

**Pb** THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING

PATENT NUMBER  
7,544,093

BQRA-XXXXX-XX-XX-XXXX

DO NOT SCALE FROM THIS PRINT

ITEM	COMPONENT	PART NUMBER	QUANTITY
1	HEADER	BQR-J-20	1
2	CABLE ASSEMBLY	BE23S-XXXXX-XX-02-XXXX (SEE TABLE 4 & 5, SHEET 2)	10
3	E-TEST LABEL	LABEL-ET	1
4	POSITION LABEL	HDRL-16	20
5	ESD BAG 1	BG-09-12	1
6	ESD BAG 2	BG-02-03-Z	1
7	TOOL	CAT-EX-SCC-03	1

END 2 CONNECTOR  
-SCC3: PRB3-P-C-XX-ST-CS3(SEE SHEET 3)  
-92SJ: 292XX-J-C-XX-ST-CS3 (SEE SHEET 3)  
-92SP: 292XX-P-C-XX-ST-CS3 (SEE SHEET 3)

END 2 PLATING OPTION  
1: GOLD ALL COMPONENTS  
P: HEAVY GOLD / PASSIVATED STAINLESS STEEL  
(SEE SHEET 2 FOR PLATING SPECIFICS)

OVERALL CABLE LENGTH (MILLIMETERS)  
0100-9999 [3.9 - 393.7]  
(SEE NOTE 8 & 9)

PHASE MATCHED PAIRS  
-10  
(SEE SHEET 2, TABLE 3)

