

9 7 4 - 4 X 1 B - X X X

X2 BACKPLANE MODULE MALE STANDARD LOAD

4 PAIR
1.85MM PITCH
W / XG

6-POSITION

ZONE	REV	SCR NUMBER	DESCRIPTION	BY	DATE	APPROVED
	3.0		UPDATED NOTES AND HOLE DETAILS	HCL-AP	03/31/2016	B.RICHARD
	4.0	BMEL-A9KH2L.VER01	UPDATED TABLE 1 AND NOTES, UPDATED PCB HOLE PATTERNS.	HCL-RM	05/02/2016	B.RICHARD
SH1 C4 SH1 C4	5.0		REMOVED .0217" DRILL OPTION FROM P/N TREE REMOVED DUPLICATE ENTRIES OF .0157" DRILL OPTION FROM P/N TREE REMOVED NOTES 11 & 12 ADDED NOTE 16	HCL-VK	05/20/2016	B.RICHARD
SH1 A8 SH1 A8 SH8 A4			DIMENSION 1.77±0.05 WAS 1.73±0.05			
SHT1, B8	6.0		UPDATED PART MARKING REQUIREMENTS	HCL-DC	07/19/2016	D.COVEY
	7.0	BMEL-AM6HL7.VER01	MODIFIED 0.00 BLOCK TOLERANCE, HOUSING WIDTH DIM CHANGED TO 2 DECIMAL	HCL-AP	05/10/2017	B.MERRILL

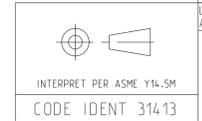
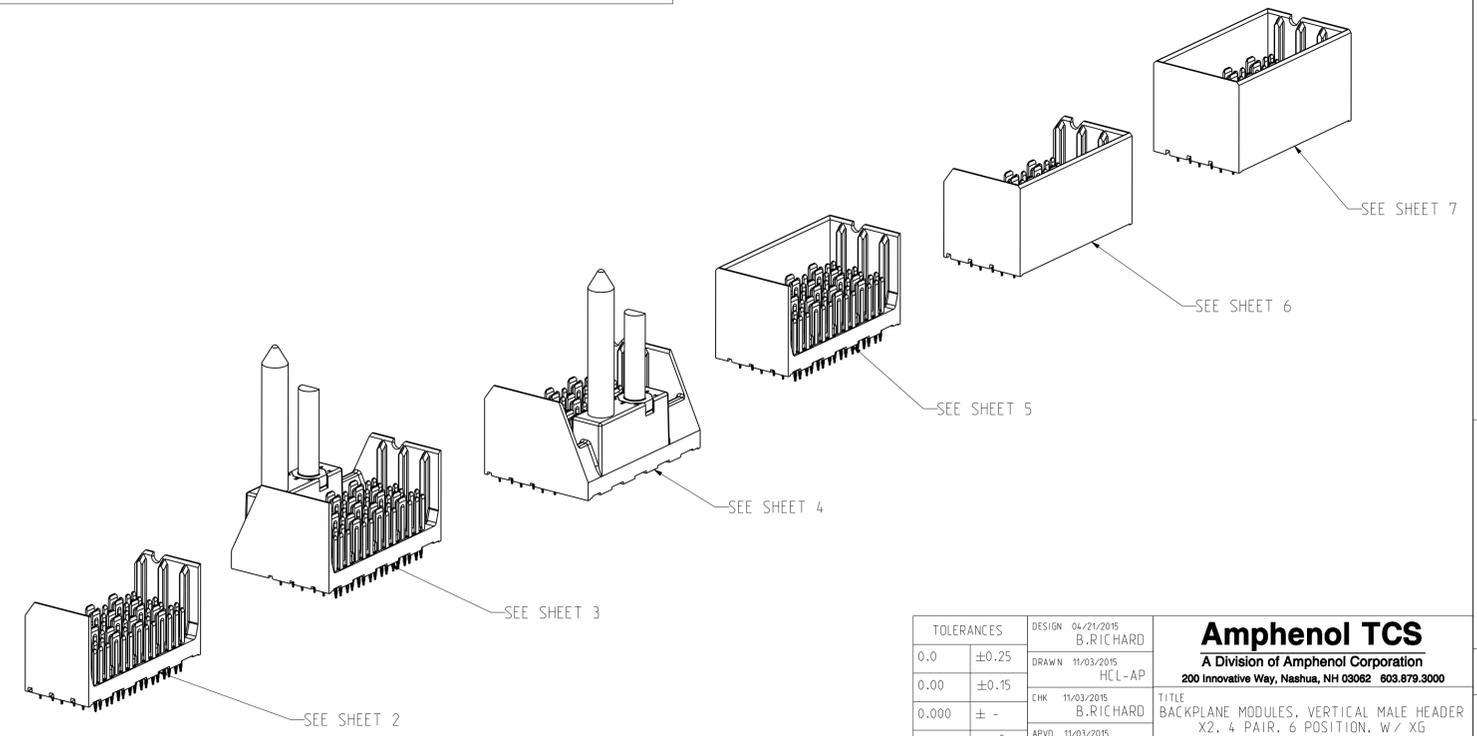
	LETTER								
LEFT POLARIZING GUIDANCE (SEE SHEET 3)	J (NO KEY)	A	B	C	D	E	F	G	H
RIGHT POLARIZING GUIDANCE (SEE SHEET 4)	Y (NO KEY)	P	Q	R	S	T	U	V	W
OPEN (SEE SHEET 2)	O (ZERO)								
LEFT WALL (SEE SHEET 5)	L								
RIGHT WALL (SEE SHEET 6)	M								
TWO WALL (SEE SHEET 7)	1								

NUMBER	PIN STYLE, HEIGHT
0	GUIDE PIN MACHINED, 31.6mm / NONE

NUMBER	SIGNAL & LG. GROUND WIPE LENGTH, COMPLIANT PIN SIZE
0	N/A
A	2 MM WIPE SIGNAL, 3.5 MM WIPE LG GND, ALL ϕ .0157" DRILL
C	2 MM WIPE SIGNAL, 4 MM WIPE LG GND, ALL ϕ .0157" DRILL
E	2.5 MM WIPE SIGNAL, 3.5 MM WIPE LG GND, ALL ϕ .0157" DRILL
G	2.5 MM WIPE SIGNAL, 4 MM WIPE LG GND, ALL ϕ .0157" DRILL
J	3 MM WIPE SIGNAL, 3.5 MM WIPE LG GND, ALL ϕ .0157" DRILL
L	3 MM WIPE SIGNAL, 4 MM WIPE LG GND, ALL ϕ .0157" DRILL

PLATING ④	
LETTER	DESCRIPTION
D	NI SULFAMATE, STANDARD GOLD, LEADFREE
E	NI SULFAMATE, HIGH GOLD, LEADFREE
H	NANO NI, STANDARD GOLD, LEADFREE
J	NANO NI, HIGH GOLD, LEADFREE

