINISH DESCRIPTION: CHEM FILM GOLD			
TOTAL CONTACT AREA: 1783 mm ²			
R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			
THERMAL STRAP INTERFACE MATERIAL: CU 99.999% PURE			
THERMAL STRAP SURFACE FINISH DESCRIPTION: GOLD PLATED			
THERMAL STRAP CONTACT AREA: 57.5 mm ²			
THERMAL STRAP R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			

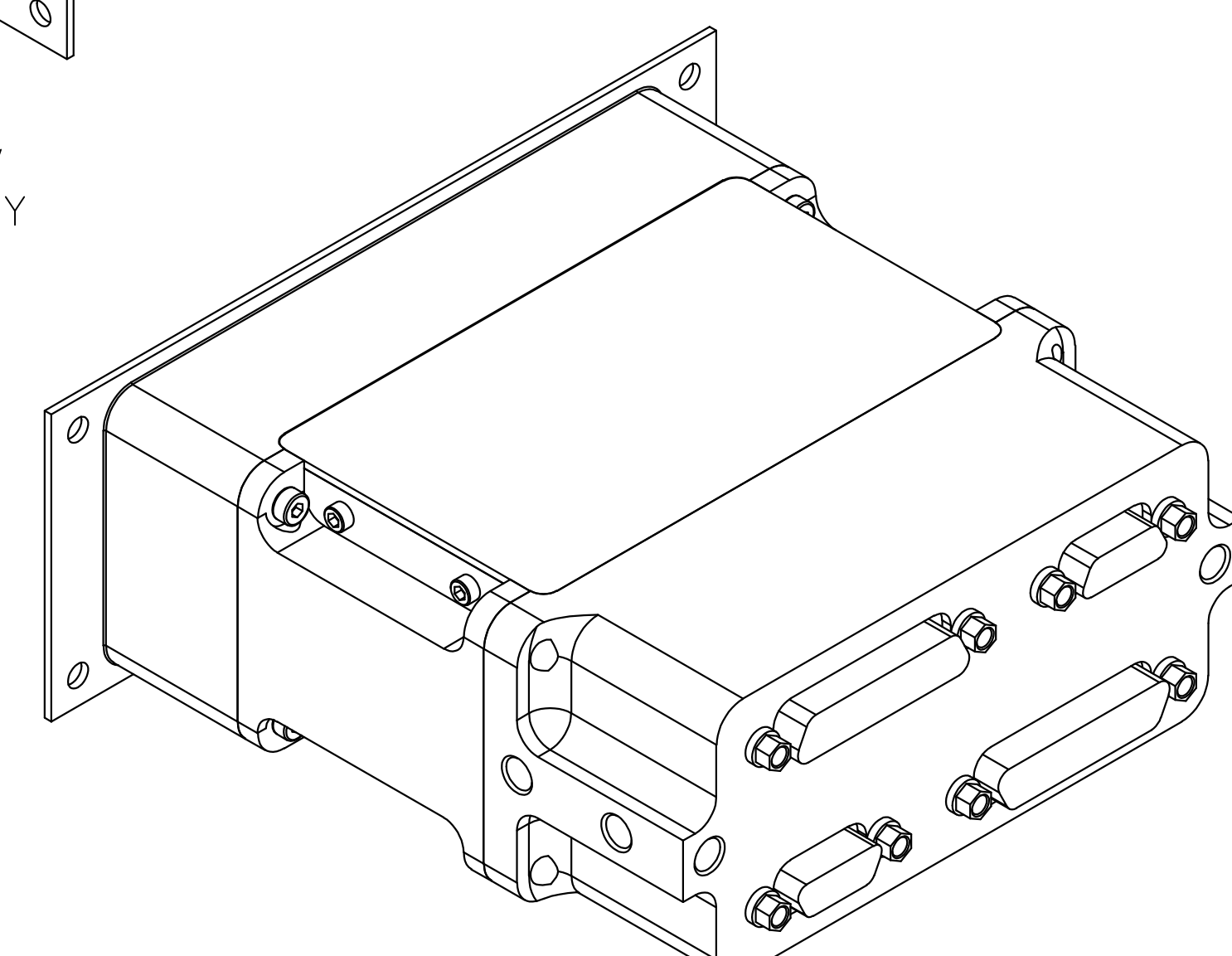
SUBSYSTEM INTERFACE DATA			
UNIT: S.SW			
NUMBER: 10209800-5			
FOCUS: 26.7			
CONNECTOR POSITIONS USED: J05, J06			
MECHANICAL CHARACTERISTICS			
MASS: 510 g			
C.O.G. LOCATION W.R.T. LOCATION HOLE:		X 34.6	Y 24.2
Z 6			
MOMENT OF INERTIA:		I _x 628 Kg*mm ²	I _y 936 Kg*mm ²
		I _z 1,189 Kg*mm ²	
MECHANICAL INTERFACE MATERIAL: 7075 AL			
SURFACE FINISH DESCRIPTION: CHEM FILM GOLD			
TOTAL CONTACT AREA: 1783 mm ²			
R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			
THERMAL STRAP INTERFACE MATERIAL: CU 99.999% PURE			
THERMAL STRAP SURFACE FINISH DESCRIPTION: GOLD PLATED			
THERMAL STRAP CONTACT AREA: 57.5 mm ²			
THERMAL STRAP R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			



LTR		ZONE		REVISIONS										
				DWN	CHK	STRUCT	MATL	THRM	CONTR	ENGR	DSGN	DATA	RELEASE	DATE
A													RGB	3/20/03
B														



GENERAL VIEW
REFERENCE ONLY
SCALE: NONE



GENERAL VIEW
REFERENCE ONLY
SCALE: NONE

6. CONNECTOR REFERENCE DESIGNATORS ARE FOR REFERENCE ONLY. UNITS TO BE SUPPLIED WITHOUT CONNECTOR REFERENCE DESIGNATORS. FLIGHT REFERENCE DESIGNATORS WILL APPEAR ON JFET RACKS.

- 5 FILTER TYPE IS PT(3300/5000 PICO FARAD).
- 4 CONNECTOR CUT OUTS SIZED TO ALLOW PROPER MATING OF SOCKET CONNECTORS.
- 3 ASSEMBLY NUMBER, NAME, TITLE, DASH NUMBER, AND REV LETTER TO APPEAR AS SHOWN IN THIS AREA.

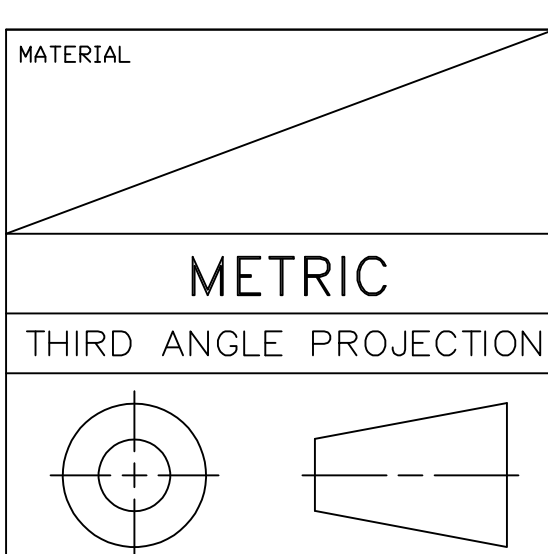
2. THIS IS THE INTERFACE CONTROL DRAWING FOR THE JFET MODULE ASSEMBLY, JPL PART NUMBER 10209750, REFERENCE DESIGNATION TBD. JPL DRAWING NUMBER 10209750 SHALL CONTAIN THE FOLLOWING NOTE: THIS ASSEMBLY MEETS THE INTERFACE REQUIREMENTS OF JPL INTERFACE CONTROL DRAWING 10209722.

1. THIS TECHNICAL DATA IS EXPORT CONTROLLED UNDER U.S. LAW AND IS BEING TRANSFERRED BY JPL TO PPARC PURSUANT TO THE NASA / PPARC LETTER OF AGREEMENT WHICH ENTERED INTO FORCE ON DECEMBER 2, 1999. THIS TECHNICAL DATA IS TRANSFERRED TO PPARC FOR USE EXCLUSIVELY ON THE NASA/PPARC SPIRE ON FIRST COOPERATIVE PROJECT, MAY NOT BE USED FOR ANY OTHER PURPOSE, AND SHALL NOT BE RE-TRANSFERRED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE PRIOR WRITTEN APPROVAL OF NASA.

NOTES: UNLESS OTHERWISE SPECIFIED

INTERFACE DRAWING

QTY REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE
PARTS LIST								
				CONTRACT NO 960939		JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109 RELEASED THROUGH EIDMG		
				APPD _____ DATE _____		JFET MODULE, INTERFACE DRAWING		
				DWN D CRUMB 3/19/03		SIZE: A1 CAGE NO: 23835		
				CHK D WATERBURY 3/19/03		10209722		
				STRUCT _____		SCALE 2:1 UNCLASSIFIED SHEET 1 OF 2		
				MATL _____		REV B		
				THRM _____		1		
				CONTR _____		REV 2/00		
				ENGR G LILIENTHAL 3/19/03		1		
				DSGN S TSENG 3/19/03		1		
				SUPV _____		1		



JAA JFET OUTPUT 1B	
PIN #	PIN PURPOSE
1	SIGNAL M+
2	SIGNAL N+
3	SIGNAL P+
4	SIGNAL R+
5	SIGNAL S+
6	SIGNAL T+
7	SIGNAL U-
8	SIGNAL V-
9	SIGNAL W-
10	SIGNAL X-
11	SIGNAL Y-
12	SIGNAL Z-
13	FPU GND
14	SIGNAL M-
15	SIGNAL N-
16	SIGNAL P-
17	SIGNAL R-
18	SIGNAL S-
19	SIGNAL T-
20	SIGNAL U+
21	SIGNAL V+
22	SIGNAL W+
23	SIGNAL X+
24	SIGNAL Y+
25	SIGNAL Z+

JAA' JFET OUTPUT 2A	
PIN #	PIN PURPOSE
1	SIGNAL M+'
2	SIGNAL N+'
3	SIGNAL P+'
4	SIGNAL R+'
5	SIGNAL S+'
6	SIGNAL T+'
7	SIGNAL U-'
8	SIGNAL V-'
9	SIGNAL W-'
10	SIGNAL X-'
11	SIGNAL Y-'
12	SIGNAL Z-'
13	FPU GND'
14	SIGNAL M-'
15	SIGNAL N-'
16	SIGNAL P-'
17	SIGNAL R-'
18	SIGNAL S-'
19	SIGNAL T-'
20	SIGNAL U+'
21	SIGNAL V+'
22	SIGNAL W+'
23	SIGNAL X+'
24	SIGNAL Y+'
25	SIGNAL Z+'

JCC JFET INPUT 1	
PIN #	PIN PURPOSE
1	BIAS V+
2	BIAS V-
3	SIGNAL Y+
4	SIGNAL W-
5	SIGNAL V+
6	SIGNAL T+
7	SIGNAL S-
8	SIGNAL P+
9	SIGNAL N-
10	SIGNAL L-
11	SIGNAL K+
12	SIGNAL I-
13	SIGNAL H+
14	SIGNAL F+
15	SIGNAL E-
16	SIGNAL C+
17	SIGNAL B-
18	SIGNAL A-
19	BIAS GND
20	SIGNAL Z+
21	SIGNAL X-
22	SIGNAL W+
23	SIGNAL U-
24	SIGNAL T-
25	SIGNAL R+
26	SIGNAL P-
27	SIGNAL M+
28	SIGNAL L+
29	SIGNAL J-
30	SIGNAL I+
31	SIGNAL G-
32	SIGNAL F-
33	SIGNAL D+
34	SIGNAL C-
35	SIGNAL A+
36	SIGNAL Z-
37	SIGNAL Y-
38	SIGNAL X+
39	SIGNAL V-
40	SIGNAL U+
41	SIGNAL S+
42	SIGNAL R-
43	SIGNAL N+
44	SIGNAL M-
45	SIGNAL K-
46	SIGNAL J+
47	SIGNAL H-
48	SIGNAL G+
49	SIGNAL E+
50	SIGNAL D-
51	SIGNAL B+

JDD JFET SERVICE 1	
PIN #	PIN PURPOSE
1	Vss
2	V+
3	H+
4	V-
5	V-
6	H+
7	V+
8	Vss
9	BIAS GND
10	Vdd
11	H-
12	CHASSIS GND
13	H-
14	Vdd
15	BIAS GND

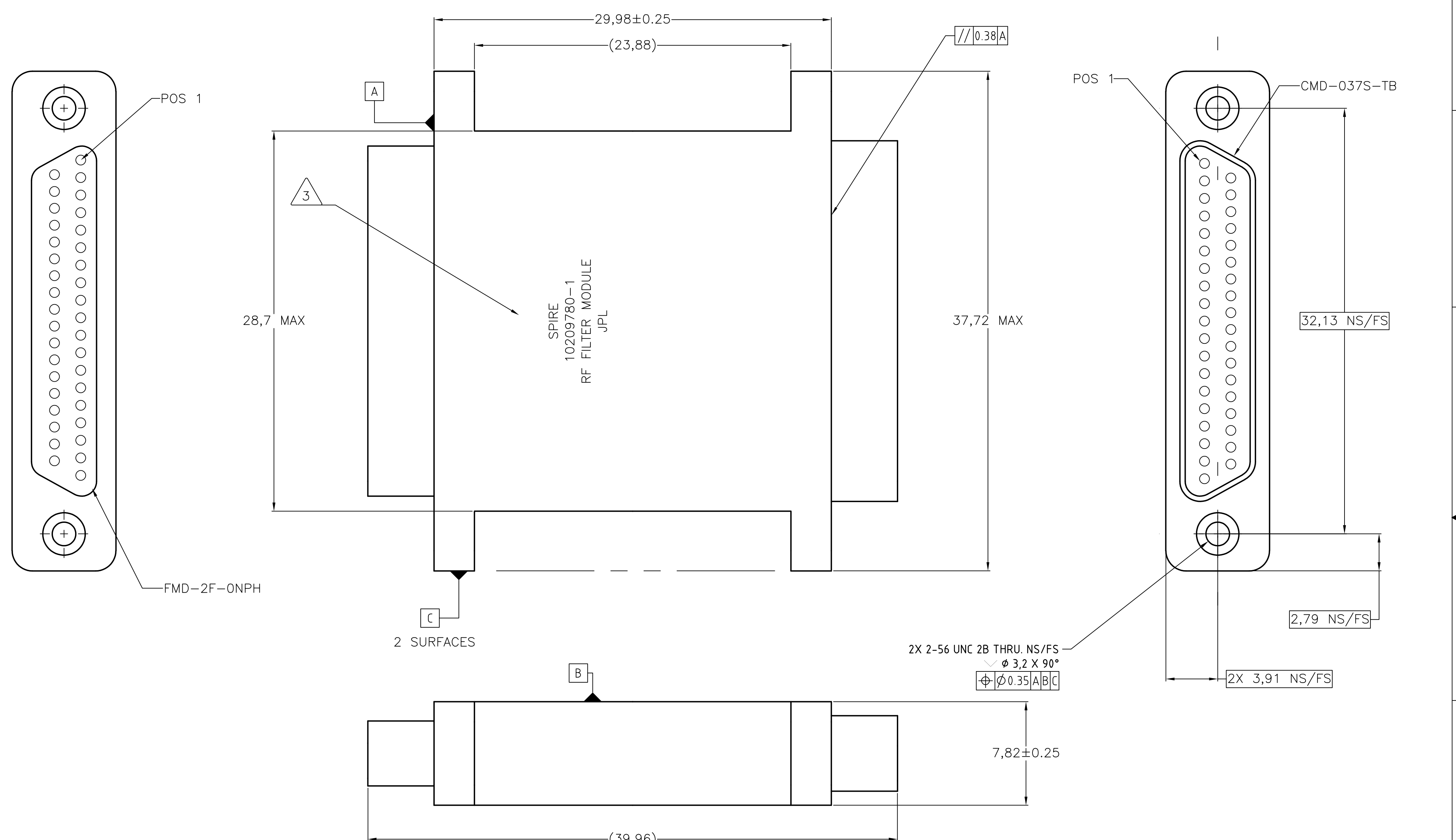
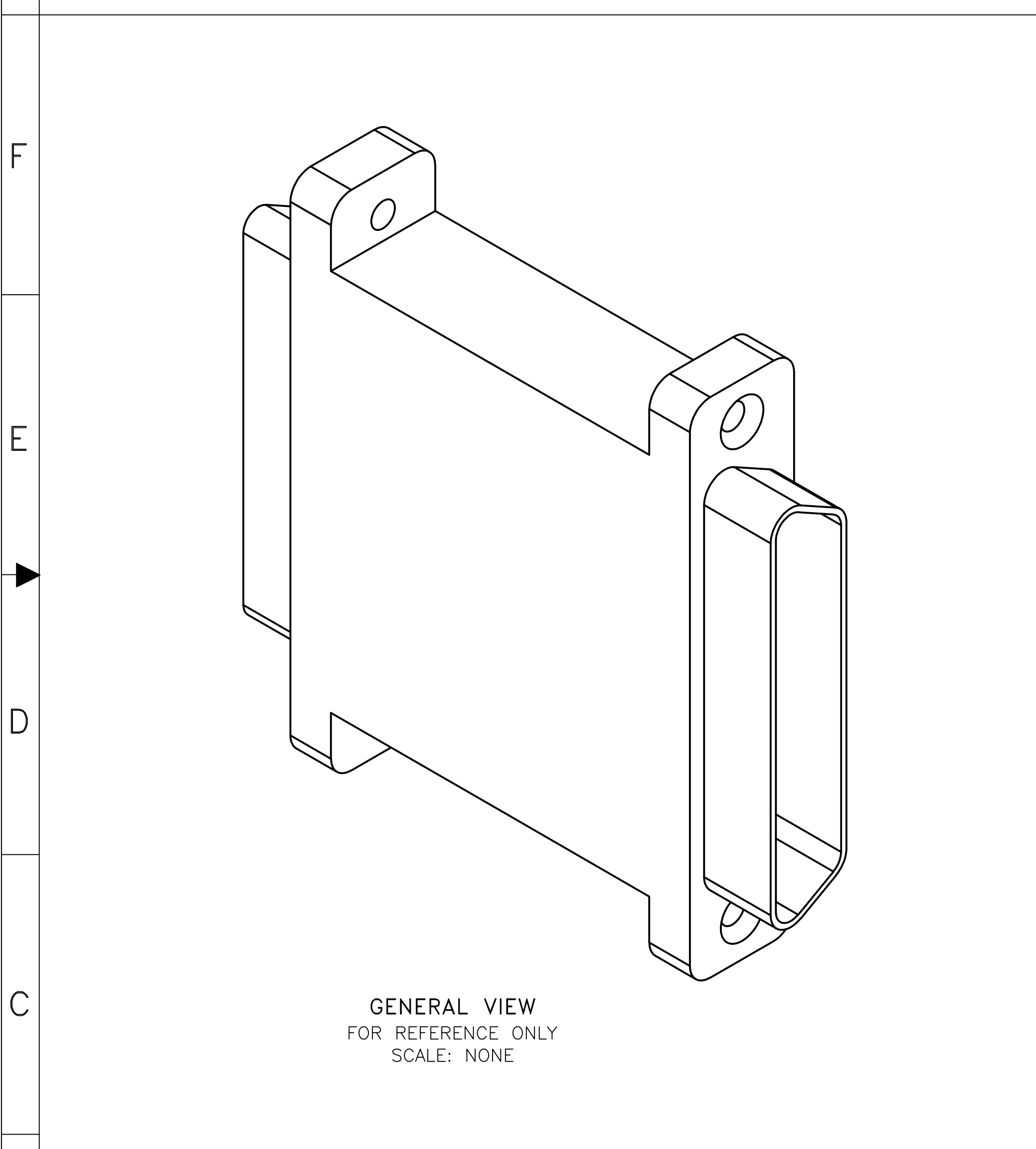
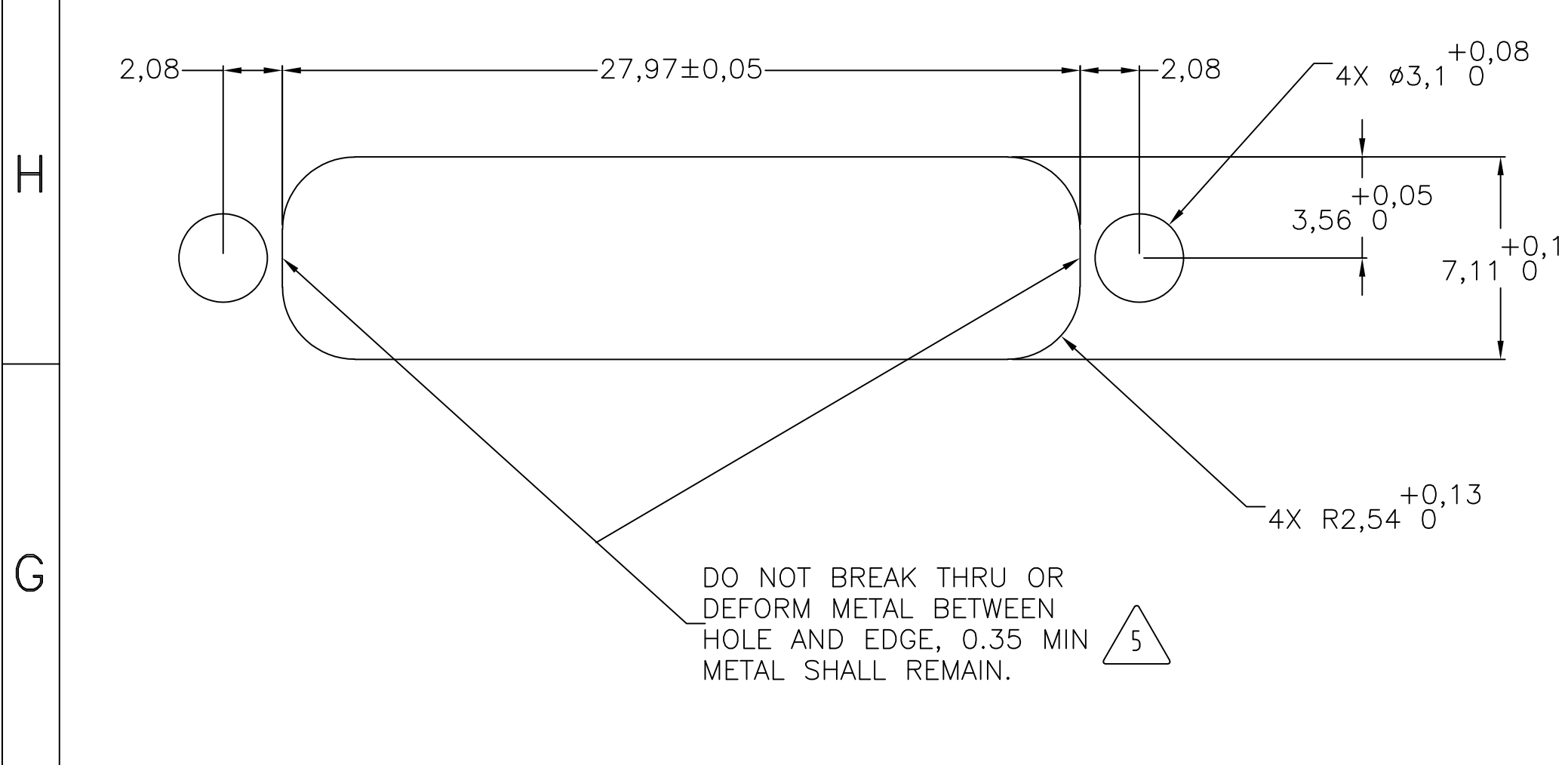
JDD' JFET SERVICE 2	
PIN #	PIN PURPOSE
1	Vss'
2	V+'
3	H+'
4	V-'
5	V-'
6	H+'
7	V+'
8	Vss'
9	BIAS GND'
10	Vdd'
11	H-'
12	CHASSIS GND'
13	H-'
14	Vdd'
15	BIAS GND'

