

TB-2333

Paladin Backplane Removal and Reinsertion Process

;
Revision "B"

Specification Revision Status

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A	S5917	Initial Release	S.Yoeth	6/13/17
B	S6466	Added Table of Content, updated BMA keep-out zone, added module insert removal block, updated pictures	S.Yoeth	10/31/17

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1. SCOPE

This document describes the methods, process and tooling required to remove and replace the entire Paladin Backplane module assembly that is already mounted to a printed circuit board.

2. REFERENCE DOCUMENTS

2.1. Paladin 2 Pair Customer Use Drawing

C-131-2010-500 2 Pair, 4-8 Column

2.2. Paladin 3 Pair Customer Use Drawing

C-131-3010-500 3 Pair, 4-8 Column

2.3. Paladin 4 Pair Customer Use Drawing

C-131-4010-500 4 Pair, 4-8 Column

2.4. Paladin 5 Pair Customer Use Drawing

C-131-5010-500 5 Pair,4-8 Column

2.5. Paladin 6 Pair Customer Use Drawing

C-131-6010-500 6 Pair, 4-8 Column

2.6. Paladin 7 Pair Customer Use Drawing

C-131-7010-500 7 Pair, 4-8 Column

2.7. Paladin 8 Pair Customer Use Drawing

C-131-8010-500 8 Pair, 4-8 Column

3. TOOLING

3.1. Removal Tools

3.1.1. Module Removal Tools (see

3.1.2. Table 1)

Table 1: Paladin BMA Module Removal Tools

Pair	Position	Removal Tool Part Number
2	4 & 5	600-2591-000
2	6	600-2592-000
2	8	600-2593-000
3	4 & 5	600-2587-000
3	6	600-2588-000
3	8	600-2589-000
4	4 & 5	600-2578-000
4	6	600-2579-000
4	8	600-2576-000
5	4 & 5	600-2594-000
5	6	600-2595-000
5	8	600-2596-000
6	4 & 5	600-2580-000
6	6	600-2581-000
6	8	600-2582-000
7	4 & 5	600-2597-000
7	6	600-2598-000
7	8	600-2599-000

8	4 & 5	600-2583-000
8	6	600-2584-000
8	8	600-2585-000

4. METHODS

4.1. The Paladin press-fit connector platform is designed with reparability only at the module level.

High speed differential pairs are bottom loaded and cannot be individually removed from modules that are board mounted.

NOTE: UNDER NO CIRCUMSTANCES MAY A BACKPLANE MODULE BE USED AGAIN ONCE IT IS REMOVED.

5. PROCEDURE

5.1. Backplane Module Removal

5.1.1. Step 1. Locate the Module Removal Tool for the proper family size from

Table 1. See Figure 1 for an example of a Module Removal Tool.



Figure 1: Paladin 3x8 BP Module Removal Tool

Step 2. Ensure that the tool is set to the ready position by loosening the knob until the washer is free falling over the screw thread. The clamp will move forward as the knob is loosened as seen in Figure 2.

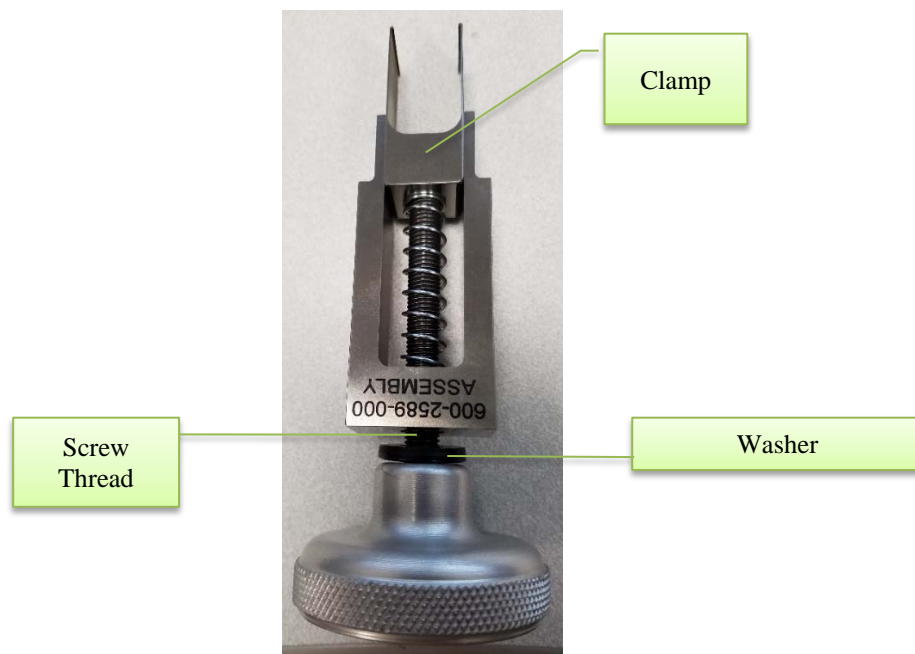


Figure 2: Loosened 3x8 BMA Removal Tool

Step 3. Insert Module Removal Block based on pair and position into the BMA module as seen in Figure 3 .

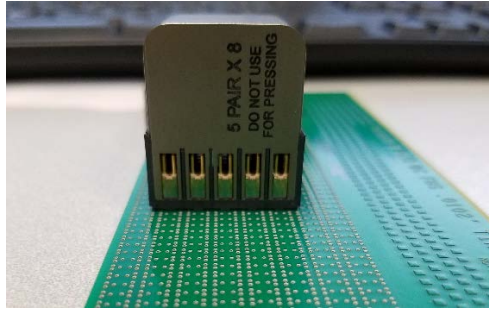


Figure 3: 5x8 BMA Insert Module Removal Block

Step 4. Insert Module Removal Tool clamping unit over the outer walls of the BMA housing as seen in Figure 4. Ensure the lips of the clamping unit are aligned and in contact with the housing undercut as seen in Figure 5.