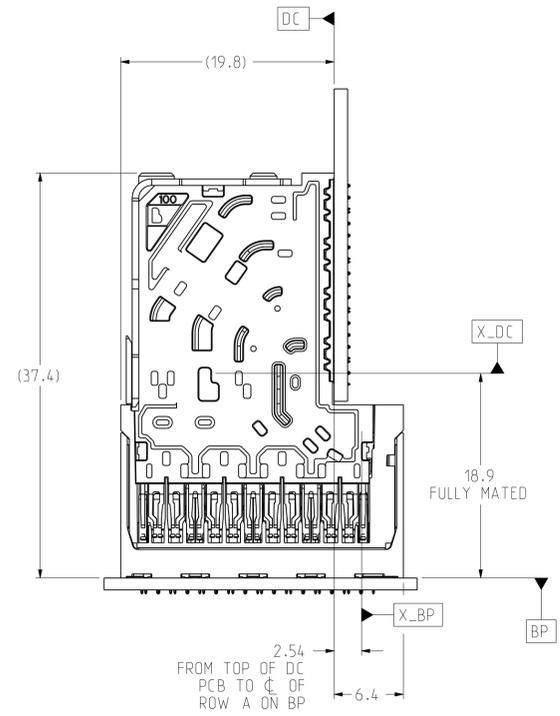
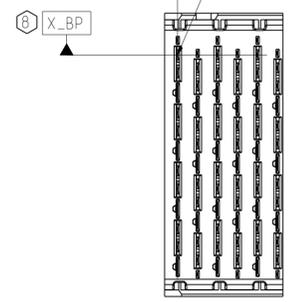
- NOTES:
- REFER TO TB-2150 FOR XCode PRODUCT SPECIFICATIONS.
 - NOTCH DESIGNATES "ROW A" SIDE OF SHROUD. NOTCH FEATURE ON OPPOSITE SIDE FROM PART MARKING.
 - PART MARKING AS FOLLOWS:
 LINE 1: "ATCS" AND DATECODE (ATCS YYWW).
 LINE 2: MODULE PART NUMBER (974-####-###).
 LINE 3: WORK ORDER NUMBER (#####).
 WHERE "*" DENOTES MANUFACTURING LOCATION.
 - PLATING THICKNESS OF SIGNAL CONTACT AND GROUND CONTACT IS DETERMINED BY PLATING CODE. SEE PART NUMBER TREE SHEET 1.
 - REPAIR PROCEDURE FOR MODULE. SEE TB-2210.
 - SEE TB-2149 FOR ROUTING GUIDELINES & PTH REQ'S.
 - SEE DOC C190-1001-000 FOR TOOLING KEEPOUT ZONES.
 - BACKPLANE DATUM REFERENCE.
 - OPTIONAL HOLE/MOUNTING SCREW LOCATION FOR GROUNDED PIN OR ADDITIONAL GUIDE PIN SUPPORT. REFER TO TB-2211 FOR PROPER GUIDE PIN SELECTION AND DRAWING C942-4010-000 FOR OPTIONAL HOLE DETAILS. ONLY APPLIES FOR MACHINED GUIDE PIN APPLICATIONS.
 - MPC CANNOT BE USED WITH 2MM WIPE SIGNAL.
 - SHADOW VIA NOT USED WITH .0177" SIGNAL.
 - USE .0157" SIGNAL AND GROUND DRILL FOR OPTIMAL SIGNAL INTEGRITY PERFORMANCE. .0177" SIGNAL AND GROUND DRILL NOT RECOMMENDED FOR NEW DESIGNS.
 - BLOCK TOLERANCES DO NOT APPLY.
 - SURFACE GROUND PLANE EQUAL TO COMPONENT OUTLINE REQUIRED. SURFACE GROUND PLANE TO BE FREE FROM SOLDERMASK.
 - SEE PAGE 8 FOR OUTER LAYER PCB REQUIREMENTS.
 - SHADOW VIAS (GND VIA'S) DO NOT RECEIVE COMPLIANT PINS. THEY ARE ADDED FOR IMPROVED SIGNAL INTERGIRTY PERFORMANCE AND CAN CHANGE IN SIZE AND LOCATION BASED UPON THE SPECIFIC DESIGN DETAILS



TOLERANCES	DESIGN	DATE	DESIGNER	Amphenol TCS	
0.0	±0.25	04/21/2015	B.RICHARD	A Division of Amphenol Corporation	
0.00	±0.15	11/03/2015	HCL-AP	200 Innovative Way, Nashua, NH 03062 603.879.3000	
0.000	±	11/03/2015	B.RICHARD	TITLE	BACKPLANE MODULES, VERTICAL MALE HEADER
ANGLES	± 3°	11/03/2015	B.RICHARD	TITLE	X2, 4 PAIR, 6 POSITION, W / XG
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM. DECIMAL MARKER IS A PERIOD				PART NO.	SEE PN TREE SHEET 1
CUSTOMER USE DRAWING				DRAWING NO.	C-974-401B-500
				REV	N/A
				REV	7.0
				ASSEM	01227-2S-CU-4PR-6POS-BP-ALL
				DRAWING	C974-401B-500
				SCALE	3/1
				SHEET	1 OF 8

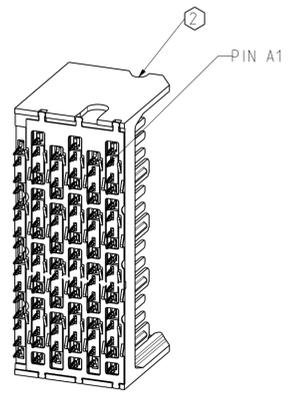
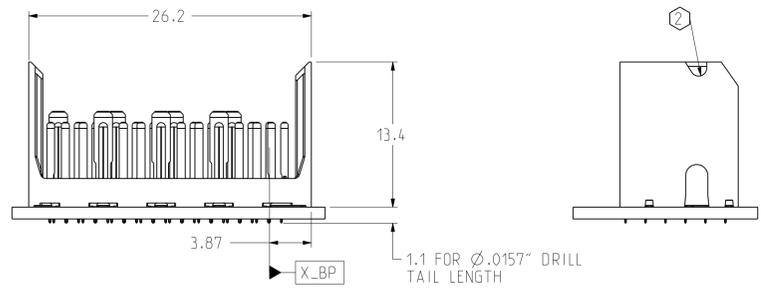
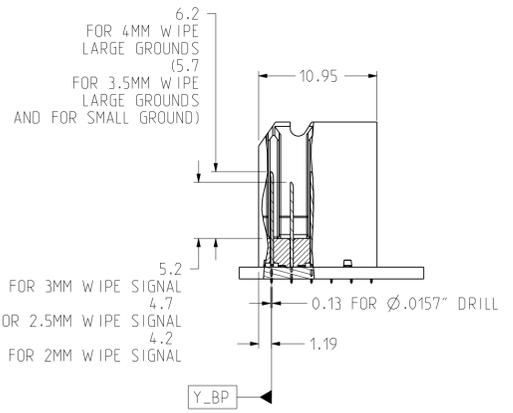
ZONE	REV	SCR NUMBER	DESCRIPTION	BY	DATE	APPROVED
			SEE SHEET 1			

DATUMS X_BP AND Y_BP INTERSECT THE SIGNAL A1 VIA ON BACKPLANE.