JCC' JFET INPUT 2	
PIN #	PIN PURPOSE
1	BIAS V+'
2	BIAS V-'
3	SIGNAL Y+'
4	SIGNAL W-'
5	SIGNAL V+'
6	SIGNAL T+'
7	SIGNAL S-'
8	SIGNAL P+'
9	SIGNAL N-'
10	SIGNAL L-'
11	SIGNAL K+'
12	SIGNAL I-'
13	SIGNAL H+'
14	SIGNAL F+'
15	SIGNAL E-'
16	SIGNAL C+'
17	SIGNAL B-'
18	SIGNAL A-'
19	BIAS GND'
20	SIGNAL Z+'
21	SIGNAL X-'
22	SIGNAL W+'
23	SIGNAL U-'
24	SIGNAL T-'
25	SIGNAL R+'
26	SIGNAL P-'
27	SIGNAL M+'
28	SIGNAL L+'
29	SIGNAL J-'
30	SIGNAL I+'
31	SIGNAL G-'
32	SIGNAL F-'
33	SIGNAL D+'
34	SIGNAL C-'
35	SIGNAL A+'
36	SIGNAL Z-'
37	SIGNAL Y-'
38	SIGNAL X+'
39	SIGNAL V-'
40	SIGNAL U+'
41	SIGNAL S+'
42	SIGNAL R-'
43	SIGNAL N+'
44	SIGNAL M-'
45	SIGNAL K-'
46	SIGNAL J+'
47	SIGNAL H-'
48	SIGNAL G+'
49	SIGNAL E+'
50	SIGNAL D-'
51	SIGNAL B+'

JBB JFET OUTPUT 1A	
PIN #	PIN PURPOSE
1	SIGNAL A+
2	SIGNAL B+
3	SIGNAL C+
4	SIGNAL D+
5	SIGNAL E+
6	SIGNAL F+
7	SIGNAL G-
8	SIGNAL H-
9	SIGNAL I-
10	SIGNAL J-
11	SIGNAL K-
12	SIGNAL L-
13	FPU GND
14	SIGNAL A-
15	SIGNAL B-
16	SIGNAL C-
17	SIGNAL D-
18	SIGNAL E-
19	SIGNAL F-
20	SIGNAL G+
21	SIGNAL H+
22	SIGNAL I+
23	SIGNAL J+
24	SIGNAL K+
25	SIGNAL L+

JBB' JFET OUTPUT 2B	
PIN #	PIN PURPOSE
1	SIGNAL A+'
2	SIGNAL B+'
3	SIGNAL C+'
4	SIGNAL D+'
5	SIGNAL E+'
6	SIGNAL F+'
7	SIGNAL G-'
8	SIGNAL H-'
9	SIGNAL I-'
10	SIGNAL J-'
11	SIGNAL K-'
12	SIGNAL L-'
13	FPU GND'
14	SIGNAL A-'
15	SIGNAL B-'
16	SIGNAL C-'
17	SIGNAL D-'
18	SIGNAL E-'
19	SIGNAL F-'
20	SIGNAL G+'
21	SIGNAL H+'
22	SIGNAL I+'
23	SIGNAL J+'
24	SIGNAL K+'
25	SIGNAL L+'

LTR		ZONE	DESCRIPTION	REVISIONS									
A			INITIAL RELEASE	DWN	CHK	STRUCT	MATL	THRM	ENGR	DSGN	DATA	RELEASE	
B			ADDED COUNTERSINKS, DELETED NOTE 6, DELETED SHEET 2, MODIFIED NOTE 7, CHANGED DIMENSIONS	CODE									
				B									



- 5. RECOMMENDED CONNECTOR CUT OUT.
 - 4. FILTER TYPE IS PH(850/1300 PICOFARAD).
 - 3. ASSEMBLY NUMBER, NAME, TITLE, DASH NUMBER, AND REV LETTER TO APPEAR AS SHOWN IN THIS AREA.
 - 2. THIS IS THE INTERFACE CONTROL DRAWING FOR THE RF FILTER MODULE ASSEMBLY, JPL PART NUMBER 10209780. JPL DRAWING NUMBER 10209780 SHALL CONTAIN THE FOLLOWING NOTE: THIS ASSEMBLY MEETS THE INTERFACE REQUIREMENTS OF JPL INTERFACE CONTROL DRAWING 10209723.
 - 1. THIS TECHNICAL DATA IS EXPORT CONTROLLED UNDER U.S. LAW AND IS BEING TRANSFERRED BY JPL TO PPARC PURSUANT TO THE NASA / PPARC LETTER OF AGREEMENT WHICH ENTERED INTO FORCE ON DECEMBER 2, 1999. THIS TECHNICAL DATA IS TRANSFERRED TO PPARC FOR USE EXCLUSIVELY ON THE NASA/PPARC SPIRE ON FIRST COOPERATIVE PROJECT, MAY NOT BE USED FOR ANY OTHER PURPOSE, AND SHALL NOT BE RE-TRANSFERRED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE PRIOR WRITTEN APPROVAL OF NASA.
- NOTES: UNLESS OTHERWISE SPECIFIED

- 11. DELETED
- 10. THE UNIT MASS IS 25.0 GRAMS MAX
- 9. THE SERIES RESISTANCE BETWEEN THE CONNECTOR MATING FLANGES SHALL BE < 5 MILIΩ.
- 8. CONNECTOR ARE WIRED PIN TO PIN.
- 7. MATERIALS:
SHELLS - INCONEL 718 PER AMS 5596.
RECEPTICAL INSULATION - DIALYLPHTHALATE PER MIL-M-14G TYPE SDG-F
PLUG INSULATION - POLYPHENYLENE SULFIDE TYPE GST-4 40F
PLUG CONTACTS - BERYLIUM COPPER
SOCKET CONTACTS - COPPER ALLOY
CONTACT FINISH: GOLD PER MIL-G-45204 TYPE 2 GRADE C CLASS 1 OVER NICKEL PER QQ-N-290
- 6. DELETED

INTERFACE DRAWING

QTY REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE
PARTS LIST								
					CONTRACT NO. 960939	JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109		
					APPD _____ DATE _____	RELEASED THROUGH EDMG		
					DWN D WATERBURY 8/1/02	RF FILTER MODULE, INTERFACE DRAWING, SPIRE		
					CHK D CRUMB 7/30/02	SIZE CAGE NO A1 23835 10209723		
					STRUC _____	REVISIONS		
					MATL _____	REV		
					THRM _____	SCALE 5:1 UNCLASSIFIED SHEET 1 OF 1		
					ENGR L HUSTED 9/25/02	REV 2/00		
					DSGN _____			
					SUPV _____			

METRIC

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

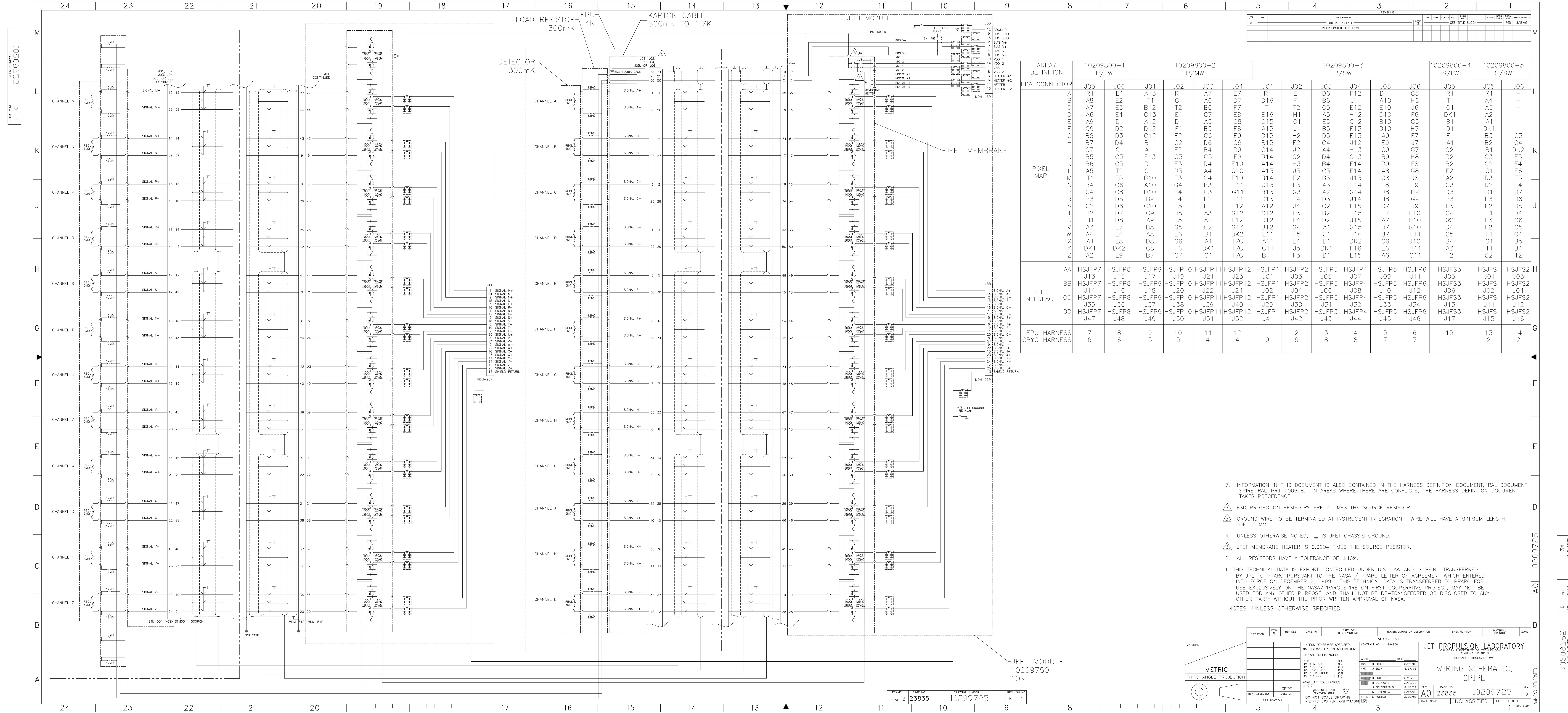
LINEAR TOLERANCES:

0-6	± 0.1
OVER 6-30	± 0.2
OVER 30-120	± 0.3
OVER 120-315	± 0.5
OVER 315-1000	± 0.8
OVER 1000	± 1.2

ANGULAR TOLERANCES: ± 0.5°

MACHINE FINISH (MICROMETERS) $\frac{32}{\sqrt{}}$

DO NOT SCALE DRAWING INTERPRET DWG PER ANS I Y14.100M



REVISIONS		DATE	BY	DESCRIPTION
1	INITIAL RELEASE	3/18/93		SEE TITLE BLOCK
2	INCORPORATED FOR 10209725			

ARRAY DEFINITION	10209800-1 P/LW			10209800-2 P/MW			10209800-3 P/SW			10209800-4 S/LW			10209800-5 S/SW			
	J05	J06	J07	J01	J02	J03	J04	J05	J06	J07	J08	J09	J10	J11	J12	
BDA CONNECTOR	R1 A8 A7 A6 A9 C9 B8 B7 C7 B5 B6 A5 T1 B4 C4 B3 C2 B2 B1 A3 A4 A1 DK1 A2	E1 E2 E3 E4 D1 D2 D3 D4 C1 C2 C3 C4 D5 D6 D7 D8 E7 E8 E6 E8 C8 DK2 E9	A13 T1 B2 E1 D1 F1 E2 G1 D1 E3 D3 F3 E4 C3 B9 F4 A5 A6 A8 D8 C8 B7	R1 G1 T2 C7 A5 B5 G2 F2 A5 B2 C3 A3 B2 F4 G5 A2 G6 A1 F6 G7	J04 J01 J02 J03 J04 J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16	E1 F1 T2 H1 G1 J1 H2 F2 A9 G2 A3 E2 H4 G4 C2 E3 F4 A1 H5 E4 J5 F5	D6 J11 E10 C10 B10 D10 A9 E9 F9 H3 F4 D8 B8 C8 A7 D7 B7 C6 A6 E6 C6 J3 J4 J5 J6 J7	D11 A10 E10 C10 B10 D10 A9 E9 F9 H3 F4 D8 B8 C8 A7 D7 B7 C6 A6 E6 C6 J3 J4 J5 J6 J7	J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16	J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16	J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16	J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16	J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16	J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16		
JFET INTERFACE	AA BB CC DD	HSJFP7 HSJFP7 HSJFP7 HSJFP7 J47	HSJFP8 J15 J16 HSJFP8 J48	HSJFP9 J17 J18 HSJFP9 J49	HSJFP10 J19 J20 HSJFP10 J50	HSJFP11 J21 J22 HSJFP11 J51	HSJFP12 J23 J24 HSJFP12 J52	HSJFP1 J01 J02 HSJFP1 J41	HSJFP2 J03 J04 HSJFP2 J42	HSJFP3 J05 J06 HSJFP3 J43	HSJFP4 J07 J08 HSJFP4 J44	HSJFP5 J09 J10 HSJFP5 J45	HSJFP6 J11 J12 HSJFP6 J46	HSJFS3 J05 J06 HSJFS3 J13	HSJFS1 J01 J02 HSJFS1 J11	HSJFS2 J03 J04 HSJFS2 J12
FPU HARNESS	7	8	9	10	11	12	1	2	3	4	5	6	15	13	14	
CRYO HARNESS	6	6	5	5	4	4	9	9	8	7	7	7	1	2	2	

- INFORMATION IN THIS DOCUMENT IS ALSO CONTAINED IN THE HARNESS DEFINITION DOCUMENT, RAL DOCUMENT SPIRE-RAL-PRJ-00608. IN AREAS WHERE THERE ARE CONFLICTS, THE HARNESS DEFINITION DOCUMENT TAKES PRECEDENCE.
 - ESD PROTECTION RESISTORS ARE 7 TIMES THE SOURCE RESISTOR.
 - GROUND WIRE TO BE TERMINATED AT INSTRUMENT INTEGRATION. WIRE WILL HAVE A MINIMUM LENGTH OF 150MM.
 - UNLESS OTHERWISE NOTED, \perp IS JFET CHASSIS GROUND.
 - JFET MEMBRANE HEATER IS 0.0204 TIMES THE SOURCE RESISTOR.
 - ALL RESISTORS HAVE A TOLERANCE OF $\pm 40\%$.
 - THIS TECHNICAL DATA IS EXPORT CONTROLLED UNDER U.S. LAW AND IS BEING TRANSFERRED BY JPL TO PPARC PURSUANT TO THE NASA / PPARC LETTER OF AGREEMENT WHICH ENTERED INTO FORCE ON DECEMBER 2, 1993. THIS TECHNICAL DATA IS TRANSFERRED TO PPARC FOR USE EXCLUSIVELY ON THE NASA/PPARC SPIRE ON FIRST COOPERATIVE PROJECT. MAY NOT BE USED FOR ANY OTHER PURPOSE, AND SHALL NOT BE RE-TRANSFERRED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE PRIOR WRITTEN APPROVAL OF NASA.
- NOTES: UNLESS OTHERWISE SPECIFIED

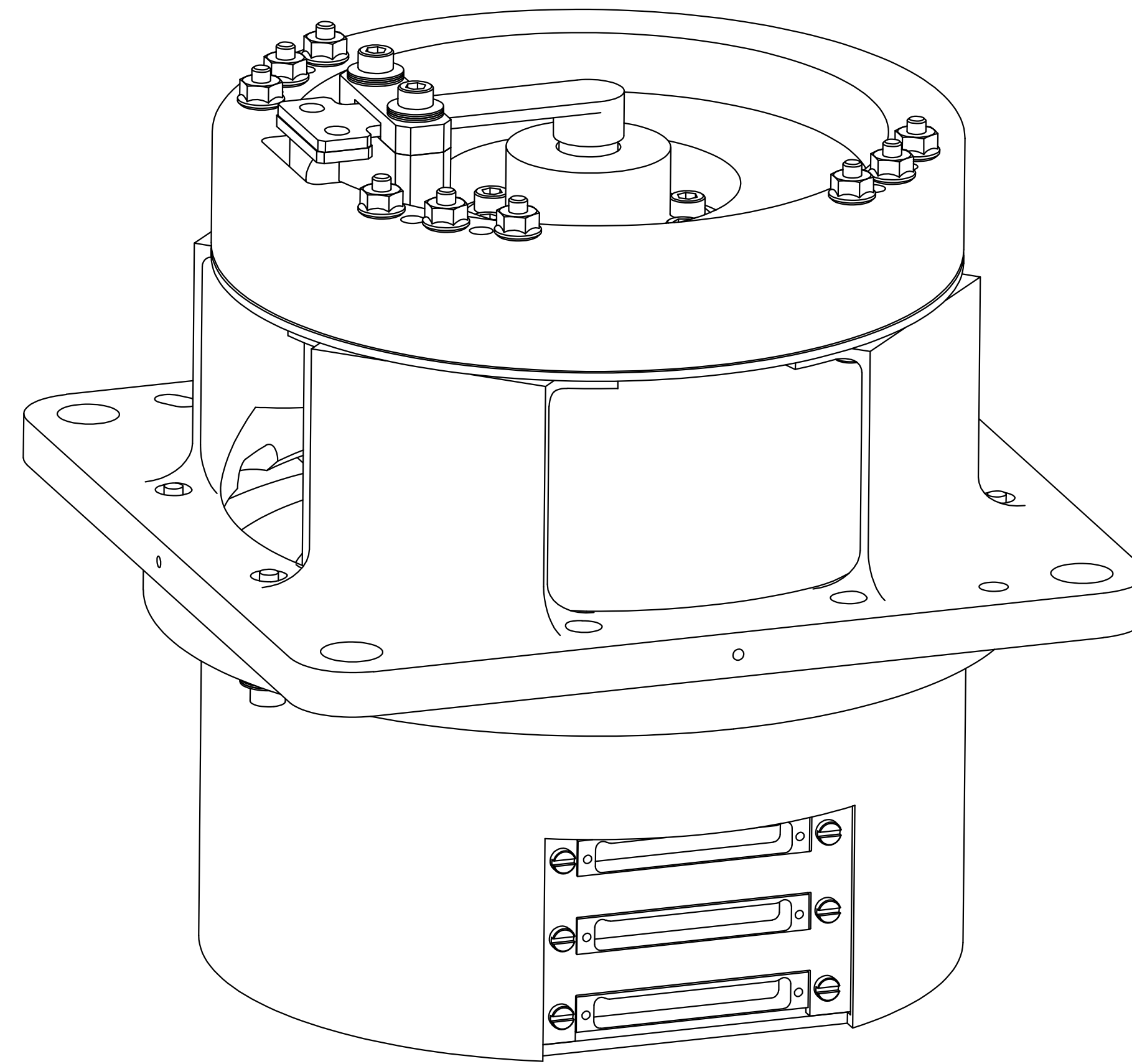
MATERIAL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	CONTRACT NO. 2484888	JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109 RELEASED THROUGH EDAC
METRIC	LINEAR TOLERANCES: 0-25 ± 0.1 25-50 ± 0.2 50-100 ± 0.3 100-250 ± 0.5 250-1000 ± 0.8 OVER 1000 ± 1.2	DATE APPD 3/26/93 CHK 3/17/93	RELEASED THROUGH EDAC
THIRD ANGLE PROJECTION	ANGULAR TOLERANCES: 30° ± 0.5°	DATE APPD 3/21/93 CHK 3/11/93	WIRING SCHEMATIC, SPIRE
APPLICATION	DO NOT SCALE DRAWING INTERPRET DIM PER ANSI Y14.100M	DATE APPD 3/26/93 CHK 3/26/93	SCALE NONE UNCLASSIFIED SHEET 1 OF 1

FRAME 1 of 2 CASE NO 23835 DRAWING NUMBER 10209725 REV B 1

10209725
 JET PROPULSION LABORATORY
 PASADENA, CA 91109
 RELEASED THROUGH EDAC

12 11 10 9 8 7 6 5 4 3 2 1

		REVISIONS													
LTR	ZONE	DESCRIPTION					DWN	CHK	STRUCT	MATL	THRM CONT	ENGR	DSGN SUPV	DATA MCT	RELEASE DATE
A		INITIAL RELEASE													
		SEE TITLE BLOCK													



GENERAL VIEW
REFERENCE ONLY
SCALE: NONE

7. WIRING IS IDENTICAL TO DRAWING 10209721 EXCEPT BOLOMETER IS REPLACED WITH A 5mΩ RESISTOR.

6. SEE TABLE II FOR CONNECTOR PIN INFORMATION.

5. INDICATES CONNECTOR POSITION. CONNECTORS INSTALLED ARE NANONIC STM 051 M6SN.

4. SEE TABLE I FOR SPECIFIED DIMENSION VALUES.

3. ASSEMBLY REFERENCE DESIGNATOR, TITLE, PART NUMBER, REVISION LETTER, AND SERIAL NUMBER TO APPEAR AS SHOWN IN THIS AREA.

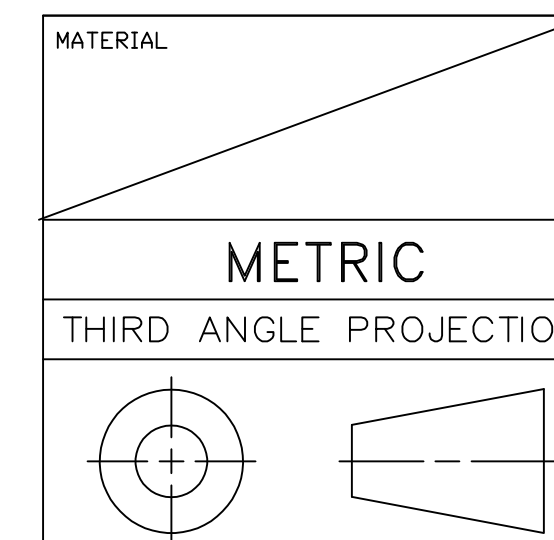
2. THIS IS THE INTERFACE CONTROL DRAWING FOR THE BOLOMETER DETECTOR ARRAY STRUCTURAL THERMAL MODEL, JPL PART NUMBER 10217670. JPL DRAWING NUMBER 10217670 SHALL CONTAIN THE FOLLOWING NOTE: THIS ASSEMBLY MEETS THE INTERFACE REQUIREMENTS OF JPL INTERFACE CONTROL DRAWING 10209727.