Figure 4: 5x8 BMA Module with insert block and clamp for removal.



Figure 5: Removal module tool snapping over housing undercut.

Step 5. After ensuring the lip of the tool is properly in contact with the undercut, turn the knob clockwise. As the knob turns, the outside walls of the tool will lower and be flush with the module as seen in Figure 6. While turning the knob, resistance will be felt.



Figure 6: Twisting of knob for BMA module removal.

Step 6. Keep turning the knob until the module is lifted from the board.

NOTE: It is normal for the housing to crack and fold as the module is lifting from the board as seen in Figure 7. If the housing does not lift properly, place one hand on the PCB and place the other hand on the removal tool. Grasping the removal tool, pull away from the PCB and the housing will remove. Some backplane signals may remain in the PTH of the PCB after the housing is removed. Using pliers, carefully remove the remaining backplane signals and discard as seen in Figure 8.



Figure 7: BMA folded housing during removal.

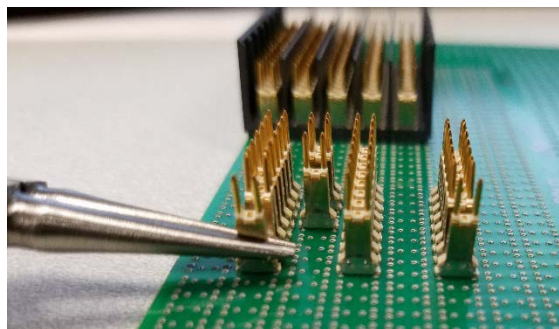


Figure 8: Removing remaining BMA signals with pliers.

NOTE: UNDER NO CIRCUMSTANCES MAY A BACKPLANE SIGNAL OR MODULE BE USED AGAIN ONCE IT IS REMOVED.

5.2. Backplane Module Reinsertion

5.2.1. Visually inspect new module for no defects

5.2.2. Place new module onto PCB as seen in Figure 9

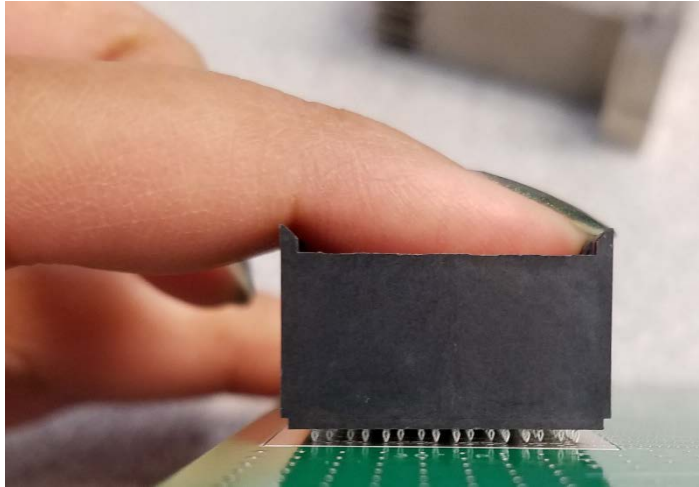


Figure 9: Insertion of new BMA module onto PCB.

5.2.3. Insert proper loading head into signal pin field, aligning the rear rib against the BMA housing rib as seen in Figure 10.



Figure 10: Proper 3 Pair loading head with 3x8 BMA module.

5.2.4. Seat and press module into board per TB-2332 guidelines

NOTE: A module cannot be pre-loaded into the same PTH more than three times.

6. KEEP-OUT ZONES

6.1. Figure 11 shows the keep-out zone for the Paladin BMA modules. Table 2 shows the overall keep-out zone dimensions for each Paladin BMA family size.

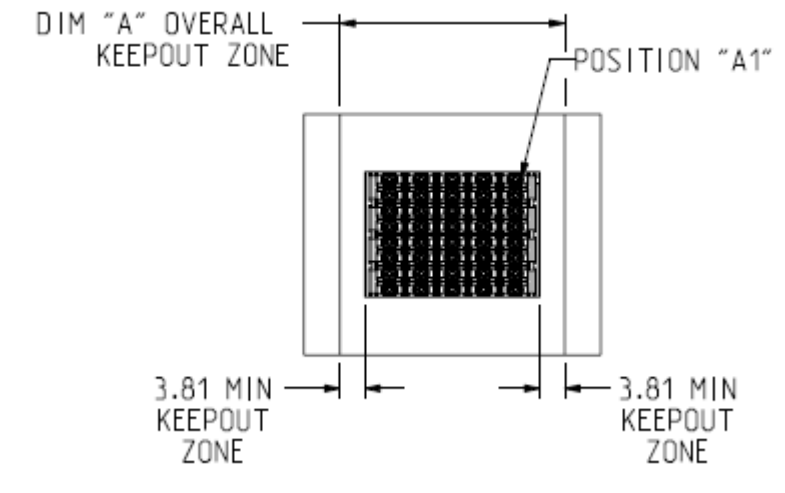


Figure 11: Overall keep-out zone for Paladin BMA modules.

Table 2: Overall Keep-out Zone for Paladin BMA Modules

DIM "A"	FAMILY SIZE
19.92	2 PAIR
24.72	3 PAIR
29.52	4 PAIR
34.32	5 PAIR
39.12	6 PAIR
43.92	7 PAIR
48.72	8 PAIR

6.2. See drawing: C-131-0000-999 for further details on the keep-out zone.