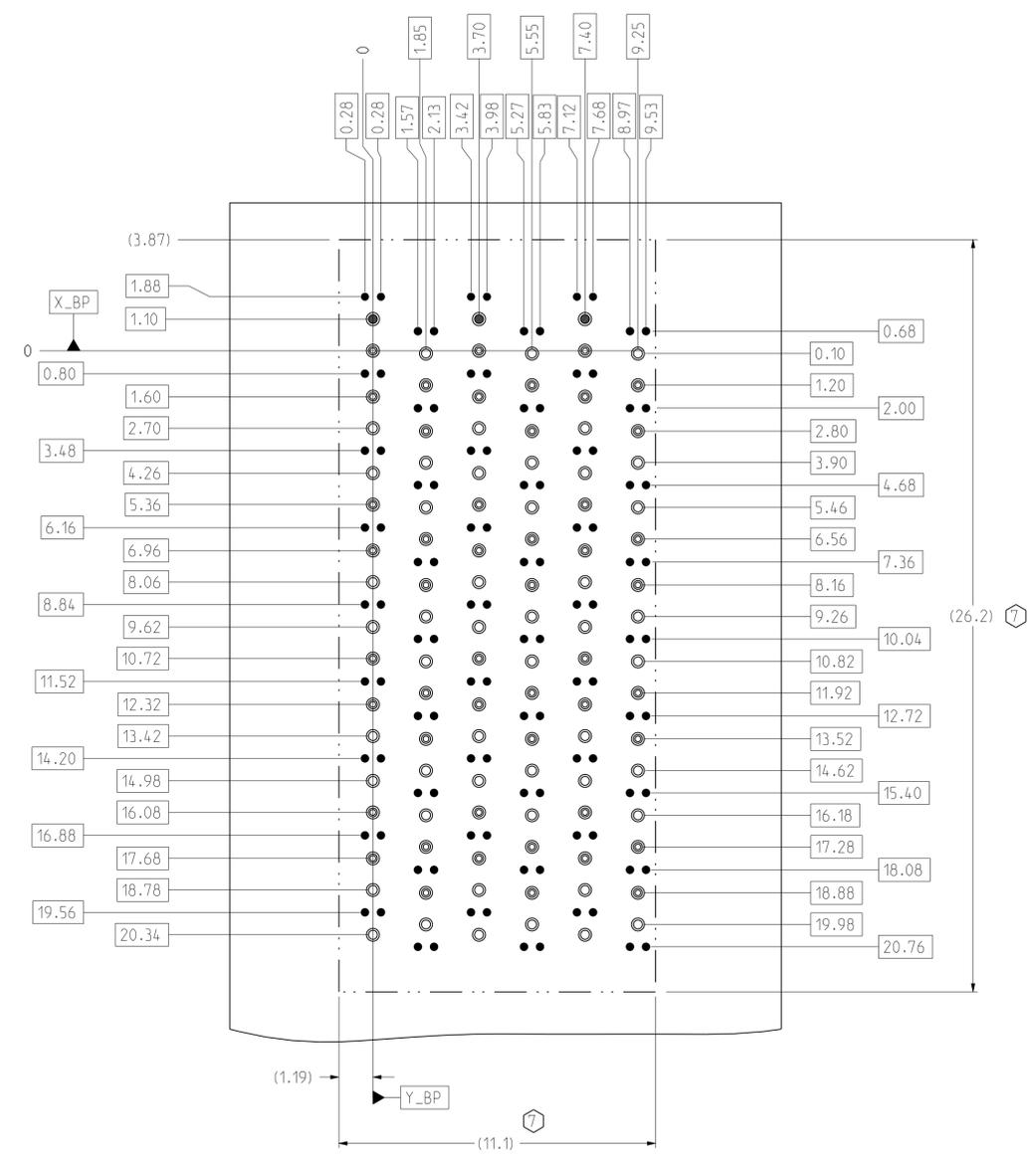


OPEN BACKPLANE MODULE DIMENSION

CONNECTOR REFERENCE SCALE 3/1

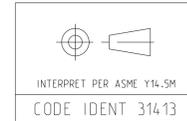


ISOMETRIC VIEW SCALE 3/1



OPEN BACKPLANE FOOTPRINT

SCALE 8/1 SEE SHEET 8 FOR HOLE PATTERN & GROUND PLANE DETAILS



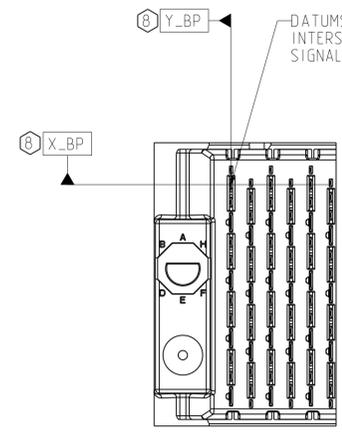
TOLERANCES	DESIGN 04/21/2015 B.RICHARD	Amphenol TCS A Division of Amphenol Corporation 200 Innovative Way, Nashua, NH 03062 603.879.3000	
0.0 ±0.25	DRAWN 11/03/2015 HCL-AP	TITLE	REV
0.00 ±0.15	EHK 11/03/2015 B.RICHARD	BACKPLANE MODULES, VERTICAL MALE HEADER X2, 4 PAIR, 6 POSITION, W/ XG	N/A
0.000 ± -	APVD 11/03/2015 B.RICHARD	PART NO.	REV
ANGLES ± 3°		SEE PN TREE SHEET 1	N/A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM. DECIMAL MARKER IS A PERIOD		DRAWING NO.	REV
CUSTOMER USE DRAWING		C-974-401B-500	7.0
		ASSEM 01227-2S-CU-4PR-6POS-BP-ALL DRAWING C974-401B-500	0.2 0.24
SIZE D	SCALE 1/1	SHEET 2 OF 8	

DRW NO. C-974-401B-500

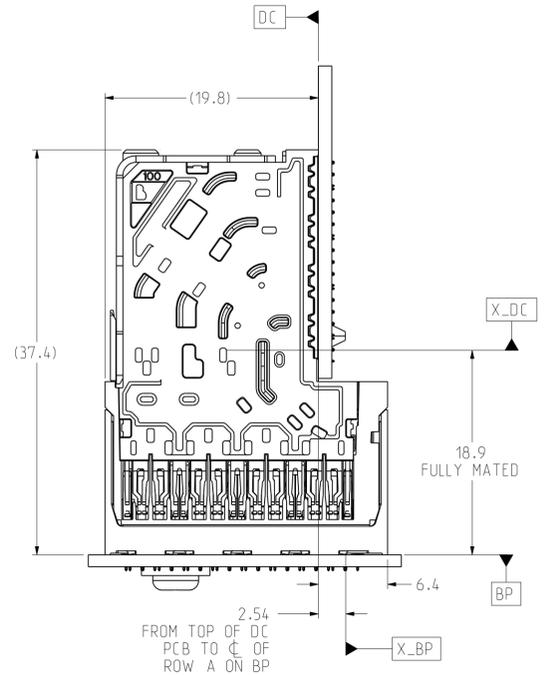
SH 2 REV 7.0

ZONE	REV	SCR NUMBER	DESCRIPTION	BY	DATE	APPROVED
			SEE SHEET 1			

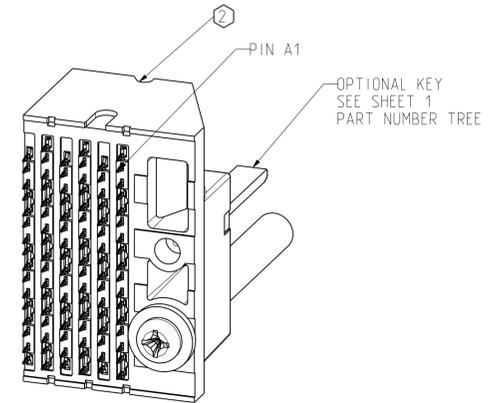
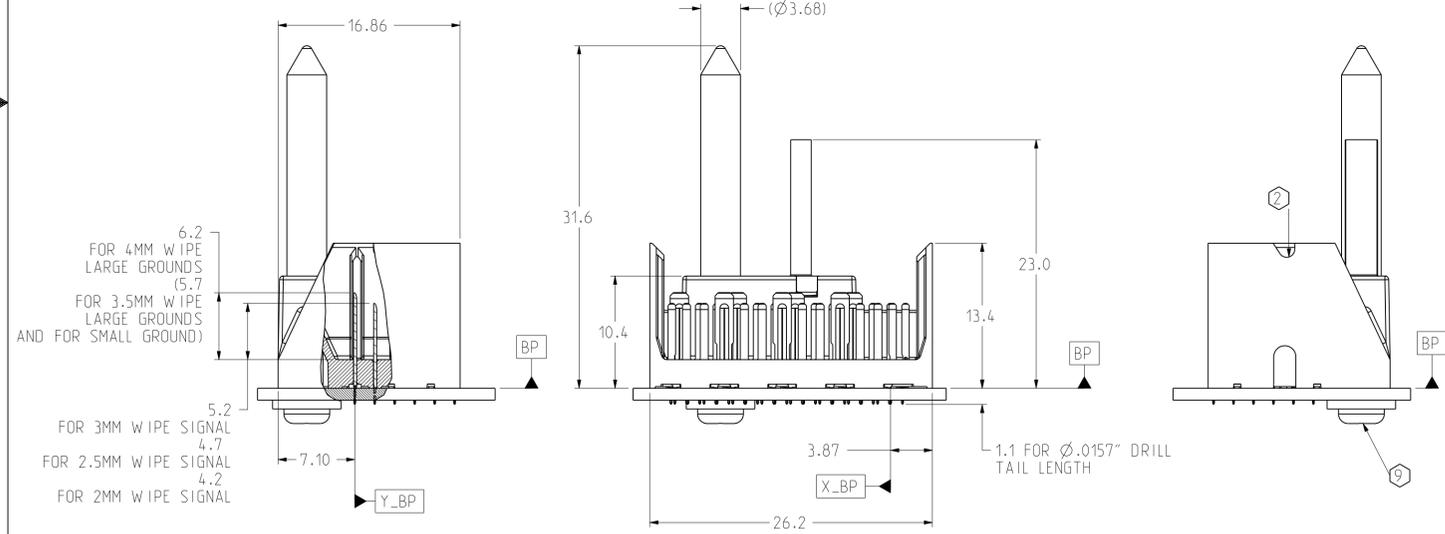
DATUMS X_BP AND Y_BP INTERSECT THE SIGNAL A1 VIA ON BACKPLANE.