1. THIS TECHNICAL DATA IS EXPORT CONTROLLED UNDER U.S. LAW AND IS BEING TRANSFERRED BY JPL TO PPARC PURSUANT TO THE NASA / PPARC LETTER OF AGREEMENT WHICH ENTERED INTO FORCE ON DECEMBER 2, 1999. THIS TECHNICAL DATA IS TRANSFERRED TO PPARC FOR USE EXCLUSIVELY ON THE NASA/PPARC SPIRE ON FIRST COOPERATIVE PROJECT, MAY NOT BE USED FOR ANY OTHER PURPOSE, AND SHALL NOT BE RE-TRANSFERRED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE PRIOR WRITTEN APPROVAL OF NASA.

NOTES: UNLESS OTHERWISE SPECIFIED

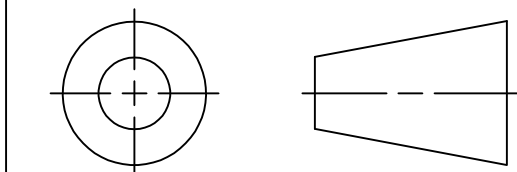
INTERFACE DRAWING

QTY REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE	
					PARTS LIST				
					CONTRACT NO	960939			
					APPD	DATE			
					DWN	J. PROEBSTLE 08/13/02			
					CHK	D. CRUMB			
					STRUCT				
					MATL				
					THRM CONT				
					ENGR				
					DSGN SUPV				
					SIZE	CAGE NO	10209727		REV
					A1	23835			A
					SCALE	2:1		UNCLASSIFIED	SHEET 1 OF 3
									REV 2/00



METRIC

THIRD ANGLE PROJECTION



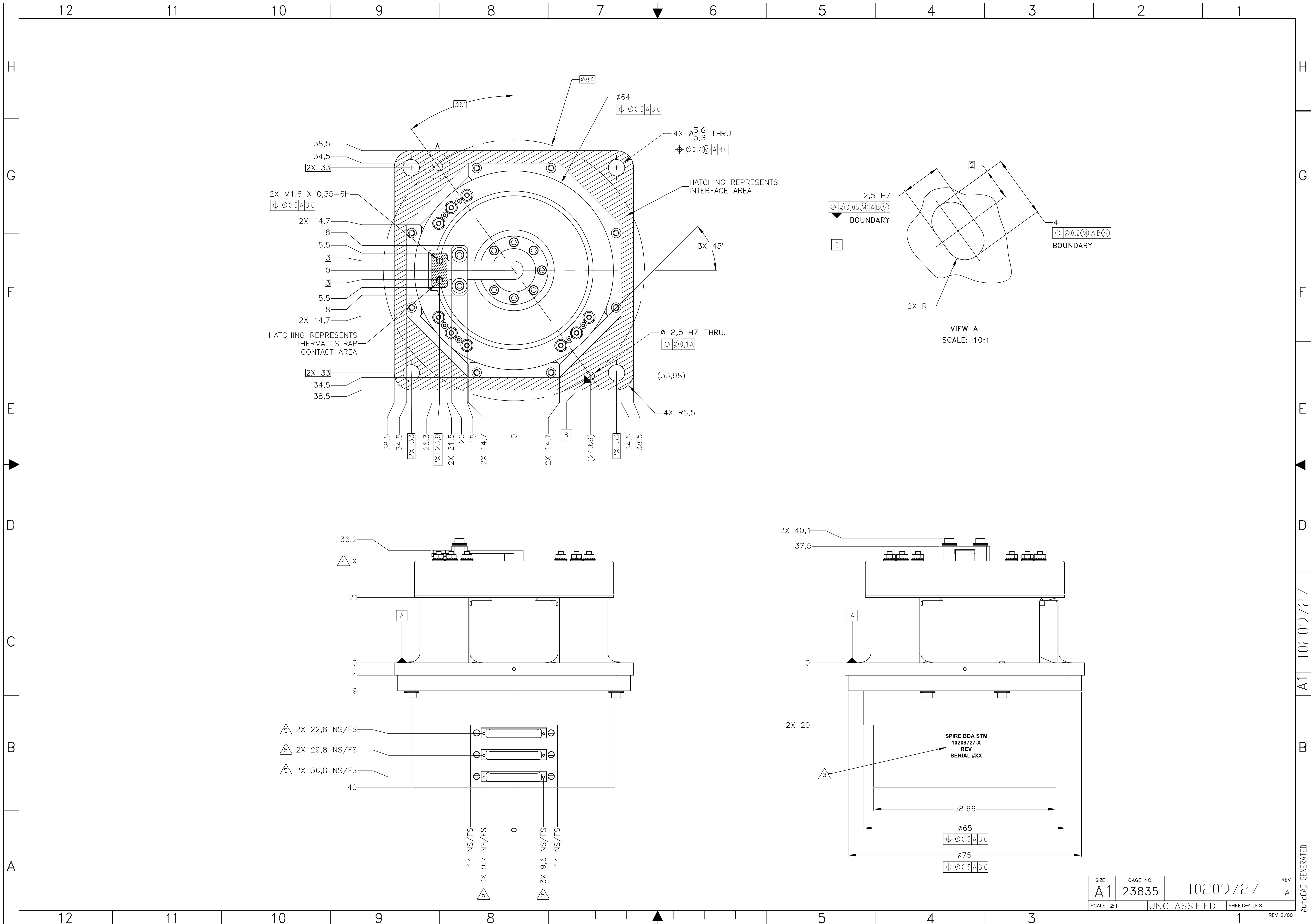
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
LINEAR TOLERANCES:
0-6 ± 0.1
OVER 6-30 ± 0.2
OVER 30-120 ± 0.3
OVER 120-315 ± 0.5
OVER 315-1000 ± 0.8
OVER 1000 ± 1.2
ANGULAR TOLERANCES:
± 0.5°
MACHINE FINISH (MICROMETERS) 3.2 ✓
DO NOT SCALE DRAWING
INTERPRET DWG PER ANSI Y14.100M

SPIRE USED ON APPLICATION

JET PROPULSION LABORATORY
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CA 91109
RELEASED THROUGH EDMG
**STRUCTURAL THERMAL MODEL,
BOLOMETER DETECTOR ARRAY,
INTERFACE DRAWING**

12 11 10 9 8 7 6 5 4 3 2 1

A1 10209727 AutoCAD GENERATED



SIZE	CAGE NO	REV
A1	23835	A
10209727		
SCALE 2:1	UNCLASSIFIED	SHEET 2 OF 3

A1 10209727
AutoCAD GENERATED

12 11 10 9 8 7 6 5 4 3 2 1

H
G
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H
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E
D
C
B
A

TABLE I

DASH NUMBER	TYPE	X	CONNECTORS
10217670-2	P/MW	32.75	J1, J2, J3, J4
10217670-3	P/SW	26.75	J1, J2, J3, J4, J5, J6
10217670-4	S/LW	21.75	J5
10217670-5	S/SW	21.75	J5, J6

TABLE II

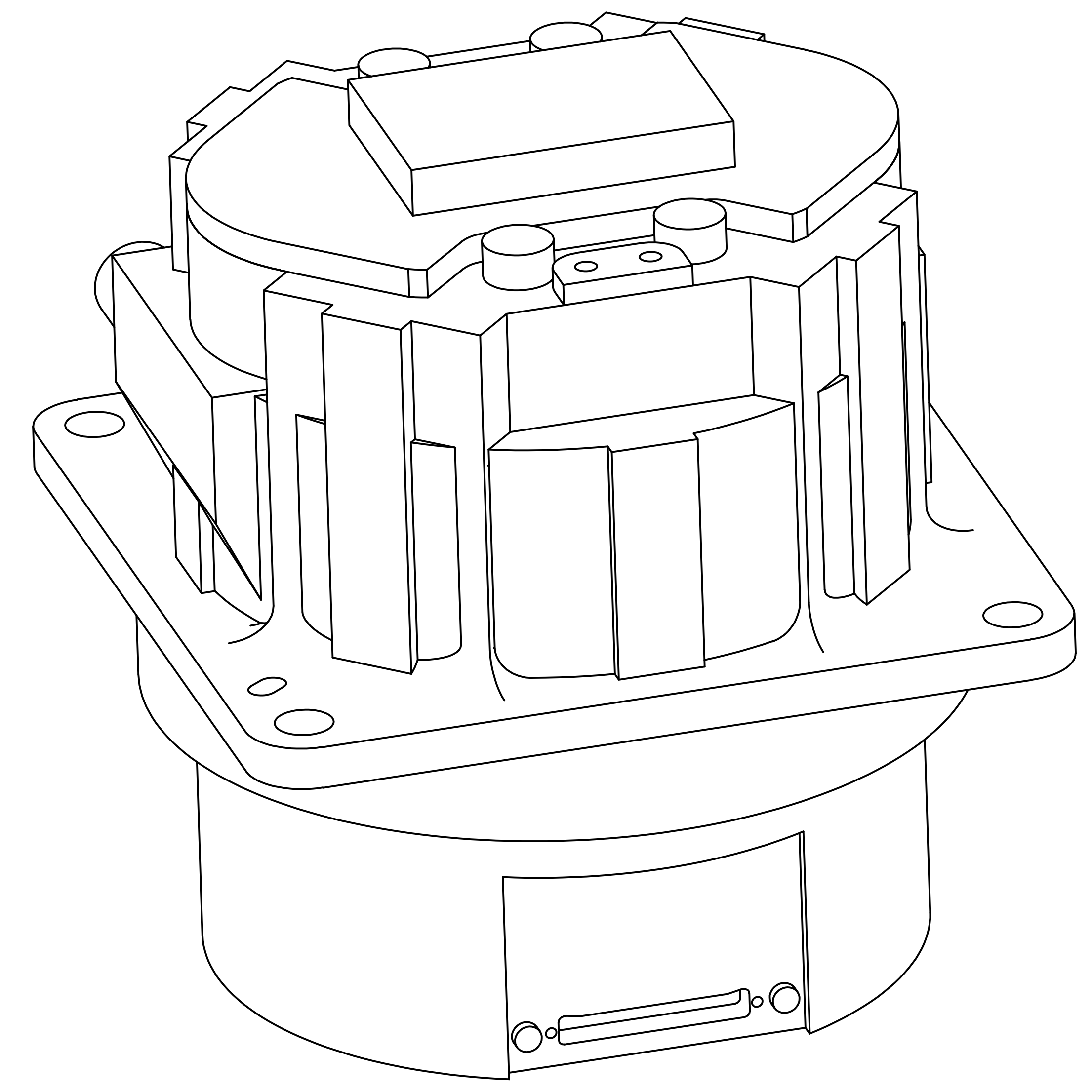
ALL CONNECTORS					
PIN #	PIN PURPOSE	PIN #	PIN PURPOSE	PIN #	PIN PURPOSE
1	SIGNAL 1A	18	SIGNAL 18A	35	SIGNAL 10B
2	SIGNAL 2A	19	SIGNAL 19A	36	SIGNAL 11B
3	SIGNAL 3A	20	SIGNAL 20A	37	SIGNAL 12B
4	SIGNAL 4A	21	SIGNAL 21A	38	SIGNAL 13B
5	SIGNAL 5A	22	SIGNAL 22A	39	SIGNAL 14B
6	SIGNAL 6A	23	SIGNAL 23A	40	SIGNAL 15B
7	SIGNAL 7A	24	SIGNAL 24A	41	SIGNAL 16B
8	SIGNAL 8A	25	SIGNAL BIAS V+	42	SIGNAL 17B
9	SIGNAL 9A	26	SIGNAL 1B	43	SIGNAL 18B
10	SIGNAL 10A	27	SIGNAL 2B	44	SIGNAL 19B
11	SIGNAL 11A	28	SIGNAL 3B	45	SIGNAL 20B
12	SIGNAL 12A	29	SIGNAL 4B	46	SIGNAL 21B
13	SIGNAL 13A	30	SIGNAL 5B	47	SIGNAL 22B
14	SIGNAL 14A	31	SIGNAL 6B	48	SIGNAL 23B
15	SIGNAL 15A	32	SIGNAL 7B	49	SIGNAL 24B
16	SIGNAL 16A	33	SIGNAL 8B	50	SIGNAL BIAS V-
17	SIGNAL 17A	34	SIGNAL 9B	51	SIGNAL BIAS GND

12 11 10 9 8 7 6 5 4 3 2 1

LTR		ZONE		REVISIONS									
DESCRIPTION	CODE	DWN	CHK	STRUCT	MATL	THRM	CONTR	ENGR	DSGN	DATA	RELEASE	DATE	
INITIAL RELEASE	B												
SEE TITLE BLOCK													

SUBSYSTEM INTERFACE DATA			
UNIT: SUSPENDED STM			
NUMBER: 10209800-9			
FOCUS: N/A			
CONNECTOR POSITIONS USED: J05, J06			
MECHANICAL CHARACTERISTICS			
MASS: 640			
C.O.G. LOCATION W.R.T. LOCATION HOLE:	X	34.5	Y 24.3 Z 4.42
MOMENT OF INERTIA:	$I_x 2.3 \times 10^{-4} \text{ KG MM}^2$	$I_y 2.3 \times 10^{-4} \text{ KG MM}^2$	$I_z 4.6 \times 10^{-4} \text{ KG MM}^2$
MECHANICAL INTERFACE MATERIAL: 7075 AL			
SURFACE FINISH DESCRIPTION: CHEM FILM GOLD			
TOTAL CONTACT AREA: 1783 mm ²			
R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			
THERMAL STRAP INTERFACE MATERIAL: OFHC			
THERMAL STRAP SURFACE FINISH DESCRIPTION: BARE			
THERMAL STRAP CONTACT AREA: 57.5 mm ²			
THERMAL STRAP R.M.S. ROUGHNESS OF CONTACT AREA: 3.2 μm			

ALL CONNECTORS					
PIN #	PIN PURPOSE	PIN #	PIN PURPOSE	PIN #	PIN PURPOSE
1	SIMULATOR 1A	18	SIMULATOR 18A	35	SIMULATOR 10B
2	SIMULATOR 2A	19	SIMULATOR 19A	36	SIMULATOR 11B
3	SIMULATOR 3A	20	SIMULATOR 20A	37	SIMULATOR 12B
4	SIMULATOR 4A	21	SIMULATOR 21A	38	SIMULATOR 13B
5	SIMULATOR 5A	22	SIMULATOR 22A	39	SIMULATOR 14B
6	SIMULATOR 6A	23	SIMULATOR 23A	40	SIMULATOR 15B
7	SIMULATOR 7A	24	SIMULATOR 24A	41	SIMULATOR 16B
8	SIMULATOR 8A	25	SIMULATOR BIAS V+	42	SIMULATOR 17B
9	SIMULATOR 9A	26	SIMULATOR 1B	43	SIMULATOR 18B
10	SIMULATOR 10A	27	SIMULATOR 2B	44	SIMULATOR 19B
11	SIMULATOR 11A	28	SIMULATOR 3B	45	SIMULATOR 20B
12	SIMULATOR 12A	29	SIMULATOR 4B	46	SIMULATOR 21B
13	SIMULATOR 13A	30	SIMULATOR 5B	47	SIMULATOR 22B
14	SIMULATOR 14A	31	SIMULATOR 6B	48	SIMULATOR 23B
15	SIMULATOR 15A	32	SIMULATOR 7B	49	SIMULATOR 24B
16	SIMULATOR 16A	33	SIMULATOR 8B	50	SIMULATOR BIAS V-
17	SIMULATOR 17A	34	SIMULATOR 9B	51	SIMULATOR BIAS GND



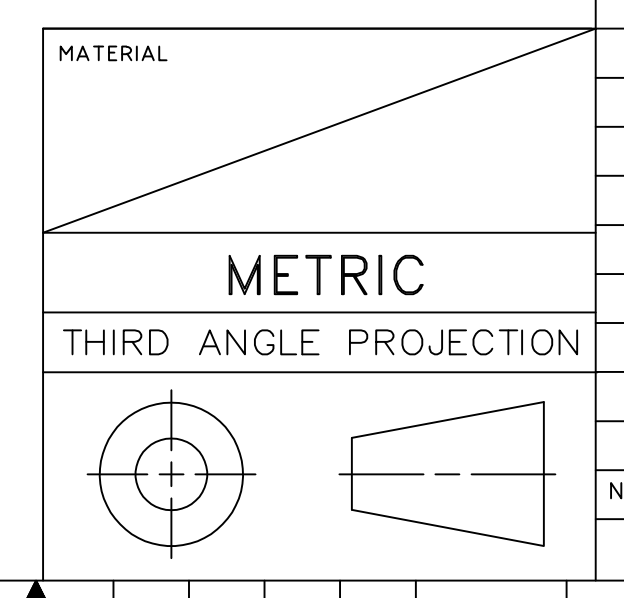
GENERAL VIEW
REFERENCE ONLY

- WIRING IS IDENTICAL TO DRAWING 10209721 EXCEPT BOLOMETER IS REPLACED WITH A 5mΩ RESISTOR.
- REFER TO SUBSYSTEM INTERFACE DATA TABLE FOR INFORMATION.
- SINGLE AXIS ACCELEROMETER INSTALLED INTERNAL TO VOLUME. ACCELEROMETER CABLE HAS A 10-32 COAXIAL CONNECTOR ON THE END OF A 150MM LEAD EXITING IN APPROXIMATE POSITION SHOWN.
- ALL DIMENSIONS SHOWN FOR THE 300mK STAGE ARE FOR THE NOMINAL SUSPENDED POSITION. THE SUSPENDED UNIT MAY BE SHIFTED FROM NOMINAL POSITION ±0.5mm IN ANY AXIS.
- DIMENSIONS IN {} ARE CALCULATED FOR OPERATING TEMPERATURE AND ARE PROVIDED FOR REFERENCE ONLY. ALL OTHER DIMENSIONS ARE BASED ON AN ASSEMBLY TEMPERATURE OF 20° C.
- INDICATES CONNECTOR POSITION. CONNECTORS INSTALLED ARE NANONIC STM 051 M6SN. UNIT PROVIDED WITH BOLOMETER SIMULATORS IN CONNECTOR POSITIONS.
- ASSEMBLY REFERENCE DESIGNATOR, TITLE, PART NUMBER, REVISION LETTER, AND SERIAL NUMBER TO APPEAR AS SHOWN IN THIS AREA.
- THIS IS THE INTERFACE CONTROL DRAWING FOR THE BOLOMETER DETECTOR ARRAY MASS SIMULATOR, JPL PART NUMBER 10209800-9. JPL DRAWING NUMBER 10209800-9 SHALL CONTAIN THE FOLLOWING NOTE: THIS ASSEMBLY MEETS THE INTERFACE REQUIREMENTS OF JPL INTERFACE CONTROL DRAWING 10209728.
- THIS TECHNICAL DATA IS EXPORT CONTROLLED UNDER U.S. LAW AND IS BEING TRANSFERRED BY JPL TO PPARC PURSUANT TO THE NASA / PPARC LETTER OF AGREEMENT WHICH ENTERED INTO FORCE ON DECEMBER 2, 1999. THIS TECHNICAL DATA IS TRANSFERRED TO PPARC FOR USE EXCLUSIVELY ON THE NASA/PPARC SPIRE ON FIRST COOPERATIVE PROJECT. MAY NOT BE USED FOR ANY OTHER PURPOSE, AND SHALL NOT BE RE-TRANSFERRED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE PRIOR WRITTEN APPROVAL OF NASA.