PHASE MATCHING SPEC (RANGE)  
-02: 2.0 PICO-SECOND  
-05: 5.0 PICO-SECONDS  
-10: 10.0 PICO-SECONDS

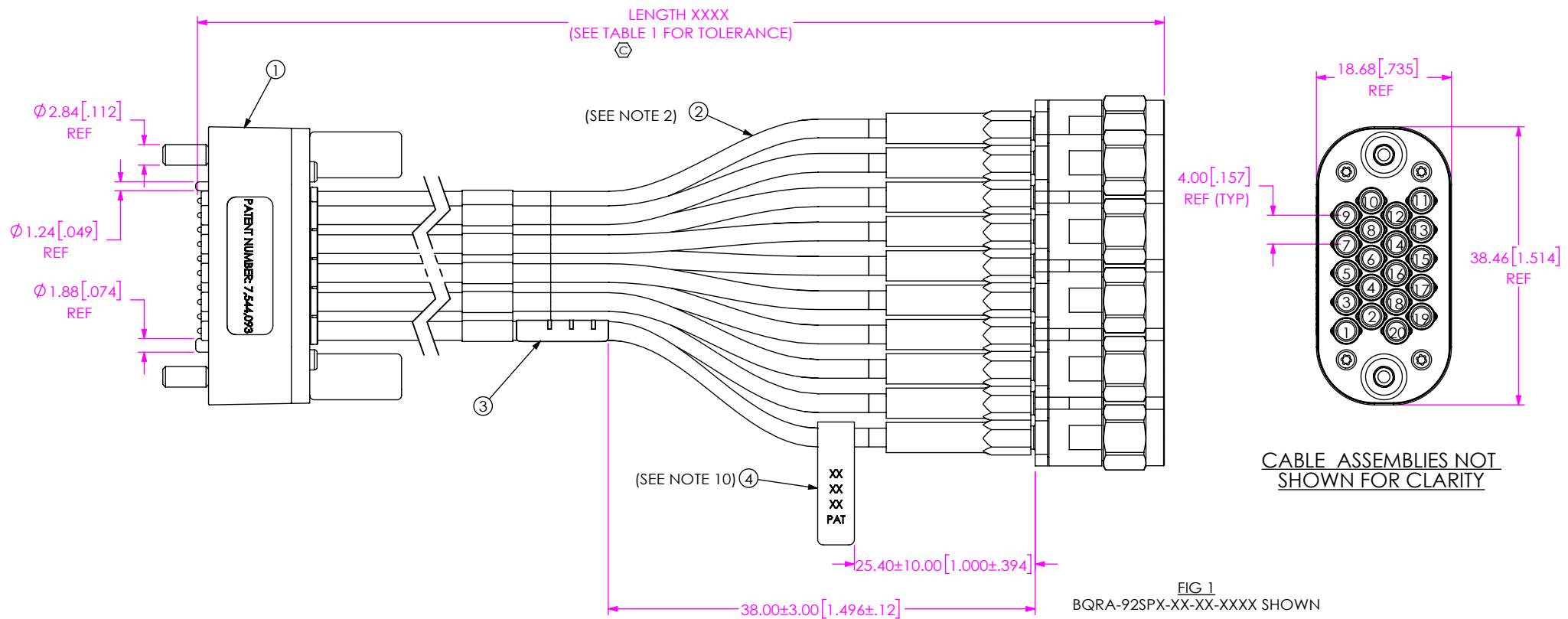


FIG 1  
BQRA-92SPX-XX-XX-XXXX SHOWN

CABLE ASSEMBLIES NOT SHOWN FOR CLARITY

- NOTES:**
- ① REPRESENTS A CRITICAL DIMENSION
  - USE DRAWING No. BE23S-XXXXX-XX-XX-XXXX FOR CABLE ASSEMBLY INSTRUCTIONS
  - PARTS TO BE PROCESSED PER SAMTEC WORKMANSHIP GUIDELINES.
  - ④ ALL ASSEMBLIES TO BE 100% ELECTRICALLY TESTED.
  - ⑤ ALL ASSEMBLIES TO BE 100% HI-POT TESTED AT 300V.
  - FOR SUB-ASSEMBLY AND FINISHED GOOD PACKAGING REQUIREMENTS, REFERENCE SAMTEC PACKAGING STANDARD, LOCK WASHERS AND NUTS TO BE SHIPPED UNASSEMBLED.
  - SEE SHEET 2, TABLE 2 FOR PHASE MATCHING REQUIREMENTS.
  - CABLE STOCKED IN INCHES, 1 INCH = 25.4 MILLIMETERS.
  - CABLE LENGTHS LONGER THAN 1000 MILLIMETERS ARE NOT SUPPORTED BY S.I. TEST DATA.
  - PRINT CABLE POSITION AND "PAT" (3 LINES POR POSITION, 1 LINE FOR "PAT") AND APPLY TO CABLES (TAG STYLE) AS SHOWN.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES ARE: DECIMALS                      ANGLES .X: ±.3[.01]                      5° .XX: ±.13[.005] .XXX: ±.051[.0020]	* PROPRIETARY NOTE * THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.	<p>520 PARK EAST BLVD, NEW ALBANY, IN 47150 PHONE: 812-944-6733    FAX: 812-948-5047 e-Mail: info@SAMTEC.com    code 55322</p>

**PATENT NUMBER**  
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**TABLE 5**

BQRA-XXXX-XX-10-XXXX ■	BE23S-XXXX-XX-02-XXXX ■
BQRA-XXXX-02-10-XXXX	BE23S-XXXX-02-02-XXXX
BQRA-XXXX-05-10-XXXX	BE23S-XXXX-05-02-XXXX
BQRA-XXXX-10-10-XXXX	BE23S-XXXX-10-02-XXXX

■ BE23S' OVERALL CABLE LENGTH OPTION IS SAME AS BQRA'S

**TABLE 4**

BQRA-XXXX-XX-10-XXXX ■	BE23S-XXXX-XX-02-XXXX ■
BQRA-SCC31-XX-10-XXXX	BE23S-SCC31-XX-02-XXXX
BQRA-92SJP-XX-10-XXXX	BE23S-92SJP-XX-02-XXXX
BQRA-92SPP-XX-10-XXXX	BE23S-92SPP-XX-02-XXXX

■ BE23S' OVERALL CABLE LENGTH OPTION IS SAME AS BQRA'S

**TABLE 1: FINAL ASSEMBLY LENGTH TOLERANCE**

LENGTH	TOLERANCE
0100-0200 [3.92-7.87]	+3.0 [.12] /-0.0 [.00]
0200-0500 [7.87-19.69]	+5.0 [.20] /-0.0 [.00]
0500-1100 [19.69-43.30]	+10.0 [.40] /-0.0 [.00]

**TABLE 3 - PHASE MATCHED PAIRS**

LOCATION	PAIR NO.
1	1
2	1
3	2
4	2
5	3
6	3
7	4
8	4
9	5
10	5
11	6
12	6
13	7
14	7
15	8
16	8
17	9
18	9
19	10
20	10

CAUTION: EACH PAIR OF CABLES MUST BE PHASE MATCHED PER CALLOUT. IF RE-WORKED, THE ENTIRE PAIR MUST BE REPLACED.