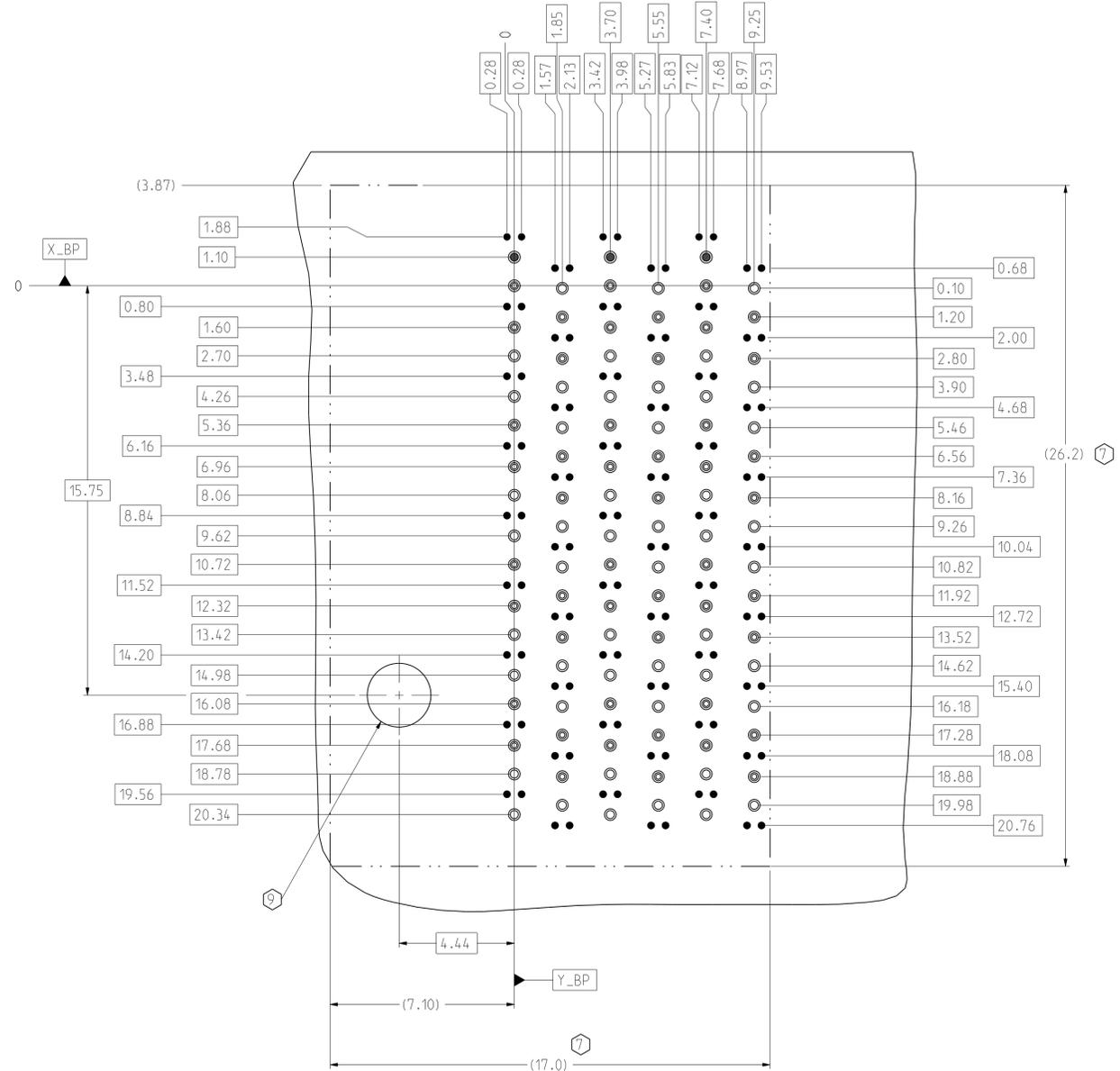
LEFT POLARIZING/GUIDE BACKPLANE MODULE DIMENSION



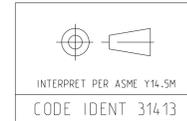
2.54 FROM TOP OF DC PCB TO C OF ROW A ON BP
CONNECTOR REFERENCE
 SCALE 3/1



ISOMETRIC VIEW
 SCALE 3/1



LEFT POLARIZING/GUIDE BACKPLANE FOOTPRINT
 SCALE 8/1
 SEE SHEET 8
 FOR HOLE PATTERN & GROUND PLANE DETAILS



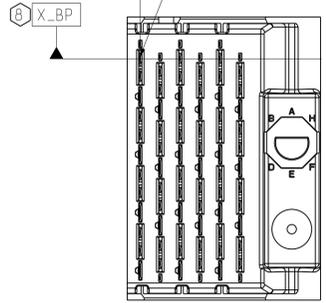
TOLERANCES	DESIGN	DATE	DESIGNER	Amphenol TCS	
0.0	±0.25	04/21/2015	B.RICHARD	A Division of Amphenol Corporation	
0.00	±0.15	11/03/2015	HCL-AP	200 Innovative Way, Nashua, NH 03062 603.879.3000	
0.000	±	11/03/2015	B.RICHARD	TITLE: BACKPLANE MODULES, VERTICAL MALE HEADER X2, 4 PAIR, 6 POSITION, W / XG	
ANGLES	± 3°	11/03/2015	B.RICHARD	PART NO. SEE PN TREE SHEET 1	REV. N/A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM. DECIMAL MARKER IS A PERIOD				DRAWING NO. C-974-401B-500	REV. 7.0
CUSTOMER USE DRAWING				ASSEM 01227-2S-CU-4PR-6POS-BP-ALL	0.2
				DRAWING C974-401B-500	0.24
SIZE	D	SCALE	1/1	SHEET 3 OF 8	

DRW NO. C-974-401B-500

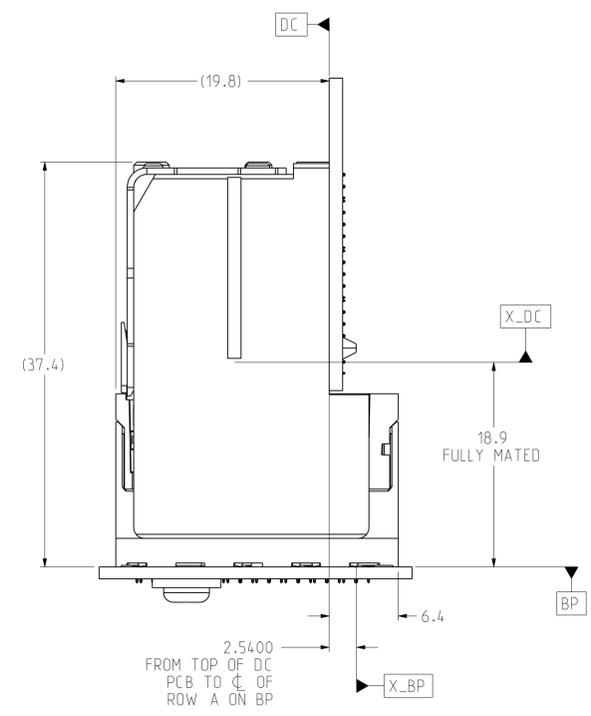
SH 3 REV 7.0

ZONE	REV	SCR NUMBER	DESCRIPTION	BY	DATE	APPROVED
			SEE SHEET 1			

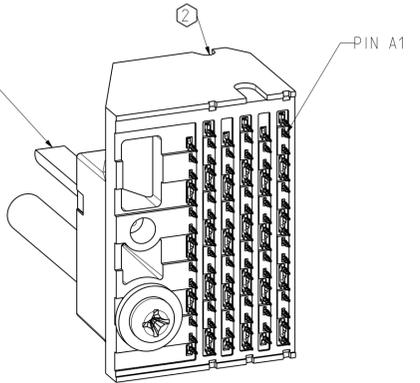
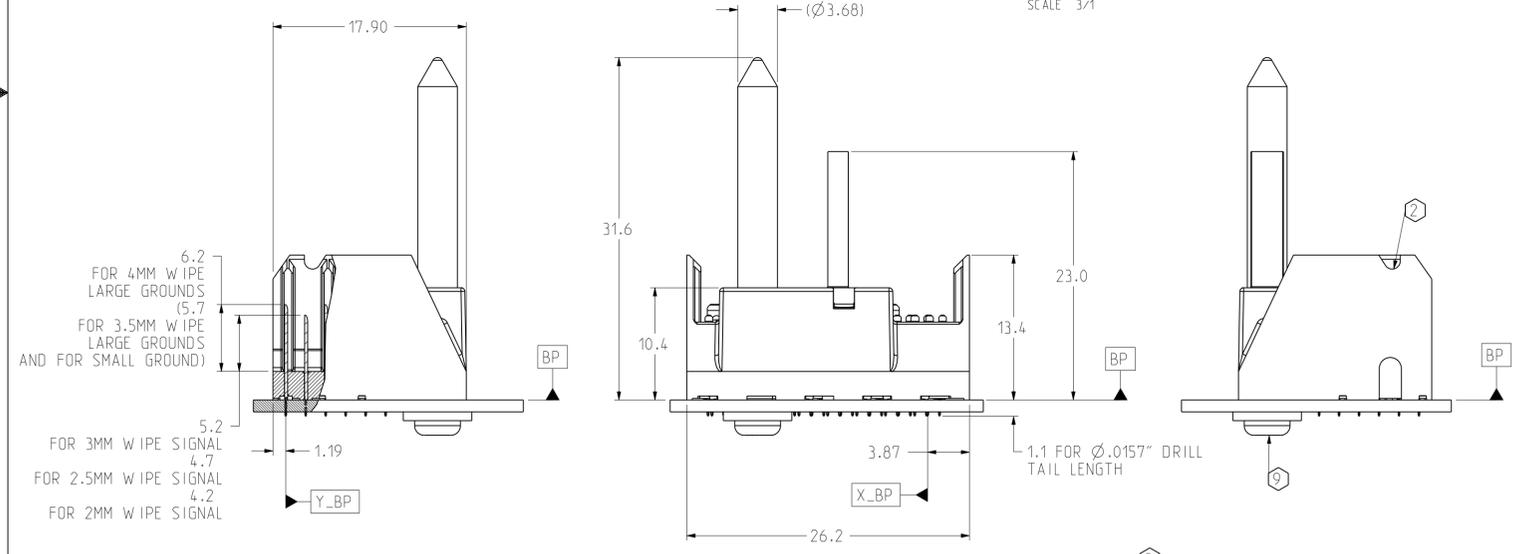
DATUMS X_BP AND Y_BP INTERSECT THE SIGNAL A1 VIA ON BACKPLANE.



