# 修正阵列DPAM, DPAF, SEAM, SEAF系列连接器


DP Array和SEARAY连接器

Reworking Grid Array connectors must be accomplished using hot air rework equipment. The recommended procedure is as follows:

修正阵列连接器必须用热风修正机来完成。推荐使用下列步骤：

1. From your rework equipment supplier, obtain a hot air rework nozzle specifically designed for use with the damaged connector.

从修正设备供应商购买一个用于不良连接器修正而专门设计的热风修正嘴。

2. Using a syringe or flux pen, add liquid flux to the connector solder joints allowing the flux to penetrate under the body.

   用注射器或松香笔把液态松香加入到连接器锡点处并让松香渗入到胶条下的锡点处。

3. Lower the hot air rework device, set to a maximum of 250℃, down over the connector and allow the hot air to circulate and liquefy the solder joints.

修正时，降低热风修正设备并设置最高温度到250℃，让热风沿圈状吹连接器直到锡点熔化。

Note: It is important to use a bottom pre-heater to avoid open solder joints because of PCB bow and twist during the repair process. Before finalizing the rework process, a thermal profile should be performed with the thermocouples in direct contact with the insulator body and solder leads to verify the temperatures of the PCB and components.

说明：使用一个底部预热器是很重要的，这样为避免在修正过程中由于印刷线路板受热不均而翘曲变形，从而导致锡点开路。在做最后的修正工序前，应用热电偶做出一个有直接联系的胶条和锡点引线的温度曲线，以核对主板和组件的温度。

4. Raise the hot air nozzle and remove the connector.

   待连接器端子下的锡点熔化后，抬高热风修正嘴，移出连接器端子。

5. The board must then be cleaned and the pads leveled with a solder wick mesh to make sure the pads are an even height and no bumps or raised areas remain.

   修正后的主板必须被清洗并用烙铁和铜网吸带把焊盘上的多余的锡吸净，以确保焊盘等高并均匀的分布在一个水平面上，没有留下凹凸不平。

6. Using a manual or pneumatic dispensing device, apply the solder paste to the pads.

   使用手动或气动刷锡设备把锡膏刷到焊盘上。

7. Load the connector into position making sure all leads are sitting in the paste.

   然后把连接器端子装入主板并确保端子引线插入锡膏里。

8. Lower the hot air device over the connector and allow the paste to liquefy for a period of 30-90 seconds. Refer to the solder manufacturer's suggested reflow profile for temperature and time specifications.

   再降低热风设备到连接器端子上，圈状吹30- 90秒钟让锡膏熔化。关于温度和时间详细的回流曲线请参考焊锡供应商的建议。

9. Clean the flux residue from the board unless "no clean" solder paste was used.

   除使用带有"no clean"标签的锡膏外，请清洗掉板上的残余松香。

EXAMPLE

Following is an example of rework specification for the SEAF-20-06.5-SM-08-K connector.

下面是一个修正SEAF-20-06.5-SM-08-K连接器说明的例子。

Equipment Used

器件和设备的使用

- Samtec SEAF-20-06.5-SM-08-2-K connector

  申泰SEAF-20-06.5-SM-08-2-K系列连接器。

- Air-Vac Engineering DRS25 surface mount rework system literature

  型号为DRS25表面贴装修正设备

- Air-Vac Engineering N10.7LZ32.1-6-6.88 hot air nozzle

  型号为N10.7LZ32.1-6-6.88的热风嘴

- A8LZ20ST-SMF insertion tray.

  型号为A8LZ20ST-SMF插件工具。

图1. 热电偶分页图

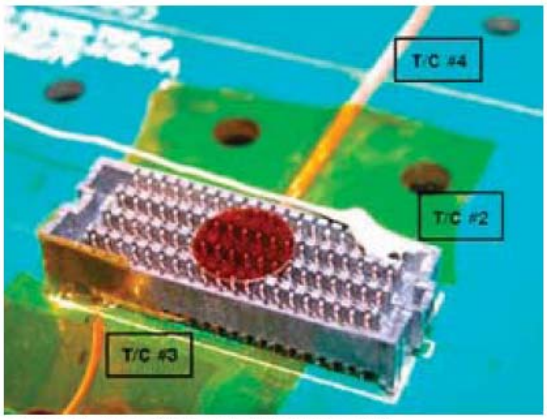


*Figure 1. Locations of T/C's 2, 3 and 4.*

Thermocouple Placement

热电偶位置放置说明

The thermocouples were placed according to Table 1 below. The nozzle, diffuser, and T/C #1 locations are not shown in Figure 1, but are represented in the thermal profile (see Figure 2).