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DO NOT SCALE DRAWING

SHEET SCALE: 1:1



520 PARK EAST BLVD, NEW ALBANY, IN 47150  
PHONE: 812-944-6733 FAX: 812-948-5047  
e-Mail info@SAMTEC.com code 55322

DESCRIPTION:  
BULLSEYE QUAD ROW, 20 POSITION, ASSEMBLY

DWG. NO.  
**BQRA-XXXX-XX-XX-XXXX**

BY: EMMA CHEN 4/2/2014 SHEET 2 OF 5

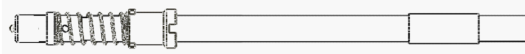
REVISION F

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**-SCC3**

(ROUND TIP/STD. FERRULE)

(USE DRAWING No. PRB3-P-C-XX-ST-CS3  
FOR ASSEMBLY INSTRUCTIONS)



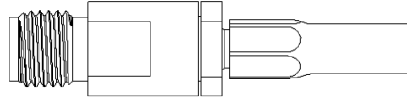
PLATING

T: 30µ" MIN. GOLD CENTER CONTACT  
3µ" MIN. GOLD OUTER CONTACT  
3µ" MIN. GOLD REMAINING METAL PARTS  
(END CONNECTOR P/N: PRB3-P-C-HF-ST-CS3)

**NOTE:** ALL CRITICAL DIMENSIONS ON PRB3-P-C-XX-ST-CS3  
THAT APPLY MUST BE VERIFIED.

**-92SJ**  
(STRAIGHT JACK)

(USE DRAWING No. 292XX-J-C-XX-ST-CS3  
FOR ASSEMBLY INSTRUCTIONS)



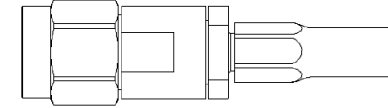
PLATING OPTIONS

P: 30µ" MIN. GOLD CENTER CONTACT  
PASSIVATED STAINLESS STEEL OUTER CONTACT  
3µ" MIN. GOLD REMAINING METAL PARTS  
(END CONNECTOR P/N: 292PS-J-C-HP-ST-CS3)

**NOTE:** ALL CRITICAL DIMENSIONS ON 292XX-J-C-XX-ST-CS3  
THAT APPLY MUST BE VERIFIED.

**-92SP**  
(STRAIGHT PLUG)

(USE DRAWING No. 292XX-P-C-XX-ST-CS3  
FOR ASSEMBLY INSTRUCTIONS)



PLATING OPTIONS

P: 30µ" MIN. GOLD CENTER CONTACT  
PASSIVATED STAINLESS STEEL OUTER CONTACT  
3µ" MIN. GOLD REMAINING METAL PARTS  
(END CONNECTOR P/N: 292PS-P-C-HP-ST-CS3)

**NOTE:** ALL CRITICAL DIMENSIONS ON 292XX-P-C-XX-ST-CS3  
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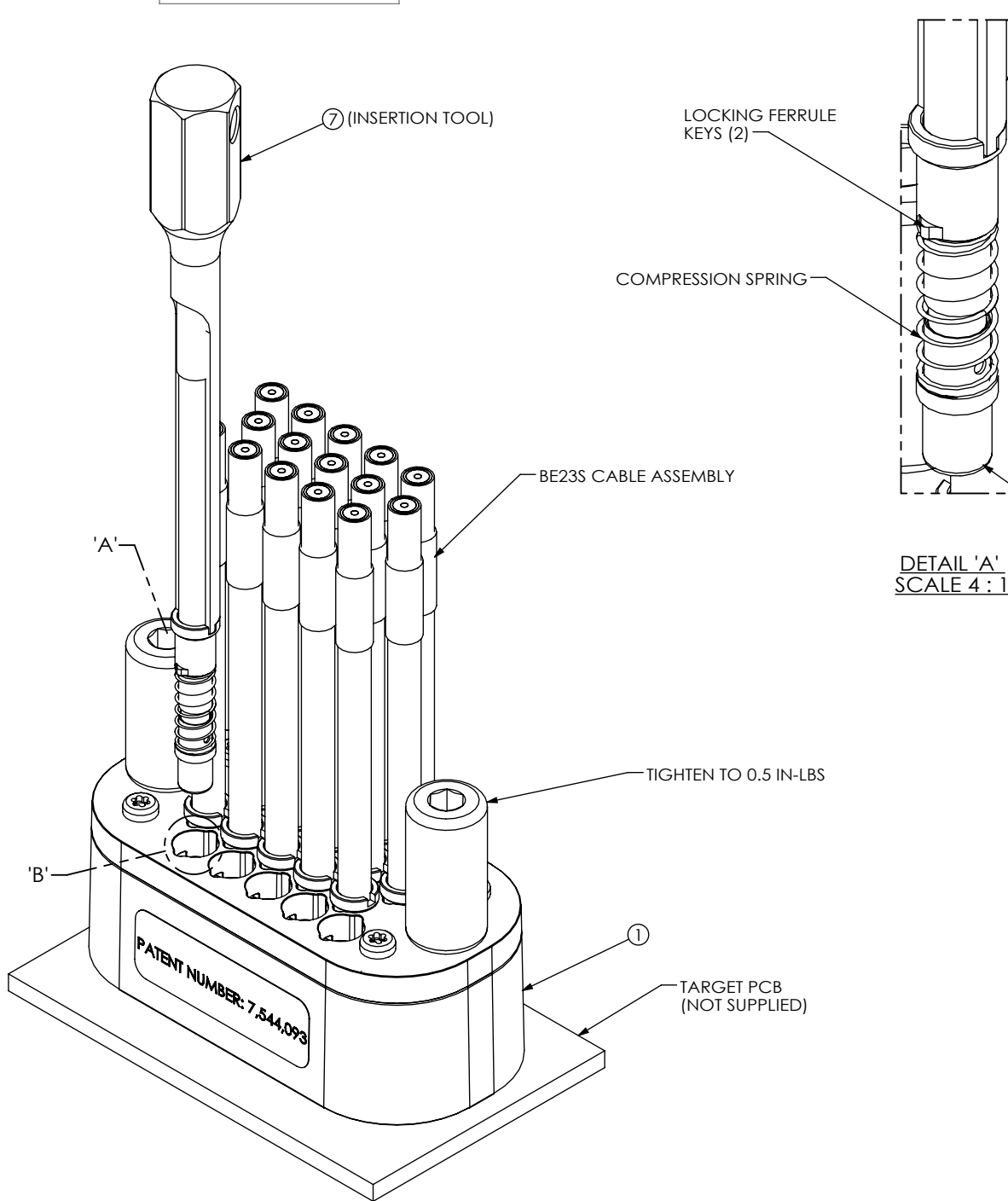