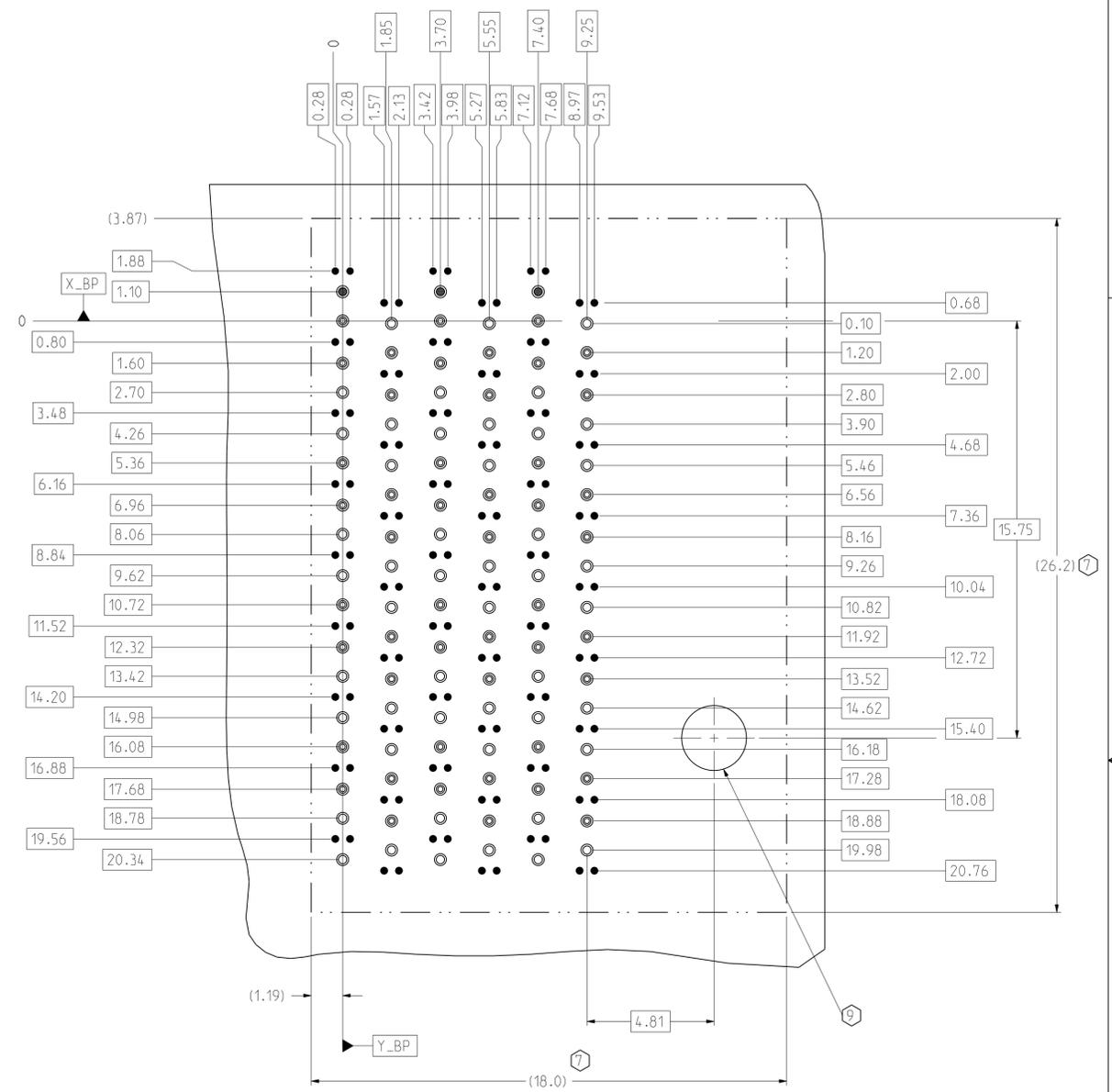
RIGHT POLARIZING/GUIDE BACKPLANE MODULE DIMENSION



CONNECTOR REFERENCE SCALE 3/4

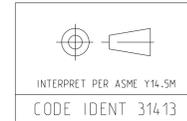


ISOMETRIC VIEW SCALE 3/4



RIGHT POLARIZING/GUIDE BACKPLANE FOOTPRINT SCALE 8/1

SEE SHEET 8 FOR HOLE PATTERN & GROUND PLANE DETAILS



TOLERANCES	DESIGN	DATE	DESIGNER	Amphenol TCS	
0.0	±0.25	04/21/2015	B.RICHARD	A Division of Amphenol Corporation	
0.00	±0.15	11/03/2015	HCL-AP	200 Innovative Way, Nashua, NH 03062 603.879.3000	
0.000	±	11/03/2015	B.RICHARD	TITLE	REV
ANGLES	± 3°	11/03/2015	B.RICHARD	BACKPLANE MODULES, VERTICAL MALE HEADER X2, 4 PAIR, 6 POSITION, W / XG	N/A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM. DECIMAL MARKER IS A PERIOD				PART NO.	REV
SEE PN TREE SHEET 1				SEE PN TREE SHEET 1	N/A
DRAWING NO. C-974-401B-500				REV	7.0
ASSEM 01227-2S-CU-4PR-6POS-BP-ALL DRAWING C974-401B-500				REV	0.2
SIZE	D	SCALE	1/1	SHEET 4 OF 8	

CUSTOMER USE DRAWING

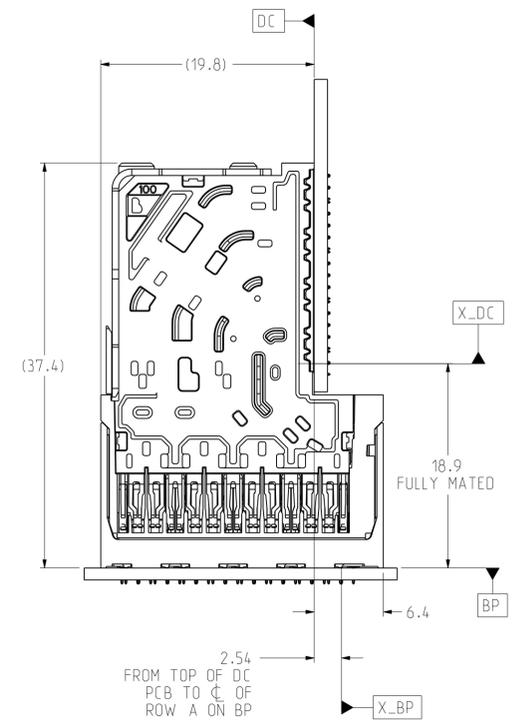
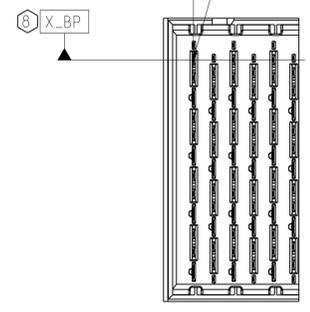
DRW NO. C-974-401B-500

