

RFID tag

Development of RFID tag Production System using Laser Bonding Method

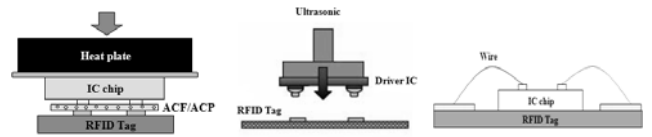
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Key words : RFID, tag, laser bonding, ACF, ACP

1. RFID 가
RFID Radio Frequency Identification

가 (bar code)
IC (tag)

(ultrasonic bonding), (heat plate bonding)
가
(ACF; Anisotropic conductive film)
(ACP; Anisotropic conductive paste)



(a) Heat plate (b) Ultrasonic (c) Wire
Fig. 2 RFID tag bonding technology

RFID ACF ACP
heat plate 230
driver IC

(underfill) 가
driver IC 가 (bump)

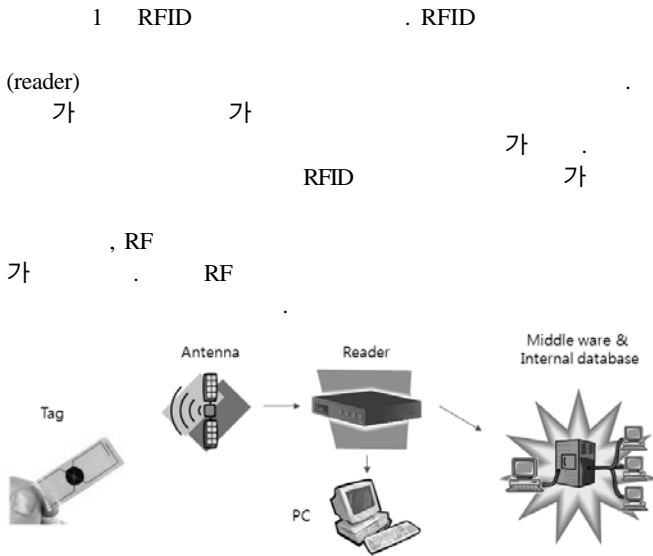


Fig. 1 RFID system

wire solder 가 driver IC
가 가
IC (fine pitch) ()가 가 가

RF 가 가
가

2. RFID (flip chip) RFID (wire bonding),

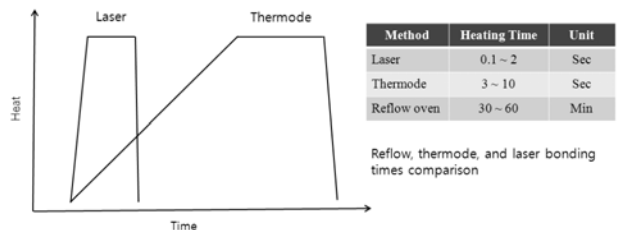


Fig. 3 Heating time to bonding temperature

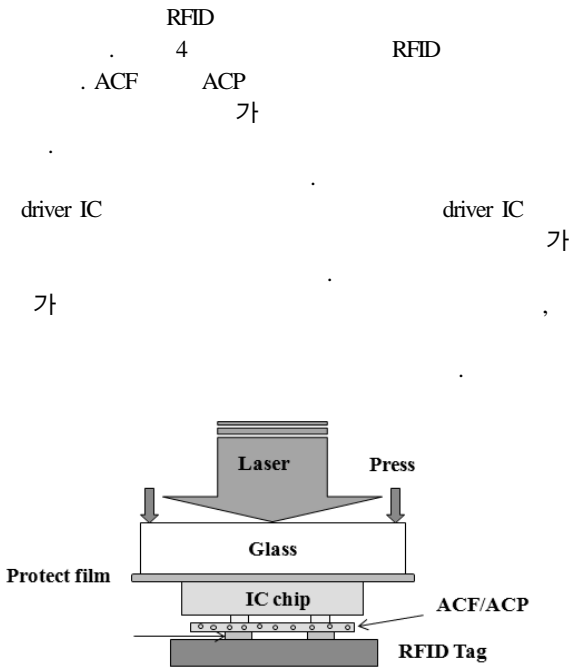


Fig. 4 Schematic of laser RFID bonding set-up

3.

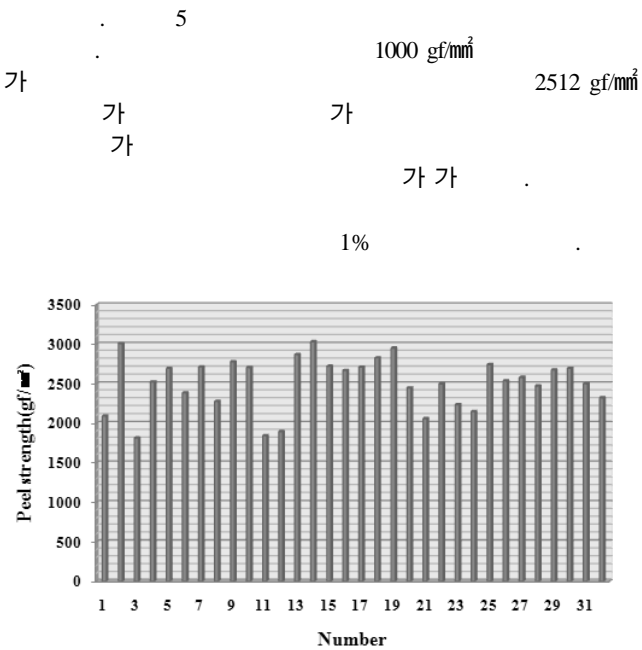


Fig. 5 Share strength of laser RFID bonding

4. RFID

6
ACF
(auto align)

10

2

가 un-

loading
loading/unloading
가 가



Fig. 6 Auto laser RFID bonding system(special tag)

7
loading
loading
pre bonding 가 가 loading



Fig. 7 Manual laser RFID bonding system

5.
RFID
2
가 가

6.