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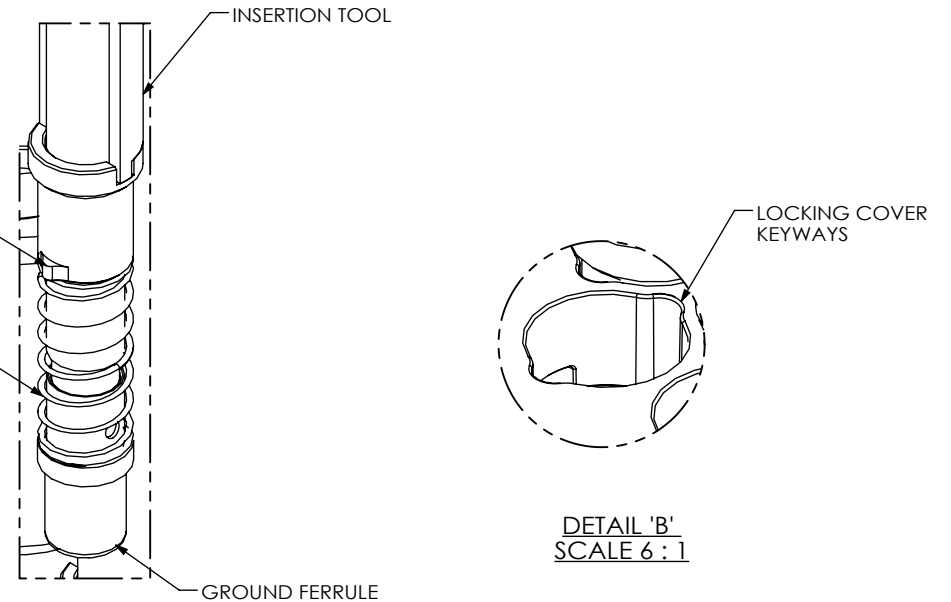
DWG. NO.  
BQRA-XXXXX-XX-XX-XXXX

BY: EMMA CHEN 4/2/2014 SHEET 3 OF 5



APPLICATION VIEW

F:\DWG\MISC\MKTG\BQRA-XXXX-XX-XXXX-MKT.SLDDRW



DETAIL 'A'  
SCALE 4 : 1

DETAIL 'B'  
SCALE 6 : 1

CABLE INSTALLATION PROCEDURE:

INSURE LOCKING FERRULE KEYS (SEE DETAIL A) ALIGN WITH KEYWAY FEATURES IN THE CONNECTOR BODY (SEE DETAIL B). PUSH DOWN ON THE LOCKING FERRULE (WITH MINIMAL FORCE) USING THE INSERTION TOOL. TWIST THE INSERTION TOOL CLOCKWISE (IT SHOULD TURN FREELY)

LOCK CHAMBER, LOCATED INSIDE THE CONNECTOR BODY, BY WAY OF THE COMPRESSION SPRING. REPEAT THIS PROCESS WITH REMAINING CABLE ASSEMBLIES .