REV 7.0

ZONE	REV	SCR NUMBER	DESCRIPTION	BY	DATE	APPROVED
			SEE SHEET 1			

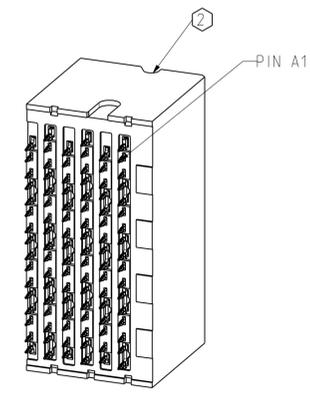
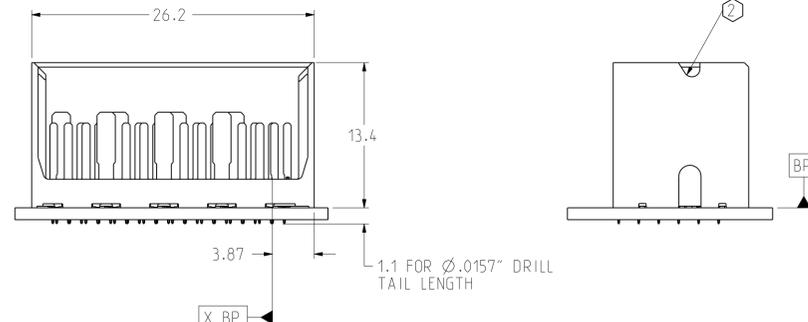
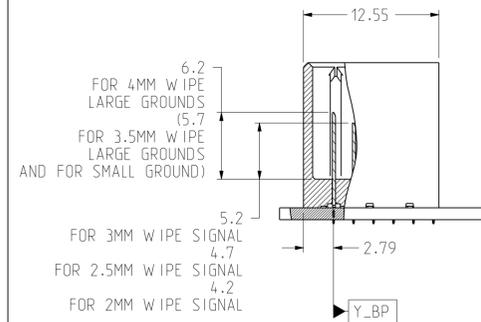
8 7 6 5 4 3

DATUMS X_BP AND Y_BP INTERSECT THE SIGNAL A1 VIA ON BACKPLANE.

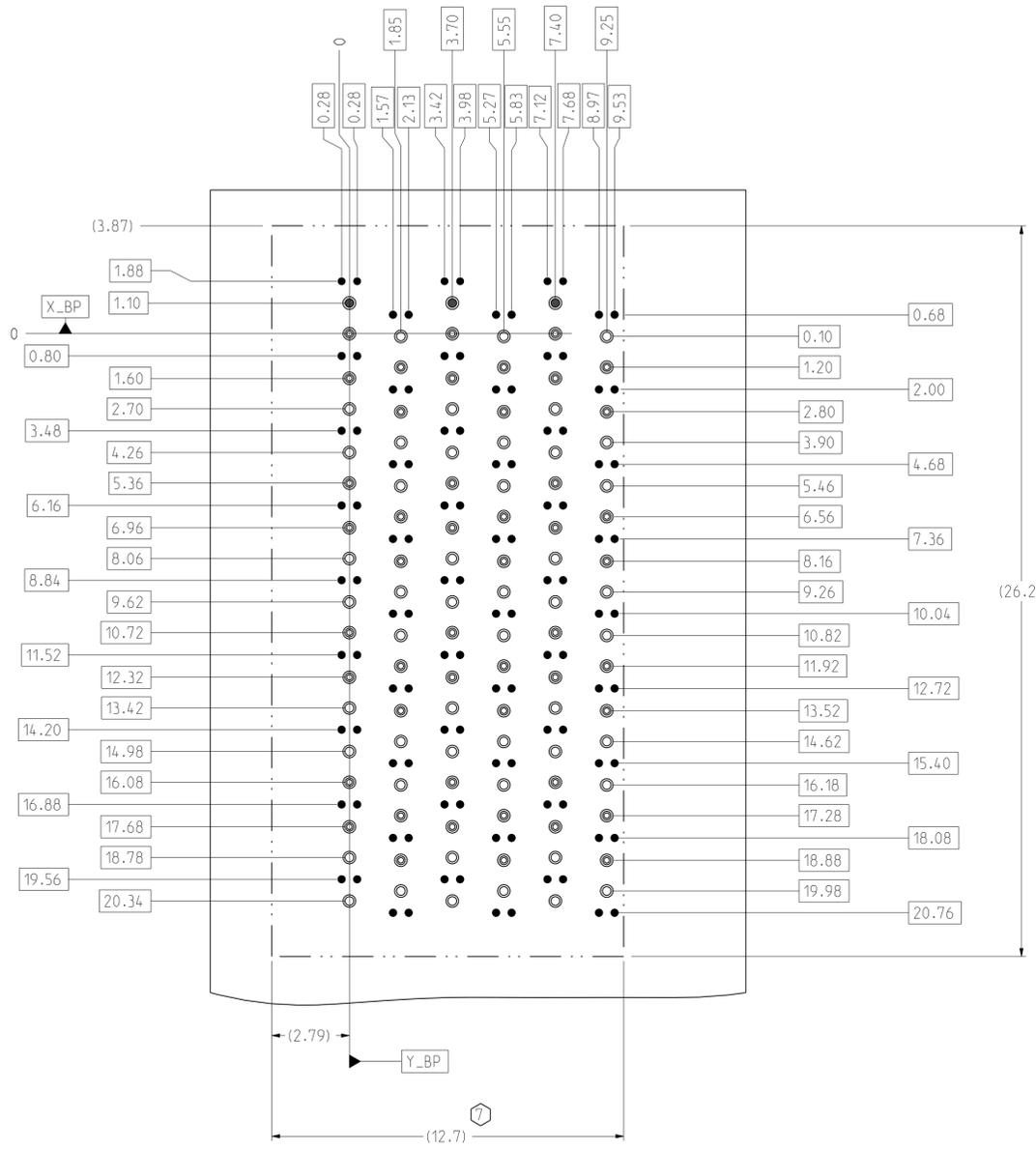


LEFT WALL BACKPLANE MODULE DIMENSION

CONNECTOR REFERENCE SCALE 3/1



ISOMETRIC VIEW SCALE 3/1



LEFT WALL BACKPLANE FOOTPRINT

SCALE 8/1
SEE SHEET 8 FOR HOLE PATTERN & GROUND PLANE DETAILS

TOLERANCES	DESIGN	DATE	DESIGNER	TITLE	PART NO.	REV
0.0 ±0.25	04/21/2015		B.RICHARD	BACKPLANE MODULES, VERTICAL MALE HEADER X2, 4 PAIR, 6 POSITION, W / XG	SEE PN TREE SHEET 1	N/A
0.00 ±0.15	11/03/2015		HCL-AP			
0.000 ± -	11/03/2015		B.RICHARD	ASSEM 01227-2S-CU-4PR-6POS-BP-ALL DRAWING C974-401B-500	REV 7.0	0.2
ANGLES ± 3°	11/03/2015		B.RICHARD			

