

【原因、判断要点、发生工序】在电镀金属的内部应力或外部应力的作用下,电镀金属的原子转移(扩散)、在金属表面集合成生长为针状的单结晶。在镀铜层晶须的根有时可见铁等的细微金属核(镀铜后)。

【Causes/processes involved/keys to judgment】

Acicular single crystal is grown at the place where metal atoms are diffused and concentrated to metal surface, caused by residual stresses from electroplating or externally induced mechanical stresses. In some cases, at the base of copper whisker, fine nucleus of different metal is observed.

1-5-1-13 CF 接着剤残り突起／CF 粘着剤屑の凸出／Projected conductor by debris of carrier film adhesive

【特徴】UTC の CF 接着剤の下に UTC の銅箔が残っている突起

【特征】在 UTC 的 CF 粘着剂的下面残留 UTC 铜箔的凸出。

【Characteristics】A projection of UTC foil copper remaining under adhesive of UTC carrier film

【原因・判断ポイント・発生工程】UTC 積層時の積層条件異常等で、CF 剥離時に残った接着剤が ET レジストとなり、UTC 銅箔が残ってできたもの(CF 付き UTC 積層・CF 剥離～ET 工程) UTC: Ultra Thin Copper (極薄銅箔)

【原因、判断要点、发生工序】在 UTC 层压时,由于层压条件异常等,CF 剥离时留下的粘着剂屑成为 ET 剂,并粘附在 UTC 铜箔上而引起的(CF 的 UTC 层压・CF 剥离～ET 工序) UTC Ultra Thin Copper (极薄铜箔)。

【Causes/processes involved/keys to judgment】

Adhesive remains after removing carrier film due to an abnormal lamination condition for UTC lamination. The adhesive residue acts as an etching resist to leave the UTC foil copper unremoved. (Lamination of UTC with carrier film, carrier film removal, etching process)



【コメント】顕微鏡倍率×175

【注釋】顕微鏡倍率×175

【Comments】Magnification: ×175



【コメント】顕微鏡倍率×

【注釋】顕微鏡倍率×

【Comments】Magnification: ×

1-5-1-14 粘着物付着突起／粘性物の凸出／Projected conductor by adhesives

【特徴】やや固めの粘着物の下に積層銅箔が残っている突起

【特征】在层压铜箔下面残留比较硬的粘性物的凸出。