根据下表1放置热电偶。热风嘴和1号热电偶的位置没有在图1中显示出来，但在图2的温度曲线中有描述。

表1. 热电偶分布表

| ID | Location |
|---|---|
| Nozzle | Nozzle |
| Diffuser | Diffuser |
| T/C #1 | Connector side of board |
| T/C #2 | Top edge of connector body (attached with epoxy) |
| T/C #3 | Corner solder joint |
| T/C #4 | Center solder joint |

*Table 1. Thermocouple locations.*

图2. 用DRS25表面贴装修正机修正的温度曲线

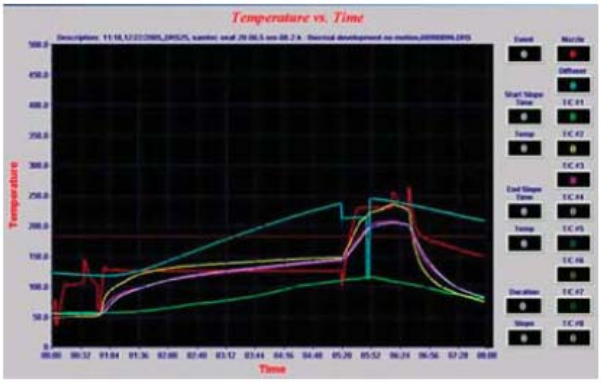


*Figure 2. Thermal profile using Air-Vac Engineering DRS25 surface mount rework system.*

