A Study on the Bump Technology

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Abstract—Chip on glass (COG) is widely used mount driver ICS on liquid crystal display (LCD) substrates[1]. This paper reports the development of Resin core bump Technology as a novel COG Technology. Unlike conventional COG bonding with Anisotropic conductive film (acf) design core bump structures from stable interconnection by direct contact between the bump and substrates. More ever the bump it’s bonding structures are optimised to achieve file picture interconnection.

Keywords—Chip-on-glass, Fine pitch bumping, Interconnection, Reliability

I. INTRODUCTION

Chip and glass Technology has been widely used for above 20 years has an interconnection Technology for mounting liquid crystal driver ICS directly on to the LCD [2] panels. The most common COG interconnection structure is established by a flip chip bonding process with electroplated good bumps and Anisotropic conductive film (acf)

A. Title and Author Details

BUMP Technology,

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II. BUMP TECHNOLOGY

A. Evaluation of fine pitch interconnection:

To evaluate fine pitch Resin core bump interconnection we designed test elements group (TEG) chips with 20 pitch and 30 pitch [1]. The electrode width of the resin core bump chips was shrunk to evaluate their ability to compensate for the alignment accuracy of the bonding equipment. This shrunk electrode design has an advantage when it comes to bonding accuracy [5]. It is not possible to achieve it in conventional Au bumps created with ACF COG Technology since a certain area is required to capture conductive particles.

B. Bump interface:

The appearance of the bonded interface on the rest samples is shown. It was confirmed that the centre of the electrode was flat, which means the bumps were deformed and formed facial contact and there was no misalignment to cause a short circuit. Checking with the daisy chain patterns conformed there was no open failure. Interconnection resistance measurements results are shown and the results of average resistance are summarised in table. The difference between 20 and 30 pitch width and 10 width was confirmed.

C. ADVANTAGES:

More features, and more fun, high security, A more convenient user experience, You can generate revenue through your app, In app search and app Store, Build your brand and get recognised faster through social media.

D. DISADVANTAGES

Highest cost of developing an app [2], The complex app development process, Complex maintenance, profile sharing, Additional requirements for marketing, Customer impractice, Challenges in tracking data facing data.

E. APPLICATIONS:

Used as flip flops, used as latches, transfer contact information photos and files, media, to transfer information between smart phones and Android mobile app etc.
III. CONCLUSION

We evaluated fine pitch Resin core Bump COG bonding with 20 micro Miter and 30 micromiter pitch TEG. Electrodes and spacing were varied to evaluate compensation for bonding alignment error. Even a 5 micrometre electrode width TGE [4] chip showed excellent interconnection Reliability in thermal cycle tests.
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REFERENCES