NOTES: UNLESS OTHERWISE SPECIFIED

INTERFACE DRAWING

QTY REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE
PARTS LIST								
					CONTRACT NO 960939	JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109		
					APPD DATE	RELEASED THROUGH EDMG		
					DWN D. WATERBURY 12/5/02	BOLOMETER DETECTOR ARRAY, MASS SIMULATOR MECHANICAL ID, SPIRE		
					CHK	SIZE	CAGE NO	REV
					STRUCT	A1	23835	10209728
					MATL	SCALE	NONE	[UNCLASSIFIED]
					THRM	SHEET 1 OF 2		REV A
					CONTR	1		2
					MSSL	REV 2/00		
					ENGR			
					DSGN			
					SUPV			



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS

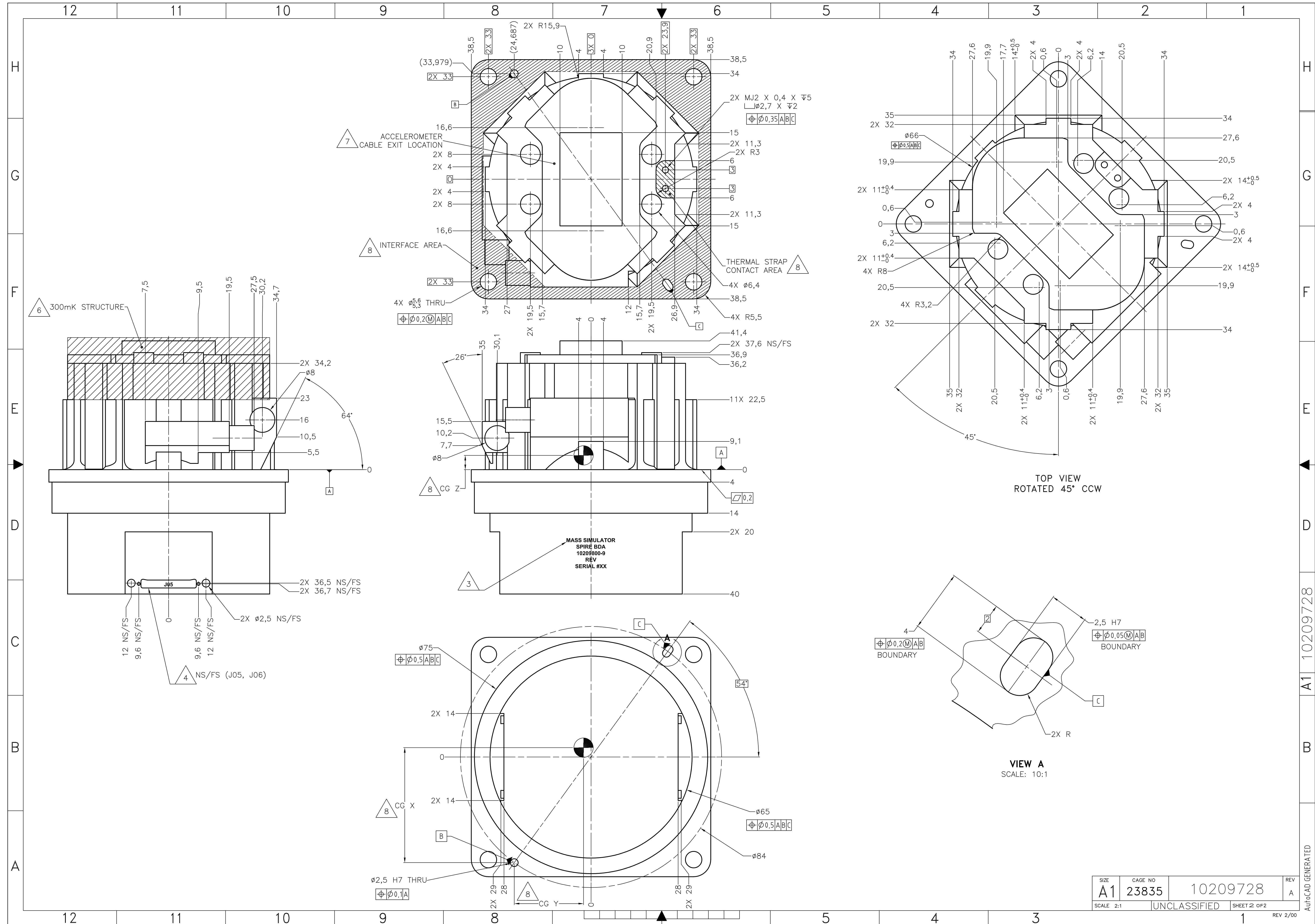
LINEAR TOLERANCES:

0-6	± 0.1
OVER 6-30	± 0.2
OVER 30-120	± 0.3
OVER 120-315	± 0.5
OVER 315-1000	± 0.8
OVER 1000	± 1.2

ANGULAR TOLERANCES:
± 0.5°

MACHINE FINISH (MICROMETERS) ✓
DO NOT SCALE DRAWING
INTERPRET DWG PER ASME Y14.100M

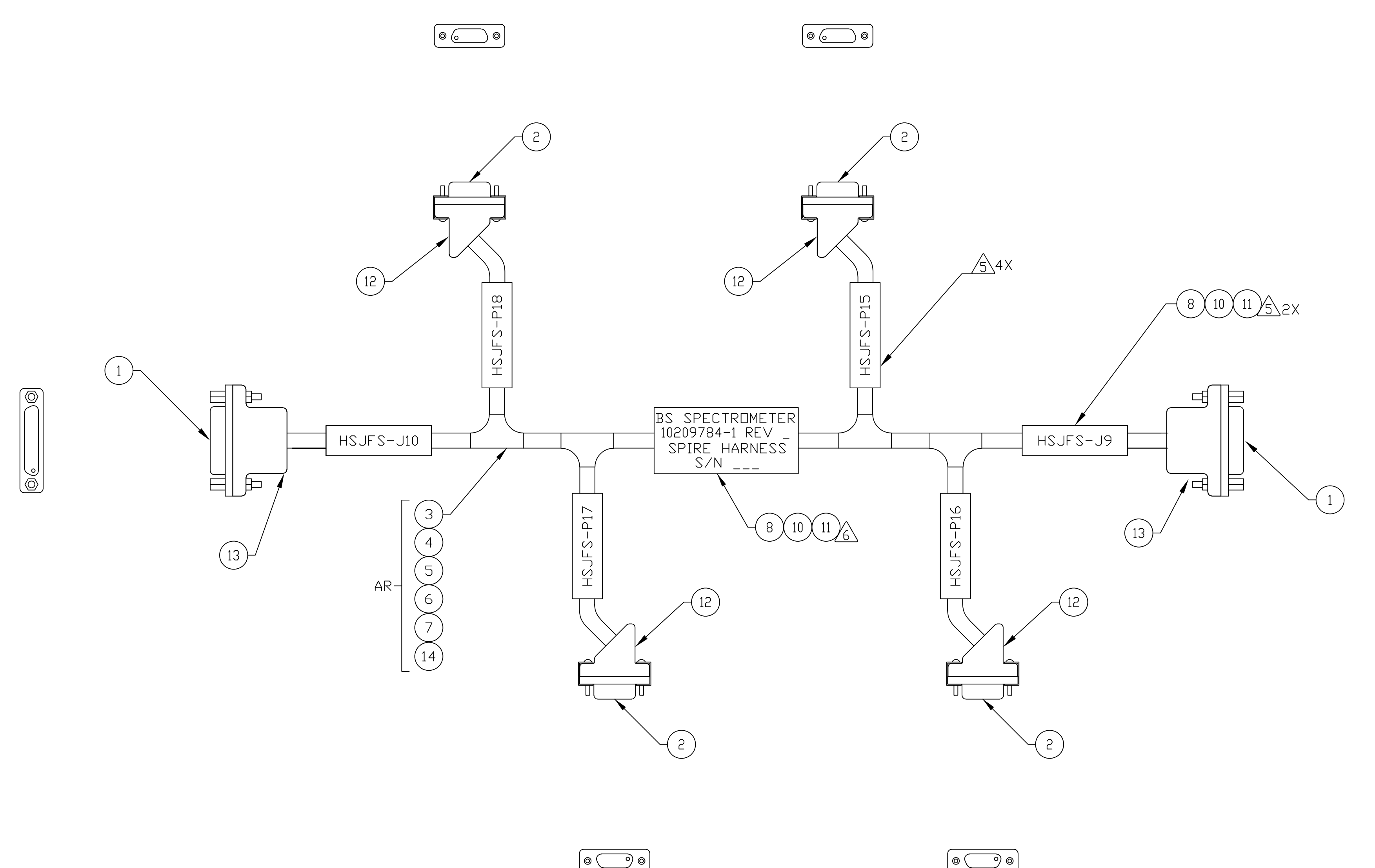
A1 10209728
AutoCAD GENERATED



SIZE	CAGE NO	REV
A1	23835	A
10209728		
SCALE 2:1	UNCLASSIFIED	SHEET 2 OF 2

AutoCAD GENERATED A1 10209728 REV 2/00

LTR		ZONE		REVISIONS									
				DESCRIPTION	DWN	CHK	STRUCT	MATL	THRM	ENGR	DGN	DATA	RELEASE
				INITIAL RELEASE	CODE	SEE TITLE BLOCK							
				B									



- 8. INDICATES TWISTED WIRE GROUP.
 - 7. ALL INTERCONNECT WIRING IS 26 AWG COPPER.
 - IDENTIFY HARNESS AND CONNECTOR PER JPL D-8208, SECTION 3.12 USING ITEMS 8, 10, AND 11. ADD APPLICABLE REVISION LEVEL AND SERIAL NUMBER.
 - IDENTIFY CONNECTORS PER JPL D-8208, SECTION 3.12 USING ITEM 10 AND 11. ALTERNATE METHOD MARK CONNECTOR DIRECTLY USING ITEM 8.
 - 4. TIE CABLE AS REQUIRED USING ITEM 7, LACING TAPE.
 - 3. ALTERNATE OR EQUIVALENT PARTS MAY BE USED SUBJECT TO PRIOR ENGINEERING APPROVAL.
 - 2. FABRICATE HARNESS ON A FULL SCALE MOCKUP OF HARDWARE. BUNDLES SHOULD LIE AS SHOWN ON RAL DOCUMENT 0-KE-0104-360.
 - 1. FABRICATE CABLE PER JPL D-8208, SECTION 3.12.
- NOTES: UNLESS OTHERWISE SPECIFIED

QTY	REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE
	AR	14			ST11478-26-ET	WIRE, SC, 26 AWG			
	2	13			500-047M37F	BACKSHELL, 37		GLENAIR	
	4	12			500E010M15H08	BACKSHELL, 15		GLENAIR	
	AR	11			ST10088	TAPE, KAPTON			
	AR	10			ST10021	TAPE, GLASS CLOTH			
	AR	9				SOLDER	QQ-S-571	SN63	
	AR	8				INK, MARKING - BLACK	BS502673	WORNOWINK SERIES M	
	AR	7			ST12013	TAPE, LACING			
	AR	6			ST10027	TUBING, INSULATION, SHRINKABLE			
	AR	5			ST10039	FERRULE, TWO PIECE			
	AR	4			ST12015	BRAID WIRE, COPPER, SILVER COATED			
	AR	3			ST11481-26-ET	WIRE, TPSJ, 26 AWG			
	4	2	HSJFS-SX		MDM-15SSB-A174	CONNECTOR, MICRO D, 15-SKT			
	2	1	HSJFS-SF		MDM-37SSP-A174	CONNECTOR, MICRO D, 37-SKT			

MATERIAL

METRIC

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

LINEAR TOLERANCES:

0-6	± 0.1
OVER 6-30	± 0.2
OVER 30-120	± 0.3
OVER 120-315	± 0.5
OVER 315-1000	± 0.8
OVER 1000	± 1.2

ANGULAR TOLERANCES: ± 0.5°

MACHINE FINISH (MICROMETERS) 3.2

DO NOT SCALE DRAWING INTERPRET DWG PER ANSI Y14.100M

CONTRACT NO 1244858

APPD _____ DATE _____

DWN D CRUMB 11/05/01

CHK _____

STRUCT _____

MATL _____

THRM _____

CONTR _____

ENGR _____

DGN _____

SUPV _____

JET PROPULSION LABORATORY

CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CA 91109

RELEASED THROUGH EDMG

**HARNESS,
SPECTROMETER JFETS,
SPIRE**

SIZE **A1**

CAGE NO **23835**

SCALE NONE

10209784

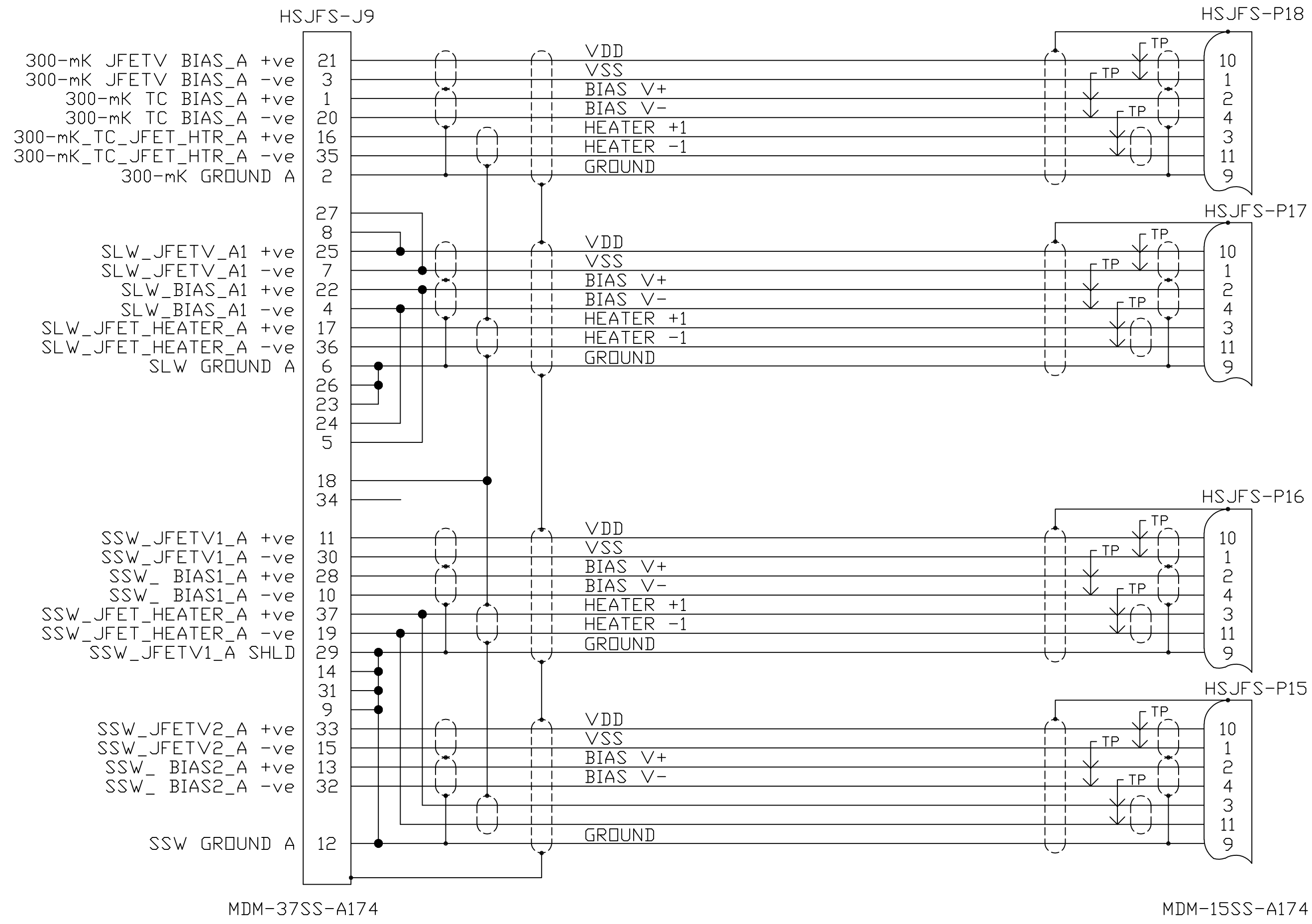
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REV **A**