REVERSE ABOVE PROCEDURE TO DISASSEMBLE.

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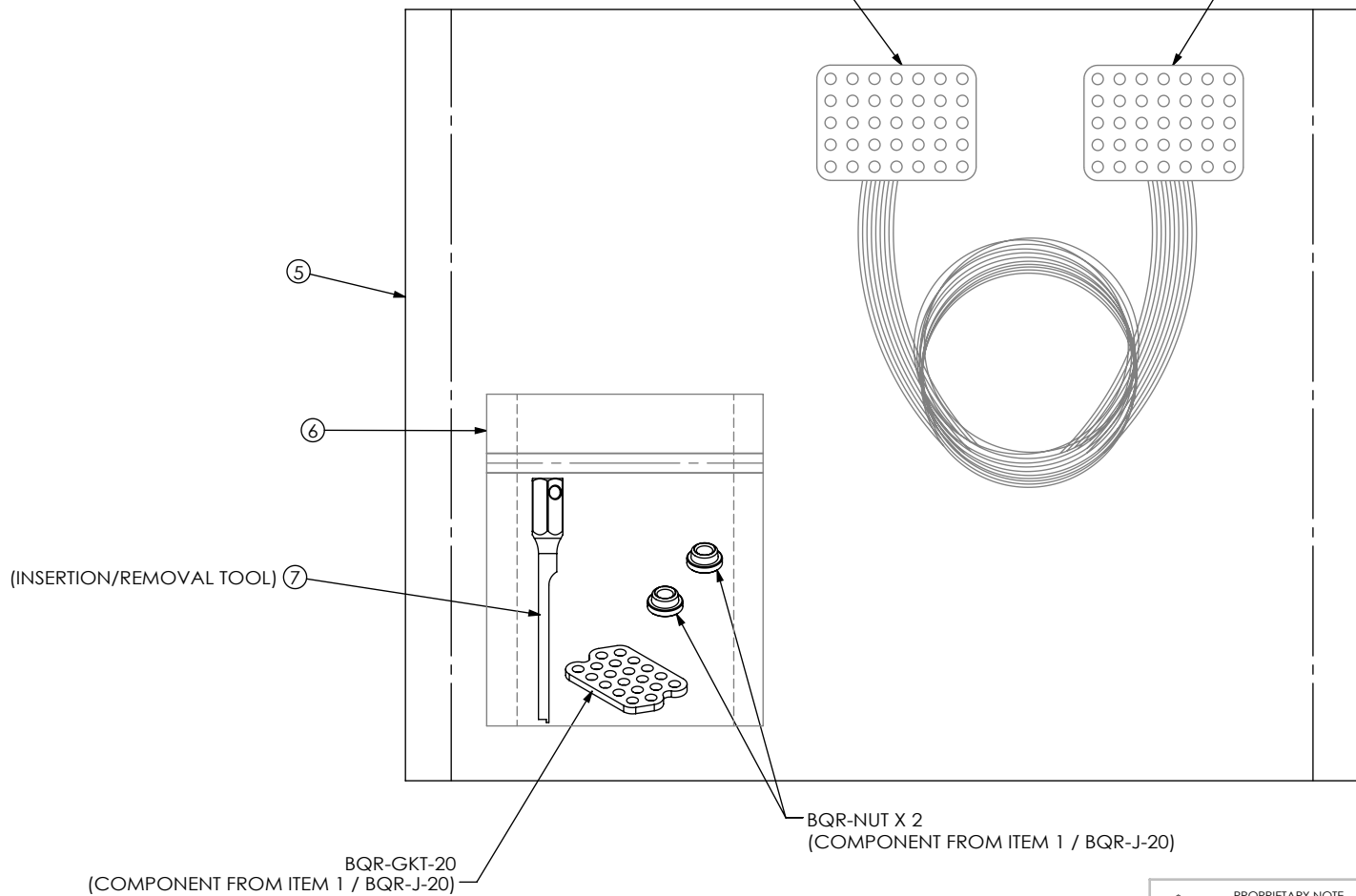
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BY: EMMA CHEN 4/2/2014 SHEET 4 OF 5

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**PACKAGING VIEW**

ENDS OF CABLE ASSEMBLY TO BE WRAPPED  
IN ANTI-STATIC BUBBLE WRAP



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