INTERPRET PER ASME Y14.5M
CODE IDENT 31413

CUSTOMER USE DRAWING

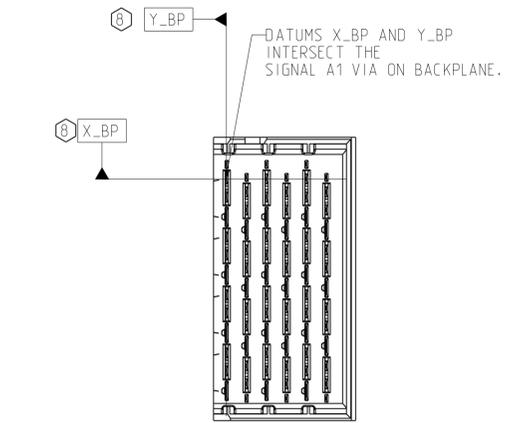
SIZE	D	SCALE	1/1	SHEET	5 OF 8

8 7 6 5 4 3 2 1

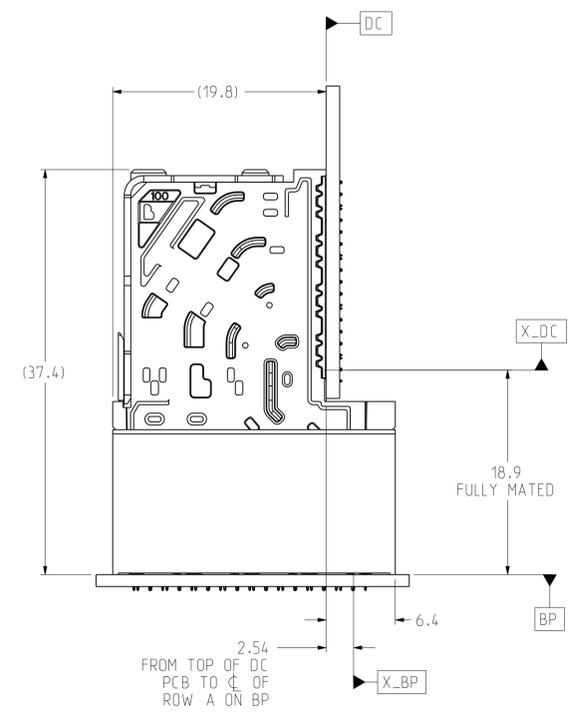
DRW NO. C-974-401B-500

SH 5 REV 7.0

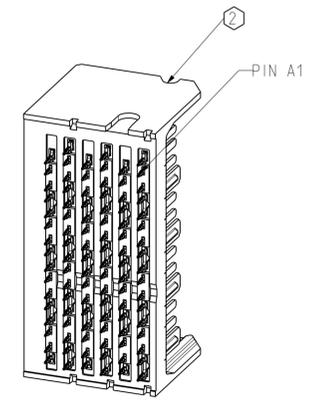
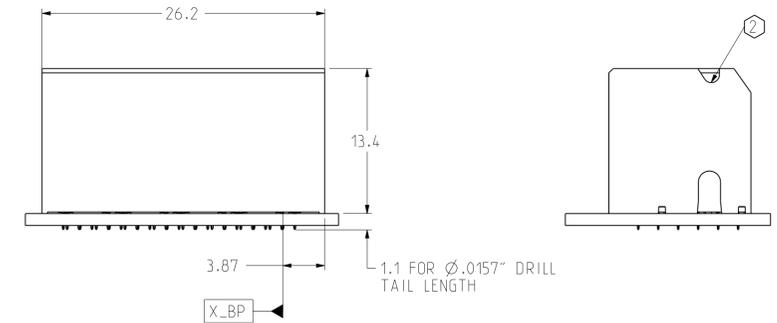
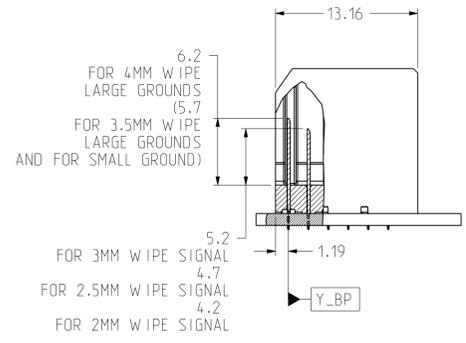
ZONE	REV	SCR NUMBER	DESCRIPTION	BY	DATE	APPROVED
			SEE SHEET 1			



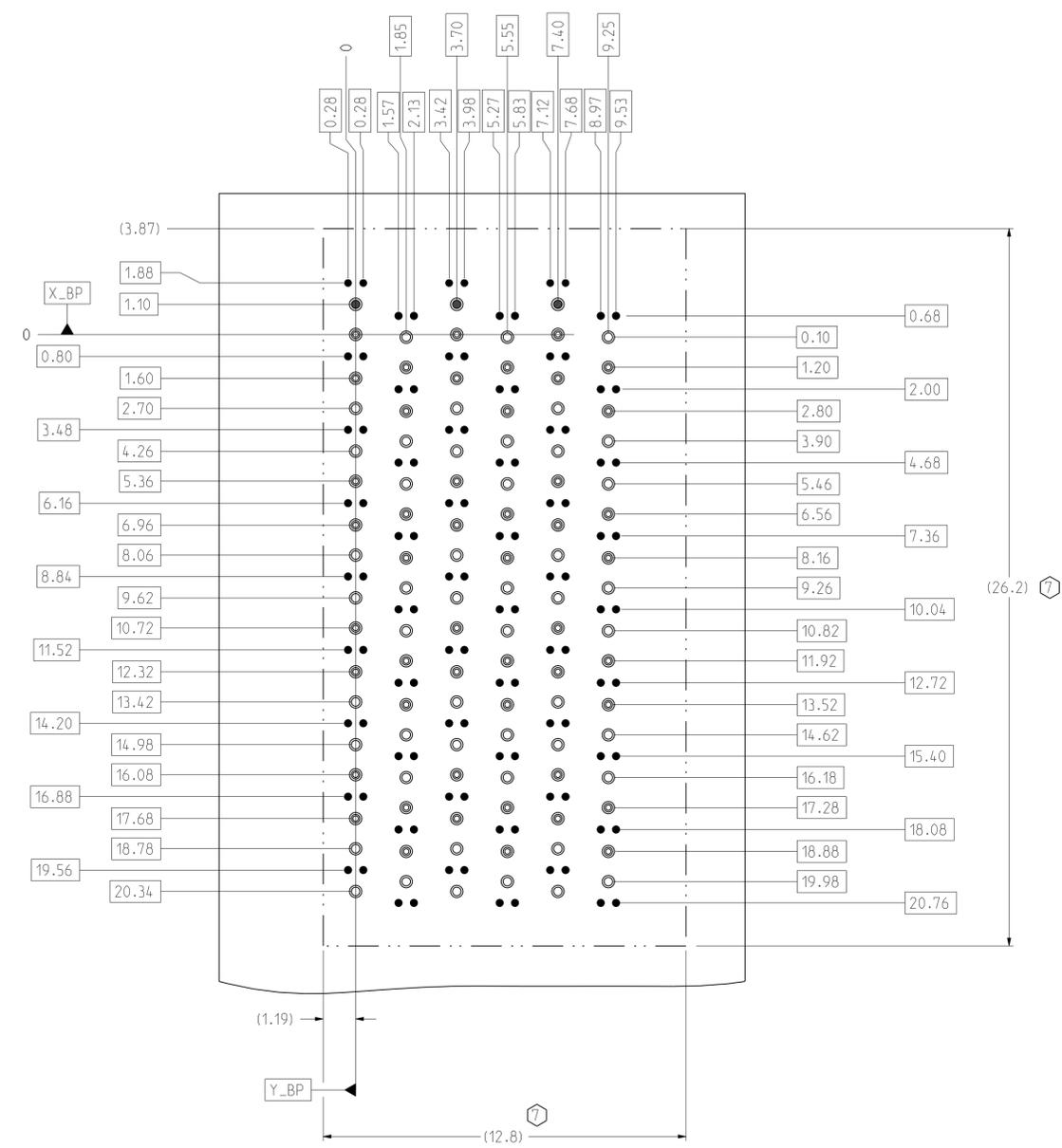
RIGHT WALL BACKPLANE MODULE DIMENSION



CONNECTOR REFERENCE SCALE 3/1



ISOMETRIC VIEW SCALE 3/1



RIGHT WALL BACKPLANE FOOTPRINT

SCALE 8/1 SEE SHEET 8 FOR HOLE PATTERN & GROUND PLANE DETAILS

TOLERANCES		DESIGN	Amphenol TCS		
0.0	±0.25	04/21/2015	A Division of Amphenol Corporation		
0.00	±0.15	B.RICHARD	200 Innovative Way, Nashua, NH 03062 603.879.3000		
0.000	±	11/03/2015	TITLE		
ANGLES	± 3°	B.RICHARD	BACKPLANE MODULES, VERTICAL MALE HEADER		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM. DECIMAL MARKER IS A PERIOD			X2, 4 PAIR, 6 POSITION, W / XG		
CODE IDENT 31413			PART NO.	REV	
			SEE PN TREE SHEET 1	N/A	
CUSTOMER USE DRAWING			DRAWING NO.	REV	
			C-974-401B-500	7.0	
			ASSEM 01227-2S-CU-4PR-6POS-BP-ALL	0.2	
			DRAWING C974-401B-500	0.24	
SIZE	D	SCALE	1/1	SHEET	6 OF 8