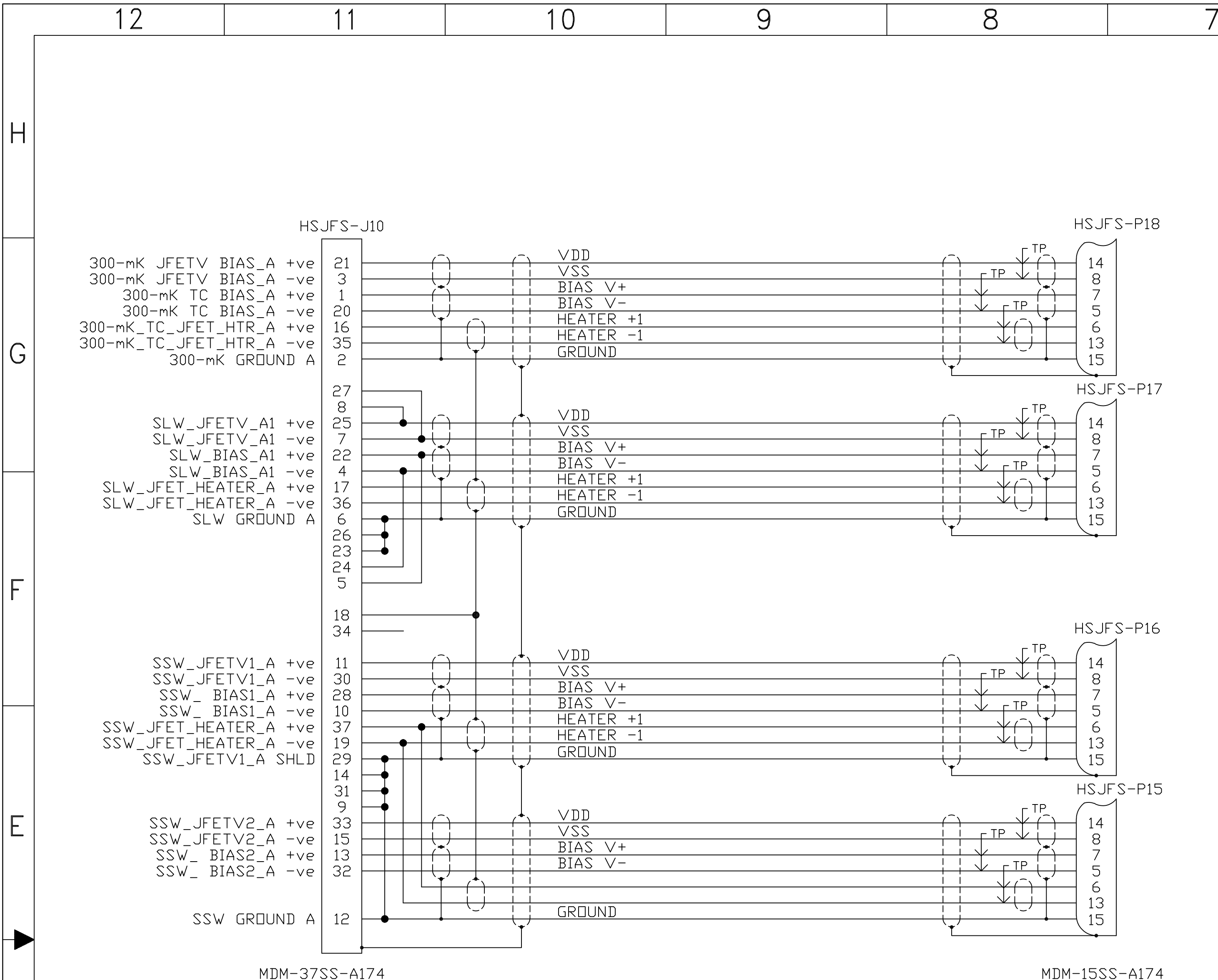
SHEET 1 OF 3

REV 2/00

BS SPECTROMETER

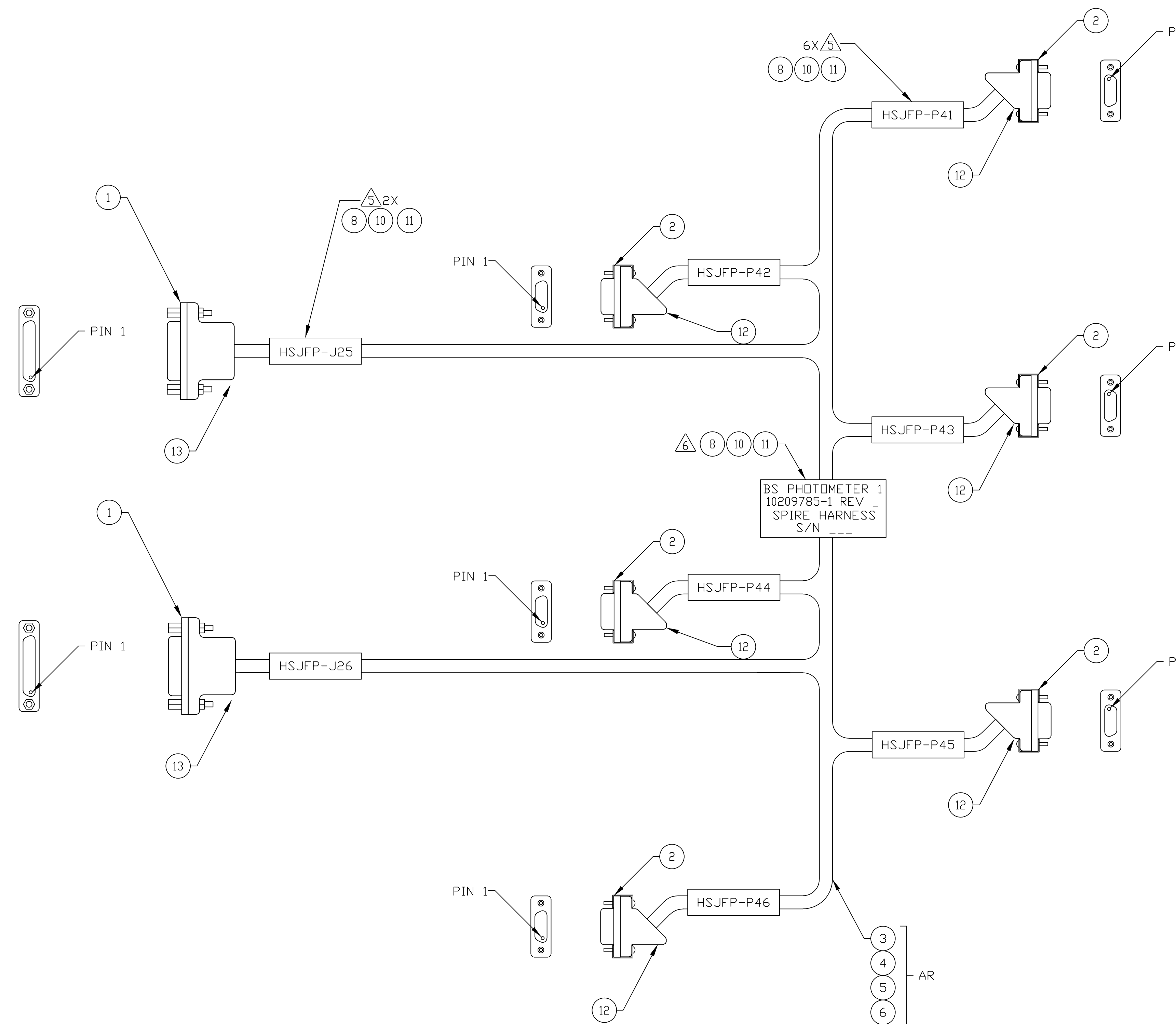


FROM	CONNECTOR PART NO.	CONTACT PART NO.	TO	CONNECTOR PART NO.	CONTACT PART NO.	WIRE AWG & TYPE	TWIST GROUPS	SIGNAL
HSJFS-J9-21	MDM-37SS-A174	—	HSJFS-P18-10	MDM-15SS-A174	—	#26 (TPSJ)	AA	300-mK JFETV BIAS_A +ve
HSJFS-J9-3	MDM-37SS-A174	—	HSJFS-P18-1	MDM-15SS-A174	—	#26 (TPSJ)	AA	300-mK JFETV BIAS_A -ve
HSJFS-J9-1	MDM-37SS-A174	—	HSJFS-P18-2	MDM-15SS-A174	—	#26 (TPSJ)	AB	300-mK TC BIAS_A +ve
HSJFS-J9-20	MDM-37SS-A174	—	HSJFS-P18-4	MDM-15SS-A174	—	#26 (TPSJ)	AB	300-mK TC BIAS_A -ve
HSJFS-J9-16	MDM-37SS-A174	—	HSJFS-P18-3	MDM-15SS-A174	—	#26 (TPSJ)	AC	300-mK_TC_JFET_HTR_A +ve
HSJFS-J9-35	MDM-37SS-A174	—	HSJFS-P18-11	MDM-15SS-A174	—	#26 (TPSJ)	AC	300-mK_TC_JFET_HTR_A -ve
HSJFS-J9-2	MDM-37SS-A174	—	HSJFS-P18-9	MDM-15SS-A174	—	#26 (SCSJ)		300-mK GROUND A
HSJFS-J9-25	MDM-37SS-A174	—	HSJFS-P17-10	MDM-15SS-A174	—	#26 (TPSJ)	AD	SLW_JFETV_A1 +ve
HSJFS-J9-7	MDM-37SS-A174	—	HSJFS-P17-1	MDM-15SS-A174	—	#26 (TPSJ)	AD	SLW_JFETV_A1 -ve
HSJFS-J9-22	MDM-37SS-A174	—	HSJFS-P17-2	MDM-15SS-A174	—	#26 (TPSJ)	AE	SLW_BIAS_A1 +ve
HSJFS-J9-4	MDM-37SS-A174	—	HSJFS-P17-4	MDM-15SS-A174	—	#26 (TPSJ)	AE	SLW_BIAS_A1 -ve
HSJFS-J9-17	MDM-37SS-A174	—	HSJFS-P17-3	MDM-15SS-A174	—	#26 (TPSJ)	AF	SLW_JFET_HEATER_A +ve
HSJFS-J9-36	MDM-37SS-A174	—	HSJFS-P17-11	MDM-15SS-A174	—	#26 (TPSJ)	AF	SLW_JFET_HEATER_A -ve
HSJFS-J9-6	MDM-37SS-A174	—	HSJFS-P17-9	MDM-15SS-A174	—	#26 (SCSJ)		SLW GROUND A
HSJFS-J9-11	MDM-37SS-A174	—	HSJFS-P16-10	MDM-15SS-A174	—	#26 (TPSJ)	AG	SSW_JFETV1_A +ve
HSJFS-J9-30	MDM-37SS-A174	—	HSJFS-P16-1	MDM-15SS-A174	—	#26 (TPSJ)	AG	SSW_JFETV1_A -ve
HSJFS-J9-28	MDM-37SS-A174	—	HSJFS-P16-2	MDM-15SS-A174	—	#26 (TPSJ)	AH	SSW_BIAS1_A +ve
HSJFS-J9-10	MDM-37SS-A174	—	HSJFS-P16-4	MDM-15SS-A174	—	#26 (TPSJ)	AH	SSW_BIAS1_A -ve
HSJFS-J9-37	MDM-37SS-A174	—	HSJFS-P16-3	MDM-15SS-A174	—	#26 (TPSJ)	AJ	SSW_JFET_HEATER_A +ve
HSJFS-J9-19	MDM-37SS-A174	—	HSJFS-P16-11	MDM-15SS-A174	—	#26 (TPSJ)	AJ	SSW_JFET_HEATER_A -ve
HSJFS-J9-29	MDM-37SS-A174	—	HSJFS-P16-9	MDM-15SS-A174	—	#26 (TPSJ)		SSW_JFETV1_A SHLD
HSJFS-J9-33	MDM-37SS-A174	—	HSJFS-P15-10	MDM-15SS-A174	—	#26 (TPSJ)	AK	SSW_JFETV2_A +ve
HSJFS-J9-15	MDM-37SS-A174	—	HSJFS-P15-1	MDM-15SS-A174	—	#26 (TPSJ)	AK	SSW_JFETV2_A -ve
HSJFS-J9-13	MDM-37SS-A174	—	HSJFS-P15-2	MDM-15SS-A174	—	#26 (TPSJ)	AL	SSW_BIAS2_A +ve
HSJFS-J9-32	MDM-37SS-A174	—	HSJFS-P15-4	MDM-15SS-A174	—	#26 (TPSJ)	AL	SSW_BIAS2_A -ve
HSJFS-J9-37	MDM-37SS-A174	—	HSJFS-P15-3	MDM-15SS-A174	—	#26 (TPSJ)	AM	SSW_JFET_HEATER_A +ve
HSJFS-J9-19	MDM-37SS-A174	—	HSJFS-P15-11	MDM-15SS-A174	—	#26 (TPSJ)	AM	SSW_JFET_HEATER_A -ve
HSJFS-J9-12	MDM-37SS-A174	—	HSJFS-P15-9	MDM-15SS-A174	—	#26 (SCSJ)		SSW GROUND A
HSJFS-J9-27	MDM-37SS-A174	—	HSJFS-J9-7	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-8	MDM-37SS-A174	—	HSJFS-J9-25	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-24	MDM-37SS-A174	—	HSJFS-J9-4	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-5	MDM-37SS-A174	—	HSJFS-J9-22	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-6	MDM-37SS-A174	—	HSJFS-J9-26	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-26	MDM-37SS-A174	—	HSJFS-J9-23	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-29	MDM-37SS-A174	—	HSJFS-J9-14	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-14	MDM-37SS-A174	—	HSJFS-J9-31	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-31	MDM-37SS-A174	—	HSJFS-J9-9	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-9	MDM-37SS-A174	—	HSJFS-J9-12	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J9-18	MDM-37SS-A174	—				#26 (SC)		SLW HEATER SHIELD
HSJFS-J9-34	MDM-37SS-A174	—						



FROM	CONNECTOR PART NO.	CONTACT PART NO.	TO	CONNECTOR PART NO.	CONTACT PART NO.	WIRE AWG & TYPE	TWIST GROUPS	SIGNAL
HSJFS-J10-21	MDM-37SS-A174	—	HSJFS-P18-14	MDM-15SS-A174	—	#26 (TPSJ)	BA	300-mK JFETV BIAS_B +ve
HSJFS-J10-3	MDM-37SS-A174	—	HSJFS-P18-8	MDM-15SS-A174	—	#26 (TPSJ)	BA	300-mK JFETV BIAS_B -ve
HSJFS-J10-1	MDM-37SS-A174	—	HSJFS-P18-7	MDM-15SS-A174	—	#26 (TPSJ)	BB	300-mK TC BIAS_B +ve
HSJFS-J10-20	MDM-37SS-A174	—	HSJFS-P18-5	MDM-15SS-A174	—	#26 (TPSJ)	BB	300-mK TC BIAS_B -ve
HSJFS-J10-16	MDM-37SS-A174	—	HSJFS-P18-6	MDM-15SS-A174	—	#26 (TPSJ)	BC	300-mK TC_JFET_HTR_B +ve
HSJFS-J10-35	MDM-37SS-A174	—	HSJFS-P18-13	MDM-15SS-A174	—	#26 (TPSJ)	BC	300-mK TC_JFET_HTR_B -ve
HSJFS-J10-2	MDM-37SS-A174	—	HSJFS-P18-15	MDM-15SS-A174	—	#26 (SC)		300-mK GROUND B
HSJFS-J10-25	MDM-37SS-A174	—	HSJFS-P17-14	MDM-15SS-A174	—	#26 (TPSJ)	BD	SLW_JFETV_B1 +ve
HSJFS-J10-7	MDM-37SS-A174	—	HSJFS-P17-8	MDM-15SS-A174	—	#26 (TPSJ)	BD	SLW_JFETV_B1 -ve
HSJFS-J10-22	MDM-37SS-A174	—	HSJFS-P17-7	MDM-15SS-A174	—	#26 (TPSJ)	BE	SLW_BIAS_B1 +ve
HSJFS-J10-4	MDM-37SS-A174	—	HSJFS-P17-5	MDM-15SS-A174	—	#26 (TPSJ)	BE	SLW_BIAS_B1 -ve
HSJFS-J10-17	MDM-37SS-A174	—	HSJFS-P17-6	MDM-15SS-A174	—	#26 (TPSJ)	BF	SLW_JFET_HEATER_B +ve
HSJFS-J10-36	MDM-37SS-A174	—	HSJFS-P17-13	MDM-15SS-A174	—	#26 (TPSJ)	BF	SLW_JFET_HEATER_B -ve
HSJFS-J10-6	MDM-37SS-A174	—	HSJFS-P17-15	MDM-15SS-A174	—	#26 (SC)		SLW GROUND B
HSJFS-J10-30	MDM-37SS-A174	—	HSJFS-P16-14	MDM-15SS-A174	—	#26 (TPSJ)	BG	SSW_JFETV1_B +ve
HSJFS-J10-11	MDM-37SS-A174	—	HSJFS-P16-8	MDM-15SS-A174	—	#26 (TPSJ)	BG	SSW_JFETV1_B -ve
HSJFS-J10-28	MDM-37SS-A174	—	HSJFS-P16-7	MDM-15SS-A174	—	#26 (TPSJ)	BH	SSW_BIAS1_B +ve
HSJFS-J10-10	MDM-37SS-A174	—	HSJFS-P16-5	MDM-15SS-A174	—	#26 (TPSJ)	BH	SSW_BIAS1_B -ve
HSJFS-J10-37	MDM-37SS-A174	—	HSJFS-P16-6	MDM-15SS-A174	—	#26 (TPSJ)	BJ	SSW_JFET_HEATER_B +ve
HSJFS-J10-19	MDM-37SS-A174	—	HSJFS-P16-12	MDM-15SS-A174	—	#26 (TPSJ)	BJ	SSW_JFET_HEATER_B -ve
HSJFS-J10-29	MDM-37SS-A174	—	HSJFS-P16-15	MDM-15SS-A174	—	#26 (SC)		SSW_JFETV1_B SHLD
HSJFS-J10-33	MDM-37SS-A174	—	HSJFS-P15-13	MDM-15SS-A174	—	#26 (TPSJ)	BK	SSW_JFETV2_B +ve
HSJFS-J10-15	MDM-37SS-A174	—	HSJFS-P15-8	MDM-15SS-A174	—	#26 (TPSJ)	BK	SSW_JFETV2_B -ve
HSJFS-J10-13	MDM-37SS-A174	—	HSJFS-P15-7	MDM-15SS-A174	—	#26 (TPSJ)	BL	SSW_BIAS2_B +ve
HSJFS-J10-32	MDM-37SS-A174	—	HSJFS-P15-5	MDM-15SS-A174	—	#26 (TPSJ)	BL	SSW_BIAS2_B -ve
HSJFS-J10-37	MDM-37SS-A174	—	HSJFS-P15-6	MDM-15SS-A174	—	#26 (TPSJ)	BM	SSW_JFET_HEATER_B +ve
HSJFS-J10-19	MDM-37SS-A174	—	HSJFS-P15-13	MDM-15SS-A174	—	#26 (TPSJ)	BM	SSW_JFET_HEATER_B -ve
HSJFS-J10-12	MDM-37SS-A174	—	HSJFS-P15-15	MDM-15SS-A174	—	#26 (SC)		SSW GROUND B
HSJFS-J10-27	MDM-37SS-A174	—	HSJFS-J10-7	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-8	MDM-37SS-A174	—	HSJFS-J10-25	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-24	MDM-37SS-A174	—	HSJFS-J10-4	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-5	MDM-37SS-A174	—	HSJFS-J10-22	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-6	MDM-37SS-A174	—	HSJFS-J10-26	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-26	MDM-37SS-A174	—	HSJFS-J10-23	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-29	MDM-37SS-A174	—	HSJFS-J10-14	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-14	MDM-37SS-A174	—	HSJFS-J10-31	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-31	MDM-37SS-A174	—	HSJFS-J10-9	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-9	MDM-37SS-A174	—	HSJFS-J10-12	MDM-37SS-A174	—	#26 (SC)		
HSJFS-J10-18	MDM-37SS-A174					#26 (SC)		SLW HEATER SHIELD
HSJFS-J10-34	MDM-37SS-A174							

LTR		ZONE		REVISIONS										
DESCRIPTION				DWN	CHK	STRUCT	MATL	THRM	CONTR	ENGR	DSGN	DATA	RELEASE	DATE
INITIAL RELEASE				CODE B										



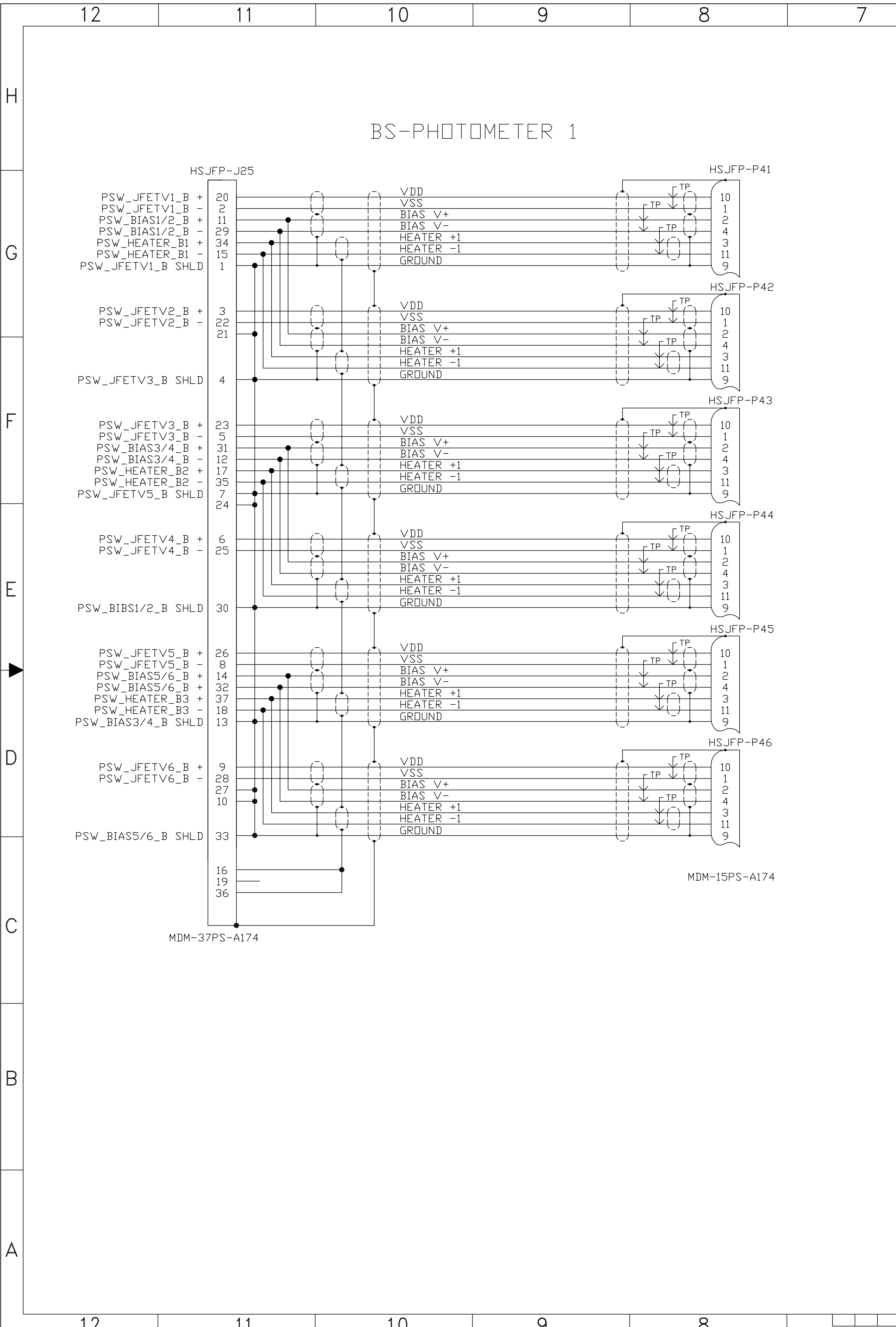
- 8. INDICATES TWISTED WIRE GROUP.
 - 7. ALL INTERCONNECT WIRING IS 26 AWG COPPER.
 - IDENTIFY HARNESS AND CONNECTOR PER JPL D-8208, SECTION 3.12 USING ITEMS 8, 10, AND 11. ADD APPLICABLE REVISION LEVEL AND SERIAL NUMBER.
 - IDENTIFY CONNECTORS PER JPL D-8208, SECTION 3.12 USING ITEM 10 AND 11. ALTERNATE METHOD MARK CONNECTOR DIRECTLY USING ITEM 8.
 - 4. TIE CABLE AS REQUIRED USING ITEM 7, LACING TAPE.
 - 3. ALTERNATE OR EQUIVALENT PARTS MAY BE USED SUBJECT TO PRIOR ENGINEERING APPROVAL.
 - 2. FABRICATE HARNESS ON A FULL SCALE MOCKUP OF HARDWARE. BUNDLES SHOULD LIE AS SHOWN ON RAL DOCUMENT 0-KE-0104-350.
 - 1. FABRICATE CABLE PER JPL D-8208, SECTION 3.12.
- NOTES: UNLESS OTHERWISE SPECIFIED

QTY REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE
	AR 14			ST11478-26-ET	WIRE, SC, 26 AWG			
	2	13		500-047M37F	BACKSHELL, 37		GLENAIR	
	6	12		500E010M15H08	BACKSHELL, 15		GLENAIR	
	AR 11			ST10088	TAPE, KAPTON			
	AR 10			ST10021	TAPE, GLASS CLOTH			
	AR 9				SOLDER	QQ-S-571	SN63	
	AR 8				INK, MARKING - BLACK	BS502673	WORNOWINK SERIES M	
	AR 7			ST12013	TAPE, LACING			
	AR 6			ST10027	TUBING, INSULATION, SHRINKABLE			
	AR 5			ST10039	FERRULE, TWO PIECE			
	AR 4			ST12015	BRAID WIRE, COPPER, SILVER COATED			
	AR 3			ST11481-26-ET	WIRE, TPSJ, 26 AWG			
	6	2	HSJFP-PX	MDM-15SSB-A174	CONNECTOR, MICRO D, 15-SKT			
	2	1	HSJFP-JX	MDM-37SSP-A174	CONNECTOR, MICRO D, 37-SKT			

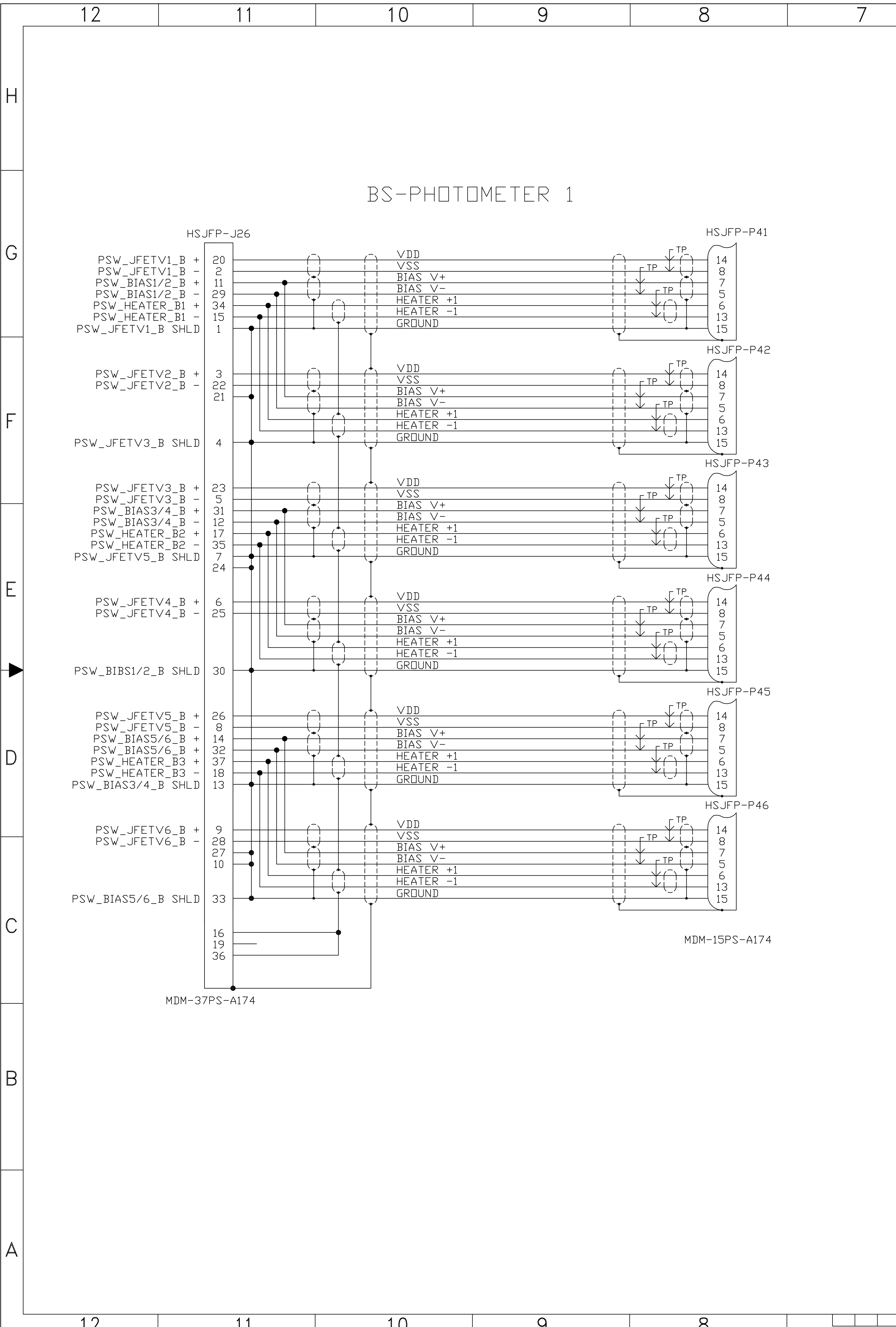
<p>MATERIAL</p> <p>METRIC</p> <p>THIRD ANGLE PROJECTION</p>	<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS</p> <p>LINEAR TOLERANCES:</p> <p>0-6 ± 0.1</p> <p>OVER 6-30 ± 0.2</p> <p>OVER 30-120 ± 0.3</p> <p>OVER 120-315 ± 0.5</p> <p>OVER 315-1000 ± 0.8</p> <p>OVER 1000 ± 1.2</p> <p>ANGULAR TOLERANCES: ± 0.5°</p> <p>MACHINE FINISH (MICROMETERS) 3.2 ✓</p> <p>DO NOT SCALE DRAWING INTERPRET DWG PER ANSI Y14.100M</p>	<p>CONTRACT NO 1244858</p> <p>APPD _____ DATE _____</p> <p>DWN D CRUMB 11/05/01</p> <p>CHK _____</p> <p>STRUCT _____</p> <p>MATL _____</p> <p>THRM _____</p> <p>CONTR _____</p> <p>ENGR _____</p> <p>DSGN _____</p> <p>SUPV _____</p>		<p>JET PROPULSION LABORATORY</p> <p>CALIFORNIA INSTITUTE OF TECHNOLOGY</p> <p>PASADENA, CA 91109</p> <p>RELEASED THROUGH EDMG</p> <p>HARNESS, PHOTOMETER</p> <p>SHORT WAVE JFET, SPIRE</p>	
		<p>SPIRE USED ON _____</p> <p>APPLICATION _____</p>	<p>SIZE A1</p> <p>CAGE NO 23835</p> <p>SCALE NONE</p>	<p>10209785</p> <p>UNCLASSIFIED</p> <p>SHEET 1 OF 3</p>	<p>REV A</p> <p>REV 2/00</p>