| PART NUMBERS | | | |
|---|---|---|---|
| | Array Products | Air-Vac Universal EZ Style Nozzle and Insertion Tool | Air-Vac Dedicated Nozzle Pt No. |
| 1 | SEAF-20-05.0-XX-10-X-XX | NA10LZ20ST-SMF | NA13LZ32.1-5.38 |
| 2 | SEAF-20-06.5-XX-10-X-XX | NA10LZ20ST-SMF | NA13LZ32.1-6.88 |
| 3 | SEAM-20-02.0-XX-10-X-XX | NA10LZ20ST-SMF | NA14.7LZ31.3-4.92 |
| 4 | SEAM-20-03.5-XX-10-X-XX | NA10LZ20ST-SMF | NA14.7LZ31.3-6.42 |
| 5 | SEAF-30-05.0-XX-10-X-XX | NA10LZ30ST-SMF | NA13LZ44.8-5.38 |
| 6 | SEAF-30-06.5-XX-10-X-XX | NA10LZ30ST-SMF | NA13LZ44.8-6.88 |
| 7 | SEAM-30-02.0-XX-10-X-XX | NA10LZ30ST-SMF | NA14.7LZ44-4.92 |
| 8 | SEAM-30-03.5-XX-10-X-XX | NA10LZ30ST-SMF | NA14.7LZ44-6.42 |
| 9 | SEAF-40-05.0-XX-10-X-XX | NA10LZ40ST-SMF | NA13LZ57.5-5.38 |
| 10 | SEAF-40-06.5-XX-10-X-XX | NA10LZ40ST-SMF | NA13LZ57.5-6.88 |
| 11 | SEAM-40-02.0-XX-10-X-XX | NA10LZ40ST-SMF | NA14.7LZ56.7-4.92 |
| 12 | SEAM-40-03.5-XX-10-X-XX | NA10LZ40ST-SMF | NA14.7LZ56.7-6.42 |
| 13 | SEAF-50-05.0-XX-10-X-XX | NA10LZ50ST-SMF | NA13LZ70.2-5.38 |
| 14 | SEAF-50-06.5-XX-10-X-XX | NA10LZ50ST-SMF | NA13LZ70.2-6.88 |
| 15 | SEAM-50-02.0-XX-10-X-XX | NA10LZ50ST-SMF | NA14.7LZ69.4-4.92 |
| 16 | SEAM-50-03.5-XX-10-X-XX | NA10LZ50ST-SMF | NA14.7LZ69.4-6.42 |
| 17 | DPAF-15-03.0-X-3-X-XX | NA3LZ15ST-DF | NA10.6LZ38-6.57 |
| 18 | DPAM-15-07.0-X-3-X-XX | NA3LZ15ST-DMF | NA11.9LZ36.7-6.78 |
| 19 | DPAM-15-14.0-X-3-X-XX | NA3LZ15ST-DMF | NA14.2LZ36.7-13.79 |
| 20 | DPAF-23-03.0-X-3-X-XX | NA3LZ23ST-DF | NA10.6LZ55.3-6.57 |
| 21 | DPAM-23-07.0-X-3-X-XX | NA3LZ23ST-DMF | NA11.9LZ54-6.78 |
| 22 | DPAM-23-14.0-X-3-X-XX | NA3LZ23ST-DMF | NA14.2LZ54-13.79 |
| 23 | DPAF-30-03.0-X-3-X-XX | NA3LZ30ST-DF | NA10.6LZ70.4-6.57 |
| 24 | DPAM-30-07.0-X-3-X-XX | NA3LZ30ST-DMF | NA11.9LZ69.1-6.78 |
| 25 | DPAF-08-03.0-X-3-X-XX | NA3LZ8ST-DMF | NA10.6LZ22.9-6.57 |
| 26 | DPAM-08-07.0-X-3-X-XX | NA3LZ8ST-DMF | NA11.9LZ21.6-6.78 |
| 27 | DPAM-08-14.0-X-3-X-XX | NA3LZ8ST-DMF | NA14.2LZ21.6-13.79 |
| 28 | DPAF-15-03.0-X-8-X-XX | NA8LZ15ST-DMF | NA23.3LZ38-6.57 |
| 29 | DPAM-15-07.0-X-8-X-XX | NA8LZ15ST-DMF | NA24.6LZ36.7-6.78 |
| 30 | DPAM-15-14.0-X-8-X-XX | NA8LZ15ST-DMF | NA26.9LZ36.7-13.79 |
| 31 | SEAF-20-05.0-XX-08-X-XX | NA8LZ20ST-SMF | NA10.5LZ32.1-5.38 |
| 32 | SEAF-20-06.5-XX-08-X-XX | NA8LZ20ST-SMF | NA10.5LZ32.1-6.88 |
| 33 | SEAM-20-02.0-XX-08-X-XX | NA8LZ20ST-SMF | NA12.1LZ31.3-4.92 |
| 34 | SEAM-20-03.5-XX-08-X-XX | NA8LZ20ST-SMF | NA12.1LZ31.3-6.42 |
| 35 | DPAF-23-03.0-X-8-X-XX | NA8LZ23ST-DMF | NA23.3LZ55.3-6.57 |
| 36 | DPAM-23-07.0-X-8-X-XX | NA8LZ23ST-DMF | NA24.6LZ54-6.78 |
| 37 | DPAM-23-14.0-X-8-X-XX | NA8LZ23ST-DMF | NA26.9LZ54-13.79 |
| 38 | SEAF-30-05.0-XX-08-X-XX | NA8LZ30ST-SMF | NA10.5LZ44.8-5.38 |
| 39 | SEAF-30-06.5-XX-08-X-XX | NA8LZ30ST-SMF | NA10.5LZ44.8-6.88 |
| 40 | SEAM-30-02.0-XX-08-X-XX | NA8LZ30ST-SMF | NA12.1LZ44-4.92 |
| 41 | SEAM-30-03.5-XX-08-X-XX | NA8LZ30ST-SMF | NA12.1LZ44-6.42 |
| 42 | SEAF-40-05.0-XX-08-X-XX | NA8LZ40ST-SMF | NA10.5LZ57.5-5.38 |
| 43 | SEAF-40-06.5-XX-08-X-XX | NA8LZ40ST-SMF | NA10.5LZ57.5-6.88 |
| 44 | SEAM-40-02.0-XX-08-X-XX | NA8LZ40ST-SMF | NA12.1LZ56.7-4.92 |
| 45 | SEAM-40-03.5-XX-08-X-XX | NA8LZ40ST-SMF | NA12.1LZ56.7-6.42 |
| 46 | SEAF-50-05.0-XX-08-X-XX | NA8LZ50ST-SMF | NA10.5LZ70.2-5.38 |
| 47 | SEAF-50-06.5-XX-08-X-XX | NA8LZ50ST-SMF | NA10.5LZ70.2-6.88 |
| 48 | SEAM-50-02.0-XX-08-X-XX | NA8LZ50ST-SMF | NA12.1LZ69.4-4.92 |
| 49 | SEAM-50-03.5-XX-08-X-XX | NA8LZ50ST-SMF | NA12.1LZ69.4-6.42 |
| 50 | DPAF-08-03.0-X-8-X-XX | NA8LZ8ST-DMF | NA22.9LZ23.3-6.57 |
| 51 | DPAM-08-07.0-X-8-X-XX | NA8LZ8ST-DMF | NA21.6LZ24.6-6.78 |
| 52 | DPAM-08-14.0-X-8-X-XX | NA8LZ8ST-DMF | NA21.6LZ26.9-13.79 |

For more information on the hot air rework nozzles or equipment used, please contact:

更多的热风修正嘴和设备使用信息，请联系：

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