DRW NO. C-974-401B-500

SH 6 REV 7.0

ZONE	REV	SCR NUMBER	DESCRIPTION	BY	DATE	APPROVED
			SEE SHEET 1			

8

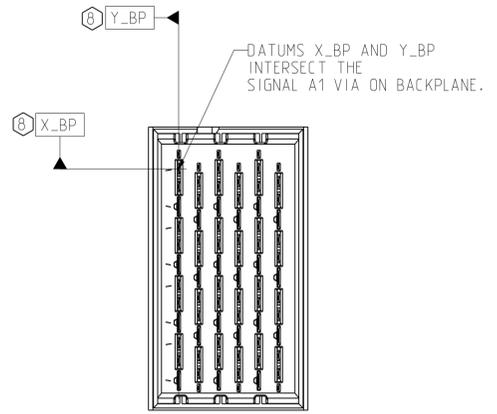
7

6

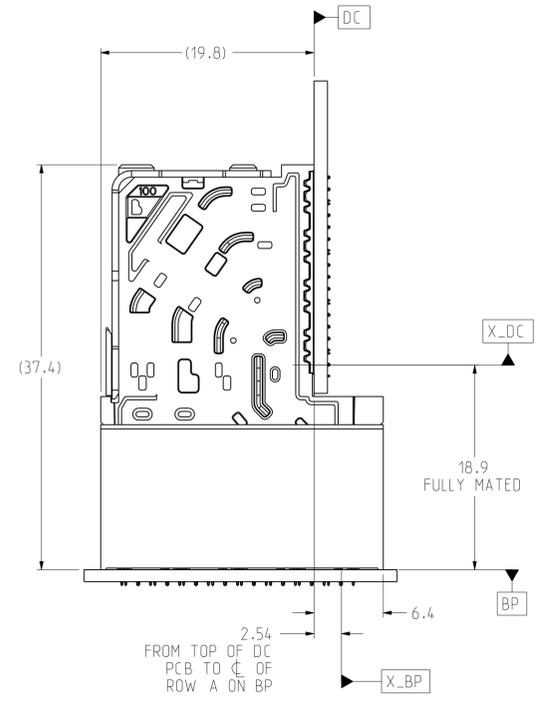
5

4

3

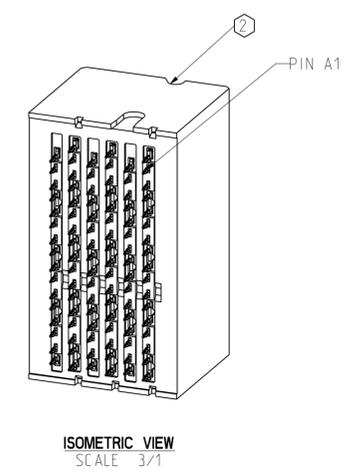
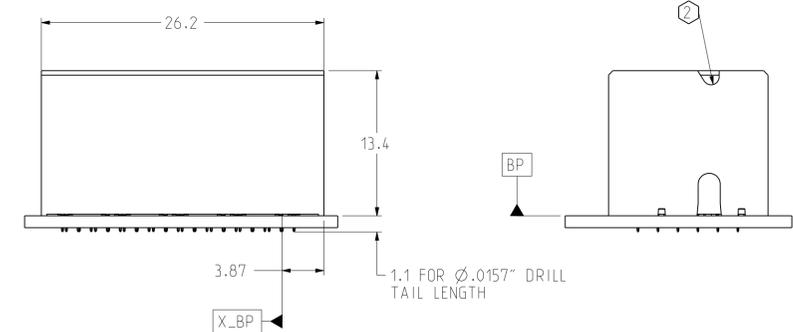
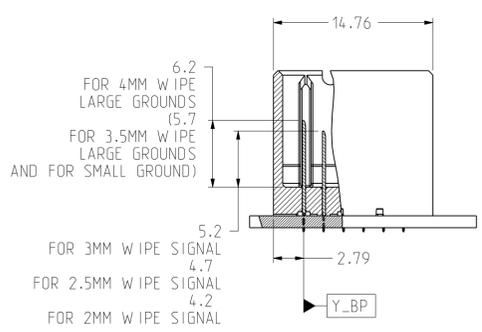


TWO WALL BACKPLANE MODULE DIMENSION

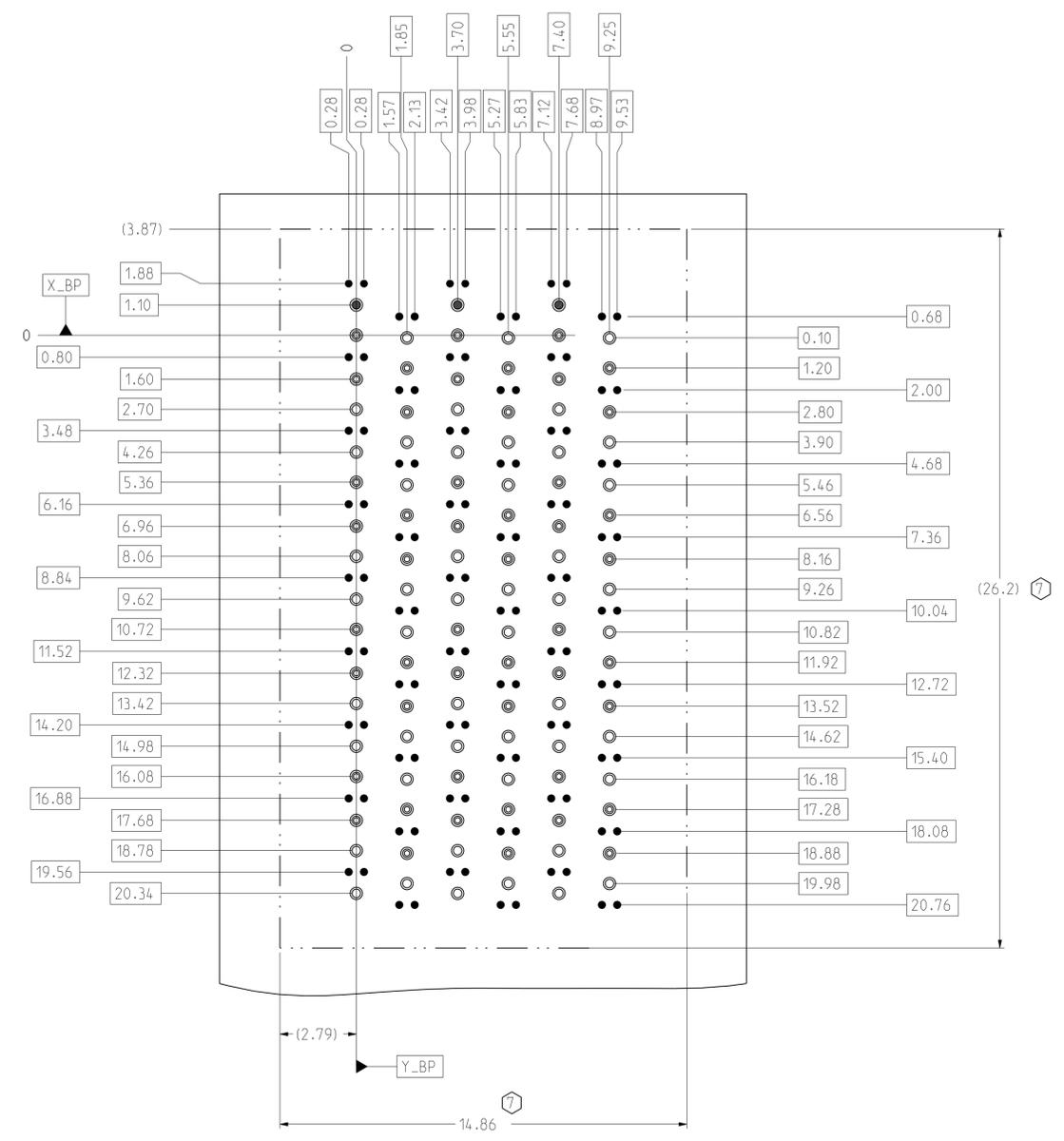


2.54
FROM TOP OF DC
PCB TO C OF
ROW A ON BP

CONNECTOR REFERENCE
SCALE 3/1



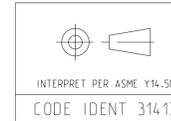
ISOMETRIC VIEW
SCALE 3/1



TWO WALL BACKPLANE FOOTPRINT
SCALE 8/1

SEE SHEET 8
FOR HOLE PATTERN & GROUND PLANE DETAILS

TOLERANCES	DESIGN	DATE	DESIGNER	TITLE	PART NO.	REV
0.0 ±0.25	04/21/2015		B.RICHARD	BACKPLANE MODULES, VERTICAL MALE HEADER X2, 4 PAIR, 6 POSITION, W / XG	SEE PN TREE SHEET 1	N/A
0.00 ±0.15	11/03/2015		HCL-AP			
0.000 ± -	11/03/2015		B.RICHARD			
ANGLES ± 3°	11/03/2015		B.RICHARD			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM. DECIMAL MARKER IS A PERIOD				DRAWING NO.	C-974-401B-500	REV 7.0
CUSTOMER USE DRAWING				ASSEM 01227-2S-CU-4PR-6POS-BP-ALL	0.2	
				DRAWING C974-401B-500	0.24	
CODE IDENT 31413	SIZE D	SCALE 1/1	SHEET 7 OF 8			



INTERPRET PER ASME Y14.5M
CODE IDENT 31413

DRW NO. C-974-401B-500

SH 7 REV 7.0

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