A1 10209785

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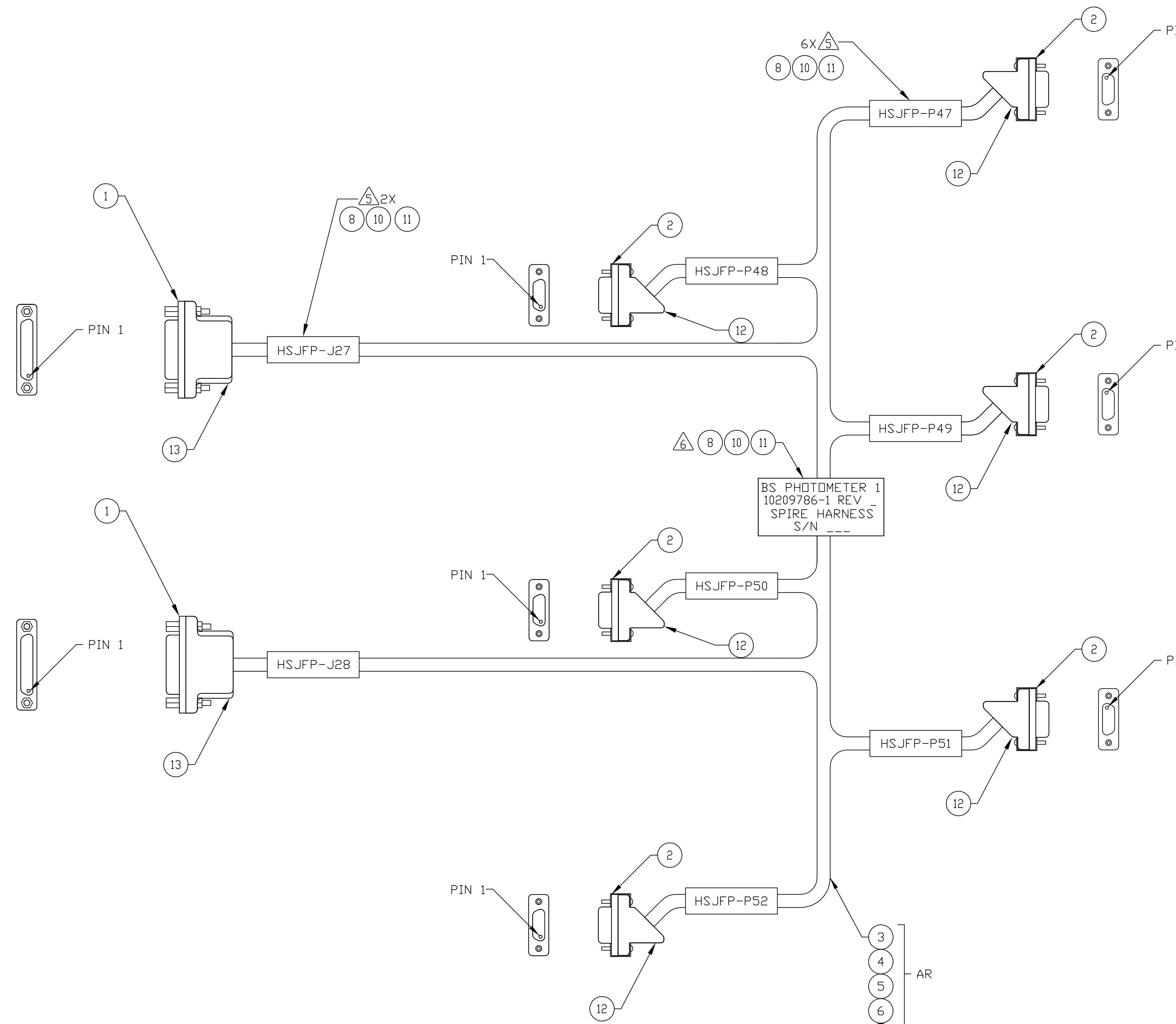


FROM	CONNECTOR PART NO.	CONTACT PART NO.	TO	CONNECTOR PART NO.	CONTACT PART NO.	WIRE AWG & TYPE	TWIST GROUPS	SIGNAL
HSJFP-J25-20	MDM-37PS-A174	—	HSJFP-P41-10	MDM-15PS-A174	—	#26 (TPSJ)	AA	PSW_JFETV1_A +
HSJFP-J25-2	MDM-37PS-A174	—	HSJFP-P41-1	MDM-15PS-A174	—	#26 (TPSJ)	AA	PSW_JFETV1_A -
HSJFP-J25-11	MDM-37PS-A174	—	HSJFP-P41-2	MDM-15PS-A174	—	#26 (TPSJ)	AB	PSW_BIAS1/2_A +
HSJFP-J25-29	MDM-37PS-A174	—	HSJFP-P41-4	MDM-15PS-A174	—	#26 (TPSJ)	AB	PSW_BIAS1/2_A -
HSJFP-J25-34	MDM-37PS-A174	—	HSJFP-P41-3	MDM-15PS-A174	—	#26 (TPSJ)	AC	PSW_HEATER_A1 +
HSJFP-J25-15	MDM-37PS-A174	—	HSJFP-P41-11	MDM-15PS-A174	—	#26 (TPSJ)	AC	PSW_HEATER_A1 -
HSJFP-J25-1	MDM-37PS-A174	—	HSJFP-P41-9	MDM-15PS-A174	—	#26 (SC)		PSW_JFETV1_A SHLD
HSJFP-J25-3	MDM-37PS-A174	—	HSJFP-P42-10	MDM-15PS-A174	—	#26 (TPSJ)	AD	PSW_JFETV2_A +
HSJFP-J25-22	MDM-37PS-A174	—	HSJFP-P42-1	MDM-15PS-A174	—	#26 (TPSJ)	AD	PSW_JFETV2_A -
HSJFP-J25-11	MDM-37PS-A174	—	HSJFP-P42-2	MDM-15PS-A174	—	#26 (TPSJ)	AE	PSW_BIAS1/2_A +
HSJFP-J25-29	MDM-37PS-A174	—	HSJFP-P42-4	MDM-15PS-A174	—	#26 (TPSJ)	AE	PSW_BIAS1/2_A -
HSJFP-J25-34	MDM-37PS-A174	—	HSJFP-P42-3	MDM-15PS-A174	—	#26 (TPSJ)	AF	PSW_HEATER_A1 +
HSJFP-J25-15	MDM-37PS-A174	—	HSJFP-P42-11	MDM-15PS-A174	—	#26 (TPSJ)	AF	PSW_HEATER_A1 -
HSJFP-J25-4	MDM-37PS-A174	—	HSJFP-P42-9	MDM-15PS-A174	—	#26 (SC)		PSW_JFETV3_A SHLD
HSJFP-J25-23	MDM-37PS-A174	—	HSJFP-P43-10	MDM-15PS-A174	—	#26 (TPSJ)	AG	PSW_JFETV3_A +
HSJFP-J25-5	MDM-37PS-A174	—	HSJFP-P43-1	MDM-15PS-A174	—	#26 (TPSJ)	AG	PSW_JFETV3_A -
HSJFP-J25-31	MDM-37PS-A174	—	HSJFP-P43-2	MDM-15PS-A174	—	#26 (TPSJ)	AH	PSW_BIAS3/4_A +
HSJFP-J25-12	MDM-37PS-A174	—	HSJFP-P43-4	MDM-15PS-A174	—	#26 (TPSJ)	AH	PSW_BIAS3/4_A -
HSJFP-J25-17	MDM-37PS-A174	—	HSJFP-P43-3	MDM-15PS-A174	—	#26 (TPSJ)	AJ	PSW_HEATER_A2 +
HSJFP-J25-35	MDM-37PS-A174	—	HSJFP-P43-11	MDM-15PS-A174	—	#26 (TPSJ)	AJ	PSW_HEATER_A2 -
HSJFP-J25-7	MDM-37PS-A174	—	HSJFP-P43-9	MDM-15PS-A174	—	#26 (SC)		PSW_JFETV5_A SHLD
HSJFP-J25-6	MDM-37PS-A174	—	HSJFP-P44-10	MDM-15PS-A174	—	#26 (TPSJ)	AK	PSW_JFETV4_A +
HSJFP-J25-25	MDM-37PS-A174	—	HSJFP-P44-1	MDM-15PS-A174	—	#26 (TPSJ)	AK	PSW_JFETV4_A -
HSJFP-J25-31	MDM-37PS-A174	—	HSJFP-P44-2	MDM-15PS-A174	—	#26 (TPSJ)	AL	PSW_BIAS3/4_A +
HSJFP-J25-12	MDM-37PS-A174	—	HSJFP-P44-4	MDM-15PS-A174	—	#26 (TPSJ)	AL	PSW_BIAS3/4_A -
HSJFP-J25-17	MDM-37PS-A174	—	HSJFP-P44-3	MDM-15PS-A174	—	#26 (TPSJ)	AM	PSW_HEATER_A2 +
HSJFP-J25-35	MDM-37PS-A174	—	HSJFP-P44-11	MDM-15PS-A174	—	#26 (TPSJ)	AM	PSW_HEATER_A2 -
HSJFP-J25-30	MDM-37PS-A174	—	HSJFP-P44-9	MDM-15PS-A174	—	#26 (SC)		PSW_BIAS1/2_A SHLD
HSJFP-J25-26	MDM-37PS-A174	—	HSJFP-P45-10	MDM-15PS-A174	—	#26 (TPSJ)	AN	PSW_JFETV5_A +
HSJFP-J25-8	MDM-37PS-A174	—	HSJFP-P45-1	MDM-15PS-A174	—	#26 (TPSJ)	AN	PSW_JFETV5_A -
HSJFP-J25-14	MDM-37PS-A174	—	HSJFP-P45-2	MDM-15PS-A174	—	#26 (TPSJ)	AP	PSW_BIAS5/6_A +
HSJFP-J25-32	MDM-37PS-A174	—	HSJFP-P45-4	MDM-15PS-A174	—	#26 (TPSJ)	AP	PSW_BIAS5/6_A -
HSJFP-J25-37	MDM-37PS-A174	—	HSJFP-P45-3	MDM-15PS-A174	—	#26 (TPSJ)	AR	PSW_HEATER_A3 +
HSJFP-J25-18	MDM-37PS-A174	—	HSJFP-P45-11	MDM-15PS-A174	—	#26 (TPSJ)	AR	PSW_HEATER_A3 -
HSJFP-J25-13	MDM-37PS-A174	—	HSJFP-P45-9	MDM-15PS-A174	—	#26 (SC)		PSW_BIAS3/4_A SHLD
HSJFP-J25-9	MDM-37PS-A174	—	HSJFP-P46-10	MDM-15PS-A174	—	#26 (TPSJ)	AS	PSW_JFETV6_A +
HSJFP-J25-28	MDM-37PS-A174	—	HSJFP-P46-1	MDM-15PS-A174	—	#26 (TPSJ)	AS	PSW_JFETV6_A -
HSJFP-J25-14	MDM-37PS-A174	—	HSJFP-P46-2	MDM-15PS-A174	—	#26 (TPSJ)	AT	PSW_BIAS5/6_A +
HSJFP-J25-32	MDM-37PS-A174	—	HSJFP-P46-4	MDM-15PS-A174	—	#26 (TPSJ)	AT	PSW_BIAS5/6_A -
HSJFP-J25-37	MDM-37PS-A174	—	HSJFP-P46-3	MDM-15PS-A174	—	#26 (TPSJ)	AU	PSW_HEATER_A3 +
HSJFP-J25-18	MDM-37PS-A174	—	HSJFP-P46-11	MDM-15PS-A174	—	#26 (TPSJ)	AU	PSW_HEATER_A3 -
HSJFP-J25-33	MDM-37PS-A174	—	HSJFP-P46-9	MDM-15PS-A174	—	#26 (SC)		PSW_BIAS5/6_A SHLD
HSJFP-J25-1	MDM-37PS-A174	—	HSJFP-J25-21	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-21	MDM-37PS-A174	—	HSJFP-J25-4	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-4	MDM-37PS-A174	—	HSJFP-J25-7	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-7	MDM-37PS-A174	—	HSJFP-J25-24	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-24	MDM-37PS-A174	—	HSJFP-J25-30	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-30	MDM-37PS-A174	—	HSJFP-J25-13	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-13	MDM-37PS-A174	—	HSJFP-J25-27	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-27	MDM-37PS-A174	—	HSJFP-J25-10	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-10	MDM-37PS-A174	—	HSJFP-J25-33	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J25-16	MDM-37PS-A174	—	HSJFP-J25-36	MDM-37PS-A174	—	#26 (SC)		PSW HEATER GROUND
HSJFP-J25-19	MDM-37PS-A174	—	—	—	—			NO CONNECTION



FROM	CONNECTOR PART NO.	CONTACT PART NO.	TO	CONNECTOR PART NO.	CONTACT PART NO.	WIRE AWG & TYPE	TWIST GROUPS	SIGNAL
HSJFP-J26-20	MDM-37PS-A174	—	HSJFP-P41-14	MDM-15PS-A174	—	#26 (TPSJ)	BA	PSW_JFETV1_B +
HSJFP-J26-2	MDM-37PS-A174	—	HSJFP-P41-8	MDM-15PS-A174	—	#26 (TPSJ)	BA	PSW_JFETV1_B -
HSJFP-J26-11	MDM-37PS-A174	—	HSJFP-P41-7	MDM-15PS-A174	—	#26 (TPSJ)	BB	PSW_BIAS1/2_B +
HSJFP-J26-29	MDM-37PS-A174	—	HSJFP-P41-5	MDM-15PS-A174	—	#26 (TPSJ)	BB	PSW_BIAS1/2_B -
HSJFP-J26-34	MDM-37PS-A174	—	HSJFP-P41-6	MDM-15PS-A174	—	#26 (TPSJ)	BC	PSW_HEATER_B1 +
HSJFP-J26-15	MDM-37PS-A174	—	HSJFP-P41-13	MDM-15PS-A174	—	#26 (TPSJ)	BC	PSW_HEATER_B1 -
HSJFP-J26-1	MDM-37PS-A174	—	HSJFP-P41-15	MDM-15PS-A174	—	#26 (SC)		PSW_JFETV1_B SHLD
HSJFP-J26-3	MDM-37PS-A174	—	HSJFP-P42-14	MDM-15PS-A174	—	#26 (TPSJ)	BD	PSW_JFETV2_B +
HSJFP-J26-22	MDM-37PS-A174	—	HSJFP-P42-8	MDM-15PS-A174	—	#26 (TPSJ)	BD	PSW_JFETV2_B -
HSJFP-J26-11	MDM-37PS-A174	—	HSJFP-P42-7	MDM-15PS-A174	—	#26 (TPSJ)	BE	PSW_BIAS1/2_B +
HSJFP-J26-29	MDM-37PS-A174	—	HSJFP-P42-5	MDM-15PS-A174	—	#26 (TPSJ)	BE	PSW_BIAS1/2_B -
HSJFP-J26-34	MDM-37PS-A174	—	HSJFP-P42-6	MDM-15PS-A174	—	#26 (TPSJ)	BF	PSW_HEATER_B1 +
HSJFP-J26-15	MDM-37PS-A174	—	HSJFP-P42-13	MDM-15PS-A174	—	#26 (TPSJ)	BF	PSW_HEATER_B1 -
HSJFP-J26-4	MDM-37PS-A174	—	HSJFP-P42-15	MDM-15PS-A174	—	#26 (SC)		PSW_JFETV3_B SHLD
HSJFP-J26-23	MDM-37PS-A174	—	HSJFP-P43-14	MDM-15PS-A174	—	#26 (TPSJ)	BG	PSW_JFETV3_B +
HSJFP-J26-5	MDM-37PS-A174	—	HSJFP-P43-8	MDM-15PS-A174	—	#26 (TPSJ)	BG	PSW_JFETV3_B -
HSJFP-J26-31	MDM-37PS-A174	—	HSJFP-P43-7	MDM-15PS-A174	—	#26 (TPSJ)	BH	PSW_BIAS3/4_B +
HSJFP-J26-12	MDM-37PS-A174	—	HSJFP-P43-5	MDM-15PS-A174	—	#26 (TPSJ)	BH	PSW_BIAS3/4_B -
HSJFP-J26-17	MDM-37PS-A174	—	HSJFP-P43-6	MDM-15PS-A174	—	#26 (TPSJ)	BJ	PSW_HEATER_B2 +
HSJFP-J26-35	MDM-37PS-A174	—	HSJFP-P43-13	MDM-15PS-A174	—	#26 (TPSJ)	BJ	PSW_HEATER_B2 -
HSJFP-J26-7	MDM-37PS-A174	—	HSJFP-P43-15	MDM-15PS-A174	—	#26 (SC)		PSW_JFETV5_B SHLD
HSJFP-J26-6	MDM-37PS-A174	—	HSJFP-P44-14	MDM-15PS-A174	—	#26 (TPSJ)	BK	PSW_JFETV4_B +
HSJFP-J26-25	MDM-37PS-A174	—	HSJFP-P44-8	MDM-15PS-A174	—	#26 (TPSJ)	BK	PSW_JFETV4_B -
HSJFP-J26-31	MDM-37PS-A174	—	HSJFP-P44-7	MDM-15PS-A174	—	#26 (TPSJ)	BL	PSW_BIAS3/4_B +
HSJFP-J26-12	MDM-37PS-A174	—	HSJFP-P44-5	MDM-15PS-A174	—	#26 (TPSJ)	BL	PSW_BIAS3/4_B -
HSJFP-J26-17	MDM-37PS-A174	—	HSJFP-P44-6	MDM-15PS-A174	—	#26 (TPSJ)	BM	PSW_HEATER_B2 +
HSJFP-J26-35	MDM-37PS-A174	—	HSJFP-P44-13	MDM-15PS-A174	—	#26 (TPSJ)	BM	PSW_HEATER_B2 -
HSJFP-J26-30	MDM-37PS-A174	—	HSJFP-P44-15	MDM-15PS-A174	—	#26 (SC)		PSW_BIAS1/2_B SHLD
HSJFP-J26-26	MDM-37PS-A174	—	HSJFP-P45-14	MDM-15PS-A174	—	#26 (TPSJ)	BN	PSW_JFETV5_B +
HSJFP-J26-8	MDM-37PS-A174	—	HSJFP-P45-8	MDM-15PS-A174	—	#26 (TPSJ)	BN	PSW_JFETV5_B -
HSJFP-J26-14	MDM-37PS-A174	—	HSJFP-P45-7	MDM-15PS-A174	—	#26 (TPSJ)	BP	PSW_BIAS5/6_B +
HSJFP-J26-32	MDM-37PS-A174	—	HSJFP-P45-5	MDM-15PS-A174	—	#26 (TPSJ)	BP	PSW_BIAS5/6_B -
HSJFP-J26-37	MDM-37PS-A174	—	HSJFP-P45-6	MDM-15PS-A174	—	#26 (TPSJ)	BR	PSW_HEATER_B3 +
HSJFP-J26-18	MDM-37PS-A174	—	HSJFP-P45-13	MDM-15PS-A174	—	#26 (TPSJ)	BR	PSW_HEATER_B3 -
HSJFP-J26-13	MDM-37PS-A174	—	HSJFP-P45-15	MDM-15PS-A174	—	#26 (SC)		PSW_BIAS3/4_B SHLD
HSJFP-J26-9	MDM-37PS-A174	—	HSJFP-P46-14	MDM-15PS-A174	—	#26 (TPSJ)	BS	PSW_JFETV6_B +
HSJFP-J26-28	MDM-37PS-A174	—	HSJFP-P46-8	MDM-15PS-A174	—	#26 (TPSJ)	BS	PSW_JFETV6_B -
HSJFP-J26-14	MDM-37PS-A174	—	HSJFP-P46-7	MDM-15PS-A174	—	#26 (TPSJ)	BT	PSW_BIAS5/6_B +
HSJFP-J26-32	MDM-37PS-A174	—	HSJFP-P46-5	MDM-15PS-A174	—	#26 (TPSJ)	BT	PSW_BIAS5/6_B -
HSJFP-J26-37	MDM-37PS-A174	—	HSJFP-P46-6	MDM-15PS-A174	—	#26 (TPSJ)	BU	PSW_HEATER_B3 +
HSJFP-J26-18	MDM-37PS-A174	—	HSJFP-P46-13	MDM-15PS-A174	—	#26 (TPSJ)	BU	PSW_HEATER_B3 -
HSJFP-J26-33	MDM-37PS-A174	—	HSJFP-P46-15	MDM-15PS-A174	—	#26 (SCSJ)		PSW_BIAS5/6_B SHLD
HSJFP-J26-1	MDM-37PS-A174	—	HSJFP-J26-21	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-21	MDM-37PS-A174	—	HSJFP-J26-4	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-4	MDM-37PS-A174	—	HSJFP-J26-7	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-7	MDM-37PS-A174	—	HSJFP-J26-24	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-24	MDM-37PS-A174	—	HSJFP-J26-30	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-30	MDM-37PS-A174	—	HSJFP-J26-13	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-13	MDM-37PS-A174	—	HSJFP-J26-27	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-27	MDM-37PS-A174	—	HSJFP-J26-10	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-10	MDM-37PS-A174	—	HSJFP-J26-33	MDM-37PS-A174	—	#26 (SC)		PSW GROUND WIRE
HSJFP-J26-16	MDM-37PS-A174	—	HSJFP-J26-36	MDM-37PS-A174	—	#26 (SC)		PSW HEATER GROUND
HSJFP-J26-19	MDM-37PS-A174	—	—	—	—			NO CONNECTION

