



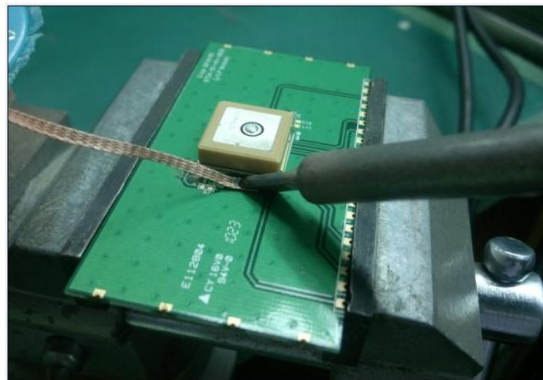
|        |                     |            |                        |
|--------|---------------------|------------|------------------------|
| DOC.   | Patch Module Rework | Product    | GPS Module             |
|        |                     | Revision   | V01                    |
| Model  | PA6C, PA6H          | Department | Production engineering |
| Date   | 2015/05/18          |            |                        |
| Author | Dylan               |            |                        |

## Cautionary Notes on SMT Production for GNSS Modules with Integrated Patch Antenna

**Please refer to below steps to rework Patch Module:**

The steps are:

1. Use clamp to fix PCBA (Photo 1)



(Photo 1)

2. Use desoldering wicks and solder horn to clean solder residue on module and PCBA. (Photo 2)

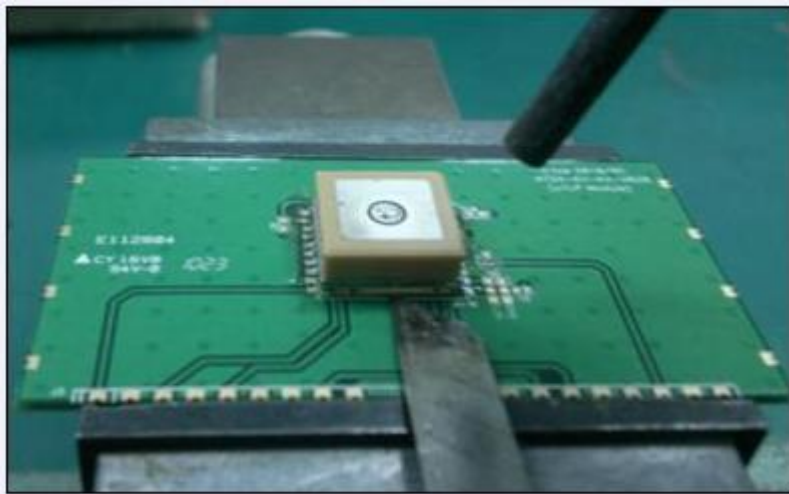


(Photo 2)



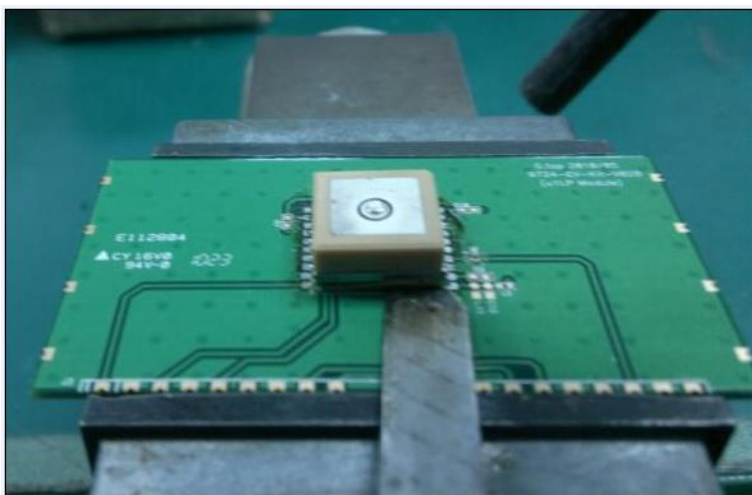
|        |                     |            |                        |
|--------|---------------------|------------|------------------------|
| DOC.   | Patch Module Rework | Product    | GPS Module             |
|        |                     | Revision   | V01                    |
| Model  | PA6C, PA6H          | Department | Production engineering |
| Date   | 2015/05/18          |            |                        |
| Author | Dylan               |            |                        |

3. Hold heat gun 2cm (approx) upon PCBA, then heat two-sides GPS module (forward & backward) (Photo3)



(Photo 3)

4. Once the solder melt, put blade to the bottom of GPS module and then slightly raise GPS module. When all solder in every pin are melted, steadily raise the GPS module away from PCBA surface. (Important Note: when the module is still hot, please do not sway fiercely. It is very easy to cause BGA failed. Please put the module on blade for 5 second (approx.) and remove the module after cool down)(Photo 4)

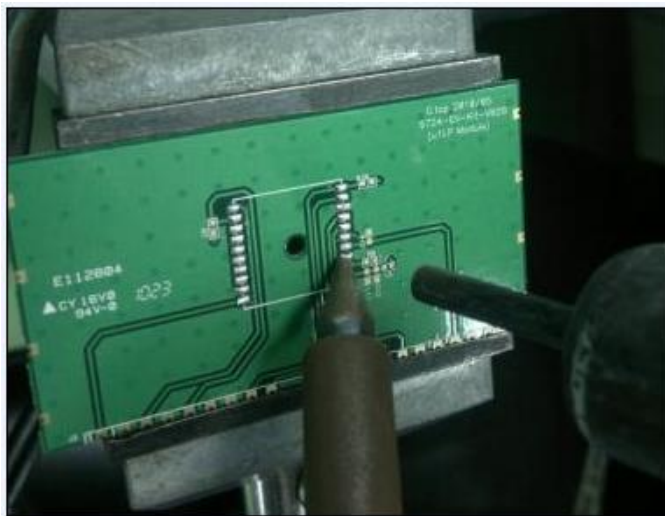


(Photo 4)



|        |                     |            |                        |
|--------|---------------------|------------|------------------------|
| DOC.   | Patch Module Rework | Product    | GPS Module             |
|        |                     | Revision   | V01                    |
| Model  | PA6C, PA6H          | Department | Production engineering |
| Date   | 2015/05/18          |            |                        |
| Author | Dylan               |            |                        |

5. Clamp the PCBA and GPS module by fixture. Clean solder residue on GPS module and PCBA by using desoldering pump & heat gun. In order to prevent positional shift or short circuit, please do not sway fiercely when the module is still hot. (Photo 5)



(Photo 5)

6. Clean the solder residue on module back side by desoldering wicks and solder horn (Photo 6)



(Photo 6)