LTR	ZONE	DESCRIPTION	REVISIONS	DWN	CHK	STRUCT	MATL	THRM	ENGR	OSGN	DATA	RELEASE
A		INITIAL RELEASE	CODE B									



BS PHOTOMETER 1
10209786-1 REV -
SPIRE HARNESS
S/N ---

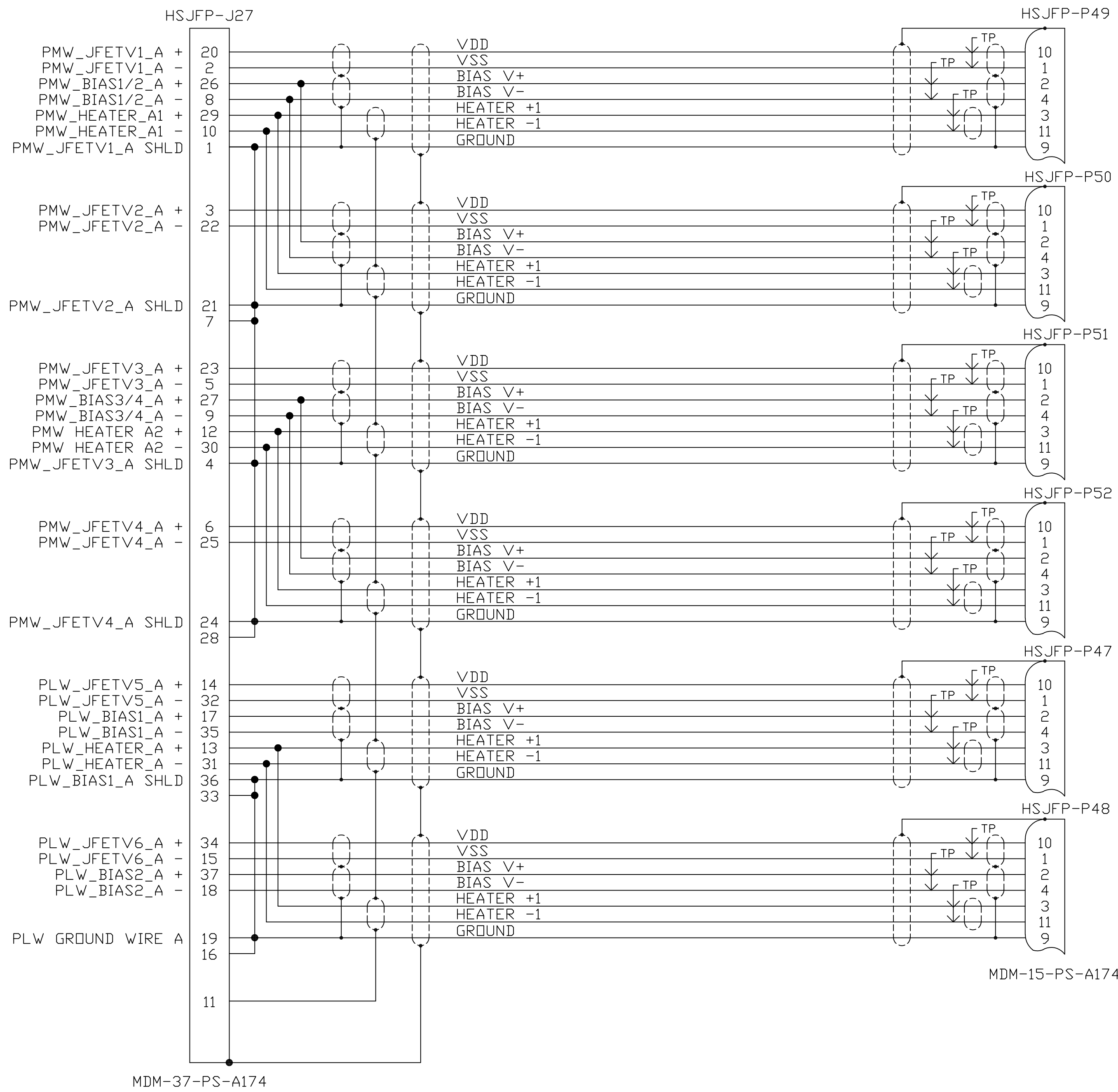
QTY REQD	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE	ZONE
AR	14			ST11478-26-ET	WIRE, SC, 26 AWG			
2	13			500-047M37F	BACKSHELL, 37		GLENAIR	
6	12			500E010M15H08	BACKSHELL, 15		GLENAIR	
AR	11			ST10088	TAPE, KAPTON			
AR	10			ST10021	TAPE, GLASS CLOTH			
AR	9				SOLDER	QQ-S-571	SN63	
AR	8				INK, MARKING - BLACK	BS502673	WORNDWINK SERIES M	
AR	7			ST12013	TAPE, LACING			
AR	6			ST10027	TUBING, INSULATION, SHRINKABLE			
AR	5			ST10039	FERRULE, TWO PIECE			
AR	4			ST12015	BRAID WIRE, COPPER, SILVER COATED			
AR	3			ST11481-26-ET	WIRE, TPSJ, 26 AWG			
6	2	HSJFP-PX		MDM-15SSB-A174	CONNECTOR, MICRO D, 15-SKT			
2	1	HSJFP-JX		MDM-37SSP-A174	CONNECTOR, MICRO D, 37-SKT			

- 8. INDICATES TWISTED WIRE GROUP.
 - 7. ALL INTERCONNECT WIRING IS 26 AWG COPPER.
 - IDENTIFY HARNESS AND CONNECTOR PER JPL D-8208, SECTION 3.12 USING ITEMS 8, 10, AND 11. ADD APPLICABLE REVISION LEVEL AND SERIAL NUMBER.
 - IDENTIFY CONNECTORS PER JPL D-8208, SECTION 3.12 USING ITEM 10 AND 11. ALTERNATE METHOD MARK CONNECTOR DIRECTLY USING ITEM 8.
 - 4. TIE CABLE AS REQUIRED USING ITEM 7, LACING TAPE.
 - 3. ALTERNATE OR EQUIVALENT PARTS MAY BE USED SUBJECT TO PRIOR ENGINEERING APPROVAL.
 - 2. FABRICATE HARNESS ON A FULL SCALE MOCKUP OF HARDWARE. BUNDLES SHOULD LIE AS SHOWN ON RAL DOCUMENT 0-KE-0104-350.
 - 1. FABRICATE CABLE PER JPL D-8208, SECTION 3.12.
- NOTES: UNLESS OTHERWISE SPECIFIED

MATERIAL		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		CONTRACT NO 124485B		JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109	
METRIC		LINEAR TOLERANCES:		APPD _____ DATE _____		RELEASED THROUGH EDMG	
THIRD ANGLE PROJECTION		0-6 ± 0.1		DWN D CRUMB 11/05/01		HARNESS, PHOTOMETER LONG & MEDIUM WAVE JFETS, SPIRE	
		OVER 6-30 ± 0.2		CHK _____		SIZE A1	
		OVER 30-120 ± 0.3		STRUCT _____		CAGE NO 23835	
		OVER 120-315 ± 0.5		MATL _____		10209786	
		OVER 315-1000 ± 0.8		THRM _____		REV A	
		OVER 1000 ± 1.2		CONT _____		SCALE NONE UNCLASSIFIED SHEET 1 OF 3	
		ANGULAR TOLERANCES: ± 0.5°		ENGR _____		1 REV 2/00	
		MACHINE FINISH (MICROMETERS) 3.2		OSGN _____			
SPIRE USED ON _____		DO NOT SCALE DRAWING INTERPRET DWG PER ANSI Y14.100M		DWN _____			
APPLICATION _____				CHK _____			

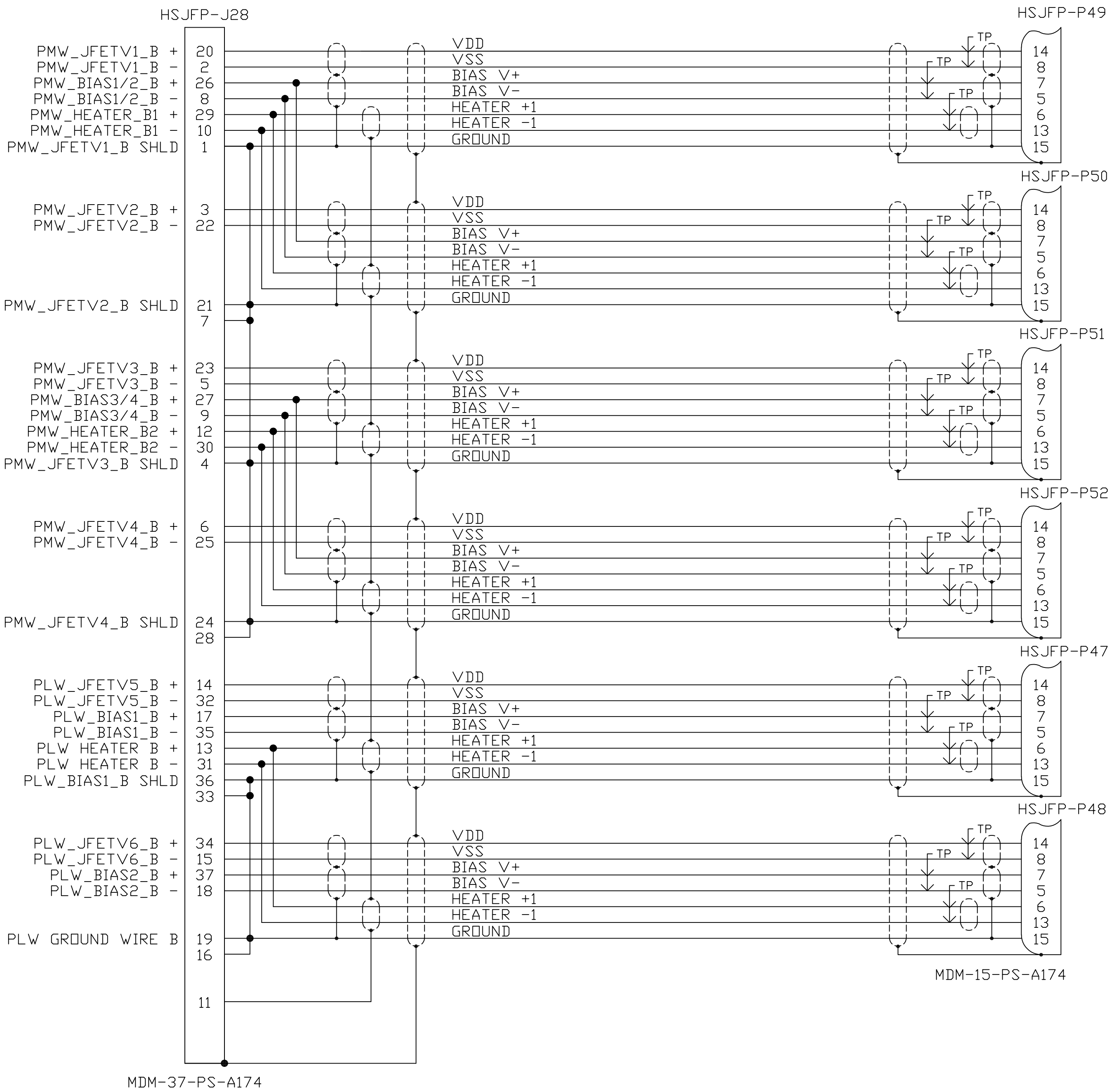
A1 10209786 AutoCAD GENERATED

BS-PHOTOMETER 2



FROM	CONNECTOR PART NO.	CONTACT PART NO.	TO	CONNECTOR PART NO.	CONTACT PART NO.	WIRE AWG & TYPE	TWIST GROUPS	SIGNAL
HSJFP-J27-20	MDM-37PS-A174	—	HSJFP-P49-10	MDM-15PS-A174	—	#26 (TPSJ)	AA	PMW_JFETV1_A +
HSJFP-J27-2	MDM-37PS-A174	—	HSJFP-P49-1	MDM-15PS-A174	—	#26 (TPSJ)	AA	PMW_JFETV1_A -
HSJFP-J27-26	MDM-37PS-A174	—	HSJFP-P49-2	MDM-15PS-A174	—	#26 (TPSJ)	AB	PMW_BIAS1/2_A +
HSJFP-J27-8	MDM-37PS-A174	—	HSJFP-P49-4	MDM-15PS-A174	—	#26 (TPSJ)	AB	PMW_BIAS1/2_A -
HSJFP-J27-29	MDM-37PS-A174	—	HSJFP-P49-3	MDM-15PS-A174	—	#26 (TPSJ)	AC	PMW_HEATER_A1 +
HSJFP-J27-10	MDM-37PS-A174	—	HSJFP-P49-11	MDM-15PS-A174	—	#26 (TPSJ)	AC	PMW_HEATER_A1 -
HSJFP-J27-1	MDM-37PS-A174	—	HSJFP-P49-9	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV1_A SHLD
HSJFP-J27-3	MDM-37PS-A174	—	HSJFP-P50-10	MDM-15PS-A174	—	#26 (TPSJ)	AD	PMW_JFETV2_A +
HSJFP-J27-22	MDM-37PS-A174	—	HSJFP-P50-1	MDM-15PS-A174	—	#26 (TPSJ)	AD	PMW_JFETV2_A -
HSJFP-J27-26	MDM-37PS-A174	—	HSJFP-P50-2	MDM-15PS-A174	—	#26 (TPSJ)	AE	PMW_BIAS1/2_A +
HSJFP-J27-8	MDM-37PS-A174	—	HSJFP-P50-4	MDM-15PS-A174	—	#26 (TPSJ)	AE	PMW_BIAS1/2_A -
HSJFP-J27-29	MDM-37PS-A174	—	HSJFP-P50-3	MDM-15PS-A174	—	#26 (TPSJ)	AF	PMW_HEATER_A1 +
HSJFP-J27-10	MDM-37PS-A174	—	HSJFP-P50-11	MDM-15PS-A174	—	#26 (TPSJ)	AF	PMW_HEATER_A1 -
HSJFP-J27-21	MDM-37PS-A174	—	HSJFP-P50-9	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV2_A SHLD
HSJFP-J27-23	MDM-37PS-A174	—	HSJFP-P51-10	MDM-15PS-A174	—	#26 (TPSJ)	AG	PMW_JFETV3_A +
HSJFP-J27-5	MDM-37PS-A174	—	HSJFP-P51-1	MDM-15PS-A174	—	#26 (TPSJ)	AG	PMW_JFETV3_A -
HSJFP-J27-27	MDM-37PS-A174	—	HSJFP-P51-2	MDM-15PS-A174	—	#26 (TPSJ)	AH	PMW_BIAS3/4_A +
HSJFP-J27-9	MDM-37PS-A174	—	HSJFP-P51-4	MDM-15PS-A174	—	#26 (TPSJ)	AH	PMW_BIAS3/4_A -
HSJFP-J27-12	MDM-37PS-A174	—	HSJFP-P51-3	MDM-15PS-A174	—	#26 (TPSJ)	AJ	PMW_HEATER_A2 +
HSJFP-J27-30	MDM-37PS-A174	—	HSJFP-P51-11	MDM-15PS-A174	—	#26 (TPSJ)	AJ	PMW_HEATER_A2 -
HSJFP-J27-4	MDM-37PS-A174	—	HSJFP-P51-9	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV3_A SHLD
HSJFP-J27-6	MDM-37PS-A174	—	HSJFP-P52-10	MDM-15PS-A174	—	#26 (TPSJ)	AK	PMW_JFETV4_A +
HSJFP-J27-25	MDM-37PS-A174	—	HSJFP-P52-1	MDM-15PS-A174	—	#26 (TPSJ)	AK	PMW_JFETV4_A -
HSJFP-J27-27	MDM-37PS-A174	—	HSJFP-P52-2	MDM-15PS-A174	—	#26 (TPSJ)	AL	PMW_BIAS3/4_A +
HSJFP-J27-9	MDM-37PS-A174	—	HSJFP-P52-4	MDM-15PS-A174	—	#26 (TPSJ)	AL	PMW_BIAS3/4_A -
HSJFP-J27-12	MDM-37PS-A174	—	HSJFP-P52-3	MDM-15PS-A174	—	#26 (TPSJ)	AM	PMW_HEATER_A2 +
HSJFP-J27-30	MDM-37PS-A174	—	HSJFP-P52-11	MDM-15PS-A174	—	#26 (TPSJ)	AM	PMW_HEATER_A2 -
HSJFP-J27-24	MDM-37PS-A174	—	HSJFP-P52-9	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV4_A SHLD
HSJFP-J27-14	MDM-37PS-A174	—	HSJFP-P47-10	MDM-15PS-A174	—	#26 (TPSJ)	AN	PMW_JFETV5_A +
HSJFP-J27-32	MDM-37PS-A174	—	HSJFP-P47-1	MDM-15PS-A174	—	#26 (TPSJ)	AN	PMW_JFETV5_A -
HSJFP-J27-17	MDM-37PS-A174	—	HSJFP-P47-2	MDM-15PS-A174	—	#26 (TPSJ)	AP	PLW_BIAS1_A +
HSJFP-J27-35	MDM-37PS-A174	—	HSJFP-P47-4	MDM-15PS-A174	—	#26 (TPSJ)	AP	PLW_BIAS1_A -
HSJFP-J27-13	MDM-37PS-A174	—	HSJFP-P47-3	MDM-15PS-A174	—	#26 (TPSJ)	AR	PLW_HEATER_A +
HSJFP-J27-31	MDM-37PS-A174	—	HSJFP-P47-11	MDM-15PS-A174	—	#26 (TPSJ)	AR	PLW_HEATER_A -
HSJFP-J27-36	MDM-37PS-A174	—	HSJFP-P47-9	MDM-15PS-A174	—	#26 (SC)		PLW_BIAS1_A SHLD
HSJFP-J27-34	MDM-37PS-A174	—	HSJFP-P48-10	MDM-15PS-A174	—	#26 (TPSJ)	AS	PLW_JFETV6_A +
HSJFP-J27-15	MDM-37PS-A174	—	HSJFP-P48-1	MDM-15PS-A174	—	#26 (TPSJ)	AS	PLW_JFETV6_A -
HSJFP-J27-37	MDM-37PS-A174	—	HSJFP-P48-2	MDM-15PS-A174	—	#26 (TPSJ)	AT	PLW_BIAS2_A +
HSJFP-J27-18	MDM-37PS-A174	—	HSJFP-P48-4	MDM-15PS-A174	—	#26 (TPSJ)	AT	PLW_BIAS2_A -
HSJFP-J27-13	MDM-37PS-A174	—	HSJFP-P48-3	MDM-15PS-A174	—	#26 (TPSJ)	AU	PLW_HEATER_A +
HSJFP-J27-31	MDM-37PS-A174	—	HSJFP-P48-11	MDM-15PS-A174	—	#26 (TPSJ)	AU	PLW_HEATER_A -
HSJFP-J27-19	MDM-37PS-A174	—	HSJFP-P48-9	MDM-15PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J27-1	MDM-37PS-A174	—	HSJFP-J27-21	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J27-21	MDM-37PS-A174	—	HSJFP-J27-7	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J27-7	MDM-37PS-A174	—	HSJFP-J27-4	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J27-4	MDM-37PS-A174	—	HSJFP-J27-24	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J27-24	MDM-37PS-A174	—	HSJFP-J27-28	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J27-36	MDM-37PS-A174	—	HSJFP-J27-33	MDM-37PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J27-33	MDM-37PS-A174	—	HSJFP-J27-19	MDM-37PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J27-19	MDM-37PS-A174	—	HSJFP-J27-16	MDM-37PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J27-11	MDM-37PS-A174	—	—	—	—	#26 (SC)		HEATER SHIELDS

BS-PHOTOMETER 2



FROM	CONNECTOR PART NO.	CONTACT PART NO.	TO	CONNECTOR PART NO.	CONTACT PART NO.	WIRE AWG & TYPE	TWIST GROUPS	SIGNAL
HSJFP-J28-20	MDM-37PS-A174	—	HSJFP-P49-14	MDM-15PS-A174	—	#26 (TPSJ)	BA	PMW_JFETV1_B +
HSJFP-J28-2	MDM-37PS-A174	—	HSJFP-P49-8	MDM-15PS-A174	—	#26 (TPSJ)	BA	PMW_JFETV1_B -
HSJFP-J28-26	MDM-37PS-A174	—	HSJFP-P49-7	MDM-15PS-A174	—	#26 (TPSJ)	BB	PMW_BIAS1/2_B +
HSJFP-J28-8	MDM-37PS-A174	—	HSJFP-P49-5	MDM-15PS-A174	—	#26 (TPSJ)	BB	PMW_BIAS1/2_B -
HSJFP-J28-29	MDM-37PS-A174	—	HSJFP-P49-6	MDM-15PS-A174	—	#26 (TPSJ)	BC	PMW_HEATER_B1 +
HSJFP-J28-10	MDM-37PS-A174	—	HSJFP-P49-13	MDM-15PS-A174	—	#26 (TPSJ)	BC	PMW_HEATER_B1 -
HSJFP-J28-1	MDM-37PS-A174	—	HSJFP-P49-15	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV1_B SHLD
HSJFP-J28-3	MDM-37PS-A174	—	HSJFP-P50-14	MDM-15PS-A174	—	#26 (TPSJ)	BD	PMW_JFETV2_B +
HSJFP-J28-22	MDM-37PS-A174	—	HSJFP-P50-8	MDM-15PS-A174	—	#26 (TPSJ)	BD	PMW_JFETV2_B -
HSJFP-J28-26	MDM-37PS-A174	—	HSJFP-P50-7	MDM-15PS-A174	—	#26 (TPSJ)	BE	PMW_BIAS1/2_B +
HSJFP-J28-8	MDM-37PS-A174	—	HSJFP-P50-5	MDM-15PS-A174	—	#26 (TPSJ)	BE	PMW_BIAS1/2_B -
HSJFP-J28-29	MDM-37PS-A174	—	HSJFP-P50-6	MDM-15PS-A174	—	#26 (TPSJ)	BF	PMW_HEATER_B1 +
HSJFP-J28-10	MDM-37PS-A174	—	HSJFP-P50-13	MDM-15PS-A174	—	#26 (TPSJ)	BF	PMW_HEATER_B1 -
HSJFP-J28-21	MDM-37PS-A174	—	HSJFP-P50-15	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV2_B SHLD
HSJFP-J28-23	MDM-37PS-A174	—	HSJFP-P51-14	MDM-15PS-A174	—	#26 (TPSJ)	BG	PMW_JFETV3_B +
HSJFP-J28-5	MDM-37PS-A174	—	HSJFP-P51-8	MDM-15PS-A174	—	#26 (TPSJ)	BG	PMW_JFETV3_B -
HSJFP-J28-27	MDM-37PS-A174	—	HSJFP-P51-7	MDM-15PS-A174	—	#26 (TPSJ)	BH	PMW_BIAS3/4_B +
HSJFP-J28-9	MDM-37PS-A174	—	HSJFP-P51-5	MDM-15PS-A174	—	#26 (TPSJ)	BH	PMW_BIAS3/4_B -
HSJFP-J28-12	MDM-37PS-A174	—	HSJFP-P51-6	MDM-15PS-A174	—	#26 (TPSJ)	BJ	PMW_HEATER_B2 +
HSJFP-J28-30	MDM-37PS-A174	—	HSJFP-P51-13	MDM-15PS-A174	—	#26 (TPSJ)	BJ	PMW_HEATER_B2 -
HSJFP-J28-4	MDM-37PS-A174	—	HSJFP-P51-15	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV3_B SHLD
HSJFP-J28-6	MDM-37PS-A174	—	HSJFP-P52-14	MDM-15PS-A174	—	#26 (TPSJ)	BK	PMW_JFETV4_B +
HSJFP-J28-25	MDM-37PS-A174	—	HSJFP-P52-8	MDM-15PS-A174	—	#26 (TPSJ)	BK	PMW_JFETV4_B -
HSJFP-J28-27	MDM-37PS-A174	—	HSJFP-P52-7	MDM-15PS-A174	—	#26 (TPSJ)	BL	PMW_BIAS3/4_B +
HSJFP-J28-9	MDM-37PS-A174	—	HSJFP-P52-5	MDM-15PS-A174	—	#26 (TPSJ)	BL	PMW_BIAS3/4_B -
HSJFP-J28-12	MDM-37PS-A174	—	HSJFP-P52-6	MDM-15PS-A174	—	#26 (TPSJ)	BM	PMW_HEATER_B2 +
HSJFP-J28-30	MDM-37PS-A174	—	HSJFP-P52-13	MDM-15PS-A174	—	#26 (TPSJ)	BM	PMW_HEATER_B2 -
HSJFP-J28-24	MDM-37PS-A174	—	HSJFP-P52-15	MDM-15PS-A174	—	#26 (SC)		PMW_JFETV4_B SHLD
HSJFP-J28-14	MDM-37PS-A174	—	HSJFP-P47-14	MDM-15PS-A174	—	#26 (TPSJ)	BN	PLW_JFETV5_B +
HSJFP-J28-32	MDM-37PS-A174	—	HSJFP-P47-8	MDM-15PS-A174	—	#26 (TPSJ)	BN	PLW_JFETV5_B -
HSJFP-J28-17	MDM-37PS-A174	—	HSJFP-P47-7	MDM-15PS-A174	—	#26 (TPSJ)	BP	PLW_BIAS1_B +
HSJFP-J28-35	MDM-37PS-A174	—	HSJFP-P47-5	MDM-15PS-A174	—	#26 (TPSJ)	BP	PLW_BIAS1_B -
HSJFP-J28-13	MDM-37PS-A174	—	HSJFP-P47-6	MDM-15PS-A174	—	#26 (TPSJ)	BR	PLW_HEATER_B +
HSJFP-J28-31	MDM-37PS-A174	—	HSJFP-P47-13	MDM-15PS-A174	—	#26 (TPSJ)	BR	PLW_HEATER_B -
HSJFP-J28-36	MDM-37PS-A174	—	HSJFP-P47-15	MDM-15PS-A174	—	#26 (SC)		PLW_BIAS1_B SHLD
HSJFP-J28-34	MDM-37PS-A174	—	HSJFP-P48-14	MDM-15PS-A174	—	#26 (TPSJ)	BS	PLW_JFETV6_B +
HSJFP-J28-15	MDM-37PS-A174	—	HSJFP-P48-8	MDM-15PS-A174	—	#26 (TPSJ)	BS	PLW_JFETV6_B -
HSJFP-J28-37	MDM-37PS-A174	—	HSJFP-P48-7	MDM-15PS-A174	—	#26 (TPSJ)	BT	PLW_BIAS2_B +
HSJFP-J28-18	MDM-37PS-A174	—	HSJFP-P48-5	MDM-15PS-A174	—	#26 (TPSJ)	BT	PLW_BIAS2_B -
HSJFP-J28-13	MDM-37PS-A174	—	HSJFP-P48-6	MDM-15PS-A174	—	#26 (TPSJ)	BU	PLW_HEATER_B +
HSJFP-J28-31	MDM-37PS-A174	—	HSJFP-P48-13	MDM-15PS-A174	—	#26 (TPSJ)	BU	PLW_HEATER_B -
HSJFP-J28-19	MDM-37PS-A174	—	HSJFP-P48-15	MDM-15PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J28-1	MDM-37PS-A174	—	HSJFP-J28-21	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J28-21	MDM-37PS-A174	—	HSJFP-J28-7	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J28-7	MDM-37PS-A174	—	HSJFP-J28-4	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J28-4	MDM-37PS-A174	—	HSJFP-J28-24	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J28-24	MDM-37PS-A174	—	HSJFP-J28-28	MDM-37PS-A174	—	#26 (SC)		PMW GROUND WIRE
HSJFP-J28-36	MDM-37PS-A174	—	HSJFP-J28-33	MDM-37PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J28-33	MDM-37PS-A174	—	HSJFP-J28-19	MDM-37PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J28-19	MDM-37PS-A174	—	HSJFP-J28-16	MDM-37PS-A174	—	#26 (SC)		PLW GROUND WIRE
HSJFP-J28-11	MDM-37PS-A174	—	—	—	—	#26 (SC)		HEATER SHIELDS

LTR		ZONE		REVISIONS									
				DESCRIPTION									
A				INITIAL RELEASE									
B				CHANGED NOTES 3, 4, 12, AND 13. CHANGED PART # FOR ITEM 6. CHANGED MARKING ON SHEET 2.									

DASH #	REFERENCE	CONNECTOR A REF. DES.	CABLE REF.	CONNECTOR B REF. DES.
-1	PLW-BDA-1	P05	F7A/B	P35
-2	PLW-BDA-2	P06	F8A/B	P36
-3	PMW-BDA-3	P01	F9A/B	P37
-4	PMW-BDA-4	P02	F10A/B	P38
-5	PMW-BDA-5	P03	F11A/B	P39
-6	PMW-BDA-6	P04	F12A/B	P40
-7	PSW-BDA-7	P01	F1A/B	P29
-8	PSW-BDA-8	P02	F2A/B	P30
-9	PSW-BDA-9	P03	F3A/B	P31
-10	PSW-BDA-10	P04	F4A/B	P32
-11	PSW-BDA-11	P05	F5A/B	P33
-12	PSW-BDA-12	P06	F6A/B	P34
-13	SLW-BDA-13	P05	F15A/B	P13
-14	SSW-BDA-14	P05	F13A/B	P11
-15	SSW-BDA-15	P06	F14A/B	P12
-16	PTC-PO1	P01	F28A/B	P14

- THE TST CABLE SHALL BE CONSTRUCTED AS FOLLOWS:
CORE: 3 TWISTED MANGANIN 38 AWG WIRES WITH PFA INSULATION
COLOR CODE: BLACK, RED, AND WHITE
SHIELD: SS 44 AWG, MINIMUM COVERAGE 90%
OTHER INSULATION: FEP, COLOR WHITE
 - WIRES TO HAVE A MINIMUM LENGTH OF 300MM AND BE CONSTRUCTED AS FOLLOWS:
CORE: 4 TWISTED SS 38 AWG WITH FEP INSULATION
COLOR CODE: BLACK, RED, BLUE, AND WHITE
SHIELD: SS 44 AWG, MINIMUM COVERAGE 90%
OTHER INSULATION: FEP, COLOR WHITE
 - 11. AFTER COMPLETION OF HARNESS, VACUUM BACKOUT AT 105°C AND 10⁻⁵ TORR FOR 72 HOURS. THE OUT GASSING PRODUCTS BETWEEN 2-100 AMU ARE TO BE RECORDED <10⁻⁹ TORR AT 80°C AT END OF BAKEOUT.
 - GROUND WIRE TO HAVE A MINIMUM LENGTH OF 150MM.
 - 9. THE COMPLETED WIRING HARNESS SHALL BE THERMAL CYCLED BETWEEN 295K AND 77K FOR 2 CYCLES. THE TEMPERATURE DWELL TIME SHALL BE 30 MINUTES. THE RESISTANCE OF EACH CIRCUIT SHALL BE MEASURED AND RECORDED AT EACH TEMPERATURE DWELL.
 - SUGGESTED SOURCE OF SUPPLY:
TYCO ELECTRONICS
306 PASADENA AVE
SOUTH PASADENA, CA 91030
 - SUGGESTED SOURCE OF SUPPLY:
COONER WIRE
9265 OWENSMOUTH
CHATSWORTH, CA 91311
 - INDICATES TWISTED TRIPLET WIRE GROUP.
 - CABLE ASSEMBLY SHALL HAVE A CRES 316L OVERSHEILD FROM THE BULKHEAD FEED-THRU TO CONNECTOR "B" SHELL. SHIELD BRAID SHALL BE 80% MINIMUM COVERAGE.
 - IDENTIFY WITH PART NUMBER, CABLE REFERENCE DESIGNATOR, AND CONNECTOR REFERENCE DESIGNATOR USING CONTRASTING COLOR INK. LOCATION OF PART NUMBER AND CABLE REFERENCE DESIGNATOR TO BE ON "B" CONNECTORS. LOCATE CONNECTOR REFERENCE DESIGNATOR ON CONNECTOR.
 - THE ISOLATION RESISTANCE OF EACH CONTACT, WHEN TESTED TO ALL OTHER CONTACTS, SHALL BE >20 MΩ WITH THE APPLICATION OF 50 VDC. THE SERIES RESISTANCE OF EACH CIRCUIT SHALL NOT EXCEED 100 Ω'S.
 - ALTERNATE OR EQUIVALENT PARTS MAY BE USED SUBJECT TO PRIOR ENGINEERING APPROVAL.
 - HARNESS LENGTHS, ROUTING, SHIELDING, AND GROUPING SHALL BE IN ACCORDANCE WITH SPIRE-BDA-JFET HARNESS DEFINITION DOCUMENT, DOCUMENT NUMBER SPIRE-RAL-DOC-001369. CABLE SHALL BE FABRICATED ON A FULL SCALE MOCK-UP OF THE INSTRUMENT.
- NOTES: UNLESS OTHERWISE SPECIFIED

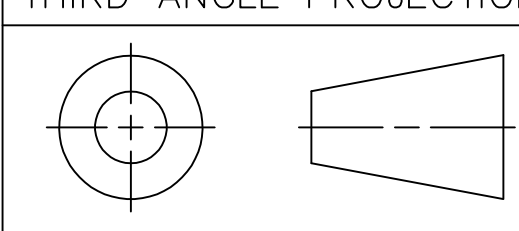
SPECIFICATION CONTROL DRAWING

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	ITEM NO	REF DES	CAGE NO	PART OR IDENTIFYING NO
																QTY REQD			
																		STM02511500PCN	CONNECTOR, NANONIC, 25-PIN
																			SOLDER
																			QQ-S-571
																			SN63
																			WORNOWINK SERIE M
																		6F142	CW6515
																			CABLE
																			M83513/02-51N
																			CONNECTOR, MICRO D, 51-SKT
																			STM05111500PCN
																			CONNECTOR, NANONIC, 51-PIN

MATERIAL

METRIC

THIRD ANGLE PROJECTION



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

LINEAR TOLERANCES:

0-6	± 0.1
OVER 6-30	± 0.2
OVER 30-120	± 0.3
OVER 120-315	± 0.5
OVER 315-1000	± 0.8
OVER 1000	± 1.2

ANGULAR TOLERANCES: ± 0.5°

MACHINE FINISH (MICROMETERS)

DO NOT SCALE DRAWING INTERPRET DWG PER ANSI Y14.100M

CONTRACT NO. 1244858

JET PROPULSION LABORATORY
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CA 91109

RELEASED THROUGH EDMG

WIRING HARNESS,
BOLOMETER DETECTOR
ARRAY TO JFET, SPIRE

SIZE	CAGE NO	REV
A1	23835	B

PARTS LIST

APPD _____ DATE _____

DWN D CRUMB 5/20/03

CHK _____

STRUCT _____

MATL _____

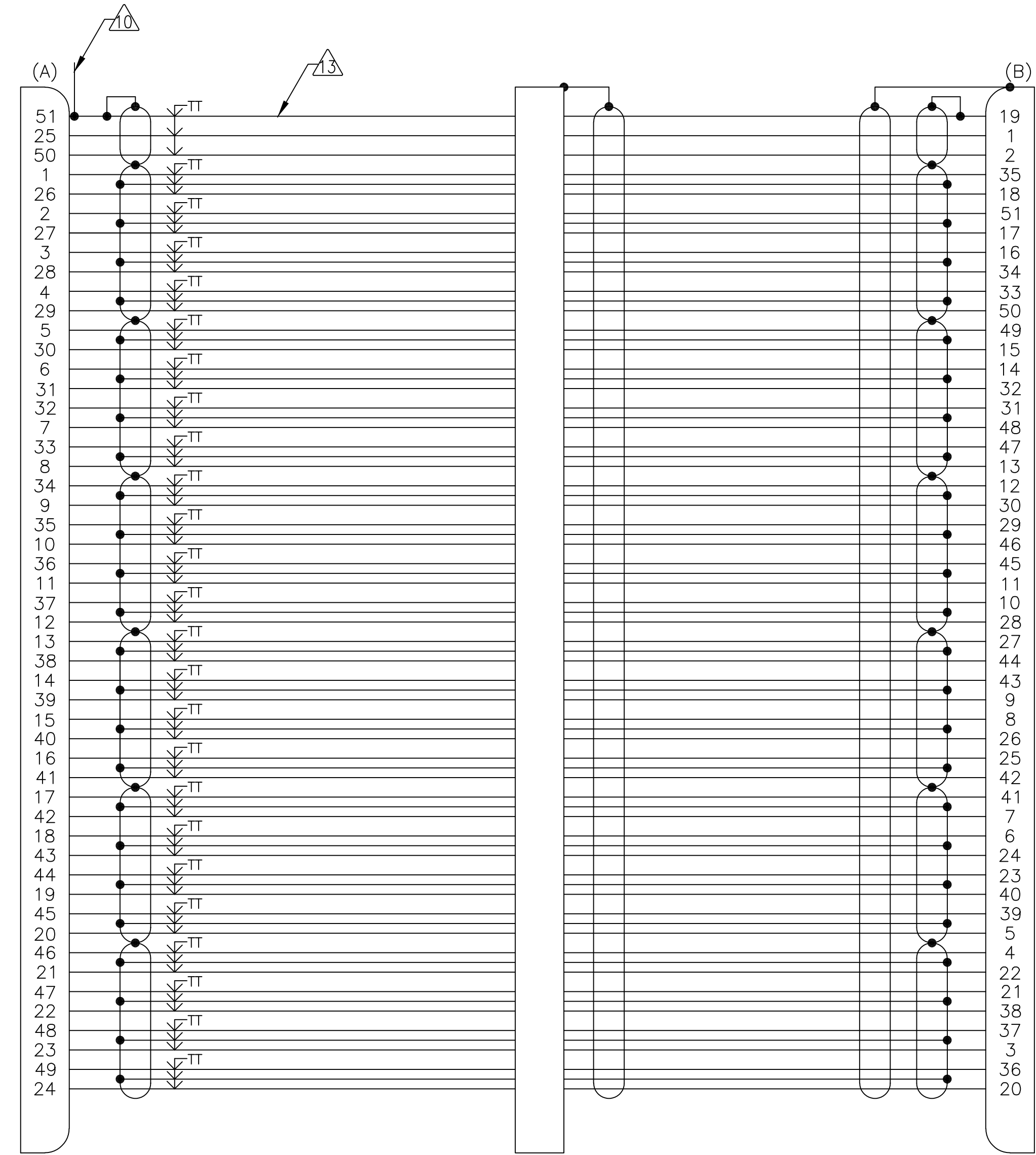
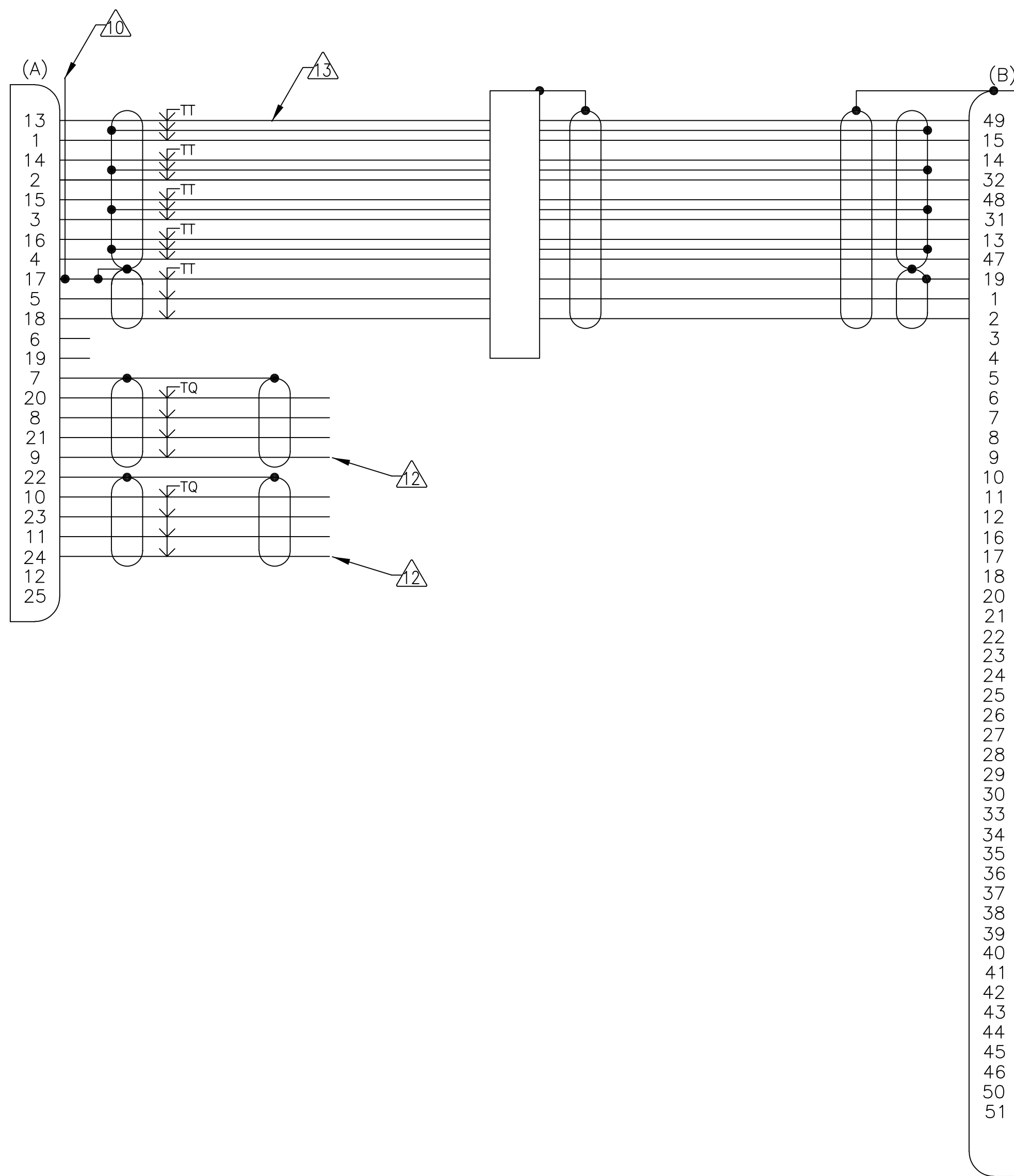
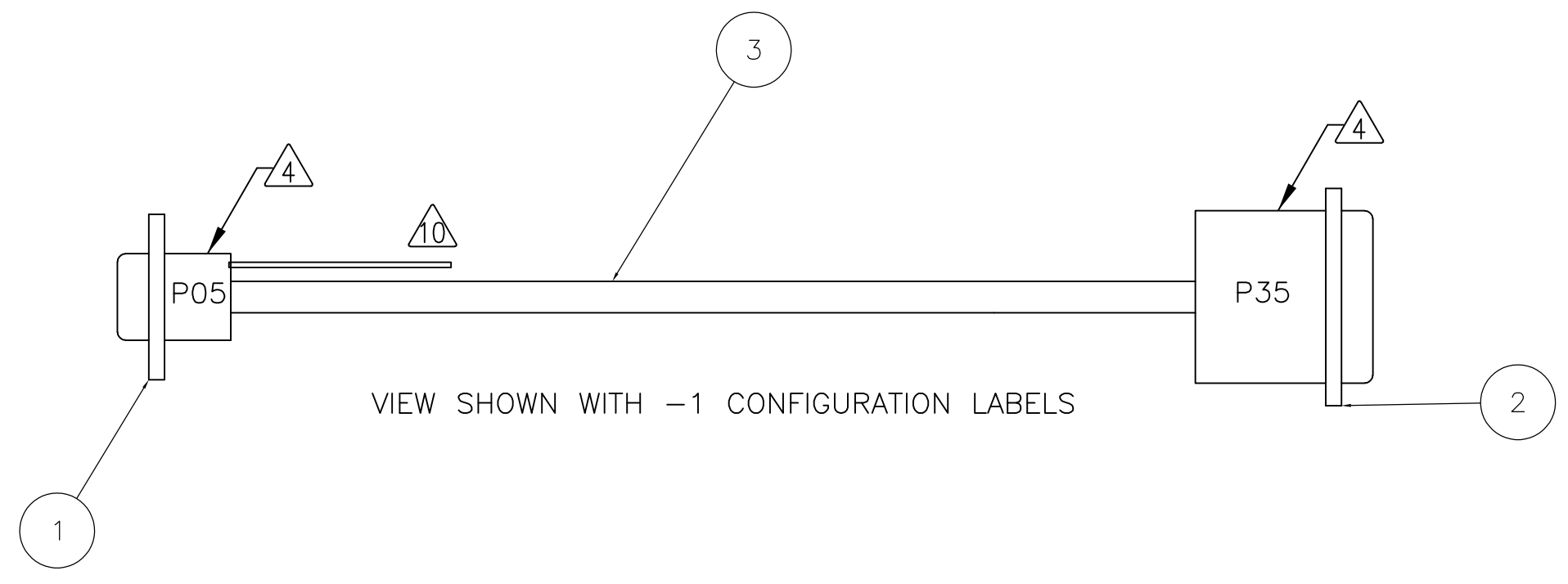
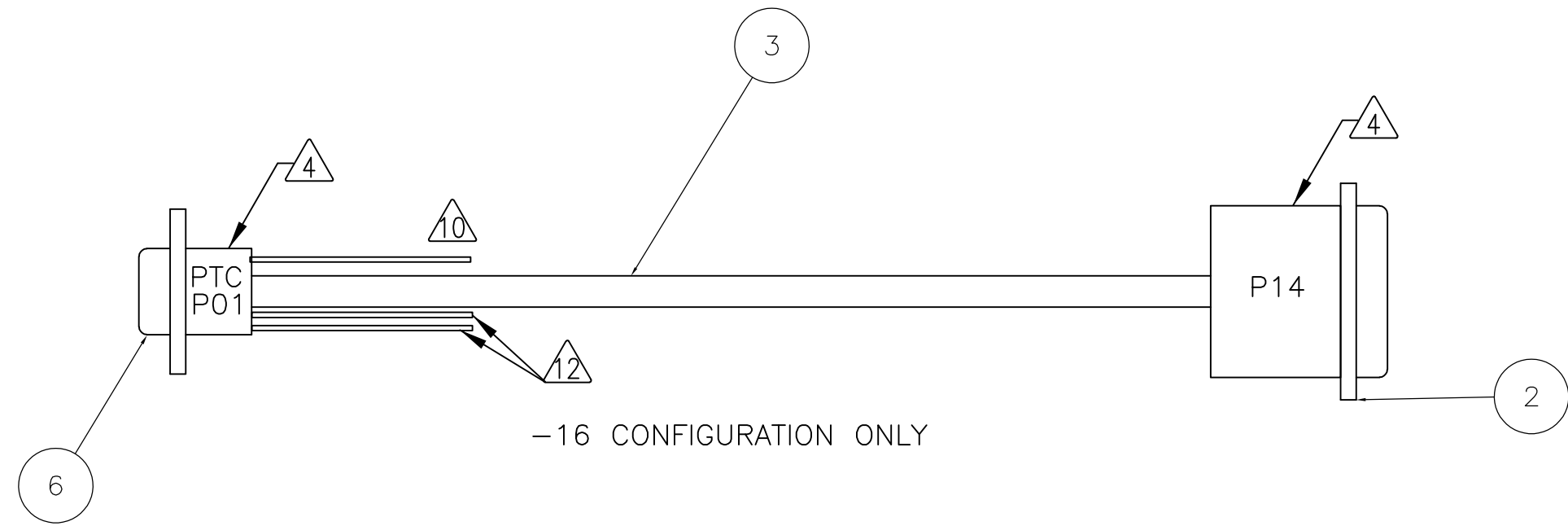
THRM CONT _____

ENGR M WEILERT 5/20/03

SCALE NONE UNCLASSIFIED SHEET 1 OF 1 REV 2/00

A1 10209787 AutoCAD GENERATED

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12 11 10 9 8 7 6 5 4 3 2 1